



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site:	S34-T2N-R68W (Billings)	North Reference:	True
Well:	Billings 1B-34H	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	S34-T2N-R68W (Billings)				
Site Position:		Northing:	1,280,284.39 ft	Latitude:	40.101620
From:	Lat/Long	Easting:	3,143,887.76 ft	Longitude:	-104.985650
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.33 °

Well	Billings 1B-34H					
Well Position	+N/-S	0.0 ft	Northing:	1,280,284.44 ft	Latitude:	40.101620
	+E/-W	0.0 ft	Easting:	3,143,898.95 ft	Longitude:	-104.985610
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,995.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/29/2013	8.74	66.72	52,778

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

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	8.00	349.40	1,197.4	54.8	-10.3	1.00	1.00	0.00	349.40	
1,920.0	8.00	349.40	1,910.4	153.3	-28.7	0.00	0.00	0.00	0.00	
2,720.0	0.00	0.00	2,707.8	208.1	-38.9	1.00	-1.00	0.00	180.00	
6,681.0	0.00	0.00	6,668.8	208.1	-38.9	0.00	0.00	0.00	0.00	
7,806.0	90.00	180.00	7,385.0	-508.1	-39.0	8.00	8.00	0.00	180.00	
11,920.6	90.00	180.00	7,385.0	-4,622.7	-39.2	0.00	0.00	0.00	0.00	Billings 1B-34H PBHL

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site:	S34-T2N-R68W (Billings)	North Reference:	True
Well:	Billings 1B-34H	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	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
358.0	0.00	0.00	358.0	0.0	0.0	0.0	0.00	0.00	Fox Hills
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	349.40	500.0	0.9	-0.2	-0.9	1.00	1.00	
600.0	2.00	349.40	600.0	3.4	-0.6	-3.4	1.00	1.00	
700.0	3.00	349.40	699.9	7.7	-1.4	-7.7	1.00	1.00	
800.0	4.00	349.40	799.7	13.7	-2.6	-13.7	1.00	1.00	
900.0	5.00	349.40	899.4	21.4	-4.0	-21.4	1.00	1.00	
1,000.0	6.00	349.40	998.9	30.9	-5.8	-30.9	1.00	1.00	
1,100.0	7.00	349.40	1,098.3	42.0	-7.9	-42.0	1.00	1.00	
1,200.0	8.00	349.40	1,197.4	54.8	-10.3	-54.8	1.00	1.00	EOB; Inc=8°
1,300.0	8.00	349.40	1,296.4	68.5	-12.8	-68.5	0.00	0.00	
1,400.0	8.00	349.40	1,395.5	82.2	-15.4	-82.2	0.00	0.00	
1,500.0	8.00	349.40	1,494.5	95.8	-17.9	-95.8	0.00	0.00	
1,600.0	8.00	349.40	1,593.5	109.5	-20.5	-109.5	0.00	0.00	
1,700.0	8.00	349.40	1,692.5	123.2	-23.1	-123.2	0.00	0.00	
1,800.0	8.00	349.40	1,791.6	136.9	-25.6	-136.9	0.00	0.00	
1,900.0	8.00	349.40	1,890.6	150.6	-28.2	-150.6	0.00	0.00	
1,920.0	8.00	349.40	1,910.4	153.3	-28.7	-153.3	0.00	0.00	Start Drop -1.00
2,000.0	7.20	349.40	1,989.7	163.7	-30.6	-163.7	1.00	-1.00	
2,100.0	6.20	349.40	2,089.0	175.2	-32.8	-175.2	1.00	-1.00	
2,200.0	5.20	349.40	2,188.5	184.9	-34.6	-184.9	1.00	-1.00	
2,300.0	4.20	349.40	2,288.2	193.0	-36.1	-193.0	1.00	-1.00	
2,400.0	3.20	349.40	2,388.0	199.3	-37.3	-199.3	1.00	-1.00	
2,500.0	2.20	349.40	2,487.9	204.0	-38.2	-204.0	1.00	-1.00	
2,600.0	1.20	349.40	2,587.8	206.9	-38.7	-206.9	1.00	-1.00	
2,700.0	0.20	349.40	2,687.8	208.1	-38.9	-208.1	1.00	-1.00	
2,720.0	0.00	0.00	2,707.8	208.1	-38.9	-208.1	1.00	-1.00	EOD; Inc=0°
2,800.0	0.00	0.00	2,787.8	208.1	-38.9	-208.1	0.00	0.00	
2,900.0	0.00	0.00	2,887.8	208.1	-38.9	-208.1	0.00	0.00	
3,000.0	0.00	0.00	2,987.8	208.1	-38.9	-208.1	0.00	0.00	
3,100.0	0.00	0.00	3,087.8	208.1	-38.9	-208.1	0.00	0.00	
3,200.0	0.00	0.00	3,187.8	208.1	-38.9	-208.1	0.00	0.00	
3,300.0	0.00	0.00	3,287.8	208.1	-38.9	-208.1	0.00	0.00	
3,400.0	0.00	0.00	3,387.8	208.1	-38.9	-208.1	0.00	0.00	
3,500.0	0.00	0.00	3,487.8	208.1	-38.9	-208.1	0.00	0.00	
3,600.0	0.00	0.00	3,587.8	208.1	-38.9	-208.1	0.00	0.00	
3,700.0	0.00	0.00	3,687.8	208.1	-38.9	-208.1	0.00	0.00	
3,800.0	0.00	0.00	3,787.8	208.1	-38.9	-208.1	0.00	0.00	
3,900.0	0.00	0.00	3,887.8	208.1	-38.9	-208.1	0.00	0.00	
4,000.0	0.00	0.00	3,987.8	208.1	-38.9	-208.1	0.00	0.00	
4,100.0	0.00	0.00	4,087.8	208.1	-38.9	-208.1	0.00	0.00	
4,200.0	0.00	0.00	4,187.8	208.1	-38.9	-208.1	0.00	0.00	
4,300.0	0.00	0.00	4,287.8	208.1	-38.9	-208.1	0.00	0.00	
4,400.0	0.00	0.00	4,387.8	208.1	-38.9	-208.1	0.00	0.00	
4,456.2	0.00	0.00	4,444.0	208.1	-38.9	-208.1	0.00	0.00	Sussex
4,500.0	0.00	0.00	4,487.8	208.1	-38.9	-208.1	0.00	0.00	
4,600.0	0.00	0.00	4,587.8	208.1	-38.9	-208.1	0.00	0.00	
4,700.0	0.00	0.00	4,687.8	208.1	-38.9	-208.1	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site:	S34-T2N-R68W (Billings)	North Reference:	True
Well:	Billings 1B-34H	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
4,726.2	0.00	0.00	4,714.0	208.1	-38.9	-208.1	0.00	0.00	Sussex Marker
4,800.0	0.00	0.00	4,787.8	208.1	-38.9	-208.1	0.00	0.00	
4,900.0	0.00	0.00	4,887.8	208.1	-38.9	-208.1	0.00	0.00	
5,000.0	0.00	0.00	4,987.8	208.1	-38.9	-208.1	0.00	0.00	Shannon
5,011.2	0.00	0.00	4,999.0	208.1	-38.9	-208.1	0.00	0.00	
5,100.0	0.00	0.00	5,087.8	208.1	-38.9	-208.1	0.00	0.00	
5,200.0	0.00	0.00	5,187.8	208.1	-38.9	-208.1	0.00	0.00	
5,300.0	0.00	0.00	5,287.8	208.1	-38.9	-208.1	0.00	0.00	
5,400.0	0.00	0.00	5,387.8	208.1	-38.9	-208.1	0.00	0.00	
5,500.0	0.00	0.00	5,487.8	208.1	-38.9	-208.1	0.00	0.00	
