



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

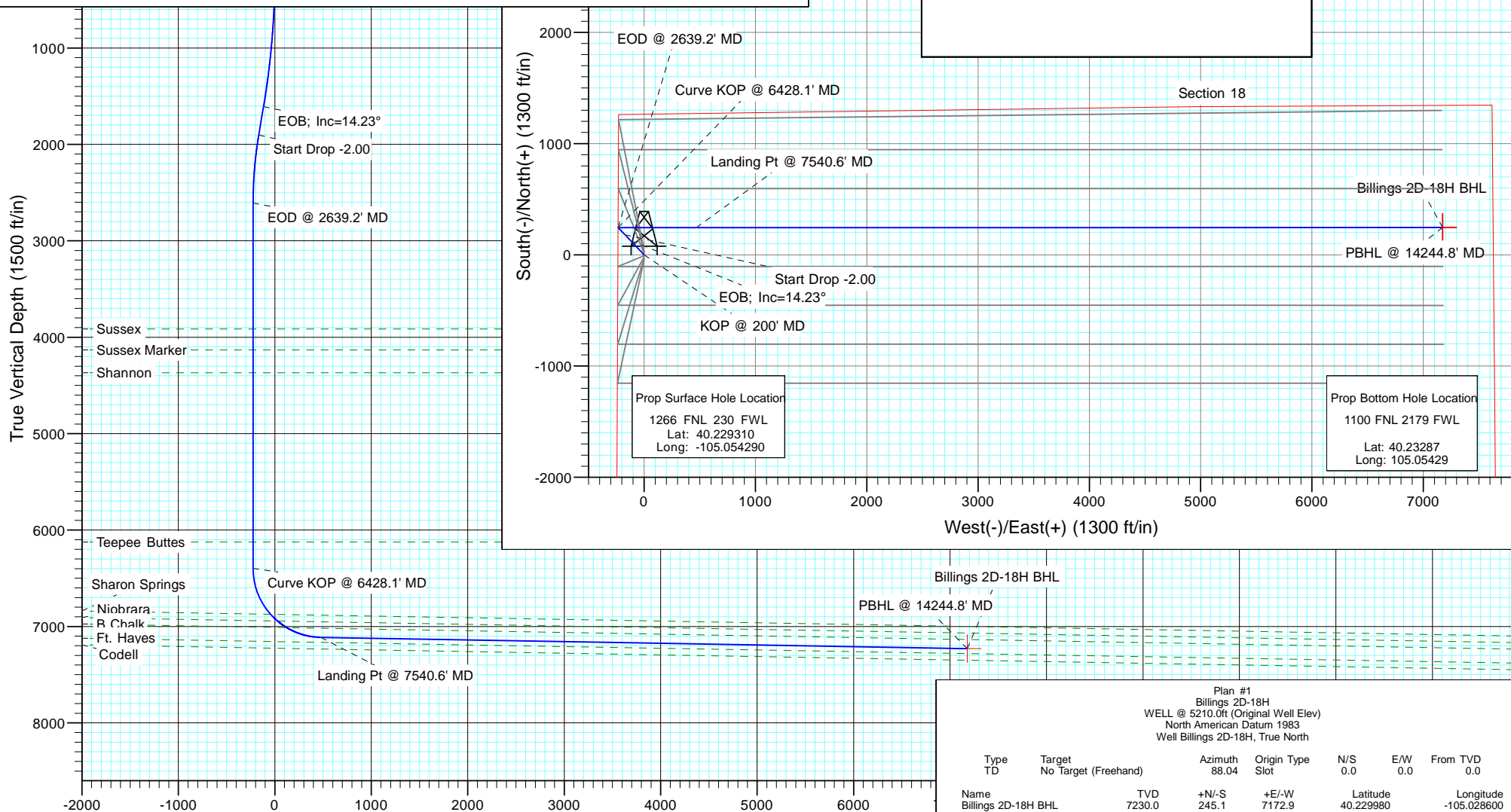


SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target	Annotation
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		KOP @ 200' MD
3	1622.6	14.23	316.28	1608.1	127.0	-121.4	1.00	316.28	-117.0		EOB; Inc=14.23°
4	1927.8	14.23	316.28	1903.9	181.2	-173.3	0.00	0.00	-167.0		Start Drop -2.00
5	2639.2	0.00	0.00	2607.9	244.7	-234.0	2.00	180.00	-225.5		EOD @ 2639.2' MD
6	6428.1	0.00	0.00	6396.9	244.7	-234.0	0.00	0.00	-225.5		Curve KOP @ 6428.1' MD
7	7540.6	89.00	90.00	7113.0	244.7	469.7	8.00	90.00	477.8		Landing Pt @ 7540.6' MD
8	14244.8	89.00	90.00	7230.0	245.1	7172.9	0.00	0.00	7177.1	Billings 2D-18H BHL	PBHL @ 14244.8' MD

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle
3915.0	3946.2	Sussex	
4132.0	4163.2	Sussex Marker	
4368.0	4399.2	Shannon	
6124.0	6155.2	Teepee Buttes	
6873.1	6949.0	Sharon Springs	1.00
6943.3	7049.7	Niobrara	1.00
7012.0	7168.0	B Chalk	1.00



Vertical Section at 88.04° (1500 ft/in)

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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 2D-18H					
Well Position	+N/-S	0.0 ft	Northing:	1,326,695.03 ft	Latitude:	40.229310
	+E/-W	0.0 ft	Easting:	3,124,453.12 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)
	IGRF200510	11/27/2012	8.76	66.83	52,881

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	88.04

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	
1,622.6	14.23	316.28	1,608.1	127.0	-121.4	1.00	1.00	0.00	316.28	
1,927.8	14.23	316.28	1,903.9	181.2	-173.3	0.00	0.00	0.00	0.00	
2,639.2	0.00	0.00	2,607.9	244.7	-234.0	2.00	-2.00	0.00	180.00	
6,428.1	0.00	0.00	6,396.9	244.7	-234.0	0.00	0.00	0.00	0.00	
7,540.6	89.00	90.00	7,113.0	244.7	469.7	8.00	8.00	0.00	90.00	
14,244.8	89.00	90.00	7,230.0	245.1	7,172.9	0.00	0.00	0.00	0.00	Billings 2D-18H BHL

Cathedral Energy Services

Planning Report

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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 2D-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	316.28	300.0	0.6	-0.6	-0.6	1.00	1.00	
400.0	2.00	316.28	400.0	2.5	-2.4	-2.3	1.00	1.00	
500.0	3.00	316.28	499.9	5.7	-5.4	-5.2	1.00	1.00	
600.0	4.00	316.28	599.7	10.1	-9.6	-9.3	1.00	1.00	
700.0	5.00	316.28	699.4	15.8	-15.1	-14.5	1.00	1.00	
800.0	6.00	316.28	798.9	22.7	-21.7	-20.9	1.00	1.00	
900.0	7.00	316.28	898.3	30.9	-29.5	-28.4	1.00	1.00	
1,000.0	8.00	316.28	997.4	40.3	-38.5	-37.1	1.00	1.00	
1,100.0	9.00	316.28	1,096.3	51.0	-48.8	-47.0	1.00	1.00	
1,200.0	10.00	316.28	1,194.9	62.9	-60.2	-58.0	1.00	1.00	
1,300.0	11.00	316.28	1,293.3	76.1	-72.8	-70.1	1.00	1.00	
1,400.0	12.00	316.28	1,391.2	90.5	-86.5	-83.4	1.00	1.00	
1,500.0	13.00	316.28	1,488.9	106.1	-101.5	-97.8	1.00	1.00	
1,600.0	14.00	316.28	1,586.1	123.0	-117.6	-113.4	1.00	1.00	
1,622.6	14.23	316.28	1,608.1	127.0	-121.4	-117.0	1.00	1.00	EOB; Inc=14.23°
1,700.0	14.23	316.28	1,683.1	140.7	-134.6	-129.7	0.00	0.00	
1,800.0	14.23	316.28	1,780.0	158.5	-151.6	-146.1	0.00	0.00	
1,900.0	14.23	316.28	1,876.9	176.3	-168.6	-162.4	0.00	0.00	
1,927.8	14.23	316.28	1,903.9	181.2	-173.3	-167.0	0.00	0.00	Start Drop -2.00
2,000.0	12.78	316.28	1,974.1	193.4	-184.9	-178.2	2.00	-2.00	
2,100.0	10.78	316.28	2,072.0	208.1	-199.0	-191.8	2.00	-2.00	
2,200.0	8.78	316.28	2,170.5	220.4	-210.8	-203.1	2.00	-2.00	
2,300.0	6.78	316.28	2,269.6	230.2	-220.1	-212.2	2.00	-2.00	
2,400.0	4.78	316.28	2,369.1	237.5	-227.1	-218.9	2.00	-2.00	
2,500.0	2.78	316.28	2,468.8	242.3	-231.7	-223.3	2.00	-2.00	
2,600.0	0.78	316.28	2,568.8	244.5	-233.8	-225.3	2.00	-2.00	
2,639.2	0.00	0.00	2,607.9	244.7	-234.0	-225.5	2.00	-2.00	EOD @ 2639.2' MD
2,700.0	0.00	0.00	2,668.8	244.7	-234.0	-225.5	0.00	0.00	
2,800.0	0.00	0.00	2,768.8	244.7	-234.0	-225.5	0.00	0.00	
2,900.0	0.00	0.00	2,868.8	244.7	-234.0	-225.5	0.00	0.00	
3,000.0	0.00	0.00	2,968.8	244.7	-234.0	-225.5	0.00	0.00	
3,100.0	0.00	0.00	3,068.8	244.7	-234.0	-225.5	0.00	0.00	
3,200.0	0.00	0.00	3,168.8	244.7	-234.0	-225.5	0.00	0.00	
3,300.0	0.00	0.00	3,268.8	244.7	-234.0	-225.5	0.00	0.00	
3,400.0	0.00	0.00	3,368.8	244.7	-234.0	-225.5	0.00	0.00	
3,500.0	0.00	0.00	3,468.8	244.7	-234.0	-225.5	0.00	0.00	
3,600.0	0.00	0.00	3,568.8	244.7	-234.0	-225.5	0.00	0.00	
3,700.0	0.00	0.00	3,668.8	244.7	-234.0	-225.5	0.00	0.00	
3,800.0	0.00	0.00	3,768.8	244.7	-234.0	-225.5	0.00	0.00	
3,900.0	0.00	0.00	3,868.8	244.7	-234.0	-225.5	0.00	0.00	
3,946.2	0.00	0.00	3,915.0	244.7	-234.0	-225.5	0.00	0.00	Sussex
4,000.0	0.00	0.00	3,968.8	244.7	-234.0	-225.5	0.00	0.00	
4,100.0	0.00	0.00	4,068.8	244.7	-234.0	-225.5	0.00	0.00	
4,163.2	0.00	0.00	4,132.0	244.7	-234.0	-225.5	0.00	0.00	Sussex Marker
4,200.0	0.00	0.00	4,168.8	244.7	-234.0	-225.5	0.00	0.00	
4,300.0	0.00	0.00	4,268.8	244.7	-234.0	-225.5	0.00	0.00	
4,399.2	0.00	0.00	4,368.0	244.7	-234.0	-225.5	0.00	0.00	Shannon
4,400.0	0.00	0.00	4,368.8	244.7	-234.0	-225.5	0.00	0.00	
4,500.0	0.00	0.00	4,468.8	244.7	-234.0	-225.5	0.00	0.00	

Cathedral Energy Services

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Well:	Billings 2D-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
4,600.0	0.00	0.00	4,568.8	244.7	-234.0	-225.5	0.00	0.00	
4,700.0	0.00	0.00	4,668.8	244.7	-234.0	-225.5	0.00	0.00	
4,800.0	0.00	0.00	4,768.8	244.7	-234.0	-225.5	0.00	0.00	
4,900.0	0.00	0.00	4,868.8	244.7	-234.0	-225.5	0.00	0.00	
5,000.0	0.00	0.00	4,968.8	244.7	-234.0	-225.5	0.00	0.00	
5,100.0	0.00	0.00	5,068.8	244.7	-234.0	-225.5	0.00	0.00	
5,200.0	0.00	0.00	5,168.8	244.7	-234.0	-225.5	0.00	0.00	
5,300.0	0.00	0.00	5,268.8	244.7	-234.0	-225.5	0.00	0.00	
5,400.0	0.00	0.00	5,368.8	244.7	-234.0	-225.5	0.00	0.00	
5,500.0	0.00	0.00	5,468.8	244.7	-234.0	-225.5	0.00	0.00	
5,600.0	0.00	0.00	5,568.8	244.7	-234.0	-225.5	0.00	0.00	
5,700.0	0.00	0.00	5,668.8	244.7	-234.0	-225.5	0.00	0.00	
5,800.0	0.00	0.00	5,768.8	244.7	-234.0	-225.5	0.00	0.00	
5,900.0	0.00	0.00	5,868.8	244.7	-234.0	-225.5	0.00	0.00	
6,000.0	0.00	0.00	5,968.8	244.7	-234.0	-225.5	0.00	0.00	
6,100.0	0.00	0.00	6,068.8	244.7	-234.0	-225.5	0.00	0.00	
6,155.2	0.00	0.00	6,124.0	244.7	-234.0	-225.5	0.00	0.00	Teepee Buttes
6,200.0	0.00	0.00	6,168.8	244.7	-234.0	-225.5	0.00	0.00	
6,300.0	0.00	0.00	6,268.8	244.7	-234.0	-225.5	0.00	0.00	
6,400.0	0.00	0.00	6,368.8	244.7	-234.0	-225.5	0.00	0.00	
6,428.1	0.00	0.00	6,396.9	244.7	-234.0	-225.5	0.00	0.00	Curve KOP @ 6428.1' MD
6,500.0	5.75	90.00	6,468.7	244.7	-230.4	-221.9	8.00	8.00	
6,600.0	13.75	90.00	6,567.1	244.7	-213.5	-205.0	8.00	8.00	
6,700.0	21.75	90.00	6,662.3	244.7	-183.0	-174.6	8.00	8.00	
6,800.0	29.75	90.00	6,752.3	244.7	-139.6	-131.2	8.00	8.00	
6,900.0	37.75	90.00	6,835.4	244.7	-84.1	-75.7	8.00	8.00	
6,949.0	41.67	90.00	6,873.1	244.7	-52.8	-44.4	8.00	8.00	Sharon Springs
7,000.0	45.75	90.00	6,909.9	244.7	-17.6	-9.2	8.00	8.00	
7,049.7	49.73	90.00	6,943.3	244.7	19.2	27.6	8.00	8.00	Niobrara
7,100.0	53.75	90.00	6,974.5	244.7	58.7	67.0	8.00	8.00	
7,168.0	59.19	90.00	7,012.0	244.7	115.3	123.6	8.00	8.00	B Chalk
7,200.0	61.75	90.00	7,027.8	244.7	143.2	151.5	8.00	8.00	
7,300.0	69.75	90.00	7,068.8	244.7	234.3	242.5	8.00	8.00	
7,400.0	77.75	90.00	7,096.8	244.7	330.2	338.4	8.00	8.00	
7,500.0	85.75	90.00	7,111.1	244.7	429.1	437.2	8.00	8.00	
7,540.6	89.00	90.00	7,113.0	244.7	469.7	477.8	8.00	8.00	Landing Pt @ 7540.6' MD
7,600.0	89.00	90.00	7,114.0	244.7	529.1	537.1	0.00	0.00	
7,700.0	89.00	90.00	7,115.8	244.7	629.0	637.0	0.00	0.00	
7,800.0	89.00	90.00	7,117.5	244.8	729.0	737.0	0.00	0.00	
7,900.0	89.00	90.00	7,119.3	244.8	829.0	836.9	0.00	0.00	
8,000.0	89.00	90.00	7,121.0	244.8	929.0	936.8	0.00	0.00	
8,100.0	89.00	90.00	7,122.8	244.8	1,029.0	1,036.7	0.00	0.00	
8,200.0	89.00	90.00	7,124.5	244.8	1,129.0	1,136.7	0.00	0.00	
8,300.0	89.00	90.00	7,126.2	244.8	1,229.0	1,236.6	0.00	0.00	
8,400.0	89.00	90.00	7,128.0	244.8	1,328.9	1,336.5	0.00	0.00	
8,500.0	89.00	90.00	7,129.7	244.8	1,428.9	1,436.5	0.00	0.00	
8,600.0	89.00	90.00	7,131.5	244.8	1,528.9	1,536.4	0.00	0.00	
8,700.0	89.00	90.00	7,133.2	244.8	1,628.9	1,636.3	0.00	0.00	
8,800.0	89.00	90.00	7,135.0	244.8	1,728.9	1,736.2	0.00	0.00	
8,900.0	89.00	90.00	7,136.7	244.8	1,828.9	1,836.2	0.00	0.00	
9,000.0	89.00	90.00	7,138.5	244.8	1,928.8	1,936.1	0.00	0.00	
9,100.0	89.00	90.00	7,140.2	244.8	2,028.8	2,036.0	0.00	0.00	

Cathedral Energy Services

Planning Report

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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 2D-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	7,142.0	244.8	2,128.8	2,135.9	0.00	0.00	
9,300.0	89.00	90.00	7,143.7	244.8	2,228.8	2,235.9	0.00	0.00	
9,400.0	89.00	90.00	7,145.4	244.8	2,328.8	2,335.8	0.00	0.00	
9,500.0	89.00	90.00	7,147.2	244.8	2,428.8	2,435.7	0.00	0.00	
9,600.0	89.00	90.00	7,148.9	244.9	2,528.8	2,535.6	0.00	0.00	
9,700.0	89.00	90.00	7,150.7	244.9	2,628.7	2,635.6	0.00	0.00	
9,800.0	89.00	90.00	7,152.4	244.9	2,728.7	2,735.5	0.00	0.00	
9,900.0	89.00	90.00	7,154.2	244.9	2,828.7	2,835.4	0.00	0.00	
10,000.0	89.00	90.00	7,155.9	244.9	2,928.7	2,935.4	0.00	0.00	
10,100.0	89.00	90.00	7,157.7	244.9	3,028.7	3,035.3	0.00	0.00	
10,200.0	89.00	90.00	7,159.4	244.9	3,128.7	3,135.2	0.00	0.00	
10,300.0	89.00	90.00	7,161.2	244.9	3,228.7	3,235.1	0.00	0.00	
10,400.0	89.00	90.00	7,162.9	244.9	3,328.6	3,335.1	0.00	0.00	
10,500.0	89.00	90.00	7,164.6	244.9	3,428.6	3,435.0	0.00	0.00	
10,600.0	89.00	90.00	7,166.4	244.9	3,528.6	3,534.9	0.00	0.00	
10,700.0	89.00	90.00	7,168.1	244.9	3,628.6	3,634.8	0.00	0.00	
10,800.0	89.00	90.00	7,169.9	244.9	3,728.6	3,734.8	0.00	0.00	
10,900.0	89.00	90.00	7,171.6	244.9	3,828.6	3,834.7	0.00	0.00	
11,000.0	89.00	90.00	7,173.4	244.9	3,928.5	3,934.6	0.00	0.00	
11,100.0	89.00	90.00	7,175.1	244.9	4,028.5	4,034.5	0.00	0.00	
11,200.0	89.00	90.00	7,176.9	244.9	4,128.5	4,134.5	0.00	0.00	
11,300.0	89.00	90.00	7,178.6	245.0	4,228.5	4,234.4	0.00	0.00	
11,400.0	89.00	90.00	7,180.4	245.0	4,328.5	4,334.3	0.00	0.00	
11,500.0	89.00	90.00	7,182.1	245.0	4,428.5	4,434.3	0.00	0.00	
11,600.0	89.00	90.00	7,183.8	245.0	4,528.5	4,534.2	0.00	0.00	
11,700.0	89.00	90.00	7,185.6	245.0	4,628.4	4,634.1	0.00	0.00	
11,800.0	89.00	90.00	7,187.3	245.0	4,728.4	4,734.0	0.00	0.00	
11,900.0	89.00	90.00	7,189.1	245.0	4,828.4	4,834.0	0.00	0.00	
12,000.0	89.00	90.00	7,190.8	245.0	4,928.4	4,933.9	0.00	0.00	
12,100.0	89.00	90.00	7,192.6	245.0	5,028.4	5,033.8	0.00	0.00	
12,200.0	89.00	90.00	7,194.3	245.0	5,128.4	5,133.7	0.00	0.00	
12,300.0	89.00	90.00	7,196.1	245.0	5,228.3	5,233.7	0.00	0.00	
12,400.0	89.00	90.00	7,197.8	245.0	5,328.3	5,333.6	0.00	0.00	
12,500.0	89.00	90.00	7,199.5	245.0	5,428.3	5,433.5	0.00	0.00	
12,600.0	89.00	90.00	7,201.3	245.0	5,528.3	5,533.4	0.00	0.00	
12,700.0	89.00	90.00	7,203.0	245.0	5,628.3	5,633.4	0.00	0.00	
12,800.0	89.00	90.00	7,204.8	245.0	5,728.3	5,733.3	0.00	0.00	
12,900.0	89.00	90.00	7,206.5	245.0	5,828.3	5,833.2	0.00	0.00	
13,000.0	89.00	90.00	7,208.3	245.0	5,928.2	5,933.2	0.00	0.00	
13,100.0	89.00	90.00	7,210.0	245.1	6,028.2	6,033.1	0.00	0.00	
13,200.0	89.00	90.00	7,211.8	245.1	6,128.2	6,133.0	0.00	0.00	
13,300.0	89.00	90.00	7,213.5	245.1	6,228.2	6,232.9	0.00	0.00	
13,400.0	89.00	90.00	7,215.3	245.1	6,328.2	6,332.9	0.00	0.00	
13,500.0	89.00	90.00	7,217.0	245.1	6,428.2	6,432.8	0.00	0.00	
13,600.0	89.00	90.00	7,218.7	245.1	6,528.1	6,532.7	0.00	0.00	
13,700.0	89.00	90.00	7,220.5	245.1	6,628.1	6,632.6	0.00	0.00	
13,800.0	89.00	90.00	7,222.2	245.1	6,728.1	6,732.6	0.00	0.00	
13,900.0	89.00	90.00	7,224.0	245.1	6,828.1	6,832.5	0.00	0.00	
14,000.0	89.00	90.00	7,225.7	245.1	6,928.1	6,932.4	0.00	0.00	
14,100.0	89.00	90.00	7,227.5	245.1	7,028.1	7,032.3	0.00	0.00	
14,200.0	89.00	90.00	7,229.2	245.1	7,128.1	7,132.3	0.00	0.00	
14,244.8	89.00	90.00	7,230.0	245.1	7,172.9	7,177.1	0.00	0.00	PBHL @ 14244.8' MD

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Interp @ 2607.9 (Billings) - hit/miss target - Shape - Point	0.00	0.00	2,607.9	244.7	-234.0	1,326,938.55	3,124,217.89	40.229982	-105.055128
Billings 2D-18H BHL - plan hits target center - Point	0.00	0.00	7,230.0	245.1	7,172.9	1,326,976.20	3,131,624.68	40.229980	-105.028600

