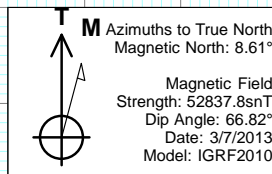


DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Devore 1B-34H PBHL	-4597.2	-821.5	1307697.57	3206344.98	40.175660	-104.761570

FORMATION TOP DETAILS		
TVDPPath	MDPPath	Formation
649.0	649.2	Base of Fox Hills
4387.0	4470.7	Sussex
4681.0	4765.4	Sussex Marker
5035.0	5119.5	Shannon
6043.0	6127.5	Teepee Buttes
7044.0	7234.3	Sharon Springs
7152.0	7513.5	B Chalk



Plan #2
Devore 1B-34H
13xxx; LR
WELL @ 4974.0ft (Original Well Elev)
Ground Elevation @ 4961.0
North American Datum 1983
Well Devore 1B-34H. True North

Vertical Section at 180.00° (1000 ft/in)

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Devore 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site:	S34-T3N-R66W (Devore)	North Reference:	True
Well:	Devore 1B-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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-T3N-R66W (Devore)			
Site Position:		Northing:	1,307,711.17 ft	Latitude:	40.175660
From:	Lat/Long	Easting:	3,207,971.22 ft	Longitude:	-104.755750
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.48 °

Well	Devore 1B-34H					
Well Position	+N/-S	0.0 ft	Northing:	1,312,301.50 ft	Latitude:	40.188280
	+E/-W	0.0 ft	Easting:	3,207,128.05 ft	Longitude:	-104.758630
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,961.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	3/7/2013	8.61	66.82	52,838

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	180.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	14.00	282.50	1,686.1	36.8	-166.2	1.00	1.00	0.00	282.50	
3,610.0	14.00	282.50	3,539.4	136.8	-617.3	0.00	0.00	0.00	0.00	
5,010.0	0.00	0.00	4,925.5	173.7	-783.4	1.00	-1.00	0.00	180.00	
6,535.3	0.00	0.00	6,450.8	173.7	-783.4	0.00	0.00	0.00	0.00	
7,660.3	90.00	182.50	7,167.0	-541.8	-814.7	8.00	8.00	0.00	182.50	
7,810.3	90.00	182.50	7,167.0	-691.7	-821.2	0.00	0.00	0.00	0.00	
7,937.1	90.00	179.96	7,167.0	-818.5	-823.9	2.00	0.00	-2.00	-90.00	
11,715.9	90.00	179.96	7,167.0	-4,597.2	-821.5	0.00	0.00	0.00	0.00	Devore 1B-34H PBHL

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Devore 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site:	S34-T3N-R66W (Devore)	North Reference:	True
Well:	Devore 1B-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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	KOP @ 300'
400.0	1.00	282.50	400.0	0.2	-0.9	-0.2	1.00	1.00	
500.0	2.00	282.50	500.0	0.8	-3.4	-0.8	1.00	1.00	
600.0	3.00	282.50	599.9	1.7	-7.7	-1.7	1.00	1.00	
649.2	3.49	282.50	649.0	2.3	-10.4	-2.3	1.00	1.00	Base of Fox Hills
700.0	4.00	282.50	699.7	3.0	-13.6	-3.0	1.00	1.00	
800.0	5.00	282.50	799.4	4.7	-21.3	-4.7	1.00	1.00	
900.0	6.00	282.50	898.9	6.8	-30.6	-6.8	1.00	1.00	
1,000.0	7.00	282.50	998.3	9.2	-41.7	-9.2	1.00	1.00	
1,100.0	8.00	282.50	1,097.4	12.1	-54.4	-12.1	1.00	1.00	
1,200.0	9.00	282.50	1,196.3	15.3	-68.9	-15.3	1.00	1.00	
1,300.0	10.00	282.50	1,294.9	18.8	-85.0	-18.8	1.00	1.00	
1,400.0	11.00	282.50	1,393.3	22.8	-102.8	-22.8	1.00	1.00	
1,500.0	12.00	282.50	1,491.2	27.1	-122.2	-27.1	1.00	1.00	
1,600.0	13.00	282.50	1,588.9	31.8	-143.4	-31.8	1.00	1.00	
1,700.0	14.00	282.50	1,686.1	36.8	-166.2	-36.8	1.00	1.00	EOB; Inc=14°
1,800.0	14.00	282.50	1,783.1	42.1	-189.8	-42.1	0.00	0.00	
1,900.0	14.00	282.50	1,880.2	47.3	-213.4	-47.3	0.00	0.00	
2,000.0	14.00	282.50	1,977.2	52.5	-237.0	-52.5	0.00	0.00	
2,100.0	14.00	282.50	2,074.2	57.8	-260.6	-57.8	0.00	0.00	
2,200.0	14.00	282.50	2,171.3	63.0	-284.3	-63.0	0.00	0.00	
2,300.0	14.00	282.50	2,268.3	68.3	-307.9	-68.3	0.00	0.00	
2,400.0	14.00	282.50	2,365.3	73.5	-331.5	-73.5	0.00	0.00	
2,500.0	14.00	282.50	2,462.3	78.7	-355.1	-78.7	0.00	0.00	
2,600.0	14.00	282.50	2,559.4	84.0	-378.7	-84.0	0.00	0.00	
2,700.0	14.00	282.50	2,656.4	89.2	-402.3	-89.2	0.00	0.00	
2,800.0	14.00	282.50	2,753.4	94.4	-426.0	-94.4	0.00	0.00	
2,900.0	14.00	282.50	2,850.5	99.7	-449.6	-99.7	0.00	0.00	
3,000.0	14.00	282.50	2,947.5	104.9	-473.2	-104.9	0.00	0.00	
3,100.0	14.00	282.50	3,044.5	110.1	-496.8	-110.1	0.00	0.00	
3,200.0	14.00	282.50	3,141.6	115.4	-520.4	-115.4	0.00	0.00	
3,300.0	14.00	282.50	3,238.6	120.6	-544.1	-120.6	0.00	0.00	
3,400.0	14.00	282.50	3,335.6	125.9	-567.7	-125.9	0.00	0.00	
3,500.0	14.00	282.50	3,432.6	131.1	-591.3	-131.1	0.00	0.00	
3,600.0	14.00	282.50	3,529.7	136.3	-614.9	-136.3	0.00	0.00	
3,610.0	14.00	282.50	3,539.4	136.8	-617.3	-136.8	0.00	0.00	Start Drop -1.00
3,700.0	13.10	282.50	3,626.9	141.4	-637.9	-141.4	1.00	-1.00	
3,800.0	12.10	282.50	3,724.5	146.1	-659.2	-146.1	1.00	-1.00	
3,900.0	11.10	282.50	3,822.4	150.5	-678.8	-150.5	1.00	-1.00	
4,000.0	10.10	282.50	3,920.7	154.5	-696.7	-154.5	1.00	-1.00	
4,100.0	9.10	282.50	4,019.3	158.1	-713.0	-158.1	1.00	-1.00	
4,200.0	8.10	282.50	4,118.2	161.3	-727.6	-161.3	1.00	-1.00	
4,300.0	7.10	282.50	4,217.3	164.2	-740.5	-164.2	1.00	-1.00	
4,400.0	6.10	282.50	4,316.6	166.7	-751.8	-166.7	1.00	-1.00	
4,470.7	5.39	282.50	4,387.0	168.2	-758.7	-168.2	1.00	-1.00	Sussex
4,500.0	5.10	282.50	4,416.2	168.8	-761.3	-168.8	1.00	-1.00	
4,600.0	4.10	282.50	4,515.8	170.5	-769.1	-170.5	1.00	-1.00	
4,700.0	3.10	282.50	4,615.6	171.9	-775.2	-171.9	1.00	-1.00	
4,765.4	2.45	282.50	4,681.0	172.6	-778.3	-172.6	1.00	-1.00	Sussex Marker