5,600.0	0.00	0.00	5,587.8	208.1	-38.9	-208.1	0.00	0.00	
5,700.0	0.00	0.00	5,687.8	208.1	-38.9	-208.1	0.00	0.00	
5,800.0	0.00	0.00	5,787.8	208.1	-38.9	-208.1	0.00	0.00	
5,900.0	0.00	0.00	5,887.8	208.1	-38.9	-208.1	0.00	0.00	
6,000.0	0.00	0.00	5,987.8	208.1	-38.9	-208.1	0.00	0.00	
6,100.0	0.00	0.00	6,087.8	208.1	-38.9	-208.1	0.00	0.00	
6,200.0	0.00	0.00	6,187.8	208.1	-38.9	-208.1	0.00	0.00	
6,300.0	0.00	0.00	6,287.8	208.1	-38.9	-208.1	0.00	0.00	
6,400.0	0.00	0.00	6,387.8	208.1	-38.9	-208.1	0.00	0.00	
6,500.0	0.00	0.00	6,487.8	208.1	-38.9	-208.1	0.00	0.00	
6,600.0	0.00	0.00	6,587.8	208.1	-38.9	-208.1	0.00	0.00	
6,602.2	0.00	0.00	6,590.0	208.1	-38.9	-208.1	0.00	0.00	Teepee Buttes Start Build 8.00
6,681.0	0.00	0.00	6,668.8	208.1	-38.9	-208.1	0.00	0.00	
6,700.0	1.52	180.00	6,687.8	207.9	-38.9	-207.9	8.00	8.00	
6,800.0	9.52	180.00	6,787.3	198.2	-38.9	-198.2	8.00	8.00	
6,900.0	17.52	180.00	6,884.4	174.9	-38.9	-174.9	8.00	8.00	
7,000.0	25.52	180.00	6,977.4	138.2	-39.0	-138.2	8.00	8.00	
7,100.0	33.52	180.00	7,064.3	89.0	-39.0	-89.0	8.00	8.00	
7,200.0	41.52	180.00	7,143.6	28.2	-39.0	-28.2	8.00	8.00	
7,300.0	49.52	180.00	7,213.6	-43.1	-39.0	43.1	8.00	8.00	
7,400.0	57.52	180.00	7,273.0	-123.5	-39.0	123.5	8.00	8.00	
7,432.9	60.15	180.00	7,290.0	-151.6	-39.0	151.6	8.00	8.00	Sharon Springs
7,500.0	65.52	180.00	7,320.6	-211.3	-39.0	211.3	8.00	8.00	
7,600.0	73.52	180.00	7,355.6	-304.9	-39.0	304.9	8.00	8.00	
7,636.4	76.43	180.00	7,365.0	-340.0	-39.0	340.0	8.00	8.00	Niobrara
7,700.0	81.52	180.00	7,377.2	-402.5	-39.0	402.5	8.00	8.00	
7,800.0	89.52	180.00	7,385.0	-502.1	-39.0	502.1	8.00	8.00	
7,806.0	90.00	180.00	7,385.0	-508.1	-39.0	508.1	8.00	8.00	LP @ 7385' TVD; 90°
7,900.0	90.00	180.00	7,385.0	-602.1	-39.0	602.1	0.00	0.00	
8,000.0	90.00	180.00	7,385.0	-702.1	-39.0	702.1	0.00	0.00	
8,100.0	90.00	180.00	7,385.0	-802.1	-39.0	802.1	0.00	0.00	
8,200.0	90.00	180.00	7,385.0	-902.1	-39.0	902.1	0.00	0.00	
8,300.0	90.00	180.00	7,385.0	-1,002.1	-39.0	1,002.1	0.00	0.00	
8,400.0	90.00	180.00	7,385.0	-1,102.1	-39.0	1,102.1	0.00	0.00	
8,500.0	90.00	180.00	7,385.0	-1,202.1	-39.0	1,202.1	0.00	0.00	
8,600.0	90.00	180.00	7,385.0	-1,302.1	-39.0	1,302.1	0.00	0.00	
8,700.0	90.00	180.00	7,385.0	-1,402.1	-39.0	1,402.1	0.00	0.00	
8,800.0	90.00	180.00	7,385.0	-1,502.1	-39.0	1,502.1	0.00	0.00	
8,900.0	90.00	180.00	7,385.0	-1,602.1	-39.0	1,602.1	0.00	0.00	
9,000.0	90.00	180.00	7,385.0	-1,702.1	-39.0	1,702.1	0.00	0.00	
9,100.0	90.00	180.00	7,385.0	-1,802.1	-39.0	1,802.1	0.00	0.00	
9,200.0	90.00	180.00	7,385.0	-1,902.1	-39.0	1,902.1	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site:	S34-T2N-R68W (Billings)	North Reference:	True
Well:	Billings 1B-34H	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
9,300.0	90.00	180.00	7,385.0	-2,002.1	-39.0	2,002.1	0.00	0.00	
9,400.0	90.00	180.00	7,385.0	-2,102.1	-39.1	2,102.1	0.00	0.00	
9,500.0	90.00	180.00	7,385.0	-2,202.1	-39.1	2,202.1	0.00	0.00	
9,600.0	90.00	180.00	7,385.0	-2,302.1	-39.1	2,302.1	0.00	0.00	
9,700.0	90.00	180.00	7,385.0	-2,402.1	-39.1	2,402.1	0.00	0.00	
9,800.0	90.00	180.00	7,385.0	-2,502.1	-39.1	2,502.1	0.00	0.00	
9,900.0	90.00	180.00	7,385.0	-2,602.1	-39.1	2,602.1	0.00	0.00	
10,000.0	90.00	180.00	7,385.0	-2,702.1	-39.1	2,702.1	0.00	0.00	
10,100.0	90.00	180.00	7,385.0	-2,802.1	-39.1	2,802.1	0.00	0.00	
10,200.0	90.00	180.00	7,385.0	-2,902.1	-39.1	2,902.1	0.00	0.00	
10,300.0	90.00	180.00	7,385.0	-3,002.1	-39.1	3,002.1	0.00	0.00	
10,400.0	90.00	180.00	7,385.0	-3,102.1	-39.1	3,102.1	0.00	0.00	
10,500.0	90.00	180.00	7,385.0	-3,202.1	-39.1	3,202.1	0.00	0.00	
10,600.0	90.00	180.00	7,385.0	-3,302.1	-39.1	3,302.1	0.00	0.00	
10,700.0	90.00	180.00	7,385.0	-3,402.1	-39.1	3,402.1	0.00	0.00	
10,800.0	90.00	180.00	7,385.0	-3,502.1	-39.1	3,502.1	0.00	0.00	
10,900.0	90.00	180.00	7,385.0	-3,602.1	-39.1	3,602.1	0.00	0.00	
11,000.0	90.00	180.00	7,385.0	-3,702.1	-39.1	3,702.1	0.00	0.00	
11,100.0	90.00	180.00	7,385.0	-3,802.1	-39.1	3,802.1	0.00	0.00	
11,200.0	90.00	180.00	7,385.0	-3,902.1	-39.1	3,902.1	0.00	0.00	
11,300.0	90.00	180.00	7,385.0	-4,002.1	-39.1	4,002.1	0.00	0.00	
11,400.0	90.00	180.00	7,385.0	-4,102.1	-39.1	4,102.1	0.00	0.00	
11,500.0	90.00	180.00	7,385.0	-4,202.1	-39.2	4,202.1	0.00	0.00	
11,600.0	90.00	180.00	7,385.0	-4,302.1	-39.2	4,302.1	0.00	0.00	
11,700.0	90.00	180.00	7,385.0	-4,402.1	-39.2	4,402.1	0.00	0.00	
11,800.0	90.00	180.00	7,385.0	-4,502.1	-39.2	4,502.1	0.00	0.00	
11,900.0	90.00	180.00	7,385.0	-4,602.1	-39.2	4,602.1	0.00	0.00	
11,920.6	90.00	180.00	7,385.0	-4,622.7	-39.2	4,622.7	0.00	0.00	TD at 11920.6 - Billings 1B-34H PBHL

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Billings 1B-34H PBHL	0.00	0.00	7,385.0	-4,622.7	-39.2	1,275,661.61	3,143,886.60	40.088930	-104.985750
- plan hits target center									
- Point									

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Billings 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site:	S34-T2N-R68W (Billings)	North Reference:	True
