

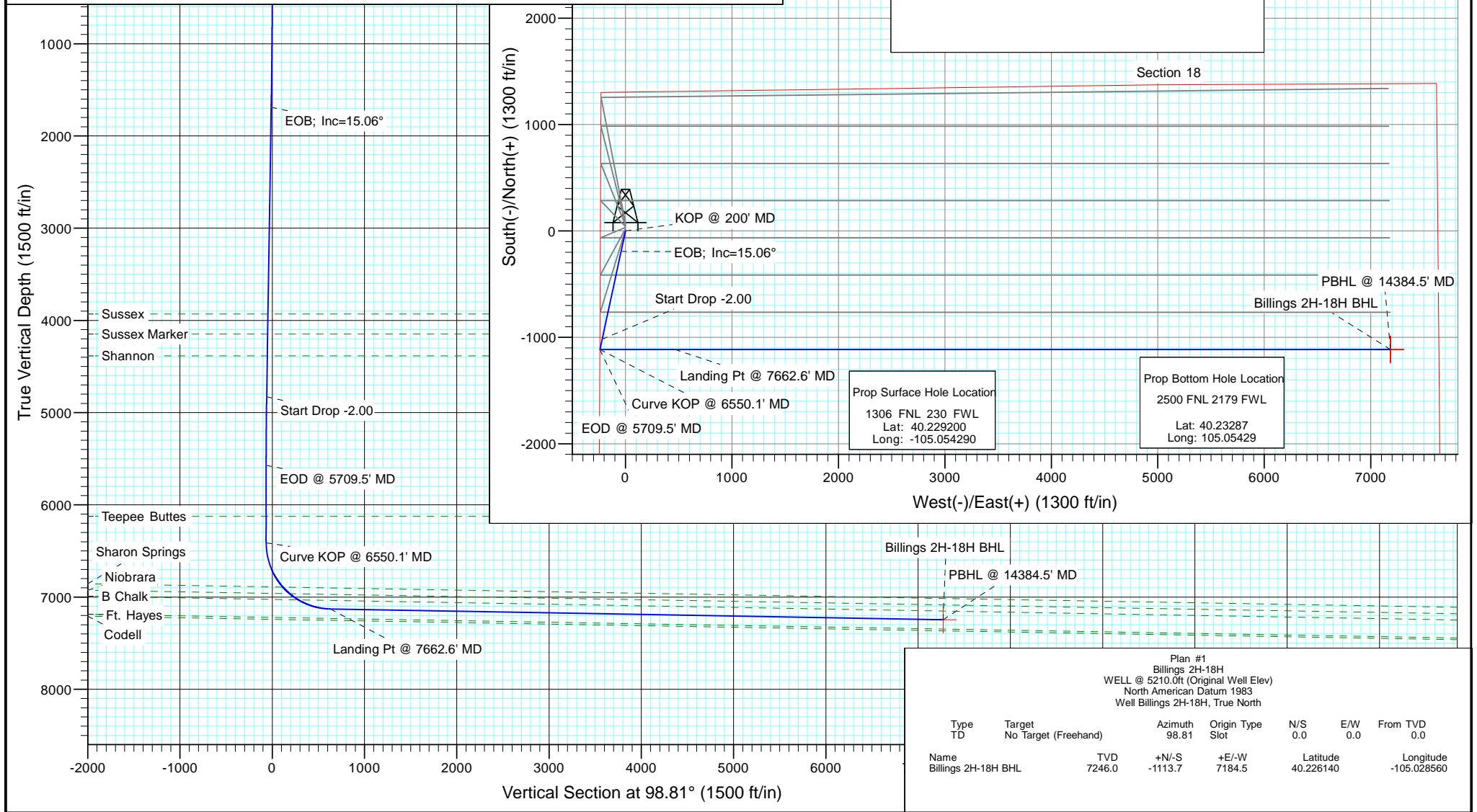


Project: DJ Wattenberg
Site: S18-T3N-R68W (Billings)
Well: Billings 2H-18H
Wellbore: Hz
Design: Plan #1



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1705.6	15.06	192.16	1688.4	-192.3	-41.4	1.00	192.16	-11.5	KOP @ 200' MD
4	4956.7	15.06	192.16	4827.8	-1017.9	-219.3	0.00	0.00	-60.8	EOB; Inc=15.06°
5	5709.5	0.00	0.00	5572.0	-1114.0	-240.1	2.00	180.00	-66.6	Start Drop -2.00
6	6550.1	0.00	0.00	6412.6	-1114.0	-240.1	0.00	0.00	-66.6	EOD @ 5709.5' MD
7	7662.6	89.00	90.00	7128.7	-1114.0	463.6	8.00	90.00	628.8	Curve KOP @ 6550.1' MD
8	14384.5	89.00	90.00	7246.0	-1113.7	7184.5	0.00	0.00	7270.3	Landing Pt @ 7662.6' MD
Billings 2H-18H BHL										
PBHL @ 14384.5' MD										

FORMATION TOP DETAILS			
TVDPPath	MDPath	Formation	DipAngle
3931.0	4028.0	Sussex	
4148.0	4252.7	Sussex Marker	
4384.0	4497.1	Shannon	
6124.0	6261.5	Teepee Buttes	
6889.0	7071.3	Sharon Springs	1.00
6959.2	7172.0	Niobrara	1.00
7027.9	7290.4	B Chalk	1.00



Plan #1 Billings 2H-18H WELL @ 5210.0ft (Original Well Elev) North American Datum 1983 Well Billings 2H-18H, True North						
Type TD	Target No Target (Freehand)	Azimuth 98.81	Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0
Name Billings 2H-18H BHL	TVD 7246.0	+N/-S -1113.7	+E/-W 7184.5	Latitude 40.226140	Longitude -105.028560	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 2H-18H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site:	S18-T3N-R68W (Billings)	North Reference:	True
Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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

Site		S18-T3N-R68W (Billings)			
Site Position:		Northing:	1,326,724.18 ft	Latitude:	40.229390
From:	Lat/Long	Easting:	3,124,452.97 ft	Longitude:	-105.054290
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well	Billings 2H-18H					
Well Position	+N/-S	0.0 ft	Northing:	1,326,654.96 ft	Latitude:	40.229200
	+E/-W	0.0 ft	Easting:	3,124,453.32 ft	Longitude:	-105.054290
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,197.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/27/2012	8.81	66.82	52,854

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	98.81

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,705.6	15.06	192.16	1,688.4	-192.3	-41.4	1.00	1.00	0.00	192.16	
4,956.7	15.06	192.16	4,827.8	-1,017.9	-219.3	0.00	0.00	0.00	0.00	
5,709.5	0.00	0.00	5,572.0	-1,114.0	-240.1	2.00	-2.00	0.00	180.00	
6,550.1	0.00	0.00	6,412.6	-1,114.0	-240.1	0.00	0.00	0.00	0.00	
7,662.6	89.00	90.00	7,128.7	-1,114.0	463.6	8.00	8.00	0.00	90.00	
14,384.5	89.00	90.00	7,246.0	-1,113.7	7,184.5	0.00	0.00	0.00	0.00	Billings 2H-18H BHL

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 2H-18H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site:	S18-T3N-R68W (Billings)	North Reference:	True
Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200' MD
300.0	1.00	192.16	300.0	-0.9	-0.2	-0.1	1.00	1.00	
400.0	2.00	192.16	400.0	-3.4	-0.7	-0.2	1.00	1.00	
500.0	3.00	192.16	499.9	-7.7	-1.7	-0.5	1.00	1.00	
600.0	4.00	192.16	599.7	-13.6	-2.9	-0.8	1.00	1.00	
700.0	5.00	192.16	699.4	-21.3	-4.6	-1.3	1.00	1.00	
800.0	6.00	192.16	798.9	-30.7	-6.6	-1.8	1.00	1.00	
900.0	7.00	192.16	898.3	-41.7	-9.0	-2.5	1.00	1.00	
1,000.0	8.00	192.16	997.4	-54.5	-11.7	-3.3	1.00	1.00	
1,100.0	9.00	192.16	1,096.3	-69.0	-14.9	-4.1	1.00	1.00	
1,200.0	10.00	192.16	1,194.9	-85.1	-18.3	-5.1	1.00	1.00	
1,300.0	11.00	192.16	1,293.3	-102.9	-22.2	-6.2	1.00	1.00	
1,400.0	12.00	192.16	1,391.2	-122.4	-26.4	-7.3	1.00	1.00	
1,500.0	13.00	192.16	1,488.9	-143.6	-30.9	-8.6	1.00	1.00	
1,600.0	14.00	192.16	1,586.1	-166.4	-35.9	-9.9	1.00	1.00	
1,700.0	15.00	192.16	1,682.9	-190.8	-41.1	-11.4	1.00	1.00	
1,705.6	15.06	192.16	1,688.4	-192.3	-41.4	-11.5	1.00	1.00	EOB; Inc=15.06°
1,800.0	15.06	192.16	1,779.5	-216.2	-46.6	-12.9	0.00	0.00	
1,900.0	15.06	192.16	1,876.1	-241.6	-52.1	-14.4	0.00	0.00	
2,000.0	15.06	192.16	1,972.6	-267.0	-57.5	-16.0	0.00	0.00	
2,100.0	15.06	192.16	2,069.2	-292.4	-63.0	-17.5	0.00	0.00	
2,200.0	15.06	192.16	2,165.8	-317.8	-68.5	-19.0	0.00	0.00	
2,300.0	15.06	192.16	2,262.3	-343.2	-74.0	-20.5	0.00	0.00	
2,400.0	15.06	192.16	2,358.9	-368.6	-79.4	-22.0	0.00	0.00	
2,500.0	15.06	192.16	2,455.5	-394.0	-84.9	-23.6	0.00	0.00	
2,600.0	15.06	192.16	2,552.0	-419.4	-90.4	-25.1	0.00	0.00	
2,700.0	15.06	192.16	2,648.6	-444.8	-95.9	-26.6	0.00	0.00	
2,800.0	15.06	192.16	2,745.2	-470.2	-101.3	-28.1	0.00	0.00	
2,900.0	15.06	192.16	2,841.7	-495.6	-106.8	-29.6	0.00	0.00	
3,000.0	15.06	192.16	2,938.3	-521.0	-112.3	-31.1	0.00	0.00	
3,100.0	15.06	192.16	3,034.9	-546.4	-117.7	-32.7	0.00	0.00	
3,200.0	15.06	192.16	3,131.4	-571.8	-123.2	-34.2	0.00	0.00	
3,300.0	15.06	192.16	3,228.0	-597.2	-128.7	-35.7	0.00	0.00	
3,400.0	15.06	192.16	3,324.6	-622.5	-134.2	-37.2	0.00	0.00	
3,500.0	15.06	192.16	3,421.1	-647.9	-139.6	-38.7	0.00	0.00	
3,600.0	15.06	192.16	3,517.7	-673.3	-145.1	-40.2	0.00	0.00	
3,700.0	15.06	192.16	3,614.3	-698.7	-150.6	-41.8	0.00	0.00	
3,800.0	15.06	192.16	3,710.8	-724.1	-156.0	-43.3	0.00	0.00	
3,900.0	15.06	192.16	3,807.4	-749.5	-161.5	-44.8	0.00	0.00	
4,000.0	15.06	192.16	3,904.0	-774.9	-167.0	-46.3	0.00	0.00	
4,028.0	15.06	192.16	3,931.0	-782.0	-168.5	-46.7	0.00	0.00	Sussex
4,100.0	15.06	192.16	4,000.5	-800.3	-172.5	-47.8	0.00	0.00	
4,200.0	15.06	192.16	4,097.1	-825.7	-177.9	-49.4	0.00	0.00	
4,252.7	15.06	192.16	4,148.0	-839.1	-180.8	-50.2	0.00	0.00	Sussex Marker
4,300.0	15.06	192.16	4,193.7	-851.1	-183.4	-50.9	0.00	0.00	
4,400.0	15.06	192.16	4,290.2	-876.5	-188.9	-52.4	0.00	0.00	
4,497.1	15.06	192.16	4,384.0	-901.1	-194.2	-53.9	0.00	0.00	Shannon
4,500.0	15.06	192.16	4,386.8	-901.9	-194.4	-53.9	0.00	0.00	
4,600.0	15.06	192.16	4,483.4	-927.3	-199.8	-55.4	0.00	0.00	
4,700.0	15.06	192.16	4,579.9	-952.7	-205.3	-56.9	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 2H-18H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site:	S18-T3N-R68W (Billings)	North Reference:	True
Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	15.06	192.16	4,676.5	-978.1	-210.8	-58.5	0.00	0.00	
4,900.0	15.06	192.16	4,773.1	-1,003.5	-216.2	-60.0	0.00	0.00	
4,956.7	15.06	192.16	4,827.8	-1,017.9	-219.3	-60.8	0.00	0.00	Start Drop -2.00
5,000.0	14.19	192.16	4,869.7	-1,028.5	-221.6	-61.5	2.00	-2.00	
5,100.0	12.19	192.16	4,967.1	-1,050.8	-226.5	-62.8	2.00	-2.00	
5,200.0	10.19	192.16	5,065.2	-1,069.8	-230.5	-63.9	2.00	-2.00	
5,300.0	8.19	192.16	5,163.9	-1,085.4	-233.9	-64.9	2.00	-2.00	
5,400.0	6.19	192.16	5,263.1	-1,097.7	-236.5	-65.6	2.00	-2.00	
5,500.0	4.19	192.16	5,362.7	-1,106.5	-238.5	-66.1	2.00	-2.00	
5,600.0	2.19	192.16	5,462.5	-1,112.0	-239.6	-66.5	2.00	-2.00	
5,700.0	0.19	192.16	5,562.5	-1,114.0	-240.1	-66.6	2.00	-2.00	
5,709.5	0.00	0.00	5,572.0	-1,114.0	-240.1	-66.6	2.00	-2.00	EOD @ 5709.5' MD
5,800.0	0.00	0.00	5,662.5	-1,114.0	-240.1	-66.6	0.00	0.00	
5,900.0	0.00	0.00	5,762.5	-1,114.0	-240.1	-66.6	0.00	0.00	
6,000.0	0.00	0.00	5,862.5	-1,114.0	-240.1	-66.6	0.00	0.00	
6,100.0	0.00	0.00	5,962.5	-1,114.0	-240.1	-66.6	0.00	0.00	
6,200.0	0.00	0.00	6,062.5	-1,114.0	-240.1	-66.6	0.00	0.00	
6,261.5	0.00	0.00	6,124.0	-1,114.0	-240.1	-66.6	0.00	0.00	Teepee Buttes
6,300.0	0.00	0.00	6,162.5	-1,114.0	-240.1	-66.6	0.00	0.00	
6,400.0	0.00	0.00	6,262.5	-1,114.0	-240.1	-66.6	0.00	0.00	
6,500.0	0.00	0.00	6,362.5	-1,114.0	-240.1	-66.6	0.00	0.00	
6,550.1	0.00	0.00	6,412.6	-1,114.0	-240.1	-66.6	0.00	0.00	Curve KOP @ 6550.1' MD
6,600.0	3.99	90.00	6,462.4	-1,114.0	-238.3	-64.9	8.00	8.00	
6,700.0	11.99	90.00	6,561.4	-1,114.0	-224.4	-51.1	8.00	8.00	
6,800.0	19.99	90.00	6,657.4	-1,114.0	-196.9	-23.9	8.00	8.00	
6,900.0	27.99	90.00	6,748.7	-1,114.0	-156.3	16.2	8.00	8.00	
7,000.0	35.99	90.00	6,833.5	-1,114.0	-103.3	68.5	8.00	8.00	
7,071.3	41.69	90.00	6,889.0	-1,114.0	-58.7	112.7	8.00	8.00	Sharon Springs
7,100.0	43.99	90.00	6,910.0	-1,114.0	-39.1	132.0	8.00	8.00	
7,172.0	49.75	90.00	6,959.2	-1,114.0	13.4	183.9	8.00	8.00	Niobrara
7,200.0	51.99	90.00	6,976.9	-1,114.0	35.1	205.3	8.00	8.00	
7,290.4	59.22	90.00	7,027.9	-1,114.0	109.6	279.0	8.00	8.00	B Chalk
7,300.0	59.99	90.00	7,032.8	-1,114.0	117.9	287.2	8.00	8.00	
7,400.0	67.99	90.00	7,076.6	-1,114.0	207.7	375.9	8.00	8.00	
7,500.0	75.99	90.00	7,107.5	-1,114.0	302.8	469.8	8.00	8.00	
7,600.0	83.99	90.00	7,124.9	-1,114.0	401.2	567.1	8.00	8.00	
7,662.6	89.00	90.00	7,128.7	-1,114.0	463.6	628.8	8.00	8.00	Landing Pt @ 7662.6' MD
7,700.0	89.00	90.00	7,129.3	-1,114.0	501.0	665.7	0.00	0.00	
7,800.0	89.00	90.00	7,131.1	-1,114.0	601.0	764.5	0.00	0.00	
7,900.0	89.00	90.00	7,132.8	-1,114.0	701.0	863.3	0.00	0.00	
8,000.0	89.00	90.00	7,134.6	-1,114.0	801.0	962.2	0.00	0.00	
8,100.0	89.00	90.00	7,136.3	-1,113.9	901.0	1,061.0	0.00	0.00	
8,200.0	89.00	90.00	7,138.1	-1,113.9	1,000.9	1,159.8	0.00	0.00	
8,300.0	89.00	90.00	7,139.8	-1,113.9	1,100.9	1,258.6	0.00	0.00	
8,400.0	89.00	90.00	7,141.6	-1,113.9	1,200.9	1,357.4	0.00	0.00	
8,500.0	89.00	90.00	7,143.3	-1,113.9	1,300.9	1,456.2	0.00	0.00	
8,600.0	89.00	90.00	7,145.0	-1,113.9	1,400.9	1,555.0	0.00	0.00	
8,700.0	89.00	90.00	7,146.8	-1,113.9	1,500.9	1,653.8	0.00	0.00	
8,800.0	89.00	90.00	7,148.5	-1,113.9	1,600.8	1,752.6	0.00	0.00	
8,900.0	89.00	90.00	7,150.3	-1,113.9	1,700.8	1,851.4	0.00	0.00	
9,000.0	89.00	90.00	7,152.0	-1,113.9	1,800.8	1,950.2	0.00	0.00	
9,100.0	89.00	90.00	7,153.8	-1,113.9	1,900.8	2,049.0	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 2H-18H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site:	S18-T3N-R68W (Billings)	North Reference:	True
Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,200.0	89.00	90.00	7,155.5	-1,113.9	2,000.8	2,147.8	0.00	0.00	
9,300.0	89.00	90.00	7,157.3	-1,113.9	2,100.8	2,246.6	0.00	0.00	
9,400.0	89.00	90.00	7,159.0	-1,113.9	2,200.8	2,345.4	0.00	0.00	
9,500.0	89.00	90.00	7,160.8	-1,113.9	2,300.7	2,444.2	0.00	0.00	
9,600.0	89.00	90.00	7,162.5	-1,113.9	2,400.7	2,543.0	0.00	0.00	
9,700.0	89.00	90.00	7,164.2	-1,113.9	2,500.7	2,641.8	0.00	0.00	
9,800.0	89.00	90.00	7,166.0	-1,113.9	2,600.7	2,740.6	0.00	0.00	
9,900.0	89.00	90.00	7,167.7	-1,113.9	2,700.7	2,839.4	0.00	0.00	
10,000.0	89.00	90.00	7,169.5	-1,113.9	2,800.7	2,938.2	0.00	0.00	
10,100.0	89.00	90.00	7,171.2	-1,113.9	2,900.6	3,037.0	0.00	0.00	
10,200.0	89.00	90.00	7,173.0	-1,113.9	3,000.6	3,135.8	0.00	0.00	
10,300.0	89.00	90.00	7,174.7	-1,113.8	3,100.6	3,234.6	0.00	0.00	
10,400.0	89.00	90.00	7,176.5	-1,113.8	3,200.6	3,333.5	0.00	0.00	
10,500.0	89.00	90.00	7,178.2	-1,113.8	3,300.6	3,432.3	0.00	0.00	
10,600.0	89.00	90.00	7,180.0	-1,113.8	3,400.6	3,531.1	0.00	0.00	
10,700.0	89.00	90.00	7,181.7	-1,113.8	3,500.6	3,629.9	0.00	0.00	
10,800.0	89.00	90.00	7,183.4	-1,113.8	3,600.5	3,728.7	0.00	0.00	
10,900.0	89.00	90.00	7,185.2	-1,113.8	3,700.5	3,827.5	0.00	0.00	
11,000.0	89.00	90.00	7,186.9	-1,113.8	3,800.5	3,926.3	0.00	0.00	
11,100.0	89.00	90.00	7,188.7	-1,113.8	3,900.5	4,025.1	0.00	0.00	
11,200.0	89.00	90.00	7,190.4	-1,113.8	4,000.5	4,123.9	0.00	0.00	
11,300.0	89.00	90.00	7,192.2	-1,113.8	4,100.5	4,222.7	0.00	0.00	
11,400.0	89.00	90.00	7,193.9	-1,113.8	4,200.5	4,321.5	0.00	0.00	
11,500.0	89.00	90.00	7,195.7	-1,113.8	4,300.4	4,420.3	0.00	0.00	
11,600.0	89.00	90.00	7,197.4	-1,113.8	4,400.4	4,519.1	0.00	0.00	
11,700.0	89.00	90.00	7,199.1	-1,113.8	4,500.4	4,617.9	0.00	0.00	
11,800.0	89.00	90.00	7,200.9	-1,113.8	4,600.4	4,716.7	0.00	0.00	
11,900.0	89.00	90.00	7,202.6	-1,113.8	4,700.4	4,815.5	0.00	0.00	
12,000.0	89.00	90.00	7,204.4	-1,113.8	4,800.4	4,914.3	0.00	0.00	
12,100.0	89.00	90.00	7,206.1	-1,113.8	4,900.3	5,013.1	0.00	0.00	
12,200.0	89.00	90.00	7,207.9	-1,113.8	5,000.3	5,111.9	0.00	0.00	
12,300.0	89.00	90.00	7,209.6	-1,113.8	5,100.3	5,210.7	0.00	0.00	
12,400.0	89.00	90.00	7,211.4	-1,113.8	5,200.3	5,309.5	0.00	0.00	
12,500.0	89.00	90.00	7,213.1	-1,113.7	5,300.3	5,408.3	0.00	0.00	
12,600.0	89.00	90.00	7,214.9	-1,113.7	5,400.3	5,507.1	0.00	0.00	
12,700.0	89.00	90.00	7,216.6	-1,113.7	5,500.3	5,605.9	0.00	0.00	
12,800.0	89.00	90.00	7,218.3	-1,113.7	5,600.2	5,704.7	0.00	0.00	
12,900.0	89.00	90.00	7,220.1	-1,113.7	5,700.2	5,803.6	0.00	0.00	
13,000.0	89.00	90.00	7,221.8	-1,113.7	5,800.2	5,902.4	0.00	0.00	
13,100.0	89.00	90.00	7,223.6	-1,113.7	5,900.2	6,001.2	0.00	0.00	
13,200.0	89.00	90.00	7,225.3	-1,113.7	6,000.2	6,100.0	0.00	0.00	
13,300.0	89.00	90.00	7,227.1	-1,113.7	6,100.2	6,198.8	0.00	0.00	
13,400.0	89.00	90.00	7,228.8	-1,113.7	6,200.1	6,297.6	0.00	0.00	
13,500.0	89.00	90.00	7,230.6	-1,113.7	6,300.1	6,396.4	0.00	0.00	
13,600.0	89.00	90.00	7,232.3	-1,113.7	6,400.1	6,495.2	0.00	0.00	
13,700.0	89.00	90.00	7,234.1	-1,113.7	6,500.1	6,594.0	0.00	0.00	
13,800.0	89.00	90.00	7,235.8	-1,113.7	6,600.1	6,692.8	0.00	0.00	
13,900.0	89.00	90.00	7,237.5	-1,113.7	6,700.1	6,791.6	0.00	0.00	
14,000.0	89.00	90.00	7,239.3	-1,113.7	6,800.1	6,890.4	0.00	0.00	
14,100.0	89.00	90.00	7,241.0	-1,113.7	6,900.0	6,989.2	0.00	0.00	
14,200.0	89.00	90.00	7,242.8	-1,113.7	7,000.0	7,088.0	0.00	0.00	
14,300.0	89.00	90.00	7,244.5	-1,113.7	7,100.0	7,186.8	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 2H-18H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site:	S18-T3N-R68W (Billings)	North Reference:	True
Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
14,384.5	89.00	90.00	7,246.0	-1,113.7	7,184.5	7,270.3	0.00	0.00	PBHL @ 14384.5' MD

