

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #4		

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 4B-17H-P267					
Well Position	+N/-S	0.0 ft	Northing:	1,292,099.71 ft	Latitude:	40.133684
	+E/-W	0.0 ft	Easting:	3,165,505.47 ft	Longitude:	-104.908091
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 #4			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
852.7	12.05	250.91	848.2	-20.7	-59.7	2.00	2.00	0.00	250.91	
7,036.3	12.05	250.91	6,895.5	-442.9	-1,279.9	0.00	0.00	0.00	0.00	
7,977.8	90.00	1.20	7,498.0	131.0	-1,388.6	10.00	8.28	11.71	109.87	
12,447.8	90.00	1.20	7,498.0	4,600.0	-1,295.0	0.00	0.00	0.00	0.00	Target 1
12,667.8	90.00	359.00	7,498.0	4,820.0	-1,294.6	1.00	0.00	-1.00	-90.00	
14,167.8	90.00	359.00	7,498.0	6,319.8	-1,320.8	0.00	0.00	0.00	0.00	
14,412.1	90.00	14.98	7,498.0	6,561.5	-1,291.2	6.54	0.00	6.54	90.00	Bighorn 4B-17H-P267

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Well:	Bighorn 4B-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #4		

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	
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	Start Build 2.00
300.0	1.00	250.91	300.0	-0.1	-0.4	-0.1	2.00	2.00	
400.0	3.00	250.91	399.9	-1.3	-3.7	-1.3	2.00	2.00	
483.3	4.67	250.91	483.0	-3.1	-9.0	-3.1	2.00	2.00	Fox Hills - BASE
500.0	5.00	250.91	499.7	-3.6	-10.3	-3.6	2.00	2.00	
600.0	7.00	250.91	599.1	-7.0	-20.2	-7.0	2.00	2.00	
700.0	9.00	250.91	698.2	-11.5	-33.3	-11.5	2.00	2.00	
800.0	11.00	250.91	796.6	-17.2	-49.7	-17.2	2.00	2.00	
852.7	12.05	250.91	848.2	-20.7	-59.7	-20.7	2.00	2.00	Start 6183.6 hold at 852.7 MD
900.0	12.05	250.91	894.5	-23.9	-69.0	-23.9	0.00	0.00	
1,000.0	12.05	250.91	992.3	-30.7	-88.8	-30.7	0.00	0.00	
1,100.0	12.05	250.91	1,090.1	-37.5	-108.5	-37.5	0.00	0.00	
1,200.0	12.05	250.91	1,187.9	-44.4	-128.2	-44.4	0.00	0.00	
1,300.0	12.05	250.91	1,285.7	-51.2	-148.0	-51.2	0.00	0.00	
1,400.0	12.05	250.91	1,383.5	-58.0	-167.7	-58.0	0.00	0.00	
1,500.0	12.05	250.91	1,481.3	-64.9	-187.4	-64.9	0.00	0.00	
1,600.0	12.05	250.91	1,579.1	-71.7	-207.2	-71.7	0.00	0.00	
1,700.0	12.05	250.91	1,676.9	-78.5	-226.9	-78.5	0.00	0.00	
1,800.0	12.05	250.91	1,774.7	-85.3	-246.6	-85.3	0.00	0.00	
1,900.0	12.05	250.91	1,872.5	-92.2	-266.4	-92.2	0.00	0.00	
2,000.0	12.05	250.91	1,970.3	-99.0	-286.1	-99.0	0.00	0.00	
2,100.0	12.05	250.91	2,068.1	-105.8	-305.8	-105.8	0.00	0.00	
2,200.0	12.05	250.91	2,165.9	-112.6	-325.6	-112.6	0.00	0.00	
2,300.0	12.05	250.91	2,263.7	-119.5	-345.3	-119.5	0.00	0.00	
2,400.0	12.05	250.91	2,361.5	-126.3	-365.0	-126.3	0.00	0.00	
2,500.0	12.05	250.91	2,459.2	-133.1	-384.8	-133.1	0.00	0.00	
2,600.0	12.05	250.91	2,557.0	-140.0	-404.5	-140.0	0.00	0.00	
2,700.0	12.05	250.91	2,654.8	-146.8	-424.2	-146.8	0.00	0.00	
2,800.0	12.05	250.91	2,752.6	-153.6	-444.0	-153.6	0.00	0.00	
2,900.0	12.05	250.91	2,850.4	-160.4	-463.7	-160.4	0.00	0.00	
3,000.0	12.05	250.91	2,948.2	-167.3	-483.4	-167.3	0.00	0.00	
3,100.0	12.05	250.91	3,046.0	-174.1	-503.2	-174.1	0.00	0.00	
3,200.0	12.05	250.91	3,143.8	-180.9	-522.9	-180.9	0.00	0.00	
3,300.0	12.05	250.91	3,241.6	-187.8	-542.6	-187.8	0.00	0.00	
3,400.0	12.05	250.91	3,339.4	-194.6	-562.4	-194.6	0.00	0.00	
3,500.0	12.05	250.91	3,437.2	-201.4	-582.1	-201.4	0.00	0.00	
3,600.0	12.05	250.91	3,535.0	-208.2	-601.8	-208.2	0.00	0.00	
3,700.0	12.05	250.91	3,632.8	-215.1	-621.6	-215.1	0.00	0.00	
3,800.0	12.05	250.91	3,730.6	-221.9	-641.3	-221.9	0.00	0.00	
3,900.0	12.05	250.91	3,828.4	-228.7	-661.0	-228.7	0.00	0.00	
4,000.0	12.05	250.91	3,926.2	-235.6	-680.8	-235.6	0.00	0.00	
4,100.0	12.05	250.91	4,024.0	-242.4	-700.5	-242.4	0.00	0.00	
4,200.0	12.05	250.91	4,121.8	-249.2	-720.2	-249.2	0.00	0.00	
4,300.0	12.05	250.91	4,219.6	-256.0	-740.0	-256.0	0.00	0.00	
4,400.0	12.05	250.91	4,317.4	-262.9	-759.7	-262.9	0.00	0.00	
4,446.7	12.05	250.91	4,363.0	-266.1	-768.9	-266.1	0.00	0.00	Sussex
4,500.0	12.05	250.91	4,415.2	-269.7	-779.4	-269.7	0.00	0.00	
4,600.0	12.05	250.91	4,513.0	-276.5	-799.2	-276.5	0.00	0.00	
4,700.0	12.05	250.91	4,610.7	-283.4	-818.9	-283.4	0.00	0.00	

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Well:	Bighorn 4B-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #4		

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
4,751.4	12.05	250.91	4,661.0	-286.9	-829.0	-286.9	0.00	0.00	Sussex Marker
4,800.0	12.05	250.91	4,708.5	-290.2	-838.6	-290.2	0.00	0.00	
4,900.0	12.05	250.91	4,806.3	-297.0	-858.4	-297.0	0.00	0.00	
5,000.0	12.05	250.91	4,904.1	-303.8	-878.1	-303.8	0.00	0.00	
5,035.6	12.05	250.91	4,939.0	-306.3	-885.1	-306.3	0.00	0.00	Shannon
5,100.0	12.05	250.91	5,001.9	-310.7	-897.8	-310.7	0.00	0.00	
5,200.0	12.05	250.91	5,099.7	-317.5	-917.6	-317.5	0.00	0.00	
5,300.0	12.05	250.91	5,197.5	-324.3	-937.3	-324.3	0.00	0.00	
5,400.0	12.05	250.91	5,295.3	-331.1	-957.0	-331.1	0.00	0.00	
5,500.0	12.05	250.91	5,393.1	-338.0	-976.8	-338.0	0.00	0.00	
5,600.0	12.05	250.91	5,490.9	-344.8	-996.5	-344.8	0.00	0.00	
5,700.0	12.05	250.91	5,588.7	-351.6	-1,016.2	-351.6	0.00	0.00	
5,800.0	12.05	250.91	5,686.5	-358.5	-1,036.0	-358.5	0.00	0.00	
5,900.0	12.05	250.91	5,784.3	-365.3	-1,055.7	-365.3	0.00	0.00	
6,000.0	12.05	250.91	5,882.1	-372.1	-1,075.4	-372.1	0.00	0.00	
6,100.0	12.05	250.91	5,979.9	-378.9	-1,095.2	-378.9	0.00	0.00	
6,200.0	12.05	250.91	6,077.7	-385.8	-1,114.9	-385.8	0.00	0.00	
6,300.0	12.05	250.91	6,175.5	-392.6	-1,134.6	-392.6	0.00	0.00	
6,400.0	12.05	250.91	6,273.3	-399.4	-1,154.4	-399.4	0.00	0.00	
6,500.0	12.05	250.91	6,371.1	-406.3	-1,174.1	-406.3	0.00	0.00	
6,600.0	12.05	250.91	6,468.9	-413.1	-1,193.8	-413.1	0.00	0.00	
6,614.5	12.05	250.91	6,483.0	-414.1	-1,196.7	-414.1	0.00	0.00	Teepee Buttes (*if present)
6,700.0	12.05	250.91	6,566.7	-419.9	-1,213.6	-419.9	0.00	0.00	
6,800.0	12.05	250.91	6,664.5	-426.7	-1,233.3	-426.7	0.00	0.00	
6,900.0	12.05	250.91	6,762.3	-433.6	-1,253.1	-433.6	0.00	0.00	
7,000.0	12.05	250.91	6,860.0	-440.4	-1,272.8	-440.4	0.00	0.00	
7,036.3	12.05	250.91	6,895.5	-442.9	-1,279.9	-442.9	0.00	0.00	Start DLS 10.00 TFO 109.87
7,100.0	11.54	282.37	6,958.0	-443.7	-1,292.5	-443.7	10.00	-0.81	
7,200.0	16.60	319.00	7,055.1	-430.7	-1,311.7	-430.7	10.00	5.06	
7,286.1	23.59	333.90	7,136.0	-405.9	-1,327.3	-405.9	10.00	8.11	Sharon Springs
7,300.0	24.81	335.53	7,148.7	-400.8	-1,329.8	-400.8	10.00	8.78	
7,370.6	31.22	341.90	7,211.0	-369.8	-1,341.6	-369.8	10.00	9.07	Niobrara
7,400.0	33.95	343.89	7,235.7	-354.7	-1,346.2	-354.7	10.00	9.31	
7,426.0	36.39	345.43	7,257.0	-340.3	-1,350.2	-340.3	10.00	9.40	B Chalk
7,466.8	40.26	347.52	7,289.0	-315.7	-1,356.1	-315.7	10.00	9.48	B Marl
7,500.0	43.44	348.99	7,313.7	-294.0	-1,360.6	-294.0	10.00	9.56	
7,527.1	46.04	350.06	7,333.0	-275.2	-1,364.1	-275.2	10.00	9.60	C Chalk
7,578.5	51.00	351.87	7,367.0	-237.2	-1,370.1	-237.2	10.00	9.65	C Marl
7,600.0	53.08	352.55	7,380.2	-220.4	-1,372.4	-220.4	10.00	9.68	
7,700.0	62.81	355.29	7,433.3	-136.3	-1,381.2	-136.3	10.00	9.73	
7,783.5	70.96	357.24	7,466.0	-59.7	-1,386.2	-59.7	10.00	9.77	Ft. Hayes
7,800.0	72.58	357.60	7,471.2	-44.1	-1,386.9	-44.1	10.00	9.78	
7,869.5	79.39	359.05	7,488.0	23.3	-1,388.9	23.3	10.00	9.79	Codell
7,900.0	82.37	359.66	7,492.8	53.4	-1,389.2	53.4	10.00	9.80	
7,977.8	90.00	1.20	7,498.0	131.0	-1,388.6	131.0	10.00	9.80	Start 4470.0 hold at 7977.8 MD
8,000.0	90.00	1.20	7,498.0	153.2	-1,388.1	153.2	0.00	0.00	
8,100.0	90.00	1.20	7,498.0	253.2	-1,386.1	253.2	0.00	0.00	
8,200.0	90.00	1.20	7,498.0	353.1	-1,384.0	353.1	0.00	0.00	
8,300.0	90.00	1.20	7,498.0	453.1	-1,381.9	453.1	0.00	0.00	
8,400.0	90.00	1.20	7,498.0	553.1	-1,379.8	553.1	0.00	0.00	
8,500.0	90.00	1.20	7,498.0	653.1	-1,377.7	653.1	0.00	0.00	
8,600.0	90.00	1.20	7,498.0	753.0	-1,375.6	753.0	0.00	0.00	

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Wellbore:	DD		
Design:	Plan #4		

Planned Survey									
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8,700.0	90.00	1.20	7,498.0	853.0	-1,373.5	853.0	0.00	0.00	
8,800.0	90.00	1.20	7,498.0	953.0	-1,371.4	953.0	0.00	0.00	
8,900.0	90.00	1.20	7,498.0	1,053.0	-1,369.3	1,053.0	0.00	0.00	
9,000.0	90.00	1.20	7,498.0	1,153.0	-1,367.2	1,153.0	0.00	0.00	
9,100.0	90.00	1.20	7,498.0	1,252.9	-1,365.1	1,252.9	0.00	0.00	
9,200.0	90.00	1.20	7,498.0	1,352.9	-1,363.0	1,352.9	0.00	0.00	
9,300.0	90.00	1.20	7,498.0	1,452.9	-1,360.9	1,452.9	0.00	0.00	
9,400.0	90.00	1.20	7,498.0	1,552.9	-1,358.8	1,552.9	0.00	0.00	
9,500.0	90.00	1.20	7,498.0	1,652.8	-1,356.7	1,652.8	0.00	0.00	
9,600.0	90.00	1.20	7,498.0	1,752.8	-1,354.6	1,752.8	0.00	0.00	
9,700.0	90.00	1.20	7,498.0	1,852.8	-1,352.5	1,852.8	0.00	0.00	
9,800.0	90.00	1.20	7,498.0	1,952.8	-1,350.5	1,952.8	0.00	0.00	
9,900.0	90.00	1.20	7,498.0	2,052.8	-1,348.4	2,052.8	0.00	0.00	
10,000.0	90.00	1.20	7,498.0	2,152.7	-1,346.3	2,152.7	0.00	0.00	
10,100.0	90.00	1.20	7,498.0	2,252.7	-1,344.2	2,252.7	0.00	0.00	
10,200.0	90.00	1.20	7,498.0	2,352.7	-1,342.1	2,352.7	0.00	0.00	
10,300.0	90.00	1.20	7,498.0	2,452.7	-1,340.0	2,452.7	0.00	0.00	
10,400.0	90.00	1.20	7,498.0	2,552.7	-1,337.9	2,552.7	0.00	0.00	
10,500.0	90.00	1.20	7,498.0	2,652.6	-1,335.8	2,652.6	0.00	0.00	
10,600.0	90.00	1.20	7,498.0	2,752.6	-1,333.7	2,752.6	0.00	0.00	
10,700.0	90.00	1.20	7,498.0	2,852.6	-1,331.6	2,852.6	0.00	0.00	
10,800.0	90.00	1.20	7,498.0	2,952.6	-1,329.5	2,952.6	0.00	0.00	
10,900.0	90.00	1.20	7,498.0	3,052.5	-1,327.4	3,052.5	0.00	0.00	
11,000.0	90.00	1.20	7,498.0	3,152.5	-1,325.3	3,152.5	0.00	0.00	
11,100.0	90.00	1.20	7,498.0	3,252.5	-1,323.2	3,252.5	0.00	0.00	
11,200.0	90.00	1.20	7,498.0	3,352.5	-1,321.1	3,352.5	0.00	0.00	
11,300.0	90.00	1.20	7,498.0	3,452.5	-1,319.0	3,452.5	0.00	0.00	
11,400.0	90.00	1.20	7,498.0	3,552.4	-1,316.9	3,552.4	0.00	0.00	
11,500.0	90.00	1.20	7,498.0	3,652.4	-1,314.8	3,652.4	0.00	0.00	
11,600.0	90.00	1.20	7,498.0	3,752.4	-1,312.8	3,752.4	0.00	0.00	
11,700.0	90.00	1.20	7,498.0	3,852.4	-1,310.7	3,852.4	0.00	0.00	
11,800.0	90.00	1.20	7,498.0	3,952.3	-1,308.6	3,952.3	0.00	0.00	
11,900.0	90.00	1.20	7,498.0	4,052.3	-1,306.5	4,052.3	0.00	0.00	
12,000.0	90.00	1.20	7,498.0	4,152.3	-1,304.4	4,152.3	0.00	0.00	
12,100.0	90.00	1.20	7,498.0	4,252.3	-1,302.3	4,252.3	0.00	0.00	
12,200.0	90.00	1.20	7,498.0	4,352.3	-1,300.2	4,352.3	0.00	0.00	
12,300.0	90.00	1.20	7,498.0	4,452.2	-1,298.1	4,452.2	0.00	0.00	
12,400.0	90.00	1.20	7,498.0	4,552.2	-1,296.0	4,552.2	0.00	0.00	
12,447.8	90.00	1.20	7,498.0	4,600.0	-1,295.0	4,600.0	0.00	0.00	Start Turn -1.00
12,500.0	90.00	0.68	7,498.0	4,652.2	-1,294.1	4,652.2	1.00	0.00	
12,600.0	90.00	359.68	7,498.0	4,752.2	-1,293.8	4,752.2	1.00	0.00	
12,667.8	90.00	359.00	7,498.0	4,820.0	-1,294.6	4,820.0	1.00	0.00	Start 1500.0 hold at 12667.8 MD
12,700.0	90.00	359.00	7,498.0	4,852.2	-1,295.2	4,852.2	0.00	0.00	
12,800.0	90.00	359.00	7,498.0	4,952.2	-1,296.9	4,952.2	0.00	0.00	
12,900.0	90.00	359.00	7,498.0	5,052.2	-1,298.7	5,052.2	0.00	0.00	
13,000.0	90.00	359.00	7,498.0	5,152.1	-1,300.4	5,152.1	0.00	0.00	
13,100.0	90.00	359.00	7,498.0	5,252.1	-1,302.2	5,252.1	0.00	0.00	
13,200.0	90.00	359.00	7,498.0	5,352.1	-1,303.9	5,352.1	0.00	0.00	
13,300.0	90.00	359.00	7,498.0	5,452.1	-1,305.6	5,452.1	0.00	0.00	
13,400.0	90.00	359.00	7,498.0	5,552.1	-1,307.4	5,552.1	0.00	0.00	
13,500.0	90.00	359.00	7,498.0	5,652.1	-1,309.1	5,652.1	0.00	0.00	
13,600.0	90.00	359.00	7,498.0	5,752.0	-1,310.9	5,752.0	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #4		

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
13,700.0	90.00	359.00	7,498.0	5,852.0	-1,312.6	5,852.0	0.00	0.00	
13,800.0	90.00	359.00	7,498.0	5,952.0	-1,314.4	5,952.0	0.00	0.00	
13,900.0	90.00	359.00	7,498.0	6,052.0	-1,316.1	6,052.0	0.00	0.00	
14,000.0	90.00	359.00	7,498.0	6,152.0	-1,317.9	6,152.0	0.00	0.00	
14,100.0	90.00	359.00	7,498.0	6,252.0	-1,319.6	6,252.0	0.00	0.00	
14,167.8	90.00	359.00	7,498.0	6,319.8	-1,320.8	6,319.8	0.00	0.00	Start DLS 6.54 TFO 90.00
14,200.0	90.00	1.11	7,498.0	6,352.0	-1,320.8	6,352.0	6.54	0.00	
14,300.0	90.00	7.65	7,498.0	6,451.6	-1,313.1	6,451.6	6.54	0.00	
14,400.0	90.00	14.19	7,498.0	6,549.7	-1,294.2	6,549.7	6.54	0.00	
14,412.1	90.00	14.98	7,498.0	6,561.5	-1,291.2	6,561.5	6.54	0.00	TD at 14412.1

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Bighorn 4B-17H-P267 P - plan hits target center - Point	0.00	0.38	7,498.0	6,561.5	-1,291.2	1,298,652.42	3,164,170.55	40.151696	-104.912710
Target 1 - plan hits target center - Point	0.00	0.00	7,498.0	4,600.0	-1,295.0	1,296,690.96	3,164,179.80	40.146311	-104.912723

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
483.3	483.0	Fox Hills - BASE			
4,446.7	4,363.0	Sussex			
4,751.4	4,661.0	Sussex Marker			
5,035.6	4,939.0	Shannon			
6,614.5	6,483.0	Teepee Buttes (*if present)			
7,286.1	7,136.0	Sharon Springs			
7,370.6	7,211.0	Niobrara			
7,426.0	7,257.0	B Chalk			
7,466.8	7,289.0	B Marl			
7,527.1	7,333.0	C Chalk			
7,578.5	7,367.0	C Marl			
7,783.5	7,466.0	Ft. Hayes			
7,869.5	7,488.0	Codell			

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #4		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
250.0	250.0	0.0	0.0	Start Build 2.00
852.7	848.2	-20.7	-59.7	Start 6183.6 hold at 852.7 MD
7,036.3	6,895.5	-442.9	-1,279.9	Start DLS 10.00 TFO 109.87
7,977.8	7,498.0	131.0	-1,388.6	Start 4470.0 hold at 7977.8 MD
12,447.8	7,498.0	4,600.0	-1,295.0	Start Turn -1.00
12,667.8	7,498.0	4,820.0	-1,294.6	Start 1500.0 hold at 12667.8 MD
14,167.8	7,498.0	6,319.8	-1,320.8	Start DLS 6.54 TFO 90.00
14,412.1	7,498.0	6,561.5	-1,291.2	TD at 14412.1

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S17-T2N-R67W (Big Horn)

Bighorn 4B-17H-P267

DD

Plan #4

Anticollision Report

18 November, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Reference	Plan #4		
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	11/18/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,412.1	Plan #4 (DD)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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
Offset Well - Wellbore - Design						
S17-T2N-R67W (Big Horn)						
ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SU						Out of range
Bighorn 4A-17H-P267 - DD - Plan #2	200.0	200.0	9.8	9.2	16.491	CC, ES
Bighorn 4A-17H-P267 - DD - Plan #2	14,167.8	14,022.7	313.8	155.8	1.985	SF
Bighorn 4C-17H-P267 - DD - Plan #2	250.0	250.0	10.1	9.3	13.107	CC, ES
Bighorn 4C-17H-P267 - DD - Plan #2	14,167.8	14,353.2	333.4	166.7	2.000	SF
Bighorn 4D-17H-P267 - DD - Plan #1	250.0	250.0	20.1	19.4	26.215	CC, ES
Bighorn 4D-17H-P267 - DD - Plan #1	14,412.1	14,786.3	442.0	223.9	2.027	SF
Bighorn 4E-17H-P267 - DD - Plan #1	250.0	250.0	30.2	29.4	39.322	CC, ES
Bighorn 4E-17H-P267 - DD - Plan #1	14,167.8	14,299.3	735.8	519.5	3.402	SF
Bighorn 4F-17H-P267 - DD - Plan #3	250.0	250.0	40.0	39.2	52.068	CC, ES
Bighorn 4F-17H-P267 - DD - Plan #3	14,350.0	14,723.2	911.5	687.7	4.072	SF
Bighorn 4G-17H-P267 - DD - Plan #2	250.0	250.0	50.1	49.3	65.175	CC, ES
Bighorn 4G-17H-P267 - DD - Plan #2	5,800.0	5,719.2	986.6	953.9	30.242	SF
Bighorn 4H-17H-P267 - DD - Plan #2	250.0	250.0	60.1	59.3	78.282	CC, ES
Bighorn 4H-17H-P267 - DD - Plan #2	5,100.0	5,003.5	997.5	970.8	37.379	SF
Bighorn 4I-17H-P267 - DD - Plan #4	250.0	250.0	70.2	69.4	91.389	CC, ES
Bighorn 4I-17H-P267 - DD - Plan #4	1,900.0	1,867.3	346.6	338.2	41.183	SF
Bighorn 4J-17H-P267 - DD - Plan #3	250.0	250.0	80.2	79.5	104.496	CC, ES
Bighorn 4J-17H-P267 - DD - Plan #3	700.0	691.1	129.2	126.9	55.616	SF
Bighorn 4K-17H-P267 - DD - Plan #2	250.0	250.0	90.0	89.3	117.242	CC, ES
Bighorn 4K-17H-P267 - DD - Plan #2	600.0	588.0	125.3	123.3	63.612	SF
Bighorn 4L-17H-P267 - DD - Plan #3	200.0	200.0	100.1	99.5	168.687	CC, ES
Bighorn 4L-17H-P267 - DD - Plan #3	700.0	678.8	172.3	170.0	74.848	SF
DECHANT 7 (EXISTING) - FOUNDATION - NO SURVEY						Out of range
DECHANT STATE V 16-12JI (EXISTING) - KMG - NO SU						Out of range
DECHANT STATE V 16-4JI (EXISTING) - KMG - NO SU						Out of range
DECHANT STATE V 16-5JI (EXISTING) - KMG - NO SU						Out of range
DECHANT-STATE 3 (EXISTING) - FOUNDATION - NO S						Out of range
DECHANT-STATE 5 (EXISTING) - FOUNDATION - NO S						Out of range
DECHANT-STATE 9 (EXISTING) - KMG - NO SURVEYS						Out of range
DIER 1 (EXISTING) - ENCANA WELL - GYRO						Out of range
DIER 33-8 (EXISTING) - ENCANA WELL - GYRO	14,218.0	7,455.3	52.0	-74.3	0.412	Level 1, CC, ES, SF
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO	12,609.9	7,451.0	107.4	7.9	1.079	Level 2, CC, ES, SF
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO						Out of range
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY	14,229.3	7,433.0	105.0	-21.1	0.833	Level 1, CC, ES, SF
DIER 4-8 (EXISTING) - ENCANA - GYRO						Out of range
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	13,324.5	7,454.6	815.7	703.6	7.275	CC, ES
DIER J 1-A (EXISTING) - ENCANA WELL - GYRO	13,400.0	7,453.6	819.2	705.8	7.222	SF
MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO						Out of range
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV	11,194.9	7,456.0	437.3	362.8	5.871	CC
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV	11,200.0	7,456.0	437.4	362.8	5.865	ES, SF
MILLER 13-17J (EXISTING) - DD - Plan #1						Out of range
MILLER 13-17J (EXISTING) - DD - SURVEYS						Out of range
MILLER 2-17 (EXISTING) - ENCANA WELL - GYRO						Out of range
MILLER 23-17J (EXISTING) - DD - Plan #1						Out of range
MILLER 23-17J (EXISTING) - DD - SURVEYS						Out of range
MILLER 2-4-17 (EXISTING) - DD - Plan #1						Out of range
MILLER 2-4-17 (EXISTING) - DD - SURVEYS						Out of range
MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYR	11,576.3	7,350.0	298.8	221.7	3.876	CC, ES
MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYR	11,600.0	7,350.0	299.7	222.3	3.869	SF
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	1,604.8	1,553.7	502.5	494.9	65.889	CC