Well:	Billings 1B-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
358.0	358.0	Fox Hills				
4,456.2	4,444.0	Sussex				
4,726.2	4,714.0	Sussex Marker				
5,011.2	4,999.0	Shannon				
6,602.2	6,590.0	Teepee Buttes				
7,432.9	7,290.0	Sharon Springs				
7,636.4	7,365.0	Niobrara				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400'	
1,200.0	1,197.4	54.8	-10.3	EOB; Inc=8°	
1,920.0	1,910.4	153.3	-28.7	Start Drop -1.00	
2,720.0	2,707.8	208.1	-38.9	EOD; Inc=0°	
6,681.0	6,668.8	208.1	-38.9	Start Build 8.00	
7,806.0	7,385.0	-508.1	-39.0	LP @ 7385' TVD; 90°	
11,920.6	7,385.0	-4,622.7	-39.2	TD at 11920.6	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S34-T2N-R68W (Billings)

Billings 1B-34H

Hz

Plan #1

Anticollision Report

30 January, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	1/30/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,920.0	Plan #1 (Hz)	MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S34-T2N-R68W (Billings)						
ALEX DONES UNIT 1 (EXISTING) - Existing - NO SURV						Out of range
ALEX DONES UNIT 2 (EXISTING) - Existing - NO SURV						Out of range
BILLINGS 1 (EXISTING) - Existing - GYRO						Out of range
Billings 1A-34H - Hz - Plan #1	200.0	200.0	11.2	10.5	17.142	CC, ES
Billings 1A-34H - Hz - Plan #1	400.0	399.5	14.6	13.2	10.810	SF
Billings 1C-34H - Hz - Plan #1	400.0	400.0	8.4	7.0	6.212	CC
Billings 1C-34H - Hz - Plan #1	500.0	500.0	8.6	6.9	5.055	ES
Billings 1C-34H - Hz - Plan #1	11,920.6	12,199.4	479.3	338.0	3.392	SF
Billings 1D-34H - Hz - Plan #1	400.0	400.0	19.6	18.2	14.495	CC
Billings 1D-34H - Hz - Plan #1	500.0	500.0	19.8	18.1	11.621	ES
Billings 1D-34H - Hz - Plan #1	700.0	699.5	23.1	20.7	9.600	SF
Billings 1E-34H - Hz - Plan #1	400.0	400.0	30.8	29.4	22.778	CC, ES
Billings 1E-34H - Hz - Plan #1	600.0	597.6	38.3	36.2	18.668	SF
Billings 1F-34H - Hz - Plan #1	200.0	200.0	39.2	38.5	59.997	CC, ES
Billings 1F-34H - Hz - Plan #1	500.0	494.9	54.6	52.9	32.272	SF
BILLINGS 2-34 (EXISTING) - Existing - NO SURVEYS						Out of range
BILLINGS 31-34 (EXISTING) - Existing - SURVEYS	7,605.8	7,507.3	455.8	426.0	15.266	CC, ES
BILLINGS 31-34 (EXISTING) - Existing - SURVEYS	7,700.0	7,524.6	465.3	434.6	15.154	SF
BILLINGS 32-34 (EXISTING) - Existing - NO SURVEYS	9,119.3	7,393.0	260.3	211.5	5.332	CC, ES, SF
BILLINGS 41-34 (EXISTING) - Existing - SURVEYS						Out of range
BILLINGS 42-34 (EXISTING) - Existing - NO SURVEYS						Out of range
BILLINGS 8-4-34 (was Billings 7-4-34) - DD - Plan #1						Out of range
GARVER 34-3M (EXISTING) - Existing - NO SURVEYS						Out of range
GARVER U 34-5 JI (EXISTING) - Existing - NO SURVEY						Out of range
MORGAN UNIT A 1 (EXISTING) - Existing - NO SURVEY						Out of range
MORGAN UNIT A 3 (EXISTING) - Existing - NO SURVEY						Out of range
PURITAN 1 (EXISTING) - Existing - NO SURVEYS						Out of range
PURITAN 2 (EXISTING) - Existing - NO SURVEYS						Out of range
PURITAN 3 (EXISTING) - Existing - NO SURVEYS						Out of range
PURITAN 33-34 (EXISTING) - Existing - GYRO	10,418.2	7,378.1	431.7	367.5	6.720	CC, ES
PURITAN 33-34 (EXISTING) - Existing - GYRO	10,500.0	7,377.0	439.4	373.8	6.693	SF
PURITAN 34-34 (EXISTING) - Existing - SURVEYS						Out of range
PURITAN 4 (EXISTING) - Existing - NO SURVEYS						Out of range
PURITAN 44-34 (EXISTING) - Existing - SURVEYS						Out of range
PURITAN 4-4-34 (EXISTING) - Existing - SURVEYS						Out of range
PURITAN 4-6-34 (EXISTING) - Existing - SURVEYS						Out of range
PURITAN 6-4-34 (EXISTING) - Existing - SURVEYS	9,561.8	7,519.8	274.8	212.0	4.376	CC, ES
PURITAN 6-4-34 (EXISTING) - Existing - SURVEYS	9,600.0	7,519.3	277.4	214.0	4.373	SF
PURITAN 6-8-34 - DD - Plan #1						Out of range
RODGERS 1 (EXISTING) - Existing - NO SURVEYS						Out of range
RODGERS UNIT 2 (EXISTING) - Existing - NO SURVEY						Out of range
WOOLLEY 1 (EXISTING) - Existing - NO SURVEYS						Out of range
WOOLLEY 2 (EXISTING) - Existing - NO SURVEYS						Out of range
WOOLLEY 34-14JI (EXISTING) - Existing - NO SURVEY						Out of range
WOOLLEY U 34-13JI (EXISTING) - Existing - NO SURV						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - Billings 1A-34H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-89.96	0.0	-11.2	11.2					
100.0	100.0	100.0	100.0	0.2	0.2	-89.96	0.0	-11.2	11.2	10.9	0.30	36.845		
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-11.2	11.2	10.5	0.65	17.142 CC, ES		
300.0	300.0	299.8	299.8	0.5	0.5	-88.96	0.2	-12.0	12.0	11.0	1.00	12.019		
400.0	400.0	399.5	399.5	0.7	0.7	-86.66	0.8	-14.6	14.6	13.2	1.35	10.810 SF		
500.0	500.0	499.2	499.0	0.9	0.9	-76.15	1.9	-18.8	18.7	17.0	1.70	10.978		
600.0	600.0	598.7	598.3	1.0	1.1	-79.44	3.4	-24.6	24.1	22.0	2.05	11.715		
700.0	699.9	697.9	697.3	1.2	1.3	-83.77	5.2	-32.2	30.9	28.5	2.42	12.799		
800.0	799.7	797.0	795.9	1.4	1.5	-88.10	7.5	-41.3	39.4	36.6	2.80	14.103		
900.0	899.4	895.7	894.0	1.6	1.8	-91.97	10.2	-52.1	49.7	46.5	3.20	15.530		
