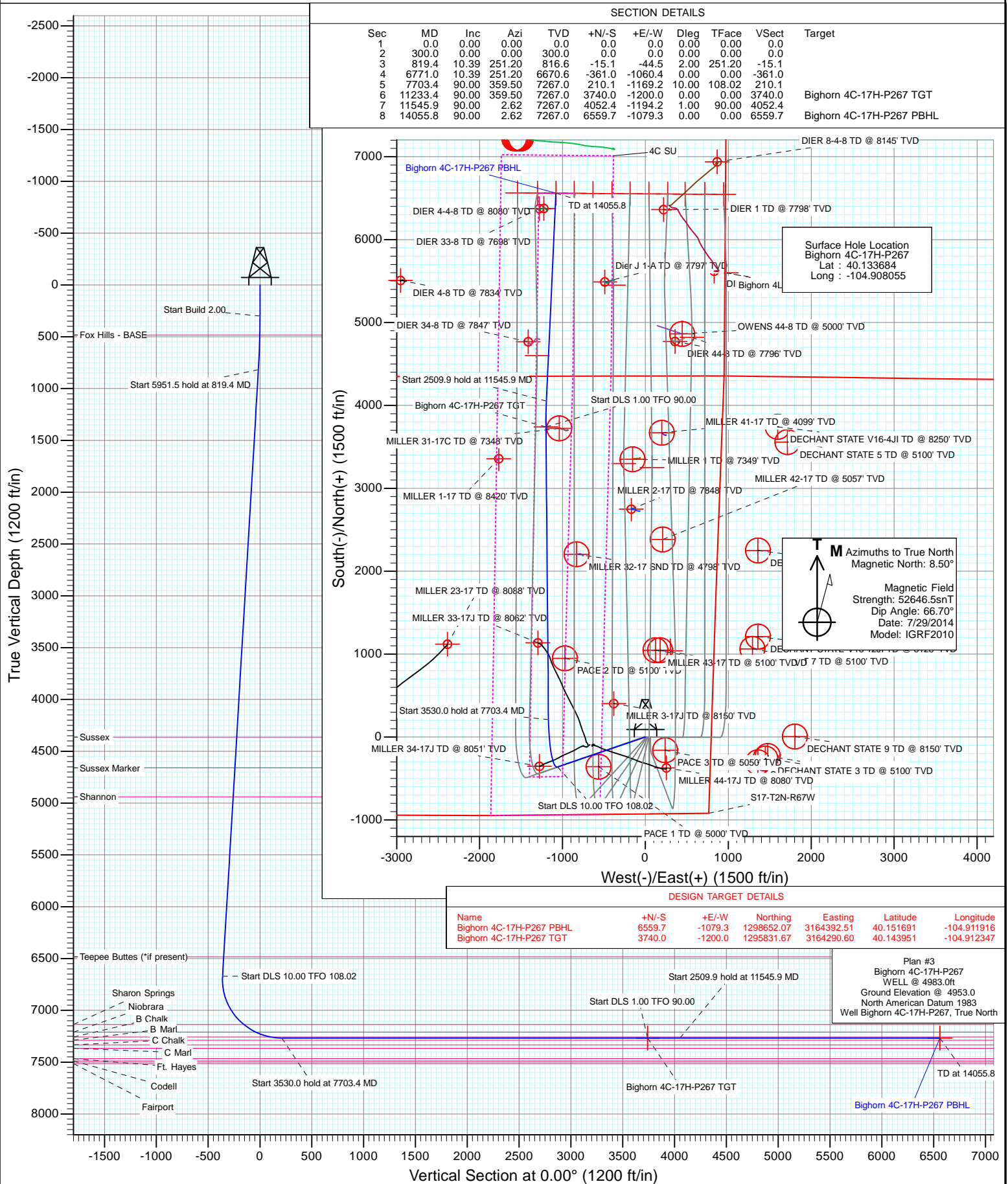




Project: DJ Wattenberg
Site: S17-T2N-R67W (Big Horn)
Well: Bighorn 4C-17H-P267
Wellbore: DD
Design: Plan #3



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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 4C-17H-P267					
Well Position	+N/-S	0.0 ft	Northing:	1,292,099.77 ft	Latitude:	40.133684
	+E/-W	0.0 ft	Easting:	3,165,515.54 ft	Longitude:	-104.908055
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 #3			
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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
819.4	10.39	251.20	816.6	-15.1	-44.5	2.00	2.00	0.00	251.20	
6,771.0	10.39	251.20	6,670.6	-361.0	-1,060.4	0.00	0.00	0.00	0.00	
7,703.4	90.00	359.50	7,267.0	210.1	-1,169.2	10.00	8.54	11.61	108.02	
11,233.4	90.00	359.50	7,267.0	3,740.0	-1,200.0	0.00	0.00	0.00	0.00	Bighorn 4C-17H-P267
11,545.9	90.00	2.62	7,267.0	4,052.4	-1,194.2	1.00	0.00	1.00	90.00	
14,055.8	90.00	2.62	7,267.0	6,559.7	-1,079.3	0.00	0.00	0.00	0.00	Bighorn 4C-17H-P267

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	Start Build 2.00
400.0	2.00	251.20	400.0	-0.6	-1.7	-0.6	2.00	2.00	
483.1	3.66	251.20	483.0	-1.9	-5.5	-1.9	2.00	2.00	Fox Hills - BASE
500.0	4.00	251.20	499.8	-2.2	-6.6	-2.2	2.00	2.00	
600.0	6.00	251.20	599.5	-5.1	-14.9	-5.1	2.00	2.00	
700.0	8.00	251.20	698.7	-9.0	-26.4	-9.0	2.00	2.00	
800.0	10.00	251.20	797.5	-14.0	-41.2	-14.0	2.00	2.00	
819.4	10.39	251.20	816.6	-15.1	-44.5	-15.1	2.00	2.00	Start 5951.5 hold at 819.4 MD
900.0	10.39	251.20	895.8	-19.8	-58.2	-19.8	0.00	0.00	
1,000.0	10.39	251.20	994.2	-25.6	-75.3	-25.6	0.00	0.00	
1,100.0	10.39	251.20	1,092.6	-31.4	-92.3	-31.4	0.00	0.00	
1,200.0	10.39	251.20	1,190.9	-37.2	-109.4	-37.2	0.00	0.00	
1,300.0	10.39	251.20	1,289.3	-43.1	-126.5	-43.1	0.00	0.00	
1,400.0	10.39	251.20	1,387.6	-48.9	-143.6	-48.9	0.00	0.00	
1,500.0	10.39	251.20	1,486.0	-54.7	-160.6	-54.7	0.00	0.00	
1,600.0	10.39	251.20	1,584.4	-60.5	-177.7	-60.5	0.00	0.00	
1,700.0	10.39	251.20	1,682.7	-66.3	-194.8	-66.3	0.00	0.00	
1,800.0	10.39	251.20	1,781.1	-72.1	-211.8	-72.1	0.00	0.00	
1,900.0	10.39	251.20	1,879.4	-77.9	-228.9	-77.9	0.00	0.00	
2,000.0	10.39	251.20	1,977.8	-83.7	-246.0	-83.7	0.00	0.00	
2,100.0	10.39	251.20	2,076.2	-89.5	-263.1	-89.5	0.00	0.00	
2,200.0	10.39	251.20	2,174.5	-95.4	-280.1	-95.4	0.00	0.00	
2,300.0	10.39	251.20	2,272.9	-101.2	-297.2	-101.2	0.00	0.00	
2,400.0	10.39	251.20	2,371.2	-107.0	-314.3	-107.0	0.00	0.00	
2,500.0	10.39	251.20	2,469.6	-112.8	-331.3	-112.8	0.00	0.00	
2,600.0	10.39	251.20	2,568.0	-118.6	-348.4	-118.6	0.00	0.00	
2,700.0	10.39	251.20	2,666.3	-124.4	-365.5	-124.4	0.00	0.00	
2,800.0	10.39	251.20	2,764.7	-130.2	-382.5	-130.2	0.00	0.00	
2,900.0	10.39	251.20	2,863.1	-136.0	-399.6	-136.0	0.00	0.00	
3,000.0	10.39	251.20	2,961.4	-141.8	-416.7	-141.8	0.00	0.00	
3,100.0	10.39	251.20	3,059.8	-147.7	-433.8	-147.7	0.00	0.00	
3,200.0	10.39	251.20	3,158.1	-153.5	-450.8	-153.5	0.00	0.00	
3,300.0	10.39	251.20	3,256.5	-159.3	-467.9	-159.3	0.00	0.00	
3,400.0	10.39	251.20	3,354.9	-165.1	-485.0	-165.1	0.00	0.00	
3,500.0	10.39	251.20	3,453.2	-170.9	-502.0	-170.9	0.00	0.00	
3,600.0	10.39	251.20	3,551.6	-176.7	-519.1	-176.7	0.00	0.00	
3,700.0	10.39	251.20	3,649.9	-182.5	-536.2	-182.5	0.00	0.00	
3,800.0	10.39	251.20	3,748.3	-188.3	-553.2	-188.3	0.00	0.00	
3,900.0	10.39	251.20	3,846.7	-194.1	-570.3	-194.1	0.00	0.00	
4,000.0	10.39	251.20	3,945.0	-200.0	-587.4	-200.0	0.00	0.00	
4,100.0	10.39	251.20	4,043.4	-205.8	-604.5	-205.8	0.00	0.00	
4,200.0	10.39	251.20	4,141.7	-211.6	-621.5	-211.6	0.00	0.00	
4,300.0	10.39	251.20	4,240.1	-217.4	-638.6	-217.4	0.00	0.00	
4,400.0	10.39	251.20	4,338.5	-223.2	-655.7	-223.2	0.00	0.00	
4,424.9	10.39	251.20	4,363.0	-224.6	-659.9	-224.6	0.00	0.00	Sussex
4,500.0	10.39	251.20	4,436.8	-229.0	-672.7	-229.0	0.00	0.00	
4,600.0	10.39	251.20	4,535.2	-234.8	-689.8	-234.8	0.00	0.00	
4,700.0	10.39	251.20	4,633.5	-240.6	-706.9	-240.6	0.00	0.00	
4,727.9	10.39	251.20	4,661.0	-242.3	-711.6	-242.3	0.00	0.00	Sussex Marker

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	10.39	251.20	4,731.9	-246.4	-723.9	-246.4	0.00	0.00	
4,900.0	10.39	251.20	4,830.3	-252.3	-741.0	-252.3	0.00	0.00	
5,000.0	10.39	251.20	4,928.6	-258.1	-758.1	-258.1	0.00	0.00	
5,010.5	10.39	251.20	4,939.0	-258.7	-759.9	-258.7	0.00	0.00	Shannon
5,100.0	10.39	251.20	5,027.0	-263.9	-775.2	-263.9	0.00	0.00	
5,200.0	10.39	251.20	5,125.4	-269.7	-792.2	-269.7	0.00	0.00	
5,300.0	10.39	251.20	5,223.7	-275.5	-809.3	-275.5	0.00	0.00	
5,400.0	10.39	251.20	5,322.1	-281.3	-826.4	-281.3	0.00	0.00	
5,500.0	10.39	251.20	5,420.4	-287.1	-843.4	-287.1	0.00	0.00	
5,600.0	10.39	251.20	5,518.8	-292.9	-860.5	-292.9	0.00	0.00	
5,700.0	10.39	251.20	5,617.2	-298.7	-877.6	-298.7	0.00	0.00	
5,800.0	10.39	251.20	5,715.5	-304.6	-894.6	-304.6	0.00	0.00	
5,900.0	10.39	251.20	5,813.9	-310.4	-911.7	-310.4	0.00	0.00	
6,000.0	10.39	251.20	5,912.2	-316.2	-928.8	-316.2	0.00	0.00	
6,100.0	10.39	251.20	6,010.6	-322.0	-945.9	-322.0	0.00	0.00	
6,200.0	10.39	251.20	6,109.0	-327.8	-962.9	-327.8	0.00	0.00	
6,300.0	10.39	251.20	6,207.3	-333.6	-980.0	-333.6	0.00	0.00	
6,400.0	10.39	251.20	6,305.7	-339.4	-997.1	-339.4	0.00	0.00	
6,500.0	10.39	251.20	6,404.0	-345.2	-1,014.1	-345.2	0.00	0.00	
6,580.3	10.39	251.20	6,483.0	-349.9	-1,027.8	-349.9	0.00	0.00	Teepee Buttes (*if present)
6,600.0	10.39	251.20	6,502.4	-351.0	-1,031.2	-351.0	0.00	0.00	
6,700.0	10.39	251.20	6,600.8	-356.9	-1,048.3	-356.9	0.00	0.00	
6,771.0	10.39	251.20	6,670.6	-361.0	-1,060.4	-361.0	0.00	0.00	Start DLS 10.00 TFO 108.02
6,800.0	9.88	267.50	6,699.2	-361.9	-1,065.4	-361.9	10.00	-1.75	
6,900.0	13.78	314.28	6,797.2	-354.0	-1,082.5	-354.0	10.00	3.90	
7,000.0	21.91	333.86	6,892.4	-328.8	-1,099.3	-328.8	10.00	8.13	
7,100.0	31.12	342.74	6,981.8	-287.3	-1,115.2	-287.3	10.00	9.21	
7,200.0	40.67	347.81	7,062.8	-230.6	-1,129.8	-230.6	10.00	9.55	
7,300.0	50.37	351.21	7,132.8	-160.6	-1,142.6	-160.6	10.00	9.70	
7,305.1	50.87	351.36	7,136.0	-156.7	-1,143.2	-156.7	10.00	9.75	Sharon Springs
7,400.0	60.15	353.77	7,189.7	-79.2	-1,153.2	-79.2	10.00	9.78	
7,446.1	64.67	354.77	7,211.0	-38.6	-1,157.3	-38.6	10.00	9.81	Niobrara
7,500.0	69.97	355.86	7,231.8	11.0	-1,161.3	11.0	10.00	9.83	
7,595.4	79.36	357.63	7,257.0	102.8	-1,166.5	102.8	10.00	9.84	B Chalk
7,600.0	79.81	357.71	7,257.8	107.3	-1,166.7	107.3	10.00	9.85	
7,700.0	89.66	359.44	7,267.0	206.7	-1,169.2	206.7	10.00	9.85	
7,703.4	90.00	359.50	7,267.0	210.1	-1,169.2	210.1	10.00	9.85	Start 3530.0 hold at 7703.4 MD
7,800.0	90.00	359.50	7,267.0	306.7	-1,170.0	306.7	0.00	0.00	
7,900.0	90.00	359.50	7,267.0	406.7	-1,170.9	406.7	0.00	0.00	
8,000.0	90.00	359.50	7,267.0	506.7	-1,171.8	506.7	0.00	0.00	
8,100.0	90.00	359.50	7,267.0	606.7	-1,172.7	606.7	0.00	0.00	
8,200.0	90.00	359.50	7,267.0	706.7	-1,173.5	706.7	0.00	0.00	
8,300.0	90.00	359.50	7,267.0	806.7	-1,174.4	806.7	0.00	0.00	
8,400.0	90.00	359.50	7,267.0	906.7	-1,175.3	906.7	0.00	0.00	
8,500.0	90.00	359.50	7,267.0	1,006.7	-1,176.1	1,006.7	0.00	0.00	
8,600.0	90.00	359.50	7,267.0	1,106.7	-1,177.0	1,106.7	0.00	0.00	
8,700.0	90.00	359.50	7,267.0	1,206.7	-1,177.9	1,206.7	0.00	0.00	
8,800.0	90.00	359.50	7,267.0	1,306.7	-1,178.8	1,306.7	0.00	0.00	
8,900.0	90.00	359.50	7,267.0	1,406.7	-1,179.6	1,406.7	0.00	0.00	
9,000.0	90.00	359.50	7,267.0	1,506.7	-1,180.5	1,506.7	0.00	0.00	
9,100.0	90.00	359.50	7,267.0	1,606.7	-1,181.4	1,606.7	0.00	0.00	
9,200.0	90.00	359.50	7,267.0	1,706.6	-1,182.3	1,706.6	0.00	0.00	

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4983.0ft
Project:	DJ Wattenberg	MD Reference:	WELL @ 4983.0ft
Site:	S17-T2N-R67W (Big Horn)	North Reference:	True
Well:	Bighorn 4C-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,300.0	90.00	359.50	7,267.0	1,806.6	-1,183.1	1,806.6	0.00	0.00	
9,400.0	90.00	359.50	7,267.0	1,906.6	-1,184.0	1,906.6	0.00	0.00	
9,500.0	90.00	359.50	7,267.0	2,006.6	-1,184.9	2,006.6	0.00	0.00	
9,600.0	90.00	359.50	7,267.0	2,106.6	-1,185.7	2,106.6	0.00	0.00	
9,700.0	90.00	359.50	7,267.0	2,206.6	-1,186.6	2,206.6	0.00	0.00	
9,800.0	90.00	359.50	7,267.0	2,306.6	-1,187.5	2,306.6	0.00	0.00	
9,900.0	90.00	359.50	7,267.0	2,406.6	-1,188.4	2,406.6	0.00	0.00	
10,000.0	90.00	359.50	7,267.0	2,506.6	-1,189.2	2,506.6	0.00	0.00	
10,100.0	90.00	359.50	7,267.0	2,606.6	-1,190.1	2,606.6	0.00	0.00	
10,200.0	90.00	359.50	7,267.0	2,706.6	-1,191.0	2,706.6	0.00	0.00	
10,300.0	90.00	359.50	7,267.0	2,806.6	-1,191.9	2,806.6	0.00	0.00	
10,400.0	90.00	359.50	7,267.0	2,906.6	-1,192.7	2,906.6	0.00	0.00	
10,500.0	90.00	359.50	7,267.0	3,006.6	-1,193.6	3,006.6	0.00	0.00	
10,600.0	90.00	359.50	7,267.0	3,106.6	-1,194.5	3,106.6	0.00	0.00	
10,700.0	90.00	359.50	7,267.0	3,206.6	-1,195.3	3,206.6	0.00	0.00	
10,800.0	90.00	359.50	7,267.0	3,306.6	-1,196.2	3,306.6	0.00	0.00	
10,900.0	90.00	359.50	7,267.0	3,406.6	-1,197.1	3,406.6	0.00	0.00	
11,000.0	90.00	359.50	7,267.0	3,506.6	-1,198.0	3,506.6	0.00	0.00	
11,100.0	90.00	359.50	7,267.0	3,606.6	-1,198.8	3,606.6	0.00	0.00	
11,200.0	90.00	359.50	7,267.0	3,706.6	-1,199.7	3,706.6	0.00	0.00	
11,233.4	90.00	359.50	7,267.0	3,740.0	-1,200.0	3,740.0	0.00	0.00	Start DLS 1.00 TFO 90.00
11,300.0	90.00	0.17	7,267.0	3,806.6	-1,200.2	3,806.6	1.00	0.00	
11,400.0	90.00	1.17	7,267.0	3,906.6	-1,199.0	3,906.6	1.00	0.00	
11,500.0	90.00	2.17	7,267.0	4,006.5	-1,196.1	4,006.5	1.00	0.00	
11,545.9	90.00	2.62	7,267.0	4,052.4	-1,194.2	4,052.4	1.00	0.00	Start 2509.9 hold at 11545.9 MD
11,600.0	90.00	2.62	7,267.0	4,106.4	-1,191.7	4,106.4	0.00	0.00	
11,700.0	90.00	2.62	7,267.0	4,206.3	-1,187.2	4,206.3	0.00	0.00	
11,800.0	90.00	2.62	7,267.0	4,306.2	-1,182.6	4,306.2	0.00	0.00	
11,900.0	90.00	2.62	7,267.0	4,406.1	-1,178.0	4,406.1	0.00	0.00	
12,000.0	90.00	2.62	7,267.0	4,506.0	-1,173.4	4,506.0	0.00	0.00	
12,100.0	90.00	2.62	7,267.0	4,605.9	-1,168.8	4,605.9	0.00	0.00	
12,200.0	90.00	2.62	7,267.0	4,705.8	-1,164.3	4,705.8	0.00	0.00	
12,300.0	90.00	2.62	7,267.0	4,805.7	-1,159.7	4,805.7	0.00	0.00	
12,400.0	90.00	2.62	7,267.0	4,905.6	-1,155.1	4,905.6	0.00	0.00	
12,500.0	90.00	2.62	7,267.0	5,005.5	-1,150.5	5,005.5	0.00	0.00	
12,600.0	90.00	2.62	7,267.0	5,105.4	-1,145.9	5,105.4	0.00	0.00	
12,700.0	90.00	2.62	7,267.0	5,205.3	-1,141.4	5,205.3	0.00	0.00	
12,800.0	90.00	2.62	7,267.0	5,305.2	-1,136.8	5,305.2	0.00	0.00	
12,900.0	90.00	2.62	7,267.0	5,405.1	-1,132.2	5,405.1	0.00	0.00	
13,000.0	90.00	2.62	7,267.0	5,505.0	-1,127.6	5,505.0	0.00	0.00	
13,100.0	90.00	2.62	7,267.0	5,604.8	-1,123.0	5,604.8	0.00	0.00	
13,200.0	90.00	2.62	7,267.0	5,704.7	-1,118.5	5,704.7	0.00	0.00	
13,300.0	90.00	2.62	7,267.0	5,804.6	-1,113.9	5,804.6	0.00	0.00	
13,400.0	90.00	2.62	7,267.0	5,904.5	-1,109.3	5,904.5	0.00	0.00	
13,500.0	90.00	2.62	7,267.0	6,004.4	-1,104.7	6,004.4	0.00	0.00	
13,600.0	90.00	2.62	7,267.0	6,104.3	-1,100.1	6,104.3	0.00	0.00	
13,700.0	90.00	2.62	7,267.0	6,204.2	-1,095.6	6,204.2	0.00	0.00	
13,800.0	90.00	2.62	7,267.0	6,304.1	-1,091.0	6,304.1	0.00	0.00	
13,900.0	90.00	2.62	7,267.0	6,404.0	-1,086.4	6,404.0	0.00	0.00	
14,000.0	90.00	2.62	7,267.0	6,503.9	-1,081.8	6,503.9	0.00	0.00	
14,055.8	90.00	2.62	7,267.0	6,559.7	-1,079.3	6,559.7	0.00	0.00	TD at 14055.8