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Interp @ 5572.0 (Billings) - plan hits target center - Point	0.00	0.00	5,572.0	-1,114.0	-240.1	1,325,539.76	3,124,218.86	40.226142	-105.055150
Billings 2H-18H BHL - plan hits target center - Point	0.00	0.00	7,246.0	-1,113.7	7,184.5	1,325,577.42	3,131,643.29	40.226140	-105.028560

Formations							
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)		
4,028.0	3,931.0	Sussex					
4,252.7	4,148.0	Sussex Marker					
4,497.1	4,384.0	Shannon					
6,261.5	6,124.0	Teepee Buttes					
7,071.3	6,890.0	Sharon Springs		1.00	90.00		
7,172.0	6,959.0	Niobrara		1.00	90.00		
7,290.4	7,026.0	B Chalk		1.00	90.00		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200' MD
1,705.6	1,688.4	-192.3	-41.4	EOB; Inc=15.06°
4,956.7	4,827.8	-1,017.9	-219.3	Start Drop -2.00
5,709.5	5,572.0	-1,114.0	-240.1	EOD @ 5709.5' MD
6,550.1	6,412.6	-1,114.0	-240.1	Curve KOP @ 6550.1' MD
7,662.6	7,128.7	-1,114.0	463.6	Landing Pt @ 7662.6' MD
14,384.5	7,246.0	-1,113.7	7,184.5	PBHL @ 14384.5' MD

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S18-T3N-R68W (Billings)