1,000.0	998.9	994.1	991.5	1.8	2.0	-95.29	13.3	-64.5	61.7	58.1	3.63	17.001		
1,100.0	1,098.3	1,092.1	1,088.5	2.1	2.3	-98.08	16.8	-78.4	75.6	71.5	4.09	18.462		
1,200.0	1,197.4	1,189.6	1,184.7	2.3	2.6	-100.41	20.6	-93.9	91.3	86.7	4.59	19.873		
1,300.0	1,296.4	1,288.0	1,281.6	2.6	3.0	-102.31	24.8	-110.5	108.0	102.9	5.11	21.148		
1,400.0	1,395.5	1,386.5	1,378.6	2.9	3.3	-103.70	28.9	-127.1	124.9	119.3	5.63	22.168		
1,500.0	1,494.5	1,485.0	1,475.7	3.2	3.6	-104.76	33.0	-143.7	141.8	135.6	6.17	22.997		
1,600.0	1,593.5	1,583.6	1,572.7	3.5	4.0	-105.59	37.2	-160.3	158.8	152.1	6.70	23.681		
1,700.0	1,692.5	1,682.1	1,669.7	3.7	4.3	-106.27	41.3	-176.9	175.7	168.5	7.25	24.254		
1,800.0	1,791.6	1,780.6	1,766.7	4.0	4.6	-106.82	45.5	-193.5	192.8	185.0	7.79	24.740		
1,900.0	1,890.6	1,879.2	1,863.8	4.3	5.0	-107.28	49.6	-210.1	209.8	201.4	8.34	25.157		
2,000.0	1,989.7	1,977.7	1,960.8	4.6	5.3	-107.67	53.7	-226.7	226.6	217.8	8.88	25.526		
2,100.0	2,089.0	2,076.4	2,058.0	4.9	5.7	-107.66	57.9	-243.3	243.0	233.6	9.39	25.874		
2,200.0	2,188.5	2,175.1	2,155.2	5.1	6.0	-107.30	62.0	-259.9	258.8	248.9	9.88	26.208		
2,300.0	2,288.2	2,273.8	2,252.4	5.3	6.4	-106.63	66.2	-276.6	274.2	263.9	10.33	26.539		
2,400.0	2,388.0	2,372.6	2,349.7	5.5	6.7	-105.72	70.3	-293.2	289.1	278.4	10.76	26.880		
2,500.0	2,487.9	2,471.3	2,446.9	5.7	7.0	-104.58	74.5	-309.8	303.7	292.6	11.15	27.243		
2,600.0	2,587.8	2,569.9	2,544.0	5.8	7.4	-103.26	78.6	-326.5	318.1	306.6	11.51	27.640		
2,700.0	2,687.8	2,668.5	2,641.1	6.0	7.7	-101.77	82.8	-343.1	332.2	320.4	11.83	28.080		
2,800.0	2,787.8	2,767.0	2,738.1	6.1	8.1	-110.70	86.9	-359.7	346.4	334.3	12.13	28.552		
2,900.0	2,887.8	2,865.5	2,835.1	6.3	8.4	-109.14	91.0	-376.3	360.9	348.5	12.43	29.034		
3,000.0	2,987.8	2,963.9	2,932.1	6.4	8.8	-107.70	95.2	-392.9	375.6	362.9	12.73	29.517		
3,100.0	3,087.8	3,062.4	3,029.1	6.5	9.1	-106.37	99.3	-409.4	390.6	377.6	13.02	29.997		
3,200.0	3,187.8	3,160.9	3,126.0	6.7	9.5	-105.13	103.4	-426.0	405.7	392.4	13.31	30.471		
3,300.0	3,287.8	3,259.4	3,223.0	6.8	9.8	-103.98	107.6	-442.6	421.0	407.4	13.61	30.938		
3,400.0	3,387.8	3,357.9	3,320.0	7.0	10.2	-102.92	111.7	-459.2	436.5	422.6	13.90	31.394		
3,500.0	3,487.8	3,456.3	3,417.0	7.1	10.5	-101.92	115.9	-475.8	452.1	437.9	14.20	31.840		
3,600.0	3,587.8	3,554.8	3,514.0	7.3	10.9	-101.00	120.0	-492.4	467.8	453.3	14.50	32.274		
3,700.0	3,687.8	3,653.3	3,611.0	7.4	11.2	-100.13	124.1	-509.0	483.6	468.9	14.79	32.695		
3,800.0	3,787.8	3,751.8	3,707.9	7.6	11.5	-99.32	128.3	-525.6	499.6	484.5	15.09	33.104		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - Billings 1C-34H - 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	90.06	0.0	8.4	8.4					
100.0	100.0	100.0	100.0	0.2	0.2	90.06	0.0	8.4	8.4	8.1	0.30	27.634		
200.0	200.0	200.0	200.0	0.3	0.3	90.06	0.0	8.4	8.4	7.7	0.65	12.856		
300.0	300.0	300.0	300.0	0.5	0.5	90.06	0.0	8.4	8.4	7.4	1.00	8.377		
400.0	400.0	400.0	400.0	0.7	0.7	90.06	0.0	8.4	8.4	7.0	1.35	6.212 CC		
500.0	500.0	500.0	500.0	0.9	0.8	106.38	0.0	8.4	8.6	6.9	1.70	5.055 ES		
600.0	600.0	600.0	600.0	1.0	1.0	121.43	0.0	8.4	9.7	7.6	2.05	4.711		
700.0	699.9	699.8	699.8	1.2	1.2	134.88	0.5	9.1	12.7	10.3	2.40	5.295		
800.0	799.7	799.6	799.6	1.4	1.4	140.70	2.2	11.1	17.9	15.1	2.76	6.478		
900.0	899.4	899.3	899.2	1.6	1.6	142.27	4.9	14.5	24.8	21.7	3.13	7.928		
1,000.0	998.9	998.8	998.5	1.8	1.7	141.97	8.7	19.2	33.4	29.8	3.51	9.509		
1,100.0	1,098.3	1,098.2	1,097.6	2.1	1.9	140.94	13.6	25.2	43.6	39.7	3.91	11.148		
1,200.0	1,197.4	1,197.3	1,196.2	2.3	2.2	139.67	19.6	32.6	55.5	51.1	4.34	12.795		
1,300.0	1,296.4	1,296.2	1,294.5	2.6	2.4	137.96	26.6	41.2	68.4	63.6	4.79	14.280		
1,400.0	1,395.5	1,395.0	1,392.4	2.9	2.6	135.64	34.6	51.2	81.8	76.6	5.28	15.513		
1,500.0	1,494.5	1,493.4	1,489.8	3.2	2.9	133.00	43.7	62.4	95.9	90.1	5.79	16.562		
1,600.0	1,593.5	1,591.6	1,586.7	3.5	3.2	130.21	53.9	74.9	110.7	104.3	6.33	17.487		
1,700.0	1,692.5	1,690.2	1,683.8	3.7	3.5	127.65	64.6	88.2	126.1	119.2	6.88	18.323		
1,800.0	1,791.6	1,788.9	1,781.0	4.0	3.8	125.65	75.4	101.5	141.6	134.2	7.43	19.053		
1,900.0	1,890.6	1,887.6	1,878.1	4.3	4.2	124.04	86.2	114.8	157.3	149.3	7.99	19.693		
2,000.0	1,989.7	1,986.3	1,975.3	4.6	4.5	122.68	97.0	128.2	172.8	164.3	8.54	20.237		
2,100.0	2,089.0	2,085.0	2,072.6	4.9	4.8	121.13	107.8	141.5	187.6	178.5	9.08	20.666		
2,200.0	2,188.5	2,183.9	2,169.9	5.1	5.1	119.38	118.6	154.8	201.6	192.0	9.59	21.014		
2,300.0	2,288.2	2,282.7	2,267.2	5.3	5.5	117.47	129.4	168.2	215.0	204.9	10.09	21.314		
2,400.0	2,388.0	2,381.5	2,364.5	5.5	5.8	115.40	140.2	181.5	227.9	217.3	10.55	21.594		
2,500.0	2,487.9	2,480.2	2,461.8	5.7	6.1	113.18	151.0	194.8	240.4	229.4	10.99	21.878		
2,600.0	2,587.8	2,581.3	2,561.4	5.8	6.5	110.87	161.6	208.0	252.2	240.9	11.38	22.160		
2,700.0	2,687.8	2,683.3	2,662.2	6.0	6.8	108.66	171.3	220.0	262.8	251.0	11.74	22.389		
2,800.0	2,787.8	2,785.7	2,763.8	6.1	7.1	95.97	179.9	230.6	272.1	260.0	12.06	22.553		