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Devore 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site:	S34-T3N-R66W (Devore)	North Reference:	True
Well:	Devore 1B-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	2.10	282.50	4,715.5	172.9	-779.7	-172.9	1.00	-1.00	
4,900.0	1.10	282.50	4,815.5	173.5	-782.4	-173.5	1.00	-1.00	
5,000.0	0.10	282.50	4,915.5	173.7	-783.4	-173.7	1.00	-1.00	
5,010.0	0.00	0.00	4,925.5	173.7	-783.4	-173.7	1.00	-1.00	EOD; Inc=0°
5,100.0	0.00	0.00	5,015.5	173.7	-783.4	-173.7	0.00	0.00	
5,119.5	0.00	0.00	5,035.0	173.7	-783.4	-173.7	0.00	0.00	Shannon
5,200.0	0.00	0.00	5,115.5	173.7	-783.4	-173.7	0.00	0.00	
5,300.0	0.00	0.00	5,215.5	173.7	-783.4	-173.7	0.00	0.00	
5,400.0	0.00	0.00	5,315.5	173.7	-783.4	-173.7	0.00	0.00	
5,500.0	0.00	0.00	5,415.5	173.7	-783.4	-173.7	0.00	0.00	
5,600.0	0.00	0.00	5,515.5	173.7	-783.4	-173.7	0.00	0.00	
5,700.0	0.00	0.00	5,615.5	173.7	-783.4	-173.7	0.00	0.00	
5,800.0	0.00	0.00	5,715.5	173.7	-783.4	-173.7	0.00	0.00	
5,900.0	0.00	0.00	5,815.5	173.7	-783.4	-173.7	0.00	0.00	
6,000.0	0.00	0.00	5,915.5	173.7	-783.4	-173.7	0.00	0.00	
6,100.0	0.00	0.00	6,015.5	173.7	-783.4	-173.7	0.00	0.00	
6,127.5	0.00	0.00	6,043.0	173.7	-783.4	-173.7	0.00	0.00	Teepee Buttes
6,200.0	0.00	0.00	6,115.5	173.7	-783.4	-173.7	0.00	0.00	
6,300.0	0.00	0.00	6,215.5	173.7	-783.4	-173.7	0.00	0.00	
6,400.0	0.00	0.00	6,315.5	173.7	-783.4	-173.7	0.00	0.00	
6,500.0	0.00	0.00	6,415.5	173.7	-783.4	-173.7	0.00	0.00	
6,535.3	0.00	0.00	6,450.8	173.7	-783.4	-173.7	0.00	0.00	Start Build 8.00
6,600.0	5.17	182.50	6,515.4	170.8	-783.6	-170.8	8.00	8.00	
6,700.0	13.17	182.50	6,614.0	154.9	-784.3	-154.9	8.00	8.00	
6,800.0	21.17	182.50	6,709.5	125.4	-785.5	-125.4	8.00	8.00	
6,900.0	29.17	182.50	6,799.9	82.9	-787.4	-82.9	8.00	8.00	
7,000.0	37.17	182.50	6,883.6	28.3	-789.8	-28.3	8.00	8.00	
7,100.0	45.17	182.50	6,958.8	-37.4	-792.7	37.4	8.00	8.00	
7,200.0	53.17	182.50	7,024.1	-113.0	-796.0	113.0	8.00	8.00	
7,234.3	55.92	182.50	7,044.0	-140.9	-797.2	140.9	8.00	8.00	Sharon Springs
7,300.0	61.17	182.50	7,078.3	-196.9	-799.6	196.9	8.00	8.00	
7,400.0	69.17	182.50	7,120.2	-287.5	-803.6	287.5	8.00	8.00	
7,500.0	77.17	182.50	7,149.1	-383.0	-807.7	383.0	8.00	8.00	
7,513.5	78.25	182.50	7,152.0	-396.2	-808.3	396.2	8.00	8.00	B Chalk
7,600.0	85.17	182.50	7,164.5	-481.6	-812.0	481.6	8.00	8.00	
7,660.3	90.00	182.50	7,167.0	-541.8	-814.7	541.8	8.00	8.00	LP @ 7167' TVD; 90°
7,700.0	90.00	182.50	7,167.0	-581.5	-816.4	581.5	0.00	0.00	
7,800.0	90.00	182.50	7,167.0	-681.4	-820.8	681.4	0.00	0.00	
7,810.3	90.00	182.50	7,167.0	-691.7	-821.2	691.7	0.00	0.00	End of hold/Start turn @ 7810' MD
7,900.0	90.00	180.71	7,167.0	-781.3	-823.7	781.3	2.00	0.00	
7,937.1	90.00	179.96	7,167.0	-818.5	-823.9	818.5	2.00	0.00	End of turn @ 7937' MD
8,000.0	90.00	179.96	7,167.0	-881.3	-823.9	881.3	0.00	0.00	
8,100.0	90.00	179.96	7,167.0	-981.3	-823.8	981.3	0.00	0.00	
8,200.0	90.00	179.96	7,167.0	-1,081.3	-823.8	1,081.3	0.00	0.00	
8,300.0	90.00	179.96	7,167.0	-1,181.3	-823.7	1,181.3	0.00	0.00	
8,400.0	90.00	179.96	7,167.0	-1,281.3	-823.6	1,281.3	0.00	0.00	
8,500.0	90.00	179.96	7,167.0	-1,381.3	-823.6	1,381.3	0.00	0.00	
8,600.0	90.00	179.96	7,167.0	-1,481.3	-823.5	1,481.3	0.00	0.00	
8,700.0	90.00	179.96	7,167.0	-1,581.3	-823.5	1,581.3	0.00	0.00	
8,800.0	90.00	179.96	7,167.0	-1,681.3	-823.4	1,681.3	0.00	0.00	
8,900.0	90.00	179.96	7,167.0	-1,781.3	-823.3	1,781.3	0.00	0.00	
9,000.0	90.00	179.96	7,167.0	-1,881.3	-823.3	1,881.3	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Devore 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site:	S34-T3N-R66W (Devore)	North Reference:	True
Well:	Devore 1B-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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
9,100.0	90.00	179.96	7,167.0	-1,981.3	-823.2	1,981.3	0.00	0.00	
9,200.0	90.00	179.96	7,167.0	-2,081.3	-823.1	2,081.3	0.00	0.00	
9,300.0	90.00	179.96	7,167.0	-2,181.3	-823.1	2,181.3	0.00	0.00	
9,400.0	90.00	179.96	7,167.0	-2,281.3	-823.0	2,281.3	0.00	0.00	
9,500.0	90.00	179.96	7,167.0	-2,381.3	-822.9	2,381.3	0.00	0.00	
9,600.0	90.00	179.96	7,167.0	-2,481.3	-822.9	2,481.3	0.00	0.00	
9,700.0	90.00	179.96	7,167.0	-2,581.3	-822.8	2,581.3	0.00	0.00	
9,800.0	90.00	179.96	7,167.0	-2,681.3	-822.8	2,681.3	0.00	0.00	
9,900.0	90.00	179.96	7,167.0	-2,781.3	-822.7	2,781.3	0.00	0.00	
10,000.0	90.00	179.96	7,167.0	-2,881.3	-822.6	2,881.3	0.00	0.00	
10,100.0	90.00	179.96	7,167.0	-2,981.3	-822.6	2,981.3	0.00	0.00	
10,200.0	90.00	179.96	7,167.0	-3,081.3	-822.5	3,081.3	0.00	0.00	
10,300.0	90.00	179.96	7,167.0	-3,181.3	-822.4	3,181.3	0.00	0.00	
10,400.0	90.00	179.96	7,167.0	-3,281.3	-822.4	3,281.3	0.00	0.00	
10,500.0	90.00	179.96	7,167.0	-3,381.3	-822.3	3,381.3	0.00	0.00	
10,600.0	90.00	179.96	7,167.0	-3,481.3	-822.2	3,481.3	0.00	0.00	
10,700.0	90.00	179.96	7,167.0	-3,581.3	-822.2	3,581.3	0.00	0.00	
10,800.0	90.00	179.96	7,167.0	-3,681.3	-822.1	3,681.3	0.00	0.00	
10,900.0	90.00	179.96	7,167.0	-3,781.3	-822.1	3,781.3	0.00	0.00	
11,000.0	90.00	179.96	7,167.0	-3,881.3	-822.0	3,881.3	0.00	0.00	
11,100.0	90.00	179.96	7,167.0	-3,981.3	-821.9	3,981.3	0.00	0.00	
11,200.0	90.00	179.96	7,167.0	-4,081.3	-821.9	4,081.3	0.00	0.00	
11,300.0	90.00	179.96	7,167.0	-4,181.3	-821.8	4,181.3	0.00	0.00	
11,400.0	90.00	179.96	7,167.0	-4,281.3	-821.7	4,281.3	0.00	0.00	
11,500.0	90.00	179.96	7,167.0	-4,381.3	-821.7	4,381.3	0.00	0.00	
11,600.0	90.00	179.96	7,167.0	-4,481.3	-821.6	4,481.3	0.00	0.00	
11,700.0	90.00	179.96	7,167.0	-4,581.3	-821.5	4,581.3	0.00	0.00	
11,715.9	90.00	179.96	7,167.0	-4,597.2	-821.5	4,597.2	0.00	0.00	TD at 11715.9 - Devore 1B-34H PBHL

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Devore 1B-34H PBHL	0.00	0.00	7,167.0	-4,597.2	-821.5	1,307,697.57	3,206,344.98	40.175660	-104.761570
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Devore 1B-34H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site:	S34-T3N-R66W (Devore)	North Reference:	True
Well:	Devore 1B-34H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
649.2	649.0	Base of Fox Hills			
4,470.7	4,387.0	Sussex			
4,765.4	4,681.0	Sussex Marker			
5,119.5	5,035.0	Shannon			
6,127.5	6,043.0	Teepee Buttes			
7,234.3	7,044.0	Sharon Springs			
7,513.5	7,152.0	B Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	KOP @ 300'
1,700.0	1,686.1	36.8	-166.2	EOB; Inc=14°
3,610.0	3,539.4	136.8	-617.3	Start Drop -1.00
5,010.0	4,925.5	173.7	-783.4	EOD; Inc=0°
6,535.3	6,450.8	173.7	-783.4	Start Build 8.00
7,660.3	7,167.0	-541.8	-814.7	LP @ 7167' TVD; 90°
7,810.3	7,167.0	-691.7	-821.2	End of hold/Start turn @ 7810' MD
7,937.1	7,167.0	-818.5	-823.9	End of turn @ 7937' MD
11,715.9	7,167.0	-4,597.2	-821.5	TD at 11715.9

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S34-T3N-R66W (Devore)

Devore 1B-34H

Hz

Plan #2

Anticollision Report

10 April, 2013

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
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	4/10/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,715.9	Plan #2 (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
S34-T3N-R66W (Devore)						
DEVORE 1 (EXISTING) - EXISTING - GYRO						Out of range
Devore 1A-34H - Hz - Plan #2	200.0	200.0	8.4	7.7	12.840	CC, ES
Devore 1A-34H - Hz - Plan #2	11,716.7	12,005.2	432.4	288.2	2.999	SF
Devore 1C-34H - Hz - Plan #1	300.0	300.0	11.2	10.2	11.155	CC, ES
Devore 1C-34H - Hz - Plan #1	11,716.7	11,915.7	397.0	257.1	2.838	SF
Devore 1D-34H - Hz - Plan #1	300.0	300.0	19.6	18.6	19.521	CC, ES
Devore 1D-34H - Hz - Plan #1	700.0	700.4	31.0	28.6	12.912	SF
Devore 1E-34H - Hz - Plan #1	300.0	300.0	30.7	29.7	30.676	CC, ES
Devore 1E-34H - Hz - Plan #1	600.0	599.9	38.4	36.4	18.770	SF
Devore 1F-34H - Hz - Plan #1	300.0	300.0	41.9	40.9	41.831	CC, ES
Devore 1F-34H - Hz - Plan #1	600.0	598.2	52.8	50.7	25.802	SF
Devore 1G-34H - Hz - Plan #1	300.0	300.0	50.3	49.3	50.197	CC, ES
Devore 1G-34H - Hz - Plan #1	600.0	596.7	65.5	63.4	32.046	SF
Devore 1H-34H - Hz - Plan #1	200.0	200.0	61.5	60.8	94.161	CC, ES
Devore 1H-34H - Hz - Plan #1	700.0	692.2	96.2	93.8	40.347	SF
DEVORE 31-34 (EXISTING) - EXISTING - GYRO	7,345.0	7,101.7	40.2	20.2	2.008	CC, ES, SF
DEVORE 32-34 (EXISTING) - EXISTING - GYRO	8,894.3	7,181.9	395.5	354.2	9.570	CC
DEVORE 32-34 (EXISTING) - EXISTING - GYRO	8,900.0	7,181.9	395.5	354.1	9.549	ES
DEVORE 32-34 (EXISTING) - EXISTING - GYRO	9,000.0	7,181.9	409.4	366.3	9.505	SF
DEVORE 33-34 (EXISTING) - EXISTING - GYRO	10,219.5	7,168.3	271.5	207.9	4.270	CC, ES, SF
DEVORE 3-34 (EXISTING) - EXISTING - GYRO						Out of range
DEVORE 34-34 (EXISTING) - EXISTING - GYRO	11,461.4	7,188.5	413.0	327.9	4.855	CC, ES
DEVORE 34-34 (EXISTING) - EXISTING - GYRO	11,500.0	7,188.6	414.8	329.1	4.838	SF
DEVORE 41-34 (EXISTING) - EXISTING - GYRO						Out of range
DEVORE 42-34 (EXISTING) - EXISTING - GYRO						Out of range
DEVORE 43-34 (EXISTING) - EXISTING - GYRO						Out of range
DEVORE 44-34 (EXISTING) - EXISTING - GYRO						Out of range
DEVORE 6-0-34 (EXISTING) - EXISTING - SURVEYS						Out of range
DEVORE 6-4-34 (EXISTING) - EXISTING - SURVEYS						Out of range
DEVORE 6-8-34 (EXISTING) - EXISTING - SURVEYS						Out of range
MAYER 23-34 (EXISTING) - EXISTING - SURVEYS						Out of range
TURNER 21-34 (EXISTING) - EXISTING - SURVEYS						Out of range
TURNER 25-34 (EXISTING) - EXISTING - SURVEYS						Out of range