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-17H-P267	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Bighorn 4C-17H-P267 T - plan hits target center - Point	0.00	0.00	7,267.0	3,740.0	-1,200.0	1,295,831.67	3,164,290.60	40.143951	-104.912347
Bighorn 4C-17H-P267 P - plan hits target center - Point	0.00	0.38	7,267.0	6,559.7	-1,079.3	1,298,652.07	3,164,392.51	40.151691	-104.911916

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
483.1	483.0	Fox Hills - BASE				
4,424.9	4,363.0	Sussex				
4,727.9	4,661.0	Sussex Marker				
5,010.5	4,939.0	Shannon				
6,580.3	6,483.0	Teepee Buttes (*if present)				
7,305.1	7,136.0	Sharon Springs				
7,446.1	7,211.0	Niobrara				
7,595.4	7,257.0	B Chalk				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	Start Build 2.00
819.4	816.6	-15.1	-44.5	Start 5951.5 hold at 819.4 MD
6,771.0	6,670.6	-361.0	-1,060.4	Start DLS 10.00 TFO 108.02
7,703.4	7,267.0	210.1	-1,169.2	Start 3530.0 hold at 7703.4 MD
11,233.4	7,267.0	3,740.0	-1,200.0	Start DLS 1.00 TFO 90.00
11,545.9	7,267.0	4,052.4	-1,194.2	Start 2509.9 hold at 11545.9 MD
14,055.8	7,267.0	6,559.7	-1,079.3	TD at 14055.8

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S17-T2N-R67W (Big Horn)

Bighorn 4C-17H-P267

DD

Plan #3

Anticollision Report

18 November, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Reference	Plan #3		
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	14,055.8	Plan #3 (DD)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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)						
ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SU						Out of range
Bighorn 4A-17H-P267 - DD - Plan #2	200.0	200.0	19.9	19.3	33.454	CC, ES
Bighorn 4A-17H-P267 - DD - Plan #2	14,055.8	14,263.5	463.2	230.5	1.990	SF
Bighorn 4B-17H-P267 - DD - Plan #4	233.5	233.5	10.1	9.4	14.171	CC, ES
Bighorn 4B-17H-P267 - DD - Plan #4	14,055.8	14,412.1	320.4	155.9	1.948	SF
Bighorn 4D-17H-P267 - DD - Plan #1	300.0	300.0	10.1	9.1	10.680	CC, ES
Bighorn 4D-17H-P267 - DD - Plan #1	14,055.8	14,786.3	319.0	154.2	1.935	SF
Bighorn 4E-17H-P267 - DD - Plan #1	300.0	300.0	20.1	19.2	21.360	CC, ES
Bighorn 4E-17H-P267 - DD - Plan #1	14,055.8	14,535.9	447.0	213.5	1.915	SF
Bighorn 4F-17H-P267 - DD - Plan #3	300.0	300.0	29.9	29.0	31.746	CC, ES
Bighorn 4F-17H-P267 - DD - Plan #3	14,055.8	14,760.0	713.2	491.5	3.217	SF
Bighorn 4G-17H-P267 - DD - Plan #2	300.0	300.0	40.0	39.0	42.425	CC, ES
Bighorn 4G-17H-P267 - DD - Plan #2	14,055.8	14,495.6	893.8	660.4	3.829	SF
Bighorn 4H-17H-P267 - DD - Plan #2	300.0	300.0	50.1	49.1	53.105	CC, ES
Bighorn 4H-17H-P267 - DD - Plan #2	700.0	698.9	76.4	74.0	32.174	SF
Bighorn 4I-17H-P267 - DD - Plan #4	300.0	300.0	60.1	59.2	63.785	CC, ES
Bighorn 4I-17H-P267 - DD - Plan #4	1,900.0	1,872.5	304.0	295.7	36.462	SF
Bighorn 4J-17H-P267 - DD - Plan #3	300.0	300.0	70.2	69.2	74.465	CC, ES
Bighorn 4J-17H-P267 - DD - Plan #3	600.0	594.2	94.6	92.7	47.831	SF
Bighorn 4K-17H-P267 - DD - Plan #2	300.0	300.0	80.0	79.0	84.851	CC, ES
Bighorn 4K-17H-P267 - DD - Plan #2	600.0	589.7	109.9	108.0	55.776	SF
Bighorn 4L-17H-P267 - DD - Plan #3	200.0	200.0	90.0	89.4	151.725	CC, ES
Bighorn 4L-17H-P267 - DD - Plan #3	600.0	584.4	131.5	129.6	67.095	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	13,850.9	7,222.3	188.5	63.0	1.501	CC, ES, SF
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO	12,240.1	7,216.9	245.6	148.1	2.518	CC, ES, SF
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO						Out of range
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY	13,865.4	7,202.0	137.1	11.3	1.090	Level 2, 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	13,018.1	7,238.0	626.5	515.4	5.641	CC, ES
DIER J 1-A (EXISTING) - ENCANA WELL - GYRO	13,100.0	7,237.3	631.8	519.3	5.617	SF
MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO						Out of range
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV	10,855.0	7,225.0	571.9	497.1	7.647	CC, ES
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV	10,900.0	7,225.0	573.6	498.1	7.592	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	11,214.1	7,217.5	165.7	84.8	2.048	CC, ES, SF
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	1,847.0	1,797.3	504.7	496.2	59.744	CC
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	1,900.0	1,849.4	504.8	496.0	57.827	ES

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S17-T2N-R67W (Big Horn)						
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	8,200.0	7,237.0	847.4	815.5	26.630	SF
MILLER 32-17 (EXISTING) SUNDANCE - SUNDANCE W						Out of range
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	8,606.4	7,530.8	77.6	27.6	1.552	CC, ES, SF
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	7,000.0	6,932.1	58.8	26.0	1.791	ES, SF
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	7,051.5	6,979.0	54.2	26.5	1.952	CC
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	4,033.0	3,953.7	110.2	90.1	5.480	CC, ES
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	4,100.0	4,019.6	110.9	90.6	5.453	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	4,164.7	4,084.0	157.3	136.5	7.548	CC
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,200.0	4,118.7	157.4	136.4	7.489	ES
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,300.0	4,217.1	159.2	137.7	7.423	SF
PACE 2 (EXISTING) - TEXAS TEA OIL - NO SURVEYS						Out of range
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	300.0	280.0	286.3	285.3	298.167	CC, ES
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,900.0	4,810.3	983.4	965.9	56.366	SF
SATER 21-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 24-8 (EXISTING) - KERRMCGEE WELL - SURV	14,055.8	7,365.3	879.5	750.2	6.804	CC, ES, SF
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 4C-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 4C-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 #3	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		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	-89.96	0.0	-19.9	19.9					
100.0	100.0	100.0	100.0	0.1	0.1	-89.96	0.0	-19.9	19.9	19.6	0.24	81.245		
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-19.9	19.9	19.3	0.59	33.454 CC, ES		
300.0	300.0	299.3	299.3	0.5	0.5	-91.47	-0.6	-21.5	21.5	20.6	0.94	22.777		
400.0	400.0	398.5	398.3	0.6	0.7	14.89	-2.2	-26.3	24.8	23.5	1.29	19.220		
500.0	499.8	497.5	497.0	0.8	0.9	13.01	-5.0	-34.4	28.1	26.5	1.64	17.138		
600.0	599.5	596.5	595.2	1.1	1.2	11.50	-9.0	-45.7	31.4	29.4	1.99	15.774		
700.0	698.7	695.3	692.8	1.3	1.5	10.26	-14.0	-60.2	34.7	32.3	2.34	14.806		
800.0	797.5	794.0	789.8	1.6	1.8	9.21	-20.1	-77.8	37.9	35.2	2.69	14.080		
819.4	816.6	813.2	808.5	1.7	1.9	9.03	-21.4	-81.6	38.5	35.8	2.76	13.959		
900.0	895.8	892.7	886.0	2.0	2.3	8.11	-27.3	-98.6	42.2	39.2	3.05	13.859		
1,000.0	994.2	992.5	982.9	2.3	2.7	6.98	-35.0	-120.9	47.9	44.5	3.40	14.092		
1,100.0	1,092.6	1,092.3	1,079.9	2.6	3.1	6.09	-42.8	-143.2	53.6	49.9	3.75	14.292		
1,200.0	1,190.9	1,192.2	1,176.9	3.0	3.6	5.38	-50.5	-165.6	59.3	55.2	4.10	14.464		
1,300.0	1,289.3	1,292.0	1,273.9	3.4	4.0	4.79	-58.2	-187.9	65.1	60.6	4.45	14.612		
1,400.0	1,387.6	1,391.8	1,370.9	3.7	4.5	4.29	-66.0	-210.2	70.8	66.0	4.80	14.742		
1,500.0	1,486.0	1,491.7	1,467.9	4.1	4.9	3.87	-73.7	-232.5	76.5	71.4	5.15	14.855		
1,600.0	1,584.4	1,591.5	1,564.9	4.4	5.4	3.51	-81.4	-254.9	82.3	76.8	5.50	14.954		
1,700.0	1,682.7	1,691.3	1,661.9	4.8	5.8	3.19	-89.2	-277.2	88.0	82.2	5.85	15.043		
1,800.0	1,781.1	1,791.2	1,758.9	5.1	6.3	2.92	-96.9	-299.5	93.8	87.6	6.20	15.122		
1,900.0	1,879.4	1,891.0	1,855.9	5.5	6.7	2.67	-104.7	-321.8	99.5	93.0	6.55	15.193		
2,000.0	1,977.8	1,990.9	1,952.9	5.9	7.2	2.46	-112.4	-344.2	105.3	98.4	6.90	15.256		
2,100.0	2,076.2	2,090.7	2,049.9	6.2	7.6	2.26	-120.1	-366.5	111.0	103.8	7.25	15.314		
2,200.0	2,174.5	2,190.5	2,146.9	6.6	8.1	2.08	-127.9	-388.8	116.8	109.2	7.60	15.366		
2,300.0	2,272.9	2,290.4	2,243.9	6.9	8.6	1.93	-135.6	-411.1	122.5	114.6	7.95	15.414		
2,400.0	2,371.2	2,390.2	2,340.9	7.3	9.0	1.78	-143.4	-433.5	128.3	120.0	8.30	15.458		
2,500.0	2,469.6	2,490.0	2,437.9	7.7	9.5	1.65	-151.1	-455.8	134.0	125.4	8.65	15.498		
2,600.0	2,568.0	2,589.9	2,534.9	8.0	9.9	1.53	-158.8	-478.1	139.8	130.8	9.00	15.535		
2,700.0	2,666.3	2,689.7	2,631.9	8.4	10.4	1.41	-166.6	-500.4	145.5	136.2	9.35	15.570		
2,800.0	2,764.7	2,789.5	2,728.9	8.8	10.8	1.31	-174.3	-522.8	151.3	141.6	9.70	15.602		
2,900.0	2,863.1	2,889.4	2,825.9	9.1	11.3	1.21	-182.0	-545.1	157.0	147.0	10.05	15.631		
3,000.0	2,961.4	2,989.2	2,922.9	9.5	11.7	1.12	-189.8	-567.4	162.8	152.4	10.40	15.659		
3,100.0	3,059.8	3,089.0	3,019.9	9.8	12.2	1.04	-197.5	-589.7	168.5	157.8	10.75	15.684		
3,200.0	3,158.1	3,188.9	3,116.9	10.2	12.7	0.96	-205.3	-612.1	174.3	163.2	11.10	15.709		
3,300.0	3,256.5	3,288.7	3,213.9	10.6	13.1	0.89	-213.0	-634.4	180.0	168.6	11.45	15.731		
3,400.0	3,354.9	3,388.5	3,310.9	10.9	13.6	0.82	-220.7	-656.7	185.8	174.0	11.80	15.752		
3,500.0	3,453.2	3,488.4	3,407.9	11.3	14.0	0.76	-228.5	-679.0	191.6	179.4	12.15	15.772		
3,600.0	3,551.6	3,588.2	3,504.9	11.7	14.5	0.70	-236.2	-701.4	197.3	184.8	12.50	15.791		
3,700.0	3,649.9	3,688.0	3,601.9	12.0	14.9	0.64	-244.0	-723.7	203.1	190.2	12.85	15.809		
3,800.0	3,748.3	3,787.9	3,698.9	12.4	15.4	0.59	-251.7	-746.0	208.8	195.6	13.20	15.826		
3,900.0	3,846.7	3,887.7	3,795.9	12.8	15.9	0.54	-259.4	-768.3	214.6	201.0	13.55	15.842		
4,000.0	3,945.0	3,987.5	3,892.9	13.1	16.3	0.49	-267.2	-790.7	220.4	206.5	13.90	15.857		
4,100.0	4,043.4	4,087.4	3,989.9	13.5	16.8	0.44	-274.9	-813.0	226.1	211.9	14.25	15.871		
4,200.0	4,141.7	4,187.2	4,086.9	13.8	17.2	0.40	-282.6	-835.3	231.9	217.3	14.60	15.885		
4,300.0	4,240.1	4,287.0	4,183.9	14.2	17.7	0.36	-290.4	-857.6	237.6	222.7	14.95	15.898		
4,400.0	4,338.5	4,386.9	4,280.9	14.6	18.1	0.32	-298.1	-880.0	243.4	228.1	15.30	15.910		
4,500.0	4,436.8	4,486.7	4,377.9	14.9	18.6	0.28	-305.9	-902.3	249.1	233.5	15.65	15.922		
4,600.0	4,535.2	4,586.5	4,474.9	15.3	19.0	0.25	-313.6	-924.6	254.9	238.9	16.00	15.933		
4,700.0	4,633.5	4,686.4	4,571.9	15.7	19.5	0.21	-321.3	-946.9	260.7	244.3	16.35	15.944		
4,800.0	4,731.9	4,786.2	4,668.9	16.0	20.0	0.18	-329.1	-969.3	266.4	249.7	16.70	15.955		
4,900.0	4,830.3	4,886.0	4,765.9	16.4	20.4	0.15	-336.8	-991.6	272.2	255.1	17.05	15.964		
5,000.0	4,928.6	4,985.9	4,862.9	16.7	20.9	0.12	-344.6	-1,013.9	277.9	260.5	17.40	15.974		