Billings 2H-18H

Hz

Plan #1

Anticollision Report

29 November, 2012

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,626.7ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	11/29/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,384.5	Plan #1 (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						
S18-T3N-R68W (Billings)						
Billings 2A-18H - Hz - Plan #1	166.3	167.3	69.2	68.7	128.906	CC
Billings 2A-18H - Hz - Plan #1	200.0	201.0	69.2	68.6	105.761	ES
Billings 2A-18H - Hz - Plan #1	700.0	691.6	111.6	109.2	46.814	SF
Billings 2B-18H - HZ - Plan #1	200.0	200.0	61.9	61.3	94.866	CC, ES
Billings 2B-18H - HZ - Plan #1	700.0	693.3	96.5	94.2	40.448	SF
Billings 2C-18H - HZ - Plan #1	200.0	200.0	51.0	50.3	78.131	CC, ES
Billings 2C-18H - HZ - Plan #1	600.0	597.6	67.9	65.8	33.193	SF
Billings 2D-18H - Hz - Plan #1	200.0	200.0	40.1	39.4	61.388	CC, ES
Billings 2D-18H - Hz - Plan #1	14,384.5	14,244.8	1,399.0	1,038.4	3.880	SF
Billings 2E-18H - HZ - Plan #1	200.0	200.0	32.8	32.1	50.227	CC, ES
Billings 2E-18H - HZ - Plan #1	14,384.5	14,030.7	1,071.2	717.7	3.031	SF
Billings 2F-18H - HZ - Plan #1	200.0	200.0	21.9	21.2	33.485	CC, ES
Billings 2F-18H - HZ - Plan #1	14,384.5	14,357.2	704.5	346.1	1.966	SF
Billings 2G-18H - Hz - Plan #1	200.0	200.0	10.9	10.3	16.742	CC, ES
Billings 2G-18H - Hz - Plan #1	14,384.5	14,093.1	411.1	102.7	1.333	Level 3, SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2A-18H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	1.0	1.0	0.0	0.0	0.00	69.2	0.0	69.2					
100.0	100.0	101.0	101.0	0.2	0.2	0.00	69.2	0.0	69.2	68.9	0.31	226.624		
166.3	166.3	167.3	167.3	0.3	0.3	0.00	69.2	0.0	69.2	68.7	0.54	128.906 CC		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	69.2	0.0	69.2	68.6	0.65	105.761 ES		
300.0	300.0	300.0	300.0	0.5	0.5	167.85	70.1	-0.2	70.9	69.9	1.00	70.808		
400.0	400.0	398.4	398.4	0.7	0.7	167.88	72.6	-0.7	76.0	74.7	1.35	56.410		
500.0	499.9	496.7	496.6	0.9	0.9	167.92	76.8	-1.5	84.5	82.8	1.69	49.900		
600.0	599.7	594.5	594.2	1.1	1.1	167.97	82.5	-2.6	96.4	94.4	2.04	47.265		
700.0	699.4	691.6	691.0	1.3	1.3	168.01	89.9	-4.0	111.6	109.2	2.38	46.814 SF		
800.0	798.9	787.9	786.8	1.5	1.5	168.04	98.8	-5.7	130.1	127.4	2.73	47.712		
900.0	898.3	883.2	881.5	1.8	1.7	168.06	109.2	-7.7	151.9	148.9	3.07	49.498		
1,000.0	997.4	977.3	974.9	2.0	2.0	168.07	120.9	-10.0	177.0	173.6	3.41	51.898		
1,100.0	1,096.3	1,070.2	1,066.9	2.3	2.3	168.07	134.0	-12.6	205.2	201.5	3.75	54.738		
1,200.0	1,194.9	1,161.7	1,157.2	2.7	2.5	168.06	148.3	-15.3	236.6	232.5	4.09	57.903		
1,300.0	1,293.3	1,251.7	1,245.8	3.0	2.8	168.04	163.7	-18.3	271.0	266.6	4.42	61.311		
1,400.0	1,391.2	1,340.0	1,332.5	3.4	3.2	168.01	180.2	-21.5	308.5	303.7	4.75	64.905		
1,500.0	1,488.9	1,426.6	1,417.3	3.8	3.5	167.98	197.6	-24.9	348.9	343.8	5.08	68.643		
1,600.0	1,586.1	1,511.4	1,500.0	4.2	3.8	167.94	215.9	-28.4	392.2	386.7	5.41	72.493		
1,700.0	1,682.9	1,594.3	1,580.6	4.7	4.2	167.89	234.9	-32.1	438.3	432.5	5.73	76.427		
1,800.0	1,779.5	1,675.5	1,659.3	5.1	4.6	167.93	254.7	-36.0	486.4	480.3	6.07	80.117		
1,900.0	1,876.1	1,755.5	1,736.5	5.6	4.9	167.93	275.2	-40.0	535.8	529.4	6.41	83.604		
2,000.0	1,972.6	1,834.2	1,812.2	6.1	5.3	167.91	296.5	-44.1	586.3	579.6	6.75	86.927		
2,100.0	2,069.2	1,912.2	1,886.9	6.6	5.7	167.87	318.5	-48.3	638.0	630.9	7.08	90.097		
2,200.0	2,165.8	1,997.5	1,968.4	7.0	6.2	167.82	343.1	-53.1	690.2	682.8	7.43	92.878		
2,300.0	2,262.3	2,082.8	2,049.9	7.5	6.6	167.78	367.7	-57.9	742.4	734.6	7.78	95.401		
2,400.0	2,358.9	2,168.1	2,131.5	8.0	7.1	167.74	392.3	-62.6	794.6	786.5	8.13	97.700		
2,500.0	2,455.5	2,253.4	2,213.0	8.5	7.5	167.71	416.8	-67.4	846.8	838.3	8.48	99.804		
2,600.0	2,552.0	2,338.7	2,294.6	8.9	8.0	167.68	441.4	-72.2	899.0	890.1	8.84	101.735		
2,700.0	2,648.6	2,424.0	2,376.1	9.4	8.4	167.66	466.0	-77.0	951.2	942.0	9.19	103.514		
2,800.0	2,745.2	2,509.3	2,457.7	9.9	8.9	167.64	490.6	-81.7	1,003.4	993.8	9.54	105.158		
2,900.0	2,841.7	2,594.6	2,539.2	10.4	9.4	167.62	515.2	-86.5	1,055.5	1,045.6	9.89	106.682		
3,000.0	2,938.3	2,679.9	2,620.7	10.9	9.8	167.60	539.8	-91.3	1,107.7	1,097.5	10.25	108.098		
3,100.0	3,034.9	2,765.2	2,702.3	11.4	10.3	167.58	564.3	-96.0	1,159.9	1,149.3	10.60	109.417		
3,200.0	3,131.4	2,850.5	2,783.8	11.8	10.7	167.57	588.9	-100.8	1,212.1	1,201.2	10.95	110.649		
3,300.0	3,228.0	2,935.8	2,865.4	12.3	11.2	167.55	613.5	-105.6	1,264.3	1,253.0	11.31	111.802		
3,400.0	3,324.6	3,021.1	2,946.9	12.8	11.6	167.54	638.1	-110.3	1,316.5	1,304.8	11.66	112.884		
3,500.0	3,421.1	3,106.4	3,028.4	13.3	12.1	167.53	662.7	-115.1	1,368.7	1,356.7	12.02	113.900		
3,600.0	3,517.7	3,191.7	3,110.0	13.8	12.6	167.52	687.3	-119.9	1,420.9	1,408.5	12.37	114.857		
3,700.0	3,614.3	3,277.0	3,191.5	14.3	13.0	167.51	711.8	-124.6	1,473.1	1,460.3	12.73	115.759		
3,800.0	3,710.8	3,362.3	3,273.1	14.7	13.5	167.50	736.4	-129.4	1,525.3	1,512.2	13.08	116.611		
3,900.0	3,807.4	3,447.6	3,354.6	15.2	13.9	167.49	761.0	-134.2	1,577.5	1,564.0	13.43	117.417		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2B-18H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	61.9	0.0	61.9					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	61.9	0.0	61.9	61.6	0.30	203.908		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	61.9	0.0	61.9	61.3	0.65	94.866 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	168.00	61.9	0.0	62.8	61.8	1.00	62.667		
400.0	400.0	398.9	398.9	0.7	0.7	168.28	62.8	-0.2	66.2	64.8	1.35	49.064		
500.0	499.9	497.5	497.4	0.9	0.9	168.45	65.2	-0.8	72.9	71.3	1.70	43.027		
600.0	599.7	595.7	595.5	1.1	1.0	168.52	69.3	-1.9	83.1	81.0	2.04	40.694		
700.0	699.4	693.3	693.0	1.3	1.2	168.51	75.0	-3.3	96.5	94.2	2.39	40.448 SF		
800.0	798.9	790.1	789.5	1.5	1.4	168.45	82.2	-5.1	113.3	110.6	2.73	41.487		
900.0	898.3	886.1	885.1	1.8	1.6	168.36	91.0	-7.3	133.4	130.3	3.08	43.371		
1,000.0	997.4	981.0	979.4	2.0	1.9	168.25	101.1	-9.8	156.7	153.3	3.42	45.838		
1,100.0	1,096.3	1,074.8	1,072.4	2.3	2.1	168.14	112.7	-12.7	183.2	179.4	3.76	48.720		
1,200.0	1,194.9	1,167.2	1,163.9	2.7	2.4	168.02	125.5	-15.9	212.8	208.7	4.10	51.906		
1,300.0	1,293.3	1,258.1	1,253.7	3.0	2.7	167.90	139.5	-19.4	245.6	241.2	4.44	55.317		
1,400.0	1,391.2	1,347.5	1,341.7	3.4	3.0	167.79	154.6	-23.2	281.4	276.6	4.78	58.899		
1,500.0	1,488.9	1,435.3	1,427.9	3.8	3.3	167.68	170.7	-27.2	320.1	315.0	5.11	62.610		
1,600.0	1,586.1	1,521.2	1,512.0	4.2	3.6	167.56	187.7	-31.5	361.8	356.3	5.45	66.419		
1,700.0	1,682.9	1,605.3	1,594.1	4.7	3.9	167.45	205.5	-35.9	406.3	400.5	5.78	70.300		
1,800.0	1,779.5	1,687.8	1,674.3	5.1	4.3	167.42	224.2	-40.6	452.9	446.7	6.12	73.948		
1,900.0	1,876.1	1,769.1	1,753.1	5.6	4.7	167.37	243.6	-45.5	500.7	494.2	6.47	77.385		
2,000.0	1,972.6	1,849.2	1,830.4	6.1	5.0	167.29	263.9	-50.5	549.7	542.8	6.82	80.650		
2,100.0	2,069.2	1,928.0	1,906.2	6.6	5.4	167.20	284.8	-55.8	599.8	592.7	7.16	83.767		
2,200.0	2,165.8	2,005.6	1,980.5	7.0	5.8	167.09	306.4	-61.2	651.1	643.6	7.51	86.754		
2,300.0	2,262.3	2,082.0	2,053.4	7.5	6.2	166.98	328.6	-66.7	703.6	695.7	7.85	89.622		
2,400.0	2,358.9	2,157.2	2,124.8	8.0	6.7	166.86	351.4	-72.4	757.1	748.9	8.19	92.387		
2,500.0	2,455.5	2,231.1	2,194.7	8.5	7.1	166.73	374.6	-78.3	811.7	803.1	8.54	95.063		
2,600.0	2,552.0	2,303.8	2,263.2	8.9	7.5	166.61	398.4	-84.2	867.3	858.4	8.88	97.659		
2,700.0	2,648.6	2,383.4	2,337.9	9.4	8.0	166.47	425.1	-90.9	923.7	914.4	9.24	99.991		
2,800.0	2,745.2	2,466.0	2,415.4	9.9	8.5	166.35	452.8	-97.8	980.1	970.5	9.60	102.089		
2,900.0	2,841.7	2,548.5	2,492.8	10.4	9.0	166.23	480.5	-104.8	1,036.5	1,026.6	9.96	104.030		
3,000.0	2,938.3	2,631.1	2,570.3	10.9	9.5	166.13	508.2	-111.7	1,093.0	1,082.6	10.33	105.831		
3,100.0	3,034.9	2,713.6	2,647.7	11.4	10.0	166.04	535.9	-118.6	1,149.4	1,138.7	10.69	107.506		
3,200.0	3,131.4	2,796.2	2,725.2	11.8	10.5	165.96	563.6	-125.5	1,205.8	1,194.8	11.06	109.068		
3,300.0	3,228.0	2,878.7	2,802.6	12.3	11.0	165.89	591.3	-132.5	1,262.3	1,250.8	11.42	110.527		
3,400.0	3,324.6	2,961.2	2,880.1	12.8	11.6	165.82	619.0	-139.4	1,318.7	1,306.9	11.79	111.893		
3,500.0	3,421.1	3,043.8	2,957.5	13.3	12.1	165.76	646.7	-146.3	1,375.1	1,363.0	12.15	113.176		
3,600.0	3,517.7	3,126.3	3,035.0	13.8	12.6	165.70	674.4	-153.3	1,431.6	1,419.1	12.52	114.382		
3,700.0	3,614.3	3,208.9	3,112.4	14.3	13.1	165.65	702.1	-160.2	1,488.0	1,475.1	12.88	115.518		
3,800.0	3,710.8	3,291.4	3,189.9	14.7	13.6	165.60	729.8	-167.1	1,544.5	1,531.2	13.25	116.589		
3,900.0	3,807.4	3,374.0	3,267.3	15.2	14.1	165.55	757.5	-174.1	1,600.9	1,587.3	13.61	117.602		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2C-18H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	0.00	51.0	0.0	51.0					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	51.0	0.0	51.0	50.7	0.30	167.936		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	51.0	0.0	51.0	50.3	0.65	78.131 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	168.04	51.0	0.0	51.9	50.9	1.00	51.762		
400.0	400.0	400.0	400.0	0.7	0.7	168.61	51.0	0.0	54.4	53.1	1.35	40.290		
500.0	499.9	498.9	498.9	0.9	0.8	169.10	51.8	-0.3	59.5	57.8	1.70	35.042		
600.0	599.7	597.6	597.5	1.1	1.0	169.21	54.2	-1.3	67.9	65.8	2.04	33.193 SF		
700.0	699.4	695.7	695.6	1.3	1.2	169.03	58.1	-2.8	79.5	77.1	2.39	33.252		
800.0	798.9	793.2	792.9	1.5	1.4	168.69	63.5	-5.0	94.4	91.7	2.74	34.485		
900.0	898.3	890.0	889.4	1.8	1.6	168.28	70.5	-7.7	112.6	109.5	3.09	36.486		
1,000.0	997.4	985.7	984.7	2.0	1.8	167.86	78.8	-11.1	133.9	130.5	3.43	39.010		
1,100.0	1,096.3	1,080.4	1,078.8	2.3	2.0	167.45	88.5	-14.9	158.4	154.6	3.78	41.902		
1,200.0	1,194.9	1,173.9	1,171.6	2.7	2.3	167.07	99.5	-19.3	186.1	181.9	4.13	45.058		
1,300.0	1,293.3	1,266.1	1,262.8	3.0	2.5	166.72	111.7	-24.2	216.8	212.3	4.48	48.403		
1,400.0	1,391.2	1,356.7	1,352.3	3.4	2.8	166.39	125.0	-29.5	250.5	245.7	4.83	51.884		
1,500.0	1,488.9	1,445.8	1,440.1	3.8	3.1	166.10	139.4	-35.2	287.2	282.0	5.18	55.461		
1,600.0	1,586.1	1,533.3	1,525.9	4.2	3.4	165.82	154.8	-41.3	326.8	321.3	5.53	59.108		
1,700.0	1,682.9	1,620.8	1,611.6	4.7	3.7	165.57	171.3	-47.9	369.2	363.3	5.88	62.750		
1,800.0	1,779.5	1,710.9	1,699.8	5.1	4.1	165.47	188.5	-54.7	412.6	406.4	6.26	65.951		
1,900.0	1,876.1	1,801.0	1,787.9	5.6	4.4	165.40	205.7	-61.6	456.1	449.4	6.63	68.764		
2,000.0	1,972.6	1,891.0	1,876.0	6.1	4.7	165.34	223.0	-68.5	499.5	492.5	7.01	71.260		
2,100.0	2,069.2	1,981.1	1,964.2	6.6	5.1	165.28	240.2	-75.3	543.0	535.6	7.39	73.488		
2,200.0	2,165.8	2,071.1	2,052.3	7.0	5.4	165.24	257.4	-82.2	586.5	578.7	7.77	75.489		
2,300.0	2,262.3	2,161.2	2,140.4	7.5	5.8	165.20	274.6	-89.0	629.9	621.8	8.15	77.295		
2,400.0	2,358.9	2,251.3	2,228.6	8.0	6.1	165.17	291.8	-95.9	673.4	664.9	8.53	78.932		
2,500.0	2,455.5	2,341.3	2,316.7	8.5	6.5	165.14	309.1	-102.7	716.8	707.9	8.91	80.423		
2,600.0	2,552.0	2,431.4	2,404.8	8.9	6.8	165.12	326.3	-109.6	760.3	751.0	9.30	81.786		
2,700.0	2,648.6	2,521.4	2,493.0	9.4	7.2	165.09	343.5	-116.4	803.8	794.1	9.68	83.037		
2,800.0	2,745.2	2,611.5	2,581.1	9.9	7.5	165.07	360.7	-123.3	847.2	837.2	10.06	84.189		
2,900.0	2,841.7	2,701.6	2,669.2	10.4	7.9	165.06	377.9	-130.2	890.7	880.2	10.45	85.252		
3,000.0	2,938.3	2,791.6	2,757.4	10.9	8.2	165.04	395.2	-137.0	934.2	923.3	10.83	86.237		
3,100.0	3,034.9	2,881.7	2,845.5	11.4	8.6	165.02	412.4	-143.9	977.6	966.4	11.22	87.151		
3,200.0	3,131.4	2,971.7	2,933.6	11.8	8.9	165.01	429.6	-150.7	1,021.1	1,009.5	11.60	88.003		
3,300.0	3,228.0	3,061.8	3,021.8	12.3	9.3	165.00	446.8	-157.6	1,064.5	1,052.6	11.99	88.798		
3,400.0	3,324.6	3,151.9	3,109.9	12.8	9.7	164.99	464.0	-164.4	1,108.0	1,095.6	12.37	89.542		
3,500.0	3,421.1	3,241.9	3,198.0	13.3	10.0	164.98	481.3	-171.3	1,151.5	1,138.7	12.76	90.239		
3,600.0	3,517.7	3,332.0	3,286.2	13.8	10.4	164.97	498.5	-178.2	1,194.9	1,181.8	13.15	90.893		
3,700.0	3,614.3	3,422.1	3,374.3	14.3	10.7	164.96	515.7	-185.0	1,238.4	1,224.9	13.53	91.509		
3,800.0	3,710.8	3,512.1	3,462.4	14.7	11.1	164.95	532.9	-191.9	1,281.9	1,267.9	13.92	92.090		
3,900.0	3,807.4	3,602.2	3,550.6	15.2	11.4	164.94	550.1	-198.7	1,325.3	1,311.0	14.31	92.638		
4,000.0	3,904.0	3,692.2	3,638.7	15.7	11.8	164.93	567.4	-205.6	1,368.8	1,354.1	14.69	93.157		
4,100.0	4,000.5	3,812.0	3,756.1	16.2	12.3	164.93	589.6	-214.4	1,411.9	1,396.7	15.13	93.289		
4,200.0	4,097.1	3,985.9	3,927.9	16.7	12.8	165.05	614.5	-224.3	1,450.8	1,435.2	15.65	92.680		
4,300.0	4,193.7	4,167.8	4,108.9	17.2	13.1	165.32	630.1	-230.5	1,484.4	1,468.2	16.16	91.861		
4,400.0	4,290.2	4,349.2	4,290.2	17.6	13.4	165.71	635.0	-232.5	1,512.1	1,495.5	16.63	90.902		
4,500.0	4,386.8	4,445.8	4,386.8	18.1	13.5	165.95	635.0	-232.5	1,537.4	1,520.4	16.98	90.538		
4,600.0	4,483.4	4,542.3	4,483.4	18.6	13.6	166.18	635.0	-232.5	1,562.6	1,545.3	17.32	90.195		
4,700.0	4,579.9	4,638.9	4,579.9	19.1	13.7	166.41	635.0	-232.5	1,587.9	1,570.2	17.67	89.873		
4,800.0	4,676.5	4,735.5	4,676.5	19.6	13.8	166.62	635.0	-232.5	1,613.2	1,595.2	18.01	89.568		

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 Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2D-18H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	40.1	0.0	40.1					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	40.1	0.0	40.1	39.8	0.30	131.949		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	40.1	0.0	40.1	39.4	0.65	61.388 CC, ES		
300.0	300.0	299.5	299.5	0.5	0.5	167.26	40.7	-0.6	41.6	40.6	1.00	41.501		
400.0	400.0	398.8	398.8	0.7	0.7	165.76	42.6	-2.4	46.0	44.7	1.35	34.055		
500.0	499.9	497.9	497.7	0.9	0.9	163.82	45.7	-5.3	53.5	51.8	1.70	31.400		
600.0	599.7	596.5	596.2	1.1	1.1	161.86	50.0	-9.5	64.1	62.0	2.06	31.083		
700.0	699.4	694.6	694.0	1.3	1.3	160.12	55.5	-14.7	77.7	75.2	2.42	32.062		
800.0	798.9	792.0	790.9	1.5	1.5	158.67	62.2	-21.1	94.3	91.5	2.79	33.809		
900.0	898.3	888.5	886.9	1.8	1.7	157.48	69.9	-28.6	114.0	110.8	3.16	36.028		
1,000.0	997.4	984.2	981.7	2.0	2.0	156.53	78.8	-37.0	136.6	133.0	3.54	38.537		
1,100.0	1,096.3	1,078.8	1,075.3	2.3	2.3	155.75	88.7	-46.5	162.1	158.2	3.93	41.220		
1,200.0	1,194.9	1,172.2	1,167.5	2.7	2.6	155.11	99.5	-56.9	190.6	186.3	4.33	43.999		
1,300.0	1,293.3	1,264.3	1,258.2	3.0	2.9	154.57	111.3	-68.1	221.9	217.1	4.74	46.820		
1,400.0	1,391.2	1,355.1	1,347.3	3.4	3.2	154.11	123.9	-80.2	255.9	250.8	5.16	49.646		
1,500.0	1,488.9	1,444.4	1,434.6	3.8	3.6	153.71	137.3	-93.0	292.8	287.2	5.58	52.451		
1,600.0	1,586.1	1,532.1	1,520.1	4.2	3.9	153.35	151.5	-106.5	332.2	326.2	6.02	55.216		
1,700.0	1,682.9	1,618.2	1,603.8	4.7	4.3	153.02	166.3	-120.7	374.3	367.9	6.46	57.938		
1,800.0	1,779.5	1,708.0	1,690.8	5.1	4.7	152.92	182.2	-135.9	417.9	410.9	6.93	60.267		
1,900.0	1,876.1	1,798.0	1,778.1	5.6	5.1	152.84	198.2	-151.2	461.4	454.0	7.41	62.256		
2,000.0	1,972.6	1,888.1	1,865.4	6.1	5.5	152.78	214.2	-166.5	504.9	497.1	7.89	63.976		
2,100.0	2,069.2	1,988.1	1,962.4	6.6	6.0	152.76	231.5	-183.1	548.0	539.6	8.39	65.287		
2,200.0	2,165.8	2,098.5	2,070.4	7.0	6.4	152.94	248.0	-198.8	588.4	579.5	8.90	66.106		
2,300.0	2,262.3	2,211.9	2,182.3	7.5	6.7	153.32	261.8	-212.0	625.7	616.3	9.39	66.615		
2,400.0	2,358.9	2,328.2	2,297.6	8.0	7.0	153.88	272.6	-222.4	659.8	649.9	9.87	66.875		
2,500.0	2,455.5	2,447.1	2,416.0	8.5	7.3	154.59	280.1	-229.6	690.6	680.3	10.32	66.940		
2,600.0	2,552.0	2,568.2	2,537.0	8.9	7.4	155.47	284.1	-233.4	718.1	707.3	10.74	66.859		
2,700.0	2,648.6	2,679.8	2,648.6	9.4	7.6	156.39	284.8	-234.0	742.5	731.4	11.13	66.725		
2,800.0	2,745.2	2,776.4	2,745.2	9.9	7.7	157.16	284.8	-234.0	766.5	755.0	11.49	66.713		
2,900.0	2,841.7	2,872.9	2,841.7	10.4	7.8	157.89	284.8	-234.0	790.6	778.8	11.85	66.740		
3,000.0	2,938.3	2,969.5	2,938.3	10.9	7.9	158.58	284.8	-234.0	814.9	802.7	12.20	66.798		
3,100.0	3,034.9	3,066.1	3,034.9	11.4	8.0	159.22	284.8	-234.0	839.2	826.7	12.55	66.882		
3,200.0	3,131.4	3,162.6	3,131.4	11.8	8.1	159.83	284.8	-234.0	863.7	850.8	12.89	66.985		
3,300.0	3,228.0	3,259.2	3,228.0	12.3	8.2	160.41	284.8	-234.0	888.2	875.0	13.24	67.104		
3,400.0	3,324.6	3,355.8	3,324.6	12.8	8.3	160.95	284.8	-234.0	912.8	899.2	13.58	67.235		
3,500.0	3,421.1	3,452.4	3,421.1	13.3	8.5	161.47	284.8	-234.0	937.5	923.6	13.91	67.376		
3,600.0	3,517.7	3,548.9	3,517.7	13.8	8.6	161.96	284.8	-234.0	962.2	948.0	14.25	67.524		
3,700.0	3,614.3	3,645.5	3,614.3	14.3	8.7	162.42	284.8	-234.0	987.0	972.4	14.58	67.677		
3,800.0	3,710.8	3,742.1	3,710.8	14.7	8.8	162.87	284.8	-234.0	1,011.9	997.0	14.92	67.834		
3,900.0	3,807.4	3,838.6	3,807.4	15.2	9.0	163.29	284.8	-234.0	1,036.8	1,021.6	15.25	67.994		
4,000.0	3,904.0	3,935.2	3,904.0	15.7	9.1	163.69	284.8	-234.0	1,061.8	1,046.2	15.58	68.154		
4,100.0	4,000.5	4,031.8	4,000.5	16.2	9.2	164.07	284.8	-234.0	1,086.8	1,070.9	15.91	68.315		
4,200.0	4,097.1	4,128.3	4,097.1	16.7	9.3	164.44	284.8	-234.0	1,111.9	1,095.6	16.24	68.475		
4,300.0	4,193.7	4,224.9	4,193.7	17.2	9.5	164.79	284.8	-234.0	1,137.0	1,120.4	16.57	68.635		
4,400.0	4,290.2	4,321.5	4,290.2	17.6	9.6	165.12	284.8	-234.0	1,162.1	1,145.2	16.89	68.793		
4,500.0	4,386.8	4,418.0	4,386.8	18.1	9.7	165.45	284.8	-234.0	1,187.3	1,170.1	17.22	68.948		
4,600.0	4,483.4	4,514.6	4,483.4	18.6	9.9	165.75	284.8	-234.0	1,212.5	1,195.0	17.55	69.102		
4,700.0	4,579.9	4,611.2	4,579.9	19.1	10.0	166.05	284.8	-234.0	1,237.8	1,219.9	17.87	69.253		
4,800.0	4,676.5	4,707.7	4,676.5	19.6	10.1	166.33	284.8	-234.0	1,263.0	1,244.8	18.20	69.402		
4,900.0	4,773.1	4,804.3	4,773.1	20.1	10.3	166.61	284.8	-234.0	1,288.3	1,269.8	18.52	69.547		
5,000.0	4,869.7	4,900.9	4,869.7	20.5	10.4	166.91	284.8	-234.0	1,313.4	1,294.5	18.88	69.573		
5,100.0	4,967.1	4,998.3	4,967.1	21.0	10.6	167.24	284.8	-234.0	1,335.6	1,316.4	19.26	69.363		