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S17-T2N-R67W (Big Horn)						
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	1,700.0	1,646.9	502.9	494.8	61.534	ES
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	3,700.0	3,602.8	666.3	649.0	38.459	SF
MILLER 32-17 (EXISTING) SUNDANCE - SUNDANCE W						Out of range
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	8,971.3	7,773.8	110.7	60.6	2.210	CC, ES, SF
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	3,916.1	3,815.7	123.5	102.5	5.886	CC
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	7,426.1	7,336.6	129.1	102.4	4.824	ES
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	7,450.0	7,353.9	130.1	102.6	4.735	SF
MILLER 41-17 (EXISTING) - SUNDANCE WELL - GYRO						Out of range
MILLER 42-17 (EXISTING) - SUNDANCE WELL - NO SU						Out of range
MILLER 43-17 (EXISTING) - SUNDANCE - NO SURVEY						Out of range
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE						Out of range
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	3,447.7	3,361.1	108.8	90.5	5.938	CC, ES
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	3,500.0	3,412.2	109.4	90.8	5.892	SF
MILLER CJ1A-17 (EXISTING) - DD - SURVEYS						Out of range
OWENS 44-8 (EXISTING) - KPK WELL - SURVEYS						Out of range
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	3,622.1	3,533.6	157.3	138.0	8.142	CC, ES
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	3,700.0	3,609.8	158.2	138.5	8.020	SF
PACE 2 (EXISTING) - TEXAS TEA OIL - NO SURVEYS						Out of range
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	250.0	230.0	294.7	293.9	375.132	CC, ES
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,300.0	4,199.6	992.7	977.3	64.351	SF
SATER 21-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 24-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 2-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
SATER 28-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 7-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
SATER 8-8 (EXISTING) - KERRMCGEE WELL - SURVE						Out of range
STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-9.8	9.8					
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-9.8	9.8	9.5	0.24	40.050		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-9.8	9.8	9.2	0.59	16.491 CC, ES		
250.0	250.0	249.8	249.8	0.4	0.4	-90.77	-0.1	-10.2	10.2	9.4	0.77	13.261		
300.0	300.0	299.7	299.6	0.5	0.5	16.89	-0.6	-11.4	11.0	10.1	0.94	11.702		
400.0	399.9	399.2	399.1	0.7	0.7	14.61	-2.3	-16.3	12.7	11.4	1.29	9.820		
500.0	499.7	498.8	498.2	0.9	0.9	12.87	-5.1	-24.5	14.3	12.7	1.64	8.734		
600.0	599.1	598.2	597.0	1.1	1.2	11.50	-9.0	-35.9	16.0	14.0	1.99	8.022		
700.0	698.2	697.7	695.2	1.4	1.5	10.39	-14.1	-50.5	17.6	15.3	2.35	7.516		
800.0	796.6	797.0	792.7	1.7	1.8	9.47	-20.3	-68.3	19.3	16.6	2.70	7.135		
852.7	848.2	849.3	843.8	1.9	2.1	9.05	-24.0	-79.0	20.1	17.2	2.89	6.969		
900.0	894.5	896.4	889.6	2.1	2.3	8.55	-27.6	-89.3	21.2	18.2	3.06	6.950		
1,000.0	992.3	996.3	986.7	2.5	2.7	7.51	-35.3	-111.7	24.1	20.7	3.41	7.055		
1,100.0	1,090.1	1,096.3	1,083.8	2.9	3.1	6.69	-43.1	-134.0	26.9	23.1	3.76	7.145		
1,200.0	1,187.9	1,196.3	1,180.9	3.3	3.6	6.02	-50.8	-156.4	29.7	25.6	4.12	7.222		
1,300.0	1,285.7	1,296.2	1,278.0	3.7	4.0	5.47	-58.6	-178.8	32.6	28.1	4.47	7.290		
1,400.0	1,383.5	1,396.2	1,375.1	4.1	4.5	5.01	-66.3	-201.1	35.4	30.6	4.82	7.349		
1,500.0	1,481.3	1,496.1	1,472.3	4.5	4.9	4.62	-74.1	-223.5	38.3	33.1	5.17	7.400		
1,600.0	1,579.1	1,596.1	1,569.4	4.9	5.4	4.28	-81.8	-245.8	41.1	35.6	5.52	7.446		
1,700.0	1,676.9	1,696.1	1,666.5	5.3	5.9	3.98	-89.6	-268.2	44.0	38.1	5.87	7.487		
1,800.0	1,774.7	1,796.0	1,763.6	5.7	6.3	3.73	-97.3	-290.5	46.8	40.6	6.22	7.523		
1,900.0	1,872.5	1,896.0	1,860.7	6.1	6.8	3.50	-105.1	-312.9	49.7	43.1	6.57	7.556		
2,000.0	1,970.3	1,995.9	1,957.9	6.5	7.2	3.29	-112.8	-335.2	52.5	45.6	6.92	7.586		
2,100.0	2,068.1	2,095.9	2,055.0	6.9	7.7	3.11	-120.6	-357.6	55.4	48.1	7.27	7.613		
2,200.0	2,165.9	2,195.9	2,162.1	7.3	8.1	2.94	-128.3	-379.9	58.2	50.6	7.62	7.637		
2,300.0	2,263.7	2,295.8	2,249.2	7.7	8.6	2.79	-136.0	-402.3	61.1	53.1	7.97	7.659		
2,400.0	2,361.5	2,395.8	2,346.3	8.2	9.0	2.66	-143.8	-424.6	63.9	55.6	8.32	7.680		
2,500.0	2,459.2	2,495.7	2,443.5	8.6	9.5	2.53	-151.5	-447.0	66.8	58.1	8.67	7.699		
2,600.0	2,557.0	2,595.7	2,540.6	9.0	9.9	2.42	-159.3	-469.3	69.6	60.6	9.02	7.716		
2,700.0	2,654.8	2,695.6	2,637.7	9.4	10.4	2.31	-167.0	-491.7	72.5	63.1	9.38	7.732		
2,800.0	2,752.6	2,795.6	2,734.8	9.8	10.9	2.21	-174.8	-514.0	75.3	65.6	9.73	7.747		
2,900.0	2,850.4	2,895.6	2,831.9	10.2	11.3	2.12	-182.5	-536.4	78.2	68.1	10.08	7.761		
3,000.0	2,948.2	2,995.5	2,929.1	10.6	11.8	2.04	-190.3	-558.8	81.1	70.6	10.43	7.774		
3,100.0	3,046.0	3,095.5	3,026.2	11.0	12.2	1.96	-198.0	-581.1	83.9	73.1	10.78	7.786		
3,200.0	3,143.8	3,195.4	3,123.3	11.4	12.7	1.89	-205.8	-603.5	86.8	75.6	11.13	7.797		
3,300.0	3,241.6	3,295.4	3,220.4	11.8	13.1	1.82	-213.5	-625.8	89.6	78.1	11.48	7.808		
3,400.0	3,339.4	3,395.4	3,317.5	12.2	13.6	1.76	-221.3	-648.2	92.5	80.6	11.83	7.818		
3,500.0	3,437.2	3,495.3	3,414.7	12.7	14.1	1.70	-229.0	-670.5	95.3	83.2	12.18	7.827		
3,600.0	3,535.0	3,595.3	3,511.8	13.1	14.5	1.64	-236.8	-692.9	98.2	85.7	12.53	7.836		
3,700.0	3,632.8	3,695.2	3,608.9	13.5	15.0	1.58	-244.5	-715.2	101.0	88.2	12.88	7.845		
3,800.0	3,730.6	3,795.2	3,706.0	13.9	15.4	1.53	-252.3	-737.6	103.9	90.7	13.23	7.853		
3,900.0	3,828.4	3,895.2	3,803.1	14.3	15.9	1.49	-260.0	-759.9	106.8	93.2	13.58	7.860		
4,000.0	3,926.2	3,995.1	3,900.2	14.7	16.3	1.44	-267.8	-782.3	109.6	95.7	13.93	7.867		
4,100.0	4,024.0	4,095.1	3,997.4	15.1	16.8	1.40	-275.5	-804.6	112.5	98.2	14.28	7.874		
4,200.0	4,121.8	4,195.0	4,094.5	15.5	17.3	1.36	-283.3	-827.0	115.3	100.7	14.63	7.881		
4,300.0	4,219.6	4,295.0	4,191.6	15.9	17.7	1.32	-291.0	-849.3	118.2	103.2	14.98	7.887		
4,400.0	4,317.4	4,395.0	4,288.7	16.3	18.2	1.28	-298.8	-871.7	121.0	105.7	15.34	7.893		
4,500.0	4,415.2	4,494.9	4,385.8	16.8	18.6	1.24	-306.5	-894.0	123.9	108.2	15.69	7.898		
4,600.0	4,513.0	4,594.9	4,483.0	17.2	19.1	1.21	-314.3	-916.4	126.7	110.7	16.04	7.904		
4,700.0	4,610.7	4,694.8	4,580.1	17.6	19.5	1.18	-322.0	-938.8	129.6	113.2	16.39	7.909		
4,800.0	4,708.5	4,794.8	4,677.2	18.0	20.0	1.15	-329.8	-961.1	132.5	115.7	16.74	7.914		
4,900.0	4,806.3	4,894.8	4,774.3	18.4	20.5	1.12	-337.5	-983.5	135.3	118.2	17.09	7.918		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		
5,000.0	4,904.1	4,994.7	4,871.4	18.8	20.9	1.09	-345.2	-1,005.8	138.2	120.7	17.44	7.923		
5,100.0	5,001.9	5,094.7	4,968.6	19.2	21.4	1.06	-353.0	-1,028.2	141.0	123.2	17.79	7.927		
5,200.0	5,099.7	5,194.6	5,065.7	19.6	21.8	1.03	-360.7	-1,050.5	143.9	125.7	18.14	7.931		
5,300.0	5,197.5	5,294.6	5,162.8	20.0	22.3	1.01	-368.5	-1,072.9	146.7	128.3	18.49	7.935		
5,400.0	5,295.3	5,394.5	5,259.9	20.4	22.7	0.99	-376.2	-1,095.2	149.6	130.8	18.84	7.939		
5,500.0	5,393.1	5,494.5	5,357.0	20.9	23.2	0.96	-384.0	-1,117.6	152.5	133.3	19.19	7.943		
5,600.0	5,490.9	5,594.5	5,454.2	21.3	23.7	0.94	-391.7	-1,139.9	155.3	135.8	19.54	7.947		
5,700.0	5,588.7	5,694.4	5,551.3	21.7	24.1	0.92	-399.5	-1,162.3	158.2	138.3	19.90	7.950		
5,800.0	5,686.5	5,794.4	5,648.4	22.1	24.6	0.90	-407.2	-1,184.6	161.0	140.8	20.25	7.953		
5,900.0	5,784.3	5,894.3	5,745.5	22.5	25.0	0.88	-415.0	-1,207.0	163.9	143.3	20.60	7.957		
6,000.0	5,882.1	5,994.3	5,842.6	22.9	25.5	0.86	-422.7	-1,229.3	166.7	145.8	20.95	7.960		
6,100.0	5,979.9	6,094.3	5,939.8	23.3	25.9	0.84	-430.5	-1,251.7	169.6	148.3	21.30	7.963		
6,200.0	6,077.7	6,194.2	6,036.9	23.7	26.4	0.82	-438.2	-1,274.0	172.5	150.8	21.65	7.965		
6,300.0	6,175.5	6,294.2	6,134.0	24.1	26.9	0.80	-446.0	-1,296.4	175.3	153.3	22.00	7.968		
6,400.0	6,273.3	6,394.1	6,231.1	24.5	27.3	0.79	-453.7	-1,318.8	178.2	155.8	22.35	7.971		
6,500.0	6,371.1	6,494.1	6,328.2	25.0	27.8	0.77	-461.5	-1,341.1	181.0	158.3	22.70	7.974		
6,600.0	6,468.9	6,594.1	6,425.3	25.4	28.2	0.75	-469.2	-1,363.5	183.9	160.8	23.05	7.976		
6,700.0	6,566.7	6,694.0	6,522.5	25.8	28.7	0.74	-477.0	-1,385.8	186.7	163.3	23.40	7.979		
6,800.0	6,664.5	6,794.0	6,619.6	26.2	29.2	0.72	-484.7	-1,408.2	189.6	165.8	23.76	7.981		
6,900.0	6,762.3	6,899.9	6,722.7	26.6	29.6	1.58	-489.9	-1,431.9	191.6	167.5	24.14	7.936		
7,000.0	6,860.0	7,007.2	6,826.3	27.0	30.0	7.62	-477.1	-1,455.7	189.5	164.3	25.28	7.499		
7,036.3	6,895.5	7,043.8	6,860.9	27.2	30.1	11.04	-468.2	-1,463.6	188.6	162.3	26.26	7.182		
7,050.0	6,909.0	7,057.3	6,873.5	27.2	30.1	6.14	-464.4	-1,466.5	188.3	161.6	26.72	7.049		
7,070.0	6,928.5	7,076.7	6,891.5	27.3	30.1	-1.57	-458.3	-1,470.6	188.2	160.8	27.44	6.858		
7,100.0	6,958.0	7,105.5	6,917.8	27.4	30.2	-13.44	-448.2	-1,476.6	188.5	159.9	28.65	6.579		
7,150.0	7,006.8	7,152.4	6,959.4	27.5	30.3	-29.71	-428.8	-1,486.1	190.2	159.4	30.81	6.175		
7,200.0	7,055.1	7,198.1	6,998.4	27.7	30.3	-39.46	-406.6	-1,495.0	193.4	160.5	32.91	5.876		
7,250.0	7,102.5	7,242.7	7,034.6	27.8	30.4	-44.30	-382.0	-1,503.2	197.8	163.1	34.75	5.693		
7,300.0	7,148.7	7,286.3	7,068.2	27.9	30.4	-46.28	-355.2	-1,510.8	203.3	167.2	36.17	5.622		
7,350.0	7,193.2	7,329.1	7,099.0	27.9	30.5	-46.66	-326.4	-1,517.8	209.6	172.6	37.06	5.657		
7,400.0	7,235.7	7,371.1	7,127.2	28.0	30.5	-46.18	-296.0	-1,524.2	216.6	179.2	37.40	5.791		
7,450.0	7,276.0	7,412.4	7,152.7	28.0	30.5	-45.26	-264.0	-1,530.0	223.9	186.7	37.18	6.020		
7,500.0	7,313.7	7,450.0	7,174.0	28.0	30.5	-44.27	-233.4	-1,534.7	231.4	194.9	36.44	6.349		
7,550.0	7,348.5	7,493.2	7,195.9	28.1	30.6	-42.91	-196.5	-1,539.6	238.8	203.5	35.29	6.768		
7,600.0	7,380.2	7,532.8	7,213.6	28.1	30.6	-41.71	-161.3	-1,543.6	246.1	212.4	33.74	7.294		
7,650.0	7,408.5	7,572.0	7,228.7	28.1	30.6	-40.57	-125.3	-1,546.9	253.2	221.3	31.93	7.929		
7,700.0	7,433.3	7,610.8	7,241.2	28.1	30.7	-39.52	-88.7	-1,549.7	259.8	229.9	29.97	8.669		
7,750.0	7,454.2	7,650.0	7,251.5	28.2	30.7	-38.55	-50.9	-1,551.9	266.0	238.0	28.00	9.499		
7,800.0	7,471.2	7,687.5	7,258.9	28.2	30.7	-37.71	-14.2	-1,553.5	271.5	245.3	26.16	10.379		
7,850.0	7,484.1	7,725.5	7,263.9	28.3	30.8	-36.97	23.4	-1,554.5	276.4	251.7	24.68	11.198		
7,900.0	7,492.8	7,763.3	7,266.6	28.3	30.8	-36.33	61.1	-1,555.0	280.6	256.9	23.67	11.854		
7,950.0	7,497.3	7,805.9	7,267.0	28.4	30.9	-35.80	103.8	-1,554.9	283.9	260.5	23.36	12.152		
7,977.8	7,498.0	7,833.7	7,267.0	28.5	30.9	-35.74	131.6	-1,554.8	284.6	261.0	23.57	12.074		
8,000.0	7,498.0	7,855.9	7,267.0	28.5	31.0	-35.80	153.8	-1,554.8	284.8	261.1	23.73	12.003		
8,100.0	7,498.0	7,955.9	7,267.0	28.8	31.3	-36.08	253.7	-1,554.4	285.8	261.3	24.54	11.649		
8,200.0	7,498.0	8,055.9	7,267.0	29.2	31.6	-36.36	353.7	-1,554.1	286.9	261.4	25.50	11.249		
8,300.0	7,498.0	8,155.9	7,267.0	29.7	32.1	-36.64	453.7	-1,553.7	287.9	261.3	26.61	10.818		
8,400.0	7,498.0	8,255.9	7,267.0	30.2	32.6	-36.92	553.7	-1,553.4	289.0	261.1	27.86	10.372		
8,500.0	7,498.0	8,355.8	7,267.0	30.9	33.3	-37.20	653.7	-1,553.0	290.0	260.8	29.23	9.922		
8,600.0	7,498.0	8,455.8	7,267.0	31.7	34.0	-37.47	753.7	-1,552.7	291.1	260.4	30.71	9.478		
8,700.0	7,498.0	8,555.8	7,267.0	32.5	34.8	-37.74	853.6	-1,552.3	292.1	259.8	32.29	9.047		
8,800.0	7,498.0	8,655.8	7,267.0	33.4	35.6	-38.01	953.6	-1,552.0	293.2	259.2	33.97	8.632		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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				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		
8,900.0	7,498.0	8,755.8	7,267.0	34.3	36.5	-38.28	1,053.6	-1,551.6	294.3	258.6	35.72	8.238		
9,000.0	7,498.0	8,855.8	7,267.0	35.4	37.5	-38.55	1,153.6	-1,551.3	295.4	257.8	37.56	7.864		
9,100.0	7,498.0	8,955.7	7,267.0	36.4	38.5	-38.81	1,253.6	-1,550.9	296.5	257.0	39.46	7.513		
9,200.0	7,498.0	9,055.7	7,267.0	37.6	39.6	-39.07	1,353.6	-1,550.6	297.6	256.1	41.43	7.183		
9,300.0	7,498.0	9,155.7	7,267.0	38.8	40.7	-39.33	1,453.6	-1,550.2	298.7	255.2	43.45	6.873		
9,400.0	7,498.0	9,255.7	7,267.0	40.0	41.9	-39.59	1,553.5	-1,549.9	299.8	254.2	45.53	6.584		
9,500.0	7,498.0	9,355.7	7,267.0	41.2	43.1	-39.84	1,653.5	-1,549.5	300.9	253.2	47.66	6.313		
9,600.0	7,498.0	9,455.7	7,267.0	42.5	44.4	-40.10	1,753.5	-1,549.2	302.0	252.2	49.83	6.060		
9,700.0	7,498.0	9,555.7	7,267.0	43.9	45.7	-40.35	1,853.5	-1,548.8	303.1	251.1	52.05	5.824		
9,800.0	7,498.0	9,655.6	7,267.0	45.2	47.0	-40.60	1,953.5	-1,548.5	304.3	250.0	54.31	5.602		
9,900.0	7,498.0	9,755.6	7,267.0	46.6	48.3	-40.85	2,053.5	-1,548.1	305.4	248.8	56.61	5.395		
10,000.0	7,498.0	9,855.6	7,267.0	48.0	49.7	-41.10	2,153.4	-1,547.8	306.5	247.6	58.94	5.201		
10,100.0	7,498.0	9,955.6	7,267.0	49.5	51.1	-41.34	2,253.4	-1,547.4	307.7	246.4	61.31	5.019		
10,200.0	7,498.0	10,055.6	7,267.0	50.9	52.5	-41.58	2,353.4	-1,547.1	308.9	245.1	63.71	4.848		
10,300.0	7,498.0	10,155.6	7,267.0	52.4	54.0	-41.83	2,453.4	-1,546.7	310.0	243.9	66.14	4.687		
10,400.0	7,498.0	10,255.5	7,267.0	53.9	55.4	-42.07	2,553.4	-1,546.4	311.2	242.6	68.60	4.536		
10,500.0	7,498.0	10,355.5	7,267.0	55.4	56.9	-42.30	2,653.4	-1,546.0	312.4	241.3	71.09	4.394		
10,600.0	7,498.0	10,455.5	7,267.0	56.9	58.4	-42.54	2,753.3	-1,545.7	313.5	239.9	73.60	4.260		
10,700.0	7,498.0	10,555.5	7,267.0	58.4	59.9	-42.77	2,853.3	-1,545.3	314.7	238.6	76.14	4.133		
10,800.0	7,498.0	10,655.5	7,267.0	60.0	61.4	-43.01	2,953.3	-1,545.0	315.9	237.2	78.71	4.014		
10,900.0	7,498.0	10,755.5	7,267.0	61.5	62.9	-43.24	3,053.3	-1,544.6	317.1	235.8	81.30	3.901		
11,000.0	7,498.0	10,855.5	7,267.0	63.1	64.5	-43.46	3,153.3	-1,544.3	318.3	234.4	83.91	3.793		
11,100.0	7,498.0	10,955.4	7,267.0	64.7	66.0	-43.69	3,253.3	-1,543.9	319.5	233.0	86.54	3.692		
11,200.0	7,498.0	11,055.4	7,267.0	66.3	67.6	-43.92	3,353.3	-1,543.6	320.7	231.5	89.20	3.595		
11,300.0	7,498.0	11,155.4	7,267.0	67.9	69.2	-44.14	3,453.2	-1,543.2	321.9	230.0	91.88	3.504		
11,400.0	7,498.0	11,255.4	7,267.0	69.5	70.7	-44.36	3,553.2	-1,542.9	323.1	228.6	94.58	3.417		
11,500.0	7,498.0	11,355.4	7,267.0	71.1	72.3	-44.58	3,653.2	-1,542.5	324.4	227.1	97.29	3.334		
11,600.0	7,498.0	11,455.4	7,267.0	72.7	73.9	-44.80	3,753.2	-1,542.2	325.6	225.6	100.03	3.255		
11,700.0	7,498.0	11,555.4	7,267.0	74.3	75.5	-45.02	3,853.2	-1,541.8	326.8	224.0	102.78	3.180		
11,800.0	7,498.0	11,655.3	7,267.0	75.9	77.1	-45.23	3,953.2	-1,541.5	328.1	222.5	105.56	3.108		
11,900.0	7,498.0	11,755.3	7,267.0	77.6	78.8	-45.45	4,053.1	-1,541.2	329.3	220.9	108.35	3.039		
12,000.0	7,498.0	11,855.3	7,267.0	79.2	80.4	-45.66	4,153.1	-1,540.8	330.5	219.4	111.16	2.974		
12,100.0	7,498.0	11,955.3	7,267.0	80.8	82.0	-45.87	4,253.1	-1,540.5	331.8	217.8	113.98	2.911		
12,200.0	7,498.0	12,055.3	7,267.0	82.5	83.6	-46.08	4,353.1	-1,540.1	333.0	216.2	116.82	2.851		
12,300.0	7,498.0	12,155.3	7,267.0	84.1	85.3	-46.29	4,453.1	-1,539.8	334.3	214.6	119.68	2.793		
12,400.0	7,498.0	12,255.2	7,267.0	85.8	86.9	-46.49	4,553.1	-1,539.4	335.6	213.0	122.55	2.738		
12,447.8	7,498.0	12,303.0	7,267.0	86.6	87.7	-46.59	4,600.9	-1,539.2	336.2	212.3	123.93	2.713		
12,500.0	7,498.0	12,355.2	7,267.0	87.5	88.6	-46.67	4,653.1	-1,539.1	336.7	211.0	125.71	2.678		
12,600.0	7,498.0	12,455.2	7,267.0	89.1	90.2	-46.67	4,753.0	-1,538.7	336.6	207.8	128.80	2.614		
12,667.8	7,498.0	12,523.0	7,267.0	90.3	91.3	-46.54	4,820.8	-1,538.5	335.9	205.3	130.64	2.571		
12,700.0	7,498.0	12,555.2	7,267.0	90.8	91.9	-46.47	4,853.0	-1,538.4	335.4	204.1	131.30	2.555		
12,800.0	7,498.0	12,655.2	7,267.0	92.5	93.5	-46.22	4,953.0	-1,538.0	333.9	200.6	133.31	2.505		
12,900.0	7,498.0	12,755.2	7,267.0	94.2	95.2	-45.97	5,053.0	-1,537.7	332.4	197.1	135.31	2.457		
13,000.0	7,498.0	12,855.2	7,267.0	95.9	96.8	-45.72	5,153.0	-1,537.3	330.9	193.6	137.27	2.410		
13,100.0	7,498.0	12,955.1	7,267.0	97.6	98.5	-45.46	5,252.9	-1,537.0	329.4	190.2	139.21	2.366		
13,200.0	7,498.0	13,055.1	7,267.0	99.3	100.2	-45.21	5,352.9	-1,536.6	327.9	186.8	141.12	2.324		
13,300.0	7,498.0	13,155.1	7,267.0	101.0	101.9	-44.95	5,452.9	-1,536.3	326.4	183.4	143.00	2.283		
13,400.0	7,498.0	13,255.1	7,267.0	102.7	103.5	-44.68	5,552.9	-1,535.9	324.9	180.1	144.86	2.243		
13,500.0	7,498.0	13,355.0	7,267.0	104.4	105.2	-44.42	5,652.9	-1,535.6	323.5	176.8	146.68	2.205		
13,600.0	7,498.0	13,455.0	7,267.0	106.1	106.9	-44.16	5,752.8	-1,535.2	322.0	173.5	148.48	2.169		
13,700.0	7,498.0	13,555.0	7,267.0	107.8	108.6	-43.89	5,852.8	-1,534.9	320.5	170.3	150.24	2.134		
13,800.0	7,498.0	13,655.0	7,267.0	109.5	110.3	-43.62	5,952.8	-1,534.5	319.1	167.1	151.97	2.100		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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										
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)							
13,900.0	7,498.0	13,755.0	7,267.0	111.2	111.9	-43.34	6,052.8	-1,534.2	317.7	164.0	153.67	2.067					
14,000.0	7,498.0	13,854.9	7,267.0	112.9	113.6	-43.07	6,152.7	-1,533.8	316.2	160.9	155.34	2.036					
14,100.0	7,498.0	13,954.9	7,267.0	114.6	115.3	-42.79	6,252.7	-1,533.5	314.8	157.8	156.98	2.005					
14,167.8	7,498.0	14,022.7	7,267.0	115.8	116.5	-42.60	6,320.5	-1,533.2	313.8	155.8	158.07	1.985 SF					
14,186.1	7,498.0	14,041.0	7,267.0	116.1	116.8	-42.58	6,338.8	-1,533.2	313.7	155.9	157.82	1.988					
14,200.0	7,498.0	14,054.9	7,267.0	116.3	117.0	-42.59	6,352.7	-1,533.1	313.8	156.1	157.66	1.990					
14,250.0	7,498.0	14,104.8	7,267.0	117.2	117.9	-42.81	6,402.6	-1,532.9	315.3	158.0	157.28	2.005					
14,300.0	7,498.0	14,154.6	7,267.0	118.0	118.7	-43.31	6,452.4	-1,532.8	318.8	161.6	157.14	2.028					
14,350.0	7,498.0	14,203.9	7,267.0	118.8	119.5	-44.06	6,501.7	-1,532.6	324.2	167.1	157.12	2.064					
14,400.0	7,498.0	14,252.8	7,267.0	119.6	120.4	-45.02	6,550.6	-1,532.4	331.8	174.8	157.06	2.113					
14,412.1	7,498.0	14,264.5	7,267.0	119.8	120.6	-45.28	6,562.3	-1,532.4	334.0	177.0	157.01	2.127					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-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)				
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	10.1	10.1					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	10.1	10.1	9.8	0.24	41.195		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	10.1	10.1	9.5	0.59	16.963		
250.0	250.0	250.0	250.0	0.4	0.4	90.05	0.0	10.1	10.1	9.3	0.77	13.107 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-161.65	0.0	10.1	10.5	9.5	0.94	11.119		
400.0	399.9	400.3	400.3	0.7	0.6	-161.67	-1.1	8.7	12.4	11.1	1.29	9.606		
500.0	499.7	500.6	500.5	0.9	0.8	-157.53	-4.5	4.6	15.0	13.3	1.65	9.052		
600.0	599.1	601.0	600.4	1.1	1.1	-151.44	-10.0	-2.2	18.3	16.3	2.05	8.935		
700.0	698.2	701.3	700.0	1.4	1.3	-144.94	-17.8	-11.7	22.6	20.1	2.51	9.001		
800.0	796.6	801.6	799.0	1.7	1.6	-138.90	-27.7	-23.8	28.1	25.0	3.08	9.106		
852.7	848.2	854.3	850.9	1.9	1.8	-136.03	-33.9	-31.3	31.4	28.0	3.43	9.149		
900.0	894.5	901.8	897.4	2.1	2.0	-133.22	-39.9	-38.7	34.4	30.6	3.77	9.128		
1,000.0	992.3	1,001.7	994.8	2.5	2.4	-126.30	-53.6	-55.5	40.5	35.9	4.57	8.846		
1,100.0	1,090.1	1,101.4	1,092.1	2.9	2.8	-121.01	-67.5	-72.5	46.9	41.5	5.40	8.680		
1,200.0	1,187.9	1,201.1	1,189.4	3.3	3.2	-117.03	-81.4	-89.4	53.6	47.4	6.24	8.598		
1,300.0	1,285.7	1,300.8	1,286.7	3.7	3.6	-113.94	-95.3	-106.4	60.6	53.5	7.07	8.562		
1,400.0	1,383.5	1,400.5	1,383.9	4.1	4.0	-111.49	-109.1	-123.4	67.7	59.7	7.91	8.553		
1,500.0	1,481.3	1,500.2	1,481.2	4.5	4.4	-109.51	-123.0	-140.3	74.8	66.1	8.74	8.559		
1,600.0	1,579.1	1,599.9	1,578.5	4.9	4.9	-107.88	-136.9	-157.3	82.1	72.5	9.57	8.574		
1,700.0	1,676.9	1,699.6	1,675.8	5.3	5.3	-106.51	-150.7	-174.2	89.4	79.0	10.40	8.592		
1,800.0	1,774.7	1,799.4	1,773.0	5.7	5.7	-105.35	-164.6	-191.2	96.7	85.5	11.23	8.614		
1,900.0	1,872.5	1,899.1	1,870.3	6.1	6.1	-104.36	-178.5	-208.2	104.1	92.1	12.06	8.636		
2,000.0	1,970.3	1,998.8	1,967.6	6.5	6.5	-103.49	-192.3	-225.1	111.5	98.6	12.88	8.658		
2,100.0	2,068.1	2,098.5	2,064.9	6.9	7.0	-102.74	-206.2	-242.1	119.0	105.3	13.71	8.679		
2,200.0	2,165.9	2,198.2	2,162.1	7.3	7.4	-102.07	-220.1	-259.0	126.4	111.9	14.53	8.700		
2,300.0	2,263.7	2,297.9	2,259.4	7.7	7.8	-101.48	-233.9	-276.0	133.9	118.5	15.35	8.720		
2,400.0	2,361.5	2,397.6	2,356.7	8.2	8.2	-100.95	-247.8	-293.0	141.4	125.2	16.17	8.739		
2,500.0	2,459.2	2,497.3	2,454.0	8.6	8.6	-100.47	-261.7	-309.9	148.8	131.8	17.00	8.757		
2,600.0	2,557.0	2,597.0	2,551.2	9.0	9.1	-100.04	-275.5	-326.9	156.3	138.5	17.82	8.775		
2,700.0	2,654.8	2,696.8	2,648.5	9.4	9.5	-99.65	-289.4	-343.8	163.9	145.2	18.64	8.791		
2,800.0	2,752.6	2,796.5	2,745.8	9.8	9.9	-99.29	-303.3	-360.8	171.4	151.9	19.46	8.806		
2,900.0	2,850.4	2,896.2	2,843.1	10.2	10.3	-98.96	-317.2	-377.8	178.9	158.6	20.28	8.821		
3,000.0	2,948.2	2,995.9	2,940.3	10.6	10.8	-98.66	-331.0	-394.7	186.4	165.3	21.10	8.835		
3,100.0	3,046.0	3,095.6	3,037.6	11.0	11.2	-98.38	-344.9	-411.7	193.9	172.0	21.92	8.848		
3,200.0	3,143.8	3,195.3	3,134.9	11.4	11.6	-98.13	-358.8	-428.6	201.5	178.7	22.74	8.860		
3,300.0	3,241.6	3,295.0	3,232.2	11.8	12.0	-97.89	-372.6	-445.6	209.0	185.5	23.56	8.872		
3,400.0	3,339.4	3,394.7	3,329.5	12.2	12.5	-97.67	-386.5	-462.5	216.6	192.2	24.38	8.883		
3,500.0	3,437.2	3,494.5	3,426.7	12.7	12.9	-97.46	-400.4	-479.5	224.1	198.9	25.20	8.894		
3,600.0	3,535.0	3,594.2	3,524.0	13.1	13.3	-97.27	-414.2	-496.5	231.6	205.6	26.01	8.904		
3,700.0	3,632.8	3,693.9	3,621.3	13.5	13.7	-97.09	-428.1	-513.4	239.2	212.4	26.83	8.914		
3,800.0	3,730.6	3,793.6	3,718.6	13.9	14.2	-96.92	-442.0	-530.4	246.7	219.1	27.65	8.923		
3,900.0	3,828.4	3,893.3	3,815.8	14.3	14.6	-96.76	-455.8	-547.3	254.3	225.8	28.47	8.932		
4,000.0	3,926.2	3,993.0	3,913.1	14.7	15.0	-96.60	-469.7	-564.3	261.9	232.6	29.29	8.940		
4,100.0	4,024.0	4,092.7	4,010.4	15.1	15.4	-96.46	-483.6	-581.3	269.4	239.3	30.11	8.948		
4,200.0	4,121.8	4,192.4	4,107.7	15.5	15.9	-96.33	-497.5	-598.2	277.0	246.0	30.93	8.956		
4,300.0	4,219.6	4,292.1	4,204.9	15.9	16.3	-96.20	-511.3	-615.2	284.5	252.8	31.74	8.963		
4,400.0	4,317.4	4,391.9	4,302.2	16.3	16.7	-96.08	-525.2	-632.1	292.1	259.5	32.56	8.970		
4,500.0	4,415.2	4,491.6	4,399.5	16.8	17.1	-95.97	-539.1	-649.1	299.7	266.3	33.38	8.977		
4,600.0	4,513.0	4,591.3	4,496.8	17.2	17.5	-95.86	-552.9	-666.1	307.2	273.0	34.20	8.984		
4,700.0	4,610.7	4,691.0	4,594.0	17.6	18.0	-95.75	-566.8	-683.0	314.8	279.8	35.02	8.990		
4,800.0	4,708.5	4,790.7	4,691.3	18.0	18.4	-95.65	-580.7	-700.0	322.3	286.5	35.83	8.996		
4,900.0	4,806.3	4,890.4	4,788.6	18.4	18.8	-95.56	-594.5	-716.9	329.9	293.3	36.65	9.001		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-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		
5,000.0	4,904.1	4,990.1	4,885.9	18.8	19.2	-95.47	-608.4	-733.9	337.5	300.0	37.47	9.007		
5,100.0	5,001.9	5,089.8	4,983.1	19.2	19.7	-95.38	-622.3	-750.9	345.0	306.8	38.29	9.012		
5,200.0	5,099.7	5,189.6	5,080.4	19.6	20.1	-95.30	-636.1	-767.8	352.6	313.5	39.10	9.017		
5,300.0	5,197.5	5,289.3	5,177.7	20.0	20.5	-95.22	-650.0	-784.8	360.2	320.3	39.92	9.022		
5,400.0	5,295.3	5,389.0	5,275.0	20.4	20.9	-95.15	-663.9	-801.7	367.8	327.0	40.74	9.027		
5,500.0	5,393.1	5,488.7	5,372.2	20.9	21.4	-95.07	-677.7	-818.7	375.3	333.8	41.56	9.032		
5,600.0	5,490.9	5,588.4	5,469.5	21.3	21.8	-95.00	-691.6	-835.6	382.9	340.5	42.37	9.036		
5,700.0	5,588.7	5,688.1	5,566.8	21.7	22.2	-94.94	-705.5	-852.6	390.5	347.3	43.19	9.040		
5,800.0	5,686.5	5,787.8	5,664.1	22.1	22.6	-94.87	-719.4	-869.6	398.0	354.0	44.01	9.045		
5,900.0	5,784.3	5,887.5	5,761.3	22.5	23.1	-94.81	-733.2	-886.5	405.6	360.8	44.83	9.049		
6,000.0	5,882.1	5,987.3	5,858.6	22.9	23.5	-94.75	-747.1	-903.5	413.2	367.5	45.64	9.052		
6,100.0	5,979.9	6,087.0	5,955.9	23.3	23.9	-94.69	-761.0	-920.4	420.8	374.3	46.46	9.056		
6,200.0	6,077.7	6,186.7	6,053.2	23.7	24.3	-94.64	-774.8	-937.4	428.3	381.1	47.28	9.060		
6,300.0	6,175.5	6,286.4	6,150.4	24.1	24.8	-94.58	-788.7	-954.4	435.9	387.8	48.10	9.063		
6,400.0	6,273.3	6,386.1	6,247.7	24.5	25.2	-94.53	-802.6	-971.3	443.5	394.6	48.91	9.067		
6,500.0	6,371.1	6,485.8	6,345.0	25.0	25.6	-94.48	-816.4	-988.3	451.1	401.3	49.73	9.070		
6,600.0	6,468.9	6,585.5	6,442.3	25.4	26.0	-94.43	-830.3	-1,005.2	458.6	408.1	50.55	9.073		
6,700.0	6,566.7	6,685.2	6,539.5	25.8	26.5	-94.39	-844.2	-1,022.2	466.2	414.9	51.37	9.077		
6,800.0	6,664.5	6,823.7	6,674.9	26.2	27.0	-94.43	-861.2	-1,045.8	473.3	421.0	52.32	9.046		
6,900.0	6,762.3	7,182.7	7,010.6	26.6	27.0	-102.45	-769.6	-1,105.6	443.1	390.0	53.10	8.345		
7,000.0	6,860.0	7,374.0	7,148.6	27.0	26.4	-118.36	-640.8	-1,130.9	378.9	329.1	49.79	7.609		
7,036.3	6,895.5	7,416.3	7,172.9	27.2	26.3	-124.57	-606.5	-1,135.5	353.0	305.3	47.61	7.414		
7,050.0	6,909.0	7,430.2	7,180.3	27.2	26.2	-131.99	-594.8	-1,136.9	343.1	296.0	47.10	7.286		
7,100.0	6,958.0	7,476.5	7,203.0	27.4	26.1	-160.69	-554.7	-1,141.2	308.6	263.6	45.03	6.854		