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 4C-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 4C-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 #3	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		
5,100.0	5,027.0	5,085.7	4,959.8	17.1	21.3	0.09	-352.3	-1,036.2	283.7	265.9	17.75	15.983		
5,200.0	5,125.4	5,185.5	5,056.8	17.5	21.8	0.06	-360.0	-1,058.6	289.5	271.4	18.10	15.992		
5,300.0	5,223.7	5,285.4	5,153.8	17.8	22.2	0.03	-367.8	-1,080.9	295.2	276.8	18.45	16.000		
5,400.0	5,322.1	5,385.2	5,250.8	18.2	22.7	0.01	-375.5	-1,103.2	301.0	282.2	18.80	16.008		
5,500.0	5,420.4	5,485.0	5,347.8	18.6	23.2	-0.02	-383.2	-1,125.5	306.7	287.6	19.15	16.016		
5,600.0	5,518.8	5,584.9	5,444.8	18.9	23.6	-0.04	-391.0	-1,147.9	312.5	293.0	19.50	16.024		
5,700.0	5,617.2	5,684.7	5,541.8	19.3	24.1	-0.06	-398.7	-1,170.2	318.2	298.4	19.85	16.031		
5,800.0	5,715.5	5,784.5	5,638.8	19.7	24.5	-0.09	-406.5	-1,192.5	324.0	303.8	20.20	16.038		
5,900.0	5,813.9	5,884.4	5,735.8	20.0	25.0	-0.11	-414.2	-1,214.8	329.8	309.2	20.55	16.045		
6,000.0	5,912.2	5,984.2	5,832.8	20.4	25.4	-0.13	-421.9	-1,237.2	335.5	314.6	20.90	16.051		
6,100.0	6,010.6	6,084.0	5,929.8	20.7	25.9	-0.15	-429.7	-1,259.5	341.3	320.0	21.25	16.057		
6,200.0	6,109.0	6,183.9	6,026.8	21.1	26.4	-0.17	-437.4	-1,281.8	347.0	325.4	21.60	16.063		
6,300.0	6,207.3	6,283.7	6,123.8	21.5	26.8	-0.19	-445.2	-1,304.1	352.8	330.9	21.96	16.069		
6,400.0	6,305.7	6,383.5	6,220.8	21.8	27.3	-0.20	-452.9	-1,326.5	358.6	336.3	22.31	16.075		
6,500.0	6,404.0	6,483.4	6,317.8	22.2	27.7	-0.22	-460.6	-1,348.8	364.3	341.7	22.66	16.080		
6,600.0	6,502.4	6,583.2	6,414.8	22.6	28.2	-0.24	-468.4	-1,371.1	370.1	347.1	23.01	16.086		
6,700.0	6,600.8	6,683.0	6,511.8	22.9	28.6	-0.25	-476.1	-1,393.4	375.8	352.5	23.36	16.091		
6,771.0	6,670.6	6,753.9	6,580.6	23.2	29.0	-0.27	-481.6	-1,409.3	379.9	356.3	23.61	16.095		
6,800.0	6,699.2	6,782.9	6,608.8	23.3	29.1	-16.24	-483.8	-1,415.7	381.8	358.1	23.70	16.109		
6,850.0	6,748.4	6,832.4	6,657.0	23.4	29.3	-43.47	-487.7	-1,426.8	386.2	362.3	23.86	16.186		
6,900.0	6,797.2	6,894.3	6,717.1	23.6	29.6	-63.15	-490.0	-1,440.7	391.4	367.4	24.04	16.283		
6,950.0	6,845.4	6,959.8	6,780.9	23.7	29.8	-75.29	-485.2	-1,455.3	396.2	372.0	24.22	16.359		
7,000.0	6,892.4	7,026.6	6,844.7	23.8	30.0	-82.87	-472.6	-1,470.0	400.4	376.0	24.40	16.414		
7,050.0	6,938.0	7,094.3	6,907.7	23.8	30.2	-87.79	-452.2	-1,484.3	404.0	379.5	24.56	16.448		
7,100.0	6,981.8	7,162.7	6,968.4	23.9	30.3	-91.07	-424.1	-1,498.2	406.9	382.2	24.73	16.456		
7,150.0	7,023.5	7,231.5	7,025.7	24.0	30.4	-93.23	-388.5	-1,511.2	409.0	384.1	24.89	16.435		
7,200.0	7,062.8	7,300.2	7,078.4	24.0	30.4	-94.58	-346.1	-1,523.2	410.3	385.3	25.04	16.384		
7,250.0	7,099.3	7,368.6	7,125.6	24.1	30.5	-95.33	-297.8	-1,533.9	410.8	385.6	25.23	16.286		
7,300.0	7,132.8	7,436.3	7,166.5	24.1	30.5	-95.59	-244.7	-1,543.1	410.6	385.2	25.42	16.152		
7,350.0	7,163.0	7,503.1	7,200.5	24.2	30.6	-95.44	-187.8	-1,550.7	409.8	384.1	25.65	15.978		
7,400.0	7,189.7	7,568.7	7,227.5	24.2	30.6	-94.97	-128.4	-1,556.7	408.3	382.3	25.92	15.752		
7,450.0	7,212.7	7,632.9	7,247.3	24.3	30.7	-94.21	-67.5	-1,561.1	406.3	380.0	26.22	15.492		
7,500.0	7,231.8	7,695.6	7,260.1	24.4	30.7	-93.21	-6.2	-1,563.8	403.8	377.3	26.56	15.207		
7,550.0	7,246.9	7,756.6	7,266.3	24.5	30.8	-92.00	54.5	-1,565.0	401.1	374.2	26.96	14.881		
7,600.0	7,257.8	7,810.8	7,267.0	24.7	30.9	-90.86	108.7	-1,565.0	398.4	371.0	27.38	14.550		
7,650.0	7,264.5	7,860.3	7,267.0	24.8	31.0	-90.20	158.2	-1,564.8	396.5	368.7	27.83	14.248		
7,703.4	7,267.0	7,913.7	7,267.0	25.0	31.1	-90.00	211.5	-1,564.6	395.4	367.1	28.32	13.961		
7,800.0	7,267.0	8,010.2	7,267.0	25.4	31.5	-90.00	308.1	-1,564.3	394.3	364.4	29.83	13.218		
7,900.0	7,267.0	8,110.2	7,267.0	26.0	31.9	-90.00	408.1	-1,563.9	393.0	361.3	31.69	12.402		
8,000.0	7,267.0	8,210.2	7,267.0	26.6	32.4	-90.00	508.1	-1,563.6	391.8	358.0	33.82	11.586		
8,100.0	7,267.0	8,310.2	7,267.0	27.4	33.0	-90.00	608.1	-1,563.2	390.6	354.4	36.16	10.801		
8,200.0	7,267.0	8,410.2	7,267.0	28.2	33.6	-90.00	708.0	-1,562.9	389.4	350.7	38.68	10.066		
8,300.0	7,267.0	8,510.2	7,267.0	29.1	34.4	-90.00	808.0	-1,562.5	388.1	346.8	41.35	9.388		
8,400.0	7,267.0	8,610.2	7,267.0	30.1	35.2	-90.00	908.0	-1,562.2	386.9	342.8	44.13	8.768		
8,500.0	7,267.0	8,710.2	7,267.0	31.2	36.1	-90.00	1,008.0	-1,561.8	385.7	338.7	47.01	8.205		
8,600.0	7,267.0	8,810.2	7,267.0	32.3	37.0	-90.00	1,108.0	-1,561.5	384.5	334.5	49.97	7.695		
8,700.0	7,267.0	8,910.2	7,267.0	33.5	38.1	-90.00	1,208.0	-1,561.1	383.3	330.3	52.99	7.232		
8,800.0	7,267.0	9,010.2	7,267.0	34.7	39.1	-90.00	1,308.0	-1,560.8	382.0	326.0	56.08	6.813		
8,900.0	7,267.0	9,110.1	7,267.0	36.0	40.2	-90.00	1,408.0	-1,560.5	380.8	321.6	59.21	6.432		
9,000.0	7,267.0	9,210.1	7,267.0	37.3	41.4	-90.00	1,508.0	-1,560.1	379.6	317.2	62.38	6.085		
9,100.0	7,267.0	9,310.1	7,267.0	38.6	42.6	-90.00	1,608.0	-1,559.8	378.4	312.8	65.58	5.769		
9,200.0	7,267.0	9,410.1	7,267.0	40.0	43.8	-90.00	1,708.0	-1,559.4	377.2	308.3	68.82	5.480		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
9,300.0	7,267.0	9,510.1	7,267.0	41.4	45.1	-90.00	1,808.0	-1,559.1	375.9	303.9	72.08	5.216		
9,400.0	7,267.0	9,610.1	7,267.0	42.8	46.4	-90.00	1,908.0	-1,558.7	374.7	299.3	75.36	4.972		
9,500.0	7,267.0	9,710.1	7,267.0	44.3	47.7	-90.00	2,007.9	-1,558.4	373.5	294.8	78.66	4.748		
9,600.0	7,267.0	9,810.1	7,267.0	45.8	49.1	-90.00	2,107.9	-1,558.0	372.3	290.3	81.98	4.541		
9,700.0	7,267.0	9,910.1	7,267.0	47.3	50.5	-90.00	2,207.9	-1,557.7	371.0	285.7	85.32	4.349		
9,800.0	7,267.0	10,010.1	7,267.0	48.8	51.9	-90.00	2,307.9	-1,557.3	369.8	281.2	88.66	4.171		
9,900.0	7,267.0	10,110.1	7,267.0	50.3	53.3	-90.00	2,407.9	-1,557.0	368.6	276.6	92.02	4.006		
10,000.0	7,267.0	10,210.1	7,267.0	51.9	54.8	-90.00	2,507.9	-1,556.6	367.4	272.0	95.39	3.851		
10,100.0	7,267.0	10,310.1	7,267.0	53.4	56.2	-90.00	2,607.9	-1,556.3	366.2	267.4	98.77	3.707		
10,200.0	7,267.0	10,410.0	7,267.0	55.0	57.7	-90.00	2,707.9	-1,555.9	364.9	262.8	102.16	3.572		
10,300.0	7,267.0	10,510.0	7,267.0	56.6	59.2	-90.00	2,807.9	-1,555.6	363.7	258.2	105.56	3.446		
10,400.0	7,267.0	10,610.0	7,267.0	58.1	60.7	-90.00	2,907.9	-1,555.2	362.5	253.5	108.96	3.327		
10,500.0	7,267.0	10,710.0	7,267.0	59.7	62.2	-90.00	3,007.9	-1,554.9	361.3	248.9	112.37	3.215		
10,600.0	7,267.0	10,810.0	7,267.0	61.4	63.8	-90.00	3,107.9	-1,554.5	360.0	244.3	115.78	3.110		
10,700.0	7,267.0	10,910.0	7,267.0	63.0	65.3	-90.00	3,207.8	-1,554.2	358.8	239.6	119.21	3.010		
10,800.0	7,267.0	11,010.0	7,267.0	64.6	66.9	-90.00	3,307.8	-1,553.8	357.6	235.0	122.63	2.916		
10,900.0	7,267.0	11,110.0	7,267.0	66.2	68.4	-90.00	3,407.8	-1,553.5	356.4	230.3	126.06	2.827		
11,000.0	7,267.0	11,210.0	7,267.0	67.9	70.0	-90.00	3,507.8	-1,553.1	355.2	225.7	129.50	2.743		
11,100.0	7,267.0	11,310.0	7,267.0	69.5	71.6	-90.00	3,607.8	-1,552.8	353.9	221.0	132.93	2.662		
11,200.0	7,267.0	11,410.0	7,267.0	71.1	73.2	-90.00	3,707.8	-1,552.4	352.7	216.3	136.38	2.586		
11,233.4	7,267.0	11,443.4	7,267.0	71.7	73.7	-90.00	3,741.2	-1,552.3	352.3	214.8	137.53	2.562		
11,300.0	7,267.0	11,510.0	7,267.0	72.8	74.8	-90.00	3,807.8	-1,552.1	351.9	212.6	139.29	2.526		
11,303.4	7,267.0	11,513.4	7,267.0	72.8	74.9	-90.00	3,811.2	-1,552.1	351.9	212.5	139.38	2.525		
11,400.0	7,267.0	11,610.0	7,267.0	74.4	76.4	-90.00	3,907.8	-1,551.7	352.7	210.8	141.90	2.485		
11,500.0	7,267.0	11,709.9	7,267.0	76.1	78.0	-90.00	4,007.8	-1,551.4	353.3	210.8	144.48	2.459		
11,545.9	7,267.0	11,755.8	7,267.0	76.8	78.8	-90.00	4,053.6	-1,551.2	357.0	211.4	145.65	2.451		
11,600.0	7,267.0	11,809.8	7,267.0	77.7	79.6	-90.00	4,107.7	-1,551.0	359.3	211.8	147.51	2.436		
11,700.0	7,267.0	11,909.8	7,267.0	79.4	81.3	-90.00	4,207.6	-1,550.7	363.5	212.6	150.96	2.408		
11,800.0	7,267.0	12,009.7	7,267.0	81.0	82.9	-90.00	4,307.5	-1,550.3	367.8	213.3	154.42	2.382		
11,900.0	7,267.0	12,109.6	7,267.0	82.7	84.5	-90.00	4,407.4	-1,550.0	372.0	214.1	157.87	2.356		
12,000.0	7,267.0	12,209.5	7,267.0	84.3	86.2	-90.00	4,507.3	-1,549.6	376.2	214.9	161.33	2.332		
12,100.0	7,267.0	12,309.4	7,267.0	86.0	87.8	-90.00	4,607.2	-1,549.3	380.5	215.7	164.79	2.309		
12,200.0	7,267.0	12,409.3	7,267.0	87.6	89.4	-90.00	4,707.1	-1,548.9	384.7	216.4	168.25	2.286		
12,300.0	7,267.0	12,509.2	7,267.0	89.3	91.1	-90.00	4,807.0	-1,548.6	388.9	217.2	171.72	2.265		
12,400.0	7,267.0	12,609.1	7,267.0	91.0	92.8	-90.00	4,907.0	-1,548.2	393.1	218.0	175.18	2.244		
12,500.0	7,267.0	12,709.0	7,267.0	92.7	94.4	-90.00	5,006.9	-1,547.9	397.4	218.7	178.65	2.224		
12,600.0	7,267.0	12,809.0	7,267.0	94.3	96.1	-90.00	5,106.8	-1,547.5	401.6	219.5	182.12	2.205		
12,700.0	7,267.0	12,908.9	7,267.0	96.0	97.7	-90.00	5,206.7	-1,547.2	405.8	220.2	185.59	2.187		
12,800.0	7,267.0	13,008.8	7,267.0	97.7	99.4	-90.00	5,306.6	-1,546.8	410.1	221.0	189.06	2.169		
12,900.0	7,267.0	13,108.7	7,267.0	99.4	101.1	-90.00	5,406.5	-1,546.5	414.3	221.8	192.53	2.152		
13,000.0	7,267.0	13,208.6	7,267.0	101.1	102.8	-90.00	5,506.4	-1,546.1	418.5	222.5	196.01	2.135		
13,100.0	7,267.0	13,308.5	7,267.0	102.8	104.4	-90.00	5,606.3	-1,545.8	422.8	223.3	199.48	2.119		
13,200.0	7,267.0	13,408.4	7,267.0	104.5	106.1	-90.00	5,706.2	-1,545.4	427.0	224.0	202.96	2.104		
13,300.0	7,267.0	13,508.3	7,267.0	106.1	107.8	-90.00	5,806.1	-1,545.1	431.2	224.8	206.43	2.089		
13,400.0	7,267.0	13,608.2	7,267.0	107.8	109.5	-90.00	5,906.1	-1,544.7	435.4	225.5	209.91	2.074		
13,500.0	7,267.0	13,708.1	7,267.0	109.5	111.2	-90.00	6,006.0	-1,544.4	439.7	226.3	213.39	2.060		
13,600.0	7,267.0	13,808.1	7,267.0	111.2	112.8	-90.00	6,105.9	-1,544.0	443.9	227.0	216.87	2.047		
13,700.0	7,267.0	13,908.0	7,267.0	112.9	114.5	-90.00	6,205.8	-1,543.7	448.1	227.8	220.35	2.034		
13,800.0	7,267.0	14,007.9	7,267.0	114.6	116.2	-90.00	6,305.7	-1,543.4	452.4	228.5	223.83	2.021		
13,900.0	7,267.0	14,107.8	7,267.0	116.4	117.9	-90.00	6,405.6	-1,543.0	456.6	229.3	227.32	2.009		
14,000.0	7,267.0	14,207.7	7,267.0	118.1	119.6	-90.00	6,505.5	-1,542.7	460.8	230.0	230.80	1.997		
14,055.8	7,267.0	14,263.5	7,267.0	119.0	120.6	-90.00	6,561.3	-1,542.5	463.2	230.5	232.74	1.990 SF		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-10.1	10.1					
100.0	100.0	100.0	100.0	0.1	0.1	-89.95	0.0	-10.1	10.1	9.8	0.24	41.195		
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-10.1	10.1	9.5	0.59	16.963		
233.5	233.5	233.5	233.5	0.4	0.4	-89.95	0.0	-10.1	10.1	9.4	0.71	14.171	CC, ES	
300.0	300.0	299.8	299.8	0.5	0.5	-90.73	-0.1	-10.5	10.5	9.5	0.94	11.119		
400.0	400.0	399.4	399.4	0.6	0.7	15.45	-1.3	-13.7	12.1	10.8	1.29	9.397		
500.0	499.8	499.0	498.7	0.8	0.9	13.41	-3.5	-20.3	13.8	12.1	1.64	8.403		
600.0	599.5	598.5	597.6	1.1	1.1	11.76	-6.9	-30.1	15.4	13.4	1.99	7.752		
700.0	698.7	697.9	696.1	1.3	1.4	10.38	-11.4	-43.1	17.1	14.7	2.34	7.290		
800.0	797.5	797.3	794.0	1.6	1.7	9.21	-17.0	-59.3	18.7	16.0	2.69	6.944		
819.4	816.6	816.6	812.9	1.7	1.8	9.00	-18.3	-62.8	19.0	16.2	2.76	6.886		
900.0	895.8	896.9	891.5	2.0	2.1	7.88	-23.7	-78.5	21.1	18.0	3.05	6.923		
1,000.0	994.2	996.8	989.2	2.3	2.5	6.68	-30.5	-98.2	24.0	20.6	3.40	7.049		
1,100.0	1,092.6	1,096.8	1,087.0	2.6	2.9	5.74	-37.3	-117.9	26.8	23.1	3.75	7.156		
1,200.0	1,190.9	1,196.8	1,184.7	3.0	3.3	4.98	-44.1	-137.7	29.7	25.6	4.10	7.248		
1,300.0	1,289.3	1,296.7	1,282.5	3.4	3.7	4.35	-51.0	-157.4	32.6	28.2	4.45	7.327		
1,400.0	1,387.6	1,396.7	1,380.3	3.7	4.1	3.83	-57.8	-177.1	35.5	30.7	4.80	7.396		
1,500.0	1,486.0	1,496.6	1,478.0	4.1	4.5	3.38	-64.6	-196.8	38.4	33.2	5.15	7.456		
1,600.0	1,584.4	1,596.6	1,575.8	4.4	4.9	3.00	-71.4	-216.6	41.3	35.8	5.50	7.508		
1,700.0	1,682.7	1,696.6	1,673.5	4.8	5.3	2.67	-78.3	-236.3	44.2	38.3	5.85	7.555		
1,800.0	1,781.1	1,796.5	1,771.3	5.1	5.7	2.37	-85.1	-256.0	47.1	40.9	6.20	7.596		
1,900.0	1,879.4	1,896.5	1,869.0	5.5	6.1	2.12	-91.9	-275.7	50.0	43.4	6.55	7.634		
2,000.0	1,977.8	1,996.4	1,966.8	5.9	6.5	1.89	-98.7	-295.5	52.9	46.0	6.90	7.667		
2,100.0	2,076.2	2,096.4	2,064.5	6.2	6.9	1.68	-105.6	-315.2	55.8	48.5	7.24	7.697		
2,200.0	2,174.5	2,196.3	2,162.3	6.6	7.3	1.50	-112.4	-334.9	58.7	51.1	7.59	7.725		
2,300.0	2,272.9	2,296.3	2,260.0	6.9	7.7	1.33	-119.2	-354.6	61.6	53.6	7.94	7.750		
2,400.0	2,371.2	2,396.3	2,357.8	7.3	8.1	1.18	-126.0	-374.4	64.5	56.2	8.29	7.773		
2,500.0	2,469.6	2,496.2	2,455.5	7.7	8.5	1.04	-132.9	-394.1	67.4	58.7	8.64	7.794		
2,600.0	2,568.0	2,596.2	2,553.3	8.0	9.0	0.91	-139.7	-413.8	70.3	61.3	8.99	7.813		
2,700.0	2,666.3	2,696.1	2,651.1	8.4	9.4	0.79	-146.5	-433.5	73.2	63.8	9.34	7.831		
2,800.0	2,764.7	2,796.1	2,748.8	8.8	9.8	0.68	-153.3	-453.3	76.1	66.4	9.69	7.848		
2,900.0	2,863.1	2,896.0	2,846.6	9.1	10.2	0.58	-160.2	-473.0	79.0	68.9	10.04	7.863		
3,000.0	2,961.4	2,996.0	2,944.3	9.5	10.6	0.49	-167.0	-492.7	81.9	71.5	10.39	7.877		
3,100.0	3,059.8	3,096.0	3,042.1	9.8	11.0	0.40	-173.8	-512.4	84.8	74.0	10.75	7.891		
3,200.0	3,158.1	3,195.9	3,139.8	10.2	11.4	0.32	-180.6	-532.2	87.7	76.6	11.10	7.903		
3,300.0	3,256.5	3,295.9	3,237.6	10.6	11.8	0.24	-187.5	-551.9	90.6	79.1	11.45	7.915		
3,400.0	3,354.9	3,395.8	3,335.3	10.9	12.2	0.17	-194.3	-571.6	93.5	81.7	11.80	7.926		
3,500.0	3,453.2	3,495.8	3,433.1	11.3	12.6	0.10	-201.1	-591.3	96.4	84.3	12.15	7.937		
3,600.0	3,551.6	3,595.7	3,530.8	11.7	13.1	0.04	-207.9	-611.1	99.3	86.8	12.50	7.946		
3,700.0	3,649.9	3,695.7	3,628.6	12.0	13.5	-0.02	-214.8	-630.8	102.2	89.4	12.85	7.956		
3,800.0	3,748.3	3,795.7	3,726.4	12.4	13.9	-0.08	-221.6	-650.5	105.1	91.9	13.20	7.964		
3,900.0	3,846.7	3,895.6	3,824.1	12.8	14.3	-0.13	-228.4	-670.2	108.0	94.5	13.55	7.973		
4,000.0	3,945.0	3,995.6	3,921.9	13.1	14.7	-0.18	-235.2	-690.0	110.9	97.0	13.90	7.980		
4,100.0	4,043.4	4,095.5	4,019.6	13.5	15.1	-0.23	-242.1	-709.7	113.8	99.6	14.25	7.988		
4,200.0	4,141.7	4,195.5	4,117.4	13.8	15.5	-0.27	-248.9	-729.4	116.7	102.1	14.60	7.995		
4,300.0	4,240.1	4,295.5	4,215.1	14.2	15.9	-0.32	-255.7	-749.1	119.6	104.7	14.95	8.002		
4,400.0	4,338.5	4,395.4	4,312.9	14.6	16.3	-0.36	-262.5	-768.9	122.5	107.2	15.30	8.008		
4,500.0	4,436.8	4,495.4	4,410.6	14.9	16.7	-0.40	-269.4	-788.6	125.5	109.8	15.65	8.014		
4,600.0	4,535.2	4,595.3	4,508.4	15.3	17.1	-0.44	-276.2	-808.3	128.4	112.4	16.00	8.020		
4,700.0	4,633.5	4,695.3	4,606.1	15.7	17.6	-0.47	-283.0	-828.0	131.3	114.9	16.36	8.026		
4,800.0	4,731.9	4,795.2	4,703.9	16.0	18.0	-0.51	-289.8	-847.8	134.2	117.5	16.71	8.031		
4,900.0	4,830.3	4,895.2	4,801.6	16.4	18.4	-0.54	-296.7	-867.5	137.1	120.0	17.06	8.036		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,928.6	4,995.2	4,899.4	16.7	18.8	-0.57	-303.5	-887.2	140.0	122.6	17.41	8.041		
5,100.0	5,027.0	5,095.1	4,997.2	17.1	19.2	-0.60	-310.3	-906.9	142.9	125.1	17.76	8.046		
5,200.0	5,125.4	5,195.1	5,094.9	17.5	19.6	-0.63	-317.1	-926.7	145.8	127.7	18.11	8.050		
5,300.0	5,223.7	5,295.0	5,192.7	17.8	20.0	-0.66	-324.0	-946.4	148.7	130.2	18.46	8.055		
5,400.0	5,322.1	5,395.0	5,290.4	18.2	20.4	-0.68	-330.8	-966.1	151.6	132.8	18.81	8.059		
5,500.0	5,420.4	5,494.9	5,388.2	18.6	20.8	-0.71	-337.6	-985.8	154.5	135.3	19.16	8.063		
5,600.0	5,518.8	5,594.9	5,485.9	18.9	21.2	-0.74	-344.4	-1,005.6	157.4	137.9	19.51	8.067		
5,700.0	5,617.2	5,694.9	5,583.7	19.3	21.7	-0.76	-351.3	-1,025.3	160.3	140.5	19.86	8.071		
5,800.0	5,715.5	5,794.8	5,681.4	19.7	22.1	-0.78	-358.1	-1,045.0	163.2	143.0	20.22	8.074		
5,900.0	5,813.9	5,894.8	5,779.2	20.0	22.5	-0.81	-364.9	-1,064.7	166.1	145.6	20.57	8.078		
6,000.0	5,912.2	5,994.7	5,876.9	20.4	22.9	-0.83	-371.7	-1,084.5	169.0	148.1	20.92	8.081		
6,100.0	6,010.6	6,094.7	5,974.7	20.7	23.3	-0.85	-378.6	-1,104.2	171.9	150.7	21.27	8.084		
6,200.0	6,109.0	6,194.7	6,072.5	21.1	23.7	-0.87	-385.4	-1,123.9	174.8	153.2	21.62	8.087		
6,300.0	6,207.3	6,294.6	6,170.2	21.5	24.1	-0.89	-392.2	-1,143.7	177.7	155.8	21.97	8.090		
6,400.0	6,305.7	6,394.6	6,268.0	21.8	24.5	-0.91	-399.0	-1,163.4	180.7	158.3	22.32	8.093		
6,500.0	6,404.0	6,494.5	6,365.7	22.2	24.9	-0.92	-405.9	-1,183.1	183.6	160.9	22.67	8.096		
6,600.0	6,502.4	6,594.5	6,463.5	22.6	25.3	-0.94	-412.7	-1,202.8	186.5	163.4	23.02	8.099		
6,700.0	6,600.8	6,694.4	6,561.2	22.9	25.8	-0.96	-419.5	-1,222.6	189.4	166.0	23.37	8.102		
6,771.0	6,670.6	6,765.4	6,630.6	23.2	26.0	-0.97	-424.4	-1,236.6	191.4	167.8	23.62	8.103		
6,800.0	6,699.2	6,794.4	6,659.0	23.3	26.2	-17.13	-426.3	-1,242.3	192.5	168.8	23.73	8.114		
6,850.0	6,748.4	6,844.1	6,707.6	23.4	26.4	-45.13	-429.7	-1,252.1	195.6	171.6	23.92	8.175		
6,900.0	6,797.2	6,893.1	6,755.5	23.6	26.6	-66.00	-433.1	-1,261.8	200.3	176.1	24.19	8.283		
6,950.0	6,845.4	6,941.2	6,802.5	23.7	26.8	-80.19	-436.4	-1,271.2	207.3	182.7	24.57	8.434		
7,000.0	6,892.4	6,987.8	6,848.1	23.8	27.0	-90.44	-439.6	-1,280.4	216.9	191.8	25.08	8.648		
7,050.0	6,938.0	7,032.7	6,892.1	23.8	27.1	-98.38	-442.6	-1,289.3	229.7	204.1	25.62	8.969		
7,100.0	6,981.8	7,091.0	6,949.1	23.9	27.4	-105.98	-444.0	-1,300.8	245.0	218.7	26.38	9.288		
7,150.0	7,023.5	7,154.4	7,011.1	24.0	27.6	-112.34	-438.8	-1,313.1	260.9	233.9	27.00	9.665		
7,200.0	7,062.8	7,222.6	7,076.7	24.0	27.7	-117.67	-425.4	-1,325.9	276.8	249.4	27.34	10.122		
7,250.0	7,099.3	7,296.0	7,145.0	24.1	27.8	-122.16	-402.3	-1,339.1	292.0	264.6	27.39	10.662		
7,300.0	7,132.8	7,375.0	7,214.7	24.1	27.9	-125.94	-367.7	-1,352.4	306.0	278.8	27.14	11.272		
7,350.0	7,163.0	7,459.8	7,283.6	24.2	28.0	-129.07	-320.1	-1,365.2	318.1	291.5	26.65	11.939		
7,400.0	7,189.7	7,550.1	7,348.6	24.2	28.1	-131.57	-258.6	-1,376.9	327.9	301.9	25.96	12.631		
7,450.0	7,212.7	7,645.0	7,405.9	24.3	28.1	-133.46	-183.7	-1,386.8	334.6	309.5	25.16	13.298		
7,500.0	7,231.8	7,743.1	7,451.5	24.4	28.2	-134.72	-97.3	-1,394.2	338.0	313.6	24.35	13.879		
7,550.0	7,246.9	7,842.5	7,482.4	24.5	28.3	-135.36	-3.1	-1,398.4	337.7	314.1	23.59	14.312		
7,600.0	7,257.8	7,940.9	7,496.8	24.7	28.4	-135.37	94.1	-1,399.2	333.7	310.7	23.05	14.480		
7,650.0	7,264.5	8,008.4	7,498.0	24.8	28.5	-135.24	161.6	-1,398.0	327.6	305.1	22.46	14.581		
7,703.4	7,267.0	8,061.7	7,498.0	25.0	28.7	-135.42	214.9	-1,396.9	324.4	302.5	21.92	14.800		
7,800.0	7,267.0	8,158.3	7,498.0	25.4	29.0	-135.78	311.4	-1,394.9	322.4	299.4	23.01	14.011		
7,900.0	7,267.0	8,258.2	7,498.0	26.0	29.5	-136.16	411.3	-1,392.8	320.3	296.0	24.31	13.176		
8,000.0	7,267.0	8,358.2	7,498.0	26.6	30.0	-136.54	511.3	-1,390.7	318.3	292.5	25.75	12.361		
8,100.0	7,267.0	8,458.1	7,498.0	27.4	30.6	-136.93	611.2	-1,388.6	316.3	289.0	27.30	11.586		
8,200.0	7,267.0	8,558.1	7,498.0	28.2	31.3	-137.33	711.1	-1,386.5	314.2	285.3	28.92	10.865		
8,300.0	7,267.0	8,658.0	7,498.0	29.1	32.1	-137.73	811.1	-1,384.4	312.2	281.6	30.61	10.201		
8,400.0	7,267.0	8,758.0	7,498.0	30.1	33.0	-138.13	911.0	-1,382.3	310.3	277.9	32.34	9.594		
8,500.0	7,267.0	8,858.0	7,498.0	31.2	33.9	-138.54	1,011.0	-1,380.2	308.3	274.2	34.09	9.043		
8,600.0	7,267.0	8,957.9	7,498.0	32.3	34.9	-138.96	1,110.9	-1,378.2	306.3	270.5	35.86	8.542		
8,700.0	7,267.0	9,057.9	7,498.0	33.5	36.0	-139.38	1,210.8	-1,376.1	304.4	266.7	37.63	8.088		
8,800.0	7,267.0	9,157.8	7,498.0	34.7	37.1	-139.81	1,310.8	-1,374.0	302.5	263.1	39.40	7.676		
8,900.0	7,267.0	9,257.8	7,498.0	36.0	38.3	-140.24	1,410.7	-1,371.9	300.6	259.4	41.16	7.301		
9,000.0	7,267.0	9,357.7	7,498.0	37.3	39.5	-140.68	1,510.6	-1,369.8	298.7	255.8	42.91	6.960		
9,100.0	7,267.0	9,457.7	7,498.0	38.6	40.7	-141.12	1,610.6	-1,367.7	296.8	252.2	44.63	6.650		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
9,200.0	7,267.0	9,557.6	7,498.0	40.0	42.0	-141.57	1,710.5	-1,365.6	294.9	248.6	46.33	6.366		
9,300.0	7,267.0	9,657.6	7,498.0	41.4	43.3	-142.02	1,810.4	-1,363.5	293.1	245.1	48.00	6.106		
9,400.0	7,267.0	9,757.6	7,498.0	42.8	44.7	-142.48	1,910.4	-1,361.4	291.3	241.7	49.64	5.869		
9,500.0	7,267.0	9,857.5	7,498.0	44.3	46.0	-142.95	2,010.3	-1,359.3	289.5	238.3	51.24	5.650		
9,600.0	7,267.0	9,957.5	7,498.0	45.8	47.4	-143.42	2,110.2	-1,357.2	287.7	234.9	52.80	5.449		
9,700.0	7,267.0	10,057.4	7,498.0	47.3	48.9	-143.90	2,210.2	-1,355.1	286.0	231.6	54.32	5.265		
9,800.0	7,267.0	10,157.4	7,498.0	48.8	50.3	-144.38	2,310.1	-1,353.0	284.2	228.4	55.79	5.094		
9,900.0	7,267.0	10,257.3	7,498.0	50.3	51.8	-144.87	2,410.0	-1,350.9	282.5	225.3	57.22	4.937		
10,000.0	7,267.0	10,357.3	7,498.0	51.9	53.2	-145.36	2,510.0	-1,348.8	280.8	222.2	58.60	4.792		
10,100.0	7,267.0	10,457.2	7,498.0	53.4	54.7	-145.86	2,609.9	-1,346.8	279.1	219.2	59.93	4.657		
10,200.0	7,267.0	10,557.2	7,498.0	55.0	56.3	-146.37	2,709.8	-1,344.7	277.5	216.3	61.21	4.533		
10,300.0	7,267.0	10,657.2	7,498.0	56.6	57.8	-146.88	2,809.8	-1,342.6	275.8	213.4	62.44	4.418		
10,400.0	7,267.0	10,757.1	7,498.0	58.1	59.3	-147.40	2,909.7	-1,340.5	274.2	210.6	63.61	4.311		
10,500.0	7,267.0	10,857.1	7,498.0	59.7	60.9	-147.93	3,009.6	-1,338.4	272.6	207.9	64.72	4.213		
10,600.0	7,267.0	10,957.0	7,498.0	61.4	62.4	-148.46	3,109.6	-1,336.3	271.1	205.3	65.77	4.122		
10,700.0	7,267.0	11,057.0	7,498.0	63.0	64.0	-149.00	3,209.5	-1,334.2	269.5	202.8	66.76	4.037		
10,800.0	7,267.0	11,156.9	7,498.0	64.6	65.6	-149.54	3,309.4	-1,332.1	268.0	200.3	67.69	3.959		
10,900.0	7,267.0	11,256.9	7,498.0	66.2	67.2	-150.09	3,409.4	-1,330.0	266.5	198.0	68.56	3.888		
11,000.0	7,267.0	11,356.9	7,498.0	67.9	68.8	-150.65	3,509.3	-1,327.9	265.1	195.7	69.36	3.822		
11,100.0	7,267.0	11,456.8	7,498.0	69.5	70.4	-151.21	3,609.2	-1,325.8	263.6	193.5	70.09	3.761		
11,200.0	7,267.0	11,556.8	7,498.0	71.1	72.0	-151.78	3,709.2	-1,323.7	262.2	191.4	70.76	3.706		
11,233.4	7,267.0	11,590.2	7,498.0	71.7	72.5	-151.97	3,742.6	-1,323.0	261.7	190.8	70.96	3.688		
11,300.0	7,267.0	11,656.7	7,498.0	72.8	73.6	-152.27	3,809.1	-1,321.6	261.0	189.7	71.28	3.661		
11,400.0	7,267.0	11,756.7	7,498.0	74.4	75.2	-152.45	3,909.1	-1,319.5	260.6	188.3	72.23	3.607		
11,403.4	7,267.0	11,760.2	7,498.0	74.5	75.3	-152.45	3,912.5	-1,319.5	260.6	188.3	72.27	3.605		
11,500.0	7,267.0	11,856.7	7,498.0	76.1	76.9	-152.29	4,009.1	-1,317.4	260.9	187.2	73.78	3.537		
11,545.9	7,267.0	11,902.6	7,498.0	76.8	77.6	-152.11	4,054.9	-1,316.5	261.4	186.7	74.70	3.499		
11,600.0	7,267.0	11,956.7	7,498.0	77.7	78.5	-151.85	4,109.0	-1,315.3	262.0	185.9	76.09	3.443		
11,700.0	7,267.0	12,056.7	7,498.0	79.4	80.1	-151.37	4,209.0	-1,313.3	263.2	184.5	78.69	3.344		
11,800.0	7,267.0	12,156.6	7,498.0	81.0	81.8	-150.90	4,308.9	-1,311.2	264.4	183.1	81.34	3.250		
11,900.0	7,267.0	12,256.6	7,498.0	82.7	83.4	-150.43	4,408.9	-1,309.1	265.6	181.6	84.03	3.161		
12,000.0	7,267.0	12,356.6	7,498.0	84.3	85.1	-149.97	4,508.8	-1,307.0	266.8	180.1	86.75	3.076		
12,100.0	7,267.0	12,456.3	7,498.0	86.0	86.7	-149.51	4,608.5	-1,304.9	268.1	178.6	89.51	2.995		
12,200.0	7,267.0	12,553.9	7,498.0	87.6	88.4	-148.88	4,706.1	-1,303.8	269.9	177.2	92.66	2.913		
12,300.0	7,267.0	12,651.4	7,498.0	89.3	90.0	-147.97	4,803.6	-1,304.4	272.6	176.1	96.52	2.824		
12,400.0	7,267.0	12,750.8	7,498.0	91.0	91.7	-146.87	4,902.9	-1,306.1	276.0	175.1	100.92	2.735		
12,500.0	7,267.0	12,850.6	7,498.0	92.7	93.4	-145.79	5,002.7	-1,307.9	279.5	174.1	105.37	2.653		
12,600.0	7,267.0	12,950.4	7,498.0	94.3	95.1	-144.73	5,102.5	-1,309.6	283.1	173.3	109.85	2.577		
12,700.0	7,267.0	13,050.2	7,498.0	96.0	96.7	-143.70	5,202.3	-1,311.4	286.8	172.5	114.34	2.509		
12,800.0	7,267.0	13,150.0	7,498.0	97.7	98.4	-142.70	5,302.1	-1,313.1	290.6	171.8	118.84	2.445		
12,900.0	7,267.0	13,249.8	7,498.0	99.4	100.1	-141.72	5,401.9	-1,314.8	294.5	171.1	123.35	2.388		
13,000.0	7,267.0	13,349.6	7,498.0	101.1	101.8	-140.77	5,501.7	-1,316.6	298.5	170.6	127.86	2.334		
13,100.0	7,267.0	13,449.4	7,498.0	102.8	103.5	-139.84	5,601.4	-1,318.3	302.5	170.1	132.37	2.285		
13,200.0	7,267.0	13,549.2	7,498.0	104.5	105.2	-138.94	5,701.2	-1,320.1	306.6	169.7	136.88	2.240		
13,300.0	7,267.0	13,649.0	7,498.0	106.1	106.9	-138.06	5,801.0	-1,321.8	310.8	169.4	141.39	2.198		
13,400.0	7,267.0	13,748.8	7,498.0	107.8	108.6	-137.21	5,900.8	-1,323.5	315.1	169.2	145.89	2.160		
13,500.0	7,267.0	13,848.6	7,498.0	109.5	110.3	-136.38	6,000.6	-1,325.3	319.4	169.0	150.38	2.124		
13,600.0	7,267.0	13,948.4	7,498.0	111.2	112.0	-135.57	6,100.4	-1,327.0	323.8	169.0	154.86	2.091		
13,700.0	7,267.0	14,048.2	7,498.0	112.9	113.7	-134.78	6,200.1	-1,328.8	328.3	168.9	159.33	2.060		
13,800.0	7,267.0	14,148.0	7,498.0	114.6	115.4	-134.01	6,299.9	-1,330.5	332.8	169.0	163.78	2.032		
13,900.0	7,267.0	14,247.8	7,498.0	116.4	117.6	-133.86	6,430.2	-1,325.8	333.7	166.6	167.08	1.997		
14,000.0	7,267.0	14,413.6	7,498.0	118.1	119.8	-136.21	6,562.9	-1,300.8	323.7	160.0	163.71	1.978		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error: 0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						
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
14,047.5	7,267.0	14,412.1	7,498.0	118.9	119.8	-136.16	6,561.5	-1,301.2	320.2	155.9	164.38	1.948	
14,055.8	7,267.0	14,412.1	7,498.0	119.0	119.8	-136.16	6,561.5	-1,301.2	320.4	155.9	164.48	1.948 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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)				
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		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	10.1	10.1	9.1	0.94	10.680	CC, ES	
400.0	400.0	400.1	400.1	0.6	0.6	-162.36	-0.3	9.8	11.4	10.1	1.29	8.845		
500.0	499.8	500.4	500.3	0.8	0.8	-158.47	-2.9	7.4	14.0	12.4	1.65	8.521		
600.0	599.5	600.6	600.3	1.1	1.0	-151.41	-8.1	2.7	17.8	15.8	2.03	8.784		
700.0	698.7	700.8	699.9	1.3	1.3	-143.90	-15.8	-4.4	23.0	20.6	2.46	9.347		
800.0	797.5	800.8	799.0	1.6	1.5	-137.28	-26.1	-13.9	29.9	26.9	2.99	9.999		
819.4	816.6	820.3	818.2	1.7	1.6	-136.14	-28.4	-16.0	31.5	28.4	3.11	10.123		
900.0	895.8	900.7	897.3	2.0	1.9	-130.83	-38.8	-25.6	37.8	34.2	3.62	10.450		
1,000.0	994.2	1,000.3	995.2	2.3	2.2	-125.40	-52.3	-37.9	45.9	41.6	4.29	10.699		
1,100.0	1,092.6	1,099.9	1,093.1	2.6	2.5	-121.63	-65.8	-50.3	54.3	49.3	4.98	10.904		
1,200.0	1,190.9	1,199.5	1,191.0	3.0	2.9	-118.87	-79.3	-62.6	62.9	57.2	5.68	11.075		
1,300.0	1,289.3	1,299.1	1,288.9	3.4	3.2	-116.78	-92.8	-75.0	71.6	65.2	6.38	11.218		
1,400.0	1,387.6	1,398.7	1,386.8	3.7	3.6	-115.14	-106.2	-87.4	80.3	73.2	7.08	11.339		
1,500.0	1,486.0	1,498.3	1,484.7	4.1	3.9	-113.82	-119.7	-99.7	89.1	81.3	7.79	11.442		
1,600.0	1,584.4	1,597.9	1,582.6	4.4	4.3	-112.74	-133.2	-112.1	97.9	89.4	8.49	11.531		
1,700.0	1,682.7	1,697.5	1,680.5	4.8	4.7	-111.84	-146.7	-124.5	106.8	97.6	9.20	11.608		
1,800.0	1,781.1	1,797.1	1,778.4	5.1	5.0	-111.08	-160.2	-136.8	115.7	105.8	9.91	11.676		
1,900.0	1,879.4	1,896.6	1,876.3	5.5	5.4	-110.43	-173.6	-149.2	124.6	114.0	10.62	11.736		
2,000.0	1,977.8	1,996.2	1,974.2	5.9	5.7	-109.86	-187.1	-161.6	133.5	122.2	11.33	11.789		
2,100.0	2,076.2	2,095.8	2,072.1	6.2	6.1	-109.36	-200.6	-173.9	142.5	130.4	12.03	11.836		
2,200.0	2,174.5	2,195.4	2,170.0	6.6	6.5	-108.93	-214.1	-186.3	151.4	138.6	12.74	11.879		
2,300.0	2,272.9	2,295.0	2,267.9	6.9	6.8	-108.54	-227.6	-198.7	160.3	146.9	13.45	11.918		
2,400.0	2,371.2	2,394.6	2,365.8	7.3	7.2	-108.19	-241.1	-211.0	169.3	155.1	14.16	11.953		
2,500.0	2,469.6	2,494.2	2,463.7	7.7	7.6	-107.88	-254.5	-223.4	178.3	163.4	14.87	11.985		
2,600.0	2,568.0	2,593.8	2,561.6	8.0	7.9	-107.60	-268.0	-235.8	187.2	171.6	15.58	12.014		
2,700.0	2,666.3	2,693.4	2,659.5	8.4	8.3	-107.34	-281.5	-248.1	196.2	179.9	16.29	12.041		
2,800.0	2,764.7	2,793.0	2,757.4	8.8	8.7	-107.11	-295.0	-260.5	205.2	188.2	17.00	12.066		
2,900.0	2,863.1	2,892.6	2,855.3	9.1	9.0	-106.89	-308.5	-272.9	214.1	196.4	17.71	12.089		
3,000.0	2,961.4	2,992.2	2,953.2	9.5	9.4	-106.70	-321.9	-285.2	223.1	204.7	18.42	12.111		
3,100.0	3,059.8	3,091.8	3,051.1	9.8	9.7	-106.51	-335.4	-297.6	232.1	213.0	19.13	12.130		
3,200.0	3,158.1	3,191.4	3,149.0	10.2	10.1	-106.35	-348.9	-310.0	241.1	221.2	19.84	12.149		
3,300.0	3,256.5	3,291.0	3,246.9	10.6	10.5	-106.19	-362.4	-322.3	250.1	229.5	20.55	12.166		
3,400.0	3,354.9	3,390.5	3,344.8	10.9	10.8	-106.04	-375.9	-334.7	259.1	237.8	21.26	12.182		
3,500.0	3,453.2	3,490.1	3,442.7	11.3	11.2	-105.91	-389.3	-347.1	268.0	246.1	21.98	12.197		
3,600.0	3,551.6	3,589.7	3,540.6	11.7	11.6	-105.78	-402.8	-359.4	277.0	254.3	22.69	12.212		
3,700.0	3,649.9	3,689.3	3,638.5	12.0	11.9	-105.66	-416.3	-371.8	286.0	262.6	23.40	12.225		
3,800.0	3,748.3	3,788.9	3,736.4	12.4	12.3	-105.55	-429.8	-384.2	295.0	270.9	24.11	12.238		
3,900.0	3,846.7	3,888.5	3,834.3	12.8	12.7	-105.45	-443.3	-396.5	304.0	279.2	24.82	12.250		
4,000.0	3,945.0	3,988.1	3,932.2	13.1	13.0	-105.35	-456.7	-408.9	313.0	287.5	25.53	12.261		
4,100.0	4,043.4	4,087.7	4,030.1	13.5	13.4	-105.25	-470.2	-421.2	322.0	295.8	26.24	12.272		
4,200.0	4,141.7	4,187.3	4,128.0	13.8	13.8	-105.16	-483.7	-433.6	331.0	304.0	26.95	12.282		
4,300.0	4,240.1	4,286.9	4,225.9	14.2	14.1	-105.08	-497.2	-446.0	340.0	312.3	27.66	12.292		
4,400.0	4,338.5	4,386.5	4,323.8	14.6	14.5	-105.00	-510.7	-458.3	349.0	320.6	28.37	12.301		
4,500.0	4,436.8	4,486.1	4,421.7	14.9	14.9	-104.93	-524.2	-470.7	358.0	328.9	29.08	12.310		
4,600.0	4,535.2	4,585.7	4,519.6	15.3	15.2	-104.85	-537.6	-483.1	367.0	337.2	29.79	12.318		
4,700.0	4,633.5	4,685.3	4,617.5	15.7	15.6	-104.79	-551.1	-495.4	376.0	345.5	30.50	12.326		
4,800.0	4,731.9	4,784.9	4,715.4	16.0	15.9	-104.72	-564.6	-507.8	385.0	353.8	31.21	12.334		
4,900.0	4,830.3	4,884.4	4,813.3	16.4	16.3	-104.66	-578.1	-520.2	394.0	362.1	31.92	12.341		
5,000.0	4,928.6	4,984.0	4,911.2	16.7	16.7	-104.60	-591.6	-532.5	403.0	370.3	32.63	12.348		