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 Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2D-18H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,065.2	5,096.4	5,065.2	21.3	10.7	167.50	284.8	-234.0	1,354.6	1,335.0	19.62	69.035		
5,300.0	5,163.9	5,195.1	5,163.9	21.6	10.8	167.71	284.8	-234.0	1,370.2	1,350.2	19.98	68.596		
5,400.0	5,263.1	5,294.3	5,263.1	21.9	11.0	167.88	284.8	-234.0	1,382.4	1,362.1	20.32	68.049		
5,500.0	5,362.7	5,393.9	5,362.7	22.0	11.1	167.99	284.8	-234.0	1,391.3	1,370.6	20.64	67.402		
5,600.0	5,462.5	5,493.7	5,462.5	22.2	11.3	168.06	284.8	-234.0	1,396.7	1,375.8	20.95	66.658		
5,700.0	5,562.5	5,593.7	5,562.5	22.3	11.4	168.09	284.8	-234.0	1,398.8	1,377.5	21.25	65.823		
5,800.0	5,662.5	5,693.7	5,662.5	22.3	11.6	0.25	284.8	-234.0	1,398.8	1,366.0	32.75	42.709		
5,900.0	5,762.5	5,793.7	5,762.5	22.4	11.7	0.25	284.8	-234.0	1,398.8	1,365.8	32.99	42.397		
6,000.0	5,862.5	5,893.7	5,862.5	22.5	11.9	0.25	284.8	-234.0	1,398.8	1,365.5	33.24	42.087		
6,100.0	5,962.5	5,993.7	5,962.5	22.6	12.0	0.25	284.8	-234.0	1,398.8	1,365.3	33.48	41.780		
6,200.0	6,062.5	6,093.7	6,062.5	22.7	12.2	0.25	284.8	-234.0	1,398.8	1,365.1	33.73	41.475		
6,300.0	6,162.5	6,193.7	6,162.5	22.7	12.3	0.25	284.8	-234.0	1,398.8	1,364.8	33.97	41.174		
6,400.0	6,262.5	6,293.7	6,262.5	22.8	12.5	0.25	284.8	-234.0	1,398.8	1,364.6	34.22	40.875		
6,500.0	6,362.5	6,393.7	6,362.5	22.9	12.6	0.25	284.8	-234.0	1,398.8	1,364.3	34.47	40.578		
6,600.0	6,462.4	6,493.1	6,461.8	23.0	12.8	-89.70	284.8	-231.1	1,398.8	1,374.7	24.13	57.973		
6,700.0	6,561.4	6,591.9	6,559.3	23.0	12.8	-89.62	284.8	-215.4	1,398.8	1,374.6	24.24	57.697		
6,800.0	6,657.4	6,690.5	6,653.4	23.0	12.8	-89.54	284.8	-186.5	1,398.8	1,374.6	24.26	57.670		
6,900.0	6,748.7	6,788.8	6,742.5	23.0	12.8	-89.47	284.8	-145.1	1,398.8	1,374.6	24.24	57.699		
7,000.0	6,833.5	6,886.9	6,825.0	23.0	12.8	-89.42	284.8	-92.0	1,398.8	1,374.5	24.33	57.498		
7,100.0	6,910.0	6,984.9	6,899.3	23.1	12.9	-89.37	284.8	-28.3	1,398.9	1,374.2	24.67	56.706		
7,200.0	6,976.9	7,082.7	6,964.1	23.2	13.2	-89.34	284.8	44.9	1,398.9	1,373.4	25.44	54.993		
7,300.0	7,032.8	7,180.5	7,018.3	23.4	13.7	-89.32	284.8	126.1	1,398.9	1,372.1	26.78	52.229		
7,400.0	7,076.6	7,278.2	7,061.0	23.8	14.7	-89.31	284.8	214.0	1,398.9	1,370.1	28.79	48.591		
7,500.0	7,107.5	7,375.9	7,091.3	24.3	16.0	-89.32	284.8	306.8	1,398.9	1,367.4	31.44	44.493		
7,600.0	7,124.9	7,473.6	7,108.7	25.1	17.5	-89.33	284.8	402.9	1,398.9	1,364.2	34.64	40.385		
7,693.3	7,130.8	7,565.4	7,113.4	25.9	19.1	-89.29	284.8	494.5	1,398.9	1,360.9	38.00	36.814		
7,700.0	7,129.3	7,572.1	7,113.5	26.0	19.3	-89.35	284.8	501.2	1,398.9	1,360.6	38.25	36.573		
7,800.0	7,131.1	7,672.1	7,115.3	27.2	21.2	-89.35	284.8	601.2	1,398.9	1,356.7	42.16	33.177		
7,900.0	7,132.8	7,772.1	7,117.0	28.6	23.2	-89.35	284.8	701.2	1,398.9	1,352.6	46.27	30.232		
8,000.0	7,134.6	7,872.1	7,118.8	30.2	25.3	-89.35	284.8	801.2	1,398.9	1,348.3	50.53	27.684		
8,100.0	7,136.3	7,972.1	7,120.5	31.9	27.5	-89.35	284.8	901.2	1,398.9	1,344.0	54.90	25.478		
8,200.0	7,138.1	8,072.1	7,122.3	33.7	29.7	-89.35	284.8	1,001.1	1,398.9	1,339.5	59.37	23.562		
8,300.0	7,139.8	8,172.1	7,124.0	35.7	32.0	-89.35	284.8	1,101.1	1,398.9	1,335.0	63.90	21.890		
8,400.0	7,141.6	8,272.1	7,125.8	37.7	34.2	-89.35	284.9	1,201.1	1,398.9	1,330.4	68.50	20.422		
8,500.0	7,143.3	8,372.1	7,127.5	39.8	36.6	-89.35	284.9	1,301.1	1,398.9	1,325.7	73.14	19.127		
8,600.0	7,145.0	8,472.1	7,129.3	41.9	38.9	-89.35	284.9	1,401.1	1,398.9	1,321.1	77.81	17.977		
8,700.0	7,146.8	8,572.1	7,131.0	44.1	41.2	-89.35	284.9	1,501.1	1,398.9	1,316.4	82.52	16.951		
8,800.0	7,148.5	8,672.1	7,132.7	46.3	43.6	-89.35	284.9	1,601.0	1,398.9	1,311.6	87.26	16.032		
8,900.0	7,150.3	8,772.1	7,134.5	48.5	46.0	-89.35	284.9	1,701.0	1,398.9	1,306.9	92.02	15.203		
9,000.0	7,152.0	8,872.1	7,136.2	50.8	48.3	-89.35	284.9	1,801.0	1,398.9	1,302.1	96.79	14.452		
9,100.0	7,153.8	8,972.1	7,138.0	53.1	50.7	-89.35	284.9	1,901.0	1,398.9	1,297.3	101.59	13.771		
9,200.0	7,155.5	9,072.1	7,139.7	55.4	53.1	-89.35	284.9	2,001.0	1,398.9	1,292.5	106.39	13.148		
9,300.0	7,157.3	9,172.1	7,141.5	57.7	55.5	-89.35	284.9	2,101.0	1,398.9	1,287.7	111.21	12.579		
9,400.0	7,159.0	9,272.1	7,143.2	60.0	58.0	-89.35	284.9	2,201.0	1,398.9	1,282.8	116.04	12.055		
9,500.0	7,160.8	9,372.1	7,145.0	62.4	60.4	-89.35	284.9	2,300.9	1,398.9	1,278.0	120.88	11.572		
9,600.0	7,162.5	9,472.1	7,146.7	64.7	62.8	-89.35	284.9	2,400.9	1,398.9	1,273.2	125.73	11.126		
9,700.0	7,164.2	9,572.1	7,148.5	67.1	65.2	-89.35	284.9	2,500.9	1,398.9	1,268.3	130.59	10.712		
9,800.0	7,166.0	9,672.1	7,150.2	69.4	67.6	-89.35	284.9	2,600.9	1,398.9	1,263.4	135.45	10.328		
9,900.0	7,167.7	9,772.1	7,151.9	71.8	70.1	-89.35	284.9	2,700.9	1,398.9	1,258.6	140.32	9.970		
10,000.0	7,169.5	9,872.1	7,153.7	74.2	72.5	-89.35	284.9	2,800.9	1,398.9	1,253.7	145.19	9.635		
10,100.0	7,171.2	9,972.1	7,155.4	76.6	74.9	-89.35	284.9	2,900.8	1,398.9	1,248.8	150.07	9.322		
10,200.0	7,173.0	10,072.1	7,157.2	79.0	77.4	-89.35	285.0	3,000.8	1,398.9	1,243.9	154.95	9.028		