7,150.0	7,006.8	7,517.9	7,220.6	27.5	25.9	173.88	-517.4	-1,144.6	276.8	234.1	42.63	6.493		
7,200.0	7,055.1	7,555.9	7,234.3	27.7	25.8	154.76	-482.1	-1,147.3	248.5	208.6	39.89	6.229		
7,250.0	7,102.5	7,591.5	7,245.0	27.8	25.6	140.23	-448.2	-1,149.5	224.9	188.1	36.87	6.100		
7,300.0	7,148.7	7,625.3	7,253.3	27.9	25.5	128.22	-415.4	-1,151.3	207.4	173.7	33.75	6.146		
7,350.0	7,193.2	7,657.8	7,259.4	27.9	25.4	117.46	-383.6	-1,152.6	197.1	166.3	30.81	6.398		
7,390.8	7,228.1	7,683.6	7,263.0	28.0	25.3	109.17	-358.1	-1,153.5	194.5	165.7	28.81	6.750		
7,400.0	7,235.7	7,689.3	7,263.6	28.0	25.3	107.36	-352.4	-1,153.6	194.6	166.2	28.44	6.844		
7,450.0	7,276.0	7,719.9	7,266.1	28.0	25.2	97.71	-321.9	-1,154.3	199.7	172.7	26.94	7.411		
7,500.0	7,313.7	7,751.9	7,267.0	28.0	25.2	88.15	-289.9	-1,154.8	211.1	184.8	26.31	8.023		
7,550.0	7,348.5	7,785.0	7,267.0	28.1	25.1	79.25	-256.9	-1,155.1	226.9	200.6	26.34	8.616		
7,600.0	7,380.2	7,823.3	7,267.0	28.1	25.0	70.86	-218.6	-1,155.4	244.8	218.2	26.58	9.209		
7,650.0	7,408.5	7,864.2	7,267.0	28.1	25.0	63.76	-177.6	-1,155.7	262.8	236.2	26.58	9.889		
7,700.0	7,433.3	7,907.5	7,267.0	28.1	24.9	57.99	-134.3	-1,156.1	279.9	253.7	26.16	10.697		
7,750.0	7,454.2	7,952.8	7,267.0	28.2	24.9	53.47	-89.0	-1,156.5	295.0	269.5	25.49	11.574		
7,800.0	7,471.2	7,999.8	7,267.0	28.2	25.0	50.05	-42.0	-1,156.9	307.5	283.0	24.51	12.549		
7,850.0	7,484.1	8,048.0	7,267.0	28.3	25.0	47.58	6.2	-1,157.4	317.1	293.5	23.56	13.461		
7,900.0	7,492.8	8,097.3	7,267.0	28.3	25.1	45.95	55.4	-1,157.8	323.4	300.5	22.81	14.177		
7,950.0	7,497.3	8,147.0	7,267.0	28.4	25.2	45.06	105.2	-1,158.2	326.1	303.8	22.35	14.590		
7,977.8	7,498.0	8,174.8	7,267.0	28.5	25.3	44.88	133.0	-1,158.5	326.1	303.8	22.25	14.654		
8,000.0	7,498.0	8,197.0	7,267.0	28.5	25.3	44.80	155.2	-1,158.7	325.6	303.2	22.41	14.533		
8,100.0	7,498.0	8,297.0	7,267.0	28.8	25.7	44.43	255.1	-1,159.5	323.5	300.3	23.29	13.893		
8,200.0	7,498.0	8,396.9	7,267.0	29.2	26.2	44.05	355.1	-1,160.4	321.5	297.1	24.37	13.190		
8,300.0	7,498.0	8,496.9	7,267.0	29.7	26.7	43.67	455.0	-1,161.3	319.4	293.8	25.63	12.465		
8,400.0	7,498.0	8,596.8	7,267.0	30.2	27.4	43.28	555.0	-1,162.1	317.4	290.4	27.01	11.749		
8,500.0	7,498.0	8,696.8	7,267.0	30.9	28.2	42.89	654.9	-1,163.0	315.3	286.8	28.51	11.063		
8,600.0	7,498.0	8,796.7	7,267.0	31.7	29.1	42.49	754.9	-1,163.9	313.3	283.3	30.08	10.417		
8,700.0	7,498.0	8,896.7	7,267.0	32.5	30.0	42.09	854.8	-1,164.8	311.3	279.6	31.71	9.817		
8,800.0	7,498.0	8,996.7	7,267.0	33.4	31.0	41.68	954.8	-1,165.6	309.4	276.0	33.39	9.264		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-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		
8,900.0	7,498.0	9,096.6	7,267.0	34.3	32.1	41.27	1,054.8	-1,166.5	307.4	272.3	35.10	8.758		
9,000.0	7,498.0	9,196.6	7,267.0	35.4	33.2	40.85	1,154.7	-1,167.4	305.4	268.6	36.82	8.295		
9,100.0	7,498.0	9,296.5	7,267.0	36.4	34.4	40.43	1,254.7	-1,168.2	303.5	265.0	38.56	7.872		
9,200.0	7,498.0	9,396.5	7,267.0	37.6	35.7	40.00	1,354.6	-1,169.1	301.6	261.3	40.29	7.486		
9,300.0	7,498.0	9,496.4	7,267.0	38.8	37.0	39.56	1,454.6	-1,170.0	299.7	257.7	42.01	7.134		
9,400.0	7,498.0	9,596.4	7,267.0	40.0	38.3	39.12	1,554.5	-1,170.9	297.8	254.1	43.72	6.812		
9,500.0	7,498.0	9,696.3	7,267.0	41.2	39.6	38.68	1,654.5	-1,171.7	296.0	250.5	45.41	6.518		
9,600.0	7,498.0	9,796.3	7,267.0	42.5	41.0	38.23	1,754.4	-1,172.6	294.1	247.0	47.07	6.248		
9,700.0	7,498.0	9,896.3	7,267.0	43.9	42.4	37.77	1,854.4	-1,173.5	292.3	243.6	48.71	6.000		
9,800.0	7,498.0	9,996.2	7,267.0	45.2	43.9	37.31	1,954.3	-1,174.4	290.5	240.2	50.32	5.773		
9,900.0	7,498.0	10,096.2	7,267.0	46.6	45.3	36.84	2,054.3	-1,175.2	288.7	236.8	51.89	5.564		
10,000.0	7,498.0	10,196.1	7,267.0	48.0	46.8	36.37	2,154.2	-1,176.1	286.9	233.5	53.42	5.371		
10,100.0	7,498.0	10,296.1	7,267.0	49.5	48.3	35.89	2,254.2	-1,177.0	285.2	230.3	54.91	5.193		
10,200.0	7,498.0	10,396.0	7,267.0	50.9	49.8	35.40	2,354.1	-1,177.8	283.4	227.1	56.36	5.029		
10,300.0	7,498.0	10,496.0	7,267.0	52.4	51.3	34.91	2,454.1	-1,178.7	281.7	224.0	57.77	4.877		
10,400.0	7,498.0	10,595.9	7,267.0	53.9	52.9	34.41	2,554.0	-1,179.6	280.0	220.9	59.13	4.736		
10,500.0	7,498.0	10,695.9	7,267.0	55.4	54.4	33.91	2,654.0	-1,180.5	278.4	217.9	60.43	4.606		
10,600.0	7,498.0	10,795.9	7,267.0	56.9	56.0	33.40	2,753.9	-1,181.3	276.7	215.0	61.69	4.486		
10,700.0	7,498.0	10,895.8	7,267.0	58.4	57.6	32.88	2,853.9	-1,182.2	275.1	212.2	62.89	4.374		
10,800.0	7,498.0	10,995.8	7,267.0	60.0	59.2	32.36	2,953.8	-1,183.1	273.5	209.5	64.04	4.271		
10,900.0	7,498.0	11,095.7	7,267.0	61.5	60.8	31.83	3,053.8	-1,183.9	271.9	206.8	65.13	4.175		
11,000.0	7,498.0	11,195.7	7,267.0	63.1	62.4	31.30	3,153.7	-1,184.8	270.4	204.2	66.16	4.087		
11,100.0	7,498.0	11,295.6	7,267.0	64.7	64.0	30.76	3,253.7	-1,185.7	268.8	201.7	67.13	4.005		
11,200.0	7,498.0	11,395.6	7,267.0	66.3	65.6	30.21	3,353.7	-1,186.6	267.3	199.3	68.03	3.929		
11,300.0	7,498.0	11,495.6	7,267.0	67.9	67.2	29.66	3,453.6	-1,187.4	265.9	197.0	68.88	3.860		
11,400.0	7,498.0	11,595.5	7,267.0	69.5	68.9	29.10	3,553.6	-1,188.3	264.4	194.7	69.66	3.796		
11,500.0	7,498.0	11,695.5	7,267.0	71.1	70.5	28.54	3,653.5	-1,189.2	263.0	192.6	70.37	3.737		
11,600.0	7,498.0	11,795.1	7,267.0	72.7	72.1	27.97	3,753.2	-1,190.0	261.6	190.5	71.03	3.683		
11,700.0	7,498.0	11,893.0	7,267.0	74.3	73.7	27.61	3,851.1	-1,189.8	260.7	188.7	71.99	3.621		
11,760.2	7,498.0	11,952.0	7,267.0	75.3	74.7	27.55	3,910.0	-1,188.9	260.6	187.7	72.84	3.577		
11,800.0	7,498.0	11,991.0	7,267.0	75.9	75.3	27.58	3,949.0	-1,187.9	260.6	187.1	73.52	3.545		
11,900.0	7,498.0	12,088.9	7,267.0	77.6	76.9	27.87	4,046.8	-1,184.4	261.3	185.7	75.68	3.453		
12,000.0	7,498.0	12,188.7	7,267.0	79.2	78.6	28.35	4,146.6	-1,179.8	262.5	184.3	78.25	3.355		
12,100.0	7,498.0	12,288.7	7,267.0	80.8	80.2	28.83	4,246.5	-1,175.2	263.7	182.8	80.87	3.261		
12,200.0	7,498.0	12,388.7	7,267.0	82.5	81.9	29.30	4,346.3	-1,170.7	264.9	181.4	83.53	3.171		
12,300.0	7,498.0	12,488.6	7,267.0	84.1	83.5	29.76	4,446.2	-1,166.1	266.1	179.9	86.23	3.086		
12,400.0	7,498.0	12,588.6	7,267.0	85.8	85.2	30.23	4,546.0	-1,161.5	267.4	178.4	88.97	3.005		
12,447.8	7,498.0	12,636.4	7,267.0	86.6	86.0	30.45	4,593.8	-1,159.3	268.0	177.7	90.29	2.968		
12,500.0	7,498.0	12,688.6	7,267.0	87.5	86.8	30.72	4,645.9	-1,156.9	268.8	176.7	92.03	2.920		
12,600.0	7,498.0	12,788.5	7,267.0	89.1	88.5	31.48	4,745.7	-1,152.4	271.0	175.0	95.92	2.825		
12,667.8	7,498.0	12,856.2	7,267.0	90.3	89.6	32.16	4,813.3	-1,149.3	273.0	174.0	98.97	2.759		
12,700.0	7,498.0	12,888.3	7,267.0	90.8	90.2	32.52	4,845.4	-1,147.8	274.1	173.7	100.40	2.730		
12,800.0	7,498.0	12,988.1	7,267.0	92.5	91.8	33.61	4,945.1	-1,143.2	277.6	172.7	104.87	2.647		
12,900.0	7,498.0	13,087.9	7,267.0	94.2	93.5	34.69	5,044.8	-1,138.6	281.1	171.7	109.37	2.570		
13,000.0	7,498.0	13,187.7	7,267.0	95.9	95.2	35.73	5,144.5	-1,134.1	284.8	170.9	113.88	2.501		
13,100.0	7,498.0	13,287.5	7,267.0	97.6	96.8	36.75	5,244.2	-1,129.5	288.5	170.1	118.40	2.437		
13,200.0	7,498.0	13,387.3	7,267.0	99.3	98.5	37.74	5,343.9	-1,124.9	292.3	169.4	122.94	2.378		
13,300.0	7,498.0	13,487.1	7,267.0	101.0	100.2	38.71	5,443.6	-1,120.4	296.2	168.8	127.48	2.324		
13,400.0	7,498.0	13,586.9	7,267.0	102.7	101.9	39.65	5,543.3	-1,115.8	300.2	168.2	132.02	2.274		
13,500.0	7,498.0	13,686.7	7,267.0	104.4	103.6	40.56	5,643.0	-1,111.2	304.3	167.8	136.56	2.229		
13,600.0	7,498.0	13,786.5	7,267.0	106.1	105.3	41.45	5,742.7	-1,106.7	308.5	167.4	141.09	2.186		
13,700.0	7,498.0	13,886.3	7,267.0	107.8	106.9	42.32	5,842.4	-1,102.1	312.7	167.1	145.62	2.147		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-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		
13,800.0	7,498.0	13,986.1	7,267.0	109.5	108.6	43.16	5,942.1	-1,097.5	317.0	166.9	150.14	2.111		
13,900.0	7,498.0	14,085.9	7,267.0	111.2	110.3	43.99	6,041.8	-1,092.9	321.4	166.7	154.65	2.078		
14,000.0	7,498.0	14,185.7	7,267.0	112.9	112.0	44.78	6,141.5	-1,088.4	325.8	166.6	159.15	2.047		
14,100.0	7,498.0	14,285.5	7,267.0	114.6	113.7	45.56	6,241.2	-1,083.8	330.3	166.6	163.63	2.018		
14,167.8	7,498.0	14,353.2	7,267.0	115.8	114.9	46.08	6,308.8	-1,080.7	333.4	166.7	166.66	2.000 SF		
14,200.0	7,498.0	14,385.3	7,267.0	116.3	115.4	46.30	6,340.9	-1,079.2	334.4	167.5	166.91	2.003		
14,250.0	7,498.0	14,435.3	7,267.0	117.2	116.3	46.28	6,390.8	-1,076.9	334.3	168.4	165.97	2.014		
14,300.0	7,498.0	14,485.2	7,267.0	118.0	117.1	45.83	6,440.7	-1,074.7	332.2	168.8	163.42	2.033		
14,350.0	7,498.0	14,534.9	7,267.0	118.8	118.0	44.94	6,490.3	-1,072.4	328.1	168.8	159.26	2.060		
14,400.0	7,498.0	14,584.1	7,267.0	119.6	118.8	43.57	6,539.5	-1,070.1	322.0	168.5	153.45	2.098		
14,412.1	7,498.0	14,596.0	7,267.0	119.8	119.0	43.17	6,551.3	-1,069.6	320.2	168.5	151.78	2.110		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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	
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	20.1	20.1					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	20.1	20.1	19.9	0.24	82.389		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	20.1	20.1	19.5	0.59	33.925		
250.0	250.0	250.0	250.0	0.4	0.4	90.05	0.0	20.1	20.1	19.4	0.77	26.215	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-161.26	0.0	20.1	20.5	19.6	0.94	21.800		
400.0	399.9	400.2	400.2	0.7	0.6	-163.20	-0.3	19.8	23.6	22.3	1.29	18.241		
500.0	499.7	500.8	500.7	0.9	0.8	-162.20	-2.9	17.5	27.8	26.1	1.65	16.869		
600.0	599.1	601.3	601.0	1.1	1.0	-158.90	-8.1	12.7	32.9	30.9	2.02	16.301		
700.0	698.2	701.9	701.0	1.4	1.3	-154.48	-15.9	5.5	39.2	36.8	2.44	16.089		
800.0	796.6	802.4	800.5	1.7	1.5	-149.70	-26.3	-4.0	46.8	43.9	2.93	15.980		
852.7	848.2	855.2	852.6	1.9	1.7	-147.22	-32.8	-9.9	51.4	48.2	3.23	15.921		
900.0	894.5	902.6	899.2	2.1	1.9	-144.97	-39.1	-15.7	55.6	52.1	3.52	15.814		
1,000.0	992.3	1,002.1	997.0	2.5	2.2	-141.04	-52.6	-28.1	64.7	60.5	4.16	15.543		
1,100.0	1,090.1	1,101.6	1,094.8	2.9	2.5	-138.08	-66.0	-40.4	73.9	69.1	4.83	15.300		
1,200.0	1,187.9	1,201.1	1,192.6	3.3	2.9	-135.78	-79.5	-52.8	83.4	77.8	5.52	15.094		
1,300.0	1,285.7	1,300.6	1,290.4	3.7	3.2	-133.95	-93.0	-65.1	92.9	86.7	6.22	14.923		
1,400.0	1,383.5	1,400.1	1,388.2	4.1	3.6	-132.46	-106.4	-77.5	102.5	95.6	6.93	14.781		
1,500.0	1,481.3	1,499.6	1,486.0	4.5	4.0	-131.23	-119.9	-89.8	112.1	104.5	7.65	14.661		
1,600.0	1,579.1	1,599.1	1,583.9	4.9	4.3	-130.20	-133.4	-102.2	121.8	113.5	8.37	14.561		
1,700.0	1,676.9	1,698.6	1,681.7	5.3	4.7	-129.31	-146.9	-114.6	131.6	122.5	9.09	14.475		
1,800.0	1,774.7	1,798.1	1,779.5	5.7	5.0	-128.55	-160.3	-126.9	141.3	131.5	9.81	14.402		
1,900.0	1,872.5	1,897.6	1,877.3	6.1	5.4	-127.89	-173.8	-139.3	151.1	140.6	10.54	14.339		
2,000.0	1,970.3	1,997.1	1,975.1	6.5	5.8	-127.31	-187.3	-151.6	160.9	149.7	11.27	14.283		
2,100.0	2,068.1	2,096.6	2,072.9	6.9	6.1	-126.79	-200.7	-164.0	170.7	158.8	12.00	14.234		
2,200.0	2,165.9	2,196.1	2,170.7	7.3	6.5	-126.33	-214.2	-176.3	180.6	167.9	12.72	14.191		
2,300.0	2,263.7	2,295.6	2,268.5	7.7	6.8	-125.92	-227.7	-188.7	190.4	177.0	13.45	14.153		
2,400.0	2,361.5	2,395.2	2,366.4	8.2	7.2	-125.55	-241.1	-201.0	200.3	186.1	14.18	14.119		
2,500.0	2,459.2	2,494.7	2,464.2	8.6	7.6	-125.21	-254.6	-213.4	210.1	195.2	14.91	14.088		
2,600.0	2,557.0	2,594.2	2,562.0	9.0	7.9	-124.91	-268.1	-225.7	220.0	204.3	15.65	14.060		
2,700.0	2,654.8	2,693.7	2,659.8	9.4	8.3	-124.63	-281.5	-238.1	229.8	213.5	16.38	14.034		
2,800.0	2,752.6	2,793.2	2,757.6	9.8	8.7	-124.37	-295.0	-250.5	239.7	222.6	17.11	14.011		
2,900.0	2,850.4	2,892.7	2,855.4	10.2	9.0	-124.13	-308.5	-262.8	249.6	231.8	17.84	13.990		
3,000.0	2,948.2	2,992.2	2,953.2	10.6	9.4	-123.91	-321.9	-275.2	259.5	240.9	18.57	13.970		
3,100.0	3,046.0	3,091.7	3,051.0	11.0	9.7	-123.71	-335.4	-287.5	269.4	250.1	19.31	13.952		
3,200.0	3,143.8	3,191.2	3,148.9	11.4	10.1	-123.52	-348.9	-299.9	279.2	259.2	20.04	13.936		
3,300.0	3,241.6	3,290.7	3,246.7	11.8	10.5	-123.35	-362.4	-312.2	289.1	268.4	20.77	13.920		
3,400.0	3,339.4	3,390.2	3,344.5	12.2	10.8	-123.18	-375.8	-324.6	299.0	277.5	21.50	13.906		
3,500.0	3,437.2	3,489.7	3,442.3	12.7	11.2	-123.03	-389.3	-336.9	308.9	286.7	22.24	13.893		
3,600.0	3,535.0	3,589.2	3,540.1	13.1	11.6	-122.89	-402.8	-349.3	318.8	295.8	22.97	13.880		
3,700.0	3,632.8	3,688.7	3,637.9	13.5	11.9	-122.75	-416.2	-361.6	328.7	305.0	23.70	13.868		
3,800.0	3,730.6	3,788.2	3,735.7	13.9	12.3	-122.63	-429.7	-374.0	338.6	314.2	24.44	13.858		
3,900.0	3,828.4	3,887.7	3,833.6	14.3	12.7	-122.51	-443.2	-386.4	348.5	323.3	25.17	13.847		
4,000.0	3,926.2	3,987.2	3,931.4	14.7	13.0	-122.39	-456.6	-398.7	358.4	332.5	25.90	13.838		
4,100.0	4,024.0	4,086.8	4,029.2	15.1	13.4	-122.28	-470.1	-411.1	368.3	341.7	26.64	13.828		
4,200.0	4,121.8	4,186.3	4,127.0	15.5	13.8	-122.18	-483.6	-423.4	378.2	350.9	27.37	13.820		
4,300.0	4,219.6	4,285.8	4,224.8	15.9	14.1	-122.09	-497.0	-435.8	388.1	360.0	28.10	13.812		
4,400.0	4,317.4	4,385.3	4,322.6	16.3	14.5	-121.99	-510.5	-448.1	398.0	369.2	28.84	13.804		
4,500.0	4,415.2	4,484.8	4,420.4	16.8	14.8	-121.91	-524.0	-460.5	408.0	378.4	29.57	13.797		
4,600.0	4,513.0	4,584.3	4,518.2	17.2	15.2	-121.82	-537.5	-472.8	417.9	387.6	30.30	13.790		
4,700.0	4,610.7	4,683.8	4,616.1	17.6	15.6	-121.75	-550.9	-485.2	427.8	396.7	31.04	13.783		
4,800.0	4,708.5	4,783.3	4,713.9	18.0	15.9	-121.67	-564.4	-497.5	437.7	405.9	31.77	13.777		
4,900.0	4,806.3	4,882.8	4,811.7	18.4	16.3	-121.60	-577.9	-509.9	447.6	415.1	32.50	13.771		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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)	
5,000.0	4,904.1	4,982.3	4,909.5	18.8	16.7	-121.53	-591.3	-522.3	457.5	424.3	33.24	13.765		
5,100.0	5,001.9	5,081.8	5,007.3	19.2	17.0	-121.46	-604.8	-534.6	467.4	433.5	33.97	13.759		
5,200.0	5,099.7	5,181.3	5,105.1	19.6	17.4	-121.40	-618.3	-547.0	477.3	442.6	34.70	13.754		
5,300.0	5,197.5	5,280.8	5,202.9	20.0	17.8	-121.34	-631.7	-559.3	487.2	451.8	35.44	13.749		
5,400.0	5,295.3	5,380.3	5,300.7	20.4	18.1	-121.28	-645.2	-571.7	497.2	461.0	36.17	13.744		
5,500.0	5,393.1	5,479.8	5,398.6	20.9	18.5	-121.22	-658.7	-584.0	507.1	470.2	36.91	13.740		
5,600.0	5,490.9	5,579.3	5,496.4	21.3	18.9	-121.17	-672.1	-596.4	517.0	479.4	37.64	13.735		
5,700.0	5,588.7	5,678.9	5,594.2	21.7	19.2	-121.12	-685.6	-608.7	526.9	488.5	38.37	13.731		
5,800.0	5,686.5	5,778.4	5,692.0	22.1	19.6	-121.07	-699.1	-621.1	536.8	497.7	39.11	13.727		
5,900.0	5,784.3	5,877.9	5,789.8	22.5	20.0	-121.02	-712.6	-633.4	546.7	506.9	39.84	13.723		
6,000.0	5,882.1	5,977.4	5,887.6	22.9	20.3	-120.97	-726.0	-645.8	556.7	516.1	40.58	13.719		
6,100.0	5,979.9	6,076.9	5,985.4	23.3	20.7	-120.93	-739.5	-658.2	566.6	525.3	41.31	13.716		
6,200.0	6,077.7	6,176.4	6,083.3	23.7	21.1	-120.88	-753.0	-670.5	576.5	534.5	42.04	13.712		
6,300.0	6,175.5	6,275.9	6,181.1	24.1	21.4	-120.84	-766.4	-682.9	586.4	543.6	42.78	13.709		
6,400.0	6,273.3	6,375.4	6,278.9	24.5	21.8	-120.80	-779.9	-695.2	596.3	552.8	43.51	13.705		
6,500.0	6,371.1	6,474.9	6,376.7	25.0	22.1	-120.76	-793.4	-707.6	606.3	562.0	44.24	13.702		
6,600.0	6,468.9	6,574.4	6,474.5	25.4	22.5	-120.72	-806.8	-719.9	616.2	571.2	44.98	13.699		
6,700.0	6,566.7	6,673.9	6,572.3	25.8	22.9	-120.69	-820.3	-732.3	626.1	580.4	45.71	13.696		
6,800.0	6,664.5	6,773.4	6,670.1	26.2	23.2	-120.65	-833.8	-744.6	636.0	589.6	46.45	13.693		
6,900.0	6,762.3	6,872.9	6,767.9	26.6	23.6	-120.62	-847.2	-757.0	645.9	598.8	47.18	13.691		
7,000.0	6,860.0	7,010.4	6,903.3	27.0	24.1	-120.72	-863.6	-774.1	655.5	607.5	47.97	13.663		
7,036.3	6,895.5	7,145.9	7,037.1	27.2	24.2	-122.56	-853.8	-791.0	654.2	606.4	47.82	13.681		
7,050.0	6,909.0	7,193.9	7,083.5	27.2	24.1	-129.82	-842.8	-796.8	652.5	605.0	47.54	13.726		
7,100.0	6,958.0	7,349.9	7,224.9	27.4	23.8	-158.68	-780.8	-814.7	642.8	597.0	45.78	14.039		
7,150.0	7,006.8	7,475.5	7,323.5	27.5	23.3	175.60	-704.3	-827.2	629.4	586.0	43.35	14.517		
7,200.0	7,055.1	7,576.1	7,389.0	27.7	22.8	156.88	-628.6	-835.4	614.3	573.6	40.76	15.072		
7,250.0	7,102.5	7,658.4	7,432.2	27.8	22.3	143.78	-558.8	-840.9	599.1	560.8	38.28	15.649		
7,300.0	7,148.7	7,727.7	7,460.5	27.9	22.0	134.25	-495.8	-844.5	584.6	548.6	36.03	16.225		
7,350.0	7,193.2	7,787.6	7,478.8	27.9	21.7	126.93	-438.8	-846.8	571.5	537.5	34.05	16.785		
7,400.0	7,235.7	7,840.7	7,490.0	28.0	21.5	121.01	-386.9	-848.2	560.1	527.8	32.34	17.322		
7,450.0	7,276.0	7,888.9	7,496.0	28.0	21.3	115.98	-339.1	-849.0	550.8	519.9	30.90	17.823		
7,500.0	7,313.7	7,933.3	7,498.0	28.0	21.2	111.55	-294.7	-849.2	543.6	513.8	29.75	18.271		
7,550.0	7,348.5	7,969.4	7,498.0	28.1	21.1	107.99	-258.7	-849.2	538.8	509.8	28.98	18.592		
7,600.0	7,380.2	8,007.6	7,498.0	28.1	21.0	104.58	-220.4	-849.2	536.3	507.9	28.39	18.892		
7,650.0	7,408.5	8,048.5	7,498.0	28.1	21.0	101.32	-179.5	-849.2	535.5	507.5	28.02	19.113		
7,652.6	7,409.9	8,050.8	7,498.0	28.1	20.9	101.16	-177.3	-849.2	535.5	507.5	28.00	19.122		
7,700.0	7,433.3	8,091.8	7,498.0	28.1	20.9	98.32	-136.3	-849.2	536.0	508.1	27.81	19.273		
7,750.0	7,454.2	8,137.1	7,498.0	28.2	20.9	95.66	-91.0	-849.2	537.1	509.3	27.80	19.321		
7,800.0	7,471.2	8,184.0	7,498.0	28.2	20.9	93.45	-44.1	-849.2	538.4	510.5	27.87	19.320		
7,850.0	7,484.1	8,232.3	7,498.0	28.3	21.0	91.74	4.2	-849.2	539.4	511.4	28.03	19.245		
7,900.0	7,492.8	8,281.5	7,498.0	28.3	21.1	90.59	53.4	-849.2	540.0	511.8	28.26	19.111		
7,950.0	7,497.3	8,331.3	7,498.0	28.4	21.2	90.04	103.2	-849.2	539.9	511.3	28.55	18.909		
7,977.8	7,498.0	8,359.1	7,498.0	28.5	21.3	90.00	131.0	-849.2	539.4	510.7	28.74	18.769		
8,000.0	7,498.0	8,381.3	7,498.0	28.5	21.4	90.00	153.2	-849.2	538.9	510.0	28.94	18.625		
8,100.0	7,498.0	8,481.2	7,498.0	28.8	21.8	90.00	253.2	-849.2	536.8	506.7	30.10	17.833		
8,200.0	7,498.0	8,581.2	7,498.0	29.2	22.3	90.00	353.1	-849.2	534.7	503.1	31.62	16.912		
8,300.0	7,498.0	8,681.2	7,498.0	29.7	23.0	90.00	453.1	-849.2	532.7	499.2	33.44	15.931		
8,400.0	7,498.0	8,781.2	7,498.0	30.2	23.8	90.00	553.1	-849.2	530.6	495.1	35.51	14.943		
8,500.0	7,498.0	8,881.1	7,498.0	30.9	24.7	90.00	653.1	-849.2	528.5	490.7	37.79	13.984		
8,600.0	7,498.0	8,981.1	7,498.0	31.7	25.7	90.00	753.0	-849.2	526.4	486.1	40.25	13.077		
8,700.0	7,498.0	9,081.1	7,498.0	32.5	26.7	90.00	853.0	-849.2	524.3	481.4	42.86	12.233		
8,800.0	7,498.0	9,181.1	7,498.0	33.4	27.9	90.00	953.0	-849.2	522.2	476.6	45.58	11.455		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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: 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		
8,900.0	7,498.0	9,281.1	7,498.0	34.3	29.1	90.00	1,053.0	-849.2	520.1	471.7	48.41	10.743	
9,000.0	7,498.0	9,381.0	7,498.0	35.4	30.3	90.00	1,153.0	-849.2	518.0	466.7	51.32	10.092	
9,100.0	7,498.0	9,481.0	7,498.0	36.4	31.6	90.00	1,252.9	-849.2	515.9	461.6	54.31	9.500	
9,200.0	7,498.0	9,581.0	7,498.0	37.6	32.9	90.00	1,352.9	-849.2	513.8	456.5	57.35	8.959	
9,300.0	7,498.0	9,681.0	7,498.0	38.8	34.3	90.00	1,452.9	-849.2	511.7	451.3	60.44	8.466	
9,400.0	7,498.0	9,780.9	7,498.0	40.0	35.7	90.00	1,552.9	-849.2	509.6	446.0	63.58	8.016	
9,500.0	7,498.0	9,880.9	7,498.0	41.2	37.2	90.00	1,652.8	-849.2	507.5	440.8	66.75	7.603	
9,600.0	7,498.0	9,980.9	7,498.0	42.5	38.6	90.00	1,752.8	-849.2	505.4	435.5	69.96	7.225	
9,700.0	7,498.0	10,080.9	7,498.0	43.9	40.1	90.00	1,852.8	-849.2	503.3	430.1	73.19	6.877	
9,800.0	7,498.0	10,180.9	7,498.0	45.2	41.6	90.00	1,952.8	-849.2	501.2	424.8	76.44	6.557	
9,900.0	7,498.0	10,280.8	7,498.0	46.6	43.2	90.00	2,052.8	-849.2	499.1	419.4	79.72	6.261	
10,000.0	7,498.0	10,380.8	7,498.0	48.0	44.7	90.00	2,152.7	-849.2	497.1	414.0	83.02	5.987	
10,100.0	7,498.0	10,480.8	7,498.0	49.5	46.3	90.00	2,252.7	-849.2	495.0	408.6	86.33	5.733	
10,200.0	7,498.0	10,580.8	7,498.0	50.9	47.8	90.00	2,352.7	-849.2	492.9	403.2	89.66	5.497	
10,300.0	7,498.0	10,680.8	7,498.0	52.4	49.4	90.00	2,452.7	-849.2	490.8	397.8	93.00	5.277	
10,400.0	7,498.0	10,780.7	7,498.0	53.9	51.0	90.00	2,552.7	-849.2	488.7	392.3	96.36	5.072	
10,500.0	7,498.0	10,880.7	7,498.0	55.4	52.6	90.00	2,652.6	-849.2	486.6	386.9	99.72	4.879	
10,600.0	7,498.0	10,980.7	7,498.0	56.9	54.2	90.00	2,752.6	-849.2	484.5	381.4	103.09	4.699	
10,700.0	7,498.0	11,080.7	7,498.0	58.4	55.9	90.00	2,852.6	-849.2	482.4	375.9	106.48	4.531	
10,800.0	7,498.0	11,180.6	7,498.0	60.0	57.5	90.00	2,952.6	-849.2	480.3	370.4	109.87	4.372	
10,900.0	7,498.0	11,280.6	7,498.0	61.5	59.1	90.00	3,052.5	-849.2	478.2	364.9	113.26	4.222	
11,000.0	7,498.0	11,380.6	7,498.0	63.1	60.8	90.00	3,152.5	-849.2	476.1	359.4	116.67	4.081	
11,100.0	7,498.0	11,480.6	7,498.0	64.7	62.4	90.00	3,252.5	-849.2	474.0	353.9	120.08	3.948	
11,200.0	7,498.0	11,580.6	7,498.0	66.3	64.1	90.00	3,352.5	-849.2	471.9	348.4	123.49	3.821	
11,300.0	7,498.0	11,680.5	7,498.0	67.9	65.7	90.00	3,452.5	-849.2	469.8	342.9	126.91	3.702	
11,400.0	7,498.0	11,780.5	7,498.0	69.5	67.4	90.00	3,552.4	-849.2	467.7	337.4	130.34	3.589	
11,500.0	7,498.0	11,880.5	7,498.0	71.1	69.1	90.00	3,652.4	-849.2	465.6	331.9	133.77	3.481	
11,600.0	7,498.0	11,980.5	7,498.0	72.7	70.8	90.00	3,752.4	-849.2	463.5	326.3	137.20	3.379	
11,700.0	7,498.0	12,080.4	7,498.0	74.3	72.4	90.00	3,852.4	-849.2	461.4	320.8	140.64	3.281	
11,800.0	7,498.0	12,180.4	7,498.0	75.9	74.1	90.00	3,952.3	-849.2	459.4	315.3	144.08	3.188	
11,900.0	7,498.0	12,280.4	7,498.0	77.6	75.8	90.00	4,052.3	-849.2	457.3	309.7	147.52	3.100	
12,000.0	7,498.0	12,380.4	7,498.0	79.2	77.5	90.00	4,152.3	-849.2	455.2	304.2	150.97	3.015	
12,100.0	7,498.0	12,480.4	7,498.0	80.8	79.2	90.00	4,252.3	-849.2	453.1	298.7	154.41	2.934	
12,200.0	7,498.0	12,580.3	7,498.0	82.5	80.9	90.00	4,352.3	-849.2	451.0	293.1	157.87	2.857	
12,300.0	7,498.0	12,680.3	7,498.0	84.1	82.6	90.00	4,452.2	-849.2	448.9	287.6	161.32	2.783	
12,400.0	7,498.0	12,780.3	7,498.0	85.8	84.3	90.00	4,552.2	-849.2	446.8	282.0	164.78	2.711	
12,447.8	7,498.0	12,828.1	7,498.0	86.6	85.1	90.00	4,600.0	-849.2	445.8	279.4	166.43	2.679	
12,500.0	7,498.0	12,880.3	7,498.0	87.5	86.0	90.00	4,652.2	-849.2	444.9	276.3	168.59	2.639	
12,567.8	7,498.0	12,948.1	7,498.0	88.6	87.1	90.00	4,720.0	-849.2	444.5	273.1	171.39	2.594	
12,600.0	7,498.0	12,980.3	7,498.0	89.1	87.7	90.00	4,752.2	-849.2	444.6	271.9	172.71	2.574	
12,667.8	7,498.0	13,048.1	7,498.0	90.3	88.8	90.00	4,820.0	-849.2	445.4	269.9	175.47	2.538	
12,700.0	7,498.0	13,080.3	7,498.0	90.8	89.4	90.00	4,852.2	-849.2	446.0	269.4	176.59	2.525	
12,800.0	7,498.0	13,180.2	7,498.0	92.5	91.1	90.00	4,952.2	-849.2	447.7	267.7	180.05	2.487	
12,900.0	7,498.0	13,280.2	7,498.0	94.2	92.8	90.00	5,052.2	-849.2	449.5	265.9	183.52	2.449	
13,000.0	7,498.0	13,380.2	7,498.0	95.9	94.5	90.00	5,152.1	-849.2	451.2	264.2	186.99	2.413	
13,100.0	7,498.0	13,480.2	7,498.0	97.6	96.2	90.00	5,252.1	-849.2	452.9	262.5	190.46	2.378	
13,200.0	7,498.0	13,580.2	7,498.0	99.3	97.9	90.00	5,352.1	-849.2	454.7	260.8	193.93	2.345	
13,300.0	7,498.0	13,680.2	7,498.0	101.0	99.6	90.00	5,452.1	-849.2	456.4	259.0	197.40	2.312	
13,400.0	7,498.0	13,780.2	7,498.0	102.7	101.4	90.00	5,552.1	-849.2	458.2	257.3	200.87	2.281	
13,500.0	7,498.0	13,880.1	7,498.0	104.4	103.1	90.00	5,652.1	-849.2	459.9	255.6	204.35	2.251	
13,600.0	7,498.0	13,980.1	7,498.0	106.1	104.8	90.00	5,752.0	-849.2	461.7	253.8	207.83	2.221	
13,700.0	7,498.0	14,080.1	7,498.0	107.8	106.5	90.00	5,852.0	-849.2	463.4	252.1	211.30	2.193	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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	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)						
13,800.0	7,498.0	14,180.1	7,498.0	109.5	108.2	90.00	5,952.0	-849.2	465.2	250.4	214.78	2.166				
13,900.0	7,498.0	14,280.1	7,498.0	111.2	109.9	90.00	6,052.0	-849.2	466.9	248.6	218.26	2.139				
14,000.0	7,498.0	14,380.1	7,498.0	112.9	111.7	90.00	6,152.0	-849.2	468.7	246.9	221.74	2.114				
14,100.0	7,498.0	14,480.0	7,498.0	114.6	113.4	90.00	6,252.0	-849.2	470.4	245.2	225.22	2.089				
14,167.8	7,498.0	14,547.8	7,498.0	115.8	114.6	90.00	6,319.8	-849.2	471.6	244.0	227.58	2.072				
14,200.0	7,498.0	14,580.0	7,498.0	116.3	115.1	90.00	6,352.0	-849.2	471.5	244.2	227.31	2.074				
14,250.0	7,498.0	14,630.0	7,498.0	117.2	116.0	90.00	6,401.9	-849.2	469.2	242.9	226.30	2.073				
14,300.0	7,498.0	14,679.7	7,498.0	118.0	116.8	90.00	6,451.6	-849.2	463.9	239.3	224.58	2.066				
14,350.0	7,498.0	14,729.0	7,498.0	118.8	117.7	90.00	6,501.0	-849.2	455.9	233.7	222.14	2.052				
14,400.0	7,498.0	14,777.8	7,498.0	119.6	118.5	90.00	6,549.7	-849.2	445.0	226.0	218.99	2.032				
14,412.1	7,498.0	14,786.3	7,498.0	119.8	118.7	90.00	6,558.2	-849.2	442.0	223.9	218.07	2.027 SF				