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 4C-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 4C-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 #3	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						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,027.0	5,083.6	5,009.1	17.1	17.0	-104.54	-605.0	-544.9	412.0	378.6	33.35	12.355		
5,200.0	5,125.4	5,183.2	5,107.0	17.5	17.4	-104.49	-618.5	-557.3	421.0	386.9	34.06	12.362		
5,300.0	5,223.7	5,282.8	5,204.9	17.8	17.8	-104.44	-632.0	-569.6	430.0	395.2	34.77	12.368		
5,400.0	5,322.1	5,382.4	5,302.8	18.2	18.1	-104.39	-645.5	-582.0	439.0	403.5	35.48	12.374		
5,500.0	5,420.4	5,482.0	5,400.7	18.6	18.5	-104.34	-659.0	-594.4	448.0	411.8	36.19	12.379		
5,600.0	5,518.8	5,581.6	5,498.6	18.9	18.9	-104.29	-672.4	-606.7	457.0	420.1	36.90	12.385		
5,700.0	5,617.2	5,681.2	5,596.5	19.3	19.2	-104.25	-685.9	-619.1	466.0	428.4	37.61	12.390		
5,800.0	5,715.5	5,780.8	5,694.4	19.7	19.6	-104.21	-699.4	-631.5	475.0	436.7	38.32	12.395		
5,900.0	5,813.9	5,880.4	5,792.3	20.0	20.0	-104.16	-712.9	-643.8	484.0	445.0	39.03	12.400		
6,000.0	5,912.2	5,980.0	5,890.2	20.4	20.3	-104.13	-726.4	-656.2	493.0	453.3	39.74	12.405		
6,100.0	6,010.6	6,079.6	5,988.1	20.7	20.7	-104.09	-739.8	-668.6	502.0	461.6	40.45	12.410		
6,200.0	6,109.0	6,179.2	6,086.0	21.1	21.1	-104.05	-753.3	-680.9	511.0	469.8	41.16	12.414		
6,300.0	6,207.3	6,278.8	6,183.9	21.5	21.4	-104.02	-766.8	-693.3	520.0	478.1	41.87	12.418		
6,400.0	6,305.7	6,378.3	6,281.8	21.8	21.8	-103.98	-780.3	-705.7	529.0	486.4	42.59	12.423		
6,500.0	6,404.0	6,477.9	6,379.7	22.2	22.2	-103.95	-793.8	-718.0	538.0	494.7	43.30	12.427		
6,600.0	6,502.4	6,577.5	6,477.6	22.6	22.5	-103.92	-807.3	-730.4	547.0	503.0	44.01	12.430		
6,700.0	6,600.8	6,677.1	6,575.5	22.9	22.9	-103.88	-820.7	-742.8	556.0	511.3	44.72	12.434		
6,771.0	6,670.6	6,747.8	6,645.0	23.2	23.1	-103.86	-830.3	-751.5	562.4	517.2	45.22	12.437		
6,800.0	6,699.2	6,776.6	6,673.3	23.3	23.3	-120.04	-834.2	-755.1	565.7	520.4	45.30	12.487		
6,850.0	6,748.4	6,825.8	6,721.7	23.4	23.4	-147.21	-840.9	-761.2	574.1	528.9	45.22	12.697		
6,900.0	6,797.2	6,874.1	6,769.1	23.6	23.6	-166.32	-847.4	-767.2	586.2	541.4	44.87	13.065		
6,950.0	6,845.4	6,921.1	6,815.3	23.7	23.8	-178.06	-853.8	-773.0	601.9	557.7	44.27	13.598		
7,000.0	6,892.4	7,070.6	6,963.1	23.8	24.2	176.10	-863.2	-791.7	620.6	577.0	43.61	14.230		
7,050.0	6,938.0	7,724.4	7,459.4	23.8	22.0	160.31	-498.8	-854.4	609.5	569.3	40.21	15.158		
7,100.0	6,981.8	7,940.8	7,498.0	23.9	21.2	143.62	-287.3	-859.3	576.1	540.9	35.25	16.344		
7,150.0	7,023.5	7,967.3	7,498.0	24.0	21.1	142.39	-260.8	-859.3	542.7	508.5	34.25	15.846		
7,200.0	7,062.8	7,997.4	7,498.0	24.0	21.0	141.04	-230.6	-859.3	512.5	479.5	32.97	15.543		
7,250.0	7,099.3	8,030.9	7,498.0	24.1	21.0	139.51	-197.2	-859.3	485.6	454.1	31.53	15.401		
7,300.0	7,132.8	8,067.5	7,498.0	24.1	20.9	137.81	-160.6	-859.3	462.2	432.2	30.06	15.380		
7,350.0	7,163.0	8,106.9	7,498.0	24.2	20.9	135.99	-121.1	-859.3	442.4	413.8	28.65	15.441		
7,400.0	7,189.7	8,148.9	7,498.0	24.2	20.9	134.11	-79.2	-859.3	426.0	398.6	27.42	15.538		
7,450.0	7,212.7	8,193.1	7,498.0	24.3	20.9	132.26	-35.0	-859.3	412.8	386.3	26.51	15.574		
7,500.0	7,231.8	8,239.1	7,498.0	24.4	21.0	130.53	11.0	-859.3	402.6	376.6	26.00	15.484		
7,550.0	7,246.9	8,286.6	7,498.0	24.5	21.1	129.02	58.6	-859.3	395.1	369.4	25.75	15.348		
7,600.0	7,257.8	8,335.4	7,498.0	24.7	21.2	127.83	107.3	-859.3	390.1	364.2	25.87	15.079		
7,650.0	7,264.5	8,384.9	7,498.0	24.8	21.4	127.04	156.8	-859.3	387.3	361.0	26.33	14.710		
7,694.6	7,266.9	8,429.3	7,498.0	25.0	21.5	126.72	201.3	-859.3	386.5	359.5	26.98	14.324		
7,703.4	7,267.0	8,438.2	7,498.0	25.0	21.6	126.70	210.1	-859.3	386.5	359.4	27.14	14.245		
7,800.0	7,267.0	8,534.8	7,498.0	25.4	22.1	126.63	306.7	-859.3	387.2	358.9	28.29	13.687		
7,900.0	7,267.0	8,634.8	7,498.0	26.0	22.7	126.55	406.7	-859.3	387.9	358.2	29.71	13.058		
8,000.0	7,267.0	8,734.8	7,498.0	26.6	23.4	126.47	506.7	-859.3	388.6	357.3	31.32	12.408		
8,100.0	7,267.0	8,834.8	7,498.0	27.4	24.3	126.40	606.7	-859.3	389.3	356.2	33.10	11.762		
8,200.0	7,267.0	8,934.8	7,498.0	28.2	25.2	126.32	706.7	-859.3	390.0	355.0	35.03	11.135		
8,300.0	7,267.0	9,034.8	7,498.0	29.1	26.2	126.24	806.7	-859.3	390.7	353.6	37.07	10.539		
8,400.0	7,267.0	9,134.7	7,498.0	30.1	27.3	126.17	906.7	-859.3	391.4	352.2	39.23	9.978		
8,500.0	7,267.0	9,234.7	7,498.0	31.2	28.5	126.09	1,006.7	-859.3	392.1	350.7	41.47	9.455		
8,600.0	7,267.0	9,334.7	7,498.0	32.3	29.7	126.02	1,106.7	-859.3	392.8	349.0	43.79	8.970		
8,700.0	7,267.0	9,434.7	7,498.0	33.5	31.0	125.94	1,206.7	-859.3	393.5	347.4	46.18	8.522		
8,800.0	7,267.0	9,534.7	7,498.0	34.7	32.3	125.87	1,306.7	-859.3	394.3	345.6	48.62	8.108		
8,900.0	7,267.0	9,634.7	7,498.0	36.0	33.7	125.79	1,406.7	-859.3	395.0	343.8	51.12	7.727		
9,000.0	7,267.0	9,734.7	7,498.0	37.3	35.1	125.72	1,506.7	-859.3	395.7	342.0	53.65	7.374		
9,100.0	7,267.0	9,834.7	7,498.0	38.6	36.5	125.65	1,606.7	-859.3	396.4	340.1	56.23	7.049		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,200.0	7,267.0	9,934.7	7,498.0	40.0	38.0	125.57	1,706.7	-859.3	397.1	338.2	58.84	6.748	
9,300.0	7,267.0	10,034.7	7,498.0	41.4	39.4	125.50	1,806.6	-859.3	397.8	336.3	61.48	6.470	
9,400.0	7,267.0	10,134.7	7,498.0	42.8	40.9	125.43	1,906.6	-859.3	398.5	334.4	64.15	6.212	
9,500.0	7,267.0	10,234.7	7,498.0	44.3	42.5	125.36	2,006.6	-859.3	399.2	332.4	66.84	5.972	
9,600.0	7,267.0	10,334.7	7,498.0	45.8	44.0	125.28	2,106.6	-859.3	399.9	330.4	69.56	5.749	
9,700.0	7,267.0	10,434.7	7,498.0	47.3	45.5	125.21	2,206.6	-859.3	400.6	328.3	72.30	5.542	
9,800.0	7,267.0	10,534.7	7,498.0	48.8	47.1	125.14	2,306.6	-859.3	401.4	326.3	75.05	5.348	
9,900.0	7,267.0	10,634.7	7,498.0	50.3	48.7	125.07	2,406.6	-859.3	402.1	324.2	77.82	5.167	
10,000.0	7,267.0	10,734.7	7,498.0	51.9	50.3	125.00	2,506.6	-859.3	402.8	322.2	80.61	4.997	
10,100.0	7,267.0	10,834.7	7,498.0	53.4	51.9	124.93	2,606.6	-859.3	403.5	320.1	83.41	4.837	
10,200.0	7,267.0	10,934.7	7,498.0	55.0	53.5	124.85	2,706.6	-859.3	404.2	318.0	86.23	4.688	
10,300.0	7,267.0	11,034.7	7,498.0	56.6	55.1	124.78	2,806.6	-859.3	404.9	315.9	89.06	4.547	
10,400.0	7,267.0	11,134.7	7,498.0	58.1	56.7	124.71	2,906.6	-859.3	405.6	313.7	91.90	4.414	
10,500.0	7,267.0	11,234.7	7,498.0	59.7	58.4	124.64	3,006.6	-859.3	406.4	311.6	94.75	4.289	
10,600.0	7,267.0	11,334.7	7,498.0	61.4	60.0	124.57	3,106.6	-859.3	407.1	309.5	97.62	4.170	
10,700.0	7,267.0	11,434.7	7,498.0	63.0	61.7	124.50	3,206.6	-859.3	407.8	307.3	100.49	4.058	
10,800.0	7,267.0	11,534.7	7,498.0	64.6	63.3	124.43	3,306.6	-859.3	408.5	305.1	103.37	3.952	
10,900.0	7,267.0	11,634.7	7,498.0	66.2	65.0	124.37	3,406.6	-859.3	409.2	303.0	106.27	3.851	
11,000.0	7,267.0	11,734.6	7,498.0	67.9	66.6	124.30	3,506.6	-859.3	410.0	300.8	109.17	3.755	
11,100.0	7,267.0	11,834.6	7,498.0	69.5	68.3	124.23	3,606.6	-859.3	410.7	298.6	112.08	3.664	
11,200.0	7,267.0	11,934.6	7,498.0	71.1	70.0	124.16	3,706.6	-859.3	411.4	296.4	115.00	3.578	
11,233.4	7,267.0	11,968.1	7,498.0	71.7	70.5	124.14	3,740.0	-859.3	411.6	295.7	115.97	3.549	
11,300.0	7,267.0	12,034.6	7,498.0	72.8	71.7	124.12	3,806.6	-859.3	411.8	294.2	117.57	3.503	
11,400.0	7,267.0	12,134.6	7,498.0	74.4	73.3	124.22	3,906.6	-859.3	410.8	291.1	119.79	3.430	
11,500.0	7,267.0	12,234.6	7,498.0	76.1	75.0	124.46	4,006.5	-859.3	408.4	286.7	121.78	3.354	
11,545.9	7,267.0	12,280.4	7,498.0	76.8	75.8	124.62	4,052.4	-859.3	406.9	284.3	122.61	3.318	
11,600.0	7,267.0	12,334.5	7,498.0	77.7	76.7	124.82	4,106.4	-859.3	404.8	281.0	123.87	3.268	
11,700.0	7,267.0	12,434.4	7,498.0	79.4	78.4	125.19	4,206.3	-859.3	401.1	274.9	126.17	3.179	
11,800.0	7,267.0	12,534.3	7,498.0	81.0	80.1	125.58	4,306.2	-859.3	397.3	268.9	128.43	3.094	
11,900.0	7,267.0	12,634.2	7,498.0	82.7	81.8	125.96	4,406.1	-859.3	393.6	263.0	130.66	3.013	
12,000.0	7,267.0	12,734.1	7,498.0	84.3	83.5	126.36	4,506.0	-859.3	389.9	257.1	132.84	2.935	
12,100.0	7,267.0	12,834.0	7,498.0	86.0	85.2	126.76	4,605.9	-859.3	386.2	251.3	134.98	2.861	
12,200.0	7,267.0	12,933.9	7,498.0	87.6	86.9	127.17	4,705.8	-859.3	382.6	245.5	137.07	2.791	
12,300.0	7,267.0	13,033.8	7,498.0	89.3	88.6	127.59	4,805.7	-859.3	378.9	239.8	139.12	2.724	
12,400.0	7,267.0	13,133.7	7,498.0	91.0	90.3	128.02	4,905.6	-859.3	375.3	234.2	141.12	2.660	
12,500.0	7,267.0	13,233.5	7,498.0	92.7	92.0	128.45	5,005.5	-859.3	371.7	228.7	143.06	2.598	
12,600.0	7,267.0	13,333.4	7,498.0	94.3	93.7	128.89	5,105.4	-859.3	368.1	223.2	144.95	2.540	
12,700.0	7,267.0	13,433.3	7,498.0	96.0	95.4	129.34	5,205.3	-859.3	364.6	217.8	146.79	2.484	
12,800.0	7,267.0	13,533.2	7,498.0	97.7	97.1	129.80	5,305.2	-859.3	361.1	212.5	148.57	2.430	
12,900.0	7,267.0	13,633.1	7,498.0	99.4	98.8	130.27	5,405.1	-859.3	357.6	207.3	150.28	2.379	
13,000.0	7,267.0	13,733.0	7,498.0	101.1	100.5	130.75	5,505.0	-859.3	354.1	202.1	151.93	2.330	
13,100.0	7,267.0	13,832.9	7,498.0	102.8	102.3	131.24	5,604.8	-859.3	350.6	197.1	153.52	2.284	
13,200.0	7,267.0	13,932.8	7,498.0	104.5	104.0	131.74	5,704.7	-859.3	347.2	192.1	155.04	2.239	
13,300.0	7,267.0	14,032.7	7,498.0	106.1	105.7	132.25	5,804.6	-859.3	343.8	187.3	156.49	2.197	
13,400.0	7,267.0	14,132.6	7,498.0	107.8	107.4	132.77	5,904.5	-859.3	340.4	182.5	157.86	2.156	
13,500.0	7,267.0	14,232.5	7,498.0	109.5	109.1	133.29	6,004.4	-859.3	337.1	177.9	159.15	2.118	
13,600.0	7,267.0	14,332.4	7,498.0	111.2	110.8	133.83	6,104.3	-859.3	333.7	173.4	160.37	2.081	
13,700.0	7,267.0	14,432.3	7,498.0	112.9	112.6	134.38	6,204.2	-859.3	330.4	168.9	161.50	2.046	
13,800.0	7,267.0	14,532.2	7,498.0	114.6	114.3	134.94	6,304.1	-859.3	327.2	164.6	162.55	2.013	
13,900.0	7,267.0	14,632.1	7,498.0	116.4	116.0	135.51	6,404.0	-859.3	324.0	160.5	163.50	1.981	
14,000.0	7,267.0	14,732.0	7,498.0	118.1	117.7	136.10	6,503.9	-859.3	320.8	156.4	164.37	1.951	
14,055.8	7,267.0	14,786.3	7,498.0	119.0	118.7	136.42	6,558.2	-859.3	319.0	154.2	164.81	1.935 SF	

