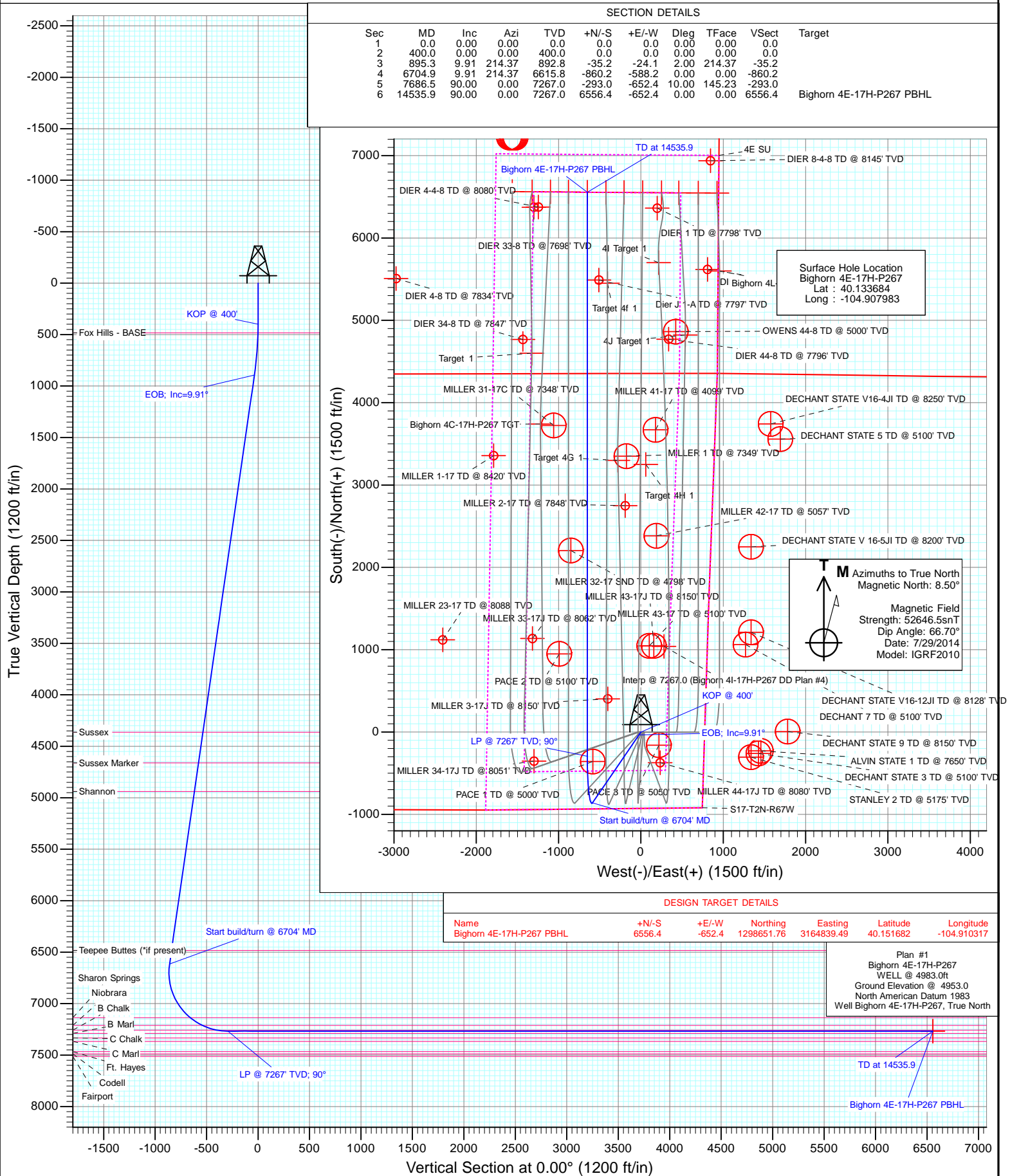




Project: DJ Wattenberg
Site: S17-T2N-R67W (Big Horn)
Well: Bighorn 4E-17H-P267
Wellbore: DD
Design: Plan #1



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
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		S17-T2N-R67W (Big Horn)			
Site Position:		Northing:	1,292,301.45 ft	Latitude:	40.134300
From:	Lat/Long	Easting:	3,162,073.61 ft	Longitude:	-104.920360
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.37 °

Well	Bighorn 4E-17H-P267					
Well Position	+N/-S	0.0 ft	Northing:	1,292,099.88 ft	Latitude:	40.133684
	+E/-W	0.0 ft	Easting:	3,165,535.67 ft	Longitude:	-104.907983
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,953.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	7/29/2014	8.50	66.70	52,646

Design	Plan #1			
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	0.00

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
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	
895.3	9.91	214.37	892.8	-35.2	-24.1	2.00	2.00	0.00	214.37	
6,704.9	9.91	214.37	6,615.8	-860.2	-588.2	0.00	0.00	0.00	0.00	
7,686.5	90.00	0.00	7,267.0	-293.0	-652.4	10.00	8.16	14.84	145.23	
14,535.9	90.00	0.00	7,267.0	6,556.4	-652.4	0.00	0.00	0.00	0.00	Bighorn 4E-17H-P267

Cathedral Energy Services

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
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	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
483.0	1.66	214.37	483.0	-1.0	-0.7	-1.0	2.00	2.00	Fox Hills - BASE
500.0	2.00	214.37	500.0	-1.4	-1.0	-1.4	2.00	2.00	
600.0	4.00	214.37	599.8	-5.8	-3.9	-5.8	2.00	2.00	
700.0	6.00	214.37	699.5	-13.0	-8.9	-13.0	2.00	2.00	
800.0	8.00	214.37	798.7	-23.0	-15.7	-23.0	2.00	2.00	
895.3	9.91	214.37	892.8	-35.2	-24.1	-35.2	2.00	2.00	EOB; Inc=9.91°
900.0	9.91	214.37	897.5	-35.9	-24.6	-35.9	0.00	0.00	
1,000.0	9.91	214.37	996.0	-50.1	-34.3	-50.1	0.00	0.00	
1,100.0	9.91	214.37	1,094.5	-64.3	-44.0	-64.3	0.00	0.00	
1,200.0	9.91	214.37	1,193.0	-78.5	-53.7	-78.5	0.00	0.00	
1,300.0	9.91	214.37	1,291.5	-92.7	-63.4	-92.7	0.00	0.00	
1,400.0	9.91	214.37	1,390.0	-106.9	-73.1	-106.9	0.00	0.00	
1,500.0	9.91	214.37	1,488.5	-121.1	-82.8	-121.1	0.00	0.00	
1,600.0	9.91	214.37	1,587.0	-135.3	-92.5	-135.3	0.00	0.00	
1,700.0	9.91	214.37	1,685.5	-149.5	-102.2	-149.5	0.00	0.00	
1,800.0	9.91	214.37	1,784.1	-163.7	-112.0	-163.7	0.00	0.00	
1,900.0	9.91	214.37	1,882.6	-177.9	-121.7	-177.9	0.00	0.00	
2,000.0	9.91	214.37	1,981.1	-192.1	-131.4	-192.1	0.00	0.00	
2,100.0	9.91	214.37	2,079.6	-206.3	-141.1	-206.3	0.00	0.00	
2,200.0	9.91	214.37	2,178.1	-220.5	-150.8	-220.5	0.00	0.00	
2,300.0	9.91	214.37	2,276.6	-234.7	-160.5	-234.7	0.00	0.00	
2,400.0	9.91	214.37	2,375.1	-248.9	-170.2	-248.9	0.00	0.00	
2,500.0	9.91	214.37	2,473.6	-263.1	-179.9	-263.1	0.00	0.00	
2,600.0	9.91	214.37	2,572.1	-277.3	-189.6	-277.3	0.00	0.00	
2,700.0	9.91	214.37	2,670.6	-291.5	-199.4	-291.5	0.00	0.00	
2,800.0	9.91	214.37	2,769.1	-305.7	-209.1	-305.7	0.00	0.00	
2,900.0	9.91	214.37	2,867.7	-319.9	-218.8	-319.9	0.00	0.00	
3,000.0	9.91	214.37	2,966.2	-334.1	-228.5	-334.1	0.00	0.00	
3,100.0	9.91	214.37	3,064.7	-348.3	-238.2	-348.3	0.00	0.00	
3,200.0	9.91	214.37	3,163.2	-362.5	-247.9	-362.5	0.00	0.00	
3,300.0	9.91	214.37	3,261.7	-376.7	-257.6	-376.7	0.00	0.00	
3,400.0	9.91	214.37	3,360.2	-390.9	-267.3	-390.9	0.00	0.00	
3,500.0	9.91	214.37	3,458.7	-405.1	-277.0	-405.1	0.00	0.00	
3,600.0	9.91	214.37	3,557.2	-419.3	-286.7	-419.3	0.00	0.00	
3,700.0	9.91	214.37	3,655.7	-433.5	-296.5	-433.5	0.00	0.00	
3,800.0	9.91	214.37	3,754.2	-447.7	-306.2	-447.7	0.00	0.00	
3,900.0	9.91	214.37	3,852.7	-461.9	-315.9	-461.9	0.00	0.00	
4,000.0	9.91	214.37	3,951.3	-476.1	-325.6	-476.1	0.00	0.00	
4,100.0	9.91	214.37	4,049.8	-490.3	-335.3	-490.3	0.00	0.00	
4,200.0	9.91	214.37	4,148.3	-504.5	-345.0	-504.5	0.00	0.00	
4,300.0	9.91	214.37	4,246.8	-518.7	-354.7	-518.7	0.00	0.00	
4,400.0	9.91	214.37	4,345.3	-532.9	-364.4	-532.9	0.00	0.00	
4,418.0	9.91	214.37	4,363.0	-535.4	-366.2	-535.4	0.00	0.00	Sussex
4,500.0	9.91	214.37	4,443.8	-547.1	-374.1	-547.1	0.00	0.00	
4,600.0	9.91	214.37	4,542.3	-561.3	-383.8	-561.3	0.00	0.00	
4,700.0	9.91	214.37	4,640.8	-575.5	-393.6	-575.5	0.00	0.00	
4,720.5	9.91	214.37	4,661.0	-578.4	-395.5	-578.4	0.00	0.00	Sussex Marker

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	9.91	214.37	4,739.3	-589.7	-403.3	-589.7	0.00	0.00	
4,900.0	9.91	214.37	4,837.8	-603.9	-413.0	-603.9	0.00	0.00	
5,000.0	9.91	214.37	4,936.3	-618.1	-422.7	-618.1	0.00	0.00	
5,002.7	9.91	214.37	4,939.0	-618.5	-422.9	-618.5	0.00	0.00	Shannon
5,100.0	9.91	214.37	5,034.9	-632.3	-432.4	-632.3	0.00	0.00	
5,200.0	9.91	214.37	5,133.4	-646.5	-442.1	-646.5	0.00	0.00	
5,300.0	9.91	214.37	5,231.9	-660.7	-451.8	-660.7	0.00	0.00	
5,400.0	9.91	214.37	5,330.4	-674.9	-461.5	-674.9	0.00	0.00	
5,500.0	9.91	214.37	5,428.9	-689.1	-471.2	-689.1	0.00	0.00	
5,600.0	9.91	214.37	5,527.4	-703.3	-480.9	-703.3	0.00	0.00	
5,700.0	9.91	214.37	5,625.9	-717.5	-490.7	-717.5	0.00	0.00	
5,800.0	9.91	214.37	5,724.4	-731.7	-500.4	-731.7	0.00	0.00	
5,900.0	9.91	214.37	5,822.9	-745.9	-510.1	-745.9	0.00	0.00	
6,000.0	9.91	214.37	5,921.4	-760.1	-519.8	-760.1	0.00	0.00	
6,100.0	9.91	214.37	6,020.0	-774.3	-529.5	-774.3	0.00	0.00	
6,200.0	9.91	214.37	6,118.5	-788.5	-539.2	-788.5	0.00	0.00	
6,300.0	9.91	214.37	6,217.0	-802.7	-548.9	-802.7	0.00	0.00	
6,400.0	9.91	214.37	6,315.5	-816.9	-558.6	-816.9	0.00	0.00	
6,500.0	9.91	214.37	6,414.0	-831.1	-568.3	-831.1	0.00	0.00	
6,570.1	9.91	214.37	6,483.0	-841.0	-575.1	-841.0	0.00	0.00	Teepee Buttes (*if present)
6,600.0	9.91	214.37	6,512.5	-845.3	-578.1	-845.3	0.00	0.00	
6,700.0	9.91	214.37	6,611.0	-859.5	-587.8	-859.5	0.00	0.00	
6,704.9	9.91	214.37	6,615.8	-860.2	-588.2	-860.2	0.00	0.00	Start build/turn @ 6704' MD
6,800.0	5.79	283.47	6,710.2	-865.8	-597.5	-865.8	10.00	-4.33	
6,900.0	12.65	333.95	6,809.0	-854.8	-607.3	-854.8	10.00	6.86	
7,000.0	22.04	345.91	6,904.4	-826.7	-616.7	-826.7	10.00	9.39	
7,100.0	31.80	350.85	6,993.4	-782.4	-625.5	-782.4	10.00	9.75	
7,200.0	41.66	353.64	7,073.5	-723.2	-633.3	-723.2	10.00	9.86	
7,290.3	50.61	355.36	7,136.0	-658.4	-639.5	-658.4	10.00	9.91	Sharon Springs
7,300.0	51.57	355.51	7,142.1	-650.9	-640.1	-650.9	10.00	9.92	
7,400.0	61.50	356.93	7,197.2	-567.8	-645.5	-567.8	10.00	9.93	
7,430.5	64.53	357.31	7,211.0	-540.6	-646.9	-540.6	10.00	9.94	Niobrara
7,500.0	71.44	358.10	7,237.0	-476.3	-649.5	-476.3	10.00	9.94	
7,579.1	79.31	358.93	7,257.0	-399.9	-651.4	-399.9	10.00	9.95	B Chalk
7,600.0	81.39	359.14	7,260.5	-379.2	-651.8	-379.2	10.00	9.95	
7,686.5	90.00	0.00	7,267.0	-293.0	-652.4	-293.0	10.00	9.95	LP @ 7267' TVD; 90°
7,700.0	90.00	0.00	7,267.0	-279.6	-652.4	-279.6	0.00	0.00	
7,800.0	90.00	0.00	7,267.0	-179.6	-652.4	-179.6	0.00	0.00	
7,900.0	90.00	0.00	7,267.0	-79.6	-652.4	-79.6	0.00	0.00	
8,000.0	90.00	0.00	7,267.0	20.4	-652.4	20.4	0.00	0.00	
8,100.0	90.00	0.00	7,267.0	120.4	-652.4	120.4	0.00	0.00	
8,200.0	90.00	0.00	7,267.0	220.4	-652.4	220.4	0.00	0.00	
8,300.0	90.00	0.00	7,267.0	320.4	-652.4	320.4	0.00	0.00	
8,400.0	90.00	0.00	7,267.0	420.4	-652.4	420.4	0.00	0.00	
8,500.0	90.00	0.00	7,267.0	520.4	-652.4	520.4	0.00	0.00	
8,600.0	90.00	0.00	7,267.0	620.4	-652.4	620.4	0.00	0.00	
8,700.0	90.00	0.00	7,267.0	720.4	-652.4	720.4	0.00	0.00	
8,800.0	90.00	0.00	7,267.0	820.4	-652.4	820.4	0.00	0.00	
8,900.0	90.00	0.00	7,267.0	920.4	-652.4	920.4	0.00	0.00	
9,000.0	90.00	0.00	7,267.0	1,020.4	-652.4	1,020.4	0.00	0.00	
9,100.0	90.00	0.00	7,267.0	1,120.4	-652.4	1,120.4	0.00	0.00	
9,200.0	90.00	0.00	7,267.0	1,220.4	-652.4	1,220.4	0.00	0.00	

Cathedral Energy Services

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Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
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	0.00	7,267.0	1,320.4	-652.4	1,320.4	0.00	0.00	
9,400.0	90.00	0.00	7,267.0	1,420.4	-652.4	1,420.4	0.00	0.00	
9,500.0	90.00	0.00	7,267.0	1,520.4	-652.4	1,520.4	0.00	0.00	
9,600.0	90.00	0.00	7,267.0	1,620.4	-652.4	1,620.4	0.00	0.00	
9,700.0	90.00	0.00	7,267.0	1,720.4	-652.4	1,720.4	0.00	0.00	
9,800.0	90.00	0.00	7,267.0	1,820.4	-652.4	1,820.4	0.00	0.00	
9,900.0	90.00	0.00	7,267.0	1,920.4	-652.4	1,920.4	0.00	0.00	
10,000.0	90.00	0.00	7,267.0	2,020.4	-652.4	2,020.4	0.00	0.00	
10,100.0	90.00	0.00	7,267.0	2,120.4	-652.4	2,120.4	0.00	0.00	
10,200.0	90.00	0.00	7,267.0	2,220.4	-652.4	2,220.4	0.00	0.00	
10,300.0	90.00	0.00	7,267.0	2,320.4	-652.4	2,320.4	0.00	0.00	
10,400.0	90.00	0.00	7,267.0	2,420.4	-652.4	2,420.4	0.00	0.00	
10,500.0	90.00	0.00	7,267.0	2,520.4	-652.4	2,520.4	0.00	0.00	
10,600.0	90.00	0.00	7,267.0	2,620.4	-652.4	2,620.4	0.00	0.00	
10,700.0	90.00	0.00	7,267.0	2,720.4	-652.4	2,720.4	0.00	0.00	
10,800.0	90.00	0.00	7,267.0	2,820.4	-652.4	2,820.4	0.00	0.00	
10,900.0	90.00	0.00	7,267.0	2,920.4	-652.4	2,920.4	0.00	0.00	
11,000.0	90.00	0.00	7,267.0	3,020.4	-652.4	3,020.4	0.00	0.00	
11,100.0	90.00	0.00	7,267.0	3,120.4	-652.4	3,120.4	0.00	0.00	
11,200.0	90.00	0.00	7,267.0	3,220.4	-652.4	3,220.4	0.00	0.00	
11,300.0	90.00	0.00	7,267.0	3,320.4	-652.4	3,320.4	0.00	0.00	
11,400.0	90.00	0.00	7,267.0	3,420.4	-652.4	3,420.4	0.00	0.00	
11,500.0	90.00	0.00	7,267.0	3,520.4	-652.4	3,520.4	0.00	0.00	
11,600.0	90.00	0.00	7,267.0	3,620.4	-652.4	3,620.4	0.00	0.00	
11,700.0	90.00	0.00	7,267.0	3,720.4	-652.4	3,720.4	0.00	0.00	
11,800.0	90.00	0.00	7,267.0	3,820.4	-652.4	3,820.4	0.00	0.00	
11,900.0	90.00	0.00	7,267.0	3,920.4	-652.4	3,920.4	0.00	0.00	
12,000.0	90.00	0.00	7,267.0	4,020.4	-652.4	4,020.4	0.00	0.00	
12,100.0	90.00	0.00	7,267.0	4,120.4	-652.4	4,120.4	0.00	0.00	
12,200.0	90.00	0.00	7,267.0	4,220.4	-652.4	4,220.4	0.00	0.00	
12,300.0	90.00	0.00	7,267.0	4,320.4	-652.4	4,320.4	0.00	0.00	
12,400.0	90.00	0.00	7,267.0	4,420.4	-652.4	4,420.4	0.00	0.00	
12,500.0	90.00	0.00	7,267.0	4,520.4	-652.4	4,520.4	0.00	0.00	
12,600.0	90.00	0.00	7,267.0	4,620.4	-652.4	4,620.4	0.00	0.00	
12,700.0	90.00	0.00	7,267.0	4,720.4	-652.4	4,720.4	0.00	0.00	
12,800.0	90.00	0.00	7,267.0	4,820.4	-652.4	4,820.4	0.00	0.00	
12,900.0	90.00	0.00	7,267.0	4,920.4	-652.4	4,920.4	0.00	0.00	
13,000.0	90.00	0.00	7,267.0	5,020.4	-652.4	5,020.4	0.00	0.00	
13,100.0	90.00	0.00	7,267.0	5,120.4	-652.4	5,120.4	0.00	0.00	
13,200.0	90.00	0.00	7,267.0	5,220.4	-652.4	5,220.4	0.00	0.00	
13,300.0	90.00	0.00	7,267.0	5,320.4	-652.4	5,320.4	0.00	0.00	
13,400.0	90.00	0.00	7,267.0	5,420.4	-652.4	5,420.4	0.00	0.00	
13,500.0	90.00	0.00	7,267.0	5,520.4	-652.4	5,520.4	0.00	0.00	
13,600.0	90.00	0.00	7,267.0	5,620.4	-652.4	5,620.4	0.00	0.00	
13,700.0	90.00	0.00	7,267.0	5,720.4	-652.4	5,720.4	0.00	0.00	
13,800.0	90.00	0.00	7,267.0	5,820.4	-652.4	5,820.4	0.00	0.00	
13,900.0	90.00	0.00	7,267.0	5,920.4	-652.4	5,920.4	0.00	0.00	
14,000.0	90.00	0.00	7,267.0	6,020.4	-652.4	6,020.4	0.00	0.00	
14,100.0	90.00	0.00	7,267.0	6,120.4	-652.4	6,120.4	0.00	0.00	
14,200.0	90.00	0.00	7,267.0	6,220.4	-652.4	6,220.4	0.00	0.00	
14,300.0	90.00	0.00	7,267.0	6,320.4	-652.4	6,320.4	0.00	0.00	
14,400.0	90.00	0.00	7,267.0	6,420.4	-652.4	6,420.4	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
14,500.0	90.00	0.00	7,267.0	6,520.4	-652.4	6,520.4	0.00	0.00	
14,535.9	90.00	0.00	7,267.0	6,556.4	-652.4	6,556.4	0.00	0.00	TD at 14535.9 - Bighorn 4E-17H-P267 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									
Bighorn 4E-17H-P267 P	0.00	0.38	7,267.0	6,556.4	-652.4	1,298,651.76	3,164,839.49	40.151682	-104.910317
- plan hits target center									
- Point									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
483.0	483.0	Fox Hills - BASE				
4,418.0	4,363.0	Sussex				
4,720.5	4,661.0	Sussex Marker				
5,002.7	4,939.0	Shannon				
6,570.1	6,483.0	Teepee Buttes (*if present)				
7,290.3	7,136.0	Sharon Springs				
7,430.5	7,211.0	Niobrara				
7,579.1	7,257.0	B Chalk				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP @ 400'
895.3	892.8	-35.2	-24.1	EOB; Inc=9.91°
6,704.9	6,615.8	-860.2	-588.2	Start build/turn @ 6704' MD
7,686.5	7,267.0	-293.0	-652.4	LP @ 7267' TVD; 90°
14,535.9	7,267.0	6,556.4	-652.4	TD at 14535.9

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S17-T2N-R67W (Big Horn)

Bighorn 4E-17H-P267

DD

Plan #1

Anticollision Report

25 November, 2014

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	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:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	11/25/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,535.9	Plan #1 (DD)	Geolink MWD	Geolink MWD

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	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)	Between Ellipses (ft)	Separation Factor	Warning
S17-T2N-R67W (Big Horn)						
Bighorn 4A-17H-P267 - DD - Plan #2	200.0	200.0	40.0	39.4	67.379	CC, ES
Bighorn 4A-17H-P267 - DD - Plan #2	14,535.9	14,261.7	910.2	675.1	3.872	SF
Bighorn 4B-17H-P267 - DD - Plan #4	233.4	233.4	30.2	29.5	42.535	CC, ES
Bighorn 4B-17H-P267 - DD - Plan #4	14,535.9	14,412.1	707.7	485.0	3.177	SF
Bighorn 4C-17H-P267 - DD - Plan #3	300.0	300.0	20.1	19.2	21.360	CC, ES
Bighorn 4C-17H-P267 - DD - Plan #3	14,535.9	14,055.8	447.0	211.9	1.902	SF
Bighorn 4D-17H-P267 - DD - Plan #1	334.4	334.4	10.1	9.0	9.474	CC, ES
Bighorn 4D-17H-P267 - DD - Plan #1	14,535.9	14,784.4	323.9	155.6	1.925	SF
Bighorn 4F-17H-P267 - DD - Plan #3	400.0	400.0	9.8	8.5	7.581	CC, ES
Bighorn 4F-17H-P267 - DD - Plan #3	14,535.9	14,760.0	324.4	155.6	1.922	SF
Bighorn 4G-17H-P267 - DD - Plan #2	400.0	400.0	19.9	18.6	15.373	CC, ES
Bighorn 4G-17H-P267 - DD - Plan #2	14,535.9	14,503.4	446.9	212.0	1.902	SF
Bighorn 4H-17H-P267 - DD - Plan #3	400.0	400.0	29.9	28.6	23.166	CC, ES
Bighorn 4H-17H-P267 - DD - Plan #3	14,535.9	14,666.3	713.2	490.3	3.198	SF
Bighorn 4I-17H-P267 - DD - Plan #5	400.0	400.0	40.0	38.7	30.959	CC, ES
Bighorn 4I-17H-P267 - DD - Plan #5	14,535.9	14,512.3	902.1	667.1	3.838	SF
Bighorn 4J-17H-P267 - DD - Plan #3	333.3	333.3	50.1	49.0	47.270	CC, ES
Bighorn 4J-17H-P267 - DD - Plan #3	700.0	695.6	75.3	72.9	31.933	SF
Bighorn 4K-17H-P267 - DD - Plan #2	300.0	300.0	59.8	58.9	63.492	CC, ES
Bighorn 4K-17H-P267 - DD - Plan #2	600.0	593.0	79.1	77.1	39.831	SF
Bighorn 4L-17H-P267 - DD - Plan #3	200.0	200.0	69.9	69.3	117.801	CC, ES
Bighorn 4L-17H-P267 - DD - Plan #3	700.0	686.9	118.5	116.1	50.516	SF
DIER 1 (EXISTING) - ENCANA WELL - GYRO	14,340.1	7,255.5	869.5	742.8	6.860	CC, ES
DIER 1 (EXISTING) - ENCANA WELL - GYRO	14,400.0	7,256.0	871.6	743.8	6.821	SF
DIER 33-8 (EXISTING) - ENCANA WELL - GYRO	14,343.1	7,219.6	644.7	517.8	5.084	CC, ES
DIER 33-8 (EXISTING) - ENCANA WELL - GYRO	14,400.0	7,220.7	647.2	519.4	5.064	SF
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO	12,736.5	7,207.7	775.4	676.5	7.842	CC, ES
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO	12,800.0	7,208.8	778.0	678.0	7.781	SF
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO	12,759.4	7,200.0	968.4	869.2	9.762	CC, ES
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO	12,900.0	7,195.7	978.6	877.0	9.630	SF
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY	14,355.3	7,202.0	592.6	465.6	4.667	CC, ES
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY	14,400.0	7,202.0	594.3	466.5	4.652	SF
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER J 1-A (EXISTING) - ENCANA WELL - GYRO	13,474.0	7,234.0	131.4	19.7	1.176	Level 2, CC, ES, SF
MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO	11,329.9	7,234.8	478.7	404.0	6.410	CC, ES
MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO	11,400.0	7,234.1	483.8	407.9	6.376	SF
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV						Out of range
MILLER 2-17 (EXISTING) - ENCANA WELL - GYRO	10,733.5	7,237.0	465.7	401.1	7.214	CC, ES
MILLER 2-17 (EXISTING) - ENCANA WELL - GYRO	10,800.0	7,236.0	470.4	404.7	7.163	SF
MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYR	11,701.7	7,200.0	401.6	320.6	4.959	CC, ES, SF
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	8,382.5	7,237.0	249.8	220.8	8.614	CC, ES
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	8,400.0	7,237.0	250.4	221.3	8.588	SF
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	3,108.0	3,038.9	548.7	534.1	37.671	CC
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	3,200.0	3,127.5	549.1	534.0	36.479	ES
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	9,200.0	7,504.5	631.2	579.3	12.166	SF
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	3,322.7	3,249.0	539.7	524.0	34.434	CC
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	3,400.0	3,324.1	539.9	523.8	33.563	ES
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	7,550.0	7,214.7	600.8	572.6	21.345	SF
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE	9,026.9	7,245.0	809.6	772.5	21.860	CC, ES
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE	9,300.0	7,245.0	854.4	813.3	20.783	SF
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	3,291.0	3,230.8	472.3	456.8	30.330	CC
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	3,300.0	3,239.4	472.3	456.7	30.243	ES

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	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
S17-T2N-R67W (Big Horn)						
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	5,600.0	5,599.5	561.1	537.7	23.934	SF
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,286.4	4,210.3	280.5	259.8	13.535	CC
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,300.0	4,223.8	280.5	259.7	13.489	ES
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,700.0	4,617.8	289.4	266.8	12.825	SF
SATER 24-8 (EXISTING) - KERRMCGEE WELL - SURV	14,535.9	7,357.2	597.1	466.8	4.582	CC, ES, SF
SATER 7-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
SATER 8-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
S5-T2N-R67W (Vogl-McCoy)						
SATER 24-8 (EXISTING) - KERR-MCGEE WELL - SURV	14,535.9	7,374.2	597.9	467.6	4.590	CC, ES, SF
SATER 7-8 (EXISTING) - KERR-MCGEE WELL - SURV						Out of range
SATER 8-8 (EXISTING) - KERR-MCGEE WELL - SURV						Out of range
Vogl-McCoy 2G-5H-F267 - Hz - FINAL						Out of range
Vogl-McCoy 2H-5H-F267 - Hz - FINAL						Out of range
S9-T2N-R67W (Sprague)						
DIER 1 (EXISTING) - ENCANA WELL - EXISTING - VES	14,290.2	7,255.0	855.6	736.0	7.157	CC
DIER 1 (EXISTING) - ENCANA WELL - EXISTING - VES	14,300.0	7,255.1	855.6	735.9	7.147	ES
DIER 1 (EXISTING) - ENCANA WELL - EXISTING - VES	14,400.0	7,255.9	862.6	741.1	7.102	SF
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
SATER 40N-5HZ (EXISTING) - KERR-MCGEE WELL - B						Out of range

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2												Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.96	0.0	-40.0	40.0				
100.0	100.0	100.0	100.0	0.1	0.1	-89.96	0.0	-40.0	40.0	39.7	0.24	163.635	
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-40.0	40.0	39.4	0.59	67.379 CC, ES	
300.0	300.0	298.7	298.6	0.5	0.5	-90.73	-0.5	-41.6	41.6	40.7	0.94	44.249	
400.0	400.0	397.1	396.9	0.6	0.7	-92.70	-2.2	-46.4	46.5	45.3	1.29	36.107	
500.0	500.0	495.2	494.6	0.8	0.9	51.73	-4.9	-54.3	53.7	52.1	1.64	32.782	
600.0	599.8	592.9	591.7	1.0	1.1	52.47	-8.8	-65.4	62.1	60.1	2.00	31.015	
700.0	699.5	690.3	687.9	1.2	1.5	54.40	-13.7	-79.5	71.6	69.2	2.39	29.949	
800.0	798.7	787.1	783.0	1.5	1.8	57.00	-19.6	-96.6	82.5	79.6	2.83	29.143	
895.3	892.8	879.0	872.6	1.8	2.2	59.77	-26.2	-115.6	94.2	90.9	3.31	28.418	
900.0	897.5	884.5	878.0	1.8	2.2	59.95	-26.6	-116.9	94.8	91.5	3.34	28.366	
1,000.0	996.0	982.5	973.2	2.1	2.6	62.73	-34.2	-138.8	108.1	104.2	3.91	27.684	
1,100.0	1,094.5	1,081.4	1,069.4	2.4	3.1	64.92	-41.9	-160.9	121.7	117.2	4.50	27.020	
1,200.0	1,193.0	1,180.4	1,165.5	2.7	3.5	66.67	-49.6	-183.1	135.4	130.3	5.12	26.427	
1,300.0	1,291.5	1,279.4	1,261.7	3.1	4.0	68.09	-57.2	-205.2	149.2	143.4	5.76	25.911	
1,400.0	1,390.0	1,378.4	1,357.9	3.4	4.4	69.28	-64.9	-227.3	163.0	156.6	6.40	25.465	
1,500.0	1,488.5	1,477.4	1,454.0	3.7	4.9	70.28	-72.6	-249.5	177.0	169.9	7.06	25.079	
1,600.0	1,587.0	1,576.4	1,550.2	4.1	5.3	71.13	-80.3	-271.6	190.9	183.2	7.72	24.745	
1,700.0	1,685.5	1,675.3	1,646.4	4.4	5.8	71.87	-87.9	-293.7	204.9	196.5	8.38	24.453	
1,800.0	1,784.1	1,774.3	1,742.6	4.8	6.2	72.51	-95.6	-315.9	219.0	209.9	9.05	24.197	
1,900.0	1,882.6	1,873.3	1,838.7	5.1	6.7	73.08	-103.3	-338.0	233.0	223.3	9.72	23.971	
2,000.0	1,981.1	1,972.3	1,934.9	5.4	7.1	73.58	-110.9	-360.1	247.1	236.7	10.39	23.771	
2,100.0	2,079.6	2,071.3	2,031.1	5.8	7.6	74.03	-118.6	-382.3	261.2	250.1	11.07	23.592	
2,200.0	2,178.1	2,170.3	2,127.2	6.1	8.0	74.43	-126.3	-404.4	275.3	263.5	11.75	23.431	
2,300.0	2,276.6	2,269.2	2,223.4	6.5	8.5	74.79	-134.0	-426.5	289.4	277.0	12.43	23.287	
2,400.0	2,375.1	2,368.2	2,319.6	6.8	8.9	75.12	-141.6	-448.7	303.5	290.4	13.11	23.156	
2,500.0	2,473.6	2,467.2	2,415.7	7.2	9.4	75.42	-149.3	-470.8	317.7	303.9	13.79	23.037	
2,600.0	2,572.1	2,566.2	2,511.9	7.5	9.8	75.69	-157.0	-492.9	331.8	317.3	14.47	22.928	
2,700.0	2,670.6	2,665.2	2,608.1	7.9	10.3	75.94	-164.7	-515.1	346.0	330.8	15.15	22.829	
2,800.0	2,769.1	2,764.2	2,704.3	8.2	10.7	76.18	-172.3	-537.2	360.1	344.3	15.84	22.737	
2,900.0	2,867.7	2,863.1	2,800.4	8.6	11.2	76.39	-180.0	-559.3	374.3	357.8	16.52	22.653	
3,000.0	2,966.2	2,962.1	2,896.6	8.9	11.6	76.59	-187.7	-581.5	388.4	371.2	17.21	22.575	
3,100.0	3,064.7	3,061.1	2,992.8	9.3	12.1	76.77	-195.3	-603.6	402.6	384.7	17.89	22.502	
3,200.0	3,163.2	3,160.1	3,088.9	9.6	12.5	76.95	-203.0	-625.8	416.8	398.2	18.58	22.435	
3,300.0	3,261.7	3,259.1	3,185.1	9.9	13.0	77.11	-210.7	-647.9	431.0	411.7	19.26	22.372	
3,400.0	3,360.2	3,358.1	3,281.3	10.3	13.4	77.26	-218.4	-670.0	445.2	425.2	19.95	22.314	
3,500.0	3,458.7	3,457.0	3,377.5	10.6	13.9	77.40	-226.0	-692.2	459.3	438.7	20.64	22.259	
3,600.0	3,557.2	3,556.0	3,473.6	11.0	14.3	77.53	-233.7	-714.3	473.5	452.2	21.32	22.207	
3,700.0	3,655.7	3,655.0	3,569.8	11.3	14.8	77.66	-241.4	-736.4	487.7	465.7	22.01	22.159	
3,800.0	3,754.2	3,754.0	3,666.0	11.7	15.2	77.77	-249.0	-758.6	501.9	479.2	22.70	22.113	
3,900.0	3,852.7	3,853.0	3,762.1	12.0	15.7	77.89	-256.7	-780.7	516.1	492.7	23.38	22.070	
4,000.0	3,951.3	3,951.9	3,858.3	12.4	16.1	77.99	-264.4	-802.8	530.3	506.2	24.07	22.030	
4,100.0	4,049.8	4,050.9	3,954.5	12.7	16.6	78.09	-272.1	-825.0	544.5	519.7	24.76	21.991	
4,200.0	4,148.3	4,149.9	4,050.6	13.1	17.1	78.19	-279.7	-847.1	558.7	533.3	25.45	21.955	
4,300.0	4,246.8	4,248.9	4,146.8	13.4	17.5	78.28	-287.4	-869.2	572.9	546.8	26.14	21.920	
4,400.0	4,345.3	4,347.9	4,243.0	13.8	18.0	78.36	-295.1	-891.4	587.1	560.3	26.82	21.887	
4,500.0	4,443.8	4,446.9	4,339.2	14.1	18.4	78.44	-302.8	-913.5	601.3	573.8	27.51	21.856	
4,600.0	4,542.3	4,545.8	4,435.3	14.5	18.9	78.52	-310.4	-935.6	615.5	587.3	28.20	21.826	
4,700.0	4,640.8	4,644.8	4,531.5	14.8	19.3	78.60	-318.1	-957.8	629.7	600.8	28.89	21.798	
4,800.0	4,739.3	4,743.8	4,627.7	15.2	19.8	78.67	-325.8	-979.9	643.9	614.3	29.58	21.771	
4,900.0	4,837.8	4,842.8	4,723.8	15.5	20.2	78.73	-333.4	-1,002.0	658.1	627.9	30.27	21.745	
5,000.0	4,936.3	4,941.8	4,820.0	15.9	20.7	78.80	-341.1	-1,024.2	672.3	641.4	30.95	21.720	