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 Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 1A-34H - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance			Total		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)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-89.94	0.0	-8.4	8.4					
100.0	100.0	100.0	100.0	0.2	0.2	-89.94	0.0	-8.4	8.4	8.1	0.30	27.599		
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.7	0.65	12.840	CC, ES	
300.0	300.0	299.8	299.8	0.5	0.5	-89.20	0.1	-9.2	9.2	8.2	1.00	9.223		
400.0	400.0	399.7	399.6	0.7	0.7	-10.91	0.5	-11.8	11.0	9.6	1.35	8.135		
500.0	500.0	499.4	499.3	0.9	0.9	-10.95	1.1	-16.1	12.7	11.0	1.70	7.499		
600.0	599.9	599.2	598.9	1.0	1.1	-11.51	1.9	-22.1	14.5	12.5	2.05	7.088		
700.0	699.7	698.9	698.3	1.2	1.3	-12.42	3.0	-29.9	16.3	13.9	2.40	6.801		
800.0	799.4	798.6	797.5	1.4	1.5	-13.58	4.4	-39.3	18.1	15.4	2.75	6.592		
900.0	898.9	898.2	896.5	1.7	1.8	-14.91	5.9	-50.5	20.0	16.9	3.11	6.432		
1,000.0	998.3	997.9	995.3	1.9	2.0	-16.36	7.7	-63.3	21.9	18.4	3.47	6.304		
1,100.0	1,097.4	1,097.5	1,093.8	2.2	2.3	-17.89	9.8	-77.8	23.8	20.0	3.84	6.196		
1,200.0	1,196.3	1,197.0	1,192.0	2.5	2.7	-19.49	12.1	-94.1	25.8	21.5	4.23	6.098		
1,300.0	1,294.9	1,296.5	1,289.9	2.8	3.0	-21.12	14.6	-112.0	27.8	23.2	4.63	6.003		
1,400.0	1,393.3	1,396.0	1,387.4	3.2	3.4	-22.78	17.3	-131.6	29.9	24.8	5.06	5.906		
1,500.0	1,491.2	1,495.5	1,484.5	3.5	3.8	-24.44	20.3	-152.8	32.0	26.5	5.52	5.803		
1,600.0	1,588.9	1,594.9	1,581.2	3.9	4.2	-26.10	23.5	-175.7	34.2	28.2	6.02	5.691		
1,700.0	1,686.1	1,694.3	1,677.5	4.4	4.7	-27.75	27.0	-200.3	36.5	30.0	6.56	5.570		
1,800.0	1,783.1	1,794.3	1,774.0	4.8	5.2	-29.25	30.6	-225.9	39.0	31.8	7.14	5.458		
1,900.0	1,880.2	1,894.2	1,870.5	5.3	5.6	-30.57	34.2	-251.5	41.4	33.7	7.74	5.351		
2,000.0	1,977.2	1,994.2	1,967.1	5.7	6.1	-31.75	37.8	-277.1	43.9	35.5	8.37	5.249		
2,100.0	2,074.2	2,094.2	2,063.7	6.2	6.6	-32.80	41.4	-302.7	46.4	37.4	9.00	5.154		
2,200.0	2,171.3	2,194.1	2,160.2	6.6	7.1	-33.74	45.0	-328.4	48.9	39.3	9.66	5.065		
2,300.0	2,268.3	2,294.1	2,256.8	7.1	7.6	-34.59	48.6	-354.0	51.4	41.1	10.32	4.984		
2,400.0	2,365.3	2,394.1	2,353.3	7.5	8.1	-35.36	52.2	-379.6	54.0	43.0	11.00	4.908		
2,500.0	2,462.3	2,494.0	2,449.9	8.0	8.6	-36.06	55.8	-405.2	56.5	44.8	11.68	4.838		
2,600.0	2,559.4	2,594.0	2,546.5	8.4	9.1	-36.70	59.4	-430.8	59.1	46.7	12.37	4.774		
2,700.0	2,656.4	2,694.0	2,643.0	8.9	9.5	-37.28	63.0	-456.5	61.6	48.5	13.07	4.715		
2,800.0	2,753.4	2,793.9	2,739.6	9.4	10.0	-37.83	66.6	-482.1	64.2	50.4	13.77	4.660		
2,900.0	2,850.5	2,893.9	2,836.1	9.8	10.5	-38.32	70.2	-507.7	66.7	52.3	14.48	4.610		
3,000.0	2,947.5	2,993.9	2,932.7	10.3	11.0	-38.79	73.8	-533.3	69.3	54.1	15.19	4.563		
3,100.0	3,044.5	3,093.8	3,029.3	10.7	11.5	-39.22	77.4	-559.0	71.9	56.0	15.90	4.519		
3,200.0	3,141.6	3,193.8	3,125.8	11.2	12.0	-39.61	81.0	-584.6	74.5	57.8	16.62	4.479		
3,300.0	3,238.6	3,293.8	3,222.4	11.7	12.5	-39.99	84.6	-610.2	77.0	59.7	17.35	4.441		
3,400.0	3,335.6	3,393.7	3,318.9	12.1	13.0	-40.34	88.2	-635.8	79.6	61.5	18.07	4.406		
3,500.0	3,432.6	3,493.7	3,415.5	12.6	13.5	-40.66	91.8	-661.4	82.2	63.4	18.80	4.373		
3,600.0	3,529.7	3,593.7	3,512.1	13.1	14.0	-40.97	95.4	-687.1	84.8	65.3	19.53	4.342		
3,700.0	3,626.9	3,693.6	3,608.6	13.5	14.5	-40.97	99.0	-712.7	87.9	67.7	20.17	4.358		
3,800.0	3,724.5	3,793.5	3,705.1	13.9	15.0	-40.28	102.6	-738.3	92.4	71.8	20.61	4.481		
3,900.0	3,822.4	3,893.3	3,801.5	14.3	15.5	-39.01	106.2	-763.9	98.2	77.3	20.86	4.706		
4,000.0	3,920.7	3,993.0	3,897.8	14.7	16.0	-37.31	109.8	-789.4	105.4	84.5	20.94	5.033		
4,100.0	4,019.3	4,092.5	3,993.9	15.0	16.5	-35.34	113.4	-814.9	114.1	93.2	20.89	5.462		
4,200.0	4,118.2	4,191.9	4,089.9	15.3	17.0	-33.21	116.9	-840.4	124.4	103.7	20.75	5.995		
4,300.0	4,217.3	4,291.1	4,185.7	15.6	17.4	-31.04	120.5	-865.8	136.4	115.8	20.56	6.632		
4,400.0	4,316.6	4,390.0	4,281.2	15.8	17.9	-28.91	124.1	-891.2	150.0	129.6	20.35	7.370		
4,500.0	4,416.2	4,488.6	4,376.5	16.0	18.4	-26.88	127.6	-916.4	165.3	145.2	20.14	8.208		
4,600.0	4,515.8	4,587.0	4,471.5	16.2	18.9	-24.97	131.2	-941.6	182.4	162.5	19.96	9.140		
4,700.0	4,615.6	4,685.0	4,566.2	16.4	19.4	-23.20	134.7	-966.8	201.3	181.4	19.81	10.161		
4,800.0	4,715.5	4,782.7	4,660.5	16.5	19.9	-21.59	138.2	-991.8	221.9	202.2	19.69	11.265		
4,900.0	4,815.5	4,879.9	4,754.5	16.6	20.4	-20.12	141.7	-1,016.7	244.2	224.6	19.62	12.445		
5,000.0	4,915.5	4,976.8	4,848.1	16.7	20.8	-18.79	145.2	-1,041.6	268.3	248.7	19.59	13.697		