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 Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2D-18H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
10,300.0	7,174.7	10,172.1	7,158.9	81.4	79.8	-89.35	285.0	3,100.8	1,398.9	1,239.1	159.84	8.752		
10,400.0	7,176.5	10,272.1	7,160.7	83.8	82.3	-89.35	285.0	3,200.8	1,398.9	1,234.2	164.73	8.492		
10,500.0	7,178.2	10,372.1	7,162.4	86.2	84.7	-89.35	285.0	3,300.8	1,398.9	1,229.3	169.62	8.247		
10,600.0	7,180.0	10,472.1	7,164.2	88.6	87.2	-89.35	285.0	3,400.8	1,398.9	1,224.4	174.52	8.016		
10,700.0	7,181.7	10,572.1	7,165.9	91.0	89.6	-89.35	285.0	3,500.8	1,398.9	1,219.5	179.42	7.797		
10,800.0	7,183.4	10,672.1	7,167.6	93.5	92.1	-89.35	285.0	3,600.7	1,398.9	1,214.6	184.32	7.590		
10,900.0	7,185.2	10,772.1	7,169.4	95.9	94.5	-89.35	285.0	3,700.7	1,398.9	1,209.7	189.22	7.393		
11,000.0	7,186.9	10,872.1	7,171.1	98.3	97.0	-89.35	285.0	3,800.7	1,398.9	1,204.8	194.13	7.206		
11,100.0	7,188.7	10,972.1	7,172.9	100.7	99.4	-89.35	285.0	3,900.7	1,398.9	1,199.9	199.04	7.028		
11,200.0	7,190.4	11,072.1	7,174.6	103.2	101.9	-89.35	285.0	4,000.7	1,398.9	1,195.0	203.95	6.859		
11,300.0	7,192.2	11,172.1	7,176.4	105.6	104.3	-89.35	285.0	4,100.7	1,398.9	1,190.0	208.86	6.698		
11,400.0	7,193.9	11,272.1	7,178.1	108.0	106.8	-89.35	285.0	4,200.6	1,398.9	1,185.1	213.78	6.544		
11,500.0	7,195.7	11,372.1	7,179.9	110.5	109.2	-89.35	285.0	4,300.6	1,398.9	1,180.2	218.69	6.397		
11,600.0	7,197.4	11,472.1	7,181.6	112.9	111.7	-89.35	285.0	4,400.6	1,398.9	1,175.3	223.61	6.256		
11,700.0	7,199.1	11,572.1	7,183.4	115.3	114.2	-89.35	285.0	4,500.6	1,398.9	1,170.4	228.53	6.121		
11,800.0	7,200.9	11,672.1	7,185.1	117.8	116.6	-89.35	285.0	4,600.6	1,398.9	1,165.5	233.45	5.992		
11,900.0	7,202.6	11,772.1	7,186.8	120.2	119.1	-89.35	285.0	4,700.6	1,398.9	1,160.5	238.37	5.869		
12,000.0	7,204.4	11,872.1	7,188.6	122.7	121.5	-89.35	285.1	4,800.6	1,398.9	1,155.6	243.29	5.750		
12,100.0	7,206.1	11,972.1	7,190.3	125.1	124.0	-89.35	285.1	4,900.5	1,398.9	1,150.7	248.21	5.636		
12,200.0	7,207.9	12,072.1	7,192.1	127.6	126.5	-89.35	285.1	5,000.5	1,398.9	1,145.8	253.13	5.526		
12,300.0	7,209.6	12,172.1	7,193.8	130.0	128.9	-89.35	285.1	5,100.5	1,398.9	1,140.9	258.06	5.421		
12,400.0	7,211.4	12,272.1	7,195.6	132.5	131.4	-89.35	285.1	5,200.5	1,398.9	1,135.9	262.98	5.319		
12,500.0	7,213.1	12,372.1	7,197.3	134.9	133.8	-89.35	285.1	5,300.5	1,398.9	1,131.0	267.91	5.222		
12,600.0	7,214.9	12,472.1	7,199.1	137.4	136.3	-89.35	285.1	5,400.5	1,398.9	1,126.1	272.84	5.127		
12,700.0	7,216.6	12,572.1	7,200.8	139.8	138.8	-89.35	285.1	5,500.5	1,398.9	1,121.2	277.76	5.036		
12,800.0	7,218.3	12,672.1	7,202.6	142.3	141.2	-89.35	285.1	5,600.4	1,398.9	1,116.2	282.69	4.949		
12,900.0	7,220.1	12,772.1	7,204.3	144.7	143.7	-89.35	285.1	5,700.4	1,398.9	1,111.3	287.62	4.864		
13,000.0	7,221.8	12,872.1	7,206.0	147.2	146.2	-89.35	285.1	5,800.4	1,398.9	1,106.4	292.55	4.782		
13,100.0	7,223.6	12,972.1	7,207.8	149.6	148.6	-89.35	285.1	5,900.4	1,398.9	1,101.4	297.48	4.703		
13,200.0	7,225.3	13,072.1	7,209.5	152.1	151.1	-89.35	285.1	6,000.4	1,398.9	1,096.5	302.41	4.626		
13,300.0	7,227.1	13,172.1	7,211.3	154.5	153.6	-89.35	285.1	6,100.4	1,398.9	1,091.6	307.34	4.552		
13,400.0	7,228.8	13,272.1	7,213.0	157.0	156.0	-89.35	285.1	6,200.3	1,398.9	1,086.7	312.28	4.480		
13,500.0	7,230.6	13,372.1	7,214.8	159.4	158.5	-89.35	285.1	6,300.3	1,398.9	1,081.7	317.21	4.410		
13,600.0	7,232.3	13,472.1	7,216.5	161.9	161.0	-89.35	285.1	6,400.3	1,398.9	1,076.8	322.14	4.343		
13,700.0	7,234.1	13,572.1	7,218.3	164.3	163.4	-89.35	285.2	6,500.3	1,398.9	1,071.9	327.07	4.277		
13,800.0	7,235.8	13,672.1	7,220.0	166.8	165.9	-89.35	285.2	6,600.3	1,398.9	1,066.9	332.01	4.214		
13,900.0	7,237.5	13,772.1	7,221.8	169.3	168.4	-89.35	285.2	6,700.3	1,398.9	1,062.0	336.94	4.152		
14,000.0	7,239.3	13,872.1	7,223.5	171.7	170.8	-89.35	285.2	6,800.3	1,398.9	1,057.1	341.88	4.092		
14,100.0	7,241.0	13,972.1	7,225.2	174.2	173.3	-89.35	285.2	6,900.2	1,398.9	1,052.1	346.81	4.034		
14,200.0	7,242.8	14,072.1	7,227.0	176.6	175.8	-89.35	285.2	7,000.2	1,398.9	1,047.2	351.75	3.977		
14,300.0	7,244.5	14,172.1	7,228.7	179.1	178.2	-89.35	285.2	7,100.2	1,398.9	1,042.3	356.68	3.922		
14,346.1	7,245.3	14,218.3	7,229.5	180.2	179.4	-89.35	285.2	7,146.3	1,398.9	1,040.0	358.96	3.897		
14,384.5	7,246.0	14,244.8	7,230.0	181.2	180.0	-89.35	285.2	7,172.9	1,399.0	1,038.4	360.56	3.880 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2E-18H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	0.00	32.8	0.0	32.8					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	32.8	0.0	32.8	32.5	0.30	107.959		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	32.8	0.0	32.8	32.1	0.65	50.227 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	168.15	32.8	0.0	33.6	32.6	1.00	33.580		
400.0	400.0	400.0	400.0	0.7	0.7	169.00	32.8	0.0	36.2	34.9	1.35	26.806		
500.0	499.9	500.2	500.1	0.9	0.9	169.04	32.4	-0.8	40.1	38.4	1.70	23.605		
600.0	599.7	600.3	600.3	1.1	1.0	167.45	31.4	-3.2	45.1	43.0	2.05	21.963		
700.0	699.4	700.4	700.3	1.3	1.2	164.81	29.8	-7.3	51.2	48.7	2.41	21.197		
800.0	798.9	800.4	800.1	1.5	1.4	161.59	27.4	-12.9	58.5	55.7	2.79	20.970		
900.0	898.3	900.2	899.6	1.8	1.6	158.17	24.4	-20.2	67.1	63.9	3.18	21.084		
1,000.0	997.4	999.9	998.8	2.0	1.8	154.79	20.8	-29.0	77.2	73.6	3.61	21.409		
1,100.0	1,096.3	1,099.2	1,097.5	2.3	2.1	151.71	16.5	-39.2	88.9	84.8	4.06	21.893		
1,200.0	1,194.9	1,198.3	1,195.9	2.7	2.3	149.68	12.2	-49.6	102.2	97.7	4.53	22.570		
1,300.0	1,293.3	1,297.1	1,294.1	3.0	2.6	148.54	7.9	-60.0	117.1	112.0	5.01	23.380		
1,400.0	1,391.2	1,395.8	1,392.1	3.4	2.8	148.04	3.5	-70.4	133.4	127.9	5.49	24.286		
1,500.0	1,488.9	1,494.2	1,489.9	3.8	3.1	147.98	-0.8	-80.8	151.2	145.3	5.99	25.266		
1,600.0	1,586.1	1,592.3	1,587.4	4.2	3.3	148.21	-5.1	-91.1	170.5	164.0	6.48	26.309		
1,700.0	1,682.9	1,690.1	1,684.5	4.7	3.6	148.66	-9.3	-101.4	191.3	184.3	6.98	27.406		
1,800.0	1,779.5	1,787.7	1,781.5	5.1	3.8	149.23	-13.6	-111.7	212.8	205.4	7.48	28.450		
1,900.0	1,876.1	1,885.3	1,878.5	5.6	4.1	149.71	-17.9	-122.0	234.4	226.4	7.99	29.358		
2,000.0	1,972.6	1,983.0	1,975.5	6.1	4.3	150.10	-22.1	-132.3	256.0	247.5	8.49	30.155		
2,100.0	2,069.2	2,080.6	2,072.5	6.6	4.6	150.43	-26.4	-142.5	277.7	268.7	9.00	30.859		
2,200.0	2,165.8	2,178.2	2,169.5	7.0	4.8	150.72	-30.7	-152.8	299.3	289.8	9.51	31.486		
2,300.0	2,262.3	2,275.8	2,266.5	7.5	5.1	150.96	-35.0	-163.1	320.9	310.9	10.01	32.047		
2,400.0	2,358.9	2,373.5	2,363.4	8.0	5.3	151.18	-39.2	-173.4	342.5	332.0	10.52	32.553		
2,500.0	2,455.5	2,471.1	2,460.4	8.5	5.6	151.37	-43.5	-183.7	364.2	353.1	11.03	33.011		
2,600.0	2,552.0	2,568.7	2,557.4	8.9	5.8	151.54	-47.8	-193.9	385.8	374.3	11.54	33.427		
2,700.0	2,648.6	2,666.3	2,654.4	9.4	6.1	151.69	-52.0	-204.2	407.5	395.4	12.05	33.806		
2,800.0	2,745.2	2,764.0	2,751.4	9.9	6.4	151.82	-56.3	-214.5	429.1	416.6	12.56	34.154		
2,900.0	2,841.7	2,860.2	2,847.1	10.4	6.6	152.05	-60.2	-223.9	450.9	437.8	13.04	34.585		
3,000.0	2,938.3	2,955.5	2,942.1	10.9	6.8	152.63	-62.9	-230.4	473.1	459.6	13.43	35.217		
3,100.0	3,034.9	3,050.2	3,036.7	11.4	6.9	153.52	-64.4	-234.0	495.8	482.0	13.75	36.045		
3,200.0	3,131.4	3,144.9	3,131.4	11.8	7.1	154.67	-64.7	-234.7	519.2	505.1	14.02	37.031		
3,300.0	3,228.0	3,241.5	3,228.0	12.3	7.2	155.84	-64.7	-234.7	542.9	528.6	14.27	38.037		
3,400.0	3,324.6	3,338.0	3,324.6	12.8	7.3	156.90	-64.7	-234.7	566.8	552.3	14.53	39.014		
3,500.0	3,421.1	3,434.6	3,421.1	13.3	7.5	157.89	-64.7	-234.7	590.9	576.1	14.79	39.960		
3,600.0	3,517.7	3,531.2	3,517.7	13.8	7.6	158.79	-64.7	-234.7	615.2	600.1	15.05	40.875		
3,700.0	3,614.3	3,627.7	3,614.3	14.3	7.7	159.63	-64.7	-234.7	639.6	624.3	15.32	41.759		
3,800.0	3,710.8	3,724.3	3,710.8	14.7	7.9	160.41	-64.7	-234.7	664.1	648.5	15.58	42.611		
3,900.0	3,807.4	3,820.9	3,807.4	15.2	8.0	161.13	-64.7	-234.7	688.7	672.8	15.86	43.434		
4,000.0	3,904.0	3,917.4	3,904.0	15.7	8.1	161.80	-64.7	-234.7	713.4	697.3	16.13	44.227		
4,100.0	4,000.5	4,014.0	4,000.5	16.2	8.3	162.43	-64.7	-234.7	738.2	721.8	16.41	44.990		
4,200.0	4,097.1	4,110.6	4,097.1	16.7	8.4	163.02	-64.7	-234.7	763.1	746.4	16.69	45.726		
4,300.0	4,193.7	4,207.1	4,193.7	17.2	8.6	163.57	-64.7	-234.7	788.1	771.1	16.97	46.434		
4,400.0	4,290.2	4,303.7	4,290.2	17.6	8.7	164.09	-64.7	-234.7	813.1	795.8	17.26	47.116		
4,500.0	4,386.8	4,400.3	4,386.8	18.1	8.9	164.57	-64.7	-234.7	838.1	820.6	17.54	47.773		
4,600.0	4,483.4	4,496.8	4,483.4	18.6	9.0	165.03	-64.7	-234.7	863.3	845.4	17.83	48.405		
4,700.0	4,579.9	4,593.4	4,579.9	19.1	9.2	165.46	-64.7	-234.7	888.4	870.3	18.13	49.014		
4,800.0	4,676.5	4,690.0	4,676.5	19.6	9.3	165.87	-64.7	-234.7	913.7	895.2	18.42	49.601		
4,900.0	4,773.1	4,786.5	4,773.1	20.1	9.5	166.26	-64.7	-234.7	938.9	920.2	18.72	50.167		
5,000.0	4,869.7	4,883.2	4,869.7	20.5	9.6	166.67	-64.7	-234.7	963.9	944.9	19.03	50.648		
5,100.0	4,967.1	4,980.5	4,967.1	21.0	9.8	167.08	-64.7	-234.7	986.2	966.8	19.37	50.922		

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 Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2E-18H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
5,200.0	5,065.2	5,078.6	5,065.2	21.3	9.9	167.41	-64.7	-234.7	1,005.1	985.4	19.69	51.035		
5,300.0	5,163.9	5,177.4	5,163.9	21.6	10.1	167.67	-64.7	-234.7	1,020.7	1,000.7	20.02	50.995		
5,400.0	5,263.1	5,276.6	5,263.1	21.9	10.2	167.87	-64.7	-234.7	1,033.0	1,012.6	20.33	50.812		
5,500.0	5,362.7	5,376.1	5,362.7	22.0	10.4	168.01	-64.7	-234.7	1,041.8	1,021.2	20.63	50.493		
5,600.0	5,462.5	5,476.0	5,462.5	22.2	10.5	168.10	-64.7	-234.7	1,047.3	1,026.3	20.93	50.045		
5,700.0	5,562.5	5,576.0	5,562.5	22.3	10.7	168.13	-64.7	-234.7	1,049.3	1,028.1	21.21	49.475		
5,800.0	5,662.5	5,676.0	5,662.5	22.3	10.8	0.29	-64.7	-234.7	1,049.3	1,017.3	31.98	32.807		
5,900.0	5,762.5	5,776.0	5,762.5	22.4	11.0	0.29	-64.7	-234.7	1,049.3	1,017.1	32.24	32.550		
6,000.0	5,862.5	5,876.0	5,862.5	22.5	11.2	0.29	-64.7	-234.7	1,049.3	1,016.8	32.49	32.296		
6,100.0	5,962.5	5,976.0	5,962.5	22.6	11.3	0.29	-64.7	-234.7	1,049.3	1,016.6	32.75	32.044		
6,200.0	6,062.5	6,076.0	6,062.5	22.7	11.5	0.29	-64.7	-234.7	1,049.3	1,016.3	33.00	31.795		
6,300.0	6,162.5	6,176.0	6,162.5	22.7	11.6	0.29	-64.7	-234.7	1,049.3	1,016.0	33.26	31.549		
6,327.5	6,190.0	6,203.5	6,190.0	22.8	11.7	0.29	-64.7	-234.7	1,049.3	1,016.0	33.33	31.482		
6,400.0	6,262.5	6,275.3	6,261.7	22.8	11.8	0.45	-64.7	-231.8	1,049.3	1,015.8	33.53	31.296		
6,500.0	6,362.5	6,371.9	6,357.1	22.9	11.8	1.28	-64.7	-216.6	1,049.6	1,015.7	33.84	31.016		
6,600.0	6,462.4	6,463.5	6,444.8	23.0	11.8	-87.32	-64.7	-190.5	1,050.5	1,027.0	23.54	44.623		
6,700.0	6,561.4	6,550.0	6,523.9	23.0	11.8	-85.91	-64.7	-155.7	1,052.2	1,028.7	23.49	44.787		
6,800.0	6,657.4	6,637.5	6,599.1	23.0	11.8	-84.52	-64.7	-111.1	1,054.4	1,030.9	23.50	44.871		
6,900.0	6,748.7	6,721.2	6,665.5	23.0	11.9	-83.26	-64.7	-60.1	1,057.0	1,033.3	23.65	44.687		
7,000.0	6,833.5	6,800.0	6,722.1	23.0	12.0	-82.15	-64.7	-5.4	1,059.7	1,035.7	24.02	44.123		
7,100.0	6,910.0	6,883.7	6,775.3	23.1	12.4	-81.10	-64.7	59.2	1,062.5	1,037.7	24.73	42.956		
7,200.0	6,976.9	6,963.1	6,818.5	23.2	13.0	-80.23	-64.7	125.7	1,065.0	1,039.2	25.81	41.267		
7,300.0	7,032.8	7,041.5	6,853.6	23.4	13.8	-79.52	-64.7	195.8	1,067.3	1,040.0	27.30	39.097		
7,400.0	7,076.6	7,119.3	6,880.7	23.8	14.8	-78.97	-64.7	268.7	1,069.1	1,039.9	29.22	36.590		
7,500.0	7,107.5	7,200.0	6,900.3	24.3	16.0	-78.59	-64.7	347.0	1,070.5	1,038.9	31.58	33.897		
7,600.0	7,124.9	7,273.5	6,910.4	25.1	17.3	-78.41	-64.7	419.7	1,071.1	1,037.0	34.18	31.338		
7,700.0	7,129.3	7,358.6	6,913.6	26.0	18.9	-78.38	-64.7	504.8	1,071.2	1,033.9	37.36	28.672		
7,800.0	7,131.1	7,458.6	6,915.3	27.2	20.9	-78.38	-64.7	604.7	1,071.2	1,030.0	41.24	25.977		
7,900.0	7,132.8	7,558.6	6,917.0	28.6	22.9	-78.38	-64.7	704.7	1,071.2	1,025.9	45.30	23.649		
8,000.0	7,134.6	7,658.6	6,918.8	30.2	25.1	-78.38	-64.7	804.7	1,071.2	1,021.7	49.50	21.642		
8,100.0	7,136.3	7,758.6	6,920.5	31.9	27.3	-78.38	-64.7	904.7	1,071.2	1,017.4	53.81	19.908		
8,200.0	7,138.1	7,858.6	6,922.3	33.7	29.5	-78.38	-64.7	1,004.7	1,071.2	1,013.0	58.20	18.405		
8,300.0	7,139.8	7,958.6	6,924.0	35.7	31.8	-78.38	-64.7	1,104.7	1,071.2	1,008.6	62.66	17.095		
8,400.0	7,141.6	8,058.6	6,925.8	37.7	34.1	-78.38	-64.7	1,204.6	1,071.2	1,004.0	67.18	15.946		
8,500.0	7,143.3	8,158.6	6,927.5	39.8	36.4	-78.38	-64.7	1,304.6	1,071.2	999.5	71.74	14.932		
8,600.0	7,145.0	8,258.6	6,929.3	41.9	38.8	-78.38	-64.7	1,404.6	1,071.2	994.9	76.33	14.034		
8,700.0	7,146.8	8,358.6	6,931.0	44.1	41.2	-78.38	-64.7	1,504.6	1,071.2	990.3	80.96	13.232		
8,800.0	7,148.5	8,458.6	6,932.8	46.3	43.5	-78.38	-64.7	1,604.6	1,071.2	985.6	85.60	12.514		
8,900.0	7,150.3	8,558.6	6,934.5	48.5	45.9	-78.38	-64.7	1,704.6	1,071.2	980.9	90.27	11.866		
9,000.0	7,152.0	8,658.6	6,936.2	50.8	48.3	-78.38	-64.7	1,804.6	1,071.2	976.3	94.96	11.281		
9,100.0	7,153.8	8,758.6	6,938.0	53.1	50.7	-78.38	-64.7	1,904.5	1,071.2	971.5	99.66	10.748		
9,200.0	7,155.5	8,858.6	6,939.7	55.4	53.1	-78.38	-64.7	2,004.5	1,071.2	966.8	104.38	10.263		
9,300.0	7,157.3	8,958.6	6,941.5	57.7	55.5	-78.38	-64.7	2,104.5	1,071.2	962.1	109.11	9.818		
9,400.0	7,159.0	9,058.6	6,943.2	60.0	57.9	-78.38	-64.7	2,204.5	1,071.2	957.4	113.84	9.409		
9,500.0	7,160.8	9,158.6	6,945.0	62.4	60.4	-78.38	-64.6	2,304.5	1,071.2	952.6	118.59	9.033		
9,600.0	7,162.5	9,258.6	6,946.7	64.7	62.8	-78.38	-64.6	2,404.5	1,071.2	947.9	123.34	8.685		
9,700.0	7,164.2	9,358.6	6,948.5	67.1	65.2	-78.38	-64.6	2,504.5	1,071.2	943.1	128.10	8.362		
9,800.0	7,166.0	9,458.6	6,950.2	69.4	67.7	-78.38	-64.6	2,604.4	1,071.2	938.3	132.87	8.062		
9,900.0	7,167.7	9,558.6	6,952.0	71.8	70.1	-78.38	-64.6	2,704.4	1,071.2	933.5	137.64	7.782		
10,000.0	7,169.5	9,658.6	6,953.7	74.2	72.5	-78.38	-64.6	2,804.4	1,071.2	928.8	142.42	7.521		
10,100.0	7,171.2	9,758.6	6,955.4	76.6	75.0	-78.38	-64.6	2,904.4	1,071.2	924.0	147.20	7.277		
10,200.0	7,173.0	9,858.6	6,957.2	79.0	77.4	-78.38	-64.6	3,004.4	1,071.2	919.2	151.99	7.048		