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-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		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	30.2	30.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	30.2	30.2	30.0	0.24	123.584		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.2	30.2	29.6	0.59	50.888		
250.0	250.0	250.0	250.0	0.4	0.4	90.05	0.0	30.2	30.2	29.4	0.77	39.322 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-161.13	0.0	30.2	30.6	29.7	0.94	32.480		
400.0	399.9	399.9	399.9	0.7	0.6	-163.02	0.0	30.2	33.9	32.6	1.29	26.277		
500.0	499.7	500.5	500.5	0.9	0.8	-163.90	-1.5	29.2	39.6	37.9	1.64	24.079		
600.0	599.1	601.2	601.0	1.1	1.0	-162.27	-5.9	26.2	46.4	44.4	2.01	23.138		
700.0	698.2	701.8	701.3	1.4	1.2	-159.18	-13.1	21.2	54.7	52.3	2.40	22.766		
800.0	796.6	802.3	801.0	1.7	1.5	-155.39	-23.3	14.3	64.5	61.6	2.85	22.596		
852.7	848.2	855.2	853.3	1.9	1.6	-153.29	-29.8	9.8	70.3	67.2	3.12	22.495		
900.0	894.5	902.6	900.1	2.1	1.8	-151.31	-36.3	5.4	75.6	72.3	3.39	22.335		
1,000.0	992.3	1,001.9	997.8	2.5	2.1	-147.62	-50.4	-4.3	86.9	83.0	3.98	21.870		
1,100.0	1,090.1	1,101.1	1,095.6	2.9	2.4	-144.79	-64.5	-13.9	98.5	93.9	4.59	21.442		
1,200.0	1,187.9	1,200.3	1,193.3	3.3	2.7	-142.56	-78.6	-23.5	110.3	105.0	5.23	21.069		
1,300.0	1,285.7	1,299.5	1,291.0	3.7	3.1	-140.76	-92.7	-33.2	122.2	116.3	5.89	20.751		
1,400.0	1,383.5	1,398.8	1,388.8	4.1	3.4	-139.28	-106.8	-42.8	134.2	127.6	6.55	20.482		
1,500.0	1,481.3	1,498.0	1,486.5	4.5	3.7	-138.04	-120.9	-52.4	146.2	139.0	7.22	20.253		
1,600.0	1,579.1	1,597.2	1,584.3	4.9	4.1	-136.99	-134.9	-62.1	158.4	150.5	7.90	20.057		
1,700.0	1,676.9	1,696.4	1,682.0	5.3	4.4	-136.09	-149.0	-71.7	170.5	162.0	8.57	19.889		
1,800.0	1,774.7	1,795.6	1,779.8	5.7	4.7	-135.31	-163.1	-81.3	182.8	173.5	9.26	19.744		
1,900.0	1,872.5	1,894.9	1,877.5	6.1	5.1	-134.63	-177.2	-91.0	195.0	185.0	9.94	19.617		
2,000.0	1,970.3	1,994.1	1,975.3	6.5	5.4	-134.03	-191.3	-100.6	207.2	196.6	10.63	19.505		
2,100.0	2,068.1	2,093.3	2,073.0	6.9	5.8	-133.49	-205.4	-110.2	219.5	208.2	11.31	19.406		
2,200.0	2,165.9	2,192.5	2,170.7	7.3	6.1	-133.02	-219.5	-119.9	231.8	219.8	12.00	19.318		
2,300.0	2,263.7	2,291.8	2,268.5	7.7	6.5	-132.59	-233.6	-129.5	244.1	231.4	12.69	19.239		
2,400.0	2,361.5	2,391.0	2,366.2	8.2	6.8	-132.20	-247.7	-139.1	256.5	243.1	13.38	19.168		
2,500.0	2,459.2	2,490.2	2,464.0	8.6	7.1	-131.85	-261.7	-148.8	268.8	254.7	14.07	19.104		
2,600.0	2,557.0	2,589.4	2,561.7	9.0	7.5	-131.52	-275.8	-158.4	281.1	266.4	14.76	19.046		
2,700.0	2,654.8	2,688.7	2,659.5	9.4	7.8	-131.23	-289.9	-168.1	293.5	278.0	15.45	18.993		
2,800.0	2,752.6	2,787.9	2,757.2	9.8	8.2	-130.96	-304.0	-177.7	305.9	289.7	16.14	18.945		
2,900.0	2,850.4	2,887.1	2,854.9	10.2	8.5	-130.71	-318.1	-187.3	318.2	301.4	16.84	18.900		
3,000.0	2,948.2	2,986.3	2,952.7	10.6	8.9	-130.48	-332.2	-197.0	330.6	313.1	17.53	18.859		
3,100.0	3,046.0	3,085.6	3,050.4	11.0	9.2	-130.26	-346.3	-206.6	343.0	324.7	18.22	18.821		
3,200.0	3,143.8	3,184.8	3,148.2	11.4	9.5	-130.07	-360.4	-216.2	355.3	336.4	18.92	18.786		
3,300.0	3,241.6	3,284.0	3,245.9	11.8	9.9	-129.88	-374.5	-225.9	367.7	348.1	19.61	18.753		
3,400.0	3,339.4	3,383.2	3,343.7	12.2	10.2	-129.71	-388.5	-235.5	380.1	359.8	20.30	18.723		
3,500.0	3,437.2	3,482.4	3,441.4	12.7	10.6	-129.54	-402.6	-245.1	392.5	371.5	21.00	18.695		
3,600.0	3,535.0	3,581.7	3,539.2	13.1	10.9	-129.39	-416.7	-254.8	404.9	383.2	21.69	18.668		
3,700.0	3,632.8	3,680.9	3,636.9	13.5	11.3	-129.25	-430.8	-264.4	417.3	394.9	22.38	18.643		
3,800.0	3,730.6	3,780.1	3,734.6	13.9	11.6	-129.11	-444.9	-274.0	429.7	406.6	23.08	18.620		
3,900.0	3,828.4	3,879.3	3,832.4	14.3	12.0	-128.98	-459.0	-283.7	442.1	418.3	23.77	18.598		
4,000.0	3,926.2	3,978.6	3,930.1	14.7	12.3	-128.86	-473.1	-293.3	454.5	430.0	24.47	18.577		
4,100.0	4,024.0	4,077.8	4,027.9	15.1	12.7	-128.75	-487.2	-302.9	466.9	441.7	25.16	18.557		
4,200.0	4,121.8	4,177.0	4,125.6	15.5	13.0	-128.64	-501.3	-312.6	479.3	453.5	25.85	18.539		
4,300.0	4,219.6	4,276.2	4,223.4	15.9	13.3	-128.54	-515.3	-322.2	491.7	465.2	26.55	18.521		
4,400.0	4,317.4	4,375.5	4,321.1	16.3	13.7	-128.44	-529.4	-331.8	504.1	476.9	27.24	18.505		
4,500.0	4,415.2	4,474.7	4,418.9	16.8	14.0	-128.34	-543.5	-341.5	516.5	488.6	27.94	18.489		
4,600.0	4,513.0	4,573.9	4,516.6	17.2	14.4	-128.25	-557.6	-351.1	528.9	500.3	28.63	18.474		
4,700.0	4,610.7	4,673.1	4,614.3	17.6	14.7	-128.17	-571.7	-360.7	541.4	512.0	29.33	18.459		
4,800.0	4,708.5	4,772.3	4,712.1	18.0	15.1	-128.09	-585.8	-370.4	553.8	523.8	30.02	18.446		
4,900.0	4,806.3	4,871.6	4,809.8	18.4	15.4	-128.01	-599.9	-380.0	566.2	535.5	30.72	18.433		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-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	4,904.1	4,970.8	4,907.6	18.8	15.8	-127.94	-614.0	-389.7	578.6	547.2	31.41	18.420		
5,100.0	5,001.9	5,070.0	5,005.3	19.2	16.1	-127.87	-628.1	-399.3	591.0	558.9	32.11	18.408		
5,200.0	5,099.7	5,169.2	5,103.1	19.6	16.4	-127.80	-642.1	-408.9	603.4	570.6	32.80	18.397		
5,300.0	5,197.5	5,268.5	5,200.8	20.0	16.8	-127.73	-656.2	-418.6	615.9	582.4	33.50	18.386		
5,400.0	5,295.3	5,367.7	5,298.6	20.4	17.1	-127.67	-670.3	-428.2	628.3	594.1	34.19	18.376		
5,500.0	5,393.1	5,466.9	5,396.3	20.9	17.5	-127.61	-684.4	-437.8	640.7	605.8	34.89	18.366		
5,600.0	5,490.9	5,566.1	5,494.0	21.3	17.8	-127.55	-698.5	-447.5	653.1	617.5	35.58	18.356		
5,700.0	5,588.7	5,665.4	5,591.8	21.7	18.2	-127.50	-712.6	-457.1	665.5	629.3	36.28	18.347		
5,800.0	5,686.5	5,764.6	5,689.5	22.1	18.5	-127.44	-726.7	-466.7	678.0	641.0	36.97	18.338		
5,900.0	5,784.3	5,863.8	5,787.3	22.5	18.9	-127.39	-740.8	-476.4	690.4	652.7	37.67	18.329		
6,000.0	5,882.1	5,963.0	5,885.0	22.9	19.2	-127.34	-754.9	-486.0	702.8	664.5	38.36	18.321		
6,100.0	5,979.9	6,062.3	5,982.8	23.3	19.6	-127.29	-769.0	-495.6	715.2	676.2	39.06	18.313		
6,200.0	6,077.7	6,161.5	6,080.5	23.7	19.9	-127.24	-783.0	-505.3	727.7	687.9	39.75	18.305		
6,300.0	6,175.5	6,260.7	6,178.3	24.1	20.2	-127.20	-797.1	-514.9	740.1	699.6	40.45	18.298		
6,400.0	6,273.3	6,359.9	6,276.0	24.5	20.6	-127.16	-811.2	-524.5	752.5	711.4	41.14	18.291		
6,500.0	6,371.1	6,459.1	6,373.7	25.0	20.9	-127.11	-825.3	-534.2	764.9	723.1	41.84	18.284		
6,600.0	6,468.9	6,558.4	6,471.5	25.4	21.3	-127.07	-839.4	-543.8	777.4	734.8	42.53	18.277		
6,700.0	6,566.7	6,657.6	6,569.2	25.8	21.6	-127.03	-853.5	-553.4	789.8	746.6	43.23	18.271		
6,800.0	6,664.5	6,756.3	6,684.5	26.2	21.9	-129.47	-849.1	-579.6	796.6	753.3	43.31	18.394		
6,900.0	6,762.3	7,219.8	7,088.0	26.6	20.8	-140.74	-709.9	-604.6	776.5	737.6	38.92	19.954		
7,000.0	6,860.0	7,362.1	7,178.0	27.0	19.9	-149.57	-600.4	-613.5	749.3	714.4	34.89	21.478		
7,036.3	6,895.5	7,394.3	7,194.4	27.2	19.7	-151.83	-572.8	-615.1	740.5	706.6	33.87	21.860		
7,050.0	6,909.0	7,405.0	7,199.5	27.2	19.7	-158.55	-563.4	-615.6	737.4	703.8	33.64	21.922		
7,100.0	6,958.0	7,441.9	7,215.8	27.4	19.4	175.21	-530.3	-617.2	728.0	695.3	32.75	22.233		
7,150.0	7,006.8	7,476.3	7,229.0	27.5	19.2	152.29	-498.6	-618.5	721.3	689.5	31.83	22.663		
7,200.0	7,055.1	7,508.9	7,239.8	27.7	19.1	135.95	-467.9	-619.5	717.3	686.4	30.90	23.212		
7,250.0	7,102.5	7,540.2	7,248.5	27.8	18.9	124.62	-437.8	-620.4	715.8	685.8	30.00	23.863		
7,255.4	7,107.6	7,543.5	7,249.3	27.8	18.9	123.60	-434.6	-620.5	715.8	685.9	29.90	23.941		
7,300.0	7,148.7	7,570.5	7,255.3	27.9	18.7	116.32	-408.3	-621.1	716.7	687.6	29.15	24.585		
7,350.0	7,193.2	7,600.0	7,260.5	27.9	18.6	109.82	-379.3	-621.6	719.8	691.4	28.40	25.343		
7,400.0	7,235.7	7,629.1	7,264.1	28.0	18.5	104.41	-350.4	-621.9	724.9	697.1	27.79	26.083		
7,450.0	7,276.0	7,657.6	7,266.3	28.0	18.4	99.72	-322.0	-622.2	731.6	704.3	27.32	26.783		
7,500.0	7,313.7	7,686.5	7,267.0	28.0	18.3	95.48	-293.1	-622.2	739.8	712.9	26.98	27.421		
7,550.0	7,348.5	7,720.9	7,267.0	28.1	18.2	91.37	-258.7	-622.2	749.1	722.3	26.77	27.982		
7,600.0	7,380.2	7,759.1	7,267.0	28.1	18.1	87.53	-220.4	-622.2	758.7	732.0	26.65	28.463		
7,650.0	7,408.5	7,800.1	7,267.0	28.1	18.0	84.07	-179.5	-622.2	768.1	741.5	26.57	28.908		
7,700.0	7,433.3	7,843.3	7,267.0	28.1	17.9	81.03	-136.3	-622.2	777.0	750.4	26.60	29.212		
7,750.0	7,454.2	7,888.6	7,267.0	28.2	17.9	78.45	-91.0	-622.2	784.9	758.3	26.58	29.532		
7,800.0	7,471.2	7,935.5	7,267.0	28.2	18.0	76.37	-44.1	-622.2	791.5	764.8	26.63	29.720		
7,850.0	7,484.1	7,983.8	7,267.0	28.3	18.0	74.81	4.2	-622.2	796.4	769.8	26.62	29.919		
7,900.0	7,492.8	8,033.0	7,267.0	28.3	18.1	73.77	53.4	-622.2	799.5	772.8	26.71	29.936		
7,950.0	7,497.3	8,082.8	7,267.0	28.4	18.3	73.27	103.2	-622.2	800.7	773.8	26.85	29.823		
7,977.8	7,498.0	8,110.6	7,267.0	28.5	18.4	73.22	131.0	-622.2	800.4	773.5	26.96	29.693		
8,000.0	7,498.0	8,132.8	7,267.0	28.5	18.5	73.21	153.2	-622.2	800.0	772.8	27.18	29.436		
8,100.0	7,498.0	8,232.7	7,267.0	28.8	19.0	73.17	253.2	-622.2	798.0	769.7	28.34	28.159		
8,200.0	7,498.0	8,332.7	7,267.0	29.2	19.6	73.13	353.1	-622.2	796.0	766.2	29.84	26.680		
8,300.0	7,498.0	8,432.7	7,267.0	29.7	20.4	73.08	453.1	-622.2	794.0	762.4	31.62	25.112		
8,400.0	7,498.0	8,532.7	7,267.0	30.2	21.3	73.04	553.1	-622.2	792.0	758.3	33.64	23.543		
8,500.0	7,498.0	8,632.7	7,267.0	30.9	22.2	72.99	653.1	-622.2	790.0	754.1	35.86	22.028		
8,600.0	7,498.0	8,732.6	7,267.0	31.7	23.3	72.95	753.0	-622.2	788.0	749.7	38.25	20.602		
8,700.0	7,498.0	8,832.6	7,267.0	32.5	24.5	72.90	853.0	-622.2	786.0	745.2	40.77	19.279		
8,800.0	7,498.0	8,932.6	7,267.0	33.4	25.7	72.86	953.0	-622.2	784.0	740.6	43.40	18.064		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-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		
8,900.0	7,498.0	9,032.6	7,267.0	34.3	27.0	72.81	1,053.0	-622.2	782.0	735.8	46.12	16.954		
9,000.0	7,498.0	9,132.5	7,267.0	35.4	28.3	72.77	1,153.0	-622.2	780.0	731.0	48.92	15.943		
9,100.0	7,498.0	9,232.5	7,267.0	36.4	29.7	72.72	1,252.9	-622.2	778.0	726.2	51.78	15.023		
9,200.0	7,498.0	9,332.5	7,267.0	37.6	31.1	72.68	1,352.9	-622.2	776.0	721.3	54.70	14.186		
9,300.0	7,498.0	9,432.5	7,267.0	38.8	32.6	72.63	1,452.9	-622.2	774.0	716.3	57.66	13.423		
9,400.0	7,498.0	9,532.5	7,267.0	40.0	34.1	72.58	1,552.9	-622.2	772.0	711.3	60.66	12.727		
9,500.0	7,498.0	9,632.4	7,267.0	41.2	35.6	72.54	1,652.9	-622.2	770.0	706.3	63.69	12.090		
9,600.0	7,498.0	9,732.4	7,267.0	42.5	37.1	72.49	1,752.8	-622.2	768.0	701.2	66.75	11.506		
9,700.0	7,498.0	9,832.4	7,267.0	43.9	38.6	72.44	1,852.8	-622.2	766.0	696.2	69.83	10.970		
9,800.0	7,498.0	9,932.4	7,267.0	45.2	40.2	72.40	1,952.8	-622.2	764.0	691.1	72.93	10.476		
9,900.0	7,498.0	10,032.4	7,267.0	46.6	41.8	72.35	2,052.8	-622.2	762.0	685.9	76.05	10.020		
10,000.0	7,498.0	10,132.3	7,267.0	48.0	43.4	72.30	2,152.7	-622.2	760.0	680.8	79.18	9.598		
10,100.0	7,498.0	10,232.3	7,267.0	49.5	45.0	72.25	2,252.7	-622.2	758.0	675.7	82.33	9.207		
10,200.0	7,498.0	10,332.3	7,267.0	50.9	46.6	72.20	2,352.7	-622.2	756.0	670.5	85.49	8.843		
10,300.0	7,498.0	10,432.3	7,267.0	52.4	48.2	72.16	2,452.7	-622.2	754.0	665.3	88.66	8.505		
10,400.0	7,498.0	10,532.2	7,267.0	53.9	49.9	72.11	2,552.7	-622.2	752.0	660.2	91.84	8.189		
10,500.0	7,498.0	10,632.2	7,267.0	55.4	51.5	72.06	2,652.6	-622.2	750.0	655.0	95.02	7.893		
10,600.0	7,498.0	10,732.2	7,267.0	56.9	53.1	72.01	2,752.6	-622.2	748.0	649.8	98.21	7.616		
10,700.0	7,498.0	10,832.2	7,267.0	58.4	54.8	71.96	2,852.6	-622.2	746.0	644.6	101.41	7.356		
10,800.0	7,498.0	10,932.2	7,267.0	60.0	56.5	71.91	2,952.6	-622.2	744.0	639.4	104.62	7.112		
10,900.0	7,498.0	11,032.1	7,267.0	61.5	58.1	71.86	3,052.5	-622.2	742.1	634.2	107.82	6.882		
11,000.0	7,498.0	11,132.1	7,267.0	63.1	59.8	71.81	3,152.5	-622.2	740.1	629.0	111.04	6.665		
11,100.0	7,498.0	11,232.1	7,267.0	64.7	61.5	71.76	3,252.5	-622.2	738.1	623.8	114.25	6.460		
11,200.0	7,498.0	11,332.1	7,267.0	66.3	63.1	71.71	3,352.5	-622.2	736.1	618.6	117.47	6.266		
11,300.0	7,498.0	11,432.0	7,267.0	67.9	64.8	71.66	3,452.5	-622.2	734.1	613.4	120.69	6.083		
11,400.0	7,498.0	11,532.0	7,267.0	69.5	66.5	71.60	3,552.4	-622.2	732.1	608.2	123.91	5.908		
11,500.0	7,498.0	11,632.0	7,267.0	71.1	68.2	71.55	3,652.4	-622.2	730.1	603.0	127.13	5.743		
11,600.0	7,498.0	11,732.0	7,267.0	72.7	69.9	71.50	3,752.4	-622.2	728.1	597.8	130.36	5.586		
11,700.0	7,498.0	11,832.0	7,267.0	74.3	71.6	71.45	3,852.4	-622.2	726.2	592.6	133.59	5.436		
11,800.0	7,498.0	11,931.9	7,267.0	75.9	73.3	71.39	3,952.3	-622.2	724.2	587.4	136.81	5.293		
11,900.0	7,498.0	12,031.9	7,267.0	77.6	75.0	71.34	4,052.3	-622.2	722.2	582.1	140.04	5.157		
12,000.0	7,498.0	12,131.9	7,267.0	79.2	76.7	71.29	4,152.3	-622.2	720.2	576.9	143.27	5.027		
12,100.0	7,498.0	12,231.9	7,267.0	80.8	78.4	71.23	4,252.3	-622.2	718.2	571.7	146.50	4.903		
12,200.0	7,498.0	12,331.8	7,267.0	82.5	80.1	71.18	4,352.3	-622.2	716.2	566.5	149.72	4.784		
12,300.0	7,498.0	12,431.8	7,267.0	84.1	81.8	71.13	4,452.2	-622.2	714.2	561.3	152.95	4.670		
12,400.0	7,498.0	12,531.8	7,267.0	85.8	83.5	71.07	4,552.2	-622.2	712.3	556.1	156.18	4.561		
12,447.8	7,498.0	12,579.6	7,267.0	86.6	84.4	71.05	4,600.0	-622.2	711.3	553.6	157.72	4.510		
12,500.0	7,498.0	12,631.8	7,267.0	87.5	85.3	71.03	4,652.2	-622.2	710.5	550.8	159.72	4.448		
12,567.8	7,498.0	12,699.6	7,267.0	88.6	86.4	71.02	4,720.0	-622.2	710.1	547.8	162.33	4.375		
12,600.0	7,498.0	12,731.8	7,267.0	89.1	87.0	71.02	4,752.2	-622.2	710.2	546.7	163.56	4.342		
12,667.8	7,498.0	12,799.6	7,267.0	90.3	88.1	71.04	4,820.0	-622.2	711.0	544.8	166.16	4.279		
12,700.0	7,498.0	12,831.8	7,267.0	90.8	88.7	71.05	4,852.2	-622.2	711.5	544.3	167.23	4.255		
12,800.0	7,498.0	12,931.8	7,267.0	92.5	90.4	71.10	4,952.2	-622.2	713.1	542.6	170.55	4.181		
12,900.0	7,498.0	13,031.7	7,267.0	94.2	92.1	71.14	5,052.2	-622.2	714.8	540.9	173.88	4.111		
13,000.0	7,498.0	13,131.7	7,267.0	95.9	93.8	71.19	5,152.1	-622.2	716.4	539.2	177.21	4.043		
13,100.0	7,498.0	13,231.7	7,267.0	97.6	95.6	71.23	5,252.1	-622.2	718.1	537.5	180.55	3.977		
13,200.0	7,498.0	13,331.7	7,267.0	99.3	97.3	71.28	5,352.1	-622.2	719.7	535.9	183.88	3.914		
13,300.0	7,498.0	13,431.7	7,267.0	101.0	99.0	71.32	5,452.1	-622.2	721.4	534.2	187.22	3.853		
13,400.0	7,498.0	13,531.7	7,267.0	102.7	100.7	71.37	5,552.1	-622.2	723.1	532.5	190.57	3.794		
13,500.0	7,498.0	13,631.7	7,267.0	104.4	102.5	71.41	5,652.1	-622.2	724.7	530.8	193.91	3.737		
13,600.0	7,498.0	13,731.6	7,267.0	106.1	104.2	71.45	5,752.0	-622.2	726.4	529.1	197.26	3.682		
13,700.0	7,498.0	13,831.6	7,267.0	107.8	105.9	71.50	5,852.0	-622.2	728.0	527.4	200.61	3.629		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design													S17-T2N-R67W (Big Horn) - Bighorn 4E-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 Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore +N/-S (ft)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
13,800.0	7,498.0	13,931.6	7,267.0	109.5	107.6	71.54	5,952.0	-622.2	729.7	525.7	203.96	3.578					
13,900.0	7,498.0	14,031.6	7,267.0	111.2	109.4	71.58	6,052.0	-622.2	731.3	524.0	207.31	3.528					
14,000.0	7,498.0	14,131.6	7,267.0	112.9	111.1	71.63	6,152.0	-622.2	733.0	522.3	210.67	3.479					
14,100.0	7,498.0	14,231.6	7,267.0	114.6	112.8	71.67	6,252.0	-622.2	734.6	520.6	214.02	3.433					
14,167.8	7,498.0	14,299.3	7,267.0	115.8	114.0	71.70	6,319.8	-622.2	735.8	519.5	216.30	3.402 SF					
14,200.0	7,498.0	14,331.5	7,267.0	116.3	114.6	71.70	6,352.0	-622.2	735.7	519.6	216.15	3.404					
14,250.0	7,498.0	14,381.5	7,267.0	117.2	115.4	71.59	6,401.9	-622.2	733.5	518.2	215.25	3.408					
14,300.0	7,498.0	14,431.2	7,267.0	118.0	116.3	71.36	6,451.6	-622.2	728.5	515.0	213.51	3.412					
14,350.0	7,498.0	14,480.5	7,267.0	118.8	117.2	70.99	6,501.0	-622.2	720.9	509.9	210.93	3.417					
14,400.0	7,498.0	14,529.3	7,267.0	119.6	118.0	70.48	6,549.8	-622.2	710.6	503.1	207.50	3.424					
14,412.1	7,498.0	14,535.9	7,267.0	119.8	118.1	70.37	6,556.3	-622.2	707.7	501.2	206.50	3.427					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.51	-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		
250.0	250.0	250.0	250.0	0.4	0.4	90.51	-0.4	40.0	40.0	39.2	0.77	52.068 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-160.61	-0.4	40.0	40.4	39.5	0.94	42.865		
400.0	399.9	399.9	399.9	0.7	0.6	-162.11	-0.4	40.0	43.7	42.4	1.29	33.843		
500.0	499.7	500.1	500.1	0.9	0.8	-164.08	-0.8	39.8	50.2	48.5	1.64	30.583		
600.0	599.1	600.6	600.5	1.1	1.0	-163.80	-4.0	38.4	58.6	56.6	2.00	29.350		
700.0	698.2	701.1	700.7	1.4	1.2	-161.78	-10.4	35.5	68.8	66.5	2.38	28.979		
800.0	796.6	801.3	800.4	1.7	1.4	-158.80	-20.0	31.1	81.0	78.2	2.80	28.954		
852.7	848.2	854.0	852.6	1.9	1.6	-157.04	-26.3	28.3	88.2	85.2	3.05	28.953		
900.0	894.5	901.2	899.3	2.1	1.7	-155.39	-32.6	25.4	94.9	91.6	3.29	28.888		
1,000.0	992.3	1,000.0	997.0	2.5	2.0	-152.34	-46.4	19.1	109.1	105.3	3.82	28.570		
1,100.0	1,090.1	1,098.9	1,094.7	2.9	2.3	-149.99	-60.2	12.9	123.6	119.2	4.38	28.214		
1,200.0	1,187.9	1,197.7	1,192.3	3.3	2.6	-148.14	-74.0	6.6	138.2	133.2	4.96	27.869		
1,300.0	1,285.7	1,296.5	1,290.0	3.7	2.9	-146.64	-87.8	0.4	152.9	147.3	5.55	27.553		
1,400.0	1,383.5	1,395.4	1,387.7	4.1	3.2	-145.41	-101.6	-5.9	167.7	161.5	6.15	27.271		
1,500.0	1,481.3	1,494.2	1,485.4	4.5	3.5	-144.37	-115.4	-12.1	182.5	175.8	6.75	27.021		
1,600.0	1,579.1	1,593.1	1,583.0	4.9	3.8	-143.50	-129.2	-18.3	197.4	190.1	7.37	26.800		
1,700.0	1,676.9	1,691.9	1,680.7	5.3	4.1	-142.74	-143.0	-24.6	212.4	204.4	7.98	26.605		
1,800.0	1,774.7	1,790.7	1,778.4	5.7	4.4	-142.09	-156.8	-30.8	227.4	218.8	8.60	26.432		
1,900.0	1,872.5	1,889.6	1,876.1	6.1	4.7	-141.51	-170.6	-37.1	242.4	233.1	9.22	26.278		
2,000.0	1,970.3	1,988.4	1,973.7	6.5	5.0	-141.00	-184.4	-43.3	257.4	247.5	9.85	26.141		
2,100.0	2,068.1	2,087.3	2,071.4	6.9	5.3	-140.55	-198.2	-49.6	272.4	262.0	10.47	26.017		
2,200.0	2,165.9	2,186.1	2,169.1	7.3	5.6	-140.15	-212.0	-55.8	287.5	276.4	11.10	25.906		
2,300.0	2,263.7	2,284.9	2,266.7	7.7	5.9	-139.78	-225.8	-62.1	302.6	290.8	11.72	25.805		
2,400.0	2,361.5	2,383.8	2,364.4	8.2	6.3	-139.45	-239.6	-68.3	317.6	305.3	12.35	25.713		
2,500.0	2,459.2	2,482.6	2,462.1	8.6	6.6	-139.15	-253.4	-74.6	332.7	319.7	12.98	25.629		
2,600.0	2,557.0	2,581.5	2,559.8	9.0	6.9	-138.88	-267.2	-80.8	347.8	334.2	13.61	25.553		
2,700.0	2,654.8	2,680.3	2,657.4	9.4	7.2	-138.63	-281.0	-87.1	362.9	348.7	14.24	25.482		
2,800.0	2,752.6	2,779.2	2,755.1	9.8	7.5	-138.40	-294.8	-93.3	378.0	363.2	14.87	25.417		
2,900.0	2,850.4	2,878.0	2,852.8	10.2	7.8	-138.19	-308.6	-99.5	393.2	377.7	15.50	25.357		
3,000.0	2,948.2	2,976.8	2,950.5	10.6	8.1	-137.99	-322.4	-105.8	408.3	392.1	16.14	25.302		
3,100.0	3,046.0	3,075.7	3,048.1	11.0	8.5	-137.81	-336.2	-112.0	423.4	406.6	16.77	25.250		
3,200.0	3,143.8	3,174.5	3,145.8	11.4	8.8	-137.64	-350.0	-118.3	438.5	421.1	17.40	25.202		
3,300.0	3,241.6	3,273.4	3,243.5	11.8	9.1	-137.48	-363.8	-124.5	453.7	435.6	18.03	25.157		
3,400.0	3,339.4	3,372.2	3,341.1	12.2	9.4	-137.33	-377.6	-130.8	468.8	450.1	18.67	25.115		
3,500.0	3,437.2	3,471.0	3,438.8	12.7	9.7	-137.19	-391.4	-137.0	483.9	464.6	19.30	25.075		
3,600.0	3,535.0	3,569.9	3,536.5	13.1	10.0	-137.06	-405.2	-143.3	499.1	479.2	19.93	25.038		
3,700.0	3,632.8	3,668.7	3,634.2	13.5	10.3	-136.93	-419.0	-149.5	514.2	493.7	20.57	25.003		
3,800.0	3,730.6	3,767.6	3,731.8	13.9	10.7	-136.82	-432.8	-155.8	529.4	508.2	21.20	24.970		
3,900.0	3,828.4	3,866.4	3,829.5	14.3	11.0	-136.71	-446.6	-162.0	544.5	522.7	21.83	24.939		
4,000.0	3,926.2	3,965.2	3,927.2	14.7	11.3	-136.60	-460.4	-168.3	559.7	537.2	22.47	24.910		
4,100.0	4,024.0	4,064.1	4,024.9	15.1	11.6	-136.50	-474.2	-174.5	574.8	551.7	23.10	24.882		
4,200.0	4,121.8	4,162.9	4,122.5	15.5	11.9	-136.41	-488.0	-180.7	590.0	566.3	23.74	24.856		
4,300.0	4,219.6	4,261.8	4,220.2	15.9	12.2	-136.32	-501.8	-187.0	605.1	580.8	24.37	24.831		
4,400.0	4,317.4	4,360.6	4,317.9	16.3	12.5	-136.24	-515.6	-193.2	620.3	595.3	25.01	24.807		
4,500.0	4,415.2	4,459.4	4,415.6	16.8	12.9	-136.16	-529.4	-199.5	635.5	609.8	25.64	24.784		
4,600.0	4,513.0	4,558.3	4,513.2	17.2	13.2	-136.08	-543.2	-205.7	650.6	624.3	26.27	24.763		
4,700.0	4,610.7	4,657.1	4,610.9	17.6	13.5	-136.01	-557.0	-212.0	665.8	638.9	26.91	24.742		
4,800.0	4,708.5	4,756.0	4,708.6	18.0	13.8	-135.94	-570.8	-218.2	680.9	653.4	27.54	24.722		
4,900.0	4,806.3	4,854.8	4,806.2	18.4	14.1	-135.87	-584.6	-224.5	696.1	667.9	28.18	24.703		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		
5,000.0	4,904.1	4,953.6	4,903.9	18.8	14.4	-135.81	-598.4	-230.7	711.3	682.5	28.81	24.685		
5,100.0	5,001.9	5,052.5	5,001.6	19.2	14.8	-135.75	-612.2	-237.0	726.4	697.0	29.45	24.668		
5,200.0	5,099.7	5,151.3	5,099.3	19.6	15.1	-135.69	-626.0	-243.2	741.6	711.5	30.08	24.651		
5,300.0	5,197.5	5,250.2	5,196.9	20.0	15.4	-135.63	-639.8	-249.4	756.8	726.0	30.72	24.636		
5,400.0	5,295.3	5,349.0	5,294.6	20.4	15.7	-135.58	-653.6	-255.7	771.9	740.6	31.35	24.620		
5,500.0	5,393.1	5,447.8	5,392.3	20.9	16.0	-135.52	-667.4	-261.9	787.1	755.1	31.99	24.606		
5,600.0	5,490.9	5,546.7	5,490.0	21.3	16.3	-135.47	-681.2	-268.2	802.3	769.6	32.62	24.592		
5,700.0	5,588.7	5,645.5	5,587.6	21.7	16.6	-135.43	-695.0	-274.4	817.4	784.2	33.26	24.578		
5,800.0	5,686.5	5,744.4	5,685.3	22.1	17.0	-135.38	-708.8	-280.7	832.6	798.7	33.89	24.565		
5,900.0	5,784.3	5,843.2	5,783.0	22.5	17.3	-135.33	-722.6	-286.9	847.8	813.2	34.53	24.552		
6,000.0	5,882.1	5,942.1	5,880.6	22.9	17.6	-135.29	-736.4	-293.2	862.9	827.8	35.16	24.540		
6,100.0	5,979.9	6,040.9	5,978.3	23.3	17.9	-135.25	-750.2	-299.4	878.1	842.3	35.80	24.528		
6,200.0	6,077.7	6,139.7	6,076.0	23.7	18.2	-135.21	-764.0	-305.7	893.3	856.8	36.44	24.517		
6,300.0	6,175.5	6,238.6	6,173.7	24.1	18.5	-135.17	-777.8	-311.9	908.5	871.4	37.07	24.506		
6,400.0	6,273.3	6,337.4	6,271.3	24.5	18.9	-135.13	-791.6	-318.2	923.6	885.9	37.71	24.495		
6,500.0	6,371.1	6,436.3	6,369.0	25.0	19.2	-135.10	-805.4	-324.4	938.8	900.5	38.34	24.485		
6,600.0	6,468.9	6,535.1	6,466.7	25.4	19.5	-135.06	-819.2	-330.6	954.0	915.0	38.98	24.475		
6,700.0	6,566.7	6,633.9	6,564.4	25.8	19.8	-135.03	-833.0	-336.9	969.1	929.5	39.61	24.466		
6,800.0	6,664.5	6,732.8	6,662.0	26.2	20.1	-134.99	-846.8	-343.1	984.3	944.1	40.25	24.456		
6,900.0	6,762.3	6,831.6	6,759.7	26.6	20.4	-134.96	-860.6	-349.4	999.5	958.6	40.88	24.447		
7,250.0	7,102.5	7,639.6	7,440.1	27.8	18.0	133.22	-556.5	-391.6	998.4	965.0	33.46	29.839		
7,300.0	7,148.7	7,708.0	7,466.3	27.9	17.5	124.62	-493.4	-393.0	993.5	961.4	32.04	31.006		
7,350.0	7,193.2	7,766.9	7,482.7	27.9	17.1	118.19	-436.9	-393.9	989.4	958.6	30.86	32.057		
7,400.0	7,235.7	7,819.1	7,492.4	28.0	16.8	113.13	-385.6	-394.3	986.4	956.5	29.90	32.989		
7,450.0	7,276.0	7,866.3	7,497.0	28.0	16.6	108.96	-338.6	-394.5	984.5	955.3	29.13	33.797		
7,500.0	7,313.7	7,907.7	7,498.0	28.0	16.4	105.51	-297.3	-394.4	983.6	955.1	28.56	34.444		
7,509.4	7,320.5	7,914.1	7,498.0	28.0	16.4	104.96	-290.8	-394.4	983.6	955.1	28.48	34.534		
7,550.0	7,348.5	7,942.9	7,498.0	28.1	16.3	102.69	-262.0	-394.3	984.0	955.8	28.18	34.915		
7,600.0	7,380.2	7,981.2	7,498.0	28.1	16.2	100.08	-223.7	-394.1	985.3	957.4	27.88	35.338		
7,650.0	7,408.5	8,022.1	7,498.0	28.1	16.1	97.70	-182.8	-394.0	987.3	959.6	27.71	35.634		
7,700.0	7,433.3	8,065.3	7,498.0	28.1	16.1	95.58	-139.6	-393.8	989.5	961.9	27.64	35.801		
7,750.0	7,454.2	8,110.6	7,498.0	28.2	16.1	93.75	-94.3	-393.7	991.8	964.1	27.65	35.866		
7,800.0	7,471.2	8,157.5	7,498.0	28.2	16.1	92.25	-47.4	-393.5	993.7	966.0	27.78	35.776		
7,850.0	7,484.1	8,205.8	7,498.0	28.3	16.2	91.12	0.9	-393.4	995.2	967.3	27.93	35.635		
7,900.0	7,492.8	8,255.0	7,498.0	28.3	16.3	90.37	50.1	-393.2	996.0	967.8	28.19	35.330		
7,950.0	7,497.3	8,304.8	7,498.0	28.4	16.5	90.02	99.8	-393.0	996.0	967.5	28.48	34.976		
7,977.8	7,498.0	8,332.5	7,498.0	28.5	16.6	90.00	127.6	-392.9	995.7	967.0	28.69	34.702		
8,000.0	7,498.0	8,354.7	7,498.0	28.5	16.7	90.00	149.8	-392.9	995.3	966.4	28.91	34.432		
8,100.0	7,498.0	8,454.7	7,498.0	28.8	17.2	90.00	249.8	-392.5	993.5	963.4	30.08	33.025		
8,200.0	7,498.0	8,554.7	7,498.0	29.2	17.9	90.00	349.8	-392.2	991.8	960.2	31.61	31.375		
8,300.0	7,498.0	8,654.7	7,498.0	29.7	18.8	90.00	449.8	-391.9	990.0	956.6	33.44	29.609		
8,400.0	7,498.0	8,754.7	7,498.0	30.2	19.7	90.00	549.8	-391.5	988.2	952.7	35.52	27.825		
8,500.0	7,498.0	8,854.7	7,498.0	30.9	20.8	90.00	649.7	-391.2	986.5	948.7	37.81	26.092		
8,600.0	7,498.0	8,954.7	7,498.0	31.7	21.9	90.00	749.7	-390.9	984.7	944.5	40.27	24.450		
8,700.0	7,498.0	9,054.6	7,498.0	32.5	23.2	90.00	849.7	-390.5	983.0	940.1	42.89	22.920		
8,800.0	7,498.0	9,154.6	7,498.0	33.4	24.5	90.00	949.7	-390.2	981.2	935.6	45.62	21.508		
8,900.0	7,498.0	9,254.6	7,498.0	34.3	25.8	90.00	1,049.7	-389.8	979.5	931.0	48.45	20.214		
9,000.0	7,498.0	9,354.6	7,498.0	35.4	27.2	90.00	1,149.7	-389.5	977.7	926.3	51.37	19.033		
9,100.0	7,498.0	9,454.6	7,498.0	36.4	28.6	90.00	1,249.7	-389.2	975.9	921.6	54.36	17.954		
9,200.0	7,498.0	9,554.6	7,498.0	37.6	30.1	90.00	1,349.6	-388.8	974.2	916.8	57.40	16.971		
9,300.0	7,498.0	9,654.5	7,498.0	38.8	31.6	90.00	1,449.6	-388.5	972.4	911.9	60.50	16.074		
9,400.0	7,498.0	9,754.5	7,498.0	40.0	33.1	90.00	1,549.6	-388.2	970.7	907.0	63.64	15.253		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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	
9,500.0	7,498.0	9,854.5	7,498.0	41.2	34.7	90.00	1,649.6	-387.8	968.9	902.1	66.81	14.502	
9,600.0	7,498.0	9,954.5	7,498.0	42.5	36.2	90.00	1,749.6	-387.5	967.2	897.1	70.02	13.813	
9,700.0	7,498.0	10,054.5	7,498.0	43.9	37.8	90.00	1,849.6	-387.1	965.4	892.1	73.25	13.179	
9,800.0	7,498.0	10,154.5	7,498.0	45.2	39.4	90.00	1,949.5	-386.8	963.6	887.1	76.51	12.595	
9,900.0	7,498.0	10,254.5	7,498.0	46.6	41.0	90.00	2,049.5	-386.5	961.9	882.1	79.79	12.055	
10,000.0	7,498.0	10,354.4	7,498.0	48.0	42.6	90.00	2,149.5	-386.1	960.1	877.0	83.09	11.555	
10,100.0	7,498.0	10,454.4	7,498.0	49.5	44.3	90.00	2,249.5	-385.8	958.4	872.0	86.41	11.092	
10,200.0	7,498.0	10,554.4	7,498.0	50.9	45.9	90.00	2,349.5	-385.5	956.6	866.9	89.74	10.660	
10,300.0	7,498.0	10,654.4	7,498.0	52.4	47.5	90.00	2,449.5	-385.1	954.9	861.8	93.08	10.259	
10,400.0	7,498.0	10,754.4	7,498.0	53.9	49.2	90.00	2,549.4	-384.8	953.1	856.7	96.43	9.884	
10,500.0	7,498.0	10,854.4	7,498.0	55.4	50.8	90.00	2,649.4	-384.5	951.3	851.5	99.80	9.533	
10,600.0	7,498.0	10,954.3	7,498.0	56.9	52.5	90.00	2,749.4	-384.1	949.6	846.4	103.17	9.204	
10,700.0	7,498.0	11,054.3	7,498.0	58.4	54.2	90.00	2,849.4	-383.8	947.8	841.3	106.56	8.895	