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: O-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,034.9	5,040.8	4,916.2	16.2	21.1	78.86	-348.8	-1,046.3	686.5	654.9	31.64	21.696		
5,200.0	5,133.4	5,139.7	5,012.3	16.6	21.6	78.92	-356.5	-1,068.4	700.8	668.4	32.33	21.674		
5,300.0	5,231.9	5,238.7	5,108.5	16.9	22.0	78.98	-364.1	-1,090.6	715.0	681.9	33.02	21.652		
5,400.0	5,330.4	5,337.7	5,204.7	17.3	22.5	79.04	-371.8	-1,112.7	729.2	695.5	33.71	21.631		
5,500.0	5,428.9	5,436.7	5,300.9	17.6	22.9	79.09	-379.5	-1,134.8	743.4	709.0	34.40	21.611		
5,600.0	5,527.4	5,535.7	5,397.0	17.9	23.4	79.14	-387.2	-1,157.0	757.6	722.5	35.09	21.591		
5,700.0	5,625.9	5,634.7	5,493.2	18.3	23.8	79.19	-394.8	-1,179.1	771.8	736.0	35.78	21.573		
5,800.0	5,724.4	5,733.6	5,589.4	18.6	24.3	79.24	-402.5	-1,201.2	786.0	749.6	36.47	21.555		
5,900.0	5,822.9	5,832.6	5,685.5	19.0	24.8	79.28	-410.2	-1,223.4	800.2	763.1	37.16	21.538		
6,000.0	5,921.4	5,931.6	5,781.7	19.3	25.2	79.33	-417.8	-1,245.5	814.5	776.6	37.84	21.521		
6,100.0	6,020.0	6,030.6	5,877.9	19.7	25.7	79.37	-425.5	-1,267.7	828.7	790.1	38.53	21.505		
6,200.0	6,118.5	6,129.6	5,974.1	20.0	26.1	79.41	-433.2	-1,289.8	842.9	803.7	39.22	21.489		
6,300.0	6,217.0	6,228.5	6,070.2	20.4	26.6	79.45	-440.9	-1,311.9	857.1	817.2	39.91	21.475		
6,400.0	6,315.5	6,327.5	6,166.4	20.7	27.0	79.49	-448.5	-1,334.1	871.3	830.7	40.60	21.460		
6,500.0	6,414.0	6,426.5	6,262.6	21.1	27.5	79.53	-456.2	-1,356.2	885.5	844.2	41.29	21.446		
6,600.0	6,512.5	6,525.5	6,358.7	21.4	27.9	79.56	-463.9	-1,378.3	899.7	857.8	41.98	21.432		
6,704.9	6,615.8	6,629.3	6,459.6	21.8	28.4	79.60	-471.9	-1,401.5	914.7	872.0	42.70	21.419		
6,750.0	6,660.5	6,674.0	6,503.1	21.9	28.6	57.69	-475.4	-1,411.5	920.3	877.2	43.15	21.328		
6,800.0	6,710.2	6,723.5	6,551.1	22.0	28.8	11.49	-479.2	-1,422.6	924.9	881.6	43.37	21.328		
6,850.0	6,759.8	6,772.6	6,598.8	22.0	29.1	-23.68	-483.0	-1,433.6	927.7	884.5	43.29	21.432		
6,900.0	6,809.0	6,820.8	6,645.7	22.0	29.3	-39.47	-486.8	-1,444.4	928.9	886.0	42.93	21.637		
6,950.0	6,857.3	6,850.0	6,674.0	21.9	29.4	-47.37	-489.0	-1,450.9	928.7	886.3	42.39	21.909		
7,000.0	6,904.4	6,886.7	6,709.7	21.8	29.6	-52.42	-490.0	-1,459.1	927.8	886.2	41.60	22.303		
7,050.0	6,949.9	6,916.0	6,738.3	21.6	29.7	-55.88	-489.2	-1,465.7	926.6	885.9	40.70	22.769		
7,100.0	6,993.4	6,950.0	6,771.3	21.4	29.8	-58.72	-486.3	-1,473.3	925.0	885.4	39.63	23.339		
7,150.0	7,034.7	6,975.3	6,795.7	21.2	29.9	-60.90	-482.9	-1,478.9	923.2	884.6	38.52	23.963		
7,200.0	7,073.5	7,000.0	6,819.4	20.9	29.9	-62.79	-478.5	-1,484.3	921.1	883.8	37.37	24.648		
7,250.0	7,109.4	7,035.7	6,853.3	20.6	30.0	-64.86	-470.3	-1,492.0	918.9	882.9	36.08	25.467		
7,300.0	7,142.1	7,066.5	6,882.1	20.3	30.1	-66.67	-461.5	-1,498.6	916.8	881.9	34.85	26.310		
7,350.0	7,171.4	7,100.0	6,912.8	20.0	30.2	-68.50	-450.2	-1,505.6	914.7	881.1	33.63	27.202		
7,400.0	7,197.2	7,129.5	6,939.3	19.7	30.2	-70.12	-438.7	-1,511.7	912.9	880.4	32.50	28.091		
7,450.0	7,219.1	7,161.9	6,967.6	19.4	30.3	-71.79	-424.4	-1,518.2	911.4	879.9	31.45	28.983		
7,500.0	7,237.0	7,195.0	6,995.8	19.1	30.3	-73.43	-408.2	-1,524.6	910.3	879.8	30.50	29.843		
7,550.0	7,250.9	7,229.1	7,023.7	18.8	30.4	-75.05	-389.8	-1,530.9	909.8	880.1	29.68	30.652		
7,568.2	7,254.9	7,241.7	7,033.8	18.8	30.4	-75.63	-382.6	-1,533.2	909.7	880.3	29.42	30.922		
7,600.0	7,260.5	7,264.2	7,051.4	18.6	30.4	-76.64	-369.1	-1,537.2	909.9	880.9	28.99	31.384		
7,650.0	7,265.8	7,300.6	7,078.6	18.4	30.4	-78.20	-345.9	-1,543.4	910.7	882.3	28.43	32.031		
7,686.5	7,267.0	7,328.2	7,098.4	18.3	30.5	-79.33	-327.1	-1,547.9	911.8	883.7	28.10	32.446		
7,700.0	7,267.0	7,338.7	7,105.6	18.2	30.5	-79.80	-319.6	-1,549.5	912.4	884.3	28.02	32.557		
7,800.0	7,267.0	7,430.3	7,163.1	18.0	30.5	-83.49	-249.6	-1,562.5	918.6	891.2	27.48	33.424		
7,900.0	7,267.0	7,548.6	7,219.9	17.9	30.6	-87.08	-146.9	-1,575.2	926.4	899.3	27.11	34.167		
8,000.0	7,267.0	7,692.4	7,259.6	18.1	30.7	-89.55	-9.4	-1,583.8	931.9	904.7	27.25	34.205		
8,100.0	7,267.0	7,825.8	7,267.0	18.3	30.9	-90.00	123.7	-1,585.1	932.6	904.6	28.08	33.212		
8,200.0	7,267.0	7,925.8	7,267.0	18.8	31.2	-90.00	223.7	-1,584.7	932.3	903.1	29.24	31.881		
8,300.0	7,267.0	8,025.8	7,267.0	19.4	31.5	-90.00	323.7	-1,584.4	931.9	901.2	30.76	30.295		
8,400.0	7,267.0	8,125.8	7,267.0	20.1	32.0	-90.00	423.7	-1,584.0	931.6	899.0	32.59	28.585		
8,500.0	7,267.0	8,225.8	7,267.0	21.0	32.5	-90.00	523.7	-1,583.7	931.3	896.6	34.68	26.854		
8,600.0	7,267.0	8,325.8	7,267.0	21.9	33.1	-90.00	623.7	-1,583.3	930.9	893.9	36.98	25.172		
8,700.0	7,267.0	8,425.8	7,267.0	23.0	33.8	-90.00	723.7	-1,583.0	930.6	891.1	39.46	23.581		
8,800.0	7,267.0	8,525.8	7,267.0	24.1	34.5	-90.00	823.7	-1,582.6	930.2	888.1	42.09	22.100		
8,900.0	7,267.0	8,625.8	7,267.0	25.3	35.3	-90.00	923.7	-1,582.3	929.9	885.0	44.84	20.738		
9,000.0	7,267.0	8,725.8	7,267.0	26.6	36.2	-90.00	1,023.7	-1,581.9	929.5	881.8	47.69	19.492		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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		
9,100.0	7,267.0	8,825.8	7,267.0	27.9	37.2	-90.00	1,123.7	-1,581.6	929.2	878.5	50.62	18.356		
9,200.0	7,267.0	8,925.8	7,267.0	29.3	38.2	-90.00	1,223.7	-1,581.2	928.8	875.2	53.62	17.323		
9,300.0	7,267.0	9,025.8	7,267.0	30.7	39.3	-90.00	1,323.7	-1,580.9	928.5	871.8	56.68	16.382		
9,400.0	7,267.0	9,125.8	7,267.0	32.1	40.4	-90.00	1,423.7	-1,580.5	928.1	868.3	59.79	15.524		
9,500.0	7,267.0	9,225.8	7,267.0	33.6	41.6	-90.00	1,523.7	-1,580.2	927.8	864.8	62.94	14.741		
9,600.0	7,267.0	9,325.8	7,267.0	35.1	42.8	-90.00	1,623.7	-1,579.8	927.4	861.3	66.12	14.026		
9,700.0	7,267.0	9,425.8	7,267.0	36.6	44.0	-90.00	1,723.7	-1,579.5	927.1	857.7	69.34	13.370		
9,800.0	7,267.0	9,525.8	7,267.0	38.1	45.3	-90.00	1,823.7	-1,579.1	926.7	854.1	72.58	12.767		
9,900.0	7,267.0	9,625.8	7,267.0	39.7	46.6	-90.00	1,923.7	-1,578.8	926.4	850.5	75.85	12.213		
10,000.0	7,267.0	9,725.8	7,267.0	41.3	47.9	-90.00	2,023.7	-1,578.4	926.0	846.9	79.14	11.701		
10,100.0	7,267.0	9,825.8	7,267.0	42.9	49.3	-90.00	2,123.7	-1,578.1	925.7	843.2	82.45	11.227		
10,200.0	7,267.0	9,925.8	7,267.0	44.5	50.7	-90.00	2,223.7	-1,577.7	925.3	839.5	85.77	10.788		
10,300.0	7,267.0	10,025.8	7,267.0	46.1	52.1	-90.00	2,323.7	-1,577.4	925.0	835.9	89.11	10.381		
10,400.0	7,267.0	10,125.8	7,267.0	47.7	53.5	-90.00	2,423.7	-1,577.0	924.6	832.2	92.46	10.001		
10,500.0	7,267.0	10,225.8	7,267.0	49.3	55.0	-90.00	2,523.7	-1,576.7	924.3	828.4	95.82	9.646		
10,600.0	7,267.0	10,325.8	7,267.0	51.0	56.5	-90.00	2,623.7	-1,576.3	923.9	824.7	99.19	9.315		
10,700.0	7,267.0	10,425.8	7,267.0	52.6	57.9	-90.00	2,723.7	-1,576.0	923.6	821.0	102.57	9.004		
10,800.0	7,267.0	10,525.8	7,267.0	54.3	59.4	-90.00	2,823.7	-1,575.6	923.2	817.3	105.96	8.713		
10,900.0	7,267.0	10,625.8	7,267.0	55.9	61.0	-90.00	2,923.7	-1,575.3	922.9	813.5	109.35	8.439		
11,000.0	7,267.0	10,725.8	7,267.0	57.6	62.5	-90.00	3,023.7	-1,574.9	922.5	809.8	112.75	8.182		
11,100.0	7,267.0	10,825.8	7,267.0	59.3	64.0	-90.00	3,123.7	-1,574.6	922.2	806.0	116.16	7.939		
11,200.0	7,267.0	10,925.8	7,267.0	60.9	65.6	-90.00	3,223.7	-1,574.2	921.8	802.2	119.58	7.709		
11,300.0	7,267.0	11,025.8	7,267.0	62.6	67.1	-90.00	3,323.7	-1,573.9	921.5	798.5	123.00	7.492		
11,400.0	7,267.0	11,125.8	7,267.0	64.3	68.7	-90.00	3,423.7	-1,573.5	921.1	794.7	126.42	7.286		
11,500.0	7,267.0	11,225.8	7,267.0	66.0	70.3	-90.00	3,523.7	-1,573.2	920.8	790.9	129.85	7.091		
11,600.0	7,267.0	11,325.8	7,267.0	67.7	71.9	-90.00	3,623.7	-1,572.8	920.4	787.1	133.29	6.906		
11,700.0	7,267.0	11,425.8	7,267.0	69.4	73.5	-90.00	3,723.6	-1,572.5	920.1	783.4	136.72	6.729		
11,800.0	7,267.0	11,525.8	7,267.0	71.1	75.1	-90.00	3,823.6	-1,572.1	919.7	779.6	140.17	6.562		
11,900.0	7,267.0	11,625.8	7,267.0	72.8	76.7	-90.00	3,923.6	-1,571.8	919.4	775.8	143.61	6.402		
12,000.0	7,267.0	11,725.8	7,267.0	74.5	78.3	-90.00	4,023.6	-1,571.4	919.0	772.0	147.06	6.249		
12,100.0	7,267.0	11,825.8	7,267.0	76.2	79.9	-90.00	4,123.6	-1,571.1	918.7	768.2	150.51	6.104		
12,200.0	7,267.0	11,925.8	7,267.0	77.9	81.5	-90.00	4,223.6	-1,570.7	918.3	764.4	153.96	5.965		
12,300.0	7,267.0	12,025.8	7,267.0	79.6	83.2	-90.00	4,323.6	-1,570.4	918.0	760.6	157.41	5.832		
12,400.0	7,267.0	12,125.8	7,267.0	81.3	84.8	-90.00	4,423.6	-1,570.1	917.6	756.8	160.87	5.704		
12,500.0	7,267.0	12,225.8	7,267.0	83.0	86.4	-90.00	4,523.6	-1,569.7	917.3	753.0	164.33	5.582		
12,600.0	7,267.0	12,325.8	7,267.0	84.7	88.1	-90.00	4,623.6	-1,569.4	916.9	749.1	167.79	5.465		
12,700.0	7,267.0	12,425.8	7,267.0	86.4	89.7	-90.00	4,723.6	-1,569.0	916.6	745.3	171.26	5.352		
12,800.0	7,267.0	12,525.8	7,267.0	88.1	91.4	-90.00	4,823.6	-1,568.7	916.2	741.5	174.72	5.244		
12,900.0	7,267.0	12,625.8	7,267.0	89.9	93.0	-90.00	4,923.6	-1,568.3	915.9	737.7	178.19	5.140		
13,000.0	7,267.0	12,725.8	7,267.0	91.6	94.7	-90.00	5,023.6	-1,568.0	915.5	733.9	181.66	5.040		
13,100.0	7,267.0	12,825.8	7,267.0	93.3	96.4	-90.00	5,123.6	-1,567.6	915.2	730.1	185.13	4.944		
13,200.0	7,267.0	12,925.8	7,267.0	95.0	98.0	-90.00	5,223.6	-1,567.3	914.8	726.2	188.60	4.851		
13,300.0	7,267.0	13,025.8	7,267.0	96.7	99.7	-90.00	5,323.6	-1,566.9	914.5	722.4	192.07	4.761		
13,400.0	7,267.0	13,125.8	7,267.0	98.5	101.4	-90.00	5,423.6	-1,566.6	914.1	718.6	195.54	4.675		
13,500.0	7,267.0	13,225.8	7,267.0	100.2	103.0	-90.00	5,523.6	-1,566.2	913.8	714.8	199.02	4.591		
13,600.0	7,267.0	13,325.8	7,267.0	101.9	104.7	-90.00	5,623.6	-1,565.9	913.4	710.9	202.49	4.511		
13,700.0	7,267.0	13,425.8	7,267.0	103.6	106.4	-90.00	5,723.6	-1,565.5	913.1	707.1	205.97	4.433		
13,800.0	7,267.0	13,525.8	7,267.0	105.4	108.1	-90.00	5,823.6	-1,565.2	912.7	703.3	209.45	4.358		
13,900.0	7,267.0	13,625.8	7,267.0	107.1	109.8	-90.00	5,923.6	-1,564.8	912.4	699.5	212.93	4.285		
14,000.0	7,267.0	13,725.8	7,267.0	108.8	111.5	-90.00	6,023.6	-1,564.5	912.0	695.6	216.41	4.214		
14,100.0	7,267.0	13,825.8	7,267.0	110.6	113.1	-90.00	6,123.6	-1,564.1	911.7	691.8	219.89	4.146		
14,200.0	7,267.0	13,925.8	7,267.0	112.3	114.8	-90.00	6,223.6	-1,563.8	911.3	688.0	223.37	4.080		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2			Offset Site Error:		0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error:		0.0 ft				
Reference		Offset		Semi Major Axis			Distance							Warning					
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							
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)									
14,300.0	7,267.0	14,025.8	7,267.0	114.0	116.5	-90.00	6,323.6	-1,563.4	911.0	684.1	226.86	4.016							
14,400.0	7,267.0	14,125.8	7,267.0	115.8	118.2	-90.00	6,423.6	-1,563.1	910.6	680.3	230.34	3.954							
14,500.0	7,267.0	14,225.8	7,267.0	117.5	119.9	-90.00	6,523.6	-1,562.7	910.3	676.5	233.82	3.893							
14,535.9	7,267.0	14,261.7	7,267.0	118.1	120.5	-90.00	6,559.6	-1,562.6	910.2	675.1	235.08	3.872 SF							

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-30.2	30.2					
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-30.2	30.2	30.0	0.24	123.584		
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-30.2	30.2	29.6	0.59	50.888		
233.4	233.4	233.4	233.4	0.4	0.4	-89.95	0.0	-30.2	30.2	29.5	0.71	42.535	CC, ES	
300.0	300.0	299.5	299.5	0.5	0.5	-90.21	-0.1	-30.6	30.6	29.7	0.94	32.503		
400.0	400.0	398.4	398.3	0.6	0.7	-92.08	-1.2	-33.8	33.9	32.6	1.29	26.283		
500.0	500.0	497.0	496.7	0.8	0.9	52.58	-3.5	-40.3	39.5	37.8	1.64	24.061		
600.0	599.8	595.4	594.5	1.0	1.1	54.06	-6.8	-49.8	46.2	44.2	2.00	23.086		
700.0	699.5	693.4	691.6	1.2	1.4	56.94	-11.2	-62.6	54.3	51.9	2.39	22.677		
800.0	798.7	791.0	787.8	1.5	1.7	60.49	-16.6	-78.3	63.9	61.0	2.84	22.476		
895.3	892.8	884.3	879.1	1.8	2.0	64.11	-22.8	-96.1	74.4	71.0	3.34	22.263		
900.0	897.5	889.0	883.7	1.8	2.1	64.32	-23.1	-97.0	74.9	71.5	3.37	22.243		
1,000.0	996.0	988.2	980.8	2.1	2.4	68.08	-29.9	-116.6	86.2	82.2	3.95	21.804		
1,100.0	1,094.5	1,087.4	1,077.8	2.4	2.8	70.96	-36.7	-136.2	97.7	93.1	4.57	21.392		
1,200.0	1,193.0	1,186.6	1,174.8	2.7	3.2	73.23	-43.4	-155.8	109.5	104.3	5.21	21.030		
1,300.0	1,291.5	1,285.9	1,271.9	3.1	3.6	75.06	-50.2	-175.4	121.4	115.5	5.86	20.720		
1,400.0	1,390.0	1,385.1	1,368.9	3.4	4.0	76.56	-57.0	-195.0	133.3	126.8	6.52	20.456		
1,500.0	1,488.5	1,484.3	1,466.0	3.7	4.4	77.81	-63.8	-214.5	145.4	138.2	7.19	20.231		
1,600.0	1,587.0	1,583.5	1,563.0	4.1	4.8	78.87	-70.5	-234.1	157.5	149.7	7.86	20.039		
1,700.0	1,685.5	1,682.8	1,660.0	4.4	5.2	79.78	-77.3	-253.7	169.7	161.2	8.54	19.873		
1,800.0	1,784.1	1,782.0	1,757.1	4.8	5.6	80.57	-84.1	-273.3	181.9	172.7	9.22	19.729		
1,900.0	1,882.6	1,881.2	1,854.1	5.1	6.0	81.25	-90.9	-292.9	194.1	184.2	9.90	19.603		
2,000.0	1,981.1	1,980.4	1,951.1	5.4	6.4	81.86	-97.6	-312.4	206.4	195.8	10.59	19.493		
2,100.0	2,079.6	2,079.7	2,048.2	5.8	6.8	82.40	-104.4	-332.0	218.7	207.4	11.28	19.395		
2,200.0	2,178.1	2,178.9	2,145.2	6.1	7.3	82.88	-111.2	-351.6	231.0	219.0	11.96	19.308		
2,300.0	2,276.6	2,278.1	2,242.2	6.5	7.7	83.31	-118.0	-371.2	243.3	230.6	12.65	19.230		
2,400.0	2,375.1	2,377.3	2,339.3	6.8	8.1	83.70	-124.7	-390.8	255.6	242.3	13.34	19.160		
2,500.0	2,473.6	2,476.5	2,436.3	7.2	8.5	84.06	-131.5	-410.3	268.0	253.9	14.03	19.096		
2,600.0	2,572.1	2,575.8	2,533.3	7.5	8.9	84.38	-138.3	-429.9	280.3	265.6	14.72	19.039		
2,700.0	2,670.6	2,675.0	2,630.4	7.9	9.3	84.68	-145.1	-449.5	292.6	277.2	15.41	18.986		
2,800.0	2,769.1	2,774.2	2,727.4	8.2	9.7	84.95	-151.8	-469.1	305.0	288.9	16.11	18.938		
2,900.0	2,867.7	2,873.4	2,824.5	8.6	10.1	85.20	-158.6	-488.7	317.4	300.6	16.80	18.894		
3,000.0	2,966.2	2,972.7	2,921.5	8.9	10.5	85.43	-165.4	-508.2	329.7	312.2	17.49	18.853		
3,100.0	3,064.7	3,071.9	3,018.5	9.3	10.9	85.65	-172.2	-527.8	342.1	323.9	18.18	18.816		
3,200.0	3,163.2	3,171.1	3,115.6	9.6	11.3	85.85	-178.9	-547.4	354.5	335.6	18.88	18.781		
3,300.0	3,261.7	3,270.3	3,212.6	9.9	11.7	86.04	-185.7	-567.0	366.9	347.3	19.57	18.748		
3,400.0	3,360.2	3,369.6	3,309.6	10.3	12.1	86.21	-192.5	-586.6	379.3	359.0	20.26	18.718		
3,500.0	3,458.7	3,468.8	3,406.7	10.6	12.5	86.37	-199.3	-606.1	391.7	370.7	20.96	18.690		
3,600.0	3,557.2	3,568.0	3,503.7	11.0	12.9	86.53	-206.0	-625.7	404.0	382.4	21.65	18.664		
3,700.0	3,655.7	3,667.2	3,600.7	11.3	13.3	86.67	-212.8	-645.3	416.4	394.1	22.34	18.639		
3,800.0	3,754.2	3,766.5	3,697.8	11.7	13.7	86.81	-219.6	-664.9	428.8	405.8	23.04	18.616		
3,900.0	3,852.7	3,865.7	3,794.8	12.0	14.2	86.94	-226.4	-684.5	441.2	417.5	23.73	18.594		
4,000.0	3,951.3	3,964.9	3,891.9	12.4	14.6	87.06	-233.1	-704.0	453.6	429.2	24.42	18.573		
4,100.0	4,049.8	4,064.1	3,988.9	12.7	15.0	87.17	-239.9	-723.6	466.0	440.9	25.12	18.554		
4,200.0	4,148.3	4,163.3	4,085.9	13.1	15.4	87.28	-246.7	-743.2	478.5	452.6	25.81	18.535		
4,300.0	4,246.8	4,262.6	4,183.0	13.4	15.8	87.39	-253.5	-762.8	490.9	464.4	26.51	18.518		
4,400.0	4,345.3	4,361.8	4,280.0	13.8	16.2	87.48	-260.2	-782.4	503.3	476.1	27.20	18.501		
4,500.0	4,443.8	4,461.0	4,377.0	14.1	16.6	87.58	-267.0	-801.9	515.7	487.8	27.90	18.486		
4,600.0	4,542.3	4,560.2	4,474.1	14.5	17.0	87.67	-273.8	-821.5	528.1	499.5	28.59	18.471		
4,700.0	4,640.8	4,659.5	4,571.1	14.8	17.4	87.75	-280.6	-841.1	540.5	511.2	29.29	18.457		
4,800.0	4,739.3	4,758.7	4,668.1	15.2	17.8	87.83	-287.3	-860.7	552.9	522.9	29.98	18.443		
4,900.0	4,837.8	4,857.9	4,765.2	15.5	18.2	87.91	-294.1	-880.3	565.3	534.7	30.67	18.430		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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		
5,000.0	4,936.3	4,957.1	4,862.2	15.9	18.6	87.99	-300.9	-899.8	577.8	546.4	31.37	18.418		
5,100.0	5,034.9	5,056.4	4,959.2	16.2	19.0	88.06	-307.7	-919.4	590.2	558.1	32.06	18.406		
5,200.0	5,133.4	5,155.6	5,056.3	16.6	19.4	88.13	-314.4	-939.0	602.6	569.8	32.76	18.395		
5,300.0	5,231.9	5,254.8	5,153.3	16.9	19.9	88.19	-321.2	-958.6	615.0	581.6	33.45	18.384		
5,400.0	5,330.4	5,354.0	5,250.4	17.3	20.3	88.25	-328.0	-978.2	627.4	593.3	34.15	18.373		
5,500.0	5,428.9	5,453.2	5,347.4	17.6	20.7	88.31	-334.8	-997.8	639.8	605.0	34.84	18.364		
5,600.0	5,527.4	5,552.5	5,444.4	17.9	21.1	88.37	-341.5	-1,017.3	652.3	616.7	35.54	18.354		
5,700.0	5,625.9	5,651.7	5,541.5	18.3	21.5	88.43	-348.3	-1,036.9	664.7	628.5	36.23	18.345		
5,800.0	5,724.4	5,750.9	5,638.5	18.6	21.9	88.48	-355.1	-1,056.5	677.1	640.2	36.93	18.336		
5,900.0	5,822.9	5,850.1	5,735.5	19.0	22.3	88.53	-361.9	-1,076.1	689.5	651.9	37.62	18.327		
6,000.0	5,921.4	5,949.4	5,832.6	19.3	22.7	88.58	-368.6	-1,095.7	702.0	663.6	38.32	18.319		
6,100.0	6,020.0	6,048.6	5,929.6	19.7	23.1	88.63	-375.4	-1,115.2	714.4	675.4	39.01	18.311		
6,200.0	6,118.5	6,147.8	6,026.6	20.0	23.5	88.68	-382.2	-1,134.8	726.8	687.1	39.71	18.304		
6,300.0	6,217.0	6,247.0	6,123.7	20.4	23.9	88.73	-389.0	-1,154.4	739.2	698.8	40.40	18.296		
6,400.0	6,315.5	6,346.3	6,220.7	20.7	24.3	88.77	-395.7	-1,174.0	751.7	710.6	41.10	18.289		
6,500.0	6,414.0	6,445.5	6,317.8	21.1	24.7	88.81	-402.5	-1,193.6	764.1	722.3	41.79	18.282		
6,600.0	6,512.5	6,544.7	6,414.8	21.4	25.1	88.85	-409.3	-1,213.1	776.5	734.0	42.49	18.276		
6,704.9	6,615.8	6,648.8	6,516.6	21.8	25.6	88.89	-416.4	-1,233.7	789.5	746.3	43.22	18.269		
6,750.0	6,660.5	6,693.6	6,560.4	21.9	25.8	66.84	-419.5	-1,242.5	794.2	750.6	43.60	18.215		
6,800.0	6,710.2	6,743.3	6,609.0	22.0	26.0	20.45	-422.8	-1,252.3	797.0	753.3	43.75	18.217		
6,850.0	6,759.8	6,792.6	6,657.2	22.0	26.2	-14.98	-426.2	-1,262.0	797.5	753.8	43.62	18.282		
6,900.0	6,809.0	6,841.1	6,704.6	22.0	26.4	-31.08	-429.5	-1,271.6	795.7	752.5	43.21	18.412		
6,950.0	6,857.3	6,888.4	6,750.9	21.9	26.6	-39.79	-432.8	-1,281.0	791.8	749.2	42.55	18.608		
7,000.0	6,904.4	6,934.3	6,795.8	21.8	26.7	-45.72	-435.9	-1,290.0	786.1	744.4	41.65	18.871		
7,050.0	6,949.9	6,978.3	6,838.8	21.6	26.9	-50.49	-438.9	-1,298.7	778.8	738.2	40.56	19.199		
7,100.0	6,993.4	7,020.1	6,879.7	21.4	27.1	-54.71	-441.7	-1,306.9	770.3	731.0	39.33	19.586		
7,150.0	7,034.7	7,050.0	6,909.0	21.2	27.2	-58.19	-443.6	-1,312.8	761.2	723.1	38.07	19.994		
7,200.0	7,073.5	7,077.1	6,935.5	20.9	27.3	-61.31	-444.2	-1,318.2	752.2	715.5	36.78	20.453		
7,250.0	7,109.4	7,100.0	6,958.0	20.6	27.4	-64.03	-443.7	-1,322.7	743.8	708.2	35.54	20.926		
7,300.0	7,142.1	7,128.5	6,985.8	20.3	27.5	-66.91	-441.7	-1,328.2	736.0	701.7	34.30	21.454		
7,350.0	7,171.4	7,150.0	7,006.8	20.0	27.5	-69.26	-439.3	-1,332.4	729.1	695.9	33.21	21.955		
7,400.0	7,197.2	7,180.2	7,036.1	19.7	27.6	-71.98	-434.6	-1,338.1	723.4	691.3	32.15	22.502		
7,450.0	7,219.1	7,206.3	7,061.1	19.4	27.7	-74.30	-429.3	-1,343.0	719.2	687.9	31.25	23.015		
7,500.0	7,237.0	7,232.5	7,086.0	19.1	27.7	-76.47	-422.8	-1,347.9	716.6	686.1	30.47	23.518		
7,543.5	7,249.3	7,255.4	7,107.6	18.9	27.8	-78.21	-416.2	-1,352.1	715.8	685.9	29.90	23.941		
7,550.0	7,250.9	7,258.9	7,110.8	18.8	27.8	-78.46	-415.1	-1,352.7	715.8	686.0	29.82	24.005		
7,600.0	7,260.5	7,285.5	7,135.4	18.6	27.8	-80.26	-406.1	-1,357.4	717.1	687.9	29.29	24.485		
7,650.0	7,265.8	7,312.5	7,159.9	18.4	27.9	-81.85	-395.9	-1,362.1	720.7	691.9	28.87	24.962		
7,686.5	7,267.0	7,332.4	7,177.7	18.3	27.9	-82.87	-387.5	-1,365.5	724.8	696.2	28.63	25.314		
7,700.0	7,267.0	7,340.0	7,184.5	18.2	27.9	-83.41	-384.2	-1,366.8	726.7	698.1	28.57	25.439		
7,800.0	7,267.0	7,412.5	7,246.1	18.0	28.0	-88.35	-347.9	-1,378.4	745.5	717.5	28.03	26.596		
7,900.0	7,267.0	7,528.7	7,334.1	17.9	28.0	-95.17	-274.1	-1,394.5	770.0	742.7	27.31	28.198		
8,000.0	7,267.0	7,719.9	7,442.0	18.1	28.1	-102.96	-118.5	-1,412.8	792.6	766.1	26.47	29.936		
8,100.0	7,267.0	7,983.3	7,498.0	18.3	28.5	-106.78	136.5	-1,418.7	800.5	773.4	27.05	29.594		
8,200.0	7,267.0	8,083.3	7,498.0	18.8	28.7	-106.82	236.4	-1,416.6	798.5	770.3	28.22	28.296		
8,300.0	7,267.0	8,183.2	7,498.0	19.4	29.1	-106.86	336.4	-1,414.5	796.5	766.8	29.71	26.808		
8,400.0	7,267.0	8,283.2	7,498.0	20.1	29.6	-106.91	436.4	-1,412.4	794.5	763.0	31.49	25.229		
8,500.0	7,267.0	8,383.2	7,498.0	21.0	30.1	-106.95	536.3	-1,410.3	792.5	759.0	33.51	23.648		
8,600.0	7,267.0	8,483.2	7,498.0	21.9	30.8	-107.00	636.3	-1,408.2	790.5	754.7	35.73	22.122		
8,700.0	7,267.0	8,583.1	7,498.0	23.0	31.5	-107.04	736.2	-1,406.1	788.5	750.4	38.12	20.685		
8,800.0	7,267.0	8,683.1	7,498.0	24.1	32.3	-107.08	836.2	-1,404.0	786.5	745.8	40.64	19.352		
8,900.0	7,267.0	8,783.1	7,498.0	25.3	33.2	-107.13	936.1	-1,401.9	784.5	741.2	43.27	18.129		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error:	0.0 ft
Survey Program: O-Geolink 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)				
9,000.0	7,267.0	8,883.1	7,498.0	26.6	34.2	-107.17	1,036.1	-1,399.8	782.5	736.5	46.00	17.012		
9,100.0	7,267.0	8,983.1	7,498.0	27.9	35.2	-107.22	1,136.1	-1,397.8	780.5	731.7	48.80	15.995		
9,200.0	7,267.0	9,083.0	7,498.0	29.3	36.3	-107.27	1,236.0	-1,395.7	778.5	726.8	51.66	15.069		
9,300.0	7,267.0	9,183.0	7,498.0	30.7	37.4	-107.31	1,336.0	-1,393.6	776.5	721.9	54.58	14.227		
9,400.0	7,267.0	9,283.0	7,498.0	32.1	38.6	-107.36	1,435.9	-1,391.5	774.5	716.9	57.54	13.460		
9,500.0	7,267.0	9,383.0	7,498.0	33.6	39.8	-107.40	1,535.9	-1,389.4	772.5	711.9	60.54	12.761		
9,600.0	7,267.0	9,483.0	7,498.0	35.1	41.0	-107.45	1,635.8	-1,387.3	770.5	706.9	63.57	12.121		
9,700.0	7,267.0	9,582.9	7,498.0	36.6	42.3	-107.50	1,735.8	-1,385.2	768.5	701.8	66.62	11.534		
9,800.0	7,267.0	9,682.9	7,498.0	38.1	43.6	-107.54	1,835.7	-1,383.1	766.5	696.8	69.71	10.996		
9,900.0	7,267.0	9,782.9	7,498.0	39.7	45.0	-107.59	1,935.7	-1,381.0	764.5	691.7	72.81	10.500		
10,000.0	7,267.0	9,882.9	7,498.0	41.3	46.4	-107.64	2,035.7	-1,378.9	762.5	686.5	75.93	10.042		
10,100.0	7,267.0	9,982.8	7,498.0	42.9	47.8	-107.69	2,135.6	-1,376.8	760.5	681.4	79.06	9.618		
10,200.0	7,267.0	10,082.8	7,498.0	44.5	49.2	-107.73	2,235.6	-1,374.7	758.5	676.3	82.21	9.226		
10,300.0	7,267.0	10,182.8	7,498.0	46.1	50.7	-107.78	2,335.5	-1,372.6	756.5	671.1	85.37	8.861		
10,400.0	7,267.0	10,282.8	7,498.0	47.7	52.1	-107.83	2,435.5	-1,370.5	754.5	666.0	88.54	8.521		
10,500.0	7,267.0	10,382.8	7,498.0	49.3	53.6	-107.88	2,535.4	-1,368.4	752.5	660.8	91.72	8.204		
10,600.0	7,267.0	10,482.7	7,498.0	51.0	55.1	-107.93	2,635.4	-1,366.3	750.5	655.6	94.91	7.908		
10,700.0	7,267.0	10,582.7	7,498.0	52.6	56.6	-107.98	2,735.3	-1,364.3	748.5	650.4	98.10	7.630		
10,800.0	7,267.0	10,682.7	7,498.0	54.3	58.2	-108.03	2,835.3	-1,362.2	746.5	645.2	101.30	7.369		
10,900.0	7,267.0	10,782.7	7,498.0	55.9	59.7	-108.08	2,935.3	-1,360.1	744.5	640.0	104.51	7.124		
11,000.0	7,267.0	10,882.6	7,498.0	57.6	61.3	-108.13	3,035.2	-1,358.0	742.5	634.8	107.71	6.894		
11,100.0	7,267.0	10,982.6	7,498.0	59.3	62.8	-108.18	3,135.2	-1,355.9	740.6	629.6	110.93	6.676		
11,200.0	7,267.0	11,082.6	7,498.0	60.9	64.4	-108.23	3,235.1	-1,353.8	738.6	624.4	114.14	6.471		
11,300.0	7,267.0	11,182.6	7,498.0	62.6	66.0	-108.28	3,335.1	-1,351.7	736.6	619.2	117.36	6.276		
11,400.0	7,267.0	11,282.6	7,498.0	64.3	67.6	-108.33	3,435.0	-1,349.6	734.6	614.0	120.58	6.092		
11,500.0	7,267.0	11,382.5	7,498.0	66.0	69.2	-108.38	3,535.0	-1,347.5	732.6	608.8	123.80	5.917		
11,600.0	7,267.0	11,482.5	7,498.0	67.7	70.8	-108.44	3,635.0	-1,345.4	730.6	603.6	127.03	5.752		
11,700.0	7,267.0	11,582.5	7,498.0	69.4	72.4	-108.49	3,734.9	-1,343.3	728.6	598.4	130.25	5.594		
11,800.0	7,267.0	11,682.5	7,498.0	71.1	74.0	-108.54	3,834.9	-1,341.2	726.6	593.2	133.48	5.444		
11,900.0	7,267.0	11,782.4	7,498.0	72.8	75.6	-108.59	3,934.8	-1,339.1	724.7	587.9	136.71	5.301		
12,000.0	7,267.0	11,882.4	7,498.0	74.5	77.3	-108.65	4,034.8	-1,337.0	722.7	582.7	139.94	5.164		
12,100.0	7,267.0	11,982.4	7,498.0	76.2	78.9	-108.70	4,134.7	-1,334.9	720.7	577.5	143.17	5.034		
12,200.0	7,267.0	12,082.4	7,498.0	77.9	80.6	-108.75	4,234.7	-1,332.8	718.7	572.3	146.39	4.909		
12,300.0	7,267.0	12,182.4	7,498.0	79.6	82.2	-108.81	4,334.6	-1,330.8	716.7	567.1	149.62	4.790		
12,400.0	7,267.0	12,282.3	7,498.0	81.3	83.9	-108.86	4,434.6	-1,328.7	714.7	561.9	152.85	4.676		
12,500.0	7,267.0	12,382.3	7,498.0	83.0	85.5	-108.91	4,534.6	-1,326.6	712.8	556.7	156.08	4.567		
12,600.0	7,267.0	12,478.7	7,498.0	84.7	87.1	-108.97	4,630.9	-1,324.6	710.9	551.6	159.25	4.464		
12,699.6	7,267.0	12,567.8	7,498.0	86.4	88.6	-108.98	4,720.0	-1,323.9	710.1	547.8	162.33	4.375		
12,700.0	7,267.0	12,568.2	7,498.0	86.4	88.6	-108.98	4,720.4	-1,323.9	710.1	547.8	162.34	4.374		
12,800.0	7,267.0	12,657.7	7,498.0	88.1	90.1	-108.96	4,809.9	-1,324.6	710.9	545.4	165.46	4.296		
12,900.0	7,267.0	12,756.5	7,498.0	89.9	91.8	-108.92	4,908.7	-1,326.4	712.5	543.8	168.77	4.222		
13,000.0	7,267.0	12,856.5	7,498.0	91.6	93.5	-108.87	5,008.6	-1,328.1	714.2	542.1	172.09	4.150		
13,100.0	7,267.0	12,956.4	7,498.0	93.3	95.2	-108.83	5,108.6	-1,329.8	715.8	540.4	175.42	4.081		
13,200.0	7,267.0	13,056.4	7,498.0	95.0	96.8	-108.78	5,208.6	-1,331.6	717.5	538.7	178.76	4.014		
13,300.0	7,267.0	13,156.4	7,498.0	96.7	98.5	-108.74	5,308.6	-1,333.3	719.1	537.0	182.09	3.949		
13,400.0	7,267.0	13,256.4	7,498.0	98.5	100.2	-108.70	5,408.5	-1,335.1	720.8	535.3	185.43	3.887		
13,500.0	7,267.0	13,356.4	7,498.0	100.2	101.9	-108.65	5,508.5	-1,336.8	722.4	533.7	188.77	3.827		
13,600.0	7,267.0	13,456.4	7,498.0	101.9	103.6	-108.61	5,608.5	-1,338.6	724.1	532.0	192.11	3.769		
13,700.0	7,267.0	13,556.3	7,498.0	103.6	105.3	-108.56	5,708.4	-1,340.3	725.7	530.3	195.46	3.713		
13,800.0	7,267.0	13,656.3	7,498.0	105.4	107.0	-108.52	5,808.4	-1,342.1	727.4	528.6	198.81	3.659		
13,900.0	7,267.0	13,756.3	7,498.0	107.1	108.7	-108.48	5,908.4	-1,343.8	729.0	526.9	202.16	3.606		
14,000.0	7,267.0	13,856.3	7,498.0	108.8	110.5	-108.43	6,008.3	-1,345.5	730.7	525.2	205.51	3.556		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error: 0.0 ft
Survey Program: 0-Geolink 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	
14,100.0	7,267.0	13,956.3	7,498.0	110.6	112.2	-108.39	6,108.3	-1,347.3	732.4	523.5	208.86	3.506	
14,200.0	7,267.0	14,056.3	7,498.0	112.3	113.9	-108.35	6,208.3	-1,349.0	734.0	521.8	212.22	3.459	
14,300.0	7,267.0	14,156.3	7,498.0	114.0	115.6	-108.30	6,308.2	-1,350.8	735.7	520.1	215.58	3.413	
14,400.0	7,267.0	14,412.1	7,498.0	115.8	119.8	-109.05	6,561.5	-1,321.3	721.6	501.1	220.49	3.273	
14,500.0	7,267.0	14,412.1	7,498.0	117.5	119.8	-109.05	6,561.5	-1,321.3	708.9	486.7	222.13	3.191	
14,535.9	7,267.0	14,412.1	7,498.0	118.1	119.8	-109.05	6,561.5	-1,321.3	707.7	485.0	222.73	3.177 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-20.1	20.1					
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-20.1	20.1	19.9	0.24	82.389	CC, ES	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-20.1	20.1	19.5	0.59	33.925		
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-20.1	20.1	19.2	0.94	21.360		
400.0	400.0	399.3	399.3	0.6	0.6	-91.42	-0.5	-21.8	21.8	20.5	1.29	16.875		
500.0	500.0	498.4	498.3	0.8	0.8	53.85	-2.2	-26.6	25.7	24.1	1.64	15.672		
600.0	599.8	597.4	596.8	1.0	1.1	56.87	-5.0	-34.7	30.9	28.9	2.00	15.440		
700.0	699.5	696.0	694.7	1.2	1.3	61.50	-8.8	-46.0	37.7	35.3	2.40	15.684		
800.0	798.7	794.3	791.9	1.5	1.6	66.52	-13.7	-60.4	46.1	43.3	2.86	16.118		
895.3	892.8	888.7	884.7	1.8	1.9	71.61	-19.1	-76.4	55.3	51.9	3.38	16.356		
900.0	897.5	893.4	889.3	1.8	1.9	71.90	-19.4	-77.2	55.8	52.4	3.41	16.354		
1,000.0	996.0	992.7	987.1	2.1	2.3	77.08	-25.2	-94.2	65.5	61.5	4.02	16.303		
1,100.0	1,094.5	1,092.1	1,084.8	2.4	2.6	80.91	-31.0	-111.1	75.6	71.0	4.65	16.257		
1,200.0	1,193.0	1,191.5	1,182.6	2.7	3.0	83.83	-36.7	-128.1	86.0	80.7	5.30	16.222		
1,300.0	1,291.5	1,290.9	1,280.3	3.1	3.3	86.11	-42.5	-145.1	96.5	90.6	5.96	16.198		
1,400.0	1,390.0	1,390.2	1,378.0	3.4	3.7	87.94	-48.3	-162.0	107.2	100.5	6.62	16.182		
1,500.0	1,488.5	1,489.6	1,475.8	3.7	4.0	89.44	-54.1	-179.0	117.9	110.6	7.29	16.172		
1,600.0	1,587.0	1,589.0	1,573.5	4.1	4.4	90.69	-59.8	-196.0	128.7	120.8	7.96	16.167		
1,700.0	1,685.5	1,688.4	1,671.3	4.4	4.7	91.75	-65.6	-212.9	139.6	131.0	8.64	16.165		
1,800.0	1,784.1	1,787.8	1,769.0	4.8	5.1	92.65	-71.4	-229.9	150.5	141.2	9.31	16.166		
1,900.0	1,882.6	1,887.1	1,866.8	5.1	5.5	93.43	-77.2	-246.8	161.5	151.5	9.99	16.167		
2,000.0	1,981.1	1,986.5	1,964.5	5.4	5.8	94.11	-82.9	-263.8	172.4	161.8	10.66	16.170		
2,100.0	2,079.6	2,085.9	2,062.3	5.8	6.2	94.71	-88.7	-280.8	183.4	172.1	11.34	16.174		
2,200.0	2,178.1	2,185.3	2,160.0	6.1	6.5	95.24	-94.5	-297.7	194.4	182.4	12.02	16.178		
2,300.0	2,276.6	2,284.6	2,257.8	6.5	6.9	95.72	-100.3	-314.7	205.4	192.7	12.70	16.182		
2,400.0	2,375.1	2,384.0	2,355.5	6.8	7.3	96.15	-106.0	-331.7	216.5	203.1	13.37	16.186		
2,500.0	2,473.6	2,483.4	2,453.3	7.2	7.6	96.53	-111.8	-348.6	227.5	213.5	14.05	16.191		
2,600.0	2,572.1	2,582.8	2,551.0	7.5	8.0	96.88	-117.6	-365.6	238.6	223.8	14.73	16.195		
2,700.0	2,670.6	2,682.1	2,648.8	7.9	8.3	97.20	-123.4	-382.6	249.6	234.2	15.41	16.200		
2,800.0	2,769.1	2,781.5	2,746.5	8.2	8.7	97.49	-129.1	-399.5	260.7	244.6	16.09	16.204		
2,900.0	2,867.7	2,880.9	2,844.3	8.6	9.1	97.76	-134.9	-416.5	271.8	255.0	16.77	16.208		
3,000.0	2,966.2	2,980.3	2,942.0	8.9	9.4	98.01	-140.7	-433.4	282.9	265.4	17.45	16.213		
3,100.0	3,064.7	3,079.7	3,039.8	9.3	9.8	98.23	-146.5	-450.4	293.9	275.8	18.13	16.217		
3,200.0	3,163.2	3,179.0	3,137.5	9.6	10.1	98.45	-152.2	-467.4	305.0	286.2	18.81	16.221		
3,300.0	3,261.7	3,278.4	3,235.3	9.9	10.5	98.64	-158.0	-484.3	316.1	296.6	19.48	16.224		
3,400.0	3,360.2	3,377.8	3,333.0	10.3	10.9	98.83	-163.8	-501.3	327.2	307.1	20.16	16.228		
3,500.0	3,458.7	3,477.2	3,430.8	10.6	11.2	99.00	-169.6	-518.3	338.3	317.5	20.84	16.231		
3,600.0	3,557.2	3,576.5	3,528.5	11.0	11.6	99.16	-175.3	-535.2	349.4	327.9	21.52	16.235		
3,700.0	3,655.7	3,675.9	3,626.3	11.3	11.9	99.31	-181.1	-552.2	360.5	338.3	22.20	16.238		
3,800.0	3,754.2	3,775.3	3,724.0	11.7	12.3	99.45	-186.9	-569.2	371.6	348.7	22.88	16.241		
3,900.0	3,852.7	3,874.7	3,821.8	12.0	12.7	99.58	-192.7	-586.1	382.7	359.2	23.56	16.244		
4,000.0	3,951.3	3,974.1	3,919.5	12.4	13.0	99.71	-198.4	-603.1	393.8	369.6	24.24	16.247		
4,100.0	4,049.8	4,073.4	4,017.2	12.7	13.4	99.83	-204.2	-620.1	405.0	380.0	24.92	16.250		
4,200.0	4,148.3	4,172.8	4,115.0	13.1	13.7	99.94	-210.0	-637.0	416.1	390.5	25.60	16.253		
4,300.0	4,246.8	4,272.2	4,212.7	13.4	14.1	100.05	-215.8	-654.0	427.2	400.9	26.28	16.256		
4,400.0	4,345.3	4,371.6	4,310.5	13.8	14.5	100.15	-221.5	-670.9	438.3	411.3	26.96	16.258		
4,500.0	4,443.8	4,470.9	4,408.2	14.1	14.8	100.24	-227.3	-687.9	449.4	421.8	27.64	16.261		
4,600.0	4,542.3	4,570.3	4,506.0	14.5	15.2	100.34	-233.1	-704.9	460.5	432.2	28.32	16.263		
4,700.0	4,640.8	4,669.7	4,603.7	14.8	15.5	100.42	-238.9	-721.8	471.7	442.7	29.00	16.265		
4,800.0	4,739.3	4,769.1	4,701.5	15.2	15.9	100.51	-244.6	-738.8	482.8	453.1	29.68	16.267		
4,900.0	4,837.8	4,868.4	4,799.2	15.5	16.3	100.59	-250.4	-755.8	493.9	463.6	30.36	16.270		
5,000.0	4,936.3	4,967.8	4,897.0	15.9	16.6	100.66	-256.2	-772.7	505.0	474.0	31.04	16.272		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: O-Geolink 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	5,034.9	5,067.2	4,994.7	16.2	17.0	100.74	-262.0	-789.7	516.2	484.4	31.72	16.274		
5,200.0	5,133.4	5,166.6	5,092.5	16.6	17.4	100.81	-267.7	-806.7	527.3	494.9	32.40	16.276		
5,300.0	5,231.9	5,266.0	5,190.2	16.9	17.7	100.87	-273.5	-823.6	538.4	505.3	33.08	16.278		
5,400.0	5,330.4	5,365.3	5,288.0	17.3	18.1	100.94	-279.3	-840.6	549.5	515.8	33.76	16.279		
5,500.0	5,428.9	5,464.7	5,385.7	17.6	18.4	101.00	-285.1	-857.5	560.7	526.2	34.44	16.281		
5,600.0	5,527.4	5,564.1	5,483.5	17.9	18.8	101.06	-290.8	-874.5	571.8	536.7	35.12	16.283		
5,700.0	5,625.9	5,663.5	5,581.2	18.3	19.2	101.11	-296.6	-891.5	582.9	547.1	35.80	16.284		
5,800.0	5,724.4	5,762.8	5,679.0	18.6	19.5	101.17	-302.4	-908.4	594.0	557.6	36.48	16.286		
5,900.0	5,822.9	5,862.2	5,776.7	19.0	19.9	101.22	-308.2	-925.4	605.2	568.0	37.16	16.288		
6,000.0	5,921.4	5,961.6	5,874.5	19.3	20.2	101.27	-313.9	-942.4	616.3	578.5	37.84	16.289		
6,100.0	6,020.0	6,061.0	5,972.2	19.7	20.6	101.32	-319.7	-959.3	627.4	588.9	38.52	16.291		
6,200.0	6,118.5	6,160.4	6,070.0	20.0	21.0	101.37	-325.5	-976.3	638.6	599.4	39.19	16.292		
6,300.0	6,217.0	6,259.7	6,167.7	20.4	21.3	101.41	-331.3	-993.3	649.7	609.8	39.87	16.293		
6,400.0	6,315.5	6,359.1	6,265.5	20.7	21.7	101.46	-337.0	-1,010.2	660.8	620.3	40.55	16.295		
6,500.0	6,414.0	6,458.5	6,363.2	21.1	22.1	101.50	-342.8	-1,027.2	672.0	630.7	41.23	16.296		
6,600.0	6,512.5	6,557.9	6,461.0	21.4	22.4	101.54	-348.6	-1,044.1	683.1	641.2	41.91	16.297		
6,704.9	6,615.8	6,662.1	6,563.5	21.8	22.8	101.58	-354.6	-1,061.9	694.8	652.1	42.63	16.299		
6,750.0	6,660.5	6,707.0	6,607.7	21.9	23.0	79.41	-357.2	-1,069.6	698.5	655.6	42.96	16.258		
6,800.0	6,710.2	6,756.8	6,656.7	22.0	23.1	32.88	-360.1	-1,078.1	699.7	656.6	43.10	16.232		
6,850.0	6,759.8	6,789.8	6,689.1	22.0	23.3	-2.44	-361.7	-1,083.7	698.1	655.2	42.95	16.254		
6,900.0	6,809.0	6,816.0	6,714.9	22.0	23.3	-18.12	-361.8	-1,088.2	695.1	652.6	42.54	16.339		
6,950.0	6,857.3	6,850.0	6,748.4	21.9	23.4	-26.29	-360.1	-1,094.1	690.8	648.9	41.93	16.477		
7,000.0	6,904.4	6,868.6	6,766.6	21.8	23.5	-31.21	-358.3	-1,097.3	685.1	644.0	41.09	16.673		
7,050.0	6,949.9	6,900.0	6,797.2	21.6	23.6	-35.03	-354.0	-1,102.6	678.1	638.1	40.07	16.922		
7,100.0	6,993.4	6,921.4	6,817.9	21.4	23.6	-37.96	-350.0	-1,106.3	670.0	631.1	38.90	17.224		
7,150.0	7,034.7	6,950.0	6,845.4	21.2	23.7	-40.76	-343.5	-1,111.1	660.8	623.2	37.60	17.576		
7,200.0	7,073.5	6,974.3	6,868.4	20.9	23.7	-43.28	-336.9	-1,115.2	650.7	614.5	36.21	17.972		
7,250.0	7,109.4	7,000.0	6,892.4	20.6	23.8	-45.80	-328.8	-1,119.4	639.8	605.0	34.78	18.397		
7,300.0	7,142.1	7,027.5	6,917.7	20.3	23.8	-48.41	-319.0	-1,123.9	628.1	594.8	33.34	18.843		
7,350.0	7,171.4	7,050.0	6,938.0	20.0	23.8	-50.86	-310.0	-1,127.5	616.1	584.1	31.97	19.273		
7,400.0	7,197.2	7,081.1	6,965.5	19.7	23.9	-53.79	-296.3	-1,132.4	603.7	573.0	30.68	19.676		
7,450.0	7,219.1	7,100.0	6,981.8	19.4	23.9	-56.16	-287.3	-1,135.3	591.3	561.7	29.56	20.005		
7,500.0	7,237.0	7,135.2	7,011.4	19.1	23.9	-59.51	-269.0	-1,140.7	578.9	550.3	28.61	20.332		
7,550.0	7,250.9	7,162.5	7,033.6	18.8	24.0	-62.48	-253.5	-1,144.7	567.1	539.2	27.87	20.346		
7,600.0	7,260.5	7,190.0	7,055.2	18.6	24.0	-65.49	-236.9	-1,148.6	556.1	528.7	27.33	20.345		
7,650.0	7,265.8	7,217.8	7,076.1	18.4	24.0	-68.51	-219.1	-1,152.4	546.1	519.1	26.97	20.249		
7,686.5	7,267.0	7,238.3	7,091.0	18.3	24.0	-70.70	-205.3	-1,155.1	539.7	512.9	26.80	20.139		
7,700.0	7,267.0	7,250.0	7,099.3	18.2	24.1	-71.60	-197.1	-1,156.6	537.7	510.9	26.80	20.063		
7,800.0	7,267.0	7,310.2	7,139.2	18.0	24.1	-75.97	-152.7	-1,163.9	527.9	501.2	26.71	19.761		
7,869.0	7,267.0	7,362.9	7,170.2	17.9	24.2	-79.40	-110.5	-1,169.7	526.2	499.5	26.75	19.674		
7,900.0	7,267.0	7,388.9	7,184.1	17.9	24.2	-80.94	-88.7	-1,172.3	526.5	499.8	26.75	19.681		
8,000.0	7,267.0	7,483.4	7,225.9	18.1	24.4	-85.55	-4.4	-1,180.3	530.1	503.0	27.01	19.626		
8,100.0	7,267.0	7,592.4	7,256.4	18.3	24.7	-88.87	99.8	-1,186.5	534.6	506.9	27.66	19.330		
8,200.0	7,267.0	7,709.0	7,267.0	18.8	25.0	-90.00	215.8	-1,189.4	537.0	508.1	28.86	18.609		
8,300.0	7,267.0	7,809.0	7,267.0	19.4	25.5	-90.00	315.7	-1,190.2	537.8	507.5	30.38	17.704		
8,400.0	7,267.0	7,909.0	7,267.0	20.1	26.0	-90.00	415.7	-1,191.1	538.7	506.5	32.21	16.724		
8,500.0	7,267.0	8,009.0	7,267.0	21.0	26.7	-90.00	515.7	-1,192.0	539.6	505.3	34.31	15.729		
8,600.0	7,267.0	8,109.0	7,267.0	21.9	27.5	-90.00	615.7	-1,192.9	540.5	503.8	36.62	14.760		
8,700.0	7,267.0	8,209.0	7,267.0	23.0	28.3	-90.00	715.7	-1,193.7	541.3	502.2	39.11	13.842		
8,800.0	7,267.0	8,309.0	7,267.0	24.1	29.2	-90.00	815.7	-1,194.6	542.2	500.5	41.74	12.989		
8,900.0	7,267.0	8,409.0	7,267.0	25.3	30.2	-90.00	915.7	-1,195.5	543.1	498.6	44.50	12.204		
9,000.0	7,267.0	8,509.0	7,267.0	26.6	31.3	-90.00	1,015.7	-1,196.4	544.0	496.6	47.36	11.486		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #3												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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	
9,100.0	7,267.0	8,609.0	7,267.0	27.9	32.4	-90.00	1,115.7	-1,197.2	544.8	494.5	50.30	10.832	
9,200.0	7,267.0	8,709.0	7,267.0	29.3	33.6	-90.00	1,215.7	-1,198.1	545.7	492.4	53.30	10.238	
9,300.0	7,267.0	8,809.0	7,267.0	30.7	34.8	-90.00	1,315.7	-1,199.0	546.6	490.2	56.37	9.696	
9,400.0	7,267.0	8,909.0	7,267.0	32.1	36.1	-90.00	1,415.7	-1,199.8	547.4	488.0	59.48	9.203	
9,500.0	7,267.0	9,009.0	7,267.0	33.6	37.4	-90.00	1,515.7	-1,200.7	548.3	485.7	62.64	8.754	
9,600.0	7,267.0	9,109.0	7,267.0	35.1	38.8	-90.00	1,615.6	-1,201.6	549.2	483.4	65.83	8.342	
9,700.0	7,267.0	9,209.0	7,267.0	36.6	40.1	-90.00	1,715.6	-1,202.5	550.1	481.0	69.05	7.966	
9,800.0	7,267.0	9,309.0	7,267.0	38.1	41.5	-90.00	1,815.6	-1,203.3	550.9	478.6	72.30	7.620	
9,900.0	7,267.0	9,409.0	7,267.0	39.7	43.0	-90.00	1,915.6	-1,204.2	551.8	476.2	75.57	7.301	
10,000.0	7,267.0	9,509.0	7,267.0	41.3	44.4	-90.00	2,015.6	-1,205.1	552.7	473.8	78.87	7.008	
10,100.0	7,267.0	9,609.0	7,267.0	42.9	45.9	-90.00	2,115.6	-1,206.0	553.5	471.4	82.18	6.736	
10,200.0	7,267.0	9,709.0	7,267.0	44.5	47.4	-90.00	2,215.6	-1,206.8	554.4	468.9	85.50	6.484	
10,300.0	7,267.0	9,808.9	7,267.0	46.1	48.9	-90.00	2,315.6	-1,207.7	555.3	466.5	88.84	6.250	
10,400.0	7,267.0	9,908.9	7,267.0	47.7	50.4	-90.00	2,415.6	-1,208.6	556.2	464.0	92.20	6.032	
10,500.0	7,267.0	10,008.9	7,267.0	49.3	52.0	-90.00	2,515.6	-1,209.4	557.0	461.5	95.56	5.829	
10,600.0	7,267.0	10,108.9	7,267.0	51.0	53.6	-90.00	2,615.6	-1,210.3	557.9	459.0	98.93	5.639	
10,700.0	7,267.0	10,208.9	7,267.0	52.6	55.1	-90.00	2,715.6	-1,211.2	558.8	456.5	102.32	5.461	
10,800.0	7,267.0	10,308.9	7,267.0	54.3	56.7	-90.00	2,815.6	-1,212.1	559.7	454.0	105.71	5.294	
10,900.0	7,267.0	10,408.9	7,267.0	55.9	58.3	-90.00	2,915.5	-1,212.9	560.5	451.4	109.10	5.138	
11,000.0	7,267.0	10,508.9	7,267.0	57.6	59.9	-90.00	3,015.5	-1,213.8	561.4	448.9	112.51	4.990	
11,100.0	7,267.0	10,608.9	7,267.0	59.3	61.5	-90.00	3,115.5	-1,214.7	562.3	446.4	115.92	4.851	
11,200.0	7,267.0	10,708.9	7,267.0	60.9	63.1	-90.00	3,215.5	-1,215.6	563.1	443.8	119.34	4.719	
11,300.0	7,267.0	10,808.9	7,267.0	62.6	64.7	-90.00	3,315.5	-1,216.4	564.0	441.3	122.76	4.595	
11,400.0	7,267.0	10,908.9	7,267.0	64.3	66.4	-90.00	3,415.5	-1,217.3	564.9	438.7	126.19	4.477	
11,500.0	7,267.0	11,008.9	7,267.0	66.0	68.0	-90.00	3,515.5	-1,218.2	565.8	436.1	129.62	4.365	
11,600.0	7,267.0	11,108.9	7,267.0	67.7	69.6	-90.00	3,615.5	-1,219.0	566.6	433.6	133.05	4.259	
11,700.0	7,267.0	11,208.9	7,267.0	69.4	71.3	-90.00	3,715.5	-1,219.9	567.5	431.0	136.49	4.158	
11,800.0	7,267.0	11,317.2	7,267.0	71.1	73.1	-90.00	3,823.8	-1,220.2	567.8	427.8	140.08	4.054	
11,900.0	7,267.0	11,428.2	7,267.0	72.8	74.9	-90.00	3,934.7	-1,218.5	566.3	422.6	143.71	3.940	
12,000.0	7,267.0	11,539.0	7,267.0	74.5	76.7	-90.00	4,045.5	-1,214.6	562.8	415.4	147.35	3.819	
12,100.0	7,267.0	11,639.6	7,267.0	76.2	78.4	-90.00	4,146.0	-1,210.0	558.2	407.4	150.81	3.701	
12,200.0	7,267.0	11,739.5	7,267.0	77.9	80.0	-90.00	4,245.8	-1,205.5	553.6	399.4	154.26	3.589	
12,300.0	7,267.0	11,839.4	7,267.0	79.6	81.7	-90.00	4,345.6	-1,200.9	549.0	391.3	157.71	3.481	
12,400.0	7,267.0	11,939.3	7,267.0	81.3	83.3	-90.00	4,445.4	-1,196.3	544.5	383.3	161.17	3.378	
12,500.0	7,267.0	12,039.2	7,267.0	83.0	85.0	-90.00	4,545.2	-1,191.7	539.9	375.3	164.63	3.279	
12,600.0	7,267.0	12,139.1	7,267.0	84.7	86.6	-90.00	4,645.0	-1,187.2	535.3	367.2	168.09	3.185	
12,700.0	7,267.0	12,239.0	7,267.0	86.4	88.3	-90.00	4,744.7	-1,182.6	530.7	359.2	171.55	3.094	
12,800.0	7,267.0	12,338.9	7,267.0	88.1	90.0	-90.00	4,844.5	-1,178.0	526.1	351.1	175.01	3.006	
12,900.0	7,267.0	12,438.8	7,267.0	89.9	91.6	-90.00	4,944.3	-1,173.4	521.6	343.1	178.48	2.922	
13,000.0	7,267.0	12,538.7	7,267.0	91.6	93.3	-90.00	5,044.1	-1,168.9	517.0	335.0	181.94	2.841	
13,100.0	7,267.0	12,638.6	7,267.0	93.3	95.0	-90.00	5,143.9	-1,164.3	512.4	327.0	185.41	2.764	
13,200.0	7,267.0	12,738.4	7,267.0	95.0	96.7	-90.00	5,243.7	-1,159.7	507.8	318.9	188.88	2.689	
13,300.0	7,267.0	12,838.3	7,267.0	96.7	98.3	-90.00	5,343.5	-1,155.1	503.3	310.9	192.35	2.616	
13,400.0	7,267.0	12,938.2	7,267.0	98.5	100.0	-90.00	5,443.3	-1,150.6	498.7	302.8	195.83	2.547	
13,500.0	7,267.0	13,038.1	7,267.0	100.2	101.7	-90.00	5,543.1	-1,146.0	494.1	294.8	199.30	2.479	
13,600.0	7,267.0	13,138.0	7,267.0	101.9	103.4	-90.00	5,642.9	-1,141.4	489.5	286.7	202.77	2.414	
13,700.0	7,267.0	13,237.9	7,267.0	103.6	105.1	-90.00	5,742.6	-1,136.9	484.9	278.7	206.25	2.351	
13,800.0	7,267.0	13,337.8	7,267.0	105.4	106.8	-90.00	5,842.4	-1,132.3	480.4	270.6	209.73	2.290	
13,900.0	7,267.0	13,437.7	7,267.0	107.1	108.5	-90.00	5,942.2	-1,127.7	475.8	262.6	213.20	2.232	
14,000.0	7,267.0	13,537.6	7,267.0	108.8	110.2	-90.00	6,042.0	-1,123.1	471.2	254.5	216.68	2.175	
14,100.0	7,267.0	13,637.5	7,267.0	110.6	111.9	-90.00	6,141.8	-1,118.6	466.6	246.5	220.16	2.119	
14,200.0	7,267.0	13,737.4	7,267.0	112.3	113.6	-90.00	6,241.6	-1,114.0	462.0	238.4	223.64	2.066	