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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	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		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	20.1	20.1	19.2	0.94	21.360 CC, ES		
400.0	400.0	400.0	400.0	0.6	0.6	-162.63	0.0	20.1	21.8	20.5	1.29	16.874		
500.0	499.8	500.4	500.4	0.8	0.8	-162.92	-1.5	19.1	25.8	24.1	1.64	15.684		
600.0	599.5	600.8	600.6	1.1	1.0	-159.76	-5.8	16.2	31.0	29.0	2.01	15.475		
700.0	698.7	701.1	700.6	1.3	1.2	-154.95	-13.1	11.2	37.9	35.5	2.40	15.747		
800.0	797.5	801.3	800.0	1.6	1.5	-149.71	-23.2	4.3	46.5	43.6	2.87	16.207		
819.4	816.6	820.8	819.3	1.7	1.5	-148.71	-25.5	2.7	48.4	45.4	2.97	16.291		
900.0	895.8	901.3	898.8	2.0	1.8	-144.16	-36.1	-4.6	56.1	52.7	3.42	16.412		
1,000.0	994.2	1,000.7	996.7	2.3	2.1	-139.04	-50.2	-14.2	65.9	61.9	4.03	16.346		
1,100.0	1,092.6	1,100.1	1,094.6	2.6	2.4	-135.25	-64.3	-23.9	76.0	71.3	4.67	16.290		
1,200.0	1,190.9	1,199.5	1,192.5	3.0	2.7	-132.37	-78.5	-33.5	86.4	81.1	5.32	16.248		
1,300.0	1,289.3	1,298.8	1,290.4	3.4	3.1	-130.10	-92.6	-43.2	96.9	91.0	5.98	16.219		
1,400.0	1,387.6	1,398.2	1,388.3	3.7	3.4	-128.29	-106.7	-52.8	107.6	101.0	6.64	16.199		
1,500.0	1,486.0	1,497.6	1,486.1	4.1	3.7	-126.80	-120.8	-62.5	118.4	111.0	7.31	16.187		
1,600.0	1,584.4	1,597.0	1,584.0	4.4	4.1	-125.56	-134.9	-72.1	129.2	121.2	7.98	16.180		
1,700.0	1,682.7	1,696.3	1,681.9	4.8	4.4	-124.51	-149.0	-81.8	140.0	131.4	8.66	16.176		
1,800.0	1,781.1	1,795.7	1,779.8	5.1	4.7	-123.61	-163.1	-91.4	151.0	141.6	9.33	16.175		
1,900.0	1,879.4	1,895.1	1,877.7	5.5	5.1	-122.84	-177.2	-101.1	161.9	151.9	10.01	16.176		
2,000.0	1,977.8	1,994.5	1,975.6	5.9	5.4	-122.16	-191.3	-110.7	172.9	162.2	10.69	16.178		
2,100.0	2,076.2	2,093.9	2,073.5	6.2	5.8	-121.56	-205.5	-120.4	183.9	172.5	11.36	16.181		
2,200.0	2,174.5	2,193.2	2,171.4	6.6	6.1	-121.03	-219.6	-130.0	194.9	182.8	12.04	16.184		
2,300.0	2,272.9	2,292.6	2,269.3	6.9	6.5	-120.56	-233.7	-139.7	205.9	193.2	12.72	16.188		
2,400.0	2,371.2	2,392.0	2,367.2	7.3	6.8	-120.13	-247.8	-149.3	216.9	203.5	13.40	16.192		
2,500.0	2,469.6	2,491.4	2,465.1	7.7	7.1	-119.75	-261.9	-159.0	228.0	213.9	14.08	16.196		
2,600.0	2,568.0	2,590.7	2,563.0	8.0	7.5	-119.40	-276.0	-168.6	239.0	224.3	14.75	16.200		
2,700.0	2,666.3	2,690.1	2,660.9	8.4	7.8	-119.08	-290.1	-178.3	250.1	234.6	15.43	16.204		
2,800.0	2,764.7	2,789.5	2,758.8	8.8	8.2	-118.79	-304.2	-187.9	261.1	245.0	16.11	16.208		
2,900.0	2,863.1	2,888.9	2,856.7	9.1	8.5	-118.53	-318.3	-197.6	272.2	255.4	16.79	16.212		
3,000.0	2,961.4	2,988.3	2,954.6	9.5	8.9	-118.28	-332.5	-207.2	283.3	265.8	17.47	16.216		
3,100.0	3,059.8	3,087.6	3,052.5	9.8	9.2	-118.05	-346.6	-216.9	294.4	276.2	18.15	16.220		
3,200.0	3,158.1	3,187.0	3,150.4	10.2	9.6	-117.84	-360.7	-226.5	305.5	286.6	18.83	16.223		
3,300.0	3,256.5	3,286.4	3,248.3	10.6	9.9	-117.65	-374.8	-236.2	316.6	297.1	19.51	16.227		
3,400.0	3,354.9	3,385.8	3,346.2	10.9	10.2	-117.46	-388.9	-245.8	327.7	307.5	20.19	16.230		
3,500.0	3,453.2	3,485.1	3,444.1	11.3	10.6	-117.29	-403.0	-255.5	338.8	317.9	20.87	16.234		
3,600.0	3,551.6	3,584.5	3,542.0	11.7	10.9	-117.13	-417.1	-265.1	349.9	328.3	21.55	16.237		
3,700.0	3,649.9	3,683.9	3,639.9	12.0	11.3	-116.98	-431.2	-274.8	361.0	338.7	22.23	16.240		
3,800.0	3,748.3	3,783.3	3,737.8	12.4	11.6	-116.84	-445.3	-284.4	372.1	349.2	22.91	16.243		
3,900.0	3,846.7	3,882.6	3,835.7	12.8	12.0	-116.71	-459.5	-294.1	383.2	359.6	23.59	16.246		
4,000.0	3,945.0	3,982.0	3,933.5	13.1	12.3	-116.58	-473.6	-303.7	394.3	370.0	24.27	16.249		
4,100.0	4,043.4	4,081.4	4,031.4	13.5	12.7	-116.46	-487.7	-313.4	405.4	380.5	24.95	16.252		
4,200.0	4,141.7	4,180.8	4,129.3	13.8	13.0	-116.35	-501.8	-323.0	416.5	390.9	25.62	16.255		
4,300.0	4,240.1	4,280.2	4,227.2	14.2	13.4	-116.24	-515.9	-332.7	427.6	401.3	26.30	16.257		
4,400.0	4,338.5	4,379.5	4,325.1	14.6	13.7	-116.14	-530.0	-342.3	438.8	411.8	26.98	16.260		
4,500.0	4,436.8	4,478.9	4,423.0	14.9	14.0	-116.05	-544.1	-352.0	449.9	422.2	27.66	16.262		
4,600.0	4,535.2	4,578.3	4,520.9	15.3	14.4	-115.96	-558.2	-361.6	461.0	432.6	28.34	16.264		
4,700.0	4,633.5	4,677.7	4,618.8	15.7	14.7	-115.87	-572.3	-371.3	472.1	443.1	29.02	16.266		
4,800.0	4,731.9	4,777.0	4,716.7	16.0	15.1	-115.79	-586.5	-380.9	483.2	453.5	29.70	16.269		
4,900.0	4,830.3	4,876.4	4,814.6	16.4	15.4	-115.71	-600.6	-390.6	494.4	464.0	30.38	16.271		
5,000.0	4,928.6	4,975.8	4,912.5	16.7	15.8	-115.63	-614.7	-400.2	505.5	474.4	31.06	16.273		