10,800.0	7,498.0	11,154.3	7,498.0	60.0	55.9	90.00	2,949.4	-383.4	946.1	836.1	109.95	8.605	
10,900.0	7,498.0	11,254.3	7,498.0	61.5	57.5	90.00	3,049.4	-383.1	944.3	831.0	113.34	8.331	
11,000.0	7,498.0	11,354.3	7,498.0	63.1	59.2	90.00	3,149.3	-382.8	942.6	825.8	116.75	8.073	
11,100.0	7,498.0	11,454.3	7,498.0	64.7	60.9	90.00	3,249.3	-382.4	940.8	820.6	120.16	7.830	
11,200.0	7,498.0	11,554.3	7,498.0	66.3	62.6	90.00	3,349.3	-382.1	939.0	815.5	123.58	7.599	
11,300.0	7,498.0	11,654.2	7,498.0	67.9	64.3	90.00	3,449.3	-381.8	937.3	810.3	127.00	7.380	
11,400.0	7,498.0	11,754.2	7,498.0	69.5	66.0	90.00	3,549.3	-381.4	935.5	805.1	130.42	7.173	
11,500.0	7,498.0	11,854.2	7,498.0	71.1	67.7	90.00	3,649.3	-381.1	933.8	799.9	133.85	6.976	
11,600.0	7,498.0	11,954.2	7,498.0	72.7	69.4	90.00	3,749.3	-380.8	932.0	794.7	137.29	6.789	
11,700.0	7,498.0	12,054.2	7,498.0	74.3	71.1	90.00	3,849.2	-380.4	930.3	789.5	140.72	6.610	
11,800.0	7,498.0	12,154.2	7,498.0	75.9	72.8	90.00	3,949.2	-380.1	928.5	784.3	144.16	6.440	
11,900.0	7,498.0	12,254.1	7,498.0	77.6	74.5	90.00	4,049.2	-379.7	926.7	779.1	147.61	6.278	
12,000.0	7,498.0	12,354.1	7,498.0	79.2	76.3	90.00	4,149.2	-379.4	925.0	773.9	151.06	6.123	
12,100.0	7,498.0	12,454.1	7,498.0	80.8	78.0	90.00	4,249.2	-379.1	923.2	768.7	154.51	5.975	
12,200.0	7,498.0	12,554.1	7,498.0	82.5	79.7	90.00	4,349.2	-378.7	921.5	763.5	157.96	5.834	
12,300.0	7,498.0	12,654.1	7,498.0	84.1	81.4	90.00	4,449.1	-378.4	919.7	758.3	161.41	5.698	
12,400.0	7,498.0	12,754.1	7,498.0	85.8	83.1	90.00	4,549.1	-378.1	917.9	753.1	164.87	5.568	
12,447.8	7,498.0	12,801.9	7,498.0	86.6	84.0	90.00	4,596.9	-377.9	917.1	750.6	166.52	5.507	
12,500.0	7,498.0	12,854.1	7,498.0	87.5	84.9	90.00	4,649.1	-377.7	916.4	747.8	168.62	5.435	
12,548.5	7,498.0	12,902.6	7,498.0	88.3	85.7	90.00	4,697.6	-377.6	916.2	745.7	170.55	5.372	
12,600.0	7,498.0	12,954.1	7,498.0	89.1	86.6	90.00	4,749.1	-377.4	916.5	743.9	172.60	5.310	
12,667.8	7,498.0	13,021.8	7,498.0	90.3	87.7	90.00	4,816.9	-377.2	917.5	742.2	175.27	5.235	
12,700.0	7,498.0	13,054.0	7,498.0	90.8	88.3	90.00	4,849.1	-377.0	918.1	741.8	176.39	5.205	
12,800.0	7,498.0	13,154.0	7,498.0	92.5	90.0	90.00	4,949.1	-376.7	920.2	740.4	179.85	5.117	
12,900.0	7,498.0	13,254.0	7,498.0	94.2	91.7	90.00	5,049.0	-376.4	922.3	739.0	183.32	5.031	
13,000.0	7,498.0	13,354.0	7,498.0	95.9	93.5	90.00	5,149.0	-376.0	924.4	737.6	186.79	4.949	
13,100.0	7,498.0	13,454.0	7,498.0	97.6	95.2	90.00	5,249.0	-375.7	926.5	736.2	190.26	4.870	
13,200.0	7,498.0	13,553.9	7,498.0	99.3	96.9	90.00	5,349.0	-375.4	928.5	734.8	193.73	4.793	
13,300.0	7,498.0	13,653.9	7,498.0	101.0	98.7	90.00	5,449.0	-375.0	930.6	733.4	197.20	4.719	
13,400.0	7,498.0	13,773.2	7,498.0	102.7	100.7	90.00	5,568.2	-375.9	931.7	730.7	201.01	4.635	
13,500.0	7,498.0	13,874.6	7,498.0	104.4	102.5	90.00	5,669.6	-377.8	931.6	727.0	204.51	4.555	
13,600.0	7,498.0	13,974.6	7,498.0	106.1	104.2	90.00	5,769.6	-379.6	931.4	723.4	207.98	4.478	
13,700.0	7,498.0	14,074.6	7,498.0	107.8	106.0	90.00	5,869.6	-381.5	931.3	719.8	211.46	4.404	
13,800.0	7,498.0	14,174.6	7,498.0	109.5	107.7	90.00	5,969.5	-383.4	931.1	716.2	214.94	4.332	
13,900.0	7,498.0	14,274.6	7,498.0	111.2	109.4	90.00	6,069.5	-385.3	931.0	712.6	218.42	4.262	
14,000.0	7,498.0	14,374.6	7,498.0	112.9	111.2	90.00	6,169.5	-387.2	930.9	709.0	221.90	4.195	
14,100.0	7,498.0	14,474.6	7,498.0	114.6	112.9	90.00	6,269.5	-389.0	930.7	705.3	225.38	4.130	
14,167.8	7,498.0	14,542.4	7,498.0	115.8	114.1	90.00	6,337.3	-390.3	930.6	702.9	227.74	4.086	
14,200.0	7,498.0	14,574.6	7,498.0	116.3	114.6	90.00	6,369.5	-390.9	930.0	702.3	227.75	4.083	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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
14,250.0	7,498.0	14,624.4	7,498.0	117.2	115.5	90.00	6,419.3	-391.9	926.7	699.5	227.16	4.079	
14,300.0	7,498.0	14,674.1	7,498.0	118.0	116.4	90.00	6,468.9	-392.8	920.5	694.6	225.86	4.076	
14,350.0	7,498.0	14,723.2	7,498.0	118.8	117.2	90.00	6,518.1	-393.7	911.5	687.7	223.83	4.072 SF	
14,400.0	7,498.0	14,760.0	7,498.0	119.6	117.9	90.00	6,554.9	-394.4	899.8	678.9	220.89	4.074	
14,412.1	7,498.0	14,760.0	7,498.0	119.8	117.9	90.00	6,554.9	-394.4	896.8	676.8	219.92	4.078	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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									
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	90.42	-0.4	50.0	50.1						
100.0	100.0	100.0	100.0	0.1	0.1	90.42	-0.4	50.0	50.1	49.8	0.24	204.835			
200.0	200.0	200.0	200.0	0.3	0.3	90.42	-0.4	50.0	50.1	49.5	0.59	84.344			
250.0	250.0	250.0	250.0	0.4	0.4	90.42	-0.4	50.0	50.1	49.3	0.77	65.175 CC, ES			
300.0	300.0	300.0	300.0	0.5	0.5	-160.66	-0.4	50.0	50.5	49.5	0.94	53.545			
400.0	399.9	399.9	399.9	0.7	0.6	-161.87	-0.4	50.0	53.8	52.5	1.29	41.636			
500.0	499.7	499.7	499.7	0.9	0.8	-163.89	-0.4	50.0	60.4	58.8	1.64	36.847			
600.0	599.1	599.9	599.9	1.1	1.0	-164.86	-2.1	49.7	70.0	68.0	1.99	35.144			
700.0	698.2	699.9	699.8	1.4	1.2	-163.84	-7.2	48.5	81.9	79.6	2.36	34.747			
800.0	796.6	799.6	799.1	1.7	1.4	-161.64	-15.6	46.5	96.3	93.5	2.76	34.934			
852.7	848.2	852.0	851.1	1.9	1.5	-160.22	-21.4	45.1	104.8	101.8	2.99	35.076			
900.0	894.5	898.9	897.7	2.1	1.6	-158.84	-27.4	43.7	112.8	109.6	3.21	35.157			
1,000.0	992.3	997.5	995.2	2.5	1.9	-155.78	-41.5	40.4	129.6	125.9	3.72	34.887			
1,100.0	1,090.1	1,095.9	1,092.5	2.9	2.2	-153.37	-55.7	37.0	146.7	142.4	4.25	34.523			
1,200.0	1,187.9	1,194.3	1,189.7	3.3	2.5	-151.47	-70.0	33.7	163.9	159.1	4.80	34.149			
1,300.0	1,285.7	1,292.6	1,287.0	3.7	2.7	-149.92	-84.2	30.4	181.3	176.0	5.37	33.796			
1,400.0	1,383.5	1,391.0	1,384.3	4.1	3.0	-148.65	-98.4	27.0	198.8	192.9	5.94	33.474			
1,500.0	1,481.3	1,489.4	1,481.6	4.5	3.3	-147.59	-112.6	23.7	216.4	209.9	6.52	33.185			
1,600.0	1,579.1	1,587.8	1,578.8	4.9	3.6	-146.68	-126.9	20.3	234.1	227.0	7.11	32.927			
1,700.0	1,676.9	1,686.1	1,676.1	5.3	3.9	-145.91	-141.1	17.0	251.8	244.1	7.70	32.697			
1,800.0	1,774.7	1,784.5	1,773.4	5.7	4.2	-145.23	-155.3	13.6	269.5	261.2	8.29	32.493			
1,900.0	1,872.5	1,882.9	1,870.7	6.1	4.5	-144.64	-169.6	10.3	287.3	278.4	8.89	32.310			
2,000.0	1,970.3	1,981.2	1,967.9	6.5	4.8	-144.11	-183.8	6.9	305.1	295.6	9.49	32.146			
2,100.0	2,068.1	2,079.6	2,065.2	6.9	5.1	-143.65	-198.0	3.6	322.9	312.8	10.09	31.998			
2,200.0	2,165.9	2,178.0	2,162.5	7.3	5.4	-143.23	-212.3	0.3	340.7	330.0	10.69	31.864			
2,300.0	2,263.7	2,276.3	2,259.8	7.7	5.7	-142.86	-226.5	-3.1	358.6	347.3	11.30	31.743			
2,400.0	2,361.5	2,374.7	2,357.0	8.2	6.0	-142.52	-240.7	-6.4	376.4	364.5	11.90	31.633			
2,500.0	2,459.2	2,473.1	2,454.3	8.6	6.3	-142.21	-255.0	-9.8	394.3	381.8	12.51	31.532			
2,600.0	2,557.0	2,571.4	2,551.6	9.0	6.6	-141.92	-269.2	-13.1	412.2	399.1	13.11	31.440			
2,700.0	2,654.8	2,669.8	2,648.9	9.4	6.9	-141.66	-283.4	-16.5	430.1	416.4	13.72	31.355			
2,800.0	2,752.6	2,768.2	2,746.1	9.8	7.3	-141.43	-297.7	-19.8	448.0	433.7	14.32	31.276			
2,900.0	2,850.4	2,866.5	2,843.4	10.2	7.6	-141.21	-311.9	-23.2	465.9	451.0	14.93	31.204			
3,000.0	2,948.2	2,964.9	2,940.7	10.6	7.9	-141.00	-326.1	-26.5	483.8	468.3	15.54	31.136			
3,100.0	3,046.0	3,063.3	3,038.0	11.0	8.2	-140.81	-340.4	-29.9	501.7	485.6	16.15	31.074			
3,200.0	3,143.8	3,161.6	3,135.2	11.4	8.5	-140.64	-354.6	-33.2	519.7	502.9	16.75	31.015			
3,300.0	3,241.6	3,260.0	3,232.5	11.8	8.8	-140.47	-368.8	-36.5	537.6	520.2	17.36	30.961			
3,400.0	3,339.4	3,358.4	3,329.8	12.2	9.1	-140.32	-383.0	-39.9	555.5	537.5	17.97	30.910			
3,500.0	3,437.2	3,456.7	3,427.1	12.7	9.4	-140.18	-397.3	-43.2	573.5	554.9	18.58	30.862			
3,600.0	3,535.0	3,555.1	3,524.4	13.1	9.7	-140.04	-411.5	-46.6	591.4	572.2	19.19	30.817			
3,700.0	3,632.8	3,653.5	3,621.6	13.5	10.0	-139.91	-425.7	-49.9	609.3	589.5	19.80	30.775			
3,800.0	3,730.6	3,751.9	3,718.9	13.9	10.3	-139.79	-440.0	-53.3	627.3	606.9	20.41	30.735			
3,900.0	3,828.4	3,850.2	3,816.2	14.3	10.6	-139.68	-454.2	-56.6	645.2	624.2	21.02	30.697			
4,000.0	3,926.2	3,948.6	3,913.5	14.7	10.9	-139.57	-468.4	-60.0	663.2	641.6	21.63	30.662			
4,100.0	4,024.0	4,047.0	4,010.7	15.1	11.2	-139.47	-482.7	-63.3	681.1	658.9	22.24	30.628			
4,200.0	4,121.8	4,145.3	4,108.0	15.5	11.5	-139.37	-496.9	-66.6	699.1	676.2	22.85	30.596			
4,300.0	4,219.6	4,243.7	4,205.3	15.9	11.8	-139.28	-511.1	-70.0	717.1	693.6	23.46	30.565			
4,400.0	4,317.4	4,342.1	4,302.6	16.3	12.2	-139.20	-525.4	-73.3	735.0	710.9	24.07	30.536			
4,500.0	4,415.2	4,440.4	4,399.8	16.8	12.5	-139.11	-539.6	-76.7	753.0	728.3	24.68	30.509			
4,600.0	4,513.0	4,538.8	4,497.1	17.2	12.8	-139.03	-553.8	-80.0	770.9	745.6	25.29	30.482			
4,700.0	4,610.7	4,637.2	4,594.4	17.6	13.1	-138.96	-568.1	-83.4	788.9	763.0	25.90	30.457			
4,800.0	4,708.5	4,735.5	4,691.7	18.0	13.4	-138.89	-582.3	-86.7	806.9	780.3	26.51	30.433			
4,900.0	4,806.3	4,833.9	4,788.9	18.4	13.7	-138.82	-596.5	-90.1	824.8	797.7	27.12	30.411			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore	Centre	Between	Between	Total	Separation	Warning				
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Uncertainty	Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	Axis						
5,000.0	4,904.1	4,932.3	4,886.2	18.8	14.0	-138.75	-610.8	-93.4	842.8	815.1	27.73	30.389					
5,100.0	5,001.9	5,030.6	4,983.5	19.2	14.3	-138.69	-625.0	-96.7	860.8	832.4	28.34	30.368					
5,200.0	5,099.7	5,129.0	5,080.8	19.6	14.6	-138.63	-639.2	-100.1	878.7	849.8	28.96	30.347					
5,300.0	5,197.5	5,227.4	5,178.0	20.0	14.9	-138.57	-653.4	-103.4	896.7	867.1	29.57	30.328					
5,400.0	5,295.3	5,325.7	5,275.3	20.4	15.2	-138.51	-667.7	-106.8	914.7	884.5	30.18	30.310					
5,500.0	5,393.1	5,424.1	5,372.6	20.9	15.5	-138.46	-681.9	-110.1	932.6	901.8	30.79	30.292					
5,600.0	5,490.9	5,522.5	5,469.9	21.3	15.8	-138.41	-696.1	-113.5	950.6	919.2	31.40	30.274					
5,700.0	5,588.7	5,620.9	5,567.1	21.7	16.1	-138.36	-710.4	-116.8	968.6	936.6	32.01	30.258					
5,800.0	5,686.5	5,719.2	5,664.4	22.1	16.5	-138.31	-724.6	-120.2	986.6	953.9	32.62	30.242 SF					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-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	90.36	-0.4	60.1	60.1						
100.0	100.0	100.0	100.0	0.1	0.1	90.36	-0.4	60.1	60.1	59.9	0.24	246.029			
200.0	200.0	200.0	200.0	0.3	0.3	90.36	-0.4	60.1	60.1	59.5	0.59	101.306			
250.0	250.0	250.0	250.0	0.4	0.4	90.36	-0.4	60.1	60.1	59.3	0.77	78.282 CC, ES			
300.0	300.0	300.0	300.0	0.5	0.5	-160.69	-0.4	60.1	60.5	59.6	0.94	64.226			
400.0	399.9	399.9	399.9	0.7	0.6	-161.71	-0.4	60.1	63.8	62.5	1.29	49.429			
500.0	499.7	499.7	499.7	0.9	0.8	-163.10	-0.8	60.1	70.5	68.8	1.64	42.948			
600.0	599.1	599.4	599.3	1.1	1.0	-162.74	-4.3	60.1	80.3	78.3	2.00	40.208			
700.0	698.2	698.6	698.2	1.4	1.2	-160.93	-11.1	60.0	93.4	91.0	2.38	39.278			
800.0	796.6	797.1	796.2	1.7	1.4	-158.37	-21.4	59.9	109.8	107.0	2.80	39.224			
852.7	848.2	848.6	847.3	1.9	1.5	-156.88	-28.1	59.9	119.8	116.8	3.04	39.424			
900.0	894.5	894.9	893.2	2.1	1.7	-155.70	-34.5	59.8	129.3	126.0	3.27	39.574			
1,000.0	992.3	992.7	990.1	2.5	1.9	-153.70	-48.0	59.7	149.5	145.7	3.77	39.694			
1,100.0	1,090.1	1,090.6	1,087.0	2.9	2.2	-152.18	-61.5	59.6	169.9	165.6	4.28	39.666			
1,200.0	1,187.9	1,188.4	1,183.8	3.3	2.5	-150.99	-75.0	59.5	190.3	185.5	4.81	39.569			
1,300.0	1,285.7	1,286.2	1,280.7	3.7	2.7	-150.02	-88.5	59.4	210.8	205.4	5.34	39.443			
1,400.0	1,383.5	1,384.0	1,377.6	4.1	3.0	-149.23	-102.0	59.3	231.3	225.4	5.88	39.307			
1,500.0	1,481.3	1,481.9	1,474.5	4.5	3.3	-148.57	-115.5	59.2	251.9	245.5	6.43	39.172			
1,600.0	1,579.1	1,579.7	1,571.4	4.9	3.6	-148.00	-129.1	59.1	272.5	265.5	6.98	39.043			
1,700.0	1,676.9	1,677.5	1,668.3	5.3	3.9	-147.52	-142.6	59.0	293.1	285.6	7.53	38.921			
1,800.0	1,774.7	1,775.3	1,765.1	5.7	4.2	-147.10	-156.1	58.9	313.7	305.7	8.08	38.807			
1,900.0	1,872.5	1,873.1	1,862.0	6.1	4.4	-146.73	-169.6	58.8	334.4	325.8	8.64	38.702			
2,000.0	1,970.3	1,971.0	1,958.9	6.5	4.7	-146.40	-183.1	58.7	355.1	345.9	9.20	38.604			
2,100.0	2,068.1	2,068.8	2,055.8	6.9	5.0	-146.11	-196.6	58.6	375.7	366.0	9.76	38.514			
2,200.0	2,165.9	2,166.6	2,152.7	7.3	5.3	-145.85	-210.1	58.5	396.4	386.1	10.32	38.431			
2,300.0	2,263.7	2,264.4	2,249.6	7.7	5.6	-145.62	-223.6	58.4	417.1	406.2	10.88	38.354			
2,400.0	2,361.5	2,362.3	2,346.5	8.2	5.9	-145.41	-237.2	58.2	437.8	426.4	11.44	38.282			
2,500.0	2,459.2	2,460.1	2,443.3	8.6	6.2	-145.22	-250.7	58.1	458.5	446.5	12.00	38.216			
2,600.0	2,557.0	2,557.9	2,540.2	9.0	6.5	-145.04	-264.2	58.0	479.2	466.7	12.56	38.154			
2,700.0	2,654.8	2,655.7	2,637.1	9.4	6.7	-144.88	-277.7	57.9	499.9	486.8	13.12	38.097			
2,800.0	2,752.6	2,753.5	2,734.0	9.8	7.0	-144.73	-291.2	57.8	520.6	507.0	13.69	38.043			
2,900.0	2,850.4	2,851.4	2,830.9	10.2	7.3	-144.59	-304.7	57.7	541.4	527.1	14.25	37.993			
3,000.0	2,948.2	2,949.2	2,927.8	10.6	7.6	-144.47	-318.2	57.6	562.1	547.3	14.81	37.946			
3,100.0	3,046.0	3,047.0	3,024.6	11.0	7.9	-144.35	-331.8	57.5	582.8	567.4	15.38	37.902			
3,200.0	3,143.8	3,144.8	3,121.5	11.4	8.2	-144.24	-345.3	57.4	603.5	587.6	15.94	37.861			
3,300.0	3,241.6	3,242.7	3,218.4	11.8	8.5	-144.13	-358.8	57.3	624.3	607.7	16.51	37.822			
3,400.0	3,339.4	3,340.5	3,315.3	12.2	8.8	-144.04	-372.3	57.2	645.0	627.9	17.07	37.785			
3,500.0	3,437.2	3,438.3	3,412.2	12.7	9.1	-143.95	-385.8	57.1	665.7	648.1	17.63	37.751			
3,600.0	3,535.0	3,536.1	3,509.1	13.1	9.3	-143.86	-399.3	57.0	686.4	668.2	18.20	37.718			
3,700.0	3,632.8	3,633.9	3,606.0	13.5	9.6	-143.78	-412.8	56.9	707.2	688.4	18.76	37.687			
3,800.0	3,730.6	3,731.8	3,702.8	13.9	9.9	-143.71	-426.4	56.8	727.9	708.6	19.33	37.657			
3,900.0	3,828.4	3,829.6	3,799.7	14.3	10.2	-143.64	-439.9	56.6	748.6	728.8	19.90	37.629			
4,000.0	3,926.2	3,927.4	3,896.6	14.7	10.5	-143.57	-453.4	56.5	769.4	748.9	20.46	37.603			
4,100.0	4,024.0	4,025.2	3,993.5	15.1	10.8	-143.51	-466.9	56.4	790.1	769.1	21.03	37.577			
4,200.0	4,121.8	4,123.1	4,090.4	15.5	11.1	-143.45	-480.4	56.3	810.9	789.3	21.59	37.553			
4,300.0	4,219.6	4,220.9	4,187.3	15.9	11.4	-143.39	-493.9	56.2	831.6	809.4	22.16	37.530			
4,400.0	4,317.4	4,318.7	4,284.1	16.3	11.7	-143.34	-507.4	56.1	852.3	829.6	22.72	37.508			
4,500.0	4,415.2	4,416.5	4,381.0	16.8	12.0	-143.28	-521.0	56.0	873.1	849.8	23.29	37.487			
4,600.0	4,513.0	4,514.4	4,477.9	17.2	12.3	-143.23	-534.5	55.9	893.8	870.0	23.86	37.467			
4,700.0	4,610.7	4,612.2	4,574.8	17.6	12.5	-143.19	-548.0	55.8	914.6	890.1	24.42	37.448			
4,800.0	4,708.5	4,710.0	4,671.7	18.0	12.8	-143.14	-561.5	55.7	935.3	910.3	24.99	37.430			
4,900.0	4,806.3	4,807.8	4,768.6	18.4	13.1	-143.10	-575.0	55.6	956.0	930.5	25.55	37.412			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design											S17-T2N-R67W (Big Horn) - Bighorn 4H-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	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	4,904.1	4,905.6	4,865.5	18.8	13.4	-143.06	-588.5	55.5	976.8	950.7	26.12	37.395			
5,100.0	5,001.9	5,003.5	4,962.3	19.2	13.7	-143.02	-602.0	55.4	997.5	970.8	26.69	37.379 SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.31	-0.4	70.2	70.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.31	-0.4	70.2	70.2	69.9	0.24	287.223		
200.0	200.0	200.0	200.0	0.3	0.3	90.31	-0.4	70.2	70.2	69.6	0.59	118.268		
250.0	250.0	250.0	250.0	0.4	0.4	90.31	-0.4	70.2	70.2	69.4	0.77	91.389 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-160.72	-0.4	70.2	70.6	69.7	0.94	74.907		
400.0	399.9	399.9	399.9	0.7	0.6	-161.59	-0.4	70.2	73.9	72.6	1.29	57.222		
500.0	499.7	499.7	499.7	0.9	0.8	-162.50	-1.2	70.2	80.5	78.9	1.64	49.063		
600.0	599.1	599.2	599.2	1.1	1.0	-162.78	-3.8	70.2	90.5	88.5	2.00	45.338		
700.0	698.2	698.4	698.2	1.4	1.2	-162.59	-8.1	70.3	103.7	101.3	2.36	43.968		
800.0	796.6	797.0	796.7	1.7	1.4	-162.08	-14.1	70.4	120.2	117.5	2.74	43.936		
852.7	848.2	848.7	848.2	1.9	1.5	-161.73	-17.9	70.5	130.2	127.3	2.94	44.241		
900.0	894.5	895.1	894.5	2.1	1.6	-161.40	-21.8	70.6	139.6	136.5	3.14	44.519		
1,000.0	992.3	993.1	992.0	2.5	1.8	-160.39	-31.0	70.7	159.5	155.9	3.57	44.732		
1,100.0	1,090.1	1,090.9	1,089.2	2.9	2.0	-159.05	-42.0	70.9	179.5	175.4	4.02	44.593		
1,200.0	1,187.9	1,188.5	1,186.0	3.3	2.3	-157.50	-54.5	71.1	199.6	195.1	4.52	44.194		
1,300.0	1,285.7	1,285.9	1,282.4	3.7	2.6	-155.80	-68.7	71.4	220.1	215.0	5.04	43.630		
1,400.0	1,383.5	1,383.5	1,378.8	4.1	2.8	-154.16	-83.8	71.6	240.8	235.2	5.59	43.060		
1,500.0	1,481.3	1,481.1	1,475.3	4.5	3.1	-152.79	-98.9	71.9	261.6	255.5	6.15	42.549		
1,600.0	1,579.1	1,578.7	1,571.7	4.9	3.4	-151.61	-114.0	72.2	282.6	275.9	6.71	42.095		
1,700.0	1,676.9	1,676.4	1,668.1	5.3	3.7	-150.60	-129.1	72.4	303.7	296.4	7.28	41.692		
1,800.0	1,774.7	1,774.0	1,764.6	5.7	4.0	-149.72	-144.2	72.7	324.9	317.0	7.86	41.336		
1,900.0	1,872.5	1,867.3	1,856.8	6.1	4.3	-149.02	-158.6	73.5	346.6	338.2	8.42	41.183 SF		
2,000.0	1,970.3	1,959.2	1,947.6	6.5	4.6	-148.49	-172.4	75.6	369.8	360.9	8.96	41.276		
2,100.0	2,068.1	2,050.4	2,037.7	6.9	4.9	-148.10	-185.9	79.3	394.5	385.0	9.49	41.564		
2,200.0	2,165.9	2,144.1	2,130.3	7.3	5.2	-147.83	-199.5	84.2	420.4	410.4	10.02	41.943		
2,300.0	2,263.7	2,240.6	2,225.6	7.7	5.5	-147.58	-213.5	89.5	446.5	436.0	10.56	42.269		
2,400.0	2,361.5	2,337.1	2,321.0	8.2	5.8	-147.37	-227.5	94.9	472.6	461.5	11.10	42.564		
2,500.0	2,459.2	2,433.6	2,416.3	8.6	6.1	-147.17	-241.5	100.2	498.7	487.1	11.64	42.831		
2,600.0	2,557.0	2,530.2	2,511.7	9.0	6.4	-147.00	-255.5	105.5	524.9	512.7	12.18	43.074		
2,700.0	2,654.8	2,626.7	2,607.0	9.4	6.7	-146.84	-269.5	110.8	551.0	538.3	12.73	43.297		
2,800.0	2,752.6	2,723.2	2,702.4	9.8	7.0	-146.70	-283.5	116.1	577.1	563.8	13.27	43.502		
2,900.0	2,850.4	2,819.7	2,797.7	10.2	7.3	-146.57	-297.5	121.4	603.2	589.4	13.81	43.691		
3,000.0	2,948.2	2,916.2	2,893.1	10.6	7.6	-146.44	-311.5	126.7	629.4	615.0	14.35	43.865		
3,100.0	3,046.0	3,012.8	2,988.4	11.0	7.9	-146.33	-325.5	132.0	655.5	640.6	14.89	44.027		
3,200.0	3,143.8	3,109.3	3,083.8	11.4	8.2	-146.23	-339.5	137.3	681.6	666.2	15.43	44.177		
3,300.0	3,241.6	3,205.8	3,179.1	11.8	8.5	-146.14	-353.5	142.6	707.8	691.8	15.97	44.318		
3,400.0	3,339.4	3,302.3	3,274.5	12.2	8.8	-146.05	-367.5	147.9	733.9	717.4	16.51	44.449		
3,500.0	3,437.2	3,398.8	3,369.8	12.7	9.1	-145.97	-381.5	153.2	760.1	743.0	17.05	44.572		
3,600.0	3,535.0	3,495.3	3,465.2	13.1	9.4	-145.89	-395.4	158.6	786.2	768.6	17.59	44.687		
3,700.0	3,632.8	3,591.9	3,560.5	13.5	9.7	-145.82	-409.4	163.9	812.3	794.2	18.13	44.795		
3,800.0	3,730.6	3,688.4	3,655.9	13.9	10.0	-145.75	-423.4	169.2	838.5	819.8	18.68	44.897		
3,900.0	3,828.4	3,784.9	3,751.2	14.3	10.3	-145.69	-437.4	174.5	864.6	845.4	19.22	44.993		
4,000.0	3,926.2	3,881.4	3,846.6	14.7	10.6	-145.63	-451.4	179.8	890.8	871.0	19.76	45.084		
4,100.0	4,024.0	3,977.9	3,941.9	15.1	10.9	-145.57	-465.4	185.1	916.9	896.6	20.30	45.171		
4,200.0	4,121.8	4,074.4	4,037.3	15.5	11.2	-145.52	-479.4	190.4	943.1	922.2	20.84	45.252		
4,300.0	4,219.6	4,171.0	4,132.6	15.9	11.6	-145.47	-493.4	195.7	969.2	947.8	21.38	45.330		
4,400.0	4,317.4	4,267.5	4,228.0	16.3	11.9	-145.42	-507.4	201.0	995.4	973.4	21.92	45.404		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.27	-0.4	80.2	80.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.27	-0.4	80.2	80.2	80.0	0.24	328.417		
200.0	200.0	200.0	200.0	0.3	0.3	90.27	-0.4	80.2	80.2	79.7	0.59	135.231		
250.0	250.0	250.0	250.0	0.4	0.4	90.27	-0.4	80.2	80.2	79.5	0.77	104.496 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-160.74	-0.4	80.2	80.7	79.7	0.94	85.587		
400.0	399.9	398.5	398.5	0.7	0.6	-161.49	-0.4	80.7	84.4	83.1	1.29	65.469		
500.0	499.7	495.0	494.9	0.9	0.8	-162.70	-0.4	83.9	94.4	92.8	1.63	57.827		
600.0	599.1	593.0	592.8	1.1	1.0	-164.10	-0.4	89.5	110.1	108.1	1.98	55.643		
700.0	698.2	691.1	690.7	1.4	1.2	-165.52	-0.5	95.2	129.2	126.9	2.32	55.616 SF		
800.0	796.6	788.5	787.9	1.7	1.4	-166.86	-0.5	100.8	151.7	149.1	2.67	56.931		
852.7	848.2	839.4	838.8	1.9	1.5	-167.50	-0.6	103.8	165.0	162.1	2.84	58.013		
900.0	894.5	885.1	884.4	2.1	1.6	-168.08	-0.6	106.4	177.3	174.3	3.01	58.934		
1,000.0	992.3	981.6	980.7	2.5	1.8	-169.07	-0.6	112.0	203.3	200.0	3.35	60.607		
1,100.0	1,090.1	1,078.1	1,077.0	2.9	2.0	-169.84	-0.7	117.6	229.4	225.7	3.70	61.991		
1,200.0	1,187.9	1,174.6	1,173.4	3.3	2.1	-170.44	-0.7	123.2	255.6	251.5	4.05	63.153		
1,300.0	1,285.7	1,271.0	1,269.7	3.7	2.3	-170.94	-0.8	128.7	281.7	277.3	4.39	64.143		
1,400.0	1,383.5	1,367.5	1,366.0	4.1	2.5	-171.35	-0.8	134.3	307.9	303.2	4.74	64.996		
1,500.0	1,481.3	1,464.0	1,462.3	4.5	2.7	-171.70	-0.8	139.9	334.1	329.0	5.08	65.738		
1,600.0	1,579.1	1,560.5	1,558.7	4.9	2.9	-172.00	-0.9	145.5	360.3	354.8	5.43	66.390		
1,700.0	1,676.9	1,657.0	1,655.0	5.3	3.1	-172.25	-0.9	151.1	386.5	380.7	5.77	66.966		
1,800.0	1,774.7	1,753.5	1,751.3	5.7	3.3	-172.48	-1.0	156.7	412.7	406.6	6.12	67.479		
1,900.0	1,872.5	1,850.0	1,847.7	6.1	3.5	-172.67	-1.0	162.2	438.9	432.4	6.46	67.940		
2,000.0	1,970.3	1,946.5	1,944.0	6.5	3.7	-172.85	-1.1	167.8	465.1	458.3	6.80	68.355		
2,100.0	2,068.1	2,043.0	2,040.3	6.9	3.9	-173.00	-1.1	173.4	491.3	484.2	7.15	68.731		
2,200.0	2,165.9	2,139.5	2,136.7	7.3	4.1	-173.14	-1.2	179.0	517.6	510.1	7.49	69.073		
2,300.0	2,263.7	2,236.0	2,233.0	7.7	4.3	-173.27	-1.2	184.6	543.8	536.0	7.84	69.386		
2,400.0	2,361.5	2,332.5	2,329.3	8.2	4.5	-173.39	-1.2	190.2	570.0	561.8	8.18	69.672		
2,500.0	2,459.2	2,429.0	2,425.7	8.6	4.7	-173.49	-1.3	195.8	596.2	587.7	8.53	69.937		
2,600.0	2,557.0	2,525.5	2,522.0	9.0	4.9	-173.59	-1.3	201.3	622.5	613.6	8.87	70.181		
2,700.0	2,654.8	2,621.9	2,618.3	9.4	5.1	-173.68	-1.4	206.9	648.7	639.5	9.21	70.407		
2,800.0	2,752.6	2,718.4	2,714.7	9.8	5.2	-173.76	-1.4	212.5	675.0	665.4	9.56	70.617		
2,900.0	2,850.4	2,814.9	2,811.0	10.2	5.4	-173.83	-1.5	218.1	701.2	691.3	9.90	70.812		
3,000.0	2,948.2	2,911.4	2,907.3	10.6	5.6	-173.90	-1.5	223.7	727.4	717.2	10.25	70.995		
3,100.0	3,046.0	3,007.9	3,003.6	11.0	5.8	-173.97	-1.5	229.3	753.7	743.1	10.59	71.166		
3,200.0	3,143.8	3,104.4	3,100.0	11.4	6.0	-174.03	-1.6	234.8	779.9	769.0	10.93	71.326		
3,300.0	3,241.6	3,200.9	3,196.3	11.8	6.2	-174.09	-1.6	240.4	806.1	794.9	11.28	71.477		
3,400.0	3,339.4	3,297.4	3,292.6	12.2	6.4	-174.14	-1.7	246.0	832.4	820.8	11.62	71.618		
3,500.0	3,437.2	3,393.9	3,389.0	12.7	6.6	-174.19	-1.7	251.6	858.6	846.7	11.97	71.752		
3,600.0	3,535.0	3,490.4	3,485.3	13.1	6.8	-174.24	-1.8	257.2	884.9	872.6	12.31	71.879		
3,700.0	3,632.8	3,586.9	3,581.6	13.5	7.0	-174.28	-1.8	262.8	911.1	898.5	12.65	71.998		
3,800.0	3,730.6	3,683.4	3,678.0	13.9	7.2	-174.32	-1.9	268.3	937.4	924.4	13.00	72.111		
3,900.0	3,828.4	3,779.9	3,774.3	14.3	7.4	-174.36	-1.9	273.9	963.6	950.3	13.34	72.219		
4,000.0	3,926.2	3,876.4	3,870.6	14.7	7.6	-174.40	-1.9	279.5	989.8	976.2	13.69	72.321		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.46	-0.7	90.0	90.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.46	-0.7	90.0	90.0	89.8	0.24	368.476		
200.0	200.0	200.0	200.0	0.3	0.3	90.46	-0.7	90.0	90.0	89.4	0.59	151.725		
250.0	250.0	250.0	250.0	0.4	0.4	90.46	-0.7	90.0	90.0	89.3	0.77	117.242 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-160.55	-0.7	90.0	90.4	89.5	0.94	95.973		
400.0	399.9	396.7	396.7	0.7	0.6	-161.19	-0.7	91.7	95.4	94.1	1.29	74.219		
500.0	499.7	492.6	492.5	0.9	0.8	-162.27	-0.7	96.5	107.1	105.5	1.63	65.772		
600.0	599.1	588.0	587.5	1.1	1.0	-163.48	-0.7	104.4	125.3	123.3	1.97	63.612 SF		
700.0	698.2	685.4	684.5	1.4	1.2	-164.72	-0.7	113.4	147.8	145.5	2.31	63.882		
800.0	796.6	781.9	780.6	1.7	1.5	-165.88	-0.8	122.4	173.7	171.0	2.66	65.404		
852.7	848.2	832.3	830.8	1.9	1.6	-166.44	-0.8	127.1	188.6	185.8	2.83	66.570		
900.0	894.5	877.6	875.9	2.1	1.7	-166.97	-0.8	131.3	202.5	199.5	3.00	67.540		
1,000.0	992.3	973.1	971.0	2.5	1.9	-167.87	-0.8	140.1	231.8	228.5	3.35	69.296		
1,100.0	1,090.1	1,068.7	1,066.1	2.9	2.1	-168.57	-0.8	149.0	261.2	257.5	3.69	70.743		
1,200.0	1,187.9	1,164.2	1,161.3	3.3	2.3	-169.13	-0.8	157.9	290.6	286.6	4.04	71.955		
1,300.0	1,285.7	1,259.8	1,256.4	3.7	2.6	-169.59	-0.8	166.7	320.1	315.7	4.39	72.986		
1,400.0	1,383.5	1,355.3	1,351.5	4.1	2.8	-169.96	-0.8	175.6	349.5	344.8	4.73	73.872		
1,500.0	1,481.3	1,450.8	1,446.6	4.5	3.0	-170.28	-0.8	184.5	379.0	373.9	5.08	74.642		
1,600.0	1,579.1	1,546.4	1,541.8	4.9	3.2	-170.56	-0.8	193.3	408.4	403.0	5.42	75.317		
1,700.0	1,676.9	1,641.9	1,636.9	5.3	3.5	-170.80	-0.9	202.2	437.9	432.1	5.77	75.914		
1,800.0	1,774.7	1,737.5	1,732.0	5.7	3.7	-171.00	-0.9	211.1	467.4	461.3	6.11	76.445		
1,900.0	1,872.5	1,833.0	1,827.2	6.1	3.9	-171.19	-0.9	219.9	496.9	490.4	6.46	76.921		
2,000.0	1,970.3	1,928.6	1,922.3	6.5	4.2	-171.35	-0.9	228.8	526.3	519.5	6.80	77.349		
2,100.0	2,068.1	2,024.1	2,017.4	6.9	4.4	-171.49	-0.9	237.7	555.8	548.7	7.15	77.738		
2,200.0	2,165.9	2,119.7	2,112.6	7.3	4.6	-171.62	-0.9	246.5	585.3	577.8	7.50	78.091		
2,300.0	2,263.7	2,215.2	2,207.7	7.7	4.8	-171.74	-0.9	255.4	614.8	607.0	7.84	78.413		
2,400.0	2,361.5	2,310.7	2,302.8	8.2	5.1	-171.85	-0.9	264.2	644.3	636.1	8.19	78.709		
2,500.0	2,459.2	2,406.3	2,398.0	8.6	5.3	-171.95	-0.9	273.1	673.8	665.3	8.53	78.981		
2,600.0	2,557.0	2,501.8	2,493.1	9.0	5.5	-172.04	-1.0	282.0	703.3	694.4	8.88	79.232		
2,700.0	2,654.8	2,597.4	2,588.2	9.4	5.7	-172.12	-1.0	290.8	732.8	723.6	9.22	79.465		
2,800.0	2,752.6	2,692.9	2,683.4	9.8	6.0	-172.19	-1.0	299.7	762.3	752.8	9.57	79.681		
2,900.0	2,850.4	2,788.5	2,778.5	10.2	6.2	-172.26	-1.0	308.6	791.8	781.9	9.91	79.883		
3,000.0	2,948.2	2,884.0	2,873.6	10.6	6.4	-172.33	-1.0	317.4	821.3	811.1	10.26	80.070		
3,100.0	3,046.0	2,979.5	2,968.8	11.0	6.7	-172.39	-1.0	326.3	850.8	840.2	10.60	80.246		
3,200.0	3,143.8	3,075.1	3,063.9	11.4	6.9	-172.45	-1.0	335.2	880.4	869.4	10.95	80.411		
3,300.0	3,241.6	3,170.6	3,159.0	11.8	7.1	-172.50	-1.0	344.0	909.9	898.6	11.29	80.566		
3,400.0	3,339.4	3,266.2	3,254.1	12.2	7.3	-172.55	-1.0	352.9	939.4	927.7	11.64	80.712		
3,500.0	3,437.2	3,361.7	3,349.3	12.7	7.6	-172.60	-1.1	361.8	968.9	956.9	11.98	80.849		
3,600.0	3,535.0	3,457.3	3,444.4	13.1	7.8	-172.64	-1.1	370.6	998.4	986.1	12.33	80.979		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.42	-0.7	100.1	100.1					
100.0	100.0	100.0	100.0	0.1	0.1	90.42	-0.7	100.1	100.1	99.9	0.24	409.669		
200.0	200.0	200.0	200.0	0.3	0.3	90.42	-0.7	100.1	100.1	99.5	0.59	168.687 CC, ES		
250.0	250.0	248.3	248.3	0.4	0.4	90.42	-0.7	100.5	100.5	99.8	0.77	131.115		
300.0	300.0	296.6	296.6	0.5	0.5	-160.57	-0.7	101.7	102.2	101.3	0.94	109.135		
400.0	399.9	392.6	392.5	0.7	0.7	-161.10	-0.8	106.6	110.5	109.3	1.28	86.456		