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design											S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #3			Offset Site Error:		0.0 ft
Survey Program:											0-Geolink MWD			Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning			
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				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)						
14,300.0	7,267.0	13,837.3	7,267.0	114.0	115.3	-90.00	6,341.4	-1,109.4	457.5	230.3	227.12	2.014				
14,400.0	7,267.0	13,937.2	7,267.0	115.8	117.0	-90.00	6,441.2	-1,104.8	452.9	222.3	230.61	1.964				
14,500.0	7,267.0	14,037.1	7,267.0	117.5	118.7	-90.00	6,541.0	-1,100.3	448.3	214.2	234.09	1.915				
14,535.9	7,267.0	14,055.8	7,267.0	118.1	119.0	-90.00	6,559.7	-1,099.4	447.0	211.9	235.04	1.902 SF				

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink 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	-89.95	0.0	-10.1	10.1					
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-10.1	10.1	9.8	0.24	41.195		
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-10.1	10.1	9.5	0.59	16.963		
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-10.1	10.1	9.1	0.94	10.680		
334.4	334.4	334.4	334.4	0.5	0.5	-89.95	0.0	-10.1	10.1	9.0	1.06	9.474 CC, ES		
400.0	400.0	399.9	399.9	0.6	0.6	-91.72	-0.3	-10.4	10.4	9.1	1.29	8.026		
500.0	500.0	499.6	499.5	0.8	0.8	48.64	-2.9	-12.7	11.8	10.2	1.64	7.188		
600.0	599.8	599.2	598.9	1.0	1.0	46.15	-8.0	-17.4	13.7	11.7	2.01	6.802		
700.0	699.5	698.8	697.9	1.2	1.3	45.64	-15.6	-24.4	15.8	13.4	2.40	6.606		
800.0	798.7	798.3	796.5	1.5	1.5	46.43	-25.8	-33.7	18.3	15.5	2.83	6.483		
895.3	892.8	893.1	889.8	1.8	1.8	47.99	-37.8	-44.7	21.0	17.7	3.30	6.372		
900.0	897.5	897.8	894.5	1.8	1.9	48.12	-38.4	-45.3	21.1	17.8	3.32	6.361		
1,000.0	996.0	997.8	992.8	2.1	2.2	50.52	-52.0	-57.7	23.7	19.9	3.86	6.150		
1,100.0	1,094.5	1,097.7	1,091.0	2.4	2.5	52.44	-65.5	-70.1	26.4	22.0	4.43	5.960		
1,200.0	1,193.0	1,197.7	1,189.3	2.7	2.9	54.01	-79.0	-82.6	29.1	24.1	5.02	5.796		
1,300.0	1,291.5	1,297.7	1,287.5	3.1	3.2	55.31	-92.6	-95.0	31.8	26.2	5.63	5.654		
1,400.0	1,390.0	1,397.6	1,385.8	3.4	3.6	56.41	-106.1	-107.4	34.5	28.3	6.24	5.533		
1,500.0	1,488.5	1,497.6	1,484.1	3.7	3.9	57.34	-119.6	-119.8	37.3	30.4	6.86	5.428		
1,600.0	1,587.0	1,597.5	1,582.3	4.1	4.3	58.15	-133.1	-132.2	40.0	32.5	7.49	5.337		
1,700.0	1,685.5	1,697.5	1,680.6	4.4	4.7	58.86	-146.7	-144.6	42.7	34.6	8.13	5.258		
1,800.0	1,784.1	1,797.5	1,778.8	4.8	5.0	59.47	-160.2	-157.0	45.5	36.7	8.77	5.189		
1,900.0	1,882.6	1,897.4	1,877.1	5.1	5.4	60.02	-173.7	-169.4	48.3	38.8	9.41	5.128		
2,000.0	1,981.1	1,997.4	1,975.4	5.4	5.8	60.51	-187.3	-181.8	51.0	41.0	10.06	5.073		
2,100.0	2,079.6	2,097.4	2,073.6	5.8	6.1	60.95	-200.8	-194.3	53.8	43.1	10.70	5.025		
2,200.0	2,178.1	2,197.3	2,171.9	6.1	6.5	61.35	-214.3	-206.7	56.6	45.2	11.35	4.981		
2,300.0	2,276.6	2,297.3	2,270.1	6.5	6.8	61.71	-227.9	-219.1	59.3	47.3	12.00	4.942		
2,400.0	2,375.1	2,397.2	2,368.4	6.8	7.2	62.03	-241.4	-231.5	62.1	49.4	12.65	4.907		
2,500.0	2,473.6	2,497.2	2,466.7	7.2	7.6	62.33	-254.9	-243.9	64.9	51.6	13.31	4.874		
2,600.0	2,572.1	2,597.2	2,564.9	7.5	7.9	62.61	-268.5	-256.3	67.6	53.7	13.96	4.845		
2,700.0	2,670.6	2,697.1	2,663.2	7.9	8.3	62.86	-282.0	-268.7	70.4	55.8	14.62	4.818		
2,800.0	2,769.1	2,797.1	2,761.4	8.2	8.7	63.09	-295.5	-281.1	73.2	57.9	15.27	4.793		
2,900.0	2,867.7	2,897.0	2,859.7	8.6	9.0	63.31	-309.0	-293.5	76.0	60.0	15.93	4.770		
3,000.0	2,966.2	2,997.0	2,958.0	8.9	9.4	63.51	-322.6	-306.0	78.8	62.2	16.58	4.749		
3,100.0	3,064.7	3,097.0	3,056.2	9.3	9.8	63.70	-336.1	-318.4	81.5	64.3	17.24	4.729		
3,200.0	3,163.2	3,196.9	3,154.5	9.6	10.1	63.87	-349.6	-330.8	84.3	66.4	17.90	4.711		
3,300.0	3,261.7	3,296.9	3,252.7	9.9	10.5	64.04	-363.2	-343.2	87.1	68.5	18.56	4.694		
3,400.0	3,360.2	3,396.8	3,351.0	10.3	10.9	64.19	-376.7	-355.6	89.9	70.7	19.22	4.678		
3,500.0	3,458.7	3,496.8	3,449.3	10.6	11.2	64.33	-390.2	-368.0	92.7	72.8	19.87	4.663		
3,600.0	3,557.2	3,596.8	3,547.5	11.0	11.6	64.47	-403.8	-380.4	95.5	74.9	20.53	4.649		
3,700.0	3,655.7	3,696.7	3,645.8	11.3	12.0	64.60	-417.3	-392.8	98.2	77.0	21.19	4.636		
3,800.0	3,754.2	3,796.7	3,744.0	11.7	12.3	64.72	-430.8	-405.2	101.0	79.2	21.85	4.623		
3,900.0	3,852.7	3,896.6	3,842.3	12.0	12.7	64.84	-444.4	-417.7	103.8	81.3	22.51	4.611		
4,000.0	3,951.3	3,996.6	3,940.6	12.4	13.1	64.94	-457.9	-430.1	106.6	83.4	23.17	4.600		
4,100.0	4,049.8	4,096.6	4,038.8	12.7	13.4	65.05	-471.4	-442.5	109.4	85.6	23.83	4.590		
4,200.0	4,148.3	4,196.5	4,137.1	13.1	13.8	65.15	-484.9	-454.9	112.2	87.7	24.49	4.580		
4,300.0	4,246.8	4,296.5	4,235.3	13.4	14.2	65.24	-498.5	-467.3	115.0	89.8	25.15	4.571		
4,400.0	4,345.3	4,396.5	4,333.6	13.8	14.5	65.33	-512.0	-479.7	117.7	91.9	25.81	4.562		
4,500.0	4,443.8	4,496.4	4,431.9	14.1	14.9	65.41	-525.5	-492.1	120.5	94.1	26.47	4.553		
4,600.0	4,542.3	4,596.4	4,530.1	14.5	15.3	65.49	-539.1	-504.5	123.3	96.2	27.13	4.545		
4,700.0	4,640.8	4,696.3	4,628.4	14.8	15.6	65.57	-552.6	-516.9	126.1	98.3	27.80	4.537		
4,800.0	4,739.3	4,796.3	4,726.6	15.2	16.0	65.65	-566.1	-529.4	128.9	100.4	28.46	4.530		
4,900.0	4,837.8	4,896.3	4,824.9	15.5	16.4	65.72	-579.7	-541.8	131.7	102.6	29.12	4.523		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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		
5,000.0	4,936.3	4,996.2	4,923.2	15.9	16.7	65.78	-593.2	-554.2	134.5	104.7	29.78	4.516		
5,100.0	5,034.9	5,096.2	5,021.4	16.2	17.1	65.85	-606.7	-566.6	137.3	106.8	30.44	4.509		
5,200.0	5,133.4	5,196.1	5,119.7	16.6	17.5	65.91	-620.3	-579.0	140.1	109.0	31.10	4.503		
5,300.0	5,231.9	5,296.1	5,218.0	16.9	17.8	65.97	-633.8	-591.4	142.8	111.1	31.76	4.497		
5,400.0	5,330.4	5,396.1	5,316.2	17.3	18.2	66.03	-647.3	-603.8	145.6	113.2	32.42	4.492		
5,500.0	5,428.9	5,496.0	5,414.5	17.6	18.6	66.09	-660.8	-616.2	148.4	115.3	33.09	4.486		
5,600.0	5,527.4	5,596.0	5,512.7	17.9	18.9	66.14	-674.4	-628.6	151.2	117.5	33.75	4.481		
5,700.0	5,625.9	5,695.9	5,611.0	18.3	19.3	66.19	-687.9	-641.1	154.0	119.6	34.41	4.476		
5,800.0	5,724.4	5,795.9	5,709.3	18.6	19.7	66.24	-701.4	-653.5	156.8	121.7	35.07	4.471		
5,900.0	5,822.9	5,895.9	5,807.5	19.0	20.0	66.29	-715.0	-665.9	159.6	123.9	35.73	4.466		
6,000.0	5,921.4	5,995.8	5,905.8	19.3	20.4	66.34	-728.5	-678.3	162.4	126.0	36.40	4.462		
6,100.0	6,020.0	6,095.8	6,004.0	19.7	20.8	66.38	-742.0	-690.7	165.2	128.1	37.06	4.457		
6,200.0	6,118.5	6,195.8	6,102.3	20.0	21.1	66.42	-755.6	-703.1	168.0	130.2	37.72	4.453		
6,300.0	6,217.0	6,295.7	6,200.6	20.4	21.5	66.47	-769.1	-715.5	170.8	132.4	38.38	4.449		
6,400.0	6,315.5	6,395.7	6,298.8	20.7	21.9	66.51	-782.6	-727.9	173.5	134.5	39.04	4.445		
6,500.0	6,414.0	6,495.6	6,397.1	21.1	22.2	66.55	-796.2	-740.4	176.3	136.6	39.71	4.441		
6,600.0	6,512.5	6,595.6	6,495.3	21.4	22.6	66.58	-809.7	-752.8	179.1	138.8	40.37	4.437		
6,704.9	6,615.8	6,700.5	6,598.4	21.8	23.0	66.62	-823.9	-765.8	182.1	141.0	41.06	4.434		
6,750.0	6,660.5	6,745.5	6,642.7	21.9	23.1	43.84	-830.0	-771.4	183.0	141.8	41.19	4.442		
6,800.0	6,710.2	6,795.1	6,691.5	22.0	23.3	-4.25	-836.7	-777.5	183.3	142.4	40.89	4.483		
6,850.0	6,759.8	6,844.1	6,739.6	22.0	23.5	-42.23	-843.3	-783.6	183.3	143.2	40.11	4.570		
6,900.0	6,809.0	6,892.0	6,786.6	22.0	23.7	-61.59	-849.8	-789.6	183.7	144.8	38.88	4.725		
6,950.0	6,857.3	6,938.4	6,832.3	21.9	23.8	-74.04	-856.1	-795.3	185.5	148.2	37.25	4.978		
7,000.0	6,904.4	6,984.6	6,877.8	21.8	24.0	-83.91	-861.8	-801.1	189.6	154.2	35.33	5.366		
7,050.0	6,949.9	7,033.3	6,926.0	21.6	24.1	-92.20	-864.1	-807.2	196.2	162.8	33.34	5.884		
7,100.0	6,993.4	7,084.0	6,976.3	21.4	24.2	-99.33	-862.2	-813.5	205.0	173.6	31.46	6.517		
7,150.0	7,034.7	7,137.3	7,028.7	21.2	24.2	-105.56	-855.4	-820.1	215.7	186.0	29.74	7.253		
7,200.0	7,073.5	7,193.3	7,082.8	20.9	24.1	-111.04	-842.9	-827.0	227.9	199.6	28.21	8.077		
7,250.0	7,109.4	7,252.4	7,138.4	20.6	24.1	-115.85	-824.1	-834.0	241.0	214.1	26.87	8.969		
7,300.0	7,142.1	7,315.1	7,194.9	20.3	23.9	-120.07	-797.9	-841.1	254.6	228.9	25.70	9.905		
7,350.0	7,171.4	7,381.7	7,251.4	20.0	23.7	-123.74	-763.5	-848.3	268.2	243.5	24.70	10.857		
7,400.0	7,197.2	7,452.4	7,306.7	19.7	23.4	-126.91	-719.9	-855.2	281.3	257.4	23.86	11.790		
7,450.0	7,219.1	7,527.6	7,359.0	19.4	23.0	-129.57	-666.6	-861.9	293.4	270.2	23.18	12.658		
7,500.0	7,237.0	7,607.1	7,406.4	19.1	22.6	-131.76	-603.1	-867.8	304.0	281.4	22.67	13.409		
7,550.0	7,250.9	7,690.7	7,446.3	18.8	22.2	-133.45	-529.9	-872.9	312.8	290.4	22.37	13.985		
7,600.0	7,260.5	7,777.7	7,476.2	18.6	21.8	-134.65	-448.3	-876.7	319.2	296.9	22.27	14.334		
7,650.0	7,265.8	7,867.3	7,493.8	18.4	21.4	-135.33	-360.6	-878.9	322.9	300.5	22.38	14.429		
7,686.5	7,267.0	7,933.5	7,498.0	18.3	21.2	-135.50	-294.5	-879.4	323.9	301.3	22.59	14.334		
7,700.0	7,267.0	7,948.5	7,498.0	18.2	21.2	-135.50	-279.6	-879.4	323.9	301.3	22.55	14.359		
7,800.0	7,267.0	8,048.5	7,498.0	18.0	21.0	-135.50	-179.6	-879.4	323.9	301.4	22.44	14.433		
7,900.0	7,267.0	8,148.5	7,498.0	17.9	20.9	-135.50	-79.6	-879.4	323.9	301.3	22.58	14.342		
8,000.0	7,267.0	8,248.5	7,498.0	18.1	21.0	-135.50	20.4	-879.4	323.9	300.9	22.99	14.087		
8,100.0	7,267.0	8,348.5	7,498.0	18.3	21.2	-135.50	120.4	-879.4	323.9	300.2	23.65	13.692		
8,200.0	7,267.0	8,448.5	7,498.0	18.8	21.6	-135.50	220.4	-879.4	323.9	299.3	24.55	13.194		
8,300.0	7,267.0	8,548.5	7,498.0	19.4	22.1	-135.50	320.4	-879.4	323.9	298.2	25.65	12.626		
8,400.0	7,267.0	8,648.5	7,498.0	20.1	22.8	-135.50	420.4	-879.4	323.9	296.9	26.93	12.024		
8,500.0	7,267.0	8,748.5	7,498.0	21.0	23.5	-135.50	520.4	-879.4	323.9	295.5	28.38	11.412		
8,600.0	7,267.0	8,848.5	7,498.0	21.9	24.4	-135.50	620.4	-879.4	323.9	293.9	29.96	10.811		
8,700.0	7,267.0	8,948.5	7,498.0	23.0	25.3	-135.50	720.4	-879.4	323.9	292.2	31.65	10.232		
8,800.0	7,267.0	9,048.5	7,498.0	24.1	26.4	-135.50	820.4	-879.4	323.9	290.4	33.44	9.684		
8,900.0	7,267.0	9,148.5	7,498.0	25.3	27.5	-135.50	920.4	-879.4	323.9	288.5	35.32	9.170		
9,000.0	7,267.0	9,248.5	7,498.0	26.6	28.7	-135.50	1,020.4	-879.4	323.9	286.6	37.26	8.692		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,100.0	7,267.0	9,348.5	7,498.0	27.9	29.9	-135.50	1,120.4	-879.4	323.9	284.6	39.26	8.248	
9,200.0	7,267.0	9,448.5	7,498.0	29.3	31.2	-135.50	1,220.4	-879.4	323.9	282.5	41.32	7.838	
9,300.0	7,267.0	9,548.5	7,498.0	30.7	32.5	-135.50	1,320.4	-879.4	323.9	280.4	43.42	7.459	
9,400.0	7,267.0	9,648.5	7,498.0	32.1	33.9	-135.50	1,420.4	-879.4	323.9	278.3	45.55	7.109	
9,500.0	7,267.0	9,748.5	7,498.0	33.6	35.3	-135.50	1,520.4	-879.4	323.9	276.1	47.72	6.786	
9,600.0	7,267.0	9,848.5	7,498.0	35.1	36.7	-135.50	1,620.4	-879.4	323.9	273.9	49.92	6.487	
9,700.0	7,267.0	9,948.5	7,498.0	36.6	38.2	-135.50	1,720.4	-879.4	323.9	271.7	52.14	6.211	
9,800.0	7,267.0	10,048.5	7,498.0	38.1	39.6	-135.50	1,820.4	-879.4	323.9	269.5	54.39	5.955	
9,900.0	7,267.0	10,148.5	7,498.0	39.7	41.1	-135.50	1,920.4	-879.4	323.9	267.2	56.65	5.717	
10,000.0	7,267.0	10,248.5	7,498.0	41.3	42.7	-135.50	2,020.4	-879.4	323.9	264.9	58.93	5.495	
10,100.0	7,267.0	10,348.5	7,498.0	42.9	44.2	-135.50	2,120.4	-879.4	323.9	262.6	61.23	5.289	
10,200.0	7,267.0	10,448.5	7,498.0	44.5	45.8	-135.50	2,220.4	-879.4	323.9	260.3	63.54	5.097	
10,300.0	7,267.0	10,548.5	7,498.0	46.1	47.3	-135.50	2,320.4	-879.4	323.9	258.0	65.86	4.918	
10,400.0	7,267.0	10,648.5	7,498.0	47.7	48.9	-135.50	2,420.4	-879.4	323.9	255.7	68.19	4.749	
10,500.0	7,267.0	10,748.5	7,498.0	49.3	50.5	-135.50	2,520.4	-879.4	323.9	253.3	70.53	4.592	
10,600.0	7,267.0	10,848.5	7,498.0	51.0	52.1	-135.50	2,620.4	-879.4	323.9	251.0	72.88	4.444	
10,700.0	7,267.0	10,948.5	7,498.0	52.6	53.7	-135.50	2,720.4	-879.4	323.9	248.6	75.24	4.304	
10,800.0	7,267.0	11,048.5	7,498.0	54.3	55.3	-135.50	2,820.4	-879.4	323.9	246.2	77.60	4.173	
10,900.0	7,267.0	11,148.5	7,498.0	55.9	57.0	-135.50	2,920.4	-879.4	323.9	243.9	79.98	4.049	
11,000.0	7,267.0	11,248.5	7,498.0	57.6	58.6	-135.50	3,020.4	-879.4	323.9	241.5	82.35	3.932	
11,100.0	7,267.0	11,348.5	7,498.0	59.3	60.3	-135.50	3,120.4	-879.4	323.9	239.1	84.74	3.822	
11,200.0	7,267.0	11,448.5	7,498.0	60.9	61.9	-135.50	3,220.4	-879.4	323.9	236.7	87.13	3.717	
11,300.0	7,267.0	11,548.5	7,498.0	62.6	63.6	-135.50	3,320.4	-879.4	323.9	234.3	89.52	3.618	
11,400.0	7,267.0	11,648.5	7,498.0	64.3	65.2	-135.50	3,420.4	-879.4	323.9	231.9	91.92	3.523	
11,500.0	7,267.0	11,748.5	7,498.0	66.0	66.9	-135.50	3,520.4	-879.4	323.9	229.5	94.32	3.434	
11,600.0	7,267.0	11,848.5	7,498.0	67.7	68.5	-135.50	3,620.4	-879.4	323.9	227.1	96.72	3.348	
11,700.0	7,267.0	11,948.5	7,498.0	69.4	70.2	-135.50	3,720.4	-879.4	323.9	224.7	99.13	3.267	
11,800.0	7,267.0	12,048.5	7,498.0	71.1	71.9	-135.50	3,820.4	-879.4	323.9	222.3	101.54	3.189	
11,900.0	7,267.0	12,148.5	7,498.0	72.8	73.6	-135.50	3,920.4	-879.4	323.9	219.9	103.96	3.115	
12,000.0	7,267.0	12,248.5	7,498.0	74.5	75.3	-135.50	4,020.4	-879.4	323.9	217.5	106.38	3.044	
12,100.0	7,267.0	12,348.5	7,498.0	76.2	76.9	-135.50	4,120.4	-879.4	323.9	215.1	108.80	2.977	
12,200.0	7,267.0	12,448.5	7,498.0	77.9	78.6	-135.50	4,220.4	-879.4	323.9	212.6	111.22	2.912	
12,300.0	7,267.0	12,548.5	7,498.0	79.6	80.3	-135.50	4,320.4	-879.4	323.9	210.2	113.64	2.850	
12,400.0	7,267.0	12,648.5	7,498.0	81.3	82.0	-135.50	4,420.4	-879.4	323.9	207.8	116.07	2.790	
12,500.0	7,267.0	12,748.5	7,498.0	83.0	83.7	-135.50	4,520.4	-879.4	323.9	205.4	118.50	2.733	
12,600.0	7,267.0	12,848.5	7,498.0	84.7	85.4	-135.50	4,620.4	-879.4	323.9	202.9	120.93	2.678	
12,700.0	7,267.0	12,948.5	7,498.0	86.4	87.1	-135.50	4,720.4	-879.4	323.9	200.5	123.36	2.625	
12,800.0	7,267.0	13,048.5	7,498.0	88.1	88.8	-135.50	4,820.4	-879.4	323.9	198.1	125.80	2.574	
12,900.0	7,267.0	13,148.5	7,498.0	89.9	90.5	-135.50	4,920.4	-879.4	323.9	195.6	128.23	2.526	
13,000.0	7,267.0	13,248.5	7,498.0	91.6	92.2	-135.50	5,020.4	-879.4	323.9	193.2	130.67	2.478	
13,100.0	7,267.0	13,348.5	7,498.0	93.3	94.0	-135.50	5,120.4	-879.4	323.9	190.7	133.11	2.433	
13,200.0	7,267.0	13,448.5	7,498.0	95.0	95.7	-135.50	5,220.4	-879.4	323.9	188.3	135.55	2.389	
13,300.0	7,267.0	13,548.5	7,498.0	96.7	97.4	-135.50	5,320.4	-879.4	323.9	185.9	137.99	2.347	
13,400.0	7,267.0	13,648.5	7,498.0	98.5	99.1	-135.50	5,420.4	-879.4	323.9	183.4	140.43	2.306	
13,500.0	7,267.0	13,748.5	7,498.0	100.2	100.8	-135.50	5,520.4	-879.4	323.9	181.0	142.87	2.267	
13,600.0	7,267.0	13,848.5	7,498.0	101.9	102.5	-135.50	5,620.4	-879.4	323.9	178.5	145.32	2.229	
13,700.0	7,267.0	13,948.5	7,498.0	103.6	104.2	-135.50	5,720.4	-879.4	323.9	176.1	147.76	2.192	
13,800.0	7,267.0	14,048.5	7,498.0	105.4	106.0	-135.50	5,820.4	-879.4	323.9	173.6	150.21	2.156	
13,900.0	7,267.0	14,148.5	7,498.0	107.1	107.7	-135.50	5,920.4	-879.4	323.9	171.2	152.66	2.121	
14,000.0	7,267.0	14,248.5	7,498.0	108.8	109.4	-135.50	6,020.4	-879.4	323.9	168.7	155.10	2.088	
14,100.0	7,267.0	14,348.5	7,498.0	110.6	111.1	-135.50	6,120.4	-879.4	323.9	166.3	157.55	2.056	
14,200.0	7,267.0	14,448.5	7,498.0	112.3	112.8	-135.50	6,220.4	-879.4	323.9	163.9	160.00	2.024	