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 4C-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 4C-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 #3	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		
5,100.0	5,027.0	5,075.2	5,010.4	17.1	16.1	-115.56	-628.8	-409.9	516.6	484.9	31.74	16.275		
5,200.0	5,125.4	5,174.5	5,108.3	17.5	16.5	-115.49	-642.9	-419.5	527.7	495.3	32.42	16.277		
5,300.0	5,223.7	5,273.9	5,206.2	17.8	16.8	-115.42	-657.0	-429.2	538.9	505.8	33.10	16.278		
5,400.0	5,322.1	5,373.3	5,304.1	18.2	17.2	-115.36	-671.1	-438.8	550.0	516.2	33.78	16.280		
5,500.0	5,420.4	5,472.7	5,402.0	18.6	17.5	-115.30	-685.2	-448.5	561.1	526.6	34.46	16.282		
5,600.0	5,518.8	5,572.1	5,499.9	18.9	17.9	-115.24	-699.3	-458.1	572.2	537.1	35.14	16.284		
5,700.0	5,617.2	5,671.4	5,597.8	19.3	18.2	-115.18	-713.4	-467.8	583.4	547.5	35.82	16.285		
5,800.0	5,715.5	5,770.8	5,695.7	19.7	18.5	-115.13	-727.6	-477.4	594.5	558.0	36.50	16.287		
5,900.0	5,813.9	5,870.2	5,793.6	20.0	18.9	-115.07	-741.7	-487.1	605.6	568.4	37.18	16.288		
6,000.0	5,912.2	5,969.6	5,891.5	20.4	19.2	-115.02	-755.8	-496.7	616.8	578.9	37.86	16.290		
6,100.0	6,010.6	6,068.9	5,989.4	20.7	19.6	-114.97	-769.9	-506.4	627.9	589.3	38.54	16.291		
6,200.0	6,109.0	6,168.3	6,087.3	21.1	19.9	-114.93	-784.0	-516.0	639.0	599.8	39.22	16.293		
6,300.0	6,207.3	6,267.7	6,185.2	21.5	20.3	-114.88	-798.1	-525.7	650.1	610.2	39.90	16.294		
6,400.0	6,305.7	6,367.1	6,283.0	21.8	20.6	-114.84	-812.2	-535.3	661.3	620.7	40.58	16.295		
6,500.0	6,404.0	6,466.5	6,380.9	22.2	21.0	-114.79	-826.3	-545.0	672.4	631.1	41.26	16.297		
6,600.0	6,502.4	6,565.8	6,478.8	22.6	21.3	-114.75	-840.4	-554.6	683.5	641.6	41.94	16.298		
6,700.0	6,600.8	6,665.2	6,576.7	22.9	21.7	-114.71	-854.6	-564.3	694.7	652.1	42.62	16.299		
6,771.0	6,670.6	6,961.4	6,868.1	23.2	21.9	-117.87	-839.5	-593.0	697.5	654.6	42.90	16.260		
6,800.0	6,699.2	7,148.1	7,033.2	23.3	21.2	-139.82	-755.7	-609.2	689.0	647.5	41.42	16.632		
6,850.0	6,748.4	7,348.4	7,170.5	23.4	20.0	-176.26	-611.9	-622.8	667.2	629.3	37.92	17.594		
6,900.0	6,797.2	7,465.0	7,224.9	23.6	19.3	158.49	-509.1	-628.1	643.0	607.9	35.06	18.338		
6,950.0	6,845.4	7,543.8	7,249.4	23.7	18.9	142.81	-434.3	-630.6	619.2	586.2	33.00	18.765		
7,000.0	6,892.4	7,603.7	7,261.1	23.8	18.6	132.64	-375.6	-631.7	597.3	565.8	31.45	18.992		
7,050.0	6,938.0	7,653.2	7,266.0	23.8	18.4	125.48	-326.4	-632.2	577.6	547.4	30.20	19.126		
7,100.0	6,981.8	7,692.3	7,267.0	23.9	18.2	120.35	-287.3	-632.3	560.8	531.6	29.26	19.167		
7,150.0	7,023.5	7,718.8	7,267.0	24.0	18.2	116.97	-260.8	-632.3	547.5	518.9	28.64	19.120		
7,200.0	7,062.8	7,748.9	7,267.0	24.0	18.1	113.63	-230.6	-632.3	537.8	509.8	27.99	19.213		
7,250.0	7,099.3	7,782.4	7,267.0	24.1	18.0	110.26	-197.2	-632.3	531.3	503.9	27.41	19.386		
7,300.0	7,132.8	7,819.0	7,267.0	24.1	18.0	106.89	-160.6	-632.3	527.7	500.7	26.99	19.552		
7,350.0	7,163.0	7,858.4	7,267.0	24.2	17.9	103.57	-121.1	-632.3	526.3	499.5	26.77	19.658		
7,362.9	7,170.2	7,869.0	7,267.0	24.2	17.9	102.74	-110.6	-632.3	526.2	499.5	26.75	19.674		
7,400.0	7,189.7	7,900.4	7,267.0	24.2	17.9	100.42	-79.2	-632.3	526.6	499.9	26.72	19.712		
7,450.0	7,212.7	7,944.6	7,267.0	24.3	18.0	97.53	-35.0	-632.3	528.1	501.2	26.88	19.644		
7,500.0	7,231.8	7,990.6	7,267.0	24.4	18.0	95.00	11.0	-632.3	530.2	503.1	27.11	19.555		
7,550.0	7,246.9	8,038.2	7,267.0	24.5	18.1	92.93	58.6	-632.3	532.5	505.0	27.47	19.385		
7,600.0	7,257.8	8,086.9	7,267.0	24.7	18.3	91.37	107.3	-632.3	534.5	506.6	27.85	19.189		
7,650.0	7,264.5	8,136.4	7,267.0	24.8	18.5	90.39	156.8	-632.3	536.0	507.7	28.31	18.933		
7,703.4	7,267.0	8,189.7	7,267.0	25.0	18.7	90.00	210.1	-632.3	536.9	508.1	28.83	18.620		
7,800.0	7,267.0	8,286.3	7,267.0	25.4	19.3	90.00	306.7	-632.3	537.7	507.4	30.30	17.747		
7,900.0	7,267.0	8,386.3	7,267.0	26.0	20.0	90.00	406.7	-632.3	538.6	506.5	32.13	16.766		
8,000.0	7,267.0	8,486.3	7,267.0	26.6	20.8	90.00	506.7	-632.3	539.5	505.3	34.21	15.769		
8,100.0	7,267.0	8,586.3	7,267.0	27.4	21.8	90.00	606.7	-632.3	540.4	503.8	36.52	14.797		
8,200.0	7,267.0	8,686.3	7,267.0	28.2	22.8	90.00	706.7	-632.3	541.2	502.2	39.00	13.877		
8,300.0	7,267.0	8,786.3	7,267.0	29.1	23.9	90.00	806.7	-632.3	542.1	500.5	41.64	13.020		
8,400.0	7,267.0	8,886.3	7,267.0	30.1	25.1	90.00	906.7	-632.3	543.0	498.6	44.39	12.232		
8,500.0	7,267.0	8,986.3	7,267.0	31.2	26.4	90.00	1,006.7	-632.3	543.9	496.6	47.24	11.512		
8,600.0	7,267.0	9,086.3	7,267.0	32.3	27.7	90.00	1,106.7	-632.3	544.7	494.5	50.18	10.855		
8,700.0	7,267.0	9,186.2	7,267.0	33.5	29.1	90.00	1,206.7	-632.3	545.6	492.4	53.19	10.258		
8,800.0	7,267.0	9,286.2	7,267.0	34.7	30.5	90.00	1,306.7	-632.3	546.5	490.2	56.25	9.715		
8,900.0	7,267.0	9,386.2	7,267.0	36.0	31.9	90.00	1,406.7	-632.3	547.3	488.0	59.36	9.220		
9,000.0	7,267.0	9,486.2	7,267.0	37.3	33.4	90.00	1,506.7	-632.3	548.2	485.7	62.52	8.769		
9,100.0	7,267.0	9,586.2	7,267.0	38.6	34.9	90.00	1,606.7	-632.3	549.1	483.4	65.71	8.356		

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 4C-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 4C-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 #3	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				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
9,200.0	7,267.0	9,686.2	7,267.0	40.0	36.4	90.00	1,706.7	-632.3	550.0	481.0	68.93	7.978		
9,300.0	7,267.0	9,786.2	7,267.0	41.4	37.9	90.00	1,806.6	-632.3	550.8	478.7	72.18	7.631		
9,400.0	7,267.0	9,886.2	7,267.0	42.8	39.5	90.00	1,906.6	-632.3	551.7	476.3	75.45	7.312		
9,500.0	7,267.0	9,986.2	7,267.0	44.3	41.1	90.00	2,006.6	-632.3	552.6	473.8	78.75	7.017		
9,600.0	7,267.0	10,086.2	7,267.0	45.8	42.6	90.00	2,106.6	-632.3	553.5	471.4	82.06	6.745		
9,700.0	7,267.0	10,186.2	7,267.0	47.3	44.2	90.00	2,206.6	-632.3	554.3	468.9	85.38	6.492		
9,800.0	7,267.0	10,286.2	7,267.0	48.8	45.9	90.00	2,306.6	-632.3	555.2	466.5	88.72	6.258		
9,900.0	7,267.0	10,386.2	7,267.0	50.3	47.5	90.00	2,406.6	-632.3	556.1	464.0	92.07	6.039		
10,000.0	7,267.0	10,486.2	7,267.0	51.9	49.1	90.00	2,506.6	-632.3	556.9	461.5	95.44	5.836		
10,100.0	7,267.0	10,586.2	7,267.0	53.4	50.7	90.00	2,606.6	-632.3	557.8	459.0	98.81	5.645		
10,200.0	7,267.0	10,686.2	7,267.0	55.0	52.4	90.00	2,706.6	-632.3	558.7	456.5	102.19	5.467		
10,300.0	7,267.0	10,786.2	7,267.0	56.6	54.0	90.00	2,806.6	-632.3	559.6	454.0	105.58	5.300		
10,400.0	7,267.0	10,886.2	7,267.0	58.1	55.7	90.00	2,906.6	-632.3	560.4	451.4	108.98	5.142		
10,500.0	7,267.0	10,986.2	7,267.0	59.7	57.4	90.00	3,006.6	-632.3	561.3	448.9	112.39	4.994		
10,600.0	7,267.0	11,086.2	7,267.0	61.4	59.0	90.00	3,106.6	-632.3	562.2	446.4	115.80	4.855		
10,700.0	7,267.0	11,186.2	7,267.0	63.0	60.7	90.00	3,206.6	-632.3	563.0	443.8	119.21	4.723		
10,800.0	7,267.0	11,286.2	7,267.0	64.6	62.4	90.00	3,306.6	-632.3	563.9	441.3	122.64	4.598		
10,900.0	7,267.0	11,386.2	7,267.0	66.2	64.1	90.00	3,406.6	-632.3	564.8	438.7	126.06	4.480		
11,000.0	7,267.0	11,486.2	7,267.0	67.9	65.7	90.00	3,506.6	-632.3	565.7	436.2	129.49	4.368		
11,100.0	7,267.0	11,586.2	7,267.0	69.5	67.4	90.00	3,606.6	-632.3	566.5	433.6	132.93	4.262		
11,200.0	7,267.0	11,686.2	7,267.0	71.1	69.1	90.00	3,706.6	-632.3	567.4	431.0	136.37	4.161		
11,233.4	7,267.0	11,719.6	7,267.0	71.7	69.7	90.00	3,740.0	-632.3	567.7	430.2	137.52	4.128		
11,300.0	7,267.0	11,786.2	7,267.0	72.8	70.8	90.00	3,806.6	-632.3	567.9	428.4	139.45	4.072		
11,400.0	7,267.0	11,886.1	7,267.0	74.4	72.5	90.00	3,906.6	-632.3	566.7	424.4	142.32	3.982		
11,500.0	7,267.0	11,986.1	7,267.0	76.1	74.2	90.00	4,006.5	-632.3	563.8	418.7	145.15	3.884		
11,545.9	7,267.0	12,032.0	7,267.0	76.8	75.0	90.00	4,052.4	-632.3	561.9	415.5	146.44	3.837		
11,600.0	7,267.0	12,086.0	7,267.0	77.7	75.9	90.00	4,106.4	-632.3	559.4	411.1	148.30	3.772		
11,700.0	7,267.0	12,185.9	7,267.0	79.4	77.6	90.00	4,206.3	-632.3	554.9	403.1	151.75	3.656		
11,800.0	7,267.0	12,285.8	7,267.0	81.0	79.3	90.00	4,306.2	-632.3	550.3	395.1	155.20	3.545		
11,900.0	7,267.0	12,385.7	7,267.0	82.7	81.0	90.00	4,406.1	-632.3	545.7	387.0	158.66	3.439		
12,000.0	7,267.0	12,485.6	7,267.0	84.3	82.7	90.00	4,506.0	-632.3	541.1	379.0	162.11	3.338		
12,100.0	7,267.0	12,585.5	7,267.0	86.0	84.5	90.00	4,605.9	-632.3	536.5	371.0	165.57	3.240		
12,200.0	7,267.0	12,685.4	7,267.0	87.6	86.2	90.00	4,705.8	-632.3	532.0	362.9	169.03	3.147		
12,300.0	7,267.0	12,785.3	7,267.0	89.3	87.9	90.00	4,805.7	-632.3	527.4	354.9	172.49	3.057		
12,400.0	7,267.0	12,885.2	7,267.0	91.0	89.6	90.00	4,905.6	-632.3	522.8	346.8	175.96	2.971		
12,500.0	7,267.0	12,985.1	7,267.0	92.7	91.3	90.00	5,005.5	-632.3	518.2	338.8	179.42	2.888		
12,600.0	7,267.0	13,085.0	7,267.0	94.3	93.0	90.00	5,105.4	-632.3	513.6	330.7	182.89	2.808		
12,700.0	7,267.0	13,184.9	7,267.0	96.0	94.8	90.00	5,205.3	-632.3	509.1	322.7	186.36	2.732		
12,800.0	7,267.0	13,284.7	7,267.0	97.7	96.5	90.00	5,305.2	-632.3	504.5	314.7	189.83	2.658		
12,900.0	7,267.0	13,384.6	7,267.0	99.4	98.2	90.00	5,405.1	-632.3	499.9	306.6	193.30	2.586		
13,000.0	7,267.0	13,484.5	7,267.0	101.1	99.9	90.00	5,505.0	-632.3	495.3	298.5	196.77	2.517		
13,100.0	7,267.0	13,584.4	7,267.0	102.8	101.6	90.00	5,604.9	-632.3	490.7	290.5	200.24	2.451		
13,200.0	7,267.0	13,684.3	7,267.0	104.5	103.4	90.00	5,704.7	-632.3	486.2	282.4	203.72	2.386		
13,300.0	7,267.0	13,784.2	7,267.0	106.1	105.1	90.00	5,804.6	-632.3	481.6	274.4	207.19	2.324		
13,400.0	7,267.0	13,884.1	7,267.0	107.8	106.8	90.00	5,904.5	-632.3	477.0	266.3	210.67	2.264		
13,500.0	7,267.0	13,984.0	7,267.0	109.5	108.6	90.00	6,004.4	-632.3	472.4	258.3	214.15	2.206		
13,600.0	7,267.0	14,083.9	7,267.0	111.2	110.3	90.00	6,104.3	-632.3	467.8	250.2	217.63	2.150		
13,700.0	7,267.0	14,183.8	7,267.0	112.9	112.0	90.00	6,204.2	-632.3	463.3	242.2	221.11	2.095		
13,800.0	7,267.0	14,283.7	7,267.0	114.6	113.7	90.00	6,304.1	-632.3	458.7	234.1	224.59	2.042		
13,900.0	7,267.0	14,383.6	7,267.0	116.4	115.5	90.00	6,404.0	-632.3	454.1	226.0	228.07	1.991		
14,000.0	7,267.0	14,483.5	7,267.0	118.1	117.2	90.00	6,503.9	-632.3	449.5	218.0	231.55	1.941		
14,055.8	7,267.0	14,535.9	7,267.0	119.0	118.1	90.00	6,556.4	-632.3	447.0	213.5	233.44	1.915 SF		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.67	-0.3	29.9	29.9					
100.0	100.0	100.0	100.0	0.1	0.1	90.67	-0.3	29.9	29.9	29.7	0.24	122.448		
200.0	200.0	200.0	200.0	0.3	0.3	90.67	-0.3	29.9	29.9	29.3	0.59	50.420		
300.0	300.0	300.0	300.0	0.5	0.5	90.67	-0.3	29.9	29.9	29.0	0.94	31.746	CC, ES	
400.0	400.0	400.0	400.0	0.6	0.6	-161.58	-0.3	29.9	31.6	30.3	1.29	24.447		
500.0	499.8	500.1	500.1	0.8	0.8	-163.54	-0.7	29.7	36.4	34.7	1.64	22.173		
600.0	599.5	600.5	600.4	1.1	1.0	-162.62	-3.9	28.3	43.2	41.2	2.00	21.626		
700.0	698.7	700.8	700.5	1.3	1.2	-159.61	-10.3	25.4	51.8	49.5	2.37	21.833		
800.0	797.5	800.8	800.0	1.6	1.4	-155.65	-19.9	21.1	62.6	59.8	2.80	22.369		
819.4	816.6	820.2	819.2	1.7	1.5	-154.84	-22.1	20.1	65.0	62.1	2.89	22.472		
900.0	895.8	900.6	898.7	2.0	1.7	-151.17	-32.5	15.3	74.7	71.4	3.29	22.675		
1,000.0	994.2	999.7	996.7	2.3	2.0	-147.11	-46.4	9.1	86.9	83.1	3.84	22.661		
1,100.0	1,092.6	1,098.8	1,094.6	2.6	2.3	-144.05	-60.2	2.8	99.4	95.0	4.40	22.594		
1,200.0	1,190.9	1,197.9	1,192.5	3.0	2.6	-141.68	-74.1	-3.4	112.2	107.2	4.98	22.511		
1,300.0	1,289.3	1,297.0	1,290.4	3.4	2.9	-139.80	-87.9	-9.7	125.1	119.5	5.58	22.429		
1,400.0	1,387.6	1,396.0	1,388.3	3.7	3.2	-138.27	-101.7	-16.0	138.1	131.9	6.18	22.352		
1,500.0	1,486.0	1,495.1	1,486.3	4.1	3.5	-137.00	-115.6	-22.2	151.2	144.4	6.79	22.284		
1,600.0	1,584.4	1,594.2	1,584.2	4.4	3.8	-135.94	-129.4	-28.5	164.3	157.0	7.40	22.223		
1,700.0	1,682.7	1,693.3	1,682.1	4.8	4.1	-135.03	-143.2	-34.8	177.5	169.5	8.01	22.169		
1,800.0	1,781.1	1,792.4	1,780.0	5.1	4.4	-134.25	-157.1	-41.0	190.8	182.2	8.62	22.121		
1,900.0	1,879.4	1,891.5	1,877.9	5.5	4.7	-133.57	-170.9	-47.3	204.1	194.8	9.24	22.079		
2,000.0	1,977.8	1,990.6	1,975.8	5.9	5.0	-132.97	-184.7	-53.5	217.3	207.5	9.86	22.042		
2,100.0	2,076.2	2,089.7	2,073.8	6.2	5.3	-132.44	-198.6	-59.8	230.7	220.2	10.48	22.008		
2,200.0	2,174.5	2,188.8	2,171.7	6.6	5.6	-131.97	-212.4	-66.1	244.0	232.9	11.10	21.978		
2,300.0	2,272.9	2,287.8	2,269.6	6.9	6.0	-131.55	-226.2	-72.3	257.3	245.6	11.72	21.952		
2,400.0	2,371.2	2,386.9	2,367.5	7.3	6.3	-131.17	-240.1	-78.6	270.7	258.3	12.34	21.927		
2,500.0	2,469.6	2,486.0	2,465.4	7.7	6.6	-130.83	-253.9	-84.8	284.0	271.1	12.97	21.905		
2,600.0	2,568.0	2,585.1	2,563.4	8.0	6.9	-130.51	-267.7	-91.1	297.4	283.8	13.59	21.885		
2,700.0	2,666.3	2,684.2	2,661.3	8.4	7.2	-130.23	-281.6	-97.4	310.8	296.6	14.21	21.867		
2,800.0	2,764.7	2,783.3	2,759.2	8.8	7.5	-129.96	-295.4	-103.6	324.2	309.4	14.84	21.851		
2,900.0	2,863.1	2,882.4	2,857.1	9.1	7.8	-129.72	-309.2	-109.9	337.6	322.1	15.46	21.835		
3,000.0	2,961.4	2,981.5	2,955.0	9.5	8.2	-129.50	-323.1	-116.2	351.0	334.9	16.09	21.821		
3,100.0	3,059.8	3,080.6	3,052.9	9.8	8.5	-129.29	-336.9	-122.4	364.4	347.7	16.71	21.808		
3,200.0	3,158.1	3,179.6	3,150.9	10.2	8.8	-129.10	-350.7	-128.7	377.8	360.5	17.33	21.796		
3,300.0	3,256.5	3,278.7	3,248.8	10.6	9.1	-128.92	-364.6	-134.9	391.2	373.3	17.96	21.785		
3,400.0	3,354.9	3,377.8	3,346.7	10.9	9.4	-128.75	-378.4	-141.2	404.7	386.1	18.58	21.774		
3,500.0	3,453.2	3,476.9	3,444.6	11.3	9.7	-128.60	-392.2	-147.5	418.1	398.9	19.21	21.765		
3,600.0	3,551.6	3,576.0	3,542.5	11.7	10.0	-128.45	-406.1	-153.7	431.5	411.7	19.83	21.755		
3,700.0	3,649.9	3,675.1	3,640.5	12.0	10.4	-128.31	-419.9	-160.0	444.9	424.5	20.46	21.747		
3,800.0	3,748.3	3,774.2	3,738.4	12.4	10.7	-128.18	-433.7	-166.2	458.4	437.3	21.08	21.739		
3,900.0	3,846.7	3,873.3	3,836.3	12.8	11.0	-128.06	-447.6	-172.5	471.8	450.1	21.71	21.731		
4,000.0	3,945.0	3,972.4	3,934.2	13.1	11.3	-127.94	-461.4	-178.8	485.2	462.9	22.34	21.724		
4,100.0	4,043.4	4,071.4	4,032.1	13.5	11.6	-127.84	-475.2	-185.0	498.7	475.7	22.96	21.717		
4,200.0	4,141.7	4,170.5	4,130.1	13.8	11.9	-127.73	-489.1	-191.3	512.1	488.5	23.59	21.711		
4,300.0	4,240.1	4,269.6	4,228.0	14.2	12.3	-127.63	-502.9	-197.6	525.5	501.3	24.21	21.705		
4,400.0	4,338.5	4,368.7	4,325.9	14.6	12.6	-127.54	-516.7	-203.8	539.0	514.1	24.84	21.699		
4,500.0	4,436.8	4,467.8	4,423.8	14.9	12.9	-127.45	-530.6	-210.1	552.4	527.0	25.46	21.694		
4,600.0	4,535.2	4,566.9	4,521.7	15.3	13.2	-127.37	-544.4	-216.3	565.9	539.8	26.09	21.689		
4,700.0	4,633.5	4,666.0	4,619.6	15.7	13.5	-127.29	-558.2	-222.6	579.3	552.6	26.72	21.684		
4,800.0	4,731.9	4,765.1	4,717.6	16.0	13.8	-127.21	-572.1	-228.9	592.7	565.4	27.34	21.679		
4,900.0	4,830.3	4,864.2	4,815.5	16.4	14.2	-127.13	-585.9	-235.1	606.2	578.2	27.97	21.675		
5,000.0	4,928.6	4,963.2	4,913.4	16.7	14.5	-127.06	-599.7	-241.4	619.6	591.0	28.59	21.671		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,027.0	5,062.3	5,011.3	17.1	14.8	-127.00	-613.6	-247.6	633.1	603.9	29.22	21.667		
5,200.0	5,125.4	5,161.4	5,109.2	17.5	15.1	-126.93	-627.4	-253.9	646.5	616.7	29.85	21.663		
5,300.0	5,223.7	5,260.5	5,207.2	17.8	15.4	-126.87	-641.2	-260.2	660.0	629.5	30.47	21.659		
5,400.0	5,322.1	5,359.6	5,305.1	18.2	15.7	-126.81	-655.1	-266.4	673.4	642.3	31.10	21.656		
5,500.0	5,420.4	5,458.7	5,403.0	18.6	16.1	-126.75	-668.9	-272.7	686.9	655.2	31.72	21.652		
5,600.0	5,518.8	5,557.8	5,500.9	18.9	16.4	-126.70	-682.7	-279.0	700.3	668.0	32.35	21.649		
5,700.0	5,617.2	5,656.9	5,598.8	19.3	16.7	-126.65	-696.6	-285.2	713.8	680.8	32.98	21.646		
5,800.0	5,715.5	5,756.0	5,696.7	19.7	17.0	-126.59	-710.4	-291.5	727.2	693.6	33.60	21.643		
5,900.0	5,813.9	5,855.0	5,794.7	20.0	17.3	-126.55	-724.2	-297.7	740.7	706.5	34.23	21.640		
6,000.0	5,912.2	5,954.1	5,892.6	20.4	17.6	-126.50	-738.1	-304.0	754.2	719.3	34.85	21.637		
6,100.0	6,010.6	6,053.2	5,990.5	20.7	18.0	-126.45	-751.9	-310.3	767.6	732.1	35.48	21.634		
6,200.0	6,109.0	6,152.3	6,088.4	21.1	18.3	-126.41	-765.7	-316.5	781.1	745.0	36.11	21.632		
6,300.0	6,207.3	6,251.4	6,186.3	21.5	18.6	-126.37	-779.6	-322.8	794.5	757.8	36.73	21.629		
6,400.0	6,305.7	6,350.5	6,284.3	21.8	18.9	-126.32	-793.4	-329.0	808.0	770.6	37.36	21.627		
6,500.0	6,404.0	6,449.6	6,382.2	22.2	19.2	-126.28	-807.2	-335.3	821.4	783.4	37.99	21.624		
6,600.0	6,502.4	6,548.7	6,480.1	22.6	19.5	-126.25	-821.1	-341.6	834.9	796.3	38.61	21.622		
6,700.0	6,600.8	6,647.8	6,578.0	22.9	19.8	-126.21	-834.9	-347.8	848.3	809.1	39.24	21.620		
6,771.0	6,670.6	6,718.1	6,647.5	23.2	20.1	-126.18	-844.7	-352.3	857.9	818.2	39.68	21.618		
6,800.0	6,699.2	6,746.8	6,675.9	23.3	20.2	-142.54	-848.7	-354.1	862.2	822.5	39.72	21.709		
6,850.0	6,748.4	6,795.7	6,724.2	23.4	20.3	-170.03	-855.6	-357.2	871.7	832.0	39.64	21.991		
6,900.0	6,797.2	6,843.6	6,771.6	23.6	20.5	170.52	-862.3	-360.2	883.6	844.2	39.39	22.429		
6,950.0	6,845.4	6,890.3	6,817.7	23.7	20.6	158.45	-868.8	-363.2	898.0	859.0	39.00	23.028		
7,000.0	6,892.4	7,259.9	7,177.1	23.8	20.4	152.29	-820.3	-385.8	911.9	873.6	38.35	23.779		
7,050.0	6,938.0	7,831.1	7,493.9	23.8	16.8	129.71	-373.7	-404.4	898.5	867.2	31.21	28.787		
7,100.0	6,981.8	7,915.2	7,498.0	23.9	16.4	123.53	-289.7	-404.4	878.4	848.6	29.83	29.451		
7,150.0	7,023.5	7,941.7	7,498.0	24.0	16.3	121.44	-263.2	-404.3	860.9	831.6	29.35	29.330		
7,200.0	7,062.8	7,971.8	7,498.0	24.0	16.2	119.54	-233.1	-404.2	846.1	817.3	28.79	29.390		
7,250.0	7,099.3	8,005.3	7,498.0	24.1	16.2	117.72	-199.6	-404.1	833.8	805.6	28.21	29.564		
7,300.0	7,132.8	8,041.9	7,498.0	24.1	16.1	115.94	-163.0	-404.0	824.0	796.3	27.70	29.745		
7,350.0	7,163.0	8,081.3	7,498.0	24.2	16.1	114.20	-123.6	-403.9	816.3	789.0	27.29	29.914		
7,400.0	7,189.7	8,123.2	7,498.0	24.2	16.1	112.54	-81.7	-403.7	810.4	783.4	27.01	30.000		
7,450.0	7,212.7	8,167.4	7,498.0	24.3	16.1	111.01	-37.6	-403.6	806.2	779.3	26.94	29.925		
7,500.0	7,231.8	8,213.4	7,498.0	24.4	16.2	109.64	8.5	-403.4	803.3	776.3	27.03	29.716		
7,550.0	7,246.9	8,260.9	7,498.0	24.5	16.3	108.50	56.0	-403.3	801.5	774.2	27.30	29.356		
7,600.0	7,257.8	8,309.6	7,498.0	24.7	16.5	107.62	104.7	-403.1	800.5	772.8	27.69	28.907		
7,649.9	7,264.5	8,359.0	7,498.0	24.8	16.7	107.04	154.1	-402.9	800.2	771.9	28.24	28.332		
7,650.0	7,264.5	8,359.1	7,498.0	24.8	16.7	107.04	154.2	-402.9	800.2	771.9	28.24	28.330		
7,703.4	7,267.0	8,412.5	7,498.0	25.0	17.0	106.77	207.6	-402.7	800.5	771.6	28.94	27.664		
7,800.0	7,267.0	8,509.0	7,498.0	25.4	17.6	106.75	304.1	-402.4	801.6	771.3	30.30	26.454		
7,900.0	7,267.0	8,609.0	7,498.0	26.0	18.4	106.72	404.1	-402.1	802.8	770.8	32.01	25.082		
8,000.0	7,267.0	8,709.0	7,498.0	26.6	19.3	106.70	504.1	-401.7	803.9	770.0	33.96	23.673		
8,100.0	7,267.0	8,809.0	7,498.0	27.4	20.3	106.67	604.1	-401.4	805.1	769.0	36.12	22.289		
8,200.0	7,267.0	8,909.0	7,498.0	28.2	21.4	106.65	704.1	-401.1	806.3	767.8	38.46	20.965		
8,300.0	7,267.0	9,009.0	7,498.0	29.1	22.6	106.63	804.1	-400.7	807.4	766.5	40.94	19.724		
8,400.0	7,267.0	9,109.0	7,498.0	30.1	23.9	106.60	904.1	-400.4	808.6	765.0	43.54	18.573		
8,500.0	7,267.0	9,209.0	7,498.0	31.2	25.2	106.58	1,004.1	-400.1	809.7	763.5	46.23	17.514		
8,600.0	7,267.0	9,309.0	7,498.0	32.3	26.6	106.55	1,104.1	-399.7	810.9	761.9	49.02	16.543		
8,700.0	7,267.0	9,409.0	7,498.0	33.5	28.0	106.53	1,204.0	-399.4	812.1	760.2	51.87	15.656		
8,800.0	7,267.0	9,509.0	7,498.0	34.7	29.4	106.50	1,304.0	-399.1	813.2	758.4	54.78	14.845		
8,900.0	7,267.0	9,609.0	7,498.0	36.0	30.9	106.48	1,404.0	-398.7	814.4	756.6	57.74	14.103		
9,000.0	7,267.0	9,708.9	7,498.0	37.3	32.4	106.46	1,504.0	-398.4	815.5	754.8	60.75	13.425		
9,100.0	7,267.0	9,808.9	7,498.0	38.6	34.0	106.43	1,604.0	-398.0	816.7	752.9	63.79	12.802		