500.0	499.7	487.6	487.1	0.9	0.9	-161.97	-0.8	114.5	125.5	123.9	1.62	77.515		
600.0	599.1	582.2	581.1	1.1	1.1	-162.96	-0.8	125.4	146.8	144.9	1.96	74.969		
700.0	698.2	678.8	677.0	1.4	1.4	-164.00	-0.9	137.3	172.3	170.0	2.30	74.848 SF		
800.0	796.6	774.5	772.0	1.7	1.6	-164.99	-0.9	149.1	201.0	198.4	2.64	76.064		
852.7	848.2	824.5	821.6	1.9	1.8	-165.48	-0.9	155.3	217.5	214.7	2.82	77.095		
900.0	894.5	869.3	866.0	2.1	1.9	-165.96	-0.9	160.8	232.7	229.7	2.99	77.930		
1,000.0	992.3	963.9	959.9	2.5	2.1	-166.79	-1.0	172.4	264.9	261.5	3.33	79.442		
1,100.0	1,090.1	1,058.6	1,053.8	2.9	2.4	-167.44	-1.0	184.1	297.1	293.4	3.68	80.687		
1,200.0	1,187.9	1,153.2	1,147.7	3.3	2.6	-167.96	-1.1	195.7	329.3	325.3	4.03	81.729		
1,300.0	1,285.7	1,247.8	1,241.6	3.7	2.9	-168.39	-1.1	207.4	361.6	357.2	4.38	82.615		
1,400.0	1,383.5	1,342.4	1,335.5	4.1	3.2	-168.75	-1.2	219.0	393.8	389.1	4.72	83.377		
1,500.0	1,481.3	1,437.1	1,429.4	4.5	3.4	-169.05	-1.2	230.7	426.1	421.0	5.07	84.038		
1,600.0	1,579.1	1,531.7	1,523.3	4.9	3.7	-169.32	-1.2	242.3	458.4	453.0	5.42	84.619		
1,700.0	1,676.9	1,626.3	1,617.2	5.3	4.0	-169.54	-1.3	254.0	490.7	484.9	5.76	85.132		
1,800.0	1,774.7	1,720.9	1,711.1	5.7	4.2	-169.74	-1.3	265.7	523.0	516.9	6.11	85.588		
1,900.0	1,872.5	1,815.6	1,805.0	6.1	4.5	-169.92	-1.4	277.3	555.3	548.9	6.46	85.998		
2,000.0	1,970.3	1,910.2	1,899.0	6.5	4.7	-170.08	-1.4	289.0	587.6	580.8	6.80	86.366		
2,100.0	2,068.1	2,004.8	1,992.9	6.9	5.0	-170.22	-1.5	300.6	619.9	612.8	7.15	86.700		
2,200.0	2,165.9	2,099.4	2,086.8	7.3	5.3	-170.34	-1.5	312.3	652.3	644.8	7.50	87.003		
2,300.0	2,263.7	2,194.0	2,180.7	7.7	5.5	-170.46	-1.5	323.9	684.6	676.7	7.84	87.281		
2,400.0	2,361.5	2,288.7	2,274.6	8.2	5.8	-170.56	-1.6	335.6	716.9	708.7	8.19	87.535		
2,500.0	2,459.2	2,383.3	2,368.5	8.6	6.1	-170.66	-1.6	347.2	749.2	740.7	8.54	87.769		
2,600.0	2,557.0	2,477.9	2,462.4	9.0	6.3	-170.75	-1.7	358.9	781.6	772.7	8.88	87.985		
2,700.0	2,654.8	2,572.5	2,556.3	9.4	6.6	-170.83	-1.7	370.5	813.9	804.7	9.23	88.185		
2,800.0	2,752.6	2,667.2	2,650.2	9.8	6.8	-170.90	-1.8	382.2	846.2	836.6	9.58	88.371		
2,900.0	2,850.4	2,761.8	2,744.1	10.2	7.1	-170.97	-1.8	393.8	878.6	868.6	9.92	88.544		
3,000.0	2,948.2	2,856.4	2,838.0	10.6	7.4	-171.03	-1.8	405.5	910.9	900.6	10.27	88.706		
3,100.0	3,046.0	2,951.0	2,931.9	11.0	7.6	-171.09	-1.9	417.1	943.2	932.6	10.62	88.857		
3,200.0	3,143.8	3,045.7	3,025.8	11.4	7.9	-171.15	-1.9	428.8	975.6	964.6	10.96	88.999		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		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			
13,300.0	7,498.0	7,439.0	7,437.3	101.0	13.1	73.64	6,367.6	-1,268.1	916.4	809.0	107.43	8.530		
13,400.0	7,498.0	7,440.7	7,439.0	102.7	13.1	75.29	6,367.6	-1,268.1	816.6	706.7	109.92	7.429		
13,500.0	7,498.0	7,442.4	7,440.6	104.4	13.1	76.99	6,367.6	-1,268.1	716.9	604.5	112.37	6.380		
13,600.0	7,498.0	7,444.1	7,442.4	106.1	13.1	78.74	6,367.7	-1,268.2	617.2	502.4	114.77	5.378		
13,700.0	7,498.0	7,445.8	7,444.1	107.8	13.1	80.55	6,367.7	-1,268.2	517.7	400.6	117.11	4.420		
13,800.0	7,498.0	7,447.6	7,445.9	109.5	13.1	82.40	6,367.7	-1,268.2	418.3	299.0	119.38	3.504		
13,900.0	7,498.0	7,449.4	7,447.7	111.2	13.1	84.30	6,367.8	-1,268.2	319.4	197.9	121.55	2.628		
14,000.0	7,498.0	7,451.2	7,449.5	112.9	13.1	86.24	6,367.8	-1,268.2	221.5	97.9	123.62	1.792		
14,100.0	7,498.0	7,453.1	7,451.3	114.6	13.1	88.22	6,367.8	-1,268.2	126.8	1.2	125.57	1.009 Level 2		
14,167.8	7,498.0	7,454.3	7,452.6	115.8	13.1	89.59	6,367.9	-1,268.3	71.2	-55.6	126.81	0.562 Level 1		
14,200.0	7,498.0	7,454.9	7,453.2	116.3	13.1	90.24	6,367.9	-1,268.3	54.9	-71.7	126.54	0.434 Level 1		
14,218.0	7,498.0	7,455.3	7,453.6	116.6	13.1	90.61	6,367.9	-1,268.3	52.0	-74.3	126.31	0.412 Level 1, CC, ES, SF		
14,250.0	7,498.0	7,455.9	7,454.1	117.2	13.1	91.24	6,367.9	-1,268.3	60.6	-65.2	125.79	0.481 Level 1		
14,300.0	7,498.0	7,456.7	7,455.0	118.0	13.1	92.09	6,367.9	-1,268.3	95.0	-29.7	124.67	0.762 Level 1		
14,350.0	7,498.0	7,457.6	7,455.9	118.8	13.1	92.71	6,367.9	-1,268.3	138.0	14.8	123.21	1.120 Level 2		
14,400.0	7,498.0	7,458.4	7,456.7	119.6	13.1	93.06	6,367.9	-1,268.3	183.7	62.3	121.42	1.513		
14,412.1	7,498.0	7,458.6	7,456.9	119.8	13.1	93.12	6,367.9	-1,268.3	194.9	74.0	120.94	1.612		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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				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		
11,700.0	7,498.0	7,434.6	7,432.2	74.3	13.2	-80.74	4,761.0	-1,401.0	913.3	831.0	82.25	11.103		
11,800.0	7,498.0	7,436.3	7,433.9	75.9	13.2	-81.64	4,761.0	-1,401.1	814.1	730.0	84.13	9.677		
11,900.0	7,498.0	7,438.1	7,435.7	77.6	13.2	-82.54	4,761.0	-1,401.1	715.2	629.2	86.00	8.316		
12,000.0	7,498.0	7,439.9	7,437.5	79.2	13.2	-83.46	4,761.1	-1,401.1	616.5	528.7	87.86	7.017		
12,100.0	7,498.0	7,441.6	7,439.2	80.8	13.2	-84.39	4,761.1	-1,401.1	518.5	428.7	89.71	5.779		
12,200.0	7,498.0	7,443.4	7,441.0	82.5	13.2	-85.32	4,761.1	-1,401.2	421.3	329.7	91.54	4.602		
12,300.0	7,498.0	7,445.3	7,442.9	84.1	13.2	-86.27	4,761.2	-1,401.2	325.8	232.4	93.36	3.489		
12,400.0	7,498.0	7,447.1	7,444.7	85.8	13.2	-87.22	4,761.2	-1,401.2	234.0	138.9	95.16	2.459		
12,447.8	7,498.0	7,448.0	7,445.6	86.6	13.2	-87.68	4,761.2	-1,401.2	193.1	97.1	96.02	2.011		
12,500.0	7,498.0	7,448.9	7,446.5	87.5	13.2	-88.16	4,761.2	-1,401.2	152.9	55.7	97.16	1.573		
12,600.0	7,498.0	7,450.8	7,448.4	89.1	13.2	-89.14	4,761.3	-1,401.3	107.8	8.5	99.31	1.086 Level 2		
12,609.9	7,498.0	7,451.0	7,448.6	89.3	13.2	-89.24	4,761.3	-1,401.3	107.4	7.9	99.52	1.079 Level 2, CC, ES, SF		
12,667.8	7,498.0	7,452.1	7,449.7	90.3	13.2	-89.83	4,761.3	-1,401.3	121.7	21.0	100.74	1.208 Level 2		
12,700.0	7,498.0	7,452.7	7,450.3	90.8	13.2	-90.16	4,761.3	-1,401.3	139.7	38.4	101.30	1.379 Level 3		
12,800.0	7,498.0	7,454.6	7,452.2	92.5	13.2	-91.19	4,761.4	-1,401.3	217.5	114.5	103.01	2.112		
12,900.0	7,498.0	7,456.6	7,454.2	94.2	13.2	-92.22	4,761.4	-1,401.3	308.4	203.7	104.69	2.946		
13,000.0	7,498.0	7,458.5	7,456.1	95.9	13.2	-93.26	4,761.4	-1,401.4	403.6	297.3	106.33	3.796		
13,100.0	7,498.0	7,460.5	7,458.1	97.6	13.3	-94.30	4,761.5	-1,401.4	500.7	392.7	107.94	4.638		
13,200.0	7,498.0	7,462.5	7,460.1	99.3	13.3	-95.34	4,761.5	-1,401.4	598.7	489.2	109.52	5.467		
13,300.0	7,498.0	7,464.5	7,462.1	101.0	13.3	-96.39	4,761.5	-1,401.4	697.3	586.2	111.05	6.279		
13,400.0	7,498.0	7,466.5	7,464.1	102.7	13.3	-97.44	4,761.6	-1,401.5	796.2	683.7	112.54	7.075		
13,500.0	7,498.0	7,468.5	7,466.1	104.4	13.3	-98.49	4,761.6	-1,401.5	895.4	781.4	113.99	7.855		
13,600.0	7,498.0	7,470.6	7,468.1	106.1	13.3	-99.55	4,761.7	-1,401.5	994.7	879.3	115.40	8.620		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		
13,300.0	7,498.0	7,433.0	7,433.0	101.0	13.0	90.00	6,375.7	-1,214.9	928.0	816.4	111.67	8.311		
13,400.0	7,498.0	7,433.0	7,433.0	102.7	13.0	90.00	6,375.7	-1,214.9	828.8	715.4	113.41	7.308		
13,500.0	7,498.0	7,433.0	7,433.0	104.4	13.0	90.00	6,375.7	-1,214.9	729.7	614.6	115.15	6.338		
13,600.0	7,498.0	7,433.0	7,433.0	106.1	13.0	90.00	6,375.7	-1,214.9	631.0	514.1	116.88	5.398		
13,700.0	7,498.0	7,433.0	7,433.0	107.8	13.0	90.00	6,375.7	-1,214.9	532.7	414.1	118.62	4.491		
13,800.0	7,498.0	7,433.0	7,433.0	109.5	13.0	90.00	6,375.7	-1,214.9	435.2	314.8	120.36	3.616		
13,900.0	7,498.0	7,433.0	7,433.0	111.2	13.0	90.00	6,375.7	-1,214.9	339.2	217.0	122.11	2.778		
14,000.0	7,498.0	7,433.0	7,433.0	112.9	13.0	90.00	6,375.7	-1,214.9	246.3	122.4	123.85	1.989		
14,100.0	7,498.0	7,433.0	7,433.0	114.6	13.0	90.00	6,375.7	-1,214.9	162.1	36.5	125.59	1.291 Level 3		
14,167.8	7,498.0	7,433.0	7,433.0	115.8	13.0	90.00	6,375.7	-1,214.9	119.8	-7.0	126.77	0.945 Level 1		
14,200.0	7,498.0	7,433.0	7,433.0	116.3	13.0	90.00	6,375.7	-1,214.9	108.5	-18.0	126.49	0.858 Level 1		
14,229.3	7,498.0	7,433.0	7,433.0	116.8	13.0	90.00	6,375.7	-1,214.9	105.0	-21.1	126.11	0.833 Level 1, CC, ES, SF		
14,250.0	7,498.0	7,433.0	7,433.0	117.2	13.0	90.00	6,375.7	-1,214.9	106.8	-19.0	125.76	0.849 Level 1		
14,300.0	7,498.0	7,433.0	7,433.0	118.0	13.0	90.00	6,375.7	-1,214.9	124.2	-0.5	124.69	0.996 Level 1		
14,350.0	7,498.0	7,433.0	7,433.0	118.8	13.0	90.00	6,375.7	-1,214.9	154.4	31.1	123.27	1.252 Level 3		
14,400.0	7,498.0	7,433.0	7,433.0	119.6	13.0	90.00	6,375.7	-1,214.9	191.3	69.8	121.51	1.574		
14,412.1	7,498.0	7,433.0	7,433.0	119.8	13.0	90.00	6,375.7	-1,214.9	200.9	79.8	121.03	1.660		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		
12,800.0	7,498.0	7,461.4	7,459.5	92.5	13.2	89.83	5,490.7	-490.4	969.8	866.7	103.04	9.412		
12,900.0	7,498.0	7,460.2	7,458.3	94.2	13.2	89.74	5,490.8	-490.5	919.6	814.8	104.77	8.777		
13,000.0	7,498.0	7,458.9	7,457.0	95.9	13.2	89.65	5,490.8	-490.5	877.9	771.4	106.50	8.243		
13,100.0	7,498.0	7,457.6	7,455.7	97.6	13.2	89.56	5,490.8	-490.5	846.1	737.8	108.23	7.817		
13,200.0	7,498.0	7,456.3	7,454.4	99.3	13.2	89.46	5,490.8	-490.5	825.2	715.2	109.97	7.504		
13,300.0	7,498.0	7,454.9	7,453.0	101.0	13.2	89.37	5,490.8	-490.5	816.1	704.4	111.70	7.306		
13,324.5	7,498.0	7,454.6	7,452.7	101.4	13.2	89.35	5,490.8	-490.5	815.7	703.6	112.12	7.275 CC, ES		
13,400.0	7,498.0	7,453.6	7,451.7	102.7	13.2	89.28	5,490.8	-490.5	819.2	705.8	113.43	7.222 SF		
13,500.0	7,498.0	7,452.2	7,450.3	104.4	13.2	89.18	5,490.9	-490.5	834.4	719.2	115.17	7.245		
13,600.0	7,498.0	7,450.8	7,448.9	106.1	13.2	89.08	5,490.9	-490.6	861.0	744.1	116.90	7.365		
13,700.0	7,498.0	7,449.4	7,447.5	107.8	13.2	88.98	5,490.9	-490.6	898.0	779.4	118.63	7.569		
13,800.0	7,498.0	7,448.0	7,446.1	109.5	13.2	88.88	5,490.9	-490.6	944.2	823.8	120.37	7.844		
13,900.0	7,498.0	7,446.6	7,444.7	111.2	13.2	88.78	5,490.9	-490.6	998.3	876.2	122.10	8.176		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8420-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		
10,300.0	7,498.0	7,456.0	7,456.0	52.4	13.0	-90.00	3,356.6	-1,758.5	996.1	936.8	59.30	16.797		
10,400.0	7,498.0	7,456.0	7,456.0	53.9	13.0	-90.00	3,356.6	-1,758.5	907.3	846.3	60.98	14.878		
10,500.0	7,498.0	7,456.0	7,456.0	55.4	13.0	-90.00	3,356.6	-1,758.5	821.1	758.4	62.67	13.103		
10,600.0	7,498.0	7,456.0	7,456.0	56.9	13.0	-90.00	3,356.6	-1,758.5	738.4	674.0	64.36	11.473		
10,700.0	7,498.0	7,456.0	7,456.0	58.4	13.0	-90.00	3,356.6	-1,758.5	660.5	594.4	66.05	9.999		
10,800.0	7,498.0	7,456.0	7,456.0	60.0	13.0	-90.00	3,356.6	-1,758.5	589.3	521.5	67.75	8.698		
10,900.0	7,498.0	7,456.0	7,456.0	61.5	13.0	-90.00	3,356.6	-1,758.5	527.5	458.0	69.45	7.595		
11,000.0	7,498.0	7,456.0	7,456.0	63.1	13.0	-90.00	3,356.6	-1,758.5	478.8	407.6	71.16	6.729		
11,100.0	7,498.0	7,456.0	7,456.0	64.7	13.0	-90.00	3,356.6	-1,758.5	447.5	374.7	72.86	6.142		
11,194.9	7,498.0	7,456.0	7,456.0	66.2	13.0	-90.00	3,356.6	-1,758.5	437.3	362.8	74.49	5.871 CC		
11,200.0	7,498.0	7,456.0	7,456.0	66.3	13.0	-90.00	3,356.6	-1,758.5	437.4	362.8	74.57	5.865 ES, SF		
11,300.0	7,498.0	7,456.0	7,456.0	67.9	13.0	-90.00	3,356.6	-1,758.5	449.8	373.5	76.29	5.896		
11,400.0	7,498.0	7,456.0	7,456.0	69.5	13.0	-90.00	3,356.6	-1,758.5	483.0	405.0	78.00	6.193		
11,500.0	7,498.0	7,456.0	7,456.0	71.1	13.0	-90.00	3,356.6	-1,758.5	533.2	453.5	79.72	6.689		
11,600.0	7,498.0	7,456.0	7,456.0	72.7	13.0	-90.00	3,356.6	-1,758.5	596.1	514.7	81.44	7.320		
11,700.0	7,498.0	7,456.0	7,456.0	74.3	13.0	-90.00	3,356.6	-1,758.5	668.1	585.0	83.16	8.034		
11,800.0	7,498.0	7,456.0	7,456.0	75.9	13.0	-90.00	3,356.6	-1,758.5	746.6	661.7	84.88	8.796		
11,900.0	7,498.0	7,456.0	7,456.0	77.6	13.0	-90.00	3,356.6	-1,758.5	829.7	743.1	86.60	9.580		
12,000.0	7,498.0	7,456.0	7,456.0	79.2	13.0	-90.00	3,356.6	-1,758.5	916.2	827.9	88.33	10.373		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		
10,700.0	7,498.0	7,350.0	7,348.6	58.4	13.0	71.79	3,722.7	-1,029.5	925.8	863.0	62.84	14.734		
10,800.0	7,498.0	7,350.0	7,348.6	60.0	13.0	71.79	3,722.7	-1,029.5	831.8	767.4	64.45	12.906		
10,900.0	7,498.0	7,350.0	7,348.6	61.5	13.0	71.79	3,722.7	-1,029.5	739.4	673.3	66.07	11.190		
11,000.0	7,498.0	7,350.0	7,348.6	63.1	13.0	71.79	3,722.7	-1,029.5	649.2	581.5	67.69	9.590		
11,100.0	7,498.0	7,350.0	7,348.6	64.7	13.0	71.79	3,722.7	-1,029.5	562.3	493.0	69.32	8.111		
11,200.0	7,498.0	7,350.0	7,348.6	66.3	13.0	71.79	3,722.7	-1,029.5	480.5	409.6	70.95	6.773		
11,300.0	7,498.0	7,350.0	7,348.6	67.9	13.0	71.79	3,722.7	-1,029.5	407.0	334.4	72.58	5.608		
11,400.0	7,498.0	7,350.0	7,348.6	69.5	13.0	71.79	3,722.7	-1,029.5	346.9	272.7	74.21	4.675		
11,500.0	7,498.0	7,350.0	7,348.6	71.1	13.0	71.79	3,722.7	-1,029.5	308.4	232.6	75.84	4.066		
11,576.3	7,498.0	7,350.0	7,348.6	72.3	13.0	71.79	3,722.7	-1,029.5	298.8	221.7	77.09	3.876 CC, ES		
11,600.0	7,498.0	7,350.0	7,348.6	72.7	13.0	71.79	3,722.7	-1,029.5	299.7	222.3	77.48	3.869 SF		
11,700.0	7,498.0	7,350.0	7,348.6	74.3	13.0	71.79	3,722.7	-1,029.5	323.4	244.3	79.11	4.088		
11,800.0	7,498.0	7,350.0	7,348.6	75.9	13.0	71.79	3,722.7	-1,029.5	373.3	292.5	80.75	4.622		
11,900.0	7,498.0	7,350.0	7,348.6	77.6	13.0	71.79	3,722.7	-1,029.5	440.5	358.1	82.39	5.347		
12,000.0	7,498.0	7,350.0	7,348.6	79.2	13.0	71.79	3,722.7	-1,029.5	518.5	434.4	84.03	6.170		
12,100.0	7,498.0	7,350.0	7,348.6	80.8	13.0	71.79	3,722.7	-1,029.5	603.0	517.3	85.68	7.038		
12,200.0	7,498.0	7,350.0	7,348.6	82.5	13.0	71.79	3,722.7	-1,029.5	691.6	604.3	87.32	7.920		
12,300.0	7,498.0	7,350.0	7,348.6	84.1	13.0	71.79	3,722.7	-1,029.5	783.0	694.0	88.96	8.801		
12,400.0	7,498.0	7,350.0	7,348.6	85.8	13.0	71.79	3,722.7	-1,029.5	876.2	785.6	90.61	9.670		
12,447.8	7,498.0	7,350.0	7,348.6	86.6	13.0	71.79	3,722.7	-1,029.5	921.3	829.9	91.40	10.080		
12,500.0	7,498.0	7,350.0	7,348.6	87.5	13.0	71.29	3,722.7	-1,029.5	970.9	878.7	92.21	10.529		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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			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	-42.75	402.9	-372.4	549.5					
100.0	100.0	70.0	70.0	0.1	0.1	-42.75	402.9	-372.4	548.7	548.4	0.24	2,243.626		
200.0	200.0	170.0	170.0	0.3	0.3	-42.75	402.9	-372.4	548.7	548.1	0.59	924.291		
250.0	250.0	220.0	220.0	0.4	0.4	-42.75	402.9	-372.4	548.7	547.9	0.77	714.280		
300.0	300.0	270.0	270.0	0.5	0.5	66.38	402.9	-372.4	548.5	547.5	0.94	581.732		
400.0	399.9	369.9	369.9	0.7	0.6	66.74	402.9	-372.4	547.1	545.8	1.30	421.219		
500.0	499.7	469.7	469.7	0.9	0.8	67.47	402.9	-372.4	544.4	542.7	1.67	325.196		
600.0	599.1	569.1	569.1	1.1	1.0	68.56	402.9	-372.4	540.5	538.4	2.08	259.764		
700.0	698.2	668.2	668.2	1.4	1.2	70.02	402.9	-372.4	535.5	533.0	2.53	211.682		
800.0	796.6	766.6	766.6	1.7	1.3	71.88	402.9	-372.4	529.7	526.7	3.03	174.769		
852.7	848.2	818.2	818.2	1.9	1.4	73.01	402.9	-372.4	526.5	523.2	3.31	158.874		
900.0	894.5	864.5	864.5	2.1	1.5	74.02	402.9	-372.4	523.6	520.1	3.57	146.545		
1,000.0	992.3	962.3	962.3	2.5	1.7	76.19	402.9	-372.4	518.2	514.0	4.13	125.409		
1,100.0	1,090.1	1,060.1	1,060.1	2.9	1.9	78.41	402.9	-372.4	513.5	508.8	4.70	109.226		
1,200.0	1,187.9	1,157.9	1,157.9	3.3	2.0	80.66	402.9	-372.4	509.6	504.3	5.28	96.564		
1,300.0	1,285.7	1,255.7	1,255.7	3.7	2.2	82.94	402.9	-372.4	506.6	500.7	5.86	86.476		
1,400.0	1,383.5	1,353.5	1,353.5	4.1	2.4	85.24	402.9	-372.4	504.4	497.9	6.44	78.319		
1,500.0	1,481.3	1,451.3	1,451.3	4.5	2.5	87.56	402.9	-372.4	503.0	496.0	7.02	71.644		
1,600.0	1,579.1	1,549.1	1,549.1	4.9	2.7	89.89	402.9	-372.4	502.5	494.9	7.60	66.127		
1,604.8	1,583.7	1,553.7	1,553.7	4.9	2.7	90.00	402.9	-372.4	502.5	494.9	7.63	65.889 CC		
1,700.0	1,676.9	1,646.9	1,646.9	5.3	2.9	92.22	402.9	-372.4	502.9	494.8	8.17	61.534 ES		
1,800.0	1,774.7	1,744.7	1,744.7	5.7	3.0	94.54	402.9	-372.4	504.2	495.4	8.74	57.685		
1,900.0	1,872.5	1,842.5	1,842.5	6.1	3.2	96.84	402.9	-372.4	506.3	497.0	9.30	54.445		
2,000.0	1,970.3	1,940.3	1,940.3	6.5	3.4	99.12	402.9	-372.4	509.3	499.4	9.85	51.710		
2,100.0	2,068.1	2,038.1	2,038.1	6.9	3.6	101.38	402.9	-372.4	513.1	502.7	10.39	49.396		
2,200.0	2,165.9	2,135.9	2,135.9	7.3	3.7	103.60	402.9	-372.4	517.7	506.8	10.91	47.435		
2,300.0	2,263.7	2,233.7	2,233.7	7.7	3.9	105.78	402.9	-372.4	523.1	511.7	11.43	45.775		
2,400.0	2,361.5	2,331.5	2,331.5	8.2	4.1	107.91	402.9	-372.4	529.3	517.3	11.93	44.371		
2,500.0	2,459.2	2,429.2	2,429.2	8.6	4.2	109.99	402.9	-372.4	536.2	523.8	12.42	43.186		
2,600.0	2,557.0	2,527.0	2,527.0	9.0	4.4	112.02	402.9	-372.4	543.8	530.9	12.89	42.191		
2,700.0	2,654.8	2,624.8	2,624.8	9.4	4.6	113.99	402.9	-372.4	552.1	538.8	13.35	41.358		
2,800.0	2,752.6	2,722.6	2,722.6	9.8	4.8	115.91	402.9	-372.4	561.1	547.3	13.80	40.667		
2,900.0	2,850.4	2,820.4	2,820.4	10.2	4.9	117.76	402.9	-372.4	570.7	556.5	14.23	40.099		
3,000.0	2,948.2	2,918.2	2,918.2	10.6	5.1	119.55	402.9	-372.4	580.9	566.2	14.65	39.638		
3,100.0	3,046.0	3,016.0	3,016.0	11.0	5.3	121.28	402.9	-372.4	591.6	576.6	15.07	39.270		
3,200.0	3,143.8	3,113.8	3,113.8	11.4	5.4	122.95	402.9	-372.4	602.9	587.4	15.47	38.984		
3,300.0	3,241.6	3,211.6	3,211.6	11.8	5.6	124.56	402.9	-372.4	614.7	598.8	15.86	38.769		
3,400.0	3,339.4	3,309.4	3,309.4	12.2	5.8	126.11	402.9	-372.4	627.0	610.7	16.24	38.617		
3,500.0	3,437.2	3,407.2	3,407.2	12.7	5.9	127.60	402.9	-372.4	639.7	623.1	16.61	38.519		
3,600.0	3,535.0	3,505.0	3,505.0	13.1	6.1	129.03	402.9	-372.4	652.8	635.8	16.97	38.468		
3,700.0	3,632.8	3,602.8	3,602.8	13.5	6.3	130.41	402.9	-372.4	666.3	649.0	17.33	38.459 SF		
3,800.0	3,730.6	3,700.6	3,700.6	13.9	6.5	131.74	402.9	-372.4	680.2	662.5	17.67	38.486		
3,900.0	3,828.4	3,798.4	3,798.4	14.3	6.6	133.01	402.9	-372.4	694.4	676.4	18.02	38.545		
4,000.0	3,926.2	3,896.2	3,896.2	14.7	6.8	134.23	402.9	-372.4	709.0	690.7	18.35	38.631		
4,100.0	4,024.0	3,994.0	3,994.0	15.1	7.0	135.40	402.9	-372.4	723.9	705.2	18.69	38.741		
4,200.0	4,121.8	4,091.8	4,091.8	15.5	7.1	136.52	402.9	-372.4	739.1	720.1	19.01	38.872		
4,300.0	4,219.6	4,189.6	4,189.6	15.9	7.3	137.60	402.9	-372.4	754.5	735.2	19.34	39.020		
4,400.0	4,317.4	4,287.4	4,287.4	16.3	7.5	138.64	402.9	-372.4	770.2	750.6	19.66	39.183		
4,500.0	4,415.2	4,385.2	4,385.2	16.8	7.7	139.64	402.9	-372.4	786.2	766.2	19.97	39.360		
4,600.0	4,513.0	4,483.0	4,483.0	17.2	7.8	140.59	402.9	-372.4	802.3	782.0	20.29	39.548		
4,700.0	4,610.7	4,580.7	4,580.7	17.6	8.0	141.51	402.9	-372.4	818.7	798.1	20.60	39.744		
4,800.0	4,708.5	4,678.5	4,678.5	18.0	8.2	142.40	402.9	-372.4	835.3	814.4	20.91	39.949		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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
4,900.0	4,806.3	4,776.3	4,776.3	18.4	8.3	143.25	402.9	-372.4	852.1	830.9	21.22	40.160	
5,000.0	4,904.1	4,874.1	4,874.1	18.8	8.5	144.07	402.9	-372.4	869.0	847.5	21.52	40.376	
5,100.0	5,001.9	4,971.9	4,971.9	19.2	8.7	144.85	402.9	-372.4	886.1	864.3	21.83	40.596	
5,200.0	5,099.7	5,069.7	5,069.7	19.6	8.8	145.61	402.9	-372.4	903.4	881.3	22.13	40.819	
5,300.0	5,197.5	5,167.5	5,167.5	20.0	9.0	146.34	402.9	-372.4	920.8	898.4	22.44	41.044	
5,400.0	5,295.3	5,265.3	5,265.3	20.4	9.2	147.04	402.9	-372.4	938.4	915.7	22.74	41.271	
5,500.0	5,393.1	5,363.1	5,363.1	20.9	9.4	147.72	402.9	-372.4	956.1	933.1	23.04	41.499	
5,600.0	5,490.9	5,460.9	5,460.9	21.3	9.5	148.37	402.9	-372.4	973.9	950.6	23.34	41.727	
5,700.0	5,588.7	5,558.7	5,558.7	21.7	9.7	149.00	402.9	-372.4	991.9	968.2	23.64	41.955	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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				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	-97.98	-92.5	-660.1	667.1						
100.0	100.0	74.0	74.0	0.1	0.1	-97.98	-92.5	-660.1	666.6	666.3	0.25	2,650.464			
200.0	200.0	174.0	174.0	0.3	0.3	-97.98	-92.5	-660.1	666.6	666.0	0.60	1,110.008			
250.0	250.0	224.0	224.0	0.4	0.4	-97.98	-92.5	-660.1	666.6	665.8	0.78	860.071			
300.0	300.0	274.0	274.0	0.5	0.5	11.12	-92.5	-660.1	666.2	665.2	0.95	701.614			
400.0	399.9	373.9	373.9	0.7	0.7	11.19	-92.5	-660.1	662.7	661.5	1.30	510.652			
500.0	499.7	473.7	473.7	0.9	0.8	11.33	-92.5	-660.1	655.9	654.3	1.65	398.602			
600.0	599.1	573.1	573.1	1.1	1.0	11.56	-92.5	-660.1	645.7	643.7	1.99	324.030			
700.0	698.2	670.0	670.0	1.4	1.2	11.86	-92.6	-660.2	632.1	629.8	2.34	270.639			
800.0	796.6	767.5	767.5	1.7	1.3	12.23	-92.9	-660.7	615.6	612.9	2.68	229.577			
852.7	848.2	818.9	818.9	1.9	1.4	12.46	-93.1	-660.9	605.6	602.7	2.86	211.410			
900.0	894.5	865.2	865.2	2.1	1.5	12.64	-93.4	-661.1	596.2	593.2	3.03	196.474			
1,000.0	992.3	962.8	962.8	2.5	1.7	13.03	-94.1	-661.6	576.4	573.0	3.40	169.762			
1,100.0	1,090.1	1,060.3	1,060.3	2.9	1.9	13.43	-95.0	-662.2	556.7	552.9	3.76	148.101			
1,200.0	1,187.9	1,157.8	1,157.7	3.3	2.0	13.86	-95.8	-662.8	537.1	532.9	4.13	130.196			
1,300.0	1,285.7	1,255.3	1,255.2	3.7	2.2	14.32	-96.7	-663.5	517.6	513.1	4.49	115.153			
1,400.0	1,383.5	1,352.7	1,352.7	4.1	2.4	14.82	-97.5	-664.4	498.3	493.4	4.87	102.350			
1,500.0	1,481.3	1,450.0	1,450.0	4.5	2.5	15.39	-98.1	-665.3	479.1	473.8	5.25	91.329			
1,600.0	1,579.1	1,547.3	1,547.3	4.9	2.7	16.04	-98.5	-666.5	460.1	454.5	5.63	81.733			
1,700.0	1,676.9	1,644.7	1,644.7	5.3	2.9	16.79	-98.5	-667.8	441.4	435.3	6.02	73.306			
1,800.0	1,774.7	1,742.4	1,742.3	5.7	3.0	17.60	-98.6	-669.2	422.8	416.4	6.42	65.848			
1,900.0	1,872.5	1,840.1	1,840.0	6.1	3.2	18.47	-98.8	-670.7	404.4	397.6	6.83	59.218			
2,000.0	1,970.3	1,937.9	1,937.8	6.5	3.4	19.39	-99.2	-672.3	386.3	379.0	7.25	53.292			
2,100.0	2,068.1	2,035.2	2,035.1	6.9	3.6	20.35	-99.8	-674.0	368.3	360.6	7.68	47.987			
2,200.0	2,165.9	2,133.4	2,133.2	7.3	3.7	21.44	-100.4	-675.9	350.6	342.5	8.12	43.190			
2,300.0	2,263.7	2,231.4	2,231.3	7.7	3.9	22.99	-98.9	-677.7	333.1	324.5	8.60	38.744			
2,400.0	2,361.5	2,328.9	2,328.7	8.2	4.1	24.79	-97.0	-679.5	315.9	306.8	9.11	34.687			
2,500.0	2,459.2	2,426.6	2,426.4	8.6	4.3	26.69	-95.5	-681.6	299.2	289.6	9.64	31.030			
2,600.0	2,557.0	2,524.4	2,524.2	9.0	4.4	28.68	-94.7	-683.8	283.0	272.8	10.21	27.731			
2,700.0	2,654.8	2,625.1	2,624.8	9.4	4.6	31.20	-93.0	-685.5	266.8	255.9	10.83	24.629			
2,800.0	2,752.6	2,723.9	2,723.5	9.8	4.8	34.56	-89.0	-685.8	250.4	238.8	11.55	21.671			
2,900.0	2,850.4	2,822.0	2,821.6	10.2	4.9	38.27	-85.4	-686.0	234.7	222.3	12.34	19.024			
3,000.0	2,948.2	2,920.2	2,919.7	10.6	5.1	42.35	-82.4	-686.1	219.8	206.6	13.18	16.679			
3,100.0	3,046.0	3,017.8	3,017.3	11.0	5.3	46.83	-79.9	-686.2	205.9	191.8	14.07	14.629			
3,200.0	3,143.8	3,114.8	3,114.3	11.4	5.5	51.75	-77.7	-686.8	193.7	178.7	15.02	12.893			
3,300.0	3,241.6	3,212.0	3,211.5	11.8	5.6	57.14	-75.6	-687.7	183.4	167.4	16.01	11.460			
3,400.0	3,339.4	3,309.5	3,308.9	12.2	5.8	62.95	-73.7	-689.2	175.3	158.3	17.00	10.312			
3,500.0	3,437.2	3,407.2	3,406.5	12.7	6.0	69.12	-71.9	-691.1	169.4	151.4	17.97	9.427			
3,600.0	3,535.0	3,505.0	3,504.3	13.1	6.2	75.55	-70.1	-693.3	165.8	146.9	18.88	8.783			
3,700.0	3,632.8	3,602.9	3,602.2	13.5	6.3	82.07	-68.3	-695.9	164.5	144.9	19.68	8.359			
3,703.5	3,636.3	3,606.4	3,605.7	13.5	6.3	82.30	-68.3	-696.0	164.5	144.8	19.71	8.348			
3,800.0	3,730.6	3,701.3	3,700.6	13.9	6.5	88.59	-66.6	-698.5	165.5	145.1	20.37	8.125			
3,900.0	3,828.4	3,799.8	3,798.9	14.3	6.7	95.08	-65.0	-700.8	168.5	147.6	20.92	8.055			
4,000.0	3,926.2	3,898.1	3,897.2	14.7	6.9	101.39	-63.5	-702.6	173.5	152.1	21.32	8.136			
4,100.0	4,024.0	3,996.1	3,995.2	15.1	7.0	107.40	-62.1	-704.1	180.4	158.8	21.59	8.354			
4,200.0	4,121.8	4,079.2	4,078.2	15.5	7.2	112.29	-57.8	-704.5	192.8	171.0	21.79	8.852			
4,300.0	4,219.6	4,170.2	4,168.7	15.9	7.4	116.52	-47.8	-706.1	212.4	190.4	21.96	9.672			
4,400.0	4,317.4	4,258.5	4,255.9	16.3	7.6	119.42	-35.1	-709.2	235.9	213.7	22.21	10.625			
4,500.0	4,415.2	4,352.0	4,348.0	16.8	7.8	121.56	-19.1	-713.7	262.3	239.8	22.51	11.652			
4,600.0	4,513.0	4,440.0	4,434.0	17.2	8.0	122.76	-1.9	-719.7	290.7	267.8	22.91	12.689			
4,700.0	4,610.7	4,523.3	4,514.9	17.6	8.2	123.33	17.2	-726.5	322.1	298.8	23.38	13.779			
4,800.0	4,708.5	4,601.4	4,589.5	18.0	8.5	123.38	38.9	-734.2	357.6	333.7	23.91	14.957			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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		
4,900.0	4,806.3	4,681.9	4,665.1	18.4	8.8	123.00	64.5	-743.7	396.4	371.9	24.51	16.175		
5,000.0	4,904.1	4,764.5	4,741.9	18.8	9.1	122.48	93.3	-754.1	437.8	412.6	25.14	17.410		
5,100.0	5,001.9	4,840.9	4,812.1	19.2	9.5	121.95	121.5	-764.3	481.1	455.3	25.77	18.668		
5,200.0	5,099.7	4,913.7	4,878.2	19.6	9.8	121.48	150.8	-773.4	527.6	501.2	26.39	19.994		
5,300.0	5,197.5	4,988.7	4,945.3	20.0	10.2	120.92	182.6	-783.7	576.0	548.9	27.03	21.308		
5,400.0	5,295.3	5,057.6	5,005.4	20.4	10.7	120.22	214.2	-794.8	627.2	599.5	27.69	22.650		
5,500.0	5,393.1	5,169.5	5,102.2	20.9	11.4	118.76	265.7	-817.8	678.1	649.5	28.59	23.716		
5,600.0	5,490.9	5,246.3	5,168.8	21.3	11.9	117.82	299.7	-835.0	727.4	698.1	29.33	24.801		
5,700.0	5,588.7	5,336.9	5,247.5	21.7	12.6	116.89	340.2	-854.6	777.2	747.1	30.11	25.818		
5,800.0	5,686.5	5,398.6	5,300.9	22.1	13.0	116.38	368.5	-867.2	828.4	797.7	30.74	26.949		
5,900.0	5,784.3	5,479.7	5,369.5	22.5	13.7	115.57	407.2	-886.0	881.3	849.8	31.48	27.992		
6,000.0	5,882.1	5,595.8	5,468.5	22.9	14.6	114.50	461.1	-914.0	933.0	900.6	32.38	28.816		
6,100.0	5,979.9	5,722.0	5,579.2	23.3	15.5	113.63	513.9	-943.5	980.0	946.8	33.28	29.450		
7,977.8	7,498.0	7,740.2	7,445.9	28.5	27.5	76.95	1,120.8	-1,255.2	999.1	961.2	37.85	26.396		
8,000.0	7,498.0	7,740.8	7,446.6	28.5	27.5	77.27	1,120.8	-1,255.3	977.0	939.0	38.00	25.709		
8,100.0	7,498.0	7,743.9	7,449.7	28.8	27.5	78.76	1,120.9	-1,255.5	877.8	839.0	38.81	22.618		
8,200.0	7,498.0	7,747.1	7,452.8	29.2	27.5	80.30	1,121.0	-1,255.7	778.8	739.0	39.78	19.576		
8,300.0	7,498.0	7,750.3	7,456.0	29.7	27.5	81.88	1,121.1	-1,255.9	680.0	639.1	40.89	16.629		
8,400.0	7,498.0	7,754.0	7,459.7	30.2	27.5	83.72	1,121.3	-1,256.1	581.6	539.5	42.13	13.804		
8,500.0	7,498.0	7,757.2	7,462.9	30.9	27.5	85.36	1,121.4	-1,256.3	483.9	440.4	43.43	11.140		
8,600.0	7,498.0	7,760.9	7,466.6	31.7	27.5	87.22	1,121.5	-1,256.5	387.3	342.4	44.81	8.642		
8,700.0	7,498.0	7,764.5	7,470.2	32.5	27.5	89.06	1,121.6	-1,256.8	292.9	246.7	46.22	6.337		
8,800.0	7,498.0	7,768.0	7,473.7	33.4	27.5	90.86	1,121.8	-1,257.0	203.9	156.2	47.64	4.279		
8,900.0	7,498.0	7,771.4	7,477.1	34.3	27.5	92.63	1,121.9	-1,257.2	131.7	82.6	49.07	2.683		
8,971.3	7,498.0	7,773.8	7,479.5	35.1	27.5	93.87	1,122.0	-1,257.4	110.7	60.6	50.10	2.210	CC, ES, SF	
9,000.0	7,498.0	7,774.8	7,480.4	35.4	27.5	94.36	1,122.0	-1,257.4	114.4	63.9	50.50	2.265		
9,100.0	7,498.0	7,778.0	7,483.7	36.4	27.5	96.05	1,122.1	-1,257.7	169.7	117.8	51.92	3.269		