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Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2E-18H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
10,300.0	7,174.7	9,958.6	6,958.9	81.4	79.9	-78.38	-64.6	3,104.4	1,071.2	914.4	156.78	6.832		
10,400.0	7,176.5	10,058.6	6,960.7	83.8	82.3	-78.38	-64.6	3,204.3	1,071.2	909.6	161.57	6.630		
10,500.0	7,178.2	10,158.6	6,962.4	86.2	84.8	-78.38	-64.6	3,304.3	1,071.2	904.8	166.37	6.439		
10,600.0	7,180.0	10,258.6	6,964.2	88.6	87.2	-78.38	-64.6	3,404.3	1,071.2	900.0	171.17	6.258		
10,700.0	7,181.7	10,358.6	6,965.9	91.0	89.7	-78.38	-64.6	3,504.3	1,071.2	895.2	175.97	6.087		
10,800.0	7,183.4	10,458.6	6,967.7	93.5	92.1	-78.38	-64.6	3,604.3	1,071.2	890.4	180.78	5.925		
10,900.0	7,185.2	10,558.6	6,969.4	95.9	94.6	-78.38	-64.6	3,704.3	1,071.2	885.6	185.58	5.772		
11,000.0	7,186.9	10,658.6	6,971.1	98.3	97.0	-78.38	-64.6	3,804.3	1,071.2	880.8	190.39	5.626		
11,100.0	7,188.7	10,758.6	6,972.9	100.7	99.5	-78.38	-64.6	3,904.2	1,071.2	876.0	195.20	5.487		
11,200.0	7,190.4	10,858.6	6,974.6	103.2	101.9	-78.38	-64.6	4,004.2	1,071.2	871.2	200.01	5.355		
11,300.0	7,192.2	10,958.6	6,976.4	105.6	104.4	-78.38	-64.6	4,104.2	1,071.2	866.3	204.83	5.230		
11,400.0	7,193.9	11,058.6	6,978.1	108.0	106.9	-78.38	-64.6	4,204.2	1,071.2	861.5	209.64	5.109		
11,500.0	7,195.7	11,158.6	6,979.9	110.5	109.3	-78.38	-64.6	4,304.2	1,071.2	856.7	214.46	4.995		
11,600.0	7,197.4	11,258.6	6,981.6	112.9	111.8	-78.38	-64.6	4,404.2	1,071.2	851.9	219.28	4.885		
11,700.0	7,199.1	11,358.6	6,983.4	115.3	114.2	-78.38	-64.6	4,504.1	1,071.2	847.1	224.10	4.780		
11,800.0	7,200.9	11,458.6	6,985.1	117.8	116.7	-78.38	-64.6	4,604.1	1,071.2	842.2	228.92	4.679		
11,900.0	7,202.6	11,558.6	6,986.9	120.2	119.2	-78.38	-64.6	4,704.1	1,071.2	837.4	233.74	4.583		
12,000.0	7,204.4	11,658.6	6,988.6	122.7	121.6	-78.38	-64.6	4,804.1	1,071.2	832.6	238.56	4.490		
12,100.0	7,206.1	11,758.6	6,990.3	125.1	124.1	-78.38	-64.6	4,904.1	1,071.2	827.8	243.39	4.401		
12,200.0	7,207.9	11,858.6	6,992.1	127.6	126.5	-78.38	-64.6	5,004.1	1,071.1	822.9	248.21	4.315		
12,300.0	7,209.6	11,958.6	6,993.8	130.0	129.0	-78.38	-64.6	5,104.1	1,071.1	818.1	253.04	4.233		
12,400.0	7,211.4	12,058.6	6,995.6	132.5	131.5	-78.38	-64.6	5,204.0	1,071.1	813.3	257.86	4.154		
12,500.0	7,213.1	12,158.6	6,997.3	134.9	133.9	-78.38	-64.6	5,304.0	1,071.1	808.5	262.69	4.078		
12,600.0	7,214.9	12,258.6	6,999.1	137.4	136.4	-78.38	-64.6	5,404.0	1,071.1	803.6	267.52	4.004		
12,700.0	7,216.6	12,358.6	7,000.8	139.8	138.9	-78.38	-64.6	5,504.0	1,071.1	798.8	272.35	3.933		
12,800.0	7,218.3	12,458.6	7,002.6	142.3	141.3	-78.38	-64.6	5,604.0	1,071.1	794.0	277.18	3.864		
12,900.0	7,220.1	12,558.6	7,004.3	144.7	143.8	-78.38	-64.6	5,704.0	1,071.1	789.1	282.00	3.798		
13,000.0	7,221.8	12,658.6	7,006.1	147.2	146.3	-78.38	-64.6	5,803.9	1,071.1	784.3	286.83	3.734		
13,100.0	7,223.6	12,758.6	7,007.8	149.6	148.7	-78.38	-64.6	5,903.9	1,071.1	779.5	291.67	3.672		
13,200.0	7,225.3	12,858.6	7,009.5	152.1	151.2	-78.38	-64.6	6,003.9	1,071.1	774.6	296.50	3.613		
13,300.0	7,227.1	12,958.6	7,011.3	154.5	153.7	-78.38	-64.6	6,103.9	1,071.1	769.8	301.33	3.555		
13,400.0	7,228.8	13,058.6	7,013.0	157.0	156.1	-78.38	-64.5	6,203.9	1,071.1	765.0	306.16	3.499		
13,500.0	7,230.6	13,158.6	7,014.8	159.4	158.6	-78.38	-64.5	6,303.9	1,071.1	760.1	310.99	3.444		
13,600.0	7,232.3	13,258.6	7,016.5	161.9	161.1	-78.38	-64.5	6,403.9	1,071.1	755.3	315.83	3.391		
13,700.0	7,234.1	13,358.6	7,018.3	164.3	163.5	-78.38	-64.5	6,503.8	1,071.1	750.5	320.66	3.340		
13,800.0	7,235.8	13,458.6	7,020.0	166.8	166.0	-78.38	-64.5	6,603.8	1,071.1	745.6	325.49	3.291		
13,900.0	7,237.5	13,558.6	7,021.8	169.3	168.5	-78.38	-64.5	6,703.8	1,071.1	740.8	330.33	3.243		
14,000.0	7,239.3	13,658.6	7,023.5	171.7	170.9	-78.38	-64.5	6,803.8	1,071.1	736.0	335.16	3.196		
14,100.0	7,241.0	13,758.6	7,025.3	174.2	173.4	-78.38	-64.5	6,903.8	1,071.1	731.1	340.00	3.150		
14,200.0	7,242.8	13,858.6	7,027.0	176.6	175.9	-78.38	-64.5	7,003.8	1,071.1	726.3	344.83	3.106		
14,300.0	7,244.5	13,958.6	7,028.7	179.1	178.3	-78.38	-64.5	7,103.7	1,071.1	721.4	349.67	3.063		
14,356.5	7,245.5	14,015.2	7,029.7	180.5	179.7	-78.38	-64.5	7,160.3	1,071.1	718.7	352.40	3.039		
14,384.5	7,246.0	14,030.7	7,030.0	181.2	180.1	-78.38	-64.5	7,175.8	1,071.2	717.7	353.45	3.031 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2F-18H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	21.9	0.0	21.9					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	21.9	0.0	21.9	21.6	0.30	71.972		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.65	33.485 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	168.30	21.9	0.0	22.7	21.7	1.00	22.671		
400.0	400.0	400.3	400.3	0.7	0.7	168.58	21.1	-0.4	24.5	23.2	1.35	18.130		
500.0	499.9	500.7	500.7	0.9	0.9	167.79	18.8	-1.7	26.5	24.8	1.70	15.542		
600.0	599.7	601.1	601.0	1.1	1.0	166.18	14.9	-3.8	28.6	26.5	2.06	13.906		
700.0	699.4	701.5	701.2	1.3	1.2	163.94	9.5	-6.7	30.9	28.5	2.42	12.807		
800.0	798.9	801.9	801.3	1.5	1.5	161.24	2.5	-10.5	33.5	30.8	2.79	12.035		
900.0	898.3	902.4	901.3	1.8	1.7	158.25	-5.9	-15.1	36.4	33.3	3.18	11.473		
1,000.0	997.4	1,002.8	1,001.1	2.0	1.9	155.09	-16.0	-20.5	39.7	36.1	3.59	11.044		
1,100.0	1,096.3	1,103.3	1,100.6	2.3	2.2	151.87	-27.6	-26.8	43.3	39.3	4.05	10.702		
1,200.0	1,194.9	1,203.5	1,199.8	2.7	2.5	148.76	-40.6	-33.9	47.4	42.9	4.54	10.437		
1,300.0	1,293.3	1,303.4	1,298.5	3.0	2.8	146.86	-53.9	-41.1	52.8	47.8	5.05	10.451		
1,400.0	1,391.2	1,403.1	1,397.1	3.4	3.1	146.26	-67.2	-48.3	59.7	54.2	5.56	10.734		
1,500.0	1,488.9	1,502.8	1,495.6	3.8	3.4	146.59	-80.4	-55.5	68.1	62.0	6.06	11.230		
1,600.0	1,586.1	1,602.3	1,593.9	4.2	3.7	147.54	-93.7	-62.7	77.9	71.3	6.54	11.905		
1,700.0	1,682.9	1,701.6	1,692.1	4.7	4.0	148.84	-106.9	-69.9	89.2	82.2	7.00	12.733		
1,800.0	1,779.5	1,800.9	1,790.2	5.1	4.3	150.18	-120.2	-77.1	101.4	93.9	7.46	13.592		
1,900.0	1,876.1	1,900.1	1,888.3	5.6	4.6	151.23	-133.4	-84.3	113.6	105.7	7.91	14.353		
2,000.0	1,972.6	1,999.3	1,986.4	6.1	4.9	152.07	-146.6	-91.4	125.8	117.5	8.37	15.033		
2,100.0	2,069.2	2,098.5	2,084.5	6.6	5.2	152.77	-159.8	-98.6	138.1	129.3	8.83	15.643		
2,200.0	2,165.8	2,197.8	2,182.5	7.0	5.5	153.35	-173.1	-105.8	150.4	141.1	9.29	16.192		
2,300.0	2,262.3	2,297.0	2,280.6	7.5	5.8	153.84	-186.3	-113.0	162.7	153.0	9.75	16.690		
2,400.0	2,358.9	2,396.2	2,378.7	8.0	6.2	154.27	-199.5	-120.1	175.0	164.8	10.21	17.142		
2,500.0	2,455.5	2,495.5	2,476.8	8.5	6.5	154.64	-212.7	-127.3	187.4	176.7	10.67	17.556		
2,600.0	2,552.0	2,594.7	2,574.9	8.9	6.8	154.96	-226.0	-134.5	199.7	188.6	11.13	17.935		
2,700.0	2,648.6	2,693.9	2,673.0	9.4	7.1	155.25	-239.2	-141.7	212.0	200.4	11.60	18.283		
2,800.0	2,745.2	2,793.2	2,771.0	9.9	7.4	155.50	-252.4	-148.9	224.4	212.3	12.06	18.605		
2,900.0	2,841.7	2,892.4	2,869.1	10.4	7.7	155.73	-265.7	-156.0	236.7	224.2	12.52	18.902		
3,000.0	2,938.3	2,991.6	2,967.2	10.9	8.0	155.93	-278.9	-163.2	249.1	236.1	12.99	19.179		
3,100.0	3,034.9	3,090.9	3,065.3	11.4	8.3	156.12	-292.1	-170.4	261.4	248.0	13.45	19.436		
3,200.0	3,131.4	3,190.1	3,163.4	11.8	8.7	156.29	-305.3	-177.6	273.8	259.9	13.92	19.676		
3,300.0	3,228.0	3,289.3	3,261.5	12.3	9.0	156.44	-318.6	-184.7	286.1	271.8	14.38	19.900		
3,400.0	3,324.6	3,388.5	3,359.5	12.8	9.3	156.58	-331.8	-191.9	298.5	283.7	14.84	20.110		
3,500.0	3,421.1	3,487.8	3,457.6	13.3	9.6	156.71	-345.0	-199.1	310.9	295.6	15.31	20.307		
3,600.0	3,517.7	3,587.0	3,555.7	13.8	9.9	156.83	-358.2	-206.3	323.2	307.5	15.77	20.493		
3,700.0	3,614.3	3,686.2	3,653.8	14.3	10.2	156.95	-371.5	-213.5	335.6	319.4	16.24	20.668		
3,800.0	3,710.8	3,785.5	3,751.9	14.7	10.5	157.05	-384.7	-220.6	348.0	331.3	16.70	20.833		
3,900.0	3,807.4	3,876.0	3,841.6	15.2	10.8	157.27	-395.6	-226.5	361.5	344.4	17.10	21.139		
4,000.0	3,904.0	3,965.7	3,930.7	15.7	11.0	157.75	-403.9	-231.1	377.4	360.0	17.42	21.666		
4,100.0	4,000.5	4,054.4	4,019.2	16.2	11.1	158.44	-409.7	-234.2	395.9	378.2	17.67	22.399		
4,200.0	4,097.1	4,142.0	4,106.7	16.7	11.3	159.29	-413.1	-236.1	416.8	398.9	17.87	23.326		
4,300.0	4,193.7	4,229.0	4,193.7	17.2	11.4	160.27	-414.1	-236.6	440.2	422.2	18.02	24.431		
4,400.0	4,290.2	4,325.5	4,290.2	17.6	11.5	161.35	-414.1	-236.6	464.8	446.6	18.15	25.604		
4,500.0	4,386.8	4,422.1	4,386.8	18.1	11.6	162.31	-414.1	-236.6	489.6	471.3	18.31	26.736		
4,600.0	4,483.4	4,518.7	4,483.4	18.6	11.7	163.19	-414.1	-236.6	514.4	496.0	18.49	27.826		
4,700.0	4,579.9	4,615.2	4,579.9	19.1	11.8	163.99	-414.1	-236.6	539.4	520.8	18.68	28.877		
4,800.0	4,676.5	4,711.8	4,676.5	19.6	11.9	164.71	-414.1	-236.6	564.5	545.6	18.89	29.889		
4,900.0	4,773.1	4,808.4	4,773.1	20.1	12.1	165.38	-414.1	-236.6	589.7	570.6	19.11	30.862		
5,000.0	4,869.7	4,905.0	4,869.7	20.5	12.2	166.03	-414.1	-236.6	614.6	595.2	19.34	31.770		
5,100.0	4,967.1	5,002.4	4,967.1	21.0	12.3	166.63	-414.1	-236.6	636.8	617.2	19.60	32.481		