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 Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 1A-34H - Hz - Plan #2													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	5,015.5	5,074.6	4,942.6	16.8	21.3	-95.04	148.7	-1,066.6	293.4	273.2	20.29	14.465		
5,200.0	5,115.5	5,176.9	5,041.7	16.9	21.8	-93.98	152.2	-1,091.5	317.5	297.1	20.36	15.595		
5,300.0	5,215.5	5,280.0	5,142.1	17.0	22.2	-93.14	155.5	-1,114.8	339.9	319.4	20.49	16.588		
5,400.0	5,315.5	5,384.0	5,243.8	17.1	22.7	-92.45	158.6	-1,136.6	360.7	340.0	20.67	17.448		
5,500.0	5,415.5	5,488.8	5,346.6	17.2	23.0	-91.89	161.4	-1,156.6	379.7	358.8	20.88	18.180		
5,600.0	5,515.5	5,594.3	5,450.4	17.3	23.4	-91.42	164.0	-1,174.9	397.0	375.8	21.12	18.791		
5,700.0	5,615.5	5,700.5	5,555.3	17.4	23.7	-91.04	166.3	-1,191.4	412.4	391.1	21.39	19.286		
5,800.0	5,715.5	5,807.2	5,661.0	17.5	24.0	-90.73	168.3	-1,206.0	426.1	404.5	21.66	19.670		
5,900.0	5,815.5	5,914.5	5,767.5	17.6	24.3	-90.47	170.1	-1,218.8	438.0	416.0	21.96	19.948		
6,000.0	5,915.5	6,022.3	5,874.7	17.7	24.5	-90.26	171.6	-1,229.6	448.0	425.8	22.26	20.126		
6,100.0	6,015.5	6,130.4	5,982.4	17.8	24.7	-90.10	172.9	-1,238.4	456.2	433.6	22.58	20.208		
6,200.0	6,115.5	6,238.8	6,090.6	17.9	24.9	-89.98	173.8	-1,245.3	462.5	439.6	22.90	20.199		
6,300.0	6,215.5	6,347.4	6,199.1	18.0	25.1	-89.90	174.5	-1,250.1	467.0	443.7	23.23	20.102		
6,400.0	6,315.5	6,456.2	6,307.9	18.1	25.2	-89.85	174.9	-1,252.9	469.5	445.9	23.57	19.923		
6,500.0	6,415.5	6,563.8	6,415.5	18.2	25.3	-89.84	175.0	-1,253.6	470.2	446.3	23.91	19.668		
6,600.0	6,515.4	6,663.7	6,515.4	18.3	25.3	-88.03	175.0	-1,253.6	470.1	446.4	23.71	19.828		
6,700.0	6,614.0	6,762.3	6,614.0	18.4	25.4	-89.96	175.0	-1,253.6	469.8	446.1	23.71	19.814		
6,701.3	6,615.3	6,763.6	6,615.3	18.4	25.4	-90.00	175.0	-1,253.6	469.8	446.1	23.71	19.815		
6,800.0	6,709.5	6,860.9	6,712.6	18.5	25.5	-93.32	173.9	-1,253.6	470.6	446.9	23.68	19.874		
6,900.0	6,799.9	6,966.5	6,817.2	18.5	25.5	-97.05	160.1	-1,253.5	472.7	448.8	23.91	19.771		
7,000.0	6,883.6	7,077.5	6,923.7	18.6	25.6	-100.73	129.3	-1,253.1	475.9	451.4	24.46	19.451		
7,100.0	6,958.8	7,194.6	7,029.4	18.8	25.6	-104.28	79.3	-1,252.4	479.6	454.3	25.28	18.974		
7,200.0	7,024.1	7,317.9	7,130.5	19.1	25.7	-107.62	8.9	-1,251.5	483.5	457.2	26.26	18.413		
7,300.0	7,078.3	7,447.6	7,222.1	19.4	25.8	-110.64	-82.7	-1,250.4	486.7	459.5	27.26	17.855		
7,400.0	7,120.2	7,583.2	7,298.5	20.0	26.1	-113.23	-194.5	-1,249.0	488.7	460.4	28.27	17.285		
7,500.0	7,149.1	7,723.5	7,354.0	20.6	26.6	-115.30	-323.1	-1,247.3	488.7	459.4	29.27	16.697		
7,600.0	7,164.5	7,866.9	7,383.7	21.4	27.3	-116.72	-463.1	-1,245.6	486.2	455.9	30.30	16.047		
7,700.0	7,167.0	7,990.9	7,388.0	22.4	28.1	-117.37	-586.9	-1,244.0	481.4	449.6	31.80	15.139		
7,800.0	7,167.0	8,090.7	7,388.0	23.4	28.9	-117.68	-686.7	-1,242.7	476.4	442.3	34.06	13.988		
7,900.0	7,167.0	8,190.6	7,388.0	24.5	29.7	-117.89	-786.6	-1,241.5	472.6	436.9	35.73	13.227		
8,000.0	7,167.0	8,290.6	7,388.0	25.6	30.6	-117.96	-886.6	-1,240.2	471.4	433.5	37.91	12.435		
8,100.0	7,167.0	8,390.6	7,388.0	26.8	31.6	-118.03	-986.6	-1,238.9	470.3	429.8	40.46	11.624		
8,200.0	7,167.0	8,490.6	7,388.0	28.0	32.7	-118.10	-1,086.6	-1,237.7	469.2	426.2	43.08	10.892		
8,300.0	7,167.0	8,590.6	7,388.0	29.3	33.8	-118.17	-1,186.6	-1,236.4	468.2	422.4	45.75	10.232		
8,400.0	7,167.0	8,690.6	7,388.0	30.7	35.0	-118.24	-1,286.5	-1,235.1	467.1	418.6	48.47	9.637		
8,500.0	7,167.0	8,790.6	7,388.0	32.1	36.2	-118.31	-1,386.5	-1,233.9	466.1	414.8	51.23	9.098		
8,600.0	7,167.0	8,890.6	7,388.0	33.5	37.4	-118.38	-1,486.5	-1,232.6	465.0	411.0	54.01	8.609		
8,700.0	7,167.0	8,990.6	7,388.0	35.0	38.7	-118.45	-1,586.5	-1,231.3	463.9	407.1	56.82	8.165		
8,800.0	7,167.0	9,090.6	7,388.0	36.5	40.1	-118.52	-1,686.5	-1,230.1	462.9	403.2	59.65	7.760		
8,900.0	7,167.0	9,190.6	7,388.0	38.0	41.4	-118.59	-1,786.5	-1,228.8	461.8	399.3	62.50	7.389		
9,000.0	7,167.0	9,290.5	7,388.0	39.5	42.8	-118.66	-1,886.5	-1,227.5	460.8	395.4	65.36	7.049		
9,100.0	7,167.0	9,390.5	7,388.0	41.0	44.2	-118.74	-1,986.4	-1,226.3	459.7	391.5	68.24	6.737		
9,200.0	7,167.0	9,490.5	7,388.0	42.6	45.7	-118.81	-2,086.4	-1,225.0	458.7	387.5	71.12	6.449		
9,300.0	7,167.0	9,590.5	7,388.0	44.2	47.2	-118.88	-2,186.4	-1,223.7	457.6	383.6	74.01	6.183		
9,400.0	7,167.0	9,690.5	7,388.0	45.8	48.6	-118.95	-2,286.4	-1,222.5	456.6	379.6	76.91	5.936		
9,500.0	7,167.0	9,790.5	7,388.0	47.4	50.1	-119.03	-2,386.4	-1,221.2	455.5	375.7	79.82	5.707		
9,600.0	7,167.0	9,890.5	7,388.0	49.0	51.7	-119.10	-2,486.4	-1,220.0	454.5	371.7	82.72	5.494		
9,700.0	7,167.0	9,990.5	7,388.0	50.6	53.2	-119.17	-2,586.3	-1,218.7	453.4	367.8	85.64	5.295		
9,800.0	7,167.0	10,090.5	7,388.0	52.2	54.7	-119.25	-2,686.3	-1,217.4	452.4	363.8	88.55	5.108		
9,900.0	7,167.0	10,190.5	7,388.0	53.9	56.3	-119.32	-2,786.3	-1,216.2	451.3	359.8	91.47	4.934		
10,000.0	7,167.0	10,290.5	7,388.0	55.5	57.9	-119.40	-2,886.3	-1,214.9	450.3	355.9	94.38	4.771		
10,100.0	7,167.0	10,390.5	7,388.0	57.2	59.5	-119.47	-2,986.3	-1,213.6	449.2	351.9	97.30	4.617		

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 Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 1A-34H - Hz - Plan #2													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		
10,200.0	7,167.0	10,490.5	7,388.0	58.8	61.1	119.55	-3,086.3	-1,212.4	448.2	347.9	100.22	4.472		
10,300.0	7,167.0	10,590.5	7,388.0	60.5	62.7	119.62	-3,186.3	-1,211.1	447.1	344.0	103.13	4.335		
10,400.0	7,167.0	10,690.4	7,388.0	62.2	64.3	119.70	-3,286.2	-1,209.8	446.1	340.0	106.05	4.206		
10,500.0	7,167.0	10,790.4	7,388.0	63.8	65.9	119.78	-3,386.2	-1,208.6	445.0	336.1	108.96	4.084		
10,600.0	7,167.0	10,890.4	7,388.0	65.5	67.5	119.85	-3,486.2	-1,207.3	444.0	332.1	111.87	3.969		
10,700.0	7,167.0	10,990.4	7,388.0	67.2	69.1	119.93	-3,586.2	-1,206.0	442.9	328.2	114.79	3.859		
10,800.0	7,167.0	11,090.4	7,388.0	68.9	70.8	120.01	-3,686.2	-1,204.8	441.9	324.2	117.69	3.755		
10,900.0	7,167.0	11,190.4	7,388.0	70.6	72.4	120.09	-3,786.2	-1,203.5	440.9	320.3	120.60	3.656		
11,000.0	7,167.0	11,290.4	7,388.0	72.3	74.0	120.17	-3,886.1	-1,202.2	439.8	316.3	123.50	3.561		
11,100.0	7,167.0	11,390.4	7,388.0	73.9	75.7	120.24	-3,986.1	-1,201.0	438.8	312.4	126.40	3.471		
11,200.0	7,167.0	11,490.4	7,388.0	75.6	77.4	120.32	-4,086.1	-1,199.7	437.7	308.5	129.30	3.386		
11,300.0	7,167.0	11,590.4	7,388.0	77.3	79.0	120.40	-4,186.1	-1,198.4	436.7	304.5	132.19	3.304		
11,400.0	7,167.0	11,690.4	7,388.0	79.0	80.7	120.48	-4,286.1	-1,197.2	435.7	300.6	135.08	3.225		
11,500.0	7,167.0	11,790.4	7,388.0	80.8	82.3	120.56	-4,386.1	-1,195.9	434.6	296.7	137.96	3.150		
11,600.0	7,167.0	11,890.4	7,388.0	82.5	84.0	120.64	-4,486.1	-1,194.6	433.6	292.8	140.84	3.079		
11,700.0	7,167.0	11,990.3	7,388.0	84.2	85.7	120.73	-4,586.0	-1,193.4	432.6	288.8	143.72	3.010		
11,716.7	7,167.0	12,005.2	7,388.0	84.5	85.9	120.74	-4,600.8	-1,193.2	432.4	288.2	144.17	2.999 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 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				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2					
100.0	100.0	100.0	100.0	0.2	0.2	90.04	0.0	11.2	11.2	10.9	0.30	36.798		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.5	0.65	17.120		
300.0	300.0	300.0	300.0	0.5	0.5	90.04	0.0	11.2	11.2	10.2	1.00	11.155 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	168.44	0.0	11.2	12.0	10.7	1.35	8.905		
500.0	500.0	500.2	500.2	0.9	0.9	169.43	0.3	10.4	13.8	12.1	1.70	8.100		
600.0	599.9	600.4	600.4	1.0	1.0	169.38	1.2	7.9	15.6	13.5	2.05	7.595		
700.0	699.7	700.7	700.5	1.2	1.2	168.60	2.7	3.8	17.4	15.0	2.40	7.256		
800.0	799.4	801.0	800.6	1.4	1.4	167.32	4.8	-2.0	19.3	16.6	2.75	7.020		
900.0	898.9	901.3	900.6	1.7	1.6	165.67	7.5	-9.4	21.3	18.2	3.11	6.850		
1,000.0	998.3	1,001.6	1,000.5	1.9	1.8	163.78	10.8	-18.5	23.4	19.9	3.48	6.724		
1,100.0	1,097.4	1,102.0	1,100.2	2.2	2.1	161.71	14.7	-29.2	25.5	21.7	3.86	6.626		
1,200.0	1,196.3	1,202.4	1,199.7	2.5	2.4	159.53	19.2	-41.5	27.8	23.6	4.25	6.542		
1,300.0	1,294.9	1,302.8	1,299.0	2.8	2.6	157.28	24.3	-55.5	30.2	25.6	4.68	6.463		
1,400.0	1,393.3	1,403.2	1,398.1	3.2	3.0	155.01	30.0	-71.1	32.8	27.7	5.14	6.381		
1,500.0	1,491.2	1,503.7	1,496.8	3.5	3.3	152.75	36.2	-88.4	35.5	29.8	5.64	6.291		
1,600.0	1,588.9	1,604.1	1,595.3	3.9	3.7	150.52	43.1	-107.3	38.4	32.2	6.20	6.190		
1,700.0	1,686.1	1,704.6	1,693.4	4.4	4.1	148.34	50.6	-127.8	41.4	34.6	6.81	6.079		
1,800.0	1,783.1	1,804.5	1,790.7	4.8	4.5	146.43	58.3	-148.9	44.6	37.1	7.46	5.979		
1,900.0	1,880.2	1,904.5	1,888.1	5.3	4.9	144.78	65.9	-170.0	47.9	39.7	8.13	5.883		
2,000.0	1,977.2	2,004.4	1,985.5	5.7	5.3	143.34	73.6	-191.2	51.1	42.3	8.83	5.792		
2,100.0	2,074.2	2,104.3	2,082.9	6.2	5.7	142.08	81.3	-212.3	54.5	44.9	9.54	5.708		
2,200.0	2,171.3	2,204.3	2,180.2	6.6	6.1	140.96	89.0	-233.4	57.8	47.5	10.27	5.631		
2,300.0	2,268.3	2,304.2	2,277.6	7.1	6.6	139.96	96.7	-254.5	61.2	50.2	11.00	5.560		
2,400.0	2,365.3	2,404.2	2,375.0	7.5	7.0	139.07	104.4	-275.7	64.5	52.8	11.74	5.495		
2,500.0	2,462.3	2,504.1	2,472.4	8.0	7.4	138.27	112.1	-296.8	67.9	55.4	12.50	5.436		
2,600.0	2,559.4	2,604.0	2,569.7	8.4	7.8	137.54	119.8	-317.9	71.3	58.1	13.25	5.382		
2,700.0	2,656.4	2,704.0	2,667.1	8.9	8.3	136.88	127.5	-339.0	74.7	60.7	14.01	5.333		
2,800.0	2,753.4	2,803.9	2,764.5	9.4	8.7	136.28	135.1	-360.2	78.2	63.4	14.78	5.288		
2,900.0	2,850.5	2,903.4	2,861.5	9.8	9.1	135.86	142.7	-381.0	81.7	66.2	15.52	5.266		
3,000.0	2,947.5	3,002.4	2,958.3	10.3	9.5	136.29	149.7	-400.3	86.3	70.2	16.13	5.352		
3,100.0	3,044.5	3,101.2	3,055.3	10.7	9.9	137.49	156.2	-418.0	92.0	75.4	16.57	5.548		
3,200.0	3,141.6	3,200.0	3,152.6	11.2	10.2	139.30	162.0	-434.1	98.8	81.9	16.88	5.852		
3,300.0	3,238.6	3,298.2	3,249.6	11.7	10.5	141.52	167.3	-448.5	106.9	89.8	17.06	6.265		
3,400.0	3,335.6	3,396.3	3,346.7	12.1	10.8	144.01	172.0	-461.4	116.4	99.3	17.14	6.790		
3,500.0	3,432.6	3,494.0	3,443.7	12.6	11.1	146.61	176.1	-472.7	127.4	110.2	17.15	7.428		
3,600.0	3,529.7	3,591.3	3,540.4	13.1	11.3	149.22	179.6	-482.3	139.9	122.8	17.10	8.181		
3,700.0	3,626.9	3,688.2	3,636.9	13.5	11.5	151.69	182.6	-490.4	153.4	136.4	17.04	9.002		
3,800.0	3,724.5	3,784.8	3,733.3	13.9	11.7	153.82	184.9	-497.0	167.0	150.0	17.02	9.814		
3,900.0	3,822.4	3,881.3	3,829.6	14.3	11.8	155.68	186.8	-502.0	180.6	163.6	17.02	10.612		
4,000.0	3,920.7	3,977.5	3,925.8	14.7	12.0	157.33	188.0	-505.5	194.3	177.2	17.05	11.394		
4,100.0	4,019.3	4,073.5	4,021.7	15.0	12.1	158.81	188.7	-507.4	207.9	190.8	17.10	12.157		
4,200.0	4,118.2	4,169.9	4,118.2	15.3	12.2	160.16	188.9	-507.9	221.5	204.3	17.17	12.896		
4,300.0	4,217.3	4,269.0	4,217.3	15.6	12.3	161.29	188.9	-507.9	234.0	216.7	17.29	13.534		
4,400.0	4,316.6	4,368.4	4,316.6	15.8	12.4	162.19	188.9	-507.9	244.9	227.4	17.45	14.036		
4,500.0	4,416.2	4,467.9	4,416.2	16.0	12.5	162.89	188.9	-507.9	254.2	236.5	17.64	14.409		
4,600.0	4,515.8	4,567.6	4,515.8	16.2	12.6	163.43	188.9	-507.9	261.9	244.0	17.86	14.660		
4,700.0	4,615.6	4,667.4	4,615.6	16.4	12.7	163.83	188.9	-507.9	267.9	249.8	18.11	14.796		
4,800.0	4,715.5	4,767.3	4,715.5	16.5	12.8	164.11	188.9	-507.9	272.3	253.9	18.37	14.823		
4,900.0	4,815.5	4,867.2	4,815.5	16.6	13.0	164.27	188.9	-507.9	274.9	256.3	18.64	14.748		
5,000.0	4,915.5	4,967.2	4,915.5	16.7	13.1	164.33	188.9	-507.9	275.9	257.0	18.93	14.577		
5,100.0	5,015.5	5,067.2	5,015.5	16.8	13.2	86.83	188.9	-507.9	276.0	256.3	19.67	14.032		