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
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	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)			
14,300.0	7,267.0	14,548.5	7,498.0	114.0	114.6	-135.50	6,320.4	-879.4	323.9	161.4	162.45	1.994	
14,400.0	7,267.0	14,648.5	7,498.0	115.8	116.3	-135.50	6,420.4	-879.4	323.9	158.9	164.90	1.964	
14,500.0	7,267.0	14,748.5	7,498.0	117.5	118.0	-135.50	6,520.4	-879.4	323.9	156.5	167.36	1.935	
14,535.9	7,267.0	14,784.4	7,498.0	118.1	118.6	-135.50	6,556.4	-879.4	323.9	155.6	168.24	1.925 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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	91.94	-0.3	9.8	9.8					
100.0	100.0	100.0	100.0	0.1	0.1	91.94	-0.3	9.8	9.8	9.5	0.24	40.073		
200.0	200.0	200.0	200.0	0.3	0.3	91.94	-0.3	9.8	9.8	9.2	0.59	16.501		
300.0	300.0	300.0	300.0	0.5	0.5	91.94	-0.3	9.8	9.8	8.8	0.94	10.389		
400.0	400.0	400.0	400.0	0.6	0.6	91.94	-0.3	9.8	9.8	8.5	1.29	7.581	CC, ES	
500.0	500.0	500.1	500.1	0.8	0.8	-128.20	-0.7	9.6	10.6	9.0	1.64	6.465		
600.0	599.8	600.3	600.2	1.0	1.0	-133.03	-3.9	8.2	12.2	10.2	2.00	6.117		
700.0	699.5	700.5	700.2	1.2	1.2	-135.05	-10.3	5.3	14.4	12.0	2.38	6.039		
800.0	798.7	800.8	799.9	1.5	1.4	-135.15	-19.9	0.9	17.0	14.2	2.81	6.065		
895.3	892.8	896.3	894.5	1.8	1.7	-134.16	-31.9	-4.5	19.9	16.7	3.26	6.114		
900.0	897.5	901.1	899.2	1.8	1.7	-134.11	-32.6	-4.8	20.1	16.8	3.28	6.119		
1,000.0	996.0	1,001.0	998.0	2.1	2.0	-133.32	-46.6	-11.1	23.5	19.7	3.79	6.193		
1,100.0	1,094.5	1,100.9	1,096.7	2.4	2.3	-132.73	-60.5	-17.4	26.9	22.6	4.32	6.223		
1,200.0	1,193.0	1,200.9	1,195.5	2.7	2.6	-132.28	-74.5	-23.8	30.3	25.4	4.86	6.231		
1,300.0	1,291.5	1,300.8	1,294.2	3.1	2.9	-131.91	-88.4	-30.1	33.7	28.3	5.41	6.228		
1,400.0	1,390.0	1,400.8	1,393.0	3.4	3.2	-131.61	-102.4	-36.4	37.1	31.2	5.97	6.219		
1,500.0	1,488.5	1,500.7	1,491.8	3.7	3.5	-131.37	-116.3	-42.7	40.5	34.0	6.53	6.206		
1,600.0	1,587.0	1,600.6	1,590.5	4.1	3.8	-131.16	-130.3	-49.0	43.9	36.8	7.10	6.192		
1,700.0	1,685.5	1,700.6	1,689.3	4.4	4.1	-130.98	-144.2	-55.3	47.4	39.7	7.66	6.178		
1,800.0	1,784.1	1,800.5	1,788.0	4.8	4.4	-130.82	-158.2	-61.7	50.8	42.5	8.23	6.164		
1,900.0	1,882.6	1,900.5	1,886.8	5.1	4.7	-130.69	-172.1	-68.0	54.2	45.4	8.81	6.151		
2,000.0	1,981.1	2,000.4	1,985.6	5.4	5.0	-130.57	-186.1	-74.3	57.6	48.2	9.38	6.138		
2,100.0	2,079.6	2,100.4	2,084.3	5.8	5.4	-130.46	-200.0	-80.6	61.0	51.0	9.96	6.126		
2,200.0	2,178.1	2,200.3	2,183.1	6.1	5.7	-130.37	-214.0	-86.9	64.4	53.9	10.53	6.115		
2,300.0	2,276.6	2,300.2	2,281.9	6.5	6.0	-130.28	-227.9	-93.2	67.8	56.7	11.11	6.104		
2,400.0	2,375.1	2,400.2	2,380.6	6.8	6.3	-130.20	-241.9	-99.6	71.2	59.5	11.69	6.094		
2,500.0	2,473.6	2,500.1	2,479.4	7.2	6.6	-130.13	-255.8	-105.9	74.6	62.4	12.27	6.084		
2,600.0	2,572.1	2,600.1	2,578.1	7.5	6.9	-130.07	-269.8	-112.2	78.1	65.2	12.85	6.076		
2,700.0	2,670.6	2,700.0	2,676.9	7.9	7.3	-130.01	-283.8	-118.5	81.5	68.0	13.43	6.067		
2,800.0	2,769.1	2,800.0	2,775.7	8.2	7.6	-129.96	-297.7	-124.8	84.9	70.9	14.01	6.059		
2,900.0	2,867.7	2,899.9	2,874.4	8.6	7.9	-129.91	-311.7	-131.1	88.3	73.7	14.59	6.052		
3,000.0	2,966.2	2,999.8	2,973.2	8.9	8.2	-129.86	-325.6	-137.4	91.7	76.5	15.17	6.045		
3,100.0	3,064.7	3,099.8	3,071.9	9.3	8.5	-129.82	-339.6	-143.8	95.1	79.4	15.75	6.038		
3,200.0	3,163.2	3,199.7	3,170.7	9.6	8.8	-129.78	-353.5	-150.1	98.5	82.2	16.33	6.032		
3,300.0	3,261.7	3,299.7	3,269.5	9.9	9.2	-129.74	-367.5	-156.4	101.9	85.0	16.92	6.026		
3,400.0	3,360.2	3,399.6	3,368.2	10.3	9.5	-129.71	-381.4	-162.7	105.4	87.9	17.50	6.021		
3,500.0	3,458.7	3,499.5	3,467.0	10.6	9.8	-129.67	-395.4	-169.0	108.8	90.7	18.08	6.016		
3,600.0	3,557.2	3,599.5	3,565.8	11.0	10.1	-129.64	-409.3	-175.3	112.2	93.5	18.66	6.011		
3,700.0	3,655.7	3,699.4	3,664.5	11.3	10.4	-129.62	-423.3	-181.7	115.6	96.3	19.25	6.006		
3,800.0	3,754.2	3,799.4	3,763.3	11.7	10.8	-129.59	-437.2	-188.0	119.0	99.2	19.83	6.001		
3,900.0	3,852.7	3,899.3	3,862.0	12.0	11.1	-129.56	-451.2	-194.3	122.4	102.0	20.41	5.997		
4,000.0	3,951.3	3,999.3	3,960.8	12.4	11.4	-129.54	-465.1	-200.6	125.8	104.8	21.00	5.993		
4,100.0	4,049.8	4,099.2	4,059.6	12.7	11.7	-129.52	-479.1	-206.9	129.2	107.7	21.58	5.989		
4,200.0	4,148.3	4,199.1	4,158.3	13.1	12.0	-129.49	-493.0	-213.2	132.7	110.5	22.16	5.985		
4,300.0	4,246.8	4,299.1	4,257.1	13.4	12.3	-129.47	-507.0	-219.5	136.1	113.3	22.75	5.982		
4,400.0	4,345.3	4,399.0	4,355.8	13.8	12.7	-129.45	-521.0	-225.9	139.5	116.1	23.33	5.978		
4,500.0	4,443.8	4,499.0	4,454.6	14.1	13.0	-129.43	-534.9	-232.2	142.9	119.0	23.91	5.975		
4,600.0	4,542.3	4,598.9	4,553.4	14.5	13.3	-129.42	-548.9	-238.5	146.3	121.8	24.50	5.972		
4,700.0	4,640.8	4,698.8	4,652.1	14.8	13.6	-129.40	-562.8	-244.8	149.7	124.6	25.08	5.969		
4,800.0	4,739.3	4,798.8	4,750.9	15.2	13.9	-129.38	-576.8	-251.1	153.1	127.5	25.67	5.966		
4,900.0	4,837.8	4,898.7	4,849.6	15.5	14.3	-129.37	-590.7	-257.4	156.5	130.3	26.25	5.963		
5,000.0	4,936.3	4,998.7	4,948.4	15.9	14.6	-129.35	-604.7	-263.8	160.0	133.1	26.84	5.961		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD				Offset Well Error: 0.0 ft									
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,100.0	5,034.9	5,098.6	5,047.2	16.2	14.9	-129.34	-618.6	-270.1	163.4	135.9	27.42	5.958	
5,200.0	5,133.4	5,198.6	5,145.9	16.6	15.2	-129.33	-632.6	-276.4	166.8	138.8	28.00	5.956	
5,300.0	5,231.9	5,298.5	5,244.7	16.9	15.5	-129.31	-646.5	-282.7	170.2	141.6	28.59	5.953	
5,400.0	5,330.4	5,398.4	5,343.5	17.3	15.9	-129.30	-660.5	-289.0	173.6	144.4	29.17	5.951	
5,500.0	5,428.9	5,498.4	5,442.2	17.6	16.2	-129.29	-674.4	-295.3	177.0	147.3	29.76	5.949	
5,600.0	5,527.4	5,598.3	5,541.0	17.9	16.5	-129.28	-688.4	-301.6	180.4	150.1	30.34	5.947	
5,700.0	5,625.9	5,698.3	5,639.7	18.3	16.8	-129.26	-702.3	-308.0	183.8	152.9	30.93	5.945	
5,800.0	5,724.4	5,798.2	5,738.5	18.6	17.1	-129.25	-716.3	-314.3	187.3	155.7	31.51	5.943	
5,900.0	5,822.9	5,898.1	5,837.3	19.0	17.5	-129.24	-730.2	-320.6	190.7	158.6	32.10	5.941	
6,000.0	5,921.4	5,998.1	5,936.0	19.3	17.8	-129.23	-744.2	-326.9	194.1	161.4	32.68	5.939	
6,100.0	6,020.0	6,098.0	6,034.8	19.7	18.1	-129.22	-758.2	-333.2	197.5	164.2	33.27	5.937	
6,200.0	6,118.5	6,198.0	6,133.5	20.0	18.4	-129.21	-772.1	-339.5	200.9	167.1	33.85	5.935	
6,300.0	6,217.0	6,297.9	6,232.3	20.4	18.7	-129.20	-786.1	-345.9	204.3	169.9	34.43	5.934	
6,400.0	6,315.5	6,397.9	6,331.1	20.7	19.1	-129.20	-800.0	-352.2	207.7	172.7	35.02	5.932	
6,500.0	6,414.0	6,497.8	6,429.8	21.1	19.4	-129.19	-814.0	-358.5	211.1	175.5	35.60	5.930	
6,600.0	6,512.5	6,597.7	6,528.6	21.4	19.7	-129.18	-827.9	-364.8	214.6	178.4	36.19	5.929	
6,704.9	6,615.8	6,702.6	6,632.2	21.8	20.0	-129.17	-842.6	-371.4	218.1	181.3	36.80	5.927	
6,750.0	6,660.5	6,747.6	6,676.7	21.9	20.2	-151.19	-848.8	-374.3	219.6	182.4	37.11	5.916	
6,800.0	6,710.2	6,797.2	6,725.7	22.0	20.3	163.95	-855.8	-377.4	220.9	183.2	37.67	5.864	
6,850.0	6,759.8	6,846.1	6,774.0	22.0	20.5	131.54	-862.6	-380.5	222.4	184.0	38.40	5.791	
6,900.0	6,809.0	6,893.9	6,821.2	22.0	20.6	119.75	-869.3	-383.5	224.6	185.4	39.18	5.731	
6,950.0	6,857.3	6,941.5	6,868.4	21.9	20.8	116.43	-875.5	-386.5	228.1	188.3	39.87	5.721	
7,000.0	6,904.4	6,991.4	6,918.0	21.8	20.9	116.35	-878.3	-389.7	233.2	193.0	40.24	5.795	
7,050.0	6,949.9	7,043.2	6,969.7	21.6	20.9	117.62	-876.7	-393.0	239.6	199.4	40.24	5.955	
7,100.0	6,993.4	7,097.0	7,023.0	21.4	20.8	119.52	-870.1	-396.3	247.1	207.3	39.86	6.200	
7,150.0	7,034.7	7,153.1	7,077.6	21.2	20.7	121.68	-857.9	-399.7	255.6	216.5	39.13	6.532	
7,200.0	7,073.5	7,211.7	7,133.1	20.9	20.6	123.91	-839.5	-403.2	264.7	226.6	38.07	6.953	
7,250.0	7,109.4	7,272.9	7,188.8	20.6	20.3	126.09	-814.4	-406.7	274.1	237.4	36.74	7.461	
7,300.0	7,142.1	7,337.0	7,243.8	20.3	20.0	128.13	-781.8	-410.1	283.6	248.4	35.20	8.057	
7,350.0	7,171.4	7,404.1	7,297.2	20.0	19.6	129.99	-741.4	-413.3	292.7	259.2	33.50	8.738	
7,400.0	7,197.2	7,474.0	7,347.4	19.7	19.1	131.63	-692.8	-416.3	301.3	269.5	31.72	9.497	
7,450.0	7,219.1	7,546.9	7,393.1	19.4	18.6	133.01	-636.2	-419.0	308.8	278.9	29.95	10.313	
7,500.0	7,237.0	7,622.3	7,432.4	19.1	18.1	134.11	-571.9	-421.3	315.2	286.9	28.26	11.152	
7,550.0	7,250.9	7,700.0	7,463.7	18.8	17.5	134.90	-500.9	-423.1	320.0	293.3	26.76	11.957	
7,600.0	7,260.5	7,779.3	7,485.4	18.6	17.1	135.36	-424.8	-424.2	323.2	297.7	25.54	12.653	
7,650.0	7,265.8	7,859.4	7,496.6	18.4	16.6	135.48	-345.4	-424.6	324.5	299.9	24.67	13.154	
7,684.4	7,267.0	7,909.0	7,498.0	18.3	16.4	135.39	-295.9	-424.6	324.5	300.2	24.31	13.348	
7,686.5	7,267.0	7,911.1	7,498.0	18.3	16.4	135.39	-293.8	-424.6	324.5	300.2	24.29	13.357	
7,700.0	7,267.0	7,924.6	7,498.0	18.2	16.4	135.39	-280.3	-424.5	324.5	300.2	24.26	13.374	
7,800.0	7,267.0	8,024.6	7,498.0	18.0	16.1	135.34	-180.3	-424.2	324.7	300.6	24.15	13.444	
7,900.0	7,267.0	8,124.6	7,498.0	17.9	16.1	135.30	-80.3	-423.8	325.0	300.7	24.30	13.375	
8,000.0	7,267.0	8,224.6	7,498.0	18.1	16.2	135.26	19.7	-423.5	325.2	300.5	24.69	13.171	
8,100.0	7,267.0	8,324.6	7,498.0	18.3	16.5	135.22	119.7	-423.2	325.5	300.1	25.32	12.852	
8,200.0	7,267.0	8,424.6	7,498.0	18.8	17.0	135.18	219.7	-422.8	325.7	299.5	26.18	12.441	
8,300.0	7,267.0	8,524.6	7,498.0	19.4	17.7	135.13	319.7	-422.5	325.9	298.7	27.24	11.967	
8,400.0	7,267.0	8,624.6	7,498.0	20.1	18.5	135.09	419.7	-422.2	326.2	297.7	28.47	11.455	
8,500.0	7,267.0	8,724.6	7,498.0	21.0	19.4	135.05	519.7	-421.8	326.4	296.5	29.87	10.927	
8,600.0	7,267.0	8,824.6	7,498.0	21.9	20.5	135.01	619.7	-421.5	326.6	295.2	31.41	10.399	
8,700.0	7,267.0	8,924.6	7,498.0	23.0	21.6	134.97	719.7	-421.2	326.9	293.8	33.07	9.885	
8,800.0	7,267.0	9,024.6	7,498.0	24.1	22.8	134.92	819.7	-420.8	327.1	292.3	34.83	9.392	
8,900.0	7,267.0	9,124.6	7,498.0	25.3	24.1	134.88	919.7	-420.5	327.4	290.7	36.68	8.924	
9,000.0	7,267.0	9,224.6	7,498.0	26.6	25.4	134.84	1,019.7	-420.1	327.6	289.0	38.61	8.485	

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: O-Geolink 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)				
9,100.0	7,267.0	9,324.6	7,498.0	27.9	26.8	134.80	1,119.7	-419.8	327.8	287.2	40.61	8.073		
9,200.0	7,267.0	9,424.6	7,498.0	29.3	28.2	134.76	1,219.7	-419.5	328.1	285.4	42.66	7.690		
9,300.0	7,267.0	9,524.6	7,498.0	30.7	29.7	134.72	1,319.7	-419.1	328.3	283.5	44.77	7.334		
9,400.0	7,267.0	9,624.6	7,498.0	32.1	31.1	134.68	1,419.6	-418.8	328.6	281.6	46.92	7.003		
9,500.0	7,267.0	9,724.6	7,498.0	33.6	32.7	134.63	1,519.6	-418.5	328.8	279.7	49.11	6.695		
9,600.0	7,267.0	9,824.6	7,498.0	35.1	34.2	134.59	1,619.6	-418.1	329.0	277.7	51.33	6.410		
9,700.0	7,267.0	9,924.6	7,498.0	36.6	35.8	134.55	1,719.6	-417.8	329.3	275.7	53.59	6.145		
9,800.0	7,267.0	10,024.5	7,498.0	38.1	37.3	134.51	1,819.6	-417.4	329.5	273.6	55.87	5.898		
9,900.0	7,267.0	10,124.5	7,498.0	39.7	38.9	134.47	1,919.6	-417.1	329.8	271.6	58.18	5.668		
10,000.0	7,267.0	10,224.5	7,498.0	41.3	40.5	134.43	2,019.6	-416.8	330.0	269.5	60.51	5.454		
10,100.0	7,267.0	10,324.5	7,498.0	42.9	42.1	134.39	2,119.6	-416.4	330.2	267.4	62.86	5.254		
10,200.0	7,267.0	10,424.5	7,498.0	44.5	43.8	134.35	2,219.6	-416.1	330.5	265.2	65.22	5.067		
10,300.0	7,267.0	10,524.5	7,498.0	46.1	45.4	134.31	2,319.6	-415.8	330.7	263.1	67.61	4.891		
10,400.0	7,267.0	10,624.5	7,498.0	47.7	47.0	134.27	2,419.6	-415.4	331.0	260.9	70.01	4.727		
10,500.0	7,267.0	10,724.5	7,498.0	49.3	48.7	134.22	2,519.6	-415.1	331.2	258.8	72.43	4.573		
10,600.0	7,267.0	10,824.5	7,498.0	51.0	50.4	134.18	2,619.6	-414.8	331.4	256.6	74.86	4.428		
10,700.0	7,267.0	10,924.5	7,498.0	52.6	52.0	134.14	2,719.6	-414.4	331.7	254.4	77.30	4.291		
10,800.0	7,267.0	11,024.5	7,498.0	54.3	53.7	134.10	2,819.6	-414.1	331.9	252.2	79.75	4.162		
10,900.0	7,267.0	11,124.5	7,498.0	55.9	55.4	134.06	2,919.6	-413.7	332.2	250.0	82.21	4.040		
11,000.0	7,267.0	11,224.5	7,498.0	57.6	57.0	134.02	3,019.6	-413.4	332.4	247.7	84.69	3.925		
11,100.0	7,267.0	11,324.5	7,498.0	59.3	58.7	133.98	3,119.6	-413.1	332.6	245.5	87.17	3.816		
11,200.0	7,267.0	11,424.5	7,498.0	60.9	60.4	133.94	3,219.6	-412.7	332.9	243.2	89.66	3.713		
11,300.0	7,267.0	11,524.5	7,498.0	62.6	62.1	133.90	3,319.6	-412.4	333.1	241.0	92.16	3.615		
11,400.0	7,267.0	11,624.5	7,498.0	64.3	63.8	133.86	3,419.6	-412.1	333.4	238.7	94.67	3.521		
11,500.0	7,267.0	11,724.5	7,498.0	66.0	65.5	133.82	3,519.6	-411.7	333.6	236.4	97.19	3.433		
11,600.0	7,267.0	11,824.5	7,498.0	67.7	67.2	133.78	3,619.6	-411.4	333.9	234.2	99.71	3.348		
11,700.0	7,267.0	11,924.5	7,498.0	69.4	68.9	133.74	3,719.6	-411.0	334.1	231.9	102.24	3.268		
11,800.0	7,267.0	12,024.5	7,498.0	71.1	70.6	133.70	3,819.6	-410.7	334.3	229.6	104.78	3.191		
11,900.0	7,267.0	12,124.5	7,498.0	72.8	72.3	133.66	3,919.6	-410.4	334.6	227.3	107.32	3.118		
12,000.0	7,267.0	12,224.5	7,498.0	74.5	74.0	133.62	4,019.6	-410.0	334.8	225.0	109.87	3.047		
12,100.0	7,267.0	12,324.5	7,498.0	76.2	75.8	133.58	4,119.6	-409.7	335.1	222.7	112.43	2.980		
12,200.0	7,267.0	12,424.5	7,498.0	77.9	77.5	133.54	4,219.6	-409.4	335.3	220.3	114.99	2.916		
12,300.0	7,267.0	12,524.5	7,498.0	79.6	79.2	133.50	4,319.6	-409.0	335.6	218.0	117.56	2.854		
12,400.0	7,267.0	12,624.5	7,498.0	81.3	80.9	133.46	4,419.6	-408.7	335.8	215.7	120.13	2.795		
12,500.0	7,267.0	12,724.5	7,498.0	83.0	82.6	133.42	4,519.6	-408.3	336.1	213.3	122.71	2.739		
12,600.0	7,267.0	12,824.5	7,498.0	84.7	84.3	133.38	4,619.6	-408.0	336.3	211.0	125.30	2.684		
12,700.0	7,267.0	12,924.5	7,498.0	86.4	86.1	133.34	4,719.6	-407.7	336.5	208.7	127.89	2.632		
12,800.0	7,267.0	13,024.5	7,498.0	88.1	87.8	133.31	4,819.6	-407.3	336.8	206.3	130.48	2.581		
12,900.0	7,267.0	13,124.5	7,498.0	89.9	89.5	133.27	4,919.6	-407.0	337.0	204.0	133.08	2.533		
13,000.0	7,267.0	13,224.5	7,498.0	91.6	91.2	133.23	5,019.6	-406.7	337.3	201.6	135.69	2.486		
13,100.0	7,267.0	13,324.5	7,498.0	93.3	93.0	133.19	5,119.6	-406.3	337.5	199.2	138.30	2.441		
13,200.0	7,267.0	13,424.5	7,498.0	95.0	94.7	133.15	5,219.6	-406.0	337.8	196.9	140.91	2.397		
13,300.0	7,267.0	13,524.5	7,498.0	96.7	96.4	133.11	5,319.6	-405.7	338.0	194.5	143.53	2.355		
13,400.0	7,267.0	13,624.5	7,498.0	98.5	98.2	133.07	5,419.6	-405.3	338.3	192.1	146.15	2.315		
13,500.0	7,267.0	13,727.7	7,498.0	100.2	99.9	133.08	5,522.8	-405.4	338.2	189.5	148.70	2.274		
13,600.0	7,267.0	13,830.0	7,498.0	101.9	101.7	133.28	5,625.1	-407.1	337.0	186.2	150.83	2.234		
13,700.0	7,267.0	13,930.0	7,498.0	103.6	103.4	133.50	5,725.0	-409.0	335.6	182.8	152.86	2.196		
13,800.0	7,267.0	14,030.0	7,498.0	105.4	105.2	133.72	5,825.0	-410.9	334.3	179.4	154.86	2.158		
13,900.0	7,267.0	14,129.9	7,498.0	107.1	106.9	133.94	5,924.9	-412.8	332.9	176.1	156.84	2.123		
14,000.0	7,267.0	14,229.9	7,498.0	108.8	108.7	134.17	6,024.9	-414.6	331.6	172.8	158.80	2.088		
14,100.0	7,267.0	14,329.9	7,498.0	110.6	110.4	134.40	6,124.9	-416.5	330.2	169.5	160.73	2.054		
14,200.0	7,267.0	14,429.9	7,498.0	112.3	112.1	134.63	6,224.8	-418.4	328.9	166.2	162.63	2.022		

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

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,300.0	7,267.0	14,529.9	7,498.0	114.0	113.9	134.86	6,324.8	-420.3	327.5	163.0	164.51	1.991	
14,400.0	7,267.0	14,629.9	7,498.0	115.8	115.6	135.09	6,424.8	-422.2	326.2	159.8	166.37	1.961	
14,500.0	7,267.0	14,729.8	7,498.0	117.5	117.3	135.33	6,524.7	-424.0	324.9	156.7	168.19	1.932	
14,534.5	7,267.0	14,760.0	7,498.0	118.1	117.9	135.40	6,554.9	-424.6	324.4	155.6	168.79	1.922	
14,535.9	7,267.0	14,760.0	7,498.0	118.1	117.9	135.40	6,554.9	-424.6	324.4	155.6	168.81	1.922 SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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	90.98	-0.3	19.9	19.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.98	-0.3	19.9	19.9	19.6	0.24	81.257		
200.0	200.0	200.0	200.0	0.3	0.3	90.98	-0.3	19.9	19.9	19.3	0.59	33.459		
300.0	300.0	300.0	300.0	0.5	0.5	90.98	-0.3	19.9	19.9	18.9	0.94	21.067		
400.0	400.0	400.0	400.0	0.6	0.6	90.98	-0.3	19.9	19.9	18.6	1.29	15.373 CC, ES		
500.0	500.0	500.0	500.0	0.8	0.8	-127.38	-0.3	19.9	20.9	19.2	1.64	12.710		
600.0	599.8	600.2	600.2	1.0	1.0	-133.36	-2.0	19.5	23.7	21.7	2.00	11.848		
700.0	699.5	700.4	700.3	1.2	1.2	-136.39	-7.2	18.2	27.7	25.4	2.37	11.678		
800.0	798.7	800.8	800.2	1.5	1.4	-137.23	-15.7	16.2	32.8	30.1	2.78	11.794		
895.3	892.8	896.4	895.1	1.8	1.6	-136.70	-27.0	13.6	38.7	35.4	3.23	11.983		
900.0	897.5	901.1	899.8	1.8	1.6	-136.65	-27.6	13.4	39.0	35.7	3.25	11.994		
1,000.0	996.0	1,001.1	998.7	2.1	1.9	-134.77	-42.0	10.1	45.2	41.4	3.76	12.004		
1,100.0	1,094.5	1,100.9	1,097.4	2.4	2.2	-133.21	-56.4	6.7	51.4	47.1	4.30	11.937		
1,200.0	1,193.0	1,200.7	1,196.1	2.7	2.5	-131.99	-70.9	3.3	57.6	52.7	4.86	11.849		
1,300.0	1,291.5	1,300.5	1,294.8	3.1	2.8	-131.01	-85.3	-0.1	63.8	58.4	5.43	11.756		
1,400.0	1,390.0	1,400.3	1,393.5	3.4	3.1	-130.21	-99.7	-3.5	70.1	64.1	6.01	11.665		
1,500.0	1,488.5	1,500.1	1,492.1	3.7	3.4	-129.53	-114.2	-6.9	76.3	69.7	6.59	11.580		
1,600.0	1,587.0	1,599.9	1,590.8	4.1	3.7	-128.96	-128.6	-10.3	82.6	75.4	7.18	11.501		
1,700.0	1,685.5	1,699.7	1,689.5	4.4	4.0	-128.47	-143.0	-13.7	88.9	81.1	7.78	11.430		
1,800.0	1,784.1	1,799.5	1,788.2	4.8	4.3	-128.05	-157.5	-17.1	95.2	86.8	8.37	11.365		
1,900.0	1,882.6	1,899.3	1,886.9	5.1	4.6	-127.67	-171.9	-20.5	101.5	92.5	8.97	11.306		
2,000.0	1,981.1	1,999.1	1,985.6	5.4	4.9	-127.34	-186.4	-23.9	107.8	98.2	9.58	11.252		
2,100.0	2,079.6	2,098.9	2,084.3	5.8	5.2	-127.05	-200.8	-27.3	114.1	103.9	10.18	11.203		
2,200.0	2,178.1	2,198.7	2,183.0	6.1	5.5	-126.79	-215.2	-30.7	120.4	109.6	10.79	11.158		
2,300.0	2,276.6	2,298.5	2,281.7	6.5	5.8	-126.55	-229.7	-34.0	126.7	115.3	11.39	11.117		
2,400.0	2,375.1	2,398.3	2,380.4	6.8	6.1	-126.34	-244.1	-37.4	133.0	121.0	12.00	11.079		
2,500.0	2,473.6	2,498.1	2,479.1	7.2	6.4	-126.14	-258.6	-40.8	139.3	126.7	12.61	11.044		
2,600.0	2,572.1	2,597.9	2,577.8	7.5	6.7	-125.97	-273.0	-44.2	145.6	132.4	13.22	11.012		
2,700.0	2,670.6	2,697.7	2,676.4	7.9	7.0	-125.80	-287.4	-47.6	151.9	138.1	13.83	10.983		
2,800.0	2,769.1	2,797.5	2,775.1	8.2	7.3	-125.65	-301.9	-51.0	158.2	143.8	14.44	10.955		
2,900.0	2,867.7	2,897.3	2,873.8	8.6	7.7	-125.52	-316.3	-54.4	164.5	149.5	15.05	10.930		
3,000.0	2,966.2	2,997.1	2,972.5	8.9	8.0	-125.39	-330.8	-57.8	170.8	155.2	15.66	10.906		
3,100.0	3,064.7	3,096.9	3,071.2	9.3	8.3	-125.27	-345.2	-61.2	177.1	160.9	16.28	10.883		
3,200.0	3,163.2	3,196.7	3,169.9	9.6	8.6	-125.16	-359.6	-64.6	183.5	166.6	16.89	10.863		
3,300.0	3,261.7	3,296.5	3,268.6	9.9	8.9	-125.05	-374.1	-68.0	189.8	172.3	17.50	10.843		
3,400.0	3,360.2	3,396.3	3,367.3	10.3	9.2	-124.96	-388.5	-71.4	196.1	178.0	18.12	10.825		
3,500.0	3,458.7	3,496.1	3,466.0	10.6	9.5	-124.87	-402.9	-74.8	202.4	183.7	18.73	10.807		
3,600.0	3,557.2	3,595.9	3,564.7	11.0	9.8	-124.78	-417.4	-78.2	208.7	189.4	19.34	10.791		
3,700.0	3,655.7	3,695.7	3,663.4	11.3	10.1	-124.70	-431.8	-81.5	215.0	195.1	19.96	10.776		
3,800.0	3,754.2	3,795.5	3,762.1	11.7	10.4	-124.63	-446.3	-84.9	221.4	200.8	20.57	10.761		
3,900.0	3,852.7	3,895.3	3,860.7	12.0	10.8	-124.55	-460.7	-88.3	227.7	206.5	21.19	10.747		
4,000.0	3,951.3	3,995.1	3,959.4	12.4	11.1	-124.49	-475.1	-91.7	234.0	212.2	21.80	10.734		
4,100.0	4,049.8	4,094.9	4,058.1	12.7	11.4	-124.42	-489.6	-95.1	240.3	217.9	22.41	10.722		
4,200.0	4,148.3	4,194.7	4,156.8	13.1	11.7	-124.36	-504.0	-98.5	246.6	223.6	23.03	10.710		
4,300.0	4,246.8	4,294.5	4,255.5	13.4	12.0	-124.30	-518.5	-101.9	253.0	229.3	23.64	10.699		
4,400.0	4,345.3	4,394.3	4,354.2	13.8	12.3	-124.25	-532.9	-105.3	259.3	235.0	24.26	10.688		
4,500.0	4,443.8	4,494.1	4,452.9	14.1	12.6	-124.20	-547.3	-108.7	265.6	240.7	24.87	10.678		
4,600.0	4,542.3	4,593.9	4,551.6	14.5	12.9	-124.15	-561.8	-112.1	271.9	246.4	25.49	10.668		
4,700.0	4,640.8	4,693.7	4,650.3	14.8	13.2	-124.10	-576.2	-115.5	278.2	252.1	26.10	10.659		
4,800.0	4,739.3	4,793.5	4,749.0	15.2	13.6	-124.05	-590.6	-118.9	284.6	257.8	26.72	10.650		
4,900.0	4,837.8	4,893.3	4,847.7	15.5	13.9	-124.01	-605.1	-122.3	290.9	263.5	27.34	10.641		
5,000.0	4,936.3	4,993.1	4,946.4	15.9	14.2	-123.97	-619.5	-125.7	297.2	269.2	27.95	10.633		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink 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	5,034.9	5,092.9	5,045.0	16.2	14.5	-123.93	-634.0	-129.1	303.5	275.0	28.57	10.625		
5,200.0	5,133.4	5,192.7	5,143.7	16.6	14.8	-123.89	-648.4	-132.4	309.8	280.7	29.18	10.617		
5,300.0	5,231.9	5,292.5	5,242.4	16.9	15.1	-123.85	-662.8	-135.8	316.2	286.4	29.80	10.610		
5,400.0	5,330.4	5,392.3	5,341.1	17.3	15.4	-123.82	-677.3	-139.2	322.5	292.1	30.41	10.603		
5,500.0	5,428.9	5,492.1	5,439.8	17.6	15.7	-123.78	-691.7	-142.6	328.8	297.8	31.03	10.596		
5,600.0	5,527.4	5,591.9	5,538.5	17.9	16.1	-123.75	-706.2	-146.0	335.1	303.5	31.65	10.590		
5,700.0	5,625.9	5,691.7	5,637.2	18.3	16.4	-123.72	-720.6	-149.4	341.4	309.2	32.26	10.584		
5,800.0	5,724.4	5,791.5	5,735.9	18.6	16.7	-123.69	-735.0	-152.8	347.8	314.9	32.88	10.578		
5,900.0	5,822.9	5,891.3	5,834.6	19.0	17.0	-123.66	-749.5	-156.2	354.1	320.6	33.49	10.572		
6,000.0	5,921.4	5,991.1	5,933.3	19.3	17.3	-123.63	-763.9	-159.6	360.4	326.3	34.11	10.566		
6,100.0	6,020.0	6,090.9	6,032.0	19.7	17.6	-123.61	-778.3	-163.0	366.7	332.0	34.73	10.561		
6,200.0	6,118.5	6,190.7	6,130.7	20.0	17.9	-123.58	-792.8	-166.4	373.1	337.7	35.34	10.556		
6,300.0	6,217.0	6,290.5	6,229.3	20.4	18.2	-123.55	-807.2	-169.8	379.4	343.4	35.96	10.551		
6,400.0	6,315.5	6,390.3	6,328.0	20.7	18.5	-123.53	-821.7	-173.2	385.7	349.1	36.57	10.546		
6,500.0	6,414.0	6,490.1	6,426.7	21.1	18.9	-123.51	-836.1	-176.6	392.0	354.8	37.19	10.541		
6,600.0	6,512.5	6,589.9	6,525.4	21.4	19.2	-123.48	-850.5	-180.0	398.3	360.5	37.81	10.536		
6,704.9	6,615.8	6,694.7	6,629.2	21.8	19.5	-123.50	-865.4	-183.5	405.0	366.5	38.44	10.536		
6,750.0	6,660.5	6,740.1	6,674.3	21.9	19.6	-146.32	-868.8	-185.1	407.8	369.3	38.50	10.593		
6,800.0	6,710.2	6,790.3	6,724.5	22.0	19.6	166.87	-868.4	-186.8	411.0	372.5	38.45	10.689		
6,850.0	6,759.8	6,840.3	6,774.2	22.0	19.5	131.47	-863.6	-188.5	414.2	375.9	38.29	10.817		
6,900.0	6,809.0	6,890.2	6,823.3	22.0	19.5	115.85	-854.5	-190.2	417.3	379.3	38.02	10.977		
6,950.0	6,857.3	6,940.0	6,871.2	21.9	19.3	108.03	-841.2	-191.8	420.4	382.8	37.65	11.168		
7,000.0	6,904.4	6,989.7	6,917.7	21.8	19.1	103.40	-823.8	-193.4	423.5	386.3	37.19	11.388		
7,050.0	6,949.9	7,039.3	6,962.4	21.6	18.9	100.30	-802.5	-195.0	426.4	389.7	36.64	11.636		
7,100.0	6,993.4	7,088.7	7,005.0	21.4	18.6	98.05	-777.5	-196.4	429.2	393.2	36.03	11.911		
7,150.0	7,034.7	7,138.1	7,045.3	21.2	18.3	96.34	-749.0	-197.8	431.9	396.5	35.37	12.211		
7,200.0	7,073.5	7,187.4	7,082.9	20.9	17.9	94.99	-717.2	-199.1	434.4	399.7	34.66	12.533		
7,250.0	7,109.4	7,236.5	7,117.5	20.6	17.6	93.89	-682.3	-200.3	436.7	402.8	33.92	12.874		
7,300.0	7,142.1	7,285.6	7,149.0	20.3	17.2	92.98	-644.6	-201.4	438.8	405.7	33.17	13.231		
7,350.0	7,171.4	7,334.7	7,177.1	20.0	16.8	92.24	-604.5	-202.4	440.7	408.3	32.41	13.598		
7,400.0	7,197.2	7,383.6	7,201.6	19.7	16.4	91.62	-562.1	-203.2	442.4	410.7	31.67	13.969		
7,450.0	7,219.1	7,432.5	7,222.4	19.4	16.1	91.12	-517.9	-203.9	443.8	412.9	30.96	14.337		
7,500.0	7,237.0	7,481.4	7,239.4	19.1	15.7	90.71	-472.1	-204.5	445.0	414.7	30.28	14.694		
7,550.0	7,250.9	7,530.2	7,252.3	18.8	15.4	90.40	-425.1	-204.9	445.9	416.2	29.67	15.031		
7,600.0	7,260.5	7,578.9	7,261.3	18.6	15.1	90.18	-377.2	-205.3	446.5	417.4	29.11	15.338		
7,650.0	7,265.8	7,627.7	7,266.1	18.4	14.8	90.05	-328.7	-205.4	446.9	418.3	28.64	15.604		
7,686.5	7,267.0	7,663.6	7,267.0	18.3	14.7	90.00	-292.8	-205.5	447.0	418.6	28.34	15.772		
7,700.0	7,267.0	7,678.2	7,267.0	18.2	14.6	90.00	-278.2	-205.5	446.9	418.7	28.23	15.834		
7,800.0	7,267.0	7,786.2	7,267.0	18.0	14.4	90.00	-170.1	-206.8	445.7	418.0	27.64	16.125		
7,900.0	7,267.0	7,886.2	7,267.0	17.9	14.3	90.00	-70.2	-208.9	443.6	416.0	27.54	16.107		
8,000.0	7,267.0	7,986.2	7,267.0	18.1	14.5	90.00	29.8	-211.1	441.5	413.6	27.87	15.841		
8,100.0	7,267.0	8,086.2	7,267.0	18.3	14.9	90.00	129.7	-213.2	439.4	410.7	28.63	15.347		
8,200.0	7,267.0	8,186.1	7,267.0	18.8	15.5	90.00	229.7	-215.3	437.2	407.5	29.78	14.681		
8,300.0	7,267.0	8,286.1	7,267.0	19.4	16.2	90.00	329.6	-217.4	435.1	403.8	31.29	13.906		
8,400.0	7,267.0	8,386.1	7,267.0	20.1	17.1	90.00	429.6	-219.5	433.0	399.9	33.10	13.081		
8,500.0	7,267.0	8,486.1	7,267.0	21.0	18.1	90.00	529.5	-221.6	430.9	395.7	35.17	12.251		
8,600.0	7,267.0	8,586.0	7,267.0	21.9	19.2	90.00	629.5	-223.7	428.8	391.3	37.46	11.448		
8,700.0	7,267.0	8,686.0	7,267.0	23.0	20.5	90.00	729.5	-225.8	426.7	386.8	39.92	10.689		
8,800.0	7,267.0	8,786.0	7,267.0	24.1	21.8	90.00	829.4	-228.0	424.6	382.0	42.53	9.983		
8,900.0	7,267.0	8,886.0	7,267.0	25.3	23.1	90.00	929.4	-230.1	422.5	377.2	45.26	9.334		
9,000.0	7,267.0	8,986.0	7,267.0	26.6	24.5	90.00	1,029.3	-232.2	420.3	372.2	48.09	8.741		
9,100.0	7,267.0	9,085.9	7,267.0	27.9	25.9	90.00	1,129.3	-234.3	418.2	367.2	51.01	8.200		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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	7,267.0	9,185.9	7,267.0	29.3	27.4	90.00	1,229.2	-236.4	416.1	362.1	53.99	7.707		
9,300.0	7,267.0	9,285.9	7,267.0	30.7	28.9	90.00	1,329.2	-238.5	414.0	357.0	57.04	7.258		
9,400.0	7,267.0	9,385.9	7,267.0	32.1	30.5	90.00	1,429.1	-240.6	411.9	351.8	60.13	6.849		
9,500.0	7,267.0	9,485.8	7,267.0	33.6	32.0	90.00	1,529.1	-242.7	409.8	346.5	63.27	6.476		
9,600.0	7,267.0	9,585.8	7,267.0	35.1	33.6	90.00	1,629.0	-244.9	407.7	341.2	66.45	6.135		
9,700.0	7,267.0	9,685.8	7,267.0	36.6	35.2	90.00	1,729.0	-247.0	405.6	335.9	69.66	5.822		
9,800.0	7,267.0	9,785.8	7,267.0	38.1	36.8	90.00	1,829.0	-249.1	403.4	330.5	72.89	5.535		
9,900.0	7,267.0	9,885.8	7,267.0	39.7	38.4	90.00	1,928.9	-251.2	401.3	325.2	76.15	5.270		
10,000.0	7,267.0	9,985.7	7,267.0	41.3	40.1	90.00	2,028.9	-253.3	399.2	319.8	79.43	5.026		
10,100.0	7,267.0	10,085.7	7,267.0	42.9	41.7	90.00	2,128.8	-255.4	397.1	314.4	82.73	4.800		
10,200.0	7,267.0	10,185.7	7,267.0	44.5	43.4	90.00	2,228.8	-257.5	395.0	308.9	86.05	4.590		
10,300.0	7,267.0	10,285.7	7,267.0	46.1	45.0	90.00	2,328.7	-259.6	392.9	303.5	89.38	4.396		
10,400.0	7,267.0	10,385.6	7,267.0	47.7	46.7	90.00	2,428.7	-261.7	390.8	298.0	92.72	4.214		
10,500.0	7,267.0	10,485.6	7,267.0	49.3	48.4	90.00	2,528.6	-263.9	388.7	292.6	96.08	4.045		
10,600.0	7,267.0	10,585.6	7,267.0	51.0	50.0	90.00	2,628.6	-266.0	386.5	287.1	99.44	3.887		
10,700.0	7,267.0	10,685.6	7,267.0	52.6	51.7	90.00	2,728.6	-268.1	384.4	281.6	102.82	3.739		
10,800.0	7,267.0	10,785.6	7,267.0	54.3	53.4	90.00	2,828.5	-270.2	382.3	276.1	106.20	3.600		
10,900.0	7,267.0	10,885.5	7,267.0	55.9	55.1	90.00	2,928.5	-272.3	380.2	270.6	109.60	3.469		
11,000.0	7,267.0	10,985.5	7,267.0	57.6	56.8	90.00	3,028.4	-274.4	378.1	265.1	112.99	3.346		
11,100.0	7,267.0	11,085.5	7,267.0	59.3	58.5	90.00	3,128.4	-276.5	376.0	259.6	116.40	3.230		
11,200.0	7,267.0	11,185.5	7,267.0	60.9	60.2	90.00	3,228.3	-278.6	373.9	254.1	119.81	3.120		
11,300.0	7,267.0	11,283.7	7,267.0	62.6	61.9	90.00	3,326.5	-280.7	371.8	248.6	123.20	3.018		
11,400.0	7,267.0	11,377.6	7,267.0	64.3	63.5	90.00	3,420.5	-281.4	371.0	244.5	126.52	2.932		
11,400.3	7,267.0	11,377.9	7,267.0	64.3	63.5	90.00	3,420.7	-281.4	371.0	244.5	126.52	2.932		
11,500.0	7,267.0	11,471.5	7,267.0	66.0	65.1	90.00	3,514.4	-280.7	371.8	242.0	129.84	2.864		
11,600.0	7,267.0	11,568.3	7,267.0	67.7	66.7	90.00	3,611.2	-278.5	374.1	240.9	133.21	2.808		
11,700.0	7,267.0	11,668.3	7,267.0	69.4	68.4	90.00	3,711.1	-276.0	376.6	239.9	136.65	2.756		
11,800.0	7,267.0	11,768.3	7,267.0	71.1	70.1	90.00	3,811.0	-273.5	379.0	239.0	140.08	2.706		
11,900.0	7,267.0	11,868.3	7,267.0	72.8	71.9	90.00	3,911.0	-271.0	381.5	238.0	143.53	2.658		
12,000.0	7,267.0	11,968.2	7,267.0	74.5	73.6	90.00	4,010.9	-268.5	384.0	237.0	146.97	2.613		
12,100.0	7,267.0	12,068.2	7,267.0	76.2	75.3	90.00	4,110.8	-266.1	386.5	236.1	150.42	2.569		
12,200.0	7,267.0	12,168.2	7,267.0	77.9	77.0	90.00	4,210.8	-263.6	389.0	235.1	153.87	2.528		
12,300.0	7,267.0	12,268.1	7,267.0	79.6	78.7	90.00	4,310.7	-261.1	391.4	234.1	157.32	2.488		
12,400.0	7,267.0	12,368.1	7,267.0	81.3	80.5	90.00	4,410.7	-258.6	393.9	233.1	160.77	2.450		
12,500.0	7,267.0	12,468.1	7,267.0	83.0	82.2	90.00	4,510.6	-256.1	396.4	232.2	164.23	2.414		
12,600.0	7,267.0	12,568.0	7,267.0	84.7	83.9	90.00	4,610.5	-253.7	398.9	231.2	167.69	2.379		
12,700.0	7,267.0	12,668.0	7,267.0	86.4	85.6	90.00	4,710.5	-251.2	401.4	230.2	171.15	2.345		
12,800.0	7,267.0	12,768.0	7,267.0	88.1	87.3	90.00	4,810.4	-248.7	403.8	229.2	174.61	2.313		
12,900.0	7,267.0	12,867.9	7,267.0	89.9	89.1	90.00	4,910.4	-246.2	406.3	228.2	178.08	2.282		
13,000.0	7,267.0	12,967.9	7,267.0	91.6	90.8	90.00	5,010.3	-243.7	408.8	227.3	181.54	2.252		
13,100.0	7,267.0	13,067.9	7,267.0	93.3	92.5	90.00	5,110.2	-241.3	411.3	226.3	185.01	2.223		
13,200.0	7,267.0	13,167.9	7,267.0	95.0	94.3	90.00	5,210.2	-238.8	413.8	225.3	188.48	2.195		
13,300.0	7,267.0	13,267.8	7,267.0	96.7	96.0	90.00	5,310.1	-236.3	416.3	224.3	191.95	2.169		
13,400.0	7,267.0	13,367.8	7,267.0	98.5	97.7	90.00	5,410.0	-233.8	418.7	223.3	195.42	2.143		
13,500.0	7,267.0	13,467.8	7,267.0	100.2	99.5	90.00	5,510.0	-231.3	421.2	222.3	198.90	2.118		
13,600.0	7,267.0	13,567.7	7,267.0	101.9	101.2	90.00	5,609.9	-228.9	423.7	221.3	202.37	2.094		
13,700.0	7,267.0	13,667.7	7,267.0	103.6	102.9	90.00	5,709.9	-226.4	426.2	220.3	205.85	2.070		
13,800.0	7,267.0	13,767.7	7,267.0	105.4	104.7	90.00	5,809.8	-223.9	428.7	219.3	209.32	2.048		
13,900.0	7,267.0	13,867.6	7,267.0	107.1	106.4	90.00	5,909.7	-221.4	431.1	218.3	212.80	2.026		
14,000.0	7,267.0	13,967.6	7,267.0	108.8	108.1	90.00	6,009.7	-218.9	433.6	217.3	216.28	2.005		
14,100.0	7,267.0	14,067.6	7,267.0	110.6	109.9	90.00	6,109.6	-216.5	436.1	216.3	219.76	1.984		
14,200.0	7,267.0	14,167.5	7,267.0	112.3	111.6	90.00	6,209.6	-214.0	438.6	215.3	223.24	1.965		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design											S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2			Offset Site Error:		0.0 ft
Survey Program:											0-Geolink 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		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)						
14,300.0	7,267.0	14,267.5	7,267.0	114.0	113.3	90.00	6,309.5	-211.5	441.1	214.3	226.72	1.945				
14,400.0	7,267.0	14,367.5	7,267.0	115.8	115.1	90.00	6,409.4	-209.0	443.5	213.3	230.20	1.927				
14,500.0	7,267.0	14,467.5	7,267.0	117.5	116.8	90.00	6,509.4	-206.5	446.0	212.3	233.68	1.909				
14,535.9	7,267.0	14,503.4	7,267.0	118.1	117.4	90.00	6,545.3	-205.6	446.9	212.0	234.94	1.902 SF				