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,946.2	3,915.0	Sussex				
4,163.2	4,132.0	Sussex Marker				
4,399.2	4,368.0	Shannon				
6,155.2	6,124.0	Teepee Buttes				
6,949.0	6,874.0	Sharon Springs		1.00	90.00	
7,049.7	6,943.0	Niobrara		1.00	90.00	
7,168.0	7,010.0	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
1,622.6	1,608.1	127.0	-121.4	EOB; Inc=14.23°
1,927.8	1,903.9	181.2	-173.3	Start Drop -2.00
2,639.2	2,607.9	244.7	-234.0	EOD @ 2639.2' MD
6,428.1	6,396.9	244.7	-234.0	Curve KOP @ 6428.1' MD
7,540.6	7,113.0	244.7	469.7	Landing Pt @ 7540.6' MD
14,244.8	7,230.0	245.1	7,172.9	PBHL @ 14244.8' MD

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S18-T3N-R68W (Billings)

Billings 2D-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 2D-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 2D-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	14,244.8	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	29.1	28.6	54.281	CC
Billings 2A-18H - Hz - Plan #1	300.0	300.5	29.4	28.4	29.297	ES
Billings 2A-18H - Hz - Plan #1	14,244.8	14,265.1	1,057.4	699.0	2.951	SF
Billings 2B-18H - HZ - Plan #1	475.5	474.8	20.1	18.4	12.344	CC
Billings 2B-18H - HZ - Plan #1	500.0	499.3	20.1	18.4	11.721	ES
Billings 2B-18H - HZ - Plan #1	14,244.8	14,328.8	699.6	339.7	1.944	SF
Billings 2C-18H - HZ - Plan #1	488.9	488.7	7.9	6.2	4.713	CC
Billings 2C-18H - HZ - Plan #1	500.0	499.8	7.9	6.2	4.610	ES
Billings 2C-18H - HZ - Plan #1	14,244.8	14,068.8	402.9	89.5	1.286	Level 3, SF
Billings 2E-18H - HZ - Plan #1	200.0	200.0	7.3	6.6	11.162	CC, ES
Billings 2E-18H - HZ - Plan #1	14,244.8	14,030.7	402.9	89.4	1.285	Level 3, SF
Billings 2F-18H - HZ - Plan #1	200.0	200.0	18.2	17.6	27.904	CC, ES
Billings 2F-18H - HZ - Plan #1	14,244.8	14,349.6	706.5	349.9	1.981	SF
Billings 2G-18H - Hz - Plan #1	200.0	200.0	29.1	28.5	44.646	CC, ES
Billings 2G-18H - Hz - Plan #1	14,244.8	14,087.9	1,068.1	714.0	3.017	SF
Billings 2H-18H - Hz - Plan #1	200.0	200.0	40.1	39.4	61.388	CC, ES
Billings 2H-18H - Hz - Plan #1	14,244.8	14,372.7	1,398.9	1,038.7	3.883	SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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 Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	1.0	1.0	0.0	0.0	0.00	29.1	0.0	29.1					
100.0	100.0	101.0	101.0	0.2	0.2	0.00	29.1	0.0	29.1	28.8	0.31	95.428		
166.3	166.3	167.3	167.3	0.3	0.3	0.00	29.1	0.0	29.1	28.6	0.54	54.281 CC		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.65	44.534		
300.0	300.0	300.5	300.5	0.5	0.5	44.56	30.0	-0.2	29.4	28.4	1.00	29.297 ES		
400.0	400.0	400.0	400.0	0.7	0.7	47.02	32.6	-0.7	30.1	28.8	1.35	22.237		
500.0	499.9	499.4	499.3	0.9	0.9	50.85	36.8	-1.5	31.4	29.7	1.71	18.359		
600.0	599.7	598.9	598.5	1.1	1.1	55.67	42.8	-2.6	33.5	31.4	2.08	16.072		
700.0	699.4	698.2	697.6	1.3	1.3	61.01	50.4	-4.1	36.4	34.0	2.48	14.698		
800.0	798.9	797.5	796.4	1.5	1.5	66.43	59.7	-5.9	40.4	37.5	2.91	13.892		
900.0	898.3	896.7	895.0	1.8	1.8	71.55	70.7	-8.1	45.4	42.1	3.38	13.449		
1,000.0	997.4	995.8	993.2	2.0	2.0	76.16	83.3	-10.5	51.6	47.7	3.90	13.243		
1,100.0	1,096.3	1,094.8	1,091.2	2.3	2.3	80.17	97.6	-13.3	58.9	54.4	4.47	13.191		
1,200.0	1,194.9	1,193.7	1,188.7	2.7	2.6	83.60	113.5	-16.4	67.3	62.2	5.09	13.236		
1,300.0	1,293.3	1,292.4	1,285.8	3.0	3.0	86.49	131.1	-19.8	76.8	71.1	5.76	13.342		
1,400.0	1,391.2	1,391.0	1,382.4	3.4	3.4	88.91	150.2	-23.5	87.4	80.9	6.48	13.484		
1,500.0	1,488.9	1,489.4	1,478.5	3.8	3.7	90.94	171.0	-27.5	99.0	91.8	7.26	13.643		
1,600.0	1,586.1	1,587.6	1,574.1	4.2	4.2	92.63	193.3	-31.8	111.7	103.6	8.09	13.809		
1,700.0	1,683.1	1,685.7	1,669.1	4.7	4.6	93.93	217.2	-36.5	125.3	116.3	8.95	14.003		
1,800.0	1,780.0	1,783.6	1,763.5	5.1	5.1	94.39	242.6	-41.4	139.7	129.9	9.82	14.224		
1,900.0	1,876.9	1,881.3	1,857.3	5.6	5.6	94.21	269.6	-46.6	154.9	144.2	10.71	14.462		
2,000.0	1,974.1	1,979.7	1,951.3	6.0	6.1	93.61	297.9	-52.1	170.7	159.1	11.58	14.740		
2,100.0	2,072.0	2,078.3	2,045.6	6.4	6.6	92.18	326.3	-57.6	186.3	173.9	12.36	15.079		
2,200.0	2,170.5	2,176.7	2,139.7	6.7	7.1	90.03	354.7	-63.1	202.1	189.0	13.04	15.502		
2,300.0	2,269.6	2,274.7	2,233.4	7.0	7.7	87.34	382.9	-68.6	218.3	204.7	13.60	16.049		
2,400.0	2,369.1	2,372.3	2,326.7	7.2	8.2	84.25	411.0	-74.1	235.4	221.4	14.05	16.757		
2,500.0	2,468.8	2,469.3	2,419.4	7.4	8.7	80.90	439.0	-79.5	253.8	239.4	14.37	17.665		
2,600.0	2,568.8	2,565.6	2,511.5	7.5	9.2	77.38	466.8	-84.9	273.8	259.3	14.56	18.809		
2,700.0	2,668.8	2,661.3	2,602.9	7.6	9.7	29.94	494.3	-90.2	295.7	282.8	12.90	22.934		
2,800.0	2,768.8	2,756.9	2,694.3	7.7	10.2	26.54	521.9	-95.6	318.9	305.0	13.86	23.009		
2,900.0	2,868.8	2,852.5	2,785.7	7.8	10.7	23.60	549.4	-100.9	343.0	328.2	14.79	23.185		
3,000.0	2,968.8	2,948.1	2,877.1	7.9	11.2	21.03	577.0	-106.2	367.9	352.2	15.70	23.434		
3,100.0	3,068.8	3,043.7	2,968.5	8.0	11.8	18.79	604.5	-111.6	393.4	376.8	16.57	23.734		
3,200.0	3,168.8	3,139.3	3,059.8	8.2	12.3	16.82	632.1	-116.9	419.3	401.9	17.42	24.068		
3,300.0	3,268.8	3,234.9	3,151.2	8.3	12.8	15.07	659.6	-122.3	445.8	427.5	18.25	24.424		
3,400.0	3,368.8	3,330.5	3,242.6	8.4	13.3	13.52	687.2	-127.6	472.5	453.5	19.06	24.792		
3,500.0	3,468.8	3,426.1	3,334.0	8.5	13.8	12.13	714.7	-133.0	499.6	479.7	19.85	25.165		
3,600.0	3,568.8	3,521.7	3,425.4	8.6	14.3	10.89	742.3	-138.3	526.9	506.2	20.63	25.539		
3,700.0	3,668.8	3,617.2	3,516.8	8.8	14.8	9.76	769.8	-143.6	554.4	533.0	21.40	25.910		
3,800.0	3,768.8	3,712.8	3,608.1	8.9	15.4	8.75	797.4	-149.0	582.1	559.9	22.15	26.276		
3,900.0	3,868.8	3,808.4	3,699.5	9.0	15.9	7.82	824.9	-154.3	609.9	587.0	22.90	26.634		
4,000.0	3,968.8	3,904.0	3,790.9	9.2	16.4	6.97	852.5	-159.7	637.9	614.3	23.64	26.984		
4,100.0	4,068.8	3,999.6	3,882.3	9.3	16.9	6.20	880.0	-165.0	666.0	641.6	24.37	27.325		
4,200.0	4,168.8	4,095.2	3,973.7	9.4	17.4	5.48	907.6	-170.4	694.2	669.1	25.10	27.657		
4,300.0	4,268.8	4,190.8	4,065.0	9.6	17.9	4.83	935.1	-175.7	722.5	696.7	25.82	27.978		
4,400.0	4,368.8	4,286.4	4,156.4	9.7	18.5	4.22	962.7	-181.0	750.9	724.3	26.54	28.289		
4,500.0	4,468.8	4,382.0	4,247.8	9.8	19.0	3.65	990.2	-186.4	779.3	752.1	27.26	28.591		
4,600.0	4,568.8	4,477.6	4,339.2	10.0	19.5	3.13	1,017.8	-191.7	807.8	779.9	27.97	28.882		
4,700.0	4,668.8	4,573.2	4,430.6	10.1	20.0	2.64	1,045.3	-197.1	836.4	807.7	28.68	29.164		
4,800.0	4,768.8	4,668.8	4,522.0	10.3	20.5	2.18	1,072.9	-202.4	865.0	835.6	29.39	29.437		
4,900.0	4,868.8	4,778.3	4,626.8	10.4	21.1	1.70	1,104.1	-208.5	893.5	863.3	30.15	29.630		
5,000.0	4,968.8	4,918.4	4,762.2	10.6	21.7	1.20	1,139.1	-215.3	918.4	887.4	30.98	29.644		

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 2D-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 2D-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 Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,068.8	5,061.7	4,902.4	10.7	22.3	0.81	1,168.2	-220.9	938.6	906.9	31.70	29.610		
5,200.0	5,168.8	5,207.8	5,046.6	10.8	22.7	0.53	1,190.7	-225.3	954.0	921.7	32.31	29.526		
5,300.0	5,268.8	5,355.8	5,193.8	11.0	23.0	0.34	1,206.1	-228.2	964.4	931.6	32.79	29.409		
5,400.0	5,368.8	5,505.1	5,342.9	11.1	23.2	0.25	1,214.0	-229.8	969.7	936.5	33.16	29.244		
5,500.0	5,468.8	5,632.0	5,469.8	11.3	23.3	0.24	1,215.1	-230.0	970.5	937.0	33.41	29.044		
5,600.0	5,568.8	5,732.0	5,569.8	11.4	23.4	0.24	1,215.1	-230.0	970.5	936.8	33.65	28.841		
5,700.0	5,668.8	5,832.0	5,669.8	11.6	23.4	0.24	1,215.1	-230.0	970.5	936.6	33.88	28.640		
5,800.0	5,768.8	5,932.0	5,769.8	11.7	23.5	0.24	1,215.1	-230.0	970.5	936.3	34.12	28.440		
5,900.0	5,868.8	6,032.0	5,869.8	11.9	23.6	0.24	1,215.1	-230.0	970.5	936.1	34.36	28.242		
6,000.0	5,968.8	6,132.0	5,969.8	12.0	23.7	0.24	1,215.1	-230.0	970.5	935.9	34.60	28.046		
6,100.0	6,068.8	6,232.0	6,069.8	12.2	23.7	0.24	1,215.1	-230.0	970.5	935.6	34.84	27.851		
6,200.0	6,168.8	6,332.0	6,169.8	12.3	23.8	0.24	1,215.1	-230.0	970.5	935.4	35.09	27.658		
6,300.0	6,268.8	6,432.0	6,269.8	12.5	23.9	0.24	1,215.1	-230.0	970.5	935.1	35.33	27.466		
6,308.2	6,277.0	6,440.2	6,278.0	12.5	23.9	0.24	1,215.1	-230.0	970.5	935.1	35.35	27.450		
6,400.0	6,368.8	6,530.4	6,368.0	12.6	24.0	0.43	1,215.2	-226.7	970.5	935.0	35.56	27.290		
6,500.0	6,468.7	6,626.3	6,462.7	12.8	24.0	-88.83	1,215.4	-211.2	970.9	946.7	24.19	40.139		
6,600.0	6,567.1	6,720.6	6,552.8	12.8	24.0	-88.08	1,215.7	-183.8	971.5	947.2	24.33	39.935		
6,700.0	6,662.3	6,813.6	6,637.4	12.8	24.0	-87.38	1,216.1	-145.4	972.5	948.1	24.36	39.920		
6,800.0	6,752.3	6,905.3	6,715.3	12.8	24.0	-86.72	1,216.6	-97.2	973.6	949.2	24.37	39.957		
6,900.0	6,835.4	6,996.0	6,785.7	12.8	24.1	-86.12	1,217.3	-40.0	974.9	950.4	24.47	39.832		
7,000.0	6,909.9	7,085.8	6,847.6	12.9	24.2	-85.60	1,218.0	24.8	976.3	951.4	24.86	39.263		
7,100.0	6,974.5	7,174.8	6,900.6	13.2	24.4	-85.15	1,218.8	96.4	977.7	952.0	25.70	38.045		
7,200.0	7,027.8	7,263.4	6,944.1	13.9	24.6	-84.79	1,219.7	173.4	979.1	952.0	27.13	36.095		
7,300.0	7,068.8	7,350.0	6,977.2	14.9	25.0	-84.52	1,220.6	253.4	980.4	951.2	29.20	33.581		
7,400.0	7,096.8	7,439.4	7,000.9	16.3	25.6	-84.34	1,221.5	339.6	981.6	949.7	31.96	30.717		
7,500.0	7,111.1	7,527.2	7,013.5	17.9	26.2	-84.27	1,222.5	426.4	982.7	947.5	35.23	27.898		
7,600.0	7,114.0	7,620.7	7,016.7	19.8	27.1	-84.27	1,223.5	519.8	983.8	944.9	38.87	25.312		
7,700.0	7,115.8	7,720.7	7,018.5	21.7	28.3	-84.28	1,224.7	619.8	984.9	942.1	42.80	23.013		
7,800.0	7,117.5	7,820.7	7,020.2	23.8	29.7	-84.29	1,225.8	719.8	986.0	939.1	46.92	21.015		
7,900.0	7,119.3	7,920.7	7,021.9	25.9	31.2	-84.29	1,226.9	819.7	987.1	935.9	51.18	19.287		
8,000.0	7,121.0	8,020.7	7,023.7	28.1	32.9	-84.30	1,228.0	919.7	988.2	932.6	55.55	17.789		
8,100.0	7,122.8	8,120.7	7,025.4	30.3	34.7	-84.31	1,229.1	1,019.7	989.3	929.3	60.01	16.486		
8,200.0	7,124.5	8,220.7	7,027.2	32.6	36.6	-84.31	1,230.3	1,119.7	990.4	925.9	64.53	15.347		
8,300.0	7,126.2	8,320.7	7,028.9	34.9	38.6	-84.32	1,231.4	1,219.6	991.5	922.4	69.11	14.346		
8,400.0	7,128.0	8,420.7	7,030.7	37.2	40.6	-84.33	1,232.5	1,319.6	992.6	918.9	73.74	13.461		
8,500.0	7,129.7	8,520.7	7,032.4	39.5	42.7	-84.33	1,233.6	1,419.6	993.7	915.3	78.40	12.675		
8,600.0	7,131.5	8,620.6	7,034.2	41.9	44.9	-84.34	1,234.7	1,519.5	994.8	911.8	83.09	11.973		
8,700.0	7,133.2	8,720.6	7,035.9	44.3	47.1	-84.34	1,235.8	1,619.5	996.0	908.1	87.81	11.342		
8,800.0	7,135.0	8,820.6	7,037.7	46.6	49.3	-84.35	1,237.0	1,719.5	997.1	904.5	92.55	10.773		
8,900.0	7,136.7	8,920.6	7,039.4	49.0	51.5	-84.36	1,238.1	1,819.5	998.2	900.9	97.31	10.258		
9,000.0	7,138.5	9,020.6	7,041.1	51.4	53.8	-84.36	1,239.2	1,919.4	999.3	897.2	102.08	9.789		
9,100.0	7,140.2	9,120.6	7,042.9	53.8	56.1	-84.37	1,240.3	2,019.4	1,000.4	893.5	106.87	9.361		
9,200.0	7,142.0	9,220.6	7,044.6	56.2	58.4	-84.38	1,241.4	2,119.4	1,001.5	889.8	111.67	8.969		
9,300.0	7,143.7	9,320.6	7,046.4	58.6	60.7	-84.38	1,242.6	2,219.4	1,002.6	886.1	116.48	8.608		
9,400.0	7,145.4	9,420.6	7,048.1	61.0	63.1	-84.39	1,243.7	2,319.3	1,003.7	882.4	121.29	8.275		
9,500.0	7,147.2	9,520.6	7,049.9	63.5	65.4	-84.39	1,244.8	2,419.3	1,004.8	878.7	126.12	7.967		
9,600.0	7,148.9	9,620.6	7,051.6	65.9	67.8	-84.40	1,245.9	2,519.3	1,005.9	875.0	130.96	7.681		
9,700.0	7,150.7	9,720.6	7,053.4	68.3	70.1	-84.41	1,247.0	2,619.2	1,007.0	871.2	135.80	7.416		
9,800.0	7,152.4	9,820.6	7,055.1	70.8	72.5	-84.41	1,248.2	2,719.2	1,008.1	867.5	140.65	7.168		
9,900.0	7,154.2	9,920.6	7,056.9	73.2	74.9	-84.42	1,249.3	2,819.2	1,009.2	863.7	145.50	6.936		
10,000.0	7,155.9	10,020.6	7,058.6	75.6	77.3	-84.43	1,250.4	2,919.2	1,010.4	860.0	150.36	6.720		
10,100.0	7,157.7	10,120.6	7,060.3	78.1	79.7	-84.43	1,251.5	3,019.1	1,011.5	856.2	155.22	6.516		