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 Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 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	5,115.5	5,167.2	5,115.5	16.9	13.3	86.83	188.9	-507.9	276.0	256.0	19.98	13.811			
5,300.0	5,215.5	5,267.2	5,215.5	17.0	13.4	86.83	188.9	-507.9	276.0	255.7	20.30	13.596			
5,400.0	5,315.5	5,367.2	5,315.5	17.1	13.5	86.83	188.9	-507.9	276.0	255.3	20.61	13.387			
5,500.0	5,415.5	5,467.2	5,415.5	17.2	13.7	86.83	188.9	-507.9	276.0	255.0	20.93	13.183			
5,600.0	5,515.5	5,567.2	5,515.5	17.3	13.8	86.83	188.9	-507.9	276.0	254.7	21.25	12.985			
5,700.0	5,615.5	5,667.2	5,615.5	17.4	13.9	86.83	188.9	-507.9	276.0	254.4	21.57	12.793			
5,800.0	5,715.5	5,767.2	5,715.5	17.5	14.0	86.83	188.9	-507.9	276.0	254.1	21.89	12.605			
5,900.0	5,815.5	5,867.2	5,815.5	17.6	14.2	86.83	188.9	-507.9	276.0	253.7	22.21	12.423			
6,000.0	5,915.5	5,967.2	5,915.5	17.7	14.3	86.83	188.9	-507.9	276.0	253.4	22.54	12.245			
6,100.0	6,015.5	6,067.2	6,015.5	17.8	14.4	86.83	188.9	-507.9	276.0	253.1	22.86	12.072			
6,200.0	6,115.5	6,167.2	6,115.5	17.9	14.5	86.83	188.9	-507.9	276.0	252.8	23.18	11.903			
6,300.0	6,215.5	6,267.2	6,215.5	18.0	14.7	86.83	188.9	-507.9	276.0	252.4	23.51	11.739			
6,400.0	6,315.5	6,367.2	6,315.5	18.1	14.8	86.83	188.9	-507.9	276.0	252.1	23.83	11.579			
6,500.0	6,415.5	6,467.2	6,415.5	18.2	14.9	86.83	188.9	-507.9	276.0	251.8	24.16	11.422			
6,507.6	6,423.1	6,474.8	6,423.1	18.2	14.9	-95.67	188.9	-507.9	276.0	252.1	23.84	11.573			
6,600.0	6,515.4	6,567.1	6,515.4	18.3	15.1	-96.24	188.9	-507.9	276.3	252.0	24.21	11.412			
6,700.0	6,614.0	6,665.8	6,614.0	18.4	15.2	-99.28	188.9	-507.9	278.4	253.6	24.83	11.216			
6,800.0	6,709.5	6,764.9	6,713.1	18.5	15.3	-104.43	187.7	-507.9	284.6	259.0	25.57	11.130			
6,900.0	6,799.9	6,871.8	6,819.0	18.5	15.4	-109.79	173.6	-507.9	294.5	268.5	25.99	11.331			
7,000.0	6,883.6	6,984.3	6,926.9	18.6	15.4	-114.56	141.9	-507.9	307.0	281.1	25.90	11.853			
7,100.0	6,958.8	7,103.1	7,033.8	18.8	15.5	-118.62	90.7	-507.9	321.1	295.7	25.39	12.646			
7,200.0	7,024.1	7,228.2	7,135.7	19.1	15.6	-121.89	18.3	-507.9	335.7	311.0	24.69	13.598			
7,300.0	7,078.3	7,359.7	7,227.5	19.4	15.9	-124.32	-75.5	-507.9	349.4	325.2	24.24	14.416			
7,400.0	7,120.2	7,496.8	7,303.3	20.0	16.4	-125.87	-189.5	-507.9	361.3	336.9	24.44	14.785			
7,500.0	7,149.1	7,638.3	7,357.3	20.6	17.2	-126.53	-320.1	-507.9	370.4	344.7	25.70	14.414			
7,600.0	7,164.5	7,782.4	7,384.9	21.4	18.4	-126.30	-461.2	-507.9	376.2	348.0	28.15	13.364			
7,700.0	7,167.0	7,902.7	7,388.0	22.4	19.6	-125.64	-581.5	-507.9	379.5	348.6	30.87	12.293			
7,800.0	7,167.0	8,002.6	7,388.0	23.4	20.7	-125.26	-681.4	-507.9	383.0	350.0	33.00	11.608			
7,900.0	7,167.0	8,102.6	7,388.0	24.5	21.9	-124.98	-781.3	-507.9	385.5	350.6	34.86	11.057			
8,000.0	7,167.0	8,202.6	7,388.0	25.6	23.2	-124.96	-881.3	-507.9	385.6	348.7	36.94	10.438			
8,100.0	7,167.0	8,302.6	7,388.0	26.8	24.5	-124.97	-981.3	-507.9	385.5	346.3	39.26	9.821			
8,200.0	7,167.0	8,402.6	7,388.0	28.0	25.9	-124.98	-1,081.3	-507.9	385.5	343.9	41.64	9.257			
8,300.0	7,167.0	8,502.6	7,388.0	29.3	27.3	-124.98	-1,181.3	-507.9	385.4	341.4	44.09	8.743			
8,400.0	7,167.0	8,602.6	7,388.0	30.7	28.7	-124.99	-1,281.3	-507.9	385.4	338.8	46.58	8.273			
8,500.0	7,167.0	8,702.6	7,388.0	32.1	30.2	-124.99	-1,381.3	-507.9	385.3	336.2	49.12	7.845			
8,600.0	7,167.0	8,802.6	7,388.0	33.5	31.8	-125.00	-1,481.3	-507.9	385.3	333.6	51.69	7.454			
8,700.0	7,167.0	8,902.6	7,388.0	35.0	33.3	-125.00	-1,581.3	-507.9	385.2	330.9	54.29	7.096			
8,800.0	7,167.0	9,002.6	7,388.0	36.5	34.9	-125.01	-1,681.3	-507.9	385.2	328.3	56.92	6.767			
8,900.0	7,167.0	9,102.6	7,388.0	38.0	36.4	-125.01	-1,781.3	-507.9	385.1	325.6	59.57	6.465			
9,000.0	7,167.0	9,202.6	7,388.0	39.5	38.0	-125.02	-1,881.3	-507.9	385.1	322.8	62.24	6.187			
9,100.0	7,167.0	9,302.6	7,388.0	41.0	39.6	-125.02	-1,981.3	-507.9	385.0	320.1	64.93	5.930			
9,200.0	7,167.0	9,402.6	7,388.0	42.6	41.2	-125.03	-2,081.3	-507.9	385.0	317.3	67.64	5.692			
9,240.7	7,167.0	9,443.2	7,388.0	43.2	41.9	-125.03	-2,122.0	-507.9	385.0	316.2	68.74	5.600			
9,300.0	7,167.0	9,500.0	7,388.0	44.2	42.8	-125.02	-2,178.8	-507.7	385.1	314.8	70.33	5.476			
9,400.0	7,167.0	9,594.5	7,388.0	45.8	44.4	-124.88	-2,273.3	-506.0	386.5	313.4	73.09	5.287			
9,500.0	7,167.0	9,691.4	7,388.0	47.4	46.0	-124.62	-2,370.2	-502.9	389.1	313.1	76.01	5.119			
9,600.0	7,167.0	9,791.4	7,388.0	49.0	47.6	-124.34	-2,470.0	-499.4	391.9	312.9	79.01	4.960			
9,700.0	7,167.0	9,891.3	7,388.0	50.6	49.2	-124.06	-2,569.9	-495.9	394.7	312.7	82.03	4.812			
9,800.0	7,167.0	9,991.3	7,388.0	52.2	50.9	-123.78	-2,669.8	-492.4	397.6	312.5	85.07	4.673			
9,900.0	7,167.0	10,091.2	7,388.0	53.9	52.6	-123.51	-2,769.7	-489.0	400.4	312.3	88.14	4.543			
10,000.0	7,167.0	10,191.2	7,388.0	55.5	54.2	-123.24	-2,869.6	-485.5	403.3	312.1	91.22	4.421			
10,100.0	7,167.0	10,291.1	7,388.0	57.2	55.9	-122.98	-2,969.4	-482.0	406.2	311.8	94.33	4.306			