2,900.0	2,887.8	2,888.6	2,866.0	6.3	7.3	94.25	187.4	239.8	280.4	268.0	12.38	22.649		
3,000.0	2,987.8	2,991.9	2,968.8	6.4	7.6	92.87	193.7	247.6	287.6	274.9	12.69	22.665		
3,100.0	3,087.8	3,095.6	3,072.1	6.5	7.8	91.80	198.9	254.1	293.6	280.6	12.99	22.593		
3,200.0	3,187.8	3,199.5	3,175.8	6.7	8.0	90.99	202.9	259.0	298.3	285.0	13.30	22.430		
3,300.0	3,287.8	3,303.6	3,279.8	6.8	8.1	90.44	205.8	262.5	301.6	288.0	13.60	22.179		
3,400.0	3,387.8	3,407.8	3,384.0	7.0	8.3	90.13	207.4	264.6	303.5	289.6	13.90	21.839		
3,500.0	3,487.8	3,511.6	3,487.8	7.1	8.4	90.04	207.9	265.1	304.1	289.9	14.20	21.415		
3,600.0	3,587.8	3,611.6	3,587.8	7.3	8.6	90.04	207.9	265.1	304.1	289.6	14.50	20.970		
3,700.0	3,687.8	3,711.6	3,687.8	7.4	8.7	90.04	207.9	265.1	304.1	289.3	14.80	20.541		
3,800.0	3,787.8	3,811.6	3,787.8	7.6	8.8	90.04	207.9	265.1	304.1	289.0	15.11	20.127		
3,900.0	3,887.8	3,911.6	3,887.8	7.7	8.9	90.04	207.9	265.1	304.1	288.7	15.42	19.726		
4,000.0	3,987.8	4,011.6	3,987.8	7.9	9.1	90.04	207.9	265.1	304.1	288.4	15.72	19.339		
4,100.0	4,087.8	4,111.6	4,087.8	8.0	9.2	90.04	207.9	265.1	304.1	288.1	16.03	18.965		
4,200.0	4,187.8	4,211.6	4,187.8	8.2	9.3	90.04	207.9	265.1	304.1	287.7	16.35	18.603		
4,300.0	4,287.8	4,311.6	4,287.8	8.3	9.5	90.04	207.9	265.1	304.1	287.4	16.66	18.253		
4,400.0	4,387.8	4,411.6	4,387.8	8.5	9.6	90.04	207.9	265.1	304.1	287.1	16.97	17.915		
4,500.0	4,487.8	4,511.6	4,487.8	8.7	9.8	90.04	207.9	265.1	304.1	286.8	17.29	17.588		
4,600.0	4,587.8	4,611.6	4,587.8	8.8	9.9	90.04	207.9	265.1	304.1	286.5	17.61	17.271		
4,700.0	4,687.8	4,711.6	4,687.8	9.0	10.0	90.04	207.9	265.1	304.1	286.2	17.93	16.964		
4,800.0	4,787.8	4,811.6	4,787.8	9.1	10.2	90.04	207.9	265.1	304.1	285.8	18.25	16.667		
4,900.0	4,887.8	4,911.6	4,887.8	9.3	10.3	90.04	207.9	265.1	304.1	285.5	18.57	16.379		
5,000.0	4,987.8	5,011.6	4,987.8	9.5	10.5	90.04	207.9	265.1	304.1	285.2	18.89	16.100		
5,100.0	5,087.8	5,111.6	5,087.8	9.6	10.6	90.04	207.9	265.1	304.1	284.9	19.21	15.830		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - Billings 1C-34H - 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	5,187.8	5,211.6	5,187.8	9.8	10.8	90.04	207.9	265.1	304.1	284.6	19.53	15.568		
5,300.0	5,287.8	5,311.6	5,287.8	9.9	10.9	90.04	207.9	265.1	304.1	284.2	19.86	15.313		
5,400.0	5,387.8	5,411.6	5,387.8	10.1	11.1	90.04	207.9	265.1	304.1	283.9	20.18	15.067		
5,500.0	5,487.8	5,511.6	5,487.8	10.3	11.2	90.04	207.9	265.1	304.1	283.6	20.51	14.827		
5,600.0	5,587.8	5,611.6	5,587.8	10.4	11.4	90.04	207.9	265.1	304.1	283.3	20.84	14.595		
5,700.0	5,687.8	5,711.6	5,687.8	10.6	11.5	90.04	207.9	265.1	304.1	282.9	21.16	14.369		
5,800.0	5,787.8	5,811.6	5,787.8	10.8	11.7	90.04	207.9	265.1	304.1	282.6	21.49	14.149		
5,900.0	5,887.8	5,911.6	5,887.8	10.9	11.8	90.04	207.9	265.1	304.1	282.3	21.82	13.936		
6,000.0	5,987.8	6,011.6	5,987.8	11.1	12.0	90.04	207.9	265.1	304.1	281.9	22.15	13.729		
6,100.0	6,087.8	6,111.6	6,087.8	11.2	12.1	90.04	207.9	265.1	304.1	281.6	22.48	13.528		
6,200.0	6,187.8	6,211.6	6,187.8	11.4	12.3	90.04	207.9	265.1	304.1	281.3	22.81	13.331		
6,300.0	6,287.8	6,311.6	6,287.8	11.6	12.4	90.04	207.9	265.1	304.1	280.9	23.14	13.141		
6,400.0	6,387.8	6,411.6	6,387.8	11.7	12.6	90.04	207.9	265.1	304.1	280.6	23.47	12.955		
6,500.0	6,487.8	6,511.6	6,487.8	11.9	12.7	90.04	207.9	265.1	304.1	280.3	23.80	12.774		
6,600.0	6,587.8	6,611.6	6,587.8	12.1	12.9	90.04	207.9	265.1	304.1	280.0	24.14	12.598		
6,672.9	6,660.7	6,684.5	6,660.7	12.2	13.0	-90.10	207.9	265.1	304.1	279.7	24.38	12.475		
6,700.0	6,687.8	6,711.6	6,687.8	12.2	13.1	-90.01	207.9	265.1	304.1	279.6	24.47	12.429		
6,714.1	6,701.8	6,725.7	6,701.8	12.3	13.1	-90.11	207.9	265.1	304.1	279.6	24.50	12.411		
6,800.0	6,787.3	6,811.1	6,787.3	12.3	13.2	-91.80	207.9	265.1	304.2	279.5	24.70	12.319		
6,900.0	6,884.4	6,908.2	6,884.4	12.4	13.4	-95.91	207.9	265.1	305.9	281.1	24.81	12.326		
7,000.0	6,977.4	7,004.7	6,980.9	12.4	13.5	-101.69	206.3	265.2	311.7	286.9	24.82	12.561		
7,100.0	7,064.3	7,108.0	7,083.1	12.5	13.6	-107.52	192.0	265.9	322.4	297.7	24.71	13.046		
7,200.0	7,143.6	7,217.8	7,188.3	12.6	13.6	-112.83	160.9	267.5	336.9	312.4	24.54	13.732		
7,300.0	7,213.6	7,335.2	7,294.0	12.8	13.7	-117.49	110.3	270.1	354.3	329.9	24.37	14.539		
7,400.0	7,273.0	7,460.9	7,396.4	13.2	13.8	-121.39	37.8	273.7	372.9	348.5	24.31	15.337		
7,500.0	7,320.6	7,595.5	7,490.2	13.7	14.1	-124.45	-58.3	278.6	391.2	366.7	24.47	15.982		
7,600.0	7,355.6	7,738.9	7,568.5	14.4	14.7	-126.59	-178.0	284.6	407.6	382.6	25.06	16.267		
7,700.0	7,377.2	7,889.9	7,623.5	15.4	15.8	-127.76	-318.1	291.7	420.8	394.6	26.18	16.074		
7,800.0	7,385.0	8,046.1	7,648.1	16.4	17.3	-127.90	-472.0	299.4	429.7	401.8	27.93	15.388		
7,900.0	7,385.0	8,159.1	7,649.0	17.6	18.5	-127.50	-584.7	305.1	434.0	404.1	29.96	14.489		
8,000.0	7,385.0	8,258.9	7,649.0	18.9	19.7	-127.10	-684.5	310.1	438.0	406.0	32.04	13.671		
8,100.0	7,385.0	8,358.8	7,649.0	20.2	21.0	-126.70	-784.2	315.1	442.1	407.8	34.26	12.903		