9,200.0	7,498.0	7,781.2	7,486.9	37.6	27.5	97.70	1,122.2	-1,257.9	254.0	200.7	53.32	4.764		
9,300.0	7,498.0	7,784.4	7,490.0	38.8	27.5	99.31	1,122.3	-1,258.1	346.7	292.0	54.69	6.339		
9,400.0	7,498.0	7,787.5	7,493.1	40.0	27.5	100.91	1,122.4	-1,258.3	442.5	386.5	56.04	7.898		
9,500.0	7,498.0	7,790.6	7,496.2	41.2	27.5	102.49	1,122.5	-1,258.5	539.9	482.6	57.34	9.415		
9,600.0	7,498.0	7,793.7	7,499.3	42.5	27.5	104.06	1,122.6	-1,258.7	638.1	579.4	58.61	10.886		
9,700.0	7,498.0	7,796.8	7,502.4	43.9	27.6	105.61	1,122.7	-1,259.0	736.7	676.9	59.84	12.312		
9,800.0	7,498.0	7,799.9	7,505.5	45.2	27.6	107.13	1,122.8	-1,259.2	835.6	774.6	61.02	13.695		
9,900.0	7,498.0	7,803.0	7,508.6	46.6	27.6	108.64	1,122.9	-1,259.4	934.8	872.7	62.15	15.041		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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	-99.28	-111.5	-682.2	691.8					
100.0	100.0	74.0	74.0	0.1	0.1	-99.28	-111.5	-682.2	691.3	691.0	0.25	2,748.596		
200.0	200.0	174.0	174.0	0.3	0.3	-99.28	-111.5	-682.2	691.3	690.7	0.60	1,151.106		
250.0	250.0	224.0	224.0	0.4	0.4	-99.28	-111.5	-682.2	691.3	690.5	0.78	891.915		
300.0	300.0	274.0	274.0	0.5	0.5	9.82	-111.5	-682.2	690.9	689.9	0.95	727.608		
400.0	399.9	373.9	373.9	0.7	0.7	9.88	-111.5	-682.2	687.4	686.1	1.30	529.689		
500.0	499.7	473.7	473.7	0.9	0.8	10.00	-111.5	-682.2	680.5	678.9	1.65	413.667		
600.0	599.1	573.1	573.1	1.1	1.0	10.19	-111.5	-682.2	670.3	668.3	1.99	336.548		
700.0	698.2	671.0	671.0	1.4	1.2	10.45	-111.5	-682.3	656.6	654.3	2.34	281.184		
800.0	796.6	766.9	766.9	1.7	1.3	10.75	-112.0	-682.6	639.9	637.2	2.68	239.146		
852.7	848.2	817.0	817.0	1.9	1.4	10.93	-112.4	-682.9	629.9	627.1	2.85	220.651		
900.0	894.5	862.1	862.1	2.1	1.5	11.08	-112.7	-683.2	620.6	617.6	3.02	205.435		
1,000.0	992.3	957.4	957.3	2.5	1.7	11.40	-113.3	-684.4	601.4	598.0	3.37	178.240		
1,100.0	1,090.1	1,053.7	1,053.7	2.9	1.8	11.75	-114.0	-685.9	582.6	578.8	3.73	156.146		
1,200.0	1,187.9	1,154.0	1,153.9	3.3	2.0	12.15	-114.7	-687.5	563.7	559.6	4.10	137.577		
1,300.0	1,285.7	1,254.1	1,254.0	3.7	2.2	12.56	-115.3	-688.6	544.5	540.0	4.47	121.914		
1,400.0	1,383.5	1,353.8	1,353.8	4.1	2.4	13.01	-115.9	-689.4	524.9	520.1	4.84	108.519		
1,500.0	1,481.3	1,450.7	1,450.6	4.5	2.5	13.48	-116.5	-690.2	505.4	500.2	5.21	97.070		
1,600.0	1,579.1	1,547.6	1,547.6	4.9	2.7	14.01	-116.9	-691.1	486.1	480.5	5.58	87.115		
1,700.0	1,676.9	1,644.7	1,644.6	5.3	2.9	14.59	-117.3	-692.3	467.0	461.1	5.96	78.386		
1,800.0	1,774.7	1,743.1	1,743.0	5.7	3.1	15.25	-117.5	-693.6	448.2	441.8	6.35	70.627		
1,900.0	1,872.5	1,841.6	1,841.5	6.1	3.2	15.99	-117.6	-694.8	429.2	422.5	6.74	63.677		
2,000.0	1,970.3	1,940.1	1,940.0	6.5	3.4	16.83	-117.4	-695.9	410.2	403.1	7.14	57.418		
2,100.0	2,068.1	2,038.7	2,038.6	6.9	3.6	17.77	-117.1	-696.8	391.2	383.6	7.56	51.746		
2,200.0	2,165.9	2,137.5	2,137.4	7.3	3.7	18.78	-117.0	-697.6	372.1	364.1	7.99	46.584		
2,300.0	2,263.7	2,236.3	2,236.2	7.7	3.9	19.86	-117.1	-698.1	352.8	344.4	8.43	41.872		
2,400.0	2,361.5	2,334.9	2,334.7	8.2	4.1	21.02	-117.5	-698.4	333.5	324.6	8.88	37.556		
2,500.0	2,459.2	2,432.8	2,432.7	8.6	4.3	22.27	-118.1	-698.7	314.2	304.9	9.35	33.609		
2,600.0	2,557.0	2,530.8	2,530.7	9.0	4.4	23.63	-118.9	-698.8	295.1	285.3	9.84	29.991		
2,700.0	2,654.8	2,628.8	2,628.7	9.4	4.6	25.14	-120.0	-699.0	276.1	265.7	10.35	26.668		
2,800.0	2,752.6	2,726.4	2,726.3	9.8	4.8	26.88	-121.0	-699.2	257.3	246.4	10.90	23.610		
2,900.0	2,850.4	2,824.1	2,823.9	10.2	4.9	28.98	-121.5	-699.5	239.0	227.5	11.50	20.786		
3,000.0	2,948.2	2,921.7	2,921.5	10.6	5.1	31.53	-121.7	-699.8	221.1	208.9	12.15	18.188		
3,100.0	3,046.0	3,018.7	3,018.6	11.0	5.3	34.57	-121.5	-700.2	203.9	191.0	12.89	15.826		
3,200.0	3,143.8	3,115.8	3,115.7	11.4	5.5	38.15	-121.2	-701.0	187.9	174.2	13.70	13.716		
3,300.0	3,241.6	3,213.1	3,212.9	11.8	5.6	42.35	-120.8	-702.3	173.1	158.5	14.60	11.858		
3,400.0	3,339.4	3,310.5	3,310.4	12.2	5.8	47.25	-120.3	-703.9	159.9	144.3	15.60	10.252		
3,500.0	3,437.2	3,408.3	3,408.1	12.7	6.0	52.84	-119.9	-706.0	148.3	131.6	16.67	8.898		
3,600.0	3,535.0	3,506.2	3,506.0	13.1	6.1	59.13	-119.7	-708.4	138.6	120.8	17.78	7.794		
3,700.0	3,632.8	3,604.3	3,604.1	13.5	6.3	66.10	-119.7	-711.2	130.9	112.1	18.89	6.932		
3,800.0	3,730.6	3,702.3	3,702.0	13.9	6.5	73.96	-119.2	-713.8	125.8	105.8	19.95	6.305		
3,900.0	3,828.4	3,800.0	3,799.7	14.3	6.7	82.52	-118.1	-716.1	123.6	102.7	20.86	5.924		
3,916.1	3,844.1	3,815.7	3,815.4	14.4	6.7	83.93	-117.9	-716.4	123.5	102.5	20.99	5.886 CC		
4,000.0	3,926.2	3,897.8	3,897.5	14.7	6.8	91.40	-116.5	-718.0	124.7	103.2	21.54	5.792		
4,100.0	4,024.0	3,996.6	3,996.2	15.1	7.0	100.03	-115.2	-719.9	128.7	106.8	21.94	5.865		
4,200.0	4,121.8	4,095.5	4,095.1	15.5	7.2	107.99	-114.4	-721.8	134.8	112.7	22.11	6.098		
4,300.0	4,219.6	4,194.4	4,194.0	15.9	7.4	115.18	-114.2	-723.7	142.8	120.7	22.11	6.458		
4,400.0	4,317.4	4,292.2	4,291.8	16.3	7.5	121.53	-114.2	-725.4	152.6	130.6	22.00	6.936		
4,500.0	4,415.2	4,389.9	4,389.5	16.8	7.7	127.13	-114.0	-726.9	164.3	142.5	21.83	7.526		
4,600.0	4,513.0	4,487.5	4,487.0	17.2	7.9	132.01	-113.6	-728.2	177.7	156.0	21.66	8.205		
4,700.0	4,610.7	4,585.3	4,584.8	17.6	8.0	136.23	-113.1	-729.3	192.4	170.9	21.50	8.948		
4,800.0	4,708.5	4,683.1	4,682.6	18.0	8.2	139.84	-112.6	-730.3	208.0	186.7	21.38	9.729		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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				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)				
4,900.0	4,806.3	4,780.9	4,780.5	18.4	8.4	142.95	-112.0	-731.3	224.5	203.1	21.31	10.531		
5,000.0	4,904.1	4,878.7	4,878.3	18.8	8.6	145.62	-111.3	-732.3	241.5	220.2	21.29	11.342		
5,100.0	5,001.9	4,976.5	4,976.0	19.2	8.7	147.92	-110.5	-733.4	259.0	237.7	21.31	12.153		
5,200.0	5,099.7	5,074.3	5,073.8	19.6	8.9	149.91	-109.6	-734.5	277.0	255.6	21.38	12.955		
5,300.0	5,197.5	5,172.5	5,172.0	20.0	9.1	151.63	-108.6	-735.7	295.2	273.8	21.48	13.743		
5,400.0	5,295.3	5,271.3	5,270.8	20.4	9.3	153.11	-107.6	-737.3	313.5	291.9	21.62	14.498		
5,500.0	5,393.1	5,373.2	5,372.7	20.9	9.4	154.38	-106.3	-739.4	331.7	309.9	21.80	15.215		
5,600.0	5,490.9	5,492.8	5,492.0	21.3	9.7	155.58	-108.0	-746.3	345.6	323.5	22.02	15.690		
5,700.0	5,588.7	5,600.1	5,598.8	21.7	9.9	156.60	-112.8	-755.7	355.3	333.1	22.25	15.969		
5,800.0	5,686.5	5,720.8	5,718.2	22.1	10.1	157.24	-119.1	-771.5	361.4	338.8	22.58	16.007		
5,900.0	5,784.3	5,832.0	5,827.6	22.5	10.4	157.91	-128.6	-789.3	363.0	340.2	22.87	15.871		
6,000.0	5,882.1	5,949.8	5,942.5	22.9	10.7	158.48	-140.9	-811.9	361.1	337.9	23.20	15.564		
6,100.0	5,979.9	6,063.5	6,052.3	23.3	11.0	158.95	-155.3	-837.6	355.0	331.5	23.54	15.080		
6,200.0	6,077.7	6,183.1	6,165.9	23.7	11.4	158.91	-172.0	-871.4	343.6	319.6	24.01	14.313		
6,300.0	6,175.5	6,293.3	6,268.5	24.1	11.8	158.45	-188.8	-907.7	327.5	302.9	24.55	13.340		
6,400.0	6,273.3	6,397.6	6,364.5	24.5	12.3	157.60	-205.0	-945.2	308.7	283.5	25.18	12.261		
6,500.0	6,371.1	6,503.3	6,460.9	25.0	12.8	156.53	-222.3	-984.9	288.2	262.3	25.89	11.133		
6,600.0	6,468.9	6,603.7	6,552.1	25.4	13.3	156.15	-242.8	-1,021.5	265.7	239.3	26.42	10.056		
6,700.0	6,566.7	6,691.8	6,632.5	25.8	13.8	155.56	-259.4	-1,053.4	244.6	217.6	27.00	9.059		
6,800.0	6,664.5	6,788.1	6,721.1	26.2	14.3	154.78	-276.2	-1,087.1	225.5	197.9	27.66	8.153		
6,900.0	6,762.3	6,878.0	6,804.6	26.6	14.8	153.42	-288.8	-1,118.1	209.4	180.9	28.50	7.350		
7,000.0	6,860.0	6,966.0	6,887.5	27.0	15.2	152.04	-298.8	-1,145.8	197.5	168.2	29.36	6.729		
7,036.3	6,895.5	7,000.9	6,920.8	27.2	15.4	151.79	-302.8	-1,155.2	194.5	164.9	29.60	6.570		
7,050.0	6,909.0	7,014.1	6,933.5	27.2	15.4	145.54	-304.2	-1,158.8	193.3	163.6	29.68	6.511		
7,100.0	6,958.0	7,060.2	6,977.7	27.4	15.6	121.65	-308.9	-1,171.0	187.1	157.4	29.69	6.301		
7,150.0	7,006.8	7,105.2	7,021.1	27.5	15.8	102.32	-313.1	-1,181.9	179.0	149.8	29.24	6.121		
7,200.0	7,055.1	7,149.8	7,064.5	27.7	16.0	91.13	-317.0	-1,191.7	169.0	140.7	28.34	5.964		
7,250.0	7,102.5	7,193.5	7,107.1	27.8	16.2	86.76	-320.6	-1,200.2	158.0	130.8	27.13	5.824		
7,300.0	7,148.7	7,236.6	7,149.5	27.9	16.3	87.49	-324.1	-1,207.8	146.6	120.6	25.96	5.645		
7,350.0	7,193.2	7,277.8	7,190.0	27.9	16.4	91.90	-327.1	-1,214.3	136.5	111.1	25.47	5.360		
7,400.0	7,235.7	7,316.9	7,228.6	28.0	16.6	98.74	-329.8	-1,220.0	130.1	104.0	26.08	4.988		
7,426.1	7,257.1	7,336.6	7,248.1	28.0	16.6	102.85	-331.0	-1,222.6	129.1	102.4	26.77	4.824 ES		
7,450.0	7,276.0	7,353.9	7,265.2	28.0	16.7	106.65	-332.0	-1,224.7	130.1	102.6	27.47	4.735 SF		
7,500.0	7,313.7	7,387.7	7,298.7	28.0	16.7	114.03	-334.0	-1,228.4	138.6	109.8	28.73	4.824		
7,550.0	7,348.5	7,419.9	7,330.7	28.1	16.8	120.35	-335.9	-1,231.4	156.1	126.7	29.36	5.315		
7,600.0	7,380.2	7,449.8	7,360.5	28.1	16.9	125.08	-337.5	-1,234.2	181.2	152.0	29.27	6.193		
7,650.0	7,408.5	7,476.4	7,387.0	28.1	17.0	127.81	-338.8	-1,236.5	212.6	183.9	28.62	7.426		
7,700.0	7,433.3	7,498.3	7,408.8	28.1	17.0	128.29	-339.8	-1,238.2	248.8	221.0	27.77	8.959		
7,750.0	7,454.2	7,517.9	7,428.3	28.2	17.1	127.20	-340.6	-1,239.6	288.6	261.6	27.00	10.690		
7,800.0	7,471.2	7,534.3	7,444.6	28.2	17.1	124.08	-341.3	-1,240.9	331.2	304.6	26.59	12.457		
7,850.0	7,484.1	7,545.4	7,455.7	28.3	17.1	117.93	-341.7	-1,241.7	375.8	349.1	26.75	14.050		
7,900.0	7,492.8	7,552.3	7,462.6	28.3	17.1	108.49	-342.0	-1,242.2	421.9	394.5	27.38	15.410		
7,950.0	7,497.3	7,554.8	7,465.1	28.4	17.1	95.61	-342.1	-1,242.4	468.9	441.0	27.86	16.832		
7,977.8	7,498.0	7,554.4	7,464.7	28.5	17.1	87.32	-342.1	-1,242.4	495.2	467.5	27.72	17.864		
8,000.0	7,498.0	7,553.5	7,463.8	28.5	17.1	87.00	-342.1	-1,242.3	516.3	488.5	27.81	18.568		
8,100.0	7,498.0	7,549.5	7,459.8	28.8	17.1	85.55	-341.9	-1,242.0	612.4	584.1	28.30	21.636		
8,200.0	7,498.0	7,545.5	7,455.8	29.2	17.1	84.10	-341.7	-1,241.7	709.5	680.5	28.97	24.493		
8,300.0	7,498.0	7,541.4	7,451.8	29.7	17.1	82.66	-341.6	-1,241.4	807.3	777.5	29.77	27.116		
8,400.0	7,498.0	7,537.3	7,447.7	30.2	17.1	81.22	-341.4	-1,241.1	905.5	874.8	30.69	29.507		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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				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	-100.05	-111.8	-631.1	641.4					
100.0	100.0	74.0	74.0	0.1	0.1	-100.05	-111.8	-631.1	640.9	640.6	0.25	2,548.268		
200.0	200.0	174.0	174.0	0.3	0.3	-100.05	-111.8	-631.1	640.9	640.3	0.60	1,067.209		
250.0	250.0	224.0	224.0	0.4	0.4	-100.05	-111.8	-631.1	640.9	640.1	0.78	826.909		
300.0	300.0	274.0	274.0	0.5	0.5	9.05	-111.8	-631.1	640.5	639.5	0.95	674.544		
400.0	399.9	373.9	373.9	0.7	0.7	9.11	-111.8	-631.1	637.0	635.7	1.30	490.876		
500.0	499.7	473.7	473.7	0.9	0.8	9.23	-111.8	-631.1	630.1	628.5	1.64	383.073		
600.0	599.1	573.1	573.1	1.1	1.0	9.42	-111.8	-631.1	619.8	617.8	1.99	311.311		
700.0	698.2	673.5	673.5	1.4	1.2	9.72	-111.5	-631.1	606.0	603.7	2.34	259.169		
800.0	796.6	771.5	771.5	1.7	1.3	10.24	-109.7	-631.2	588.8	586.1	2.68	219.405		
852.7	848.2	822.8	822.8	1.9	1.4	10.56	-108.7	-631.3	578.3	575.5	2.87	201.860		
900.0	894.5	868.9	868.8	2.1	1.5	10.83	-107.8	-631.4	568.6	565.6	3.03	187.414		
1,000.0	992.3	966.2	966.1	2.5	1.7	11.45	-105.9	-631.7	548.1	544.7	3.39	161.541		
1,100.0	1,090.1	1,061.8	1,061.7	2.9	1.9	12.12	-103.8	-632.1	527.8	524.1	3.75	140.598		
1,200.0	1,187.9	1,157.4	1,157.3	3.3	2.0	12.85	-101.7	-633.0	508.1	504.0	4.12	123.309		
1,300.0	1,285.7	1,253.2	1,253.1	3.7	2.2	13.67	-99.5	-634.4	488.8	484.4	4.49	108.817		
1,400.0	1,383.5	1,354.0	1,353.9	4.1	2.4	14.56	-97.4	-635.8	469.8	464.9	4.88	96.362		
1,500.0	1,481.3	1,457.1	1,456.9	4.5	2.6	15.38	-96.5	-636.1	449.8	444.5	5.26	85.440		
1,600.0	1,579.1	1,559.9	1,559.7	4.9	2.7	16.09	-97.0	-635.1	428.7	423.1	5.66	75.802		
1,700.0	1,676.9	1,654.2	1,654.0	5.3	2.9	16.76	-97.7	-633.6	407.2	401.1	6.04	67.410		
1,800.0	1,774.7	1,754.3	1,754.1	5.7	3.1	18.05	-95.2	-633.2	386.7	380.2	6.46	59.827		
1,900.0	1,872.5	1,860.6	1,860.2	6.1	3.3	19.68	-91.9	-630.4	364.3	357.4	6.92	52.631		
2,000.0	1,970.3	1,955.4	1,955.0	6.5	3.4	21.14	-90.1	-626.9	341.1	333.7	7.37	46.311		
2,100.0	2,068.1	2,050.8	2,050.3	6.9	3.6	22.40	-90.5	-624.2	318.9	311.1	7.81	40.827		
2,200.0	2,165.9	2,146.9	2,146.4	7.3	3.8	23.85	-90.9	-622.0	297.3	289.0	8.28	35.903		
2,300.0	2,263.7	2,243.3	2,242.8	7.7	3.9	25.55	-91.2	-620.0	276.2	267.4	8.78	31.462		
2,400.0	2,361.5	2,339.9	2,339.4	8.2	4.1	27.55	-91.3	-618.4	255.8	246.5	9.32	27.455		
2,500.0	2,459.2	2,436.5	2,436.0	8.6	4.3	29.93	-91.3	-617.0	236.0	226.1	9.90	23.841		
2,600.0	2,557.0	2,533.9	2,533.3	9.0	4.4	32.81	-90.9	-615.9	217.0	206.4	10.55	20.566		
2,700.0	2,654.8	2,631.1	2,630.6	9.4	4.6	36.35	-90.0	-614.7	198.7	187.4	11.28	17.612		
2,800.0	2,752.6	2,728.3	2,727.7	9.8	4.8	40.71	-88.7	-613.5	181.5	169.4	12.11	14.982		
2,900.0	2,850.4	2,829.6	2,829.1	10.2	5.0	45.97	-88.2	-611.7	164.8	151.7	13.05	12.626		
3,000.0	2,948.2	2,927.0	2,926.4	10.6	5.1	51.47	-90.2	-609.3	147.7	133.7	14.01	10.540		
3,100.0	3,046.0	3,023.4	3,022.8	11.0	5.3	58.18	-91.7	-607.5	133.0	117.9	15.06	8.829		
3,200.0	3,143.8	3,120.1	3,119.4	11.4	5.5	66.30	-92.8	-606.3	121.4	105.2	16.16	7.511		
3,300.0	3,241.6	3,217.2	3,216.5	11.8	5.6	75.73	-93.5	-605.6	113.4	96.2	17.19	6.593		
3,400.0	3,339.4	3,314.6	3,313.9	12.2	5.8	86.01	-94.1	-605.5	109.3	91.3	18.03	6.062		
3,447.7	3,386.0	3,361.1	3,360.4	12.4	5.9	91.02	-94.4	-605.6	108.8	90.5	18.33	5.938 CC, ES		
3,500.0	3,437.2	3,412.2	3,411.5	12.7	6.0	96.46	-94.6	-605.8	109.4	90.8	18.57	5.892 SF		
3,600.0	3,535.0	3,509.7	3,509.1	13.1	6.1	106.31	-94.9	-606.7	113.4	94.6	18.79	6.036		
3,700.0	3,632.8	3,607.3	3,606.6	13.5	6.3	115.03	-94.8	-608.0	121.0	102.2	18.80	6.440		
3,800.0	3,730.6	3,705.0	3,704.3	13.9	6.5	122.39	-94.3	-609.7	131.5	112.8	18.69	7.035		
3,900.0	3,828.4	3,803.7	3,802.9	14.3	6.7	128.65	-93.7	-611.5	143.9	125.3	18.54	7.760		
4,000.0	3,926.2	3,902.2	3,901.4	14.7	6.8	134.83	-94.6	-611.1	157.3	139.0	18.28	8.602		
4,100.0	4,024.0	4,000.2	3,999.4	15.1	7.0	140.08	-95.8	-610.5	172.0	154.0	18.05	9.528		
4,200.0	4,121.8	4,098.2	4,097.5	15.5	7.2	144.45	-97.1	-610.1	187.8	169.9	17.89	10.500		
4,300.0	4,219.6	4,196.2	4,195.5	15.9	7.3	148.11	-98.4	-609.9	204.4	186.6	17.79	11.489		
4,400.0	4,317.4	4,294.1	4,293.3	16.3	7.5	151.11	-99.5	-609.9	221.6	203.9	17.76	12.476		
4,500.0	4,415.2	4,392.0	4,391.2	16.8	7.7	153.59	-100.3	-610.3	239.4	221.6	17.81	13.443		
4,600.0	4,513.0	4,489.9	4,489.1	17.2	7.8	155.63	-100.9	-610.9	257.5	239.6	17.90	14.381		
4,700.0	4,610.7	4,587.9	4,587.1	17.6	8.0	157.37	-101.3	-611.7	275.9	257.8	18.04	15.291		
4,800.0	4,708.5	4,685.8	4,685.0	18.0	8.2	158.88	-101.6	-612.5	294.5	276.3	18.21	16.173		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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	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)				
4,900.0	4,806.3	4,783.7	4,782.9	18.4	8.4	160.21	-101.9	-613.2	313.3	294.9	18.40	17.026		
5,000.0	4,904.1	4,880.7	4,879.9	18.8	8.5	161.35	-102.1	-614.0	332.4	313.8	18.61	17.857		
5,100.0	5,001.9	4,966.0	4,965.1	19.2	8.7	162.35	-102.1	-613.5	352.8	334.0	18.83	18.740		
5,200.0	5,099.7	5,045.5	5,044.5	19.6	8.8	163.67	-102.3	-608.1	378.1	359.1	18.98	19.918		
5,300.0	5,197.5	5,132.3	5,130.6	20.0	9.0	165.50	-103.8	-597.5	407.2	388.1	19.08	21.338		
5,400.0	5,295.3	5,218.5	5,215.7	20.4	9.1	167.56	-107.5	-584.0	438.3	419.1	19.17	22.865		
5,500.0	5,393.1	5,305.9	5,301.2	20.9	9.3	169.87	-113.9	-567.5	471.3	452.0	19.26	24.472		
5,600.0	5,490.9	5,381.2	5,374.1	21.3	9.5	172.07	-121.8	-550.1	507.2	487.9	19.38	26.175		
5,700.0	5,588.7	5,464.1	5,453.4	21.7	9.7	174.51	-132.1	-528.3	546.1	526.5	19.55	27.940		
5,800.0	5,686.5	5,535.0	5,520.6	22.1	9.9	176.49	-141.3	-507.7	588.1	568.3	19.77	29.748		
5,900.0	5,784.3	5,604.7	5,586.2	22.5	10.1	178.23	-149.7	-485.7	633.2	613.2	20.04	31.600		
6,000.0	5,882.1	5,660.0	5,637.6	22.9	10.3	179.52	-156.2	-466.4	682.1	661.8	20.32	33.577		
6,100.0	5,979.9	5,721.4	5,693.5	23.3	10.6	-179.05	-163.8	-442.2	735.1	714.5	20.63	35.630		
6,200.0	6,077.7	5,791.4	5,756.5	23.7	10.9	-177.49	-173.4	-413.4	790.2	769.2	21.00	37.622		
6,300.0	6,175.5	5,848.0	5,806.9	24.1	11.2	-176.27	-181.8	-388.8	847.4	826.0	21.36	39.670		
6,400.0	6,273.3	5,918.0	5,868.4	24.5	11.6	-174.88	-192.1	-357.0	906.8	885.0	21.78	41.628		
6,500.0	6,371.1	5,979.4	5,922.0	25.0	12.0	-173.77	-201.3	-328.7	967.4	945.2	22.19	43.593		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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			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	-122.87	-358.4	-554.7	660.9					
100.0	100.0	77.0	77.0	0.1	0.1	-122.87	-358.4	-554.7	660.5	660.2	0.26	2,572.313		
200.0	200.0	177.0	177.0	0.3	0.3	-122.87	-358.4	-554.7	660.5	659.9	0.61	1,090.201		
250.0	250.0	227.0	227.0	0.4	0.4	-122.87	-358.4	-554.7	660.5	659.7	0.78	846.371		
300.0	300.0	277.0	277.0	0.5	0.5	-13.79	-358.4	-554.7	660.0	659.1	0.95	691.286		
400.0	399.9	376.9	376.9	0.7	0.7	-13.88	-358.4	-554.7	656.7	655.4	1.30	503.809		
500.0	499.7	476.7	476.7	0.9	0.8	-14.06	-358.4	-554.7	649.9	648.2	1.65	393.446		
600.0	599.1	576.1	576.1	1.1	1.0	-14.34	-358.4	-554.7	639.7	637.7	2.00	319.794		
700.0	698.2	675.2	675.2	1.4	1.2	-14.72	-358.4	-554.7	626.3	623.9	2.35	266.449		
800.0	796.6	773.6	773.6	1.7	1.4	-15.23	-358.4	-554.7	609.5	606.8	2.70	225.480		
852.7	848.2	825.2	825.2	1.9	1.4	-15.55	-358.4	-554.7	599.3	596.4	2.89	207.376		
900.0	894.5	871.5	871.5	2.1	1.5	-15.80	-358.4	-554.7	589.8	586.7	3.06	192.508		
1,000.0	992.3	969.3	969.3	2.5	1.7	-16.37	-358.4	-554.7	569.7	566.3	3.43	165.898		
1,100.0	1,090.1	1,067.1	1,067.1	2.9	1.9	-16.99	-358.4	-554.7	549.6	545.8	3.81	144.297		
1,200.0	1,187.9	1,164.9	1,164.9	3.3	2.0	-17.65	-358.4	-554.7	529.7	525.5	4.19	126.424		
1,300.0	1,285.7	1,262.7	1,262.7	3.7	2.2	-18.36	-358.4	-554.7	509.8	505.2	4.58	111.397		
1,400.0	1,383.5	1,360.5	1,360.5	4.1	2.4	-19.12	-358.4	-554.7	490.0	485.0	4.97	98.592		
1,500.0	1,481.3	1,458.3	1,458.3	4.5	2.5	-19.95	-358.4	-554.7	470.2	464.9	5.37	87.556		
1,600.0	1,579.1	1,556.1	1,556.1	4.9	2.7	-20.86	-358.4	-554.7	450.6	444.8	5.78	77.951		
1,700.0	1,676.9	1,653.9	1,653.9	5.3	2.9	-21.84	-358.4	-554.7	431.1	424.9	6.20	69.521		
1,800.0	1,774.7	1,751.7	1,751.7	5.7	3.1	-22.92	-358.4	-554.7	411.7	405.1	6.63	62.068		
1,900.0	1,872.5	1,849.5	1,849.5	6.1	3.2	-24.10	-358.4	-554.7	392.5	385.4	7.08	55.439		
2,000.0	1,970.3	1,947.3	1,947.3	6.5	3.4	-25.41	-358.4	-554.7	373.5	365.9	7.54	49.512		
2,100.0	2,068.1	2,045.1	2,045.1	6.9	3.6	-26.85	-358.4	-554.7	354.6	346.6	8.03	44.188		
2,200.0	2,165.9	2,142.9	2,142.9	7.3	3.7	-28.45	-358.4	-554.7	336.1	327.5	8.53	39.392		
2,300.0	2,263.7	2,240.7	2,240.7	7.7	3.9	-30.23	-358.4	-554.7	317.8	308.7	9.06	35.060		
2,400.0	2,361.5	2,338.5	2,338.5	8.2	4.1	-32.23	-358.4	-554.7	299.8	290.2	9.63	31.142		
2,500.0	2,459.2	2,436.2	2,436.2	8.6	4.3	-34.48	-358.4	-554.7	282.2	272.0	10.23	27.598		
2,600.0	2,557.0	2,534.0	2,534.0	9.0	4.4	-37.01	-358.4	-554.7	265.2	254.3	10.87	24.397		
2,700.0	2,654.8	2,631.8	2,631.8	9.4	4.6	-39.88	-358.4	-554.7	248.7	237.1	11.56	21.514		
2,800.0	2,752.6	2,729.6	2,729.6	9.8	4.8	-43.14	-358.4	-554.7	232.9	220.6	12.30	18.931		
2,900.0	2,850.4	2,827.4	2,827.4	10.2	4.9	-46.86	-358.4	-554.7	217.9	204.8	13.10	16.637		
3,000.0	2,948.2	2,925.2	2,925.2	10.6	5.1	-51.08	-358.4	-554.7	204.0	190.1	13.95	14.622		
3,100.0	3,046.0	3,023.0	3,023.0	11.0	5.3	-55.88	-358.4	-554.7	191.4	176.6	14.86	12.881		
3,200.0	3,143.8	3,120.8	3,120.8	11.4	5.4	-61.29	-358.4	-554.7	180.3	164.5	15.80	11.413		
3,300.0	3,241.6	3,218.6	3,218.6	11.8	5.6	-67.31	-358.4	-554.7	171.1	154.4	16.75	10.216		
3,400.0	3,339.4	3,316.4	3,316.4	12.2	5.8	-73.92	-358.4	-554.7	164.0	146.4	17.66	9.286		
3,500.0	3,437.2	3,414.2	3,414.2	12.7	6.0	-81.00	-358.4	-554.7	159.4	140.9	18.49	8.618		
3,600.0	3,535.0	3,512.0	3,512.0	13.1	6.1	-88.36	-358.4	-554.7	157.4	138.2	19.19	8.201		
3,622.1	3,556.6	3,533.6	3,533.6	13.2	6.2	-90.00	-358.4	-554.7	157.3	138.0	19.33	8.142 CC, ES		
3,700.0	3,632.8	3,609.8	3,609.8	13.5	6.3	-95.78	-358.4	-554.7	158.2	138.5	19.72	8.020 SF		
3,800.0	3,730.6	3,707.6	3,707.6	13.9	6.5	-103.00	-358.4	-554.7	161.7	141.6	20.08	8.052		
3,900.0	3,828.4	3,805.4	3,805.4	14.3	6.6	-109.84	-358.4	-554.7	167.7	147.4	20.27	8.271		
4,000.0	3,926.2	3,903.2	3,903.2	14.7	6.8	-116.13	-358.4	-554.7	176.0	155.7	20.35	8.651		
4,100.0	4,024.0	4,001.0	4,001.0	15.1	7.0	-121.81	-358.4	-554.7	186.3	166.0	20.34	9.161		
4,200.0	4,121.8	4,098.8	4,098.8	15.5	7.2	-126.87	-358.4	-554.7	198.3	178.0	20.29	9.774		
4,300.0	4,219.6	4,196.6	4,196.6	15.9	7.3	-131.35	-358.4	-554.7	211.6	191.4	20.22	10.466		
4,400.0	4,317.4	4,294.4	4,294.4	16.3	7.5	-135.28	-358.4	-554.7	226.1	206.0	20.16	11.215		
4,500.0	4,415.2	4,392.2	4,392.2	16.8	7.7	-138.73	-358.4	-554.7	241.6	221.5	20.13	12.004		
4,600.0	4,513.0	4,490.0	4,490.0	17.2	7.8	-141.77	-358.4	-554.7	257.8	237.7	20.11	12.818		
4,700.0	4,610.7	4,587.7	4,587.7	17.6	8.0	-144.44	-358.4	-554.7	274.6	254.5	20.13	13.644		
4,800.0	4,708.5	4,685.5	4,685.5	18.0	8.2	-146.81	-358.4	-554.7	292.0	271.8	20.17	14.475		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	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	
4,900.0	4,806.3	4,783.3	4,783.3	18.4	8.3	-148.91	-358.4	-554.7	309.8	289.5	20.24	15.302	
5,000.0	4,904.1	4,881.1	4,881.1	18.8	8.5	-150.79	-358.4	-554.7	327.9	307.6	20.34	16.121	
5,100.0	5,001.9	4,978.9	4,978.9	19.2	8.7	-152.47	-358.4	-554.7	346.4	325.9	20.46	16.928	
5,200.0	5,099.7	5,000.0	5,000.0	19.6	8.7	-152.81	-358.4	-554.7	373.1	352.4	20.68	18.038	
5,300.0	5,197.5	5,000.0	5,000.0	20.0	8.7	-152.81	-358.4	-554.7	421.9	400.9	20.93	20.158	
5,400.0	5,295.3	5,000.0	5,000.0	20.4	8.7	-152.81	-358.4	-554.7	486.6	465.4	21.17	22.982	
5,500.0	5,393.1	5,000.0	5,000.0	20.9	8.7	-152.81	-358.4	-554.7	561.7	540.3	21.42	26.229	
5,600.0	5,490.9	5,000.0	5,000.0	21.3	8.7	-152.81	-358.4	-554.7	643.6	622.0	21.66	29.717	
5,700.0	5,588.7	5,000.0	5,000.0	21.7	8.7	-152.81	-358.4	-554.7	730.1	708.2	21.90	33.333	
5,800.0	5,686.5	5,000.0	5,000.0	22.1	8.7	-152.81	-358.4	-554.7	819.6	797.5	22.15	37.009	
5,900.0	5,784.3	5,000.0	5,000.0	22.5	8.7	-152.81	-358.4	-554.7	911.4	889.0	22.39	40.702	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5050-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	122.69	-159.2	248.0	295.4					
100.0	100.0	80.0	80.0	0.1	0.1	122.69	-159.2	248.0	294.7	294.4	0.26	1,124.825		
200.0	200.0	180.0	180.0	0.3	0.3	122.69	-159.2	248.0	294.7	294.1	0.61	482.278		
250.0	250.0	230.0	230.0	0.4	0.4	122.69	-159.2	248.0	294.7	293.9	0.79	375.132 CC, ES		
300.0	300.0	280.0	280.0	0.5	0.5	-128.28	-159.2	248.0	295.0	294.0	0.96	307.186		
400.0	399.9	379.9	379.9	0.7	0.7	-128.78	-159.2	248.0	297.1	295.8	1.31	226.138		
500.0	499.7	479.7	479.7	0.9	0.8	-129.74	-159.2	248.0	301.6	299.9	1.68	179.479		
600.0	599.1	579.1	579.1	1.1	1.0	-131.13	-159.2	248.0	308.4	306.3	2.06	149.361		
700.0	698.2	678.2	678.2	1.4	1.2	-132.87	-159.2	248.0	317.7	315.3	2.47	128.671		
800.0	796.6	776.6	776.6	1.7	1.4	-134.89	-159.2	248.0	329.9	327.0	2.89	114.005		
852.7	848.2	828.2	828.2	1.9	1.4	-136.04	-159.2	248.0	337.4	334.3	3.12	108.137		
900.0	894.5	874.5	874.5	2.1	1.5	-137.17	-159.2	248.0	344.7	341.4	3.32	103.685		
1,000.0	992.3	972.3	972.3	2.5	1.7	-139.40	-159.2	248.0	360.4	356.7	3.75	96.127		
1,100.0	1,090.1	1,070.1	1,070.1	2.9	1.9	-141.45	-159.2	248.0	376.7	372.5	4.17	90.422		
1,200.0	1,187.9	1,167.9	1,167.9	3.3	2.0	-143.33	-159.2	248.0	393.4	388.8	4.57	86.022		
1,300.0	1,285.7	1,265.7	1,265.7	3.7	2.2	-145.06	-159.2	248.0	410.4	405.5	4.97	82.562		
1,400.0	1,383.5	1,363.5	1,363.5	4.1	2.4	-146.65	-159.2	248.0	427.8	422.5	5.36	79.798		
1,500.0	1,481.3	1,461.3	1,461.3	4.5	2.6	-148.12	-159.2	248.0	445.5	439.8	5.74	77.557		
1,600.0	1,579.1	1,559.1	1,559.1	4.9	2.7	-149.48	-159.2	248.0	463.5	457.4	6.12	75.719		
1,700.0	1,676.9	1,656.9	1,656.9	5.3	2.9	-150.73	-159.2	248.0	481.7	475.2	6.49	74.194		
1,800.0	1,774.7	1,754.7	1,754.7	5.7	3.1	-151.90	-159.2	248.0	500.1	493.3	6.86	72.917		
1,900.0	1,872.5	1,852.5	1,852.5	6.1	3.2	-152.98	-159.2	248.0	518.7	511.5	7.22	71.837		
2,000.0	1,970.3	1,950.3	1,950.3	6.5	3.4	-153.98	-159.2	248.0	537.5	529.9	7.58	70.918		
2,100.0	2,068.1	2,048.1	2,048.1	6.9	3.6	-154.92	-159.2	248.0	556.4	548.5	7.93	70.129		
2,200.0	2,165.9	2,145.9	2,145.9	7.3	3.7	-155.80	-159.2	248.0	575.5	567.2	8.29	69.447		
2,300.0	2,263.7	2,243.7	2,243.7	7.7	3.9	-156.62	-159.2	248.0	594.6	586.0	8.64	68.854		
2,400.0	2,361.5	2,341.5	2,341.5	8.2	4.1	-157.39	-159.2	248.0	613.9	604.9	8.98	68.336		
2,500.0	2,459.2	2,439.2	2,439.2	8.6	4.3	-158.12	-159.2	248.0	633.3	624.0	9.33	67.880		
2,600.0	2,557.0	2,537.0	2,537.0	9.0	4.4	-158.80	-159.2	248.0	652.8	643.1	9.67	67.477		
2,700.0	2,654.8	2,634.8	2,634.8	9.4	4.6	-159.44	-159.2	248.0	672.4	662.3	10.02	67.119		
2,800.0	2,752.6	2,732.6	2,732.6	9.8	4.8	-160.05	-159.2	248.0	692.0	681.6	10.36	66.799		
2,900.0	2,850.4	2,830.4	2,830.4	10.2	4.9	-160.62	-159.2	248.0	711.7	701.0	10.70	66.513		
3,000.0	2,948.2	2,928.2	2,928.2	10.6	5.1	-161.16	-159.2	248.0	731.5	720.5	11.04	66.255		
3,100.0	3,046.0	3,026.0	3,026.0	11.0	5.3	-161.67	-159.2	248.0	751.3	739.9	11.38	66.021		
3,200.0	3,143.8	3,123.8	3,123.8	11.4	5.5	-162.16	-159.2	248.0	771.2	759.5	11.72	65.810		
3,300.0	3,241.6	3,221.6	3,221.6	11.8	5.6	-162.62	-159.2	248.0	791.2	779.1	12.06	65.617		
3,400.0	3,339.4	3,319.4	3,319.4	12.2	5.8	-163.06	-159.2	248.0	811.2	798.8	12.40	65.441		
3,500.0	3,437.2	3,417.2	3,417.2	12.7	6.0	-163.48	-159.2	248.0	831.2	818.5	12.73	65.279		
3,600.0	3,535.0	3,515.0	3,515.0	13.1	6.1	-163.88	-159.2	248.0	851.3	838.2	13.07	65.130		
3,700.0	3,632.8	3,612.8	3,612.8	13.5	6.3	-164.26	-159.2	248.0	871.4	858.0	13.41	64.993		
3,800.0	3,730.6	3,710.6	3,710.6	13.9	6.5	-164.62	-159.2	248.0	891.5	877.8	13.74	64.866		
3,900.0	3,828.4	3,808.4	3,808.4	14.3	6.6	-164.97	-159.2	248.0	911.7	897.6	14.08	64.748		
4,000.0	3,926.2	3,906.2	3,906.2	14.7	6.8	-165.30	-159.2	248.0	931.9	917.5	14.42	64.639		
4,100.0	4,024.0	4,004.0	4,004.0	15.1	7.0	-165.62	-159.2	248.0	952.2	937.4	14.75	64.536		
4,200.0	4,121.8	4,101.8	4,101.8	15.5	7.2	-165.93	-159.2	248.0	972.4	957.3	15.09	64.440		
4,300.0	4,219.6	4,199.6	4,199.6	15.9	7.3	-166.22	-159.2	248.0	992.7	977.3	15.43	64.351 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4B-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 4B-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 #4	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4983.0ft