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 Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 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		
10,200.0	7,167.0	10,391.0	7,388.0	58.8	57.6	-122.71	-3,069.3	-478.5	409.0	311.6	97.45	4.198		
10,300.0	7,167.0	10,491.0	7,388.0	60.5	59.3	-122.46	-3,169.2	-475.0	411.9	311.3	100.58	4.095		
10,400.0	7,167.0	10,593.7	7,388.0	62.2	61.0	-122.21	-3,271.9	-471.6	414.7	310.9	103.77	3.996		
10,500.0	7,167.0	10,700.2	7,388.0	63.8	62.8	-122.08	-3,378.4	-469.7	416.1	309.2	106.91	3.892		
10,600.0	7,167.0	10,806.8	7,388.0	65.5	64.6	-122.09	-3,484.9	-469.8	416.0	306.1	109.90	3.785		
10,700.0	7,167.0	10,910.2	7,388.0	67.2	66.4	-122.22	-3,588.4	-471.6	414.5	301.8	112.71	3.677		
10,800.0	7,167.0	11,010.2	7,388.0	68.9	68.1	-122.38	-3,688.3	-473.6	412.7	297.3	115.45	3.575		
10,900.0	7,167.0	11,110.2	7,388.0	70.6	69.8	-122.53	-3,788.3	-475.6	411.0	292.8	118.17	3.478		
11,000.0	7,167.0	11,210.2	7,388.0	72.3	71.5	-122.69	-3,888.2	-477.6	409.2	288.3	120.89	3.385		
11,100.0	7,167.0	11,310.2	7,388.0	73.9	73.3	-122.85	-3,988.2	-479.6	407.5	283.9	123.60	3.297		
11,200.0	7,167.0	11,410.1	7,388.0	75.6	75.0	-123.00	-4,088.2	-481.6	405.7	279.5	126.29	3.213		
11,300.0	7,167.0	11,510.1	7,388.0	77.3	76.7	-123.16	-4,188.1	-483.6	404.0	275.0	128.98	3.132		
11,400.0	7,167.0	11,610.1	7,388.0	79.0	78.4	-123.32	-4,288.1	-485.6	402.3	270.6	131.65	3.056		
11,500.0	7,167.0	11,710.1	7,388.0	80.8	80.1	-123.49	-4,388.0	-487.7	400.5	266.2	134.31	2.982		
11,600.0	7,167.0	11,810.0	7,388.0	82.5	81.9	-123.65	-4,488.0	-489.7	398.8	261.9	136.96	2.912		
11,700.0	7,167.0	11,910.1	7,388.0	84.2	83.6	-123.82	-4,588.0	-491.7	397.1	257.5	139.59	2.845		
11,712.5	7,167.0	11,915.7	7,388.0	84.4	83.7	-123.83	-4,593.6	-491.8	396.9	257.1	139.84	2.839		
11,716.7	7,167.0	11,915.7	7,388.0	84.5	83.7	-123.83	-4,593.6	-491.8	397.0	257.1	139.90	2.838 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 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	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.06	0.0	19.6	19.6					
100.0	100.0	100.0	100.0	0.2	0.2	90.06	0.0	19.6	19.6	19.3	0.30	64.397		
200.0	200.0	200.0	200.0	0.3	0.3	90.06	0.0	19.6	19.6	18.9	0.65	29.960		
300.0	300.0	300.0	300.0	0.5	0.5	90.06	0.0	19.6	19.6	18.6	1.00	19.521 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	168.09	0.0	19.6	20.4	19.1	1.35	15.110		
500.0	500.0	500.0	500.0	0.9	0.8	169.43	0.0	19.6	23.0	21.3	1.70	13.520		
600.0	599.9	600.2	600.2	1.0	1.0	169.72	0.7	19.0	26.7	24.6	2.05	13.030		
700.0	699.7	700.4	700.4	1.2	1.2	168.08	2.7	17.4	31.0	28.6	2.40	12.912 SF		
800.0	799.4	800.6	800.5	1.4	1.4	165.27	6.1	14.6	35.9	33.2	2.76	13.032		
900.0	898.9	900.8	900.5	1.7	1.6	161.85	10.9	10.7	41.6	38.5	3.12	13.316		
1,000.0	998.3	1,001.0	1,000.4	1.9	1.8	158.20	17.0	5.8	48.1	44.6	3.51	13.709		
1,100.0	1,097.4	1,101.1	1,100.0	2.2	2.0	154.56	24.5	-0.3	55.6	51.7	3.93	14.165		
1,200.0	1,196.3	1,201.1	1,199.3	2.5	2.2	151.08	33.3	-7.4	64.1	59.7	4.38	14.644		
1,300.0	1,294.9	1,301.0	1,298.4	2.8	2.5	147.84	43.4	-15.6	73.7	68.8	4.87	15.117		
1,400.0	1,393.3	1,400.8	1,397.1	3.2	2.8	144.88	54.9	-24.9	84.3	78.9	5.42	15.565		
1,500.0	1,491.2	1,500.4	1,495.3	3.5	3.1	142.19	67.7	-35.3	96.1	90.0	6.01	15.976		
1,600.0	1,588.9	1,599.5	1,592.9	3.9	3.4	140.22	81.1	-46.1	109.1	102.5	6.63	16.445		
1,700.0	1,686.1	1,698.4	1,690.3	4.4	3.7	139.18	94.4	-56.9	123.6	116.3	7.27	16.999		
1,800.0	1,783.1	1,797.3	1,787.7	4.8	4.0	138.67	107.7	-67.7	138.7	130.8	7.91	17.530		
1,900.0	1,880.2	1,896.1	1,885.0	5.3	4.4	138.26	121.1	-78.5	153.8	145.3	8.56	17.964		
2,000.0	1,977.2	1,994.9	1,982.3	5.7	4.7	137.94	134.4	-89.3	169.0	159.7	9.22	18.326		
2,100.0	2,074.2	2,093.2	2,079.3	6.2	5.0	138.00	146.8	-99.4	184.3	174.5	9.84	18.728		
2,200.0	2,171.3	2,191.3	2,176.4	6.6	5.3	138.53	157.9	-108.4	199.9	189.5	10.42	19.194		
2,300.0	2,268.3	2,289.3	2,273.5	7.1	5.6	139.43	167.7	-116.3	215.9	205.0	10.95	19.727		
2,400.0	2,365.3	2,387.0	2,370.6	7.5	5.8	140.61	176.2	-123.2	232.3	220.9	11.43	20.333		
2,500.0	2,462.3	2,484.4	2,467.6	8.0	6.0	142.01	183.4	-129.0	249.2	237.4	11.86	21.018		
2,600.0	2,559.4	2,581.5	2,564.4	8.4	6.2	143.57	189.3	-133.7	266.7	254.5	12.24	21.790		
2,700.0	2,656.4	2,678.2	2,660.9	8.9	6.4	145.26	193.9	-137.5	284.9	272.3	12.58	22.652		
2,800.0	2,753.4	2,774.4	2,757.0	9.4	6.6	147.03	197.2	-140.1	303.8	290.9	12.87	23.611		
2,900.0	2,850.5	2,870.1	2,852.7	9.8	6.7	148.87	199.2	-141.8	323.5	310.4	13.11	24.669		
3,000.0	2,947.5	2,965.3	2,947.8	10.3	6.9	150.73	200.0	-142.4	344.2	330.8	13.33	25.824		
3,100.0	3,044.5	3,062.0	3,044.5	10.7	7.0	152.56	200.0	-142.5	365.6	352.1	13.53	27.027		
3,200.0	3,141.6	3,159.0	3,141.6	11.2	7.1	154.20	200.0	-142.5	387.4	373.6	13.74	28.201		
3,300.0	3,238.6	3,256.0	3,238.6	11.7	7.2	155.67	200.0	-142.5	409.4	395.4	13.95	29.341		
3,400.0	3,335.6	3,353.0	3,335.6	12.1	7.4	156.99	200.0	-142.5	431.6	417.5	14.18	30.442		
3,500.0	3,432.6	3,450.1	3,432.6	12.6	7.5	158.18	200.0	-142.5	454.1	439.7	14.41	31.505		
3,600.0	3,529.7	3,547.1	3,529.7	13.1	7.6	159.25	200.0	-142.5	476.7	462.1	14.66	32.529		
3,700.0	3,626.9	3,644.3	3,626.9	13.5	7.8	160.27	200.0	-142.5	498.9	484.0	14.91	33.451		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 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						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
							+N/-S (ft)	+E/-W (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	30.7	30.7				
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	30.7	30.7	30.4	0.30	101.196	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.7	30.7	30.1	0.65	47.080	
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	30.7	30.7	29.7	1.00	30.676 CC, ES	
400.0	400.0	400.0	400.0	0.7	0.7	167.89	0.0	30.7	31.6	30.2	1.35	23.382	
500.0	500.0	500.0	500.0	0.9	0.8	168.81	0.0	30.7	34.1	32.4	1.70	20.093	
600.0	599.9	599.9	599.9	1.0	1.0	170.06	0.0	30.7	38.4	36.4	2.05	18.770 SF	
700.0	699.7	699.2	699.2	1.2	1.2	170.52	0.6	31.3	45.0	42.6	2.40	18.780	
800.0	799.4	798.2	798.2	1.4	1.4	169.70	2.6	33.0	54.3	51.6	2.74	19.792	
900.0	898.9	896.8	896.7	1.7	1.6	168.23	5.8	35.7	66.4	63.3	3.09	21.460	
1,000.0	998.3	994.9	994.6	1.9	1.7	166.56	10.3	39.5	81.3	77.9	3.45	23.576	
1,100.0	1,097.4	1,092.2	1,091.6	2.2	1.9	164.93	16.1	44.4	99.1	95.3	3.81	25.999	
1,200.0	1,196.3	1,188.8	1,187.7	2.5	2.1	163.42	23.0	50.3	119.7	115.6	4.18	28.629	
1,300.0	1,294.9	1,284.4	1,282.8	2.8	2.4	162.07	31.1	57.2	143.2	138.7	4.56	31.389	
1,400.0	1,393.3	1,379.0	1,376.6	3.2	2.6	160.88	40.2	65.0	169.5	164.5	4.95	34.221	
1,500.0	1,491.2	1,472.4	1,469.0	3.5	2.9	159.83	50.5	73.7	198.6	193.2	5.36	37.079	
1,600.0	1,588.9	1,564.6	1,560.0	3.9	3.1	158.91	61.7	83.2	230.4	224.6	5.77	39.930	
1,700.0	1,686.1	1,657.4	1,651.5	4.4	3.4	158.11	73.8	93.6	264.7	258.5	6.20	42.716	
1,800.0	1,783.1	1,751.0	1,743.6	4.8	3.7	157.65	86.2	104.1	299.8	293.2	6.64	45.144	
1,900.0	1,880.2	1,844.6	1,835.8	5.3	4.0	157.29	98.6	114.7	335.0	327.9	7.09	47.236	
2,000.0	1,977.2	1,938.2	1,928.0	5.7	4.3	156.99	111.0	125.2	370.2	362.6	7.55	49.053	
2,100.0	2,074.2	2,031.8	2,020.1	6.2	4.6	156.75	123.4	135.7	405.4	397.4	8.00	50.643	
2,200.0	2,171.3	2,125.3	2,112.3	6.6	4.9	156.54	135.7	146.3	440.6	432.1	8.47	52.045	
2,300.0	2,268.3	2,223.0	2,208.5	7.1	5.2	156.39	148.4	157.0	475.5	466.6	8.93	53.231	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 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			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	41.9	41.9					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	41.9	41.9	41.6	0.30	137.994		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	41.9	41.9	41.3	0.65	64.201		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	41.9	41.9	40.9	1.00	41.831 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	167.80	0.0	41.9	42.8	41.4	1.35	31.655		
500.0	500.0	499.2	499.2	0.9	0.8	168.07	0.3	42.7	46.1	44.4	1.70	27.156		
600.0	599.9	598.2	598.2	1.0	1.0	167.96	1.2	45.1	52.8	50.7	2.05	25.802 SF		
700.0	699.7	696.8	696.7	1.2	1.2	167.59	2.8	49.0	62.7	60.3	2.39	26.215		
800.0	799.4	794.8	794.5	1.4	1.4	167.13	5.1	54.5	76.0	73.2	2.74	27.718		
900.0	898.9	892.1	891.5	1.7	1.6	166.65	7.9	61.5	92.4	89.3	3.09	29.933		
1,000.0	998.3	988.5	987.5	1.9	1.8	166.20	11.3	69.9	112.1	108.7	3.44	32.634		
1,100.0	1,097.4	1,084.0	1,082.3	2.2	2.0	165.79	15.2	79.7	135.0	131.2	3.79	35.675		
1,200.0	1,196.3	1,178.2	1,175.8	2.5	2.3	165.44	19.7	90.8	161.1	156.9	4.13	38.957		
1,300.0	1,294.9	1,271.2	1,267.9	2.8	2.6	165.12	24.7	103.2	190.2	185.7	4.48	42.413		
1,400.0	1,393.3	1,362.8	1,358.3	3.2	2.8	164.84	30.2	116.7	222.4	217.6	4.84	45.990		
1,500.0	1,491.2	1,455.1	1,449.2	3.5	3.1	164.61	36.2	131.5	257.3	252.2	5.19	49.578		
1,600.0	1,588.9	1,548.1	1,540.8	3.9	3.4	164.49	42.2	146.5	294.0	288.4	5.55	52.982		
1,700.0	1,686.1	1,640.5	1,631.8	4.4	3.7	164.45	48.2	161.3	332.2	326.3	5.91	56.231		
1,800.0	1,783.1	1,732.6	1,722.5	4.8	4.0	164.55	54.2	176.2	371.1	364.9	6.28	59.097		
1,900.0	1,880.2	1,824.7	1,813.2	5.3	4.3	164.63	60.2	191.0	410.1	403.4	6.65	61.629		
2,000.0	1,977.2	1,916.8	1,903.9	5.7	4.7	164.69	66.2	205.8	449.1	442.0	7.03	63.881		
2,100.0	2,074.2	2,008.9	1,994.6	6.2	5.0	164.75	72.2	220.7	488.0	480.6	7.41	65.895		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 1G-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					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)	Total Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	50.3	50.3					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	50.3	50.3	50.0	0.30	165.593		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	50.3	50.3	49.6	0.65	77.041		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	50.3	50.3	49.3	1.00	50.197 CC, ES		
400.0	400.0	399.1	399.1	0.7	0.7	167.52	0.2	51.1	52.0	50.6	1.35	38.522		
500.0	500.0	498.1	498.0	0.9	0.9	167.43	0.8	53.6	57.0	55.3	1.70	33.625		
600.0	599.9	596.7	596.6	1.0	1.0	167.31	1.9	57.7	65.5	63.4	2.04	32.046 SF		
700.0	699.7	694.8	694.5	1.2	1.2	167.18	3.3	63.5	77.3	74.9	2.39	32.333		
800.0	799.4	792.3	791.7	1.4	1.4	167.05	5.2	70.8	92.4	89.6	2.73	33.773		
900.0	898.9	888.9	887.9	1.7	1.7	166.94	7.5	79.6	110.8	107.7	3.08	35.968		
1,000.0	998.3	984.6	982.9	1.9	1.9	166.84	10.1	89.9	132.4	129.0	3.42	38.683		
1,100.0	1,097.4	1,079.1	1,076.7	2.2	2.1	166.75	13.1	101.5	157.3	153.6	3.77	41.768		
1,200.0	1,196.3	1,172.4	1,169.0	2.5	2.4	166.67	16.4	114.5	185.4	181.3	4.11	45.122		
1,300.0	1,294.9	1,264.3	1,259.7	2.8	2.7	166.59	20.1	128.7	216.6	212.1	4.45	48.674		
1,400.0	1,393.3	1,354.6	1,348.7	3.2	3.0	166.51	24.0	144.0	250.8	246.0	4.79	52.375		
1,500.0	1,491.2	1,443.4	1,435.8	3.5	3.3	166.44	28.2	160.4	288.0	282.9	5.13	56.186		
1,600.0	1,588.9	1,532.1	1,522.7	3.9	3.7	166.36	32.8	178.0	328.1	322.7	5.47	60.034		
1,700.0	1,686.1	1,622.9	1,611.5	4.4	4.0	166.34	37.4	196.3	370.1	364.3	5.81	63.702		
1,800.0	1,783.1	1,713.3	1,699.9	4.8	4.3	166.43	42.1	214.5	412.8	406.6	6.17	66.927		
1,900.0	1,880.2	1,803.7	1,788.3	5.3	4.7	166.51	46.8	232.7	455.5	448.9	6.53	69.786		
2,000.0	1,977.2	1,894.2	1,876.8	5.7	5.1	166.58	51.5	250.9	498.2	491.3	6.89	72.338		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - Devore 1H-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	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	-0.1	61.5	61.5					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	-0.1	61.5	61.5	61.2	0.30	202.391		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	-0.1	61.5	61.5	60.8	0.65	94.161 CC, ES		
300.0	300.0	298.9	298.9	0.5	0.5	89.91	0.1	62.3	62.3	61.3	1.00	62.257		
400.0	400.0	397.8	397.8	0.7	0.7	167.16	0.6	64.8	65.7	64.4	1.35	48.780		
500.0	500.0	496.4	496.3	0.9	0.9	167.00	1.3	69.0	72.5	70.8	1.69	42.808		
600.0	599.9	594.6	594.3	1.0	1.1	166.94	2.4	74.8	82.7	80.6	2.04	40.537		
700.0	699.7	692.2	691.5	1.2	1.3	166.93	3.8	82.2	96.2	93.8	2.38	40.347 SF		
800.0	799.4	789.0	787.9	1.4	1.5	166.96	5.5	91.2	113.1	110.3	2.73	41.444		
900.0	898.9	884.9	883.3	1.7	1.7	167.01	7.4	101.7	133.2	130.2	3.07	43.387		
1,000.0	998.3	979.8	977.3	1.9	2.0	167.06	9.6	113.6	156.7	153.2	3.41	45.916		
1,100.0	1,097.4	1,073.4	1,070.0	2.2	2.3	167.11	12.1	126.8	183.3	179.5	3.75	48.865		
1,200.0	1,196.3	1,165.7	1,161.2	2.5	2.6	167.16	14.7	141.3	213.1	209.0	4.09	52.122		
1,300.0	1,294.9	1,256.6	1,250.6	2.8	2.9	167.19	17.6	157.0	246.0	241.6	4.42	55.610		
1,400.0	1,393.3	1,345.8	1,338.2	3.2	3.2	167.21	20.8	173.7	282.0	277.2	4.76	59.276		
1,500.0	1,491.2	1,433.4	1,423.9	3.5	3.5	167.22	24.0	191.5	320.9	315.8	5.09	63.077		
1,600.0	1,588.9	1,519.2	1,507.6	3.9	3.9	167.22	27.5	210.1	362.8	357.3	5.42	66.983		
1,700.0	1,686.1	1,600.0	1,586.1	4.4	4.3	167.21	31.0	228.8	407.5	401.7	5.74	71.039		
1,800.0	1,783.1	1,685.5	1,668.9	4.8	4.7	167.28	34.8	249.7	454.2	448.1	6.08	74.698		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - DEVORE 31-34 (EXISTING) - EXISTING - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Gyro													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		
3,000.0	2,947.5	2,945.1	2,944.8	10.3	2.6	-53.62	-211.5	-845.2	488.4	477.0	11.42	42.750		
3,100.0	3,044.5	3,043.0	3,042.7	10.7	2.7	-56.09	-212.8	-844.9	474.8	462.7	12.08	39.302		
3,200.0	3,141.6	3,139.0	3,138.7	11.2	2.8	-58.64	-214.1	-844.6	462.2	449.4	12.75	36.243		
3,300.0	3,238.6	3,234.1	3,233.7	11.7	2.8	-61.31	-215.7	-844.3	450.9	437.5	13.44	33.556		
3,400.0	3,335.6	3,328.6	3,328.2	12.1	2.9	-64.14	-217.8	-844.0	441.1	426.9	14.14	31.204		
3,500.0	3,432.6	3,421.9	3,421.5	12.6	3.0	-67.00	-220.4	-844.4	433.3	418.5	14.83	29.213		
3,600.0	3,529.7	3,519.8	3,519.3	13.1	3.1	-70.12	-223.4	-844.8	427.0	411.5	15.55	27.469		
3,700.0	3,626.9	3,617.2	3,616.7	13.5	3.2	-73.22	-226.4	-844.8	422.1	405.9	16.22	26.019		
3,800.0	3,724.5	3,713.9	3,713.4	13.9	3.3	-76.12	-229.3	-845.0	419.1	402.2	16.85	24.875		
3,900.0	3,822.4	3,811.8	3,811.2	14.3	3.3	-78.83	-232.2	-845.6	417.6	400.2	17.42	23.973		
3,966.3	3,887.6	3,876.7	3,876.1	14.5	3.4	-80.52	-234.1	-846.0	417.3	399.6	17.77	23.487		
4,000.0	3,920.7	3,909.8	3,909.1	14.7	3.4	-81.36	-235.1	-846.1	417.4	399.5	17.94	23.264		
4,100.0	4,019.3	4,008.4	4,007.8	15.0	3.5	-83.64	-238.0	-846.8	418.2	399.8	18.41	22.714		
4,200.0	4,118.2	4,106.5	4,105.8	15.3	3.6	-85.63	-240.8	-847.9	420.0	401.1	18.84	22.293		
4,300.0	4,217.3	4,204.2	4,203.4	15.6	3.7	-87.32	-243.8	-849.5	422.6	403.3	19.22	21.987		
4,400.0	4,316.6	4,307.3	4,306.5	15.8	3.8	-88.81	-246.6	-851.3	425.2	405.7	19.57	21.733		
4,500.0	4,416.2	4,406.9	4,406.0	16.0	3.9	-90.05	-249.0	-852.5	427.8	407.9	19.88	21.521		
4,600.0	4,515.8	4,506.7	4,505.7	16.2	4.0	-91.03	-251.3	-853.9	430.4	410.3	20.16	21.355		
4,700.0	4,615.6	4,605.5	4,604.5	16.4	4.0	-91.75	-253.8	-855.3	433.3	412.9	20.41	21.233		
4,800.0	4,715.5	4,706.9	4,705.9	16.5	4.1	-92.27	-256.2	-856.7	436.1	415.4	20.63	21.133		
4,900.0	4,815.5	4,809.4	4,808.4	16.6	4.2	-92.52	-258.2	-858.2	438.4	417.5	20.84	21.036		
5,000.0	4,915.5	4,916.4	4,915.4	16.7	4.3	-92.57	-259.2	-859.2	439.4	418.4	21.02	20.903		
5,100.0	5,015.5	5,020.3	5,019.3	16.8	4.4	-169.98	-258.8	-859.9	439.2	418.0	21.17	20.743		
5,200.0	5,115.5	5,121.2	5,120.2	16.9	4.5	-169.86	-257.9	-860.6	438.4	417.1	21.36	20.531		
5,300.0	5,215.5	5,222.4	5,221.3	17.0	4.6	-169.73	-256.7	-861.5	437.5	415.9	21.54	20.308		
5,400.0	5,315.5	5,322.7	5,321.7	17.1	4.7	-169.61	-255.4	-862.1	436.3	414.6	21.73	20.082		
5,500.0	5,415.5	5,422.9	5,421.8	17.2	4.8	-169.57	-254.2	-862.2	435.1	413.2	21.91	19.857		
5,600.0	5,515.5	5,522.2	5,521.1	17.3	4.8	-169.58	-253.1	-861.9	434.0	411.9	22.10	19.640		
5,700.0	5,615.5	5,622.3	5,621.2	17.4	4.9	-169.58	-252.0	-861.7	432.9	410.6	22.28	19.428		
5,800.0	5,715.5	5,722.1	5,721.0	17.5	5.0	-169.67	-251.1	-860.8	431.8	409.3	22.47	19.218		
5,900.0	5,815.5	5,821.4	5,820.3	17.6	5.1	-169.74	-250.3	-860.2	430.9	408.2	22.65	19.021		
6,000.0	5,915.5	5,923.7	5,922.6	17.7	5.2	-169.77	-249.1	-859.7	429.7	406.8	22.84	18.809		
6,100.0	6,015.5	6,022.9	6,021.8	17.8	5.3	-169.81	-247.8	-859.2	428.3	405.2	23.03	18.593		
6,200.0	6,115.5	6,120.5	6,119.3	17.9	5.4	-169.87	-247.1	-858.6	427.4	404.2	23.22	18.407		
6,300.0	6,215.5	6,223.0	6,221.9	18.0	5.4	-169.93	-246.1	-858.0	426.4	403.0	23.42	18.210		
6,400.0	6,315.5	6,322.7	6,321.6	18.1	5.5	-170.09	-245.1	-856.6	425.2	401.6	23.61	18.011		
6,500.0	6,415.5	6,422.5	6,421.3	18.2	5.6	-170.26	-244.1	-855.1	423.9	400.1	23.80	17.815		
6,600.0	6,515.4	6,520.4	6,519.2	18.3	5.7	7.14	-243.5	-853.7	420.2	396.2	23.96	17.539		
6,700.0	6,614.0	6,619.0	6,617.7	18.4	5.8	7.25	-243.3	-851.3	403.7	379.9	23.81	16.956		
6,800.0	6,709.5	6,715.3	6,714.1	18.5	5.9	7.76	-242.9	-848.6	373.7	350.3	23.39	15.975		
6,900.0	6,799.9	6,805.4	6,804.1	18.5	5.9	9.00	-242.4	-846.7	330.7	308.0	22.70	14.571		
7,000.0	6,883.6	6,892.4	6,891.1	18.6	6.0	11.61	-241.2	-845.3	275.2	253.5	21.73	12.666		
7,100.0	6,958.8	6,967.7	6,966.3	18.8	6.1	16.99	-239.3	-844.0	208.4	188.0	20.47	10.184		
7,200.0	7,024.1	7,031.5	7,030.1	19.1	6.1	29.95	-237.4	-842.7	133.0	114.1	18.96	7.016		
7,300.0	7,078.3	7,082.9	7,081.5	19.4	6.2	66.49	-235.6	-841.8	57.3	38.4	18.91	3.031		
7,345.0	7,098.7	7,101.7	7,100.3	19.7	6.2	90.94	-234.8	-841.5	40.2	20.2	20.00	2.008 CC, ES, SF		
7,400.0	7,120.2	7,121.2	7,119.8	20.0	6.2	113.18	-234.1	-841.1	65.3	44.8	20.49	3.187		
7,500.0	7,149.1	7,146.5	7,145.0	20.6	6.2	125.35	-233.1	-840.7	153.6	133.2	20.40	7.527		
7,600.0	7,164.5	7,158.1	7,156.6	21.4	6.2	106.99	-232.7	-840.4	250.8	228.7	22.04	11.375		
7,700.0	7,167.0	7,156.7	7,155.2	22.4	6.2	71.97	-232.7	-840.4	349.8	326.5	23.35	14.982		
7,800.0	7,167.0	7,152.8	7,151.3	23.4	6.2	66.97	-232.9	-840.5	449.3	425.0	24.23	18.541		