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	90.67	-0.3	29.9	29.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.67	-0.3	29.9	29.9	29.7	0.24	122.448		
200.0	200.0	200.0	200.0	0.3	0.3	90.67	-0.3	29.9	29.9	29.3	0.59	50.420		
300.0	300.0	300.0	300.0	0.5	0.5	90.67	-0.3	29.9	29.9	29.0	0.94	31.746		
400.0	400.0	400.0	400.0	0.6	0.6	90.67	-0.3	29.9	29.9	28.6	1.29	23.166 CC, ES		
500.0	500.0	500.0	500.0	0.8	0.8	-125.57	-0.8	29.9	30.9	29.2	1.64	18.803		
600.0	599.8	600.1	600.0	1.0	1.0	-126.86	-4.3	29.6	33.6	31.6	2.01	16.754		
700.0	699.5	700.2	699.9	1.2	1.2	-126.86	-11.2	29.1	38.0	35.6	2.40	15.829		
800.0	798.7	800.1	799.3	1.5	1.4	-125.95	-21.7	28.3	44.1	41.2	2.85	15.463		
895.3	892.8	895.2	893.5	1.8	1.7	-124.89	-34.5	27.3	51.5	48.1	3.34	15.418		
900.0	897.5	899.9	898.1	1.8	1.7	-124.90	-35.2	27.3	51.9	48.5	3.36	15.426		
1,000.0	996.0	999.5	996.8	2.1	1.9	-124.95	-49.2	26.2	60.5	56.6	3.90	15.521		
1,100.0	1,094.5	1,099.2	1,095.4	2.4	2.2	-124.99	-63.2	25.2	69.2	64.7	4.45	15.535		
1,200.0	1,193.0	1,198.8	1,194.0	2.7	2.5	-125.02	-77.2	24.1	77.8	72.8	5.02	15.513		
1,300.0	1,291.5	1,298.4	1,292.6	3.1	2.8	-125.04	-91.2	23.1	86.5	80.9	5.59	15.474		
1,400.0	1,390.0	1,398.0	1,391.3	3.4	3.1	-125.06	-105.3	22.0	95.2	89.0	6.17	15.429		
1,500.0	1,488.5	1,497.7	1,489.9	3.7	3.4	-125.08	-119.3	21.0	103.8	97.1	6.75	15.382		
1,600.0	1,587.0	1,597.3	1,588.5	4.1	3.7	-125.09	-133.3	19.9	112.5	105.1	7.33	15.336		
1,700.0	1,685.5	1,696.9	1,687.1	4.4	4.0	-125.10	-147.3	18.9	121.1	113.2	7.92	15.292		
1,800.0	1,784.1	1,796.5	1,785.8	4.8	4.3	-125.11	-161.4	17.8	129.8	121.3	8.51	15.251		
1,900.0	1,882.6	1,896.2	1,884.4	5.1	4.5	-125.12	-175.4	16.7	138.5	129.4	9.10	15.213		
2,000.0	1,981.1	1,995.8	1,983.0	5.4	4.8	-125.13	-189.4	15.7	147.1	137.4	9.69	15.177		
2,100.0	2,079.6	2,095.4	2,081.7	5.8	5.1	-125.14	-203.4	14.6	155.8	145.5	10.29	15.144		
2,200.0	2,178.1	2,195.0	2,180.3	6.1	5.4	-125.14	-217.4	13.6	164.4	153.5	10.88	15.113		
2,300.0	2,276.6	2,294.7	2,278.9	6.5	5.7	-125.15	-231.5	12.5	173.1	161.6	11.47	15.085		
2,400.0	2,375.1	2,394.3	2,377.5	6.8	6.0	-125.15	-245.5	11.5	181.7	169.7	12.07	15.058		
2,500.0	2,473.6	2,493.9	2,476.2	7.2	6.3	-125.16	-259.5	10.4	190.4	177.7	12.67	15.034		
2,600.0	2,572.1	2,593.5	2,574.8	7.5	6.6	-125.16	-273.5	9.4	199.1	185.8	13.26	15.011		
2,700.0	2,670.6	2,693.2	2,673.4	7.9	6.9	-125.17	-287.5	8.3	207.7	193.9	13.86	14.989		
2,800.0	2,769.1	2,792.8	2,772.0	8.2	7.2	-125.17	-301.6	7.3	216.4	201.9	14.45	14.969		
2,900.0	2,867.7	2,892.4	2,870.7	8.6	7.5	-125.17	-315.6	6.2	225.0	210.0	15.05	14.950		
3,000.0	2,966.2	2,992.0	2,969.3	8.9	7.8	-125.18	-329.6	5.1	233.7	218.0	15.65	14.933		
3,100.0	3,064.7	3,091.7	3,067.9	9.3	8.1	-125.18	-343.6	4.1	242.3	226.1	16.25	14.916		
3,200.0	3,163.2	3,191.3	3,166.6	9.6	8.4	-125.18	-357.6	3.0	251.0	234.2	16.85	14.901		
3,300.0	3,261.7	3,290.9	3,265.2	9.9	8.7	-125.19	-371.7	2.0	259.7	242.2	17.44	14.886		
3,400.0	3,360.2	3,390.5	3,363.8	10.3	9.0	-125.19	-385.7	0.9	268.3	250.3	18.04	14.872		
3,500.0	3,458.7	3,490.2	3,462.4	10.6	9.3	-125.19	-399.7	-0.1	277.0	258.3	18.64	14.859		
3,600.0	3,557.2	3,589.8	3,561.1	11.0	9.6	-125.19	-413.7	-1.2	285.6	266.4	19.24	14.847		
3,700.0	3,655.7	3,689.4	3,659.7	11.3	9.9	-125.19	-427.7	-2.2	294.3	274.5	19.84	14.835		
3,800.0	3,754.2	3,789.0	3,758.3	11.7	10.2	-125.20	-441.8	-3.3	303.0	282.5	20.44	14.824		
3,900.0	3,852.7	3,888.7	3,856.9	12.0	10.5	-125.20	-455.8	-4.4	311.6	290.6	21.04	14.814		
4,000.0	3,951.3	3,988.3	3,955.6	12.4	10.8	-125.20	-469.8	-5.4	320.3	298.6	21.63	14.804		
4,100.0	4,049.8	4,087.9	4,054.2	12.7	11.1	-125.20	-483.8	-6.5	328.9	306.7	22.23	14.794		
4,200.0	4,148.3	4,187.5	4,152.8	13.1	11.4	-125.20	-497.8	-7.5	337.6	314.8	22.83	14.785		
4,300.0	4,246.8	4,287.2	4,251.5	13.4	11.7	-125.20	-511.9	-8.6	346.2	322.8	23.43	14.776		
4,400.0	4,345.3	4,386.8	4,350.1	13.8	12.0	-125.20	-525.9	-9.6	354.9	330.9	24.03	14.768		
4,500.0	4,443.8	4,486.4	4,448.7	14.1	12.3	-125.21	-539.9	-10.7	363.6	338.9	24.63	14.760		
4,600.0	4,542.3	4,586.0	4,547.3	14.5	12.6	-125.21	-553.9	-11.7	372.2	347.0	25.23	14.752		
4,700.0	4,640.8	4,685.7	4,646.0	14.8	12.9	-125.21	-567.9	-12.8	380.9	355.0	25.83	14.745		
4,800.0	4,739.3	4,785.3	4,744.6	15.2	13.2	-125.21	-582.0	-13.8	389.5	363.1	26.43	14.738		
4,900.0	4,837.8	4,884.9	4,843.2	15.5	13.5	-125.21	-596.0	-14.9	398.2	371.2	27.03	14.732		
5,000.0	4,936.3	4,984.5	4,941.9	15.9	13.8	-125.21	-610.0	-16.0	406.8	379.2	27.63	14.725		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
5,100.0	5,034.9	5,084.2	5,040.5	16.2	14.1	-125.21	-624.0	-17.0	415.5	387.3	28.23	14.719		
5,200.0	5,133.4	5,183.8	5,139.1	16.6	14.4	-125.21	-638.0	-18.1	424.2	395.3	28.83	14.713		
5,300.0	5,231.9	5,283.4	5,237.7	16.9	14.7	-125.21	-652.1	-19.1	432.8	403.4	29.43	14.707		
5,400.0	5,330.4	5,383.0	5,336.4	17.3	15.0	-125.21	-666.1	-20.2	441.5	411.5	30.03	14.702		
5,500.0	5,428.9	5,482.7	5,435.0	17.6	15.3	-125.22	-680.1	-21.2	450.1	419.5	30.63	14.696		
5,600.0	5,527.4	5,582.3	5,533.6	17.9	15.6	-125.22	-694.1	-22.3	458.8	427.6	31.23	14.691		
5,700.0	5,625.9	5,681.9	5,632.2	18.3	15.9	-125.22	-708.1	-23.3	467.5	435.6	31.83	14.686		
5,800.0	5,724.4	5,781.5	5,730.9	18.6	16.2	-125.22	-722.2	-24.4	476.1	443.7	32.43	14.682		
5,900.0	5,822.9	5,881.1	5,829.5	19.0	16.5	-125.22	-736.2	-25.5	484.8	451.7	33.03	14.677		
6,000.0	5,921.4	5,980.8	5,928.1	19.3	16.8	-125.22	-750.2	-26.5	493.4	459.8	33.63	14.673		
6,100.0	6,020.0	6,080.4	6,026.8	19.7	17.1	-125.22	-764.2	-27.6	502.1	467.9	34.23	14.668		
6,200.0	6,118.5	6,180.0	6,125.4	20.0	17.4	-125.22	-778.2	-28.6	510.7	475.9	34.83	14.664		
6,300.0	6,217.0	6,279.6	6,224.0	20.4	17.7	-125.22	-792.3	-29.7	519.4	484.0	35.43	14.660		
6,400.0	6,315.5	6,379.3	6,322.6	20.7	18.0	-125.22	-806.3	-30.7	528.1	492.0	36.03	14.656		
6,500.0	6,414.0	6,478.9	6,421.3	21.1	18.3	-125.22	-820.3	-31.8	536.7	500.1	36.63	14.652		
6,600.0	6,512.5	6,578.5	6,519.9	21.4	18.6	-125.22	-834.3	-32.8	545.4	508.1	37.23	14.649		
6,704.9	6,615.8	6,683.0	6,623.4	21.8	18.9	-125.22	-849.0	-33.9	554.5	516.6	37.86	14.645		
6,750.0	6,660.5	6,727.9	6,667.8	21.9	19.1	-147.78	-855.3	-34.4	558.3	520.3	38.05	14.674		
6,800.0	6,710.2	6,776.9	6,716.4	22.0	19.2	166.02	-861.4	-34.9	562.7	524.4	38.22	14.722		
6,850.0	6,759.8	6,825.9	6,765.3	22.0	19.3	131.33	-864.2	-35.4	567.0	528.7	38.30	14.807		
6,900.0	6,809.0	6,875.2	6,814.6	22.0	19.3	116.48	-863.6	-35.9	571.5	533.2	38.28	14.930		
6,950.0	6,857.3	6,924.9	6,864.1	21.9	19.3	109.51	-859.6	-36.3	576.0	537.8	38.17	15.091		
7,000.0	6,904.4	6,975.0	6,913.7	21.8	19.2	105.78	-852.1	-36.7	580.6	542.6	37.96	15.293		
7,050.0	6,949.9	7,025.7	6,963.1	21.6	19.1	103.64	-841.0	-37.1	585.2	547.6	37.66	15.539		
7,100.0	6,993.4	7,076.9	7,012.2	21.4	18.9	102.41	-826.3	-37.4	590.0	552.7	37.27	15.830		
7,150.0	7,034.7	7,128.9	7,060.7	21.2	18.7	101.75	-807.8	-37.7	594.8	558.0	36.78	16.170		
7,200.0	7,073.5	7,181.5	7,108.4	20.9	18.5	101.48	-785.5	-38.0	599.6	563.4	36.21	16.563		
7,250.0	7,109.4	7,235.1	7,155.1	20.6	18.2	101.51	-759.4	-38.2	604.6	569.1	35.54	17.010		
7,300.0	7,142.1	7,289.5	7,200.4	20.3	17.8	101.75	-729.2	-38.4	609.6	574.8	34.80	17.516		
7,350.0	7,171.4	7,345.0	7,244.2	20.0	17.5	102.17	-695.1	-38.5	614.7	580.7	34.00	18.081		
7,400.0	7,197.2	7,401.7	7,285.9	19.7	17.1	102.74	-656.8	-38.5	619.9	586.8	33.14	18.707		
7,450.0	7,219.1	7,459.6	7,325.4	19.4	16.7	103.43	-614.5	-38.5	625.1	592.9	32.24	19.391		
7,500.0	7,237.0	7,518.9	7,362.1	19.1	16.3	104.23	-567.9	-38.5	630.4	599.0	31.32	20.126		
7,550.0	7,250.9	7,579.7	7,395.6	18.8	15.8	105.13	-517.1	-38.3	635.6	605.2	30.41	20.901		
7,600.0	7,260.5	7,642.2	7,425.4	18.6	15.4	106.11	-462.2	-38.2	640.8	611.3	29.54	21.697		
7,650.0	7,265.8	7,706.5	7,451.0	18.4	15.0	107.17	-403.3	-37.9	645.9	617.2	28.73	22.484		
7,686.5	7,267.0	7,754.7	7,466.6	18.3	14.8	107.99	-357.7	-37.6	649.6	621.4	28.20	23.032		
7,700.0	7,267.0	7,772.8	7,471.7	18.2	14.7	108.41	-340.4	-37.5	650.9	622.9	28.04	23.214		
7,800.0	7,267.0	7,913.8	7,496.0	18.0	14.2	110.40	-201.7	-36.5	657.4	630.3	27.18	24.186		
7,900.0	7,267.0	8,030.6	7,498.0	17.9	14.0	110.53	-84.9	-35.5	658.7	631.7	27.08	24.326		
8,000.0	7,267.0	8,130.6	7,498.0	18.1	14.2	110.50	15.0	-34.7	659.6	632.2	27.40	24.073		
8,100.0	7,267.0	8,230.6	7,498.0	18.3	14.6	110.48	115.0	-33.8	660.4	632.3	28.10	23.500		
8,200.0	7,267.0	8,330.6	7,498.0	18.8	15.1	110.45	215.0	-32.9	661.2	632.0	29.16	22.675		
8,300.0	7,267.0	8,430.6	7,498.0	19.4	15.9	110.42	315.0	-32.1	662.0	631.5	30.54	21.678		
8,400.0	7,267.0	8,530.6	7,498.0	20.1	16.7	110.40	415.0	-31.2	662.8	630.6	32.20	20.587		
8,500.0	7,267.0	8,630.6	7,498.0	21.0	17.7	110.37	515.0	-30.3	663.6	629.5	34.09	19.466		
8,600.0	7,267.0	8,730.6	7,498.0	21.9	18.9	110.34	615.0	-29.4	664.5	628.3	36.19	18.360		
8,700.0	7,267.0	8,830.6	7,498.0	23.0	20.1	110.32	715.0	-28.6	665.3	626.8	38.46	17.299		
8,800.0	7,267.0	8,930.6	7,498.0	24.1	21.4	110.29	815.0	-27.7	666.1	625.2	40.87	16.300		
8,900.0	7,267.0	9,030.6	7,498.0	25.3	22.7	110.27	915.0	-26.8	666.9	623.5	43.39	15.370		
9,000.0	7,267.0	9,130.6	7,498.0	26.6	24.1	110.24	1,015.0	-25.9	667.7	621.7	46.02	14.511		
9,100.0	7,267.0	9,230.6	7,498.0	27.9	25.6	110.21	1,115.0	-25.1	668.5	619.8	48.72	13.721		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #3												Offset Site Error:	0.0 ft
Survey Program: O-Geolink 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)			
9,200.0	7,267.0	9,330.6	7,498.0	29.3	27.0	110.19	1,215.0	-24.2	669.4	617.9	51.50	12.997	
9,300.0	7,267.0	9,430.6	7,498.0	30.7	28.5	110.16	1,314.9	-23.3	670.2	615.8	54.34	12.333	
9,400.0	7,267.0	9,530.5	7,498.0	32.1	30.1	110.14	1,414.9	-22.5	671.0	613.8	57.23	11.725	
9,500.0	7,267.0	9,630.5	7,498.0	33.6	31.6	110.11	1,514.9	-21.6	671.8	611.7	60.16	11.167	
9,600.0	7,267.0	9,730.5	7,498.0	35.1	33.2	110.09	1,614.9	-20.7	672.6	609.5	63.13	10.655	
9,700.0	7,267.0	9,830.5	7,498.0	36.6	34.8	110.06	1,714.9	-19.8	673.5	607.3	66.13	10.184	
9,800.0	7,267.0	9,930.5	7,498.0	38.1	36.4	110.04	1,814.9	-19.0	674.3	605.1	69.16	9.749	
9,900.0	7,267.0	10,030.5	7,498.0	39.7	38.1	110.01	1,914.9	-18.1	675.1	602.9	72.22	9.348	
10,000.0	7,267.0	10,130.5	7,498.0	41.3	39.7	109.98	2,014.9	-17.2	675.9	600.6	75.30	8.977	
10,100.0	7,267.0	10,230.5	7,498.0	42.9	41.3	109.96	2,114.9	-16.4	676.7	598.3	78.40	8.632	
10,200.0	7,267.0	10,330.5	7,498.0	44.5	43.0	109.93	2,214.9	-15.5	677.6	596.1	81.51	8.313	
10,300.0	7,267.0	10,430.5	7,498.0	46.1	44.7	109.91	2,314.9	-14.6	678.4	593.7	84.64	8.015	
10,400.0	7,267.0	10,530.5	7,498.0	47.7	46.3	109.88	2,414.9	-13.7	679.2	591.4	87.79	7.737	
10,500.0	7,267.0	10,630.5	7,498.0	49.3	48.0	109.86	2,514.9	-12.9	680.0	589.1	90.95	7.477	
10,600.0	7,267.0	10,730.5	7,498.0	51.0	49.7	109.83	2,614.8	-12.0	680.8	586.7	94.12	7.234	
10,700.0	7,267.0	10,830.5	7,498.0	52.6	51.4	109.81	2,714.8	-11.1	681.7	584.4	97.30	7.006	
10,800.0	7,267.0	10,930.5	7,498.0	54.3	53.1	109.78	2,814.8	-10.2	682.5	582.0	100.49	6.792	
10,900.0	7,267.0	11,030.5	7,498.0	55.9	54.7	109.76	2,914.8	-9.4	683.3	579.6	103.69	6.590	
11,000.0	7,267.0	11,130.5	7,498.0	57.6	56.4	109.73	3,014.8	-8.5	684.1	577.2	106.90	6.400	
11,100.0	7,267.0	11,230.5	7,498.0	59.3	58.1	109.71	3,114.8	-7.6	685.0	574.8	110.11	6.221	
11,200.0	7,267.0	11,330.5	7,498.0	60.9	59.8	109.69	3,214.8	-6.8	685.8	572.4	113.33	6.051	
11,300.0	7,267.0	11,430.5	7,498.0	62.6	61.6	109.66	3,314.8	-5.9	686.6	570.0	116.56	5.890	
11,400.0	7,267.0	11,530.5	7,498.0	64.3	63.3	109.64	3,414.8	-5.0	687.4	567.6	119.80	5.738	
11,500.0	7,267.0	11,630.5	7,498.0	66.0	65.0	109.61	3,514.8	-4.1	688.2	565.2	123.04	5.594	
11,600.0	7,267.0	11,730.5	7,498.0	67.7	66.7	109.59	3,614.8	-3.3	689.1	562.8	126.28	5.457	
11,700.0	7,267.0	11,830.5	7,498.0	69.4	68.4	109.56	3,714.8	-2.4	689.9	560.4	129.53	5.326	
11,800.0	7,267.0	11,930.5	7,498.0	71.1	70.1	109.54	3,814.8	-1.5	690.7	557.9	132.79	5.202	
11,900.0	7,267.0	12,030.5	7,498.0	72.8	71.8	109.52	3,914.7	-0.6	691.5	555.5	136.05	5.083	
12,000.0	7,267.0	12,130.4	7,498.0	74.5	73.6	109.49	4,014.7	0.2	692.3	553.0	139.31	4.970	
12,100.0	7,267.0	12,230.4	7,498.0	76.2	75.3	109.47	4,114.7	1.1	693.2	550.6	142.58	4.862	
12,200.0	7,267.0	12,330.4	7,498.0	77.9	77.0	109.44	4,214.7	2.0	694.0	548.1	145.85	4.758	
12,300.0	7,267.0	12,430.4	7,498.0	79.6	78.7	109.42	4,314.7	2.8	694.8	545.7	149.12	4.659	
12,400.0	7,267.0	12,530.4	7,498.0	81.3	80.5	109.40	4,414.7	3.7	695.6	543.2	152.40	4.565	
12,500.0	7,267.0	12,630.4	7,498.0	83.0	82.2	109.37	4,514.7	4.6	696.5	540.8	155.68	4.474	
12,600.0	7,267.0	12,730.4	7,498.0	84.7	83.9	109.35	4,614.7	5.5	697.3	538.3	158.96	4.386	
12,700.0	7,267.0	12,830.4	7,498.0	86.4	85.6	109.32	4,714.7	6.3	698.1	535.9	162.25	4.303	
12,800.0	7,267.0	12,930.4	7,498.0	88.1	87.4	109.30	4,814.7	7.2	698.9	533.4	165.54	4.222	
12,900.0	7,267.0	13,030.4	7,498.0	89.9	89.1	109.28	4,914.7	8.1	699.8	530.9	168.83	4.145	
13,000.0	7,267.0	13,130.4	7,498.0	91.6	90.8	109.25	5,014.7	9.0	700.6	528.5	172.13	4.070	
13,100.0	7,267.0	13,230.4	7,498.0	93.3	92.6	109.23	5,114.7	9.8	701.4	526.0	175.42	3.998	
13,200.0	7,267.0	13,330.4	7,498.0	95.0	94.3	109.21	5,214.7	10.7	702.2	523.5	178.72	3.929	
13,300.0	7,267.0	13,430.4	7,498.0	96.7	96.0	109.18	5,314.6	11.6	703.1	521.0	182.03	3.862	
13,400.0	7,267.0	13,530.4	7,498.0	98.5	97.8	109.16	5,414.6	12.4	703.9	518.5	185.33	3.798	
13,500.0	7,267.0	13,630.4	7,498.0	100.2	99.5	109.14	5,514.6	13.3	704.7	516.1	188.64	3.736	
13,600.0	7,267.0	13,730.4	7,498.0	101.9	101.2	109.11	5,614.6	14.2	705.5	513.6	191.94	3.676	
13,700.0	7,267.0	13,830.4	7,498.0	103.6	103.0	109.09	5,714.6	15.1	706.4	511.1	195.25	3.618	
13,800.0	7,267.0	13,930.4	7,498.0	105.4	104.7	109.07	5,814.6	15.9	707.2	508.6	198.57	3.561	
13,900.0	7,267.0	14,030.4	7,498.0	107.1	106.5	109.04	5,914.6	16.8	708.0	506.1	201.88	3.507	
14,000.0	7,267.0	14,130.4	7,498.0	108.8	108.2	109.02	6,014.6	17.7	708.8	503.6	205.20	3.454	
14,100.0	7,267.0	14,230.4	7,498.0	110.6	109.9	109.00	6,114.6	18.5	709.6	501.1	208.51	3.403	
14,200.0	7,267.0	14,330.4	7,498.0	112.3	111.7	108.97	6,214.6	19.4	710.5	498.6	211.83	3.354	
14,300.0	7,267.0	14,430.4	7,498.0	114.0	113.4	108.95	6,314.6	20.3	711.3	496.1	215.15	3.306	