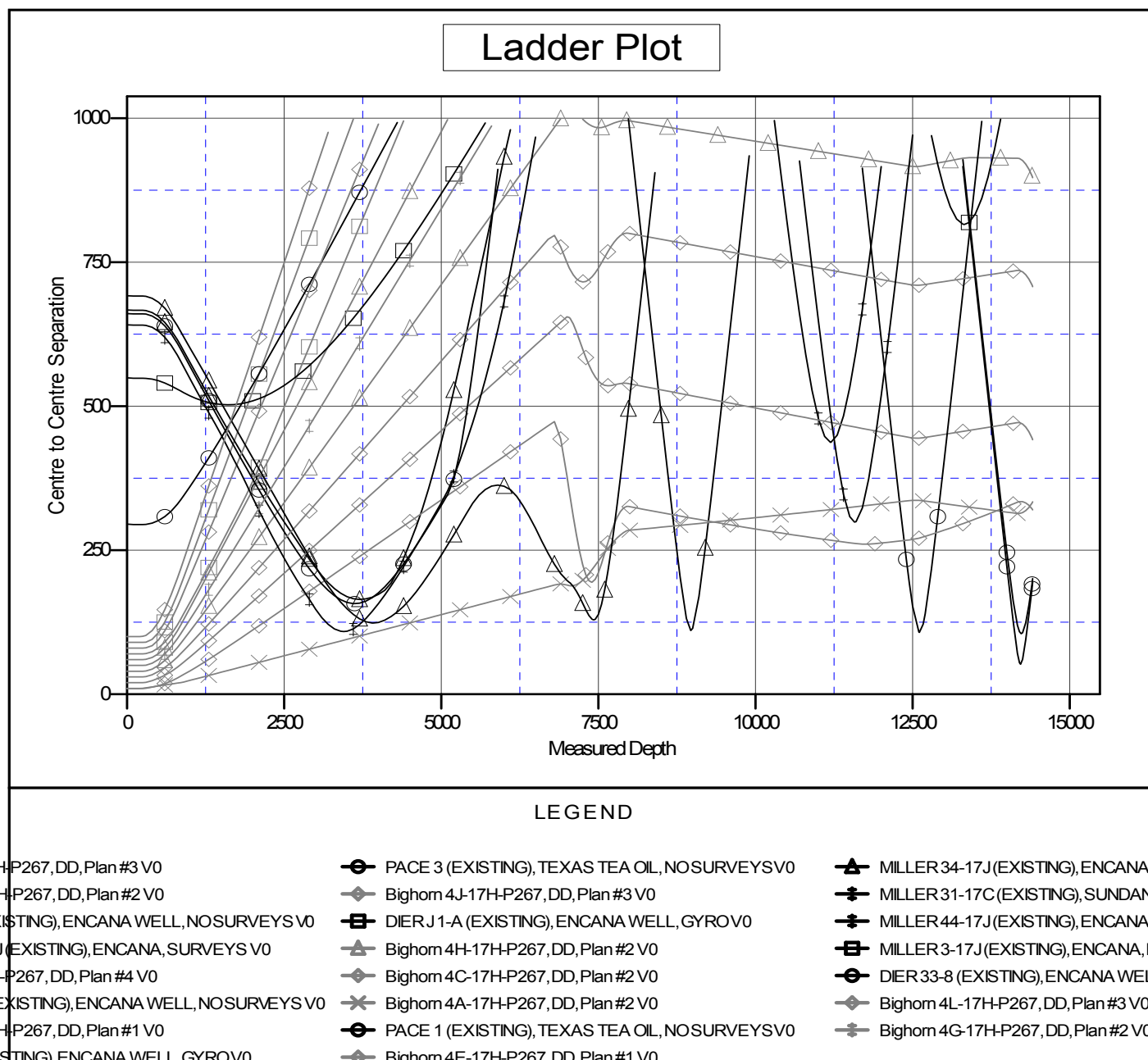
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Bighorn 4B-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