8,200.0	7,385.0	8,458.7	7,649.0	21.6	22.3	-126.32	-884.0	320.2	446.1	409.5	36.60	12.190		
8,300.0	7,385.0	8,558.6	7,649.0	23.0	23.7	-125.94	-983.7	325.2	450.2	411.2	39.03	11.534		
8,400.0	7,385.0	8,658.4	7,649.0	24.5	25.2	-125.56	-1,083.5	330.2	454.3	412.7	41.55	10.932		
8,500.0	7,385.0	8,758.3	7,649.0	26.0	26.7	-125.20	-1,183.2	335.3	458.4	414.2	44.15	10.382		
8,600.0	7,385.0	8,858.2	7,649.0	27.6	28.2	-124.84	-1,283.0	340.3	462.5	415.7	46.82	9.879		
8,700.0	7,385.0	8,958.1	7,649.0	29.2	29.7	-124.49	-1,382.7	345.3	466.7	417.1	49.54	9.420		
8,800.0	7,385.0	9,057.9	7,649.0	30.7	31.3	-124.14	-1,482.5	350.3	470.8	418.5	52.32	8.999		
8,900.0	7,385.0	9,157.8	7,649.0	32.4	32.9	-123.80	-1,582.2	355.4	475.0	419.9	55.14	8.614		
9,000.0	7,385.0	9,257.7	7,649.0	34.0	34.5	-123.46	-1,682.0	360.4	479.2	421.2	58.01	8.261		
9,100.0	7,385.0	9,357.5	7,649.0	35.6	36.1	-123.13	-1,781.7	365.4	483.4	422.5	60.92	7.936		
9,200.0	7,385.0	9,457.4	7,649.0	37.3	37.7	-122.81	-1,881.4	370.4	487.6	423.8	63.86	7.637		
9,300.0	7,385.0	9,557.3	7,649.0	38.9	39.3	-122.49	-1,981.2	375.5	491.9	425.1	66.83	7.360		
9,400.0	7,385.0	9,657.2	7,649.0	40.6	41.0	-122.18	-2,080.9	380.5	496.2	426.3	69.83	7.105		
10,200.0	7,385.0	10,484.4	7,649.0	54.1	54.8	-121.94	-2,907.9	384.4	499.1	405.8	93.28	5.350		
10,300.0	7,385.0	10,584.4	7,649.0	55.8	56.5	-122.02	-3,007.9	383.1	498.0	401.8	96.10	5.181		
10,400.0	7,385.0	10,684.4	7,649.0	57.5	58.2	-122.10	-3,107.9	381.7	496.8	397.9	98.92	5.022		
10,500.0	7,385.0	10,784.4	7,649.0	59.2	59.8	-122.19	-3,207.8	380.3	495.6	393.9	101.73	4.872		
10,600.0	7,385.0	10,884.4	7,649.0	60.9	61.5	-122.27	-3,307.8	379.0	494.5	389.9	104.55	4.730		
10,700.0	7,385.0	10,984.4	7,649.0	62.6	63.2	-122.36	-3,407.8	377.6	493.3	386.0	107.36	4.595		
10,800.0	7,385.0	11,084.4	7,649.0	64.4	65.0	-122.44	-3,507.8	376.2	492.2	382.0	110.17	4.467		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - Billings 1C-34H - 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	
10,900.0	7,385.0	11,184.3	7,649.0	66.1	66.7	-122.53	-3,607.8	374.8	491.0	378.0	112.98	4.346	
11,000.0	7,385.0	11,284.3	7,649.0	67.8	68.4	-122.61	-3,707.7	373.5	489.9	374.1	115.78	4.231	
11,100.0	7,385.0	11,384.3	7,649.0	69.5	70.1	-122.70	-3,807.7	372.1	488.7	370.1	118.58	4.121	
11,200.0	7,385.0	11,484.3	7,649.0	71.3	71.8	-122.79	-3,907.7	370.7	487.6	366.2	121.38	4.017	
11,300.0	7,385.0	11,584.3	7,649.0	73.0	73.5	-122.87	-4,007.7	369.4	486.4	362.2	124.17	3.917	
11,400.0	7,385.0	11,684.3	7,649.0	74.7	75.2	-122.96	-4,107.7	368.0	485.3	358.3	126.96	3.822	
11,500.0	7,385.0	11,784.3	7,649.0	76.4	77.0	-123.05	-4,207.6	366.6	484.1	354.4	129.75	3.731	
11,600.0	7,385.0	11,884.3	7,649.0	78.2	78.7	-123.14	-4,307.6	365.2	483.0	350.5	132.53	3.644	
11,700.0	7,385.0	11,984.3	7,649.0	79.9	80.4	-123.23	-4,407.6	363.9	481.8	346.5	135.30	3.561	
11,800.0	7,385.0	12,084.3	7,649.0	81.6	82.1	-123.32	-4,507.6	362.5	480.7	342.6	138.07	3.481	
11,900.0	7,385.0	12,184.3	7,649.0	83.4	83.8	-123.40	-4,607.6	361.1	479.6	338.7	140.84	3.405	
11,920.6	7,385.0	12,199.4	7,649.0	83.7	84.1	-123.42	-4,622.7	360.9	479.3	338.0	141.33	3.392	
11,920.6	7,385.0	12,199.4	7,649.0	83.7	84.1	-123.42	-4,622.7	360.9	479.3	338.0	141.34	3.392 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - Billings 1D-34H - 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	90.05	0.0	19.6	19.6					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	19.6	19.6	19.3	0.30	64.479		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	18.9	0.65	29.998		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	1.00	19.546		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	19.6	19.6	18.2	1.35	14.495 CC		
500.0	500.0	500.0	500.0	0.9	0.8	103.13	0.0	19.6	19.8	18.1	1.70	11.621 ES		
600.0	600.0	600.0	600.0	1.0	1.0	110.26	0.0	19.6	20.5	18.5	2.05	9.996		
700.0	699.9	699.5	699.5	1.2	1.2	119.47	0.2	20.4	23.1	20.7	2.41	9.600 SF		
800.0	799.7	799.0	798.9	1.4	1.4	127.13	0.9	22.9	28.5	25.8	2.77	10.308		
900.0	899.4	898.2	898.1	1.6	1.6	132.28	2.1	27.1	36.6	33.5	3.13	11.690		
1,000.0	998.9	997.2	996.8	1.8	1.7	135.37	3.7	32.8	47.2	43.7	3.51	13.465		
1,100.0	1,098.3	1,095.7	1,095.1	2.1	1.9	137.12	5.8	40.2	60.3	56.4	3.90	15.458		
1,200.0	1,197.4	1,193.8	1,192.8	2.3	2.2	138.03	8.3	49.2	75.6	71.3	4.31	17.561		
1,300.0	1,296.4	1,291.5	1,289.8	2.6	2.4	138.22	11.3	59.7	92.6	87.9	4.73	19.572		
1,400.0	1,395.5	1,388.9	1,386.4	2.9	2.6	137.64	14.7	71.8	110.6	105.4	5.18	21.367		
1,500.0	1,494.5	1,485.8	1,482.2	3.2	2.9	136.63	18.5	85.4	129.6	124.0	5.64	22.986		
1,600.0	1,593.5	1,582.2	1,577.4	3.5	3.2	135.39	22.7	100.4	149.7	143.6	6.12	24.465		
1,700.0	1,692.5	1,679.7	1,673.4	3.7	3.5	134.14	27.3	116.7	170.6	164.0	6.61	25.801		
1,800.0	1,791.6	1,777.4	1,769.6	4.0	3.8	133.15	31.9	133.0	191.5	184.4	7.11	26.946		
1,900.0	1,890.6	1,875.1	1,865.9	4.3	4.1	132.35	36.5	149.4	212.5	204.9	7.61	27.934		
2,000.0	1,989.7	1,972.9	1,962.2	4.6	4.4	131.72	41.1	165.7	233.1	225.0	8.11	28.761		