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 4C-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 4C-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 #3	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
9,200.0	7,267.0	9,908.9	7,498.0	40.0	35.5	106.41	1,704.0	-397.7	817.9	751.0	66.87	12.231	
9,300.0	7,267.0	10,008.9	7,498.0	41.4	37.1	106.38	1,804.0	-397.4	819.0	749.0	69.97	11.705	
9,400.0	7,267.0	10,108.9	7,498.0	42.8	38.7	106.36	1,904.0	-397.0	820.2	747.1	73.10	11.220	
9,500.0	7,267.0	10,208.9	7,498.0	44.3	40.3	106.34	2,004.0	-396.7	821.3	745.1	76.25	10.772	
9,600.0	7,267.0	10,308.9	7,498.0	45.8	41.9	106.31	2,104.0	-396.4	822.5	743.1	79.42	10.356	
9,700.0	7,267.0	10,408.9	7,498.0	47.3	43.5	106.29	2,204.0	-396.0	823.7	741.1	82.60	9.971	
9,800.0	7,267.0	10,508.9	7,498.0	48.8	45.1	106.27	2,304.0	-395.7	824.8	739.0	85.81	9.613	
9,900.0	7,267.0	10,608.9	7,498.0	50.3	46.8	106.24	2,404.0	-395.3	826.0	737.0	89.02	9.278	
10,000.0	7,267.0	10,708.9	7,498.0	51.9	48.4	106.22	2,503.9	-395.0	827.1	734.9	92.25	8.966	
10,100.0	7,267.0	10,808.9	7,498.0	53.4	50.1	106.19	2,603.9	-394.7	828.3	732.8	95.49	8.674	
10,200.0	7,267.0	10,908.9	7,498.0	55.0	51.8	106.17	2,703.9	-394.3	829.5	730.7	98.74	8.401	
10,300.0	7,267.0	11,008.8	7,498.0	56.6	53.4	106.15	2,803.9	-394.0	830.6	728.6	102.00	8.144	
10,400.0	7,267.0	11,108.8	7,498.0	58.1	55.1	106.13	2,903.9	-393.7	831.8	726.5	105.26	7.902	
10,500.0	7,267.0	11,208.8	7,498.0	59.7	56.8	106.10	3,003.9	-393.3	832.9	724.4	108.54	7.674	
10,600.0	7,267.0	11,308.8	7,498.0	61.4	58.5	106.08	3,103.9	-393.0	834.1	722.3	111.82	7.459	
10,700.0	7,267.0	11,408.8	7,498.0	63.0	60.2	106.06	3,203.9	-392.7	835.3	720.2	115.11	7.256	
10,800.0	7,267.0	11,508.8	7,498.0	64.6	61.8	106.03	3,303.9	-392.3	836.4	718.0	118.40	7.064	
10,900.0	7,267.0	11,608.8	7,498.0	66.2	63.5	106.01	3,403.9	-392.0	837.6	715.9	121.70	6.882	
11,000.0	7,267.0	11,708.8	7,498.0	67.9	65.2	105.99	3,503.9	-391.6	838.8	713.8	125.01	6.710	
11,100.0	7,267.0	11,808.8	7,498.0	69.5	66.9	105.96	3,603.9	-391.3	839.9	711.6	128.32	6.546	
11,200.0	7,267.0	11,908.8	7,498.0	71.1	68.6	105.94	3,703.8	-391.0	841.1	709.5	131.63	6.390	
11,233.4	7,267.0	11,942.2	7,498.0	71.7	69.2	105.93	3,737.3	-390.9	841.5	708.7	132.74	6.339	
11,300.0	7,267.0	12,008.8	7,498.0	72.8	70.4	105.93	3,803.8	-390.6	841.9	707.2	134.65	6.252	
11,400.0	7,267.0	12,108.8	7,498.0	74.4	72.1	105.94	3,903.8	-390.3	841.1	703.6	137.48	6.118	
11,500.0	7,267.0	12,208.7	7,498.0	76.1	73.8	106.00	4,003.8	-390.0	838.6	698.4	140.23	5.980	
11,545.9	7,267.0	12,254.6	7,498.0	76.8	74.6	106.04	4,049.7	-389.8	836.9	695.4	141.48	5.915	
11,600.0	7,267.0	12,308.7	7,498.0	77.7	75.5	106.08	4,103.7	-389.6	834.7	691.5	143.24	5.827	
11,700.0	7,267.0	12,408.6	7,498.0	79.4	77.2	106.16	4,203.6	-389.3	830.6	684.1	146.50	5.670	
11,800.0	7,267.0	12,508.5	7,498.0	81.0	78.9	106.24	4,303.5	-388.9	826.6	676.8	149.75	5.520	
11,900.0	7,267.0	12,608.4	7,498.0	82.7	80.6	106.33	4,403.4	-388.6	822.5	669.5	153.00	5.376	
12,000.0	7,267.0	12,708.3	7,498.0	84.3	82.3	106.41	4,503.4	-388.3	818.4	662.2	156.26	5.238	
12,100.0	7,267.0	12,808.2	7,498.0	86.0	84.1	106.49	4,603.3	-387.9	814.3	654.8	159.51	5.105	
12,200.0	7,267.0	12,908.1	7,498.0	87.6	85.8	106.58	4,703.2	-387.6	810.3	647.5	162.75	4.979	
12,300.0	7,267.0	13,008.0	7,498.0	89.3	87.5	106.66	4,803.1	-387.3	806.2	640.2	166.00	4.857	
12,400.0	7,267.0	13,107.9	7,498.0	91.0	89.2	106.75	4,903.0	-386.9	802.2	632.9	169.25	4.740	
12,500.0	7,267.0	13,207.8	7,498.0	92.7	91.0	106.84	5,002.9	-386.6	798.1	625.6	172.49	4.627	
12,600.0	7,267.0	13,307.8	7,498.0	94.3	92.7	106.93	5,102.8	-386.3	794.0	618.3	175.73	4.519	
12,700.0	7,267.0	13,407.7	7,498.0	96.0	94.4	107.02	5,202.7	-385.9	790.0	611.0	178.96	4.414	
12,800.0	7,267.0	13,507.6	7,498.0	97.7	96.1	107.11	5,302.6	-385.6	785.9	603.7	182.20	4.314	
12,900.0	7,267.0	13,607.5	7,498.0	99.4	97.9	107.20	5,402.5	-385.2	781.9	596.4	185.43	4.217	
13,000.0	7,267.0	13,715.3	7,498.0	101.1	99.7	107.31	5,510.3	-385.2	777.5	588.8	188.77	4.119	
13,100.0	7,267.0	13,823.7	7,498.0	102.8	101.6	107.45	5,618.7	-386.9	771.7	579.6	192.08	4.018	
13,200.0	7,267.0	13,923.5	7,498.0	104.5	103.3	107.60	5,718.5	-388.7	765.5	570.3	195.24	3.921	
13,300.0	7,267.0	14,023.2	7,498.0	106.1	105.1	107.74	5,818.3	-390.6	759.4	561.0	198.40	3.828	
13,400.0	7,267.0	14,123.0	7,498.0	107.8	106.8	107.89	5,918.0	-392.5	753.2	551.7	201.55	3.737	
13,500.0	7,267.0	14,222.8	7,498.0	109.5	108.5	108.05	6,017.8	-394.4	747.1	542.4	204.68	3.650	
13,600.0	7,267.0	14,322.6	7,498.0	111.2	110.3	108.20	6,117.6	-396.3	740.9	533.1	207.81	3.565	
13,700.0	7,267.0	14,422.4	7,498.0	112.9	112.0	108.36	6,217.3	-398.1	734.8	523.9	210.93	3.484	
13,800.0	7,267.0	14,522.2	7,498.0	114.6	113.7	108.52	6,317.1	-400.0	728.7	514.6	214.04	3.404	
13,900.0	7,267.0	14,622.0	7,498.0	116.4	115.5	108.68	6,416.9	-401.9	722.6	505.4	217.14	3.328	
14,000.0	7,267.0	14,721.8	7,498.0	118.1	117.2	108.85	6,516.7	-403.8	716.4	496.2	220.23	3.253	
14,055.8	7,267.0	14,760.0	7,498.0	119.0	117.9	108.91	6,554.9	-404.5	713.2	491.5	221.70	3.217 SF	