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
14,400.0	7,267.0	14,530.4	7,498.0	115.8	115.2	108.93	6,414.6	21.2	712.1	493.6	218.48	3.260		
14,500.0	7,267.0	14,630.4	7,498.0	117.5	116.9	108.91	6,514.6	22.0	713.0	491.2	221.80	3.214		
14,535.9	7,267.0	14,666.3	7,498.0	118.1	117.5	108.90	6,550.5	22.4	713.2	490.3	223.00	3.198 SF		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4I-17H-P267 - DD - Plan #5													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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	90.51	-0.4	40.0	40.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.51	-0.4	40.0	40.0	39.7	0.24	163.641		
200.0	200.0	200.0	200.0	0.3	0.3	90.51	-0.4	40.0	40.0	39.4	0.59	67.382		
300.0	300.0	300.0	300.0	0.5	0.5	90.51	-0.4	40.0	40.0	39.0	0.94	42.425		
400.0	400.0	400.0	400.0	0.6	0.6	90.51	-0.4	40.0	40.0	38.7	1.29	30.959	CC, ES	
500.0	500.0	500.0	500.0	0.8	0.8	-124.65	-1.2	40.0	41.0	39.3	1.64	24.953		
600.0	599.8	599.9	599.9	1.0	1.0	-126.80	-3.8	40.0	44.0	42.0	2.00	21.975		
700.0	699.5	699.8	699.7	1.2	1.2	-129.78	-8.2	40.1	49.2	46.8	2.38	20.651		
800.0	798.7	799.6	799.2	1.5	1.4	-133.01	-14.3	40.2	56.6	53.9	2.79	20.331		
895.3	892.8	894.5	893.9	1.8	1.6	-135.94	-21.7	40.4	65.9	62.7	3.19	20.625		
900.0	897.5	899.2	898.6	1.8	1.6	-136.08	-22.1	40.4	66.4	63.2	3.21	20.653		
1,000.0	996.0	998.9	997.8	2.1	1.8	-137.99	-31.6	40.5	77.1	73.4	3.67	21.022		
1,100.0	1,094.5	1,098.7	1,096.9	2.4	2.0	-138.32	-42.9	40.7	87.4	83.3	4.15	21.069		
1,200.0	1,193.0	1,198.5	1,195.9	2.7	2.3	-137.58	-55.9	41.0	97.4	92.7	4.67	20.852		
1,300.0	1,291.5	1,298.4	1,294.7	3.1	2.6	-136.07	-70.6	41.2	107.0	101.7	5.23	20.450		
1,400.0	1,390.0	1,397.8	1,393.0	3.4	2.9	-134.46	-86.0	41.5	116.5	110.7	5.81	20.045		
1,500.0	1,488.5	1,497.3	1,491.3	3.7	3.2	-133.09	-101.4	41.7	126.2	119.7	6.41	19.691		
1,600.0	1,587.0	1,596.8	1,589.6	4.1	3.5	-131.91	-116.8	42.0	135.8	128.8	7.01	19.383		
1,700.0	1,685.5	1,696.3	1,687.9	4.4	3.8	-130.90	-132.2	42.3	145.6	138.0	7.62	19.114		
1,800.0	1,784.1	1,795.7	1,786.0	4.8	4.1	-130.01	-147.5	42.6	155.4	147.1	8.23	18.881		
1,900.0	1,882.6	1,892.4	1,881.6	5.1	4.4	-129.28	-162.3	43.7	166.1	157.3	8.83	18.805		
2,000.0	1,981.1	1,988.7	1,976.7	5.4	4.7	-128.68	-176.8	46.5	178.6	169.1	9.43	18.925		
2,100.0	2,079.6	2,084.6	2,071.5	5.8	5.0	-128.22	-190.9	50.8	192.7	182.6	10.03	19.206		
2,200.0	2,178.1	2,183.1	2,168.8	6.1	5.3	-127.84	-205.2	56.2	207.8	197.1	10.63	19.536		
2,300.0	2,276.6	2,281.9	2,266.5	6.5	5.6	-127.51	-219.5	61.6	222.9	211.6	11.24	19.830		
2,400.0	2,375.1	2,380.8	2,364.1	6.8	5.9	-127.22	-233.8	67.1	238.0	226.2	11.85	20.094		
2,500.0	2,473.6	2,479.6	2,461.8	7.2	6.2	-126.97	-248.1	72.5	253.1	240.7	12.45	20.332		
2,600.0	2,572.1	2,578.5	2,559.4	7.5	6.5	-126.75	-262.5	77.9	268.3	255.2	13.06	20.549		
2,700.0	2,670.6	2,677.3	2,657.1	7.9	6.8	-126.55	-276.8	83.4	283.4	269.8	13.66	20.746		
2,800.0	2,769.1	2,776.1	2,754.7	8.2	7.1	-126.37	-291.1	88.8	298.6	284.3	14.27	20.927		
2,900.0	2,867.7	2,875.0	2,852.3	8.6	7.4	-126.20	-305.5	94.2	313.7	298.8	14.87	21.093		
3,000.0	2,966.2	2,973.8	2,950.0	8.9	7.8	-126.06	-319.8	99.7	328.9	313.4	15.48	21.246		
3,100.0	3,064.7	3,072.7	3,047.6	9.3	8.1	-125.92	-334.1	105.1	344.0	327.9	16.09	21.387		
3,200.0	3,163.2	3,171.5	3,145.3	9.6	8.4	-125.80	-348.5	110.5	359.2	342.5	16.69	21.518		
3,300.0	3,261.7	3,270.4	3,242.9	9.9	8.7	-125.68	-362.8	116.0	374.3	357.0	17.30	21.640		
3,400.0	3,360.2	3,369.2	3,340.6	10.3	9.0	-125.58	-377.1	121.4	389.5	371.6	17.90	21.754		
3,500.0	3,458.7	3,468.0	3,438.2	10.6	9.3	-125.48	-391.5	126.9	404.6	386.1	18.51	21.860		
3,600.0	3,557.2	3,566.9	3,535.9	11.0	9.6	-125.39	-405.8	132.3	419.8	400.7	19.12	21.959		
3,700.0	3,655.7	3,665.7	3,633.5	11.3	9.9	-125.31	-420.1	137.7	435.0	415.2	19.72	22.053		
3,800.0	3,754.2	3,764.6	3,731.2	11.7	10.3	-125.23	-434.5	143.2	450.1	429.8	20.33	22.140		
3,900.0	3,852.7	3,863.4	3,828.8	12.0	10.6	-125.16	-448.8	148.6	465.3	444.3	20.94	22.223		
4,000.0	3,951.3	3,962.3	3,926.5	12.4	10.9	-125.09	-463.1	154.0	480.4	458.9	21.54	22.301		
4,100.0	4,049.8	4,061.1	4,024.1	12.7	11.2	-125.03	-477.4	159.5	495.6	473.4	22.15	22.375		
4,200.0	4,148.3	4,159.9	4,121.8	13.1	11.5	-124.97	-491.8	164.9	510.8	488.0	22.76	22.444		
4,300.0	4,246.8	4,258.8	4,219.4	13.4	11.8	-124.91	-506.1	170.3	525.9	502.6	23.36	22.510		
4,400.0	4,345.3	4,357.6	4,317.1	13.8	12.2	-124.86	-520.4	175.8	541.1	517.1	23.97	22.573		
4,500.0	4,443.8	4,456.5	4,414.7	14.1	12.5	-124.81	-534.8	181.2	556.2	531.7	24.58	22.633		
4,600.0	4,542.3	4,555.3	4,512.3	14.5	12.8	-124.76	-549.1	186.6	571.4	546.2	25.18	22.689		
4,700.0	4,640.8	4,654.2	4,610.0	14.8	13.1	-124.71	-563.4	192.1	586.6	560.8	25.79	22.743		
4,800.0	4,739.3	4,753.0	4,707.6	15.2	13.4	-124.67	-577.8	197.5	601.7	575.3	26.40	22.795		
4,900.0	4,837.8	4,851.8	4,805.3	15.5	13.7	-124.63	-592.1	203.0	616.9	589.9	27.00	22.844		
5,000.0	4,936.3	4,950.7	4,902.9	15.9	14.1	-124.59	-606.4	208.4	632.1	604.5	27.61	22.891		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4I-17H-P267 - DD - Plan #5													Offset Site Error: 0.0 ft	
Survey Program: O-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,034.9	5,049.5	5,000.6	16.2	14.4	-124.55	-620.8	213.8	647.2	619.0	28.22	22.936		
5,200.0	5,133.4	5,148.4	5,098.2	16.6	14.7	-124.52	-635.1	219.3	662.4	633.6	28.83	22.980		
5,300.0	5,231.9	5,247.2	5,195.9	16.9	15.0	-124.48	-649.4	224.7	677.6	648.1	29.43	23.021		
5,400.0	5,330.4	5,346.0	5,293.5	17.3	15.3	-124.45	-663.8	230.1	692.7	662.7	30.04	23.061		
5,500.0	5,428.9	5,444.9	5,391.2	17.6	15.6	-124.42	-678.1	235.6	707.9	677.2	30.65	23.099		
5,600.0	5,527.4	5,543.7	5,488.8	17.9	16.0	-124.39	-692.4	241.0	723.1	691.8	31.25	23.135		
5,700.0	5,625.9	5,642.6	5,586.5	18.3	16.3	-124.36	-706.7	246.4	738.2	706.4	31.86	23.170		
5,800.0	5,724.4	5,741.4	5,684.1	18.6	16.6	-124.33	-721.1	251.9	753.4	720.9	32.47	23.204		
5,900.0	5,822.9	5,840.3	5,781.8	19.0	16.9	-124.31	-735.4	257.3	768.6	735.5	33.08	23.237		
6,000.0	5,921.4	5,939.1	5,879.4	19.3	17.2	-124.28	-749.7	262.7	783.7	750.0	33.68	23.268		
6,100.0	6,020.0	6,037.9	5,977.0	19.7	17.5	-124.26	-764.1	268.2	798.9	764.6	34.29	23.299		
6,200.0	6,118.5	6,136.8	6,074.7	20.0	17.9	-124.23	-778.4	273.6	814.1	779.2	34.90	23.328		
6,300.0	6,217.0	6,235.6	6,172.3	20.4	18.2	-124.21	-792.7	279.0	829.2	793.7	35.50	23.356		
6,400.0	6,315.5	6,334.5	6,270.0	20.7	18.5	-124.19	-807.1	284.5	844.4	808.3	36.11	23.384		
6,500.0	6,414.0	6,433.3	6,367.6	21.1	18.8	-124.17	-821.4	289.9	859.6	822.9	36.72	23.410		
6,600.0	6,512.5	6,532.2	6,465.3	21.4	19.1	-124.15	-835.7	295.4	874.7	837.4	37.33	23.436		
6,704.9	6,615.8	6,635.9	6,567.7	21.8	19.5	-124.13	-850.8	301.1	890.6	852.7	37.96	23.461		
6,750.0	6,660.5	6,680.4	6,611.7	21.9	19.6	-147.04	-857.2	303.5	897.5	859.4	38.14	23.533		
6,800.0	6,710.2	6,729.1	6,660.1	22.0	19.7	166.16	-862.3	306.2	905.1	866.9	38.23	23.678		
6,850.0	6,759.8	6,778.2	6,709.1	22.0	19.7	130.79	-863.1	308.9	912.8	874.6	38.20	23.892		
6,900.0	6,809.0	6,827.7	6,758.4	22.0	19.7	115.18	-859.8	311.7	920.4	882.3	38.07	24.175		
6,950.0	6,857.3	6,877.6	6,807.6	21.9	19.7	107.39	-852.1	314.4	927.8	890.0	37.83	24.526		
7,000.0	6,904.4	6,927.9	6,856.3	21.8	19.6	102.78	-840.0	317.1	935.1	897.6	37.49	24.944		
7,050.0	6,949.9	6,978.6	6,904.2	21.6	19.4	99.71	-823.6	319.8	942.2	905.2	37.05	25.429		
7,100.0	6,993.4	7,029.8	6,950.9	21.4	19.2	97.50	-802.8	322.4	949.0	912.5	36.53	25.981		
7,150.0	7,034.7	7,081.5	6,995.9	21.2	18.9	95.83	-777.6	324.9	955.5	919.6	35.92	26.599		
7,200.0	7,073.5	7,133.6	7,038.9	20.9	18.6	94.51	-748.2	327.3	961.6	926.3	35.25	27.279		
7,250.0	7,109.4	7,186.2	7,079.3	20.6	18.2	93.45	-714.7	329.5	967.2	932.7	34.52	28.019		
7,300.0	7,142.1	7,239.2	7,116.9	20.3	17.9	92.60	-677.3	331.6	972.4	938.7	33.75	28.813		
7,350.0	7,171.4	7,292.7	7,151.0	20.0	17.5	91.90	-636.2	333.5	977.1	944.1	32.95	29.652		
7,400.0	7,197.2	7,346.6	7,181.4	19.7	17.1	91.33	-591.8	335.2	981.2	949.0	32.15	30.523		
7,450.0	7,219.1	7,400.9	7,207.7	19.4	16.6	90.87	-544.3	336.7	984.7	953.3	31.35	31.409		
7,500.0	7,237.0	7,455.5	7,229.5	19.1	16.3	90.52	-494.3	337.9	987.6	957.0	30.59	32.287		
7,550.0	7,250.9	7,510.3	7,246.5	18.8	15.9	90.27	-442.2	338.8	989.8	959.9	29.88	33.130		
7,600.0	7,260.5	7,565.4	7,258.6	18.6	15.6	90.10	-388.5	339.5	991.3	962.1	29.24	33.909		
7,650.0	7,265.8	7,620.7	7,265.4	18.4	15.3	90.01	-333.7	339.9	992.2	963.5	28.68	34.592		
7,686.5	7,267.0	7,661.1	7,267.0	18.3	15.1	90.00	-293.3	340.0	992.4	964.1	28.34	35.020		
7,700.0	7,267.0	7,674.8	7,267.0	18.2	15.0	90.00	-279.6	340.0	992.4	964.2	28.23	35.154		
7,800.0	7,267.0	7,774.8	7,267.0	18.0	14.8	90.00	-179.6	340.0	992.4	964.7	27.67	35.861		
7,900.0	7,267.0	7,874.8	7,267.0	17.9	14.7	90.00	-79.6	340.0	992.4	964.9	27.54	36.036		
8,000.0	7,267.0	7,974.8	7,267.0	18.1	14.8	90.00	20.4	340.0	992.4	964.6	27.85	35.635		
8,100.0	7,267.0	8,074.8	7,267.0	18.3	15.2	90.00	120.4	340.0	992.4	963.8	28.59	34.713		
8,200.0	7,267.0	8,174.8	7,267.0	18.8	15.7	90.00	220.4	340.0	992.4	962.7	29.73	33.385		
8,300.0	7,267.0	8,274.8	7,267.0	19.4	16.5	90.00	320.4	340.0	992.4	961.2	31.22	31.790		
8,400.0	7,267.0	8,374.8	7,267.0	20.1	17.3	90.00	420.4	340.0	992.4	959.4	33.02	30.058		
8,500.0	7,267.0	8,474.8	7,267.0	21.0	18.3	90.00	520.4	340.0	992.4	957.3	35.07	28.294		
8,600.0	7,267.0	8,574.8	7,267.0	21.9	19.4	90.00	620.4	340.0	992.4	955.1	37.35	26.571		
8,700.0	7,267.0	8,674.8	7,267.0	23.0	20.6	90.00	720.4	340.0	992.4	952.6	39.80	24.932		
8,800.0	7,267.0	8,774.8	7,267.0	24.1	21.8	90.00	820.4	340.0	992.4	950.0	42.41	23.402		
8,900.0	7,267.0	8,874.8	7,267.0	25.3	23.2	90.00	920.4	340.0	992.4	947.3	45.13	21.988		
9,000.0	7,267.0	8,974.8	7,267.0	26.6	24.5	90.00	1,020.4	340.0	992.4	944.4	47.96	20.692		
9,100.0	7,267.0	9,075.8	7,267.0	27.9	26.0	90.00	1,121.4	339.9	992.4	941.5	50.89	19.501		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4I-17H-P267 - DD - Plan #5													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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	7,267.0	9,176.9	7,267.0	29.3	27.5	90.00	1,222.5	339.8	992.2	938.3	53.89	18.412		
9,300.0	7,267.0	9,278.1	7,267.0	30.7	29.0	90.00	1,323.7	339.5	991.9	935.0	56.95	17.418		
9,400.0	7,267.0	9,379.2	7,267.0	32.1	30.5	90.00	1,424.8	339.1	991.6	931.5	60.06	16.509		
9,500.0	7,267.0	9,480.4	7,267.0	33.6	32.1	90.00	1,526.0	338.6	991.1	927.8	63.22	15.676		
9,600.0	7,267.0	9,581.5	7,267.0	35.1	33.7	90.00	1,627.1	338.0	990.4	924.0	66.41	14.913		
9,700.0	7,267.0	9,682.7	7,267.0	36.6	35.3	90.00	1,728.3	337.3	989.7	920.1	69.64	14.212		
9,800.0	7,267.0	9,783.8	7,267.0	38.1	36.9	90.00	1,829.4	336.4	988.9	916.0	72.89	13.566		
9,900.0	7,267.0	9,885.0	7,267.0	39.7	38.5	90.00	1,930.6	335.4	987.9	911.7	76.17	12.969		
10,000.0	7,267.0	9,986.1	7,267.0	41.3	40.2	90.00	2,031.7	334.3	986.8	907.3	79.47	12.417		
10,100.0	7,267.0	10,087.2	7,267.0	42.9	41.8	90.00	2,132.8	333.1	985.6	902.8	82.79	11.905		
10,200.0	7,267.0	10,188.4	7,267.0	44.5	43.5	90.00	2,234.0	331.8	984.3	898.2	86.13	11.428		
10,300.0	7,267.0	10,289.5	7,267.0	46.1	45.1	90.00	2,335.1	330.3	982.9	893.4	89.48	10.985		
10,400.0	7,267.0	10,390.6	7,267.0	47.7	46.8	90.00	2,436.2	328.8	981.3	888.5	92.84	10.570		
10,500.0	7,267.0	10,491.8	7,267.0	49.3	48.5	90.00	2,537.3	327.1	979.7	883.4	96.21	10.182		
10,600.0	7,267.0	10,592.9	7,267.0	51.0	50.2	90.00	2,638.4	325.3	977.9	878.3	99.60	9.818		
10,700.0	7,267.0	10,694.0	7,267.0	52.6	51.9	90.00	2,739.5	323.4	976.0	873.0	102.99	9.476		
10,800.0	7,267.0	10,795.1	7,267.0	54.3	53.6	90.00	2,840.6	321.3	974.0	867.6	106.40	9.154		
10,900.0	7,267.0	10,896.2	7,267.0	55.9	55.3	90.00	2,941.7	319.2	971.8	862.0	109.81	8.850		
11,000.0	7,267.0	10,997.3	7,267.0	57.6	57.0	90.00	3,042.8	316.9	969.6	856.4	113.23	8.563		
11,100.0	7,267.0	11,098.4	7,267.0	59.3	58.7	90.00	3,143.8	314.5	967.2	850.6	116.65	8.292		
11,200.0	7,267.0	11,199.5	7,267.0	60.9	60.4	90.00	3,244.9	312.0	964.7	844.7	120.08	8.034		
11,300.0	7,267.0	11,300.6	7,267.0	62.6	62.1	90.00	3,346.0	309.4	962.1	838.6	123.52	7.790		
11,400.0	7,267.0	11,401.7	7,267.0	64.3	63.9	90.00	3,447.0	306.6	959.4	832.5	126.96	7.557		
11,500.0	7,267.0	11,502.8	7,267.0	66.0	65.6	90.00	3,548.0	303.8	956.6	826.2	130.40	7.336		
11,600.0	7,267.0	11,603.8	7,267.0	67.7	67.3	90.00	3,649.1	300.8	953.7	819.8	133.85	7.125		
11,700.0	7,267.0	11,704.9	7,267.0	69.4	69.0	90.00	3,750.1	297.7	950.6	813.3	137.30	6.923		
11,800.0	7,267.0	11,805.9	7,267.0	71.1	70.8	90.00	3,851.1	294.5	947.4	806.7	140.76	6.731		
11,900.0	7,267.0	11,907.0	7,267.0	72.8	72.5	90.00	3,952.1	291.2	944.1	799.9	144.22	6.547		
12,000.0	7,267.0	12,008.0	7,267.0	74.5	74.2	90.00	4,053.0	287.7	940.7	793.1	147.68	6.370		
12,100.0	7,267.0	12,109.1	7,267.0	76.2	76.0	90.00	4,154.0	284.2	937.2	786.1	151.15	6.201		
12,200.0	7,267.0	12,210.1	7,267.0	77.9	77.7	90.00	4,255.0	280.5	933.6	779.0	154.61	6.038		
12,300.0	7,267.0	12,311.1	7,267.0	79.6	79.5	90.00	4,355.9	276.7	929.8	771.7	158.08	5.882		
12,400.0	7,267.0	12,412.1	7,267.0	81.3	81.2	90.00	4,456.8	272.8	925.9	764.4	161.56	5.731		
12,500.0	7,267.0	12,513.1	7,267.0	83.0	82.9	90.00	4,557.7	268.8	922.0	756.9	165.03	5.587		
12,600.0	7,267.0	12,614.1	7,267.0	84.7	84.7	90.00	4,658.6	264.6	917.8	749.3	168.51	5.447		
12,700.0	7,267.0	12,715.0	7,267.0	86.4	86.4	90.00	4,759.5	260.4	913.6	741.6	171.99	5.312		
12,800.0	7,267.0	12,816.0	7,267.0	88.1	88.2	90.00	4,860.4	256.0	909.3	733.8	175.47	5.182		
12,900.0	7,267.0	12,917.0	7,267.0	89.9	89.9	90.00	4,961.2	251.5	904.8	725.9	178.95	5.056		
13,000.0	7,267.0	13,017.9	7,267.0	91.6	91.6	90.00	5,062.1	246.9	900.3	717.8	182.43	4.935		
13,100.0	7,267.0	13,118.8	7,267.0	93.3	93.4	90.00	5,162.9	242.2	895.6	709.7	185.91	4.817		
13,200.0	7,267.0	13,219.8	7,267.0	95.0	95.1	90.00	5,263.7	237.3	890.8	701.4	189.40	4.703		
13,300.0	7,267.0	13,320.7	7,267.0	96.7	96.9	90.00	5,364.5	232.3	885.9	693.0	192.89	4.593		
13,400.0	7,267.0	13,421.6	7,267.0	98.5	98.6	90.00	5,465.3	227.3	880.8	684.5	196.37	4.486		
13,500.0	7,267.0	13,522.5	7,267.0	100.2	100.4	90.00	5,566.0	222.1	875.7	675.8	199.86	4.381		
13,600.0	7,267.0	13,623.3	7,267.0	101.9	102.1	90.00	5,666.8	216.8	870.4	667.1	203.35	4.280		
13,700.0	7,267.0	13,700.0	7,267.0	103.6	103.5	90.00	5,743.3	213.1	865.9	659.5	206.42	4.195		
13,782.2	7,267.0	13,759.3	7,267.0	105.1	104.5	90.00	5,802.6	212.2	864.7	655.8	208.88	4.139		
13,800.0	7,267.0	13,771.5	7,267.0	105.4	104.7	90.00	5,814.9	212.3	864.7	655.3	209.40	4.129		
13,900.0	7,267.0	13,840.3	7,267.0	107.1	105.9	90.00	5,883.6	213.9	867.2	654.8	212.34	4.084		
14,000.0	7,267.0	13,900.0	7,267.0	108.8	106.9	90.00	5,943.2	217.4	873.3	658.1	215.11	4.060		
14,100.0	7,267.0	13,977.1	7,267.0	110.6	108.3	90.00	6,020.0	224.6	882.8	664.6	218.19	4.046		
14,200.0	7,267.0	14,044.7	7,267.0	112.3	109.4	90.00	6,087.0	233.5	895.9	674.8	221.09	4.052		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design										S17-T2N-R67W (Big Horn) - Bighorn 4I-17H-P267 - DD - Plan #5				Offset Site Error:		0.0 ft
Survey Program: 0-Geolink 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)						
14,300.0	7,267.0	14,111.7	7,267.0	114.0	110.6	90.00	6,153.0	244.6	912.6	688.6	223.98	4.074				
14,400.0	7,267.0	14,512.3	7,267.0	115.8	117.5	90.00	6,549.8	249.6	911.3	678.6	232.65	3.917				
14,500.0	7,267.0	14,512.3	7,267.0	117.5	117.5	90.00	6,549.8	249.6	902.5	668.1	234.39	3.850				
14,529.4	7,267.0	14,512.3	7,267.0	118.0	117.5	90.00	6,549.8	249.6	902.0	667.1	234.90	3.840				
14,535.9	7,267.0	14,512.3	7,267.0	118.1	117.5	90.00	6,549.8	249.6	902.1	667.1	235.02	3.838 SF				

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3														Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	90.40	-0.4	50.0	50.1						
100.0	100.0	100.0	100.0	0.1	0.1	90.40	-0.4	50.0	50.1	49.8	0.24	204.834			
200.0	200.0	200.0	200.0	0.3	0.3	90.40	-0.4	50.0	50.1	49.5	0.59	84.344			
300.0	300.0	300.0	300.0	0.5	0.5	90.40	-0.4	50.0	50.1	49.1	0.94	53.105			
333.3	333.3	333.3	333.3	0.5	0.5	90.40	-0.4	50.0	50.1	49.0	1.06	47.270 CC, ES			
400.0	400.0	399.1	399.1	0.6	0.6	90.40	-0.4	50.5	50.5	49.2	1.29	39.128			
500.0	500.0	497.2	497.2	0.8	0.8	-125.37	-0.4	53.8	54.9	53.3	1.64	33.536			
600.0	599.8	596.4	596.2	1.0	1.0	-128.92	-0.4	59.5	63.8	61.8	1.99	32.016			
700.0	699.5	695.6	695.2	1.2	1.2	-133.52	-0.5	65.2	75.3	72.9	2.36	31.933 SF			
800.0	798.7	794.2	793.7	1.5	1.4	-138.34	-0.5	71.0	89.7	87.0	2.73	32.846			
895.3	892.8	887.7	887.0	1.8	1.6	-142.67	-0.6	76.4	106.5	103.4	3.09	34.427			
900.0	897.5	892.3	891.6	1.8	1.6	-142.89	-0.6	76.6	107.4	104.2	3.11	34.519			
1,000.0	996.0	990.1	989.2	2.1	1.8	-146.70	-0.6	82.3	126.8	123.3	3.49	36.347			
1,100.0	1,094.5	1,087.9	1,086.9	2.4	2.0	-149.49	-0.6	88.0	146.7	142.8	3.87	37.942			
1,200.0	1,193.0	1,185.7	1,184.5	2.7	2.2	-151.62	-0.7	93.6	166.8	162.6	4.24	39.332			
1,300.0	1,291.5	1,283.5	1,282.1	3.1	2.4	-153.28	-0.7	99.3	187.1	182.5	4.61	40.546			
1,400.0	1,390.0	1,381.3	1,379.7	3.4	2.6	-154.63	-0.8	104.9	207.5	202.5	4.99	41.611			
1,500.0	1,488.5	1,479.1	1,477.4	3.7	2.8	-155.73	-0.8	110.6	228.0	222.7	5.36	42.550			
1,600.0	1,587.0	1,576.9	1,575.0	4.1	3.0	-156.64	-0.9	116.2	248.6	242.9	5.73	43.383			
1,700.0	1,685.5	1,674.7	1,672.6	4.4	3.1	-157.42	-0.9	121.9	269.2	263.1	6.10	44.127			
1,800.0	1,784.1	1,772.4	1,770.2	4.8	3.3	-158.09	-1.0	127.6	289.9	283.4	6.47	44.793			
1,900.0	1,882.6	1,870.2	1,867.9	5.1	3.5	-158.67	-1.0	133.2	310.6	303.8	6.84	45.394			
2,000.0	1,981.1	1,968.0	1,965.5	5.4	3.7	-159.18	-1.0	138.9	331.3	324.1	7.21	45.939			
2,100.0	2,079.6	2,065.8	2,063.1	5.8	3.9	-159.62	-1.1	144.5	352.1	344.5	7.58	46.434			
2,200.0	2,178.1	2,163.6	2,160.7	6.1	4.1	-160.02	-1.1	150.2	372.9	364.9	7.95	46.886			
2,300.0	2,276.6	2,261.4	2,258.4	6.5	4.3	-160.38	-1.2	155.9	393.6	385.3	8.32	47.300			
2,400.0	2,375.1	2,359.2	2,356.0	6.8	4.5	-160.70	-1.2	161.5	414.4	405.7	8.69	47.681			
2,500.0	2,473.6	2,457.0	2,453.6	7.2	4.7	-160.98	-1.3	167.2	435.2	426.2	9.06	48.033			
2,600.0	2,572.1	2,554.7	2,551.2	7.5	4.9	-161.25	-1.3	172.8	456.1	446.6	9.43	48.358			
2,700.0	2,670.6	2,652.5	2,648.9	7.9	5.1	-161.49	-1.4	178.5	476.9	467.1	9.80	48.660			
2,800.0	2,769.1	2,750.3	2,746.5	8.2	5.3	-161.71	-1.4	184.1	497.7	487.6	10.17	48.941			
2,900.0	2,867.7	2,848.1	2,844.1	8.6	5.5	-161.91	-1.4	189.8	518.6	508.0	10.54	49.203			
3,000.0	2,966.2	2,945.9	2,941.7	8.9	5.7	-162.10	-1.5	195.5	539.4	528.5	10.91	49.448			
3,100.0	3,064.7	3,043.7	3,039.4	9.3	5.9	-162.27	-1.5	201.1	560.3	549.0	11.28	49.677			
3,200.0	3,163.2	3,141.5	3,137.0	9.6	6.1	-162.43	-1.6	206.8	581.1	569.5	11.65	49.893			
3,300.0	3,261.7	3,239.3	3,234.6	9.9	6.3	-162.58	-1.6	212.4	602.0	590.0	12.02	50.095			
3,400.0	3,360.2	3,337.1	3,332.2	10.3	6.5	-162.72	-1.7	218.1	622.8	610.4	12.39	50.286			
3,500.0	3,458.7	3,434.8	3,429.9	10.6	6.7	-162.85	-1.7	223.8	643.7	630.9	12.75	50.467			
3,600.0	3,557.2	3,532.6	3,527.5	11.0	6.9	-162.97	-1.8	229.4	664.6	651.4	13.12	50.637			
3,700.0	3,655.7	3,630.4	3,625.1	11.3	7.1	-163.08	-1.8	235.1	685.4	671.9	13.49	50.798			
3,800.0	3,754.2	3,728.2	3,722.7	11.7	7.3	-163.19	-1.8	240.7	706.3	692.4	13.86	50.951			
3,900.0	3,852.7	3,826.0	3,820.4	12.0	7.5	-163.29	-1.9	246.4	727.2	713.0	14.23	51.096			
4,000.0	3,951.3	3,923.8	3,918.0	12.4	7.7	-163.39	-1.9	252.1	748.1	733.5	14.60	51.234			
4,100.0	4,049.8	4,021.6	4,015.6	12.7	7.9	-163.48	-2.0	257.7	768.9	754.0	14.97	51.366			
4,200.0	4,148.3	4,119.4	4,113.2	13.1	8.1	-163.56	-2.0	263.4	789.8	774.5	15.34	51.491			
4,300.0	4,246.8	4,217.2	4,210.9	13.4	8.3	-163.65	-2.1	269.0	810.7	795.0	15.71	51.610			
4,400.0	4,345.3	4,314.9	4,308.5	13.8	8.5	-163.72	-2.1	274.7	831.6	815.5	16.08	51.724			
4,500.0	4,443.8	4,412.7	4,406.1	14.1	8.7	-163.80	-2.2	280.3	852.5	836.0	16.45	51.833			
4,600.0	4,542.3	4,510.5	4,503.7	14.5	8.9	-163.87	-2.2	286.0	873.4	856.6	16.82	51.938			
4,700.0	4,640.8	4,608.3	4,601.4	14.8	9.1	-163.93	-2.3	291.7	894.3	877.1	17.18	52.038			
4,800.0	4,739.3	4,706.1	4,699.0	15.2	9.3	-164.00	-2.3	297.3	915.1	897.6	17.55	52.134			
4,900.0	4,837.8	4,803.9	4,796.6	15.5	9.5	-164.06	-2.3	303.0	936.0	918.1	17.92	52.226			

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3		Offset Site Error:		0.0 ft	
Survey Program:													0-Geolink MWD		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning				
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)								
5,000.0	4,936.3	4,901.7	4,894.2	15.9	9.6	-164.12	-2.4	308.6	956.9	938.6	18.29	52.314						
5,100.0	5,034.9	4,999.5	4,991.9	16.2	9.8	-164.17	-2.4	314.3	977.8	959.2	18.66	52.399						
5,200.0	5,133.4	5,097.3	5,089.5	16.6	10.0	-164.23	-2.5	320.0	998.7	979.7	19.03	52.480						

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4K-17H-P267 - DD - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink 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	90.67	-0.7	59.8	59.8					
100.0	100.0	100.0	100.0	0.1	0.1	90.67	-0.7	59.8	59.8	59.6	0.24	244.896		
200.0	200.0	200.0	200.0	0.3	0.3	90.67	-0.7	59.8	59.8	59.2	0.59	100.840		
300.0	300.0	300.0	300.0	0.5	0.5	90.67	-0.7	59.8	59.8	58.9	0.94	63.492 CC, ES		
400.0	400.0	397.9	397.9	0.6	0.6	90.65	-0.7	61.5	61.5	60.3	1.29	47.757		
500.0	500.0	495.5	495.4	0.8	0.8	-124.86	-0.7	66.5	67.7	66.0	1.63	41.402		
600.0	599.8	593.0	592.5	1.0	1.0	-127.68	-0.7	74.7	79.1	77.1	1.99	39.831 SF		
700.0	699.5	691.7	690.8	1.2	1.3	-131.31	-0.7	83.8	93.9	91.5	2.35	39.912		
800.0	798.7	789.9	788.6	1.5	1.5	-135.15	-0.7	93.0	111.4	108.7	2.73	40.778		
895.3	892.8	882.8	881.1	1.8	1.7	-138.70	-0.7	101.6	130.9	127.7	3.10	42.152		
900.0	897.5	887.4	885.7	1.8	1.7	-138.89	-0.7	102.0	131.9	128.8	3.12	42.232		
1,000.0	996.0	984.6	982.4	2.1	1.9	-142.18	-0.8	111.0	154.0	150.5	3.52	43.786		
1,100.0	1,094.5	1,081.8	1,079.2	2.4	2.2	-144.64	-0.8	120.0	176.6	172.6	3.91	45.121		
1,200.0	1,193.0	1,179.0	1,176.0	2.7	2.4	-146.55	-0.8	129.0	199.3	195.0	4.31	46.274		
1,300.0	1,291.5	1,276.2	1,272.7	3.1	2.6	-148.06	-0.8	138.1	222.2	217.5	4.70	47.273		
1,400.0	1,390.0	1,373.4	1,369.5	3.4	2.8	-149.30	-0.8	147.1	245.3	240.2	5.09	48.146		
1,500.0	1,488.5	1,470.6	1,466.3	3.7	3.1	-150.32	-0.8	156.1	268.4	262.9	5.49	48.913		
1,600.0	1,587.0	1,567.7	1,563.0	4.1	3.3	-151.18	-0.8	165.1	291.6	285.8	5.88	49.591		
1,700.0	1,685.5	1,664.9	1,659.8	4.4	3.5	-151.91	-0.8	174.1	314.9	308.6	6.27	50.195		
1,800.0	1,784.1	1,762.1	1,756.6	4.8	3.8	-152.54	-0.8	183.1	338.2	331.5	6.67	50.735		
1,900.0	1,882.6	1,859.3	1,853.3	5.1	4.0	-153.09	-0.9	192.2	361.5	354.5	7.06	51.221		
2,000.0	1,981.1	1,956.5	1,950.1	5.4	4.2	-153.57	-0.9	201.2	384.9	377.4	7.45	51.661		
2,100.0	2,079.6	2,053.7	2,046.9	5.8	4.5	-154.00	-0.9	210.2	408.3	400.4	7.84	52.060		
2,200.0	2,178.1	2,150.9	2,143.6	6.1	4.7	-154.38	-0.9	219.2	431.7	423.4	8.23	52.424		
2,300.0	2,276.6	2,248.0	2,240.4	6.5	4.9	-154.72	-0.9	228.2	455.1	446.5	8.63	52.757		
2,400.0	2,375.1	2,345.2	2,337.2	6.8	5.1	-155.03	-0.9	237.2	478.5	469.5	9.02	53.063		
2,500.0	2,473.6	2,442.4	2,433.9	7.2	5.4	-155.31	-0.9	246.3	502.0	492.5	9.41	53.346		
2,600.0	2,572.1	2,539.6	2,530.7	7.5	5.6	-155.57	-0.9	255.3	525.4	515.6	9.80	53.607		
2,700.0	2,670.6	2,636.8	2,627.5	7.9	5.8	-155.80	-0.9	264.3	548.9	538.7	10.19	53.849		
2,800.0	2,769.1	2,734.0	2,724.2	8.2	6.1	-156.02	-1.0	273.3	572.3	561.8	10.58	54.074		
2,900.0	2,867.7	2,831.1	2,821.0	8.6	6.3	-156.21	-1.0	282.3	595.8	584.8	10.98	54.283		
3,000.0	2,966.2	2,928.3	2,917.8	8.9	6.5	-156.40	-1.0	291.3	619.3	607.9	11.37	54.479		
3,100.0	3,064.7	3,025.5	3,014.5	9.3	6.8	-156.56	-1.0	300.4	642.8	631.0	11.76	54.663		
3,200.0	3,163.2	3,122.7	3,111.3	9.6	7.0	-156.72	-1.0	309.4	666.3	654.1	12.15	54.835		
3,300.0	3,261.7	3,219.9	3,208.1	9.9	7.2	-156.87	-1.0	318.4	689.8	677.2	12.54	54.997		
3,400.0	3,360.2	3,317.1	3,304.8	10.3	7.5	-157.01	-1.0	327.4	713.3	700.4	12.93	55.149		
3,500.0	3,458.7	3,414.3	3,401.6	10.6	7.7	-157.13	-1.0	336.4	736.8	723.5	13.33	55.293		
3,600.0	3,557.2	3,511.4	3,498.4	11.0	7.9	-157.25	-1.0	345.4	760.3	746.6	13.72	55.429		
3,700.0	3,655.7	3,608.6	3,595.1	11.3	8.2	-157.37	-1.1	354.5	783.8	769.7	14.11	55.558		
3,800.0	3,754.2	3,705.8	3,691.9	11.7	8.4	-157.47	-1.1	363.5	807.3	792.8	14.50	55.679		
3,900.0	3,852.7	3,803.0	3,788.7	12.0	8.6	-157.57	-1.1	372.5	830.9	816.0	14.89	55.795		
4,000.0	3,951.3	3,900.2	3,885.4	12.4	8.8	-157.67	-1.1	381.5	854.4	839.1	15.28	55.905		
4,100.0	4,049.8	3,997.4	3,982.2	12.7	9.1	-157.76	-1.1	390.5	877.9	862.2	15.67	56.010		
4,200.0	4,148.3	4,094.6	4,079.0	13.1	9.3	-157.84	-1.1	399.5	901.4	885.4	16.07	56.109		
4,300.0	4,246.8	4,191.7	4,175.7	13.4	9.5	-157.92	-1.1	408.6	924.9	908.5	16.46	56.204		
4,400.0	4,345.3	4,288.9	4,272.5	13.8	9.8	-158.00	-1.1	417.6	948.5	931.6	16.85	56.295		
4,500.0	4,443.8	4,386.1	4,369.3	14.1	10.0	-158.07	-1.1	426.6	972.0	954.8	17.24	56.382		
4,600.0	4,542.3	4,483.3	4,466.0	14.5	10.2	-158.14	-1.2	435.6	995.5	977.9	17.63	56.465		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4L-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	90.58	-0.7	69.9	69.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.58	-0.7	69.9	69.9	69.7	0.24	286.089		
200.0	200.0	200.0	200.0	0.3	0.3	90.58	-0.7	69.9	69.9	69.3	0.59	117.801 CC, ES		
300.0	300.0	297.6	297.6	0.5	0.5	90.57	-0.7	71.6	71.6	70.7	0.94	76.222		
400.0	400.0	394.9	394.8	0.6	0.7	90.54	-0.7	76.5	76.7	75.4	1.29	59.446		
500.0	500.0	491.7	491.2	0.8	0.9	-124.64	-0.8	84.7	86.2	84.5	1.63	52.959		
600.0	599.8	588.6	587.4	1.0	1.1	-126.74	-0.8	96.0	100.8	98.9	1.98	50.964		
700.0	699.5	686.9	684.9	1.2	1.4	-129.55	-0.8	108.1	118.5	116.1	2.35	50.516 SF		
800.0	798.7	784.5	781.9	1.5	1.6	-132.61	-0.9	120.1	138.7	136.0	2.73	50.822		
895.3	892.8	876.9	873.5	1.8	1.9	-135.53	-0.9	131.5	160.5	157.4	3.11	51.614		
900.0	897.5	881.4	878.0	1.8	1.9	-135.69	-0.9	132.1	161.7	158.5	3.13	51.664		
1,000.0	996.0	978.0	973.9	2.1	2.2	-138.57	-1.0	144.0	186.2	182.7	3.54	52.635		
1,100.0	1,094.5	1,074.6	1,069.7	2.4	2.4	-140.78	-1.0	155.9	211.1	207.1	3.95	53.468		
1,200.0	1,193.0	1,171.1	1,165.5	2.7	2.7	-142.53	-1.1	167.7	236.2	231.8	4.36	54.189		
1,300.0	1,291.5	1,267.7	1,261.4	3.1	3.0	-143.94	-1.1	179.6	261.5	256.7	4.77	54.817		
1,400.0	1,390.0	1,364.3	1,357.2	3.4	3.2	-145.10	-1.1	191.5	286.9	281.7	5.18	55.369		
1,500.0	1,488.5	1,460.9	1,453.1	3.7	3.5	-146.07	-1.2	203.4	312.4	306.8	5.59	55.856		
1,600.0	1,587.0	1,557.4	1,548.9	4.1	3.8	-146.89	-1.2	215.3	338.0	331.9	6.00	56.290		
1,700.0	1,685.5	1,654.0	1,644.7	4.4	4.0	-147.60	-1.3	227.2	363.6	357.2	6.41	56.677		
1,800.0	1,784.1	1,750.6	1,740.6	4.8	4.3	-148.22	-1.3	239.1	389.2	382.4	6.83	57.025		
1,900.0	1,882.6	1,847.1	1,836.4	5.1	4.6	-148.76	-1.4	251.0	415.0	407.7	7.24	57.339		
2,000.0	1,981.1	1,943.7	1,932.2	5.4	4.8	-149.24	-1.4	262.9	440.7	433.0	7.65	57.625		
2,100.0	2,079.6	2,040.3	2,028.1	5.8	5.1	-149.66	-1.4	274.8	466.5	458.4	8.06	57.884		
2,200.0	2,178.1	2,136.8	2,123.9	6.1	5.4	-150.04	-1.5	286.7	492.2	483.8	8.47	58.122		
2,300.0	2,276.6	2,233.4	2,219.7	6.5	5.6	-150.39	-1.5	298.6	518.0	509.2	8.88	58.340		
2,400.0	2,375.1	2,330.0	2,315.6	6.8	5.9	-150.70	-1.6	310.5	543.9	534.6	9.29	58.540		
2,500.0	2,473.6	2,426.6	2,411.4	7.2	6.2	-150.98	-1.6	322.4	569.7	560.0	9.70	58.726		
2,600.0	2,572.1	2,523.1	2,507.2	7.5	6.4	-151.23	-1.7	334.3	595.5	585.4	10.11	58.898		
2,700.0	2,670.6	2,619.7	2,603.1	7.9	6.7	-151.47	-1.7	346.1	621.4	610.9	10.52	59.057		
2,800.0	2,769.1	2,716.3	2,698.9	8.2	7.0	-151.69	-1.8	358.0	647.2	636.3	10.93	59.206		
2,900.0	2,867.7	2,812.8	2,794.7	8.6	7.2	-151.89	-1.8	369.9	673.1	661.8	11.34	59.344		
3,000.0	2,966.2	2,909.4	2,890.6	8.9	7.5	-152.07	-1.8	381.8	699.0	687.2	11.75	59.474		
3,100.0	3,064.7	3,006.0	2,986.4	9.3	7.8	-152.25	-1.9	393.7	724.9	712.7	12.16	59.596		
3,200.0	3,163.2	3,102.5	3,082.2	9.6	8.0	-152.41	-1.9	405.6	750.8	738.2	12.57	59.710		
3,300.0	3,261.7	3,199.1	3,178.1	9.9	8.3	-152.56	-2.0	417.5	776.7	763.7	12.98	59.817		
3,400.0	3,360.2	3,295.7	3,273.9	10.3	8.6	-152.70	-2.0	429.4	802.6	789.2	13.39	59.919		
3,500.0	3,458.7	3,392.3	3,369.7	10.6	8.9	-152.83	-2.1	441.3	828.5	814.7	13.80	60.015		
3,600.0	3,557.2	3,488.8	3,465.6	11.0	9.1	-152.95	-2.1	453.2	854.4	840.2	14.21	60.105		
3,700.0	3,655.7	3,585.4	3,561.4	11.3	9.4	-153.07	-2.1	465.1	880.3	865.7	14.62	60.191		
3,800.0	3,754.2	3,682.0	3,657.3	11.7	9.7	-153.18	-2.2	477.0	906.2	891.2	15.04	60.272		
3,900.0	3,852.7	3,778.5	3,753.1	12.0	9.9	-153.28	-2.2	488.9	932.1	916.7	15.45	60.349		
4,000.0	3,951.3	3,875.1	3,848.9	12.4	10.2	-153.38	-2.3	500.8	958.0	942.2	15.86	60.423		
4,100.0	4,049.8	3,971.7	3,944.8	12.7	10.5	-153.47	-2.3	512.6	984.0	967.7	16.27	60.493		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 1 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink 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		
13,900.0	7,267.0	7,251.7	7,250.9	107.1	12.7	91.70	6,360.5	216.7	974.6	855.5	119.10	8.183		
14,000.0	7,267.0	7,252.5	7,251.7	108.8	12.7	91.76	6,360.5	216.7	933.7	812.8	120.84	7.727		
14,100.0	7,267.0	7,253.4	7,252.6	110.6	12.7	91.82	6,360.5	216.7	902.1	779.5	122.58	7.359		
14,200.0	7,267.0	7,254.3	7,253.4	112.3	12.7	91.87	6,360.5	216.6	880.7	756.4	124.31	7.085		
14,300.0	7,267.0	7,255.1	7,254.3	114.0	12.7	91.93	6,360.5	216.6	870.5	744.4	126.05	6.906		
14,340.1	7,267.0	7,255.5	7,254.6	114.7	12.7	91.95	6,360.5	216.6	869.5	742.8	126.75	6.860	CC, ES	
14,400.0	7,267.0	7,256.0	7,255.1	115.8	12.7	91.99	6,360.6	216.6	871.6	743.8	127.79	6.821	SF	
14,500.0	7,267.0	7,256.8	7,256.0	117.5	12.7	92.04	6,360.6	216.6	884.1	754.6	129.53	6.826		
14,535.9	7,267.0	7,257.1	7,256.3	118.1	12.7	92.06	6,360.6	216.5	891.3	761.2	130.15	6.848		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 33-8 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error: 0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,600.0	7,267.0	7,205.1	7,203.5	101.9	12.7	-88.35	6,363.3	-1,297.0	983.6	869.8	113.82	8.642	
13,700.0	7,267.0	7,207.0	7,205.4	103.6	12.7	-88.52	6,363.3	-1,297.0	910.5	794.9	115.57	7.879	
13,800.0	7,267.0	7,208.9	7,207.3	105.4	12.7	-88.69	6,363.3	-1,297.0	842.9	725.5	117.31	7.185	
13,900.0	7,267.0	7,210.9	7,209.2	107.1	12.7	-88.86	6,363.4	-1,297.0	782.2	663.1	119.06	6.570	
14,000.0	7,267.0	7,212.8	7,211.1	108.8	12.7	-89.03	6,363.4	-1,297.0	730.2	609.4	120.81	6.044	
14,100.0	7,267.0	7,214.8	7,213.1	110.6	12.7	-89.21	6,363.4	-1,297.0	688.9	566.4	122.56	5.621	
14,200.0	7,267.0	7,216.7	7,215.1	112.3	12.7	-89.38	6,363.5	-1,297.0	660.3	536.0	124.31	5.312	
14,300.0	7,267.0	7,218.7	7,217.0	114.0	12.7	-89.56	6,363.5	-1,297.1	646.1	520.0	126.05	5.126	
14,343.1	7,267.0	7,219.6	7,217.9	114.8	12.7	-89.63	6,363.5	-1,297.1	644.7	517.8	126.80	5.084	CC, ES
14,400.0	7,267.0	7,220.7	7,219.0	115.8	12.7	-89.74	6,363.5	-1,297.1	647.2	519.4	127.80	5.064	SF
14,500.0	7,267.0	7,222.7	7,221.0	117.5	12.7	-89.91	6,363.6	-1,297.1	663.5	533.9	129.54	5.122	
14,535.9	7,267.0	7,223.4	7,221.8	118.1	12.7	-89.98	6,363.6	-1,297.1	672.9	542.7	130.17	5.169	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 34-8 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink 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		
12,200.0	7,267.0	7,200.0	7,197.7	77.9	12.8	-88.42	4,756.8	-1,427.6	942.8	853.3	89.58	10.525		
12,300.0	7,267.0	7,200.6	7,198.2	79.6	12.8	-88.47	4,756.8	-1,427.6	889.8	798.5	91.31	9.745		
12,400.0	7,267.0	7,202.2	7,199.8	81.3	12.8	-88.58	4,756.8	-1,427.6	845.2	752.2	93.04	9.085		
12,500.0	7,267.0	7,203.8	7,201.5	83.0	12.8	-88.70	4,756.9	-1,427.6	810.6	715.9	94.77	8.553		
12,600.0	7,267.0	7,205.5	7,203.1	84.7	12.8	-88.83	4,756.9	-1,427.7	787.3	690.8	96.51	8.158		
12,700.0	7,267.0	7,207.1	7,204.8	86.4	12.8	-88.95	4,756.9	-1,427.7	776.2	678.0	98.25	7.901		
12,736.5	7,267.0	7,207.7	7,205.4	87.0	12.8	-88.99	4,756.9	-1,427.7	775.4	676.5	98.88	7.842 CC, ES		
12,800.0	7,267.0	7,208.8	7,206.4	88.1	12.8	-89.07	4,756.9	-1,427.7	778.0	678.0	99.98	7.781 SF		
12,900.0	7,267.0	7,210.4	7,208.1	89.9	12.8	-89.19	4,757.0	-1,427.7	792.4	690.7	101.72	7.790		
13,000.0	7,267.0	7,212.1	7,209.8	91.6	12.8	-89.32	4,757.0	-1,427.8	818.9	715.5	103.46	7.916		
13,100.0	7,267.0	7,213.8	7,211.5	93.3	12.8	-89.44	4,757.0	-1,427.8	856.3	751.2	105.20	8.140		
13,200.0	7,267.0	7,215.5	7,213.2	95.0	12.8	-89.57	4,757.0	-1,427.8	903.3	796.4	106.94	8.447		
13,300.0	7,267.0	7,217.3	7,214.9	96.7	12.8	-89.70	4,757.1	-1,427.9	958.5	849.8	108.68	8.820		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design		S17-T2N-R67W (Big Horn) - DIER 44-8 (EXISTING) - ENCANA WELL - GYRO										Offset Site Error:		0.0 ft	
Survey Program:		100-Geolink MWD										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
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			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)					
12,600.0	7,267.0	7,208.9	7,205.7	84.7	12.8	88.50	4,779.4	315.7	981.4	884.9	96.49	10.171			
12,700.0	7,267.0	7,204.7	7,201.5	86.4	12.8	88.26	4,779.6	315.6	970.3	872.1	98.20	9.880			
12,759.4	7,267.0	7,200.0	7,196.8	87.4	12.8	87.98	4,779.8	315.4	968.4	869.2	99.21	9.762 CC, ES			
12,800.0	7,267.0	7,200.0	7,196.8	88.1	12.8	87.98	4,779.8	315.4	969.3	869.4	99.91	9.702			
12,900.0	7,267.0	7,195.7	7,192.5	89.9	12.8	87.72	4,780.0	315.3	978.6	877.0	101.62	9.630 SF			
13,000.0	7,267.0	7,190.9	7,187.8	91.6	12.8	87.44	4,780.2	315.1	997.8	894.5	103.32	9.658			