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 Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design S34-T3N-R66W (Devore) - DEVORE 32-34 (EXISTING) - EXISTING - GYRO												Offset Site Error:	0.0 ft
Survey Program: 100-Gyro												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	
8,600.0	7,167.0	7,181.9	7,178.8	33.5	6.3	-90.84	-1,775.4	-427.9	493.0	456.4	36.55	13.488	
8,700.0	7,167.0	7,181.9	7,178.8	35.0	6.3	-90.84	-1,775.4	-427.9	440.6	402.5	38.16	11.547	
8,800.0	7,167.0	7,181.9	7,178.8	36.5	6.3	-90.84	-1,775.4	-427.9	406.6	366.8	39.78	10.220	
8,894.3	7,167.0	7,181.9	7,178.8	37.9	6.3	-90.84	-1,775.4	-427.9	395.5	354.2	41.33	9.570 CC	
8,900.0	7,167.0	7,181.9	7,178.8	38.0	6.3	-90.84	-1,775.4	-427.9	395.5	354.1	41.42	9.549 ES	
9,000.0	7,167.0	7,181.9	7,178.8	39.5	6.3	-90.84	-1,775.4	-427.9	409.4	366.3	43.07	9.505 SF	
9,100.0	7,167.0	7,181.9	7,178.8	41.0	6.3	-90.83	-1,775.4	-427.9	445.8	401.1	44.73	9.967	
9,200.0	7,167.0	7,181.9	7,178.8	42.6	6.3	-90.83	-1,775.4	-427.9	499.9	453.5	46.39	10.775	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design													S34-T3N-R66W (Devore) - DEVORE 33-34 (EXISTING) - EXISTING - GYRO		Offset Site Error:		0.0 ft	
Survey Program: 100-Gyro															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					
9,800.0	7,167.0	7,165.0	7,162.0	52.2	6.4	-85.78	-3,100.6	-551.7	499.7	443.3	56.39	8.861						
9,900.0	7,167.0	7,165.8	7,162.9	53.9	6.4	-85.96	-3,100.6	-551.7	419.3	361.2	58.10	7.216						
10,000.0	7,167.0	7,166.6	7,163.7	55.5	6.4	-86.12	-3,100.6	-551.6	349.1	289.3	59.81	5.837						
10,100.0	7,167.0	7,167.4	7,164.4	57.2	6.4	-86.29	-3,100.6	-551.6	296.6	235.1	61.53	4.821						
10,200.0	7,167.0	7,168.2	7,165.2	58.8	6.4	-86.45	-3,100.7	-551.5	272.2	208.9	63.25	4.304						
10,219.5	7,167.0	7,168.3	7,165.3	59.2	6.4	-86.48	-3,100.7	-551.5	271.5	207.9	63.58	4.270	CC, ES, SF					
10,300.0	7,167.0	7,168.9	7,165.9	60.5	6.4	-86.61	-3,100.7	-551.5	283.2	218.2	64.97	4.359						
10,400.0	7,167.0	7,169.6	7,166.7	62.2	6.4	-86.76	-3,100.7	-551.4	326.0	259.3	66.69	4.888						
10,500.0	7,167.0	7,170.4	7,167.4	63.8	6.4	-86.92	-3,100.7	-551.4	390.4	322.0	68.42	5.706						
10,600.0	7,167.0	7,171.1	7,168.1	65.5	6.4	-87.06	-3,100.7	-551.3	467.4	397.3	70.15	6.664						