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 2D-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 2D-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 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)				
10,200.0	7,159.4	10,220.5	7,062.1	80.5	82.0	-84.44	1,252.6	3,119.1	1,012.6	852.5	160.08	6.325		
10,300.0	7,161.2	10,320.5	7,063.8	83.0	84.4	-84.44	1,253.7	3,219.1	1,013.7	848.7	164.95	6.145		
10,400.0	7,162.9	10,420.5	7,065.6	85.4	86.9	-84.45	1,254.9	3,319.0	1,014.8	845.0	169.83	5.975		
10,500.0	7,164.6	10,520.5	7,067.3	87.8	89.3	-84.46	1,256.0	3,419.0	1,015.9	841.2	174.70	5.815		
10,600.0	7,166.4	10,620.5	7,069.1	90.3	91.7	-84.46	1,257.1	3,519.0	1,017.0	837.4	179.58	5.663		
10,700.0	7,168.1	10,720.5	7,070.8	92.7	94.1	-84.47	1,258.2	3,619.0	1,018.1	833.6	184.46	5.519		
10,800.0	7,169.9	10,820.5	7,072.6	95.2	96.5	-84.47	1,259.3	3,718.9	1,019.2	829.9	189.35	5.383		
10,900.0	7,171.6	10,920.5	7,074.3	97.6	98.9	-84.48	1,260.5	3,818.9	1,020.3	826.1	194.23	5.253		
11,000.0	7,173.4	11,020.5	7,076.0	100.1	101.4	-84.49	1,261.6	3,918.9	1,021.4	822.3	199.12	5.130		
11,100.0	7,175.1	11,120.5	7,077.8	102.6	103.8	-84.49	1,262.7	4,018.9	1,022.5	818.5	204.01	5.012		
11,200.0	7,176.9	11,220.5	7,079.5	105.0	106.2	-84.50	1,263.8	4,118.8	1,023.7	814.7	208.90	4.900		
11,300.0	7,178.6	11,320.5	7,081.3	107.5	108.6	-84.50	1,264.9	4,218.8	1,024.8	811.0	213.80	4.793		
11,400.0	7,180.4	11,420.5	7,083.0	109.9	111.1	-84.51	1,266.1	4,318.8	1,025.9	807.2	218.69	4.691		
11,500.0	7,182.1	11,520.5	7,084.8	112.4	113.5	-84.52	1,267.2	4,418.7	1,027.0	803.4	223.59	4.593		
11,600.0	7,183.8	11,620.5	7,086.5	114.8	115.9	-84.52	1,268.3	4,518.7	1,028.1	799.6	228.49	4.500		
11,700.0	7,185.6	11,720.5	7,088.3	117.3	118.4	-84.53	1,269.4	4,618.7	1,029.2	795.8	233.38	4.410		
11,800.0	7,187.3	11,820.4	7,090.0	119.8	120.8	-84.53	1,270.5	4,718.7	1,030.3	792.0	238.29	4.324		
11,900.0	7,189.1	11,920.4	7,091.8	122.2	123.3	-84.54	1,271.7	4,818.6	1,031.4	788.2	243.19	4.241		
12,000.0	7,190.8	12,020.4	7,093.5	124.7	125.7	-84.55	1,272.8	4,918.6	1,032.5	784.4	248.09	4.162		
12,100.0	7,192.6	12,120.4	7,095.2	127.1	128.1	-84.55	1,273.9	5,018.6	1,033.6	780.6	252.99	4.086		
12,200.0	7,194.3	12,220.4	7,097.0	129.6	130.6	-84.56	1,275.0	5,118.6	1,034.7	776.8	257.90	4.012		
12,300.0	7,196.1	12,320.4	7,098.7	132.1	133.0	-84.56	1,276.1	5,218.5	1,035.8	773.0	262.80	3.941		
12,400.0	7,197.8	12,420.4	7,100.5	134.5	135.5	-84.57	1,277.2	5,318.5	1,036.9	769.2	267.71	3.873		
12,500.0	7,199.5	12,520.4	7,102.2	137.0	137.9	-84.57	1,278.4	5,418.5	1,038.1	765.4	272.62	3.808		
12,600.0	7,201.3	12,620.4	7,104.0	139.5	140.4	-84.58	1,279.5	5,518.4	1,039.2	761.6	277.53	3.744		
12,700.0	7,203.0	12,720.4	7,105.7	141.9	142.8	-84.59	1,280.6	5,618.4	1,040.3	757.8	282.44	3.683		
12,800.0	7,204.8	12,820.4	7,107.5	144.4	145.3	-84.59	1,281.7	5,718.4	1,041.4	754.0	287.35	3.624		
12,900.0	7,206.5	12,920.4	7,109.2	146.8	147.7	-84.60	1,282.8	5,818.4	1,042.5	750.2	292.26	3.567		
13,000.0	7,208.3	13,020.4	7,111.0	149.3	150.2	-84.60	1,284.0	5,918.3	1,043.6	746.4	297.17	3.512		
13,100.0	7,210.0	13,120.4	7,112.7	151.8	152.6	-84.61	1,285.1	6,018.3	1,044.7	742.6	302.08	3.458		
13,200.0	7,211.8	13,220.4	7,114.4	154.2	155.1	-84.62	1,286.2	6,118.3	1,045.8	738.8	306.99	3.407		
13,300.0	7,213.5	13,320.4	7,116.2	156.7	157.5	-84.62	1,287.3	6,218.2	1,046.9	735.0	311.91	3.357		
13,400.0	7,215.3	13,420.3	7,117.9	159.2	160.0	-84.63	1,288.4	6,318.2	1,048.0	731.2	316.82	3.308		
13,500.0	7,217.0	13,520.3	7,119.7	161.6	162.5	-84.63	1,289.6	6,418.2	1,049.1	727.4	321.73	3.261		
13,600.0	7,218.7	13,620.3	7,121.4	164.1	164.9	-84.64	1,290.7	6,518.2	1,050.2	723.6	326.65	3.215		
13,700.0	7,220.5	13,720.3	7,123.2	166.6	167.4	-84.64	1,291.8	6,618.1	1,051.4	719.8	331.56	3.171		
13,800.0	7,222.2	13,820.3	7,124.9	169.0	169.8	-84.65	1,292.9	6,718.1	1,052.5	716.0	336.48	3.128		
13,900.0	7,224.0	13,920.3	7,126.7	171.5	172.3	-84.66	1,294.0	6,818.1	1,053.6	712.2	341.39	3.086		
14,000.0	7,225.7	14,020.3	7,128.4	174.0	174.7	-84.66	1,295.1	6,918.1	1,054.7	708.4	346.31	3.045		
14,100.0	7,227.5	14,120.3	7,130.1	176.4	177.2	-84.67	1,296.3	7,018.0	1,055.8	704.6	351.23	3.006		
14,200.0	7,229.2	14,220.3	7,131.9	178.9	179.7	-84.67	1,297.4	7,118.0	1,056.9	700.8	356.15	2.968		
14,244.8	7,230.0	14,265.1	7,132.7	180.0	180.8	-84.67	1,297.9	7,162.8	1,057.4	699.0	358.35	2.951 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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							
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	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	21.5	0.30	71.959		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.65	33.478		
300.0	300.0	300.0	300.0	0.5	0.5	45.35	21.9	0.0	21.2	20.2	1.00	21.184		
400.0	400.0	399.6	399.6	0.7	0.7	49.94	22.7	-0.2	20.3	18.9	1.35	14.990		
475.5	475.3	474.8	474.8	0.8	0.8	54.99	24.4	-0.6	20.1	18.4	1.62	12.344 CC		
500.0	499.9	499.3	499.2	0.9	0.9	56.89	25.2	-0.8	20.1	18.4	1.71	11.721 ES		
600.0	599.7	598.9	598.8	1.1	1.0	65.48	29.4	-1.9	20.8	18.8	2.09	9.977		
700.0	699.4	698.6	698.2	1.3	1.2	74.46	35.3	-3.4	22.8	20.3	2.49	9.148		
800.0	798.9	798.2	797.5	1.5	1.4	82.63	42.8	-5.3	26.1	23.1	2.93	8.889		
900.0	898.3	897.7	896.7	1.8	1.7	89.35	52.1	-7.6	30.6	27.2	3.41	8.973		
1,000.0	997.4	997.3	995.6	2.0	1.9	94.53	63.0	-10.3	36.3	32.3	3.92	9.248		
1,100.0	1,096.3	1,096.7	1,094.2	2.3	2.2	98.40	75.5	-13.4	43.1	38.6	4.48	9.617		
1,200.0	1,194.9	1,196.1	1,192.5	2.7	2.5	101.26	89.7	-17.0	50.9	45.8	5.08	10.022		
1,300.0	1,293.3	1,295.4	1,290.4	3.0	2.8	103.36	105.5	-20.9	59.7	53.9	5.72	10.428		
1,400.0	1,391.2	1,394.7	1,388.0	3.4	3.1	104.90	123.0	-25.3	69.4	63.0	6.41	10.817		
1,500.0	1,488.9	1,493.8	1,485.2	3.8	3.5	106.02	142.1	-30.1	80.0	72.9	7.16	11.180		
1,600.0	1,586.1	1,592.8	1,581.9	4.2	3.9	106.85	162.7	-35.3	91.5	83.6	7.95	11.513		
1,700.0	1,683.1	1,691.7	1,678.1	4.7	4.3	107.26	185.0	-40.8	103.8	95.0	8.78	11.816		
1,800.0	1,780.0	1,790.5	1,773.8	5.1	4.7	106.80	208.9	-46.8	116.4	106.8	9.65	12.059		
1,900.0	1,876.9	1,889.2	1,868.9	5.6	5.2	105.68	234.3	-53.2	129.4	118.8	10.56	12.259		
2,000.0	1,974.1	1,987.6	1,963.3	6.0	5.7	103.94	261.2	-59.9	142.6	131.2	11.46	12.443		
2,100.0	2,072.0	2,085.6	2,056.8	6.4	6.2	100.82	289.6	-67.0	155.9	143.5	12.32	12.651		
2,200.0	2,170.5	2,182.8	2,149.1	6.7	6.8	96.59	319.3	-74.4	169.8	156.7	13.09	12.969		
2,300.0	2,269.6	2,278.9	2,239.8	7.0	7.4	91.62	350.1	-82.1	185.2	171.5	13.73	13.494		
2,400.0	2,369.1	2,374.6	2,329.6	7.2	7.9	86.24	382.0	-90.1	203.0	188.8	14.18	14.311		
2,500.0	2,468.8	2,470.2	2,419.3	7.4	8.5	80.94	414.1	-98.2	223.2	208.7	14.47	15.424		
2,600.0	2,568.8	2,564.9	2,508.2	7.5	9.1	75.90	445.9	-106.1	246.0	231.4	14.60	16.857		
2,700.0	2,668.8	2,658.8	2,596.3	7.6	9.7	27.28	477.4	-114.0	271.7	258.7	12.94	20.992		
2,800.0	2,768.8	2,752.6	2,684.3	7.7	10.3	22.99	508.9	-121.9	299.2	285.1	14.07	21.261		
2,900.0	2,868.8	2,846.4	2,772.4	7.8	10.8	19.42	540.4	-129.8	328.0	312.9	15.15	21.657		
3,000.0	2,968.8	2,940.3	2,860.4	7.9	11.4	16.41	571.9	-137.7	357.9	341.7	16.17	22.134		
3,100.0	3,068.8	3,034.1	2,948.4	8.0	12.0	13.86	603.3	-145.5	388.5	371.4	17.15	22.659		
3,200.0	3,168.8	3,127.9	3,036.5	8.2	12.6	11.67	634.8	-153.4	419.8	401.7	18.09	23.210		
3,300.0	3,268.8	3,221.8	3,124.5	8.3	13.2	9.78	666.3	-161.3	451.5	432.5	18.99	23.771		
3,400.0	3,368.8	3,315.6	3,212.5	8.4	13.8	8.14	697.8	-169.2	483.7	463.8	19.88	24.331		
3,500.0	3,468.8	3,409.4	3,300.6	8.5	14.3	6.70	729.3	-177.1	516.1	495.4	20.74	24.884		
3,600.0	3,568.8	3,503.2	3,388.6	8.6	14.9	5.43	760.8	-184.9	548.8	527.2	21.59	25.424		
3,700.0	3,668.8	3,610.6	3,489.7	8.8	15.6	4.17	796.0	-193.8	581.1	558.6	22.49	25.840		
3,800.0	3,768.8	3,729.6	3,603.0	8.9	16.2	3.07	831.0	-202.5	610.1	586.8	23.36	26.120		
3,900.0	3,868.8	3,851.6	3,720.7	9.0	16.8	2.20	862.1	-210.3	635.4	611.2	24.15	26.313		
4,000.0	3,968.8	3,976.2	3,842.2	9.2	17.3	1.51	888.8	-217.0	656.7	631.8	24.85	26.426		
4,100.0	4,068.8	4,103.0	3,967.0	9.3	17.7	0.99	910.7	-222.5	673.9	648.4	25.46	26.465		
4,200.0	4,168.8	4,231.7	4,094.5	9.4	18.0	0.62	927.5	-226.6	686.8	660.9	25.97	26.446		
4,300.0	4,268.8	4,361.7	4,224.0	9.6	18.2	0.37	938.7	-229.5	695.5	669.1	26.38	26.358		
4,400.0	4,368.8	4,492.4	4,354.6	9.7	18.4	0.26	944.2	-230.8	699.7	673.0	26.70	26.202		
4,500.0	4,468.8	4,606.6	4,468.8	9.8	18.5	0.25	944.9	-231.0	700.2	673.2	26.95	25.982		
4,600.0	4,568.8	4,706.6	4,568.8	10.0	18.6	0.25	944.9	-231.0	700.2	673.0	27.18	25.761		
4,700.0	4,668.8	4,806.6	4,668.8	10.1	18.6	0.25	944.9	-231.0	700.2	672.7	27.41	25.541		
4,800.0	4,768.8	4,906.6	4,768.8	10.3	18.7	0.25	944.9	-231.0	700.2	672.5	27.65	25.323		
4,900.0	4,868.8	5,006.6	4,868.8	10.4	18.8	0.25	944.9	-231.0	700.2	672.3	27.89	25.107		
5,000.0	4,968.8	5,106.6	4,968.8	10.6	18.9	0.25	944.9	-231.0	700.2	672.0	28.13	24.893		

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 2D-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 2D-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							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
5,100.0	5,068.8	5,206.6	5,068.8	10.7	19.0	0.25	944.9	-231.0	700.2	671.8	28.37	24.681		
5,200.0	5,168.8	5,306.6	5,168.8	10.8	19.0	0.25	944.9	-231.0	700.2	671.5	28.61	24.471		
5,300.0	5,268.8	5,406.6	5,268.8	11.0	19.1	0.25	944.9	-231.0	700.2	671.3	28.86	24.263		
5,400.0	5,368.8	5,506.6	5,368.8	11.1	19.2	0.25	944.9	-231.0	700.2	671.1	29.10	24.057		
5,500.0	5,468.8	5,606.6	5,468.8	11.3	19.3	0.25	944.9	-231.0	700.2	670.8	29.35	23.853		
5,600.0	5,568.8	5,706.6	5,568.8	11.4	19.4	0.25	944.9	-231.0	700.2	670.6	29.60	23.651		
5,700.0	5,668.8	5,806.6	5,668.8	11.6	19.5	0.25	944.9	-231.0	700.2	670.3	29.86	23.451		
5,800.0	5,768.8	5,906.6	5,768.8	11.7	19.6	0.25	944.9	-231.0	700.2	670.1	30.11	23.254		
5,900.0	5,868.8	6,006.6	5,868.8	11.9	19.7	0.25	944.9	-231.0	700.2	669.8	30.37	23.058		
6,000.0	5,968.8	6,106.6	5,968.8	12.0	19.8	0.25	944.9	-231.0	700.2	669.5	30.62	22.865		
6,100.0	6,068.8	6,206.6	6,068.8	12.2	19.9	0.25	944.9	-231.0	700.2	669.3	30.88	22.674		
6,200.0	6,168.8	6,306.6	6,168.8	12.3	20.0	0.25	944.9	-231.0	700.2	669.0	31.14	22.484		
6,300.0	6,268.8	6,406.6	6,268.8	12.5	20.0	0.25	944.9	-231.0	700.2	668.8	31.40	22.297		
6,400.0	6,368.8	6,506.6	6,368.8	12.6	20.1	0.25	944.9	-231.0	700.2	668.5	31.66	22.113		
6,500.0	6,468.7	6,606.2	6,468.1	12.8	20.2	-89.63	944.9	-225.9	700.2	676.0	24.16	28.978		
6,600.0	6,567.1	6,705.4	6,565.5	12.8	20.2	-89.48	944.9	-207.4	700.2	675.9	24.27	28.848		
6,700.0	6,662.3	6,804.4	6,659.2	12.8	20.2	-89.34	944.9	-175.6	700.2	675.9	24.28	28.840		
6,800.0	6,752.3	6,903.2	6,747.4	12.8	20.2	-89.22	944.8	-131.4	700.2	675.9	24.27	28.851		
6,900.0	6,835.4	7,001.8	6,828.6	12.8	20.3	-89.11	944.8	-75.5	700.2	675.8	24.38	28.724		
7,000.0	6,909.9	7,100.0	6,901.1	12.9	20.4	-89.01	944.8	-9.4	700.2	675.5	24.77	28.267		
7,100.0	6,974.5	7,198.5	6,964.0	13.2	20.5	-88.94	944.8	66.3	700.2	674.6	25.64	27.311		
7,200.0	7,027.8	7,296.6	7,015.8	13.9	20.8	-88.88	944.8	149.6	700.3	673.1	27.13	25.815		
7,300.0	7,068.8	7,394.7	7,055.7	14.9	21.3	-88.85	944.8	239.2	700.2	671.0	29.30	23.903		
7,400.0	7,096.8	7,492.8	7,083.0	16.3	22.0	-88.84	944.8	333.3	700.2	668.1	32.11	21.804		
7,500.0	7,111.1	7,590.9	7,097.1	17.9	23.0	-88.85	944.8	430.2	700.2	664.8	35.46	19.745		
7,600.0	7,114.0	7,690.1	7,100.1	19.8	24.2	-88.86	944.8	529.3	700.2	661.0	39.18	17.873		
7,700.0	7,115.8	7,790.1	7,101.9	21.7	25.6	-88.86	944.8	629.3	700.2	657.1	43.14	16.230		
7,800.0	7,117.5	7,890.1	7,103.6	23.8	27.2	-88.86	944.8	729.3	700.2	652.9	47.29	14.806		
7,900.0	7,119.3	7,990.1	7,105.4	25.9	29.0	-88.86	944.8	829.3	700.2	648.6	51.58	13.574		
8,000.0	7,121.0	8,090.1	7,107.1	28.1	30.9	-88.86	944.8	929.3	700.2	644.2	55.98	12.507		
8,100.0	7,122.8	8,190.1	7,108.9	30.3	32.9	-88.86	944.8	1,029.3	700.2	639.7	60.46	11.580		
8,200.0	7,124.5	8,290.1	7,110.6	32.6	35.0	-88.86	944.8	1,129.2	700.2	635.1	65.02	10.769		
8,300.0	7,126.2	8,390.1	7,112.4	34.9	37.1	-88.86	944.8	1,229.2	700.1	630.5	69.62	10.057		
8,400.0	7,128.0	8,490.1	7,114.1	37.2	39.3	-88.86	944.8	1,329.2	700.1	625.9	74.27	9.427		
8,500.0	7,129.7	8,590.1	7,115.8	39.5	41.5	-88.86	944.8	1,429.2	700.1	621.2	78.95	8.868		
8,600.0	7,131.5	8,690.1	7,117.6	41.9	43.7	-88.86	944.8	1,529.2	700.1	616.5	83.67	8.368		
8,700.0	7,133.2	8,790.1	7,119.3	44.3	46.0	-88.86	944.8	1,629.2	700.1	611.7	88.41	7.919		
8,800.0	7,135.0	8,890.1	7,121.1	46.6	48.3	-88.86	944.8	1,729.2	700.1	606.9	93.17	7.514		
8,900.0	7,136.7	8,990.1	7,122.8	49.0	50.6	-88.86	944.8	1,829.1	700.1	602.1	97.95	7.147		
9,000.0	7,138.5	9,090.1	7,124.6	51.4	52.9	-88.86	944.8	1,929.1	700.1	597.3	102.75	6.814		
9,100.0	7,140.2	9,190.1	7,126.3	53.8	55.3	-88.86	944.8	2,029.1	700.1	592.5	107.56	6.509		
9,200.0	7,142.0	9,290.1	7,128.1	56.2	57.6	-88.86	944.8	2,129.1	700.1	587.7	112.38	6.229		
9,300.0	7,143.7	9,390.1	7,129.8	58.6	60.0	-88.86	944.8	2,229.1	700.1	582.8	117.21	5.972		
9,400.0	7,145.4	9,490.1	7,131.6	61.0	62.3	-88.86	944.7	2,329.1	700.0	578.0	122.05	5.736		
9,500.0	7,147.2	9,590.1	7,133.3	63.5	64.7	-88.86	944.7	2,429.0	700.0	573.1	126.90	5.516		
9,600.0	7,148.9	9,690.1	7,135.0	65.9	67.1	-88.86	944.7	2,529.0	700.0	568.3	131.76	5.313		
9,700.0	7,150.7	9,790.1	7,136.8	68.3	69.5	-88.86	944.7	2,629.0	700.0	563.4	136.62	5.124		
9,800.0	7,152.4	9,890.1	7,138.5	70.8	71.9	-88.86	944.7	2,729.0	700.0	558.5	141.49	4.947		
9,900.0	7,154.2	9,990.1	7,140.3	73.2	74.3	-88.86	944.7	2,829.0	700.0	553.6	146.37	4.782		
10,000.0	7,155.9	10,090.1	7,142.0	75.6	76.7	-88.86	944.7	2,929.0	700.0	548.7	151.25	4.628		
10,100.0	7,157.7	10,190.1	7,143.8	78.1	79.1	-88.86	944.7	3,029.0	700.0	543.8	156.13	4.483		
10,200.0	7,159.4	10,290.1	7,145.5	80.5	81.5	-88.86	944.7	3,128.9	700.0	538.9	161.02	4.347		