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8080-Geolink 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		
13,600.0	7,267.0	7,202.0	7,202.0	101.9	12.6	-90.00	6,375.7	-1,245.0	960.0	846.2	113.84	8.433		
13,700.0	7,267.0	7,202.0	7,202.0	103.6	12.6	-90.00	6,375.7	-1,245.0	883.5	767.9	115.58	7.644		
13,800.0	7,267.0	7,202.0	7,202.0	105.4	12.6	-90.00	6,375.7	-1,245.0	812.1	694.8	117.32	6.922		
13,900.0	7,267.0	7,202.0	7,202.0	107.1	12.6	-90.00	6,375.7	-1,245.0	747.3	628.2	119.06	6.277		
14,000.0	7,267.0	7,202.0	7,202.0	108.8	12.6	-90.00	6,375.7	-1,245.0	690.9	570.2	120.80	5.720		
14,100.0	7,267.0	7,202.0	7,202.0	110.6	12.6	-90.00	6,375.7	-1,245.0	645.3	522.7	122.54	5.266		
14,200.0	7,267.0	7,202.0	7,202.0	112.3	12.6	-90.00	6,375.7	-1,245.0	612.6	488.3	124.28	4.929		
14,300.0	7,267.0	7,202.0	7,202.0	114.0	12.6	-90.00	6,375.7	-1,245.0	595.2	469.2	126.02	4.723		
14,355.3	7,267.0	7,202.0	7,202.0	115.0	12.6	-90.00	6,375.7	-1,245.0	592.6	465.6	126.98	4.667	CC, ES	
14,400.0	7,267.0	7,202.0	7,202.0	115.8	12.6	-90.00	6,375.7	-1,245.0	594.3	466.5	127.76	4.652	SF	
14,500.0	7,267.0	7,202.0	7,202.0	117.5	12.6	-90.00	6,375.7	-1,245.0	610.0	480.5	129.50	4.711		
14,535.9	7,267.0	7,202.0	7,202.0	118.1	12.6	-90.00	6,375.7	-1,245.0	619.5	489.4	130.13	4.761		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER J 1-A (EXISTING) - ENCANA WELL - GYRO													Offset Site Error: 0.0 ft	
Survey Program: 100-Geolink 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		
12,500.0	7,267.0	7,244.1	7,242.2	83.0	12.8	94.88	5,494.3	-521.1	982.8	888.2	94.56	10.393		
12,600.0	7,267.0	7,242.9	7,241.0	84.7	12.8	94.37	5,494.3	-521.1	883.8	787.4	96.34	9.173		
12,700.0	7,267.0	7,241.8	7,239.9	86.4	12.8	93.87	5,494.3	-521.1	785.0	686.9	98.12	8.001		
12,800.0	7,267.0	7,240.6	7,238.8	88.1	12.8	93.39	5,494.3	-521.1	686.6	586.7	99.89	6.874		
12,900.0	7,267.0	7,239.6	7,237.7	89.9	12.8	92.92	5,494.4	-521.1	588.8	487.1	101.66	5.792		
13,000.0	7,267.0	7,238.5	7,236.7	91.6	12.8	92.47	5,494.4	-521.1	491.8	388.4	103.42	4.756		
13,100.0	7,267.0	7,237.5	7,235.7	93.3	12.8	92.03	5,494.4	-521.1	396.4	291.2	105.18	3.769		
13,200.0	7,267.0	7,236.6	7,234.7	95.0	12.8	91.61	5,494.4	-521.1	303.8	196.9	106.93	2.841		
13,300.0	7,267.0	7,235.6	7,233.7	96.7	12.8	91.20	5,494.4	-521.1	218.0	109.3	108.68	2.006		
13,400.0	7,267.0	7,234.7	7,232.8	98.5	12.8	90.80	5,494.4	-521.1	150.8	40.3	110.42	1.365 Level 3		
13,474.0	7,267.0	7,234.0	7,232.2	99.7	12.8	90.51	5,494.4	-521.1	131.4	19.7	111.71	1.176 Level 2, CC, ES, SF		
13,500.0	7,267.0	7,233.8	7,231.9	100.2	12.8	90.41	5,494.4	-521.1	133.9	21.8	112.16	1.194 Level 2		
13,600.0	7,267.0	7,232.9	7,231.1	101.9	12.8	90.03	5,494.4	-521.0	182.0	68.1	113.90	1.598		
13,700.0	7,267.0	7,232.1	7,230.2	103.6	12.8	89.67	5,494.4	-521.0	261.4	145.8	115.63	2.261		
13,800.0	7,267.0	7,231.3	7,229.4	105.4	12.8	89.31	5,494.4	-521.0	351.5	234.1	117.36	2.995		
13,900.0	7,267.0	7,230.5	7,228.6	107.1	12.8	88.97	5,494.4	-521.0	445.8	326.7	119.09	3.744		
14,000.0	7,267.0	7,229.7	7,227.9	108.8	12.8	88.63	5,494.4	-521.0	542.2	421.4	120.81	4.488		
14,100.0	7,267.0	7,229.0	7,227.1	110.6	12.8	88.31	5,494.5	-521.0	639.6	517.1	122.53	5.220		
14,200.0	7,267.0	7,228.3	7,226.4	112.3	12.8	87.99	5,494.5	-521.0	737.8	613.5	124.25	5.938		
14,300.0	7,267.0	7,227.5	7,225.7	114.0	12.8	87.68	5,494.5	-521.0	836.4	710.4	125.96	6.640		
14,400.0	7,267.0	7,226.9	7,225.0	115.8	12.8	87.38	5,494.5	-521.0	935.3	807.6	127.67	7.326		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO											Offset Site Error:		0.0 ft
Survey Program: 100-Geolink 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
10,500.0	7,267.0	7,241.9	7,240.9	49.3	12.7	92.02	3,350.3	-174.0	958.0	897.4	60.60	15.810	6.410 CC, ES 6.376 SF
10,600.0	7,267.0	7,241.1	7,240.1	51.0	12.7	91.92	3,350.3	-173.9	872.8	810.6	62.28	14.015	
10,700.0	7,267.0	7,240.2	7,239.3	52.6	12.7	91.83	3,350.3	-173.9	791.1	727.2	63.97	12.368	
10,800.0	7,267.0	7,239.4	7,238.4	54.3	12.7	91.73	3,350.3	-173.9	714.1	648.4	65.66	10.876	
10,900.0	7,267.0	7,238.6	7,237.6	55.9	12.7	91.63	3,350.3	-173.9	643.4	576.0	67.35	9.552	
11,000.0	7,267.0	7,237.7	7,236.7	57.6	12.7	91.52	3,350.3	-173.9	581.4	512.3	69.05	8.419	
11,100.0	7,267.0	7,236.8	7,235.9	59.3	12.7	91.42	3,350.3	-173.9	531.0	460.3	70.76	7.505	
11,200.0	7,267.0	7,235.9	7,235.0	60.9	12.7	91.31	3,350.3	-173.8	496.0	423.6	72.46	6.845	
11,300.0	7,267.0	7,235.0	7,234.0	62.6	12.7	91.20	3,350.3	-173.8	479.6	405.5	74.17	6.467	
11,329.9	7,267.0	7,234.8	7,233.8	63.1	12.7	91.17	3,350.3	-173.8	478.7	404.0	74.68		
11,400.0	7,267.0	7,234.1	7,233.1	64.3	12.7	91.09	3,350.3	-173.8	483.8	407.9	75.88		
11,500.0	7,267.0	7,233.1	7,232.2	66.0	12.7	90.98	3,350.3	-173.8	508.0	430.4	77.59	6.547	
11,600.0	7,267.0	7,232.2	7,231.2	67.7	12.7	90.86	3,350.3	-173.8	549.7	470.3	79.31	6.931	
11,700.0	7,267.0	7,231.2	7,230.2	69.4	12.7	90.74	3,350.4	-173.7	605.1	524.1	81.03	7.468	
11,800.0	7,267.0	7,230.1	7,229.2	71.1	12.7	90.62	3,350.4	-173.7	670.9	588.2	82.74	8.109	
11,900.0	7,267.0	7,229.1	7,228.1	72.8	12.7	90.49	3,350.4	-173.7	744.4	660.0	84.46	8.814	
12,000.0	7,267.0	7,228.0	7,227.1	74.5	12.7	90.37	3,350.4	-173.7	823.5	737.3	86.18	9.555	
12,100.0	7,267.0	7,227.0	7,226.0	76.2	12.7	90.24	3,350.4	-173.7	906.7	818.8	87.91	10.315	
12,200.0	7,267.0	7,225.8	7,224.9	77.9	12.7	90.10	3,350.4	-173.6	993.1	903.4	89.63	11.080	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design		S17-T2N-R67W (Big Horn) - MILLER 2-17 (EXISTING) - ENCANA WELL - GYRO											Offset Site Error:	0.0 ft
Survey Program:		100-Geolink 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		
9,900.0	7,267.0	7,249.5	7,247.9	39.7	12.8	91.22	2,753.8	-186.7	954.7	904.0	50.68	18.839	7.214 CC, ES 7.163 SF	
10,000.0	7,267.0	7,248.0	7,246.4	41.3	12.8	91.03	2,753.8	-186.7	868.8	816.5	52.32	16.607		
10,100.0	7,267.0	7,246.5	7,244.9	42.9	12.8	90.85	2,753.8	-186.7	786.2	732.3	53.96	14.569		
10,200.0	7,267.0	7,245.0	7,243.4	44.5	12.8	90.66	2,753.8	-186.7	708.1	652.5	55.62	12.732		
10,300.0	7,267.0	7,243.5	7,241.9	46.1	12.8	90.47	2,753.9	-186.7	636.2	578.9	57.28	11.107		
10,400.0	7,267.0	7,242.0	7,240.4	47.7	12.8	90.29	2,753.9	-186.7	572.8	513.8	58.95	9.717		
10,500.0	7,267.0	7,240.5	7,238.9	49.3	12.8	90.10	2,753.9	-186.7	521.0	460.3	60.62	8.593		
10,600.0	7,267.0	7,239.0	7,237.4	51.0	12.8	89.92	2,753.9	-186.7	484.4	422.1	62.30	7.776		
10,700.0	7,267.0	7,237.5	7,235.9	52.6	12.7	89.74	2,754.0	-186.7	466.9	402.9	63.99	7.297		
10,733.5	7,267.0	7,237.0	7,235.4	53.2	12.7	89.68	2,754.0	-186.7	465.7	401.1	64.55			
10,800.0	7,267.0	7,236.0	7,234.4	54.3	12.7	89.55	2,754.0	-186.8	470.4	404.7	65.67			
10,900.0	7,267.0	7,234.5	7,232.9	55.9	12.7	89.37	2,754.0	-186.8	494.5	427.2	67.36	7.341		
11,000.0	7,267.0	7,233.0	7,231.4	57.6	12.7	89.19	2,754.0	-186.8	536.5	467.5	69.06	7.769		
11,100.0	7,267.0	7,231.5	7,229.9	59.3	12.7	89.01	2,754.1	-186.8	592.6	521.8	70.75	8.375		
11,200.0	7,267.0	7,230.0	7,228.4	60.9	12.7	88.82	2,754.1	-186.8	659.1	586.6	72.45	9.097		
11,300.0	7,267.0	7,228.6	7,227.0	62.6	12.7	88.64	2,754.1	-186.8	733.3	659.1	74.15	9.889		
11,400.0	7,267.0	7,227.1	7,225.5	64.3	12.7	88.46	2,754.1	-186.8	813.0	737.1	75.85	10.718		
11,500.0	7,267.0	7,225.6	7,224.0	66.0	12.7	88.28	2,754.1	-186.8	896.8	819.2	77.55	11.563		
11,600.0	7,267.0	7,224.2	7,222.5	67.7	12.7	88.10	2,754.2	-186.8	983.6	904.3	79.26	12.410		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYRO												Offset Site Error: 0.0 ft	
Survey Program: 100-Geolink 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	
10,800.0	7,267.0	7,200.0	7,198.7	54.3	12.7	-88.25	3,722.1	-1,053.8	987.0	921.5	65.59	15.048	
10,900.0	7,267.0	7,200.0	7,198.7	55.9	12.7	-88.25	3,722.1	-1,053.8	896.6	829.3	67.29	13.325	
11,000.0	7,267.0	7,200.0	7,198.7	57.6	12.7	-88.25	3,722.1	-1,053.8	808.5	739.5	68.99	11.719	
11,100.0	7,267.0	7,200.0	7,198.7	59.3	12.7	-88.25	3,722.1	-1,053.8	723.4	652.7	70.69	10.233	
11,200.0	7,267.0	7,200.0	7,198.7	60.9	12.7	-88.25	3,722.1	-1,053.8	642.6	570.2	72.39	8.877	
11,300.0	7,267.0	7,200.0	7,198.7	62.6	12.7	-88.25	3,722.1	-1,053.8	568.0	493.9	74.10	7.665	
11,400.0	7,267.0	7,200.0	7,198.7	64.3	12.7	-88.25	3,722.1	-1,053.8	502.2	426.4	75.81	6.625	
11,500.0	7,267.0	7,200.0	7,198.7	66.0	12.7	-88.25	3,722.1	-1,053.8	449.4	371.8	77.52	5.797	
11,600.0	7,267.0	7,200.0	7,198.7	67.7	12.7	-88.25	3,722.1	-1,053.8	414.2	335.0	79.24	5.228	
11,700.0	7,267.0	7,200.0	7,198.7	69.4	12.7	-88.25	3,722.1	-1,053.8	401.6	320.6	80.95	4.960	
11,701.7	7,267.0	7,200.0	7,198.7	69.4	12.7	-88.25	3,722.1	-1,053.8	401.6	320.6	80.98	4.959	CC, ES, SF
11,800.0	7,267.0	7,200.0	7,198.7	71.1	12.7	-88.25	3,722.1	-1,053.8	413.4	330.7	82.67	5.001	
11,900.0	7,267.0	7,200.0	7,198.7	72.8	12.7	-88.25	3,722.1	-1,053.8	447.9	363.5	84.39	5.307	
12,000.0	7,267.0	7,200.0	7,198.7	74.5	12.7	-88.25	3,722.1	-1,053.8	500.2	414.1	86.11	5.809	
12,100.0	7,267.0	7,200.0	7,198.7	76.2	12.7	-88.25	3,722.1	-1,053.8	565.6	477.8	87.83	6.440	
12,200.0	7,267.0	7,200.0	7,198.7	77.9	12.7	-88.25	3,722.1	-1,053.8	640.0	550.4	89.56	7.146	
12,300.0	7,267.0	7,200.0	7,198.7	79.6	12.7	-88.25	3,722.1	-1,053.8	720.6	629.3	91.28	7.894	
12,400.0	7,267.0	7,200.0	7,198.7	81.3	12.7	-88.25	3,722.1	-1,053.8	805.5	712.5	93.01	8.661	
12,500.0	7,267.0	7,201.0	7,199.7	83.0	12.7	-88.39	3,722.1	-1,053.8	893.6	798.9	94.74	9.432	
12,600.0	7,267.0	7,201.0	7,199.8	84.7	12.7	-88.40	3,722.1	-1,053.8	984.0	887.5	96.47	10.200	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8150-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-44.98	402.9	-402.6	570.4					
100.0	100.0	70.0	70.0	0.1	0.1	-44.98	402.9	-402.6	569.6	569.4	0.24	2,329.284		
200.0	200.0	170.0	170.0	0.3	0.3	-44.98	402.9	-402.6	569.6	569.0	0.59	959.579		
300.0	300.0	270.0	270.0	0.5	0.5	-44.98	402.9	-402.6	569.6	568.7	0.94	604.255		
400.0	400.0	370.0	370.0	0.6	0.6	-44.98	402.9	-402.6	569.6	568.3	1.29	440.968		
500.0	500.0	470.0	470.0	0.8	0.8	100.82	402.9	-402.6	569.9	568.3	1.64	346.906		
600.0	599.8	569.8	569.8	1.0	1.0	101.32	402.9	-402.6	570.9	568.9	2.01	284.692		
700.0	699.5	669.5	669.5	1.2	1.2	102.13	402.9	-402.6	572.7	570.3	2.39	239.529		
800.0	798.7	768.7	768.7	1.5	1.3	103.26	402.9	-402.6	575.4	572.6	2.81	204.778		
895.3	892.8	862.8	862.8	1.8	1.5	104.60	402.9	-402.6	579.0	575.8	3.25	178.372		
900.0	897.5	867.5	867.5	1.8	1.5	104.68	402.9	-402.6	579.2	576.0	3.27	177.234		
1,000.0	996.0	966.0	966.0	2.1	1.7	106.29	402.9	-402.6	583.9	580.2	3.74	156.180		
1,100.0	1,094.5	1,064.5	1,064.5	2.4	1.9	107.87	402.9	-402.6	589.0	584.8	4.21	139.759		
1,200.0	1,193.0	1,163.0	1,163.0	2.7	2.0	109.43	402.9	-402.6	594.6	589.9	4.69	126.723		
1,300.0	1,291.5	1,261.5	1,261.5	3.1	2.2	110.96	402.9	-402.6	600.6	595.4	5.17	116.198		
1,400.0	1,390.0	1,360.0	1,360.0	3.4	2.4	112.45	402.9	-402.6	607.1	601.4	5.64	107.571		
1,500.0	1,488.5	1,458.5	1,458.5	3.7	2.5	113.92	402.9	-402.6	613.9	607.8	6.11	100.406		
1,600.0	1,587.0	1,557.0	1,557.0	4.1	2.7	115.35	402.9	-402.6	621.2	614.6	6.58	94.386		
1,700.0	1,685.5	1,655.5	1,655.5	4.4	2.9	116.75	402.9	-402.6	628.8	621.8	7.04	89.277		
1,800.0	1,784.1	1,754.1	1,754.1	4.8	3.1	118.12	402.9	-402.6	636.8	629.3	7.50	84.903		
1,900.0	1,882.6	1,852.6	1,852.6	5.1	3.2	119.45	402.9	-402.6	645.2	637.3	7.95	81.130		
2,000.0	1,981.1	1,951.1	1,951.1	5.4	3.4	120.75	402.9	-402.6	654.0	645.6	8.40	77.853		
2,100.0	2,079.6	2,049.6	2,049.6	5.8	3.6	122.01	402.9	-402.6	663.0	654.2	8.84	74.990		
2,200.0	2,178.1	2,148.1	2,148.1	6.1	3.7	123.24	402.9	-402.6	672.4	663.1	9.28	72.476		
2,300.0	2,276.6	2,246.6	2,246.6	6.5	3.9	124.44	402.9	-402.6	682.1	672.4	9.71	70.257		
2,400.0	2,375.1	2,345.1	2,345.1	6.8	4.1	125.60	402.9	-402.6	692.0	681.9	10.13	68.291		
2,500.0	2,473.6	2,443.6	2,443.6	7.2	4.3	126.73	402.9	-402.6	702.3	691.7	10.55	66.542		
2,600.0	2,572.1	2,542.1	2,542.1	7.5	4.4	127.83	402.9	-402.6	712.8	701.8	10.97	64.981		
2,700.0	2,670.6	2,640.6	2,640.6	7.9	4.6	128.90	402.9	-402.6	723.6	712.2	11.38	63.584		
2,800.0	2,769.1	2,739.1	2,739.1	8.2	4.8	129.93	402.9	-402.6	734.6	722.8	11.79	62.329		
2,900.0	2,867.7	2,837.7	2,837.7	8.6	5.0	130.94	402.9	-402.6	745.9	733.7	12.19	61.200		
3,000.0	2,966.2	2,936.2	2,936.2	8.9	5.1	131.91	402.9	-402.6	757.3	744.7	12.58	60.181		
3,100.0	3,064.7	3,034.7	3,034.7	9.3	5.3	132.86	402.9	-402.6	769.0	756.0	12.98	59.260		
3,200.0	3,163.2	3,133.2	3,133.2	9.6	5.5	133.78	402.9	-402.6	780.9	767.6	13.37	58.425		
3,300.0	3,261.7	3,231.7	3,231.7	9.9	5.6	134.67	402.9	-402.6	793.0	779.3	13.75	57.668		
3,400.0	3,360.2	3,330.2	3,330.2	10.3	5.8	135.53	402.9	-402.6	805.3	791.1	14.13	56.979		
3,500.0	3,458.7	3,428.7	3,428.7	10.6	6.0	136.37	402.9	-402.6	817.7	803.2	14.51	56.352		
3,600.0	3,557.2	3,527.2	3,527.2	11.0	6.2	137.18	402.9	-402.6	830.4	815.5	14.89	55.780		
3,700.0	3,655.7	3,625.7	3,625.7	11.3	6.3	137.97	402.9	-402.6	843.1	827.9	15.26	55.257		
3,800.0	3,754.2	3,724.2	3,724.2	11.7	6.5	138.74	402.9	-402.6	856.1	840.5	15.63	54.780		
3,900.0	3,852.7	3,822.7	3,822.7	12.0	6.7	139.48	402.9	-402.6	869.2	853.2	15.99	54.343		
4,000.0	3,951.3	3,921.3	3,921.3	12.4	6.8	140.20	402.9	-402.6	882.4	866.0	16.36	53.942		
4,100.0	4,049.8	4,019.8	4,019.8	12.7	7.0	140.90	402.9	-402.6	895.8	879.0	16.72	53.575		
4,200.0	4,148.3	4,118.3	4,118.3	13.1	7.2	141.58	402.9	-402.6	909.3	892.2	17.08	53.237		
4,300.0	4,246.8	4,216.8	4,216.8	13.4	7.4	142.24	402.9	-402.6	922.9	905.4	17.44	52.927		
4,400.0	4,345.3	4,315.3	4,315.3	13.8	7.5	142.88	402.9	-402.6	936.6	918.8	17.79	52.642		
4,500.0	4,443.8	4,413.8	4,413.8	14.1	7.7	143.51	402.9	-402.6	950.5	932.3	18.15	52.380		
4,600.0	4,542.3	4,512.3	4,512.3	14.5	7.9	144.11	402.9	-402.6	964.4	945.9	18.50	52.138		
4,700.0	4,640.8	4,610.8	4,610.8	14.8	8.0	144.70	402.9	-402.6	978.5	959.6	18.85	51.915		
4,800.0	4,739.3	4,709.3	4,709.3	15.2	8.2	145.27	402.9	-402.6	992.6	973.4	19.20	51.710		
7,450.0	7,219.1	7,189.1	7,189.1	19.4	12.5	37.93	402.9	-402.6	957.7	937.5	20.19	47.444		
7,500.0	7,237.0	7,207.0	7,207.0	19.1	12.6	44.87	402.9	-402.6	913.2	891.9	21.34	42.794		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 8150-Geolink 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	
7,550.0	7,250.9	7,220.9	7,220.9	18.8	12.6	54.12	402.9	-402.6	867.5	844.4	23.10	37.554	
7,600.0	7,260.5	7,230.5	7,230.5	18.6	12.6	65.92	402.9	-402.6	820.9	795.8	25.07	32.744	
7,650.0	7,265.8	7,235.8	7,235.8	18.4	12.6	79.67	402.9	-402.6	773.9	747.4	26.50	29.203	
7,686.5	7,267.0	7,237.0	7,237.0	18.3	12.6	90.00	402.9	-402.6	739.4	712.6	26.83	27.564	
7,700.0	7,267.0	7,237.0	7,237.0	18.2	12.6	90.00	402.9	-402.6	726.8	700.0	26.77	27.148	
7,800.0	7,267.0	7,237.0	7,237.0	18.0	12.6	90.00	402.9	-402.6	633.8	607.3	26.49	23.930	
7,900.0	7,267.0	7,237.0	7,237.0	17.9	12.6	90.00	402.9	-402.6	543.3	516.9	26.42	20.566	
8,000.0	7,267.0	7,237.0	7,237.0	18.1	12.6	90.00	402.9	-402.6	456.8	430.3	26.57	17.192	
8,100.0	7,267.0	7,237.0	7,237.0	18.3	12.6	90.00	402.9	-402.6	377.1	350.2	26.94	13.996	
8,200.0	7,267.0	7,237.0	7,237.0	18.8	12.6	90.00	402.9	-402.6	309.4	281.8	27.51	11.245	
8,300.0	7,267.0	7,237.0	7,237.0	19.4	12.6	90.00	402.9	-402.6	263.1	234.8	28.26	9.310	
8,382.5	7,267.0	7,237.0	7,237.0	20.0	12.6	90.00	402.9	-402.6	249.8	220.8	29.00	8.614 CC, ES	
8,400.0	7,267.0	7,237.0	7,237.0	20.1	12.6	90.00	402.9	-402.6	250.4	221.3	29.16	8.588 SF	
8,500.0	7,267.0	7,237.0	7,237.0	21.0	12.6	90.00	402.9	-402.6	276.1	245.9	30.19	9.145	
8,600.0	7,267.0	7,237.0	7,237.0	21.9	12.6	90.00	402.9	-402.6	331.2	299.9	31.32	10.574	
8,700.0	7,267.0	7,237.0	7,237.0	23.0	12.6	90.00	402.9	-402.6	404.0	371.4	32.55	12.411	
8,800.0	7,267.0	7,237.0	7,237.0	24.1	12.6	90.00	402.9	-402.6	486.5	452.7	33.85	14.372	
8,900.0	7,267.0	7,237.0	7,237.0	25.3	12.6	90.00	402.9	-402.6	574.6	539.4	35.21	16.319	
9,000.0	7,267.0	7,237.0	7,237.0	26.6	12.6	90.00	402.9	-402.6	666.1	629.5	36.63	18.186	
9,100.0	7,267.0	7,237.0	7,237.0	27.9	12.6	90.00	402.9	-402.6	759.7	721.7	38.08	19.950	
9,200.0	7,267.0	7,237.0	7,237.0	29.3	12.6	90.00	402.9	-402.6	854.8	815.2	39.57	21.600	
9,300.0	7,267.0	7,237.0	7,237.0	30.7	12.6	90.00	402.9	-402.6	950.9	909.8	41.10	23.139	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 33-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 608-Geolink 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	-97.63	-92.5	-690.3	697.0					
100.0	100.0	74.0	74.0	0.1	0.1	-97.63	-92.5	-690.3	696.5	696.3	0.25	2,769.406		
200.0	200.0	174.0	174.0	0.3	0.3	-97.63	-92.5	-690.3	696.5	695.9	0.60	1,159.821		
300.0	300.0	274.0	274.0	0.5	0.5	-97.63	-92.5	-690.3	696.5	695.6	0.95	733.506		
400.0	400.0	374.0	374.0	0.6	0.7	-97.63	-92.5	-690.3	696.5	695.2	1.30	536.357		
500.0	500.0	474.0	474.0	0.8	0.8	48.13	-92.5	-690.3	695.3	693.7	1.65	421.788		
600.0	599.8	573.8	573.8	1.0	1.0	48.50	-92.5	-690.3	691.9	689.9	2.00	345.151		
700.0	699.5	671.1	671.1	1.2	1.2	49.11	-92.5	-690.4	686.2	683.9	2.37	289.560		
800.0	798.7	769.3	769.3	1.5	1.3	49.97	-92.9	-690.9	678.8	676.0	2.76	245.938		
895.3	892.8	863.1	863.1	1.8	1.5	51.03	-93.4	-691.3	669.8	666.6	3.16	211.847		
900.0	897.5	867.8	867.8	1.8	1.5	51.09	-93.4	-691.3	669.3	666.1	3.18	210.326		
1,000.0	996.0	966.1	966.1	2.1	1.7	52.18	-94.1	-691.9	659.1	655.4	3.62	181.877		
1,100.0	1,094.5	1,064.3	1,064.3	2.4	1.9	53.29	-95.0	-692.4	649.2	645.1	4.08	159.191		
1,200.0	1,193.0	1,162.4	1,162.4	2.7	2.0	54.43	-95.9	-693.0	639.6	635.1	4.54	140.801		
1,300.0	1,291.5	1,260.5	1,260.5	3.1	2.2	55.61	-96.7	-693.8	630.4	625.4	5.02	125.660		
1,400.0	1,390.0	1,358.4	1,358.3	3.4	2.4	56.82	-97.6	-694.6	621.6	616.1	5.50	113.042		
1,500.0	1,488.5	1,456.0	1,455.9	3.7	2.5	58.08	-98.1	-695.6	613.2	607.2	5.99	102.410		
1,600.0	1,587.0	1,553.5	1,553.5	4.1	2.7	59.40	-98.5	-696.7	605.4	598.9	6.49	93.349		
1,700.0	1,685.5	1,651.2	1,651.1	4.4	2.9	60.77	-98.5	-698.1	598.0	591.1	6.99	85.559		
1,800.0	1,784.1	1,749.4	1,749.3	4.8	3.1	62.19	-98.6	-699.5	591.2	583.7	7.50	78.799		
1,900.0	1,882.6	1,847.6	1,847.5	5.1	3.2	63.62	-98.8	-701.0	584.8	576.8	8.02	72.905		
2,000.0	1,981.1	1,945.9	1,945.8	5.4	3.4	65.06	-99.2	-702.6	578.8	570.3	8.55	67.736		
2,100.0	2,079.6	2,043.9	2,043.8	5.8	3.6	66.49	-99.9	-704.4	573.4	564.3	9.07	63.190		
2,200.0	2,178.1	2,141.2	2,141.0	6.1	3.8	67.96	-100.3	-706.3	568.4	558.8	9.60	59.187		
2,300.0	2,276.6	2,237.9	2,237.7	6.5	3.9	69.65	-98.8	-708.0	564.3	554.1	10.14	55.646		
2,400.0	2,375.1	2,336.0	2,335.8	6.8	4.1	71.41	-96.8	-709.9	560.8	550.1	10.69	52.484		
2,500.0	2,473.6	2,434.4	2,434.1	7.2	4.3	73.14	-95.4	-711.9	558.0	546.7	11.23	49.675		
2,600.0	2,572.1	2,532.9	2,532.7	7.5	4.4	74.82	-94.6	-714.2	555.6	543.8	11.78	47.168		
2,700.0	2,670.6	2,634.2	2,633.9	7.9	4.6	76.70	-92.6	-715.8	553.5	541.2	12.33	44.884		
2,800.0	2,769.1	2,734.0	2,733.6	8.2	4.8	78.81	-88.6	-716.1	551.6	538.7	12.89	42.806		
2,900.0	2,867.7	2,833.7	2,833.2	8.6	5.0	80.90	-85.0	-716.2	550.2	536.8	13.44	40.944		
3,000.0	2,966.2	2,933.6	2,933.1	8.9	5.1	82.94	-82.0	-716.3	549.2	535.2	13.98	39.271		
3,100.0	3,064.7	3,031.2	3,030.7	9.3	5.3	84.89	-79.6	-716.5	548.7	534.1	14.52	37.781		
3,108.0	3,072.5	3,038.9	3,038.4	9.3	5.3	85.05	-79.4	-716.5	548.7	534.1	14.56	37.671 CC		
3,200.0	3,163.2	3,127.5	3,127.0	9.6	5.5	86.78	-77.4	-717.1	549.1	534.0	15.05	36.479 ES		
3,300.0	3,261.7	3,224.0	3,223.4	9.9	5.7	88.63	-75.4	-718.1	550.5	534.9	15.58	35.342		
3,400.0	3,360.2	3,320.6	3,320.0	10.3	5.8	90.43	-73.4	-719.6	552.8	536.7	16.09	34.349		
3,500.0	3,458.7	3,417.7	3,417.1	10.6	6.0	92.20	-71.6	-721.5	555.9	539.3	16.61	33.479		
3,600.0	3,557.2	3,514.9	3,514.2	11.0	6.2	93.92	-69.9	-723.8	559.8	542.7	17.11	32.718		
3,700.0	3,655.7	3,612.2	3,611.4	11.3	6.4	95.59	-68.1	-726.3	564.5	546.8	17.61	32.056		
3,800.0	3,754.2	3,712.2	3,711.5	11.7	6.5	97.27	-66.4	-729.0	569.6	551.5	18.10	31.464		
3,900.0	3,852.7	3,812.8	3,812.0	12.0	6.7	98.96	-64.8	-731.2	574.8	556.3	18.59	30.923		
4,000.0	3,951.3	3,913.4	3,912.5	12.4	6.9	100.63	-63.2	-733.1	580.2	561.2	19.07	30.430		
4,100.0	4,049.8	4,013.0	4,012.1	12.7	7.1	102.30	-61.7	-734.3	585.7	566.2	19.53	29.985		
4,200.0	4,148.3	4,077.7	4,076.7	13.1	7.2	103.58	-59.9	-734.7	594.5	574.5	19.94	29.810		
4,300.0	4,246.8	4,159.0	4,157.5	13.4	7.3	105.32	-49.1	-736.1	608.2	587.9	20.35	29.887		
4,400.0	4,345.3	4,230.8	4,228.6	13.8	7.5	106.84	-39.5	-738.4	625.7	605.0	20.74	30.167		
4,500.0	4,443.8	4,310.5	4,307.1	14.1	7.7	108.51	-26.3	-741.7	647.0	625.8	21.13	30.621		
4,600.0	4,542.3	4,390.1	4,385.3	14.5	7.9	110.07	-12.1	-746.2	670.9	649.3	21.51	31.188		
4,700.0	4,640.8	4,459.1	4,452.6	14.8	8.0	111.34	2.2	-751.4	698.7	676.8	21.88	31.932		
4,800.0	4,739.3	4,534.0	4,525.1	15.2	8.2	112.70	20.0	-757.7	729.9	707.6	22.25	32.809		
4,900.0	4,837.8	4,586.6	4,575.4	15.5	8.4	113.63	34.5	-762.8	765.3	742.8	22.60	33.871		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 33-17J (EXISTING) - ENCANA - SURVEYS												Offset Site Error: 0.0 ft	
Survey Program: 608-Geolink 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	
5,000.0	4,936.3	4,650.2	4,635.4	15.9	8.6	114.68	54.1	-770.1	805.1	782.1	22.95	35.083	
5,100.0	5,034.9	4,718.4	4,699.2	16.2	8.9	115.77	77.1	-778.3	847.8	824.5	23.30	36.388	
5,200.0	5,133.4	4,784.0	4,759.9	16.6	9.2	116.73	100.3	-787.0	893.0	869.4	23.65	37.764	
5,300.0	5,231.9	4,847.0	4,817.7	16.9	9.5	117.63	123.9	-795.2	940.3	916.3	23.99	39.195	
5,400.0	5,330.4	4,909.0	4,873.9	17.3	9.8	118.52	148.9	-803.0	990.2	965.9	24.33	40.703	
8,400.0	7,267.0	7,431.5	7,138.2	20.1	26.9	-80.52	1,105.3	-1,268.4	926.8	885.8	41.05	22.577	
8,500.0	7,267.0	7,443.0	7,149.6	21.0	26.9	-81.57	1,106.2	-1,269.2	855.5	813.4	42.16	20.292	
8,600.0	7,267.0	7,453.3	7,159.8	21.9	26.9	-82.51	1,107.0	-1,269.9	790.4	747.0	43.37	18.226	
8,700.0	7,267.0	7,462.9	7,169.4	23.0	26.9	-83.40	1,107.8	-1,270.6	733.0	688.4	44.65	16.416	
8,800.0	7,267.0	7,472.0	7,178.4	24.1	27.0	-84.22	1,108.5	-1,271.2	685.4	639.4	46.00	14.899	
8,900.0	7,267.0	7,480.7	7,187.1	25.3	27.0	-85.02	1,109.1	-1,271.8	649.7	602.3	47.41	13.703	
9,000.0	7,267.0	7,489.0	7,195.3	26.6	27.0	-85.79	1,109.7	-1,272.3	627.9	579.1	48.87	12.850	
9,089.8	7,267.0	7,496.1	7,202.4	27.8	27.0	-86.44	1,110.2	-1,272.7	621.5	571.3	50.20	12.380	
9,100.0	7,267.0	7,496.9	7,203.2	27.9	27.0	-86.51	1,110.3	-1,272.8	621.6	571.2	50.36	12.344	
9,200.0	7,267.0	7,504.5	7,210.8	29.3	27.0	-87.21	1,110.8	-1,273.3	631.2	579.3	51.88	12.166 SF	
9,300.0	7,267.0	7,512.5	7,218.7	30.7	27.1	-87.95	1,111.3	-1,273.7	655.9	602.5	53.43	12.277	
9,400.0	7,267.0	7,520.0	7,226.2	32.1	27.1	-88.64	1,111.8	-1,274.2	694.3	639.3	54.99	12.625	
9,500.0	7,267.0	7,527.1	7,233.3	33.6	27.1	-89.29	1,112.2	-1,274.5	744.1	687.5	56.58	13.153	
9,600.0	7,267.0	7,533.8	7,240.0	35.1	27.1	-89.91	1,112.6	-1,274.9	803.3	745.1	58.17	13.810	
9,700.0	7,267.0	7,539.7	7,245.9	36.6	27.1	-90.45	1,113.0	-1,275.2	870.0	810.2	59.78	14.554	
9,800.0	7,267.0	7,545.2	7,251.3	38.1	27.1	-90.95	1,113.3	-1,275.5	942.5	881.1	61.39	15.352	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 34-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 627-Geolink 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	-98.89	-111.4	-712.4	721.6					
100.0	100.0	74.0	74.0	0.1	0.1	-98.89	-111.4	-712.4	721.1	720.8	0.25	2,867.142		
200.0	200.0	174.0	174.0	0.3	0.3	-98.89	-111.4	-712.4	721.1	720.5	0.60	1,200.753		
300.0	300.0	274.0	274.0	0.5	0.5	-98.89	-111.4	-712.4	721.1	720.1	0.95	759.392		
400.0	400.0	374.0	374.0	0.6	0.7	-98.89	-111.4	-712.4	721.1	719.8	1.30	555.286		
500.0	500.0	474.0	474.0	0.8	0.8	46.86	-111.4	-712.4	719.9	718.3	1.65	436.698		
600.0	599.8	573.8	573.8	1.0	1.0	47.22	-111.4	-712.4	716.3	714.3	2.00	357.434		
700.0	699.5	672.2	672.2	1.2	1.2	47.81	-111.5	-712.5	710.5	708.1	2.37	299.726		
800.0	798.7	768.6	768.6	1.5	1.3	48.60	-112.0	-712.8	702.7	699.9	2.76	255.043		
895.3	892.8	859.8	859.8	1.8	1.5	49.58	-112.6	-713.4	693.7	690.5	3.15	220.290		
900.0	897.5	864.3	864.3	1.8	1.5	49.63	-112.6	-713.5	693.2	690.0	3.17	218.737		
1,000.0	996.0	959.9	959.9	2.1	1.7	50.64	-113.3	-714.6	683.3	679.7	3.60	189.709		
1,100.0	1,094.5	1,056.7	1,056.7	2.4	1.8	51.69	-114.0	-716.2	674.1	670.1	4.05	166.466		
1,200.0	1,193.0	1,158.0	1,157.9	2.7	2.0	52.82	-114.7	-717.7	665.1	660.6	4.52	147.264		
1,300.0	1,291.5	1,259.2	1,259.1	3.1	2.2	53.99	-115.3	-718.9	655.9	650.9	4.99	131.389		
1,400.0	1,390.0	1,359.8	1,359.7	3.4	2.4	55.18	-115.9	-719.7	646.6	641.1	5.48	118.098		
1,500.0	1,488.5	1,456.9	1,456.9	3.7	2.5	56.37	-116.5	-720.4	637.6	631.7	5.96	106.989		
1,600.0	1,587.0	1,554.2	1,554.1	4.1	2.7	57.61	-116.9	-721.4	629.2	622.7	6.45	97.518		
1,700.0	1,685.5	1,651.4	1,651.3	4.4	2.9	58.88	-117.3	-722.6	621.2	614.3	6.95	89.374		
1,800.0	1,784.1	1,750.5	1,750.4	4.8	3.1	60.22	-117.5	-723.9	613.7	606.3	7.46	82.263		
1,900.0	1,882.6	1,849.7	1,849.6	5.1	3.2	61.61	-117.5	-725.1	606.5	598.5	7.98	76.028		
2,000.0	1,981.1	1,948.8	1,948.7	5.4	3.4	63.05	-117.4	-726.2	599.5	591.0	8.50	70.532		
2,100.0	2,079.6	2,048.4	2,048.3	5.8	3.6	64.55	-117.1	-727.1	592.8	583.8	9.03	65.653		
2,200.0	2,178.1	2,148.6	2,148.5	6.1	3.8	66.07	-116.9	-727.9	586.3	576.7	9.57	61.291		
2,300.0	2,276.6	2,248.8	2,248.7	6.5	3.9	67.61	-117.1	-728.4	579.9	569.8	10.11	57.382		
2,400.0	2,375.1	2,348.7	2,348.6	6.8	4.1	69.15	-117.5	-728.7	573.7	563.0	10.65	53.870		
2,500.0	2,473.6	2,447.7	2,447.6	7.2	4.3	70.69	-118.2	-728.9	567.8	556.6	11.19	50.719		
2,600.0	2,572.1	2,546.8	2,546.7	7.5	4.5	72.24	-119.1	-729.1	562.2	550.4	11.74	47.880		
2,700.0	2,670.6	2,645.7	2,645.6	7.9	4.6	73.80	-120.2	-729.3	556.9	544.6	12.29	45.319		
2,800.0	2,769.1	2,743.4	2,743.2	8.2	4.8	75.38	-121.1	-729.5	552.2	539.4	12.83	43.022		
2,900.0	2,867.7	2,841.0	2,840.8	8.6	5.0	77.02	-121.6	-729.7	548.1	534.7	13.38	40.957		
3,000.0	2,966.2	2,938.4	2,938.3	8.9	5.1	78.72	-121.7	-730.0	544.7	530.7	13.93	39.103		
3,100.0	3,064.7	3,034.7	3,034.5	9.3	5.3	80.44	-121.5	-730.5	542.1	527.6	14.47	37.455		
3,200.0	3,163.2	3,130.9	3,130.8	9.6	5.5	82.16	-121.1	-731.4	540.4	525.4	15.01	35.995		
3,300.0	3,261.7	3,227.2	3,227.0	9.9	5.6	83.88	-120.7	-732.7	539.7	524.2	15.55	34.705		
3,322.7	3,284.1	3,249.0	3,248.9	10.0	5.7	84.28	-120.6	-733.0	539.7	524.0	15.67	34.434 CC		
3,400.0	3,360.2	3,324.1	3,323.9	10.3	5.8	85.61	-120.2	-734.4	539.9	523.8	16.09	33.563 ES		
3,500.0	3,458.7	3,421.3	3,421.1	10.6	6.0	87.29	-119.9	-736.5	540.9	524.3	16.62	32.548		
3,600.0	3,557.2	3,518.7	3,518.5	11.0	6.2	88.94	-119.7	-739.0	542.6	525.5	17.14	31.649		
3,700.0	3,655.7	3,616.7	3,616.4	11.3	6.3	90.56	-119.6	-741.8	545.0	527.3	17.66	30.852		
3,800.0	3,754.2	3,715.0	3,714.7	11.7	6.5	92.22	-119.1	-744.4	547.9	529.7	18.18	30.141		
3,900.0	3,852.7	3,813.0	3,812.7	12.0	6.7	93.93	-117.9	-746.6	551.4	532.7	18.68	29.512		
4,000.0	3,951.3	3,911.8	3,911.5	12.4	6.9	95.69	-116.3	-748.5	555.5	536.3	19.18	28.958		
4,100.0	4,049.8	4,012.5	4,012.2	12.7	7.0	97.44	-115.0	-750.4	559.8	540.1	19.67	28.451		
4,200.0	4,148.3	4,113.4	4,113.0	13.1	7.2	99.11	-114.3	-752.3	564.2	544.0	20.16	27.984		
4,300.0	4,246.8	4,214.0	4,213.6	13.4	7.4	100.71	-114.2	-754.2	568.6	548.0	20.64	27.553		
4,400.0	4,345.3	4,312.9	4,312.4	13.8	7.6	102.26	-114.1	-756.0	573.3	552.2	21.10	27.169		
4,500.0	4,443.8	4,411.7	4,411.2	14.1	7.7	103.82	-113.9	-757.4	578.4	556.9	21.56	26.834		
4,600.0	4,542.3	4,510.3	4,509.9	14.5	7.9	105.38	-113.5	-758.6	584.0	562.0	22.00	26.543		
4,700.0	4,640.8	4,608.7	4,608.3	14.8	8.1	106.92	-113.0	-759.7	589.9	567.5	22.44	26.295		
4,800.0	4,739.3	4,707.1	4,706.7	15.2	8.3	108.43	-112.4	-760.8	596.4	573.5	22.86	26.088		
4,900.0	4,837.8	4,805.5	4,805.0	15.5	8.4	109.92	-111.8	-761.8	603.2	580.0	23.27	25.918		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 34-17J (EXISTING) - ENCANA - SURVEYS												Offset Site Error: 0.0 ft	
Survey Program: 627-Geolink 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	
5,000.0	4,936.3	4,903.3	4,902.8	15.9	8.6	111.37	-111.1	-762.8	610.6	586.9	23.68	25.784	
5,100.0	5,034.9	5,001.0	5,000.5	16.2	8.8	112.79	-110.3	-763.9	618.4	594.3	24.08	25.684	
5,200.0	5,133.4	5,098.7	5,098.2	16.6	8.9	114.17	-109.4	-765.0	626.8	602.3	24.47	25.617	
5,300.0	5,231.9	5,195.9	5,195.4	16.9	9.1	115.50	-108.3	-766.2	635.6	610.8	24.85	25.580	
5,400.0	5,330.4	5,292.9	5,292.4	17.3	9.3	116.76	-107.3	-767.9	645.1	619.9	25.23	25.571	
5,500.0	5,428.9	5,390.8	5,390.2	17.6	9.5	117.95	-106.3	-770.2	655.2	629.5	25.61	25.585	
5,600.0	5,527.4	5,504.1	5,503.3	17.9	9.7	118.81	-108.4	-777.3	664.6	638.6	26.05	25.515	
5,700.0	5,625.9	5,592.7	5,591.4	18.3	9.9	119.20	-112.5	-785.1	672.9	646.4	26.49	25.398	
5,800.0	5,724.4	5,697.4	5,695.1	18.6	10.1	119.35	-117.5	-798.2	682.6	655.6	27.01	25.275	
5,900.0	5,822.9	5,808.4	5,804.4	19.0	10.3	119.12	-126.4	-815.5	690.7	663.1	27.60	25.030	
6,000.0	5,921.4	5,909.5	5,903.4	19.3	10.6	118.65	-136.2	-833.9	698.5	670.3	28.21	24.763	
6,100.0	6,020.0	6,010.2	6,001.0	19.7	10.8	117.87	-148.4	-855.2	705.6	676.7	28.88	24.432	
6,200.0	6,118.5	6,099.8	6,087.1	20.0	11.1	116.93	-160.2	-877.3	713.5	683.9	29.57	24.129	
6,300.0	6,217.0	6,187.5	6,170.0	20.4	11.4	115.70	-172.6	-903.0	723.0	692.7	30.32	23.848	
6,400.0	6,315.5	6,283.8	6,259.7	20.7	11.8	114.10	-187.2	-934.6	734.0	702.8	31.17	23.543	
6,500.0	6,414.0	6,367.4	6,336.8	21.1	12.1	112.58	-200.3	-964.3	746.5	714.5	32.00	23.328	
6,600.0	6,512.5	6,466.9	6,427.8	21.4	12.6	110.71	-215.8	-1,001.3	760.8	727.8	32.95	23.087	
6,704.9	6,615.8	6,597.0	6,546.0	21.8	13.3	108.15	-241.4	-1,049.3	772.9	738.8	34.15	22.631	
6,750.0	6,660.5	6,629.0	6,575.0	21.9	13.5	85.37	-248.0	-1,061.0	776.7	742.3	34.47	22.533	
6,800.0	6,710.2	6,670.8	6,613.2	22.0	13.7	38.23	-255.7	-1,076.2	778.7	743.9	34.71	22.431	
6,850.0	6,759.8	6,727.7	6,665.5	22.0	14.0	1.81	-265.7	-1,096.1	777.5	742.6	34.91	22.274	
6,900.0	6,809.0	6,765.1	6,700.0	22.0	14.2	-14.70	-272.4	-1,109.1	773.3	738.4	34.83	22.203	
6,950.0	6,857.3	6,801.3	6,733.3	21.9	14.4	-23.67	-278.3	-1,122.0	767.0	732.4	34.59	22.172	
7,000.0	6,904.4	6,838.4	6,767.7	21.8	14.6	-29.80	-283.7	-1,134.7	758.5	724.3	34.23	22.159	
7,050.0	6,949.9	6,870.6	6,797.7	21.6	14.7	-34.52	-287.9	-1,145.7	748.4	714.6	33.72	22.193	
7,100.0	6,993.4	6,918.9	6,842.9	21.4	15.0	-39.49	-293.4	-1,162.0	736.5	703.3	33.21	22.179	
7,150.0	7,034.7	6,986.0	6,906.6	21.2	15.3	-45.43	-301.1	-1,181.4	721.5	688.8	32.71	22.061	
7,200.0	7,073.5	7,019.4	6,938.5	20.9	15.5	-49.76	-304.8	-1,190.4	705.1	673.1	32.00	22.033	
7,250.0	7,109.4	7,051.9	6,969.7	20.6	15.6	-54.15	-308.1	-1,199.0	688.2	656.9	31.30	21.988	
7,300.0	7,142.1	7,092.8	7,009.1	20.3	15.8	-59.27	-311.9	-1,209.2	671.0	640.3	30.66	21.883	
7,350.0	7,171.4	7,125.8	7,041.1	20.0	15.9	-63.96	-314.9	-1,216.8	653.8	623.8	30.05	21.760	
7,400.0	7,197.2	7,160.3	7,074.7	19.7	16.0	-68.82	-317.9	-1,224.0	637.5	608.0	29.50	21.609	
7,450.0	7,219.1	7,185.1	7,099.0	19.4	16.1	-72.78	-319.9	-1,228.8	622.7	593.7	29.00	21.476	
7,500.0	7,237.0	7,202.8	7,116.2	19.1	16.2	-75.87	-321.4	-1,232.1	610.3	581.7	28.54	21.380	
7,550.0	7,250.9	7,214.7	7,127.9	18.8	16.2	-78.10	-322.3	-1,234.2	600.8	572.6	28.15	21.345 SF	
7,600.0	7,260.5	7,221.5	7,134.6	18.6	16.3	-79.45	-322.8	-1,235.4	594.8	567.0	27.80	21.394	
7,650.0	7,265.8	7,223.4	7,136.5	18.4	16.3	-79.91	-323.0	-1,235.7	592.6	565.1	27.50	21.550	
7,653.9	7,266.1	7,223.3	7,136.4	18.4	16.3	-79.91	-323.0	-1,235.7	592.5	565.1	27.48	21.566	
7,686.5	7,267.0	7,221.1	7,134.2	18.3	16.3	-79.62	-322.8	-1,235.3	593.4	566.1	27.29	21.745	
7,700.0	7,267.0	7,219.8	7,132.9	18.2	16.2	-79.49	-322.7	-1,235.1	594.2	567.0	27.23	21.823	
7,800.0	7,267.0	7,210.2	7,123.5	18.0	16.2	-78.57	-321.9	-1,233.4	609.6	582.7	26.90	22.658	
7,900.0	7,267.0	7,200.4	7,113.9	17.9	16.2	-77.63	-321.2	-1,231.6	640.3	613.5	26.79	23.900	
8,000.0	7,267.0	7,190.4	7,104.2	18.1	16.1	-76.67	-320.4	-1,229.8	684.3	657.4	26.89	25.451	
8,100.0	7,267.0	7,178.0	7,092.0	18.3	16.1	-75.48	-319.4	-1,227.5	739.1	712.0	27.16	27.210	
8,200.0	7,267.0	7,165.2	7,079.5	18.8	16.1	-74.25	-318.3	-1,225.0	802.6	775.0	27.62	29.064	
8,300.0	7,267.0	7,149.7	7,064.3	19.4	16.0	-72.77	-317.0	-1,221.9	872.8	844.6	28.19	30.959	
8,400.0	7,267.0	7,131.8	7,046.9	20.1	15.9	-71.06	-315.4	-1,218.1	948.2	919.4	28.86	32.852	