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 Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2F-18H - HZ - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,065.2	5,100.5	5,065.2	21.3	12.4	167.11	-414.1	-236.6	655.7	635.8	19.87	32.994		
5,300.0	5,163.9	5,199.2	5,163.9	21.6	12.5	167.48	-414.1	-236.6	671.3	651.1	20.15	33.320		
5,400.0	5,263.1	5,298.4	5,263.1	21.9	12.7	167.76	-414.1	-236.6	683.5	663.1	20.42	33.471		
5,500.0	5,362.7	5,398.0	5,362.7	22.0	12.8	167.96	-414.1	-236.6	692.4	671.7	20.70	33.456		
5,600.0	5,462.5	5,497.8	5,462.5	22.2	12.9	168.08	-414.1	-236.6	697.8	676.9	20.97	33.283		
5,700.0	5,562.5	5,597.8	5,562.5	22.3	13.1	168.12	-414.1	-236.6	699.9	678.6	21.23	32.962		
5,800.0	5,662.5	5,697.8	5,662.5	22.3	13.2	0.28	-414.1	-236.6	699.9	665.4	34.48	20.298		
5,900.0	5,762.5	5,797.8	5,762.5	22.4	13.3	0.28	-414.1	-236.6	699.9	665.2	34.70	20.170		
6,000.0	5,862.5	5,897.8	5,862.5	22.5	13.4	0.28	-414.1	-236.6	699.9	664.9	34.92	20.042		
6,100.0	5,962.5	5,997.8	5,962.5	22.6	13.6	0.28	-414.1	-236.6	699.9	664.7	35.14	19.914		
6,200.0	6,062.5	6,097.8	6,062.5	22.7	13.7	0.28	-414.1	-236.6	699.9	664.5	35.37	19.787		
6,300.0	6,162.5	6,197.8	6,162.5	22.7	13.9	0.28	-414.1	-236.6	699.9	664.3	35.60	19.661		
6,400.0	6,262.5	6,297.8	6,262.5	22.8	14.0	0.28	-414.1	-236.6	699.9	664.0	35.83	19.536		
6,500.0	6,362.5	6,397.8	6,362.5	22.9	14.1	0.28	-414.1	-236.6	699.9	663.8	36.06	19.411		
6,600.0	6,462.4	6,497.7	6,462.4	23.0	14.3	-89.86	-414.1	-236.6	699.9	675.7	24.17	28.957		
6,619.6	6,481.9	6,517.2	6,481.9	23.0	14.3	-89.99	-414.1	-236.6	699.9	675.6	24.24	28.877		
6,700.0	6,561.4	6,597.6	6,562.2	23.0	14.4	-90.75	-414.1	-233.6	699.9	675.4	24.51	28.555		
6,800.0	6,657.4	6,699.1	6,662.3	23.0	14.4	-91.70	-414.1	-217.2	700.2	675.5	24.70	28.348		
6,900.0	6,748.7	6,802.3	6,760.6	23.0	14.4	-92.62	-414.1	-186.2	700.6	675.8	24.76	28.298		
7,000.0	6,833.5	6,907.2	6,855.0	23.0	14.4	-93.50	-414.1	-140.6	701.2	676.4	24.78	28.299		
7,100.0	6,910.0	7,013.9	6,943.1	23.1	14.4	-94.31	-414.1	-80.6	701.8	676.9	24.92	28.168		
7,200.0	6,976.9	7,122.2	7,022.3	23.2	14.6	-95.04	-414.1	-6.9	702.6	677.2	25.41	27.655		
7,300.0	7,032.8	7,232.0	7,090.5	23.4	14.9	-95.66	-414.1	79.0	703.3	676.8	26.48	26.563		
7,400.0	7,076.6	7,343.1	7,145.2	23.8	15.5	-96.17	-414.1	175.6	703.9	675.6	28.34	24.843		
7,500.0	7,107.5	7,455.2	7,184.7	24.3	16.7	-96.55	-414.1	280.4	704.4	673.4	31.05	22.686		
7,600.0	7,124.9	7,568.1	7,207.4	25.1	18.2	-96.78	-414.2	390.9	704.8	670.2	34.53	20.408		
7,700.0	7,129.3	7,677.0	7,213.4	26.0	20.1	-96.85	-414.2	499.6	704.8	666.4	38.40	18.355		
7,800.0	7,131.1	7,777.0	7,215.2	27.2	21.9	-96.85	-414.2	599.5	704.8	662.6	42.27	16.675		
7,900.0	7,132.8	7,877.0	7,216.9	28.6	23.9	-96.85	-414.2	699.5	704.8	658.5	46.33	15.214		
8,000.0	7,134.6	7,977.0	7,218.7	30.2	26.0	-96.85	-414.2	799.5	704.8	654.3	50.54	13.946		
8,100.0	7,136.3	8,077.0	7,220.4	31.9	28.1	-96.85	-414.2	899.5	704.8	650.0	54.87	12.845		
8,200.0	7,138.1	8,177.0	7,222.1	33.7	30.3	-96.85	-414.2	999.5	704.8	645.5	59.29	11.888		
8,300.0	7,139.8	8,277.0	7,223.9	35.7	32.5	-96.85	-414.2	1,099.5	704.8	641.0	63.78	11.050		
8,400.0	7,141.6	8,377.0	7,225.6	37.7	34.8	-96.85	-414.2	1,199.5	704.8	636.5	68.33	10.314		
8,500.0	7,143.3	8,477.0	7,227.4	39.8	37.1	-96.85	-414.2	1,299.4	704.8	631.9	72.93	9.664		
8,600.0	7,145.0	8,577.0	7,229.1	41.9	39.4	-96.85	-414.2	1,399.4	704.8	627.2	77.57	9.086		
8,700.0	7,146.8	8,677.0	7,230.9	44.1	41.7	-96.85	-414.2	1,499.4	704.8	622.6	82.24	8.570		
8,800.0	7,148.5	8,777.0	7,232.6	46.3	44.1	-96.85	-414.2	1,599.4	704.8	617.9	86.93	8.107		
8,900.0	7,150.3	8,877.0	7,234.4	48.5	46.4	-96.85	-414.2	1,699.4	704.8	613.1	91.65	7.690		
9,000.0	7,152.0	8,977.0	7,236.1	50.8	48.8	-96.85	-414.2	1,799.4	704.8	608.4	96.39	7.312		
9,100.0	7,153.8	9,077.0	7,237.8	53.1	51.2	-96.85	-414.2	1,899.3	704.8	603.6	101.14	6.968		
9,200.0	7,155.5	9,177.0	7,239.6	55.4	53.5	-96.85	-414.2	1,999.3	704.8	598.9	105.91	6.654		
9,300.0	7,157.3	9,277.0	7,241.3	57.7	55.9	-96.85	-414.2	2,099.3	704.8	594.1	110.69	6.367		
9,400.0	7,159.0	9,377.0	7,243.1	60.0	58.3	-96.85	-414.2	2,199.3	704.8	589.3	115.48	6.103		
9,500.0	7,160.8	9,477.0	7,244.8	62.4	60.8	-96.85	-414.2	2,299.3	704.7	584.5	120.28	5.859		
9,600.0	7,162.5	9,577.0	7,246.6	64.7	63.2	-96.85	-414.2	2,399.3	704.7	579.6	125.09	5.634		
9,700.0	7,164.2	9,677.0	7,248.3	67.1	65.6	-96.85	-414.2	2,499.3	704.7	574.8	129.91	5.425		
9,800.0	7,166.0	9,777.0	7,250.1	69.4	68.0	-96.85	-414.2	2,599.2	704.7	570.0	134.74	5.230		
9,900.0	7,167.7	9,877.0	7,251.8	71.8	70.4	-96.85	-414.2	2,699.2	704.7	565.2	139.57	5.049		
10,000.0	7,169.5	9,977.0	7,253.6	74.2	72.9	-96.85	-414.2	2,799.2	704.7	560.3	144.41	4.880		
10,100.0	7,171.2	10,077.0	7,255.3	76.6	75.3	-96.85	-414.2	2,899.2	704.7	555.5	149.25	4.722		
10,200.0	7,173.0	10,177.0	7,257.0	79.0	77.7	-96.85	-414.2	2,999.2	704.7	550.6	154.09	4.573		

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 Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2F-18H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
10,300.0	7,174.7	10,277.0	7,258.8	81.4	80.2	-96.85	-414.2	3,099.2	704.7	545.8	158.94	4.434		
10,400.0	7,176.5	10,377.0	7,260.5	83.8	82.6	-96.85	-414.2	3,199.1	704.7	540.9	163.80	4.302		
10,500.0	7,178.2	10,477.0	7,262.3	86.2	85.0	-96.85	-414.2	3,299.1	704.7	536.0	168.65	4.178		
10,600.0	7,180.0	10,577.0	7,264.0	88.6	87.5	-96.85	-414.2	3,399.1	704.7	531.2	173.52	4.061		
10,700.0	7,181.7	10,677.0	7,265.8	91.0	89.9	-96.85	-414.2	3,499.1	704.7	526.3	178.38	3.950		
10,800.0	7,183.4	10,777.0	7,267.5	93.5	92.4	-96.85	-414.2	3,599.1	704.7	521.4	183.24	3.846		
10,900.0	7,185.2	10,877.0	7,269.3	95.9	94.8	-96.85	-414.2	3,699.1	704.7	516.6	188.11	3.746		
11,000.0	7,186.9	10,977.0	7,271.0	98.3	97.3	-96.85	-414.2	3,799.1	704.7	511.7	192.98	3.651		
11,100.0	7,188.7	11,077.0	7,272.8	100.7	99.7	-96.85	-414.2	3,899.0	704.7	506.8	197.86	3.561		
11,200.0	7,190.4	11,177.0	7,274.5	103.2	102.2	-96.85	-414.2	3,999.0	704.6	501.9	202.73	3.476		
11,300.0	7,192.2	11,277.0	7,276.2	105.6	104.6	-96.85	-414.2	4,099.0	704.6	497.0	207.61	3.394		
11,400.0	7,193.9	11,377.0	7,278.0	108.0	107.1	-96.85	-414.2	4,199.0	704.6	492.2	212.48	3.316		
11,500.0	7,195.7	11,477.0	7,279.7	110.5	109.5	-96.85	-414.2	4,299.0	704.6	487.3	217.36	3.242		
11,600.0	7,197.4	11,577.0	7,281.5	112.9	112.0	-96.85	-414.2	4,399.0	704.6	482.4	222.25	3.170		
11,700.0	7,199.1	11,677.0	7,283.2	115.3	114.4	-96.85	-414.2	4,498.9	704.6	477.5	227.13	3.102		
11,800.0	7,200.9	11,777.0	7,285.0	117.8	116.9	-96.85	-414.2	4,598.9	704.6	472.6	232.01	3.037		
11,900.0	7,202.6	11,877.0	7,286.7	120.2	119.4	-96.85	-414.2	4,698.9	704.6	467.7	236.90	2.974		
12,000.0	7,204.4	11,977.0	7,288.5	122.7	121.8	-96.85	-414.2	4,798.9	704.6	462.8	241.78	2.914		
12,100.0	7,206.1	12,077.0	7,290.2	125.1	124.3	-96.85	-414.2	4,898.9	704.6	457.9	246.67	2.856		
12,200.0	7,207.9	12,177.0	7,292.0	127.6	126.7	-96.85	-414.2	4,998.9	704.6	453.0	251.56	2.801		
12,300.0	7,209.6	12,277.0	7,293.7	130.0	129.2	-96.85	-414.2	5,098.9	704.6	448.1	256.45	2.747		
12,400.0	7,211.4	12,377.0	7,295.4	132.5	131.7	-96.85	-414.2	5,198.8	704.6	443.2	261.34	2.696		
12,500.0	7,213.1	12,477.0	7,297.2	134.9	134.1	-96.85	-414.2	5,298.8	704.6	438.3	266.23	2.647		
12,600.0	7,214.9	12,577.0	7,298.9	137.4	136.6	-96.85	-414.2	5,398.8	704.6	433.4	271.12	2.599		
12,700.0	7,216.6	12,677.0	7,300.7	139.8	139.0	-96.85	-414.2	5,498.8	704.6	428.5	276.01	2.553		
12,800.0	7,218.3	12,777.0	7,302.4	142.3	141.5	-96.85	-414.2	5,598.8	704.6	423.7	280.90	2.508		
12,900.0	7,220.1	12,877.0	7,304.2	144.7	144.0	-96.85	-414.2	5,698.8	704.5	418.8	285.80	2.465		
13,000.0	7,221.8	12,977.0	7,305.9	147.2	146.4	-96.85	-414.2	5,798.7	704.5	413.9	290.69	2.424		
13,100.0	7,223.6	13,077.0	7,307.7	149.6	148.9	-96.85	-414.2	5,898.7	704.5	409.0	295.59	2.384		
13,200.0	7,225.3	13,177.0	7,309.4	152.1	151.4	-96.85	-414.2	5,998.7	704.5	404.0	300.48	2.345		
13,300.0	7,227.1	13,277.0	7,311.1	154.5	153.8	-96.85	-414.2	6,098.7	704.5	399.1	305.38	2.307		
13,400.0	7,228.8	13,377.0	7,312.9	157.0	156.3	-96.85	-414.2	6,198.7	704.5	394.2	310.27	2.271		
13,500.0	7,230.6	13,477.0	7,314.6	159.4	158.7	-96.85	-414.2	6,298.7	704.5	389.3	315.17	2.235		
13,600.0	7,232.3	13,577.0	7,316.4	161.9	161.2	-96.85	-414.2	6,398.7	704.5	384.4	320.07	2.201		
13,700.0	7,234.1	13,677.0	7,318.1	164.3	163.7	-96.86	-414.2	6,498.6	704.5	379.5	324.97	2.168		
13,800.0	7,235.8	13,777.0	7,319.9	166.8	166.1	-96.86	-414.2	6,598.6	704.5	374.6	329.86	2.136		
13,900.0	7,237.5	13,877.0	7,321.6	169.3	168.6	-96.86	-414.2	6,698.6	704.5	369.7	334.76	2.104		
14,000.0	7,239.3	13,977.0	7,323.4	171.7	171.1	-96.86	-414.2	6,798.6	704.5	364.8	339.66	2.074		
14,100.0	7,241.0	14,077.0	7,325.1	174.2	173.5	-96.86	-414.2	6,898.6	704.5	359.9	344.56	2.045		
14,200.0	7,242.8	14,177.0	7,326.9	176.6	176.0	-96.86	-414.2	6,998.6	704.5	355.0	349.46	2.016		
14,300.0	7,244.5	14,277.0	7,328.6	179.1	178.5	-96.86	-414.2	7,098.6	704.5	350.1	354.36	1.988		
14,360.2	7,245.6	14,337.3	7,329.7	180.6	180.0	-96.86	-414.2	7,158.8	704.5	347.2	357.31	1.972		
14,384.5	7,246.0	14,357.2	7,330.0	181.2	180.4	-96.86	-414.2	7,178.7	704.5	346.1	358.40	1.966 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2G-18H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	10.9	0.0	10.9					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	10.9	0.0	10.9	10.6	0.30	35.986		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	10.9	0.0	10.9	10.3	0.65	16.742 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	168.73	10.9	0.0	11.8	10.8	1.00	11.762		
400.0	400.0	400.0	400.0	0.7	0.7	170.77	10.9	0.0	14.4	13.0	1.35	10.632		
500.0	499.9	500.2	500.2	0.9	0.9	172.33	10.1	-0.3	17.8	16.1	1.70	10.488		
600.0	599.7	600.4	600.4	1.1	1.0	172.98	7.6	-1.0	21.3	19.3	2.05	10.407		
700.0	699.4	700.8	700.6	1.3	1.2	173.11	3.4	-2.3	24.8	22.4	2.40	10.357		
800.0	798.9	801.2	800.8	1.5	1.4	172.90	-2.5	-4.1	28.4	25.6	2.75	10.324		
900.0	898.3	901.6	901.0	1.8	1.6	172.46	-10.0	-6.4	31.9	28.8	3.10	10.301		
1,000.0	997.4	1,002.1	1,001.0	2.0	1.8	171.87	-19.3	-9.3	35.5	32.0	3.45	10.281		
1,100.0	1,096.3	1,102.7	1,100.9	2.3	2.1	171.17	-30.2	-12.6	39.1	35.3	3.81	10.263		
1,200.0	1,194.9	1,203.3	1,200.7	2.7	2.4	170.39	-42.8	-16.5	42.7	38.5	4.17	10.242		
1,300.0	1,293.3	1,304.0	1,300.3	3.0	2.6	169.54	-57.1	-20.9	46.4	41.8	4.54	10.216		
1,400.0	1,391.2	1,404.7	1,399.6	3.4	3.0	168.65	-73.1	-25.8	50.0	45.1	4.91	10.182		
1,500.0	1,488.9	1,504.6	1,498.0	3.8	3.3	168.02	-89.6	-30.9	54.7	49.4	5.29	10.327		
1,600.0	1,586.1	1,604.4	1,596.2	4.2	3.6	167.85	-106.2	-36.0	61.0	55.3	5.67	10.760		
1,700.0	1,682.9	1,704.1	1,694.4	4.7	3.9	168.00	-122.8	-41.1	69.1	63.0	6.04	11.430		
1,800.0	1,779.5	1,803.7	1,792.5	5.1	4.3	168.29	-139.3	-46.2	78.0	71.6	6.42	12.161		
1,900.0	1,876.1	1,903.3	1,890.6	5.6	4.6	168.51	-155.8	-51.2	87.0	80.2	6.80	12.809		
2,000.0	1,972.6	2,002.9	1,988.6	6.1	4.9	168.70	-172.3	-56.3	96.0	88.9	7.17	13.388		
2,100.0	2,069.2	2,102.5	2,086.7	6.6	5.3	168.85	-188.9	-61.4	105.0	97.5	7.55	13.909		
2,200.0	2,165.8	2,202.1	2,184.8	7.0	5.6	168.98	-205.4	-66.5	114.0	106.1	7.93	14.380		
2,300.0	2,262.3	2,301.7	2,282.9	7.5	5.9	169.09	-221.9	-71.6	123.0	114.7	8.31	14.808		
2,400.0	2,358.9	2,401.3	2,381.0	8.0	6.3	169.18	-238.5	-76.6	132.0	123.3	8.69	15.198		
2,500.0	2,455.5	2,500.8	2,479.1	8.5	6.6	169.26	-255.0	-81.7	141.0	132.0	9.07	15.556		
2,600.0	2,552.0	2,600.4	2,577.1	8.9	7.0	169.34	-271.5	-86.8	150.0	140.6	9.44	15.884		
2,700.0	2,648.6	2,700.0	2,675.2	9.4	7.3	169.40	-288.1	-91.9	159.0	149.2	9.82	16.187		
2,800.0	2,745.2	2,799.6	2,773.3	9.9	7.7	169.46	-304.6	-97.0	168.0	157.8	10.20	16.467		
2,900.0	2,841.7	2,899.2	2,871.4	10.4	8.0	169.51	-321.1	-102.0	177.0	166.4	10.58	16.727		
3,000.0	2,938.3	2,998.8	2,969.5	10.9	8.3	169.56	-337.7	-107.1	186.0	175.0	10.96	16.969		
3,100.0	3,034.9	3,098.4	3,067.5	11.4	8.7	169.60	-354.2	-112.2	195.0	183.7	11.34	17.195		
3,200.0	3,131.4	3,198.0	3,165.6	11.8	9.0	169.64	-370.7	-117.3	204.0	192.3	11.72	17.406		
3,300.0	3,228.0	3,297.6	3,263.7	12.3	9.4	169.67	-387.3	-122.4	213.0	200.9	12.10	17.603		
3,400.0	3,324.6	3,397.2	3,361.8	12.8	9.7	169.70	-403.8	-127.4	222.0	209.5	12.48	17.789		
3,500.0	3,421.1	3,496.8	3,459.9	13.3	10.1	169.73	-420.3	-132.5	231.0	218.1	12.86	17.963		
3,600.0	3,517.7	3,596.4	3,557.9	13.8	10.4	169.76	-436.8	-137.6	240.0	226.8	13.24	18.128		
3,700.0	3,614.3	3,696.0	3,656.0	14.3	10.8	169.79	-453.4	-142.7	249.0	235.4	13.62	18.283		
3,800.0	3,710.8	3,795.6	3,754.1	14.7	11.1	169.81	-469.9	-147.8	258.0	244.0	14.00	18.429		
3,900.0	3,807.4	3,895.2	3,852.2	15.2	11.5	169.83	-486.4	-152.8	267.0	252.6	14.38	18.568		
4,000.0	3,904.0	3,994.8	3,950.3	15.7	11.8	169.86	-503.0	-157.9	276.0	261.2	14.76	18.700		
4,100.0	4,000.5	4,094.4	4,048.4	16.2	12.2	169.87	-519.5	-163.0	285.0	269.9	15.14	18.825		
4,200.0	4,097.1	4,193.9	4,146.4	16.7	12.5	169.89	-536.0	-168.1	294.0	278.5	15.52	18.944		
4,300.0	4,193.7	4,293.5	4,244.5	17.2	12.8	169.91	-552.6	-173.2	303.0	287.1	15.90	19.057		
4,400.0	4,290.2	4,393.1	4,342.6	17.6	13.2	169.93	-569.1	-178.2	312.0	295.7	16.28	19.165		
4,500.0	4,386.8	4,492.7	4,440.7	18.1	13.5	169.94	-585.6	-183.3	321.0	304.3	16.66	19.268		
4,600.0	4,483.4	4,592.3	4,538.8	18.6	13.9	169.96	-602.2	-188.4	330.0	313.0	17.04	19.366		
4,700.0	4,579.9	4,691.9	4,636.8	19.1	14.2	169.97	-618.7	-193.5	339.0	321.6	17.42	19.460		
4,800.0	4,676.5	4,791.5	4,734.9	19.6	14.6	169.98	-635.2	-198.6	348.0	330.2	17.80	19.550		
4,900.0	4,773.1	4,891.1	4,833.0	20.1	14.9	170.00	-651.8	-203.6	357.0	338.8	18.18	19.636		
5,000.0	4,869.7	4,990.7	4,931.1	20.5	15.3	170.01	-668.3	-208.7	365.7	347.1	18.57	19.688		
5,100.0	4,967.1	5,090.6	5,029.4	21.0	15.6	169.96	-684.9	-213.8	371.5	352.5	18.98	19.568		