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 2D-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 2D-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							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
10,300.0	7,161.2	10,390.1	7,147.3	83.0	83.9	-88.86	944.7	3,228.9	700.0	534.0	165.91	4.219		
10,400.0	7,162.9	10,490.1	7,149.0	85.4	86.4	-88.86	944.7	3,328.9	699.9	529.1	170.80	4.098		
10,500.0	7,164.6	10,590.1	7,150.7	87.8	88.8	-88.86	944.7	3,428.9	699.9	524.2	175.70	3.984		
10,600.0	7,166.4	10,690.1	7,152.5	90.3	91.2	-88.86	944.7	3,528.9	699.9	519.3	180.60	3.876		
10,700.0	7,168.1	10,790.1	7,154.2	92.7	93.7	-88.86	944.7	3,628.9	699.9	514.4	185.50	3.773		
10,800.0	7,169.9	10,890.1	7,156.0	95.2	96.1	-88.86	944.7	3,728.8	699.9	509.5	190.40	3.676		
10,900.0	7,171.6	10,990.1	7,157.7	97.6	98.5	-88.86	944.7	3,828.8	699.9	504.6	195.31	3.584		
11,000.0	7,173.4	11,090.1	7,159.5	100.1	101.0	-88.86	944.7	3,928.8	699.9	499.7	200.22	3.496		
11,100.0	7,175.1	11,190.1	7,161.2	102.6	103.4	-88.86	944.7	4,028.8	699.9	494.7	205.13	3.412		
11,200.0	7,176.9	11,290.1	7,163.0	105.0	105.8	-88.86	944.7	4,128.8	699.9	489.8	210.04	3.332		
11,300.0	7,178.6	11,390.1	7,164.7	107.5	108.3	-88.86	944.7	4,228.8	699.9	484.9	214.95	3.256		
11,400.0	7,180.4	11,490.1	7,166.5	109.9	110.7	-88.86	944.7	4,328.8	699.8	480.0	219.87	3.183		
11,500.0	7,182.1	11,590.1	7,168.2	112.4	113.2	-88.86	944.7	4,428.7	699.8	475.1	224.78	3.113		
11,600.0	7,183.8	11,690.1	7,169.9	114.8	115.6	-88.86	944.7	4,528.7	699.8	470.1	229.70	3.047		
11,700.0	7,185.6	11,790.1	7,171.7	117.3	118.0	-88.86	944.7	4,628.7	699.8	465.2	234.62	2.983		
11,800.0	7,187.3	11,890.1	7,173.4	119.8	120.5	-88.86	944.6	4,728.7	699.8	460.3	239.54	2.921		
11,900.0	7,189.1	11,990.1	7,175.2	122.2	122.9	-88.86	944.6	4,828.7	699.8	455.3	244.46	2.863		
12,000.0	7,190.8	12,090.1	7,176.9	124.7	125.4	-88.86	944.6	4,928.7	699.8	450.4	249.38	2.806		
12,100.0	7,192.6	12,190.1	7,178.7	127.1	127.8	-88.86	944.6	5,028.6	699.8	445.5	254.31	2.752		
12,200.0	7,194.3	12,290.1	7,180.4	129.6	130.3	-88.86	944.6	5,128.6	699.8	440.5	259.23	2.699		
12,300.0	7,196.1	12,390.1	7,182.2	132.1	132.7	-88.86	944.6	5,228.6	699.8	435.6	264.16	2.649		
12,400.0	7,197.8	12,490.1	7,183.9	134.5	135.2	-88.86	944.6	5,328.6	699.7	430.7	269.08	2.600		
12,500.0	7,199.5	12,590.1	7,185.7	137.0	137.7	-88.86	944.6	5,428.6	699.7	425.7	274.01	2.554		
12,600.0	7,201.3	12,690.1	7,187.4	139.5	140.1	-88.86	944.6	5,528.6	699.7	420.8	278.94	2.509		
12,700.0	7,203.0	12,790.1	7,189.1	141.9	142.6	-88.86	944.6	5,628.6	699.7	415.9	283.86	2.465		
12,800.0	7,204.8	12,890.1	7,190.9	144.4	145.0	-88.86	944.6	5,728.5	699.7	410.9	288.79	2.423		
12,900.0	7,206.5	12,990.1	7,192.6	146.8	147.5	-88.86	944.6	5,828.5	699.7	406.0	293.72	2.382		
13,000.0	7,208.3	13,090.1	7,194.4	149.3	149.9	-88.86	944.6	5,928.5	699.7	401.0	298.65	2.343		
13,100.0	7,210.0	13,190.1	7,196.1	151.8	152.4	-88.86	944.6	6,028.5	699.7	396.1	303.58	2.305		
13,200.0	7,211.8	13,290.1	7,197.9	154.2	154.8	-88.86	944.6	6,128.5	699.7	391.2	308.51	2.268		
13,300.0	7,213.5	13,390.1	7,199.6	156.7	157.3	-88.86	944.6	6,228.5	699.7	386.2	313.44	2.232		
13,400.0	7,215.3	13,490.1	7,201.4	159.2	159.8	-88.86	944.6	6,328.5	699.6	381.3	318.38	2.198		
13,500.0	7,217.0	13,590.1	7,203.1	161.6	162.2	-88.86	944.6	6,428.4	699.6	376.3	323.31	2.164		
13,600.0	7,218.7	13,690.1	7,204.9	164.1	164.7	-88.86	944.6	6,528.4	699.6	371.4	328.24	2.131		
13,700.0	7,220.5	13,790.1	7,206.6	166.6	167.1	-88.86	944.6	6,628.4	699.6	366.4	333.17	2.100		
13,800.0	7,222.2	13,890.1	7,208.3	169.0	169.6	-88.86	944.6	6,728.4	699.6	361.5	338.11	2.069		
13,900.0	7,224.0	13,990.1	7,210.1	171.5	172.1	-88.86	944.6	6,828.4	699.6	356.6	343.04	2.039		
14,000.0	7,225.7	14,090.1	7,211.8	174.0	174.5	-88.86	944.6	6,928.4	699.6	351.6	347.98	2.010		
14,100.0	7,227.5	14,190.1	7,213.6	176.4	177.0	-88.86	944.6	7,028.3	699.6	346.7	352.91	1.982		
14,200.0	7,229.2	14,290.1	7,215.3	178.9	179.5	-88.86	944.5	7,128.3	699.6	341.7	357.85	1.955		
14,232.9	7,229.8	14,322.9	7,215.9	179.7	180.3	-88.86	944.5	7,161.2	699.6	340.1	359.47	1.946		
14,244.8	7,230.0	14,328.8	7,216.0	180.0	180.4	-88.86	944.5	7,167.1	699.6	339.7	359.91	1.944 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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				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		
300.0	300.0	300.0	300.0	0.5	0.5	47.08	10.9	0.0	10.3	9.3	1.00	10.292		
400.0	400.0	400.0	400.0	0.7	0.7	59.75	10.9	0.0	8.7	7.4	1.36	6.453		
488.9	488.7	488.7	488.7	0.8	0.8	80.86	11.6	-0.3	7.9	6.2	1.68	4.713 CC		
500.0	499.9	499.8	499.8	0.9	0.9	83.81	11.7	-0.3	7.9	6.2	1.72	4.610 ES		
600.0	599.7	599.7	599.7	1.1	1.0	107.68	14.2	-1.3	9.3	7.2	2.09	4.444		
700.0	699.4	699.6	699.5	1.3	1.2	122.29	18.2	-2.9	12.4	9.9	2.47	5.026		
800.0	798.9	799.6	799.3	1.5	1.4	129.57	23.9	-5.2	16.6	13.7	2.86	5.800		
900.0	898.3	899.6	898.9	1.8	1.6	132.91	31.1	-8.1	21.5	18.2	3.27	6.568		
1,000.0	997.4	999.6	998.5	2.0	1.8	134.20	40.0	-11.6	27.0	23.3	3.71	7.272		
1,100.0	1,096.3	1,099.6	1,097.8	2.3	2.1	134.40	50.6	-15.8	33.0	28.8	4.18	7.897		
1,200.0	1,194.9	1,199.6	1,197.0	2.7	2.3	133.99	62.7	-20.6	39.6	34.9	4.69	8.441		
1,300.0	1,293.3	1,299.6	1,295.9	3.0	2.6	133.24	76.4	-26.1	46.8	41.5	5.25	8.907		
1,400.0	1,391.2	1,399.6	1,394.6	3.4	2.9	132.31	91.7	-32.2	54.5	48.6	5.86	9.300		
1,500.0	1,488.9	1,499.7	1,492.9	3.8	3.3	131.29	108.7	-38.9	62.8	56.2	6.52	9.628		
1,600.0	1,586.1	1,599.6	1,590.8	4.2	3.6	130.24	127.2	-46.3	71.6	64.4	7.23	9.904		
1,700.0	1,683.1	1,699.1	1,688.3	4.7	4.0	129.68	146.2	-53.9	81.1	73.1	7.96	10.190		
1,800.0	1,780.0	1,798.7	1,785.7	5.1	4.4	129.27	165.2	-61.4	90.6	81.9	8.69	10.421		
1,900.0	1,876.9	1,898.2	1,883.1	5.6	4.8	128.93	184.3	-69.0	100.1	90.6	9.43	10.608		
2,000.0	1,974.1	1,997.8	1,980.6	6.0	5.1	128.38	203.3	-76.6	109.0	98.8	10.18	10.702		
2,100.0	2,072.0	2,097.5	2,078.1	6.4	5.5	126.63	222.4	-84.2	115.9	104.9	10.97	10.565		
2,200.0	2,170.5	2,197.2	2,175.7	6.7	5.9	123.71	241.4	-91.8	121.0	109.2	11.79	10.258		
2,300.0	2,269.6	2,296.7	2,273.1	7.0	6.3	119.65	260.5	-99.3	124.6	111.9	12.63	9.864		
2,400.0	2,369.1	2,396.0	2,370.2	7.2	6.7	114.44	279.4	-106.9	127.3	113.9	13.45	9.469		
2,500.0	2,468.8	2,494.9	2,467.0	7.4	7.1	108.09	298.4	-114.4	130.0	115.8	14.18	9.163		
2,600.0	2,568.8	2,593.3	2,563.3	7.5	7.5	100.69	317.2	-121.9	133.5	118.8	14.77	9.044		
2,700.0	2,668.8	2,691.2	2,659.1	7.6	7.8	48.93	335.9	-129.4	139.1	129.3	9.79	14.214		
2,800.0	2,768.8	2,789.1	2,754.9	7.7	8.2	41.48	354.6	-136.8	147.4	136.8	10.56	13.954		
2,900.0	2,868.8	2,886.9	2,850.6	7.8	8.6	34.90	373.3	-144.3	157.9	146.4	11.48	13.757		
3,000.0	2,968.8	2,984.8	2,946.4	7.9	9.0	29.18	392.0	-151.7	170.2	157.8	12.44	13.686		
3,100.0	3,068.8	3,082.6	3,042.2	8.0	9.4	24.26	410.7	-159.2	184.1	170.7	13.39	13.745		
3,200.0	3,168.8	3,180.5	3,137.9	8.2	9.8	20.04	429.4	-166.6	199.1	184.8	14.31	13.913		
3,300.0	3,268.8	3,278.4	3,233.7	8.3	10.2	16.41	448.2	-174.1	215.0	199.8	15.18	14.163		
3,400.0	3,368.8	3,376.2	3,329.5	8.4	10.5	13.29	466.9	-181.5	231.6	215.6	16.01	14.473		
3,500.0	3,468.8	3,474.1	3,425.2	8.5	10.9	10.59	485.6	-189.0	248.9	232.1	16.79	14.823		
3,600.0	3,568.8	3,571.9	3,521.0	8.6	11.3	8.24	504.3	-196.4	266.6	249.1	17.54	15.200		
3,700.0	3,668.8	3,669.8	3,616.7	8.8	11.7	6.18	523.0	-203.9	284.7	266.5	18.26	15.593		
3,800.0	3,768.8	3,769.7	3,714.6	8.9	12.1	4.34	542.0	-211.4	303.1	284.1	18.96	15.985		
3,900.0	3,868.8	3,878.9	3,821.9	9.0	12.5	2.78	560.3	-218.7	319.4	299.8	19.61	16.287		
4,000.0	3,968.8	3,989.4	3,931.3	9.2	12.8	1.65	574.8	-224.5	332.4	312.2	20.16	16.483		
4,100.0	4,068.8	4,100.9	4,042.3	9.3	13.0	0.88	585.5	-228.8	341.9	321.3	20.63	16.573		
4,200.0	4,168.8	4,213.3	4,154.3	9.4	13.2	0.42	592.2	-231.4	347.9	326.9	21.01	16.560		
4,300.0	4,268.8	4,326.0	4,267.0	9.6	13.3	0.25	594.9	-232.5	350.2	328.9	21.31	16.437		
4,400.0	4,368.8	4,427.8	4,368.8	9.7	13.4	0.25	594.9	-232.5	350.2	328.7	21.56	16.241		
4,500.0	4,468.8	4,527.8	4,468.8	9.8	13.5	0.25	594.9	-232.5	350.2	328.4	21.82	16.049		
4,600.0	4,568.8	4,627.8	4,568.8	10.0	13.6	0.25	594.9	-232.5	350.2	328.2	22.08	15.859		
4,700.0	4,668.8	4,727.8	4,668.8	10.1	13.7	0.25	594.9	-232.5	350.2	327.9	22.35	15.673		
4,800.0	4,768.8	4,827.8	4,768.8	10.3	13.9	0.25	594.9	-232.5	350.2	327.6	22.61	15.489		
4,900.0	4,868.8	4,927.8	4,868.8	10.4	14.0	0.25	594.9	-232.5	350.2	327.4	22.88	15.308		
5,000.0	4,968.8	5,027.8	4,968.8	10.6	14.1	0.25	594.9	-232.5	350.2	327.1	23.15	15.130		

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 2D-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 2D-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: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,068.8	5,127.8	5,068.8	10.7	14.2	0.25	594.9	-232.5	350.2	326.8	23.42	14.955		
5,200.0	5,168.8	5,227.8	5,168.8	10.8	14.3	0.25	594.9	-232.5	350.2	326.5	23.69	14.782		
5,300.0	5,268.8	5,327.8	5,268.8	11.0	14.4	0.25	594.9	-232.5	350.2	326.3	23.97	14.613		
5,400.0	5,368.8	5,427.8	5,368.8	11.1	14.5	0.25	594.9	-232.5	350.2	326.0	24.24	14.446		
5,500.0	5,468.8	5,527.8	5,468.8	11.3	14.6	0.25	594.9	-232.5	350.2	325.7	24.52	14.282		
5,600.0	5,568.8	5,627.8	5,568.8	11.4	14.7	0.25	594.9	-232.5	350.2	325.4	24.80	14.121		
5,700.0	5,668.8	5,727.8	5,668.8	11.6	14.9	0.25	594.9	-232.5	350.2	325.2	25.08	13.963		
5,800.0	5,768.8	5,827.8	5,768.8	11.7	15.0	0.25	594.9	-232.5	350.2	324.9	25.37	13.807		
5,900.0	5,868.8	5,927.8	5,868.8	11.9	15.1	0.25	594.9	-232.5	350.2	324.6	25.65	13.654		
6,000.0	5,968.8	6,027.8	5,968.8	12.0	15.2	0.25	594.9	-232.5	350.2	324.3	25.94	13.503		
6,100.0	6,068.8	6,127.8	6,068.8	12.2	15.3	0.25	594.9	-232.5	350.2	324.0	26.22	13.356		
6,200.0	6,168.8	6,227.8	6,168.8	12.3	15.5	0.25	594.9	-232.5	350.2	323.7	26.51	13.210		
6,232.0	6,200.8	6,259.8	6,200.8	12.4	15.5	0.25	594.9	-232.5	350.2	323.6	26.61	13.164		
6,300.0	6,268.8	6,327.4	6,268.3	12.5	15.5	0.83	594.9	-228.9	350.3	323.5	26.76	13.090		
6,400.0	6,368.8	6,424.2	6,363.7	12.6	15.6	3.46	594.9	-212.8	350.9	324.0	26.86	13.066		
6,500.0	6,468.7	6,516.3	6,451.7	12.8	15.6	-82.48	594.9	-185.7	353.5	329.1	24.36	14.508		
6,600.0	6,567.1	6,605.5	6,532.8	12.8	15.6	-78.55	594.9	-148.9	357.8	333.2	24.61	14.536		
6,700.0	6,662.3	6,692.4	6,606.9	12.8	15.6	-74.93	594.9	-103.6	363.4	338.7	24.66	14.737		
6,800.0	6,752.3	6,777.2	6,673.4	12.8	15.6	-71.67	594.9	-51.1	369.8	345.2	24.54	15.067		
6,900.0	6,835.4	6,860.3	6,732.1	12.8	15.7	-68.80	594.9	7.7	376.5	352.1	24.41	15.426		
7,000.0	6,909.9	6,942.1	6,782.9	12.9	15.9	-66.35	594.9	71.8	383.1	358.7	24.37	15.720		
7,100.0	6,974.5	7,022.7	6,825.4	13.2	16.3	-64.32	594.9	140.2	389.2	364.6	24.66	15.781		
7,200.0	7,027.8	7,100.0	6,858.8	13.9	16.8	-62.74	594.9	209.9	394.5	369.1	25.44	15.507		
7,300.0	7,068.8	7,181.4	6,885.6	14.9	17.5	-61.51	594.9	286.7	398.7	371.8	26.92	14.809		
7,400.0	7,096.8	7,260.0	6,903.0	16.3	18.5	-60.71	594.9	363.3	401.6	372.5	29.07	13.814		
7,500.0	7,111.1	7,338.3	6,911.9	17.9	19.6	-60.32	594.9	441.0	403.1	371.2	31.87	12.649		
7,600.0	7,114.0	7,429.8	6,914.1	19.8	21.1	-60.28	594.9	532.6	403.2	368.1	35.10	11.489		
7,700.0	7,115.8	7,529.8	6,915.9	21.7	22.9	-60.28	594.9	632.5	403.2	364.7	38.50	10.473		
7,800.0	7,117.5	7,629.8	6,917.6	23.8	24.9	-60.28	594.9	732.5	403.2	361.1	42.07	9.585		
7,900.0	7,119.3	7,729.8	6,919.4	25.9	26.9	-60.28	594.9	832.5	403.2	357.4	45.76	8.811		
8,000.0	7,121.0	7,829.8	6,921.1	28.1	29.0	-60.28	594.9	932.5	403.2	353.6	49.56	8.136		
8,100.0	7,122.8	7,929.8	6,922.9	30.3	31.2	-60.28	594.9	1,032.5	403.2	349.8	53.43	7.547		
8,200.0	7,124.5	8,029.8	6,924.6	32.6	33.4	-60.27	594.9	1,132.5	403.2	345.8	57.36	7.029		
8,300.0	7,126.2	8,129.8	6,926.4	34.9	35.7	-60.27	594.9	1,232.4	403.2	341.8	61.34	6.573		
8,400.0	7,128.0	8,229.8	6,928.1	37.2	37.9	-60.27	594.9	1,332.4	403.2	337.8	65.36	6.168		
8,500.0	7,129.7	8,329.8	6,929.9	39.5	40.3	-60.27	594.9	1,432.4	403.2	333.8	69.42	5.808		
8,600.0	7,131.5	8,429.8	6,931.6	41.9	42.6	-60.27	594.9	1,532.4	403.2	329.7	73.50	5.485		
8,700.0	7,133.2	8,529.8	6,933.3	44.3	44.9	-60.27	594.9	1,632.4	403.2	325.6	77.61	5.195		
8,800.0	7,135.0	8,629.8	6,935.1	46.6	47.3	-60.27	594.9	1,732.4	403.2	321.4	81.73	4.933		
8,900.0	7,136.7	8,729.8	6,936.8	49.0	49.6	-60.27	594.9	1,832.4	403.1	317.3	85.88	4.694		
9,000.0	7,138.5	8,829.8	6,938.6	51.4	52.0	-60.27	594.9	1,932.3	403.1	313.1	90.04	4.478		
9,100.0	7,140.2	8,929.8	6,940.3	53.8	54.4	-60.27	594.9	2,032.3	403.1	308.9	94.21	4.279		
9,200.0	7,142.0	9,029.8	6,942.1	56.2	56.8	-60.27	594.9	2,132.3	403.1	304.7	98.39	4.097		
9,300.0	7,143.7	9,129.8	6,943.8	58.6	59.2	-60.27	594.9	2,232.3	403.1	300.5	102.58	3.930		
9,400.0	7,145.4	9,229.8	6,945.6	61.0	61.6	-60.27	594.9	2,332.3	403.1	296.3	106.78	3.775		
9,500.0	7,147.2	9,329.8	6,947.3	63.5	64.0	-60.27	594.9	2,432.3	403.1	292.1	110.99	3.632		
9,600.0	7,148.9	9,429.8	6,949.0	65.9	66.4	-60.27	594.9	2,532.3	403.1	287.9	115.20	3.499		
9,700.0	7,150.7	9,529.8	6,950.8	68.3	68.8	-60.27	594.9	2,632.2	403.1	283.7	119.43	3.375		
9,800.0	7,152.4	9,629.8	6,952.5	70.8	71.3	-60.27	594.9	2,732.2	403.1	279.4	123.65	3.260		
9,900.0	7,154.2	9,729.8	6,954.3	73.2	73.7	-60.27	594.9	2,832.2	403.1	275.2	127.88	3.152		
10,000.0	7,155.9	9,829.8	6,956.0	75.6	76.1	-60.27	594.9	2,932.2	403.1	271.0	132.12	3.051		
10,100.0	7,157.7	9,929.8	6,957.8	78.1	78.5	-60.27	594.9	3,032.2	403.1	266.7	136.36	2.956		