2,100.0	2,089.0	2,070.9	2,058.7	4.9	4.8	130.94	45.7	182.1	252.7	244.1	8.59	29.406		
2,200.0	2,188.5	2,169.1	2,155.4	5.1	5.1	130.00	50.3	198.5	271.2	262.2	9.07	29.910		
2,300.0	2,288.2	2,267.4	2,252.1	5.3	5.4	128.93	54.9	214.9	288.8	279.3	9.53	30.309		
2,400.0	2,388.0	2,365.7	2,349.0	5.5	5.8	127.72	59.5	231.4	305.4	295.4	9.97	30.633		
2,500.0	2,487.9	2,464.2	2,446.0	5.7	6.1	126.40	64.1	247.8	321.1	310.7	10.39	30.905		
2,600.0	2,587.8	2,562.7	2,543.0	5.8	6.4	124.96	68.8	264.3	336.0	325.2	10.79	31.147		
2,700.0	2,687.8	2,661.1	2,640.0	6.0	6.8	123.42	73.4	280.8	350.2	339.0	11.16	31.375		
2,800.0	2,787.8	2,759.6	2,736.9	6.1	7.1	111.15	78.0	297.2	364.0	352.5	11.52	31.601		
2,900.0	2,887.8	2,858.1	2,833.9	6.3	7.4	109.58	82.7	313.7	378.2	366.3	11.87	31.857		
3,000.0	2,987.8	2,956.6	2,930.9	6.4	7.8	108.13	87.3	330.2	392.5	380.3	12.22	32.134		
3,100.0	3,087.8	3,055.1	3,027.9	6.5	8.1	106.77	91.9	346.6	407.1	394.6	12.55	32.428		
3,200.0	3,187.8	3,153.5	3,124.9	6.7	8.5	105.51	96.5	363.1	421.9	409.1	12.89	32.732		
3,300.0	3,287.8	3,252.0	3,221.9	6.8	8.8	104.34	101.2	379.5	436.9	423.7	13.22	33.044		
3,400.0	3,387.8	3,350.5	3,318.8	7.0	9.2	103.24	105.8	396.0	452.1	438.6	13.55	33.358		
3,500.0	3,487.8	3,449.0	3,415.8	7.1	9.5	102.21	110.4	412.5	467.4	453.6	13.88	33.675		
3,600.0	3,587.8	3,547.5	3,512.8	7.3	9.8	101.25	115.0	428.9	482.9	468.7	14.21	33.990		
3,700.0	3,687.8	3,646.0	3,609.8	7.4	10.2	100.35	119.7	445.4	498.5	484.0	14.53	34.303		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - Billings 1E-34H - 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	90.05	0.0	30.8	30.8					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	30.8	30.8	30.5	0.30	101.325		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.8	30.8	30.1	0.65	47.140		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	30.8	30.8	29.8	1.00	30.715		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	30.8	30.8	29.4	1.35	22.778 CC, ES		
500.0	500.0	498.9	498.9	0.9	0.8	101.57	0.3	32.4	32.6	30.9	1.70	19.212		
600.0	600.0	597.6	597.4	1.0	1.0	103.79	1.2	37.5	38.3	36.2	2.05	18.668 SF		
700.0	699.9	695.7	695.1	1.2	1.2	106.30	2.8	45.8	47.7	45.3	2.41	19.816		
800.0	799.7	793.0	791.8	1.4	1.5	108.47	4.9	57.2	61.0	58.2	2.78	21.956		
900.0	899.4	889.3	887.0	1.6	1.8	110.14	7.6	71.8	78.0	74.9	3.16	24.665		
1,000.0	998.9	984.4	980.3	1.8	2.1	111.35	10.8	89.2	98.8	95.2	3.57	27.667		
1,100.0	1,098.3	1,078.0	1,071.7	2.1	2.5	112.20	14.5	109.3	123.2	119.2	4.00	30.776		
1,200.0	1,197.4	1,170.9	1,161.7	2.3	2.9	112.81	18.8	132.1	151.1	146.7	4.46	33.864		
1,300.0	1,296.4	1,266.6	1,254.1	2.6	3.3	113.57	23.3	156.4	180.2	175.3	4.95	36.437		
1,400.0	1,395.5	1,362.2	1,346.4	2.9	3.8	114.12	27.8	180.8	209.4	203.9	5.44	38.485		
1,500.0	1,494.5	1,457.9	1,438.8	3.2	4.2	114.54	32.3	205.1	238.5	232.6	5.94	40.142		
1,600.0	1,593.5	1,553.5	1,531.2	3.5	4.7	114.87	36.8	229.4	267.7	261.2	6.45	41.505		
1,700.0	1,692.5	1,649.1	1,623.6	3.7	5.1	115.13	41.3	253.8	296.8	289.9	6.96	42.641		
1,800.0	1,791.6	1,744.8	1,716.0	4.0	5.6	115.34	45.8	278.1	326.0	318.5	7.48	43.602		
1,900.0	1,890.6	1,840.4	1,808.4	4.3	6.1	115.52	50.3	302.5	355.1	347.1	7.99	44.422		
2,000.0	1,989.7	1,936.2	1,900.8	4.6	6.5	115.81	54.8	326.8	384.1	375.6	8.52	45.105		
2,100.0	2,089.0	2,032.1	1,993.5	4.9	7.0	115.92	59.4	351.2	412.3	403.3	9.01	45.739		
2,200.0	2,188.5	2,128.2	2,086.3	5.1	7.5	115.82	63.9	375.7	439.8	430.3	9.49	46.347		
2,300.0	2,288.2	2,224.5	2,179.3	5.3	8.0	115.56	68.4	400.2	466.6	456.7	9.94	46.944		
2,400.0	2,388.0	2,320.8	2,272.4	5.5	8.4	115.16	73.0	424.7	492.7	482.4	10.36	47.546		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - Billings 1F-34H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	39.2	39.2					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	39.2	39.2	38.9	0.30	128.959		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	39.2	39.2	38.5	0.65	59.997 CC, ES		
300.0	300.0	298.6	298.6	0.5	0.5	89.69	0.2	40.8	40.9	39.9	1.00	40.874		
400.0	400.0	397.0	396.9	0.7	0.7	88.79	1.0	45.9	46.0	44.6	1.35	34.109		
500.0	500.0	494.9	494.4	0.9	0.9	99.07	2.2	54.2	54.6	52.9	1.69	32.272 SF		
600.0	600.0	592.1	590.9	1.0	1.2	99.90	3.9	65.7	66.9	64.9	2.04	32.771		
700.0	699.9	688.4	686.0	1.2	1.5	101.22	6.1	80.2	82.9	80.5	2.40	34.547		
800.0	799.7	783.4	779.3	1.4	1.8	102.64	8.7	97.7	102.4	99.7	2.77	37.027		
900.0	899.4	877.0	870.7	1.6	2.2	103.96	11.7	117.9	125.6	122.5	3.15	39.870		
1,000.0	998.9	968.9	959.7	1.8	2.7	105.10	15.1	140.6	152.3	148.8	3.55	42.855		
1,100.0	1,098.3	1,062.7	1,049.9	2.1	3.1	106.18	18.9	166.0	181.9	177.9	3.99	45.621		
1,200.0	1,197.4	1,157.9	1,141.4	2.3	3.6	107.33	22.8	192.0	212.3	207.8	4.45	47.671		
1,300.0	1,296.4	1,252.9	1,232.8	2.6	4.1	108.63	26.7	217.9	242.9	238.0	4.94	49.197		
1,400.0	1,395.5	1,348.0	1,324.1	2.9	4.6	109.64	30.5	243.8	273.7	268.3	5.43	50.376		
1,500.0	1,494.5	1,443.0	1,415.5	3.2	5.1	110.45	34.4	269.7	304.5	298.6	5.94	51.306		