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 Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2G-18H - Hz - Plan #1													Offset Site Error: 0.0 ft			
Survey Program: 0-MWD															Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning			
5,200.0	5,065.2	5,190.5	5,127.9	21.3	16.0	169.80	-701.5	-218.9	373.8	354.4	19.40	19.272				
5,300.0	5,163.9	5,290.5	5,226.3	21.6	16.3	169.53	-718.1	-224.0	372.8	353.0	19.82	18.810				
5,400.0	5,263.1	5,381.9	5,316.5	21.9	16.6	169.22	-732.5	-228.4	369.2	349.0	20.21	18.265				
5,500.0	5,362.7	5,470.9	5,404.6	22.0	16.9	168.93	-743.9	-232.0	365.0	344.5	20.57	17.743				
5,600.0	5,462.5	5,559.9	5,493.2	22.2	17.1	168.65	-752.8	-234.7	360.5	339.6	20.91	17.239				
5,700.0	5,562.5	5,649.1	5,582.1	22.3	17.2	168.40	-759.0	-236.6	355.5	334.3	21.22	16.753				
5,800.0	5,662.5	5,738.4	5,671.4	22.3	17.3	0.38	-762.6	-237.7	351.5	312.7	38.80	9.058				
5,900.0	5,762.5	5,829.6	5,762.5	22.4	17.4	0.34	-763.6	-238.0	350.4	311.5	38.98	8.990				
6,000.0	5,862.5	5,929.6	5,862.5	22.5	17.5	0.34	-763.6	-238.0	350.4	311.3	39.16	8.948				
6,100.0	5,962.5	6,029.6	5,962.5	22.6	17.6	0.34	-763.6	-238.0	350.4	311.1	39.35	8.905				
6,200.0	6,062.5	6,129.6	6,062.5	22.7	17.7	0.34	-763.6	-238.0	350.4	310.9	39.55	8.861				
6,300.0	6,162.5	6,229.6	6,162.5	22.7	17.8	0.34	-763.6	-238.0	350.4	310.7	39.74	8.818				
6,332.9	6,195.4	6,262.5	6,195.4	22.8	17.9	0.34	-763.6	-238.0	350.4	310.6	39.80	8.804				
6,400.0	6,262.5	6,329.2	6,262.0	22.8	17.9	0.83	-763.6	-235.0	350.5	310.5	39.99	8.764				
6,500.0	6,362.5	6,426.2	6,357.8	22.9	18.0	3.33	-763.6	-219.6	351.0	310.6	40.42	8.684				
6,600.0	6,462.4	6,518.1	6,445.8	23.0	18.0	-82.51	-763.6	-193.3	353.7	330.8	22.92	15.433				
6,700.0	6,561.4	6,606.7	6,526.6	23.0	17.9	-78.27	-763.6	-157.5	358.4	335.5	22.97	15.602				
6,800.0	6,657.4	6,692.7	6,600.4	23.0	17.9	-74.37	-763.6	-113.4	364.7	341.3	23.43	15.565				
6,900.0	6,748.7	6,776.6	6,666.8	23.0	18.0	-70.86	-763.6	-62.1	372.0	347.8	24.19	15.375				
7,000.0	6,833.5	6,858.7	6,725.5	23.0	18.1	-67.77	-763.6	-4.8	379.7	354.6	25.06	15.151				
7,100.0	6,910.0	6,939.4	6,776.5	23.1	18.2	-65.12	-763.6	57.7	387.3	361.3	25.98	14.909				
7,200.0	6,976.9	7,018.9	6,819.5	23.2	18.5	-62.92	-763.6	124.5	394.4	367.5	26.87	14.678				
7,300.0	7,032.8	7,100.0	6,855.5	23.4	18.9	-61.13	-763.6	197.2	400.6	372.8	27.78	14.422				
7,400.0	7,076.6	7,175.2	6,881.3	23.8	19.4	-59.84	-763.6	267.8	405.6	376.9	28.69	14.138				
7,500.0	7,107.5	7,250.0	6,899.5	24.3	20.0	-58.95	-763.6	340.3	409.2	379.5	29.73	13.766				
7,600.0	7,124.9	7,329.5	6,910.4	25.1	20.9	-58.45	-763.6	419.0	411.2	380.1	31.06	13.236				
7,700.0	7,129.3	7,415.4	6,913.5	26.0	22.1	-58.35	-763.6	504.8	411.5	378.3	33.24	12.381				
7,800.0	7,131.1	7,515.4	6,915.2	27.2	23.7	-58.35	-763.6	604.8	411.5	374.9	36.63	11.233				
7,900.0	7,132.8	7,615.4	6,916.9	28.6	25.5	-58.35	-763.6	704.8	411.5	371.3	40.19	10.241				
8,000.0	7,134.6	7,715.4	6,918.7	30.2	27.4	-58.35	-763.6	804.8	411.5	367.7	43.85	9.384				
8,100.0	7,136.3	7,815.4	6,920.4	31.9	29.4	-58.35	-763.6	904.7	411.5	363.9	47.61	8.643				
8,200.0	7,138.1	7,915.4	6,922.2	33.7	31.5	-58.35	-763.6	1,004.7	411.5	360.1	51.44	7.999				
8,300.0	7,139.8	8,015.4	6,923.9	35.7	33.6	-58.35	-763.6	1,104.7	411.5	356.2	55.33	7.437				
8,400.0	7,141.6	8,115.4	6,925.7	37.7	35.8	-58.35	-763.7	1,204.7	411.5	352.2	59.26	6.943				
8,500.0	7,143.3	8,215.4	6,927.4	39.8	38.0	-58.35	-763.7	1,304.7	411.5	348.2	63.23	6.508				
8,600.0	7,145.0	8,315.4	6,929.2	41.9	40.3	-58.35	-763.7	1,404.7	411.5	344.2	67.23	6.120				
8,700.0	7,146.8	8,415.4	6,930.9	44.1	42.6	-58.35	-763.7	1,504.6	411.5	340.2	71.25	5.775				
8,800.0	7,148.5	8,515.4	6,932.7	46.3	44.9	-58.35	-763.7	1,604.6	411.5	336.2	75.30	5.464				
8,900.0	7,150.3	8,615.4	6,934.4	48.5	47.2	-58.35	-763.7	1,704.6	411.4	332.1	79.36	5.185				
9,000.0	7,152.0	8,715.4	6,936.1	50.8	49.5	-58.35	-763.7	1,804.6	411.4	328.0	83.44	4.931				
9,100.0	7,153.8	8,815.4	6,937.9	53.1	51.9	-58.35	-763.7	1,904.6	411.4	323.9	87.53	4.701				
9,200.0	7,155.5	8,915.4	6,939.6	55.4	54.2	-58.34	-763.7	2,004.6	411.4	319.8	91.63	4.490				
9,300.0	7,157.3	9,015.4	6,941.4	57.7	56.6	-58.34	-763.7	2,104.6	411.4	315.7	95.74	4.297				
9,400.0	7,159.0	9,115.4	6,943.1	60.0	59.0	-58.34	-763.7	2,204.5	411.4	311.5	99.86	4.120				
9,500.0	7,160.8	9,215.4	6,944.9	62.4	61.4	-58.34	-763.7	2,304.5	411.4	307.4	103.99	3.956				
9,600.0	7,162.5	9,315.4	6,946.6	64.7	63.8	-58.34	-763.7	2,404.5	411.4	303.3	108.13	3.805				
9,700.0	7,164.2	9,415.4	6,948.4	67.1	66.2	-58.34	-763.7	2,504.5	411.4	299.1	112.27	3.664				
9,800.0	7,166.0	9,515.4	6,950.1	69.4	68.6	-58.34	-763.7	2,604.5	411.4	295.0	116.41	3.534				
9,900.0	7,167.7	9,615.4	6,951.9	71.8	71.0	-58.34	-763.7	2,704.5	411.4	290.8	120.56	3.412				
10,000.0	7,169.5	9,715.4	6,953.6	74.2	73.4	-58.34	-763.7	2,804.5	411.4	286.6	124.72	3.298				
10,100.0	7,171.2	9,815.4	6,955.3	76.6	75.8	-58.34	-763.7	2,904.4	411.3	282.5	128.88	3.192				
10,200.0	7,173.0	9,915.4	6,957.1	79.0	78.3	-58.34	-763.7	3,004.4	411.3	278.3	133.04	3.092				

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 Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S18-T3N-R68W (Billings) - Billings 2G-18H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
10,300.0	7,174.7	10,015.4	6,958.8	81.4	80.7	-58.34	-763.7	3,104.4	411.3	274.1	137.21	2.998		
10,400.0	7,176.5	10,115.4	6,960.6	83.8	83.1	-58.34	-763.8	3,204.4	411.3	269.9	141.37	2.909		
10,500.0	7,178.2	10,215.4	6,962.3	86.2	85.5	-58.34	-763.8	3,304.4	411.3	265.8	145.54	2.826		
10,600.0	7,180.0	10,315.4	6,964.1	88.6	88.0	-58.33	-763.8	3,404.4	411.3	261.6	149.72	2.747		
10,700.0	7,181.7	10,415.4	6,965.8	91.0	90.4	-58.33	-763.8	3,504.3	411.3	257.4	153.89	2.673		
10,800.0	7,183.4	10,515.4	6,967.6	93.5	92.8	-58.33	-763.8	3,604.3	411.3	253.2	158.07	2.602		
10,900.0	7,185.2	10,615.4	6,969.3	95.9	95.3	-58.33	-763.8	3,704.3	411.3	249.0	162.25	2.535		
11,000.0	7,186.9	10,715.4	6,971.0	98.3	97.7	-58.33	-763.8	3,804.3	411.3	244.8	166.43	2.471		
11,100.0	7,188.7	10,815.4	6,972.8	100.7	100.2	-58.33	-763.8	3,904.3	411.3	240.6	170.62	2.410		
11,200.0	7,190.4	10,915.4	6,974.5	103.2	102.6	-58.33	-763.8	4,004.3	411.3	236.5	174.80	2.353		
11,300.0	7,192.2	11,015.4	6,976.3	105.6	105.1	-58.33	-763.8	4,104.3	411.2	232.3	178.99	2.298		
11,400.0	7,193.9	11,115.4	6,978.0	108.0	107.5	-58.33	-763.8	4,204.2	411.2	228.1	183.17	2.245		
11,500.0	7,195.7	11,215.4	6,979.8	110.5	110.0	-58.33	-763.8	4,304.2	411.2	223.9	187.36	2.195		
11,600.0	7,197.4	11,315.4	6,981.5	112.9	112.4	-58.33	-763.8	4,404.2	411.2	219.7	191.55	2.147		
11,700.0	7,199.1	11,415.4	6,983.3	115.3	114.9	-58.33	-763.8	4,504.2	411.2	215.5	195.74	2.101		
11,800.0	7,200.9	11,515.4	6,985.0	117.8	117.3	-58.33	-763.8	4,604.2	411.2	211.3	199.93	2.057		
11,900.0	7,202.6	11,615.4	6,986.8	120.2	119.8	-58.33	-763.8	4,704.2	411.2	207.1	204.12	2.014		
12,000.0	7,204.4	11,715.4	6,988.5	122.7	122.2	-58.32	-763.8	4,804.1	411.2	202.9	208.32	1.974		
12,100.0	7,206.1	11,815.4	6,990.2	125.1	124.7	-58.32	-763.8	4,904.1	411.2	198.7	212.51	1.935		
12,200.0	7,207.9	11,915.4	6,992.0	127.6	127.1	-58.32	-763.8	5,004.1	411.2	194.5	216.71	1.897		
12,300.0	7,209.6	12,015.4	6,993.7	130.0	129.6	-58.32	-763.8	5,104.1	411.2	190.3	220.90	1.861		
12,400.0	7,211.4	12,115.4	6,995.5	132.5	132.0	-58.32	-763.9	5,204.1	411.2	186.1	225.10	1.827		
12,500.0	7,213.1	12,215.4	6,997.2	134.9	134.5	-58.32	-763.9	5,304.1	411.2	181.9	229.29	1.793		
12,600.0	7,214.9	12,315.4	6,999.0	137.4	136.9	-58.32	-763.9	5,404.1	411.1	177.7	233.49	1.761		
12,700.0	7,216.6	12,415.4	7,000.7	139.8	139.4	-58.32	-763.9	5,504.0	411.1	173.4	237.69	1.730		
12,800.0	7,218.3	12,515.4	7,002.5	142.3	141.9	-58.32	-763.9	5,604.0	411.1	169.2	241.89	1.700		
12,900.0	7,220.1	12,615.4	7,004.2	144.7	144.3	-58.32	-763.9	5,704.0	411.1	165.0	246.08	1.671		
13,000.0	7,221.8	12,715.4	7,006.0	147.2	146.8	-58.32	-763.9	5,804.0	411.1	160.8	250.28	1.643		
13,100.0	7,223.6	12,815.4	7,007.7	149.6	149.2	-58.32	-763.9	5,904.0	411.1	156.6	254.48	1.615		
13,200.0	7,225.3	12,915.4	7,009.4	152.1	151.7	-58.32	-763.9	6,004.0	411.1	152.4	258.68	1.589		
13,300.0	7,227.1	13,015.4	7,011.2	154.5	154.2	-58.32	-763.9	6,103.9	411.1	148.2	262.88	1.564		
13,400.0	7,228.8	13,115.4	7,012.9	157.0	156.6	-58.32	-763.9	6,203.9	411.1	144.0	267.08	1.539		
13,500.0	7,230.6	13,215.4	7,014.7	159.4	159.1	-58.31	-763.9	6,303.9	411.1	139.8	271.28	1.515		
13,600.0	7,232.3	13,315.4	7,016.4	161.9	161.6	-58.31	-763.9	6,403.9	411.1	135.6	275.48	1.492 Level 3		
13,700.0	7,234.1	13,415.4	7,018.2	164.3	164.0	-58.31	-763.9	6,503.9	411.1	131.4	279.69	1.470 Level 3		
13,800.0	7,235.8	13,515.4	7,019.9	166.8	166.5	-58.31	-763.9	6,603.9	411.0	127.2	283.89	1.448 Level 3		
13,900.0	7,237.5	13,615.4	7,021.7	169.3	168.9	-58.31	-763.9	6,703.9	411.0	122.9	288.09	1.427 Level 3		
14,000.0	7,239.3	13,715.4	7,023.4	171.7	171.4	-58.31	-763.9	6,803.8	411.0	118.7	292.29	1.406 Level 3		
14,100.0	7,241.0	13,815.4	7,025.2	174.2	173.9	-58.31	-763.9	6,903.8	411.0	114.5	296.49	1.386 Level 3		
14,200.0	7,242.8	13,915.4	7,026.9	176.6	176.3	-58.31	-763.9	7,003.8	411.0	110.3	300.70	1.367 Level 3		
14,300.0	7,244.5	14,015.4	7,028.6	179.1	178.8	-58.31	-763.9	7,103.8	411.0	106.1	304.90	1.348 Level 3		
14,359.1	7,245.6	14,074.5	7,029.7	180.6	180.3	-58.31	-763.9	7,162.9	411.0	103.6	307.39	1.337 Level 3		
14,384.5	7,246.0	14,093.1	7,030.0	181.2	180.7	-58.31	-763.9	7,181.6	411.1	102.7	308.31	1.333 Level 3, SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2H-18H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5210.0ft (Original Well Elev)
Reference Site:	S18-T3N-R68W (Billings)	MD Reference:	WELL @ 5210.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 2H-18H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5210.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Billings 2H-18H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.29°