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 2D-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 2D-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				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		
10,200.0	7,159.4	10,029.8	6,959.5	80.5	81.0	-60.26	594.9	3,132.2	403.1	262.5	140.60	2.867		
10,300.0	7,161.2	10,129.8	6,961.3	83.0	83.4	-60.26	594.9	3,232.1	403.1	258.2	144.85	2.783		
10,400.0	7,162.9	10,229.8	6,963.0	85.4	85.9	-60.26	594.9	3,332.1	403.1	254.0	149.10	2.703		
10,500.0	7,164.6	10,329.8	6,964.8	87.8	88.3	-60.26	594.9	3,432.1	403.1	249.7	153.35	2.628		
10,600.0	7,166.4	10,429.8	6,966.5	90.3	90.7	-60.26	594.9	3,532.1	403.0	245.4	157.60	2.557		
10,700.0	7,168.1	10,529.8	6,968.2	92.7	93.2	-60.26	594.9	3,632.1	403.0	241.2	161.86	2.490		
10,800.0	7,169.9	10,629.8	6,970.0	95.2	95.6	-60.26	594.9	3,732.1	403.0	236.9	166.12	2.426		
10,900.0	7,171.6	10,729.8	6,971.7	97.6	98.1	-60.26	594.9	3,832.1	403.0	232.6	170.38	2.365		
11,000.0	7,173.4	10,829.8	6,973.5	100.1	100.5	-60.26	594.9	3,932.0	403.0	228.4	174.65	2.308		
11,100.0	7,175.1	10,929.8	6,975.2	102.6	103.0	-60.26	594.9	4,032.0	403.0	224.1	178.91	2.253		
11,200.0	7,176.9	11,029.8	6,977.0	105.0	105.4	-60.26	594.9	4,132.0	403.0	219.8	183.18	2.200		
11,300.0	7,178.6	11,129.8	6,978.7	107.5	107.9	-60.26	594.9	4,232.0	403.0	215.6	187.44	2.150		
11,400.0	7,180.4	11,229.8	6,980.5	109.9	110.3	-60.26	594.9	4,332.0	403.0	211.3	191.71	2.102		
11,500.0	7,182.1	11,329.8	6,982.2	112.4	112.8	-60.26	594.9	4,432.0	403.0	207.0	195.98	2.056		
11,600.0	7,183.8	11,429.8	6,984.0	114.8	115.2	-60.26	594.9	4,531.9	403.0	202.7	200.26	2.012		
11,700.0	7,185.6	11,529.8	6,985.7	117.3	117.7	-60.26	594.9	4,631.9	403.0	198.4	204.53	1.970		
11,800.0	7,187.3	11,629.8	6,987.4	119.8	120.1	-60.26	594.9	4,731.9	403.0	194.2	208.80	1.930		
11,900.0	7,189.1	11,729.8	6,989.2	122.2	122.6	-60.26	594.9	4,831.9	403.0	189.9	213.08	1.891		
12,000.0	7,190.8	11,829.8	6,990.9	124.7	125.1	-60.26	594.9	4,931.9	403.0	185.6	217.35	1.854		
12,100.0	7,192.6	11,929.8	6,992.7	127.1	127.5	-60.26	594.9	5,031.9	403.0	181.3	221.63	1.818		
12,200.0	7,194.3	12,029.8	6,994.4	129.6	130.0	-60.25	594.9	5,131.9	402.9	177.0	225.91	1.784		
12,300.0	7,196.1	12,129.8	6,996.2	132.1	132.4	-60.25	594.9	5,231.8	402.9	172.8	230.19	1.751		
12,400.0	7,197.8	12,229.8	6,997.9	134.5	134.9	-60.25	594.9	5,331.8	402.9	168.5	234.47	1.719		
12,500.0	7,199.5	12,329.8	6,999.7	137.0	137.4	-60.25	594.9	5,431.8	402.9	164.2	238.75	1.688		
12,600.0	7,201.3	12,429.8	7,001.4	139.5	139.8	-60.25	594.9	5,531.8	402.9	159.9	243.03	1.658		
12,700.0	7,203.0	12,529.8	7,003.2	141.9	142.3	-60.25	594.9	5,631.8	402.9	155.6	247.31	1.629		
12,800.0	7,204.8	12,629.8	7,004.9	144.4	144.7	-60.25	594.9	5,731.8	402.9	151.3	251.59	1.601		
12,900.0	7,206.5	12,729.8	7,006.6	146.8	147.2	-60.25	594.8	5,831.7	402.9	147.0	255.87	1.575		
13,000.0	7,208.3	12,829.8	7,008.4	149.3	149.7	-60.25	594.8	5,931.7	402.9	142.7	260.15	1.549		
13,100.0	7,210.0	12,929.8	7,010.1	151.8	152.1	-60.25	594.8	6,031.7	402.9	138.5	264.44	1.524		
13,200.0	7,211.8	13,029.8	7,011.9	154.2	154.6	-60.25	594.8	6,131.7	402.9	134.2	268.72	1.499 Level 3		
13,300.0	7,213.5	13,129.8	7,013.6	156.7	157.1	-60.25	594.8	6,231.7	402.9	129.9	273.00	1.476 Level 3		
13,400.0	7,215.3	13,229.8	7,015.4	159.2	159.5	-60.25	594.8	6,331.7	402.9	125.6	277.29	1.453 Level 3		
13,500.0	7,217.0	13,329.8	7,017.1	161.6	162.0	-60.25	594.8	6,431.7	402.9	121.3	281.57	1.431 Level 3		
13,600.0	7,218.7	13,429.8	7,018.9	164.1	164.4	-60.25	594.8	6,531.6	402.9	117.0	285.86	1.409 Level 3		
13,700.0	7,220.5	13,529.8	7,020.6	166.6	166.9	-60.25	594.8	6,631.6	402.9	112.7	290.14	1.388 Level 3		
13,800.0	7,222.2	13,629.8	7,022.3	169.0	169.4	-60.25	594.8	6,731.6	402.9	108.4	294.43	1.368 Level 3		
13,900.0	7,224.0	13,729.8	7,024.1	171.5	171.8	-60.25	594.8	6,831.6	402.8	104.1	298.71	1.349 Level 3		
14,000.0	7,225.7	13,829.8	7,025.8	174.0	174.3	-60.25	594.8	6,931.6	402.8	99.8	303.00	1.329 Level 3		
14,100.0	7,227.5	13,929.8	7,027.6	176.4	176.8	-60.25	594.8	7,031.6	402.8	95.5	307.29	1.311 Level 3		
14,200.0	7,229.2	14,029.8	7,029.3	178.9	179.2	-60.25	594.8	7,131.6	402.8	91.3	311.57	1.293 Level 3		
14,232.8	7,229.8	14,062.6	7,029.9	179.7	180.0	-60.24	594.8	7,164.3	402.8	89.8	312.98	1.287 Level 3		
14,244.8	7,230.0	14,068.8	7,030.0	180.0	180.2	-60.24	594.8	7,170.5	402.9	89.5	313.37	1.286 Level 3, SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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)					
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-7.3	0.0	7.3						
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-7.3	0.0	7.3	7.0	0.30	23.991			
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-7.3	0.0	7.3	6.6	0.65	11.162 CC, ES			
300.0	300.0	300.0	300.0	0.5	0.5	-140.63	-7.3	0.0	7.9	6.9	1.00	7.922			
400.0	400.0	400.0	400.0	0.7	0.7	-150.08	-7.3	0.0	10.1	8.7	1.35	7.471			
500.0	499.9	499.9	499.8	0.9	0.9	-155.43	-7.6	-0.8	14.1	12.4	1.70	8.267			
600.0	599.7	599.7	599.6	1.1	1.0	-155.20	-8.6	-3.2	19.8	17.7	2.06	9.610			
700.0	699.4	699.4	699.2	1.3	1.2	-152.95	-10.3	-7.2	27.2	24.8	2.43	11.216			
800.0	798.9	798.9	798.5	1.5	1.4	-150.23	-12.6	-12.8	36.4	33.6	2.81	12.959			
900.0	898.3	898.1	897.5	1.8	1.6	-147.62	-15.6	-20.0	47.4	44.2	3.21	14.757			
1,000.0	997.4	997.0	996.0	2.0	1.8	-145.30	-19.2	-28.7	60.3	56.7	3.65	16.548			
1,100.0	1,096.3	1,095.8	1,094.1	2.3	2.1	-143.38	-23.4	-38.8	75.1	71.0	4.10	18.302			
1,200.0	1,194.9	1,194.4	1,192.1	2.7	2.3	-142.55	-27.7	-49.2	91.3	86.8	4.57	19.973			
1,300.0	1,293.3	1,292.9	1,289.9	3.0	2.5	-142.51	-32.0	-59.6	109.0	103.9	5.05	21.563			
1,400.0	1,391.2	1,391.0	1,387.4	3.4	2.8	-142.92	-36.3	-69.9	128.0	122.4	5.54	23.091			
1,500.0	1,488.9	1,488.9	1,484.7	3.8	3.0	-143.60	-40.6	-80.2	148.3	142.3	6.04	24.577			
1,600.0	1,586.1	1,586.5	1,581.6	4.2	3.3	-144.43	-44.9	-90.5	170.1	163.6	6.53	26.036			
1,700.0	1,683.1	1,683.8	1,678.3	4.7	3.5	-145.35	-49.1	-100.8	192.9	185.9	7.04	27.418			
1,800.0	1,780.0	1,781.1	1,775.0	5.1	3.8	-146.11	-53.4	-111.0	215.8	208.3	7.54	28.613			
1,900.0	1,876.9	1,878.4	1,871.6	5.6	4.0	-146.73	-57.6	-121.2	238.7	230.6	8.05	29.655			
2,000.0	1,974.1	1,975.9	1,968.5	6.0	4.3	-147.30	-61.9	-131.5	260.9	252.3	8.56	30.464			
2,100.0	2,072.0	2,074.0	2,065.9	6.4	4.6	-147.47	-66.2	-141.8	280.3	271.2	9.07	30.888			
2,200.0	2,170.5	2,172.6	2,163.9	6.7	4.8	-147.25	-70.5	-152.2	296.8	287.3	9.58	30.980			
2,300.0	2,269.6	2,271.6	2,262.2	7.0	5.1	-146.68	-74.8	-162.6	310.5	300.4	10.08	30.799			
2,400.0	2,369.1	2,370.8	2,360.8	7.2	5.3	-145.80	-79.2	-173.1	321.3	310.8	10.57	30.394			
2,500.0	2,468.8	2,470.2	2,459.6	7.4	5.6	-144.60	-83.5	-183.6	329.4	318.4	11.05	29.809			
2,600.0	2,568.8	2,569.7	2,558.4	7.5	5.8	-143.09	-87.9	-194.0	334.9	323.4	11.52	29.084			
2,700.0	2,668.8	2,669.0	2,657.1	7.6	6.1	175.00	-92.2	-204.5	338.4	327.0	11.39	29.720			
2,800.0	2,768.8	2,768.4	2,755.8	7.7	6.4	176.81	-96.6	-215.0	342.0	330.4	11.64	29.374			
2,900.0	2,868.8	2,871.2	2,858.0	7.8	6.6	178.47	-100.7	-224.8	345.6	333.7	11.92	29.003			
3,000.0	2,968.8	2,975.6	2,962.2	7.9	6.8	179.57	-103.4	-231.4	348.2	336.0	12.21	28.521			
3,100.0	3,068.8	3,080.4	3,066.9	8.0	7.0	-179.92	-104.7	-234.5	349.4	336.9	12.51	27.933			
3,200.0	3,168.8	3,182.2	3,168.8	8.2	7.1	-179.88	-104.8	-234.7	349.5	336.7	12.81	27.273			
3,300.0	3,268.8	3,282.2	3,268.8	8.3	7.2	-179.88	-104.8	-234.7	349.5	336.4	13.12	26.637			
3,400.0	3,368.8	3,382.2	3,368.8	8.4	7.4	-179.88	-104.8	-234.7	349.5	336.1	13.43	26.026			
3,500.0	3,468.8	3,482.2	3,468.8	8.5	7.5	-179.88	-104.8	-234.7	349.5	335.7	13.74	25.440			
3,600.0	3,568.8	3,582.2	3,568.8	8.6	7.7	-179.88	-104.8	-234.7	349.5	335.4	14.05	24.876			
3,700.0	3,668.8	3,682.2	3,668.8	8.8	7.8	-179.88	-104.8	-234.7	349.5	335.1	14.36	24.333			
3,800.0	3,768.8	3,782.2	3,768.8	8.9	7.9	-179.88	-104.8	-234.7	349.5	334.8	14.68	23.812			
3,900.0	3,868.8	3,882.2	3,868.8	9.0	8.1	-179.88	-104.8	-234.7	349.5	334.5	14.99	23.310			
4,000.0	3,968.8	3,982.2	3,968.8	9.2	8.2	-179.88	-104.8	-234.7	349.5	334.2	15.31	22.827			
4,100.0	4,068.8	4,082.2	4,068.8	9.3	8.4	-179.88	-104.8	-234.7	349.5	333.9	15.63	22.361			
4,200.0	4,168.8	4,182.2	4,168.8	9.4	8.5	-179.88	-104.8	-234.7	349.5	333.5	15.95	21.913			
4,300.0	4,268.8	4,282.2	4,268.8	9.6	8.7	-179.88	-104.8	-234.7	349.5	333.2	16.27	21.480			
4,400.0	4,368.8	4,382.2	4,368.8	9.7	8.8	-179.88	-104.8	-234.7	349.5	332.9	16.59	21.063			
4,500.0	4,468.8	4,482.2	4,468.8	9.8	9.0	-179.88	-104.8	-234.7	349.5	332.6	16.92	20.661			
4,600.0	4,568.8	4,582.2	4,568.8	10.0	9.1	-179.88	-104.8	-234.7	349.5	332.2	17.24	20.273			
4,700.0	4,668.8	4,682.2	4,668.8	10.1	9.3	-179.88	-104.8	-234.7	349.5	331.9	17.56	19.898			
4,800.0	4,768.8	4,782.2	4,768.8	10.3	9.4	-179.88	-104.8	-234.7	349.5	331.6	17.89	19.535			
4,900.0	4,868.8	4,882.2	4,868.8	10.4	9.6	-179.88	-104.8	-234.7	349.5	331.3	18.22	19.185			
5,000.0	4,968.8	4,982.2	4,968.8	10.6	9.8	-179.88	-104.8	-234.7	349.5	330.9	18.54	18.846			
5,100.0	5,068.8	5,082.2	5,068.8	10.7	9.9	-179.88	-104.8	-234.7	349.5	330.6	18.87	18.519			

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 2D-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 2D-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		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	5,168.8	5,182.2	5,168.8	10.8	10.1	-179.88	-104.8	-234.7	349.5	330.3	19.20	18.201		
5,300.0	5,268.8	5,282.2	5,268.8	11.0	10.2	-179.88	-104.8	-234.7	349.5	330.0	19.53	17.894		
5,400.0	5,368.8	5,382.2	5,368.8	11.1	10.4	-179.88	-104.8	-234.7	349.5	329.6	19.86	17.597		
5,500.0	5,468.8	5,482.2	5,468.8	11.3	10.5	-179.88	-104.8	-234.7	349.5	329.3	20.19	17.309		
5,600.0	5,568.8	5,582.2	5,568.8	11.4	10.7	-179.88	-104.8	-234.7	349.5	329.0	20.52	17.029		
5,700.0	5,668.8	5,682.2	5,668.8	11.6	10.9	-179.88	-104.8	-234.7	349.5	328.6	20.85	16.758		
5,800.0	5,768.8	5,782.2	5,768.8	11.7	11.0	-179.88	-104.8	-234.7	349.5	328.3	21.19	16.495		
5,900.0	5,868.8	5,882.2	5,868.8	11.9	11.2	-179.88	-104.8	-234.7	349.5	328.0	21.52	16.240		
6,000.0	5,968.8	5,982.2	5,968.8	12.0	11.3	-179.88	-104.8	-234.7	349.5	327.6	21.85	15.992		
6,100.0	6,068.8	6,082.2	6,068.8	12.2	11.5	-179.88	-104.8	-234.7	349.5	327.3	22.19	15.751		
6,200.0	6,168.8	6,182.2	6,168.8	12.3	11.7	-179.88	-104.8	-234.7	349.5	327.0	22.52	15.518		
6,259.5	6,228.3	6,241.8	6,228.3	12.4	11.7	-179.99	-104.8	-234.0	349.5	326.8	22.72	15.380		
6,300.0	6,268.8	6,282.1	6,268.5	12.5	11.8	179.53	-104.8	-231.1	349.5	326.6	22.87	15.285		
6,400.0	6,368.8	6,379.2	6,364.2	12.6	11.8	176.87	-104.8	-214.9	350.0	326.8	23.24	15.061		
6,500.0	6,468.7	6,471.6	6,452.3	12.8	11.8	82.80	-104.8	-187.6	352.5	328.9	23.58	14.948		
6,600.0	6,567.1	6,560.9	6,533.6	12.8	11.8	78.83	-104.8	-150.6	356.7	333.1	23.54	15.150		
6,700.0	6,662.3	6,650.0	6,609.4	12.8	11.8	75.10	-104.8	-104.0	362.2	338.7	23.49	15.420		
6,800.0	6,752.3	6,732.9	6,674.3	12.8	11.9	71.87	-104.8	-52.4	368.6	345.1	23.50	15.684		
6,900.0	6,835.4	6,816.2	6,733.0	12.8	12.1	68.97	-104.8	6.6	375.3	351.7	23.65	15.870		
7,000.0	6,909.9	6,900.0	6,784.8	12.9	12.5	66.43	-104.8	72.5	382.0	358.0	24.02	15.900		
7,100.0	6,974.5	6,978.7	6,826.1	13.2	13.2	64.41	-104.8	139.4	388.2	363.5	24.72	15.704		
7,200.0	7,027.8	7,058.4	6,860.2	13.9	14.0	62.76	-104.8	211.4	393.6	367.8	25.80	15.255		
7,300.0	7,068.8	7,137.5	6,885.9	14.9	15.1	61.52	-104.8	286.2	397.9	370.6	27.32	14.562		
7,400.0	7,096.8	7,216.1	6,903.1	16.3	16.3	60.70	-104.8	362.8	400.9	371.6	29.29	13.687		
7,500.0	7,111.1	7,294.4	6,911.9	17.9	17.7	60.27	-104.8	440.5	402.5	370.8	31.67	12.709		
7,600.0	7,114.0	7,386.4	6,914.0	19.8	19.4	60.22	-104.8	532.6	402.7	368.0	34.71	11.602		
7,700.0	7,115.8	7,486.4	6,915.8	21.7	21.4	60.22	-104.8	632.5	402.7	364.5	38.15	10.555		
7,800.0	7,117.5	7,586.4	6,917.5	23.8	23.5	60.22	-104.8	732.5	402.7	360.9	41.75	9.645		
7,900.0	7,119.3	7,686.4	6,919.3	25.9	25.7	60.22	-104.8	832.5	402.7	357.2	45.47	8.856		
8,000.0	7,121.0	7,786.4	6,921.0	28.1	27.9	60.22	-104.8	932.5	402.7	353.4	49.29	8.170		
8,100.0	7,122.8	7,886.4	6,922.8	30.3	30.2	60.22	-104.8	1,032.5	402.7	349.5	53.18	7.573		
8,200.0	7,124.5	7,986.4	6,924.5	32.6	32.4	60.22	-104.8	1,132.5	402.7	345.6	57.13	7.049		
8,300.0	7,126.2	8,086.4	6,926.3	34.9	34.8	60.22	-104.7	1,232.5	402.7	341.6	61.12	6.589		
8,400.0	7,128.0	8,186.4	6,928.0	37.2	37.1	60.22	-104.7	1,332.4	402.7	337.6	65.16	6.181		
8,500.0	7,129.7	8,286.4	6,929.7	39.5	39.4	60.22	-104.7	1,432.4	402.7	333.5	69.22	5.818		
8,600.0	7,131.5	8,386.4	6,931.5	41.9	41.8	60.22	-104.7	1,532.4	402.7	329.4	73.32	5.493		
8,700.0	7,133.2	8,486.4	6,933.2	44.3	44.2	60.22	-104.7	1,632.4	402.7	325.3	77.43	5.201		
8,800.0	7,135.0	8,586.4	6,935.0	46.6	46.6	60.22	-104.7	1,732.4	402.7	321.2	81.57	4.937		
8,900.0	7,136.7	8,686.4	6,936.7	49.0	49.0	60.22	-104.7	1,832.4	402.7	317.0	85.72	4.698		
9,000.0	7,138.5	8,786.4	6,938.5	51.4	51.4	60.22	-104.7	1,932.3	402.7	312.9	89.88	4.481		
9,100.0	7,140.2	8,886.4	6,940.2	53.8	53.8	60.22	-104.7	2,032.3	402.7	308.7	94.06	4.282		
9,200.0	7,142.0	8,986.4	6,942.0	56.2	56.2	60.22	-104.7	2,132.3	402.7	304.5	98.24	4.099		
9,300.0	7,143.7	9,086.4	6,943.7	58.6	58.6	60.22	-104.7	2,232.3	402.7	300.3	102.44	3.931		
9,400.0	7,145.4	9,186.4	6,945.5	61.0	61.0	60.22	-104.7	2,332.3	402.7	296.1	106.65	3.776		
9,500.0	7,147.2	9,286.4	6,947.2	63.5	63.5	60.22	-104.7	2,432.3	402.7	291.9	110.86	3.633		
9,600.0	7,148.9	9,386.4	6,948.9	65.9	65.9	60.22	-104.7	2,532.3	402.7	287.7	115.08	3.500		
9,700.0	7,150.7	9,486.4	6,950.7	68.3	68.3	60.22	-104.7	2,632.2	402.8	283.5	119.30	3.376		
9,800.0	7,152.4	9,586.4	6,952.4	70.8	70.8	60.22	-104.7	2,732.2	402.8	279.2	123.53	3.260		
9,900.0	7,154.2	9,686.4	6,954.2	73.2	73.2	60.22	-104.7	2,832.2	402.8	275.0	127.76	3.152		
10,000.0	7,155.9	9,786.4	6,955.9	75.6	75.7	60.22	-104.7	2,932.2	402.8	270.8	132.00	3.051		
10,100.0	7,157.7	9,886.4	6,957.7	78.1	78.1	60.22	-104.7	3,032.2	402.8	266.5	136.24	2.956		
10,200.0	7,159.4	9,986.4	6,959.4	80.5	80.5	60.22	-104.7	3,132.2	402.8	262.3	140.49	2.867		