1,600.0	1,593.5	1,538.1	1,506.9	3.5	5.6	111.10	38.3	295.6	335.4	329.0	6.44	52.053		
1,700.0	1,692.5	1,633.1	1,598.3	3.7	6.1	111.65	42.2	321.5	366.3	359.4	6.96	52.664		
1,800.0	1,791.6	1,728.2	1,689.6	4.0	6.6	112.11	46.0	347.4	397.3	389.8	7.47	53.170		
1,900.0	1,890.6	1,823.2	1,781.0	4.3	7.1	112.51	49.9	373.3	428.2	420.2	7.99	53.595		
2,000.0	1,989.7	1,918.4	1,872.4	4.6	7.6	113.02	53.8	399.3	459.0	450.5	8.51	53.913		
2,100.0	2,089.0	2,013.7	1,964.1	4.9	8.1	113.36	57.7	425.3	489.1	480.1	9.01	54.258		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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													S34-T2N-R68W (Billings) - BILLINGS 31-34 (EXISTING) - Existing - SURVEYS		Offset Site Error:		0.0 ft
Survey Program:													92-MWD		Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis				Distance									
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)							
7,400.0	7,273.0	7,426.7	7,287.6	13.2	24.1	79.16	-309.7	-496.5	494.2	464.8	29.41	16.801					
7,500.0	7,320.6	7,473.1	7,334.0	13.7	24.1	86.48	-308.4	-495.5	466.9	437.5	29.38	15.890					
7,600.0	7,355.6	7,505.9	7,366.7	14.4	24.1	91.25	-307.4	-494.7	455.9	426.0	29.81	15.290					
7,605.8	7,357.2	7,507.3	7,368.2	14.5	24.1	91.43	-307.3	-494.7	455.8	426.0	29.86	15.266 CC, ES					
7,700.0	7,377.2	7,524.6	7,385.4	15.4	24.1	92.79	-306.8	-494.2	465.3	434.6	30.70	15.154 SF					
7,800.0	7,385.0	7,529.1	7,389.9	16.4	24.1	90.83	-306.6	-494.1	495.4	463.5	31.90	15.528					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - BILLINGS 32-34 (EXISTING) - Existing - NO SURVEYS													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		
8,700.0	7,385.0	7,393.0	7,393.0	29.2	12.9	90.00	-1,821.4	-299.3	493.5	451.5	42.05	11.738		
8,800.0	7,385.0	7,393.0	7,393.0	30.7	12.9	90.00	-1,821.4	-299.3	412.0	368.3	43.64	9.441		
8,900.0	7,385.0	7,393.0	7,393.0	32.4	12.9	90.00	-1,821.4	-299.3	340.4	295.1	45.25	7.523		
9,000.0	7,385.0	7,393.0	7,393.0	34.0	12.9	90.00	-1,821.4	-299.3	286.3	239.5	46.87	6.110		
9,100.0	7,385.0	7,393.0	7,393.0	35.6	12.9	90.00	-1,821.4	-299.3	261.0	212.5	48.50	5.381		
9,119.3	7,385.0	7,393.0	7,393.0	35.9	12.9	90.00	-1,821.4	-299.3	260.3	211.5	48.82	5.332	CC, ES, SF	
9,200.0	7,385.0	7,393.0	7,393.0	37.3	12.9	90.00	-1,821.4	-299.3	272.5	222.4	50.15	5.434		
9,300.0	7,385.0	7,393.0	7,393.0	38.9	12.9	90.00	-1,821.4	-299.3	316.9	265.1	51.80	6.117		
9,400.0	7,385.0	7,393.0	7,393.0	40.6	12.9	90.00	-1,821.4	-299.3	382.8	329.3	53.47	7.160		
9,500.0	7,385.0	7,393.0	7,393.0	42.2	12.9	90.00	-1,821.4	-299.3	461.2	406.0	55.14	8.364		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
S34-T2N-R68W (Billings) - PURITAN 33-34 (EXISTING) - Existing - GYRO												Offset Well Error:	0.0 ft
Survey Program: 100-Gyro													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)			
10,200.0	7,385.0	7,380.9	7,380.0	54.1	6.5	90.26	-3,120.2	-470.8	483.7	423.2	60.53	7.992	
10,300.0	7,385.0	7,379.6	7,378.7	55.8	6.5	90.09	-3,120.2	-470.8	447.6	385.4	62.23	7.193	
10,400.0	7,385.0	7,378.3	7,377.4	57.5	6.5	89.92	-3,120.2	-470.8	432.1	368.2	63.94	6.758	
10,418.2	7,385.0	7,378.1	7,377.1	57.8	6.5	89.88	-3,120.3	-470.8	431.7	367.5	64.25	6.720 CC, ES	
10,500.0	7,385.0	7,377.0	7,376.1	59.2	6.5	89.74	-3,120.3	-470.8	439.4	373.8	65.65	6.693 SF	
10,600.0	7,385.0	7,375.7	7,374.8	60.9	6.5	89.57	-3,120.3	-470.8	468.5	401.1	67.36	6.954	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 S34-T2N-R68W (Billings) - PURITAN 6-4-34 (EXISTING) - Existing - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 78-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		
9,200.0	7,385.0	7,524.2	7,394.9	37.3	23.4	-90.82	-2,263.9	235.8	454.3	397.6	56.77	8.004		
9,300.0	7,385.0	7,523.0	7,393.7	38.9	23.4	-90.56	-2,263.9	235.8	379.6	321.1	58.43	6.496		
9,400.0	7,385.0	7,521.7	7,392.5	40.6	23.4	-90.31	-2,263.9	235.7	318.9	258.8	60.09	5.307		
9,500.0	7,385.0	7,520.5	7,391.3	42.2	23.4	-90.06	-2,263.9	235.7	281.7	219.9	61.76	4.561		
9,561.8	7,385.0	7,519.8	7,390.5	43.3	23.4	-89.90	-2,263.9	235.7	274.8	212.0	62.80	4.376 CC, ES		
9,600.0	7,385.0	7,519.3	7,390.1	43.9	23.4	-89.81	-2,263.9	235.7	277.4	214.0	63.44	4.373 SF		
9,700.0	7,385.0	7,518.1	7,388.9	45.6	23.4	-89.56	-2,264.0	235.7	307.6	242.5	65.12	4.723		
9,800.0	7,385.0	7,516.9	7,387.7	47.3	23.4	-89.30	-2,264.0	235.7	363.6	296.8	66.81	5.443		
9,900.0	7,385.0	7,515.7	7,386.5	49.0	23.4	-89.05	-2,264.0	235.7	435.7	367.2	68.50	6.361		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Billings 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5008.0ft (Original Well Elev)
Reference Site:	S34-T2N-R68W (Billings)	MD Reference:	WELL @ 5008.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Billings 1B-34H	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 @ 5008.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Billings 1B-34H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.33°