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Devore 1B-34H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4974.0ft (Original Well Elev)
Reference Site:	S34-T3N-R66W (Devore)	MD Reference:	WELL @ 4974.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Devore 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 #2	Offset TVD Reference:	Offset Datum

Offset Design													S34-T3N-R66W (Devore) - DEVORE 34-34 (EXISTING) - EXISTING - GYRO		Offset Site Error:		0.0 ft	
Survey Program: 100-Gyro													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						
11,200.0	7,167.0	7,188.2	7,184.8	75.6	6.3	-89.28	-4,342.5	-408.7	488.8	408.2	80.53	6.069	4.855 CC, ES 4.838 SF					
11,300.0	7,167.0	7,188.3	7,185.0	77.3	6.3	-89.30	-4,342.5	-408.7	443.4	361.2	82.26	5.390						
11,400.0	7,167.0	7,188.5	7,185.1	79.0	6.3	-89.32	-4,342.5	-408.7	417.5	333.5	84.00	4.971						
11,461.4	7,167.0	7,188.5	7,185.1	80.1	6.3	-89.33	-4,342.5	-408.7	413.0	327.9	85.06							
11,500.0	7,167.0	7,188.6	7,185.2	80.8	6.3	-89.33	-4,342.5	-408.7	414.8	329.1	85.73							
11,600.0	7,167.0	7,188.7	7,185.3	82.5	6.3	-89.35	-4,342.5	-408.7	435.6	348.2	87.46	4.981						
11,700.0	7,167.0	7,188.8	7,185.4	84.2	6.3	-89.36	-4,342.5	-408.7	477.0	387.8	89.20	5.347						
11,716.7	7,167.0	7,188.8	7,185.4	84.5	6.3	-89.37	-4,342.5	-408.7	485.5	396.0	89.49	5.426						

Cathedral Energy Services

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: DJ Wattenberg
Reference Site: S34-T3N-R66W (Devore)
Site Error: 0.0ft
Reference Well: Devore 1B-34H
Well Error: 0.0ft
Reference Wellbore: Hz
Reference Design: Plan #2

Local Co-ordinate Reference: Well Devore 1B-34H
TVD Reference: WELL @ 4974.0ft (Original Well Elev)
MD Reference: WELL @ 4974.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4974.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Devore 1B-34H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.48°