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 2D-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 2D-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						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,300.0	7,161.2	10,086.4	6,961.2	83.0	83.0	60.22	-104.7	3,232.2	402.8	258.0	144.74	2.783		
10,400.0	7,162.9	10,186.4	6,962.9	85.4	85.4	60.22	-104.7	3,332.1	402.8	253.8	148.99	2.703		
10,500.0	7,164.6	10,286.4	6,964.7	87.8	87.9	60.22	-104.7	3,432.1	402.8	249.5	153.24	2.628		
10,600.0	7,166.4	10,386.4	6,966.4	90.3	90.3	60.22	-104.7	3,532.1	402.8	245.3	157.50	2.557		
10,700.0	7,168.1	10,486.4	6,968.1	92.7	92.8	60.22	-104.7	3,632.1	402.8	241.0	161.76	2.490		
10,800.0	7,169.9	10,586.4	6,969.9	95.2	95.3	60.22	-104.7	3,732.1	402.8	236.8	166.02	2.426		
10,900.0	7,171.6	10,686.4	6,971.6	97.6	97.7	60.23	-104.7	3,832.1	402.8	232.5	170.28	2.365		
11,000.0	7,173.4	10,786.4	6,973.4	100.1	100.2	60.23	-104.7	3,932.0	402.8	228.2	174.55	2.308		
11,100.0	7,175.1	10,886.4	6,975.1	102.6	102.6	60.23	-104.7	4,032.0	402.8	224.0	178.81	2.253		
11,200.0	7,176.9	10,986.4	6,976.9	105.0	105.1	60.23	-104.7	4,132.0	402.8	219.7	183.08	2.200		
11,300.0	7,178.6	11,086.4	6,978.6	107.5	107.5	60.23	-104.7	4,232.0	402.8	215.4	187.35	2.150		
11,400.0	7,180.4	11,186.4	6,980.4	109.9	110.0	60.23	-104.7	4,332.0	402.8	211.2	191.62	2.102		
11,500.0	7,182.1	11,286.4	6,982.1	112.4	112.5	60.23	-104.7	4,432.0	402.8	206.9	195.89	2.056		
11,600.0	7,183.8	11,386.4	6,983.9	114.8	114.9	60.23	-104.7	4,532.0	402.8	202.6	200.17	2.012		
11,700.0	7,185.6	11,486.4	6,985.6	117.3	117.4	60.23	-104.7	4,631.9	402.8	198.4	204.44	1.970		
11,800.0	7,187.3	11,586.4	6,987.3	119.8	119.8	60.23	-104.7	4,731.9	402.8	194.1	208.72	1.930		
11,900.0	7,189.1	11,686.4	6,989.1	122.2	122.3	60.23	-104.7	4,831.9	402.8	189.8	212.99	1.891		
12,000.0	7,190.8	11,786.4	6,990.8	124.7	124.8	60.23	-104.7	4,931.9	402.8	185.5	217.27	1.854		
12,100.0	7,192.6	11,886.4	6,992.6	127.1	127.2	60.23	-104.6	5,031.9	402.8	181.3	221.55	1.818		
12,200.0	7,194.3	11,986.4	6,994.3	129.6	129.7	60.23	-104.6	5,131.9	402.8	177.0	225.83	1.784		
12,300.0	7,196.1	12,086.4	6,996.1	132.1	132.2	60.23	-104.6	5,231.8	402.8	172.7	230.11	1.751		
12,400.0	7,197.8	12,186.4	6,997.8	134.5	134.6	60.23	-104.6	5,331.8	402.8	168.4	234.39	1.719		
12,500.0	7,199.5	12,286.4	6,999.6	137.0	137.1	60.23	-104.6	5,431.8	402.8	164.2	238.67	1.688		
12,600.0	7,201.3	12,386.4	7,001.3	139.5	139.5	60.23	-104.6	5,531.8	402.8	159.9	242.95	1.658		
12,700.0	7,203.0	12,486.4	7,003.0	141.9	142.0	60.23	-104.6	5,631.8	402.8	155.6	247.24	1.629		
12,800.0	7,204.8	12,586.4	7,004.8	144.4	144.5	60.23	-104.6	5,731.8	402.8	151.3	251.52	1.602		
12,900.0	7,206.5	12,686.4	7,006.5	146.8	146.9	60.23	-104.6	5,831.8	402.8	147.0	255.80	1.575		
13,000.0	7,208.3	12,786.4	7,008.3	149.3	149.4	60.23	-104.6	5,931.7	402.8	142.8	260.09	1.549		
13,100.0	7,210.0	12,886.4	7,010.0	151.8	151.9	60.23	-104.6	6,031.7	402.8	138.5	264.37	1.524		
13,200.0	7,211.8	12,986.4	7,011.8	154.2	154.3	60.23	-104.6	6,131.7	402.8	134.2	268.66	1.499 Level 3		
13,300.0	7,213.5	13,086.4	7,013.5	156.7	156.8	60.23	-104.6	6,231.7	402.8	129.9	272.94	1.476 Level 3		
13,400.0	7,215.3	13,186.4	7,015.3	159.2	159.3	60.23	-104.6	6,331.7	402.9	125.6	277.23	1.453 Level 3		
13,500.0	7,217.0	13,286.4	7,017.0	161.6	161.7	60.23	-104.6	6,431.7	402.9	121.3	281.52	1.431 Level 3		
13,600.0	7,218.7	13,386.4	7,018.8	164.1	164.2	60.23	-104.6	6,531.6	402.9	117.1	285.80	1.410 Level 3		
13,700.0	7,220.5	13,486.4	7,020.5	166.6	166.7	60.23	-104.6	6,631.6	402.9	112.8	290.09	1.389 Level 3		
13,800.0	7,222.2	13,586.4	7,022.2	169.0	169.1	60.23	-104.6	6,731.6	402.9	108.5	294.38	1.369 Level 3		
13,900.0	7,224.0	13,686.4	7,024.0	171.5	171.6	60.23	-104.6	6,831.6	402.9	104.2	298.67	1.349 Level 3		
14,000.0	7,225.7	13,786.4	7,025.7	174.0	174.1	60.23	-104.6	6,931.6	402.9	99.9	302.96	1.330 Level 3		
14,100.0	7,227.5	13,886.4	7,027.5	176.4	176.5	60.23	-104.6	7,031.6	402.9	95.6	307.24	1.311 Level 3		
14,200.0	7,229.2	13,986.4	7,029.2	178.9	179.0	60.23	-104.6	7,131.6	402.9	91.3	311.53	1.293 Level 3		
14,223.7	7,229.6	14,010.1	7,029.6	179.5	179.6	60.23	-104.6	7,155.3	402.9	90.3	312.55	1.289 Level 3		
14,244.8	7,230.0	14,030.7	7,030.0	180.0	180.1	60.23	-104.6	7,175.8	402.9	89.4	313.44	1.285 Level 3, SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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		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	-180.00	-18.2	0.0	18.2					
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-18.2	0.0	18.2	17.9	0.30	59.977		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-18.2	0.0	18.2	17.6	0.65	27.904 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-138.11	-18.2	0.0	18.9	17.9	1.00	18.814		
400.0	400.0	399.7	399.6	0.7	0.7	-141.56	-19.0	-0.4	21.6	20.2	1.35	15.964		
500.0	499.9	499.1	499.1	0.9	0.9	-144.18	-21.3	-1.7	27.2	25.5	1.71	15.946		
600.0	599.7	598.3	598.2	1.1	1.0	-145.72	-25.0	-3.7	35.7	33.6	2.06	17.271		
700.0	699.4	697.2	696.8	1.3	1.2	-146.49	-30.3	-6.6	46.9	44.5	2.43	19.303		
800.0	798.9	795.4	794.8	1.5	1.4	-146.80	-37.0	-10.2	60.9	58.1	2.81	21.722		
900.0	898.3	893.1	892.1	1.8	1.7	-146.85	-45.2	-14.6	77.7	74.5	3.19	24.347		
1,000.0	997.4	990.0	988.4	2.0	1.9	-146.78	-54.7	-19.8	97.2	93.6	3.59	27.067		
1,100.0	1,096.3	1,086.1	1,083.7	2.3	2.2	-146.63	-65.5	-25.7	119.5	115.4	4.01	29.810		
1,200.0	1,194.9	1,181.5	1,178.0	2.7	2.4	-146.44	-77.7	-32.3	144.3	139.9	4.44	32.535		
1,300.0	1,293.3	1,277.8	1,273.2	3.0	2.7	-146.45	-90.5	-39.2	171.1	166.2	4.88	35.070		
1,400.0	1,391.2	1,373.8	1,368.1	3.4	3.0	-146.69	-103.3	-46.2	199.3	194.0	5.33	37.384		
1,500.0	1,488.9	1,469.3	1,462.5	3.8	3.3	-147.07	-116.0	-53.1	228.9	223.1	5.79	39.522		
1,600.0	1,586.1	1,564.3	1,556.4	4.2	3.6	-147.54	-128.7	-60.0	259.9	253.7	6.26	41.523		
1,700.0	1,683.1	1,659.0	1,650.0	4.7	3.9	-148.14	-141.3	-66.8	292.0	285.2	6.74	43.332		
1,800.0	1,780.0	1,753.6	1,743.6	5.1	4.2	-148.66	-153.9	-73.7	324.1	316.8	7.22	44.881		
1,900.0	1,876.9	1,848.3	1,837.1	5.6	4.4	-149.08	-166.6	-80.5	356.2	348.5	7.70	46.227		
2,000.0	1,974.1	1,943.2	1,931.0	6.0	4.7	-149.61	-179.2	-87.4	387.6	379.4	8.20	47.253		
2,100.0	2,072.0	2,039.1	2,025.7	6.4	5.0	-149.90	-192.0	-94.3	416.2	407.5	8.69	47.886		
2,200.0	2,170.5	2,135.7	2,121.2	6.7	5.3	-149.93	-204.9	-101.3	441.9	432.7	9.17	48.203		
2,300.0	2,269.6	2,233.0	2,217.3	7.0	5.6	-149.73	-217.8	-108.3	464.7	455.1	9.63	48.259		
2,400.0	2,369.1	2,330.8	2,314.1	7.2	5.9	-149.33	-230.9	-115.4	484.6	474.6	10.07	48.103		
2,500.0	2,468.8	2,429.2	2,411.3	7.4	6.3	-148.73	-244.0	-122.5	501.6	491.1	10.50	47.775		
2,600.0	2,568.8	2,527.8	2,508.8	7.5	6.6	-147.96	-257.1	-129.7	515.8	504.9	10.90	47.311		
2,700.0	2,668.8	2,626.6	2,606.4	7.6	6.9	169.31	-270.3	-136.8	527.8	514.9	12.91	40.880		
2,800.0	2,768.8	2,725.5	2,704.1	7.7	7.2	170.33	-283.5	-144.0	539.7	526.4	13.29	40.599		
2,900.0	2,868.8	2,824.3	2,801.8	7.8	7.5	171.29	-296.6	-151.1	551.7	538.0	13.68	40.325		
3,000.0	2,968.8	2,923.2	2,899.6	7.9	7.8	172.22	-309.8	-158.3	563.9	549.9	14.08	40.058		
3,100.0	3,068.8	3,022.0	2,997.3	8.0	8.1	173.11	-323.0	-165.4	576.3	561.8	14.48	39.799		
3,200.0	3,168.8	3,120.9	3,095.0	8.2	8.4	173.96	-336.2	-172.6	588.8	573.9	14.89	39.547		
3,300.0	3,268.8	3,219.7	3,192.7	8.3	8.7	174.78	-349.3	-179.7	601.4	586.1	15.30	39.303		
3,400.0	3,368.8	3,318.5	3,290.4	8.4	9.1	175.56	-362.5	-186.9	614.1	598.4	15.72	39.067		
3,500.0	3,468.8	3,417.4	3,388.1	8.5	9.4	176.31	-375.7	-194.0	626.9	610.8	16.14	38.838		
3,600.0	3,568.8	3,516.2	3,485.8	8.6	9.7	177.03	-388.9	-201.2	639.8	623.3	16.57	38.617		
3,700.0	3,668.8	3,615.1	3,583.5	8.8	10.0	177.73	-402.0	-208.3	652.9	635.9	17.00	38.404		
3,800.0	3,768.8	3,713.9	3,681.2	8.9	10.3	178.39	-415.2	-215.5	666.0	648.5	17.43	38.198		
3,900.0	3,868.8	3,819.2	3,785.3	9.0	10.6	179.06	-429.1	-223.0	679.0	661.2	17.88	37.971		
4,000.0	3,968.8	3,944.7	3,909.9	9.2	10.9	179.68	-442.2	-230.1	689.5	671.1	18.33	37.615		
4,100.0	4,068.8	4,071.4	4,036.1	9.3	11.2	-179.94	-450.6	-234.7	696.1	677.4	18.72	37.189		
4,200.0	4,168.8	4,198.6	4,163.3	9.4	11.3	-179.79	-454.1	-236.6	698.8	679.8	19.05	36.693		
4,300.0	4,268.8	4,304.1	4,268.8	9.6	11.5	-179.79	-454.2	-236.6	698.9	679.6	19.32	36.167		
4,400.0	4,368.8	4,404.1	4,368.8	9.7	11.6	-179.79	-454.2	-236.6	698.9	679.3	19.60	35.660		
4,500.0	4,468.8	4,504.1	4,468.8	9.8	11.7	-179.79	-454.2	-236.6	698.9	679.0	19.88	35.163		
4,600.0	4,568.8	4,604.1	4,568.8	10.0	11.8	-179.79	-454.2	-236.6	698.9	678.8	20.16	34.676		
4,700.0	4,668.8	4,704.1	4,668.8	10.1	11.9	-179.79	-454.2	-236.6	698.9	678.5	20.44	34.199		
4,800.0	4,768.8	4,804.1	4,768.8	10.3	12.1	-179.79	-454.2	-236.6	698.9	678.2	20.72	33.732		
4,900.0	4,868.8	4,904.1	4,868.8	10.4	12.2	-179.79	-454.2	-236.6	698.9	677.9	21.00	33.274		
5,000.0	4,968.8	5,004.1	4,968.8	10.6	12.3	-179.79	-454.2	-236.6	698.9	677.6	21.29	32.826		
5,100.0	5,068.8	5,104.1	5,068.8	10.7	12.4	-179.79	-454.2	-236.6	698.9	677.3	21.58	32.387		

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 2D-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 2D-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	5,168.8	5,204.1	5,168.8	10.8	12.5	-179.79	-454.2	-236.6	698.9	677.0	21.87	31.957		
5,300.0	5,268.8	5,304.1	5,268.8	11.0	12.7	-179.79	-454.2	-236.6	698.9	676.8	22.16	31.536		
5,400.0	5,368.8	5,404.1	5,368.8	11.1	12.8	-179.79	-454.2	-236.6	698.9	676.5	22.46	31.124		
5,500.0	5,468.8	5,504.1	5,468.8	11.3	12.9	-179.79	-454.2	-236.6	698.9	676.2	22.75	30.720		
5,600.0	5,568.8	5,604.1	5,568.8	11.4	13.1	-179.79	-454.2	-236.6	698.9	675.9	23.05	30.325		
5,700.0	5,668.8	5,704.1	5,668.8	11.6	13.2	-179.79	-454.2	-236.6	698.9	675.6	23.35	29.938		
5,800.0	5,768.8	5,804.1	5,768.8	11.7	13.3	-179.79	-454.2	-236.6	698.9	675.3	23.64	29.559		
5,900.0	5,868.8	5,904.1	5,868.8	11.9	13.5	-179.79	-454.2	-236.6	698.9	675.0	23.95	29.188		
6,000.0	5,968.8	6,004.1	5,968.8	12.0	13.6	-179.79	-454.2	-236.6	698.9	674.7	24.25	28.825		
6,100.0	6,068.8	6,104.1	6,068.8	12.2	13.7	-179.79	-454.2	-236.6	698.9	674.4	24.55	28.469		
6,200.0	6,168.8	6,204.1	6,168.8	12.3	13.9	-179.79	-454.2	-236.6	698.9	674.1	24.85	28.121		
6,300.0	6,268.8	6,304.1	6,268.8	12.5	14.0	-179.79	-454.2	-236.6	698.9	673.8	25.16	27.780		
6,400.0	6,368.8	6,404.1	6,368.8	12.6	14.1	-179.79	-454.2	-236.6	698.9	673.5	25.47	27.446		
6,426.1	6,394.9	6,430.2	6,394.9	12.7	14.2	90.25	-454.2	-236.6	698.9	675.1	23.84	29.314		
6,500.0	6,468.7	6,504.0	6,468.7	12.8	14.3	90.51	-454.2	-236.6	698.9	674.9	24.05	29.057		
6,600.0	6,567.1	6,604.5	6,569.1	12.8	14.4	91.59	-454.2	-233.0	699.2	675.0	24.21	28.878		
6,700.0	6,662.3	6,707.4	6,670.4	12.8	14.4	92.70	-454.2	-215.3	699.7	675.5	24.24	28.865		
6,800.0	6,752.3	6,812.4	6,770.0	12.8	14.4	93.77	-454.2	-182.5	700.5	676.2	24.22	28.922		
6,900.0	6,835.4	6,919.5	6,865.6	12.8	14.4	94.77	-454.2	-134.4	701.4	677.1	24.26	28.908		
7,000.0	6,909.9	7,028.7	6,954.5	12.9	14.5	95.67	-454.2	-71.2	702.4	677.9	24.54	28.621		
7,100.0	6,974.5	7,139.8	7,034.1	13.2	14.6	96.47	-454.2	6.1	703.4	678.2	25.25	27.855		
7,200.0	7,027.8	7,252.7	7,101.8	13.9	15.0	97.13	-454.2	96.3	704.4	677.8	26.61	26.475		
7,300.0	7,068.8	7,367.0	7,155.0	14.9	15.7	97.63	-454.2	197.4	705.2	676.5	28.73	24.548		
7,400.0	7,096.8	7,482.3	7,191.8	16.3	17.0	97.97	-454.2	306.6	705.8	674.2	31.60	22.333		
7,500.0	7,111.1	7,598.4	7,210.6	17.9	18.7	98.12	-454.2	420.9	706.0	670.9	35.11	20.111		
7,600.0	7,114.0	7,704.8	7,213.9	19.8	20.6	98.13	-454.2	527.3	706.1	667.2	38.89	18.156		
7,700.0	7,115.8	7,804.8	7,215.6	21.7	22.5	98.13	-454.2	627.3	706.1	663.3	42.81	16.493		
7,800.0	7,117.5	7,904.8	7,217.4	23.8	24.5	98.13	-454.2	727.3	706.1	659.2	46.92	15.049		
7,900.0	7,119.3	8,004.8	7,219.1	25.9	26.6	98.13	-454.2	827.3	706.1	654.9	51.17	13.800		
8,000.0	7,121.0	8,104.8	7,220.9	28.1	28.7	98.13	-454.2	927.2	706.1	650.6	55.52	12.718		
8,100.0	7,122.8	8,204.8	7,222.6	30.3	30.9	98.13	-454.2	1,027.2	706.1	646.1	59.96	11.776		
8,200.0	7,124.5	8,304.8	7,224.4	32.6	33.1	98.13	-454.2	1,127.2	706.1	641.6	64.46	10.953		
8,300.0	7,126.2	8,404.8	7,226.1	34.9	35.4	98.13	-454.2	1,227.2	706.1	637.1	69.02	10.230		
8,400.0	7,128.0	8,504.8	7,227.9	37.2	37.7	98.13	-454.2	1,327.2	706.1	632.5	73.63	9.591		
8,500.0	7,129.7	8,604.8	7,229.6	39.5	40.0	98.13	-454.2	1,427.2	706.1	627.9	78.26	9.022		
8,600.0	7,131.5	8,704.8	7,231.4	41.9	42.4	98.13	-454.2	1,527.2	706.1	623.2	82.93	8.515		
8,700.0	7,133.2	8,804.8	7,233.1	44.3	44.7	98.13	-454.2	1,627.1	706.1	618.5	87.63	8.059		
8,800.0	7,135.0	8,904.8	7,234.8	46.6	47.1	98.13	-454.2	1,727.1	706.1	613.8	92.34	7.647		
8,900.0	7,136.7	9,004.8	7,236.6	49.0	49.4	98.13	-454.2	1,827.1	706.2	609.1	97.07	7.275		
9,000.0	7,138.5	9,104.8	7,238.3	51.4	51.8	98.13	-454.2	1,927.1	706.2	604.3	101.82	6.935		
9,100.0	7,140.2	9,204.8	7,240.1	53.8	54.2	98.13	-454.2	2,027.1	706.2	599.6	106.58	6.626		
9,200.0	7,142.0	9,304.8	7,241.8	56.2	56.6	98.13	-454.2	2,127.1	706.2	594.8	111.36	6.342		
9,300.0	7,143.7	9,404.8	7,243.6	58.6	59.0	98.13	-454.2	2,227.1	706.2	590.0	116.14	6.080		
9,400.0	7,145.4	9,504.8	7,245.3	61.0	61.4	98.13	-454.2	2,327.0	706.2	585.3	120.93	5.839		
9,500.0	7,147.2	9,604.8	7,247.1	63.5	63.8	98.13	-454.2	2,427.0	706.2	580.5	125.74	5.616		
9,600.0	7,148.9	9,704.8	7,248.8	65.9	66.3	98.13	-454.2	2,527.0	706.2	575.7	130.54	5.410		
9,700.0	7,150.7	9,804.8	7,250.6	68.3	68.7	98.13	-454.3	2,627.0	706.2	570.9	135.36	5.217		
9,800.0	7,152.4	9,904.8	7,252.3	70.8	71.1	98.13	-454.3	2,727.0	706.2	566.0	140.18	5.038		
9,900.0	7,154.2	10,004.8	7,254.0	73.2	73.5	98.13	-454.3	2,827.0	706.2	561.2	145.01	4.870		
10,000.0	7,155.9	10,104.8	7,255.8	75.6	76.0	98.13	-454.3	2,926.9	706.2	556.4	149.84	4.713		
10,100.0	7,157.7	10,204.8	7,257.5	78.1	78.4	98.13	-454.3	3,026.9	706.2	551.6	154.67	4.566		
10,200.0	7,159.4	10,304.8	7,259.3	80.5	80.8	98.13	-454.3	3,126.9	706.2	546.7	159.51	4.428		