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8150-Geolink MWD													Offset Well Error:	0.0 ft
Offset				Semi Major Axis			Distance						Warning	
Reference	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Total	Separation		
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Uncertainty Axis	Factor		
8,500.0	7,267.0	7,245.0	7,245.0	21.0	12.6	90.00	1,047.3	157.1	965.9	935.7	30.20	31.984		
8,600.0	7,267.0	7,245.0	7,245.0	21.9	12.6	90.00	1,047.3	157.1	915.2	883.9	31.34	29.205		
8,700.0	7,267.0	7,245.0	7,245.0	23.0	12.6	90.00	1,047.3	157.1	873.1	840.5	32.56	26.810		
8,800.0	7,267.0	7,245.0	7,245.0	24.1	12.6	90.00	1,047.3	157.1	840.8	806.9	33.87	24.826		
8,900.0	7,267.0	7,245.0	7,245.0	25.3	12.6	90.00	1,047.3	157.1	819.4	784.2	35.23	23.261		
9,000.0	7,267.0	7,245.0	7,245.0	26.6	12.6	90.00	1,047.3	157.1	810.0	773.4	36.64	22.106		
9,026.9	7,267.0	7,245.0	7,245.0	26.9	12.6	90.00	1,047.3	157.1	809.6	772.5	37.03	21.860	CC, ES	
9,100.0	7,267.0	7,245.0	7,245.0	27.9	12.6	90.00	1,047.3	157.1	812.9	774.8	38.10	21.336		
9,200.0	7,267.0	7,245.0	7,245.0	29.3	12.6	90.00	1,047.3	157.1	827.9	788.3	39.59	20.912		
9,300.0	7,267.0	7,245.0	7,245.0	30.7	12.6	90.00	1,047.3	157.1	854.4	813.3	41.11	20.783	SF	
9,400.0	7,267.0	7,245.0	7,245.0	32.1	12.6	90.00	1,047.3	157.1	891.4	848.7	42.66	20.897		
9,500.0	7,267.0	7,245.0	7,245.0	33.6	12.6	90.00	1,047.3	157.1	937.7	893.4	44.22	21.202		
9,600.0	7,267.0	7,245.0	7,245.0	35.1	12.6	90.00	1,047.3	157.1	991.9	946.1	45.81	21.651		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 44-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 642-Geolink 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	-99.60	-111.8	-661.3	671.2					
100.0	100.0	74.0	74.0	0.1	0.1	-99.60	-111.8	-661.3	670.7	670.4	0.25	2,666.559		
200.0	200.0	174.0	174.0	0.3	0.3	-99.60	-111.8	-661.3	670.7	670.1	0.60	1,116.749		
300.0	300.0	274.0	274.0	0.5	0.5	-99.60	-111.8	-661.3	670.7	669.7	0.95	706.266		
400.0	400.0	374.0	374.0	0.6	0.7	-99.60	-111.8	-661.3	670.7	669.4	1.30	516.439		
500.0	500.0	474.0	474.0	0.8	0.8	46.16	-111.8	-661.3	669.4	667.8	1.65	406.096		
600.0	599.8	573.8	573.8	1.0	1.0	46.54	-111.8	-661.3	665.8	663.8	2.00	332.269		
700.0	699.5	674.7	674.7	1.2	1.2	47.22	-111.4	-661.3	659.8	657.4	2.37	277.894		
800.0	798.7	773.3	773.3	1.5	1.4	48.28	-109.6	-661.4	651.4	648.7	2.76	235.690		
895.3	892.8	866.8	866.7	1.8	1.5	49.56	-107.8	-661.6	641.6	638.4	3.16	202.819		
900.0	897.5	871.4	871.4	1.8	1.5	49.62	-107.7	-661.6	641.1	637.9	3.18	201.349		
1,000.0	996.0	969.2	969.1	2.1	1.7	50.98	-105.8	-661.9	630.0	626.4	3.62	173.853		
1,100.0	1,094.5	1,064.8	1,064.8	2.4	1.9	52.35	-103.8	-662.4	619.6	615.6	4.08	152.017		
1,200.0	1,193.0	1,160.4	1,160.3	2.7	2.0	53.79	-101.6	-663.3	610.1	605.5	4.54	134.364		
1,300.0	1,291.5	1,256.1	1,256.0	3.1	2.2	55.27	-99.4	-664.6	601.3	596.3	5.02	119.896		
1,400.0	1,390.0	1,359.1	1,358.9	3.4	2.4	56.89	-97.3	-666.1	593.0	587.5	5.51	107.628		
1,500.0	1,488.5	1,465.3	1,465.1	3.7	2.6	58.47	-96.5	-666.3	584.0	577.9	6.02	97.047		
1,600.0	1,587.0	1,571.7	1,571.5	4.1	2.7	59.98	-97.1	-665.1	573.9	567.4	6.53	87.876		
1,700.0	1,685.5	1,662.0	1,661.8	4.4	2.9	61.32	-97.6	-663.8	563.9	556.9	7.02	80.286		
1,800.0	1,784.1	1,764.9	1,764.7	4.8	3.1	63.21	-94.8	-663.2	555.6	548.0	7.56	73.504		
1,900.0	1,882.6	1,876.5	1,876.2	5.1	3.3	65.42	-91.4	-660.0	545.6	537.5	8.12	67.165		
2,000.0	1,981.1	1,971.4	1,971.0	5.4	3.5	67.21	-90.1	-656.6	535.3	526.6	8.65	61.888		
2,100.0	2,079.6	2,067.4	2,067.0	5.8	3.6	68.88	-90.6	-654.0	526.0	516.8	9.18	57.306		
2,200.0	2,178.1	2,163.6	2,163.2	6.1	3.8	70.60	-91.0	-651.8	517.6	507.9	9.71	53.288		
2,300.0	2,276.6	2,260.2	2,259.7	6.5	4.0	72.39	-91.2	-649.9	510.1	499.8	10.25	49.752		
2,400.0	2,375.1	2,356.7	2,356.2	6.8	4.1	74.24	-91.3	-648.3	503.4	492.7	10.79	46.639		
2,500.0	2,473.6	2,453.4	2,452.8	7.2	4.3	76.14	-91.2	-647.0	497.8	486.4	11.34	43.896		
2,600.0	2,572.1	2,550.9	2,550.4	7.5	4.5	78.14	-90.7	-645.8	492.9	481.0	11.89	41.459		
2,700.0	2,670.6	2,648.3	2,647.8	7.9	4.6	80.21	-89.8	-644.6	488.9	476.4	12.44	39.304		
2,800.0	2,769.1	2,745.6	2,745.0	8.2	4.8	82.36	-88.4	-643.4	485.7	472.7	12.98	37.406		
2,900.0	2,867.7	2,858.4	2,857.8	8.6	5.0	84.73	-88.8	-641.2	481.8	468.2	13.55	35.554		
3,000.0	2,966.2	2,953.2	2,952.6	8.9	5.2	86.62	-90.6	-639.0	477.4	463.4	14.08	33.919		
3,100.0	3,064.7	3,048.1	3,047.5	9.3	5.3	88.55	-92.0	-637.3	474.4	459.8	14.60	32.504		
3,200.0	3,163.2	3,143.2	3,142.5	9.6	5.5	90.50	-92.9	-636.3	472.8	457.7	15.11	31.289		
3,291.0	3,252.9	3,230.8	3,230.1	9.9	5.7	92.30	-93.6	-635.8	472.3	456.8	15.57	30.330 CC		
3,300.0	3,261.7	3,239.4	3,238.8	9.9	5.7	92.48	-93.6	-635.7	472.3	456.7	15.62	30.243 ES		
3,400.0	3,360.2	3,335.7	3,335.0	10.3	5.8	94.43	-94.2	-635.7	473.0	456.9	16.12	29.345		
3,500.0	3,458.7	3,432.0	3,431.3	10.6	6.0	96.35	-94.7	-636.1	474.7	458.1	16.61	28.581		
3,600.0	3,557.2	3,527.8	3,527.1	11.0	6.2	98.23	-94.9	-637.1	477.5	460.4	17.09	27.941		
3,700.0	3,655.7	3,623.5	3,622.8	11.3	6.3	100.07	-94.7	-638.4	481.4	463.9	17.56	27.417		
3,800.0	3,754.2	3,719.1	3,718.4	11.7	6.5	101.89	-94.1	-640.2	486.5	468.5	18.02	26.999		
3,900.0	3,852.7	3,831.1	3,830.4	12.0	6.7	103.99	-93.8	-641.7	491.6	473.2	18.49	26.594		
4,000.0	3,951.3	3,932.6	3,931.9	12.4	6.9	105.92	-94.9	-641.1	494.8	475.9	18.93	26.141		
4,100.0	4,049.8	4,030.9	4,030.2	12.7	7.0	107.75	-96.2	-640.5	498.5	479.2	19.36	25.756		
4,200.0	4,148.3	4,129.3	4,128.6	13.1	7.2	109.53	-97.5	-640.2	502.8	483.1	19.77	25.430		
4,300.0	4,246.8	4,226.5	4,225.8	13.4	7.4	111.24	-98.8	-640.1	507.7	487.6	20.18	25.162		
4,400.0	4,345.3	4,323.1	4,322.4	13.8	7.6	112.89	-99.8	-640.2	513.5	492.9	20.57	24.958		
4,500.0	4,443.8	4,419.7	4,418.9	14.1	7.7	114.50	-100.5	-640.6	520.1	499.1	20.96	24.813		
4,600.0	4,542.3	4,517.1	4,516.3	14.5	7.9	116.07	-101.0	-641.3	527.5	506.1	21.34	24.719		
4,700.0	4,640.8	4,615.5	4,614.7	14.8	8.1	117.61	-101.3	-642.1	535.3	513.6	21.71	24.660		
4,800.0	4,739.3	4,713.8	4,713.0	15.2	8.2	119.11	-101.7	-642.9	543.6	521.6	22.07	24.633		
4,900.0	4,837.8	4,811.8	4,811.0	15.5	8.4	120.56	-102.0	-643.7	552.4	530.0	22.42	24.634		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 44-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 642-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	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)						
5,000.0	4,936.3	4,908.9	4,908.1	15.9	8.6	121.96	-102.0	-644.4	561.7	538.9	22.77	24.668		
5,100.0	5,034.9	5,028.8	5,027.8	16.2	8.8	124.13	-102.2	-639.8	569.5	546.5	23.07	24.692		
5,200.0	5,133.4	5,157.4	5,155.4	16.6	9.0	127.32	-104.7	-624.0	573.5	550.3	23.25	24.665		
5,300.0	5,231.9	5,291.4	5,287.1	16.9	9.3	131.09	-112.5	-600.6	573.8	550.4	23.36	24.566		
5,400.0	5,330.4	5,415.8	5,407.2	17.3	9.6	135.18	-126.0	-571.3	569.1	545.7	23.39	24.331		
5,500.0	5,428.9	5,515.6	5,502.3	17.6	9.9	138.87	-138.8	-543.7	563.9	540.5	23.42	24.079		
5,600.0	5,527.4	5,599.5	5,581.4	17.9	10.1	142.30	-149.1	-517.6	561.1	537.7	23.44	23.934 SF		
5,635.2	5,562.1	5,634.4	5,614.0	18.1	10.2	143.83	-153.1	-505.9	561.0	537.6	23.43	23.942		
5,700.0	5,625.9	5,698.2	5,672.5	18.3	10.5	146.86	-160.9	-481.7	561.4	538.0	23.40	23.995		
5,800.0	5,724.4	5,797.7	5,762.2	18.6	10.9	151.90	-174.3	-440.9	564.2	540.8	23.35	24.166		
5,900.0	5,822.9	5,882.1	5,836.9	19.0	11.4	156.38	-186.9	-403.6	570.5	547.1	23.38	24.400		
6,000.0	5,921.4	5,967.4	5,911.6	19.3	11.9	160.94	-199.4	-364.5	582.0	558.5	23.49	24.781		
6,100.0	6,020.0	6,050.6	5,983.9	19.7	12.4	165.35	-212.7	-325.4	597.6	573.9	23.68	25.231		
6,200.0	6,118.5	6,129.8	6,054.0	20.0	12.9	169.15	-223.4	-290.2	618.7	594.7	23.98	25.804		
6,300.0	6,217.0	6,216.8	6,130.3	20.4	13.5	173.20	-236.3	-250.6	643.0	618.6	24.40	26.356		
6,400.0	6,315.5	6,313.0	6,215.4	20.7	14.1	177.31	-250.8	-208.1	669.9	644.9	24.95	26.845		
6,500.0	6,414.0	6,414.8	6,304.4	21.1	14.9	-178.48	-268.4	-162.0	699.1	673.4	25.69	27.211		
6,600.0	6,512.5	6,481.4	6,362.0	21.4	15.4	-175.77	-281.5	-131.0	730.2	703.9	26.32	27.746		
6,704.9	6,615.8	6,571.8	6,440.1	21.8	16.1	-172.38	-297.8	-88.7	766.9	739.8	27.15	28.243		
6,750.0	6,660.5	6,598.0	6,463.2	21.9	16.3	165.08	-301.9	-76.9	782.4	754.9	27.52	28.435		
6,800.0	6,710.2	6,629.0	6,490.3	22.0	16.6	118.85	-306.3	-62.5	798.1	770.2	27.85	28.654		
6,850.0	6,759.8	6,665.1	6,521.7	22.0	16.8	84.47	-311.3	-45.5	811.8	783.7	28.13	28.855		
6,900.0	6,809.0	6,715.7	6,566.2	22.0	17.2	70.65	-318.0	-22.3	823.0	794.6	28.42	28.954		
6,950.0	6,857.3	6,774.4	6,618.7	21.9	17.7	65.19	-325.4	2.8	831.3	802.6	28.69	28.976		
7,000.0	6,904.4	6,813.9	6,654.1	21.8	18.0	62.37	-330.9	19.6	837.2	808.5	28.76	29.108		
7,050.0	6,949.9	6,875.6	6,709.6	21.6	18.4	62.36	-340.0	44.8	840.8	811.8	28.97	29.027		
7,100.0	6,993.4	6,930.5	6,759.9	21.4	18.8	63.12	-347.6	65.5	842.3	813.2	29.07	28.975		
7,150.0	7,034.7	6,987.1	6,812.8	21.2	19.1	64.70	-354.1	84.5	841.8	812.6	29.16	28.872		
7,200.0	7,073.5	7,033.3	6,856.4	20.9	19.4	66.33	-359.1	98.9	839.7	810.6	29.15	28.810		
7,250.0	7,109.4	7,056.5	6,878.5	20.6	19.5	67.11	-361.5	105.9	837.0	808.1	28.95	28.910		
7,300.0	7,142.1	7,077.0	6,897.8	20.3	19.6	67.97	-363.5	112.2	834.4	805.7	28.73	29.040		
7,350.0	7,171.4	7,098.0	6,917.6	20.0	19.7	69.03	-365.6	118.8	832.0	803.5	28.52	29.175		
7,400.0	7,197.2	7,124.6	6,942.8	19.7	19.9	70.55	-368.0	127.0	830.0	801.7	28.36	29.271		
7,450.0	7,219.1	7,174.4	6,990.4	19.4	20.1	73.69	-372.0	141.1	828.3	799.9	28.39	29.181		
7,500.0	7,237.0	7,209.8	7,024.6	19.1	20.3	75.95	-374.5	149.9	827.1	798.8	28.28	29.242		
7,529.3	7,245.7	7,224.1	7,038.5	19.0	20.4	76.85	-375.3	153.2	826.9	798.7	28.18	29.340		
7,550.0	7,250.9	7,235.3	7,049.4	18.8	20.4	77.55	-376.0	155.6	827.0	798.9	28.11	29.418		
7,600.0	7,260.5	7,254.5	7,068.2	18.6	20.5	78.64	-377.1	159.6	828.3	800.4	27.91	29.681		
7,650.0	7,265.8	7,258.9	7,072.4	18.4	20.5	78.61	-377.3	160.5	831.2	803.6	27.63	30.085		
7,686.5	7,267.0	7,257.5	7,071.0	18.3	20.5	78.19	-377.2	160.2	834.5	807.1	27.42	30.438		
7,700.0	7,267.0	7,256.2	7,069.8	18.2	20.5	78.10	-377.2	160.0	835.9	808.6	27.36	30.559		
7,800.0	7,267.0	7,239.2	7,053.2	18.0	20.4	76.93	-376.2	156.5	853.4	826.4	26.97	31.637		
7,900.0	7,267.0	7,218.8	7,033.3	17.9	20.3	75.52	-375.0	152.0	881.7	854.9	26.78	32.923		
8,000.0	7,267.0	7,199.9	7,015.0	18.1	20.2	74.23	-373.8	147.5	920.0	893.2	26.81	34.318		
8,100.0	7,267.0	7,160.0	6,976.6	18.3	20.1	71.49	-371.0	137.3	967.0	940.1	26.86	35.995		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 5000-Geolink 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	-121.50	-358.4	-584.9	686.4					
100.0	100.0	77.0	77.0	0.1	0.1	-121.50	-358.4	-584.9	686.0	685.8	0.26	2,671.807		
200.0	200.0	177.0	177.0	0.3	0.3	-121.50	-358.4	-584.9	686.0	685.4	0.61	1,132.369		
300.0	300.0	277.0	277.0	0.5	0.5	-121.50	-358.4	-584.9	686.0	685.1	0.95	718.427		
400.0	400.0	377.0	377.0	0.6	0.7	-121.50	-358.4	-584.9	686.0	684.7	1.30	526.107		
500.0	500.0	477.0	477.0	0.8	0.8	24.21	-358.4	-584.9	684.4	682.8	1.65	414.092		
600.0	599.8	576.8	576.8	1.0	1.0	24.43	-358.4	-584.9	679.7	677.6	2.00	339.433		
700.0	699.5	676.5	676.5	1.2	1.2	24.80	-358.4	-584.9	671.7	669.4	2.35	285.303		
800.0	798.7	775.7	775.7	1.5	1.4	25.34	-358.4	-584.9	660.7	658.0	2.71	243.622		
895.3	892.8	869.8	869.8	1.8	1.5	26.02	-358.4	-584.9	647.3	644.2	3.06	211.488		
900.0	897.5	874.5	874.5	1.8	1.5	26.05	-358.4	-584.9	646.5	643.5	3.08	210.024		
1,000.0	996.0	973.0	973.0	2.1	1.7	26.74	-358.4	-584.9	631.1	627.6	3.46	182.467		
1,100.0	1,094.5	1,071.5	1,071.5	2.4	1.9	27.45	-358.4	-584.9	615.7	611.9	3.85	160.121		
1,200.0	1,193.0	1,170.0	1,170.0	2.7	2.0	28.21	-358.4	-584.9	600.5	596.2	4.24	141.673		
1,300.0	1,291.5	1,268.5	1,268.5	3.1	2.2	29.00	-358.4	-584.9	585.3	580.7	4.64	126.208		
1,400.0	1,390.0	1,367.0	1,367.0	3.4	2.4	29.84	-358.4	-584.9	570.3	565.2	5.04	113.072		
1,500.0	1,488.5	1,465.5	1,465.5	3.7	2.6	30.71	-358.4	-584.9	555.4	549.9	5.46	101.790		
1,600.0	1,587.0	1,564.0	1,564.0	4.1	2.7	31.64	-358.4	-584.9	540.6	534.7	5.88	92.005		
1,700.0	1,685.5	1,662.5	1,662.5	4.4	2.9	32.62	-358.4	-584.9	526.0	519.7	6.30	83.447		
1,800.0	1,784.1	1,761.1	1,761.1	4.8	3.1	33.66	-358.4	-584.9	511.5	504.7	6.74	75.908		
1,900.0	1,882.6	1,859.6	1,859.6	5.1	3.2	34.75	-358.4	-584.9	497.2	490.0	7.18	69.224		
2,000.0	1,981.1	1,958.1	1,958.1	5.4	3.4	35.91	-358.4	-584.9	483.1	475.5	7.64	63.265		
2,100.0	2,079.6	2,056.6	2,056.6	5.8	3.6	37.13	-358.4	-584.9	469.2	461.1	8.10	57.927		
2,200.0	2,178.1	2,155.1	2,155.1	6.1	3.8	38.43	-358.4	-584.9	455.5	446.9	8.57	53.127		
2,300.0	2,276.6	2,253.6	2,253.6	6.5	3.9	39.81	-358.4	-584.9	442.1	433.0	9.06	48.795		
2,400.0	2,375.1	2,352.1	2,352.1	6.8	4.1	41.27	-358.4	-584.9	428.9	419.4	9.56	44.875		
2,500.0	2,473.6	2,450.6	2,450.6	7.2	4.3	42.82	-358.4	-584.9	416.1	406.0	10.07	41.319		
2,600.0	2,572.1	2,549.1	2,549.1	7.5	4.4	44.47	-358.4	-584.9	403.5	392.9	10.59	38.088		
2,700.0	2,670.6	2,647.6	2,647.6	7.9	4.6	46.22	-358.4	-584.9	391.4	380.2	11.13	35.150		
2,800.0	2,769.1	2,746.1	2,746.1	8.2	4.8	48.08	-358.4	-584.9	379.6	367.9	11.69	32.475		
2,900.0	2,867.7	2,844.7	2,844.7	8.6	5.0	50.05	-358.4	-584.9	368.2	355.9	12.26	30.040		
3,000.0	2,966.2	2,943.2	2,943.2	8.9	5.1	52.15	-358.4	-584.9	357.3	344.4	12.84	27.826		
3,100.0	3,064.7	3,041.7	3,041.7	9.3	5.3	54.37	-358.4	-584.9	346.9	333.5	13.44	25.815		
3,200.0	3,163.2	3,140.2	3,140.2	9.6	5.5	56.73	-358.4	-584.9	337.1	323.0	14.05	23.992		
3,300.0	3,261.7	3,238.7	3,238.7	9.9	5.7	59.21	-358.4	-584.9	327.8	313.2	14.67	22.344		
3,400.0	3,360.2	3,337.2	3,337.2	10.3	5.8	61.83	-358.4	-584.9	319.3	304.0	15.31	20.860		
3,500.0	3,458.7	3,435.7	3,435.7	10.6	6.0	64.59	-358.4	-584.9	311.4	295.5	15.95	19.530		
3,600.0	3,557.2	3,534.2	3,534.2	11.0	6.2	67.48	-358.4	-584.9	304.4	287.8	16.59	18.345		
3,700.0	3,655.7	3,632.7	3,632.7	11.3	6.3	70.50	-358.4	-584.9	298.1	280.9	17.23	17.297		
3,800.0	3,754.2	3,731.2	3,731.2	11.7	6.5	73.63	-358.4	-584.9	292.7	274.9	17.87	16.378		
3,900.0	3,852.7	3,829.7	3,829.7	12.0	6.7	76.86	-358.4	-584.9	288.3	269.8	18.50	15.583		
4,000.0	3,951.3	3,928.3	3,928.3	12.4	6.9	80.19	-358.4	-584.9	284.8	265.7	19.11	14.902		
4,100.0	4,049.8	4,026.8	4,026.8	12.7	7.0	83.58	-358.4	-584.9	282.3	262.6	19.70	14.331		
4,200.0	4,148.3	4,125.3	4,125.3	13.1	7.2	87.01	-358.4	-584.9	280.9	260.6	20.26	13.862		
4,286.4	4,233.3	4,210.3	4,210.3	13.4	7.3	90.00	-358.4	-584.9	280.5	259.8	20.73	13.535 CC		
4,300.0	4,246.8	4,223.8	4,223.8	13.4	7.4	90.47	-358.4	-584.9	280.5	259.7	20.80	13.489 ES		
4,400.0	4,345.3	4,322.3	4,322.3	13.8	7.5	93.93	-358.4	-584.9	281.2	259.9	21.29	13.206		
4,500.0	4,443.8	4,420.8	4,420.8	14.1	7.7	97.35	-358.4	-584.9	282.9	261.2	21.75	13.005		
4,600.0	4,542.3	4,519.3	4,519.3	14.5	7.9	100.73	-358.4	-584.9	285.7	263.5	22.18	12.880		
4,700.0	4,640.8	4,617.8	4,617.8	14.8	8.1	104.03	-358.4	-584.9	289.4	266.8	22.57	12.825 SF		
4,800.0	4,739.3	4,716.3	4,716.3	15.2	8.2	107.24	-358.4	-584.9	294.1	271.2	22.92	12.833		
4,900.0	4,837.8	4,814.8	4,814.8	15.5	8.4	110.34	-358.4	-584.9	299.7	276.5	23.24	12.899		

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 Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5000-Geolink 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		
5,000.0	4,936.3	4,913.3	4,913.3	15.9	8.6	113.32	-358.4	-584.9	306.2	282.7	23.53	13.015		
5,100.0	5,034.9	5,000.0	5,000.0	16.2	8.7	115.84	-358.4	-584.9	313.7	289.9	23.80	13.181		
5,200.0	5,133.4	5,000.0	5,000.0	16.6	8.7	115.84	-358.4	-584.9	340.0	315.8	24.12	14.092		
5,300.0	5,231.9	5,000.0	5,000.0	16.9	8.7	115.84	-358.4	-584.9	390.8	366.4	24.45	15.986		
5,400.0	5,330.4	5,000.0	5,000.0	17.3	8.7	115.84	-358.4	-584.9	458.1	433.4	24.77	18.496		
5,500.0	5,428.9	5,000.0	5,000.0	17.6	8.7	115.84	-358.4	-584.9	535.7	510.7	25.09	21.352		
5,600.0	5,527.4	5,000.0	5,000.0	17.9	8.7	115.84	-358.4	-584.9	619.8	594.4	25.41	24.389		
5,700.0	5,625.9	5,000.0	5,000.0	18.3	8.7	115.84	-358.4	-584.9	708.0	682.3	25.74	27.512		
5,800.0	5,724.4	5,000.0	5,000.0	18.6	8.7	115.84	-358.4	-584.9	799.1	773.0	26.06	30.664		
5,900.0	5,822.9	5,000.0	5,000.0	19.0	8.7	115.84	-358.4	-584.9	892.0	865.6	26.38	33.812		
6,000.0	5,921.4	5,000.0	5,000.0	19.3	8.7	115.84	-358.4	-584.9	986.3	959.6	26.70	36.935		

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - SATER 24-8 (EXISTING) - KERRMCGEE WELL - SURVEYS											Offset Site Error:		0.0 ft	
Survey Program: 15-Geolink MWD											Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
14,200.0	7,267.0	7,363.6	7,211.5	112.3	24.2	94.29	7,099.7	-405.5	913.5	789.3	124.26	7.352		
14,300.0	7,267.0	7,361.6	7,209.6	114.0	24.2	93.85	7,099.8	-405.5	817.7	691.6	126.07	6.486		
14,400.0	7,267.0	7,359.8	7,207.7	115.8	24.2	93.41	7,099.8	-405.4	723.0	595.2	127.87	5.655		
14,500.0	7,267.0	7,357.9	7,205.9	117.5	24.2	92.98	7,099.8	-405.4	630.0	500.3	129.66	4.859		
14,535.9	7,267.0	7,357.2	7,205.2	118.1	24.2	92.83	7,099.9	-405.4	597.1	466.8	130.30	4.582	CC, ES, SF	

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S5-T2N-R67W (Vogl-McCoy) - SATER 24-8 (EXISTING) - KERR-MCGEE WELL - SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 15-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
14,200.0	7,267.0	7,380.9	7,228.9	112.3	24.2	94.83	7,100.2	-404.8	914.2	790.0	124.17	7.363	
14,300.0	7,267.0	7,378.9	7,226.9	114.0	24.2	94.36	7,100.2	-404.8	818.4	692.4	125.98	6.496	
14,400.0	7,267.0	7,376.9	7,224.8	115.8	24.2	93.89	7,100.3	-404.7	723.8	596.0	127.80	5.663	
14,500.0	7,267.0	7,374.9	7,222.9	117.5	24.2	93.43	7,100.3	-404.7	630.8	501.2	129.60	4.867	
14,535.9	7,267.0	7,374.2	7,222.1	118.1	24.2	93.27	7,100.3	-404.7	597.9	467.6	130.25	4.590	CC, ES, SF

Cathedral Energy Services

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4E-17H-P267
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4983.0ft
Reference Site:	S17-T2N-R67W (Big Horn)	MD Reference:	WELL @ 4983.0ft
Site Error:	0.0ft	North Reference:	True
Reference Well:	Bighorn 4E-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S9-T2N-R67W (Sprague) - DIER 1 (EXISTING) - ENCANA WELL - EXISTING - VES 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation	Warning					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor						
13,800.0	7,267.0	7,250.8	7,249.9	105.4	6.4	91.67	6,310.6	202.8	986.0	875.0	111.04	8.880						
13,900.0	7,267.0	7,251.6	7,250.8	107.1	6.4	91.73	6,310.6	202.8	940.3	827.6	112.77	8.338						
14,000.0	7,267.0	7,252.5	7,251.7	108.8	6.4	91.79	6,310.6	202.7	903.4	788.9	114.51	7.890						
14,100.0	7,267.0	7,253.3	7,252.5	110.6	6.4	91.84	6,310.6	202.7	876.4	760.2	116.25	7.540						
14,200.0	7,267.0	7,254.2	7,253.4	112.3	6.4	91.90	6,310.6	202.7	860.3	742.3	117.98	7.292						
14,290.2	7,267.0	7,255.0	7,254.1	113.9	6.4	91.95	6,310.6	202.6	855.6	736.0	119.55	7.157 CC						
14,300.0	7,267.0	7,255.1	7,254.2	114.0	6.4	91.96	6,310.6	202.6	855.6	735.9	119.72	7.147 ES						
14,400.0	7,267.0	7,255.9	7,255.1	115.8	6.4	92.02	6,310.7	202.6	862.6	741.1	121.46	7.102 SF						
14,500.0	7,267.0	7,256.8	7,255.9	117.5	6.4	92.07	6,310.7	202.6	880.9	757.7	123.20	7.151						
14,535.9	7,267.0	7,257.1	7,256.2	118.1	6.4	92.09	6,310.7	202.6	890.2	766.3	123.82	7.189						

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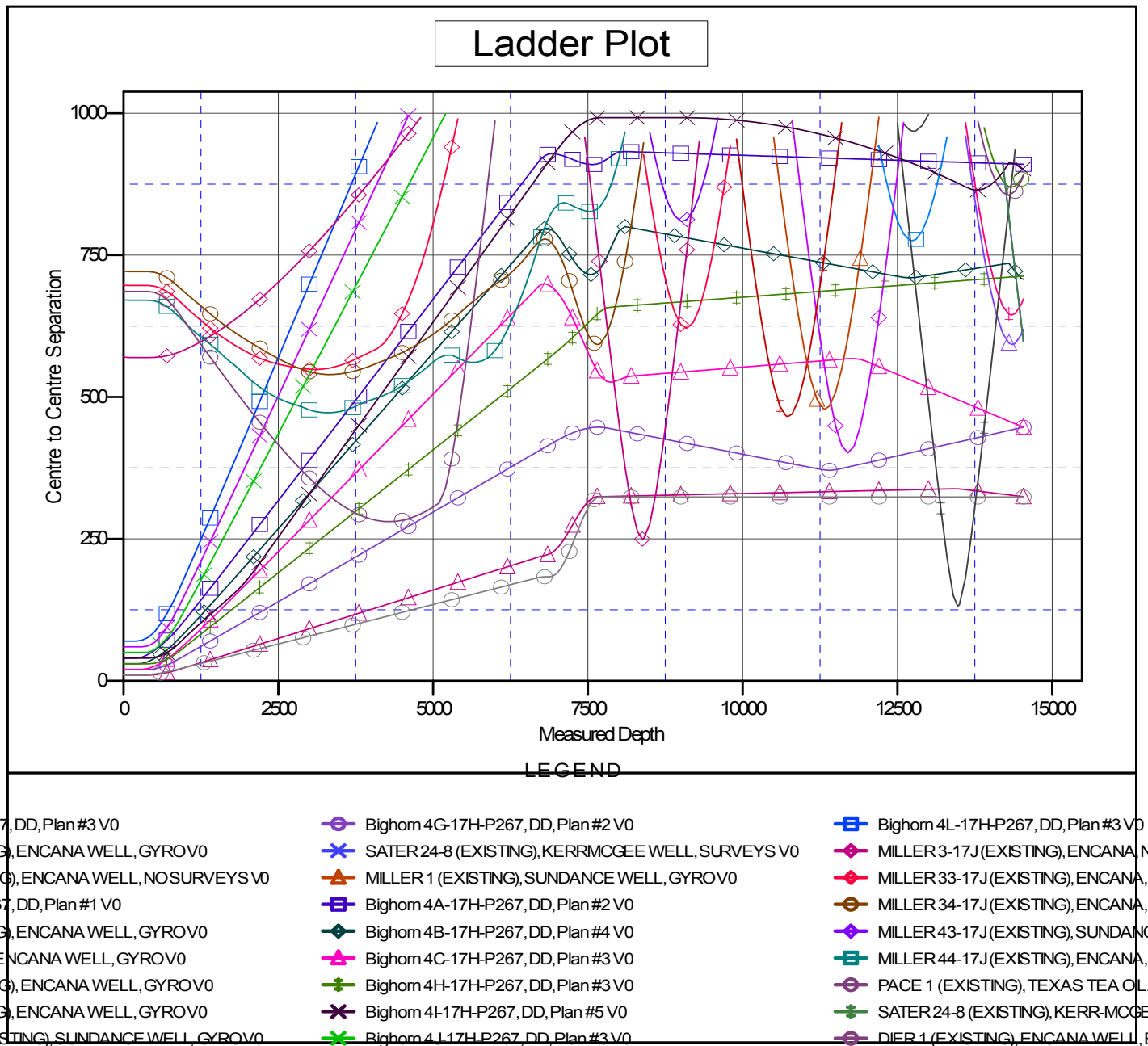
Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: DJ Wattenberg
Reference Site: S17-T2N-R67W (Big Horn)
Site Error: 0.0ft
Reference Well: Bighorn 4E-17H-P267
Well Error: 0.0ft
Reference Wellbore: DD
Reference Design: Plan #1

Local Co-ordinate Reference: Well Bighorn 4E-17H-P267
TVD Reference: WELL @ 4983.0ft
MD Reference: WELL @ 4983.0ft
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 @ 4983.0ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Bighorn 4E-17H-P267
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.38°



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