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 2D-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 2D-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							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
10,300.0	7,161.2	10,404.8	7,261.0	83.0	83.3	98.13	-454.3	3,226.9	706.3	541.9	164.35	4.297		
10,400.0	7,162.9	10,504.8	7,262.8	85.4	85.7	98.13	-454.3	3,326.9	706.3	537.1	169.20	4.174		
10,500.0	7,164.6	10,604.8	7,264.5	87.8	88.2	98.13	-454.3	3,426.9	706.3	532.2	174.05	4.058		
10,600.0	7,166.4	10,704.8	7,266.3	90.3	90.6	98.13	-454.3	3,526.9	706.3	527.4	178.90	3.948		
10,700.0	7,168.1	10,804.8	7,268.0	92.7	93.1	98.13	-454.3	3,626.8	706.3	522.5	183.75	3.844		
10,800.0	7,169.9	10,904.8	7,269.7	95.2	95.5	98.13	-454.3	3,726.8	706.3	517.7	188.61	3.745		
10,900.0	7,171.6	11,004.8	7,271.5	97.6	98.0	98.13	-454.3	3,826.8	706.3	512.8	193.47	3.651		
11,000.0	7,173.4	11,104.8	7,273.2	100.1	100.4	98.13	-454.3	3,926.8	706.3	508.0	198.33	3.561		
11,100.0	7,175.1	11,204.8	7,275.0	102.6	102.9	98.13	-454.3	4,026.8	706.3	503.1	203.19	3.476		
11,200.0	7,176.9	11,304.8	7,276.7	105.0	105.3	98.13	-454.3	4,126.8	706.3	498.3	208.05	3.395		
11,300.0	7,178.6	11,404.8	7,278.5	107.5	107.8	98.13	-454.3	4,226.7	706.3	493.4	212.92	3.317		
11,400.0	7,180.4	11,504.8	7,280.2	109.9	110.2	98.13	-454.3	4,326.7	706.3	488.5	217.79	3.243		
11,500.0	7,182.1	11,604.8	7,282.0	112.4	112.7	98.13	-454.3	4,426.7	706.3	483.7	222.65	3.172		
11,600.0	7,183.8	11,704.8	7,283.7	114.8	115.1	98.13	-454.3	4,526.7	706.3	478.8	227.52	3.104		
11,700.0	7,185.6	11,804.8	7,285.5	117.3	117.6	98.13	-454.3	4,626.7	706.3	474.0	232.39	3.039		
11,800.0	7,187.3	11,904.8	7,287.2	119.8	120.0	98.13	-454.3	4,726.7	706.4	469.1	237.27	2.977		
11,900.0	7,189.1	12,004.8	7,288.9	122.2	122.5	98.13	-454.3	4,826.7	706.4	464.2	242.14	2.917		
12,000.0	7,190.8	12,104.8	7,290.7	124.7	125.0	98.13	-454.3	4,926.6	706.4	459.4	247.01	2.860		
12,100.0	7,192.6	12,204.8	7,292.4	127.1	127.4	98.13	-454.3	5,026.6	706.4	454.5	251.89	2.804		
12,200.0	7,194.3	12,304.8	7,294.2	129.6	129.9	98.13	-454.3	5,126.6	706.4	449.6	256.76	2.751		
12,300.0	7,196.1	12,404.8	7,295.9	132.1	132.3	98.13	-454.3	5,226.6	706.4	444.7	261.64	2.700		
12,400.0	7,197.8	12,504.8	7,297.7	134.5	134.8	98.13	-454.3	5,326.6	706.4	439.9	266.52	2.650		
12,500.0	7,199.5	12,604.8	7,299.4	137.0	137.3	98.13	-454.3	5,426.6	706.4	435.0	271.40	2.603		
12,600.0	7,201.3	12,704.8	7,301.2	139.5	139.7	98.13	-454.3	5,526.5	706.4	430.1	276.27	2.557		
12,700.0	7,203.0	12,804.8	7,302.9	141.9	142.2	98.13	-454.3	5,626.5	706.4	425.3	281.15	2.513		
12,800.0	7,204.8	12,904.8	7,304.7	144.4	144.6	98.13	-454.3	5,726.5	706.4	420.4	286.03	2.470		
12,900.0	7,206.5	13,004.8	7,306.4	146.8	147.1	98.13	-454.3	5,826.5	706.4	415.5	290.92	2.428		
13,000.0	7,208.3	13,104.8	7,308.1	149.3	149.6	98.13	-454.3	5,926.5	706.4	410.6	295.80	2.388		
13,100.0	7,210.0	13,204.8	7,309.9	151.8	152.0	98.13	-454.3	6,026.5	706.4	405.8	300.68	2.349		
13,200.0	7,211.8	13,304.8	7,311.6	154.2	154.5	98.13	-454.3	6,126.5	706.5	400.9	305.56	2.312		
13,300.0	7,213.5	13,404.8	7,313.4	156.7	157.0	98.13	-454.3	6,226.4	706.5	396.0	310.44	2.276		
13,400.0	7,215.3	13,504.8	7,315.1	159.2	159.4	98.13	-454.3	6,326.4	706.5	391.1	315.33	2.240		
13,500.0	7,217.0	13,604.8	7,316.9	161.6	161.9	98.13	-454.3	6,426.4	706.5	386.3	320.21	2.206		
13,600.0	7,218.7	13,704.8	7,318.6	164.1	164.4	98.13	-454.3	6,526.4	706.5	381.4	325.10	2.173		
13,700.0	7,220.5	13,804.8	7,320.4	166.6	166.8	98.13	-454.3	6,626.4	706.5	376.5	329.98	2.141		
13,800.0	7,222.2	13,904.8	7,322.1	169.0	169.3	98.13	-454.3	6,726.4	706.5	371.6	334.87	2.110		
13,900.0	7,224.0	14,004.8	7,323.9	171.5	171.8	98.13	-454.3	6,826.4	706.5	366.7	339.75	2.079		
14,000.0	7,225.7	14,104.8	7,325.6	174.0	174.2	98.13	-454.3	6,926.3	706.5	361.9	344.64	2.050		
14,100.0	7,227.5	14,204.8	7,327.3	176.4	176.7	98.13	-454.3	7,026.3	706.5	357.0	349.52	2.021		
14,200.0	7,229.2	14,304.8	7,329.1	178.9	179.2	98.13	-454.3	7,126.3	706.5	352.1	354.41	1.994		
14,244.8	7,230.0	14,349.6	7,329.9	180.0	180.3	98.13	-454.3	7,171.1	706.5	349.9	356.60	1.981 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-29.1	0.0	29.1						
100.0	100.0	100.0	100.0	0.2	0.2	180.00	-29.1	0.0	29.1	28.8	0.30	95.963			
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-29.1	0.0	29.1	28.5	0.65	44.646	CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-137.44	-29.1	0.0	29.8	28.8	1.00	29.715			
400.0	400.0	400.0	400.0	0.7	0.7	-140.62	-29.1	0.0	31.8	30.4	1.35	23.471			
500.0	499.9	499.3	499.3	0.9	0.8	-144.48	-30.0	-0.3	36.0	34.3	1.70	21.129			
600.0	599.7	598.4	598.4	1.1	1.0	-147.64	-32.4	-1.0	43.4	41.3	2.06	21.087			
700.0	699.4	697.1	697.0	1.3	1.2	-149.84	-36.5	-2.3	53.9	51.4	2.41	22.306			
800.0	798.9	795.3	795.0	1.5	1.4	-151.23	-42.2	-4.0	67.3	64.6	2.78	24.259			
900.0	898.3	892.8	892.2	1.8	1.6	-152.05	-49.4	-6.2	83.8	80.6	3.14	26.656			
1,000.0	997.4	989.6	988.6	2.0	1.8	-152.49	-58.1	-8.9	103.2	99.6	3.52	29.320			
1,100.0	1,096.3	1,085.5	1,083.9	2.3	2.0	-152.69	-68.3	-12.0	125.4	121.5	3.90	32.138			
1,200.0	1,194.9	1,180.4	1,178.0	2.7	2.3	-152.74	-79.9	-15.6	150.5	146.2	4.30	35.034			
1,300.0	1,293.3	1,274.2	1,270.8	3.0	2.6	-152.70	-92.8	-19.6	178.4	173.7	4.70	37.955			
1,400.0	1,391.2	1,366.8	1,362.2	3.4	2.8	-152.60	-106.9	-23.9	209.1	204.0	5.12	40.863			
1,500.0	1,488.9	1,460.1	1,454.1	3.8	3.1	-152.50	-122.3	-28.6	242.3	236.8	5.55	43.683			
1,600.0	1,586.1	1,553.9	1,546.5	4.2	3.4	-152.54	-137.9	-33.4	277.0	271.0	5.98	46.287			
1,700.0	1,683.1	1,647.3	1,638.5	4.7	3.7	-152.77	-153.4	-38.2	312.7	306.3	6.43	48.613			
1,800.0	1,780.0	1,740.7	1,730.4	5.1	4.1	-153.00	-168.9	-42.9	348.5	341.6	6.89	50.599			
1,900.0	1,876.9	1,834.1	1,822.4	5.6	4.4	-153.18	-184.4	-47.7	384.2	376.9	7.34	52.319			
2,000.0	1,974.1	1,927.7	1,914.6	6.0	4.7	-153.51	-199.9	-52.5	419.3	411.4	7.82	53.635			
2,100.0	2,072.0	2,022.4	2,007.9	6.4	5.0	-153.68	-215.7	-57.3	451.4	443.2	8.29	54.484			
2,200.0	2,170.5	2,118.0	2,102.0	6.7	5.3	-153.65	-231.5	-62.2	480.6	471.9	8.74	54.965			
2,300.0	2,269.6	2,214.4	2,197.0	7.0	5.7	-153.44	-247.5	-67.1	506.9	497.7	9.19	55.147			
2,400.0	2,369.1	2,311.5	2,292.6	7.2	6.0	-153.08	-263.7	-72.1	530.1	520.5	9.62	55.085			
2,500.0	2,468.8	2,409.2	2,388.8	7.4	6.3	-152.56	-279.9	-77.0	550.4	540.3	10.04	54.827			
2,600.0	2,568.8	2,507.4	2,485.5	7.5	6.7	-151.90	-296.2	-82.1	567.7	557.3	10.43	54.409			
2,700.0	2,668.8	2,605.9	2,582.5	7.6	7.0	165.23	-312.5	-87.1	582.7	569.3	13.42	43.434			
2,800.0	2,768.8	2,704.3	2,679.5	7.7	7.3	166.10	-328.9	-92.1	597.6	583.7	13.83	43.196			
2,900.0	2,868.8	2,802.8	2,776.4	7.8	7.7	166.94	-345.2	-97.1	612.6	598.3	14.26	42.962			
3,000.0	2,968.8	2,901.3	2,873.4	7.9	8.0	167.73	-361.5	-102.1	627.7	613.0	14.69	42.733			
3,100.0	3,068.8	2,999.8	2,970.4	8.0	8.4	168.49	-377.9	-107.2	642.9	627.8	15.13	42.509			
3,200.0	3,168.8	3,098.3	3,067.4	8.2	8.7	169.21	-394.2	-112.2	658.3	642.7	15.57	42.290			
3,300.0	3,268.8	3,196.7	3,164.4	8.3	9.0	169.89	-410.6	-117.2	673.7	657.7	16.01	42.076			
3,400.0	3,368.8	3,295.2	3,261.4	8.4	9.4	170.55	-426.9	-122.2	689.3	672.8	16.46	41.869			
3,500.0	3,468.8	3,393.7	3,358.4	8.5	9.7	171.18	-443.3	-127.3	704.9	688.0	16.92	41.667			
3,600.0	3,568.8	3,492.2	3,455.3	8.6	10.1	171.78	-459.6	-132.3	720.6	703.2	17.38	41.471			
3,700.0	3,668.8	3,590.7	3,552.3	8.8	10.4	172.36	-476.0	-137.3	736.4	718.6	17.84	41.280			
3,800.0	3,768.8	3,689.2	3,649.3	8.9	10.7	172.91	-492.3	-142.3	752.2	733.9	18.30	41.096			
3,900.0	3,868.8	3,787.6	3,746.3	9.0	11.1	173.44	-508.7	-147.4	768.2	749.4	18.77	40.917			
4,000.0	3,968.8	3,886.1	3,843.3	9.2	11.4	173.95	-525.0	-152.4	784.1	764.9	19.25	40.744			
4,100.0	4,068.8	3,984.6	3,940.3	9.3	11.8	174.43	-541.4	-157.4	800.2	780.4	19.72	40.577			
4,200.0	4,168.8	4,083.1	4,037.2	9.4	12.1	174.90	-557.7	-162.4	816.3	796.1	20.20	40.415			
4,300.0	4,268.8	4,181.6	4,134.2	9.6	12.5	175.35	-574.1	-167.4	832.4	811.7	20.68	40.258			
4,400.0	4,368.8	4,280.0	4,231.2	9.7	12.8	175.79	-590.4	-172.5	848.6	827.4	21.16	40.107			
4,500.0	4,468.8	4,378.5	4,328.2	9.8	13.1	176.20	-606.7	-177.5	864.8	843.2	21.64	39.960			
4,600.0	4,568.8	4,477.0	4,425.2	10.0	13.5	176.60	-623.1	-182.5	881.1	859.0	22.13	39.818			
4,700.0	4,668.8	4,575.5	4,522.2	10.1	13.8	176.99	-639.4	-187.5	897.4	874.8	22.62	39.681			
4,800.0	4,768.8	4,674.0	4,619.2	10.3	14.2	177.37	-655.8	-192.6	913.8	890.7	23.11	39.548			
4,900.0	4,868.8	4,772.4	4,716.1	10.4	14.5	177.73	-672.1	-197.6	930.2	906.6	23.60	39.420			
5,000.0	4,968.8	4,870.9	4,813.1	10.6	14.9	178.07	-688.5	-202.6	946.6	922.5	24.09	39.296			
5,100.0	5,068.8	4,969.4	4,910.1	10.7	15.2	178.41	-704.8	-207.6	963.1	938.5	24.58	39.176			

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 2D-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 2D-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	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
5,200.0	5,168.8	5,067.9	5,007.1	10.8	15.5	178.73	-721.2	-212.7	979.5	954.5	25.08	39.060		
5,300.0	5,268.8	5,166.4	5,104.1	11.0	15.9	179.05	-737.5	-217.7	996.1	970.5	25.57	38.948		
5,400.0	5,368.8	5,264.8	5,201.1	11.1	16.2	179.35	-753.9	-222.7	1,012.6	986.5	26.07	38.839		
5,500.0	5,468.8	5,389.0	5,323.5	11.3	16.6	179.70	-773.6	-228.8	1,028.6	1,001.9	26.63	38.626		
5,600.0	5,568.8	5,540.6	5,473.9	11.4	17.0	-179.99	-791.2	-234.2	1,040.2	1,013.0	27.16	38.296		
5,700.0	5,668.8	5,693.7	5,626.7	11.6	17.3	-179.82	-801.2	-237.3	1,046.8	1,019.2	27.59	37.935		
5,800.0	5,768.8	5,835.8	5,768.8	11.7	17.4	-179.78	-803.6	-238.0	1,048.4	1,020.4	27.91	37.557		
5,900.0	5,868.8	5,935.8	5,868.8	11.9	17.5	-179.78	-803.6	-238.0	1,048.4	1,020.2	28.18	37.203		
6,000.0	5,968.8	6,035.8	5,968.8	12.0	17.6	-179.78	-803.6	-238.0	1,048.4	1,019.9	28.45	36.853		
6,100.0	6,068.8	6,135.8	6,068.8	12.2	17.7	-179.78	-803.6	-238.0	1,048.4	1,019.6	28.72	36.507		
6,200.0	6,168.8	6,235.8	6,168.8	12.3	17.8	-179.78	-803.6	-238.0	1,048.4	1,019.4	28.99	36.166		
6,300.0	6,268.8	6,336.0	6,268.8	12.5	17.9	-179.98	-803.6	-234.4	1,048.3	1,019.1	29.25	35.837		
6,303.0	6,271.8	6,339.0	6,271.8	12.5	17.9	-180.00	-803.6	-234.1	1,048.3	1,019.1	29.26	35.827		
6,400.0	6,368.8	6,433.5	6,364.9	12.6	18.0	179.12	-803.7	-218.0	1,048.5	1,019.0	29.50	35.540		
6,500.0	6,468.7	6,526.2	6,453.3	12.8	18.0	87.75	-803.7	-190.4	1,049.2	1,025.3	23.88	43.936		
6,600.0	6,567.1	6,615.9	6,534.8	12.8	17.9	86.39	-803.7	-153.2	1,050.6	1,026.6	23.95	43.865		
6,700.0	6,662.3	6,703.1	6,609.0	12.8	18.0	85.10	-803.7	-107.4	1,052.4	1,028.5	23.97	43.913		
6,800.0	6,752.3	6,788.3	6,675.6	12.8	18.0	83.90	-803.7	-54.3	1,054.6	1,030.6	24.02	43.901		
6,900.0	6,835.4	6,871.7	6,734.2	12.8	18.1	82.81	-803.7	4.9	1,057.0	1,032.7	24.25	43.582		
7,000.0	6,909.9	6,950.0	6,782.6	12.9	18.2	81.87	-803.7	66.4	1,059.4	1,034.7	24.74	42.822		
7,100.0	6,974.5	7,034.5	6,827.0	13.2	18.5	81.01	-803.7	138.2	1,061.7	1,036.0	25.73	41.269		
7,200.0	7,027.8	7,114.3	6,860.9	13.9	18.9	80.32	-803.7	210.4	1,063.7	1,036.5	27.22	39.075		
7,300.0	7,068.8	7,193.4	6,886.4	14.9	19.5	79.79	-803.7	285.3	1,065.4	1,036.1	29.29	36.371		
7,400.0	7,096.8	7,272.0	6,903.4	16.3	20.3	79.43	-803.7	362.0	1,066.6	1,034.7	31.91	33.426		
7,500.0	7,111.1	7,350.0	6,911.8	17.9	21.2	79.23	-803.7	439.5	1,067.2	1,032.3	34.96	30.531		
7,600.0	7,114.0	7,443.1	6,913.9	19.8	22.5	79.19	-803.7	532.5	1,067.4	1,028.8	38.56	27.678		
7,700.0	7,115.8	7,543.1	6,915.7	21.7	24.2	79.19	-803.7	632.5	1,067.4	1,024.9	42.48	25.128		
7,800.0	7,117.5	7,643.1	6,917.4	23.8	26.0	79.19	-803.7	732.5	1,067.4	1,020.8	46.57	22.920		
7,900.0	7,119.3	7,743.1	6,919.2	25.9	27.9	79.19	-803.7	832.5	1,067.4	1,016.6	50.80	21.013		
8,000.0	7,121.0	7,843.1	6,920.9	28.1	29.9	79.19	-803.7	932.4	1,067.4	1,012.3	55.13	19.361		
8,100.0	7,122.8	7,943.1	6,922.7	30.3	32.0	79.19	-803.7	1,032.4	1,067.4	1,007.9	59.55	17.926		
8,200.0	7,124.5	8,043.1	6,924.4	32.6	34.2	79.19	-803.7	1,132.4	1,067.4	1,003.4	64.02	16.672		
8,300.0	7,126.2	8,143.1	6,926.2	34.9	36.4	79.19	-803.7	1,232.4	1,067.4	998.9	68.56	15.570		
8,400.0	7,128.0	8,243.1	6,927.9	37.2	38.6	79.19	-803.7	1,332.4	1,067.4	994.3	73.13	14.596		
8,500.0	7,129.7	8,343.1	6,929.6	39.5	40.9	79.19	-803.7	1,432.4	1,067.5	989.7	77.74	13.731		
8,600.0	7,131.5	8,443.1	6,931.4	41.9	43.2	79.19	-803.7	1,532.3	1,067.5	985.1	82.38	12.958		
8,700.0	7,133.2	8,543.1	6,933.1	44.3	45.5	79.19	-803.7	1,632.3	1,067.5	980.4	87.04	12.264		
8,800.0	7,135.0	8,643.1	6,934.9	46.6	47.8	79.19	-803.7	1,732.3	1,067.5	975.8	91.72	11.638		
8,900.0	7,136.7	8,743.1	6,936.6	49.0	50.2	79.20	-803.8	1,832.3	1,067.5	971.1	96.42	11.071		
9,000.0	7,138.5	8,843.1	6,938.4	51.4	52.5	79.20	-803.8	1,932.3	1,067.5	966.4	101.14	10.555		
9,100.0	7,140.2	8,943.1	6,940.1	53.8	54.9	79.20	-803.8	2,032.3	1,067.5	961.7	105.87	10.084		
9,200.0	7,142.0	9,043.1	6,941.9	56.2	57.3	79.20	-803.8	2,132.3	1,067.5	956.9	110.61	9.652		
9,300.0	7,143.7	9,143.1	6,943.6	58.6	59.7	79.20	-803.8	2,232.2	1,067.5	952.2	115.36	9.254		
9,400.0	7,145.4	9,243.1	6,945.4	61.0	62.0	79.20	-803.8	2,332.2	1,067.5	947.4	120.11	8.888		
9,500.0	7,147.2	9,343.1	6,947.1	63.5	64.4	79.20	-803.8	2,432.2	1,067.6	942.7	124.88	8.549		
9,600.0	7,148.9	9,443.1	6,948.8	65.9	66.8	79.20	-803.8	2,532.2	1,067.6	937.9	129.65	8.234		
9,700.0	7,150.7	9,543.1	6,950.6	68.3	69.3	79.20	-803.8	2,632.2	1,067.6	933.1	134.43	7.941		
9,800.0	7,152.4	9,643.1	6,952.3	70.8	71.7	79.20	-803.8	2,732.2	1,067.6	928.4	139.22	7.668		
9,900.0	7,154.2	9,743.1	6,954.1	73.2	74.1	79.20	-803.8	2,832.2	1,067.6	923.6	144.01	7.413		
10,000.0	7,155.9	9,843.1	6,955.8	75.6	76.5	79.20	-803.8	2,932.1	1,067.6	918.8	148.81	7.174		
10,100.0	7,157.7	9,943.1	6,957.6	78.1	78.9	79.20	-803.8	3,032.1	1,067.6	914.0	153.61	6.950		
10,200.0	7,159.4	10,043.1	6,959.3	80.5	81.4	79.20	-803.8	3,132.1	1,067.6	909.2	158.41	6.740		

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 2D-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 2D-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						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,300.0	7,161.2	10,143.1	6,961.1	83.0	83.8	79.20	-803.8	3,232.1	1,067.6	904.4	163.22	6.541		
10,400.0	7,162.9	10,243.1	6,962.8	85.4	86.2	79.20	-803.8	3,332.1	1,067.7	899.6	168.02	6.354		
10,500.0	7,164.6	10,343.1	6,964.6	87.8	88.6	79.20	-803.8	3,432.1	1,067.7	894.8	172.84	6.177		
10,600.0	7,166.4	10,443.1	6,966.3	90.3	91.1	79.20	-803.8	3,532.0	1,067.7	890.0	177.65	6.010		
10,700.0	7,168.1	10,543.1	6,968.0	92.7	93.5	79.20	-803.8	3,632.0	1,067.7	885.2	182.47	5.851		
10,800.0	7,169.9	10,643.1	6,969.8	95.2	96.0	79.20	-803.8	3,732.0	1,067.7	880.4	187.29	5.701		
10,900.0	7,171.6	10,743.1	6,971.5	97.6	98.4	79.20	-803.9	3,832.0	1,067.7	875.6	192.11	5.558		
11,000.0	7,173.4	10,843.1	6,973.3	100.1	100.8	79.20	-803.9	3,932.0	1,067.7	870.8	196.93	5.422		
11,100.0	7,175.1	10,943.1	6,975.0	102.6	103.3	79.20	-803.9	4,032.0	1,067.7	866.0	201.76	5.292		
11,200.0	7,176.9	11,043.1	6,976.8	105.0	105.7	79.20	-803.9	4,132.0	1,067.7	861.1	206.59	5.168		
11,300.0	7,178.6	11,143.1	6,978.5	107.5	108.2	79.20	-803.9	4,231.9	1,067.7	856.3	211.42	5.050		
11,400.0	7,180.4	11,243.1	6,980.3	109.9	110.6	79.20	-803.9	4,331.9	1,067.8	851.5	216.25	4.938		
11,500.0	7,182.1	11,343.1	6,982.0	112.4	113.1	79.20	-803.9	4,431.9	1,067.8	846.7	221.08	4.830		
11,600.0	7,183.8	11,443.1	6,983.7	114.8	115.5	79.20	-803.9	4,531.9	1,067.8	841.9	225.91	4.727		
11,700.0	7,185.6	11,543.1	6,985.5	117.3	118.0	79.20	-803.9	4,631.9	1,067.8	837.0	230.74	4.628		
11,800.0	7,187.3	11,643.1	6,987.2	119.8	120.4	79.20	-803.9	4,731.9	1,067.8	832.2	235.58	4.533		
11,900.0	7,189.1	11,743.1	6,989.0	122.2	122.9	79.20	-803.9	4,831.8	1,067.8	827.4	240.42	4.442		
12,000.0	7,190.8	11,843.1	6,990.7	124.7	125.3	79.20	-803.9	4,931.8	1,067.8	822.6	245.25	4.354		
12,100.0	7,192.6	11,943.1	6,992.5	127.1	127.8	79.20	-803.9	5,031.8	1,067.8	817.7	250.09	4.270		
12,200.0	7,194.3	12,043.1	6,994.2	129.6	130.3	79.20	-803.9	5,131.8	1,067.8	812.9	254.93	4.189		
12,300.0	7,196.1	12,143.1	6,996.0	132.1	132.7	79.20	-803.9	5,231.8	1,067.9	808.1	259.77	4.111		
12,400.0	7,197.8	12,243.1	6,997.7	134.5	135.2	79.20	-803.9	5,331.8	1,067.9	803.3	264.61	4.036		
12,500.0	7,199.5	12,343.1	6,999.5	137.0	137.6	79.20	-803.9	5,431.8	1,067.9	798.4	269.45	3.963		
12,600.0	7,201.3	12,443.1	7,001.2	139.5	140.1	79.20	-803.9	5,531.7	1,067.9	793.6	274.29	3.893		
12,700.0	7,203.0	12,543.1	7,002.9	141.9	142.5	79.20	-803.9	5,631.7	1,067.9	788.8	279.13	3.826		
12,800.0	7,204.8	12,643.1	7,004.7	144.4	145.0	79.20	-803.9	5,731.7	1,067.9	783.9	283.98	3.761		
12,900.0	7,206.5	12,743.1	7,006.4	146.8	147.5	79.20	-804.0	5,831.7	1,067.9	779.1	288.82	3.697		
13,000.0	7,208.3	12,843.1	7,008.2	149.3	149.9	79.20	-804.0	5,931.7	1,067.9	774.3	293.67	3.637		
13,100.0	7,210.0	12,943.1	7,009.9	151.8	152.4	79.20	-804.0	6,031.7	1,067.9	769.4	298.51	3.578		
13,200.0	7,211.8	13,043.1	7,011.7	154.2	154.8	79.20	-804.0	6,131.6	1,067.9	764.6	303.36	3.520		
13,300.0	7,213.5	13,143.1	7,013.4	156.7	157.3	79.20	-804.0	6,231.6	1,068.0	759.8	308.20	3.465		
13,400.0	7,215.3	13,243.1	7,015.2	159.2	159.8	79.20	-804.0	6,331.6	1,068.0	754.9	313.05	3.412		
13,500.0	7,217.0	13,343.1	7,016.9	161.6	162.2	79.20	-804.0	6,431.6	1,068.0	750.1	317.89	3.360		
13,600.0	7,218.7	13,443.1	7,018.7	164.1	164.7	79.20	-804.0	6,531.6	1,068.0	745.2	322.74	3.309		
13,700.0	7,220.5	13,543.1	7,020.4	166.6	167.2	79.20	-804.0	6,631.6	1,068.0	740.4	327.59	3.260		
13,800.0	7,222.2	13,643.1	7,022.1	169.0	169.6	79.20	-804.0	6,731.6	1,068.0	735.6	332.44	3.213		
13,900.0	7,224.0	13,743.1	7,023.9	171.5	172.1	79.20	-804.0	6,831.5	1,068.0	730.7	337.29	3.167		
14,000.0	7,225.7	13,843.1	7,025.6	174.0	174.6	79.20	-804.0	6,931.5	1,068.0	725.9	342.13	3.122		
14,100.0	7,227.5	13,943.1	7,027.4	176.4	177.0	79.20	-804.0	7,031.5	1,068.0	721.1	346.98	3.078		
14,200.0	7,229.2	14,043.1	7,029.1	178.9	179.5	79.20	-804.0	7,131.5	1,068.1	716.2	351.83	3.036		
14,244.8	7,230.0	14,087.9	7,029.9	180.0	180.6	79.20	-804.0	7,176.3	1,068.1	714.0	354.01	3.017 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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 2H-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		
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-40.1	0.0	40.1					
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-40.1	0.0	40.1	39.8	0.30	131.949		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-40.1	0.0	40.1	39.4	0.65	61.388	CC, ES	
300.0	300.0	299.3	299.3	0.5	0.5	-136.85	-40.9	-0.2	41.6	40.6	1.00	41.509		
400.0	400.0	398.5	398.4	0.7	0.7	-138.32	-43.4	-0.7	46.0	44.7	1.35	34.057		
500.0	499.9	497.3	497.2	0.9	0.9	-140.23	-47.6	-1.6	53.5	51.8	1.70	31.393		
600.0	599.7	595.8	595.5	1.1	1.1	-142.13	-53.4	-2.9	64.0	62.0	2.06	31.067		
700.0	699.4	693.7	693.1	1.3	1.3	-143.81	-60.9	-4.5	77.6	75.2	2.42	32.034		
800.0	798.9	790.9	789.9	1.5	1.5	-145.18	-69.8	-6.4	94.2	91.4	2.79	33.768		
900.0	898.3	887.3	885.7	1.8	1.7	-146.27	-80.3	-8.7	113.8	110.7	3.16	35.972		
1,000.0	997.4	982.8	980.4	2.0	2.0	-147.11	-92.3	-11.2	136.4	132.9	3.55	38.464		
1,100.0	1,096.3	1,077.2	1,073.8	2.3	2.3	-147.76	-105.6	-14.1	161.9	158.0	3.94	41.128		
1,200.0	1,194.9	1,170.5	1,165.9	2.7	2.6	-148.26	-120.2	-17.3	190.3	186.0	4.34	43.885		
1,300.0	1,293.3	1,262.5	1,256.4	3.0	2.9	-148.63	-136.1	-20.7	221.6	216.8	4.75	46.681		
1,400.0	1,391.2	1,353.1	1,345.3	3.4	3.2	-148.91	-153.1	-24.4	255.6	250.4	5.17	49.480		
1,500.0	1,488.9	1,442.3	1,432.6	3.8	3.6	-149.11	-171.2	-28.3	292.3	286.7	5.59	52.254		
1,600.0	1,586.1	1,529.9	1,518.0	4.2	3.9	-149.25	-190.3	-32.4	331.7	325.7	6.03	54.984		
1,700.0	1,683.1	1,616.1	1,601.7	4.7	4.3	-149.48	-210.3	-36.7	373.4	366.9	6.49	57.555		
1,800.0	1,780.0	1,701.2	1,684.1	5.1	4.7	-149.62	-231.2	-41.2	416.2	409.3	6.95	59.892		
1,900.0	1,876.9	1,790.9	1,770.7	5.6	5.1	-149.69	-254.0	-46.1	459.8	452.4	7.43	61.904		
2,000.0	1,974.1	1,881.3	1,858.0	6.0	5.5	-150.04	-277.0	-51.0	502.6	494.7	7.92	63.435		
2,100.0	2,072.0	1,972.8	1,946.4	6.4	6.0	-150.28	-300.2	-56.1	542.8	534.4	8.41	64.514		
2,200.0	2,170.5	2,065.5	2,035.9	6.7	6.4	-150.33	-323.7	-61.1	580.2	571.3	8.89	65.259		
2,300.0	2,269.6	2,159.2	2,126.4	7.0	6.8	-150.22	-347.5	-66.3	614.8	605.4	9.35	65.741		
2,400.0	2,369.1	2,253.8	2,217.7	7.2	7.3	-149.96	-371.6	-71.4	646.6	636.8	9.79	66.020		
2,500.0	2,468.8	2,349.2	2,309.8	7.4	7.7	-149.56	-395.8	-76.7	675.6	665.4	10.21	66.144		
2,600.0	2,568.8	2,445.3	2,402.6	7.5	8.2	-149.05	-420.2	-81.9	701.8	691.2	10.61	66.152		
2,700.0	2,668.8	2,541.8	2,495.8	7.6	8.7	167.98	-444.7	-87.2	725.8	710.7	15.02	48.328		
2,800.0	2,768.8	2,638.4	2,589.1	7.7	9.1	168.79	-469.2	-92.5	749.7	734.1	15.57	48.148		
2,900.0	2,868.8	2,734.9	2,682.3	7.8	9.6	169.55	-493.7	-97.8	773.7	757.6	16.13	47.969		
3,000.0	2,968.8	2,831.5	2,775.6	7.9	10.1	170.26	-518.2	-103.0	797.9	781.2	16.69	47.792		
3,100.0	3,068.8	2,928.1	2,868.8	8.0	10.5	170.93	-542.8	-108.3	822.1	804.9	17.26	47.618		
3,200.0	3,168.8	3,024.6	2,962.1	8.2	11.0	171.57	-567.3	-113.6	846.5	828.7	17.84	47.448		
3,300.0	3,268.8	3,121.2	3,055.3	8.3	11.5	172.17	-591.8	-118.9	871.0	852.5	18.42	47.281		
3,400.0	3,368.8	3,217.8	3,148.6	8.4	11.9	172.73	-616.3	-124.2	895.5	876.5	19.01	47.119		
3,500.0	3,468.8	3,314.3	3,241.8	8.5	12.4	173.27	-640.9	-129.5	920.1	900.5	19.59	46.962		
3,600.0	3,568.8	3,410.9	3,335.1	8.6	12.9	173.78	-665.4	-134.8	944.8	924.6	20.19	46.809		
3,700.0	3,668.8	3,507.5	3,428.3	8.8	13.3	174.26	-689.9	-140.0	969.6	948.8	20.78	46.660		
3,800.0	3,768.8	3,604.0	3,521.6	8.9	13.8	174.72	-714.4	-145.3	994.4	973.1	21.38	46.516		
3,900.0	3,868.8	3,700.6	3,614.8	9.0	14.3	175.15	-739.0	-150.6	1,019.3	997.3	21.98	46.377		
4,000.0	3,968.8	3,797.2	3,708.1	9.2	14.7	175.57	-763.5	-155.9	1,044.3	1,021.7	22.58	46.242		
4,100.0	4,068.8	3,893.7	3,801.3	9.3	15.2	175.97	-788.0	-161.2	1,069.2	1,046.1	23.19	46.111		
4,200.0	4,168.8	3,990.3	3,894.6	9.4	15.7	176.34	-812.5	-166.5	1,094.3	1,070.5	23.80	45.985		
4,300.0	4,268.8	4,086.9	3,987.8	9.6	16.1	176.71	-837.0	-171.7	1,119.4	1,094.9	24.41	45.863		
4,400.0	4,368.8	4,183.4	4,081.1	9.7	16.6	177.05	-861.6	-177.0	1,144.5	1,119.5	25.02	45.745		
4,500.0	4,468.8	4,280.0	4,174.3	9.8	17.1	177.38	-886.1	-182.3	1,169.6	1,144.0	25.63	45.631		
4,600.0	4,568.8	4,376.6	4,267.6	10.0	17.5	177.70	-910.6	-187.6	1,194.8	1,168.6	26.25	45.521		
4,700.0	4,668.8	4,473.1	4,360.9	10.1	18.0	178.00	-935.1	-192.9	1,220.0	1,193.2	26.86	45.414		
4,800.0	4,768.8	4,569.7	4,454.1	10.3	18.5	178.30	-959.7	-198.2	1,245.3	1,217.8	27.48	45.311		
4,900.0	4,868.8	4,666.3	4,547.4	10.4	18.9	178.58	-984.2	-203.5	1,270.6	1,242.5	28.10	45.211		
5,000.0	4,968.8	4,762.8	4,640.6	10.6	19.4	178.85	-1,008.7	-208.7	1,295.9	1,267.2	28.72	45.115		
5,100.0	5,068.8	4,859.4	4,733.9	10.7	19.9	179.10	-1,033.2	-214.0	1,321.2	1,291.9	29.35	45.022		

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 2D-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 2D-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 2H-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	5,168.8	4,956.0	4,827.1	10.8	20.3	179.35	-1,057.7	-219.3	1,346.6	1,316.6	29.97	44.932		
5,300.0	5,268.8	5,136.6	5,002.9	11.0	21.1	179.75	-1,098.3	-228.0	1,369.0	1,338.2	30.87	44.352		
5,400.0	5,368.8	5,322.7	5,186.4	11.1	21.7	-179.98	-1,128.6	-234.6	1,385.3	1,353.7	31.61	43.833		
5,500.0	5,468.8	5,512.2	5,374.8	11.3	22.1	-179.81	-1,147.4	-238.6	1,395.3	1,363.1	32.16	43.383		
5,600.0	5,568.8	5,703.3	5,565.8	11.4	22.3	-179.75	-1,154.1	-240.1	1,398.8	1,366.3	32.52	43.007		
5,700.0	5,668.8	5,806.3	5,668.8	11.6	22.3	-179.75	-1,154.1	-240.1	1,398.8	1,366.0	32.77	42.689		
5,800.0	5,768.8	5,906.3	5,768.8	11.7	22.4	-179.75	-1,154.1	-240.1	1,398.8	1,365.8	33.01	42.377		
5,900.0	5,868.8	6,006.3	5,868.8	11.9	22.5	-179.75	-1,154.1	-240.1	1,398.8	1,365.5	33.25	42.067		
6,000.0	5,968.8	6,106.3	5,968.8	12.0	22.6	-179.75	-1,154.1	-240.1	1,398.8	1,365.3	33.50	41.761		
6,100.0	6,068.8	6,206.3	6,068.8	12.2	22.7	-179.75	-1,154.1	-240.1	1,398.8	1,365.0	33.74	41.456		
6,200.0	6,168.8	6,306.3	6,168.8	12.3	22.7	-179.75	-1,154.1	-240.1	1,398.8	1,364.8	33.99	41.155		
6,300.0	6,268.8	6,406.3	6,268.8	12.5	22.8	-179.75	-1,154.1	-240.1	1,398.8	1,364.5	34.24	40.856		
6,400.0	6,368.8	6,506.3	6,368.8	12.6	22.9	-179.75	-1,154.1	-240.1	1,398.8	1,364.3	34.49	40.560		
6,500.0	6,468.7	6,606.8	6,469.3	12.8	23.0	90.31	-1,154.1	-237.8	1,398.8	1,374.6	24.14	57.943		
6,600.0	6,567.1	6,708.0	6,569.2	12.8	23.0	90.39	-1,154.1	-222.7	1,398.8	1,374.6	24.25	57.687		
6,700.0	6,662.3	6,809.5	6,666.3	12.8	23.0	90.47	-1,154.1	-193.6	1,398.8	1,374.6	24.25	57.673		
6,800.0	6,752.3	6,911.2	6,758.6	12.8	23.0	90.53	-1,154.1	-150.9	1,398.8	1,374.6	24.25	57.693		
6,900.0	6,835.4	7,013.2	6,844.0	12.8	23.0	90.59	-1,154.1	-95.5	1,398.8	1,374.5	24.36	57.434		
7,000.0	6,909.9	7,115.3	6,920.9	12.9	23.1	90.63	-1,154.1	-28.4	1,398.9	1,374.1	24.76	56.507		
7,100.0	6,974.5	7,217.5	6,987.5	13.2	23.2	90.67	-1,154.1	49.1	1,398.9	1,373.2	25.63	54.583		
7,200.0	7,027.8	7,319.9	7,042.5	13.9	23.5	90.69	-1,154.1	135.3	1,398.9	1,371.7	27.13	51.563		
7,300.0	7,068.8	7,422.3	7,084.6	14.9	23.9	90.69	-1,154.1	228.5	1,398.9	1,369.5	29.33	47.700		
7,400.0	7,096.8	7,524.7	7,113.1	16.3	24.5	90.68	-1,154.0	326.8	1,398.9	1,366.7	32.18	43.465		
7,500.0	7,111.1	7,627.0	7,127.2	17.9	25.3	90.66	-1,154.0	428.1	1,398.9	1,363.3	35.58	39.320		
7,580.3	7,115.3	7,708.2	7,129.5	19.4	26.1	90.58	-1,154.0	509.2	1,398.8	1,360.3	38.57	36.267		
7,600.0	7,114.0	7,727.8	7,129.8	19.8	26.3	90.65	-1,154.0	528.8	1,398.9	1,359.5	39.32	35.577		
7,700.0	7,115.8	7,827.8	7,131.6	21.7	27.6	90.65	-1,154.0	628.8	1,398.9	1,355.6	43.29	32.315		
7,800.0	7,117.5	7,927.8	7,133.3	23.8	29.0	90.65	-1,154.0	728.8	1,398.9	1,351.4	47.44	29.485		
7,900.0	7,119.3	8,027.8	7,135.1	25.9	30.6	90.65	-1,154.0	828.8	1,398.9	1,347.1	51.74	27.038		
8,000.0	7,121.0	8,127.8	7,136.8	28.1	32.4	90.65	-1,154.0	928.8	1,398.9	1,342.7	56.14	24.918		
8,100.0	7,122.8	8,227.8	7,138.6	30.3	34.2	90.65	-1,154.0	1,028.8	1,398.9	1,338.2	60.62	23.074		
8,200.0	7,124.5	8,327.8	7,140.3	32.6	36.2	90.65	-1,154.0	1,128.8	1,398.9	1,333.7	65.18	21.462		
8,300.0	7,126.2	8,427.8	7,142.0	34.9	38.2	90.65	-1,154.0	1,228.7	1,398.9	1,329.1	69.78	20.046		
8,400.0	7,128.0	8,527.8	7,143.8	37.2	40.3	90.65	-1,154.0	1,328.7	1,398.9	1,324.4	74.44	18.793		
8,500.0	7,129.7	8,627.8	7,145.5	39.5	42.5	90.65	-1,154.0	1,428.7	1,398.9	1,319.8	79.12	17.680		
8,600.0	7,131.5	8,727.8	7,147.3	41.9	44.7	90.65	-1,154.0	1,528.7	1,398.9	1,315.0	83.84	16.685		
8,700.0	7,133.2	8,827.8	7,149.0	44.3	46.9	90.65	-1,154.0	1,628.7	1,398.9	1,310.3	88.58	15.792		
8,800.0	7,135.0	8,927.8	7,150.8	46.6	49.1	90.65	-1,154.0	1,728.7	1,398.9	1,305.5	93.34	14.986		
8,900.0	7,136.7	9,027.8	7,152.5	49.0	51.4	90.65	-1,154.0	1,828.7	1,398.9	1,300.8	98.13	14.256		
9,000.0	7,138.5	9,127.8	7,154.3	51.4	53.7	90.65	-1,154.0	1,928.6	1,398.9	1,296.0	102.92	13.592		
9,100.0	7,140.2	9,227.8	7,156.0	53.8	56.0	90.65	-1,154.0	2,028.6	1,398.9	1,291.2	107.73	12.985		
9,200.0	7,142.0	9,327.8	7,157.7	56.2	58.3	90.65	-1,154.0	2,128.6	1,398.9	1,286.3	112.56	12.428		
9,300.0	7,143.7	9,427.8	7,159.5	58.6	60.7	90.65	-1,154.0	2,228.6	1,398.9	1,281.5	117.39	11.917		
9,400.0	7,145.4	9,527.8	7,161.2	61.0	63.0	90.65	-1,154.0	2,328.6	1,398.9	1,276.7	122.23	11.445		
9,500.0	7,147.2	9,627.8	7,163.0	63.5	65.4	90.65	-1,154.0	2,428.6	1,398.9	1,271.8	127.08	11.008		
9,600.0	7,148.9	9,727.8	7,164.7	65.9	67.7	90.65	-1,153.9	2,528.5	1,398.9	1,267.0	131.94	10.603		
9,700.0	7,150.7	9,827.8	7,166.5	68.3	70.1	90.65	-1,153.9	2,628.5	1,398.9	1,262.1	136.80	10.226		
9,800.0	7,152.4	9,927.8	7,168.2	70.8	72.5	90.65	-1,153.9	2,728.5	1,398.9	1,257.2	141.67	9.874		
9,900.0	7,154.2	10,027.8	7,170.0	73.2	74.9	90.65	-1,153.9	2,828.5	1,398.9	1,252.3	146.55	9.546		
10,000.0	7,155.9	10,127.8	7,171.7	75.6	77.3	90.65	-1,153.9	2,928.5	1,398.9	1,247.5	151.43	9.238		
10,100.0	7,157.7	10,227.8	7,173.5	78.1	79.7	90.65	-1,153.9	3,028.5	1,398.9	1,242.6	156.31	8.949		
10,200.0	7,159.4	10,327.8	7,175.2	80.5	82.1	90.65	-1,153.9	3,128.5	1,398.9	1,237.7	161.20	8.678		

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 2D-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 2D-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 2H-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
10,300.0	7,161.2	10,427.8	7,176.9	83.0	84.5	90.65	-1,153.9	3,228.4	1,398.9	1,232.8	166.09	8.423	
10,400.0	7,162.9	10,527.8	7,178.7	85.4	86.9	90.65	-1,153.9	3,328.4	1,398.9	1,227.9	170.98	8.181	
10,500.0	7,164.6	10,627.8	7,180.4	87.8	89.3	90.65	-1,153.9	3,428.4	1,398.9	1,223.0	175.88	7.954	
10,600.0	7,166.4	10,727.8	7,182.2	90.3	91.7	90.65	-1,153.9	3,528.4	1,398.9	1,218.1	180.78	7.738	
10,700.0	7,168.1	10,827.8	7,183.9	92.7	94.1	90.65	-1,153.9	3,628.4	1,398.9	1,213.2	185.68	7.534	
10,800.0	7,169.9	10,927.8	7,185.7	95.2	96.6	90.65	-1,153.9	3,728.4	1,398.9	1,208.3	190.59	7.340	
10,900.0	7,171.6	11,027.8	7,187.4	97.6	99.0	90.65	-1,153.9	3,828.3	1,398.9	1,203.4	195.50	7.156	
11,000.0	7,173.4	11,127.8	7,189.2	100.1	101.4	90.65	-1,153.9	3,928.3	1,398.9	1,198.5	200.41	6.980	
11,100.0	7,175.1	11,227.8	7,190.9	102.6	103.8	90.65	-1,153.9	4,028.3	1,398.9	1,193.6	205.32	6.813	
11,200.0	7,176.9	11,327.8	7,192.7	105.0	106.3	90.65	-1,153.9	4,128.3	1,398.9	1,188.7	210.23	6.654	
11,300.0	7,178.6	11,427.8	7,194.4	107.5	108.7	90.65	-1,153.9	4,228.3	1,398.9	1,183.8	215.14	6.502	
11,400.0	7,180.4	11,527.8	7,196.1	109.9	111.1	90.65	-1,153.9	4,328.3	1,398.9	1,178.9	220.06	6.357	
11,500.0	7,182.1	11,627.8	7,197.9	112.4	113.6	90.65	-1,153.9	4,428.3	1,398.9	1,173.9	224.98	6.218	
11,600.0	7,183.8	11,727.8	7,199.6	114.8	116.0	90.65	-1,153.9	4,528.2	1,398.9	1,169.0	229.90	6.085	
11,700.0	7,185.6	11,827.8	7,201.4	117.3	118.5	90.65	-1,153.9	4,628.2	1,398.9	1,164.1	234.82	5.958	
11,800.0	7,187.3	11,927.8	7,203.1	119.8	120.9	90.65	-1,153.8	4,728.2	1,398.9	1,159.2	239.74	5.835	
11,900.0	7,189.1	12,027.8	7,204.9	122.2	123.4	90.65	-1,153.8	4,828.2	1,398.9	1,154.3	244.66	5.718	
12,000.0	7,190.8	12,127.8	7,206.6	124.7	125.8	90.65	-1,153.8	4,928.2	1,398.9	1,149.3	249.58	5.605	
12,100.0	7,192.6	12,227.8	7,208.4	127.1	128.2	90.65	-1,153.8	5,028.2	1,398.9	1,144.4	254.50	5.497	
12,200.0	7,194.3	12,327.8	7,210.1	129.6	130.7	90.65	-1,153.8	5,128.1	1,398.9	1,139.5	259.43	5.392	
12,300.0	7,196.1	12,427.8	7,211.9	132.1	133.1	90.65	-1,153.8	5,228.1	1,398.9	1,134.6	264.35	5.292	
12,400.0	7,197.8	12,527.8	7,213.6	134.5	135.6	90.65	-1,153.8	5,328.1	1,398.9	1,129.6	269.28	5.195	
12,500.0	7,199.5	12,627.8	7,215.3	137.0	138.0	90.65	-1,153.8	5,428.1	1,398.9	1,124.7	274.21	5.102	
12,600.0	7,201.3	12,727.8	7,217.1	139.5	140.5	90.65	-1,153.8	5,528.1	1,398.9	1,119.8	279.14	5.012	
12,700.0	7,203.0	12,827.8	7,218.8	141.9	142.9	90.65	-1,153.8	5,628.1	1,398.9	1,114.9	284.06	4.925	
12,800.0	7,204.8	12,927.8	7,220.6	144.4	145.4	90.65	-1,153.8	5,728.1	1,398.9	1,109.9	288.99	4.841	
12,900.0	7,206.5	13,027.8	7,222.3	146.8	147.8	90.65	-1,153.8	5,828.0	1,398.9	1,105.0	293.92	4.759	
13,000.0	7,208.3	13,127.8	7,224.1	149.3	150.3	90.65	-1,153.8	5,928.0	1,398.9	1,100.1	298.85	4.681	
13,100.0	7,210.0	13,227.8	7,225.8	151.8	152.8	90.65	-1,153.8	6,028.0	1,398.9	1,095.1	303.79	4.605	
13,200.0	7,211.8	13,327.8	7,227.6	154.2	155.2	90.65	-1,153.8	6,128.0	1,398.9	1,090.2	308.72	4.531	
13,300.0	7,213.5	13,427.8	7,229.3	156.7	157.7	90.65	-1,153.8	6,228.0	1,398.9	1,085.3	313.65	4.460	
13,400.0	7,215.3	13,527.8	7,231.0	159.2	160.1	90.65	-1,153.8	6,328.0	1,398.9	1,080.4	318.58	4.391	
13,500.0	7,217.0	13,627.8	7,232.8	161.6	162.6	90.65	-1,153.8	6,428.0	1,398.9	1,075.4	323.51	4.324	
13,600.0	7,218.7	13,727.8	7,234.5	164.1	165.0	90.65	-1,153.8	6,527.9	1,398.9	1,070.5	328.45	4.259	
13,700.0	7,220.5	13,827.8	7,236.3	166.6	167.5	90.65	-1,153.8	6,627.9	1,398.9	1,065.6	333.38	4.196	
13,800.0	7,222.2	13,927.8	7,238.0	169.0	169.9	90.65	-1,153.8	6,727.9	1,398.9	1,060.6	338.32	4.135	
13,900.0	7,224.0	14,027.8	7,239.8	171.5	172.4	90.65	-1,153.8	6,827.9	1,398.9	1,055.7	343.25	4.076	
14,000.0	7,225.7	14,127.8	7,241.5	174.0	174.9	90.65	-1,153.7	6,927.9	1,398.9	1,050.8	348.18	4.018	
14,100.0	7,227.5	14,227.8	7,243.3	176.4	177.3	90.65	-1,153.7	7,027.9	1,398.9	1,045.8	353.12	3.962	
14,200.0	7,229.2	14,327.8	7,245.0	178.9	179.8	90.65	-1,153.7	7,127.8	1,398.9	1,040.9	358.06	3.907	
14,244.8	7,230.0	14,372.7	7,245.8	180.0	180.9	90.65	-1,153.7	7,172.7	1,398.9	1,038.7	360.27	3.883 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 2D-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 2D-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 2D-18H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.29°