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

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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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	90.51	-0.4	40.0	40.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.51	-0.4	40.0	40.0	39.7	0.24	163.641		
200.0	200.0	200.0	200.0	0.3	0.3	90.51	-0.4	40.0	40.0	39.4	0.59	67.382		
300.0	300.0	300.0	300.0	0.5	0.5	90.51	-0.4	40.0	40.0	39.0	0.94	42.425 CC, ES		
400.0	400.0	400.0	400.0	0.6	0.6	-161.47	-0.4	40.0	41.6	40.3	1.29	32.242		
500.0	499.8	499.8	499.8	0.8	0.8	-163.49	-0.4	40.0	46.6	45.0	1.64	28.433		
600.0	599.5	600.0	600.0	1.1	1.0	-164.29	-2.1	39.6	54.5	52.5	1.99	27.385		
700.0	698.7	700.0	699.9	1.3	1.2	-162.71	-7.2	38.4	64.8	62.5	2.36	27.513		
800.0	797.5	799.7	799.2	1.6	1.4	-159.83	-15.6	36.4	77.6	74.9	2.75	28.198		
819.4	816.6	819.0	818.4	1.7	1.4	-159.19	-17.6	35.9	80.4	77.6	2.84	28.338		
900.0	895.8	899.0	897.8	2.0	1.6	-156.24	-27.4	33.6	92.2	89.0	3.21	28.718		
1,000.0	994.2	997.9	995.5	2.3	1.9	-152.31	-41.5	30.3	106.8	103.1	3.72	28.736		
1,100.0	1,092.6	1,096.6	1,093.1	2.6	2.2	-149.26	-55.8	27.0	121.8	117.5	4.25	28.658		
1,200.0	1,190.9	1,195.2	1,190.7	3.0	2.5	-146.89	-70.1	23.6	137.0	132.2	4.80	28.550		
1,300.0	1,289.3	1,293.9	1,288.3	3.4	2.7	-145.00	-84.4	20.2	152.4	147.1	5.36	28.435		
1,400.0	1,387.6	1,392.6	1,385.9	3.7	3.0	-143.45	-98.6	16.9	168.0	162.1	5.93	28.325		
1,500.0	1,486.0	1,491.3	1,483.5	4.1	3.3	-142.17	-112.9	13.5	183.7	177.2	6.51	28.224		
1,600.0	1,584.4	1,590.0	1,581.1	4.4	3.6	-141.08	-127.2	10.2	199.4	192.3	7.09	28.133		
1,700.0	1,682.7	1,688.7	1,678.7	4.8	3.9	-140.16	-141.5	6.8	215.2	207.5	7.67	28.052		
1,800.0	1,781.1	1,787.4	1,776.3	5.1	4.2	-139.36	-155.8	3.5	231.0	222.8	8.26	27.979		
1,900.0	1,879.4	1,886.1	1,873.8	5.5	4.5	-138.67	-170.0	0.1	246.9	238.1	8.85	27.914		
2,000.0	1,977.8	1,984.8	1,971.4	5.9	4.8	-138.06	-184.3	-3.2	262.8	253.4	9.44	27.856		
2,100.0	2,076.2	2,083.5	2,069.0	6.2	5.1	-137.51	-198.6	-6.6	278.8	268.7	10.03	27.804		
2,200.0	2,174.5	2,182.1	2,166.6	6.6	5.4	-137.03	-212.9	-10.0	294.7	284.1	10.62	27.757		
2,300.0	2,272.9	2,280.8	2,264.2	6.9	5.7	-136.60	-227.1	-13.3	310.7	299.5	11.21	27.715		
2,400.0	2,371.2	2,379.5	2,361.8	7.3	6.0	-136.21	-241.4	-16.7	326.7	314.9	11.80	27.676		
2,500.0	2,469.6	2,478.2	2,459.4	7.7	6.4	-135.85	-255.7	-20.0	342.7	330.3	12.40	27.642		
2,600.0	2,568.0	2,576.9	2,557.0	8.0	6.7	-135.53	-270.0	-23.4	358.7	345.7	12.99	27.610		
2,700.0	2,666.3	2,675.6	2,654.6	8.4	7.0	-135.24	-284.3	-26.7	374.7	361.2	13.59	27.580		
2,800.0	2,764.7	2,774.3	2,752.2	8.8	7.3	-134.96	-298.5	-30.1	390.8	376.6	14.18	27.554		
2,900.0	2,863.1	2,873.0	2,849.8	9.1	7.6	-134.72	-312.8	-33.4	406.8	392.0	14.78	27.529		
3,000.0	2,961.4	2,971.7	2,947.4	9.5	7.9	-134.48	-327.1	-36.8	422.9	407.5	15.37	27.506		
3,100.0	3,059.8	3,070.3	3,045.0	9.8	8.2	-134.27	-341.4	-40.2	438.9	423.0	15.97	27.485		
3,200.0	3,158.1	3,169.0	3,142.6	10.2	8.5	-134.07	-355.6	-43.5	455.0	438.4	16.57	27.465		
3,300.0	3,256.5	3,267.7	3,240.2	10.6	8.8	-133.89	-369.9	-46.9	471.1	453.9	17.16	27.447		
3,400.0	3,354.9	3,366.4	3,337.7	10.9	9.1	-133.71	-384.2	-50.2	487.1	469.4	17.76	27.430		
3,500.0	3,453.2	3,465.1	3,435.3	11.3	9.4	-133.55	-398.5	-53.6	503.2	484.9	18.36	27.414		
3,600.0	3,551.6	3,563.8	3,532.9	11.7	9.7	-133.40	-412.8	-56.9	519.3	500.3	18.95	27.399		
3,700.0	3,649.9	3,662.5	3,630.5	12.0	10.0	-133.26	-427.0	-60.3	535.4	515.8	19.55	27.385		
3,800.0	3,748.3	3,761.2	3,728.1	12.4	10.3	-133.12	-441.3	-63.6	551.5	531.3	20.15	27.372		
3,900.0	3,846.7	3,859.9	3,825.7	12.8	10.6	-133.00	-455.6	-67.0	567.6	546.8	20.74	27.360		
4,000.0	3,945.0	3,958.6	3,923.3	13.1	11.0	-132.88	-469.9	-70.4	583.6	562.3	21.34	27.348		
4,100.0	4,043.4	4,057.2	4,020.9	13.5	11.3	-132.76	-484.1	-73.7	599.7	577.8	21.94	27.337		
4,200.0	4,141.7	4,155.9	4,118.5	13.8	11.6	-132.66	-498.4	-77.1	615.8	593.3	22.54	27.326		
4,300.0	4,240.1	4,254.6	4,216.1	14.2	11.9	-132.55	-512.7	-80.4	631.9	608.8	23.13	27.316		
4,400.0	4,338.5	4,353.3	4,313.7	14.6	12.2	-132.46	-527.0	-83.8	648.0	624.3	23.73	27.307		
4,500.0	4,436.8	4,452.0	4,411.3	14.9	12.5	-132.37	-541.3	-87.1	664.1	639.8	24.33	27.298		
4,600.0	4,535.2	4,550.7	4,508.9	15.3	12.8	-132.28	-555.5	-90.5	680.2	655.3	24.93	27.290		
4,700.0	4,633.5	4,649.4	4,606.5	15.7	13.1	-132.19	-569.8	-93.8	696.4	670.8	25.52	27.281		
4,800.0	4,731.9	4,748.1	4,704.1	16.0	13.4	-132.11	-584.1	-97.2	712.5	686.3	26.12	27.274		
4,900.0	4,830.3	4,846.8	4,801.7	16.4	13.7	-132.04	-598.4	-100.6	728.6	701.8	26.72	27.266		
5,000.0	4,928.6	4,945.5	4,899.2	16.7	14.0	-131.96	-612.6	-103.9	744.7	717.4	27.32	27.259		

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

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Reference Design:	Plan #3	Offset TVD Reference:	Offset Datum

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Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,027.0	5,044.1	4,996.8	17.1	14.3	-131.89	-626.9	-107.3	760.8	732.9	27.92	27.253		
5,200.0	5,125.4	5,142.8	5,094.4	17.5	14.7	-131.83	-641.2	-110.6	776.9	748.4	28.51	27.246		
5,300.0	5,223.7	5,241.5	5,192.0	17.8	15.0	-131.76	-655.5	-114.0	793.0	763.9	29.11	27.240		
5,400.0	5,322.1	5,340.2	5,289.6	18.2	15.3	-131.70	-669.8	-117.3	809.1	779.4	29.71	27.234		
5,500.0	5,420.4	5,438.9	5,387.2	18.6	15.6	-131.64	-684.0	-120.7	825.2	794.9	30.31	27.228		
5,600.0	5,518.8	5,537.6	5,484.8	18.9	15.9	-131.58	-698.3	-124.0	841.4	810.4	30.91	27.223		
5,700.0	5,617.2	5,636.3	5,582.4	19.3	16.2	-131.53	-712.6	-127.4	857.5	826.0	31.50	27.218		
5,800.0	5,715.5	5,735.0	5,680.0	19.7	16.5	-131.48	-726.9	-130.8	873.6	841.5	32.10	27.213		
5,900.0	5,813.9	5,833.7	5,777.6	20.0	16.8	-131.43	-741.2	-134.1	889.7	857.0	32.70	27.208		
6,000.0	5,912.2	5,932.3	5,875.2	20.4	17.1	-131.38	-755.4	-137.5	905.8	872.5	33.30	27.203		
6,100.0	6,010.6	6,031.0	5,972.8	20.7	17.4	-131.33	-769.7	-140.8	921.9	888.0	33.90	27.198		
6,200.0	6,109.0	6,129.7	6,070.4	21.1	17.7	-131.28	-784.0	-144.2	938.1	903.6	34.49	27.194		
6,300.0	6,207.3	6,228.4	6,168.0	21.5	18.0	-131.24	-798.3	-147.5	954.2	919.1	35.09	27.190		
6,400.0	6,305.7	6,327.1	6,265.6	21.8	18.3	-131.20	-812.5	-150.9	970.3	934.6	35.69	27.186		
6,500.0	6,404.0	6,425.8	6,363.1	22.2	18.7	-131.15	-826.8	-154.2	986.4	950.1	36.29	27.182		
6,950.0	6,845.4	7,515.0	7,248.7	23.7	15.5	134.09	-439.8	-184.7	996.7	966.7	29.96	33.262		
7,000.0	6,892.4	7,579.4	7,261.3	23.8	15.1	124.58	-376.7	-185.1	987.0	958.0	28.97	34.069		
7,050.0	6,938.0	7,631.4	7,266.3	23.8	14.8	117.96	-324.9	-185.3	978.9	950.7	28.22	34.685		
7,100.0	6,981.8	7,670.8	7,267.0	23.9	14.7	113.27	-285.6	-185.3	972.6	944.9	27.69	35.121		
7,150.0	7,023.5	7,702.5	7,267.0	24.0	14.5	109.75	-253.8	-185.5	968.4	941.1	27.30	35.470		
7,200.0	7,062.8	7,738.7	7,267.0	24.0	14.4	106.53	-217.7	-185.9	965.9	938.9	26.97	35.819		
7,250.0	7,099.3	7,778.9	7,267.0	24.1	14.4	103.52	-177.5	-186.5	964.8	938.1	26.69	36.152		
7,271.4	7,114.0	7,794.7	7,267.0	24.1	14.3	102.40	-161.7	-186.9	964.7	938.1	26.62	36.240		
7,300.0	7,132.8	7,816.0	7,267.0	24.1	14.3	100.98	-140.4	-187.3	964.9	938.3	26.57	36.315		
7,350.0	7,163.0	7,855.6	7,267.0	24.2	14.3	98.63	-100.8	-188.2	965.9	939.3	26.56	36.365		
7,400.0	7,189.7	7,897.6	7,267.0	24.2	14.3	96.48	-58.8	-189.1	967.5	940.8	26.62	36.345		
7,450.0	7,212.7	7,941.9	7,267.0	24.3	14.4	94.57	-14.6	-190.0	969.3	942.5	26.82	36.137		
7,500.0	7,231.8	7,988.0	7,267.0	24.4	14.5	92.96	31.5	-191.0	971.2	944.1	27.08	35.865		
7,550.0	7,246.9	8,035.6	7,267.0	24.5	14.7	91.66	79.1	-192.0	972.8	945.4	27.44	35.453		
7,600.0	7,257.8	8,084.3	7,267.0	24.7	14.9	90.72	127.9	-193.0	974.0	946.1	27.85	34.978		
7,650.0	7,264.5	8,133.8	7,267.0	24.8	15.1	90.16	177.4	-194.0	974.5	946.1	28.33	34.396		
7,703.4	7,267.0	8,187.2	7,267.0	25.0	15.5	90.00	230.7	-195.2	974.2	945.3	28.90	33.706		
7,800.0	7,267.0	8,283.8	7,267.0	25.4	16.2	90.00	327.3	-197.2	973.0	942.6	30.40	32.009		
7,900.0	7,267.0	8,383.8	7,267.0	26.0	17.1	90.00	427.2	-199.3	971.8	939.6	32.25	30.135		
8,000.0	7,267.0	8,483.7	7,267.0	26.6	18.1	90.00	527.2	-201.4	970.6	936.2	34.36	28.248		
8,100.0	7,267.0	8,583.7	7,267.0	27.4	19.2	90.00	627.2	-203.6	969.3	932.6	36.68	26.425		
8,200.0	7,267.0	8,683.7	7,267.0	28.2	20.4	90.00	727.1	-205.7	968.1	928.9	39.18	24.707		
8,300.0	7,267.0	8,783.7	7,267.0	29.1	21.7	90.00	827.1	-207.8	966.8	925.0	41.83	23.114		
8,400.0	7,267.0	8,883.7	7,267.0	30.1	23.1	90.00	927.1	-209.9	965.6	921.0	44.59	21.653		
8,500.0	7,267.0	8,983.7	7,267.0	31.2	24.5	90.00	1,027.0	-212.0	964.4	916.9	47.46	20.320		
8,600.0	7,267.0	9,083.7	7,267.0	32.3	25.9	90.00	1,127.0	-214.1	963.1	912.7	50.40	19.108		
8,700.0	7,267.0	9,183.7	7,267.0	33.5	27.4	90.00	1,227.0	-216.2	961.9	908.5	53.42	18.007		
8,800.0	7,267.0	9,283.7	7,267.0	34.7	28.9	90.00	1,327.0	-218.3	960.6	904.2	56.49	17.007		
8,900.0	7,267.0	9,383.7	7,267.0	36.0	30.4	90.00	1,426.9	-220.5	959.4	899.8	59.61	16.096		
9,000.0	7,267.0	9,483.7	7,267.0	37.3	32.0	90.00	1,526.9	-222.6	958.2	895.4	62.76	15.266		
9,100.0	7,267.0	9,583.7	7,267.0	38.6	33.6	90.00	1,626.9	-224.7	956.9	891.0	65.96	14.508		
9,200.0	7,267.0	9,683.7	7,267.0	40.0	35.2	90.00	1,726.8	-226.8	955.7	886.5	69.19	13.813		
9,300.0	7,267.0	9,783.6	7,267.0	41.4	36.8	90.00	1,826.8	-228.9	954.4	882.0	72.44	13.176		
9,400.0	7,267.0	9,883.6	7,267.0	42.8	38.4	90.00	1,926.8	-231.0	953.2	877.5	75.71	12.590		
9,500.0	7,267.0	9,983.6	7,267.0	44.3	40.0	90.00	2,026.7	-233.1	952.0	873.0	79.01	12.049		
9,600.0	7,267.0	10,083.6	7,267.0	45.8	41.7	90.00	2,126.7	-235.2	950.7	868.4	82.32	11.549		
9,700.0	7,267.0	10,183.6	7,267.0	47.3	43.3	90.00	2,226.7	-237.3	949.5	863.8	85.65	11.086		

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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 4C-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 #3	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 (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,800.0	7,267.0	10,283.6	7,267.0	48.8	45.0	90.00	2,326.7	-239.5	948.2	859.3	88.99	10.656	
9,900.0	7,267.0	10,383.6	7,267.0	50.3	46.7	90.00	2,426.6	-241.6	947.0	854.7	92.34	10.255	
10,000.0	7,267.0	10,483.6	7,267.0	51.9	48.3	90.00	2,526.6	-243.7	945.8	850.1	95.71	9.882	
10,100.0	7,267.0	10,583.6	7,267.0	53.4	50.0	90.00	2,626.6	-245.8	944.5	845.4	99.08	9.533	
10,200.0	7,267.0	10,683.6	7,267.0	55.0	51.7	90.00	2,726.5	-247.9	943.3	840.8	102.47	9.206	
10,300.0	7,267.0	10,783.6	7,267.0	56.6	53.4	90.00	2,826.5	-250.0	942.0	836.2	105.86	8.899	
10,400.0	7,267.0	10,883.6	7,267.0	58.1	55.1	90.00	2,926.5	-252.1	940.8	831.5	109.26	8.611	
10,500.0	7,267.0	10,983.6	7,267.0	59.7	56.8	90.00	3,026.4	-254.2	939.6	826.9	112.66	8.339	
10,600.0	7,267.0	11,083.5	7,267.0	61.4	58.5	90.00	3,126.4	-256.4	938.3	822.2	116.08	8.084	
10,700.0	7,267.0	11,183.5	7,267.0	63.0	60.2	90.00	3,226.4	-258.5	937.1	817.6	119.49	7.842	
10,800.0	7,267.0	11,279.8	7,267.0	64.6	61.8	90.00	3,322.6	-260.5	935.9	813.0	122.85	7.618	
10,855.9	7,267.0	11,327.9	7,267.0	65.5	62.6	90.00	3,370.7	-261.1	935.7	811.0	124.64	7.507	
10,900.0	7,267.0	11,365.7	7,267.0	66.2	63.3	90.00	3,408.6	-261.3	935.8	809.8	126.04	7.425	
11,000.0	7,267.0	11,451.7	7,267.0	67.9	64.7	90.00	3,494.5	-260.8	937.2	808.0	129.23	7.252	
11,100.0	7,267.0	11,540.5	7,267.0	69.5	66.3	90.00	3,583.3	-259.0	940.1	807.6	132.47	7.097	
11,200.0	7,267.0	11,640.4	7,267.0	71.1	68.0	90.00	3,683.2	-256.6	943.4	807.5	135.91	6.942	
11,233.4	7,267.0	11,673.8	7,267.0	71.7	68.5	90.00	3,716.6	-255.7	944.6	807.5	137.06	6.892	
11,300.0	7,267.0	11,740.4	7,267.0	72.8	69.7	90.00	3,783.1	-254.1	946.4	807.4	139.06	6.806	
11,400.0	7,267.0	11,840.3	7,267.0	74.4	71.4	90.00	3,883.1	-251.6	947.7	805.7	142.04	6.672	
11,500.0	7,267.0	11,940.3	7,267.0	76.1	73.1	90.00	3,983.0	-249.1	947.3	802.3	144.98	6.534	
11,545.9	7,267.0	11,986.2	7,267.0	76.8	73.9	90.00	4,028.9	-248.0	946.5	800.2	146.32	6.469	
11,600.0	7,267.0	12,040.3	7,267.0	77.7	74.8	90.00	4,083.0	-246.6	945.4	797.2	148.18	6.380	
11,700.0	7,267.0	12,140.3	7,267.0	79.4	76.5	90.00	4,182.9	-244.1	943.3	791.7	151.64	6.221	
11,800.0	7,267.0	12,240.3	7,267.0	81.0	78.3	90.00	4,282.9	-241.7	941.2	786.1	155.09	6.069	
11,900.0	7,267.0	12,340.3	7,267.0	82.7	80.0	90.00	4,382.8	-239.2	939.1	780.5	158.55	5.923	
12,000.0	7,267.0	12,440.2	7,267.0	84.3	81.7	90.00	4,482.8	-236.7	937.0	775.0	162.01	5.784	
12,100.0	7,267.0	12,540.2	7,267.0	86.0	83.4	90.00	4,582.7	-234.2	934.9	769.4	165.47	5.650	
12,200.0	7,267.0	12,640.2	7,267.0	87.6	85.1	90.00	4,682.7	-231.7	932.8	763.9	168.93	5.522	
12,300.0	7,267.0	12,740.2	7,267.0	89.3	86.9	90.00	4,782.6	-229.3	930.7	758.3	172.40	5.399	
12,400.0	7,267.0	12,840.1	7,267.0	91.0	88.6	90.00	4,882.5	-226.8	928.6	752.7	175.87	5.280	
12,500.0	7,267.0	12,940.1	7,267.0	92.7	90.3	90.00	4,982.5	-224.3	926.5	747.2	179.33	5.166	
12,600.0	7,267.0	13,040.1	7,267.0	94.3	92.1	90.00	5,082.4	-221.8	924.4	741.6	182.81	5.057	
12,700.0	7,267.0	13,140.1	7,267.0	96.0	93.8	90.00	5,182.4	-219.3	922.3	736.0	186.28	4.951	
12,800.0	7,267.0	13,240.1	7,267.0	97.7	95.5	90.00	5,282.3	-216.9	920.2	730.4	189.75	4.850	
12,900.0	7,267.0	13,340.0	7,267.0	99.4	97.2	90.00	5,382.3	-214.4	918.1	724.9	193.22	4.751	
13,000.0	7,267.0	13,440.0	7,267.0	101.1	99.0	90.00	5,482.2	-211.9	916.0	719.3	196.70	4.657	
13,100.0	7,267.0	13,540.0	7,267.0	102.8	100.7	90.00	5,582.2	-209.4	913.9	713.7	200.18	4.565	
13,200.0	7,267.0	13,640.0	7,267.0	104.5	102.4	90.00	5,682.1	-206.9	911.8	708.1	203.66	4.477	
13,300.0	7,267.0	13,739.9	7,267.0	106.1	104.2	90.00	5,782.1	-204.5	909.7	702.6	207.14	4.392	
13,400.0	7,267.0	13,839.9	7,267.0	107.8	105.9	90.00	5,882.0	-202.0	907.6	697.0	210.62	4.309	
13,500.0	7,267.0	13,939.9	7,267.0	109.5	107.7	90.00	5,982.0	-199.5	905.5	691.4	214.10	4.229	
13,600.0	7,267.0	14,039.9	7,267.0	111.2	109.4	90.00	6,081.9	-197.0	903.4	685.8	217.58	4.152	
13,700.0	7,267.0	14,139.9	7,267.0	112.9	111.1	90.00	6,181.9	-194.5	901.3	680.2	221.06	4.077	
13,800.0	7,267.0	14,239.8	7,267.0	114.6	112.9	90.00	6,281.8	-192.1	899.2	674.7	224.55	4.005	
13,900.0	7,267.0	14,339.8	7,267.0	116.4	114.6	90.00	6,381.8	-189.6	897.1	669.1	228.03	3.934	
14,000.0	7,267.0	14,439.8	7,267.0	118.1	116.3	90.00	6,481.7	-187.1	895.0	663.5	231.52	3.866	
14,055.8	7,267.0	14,495.6	7,267.0	119.0	117.3	90.00	6,537.5	-185.7	893.8	660.4	233.46	3.829 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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				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	90.42	-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		
300.0	300.0	300.0	300.0	0.5	0.5	90.42	-0.4	50.0	50.1	49.1	0.94	53.105 CC, ES		
400.0	400.0	400.0	400.0	0.6	0.6	-161.41	-0.4	50.0	51.7	50.4	1.29	40.036		
500.0	499.8	499.9	499.9	0.8	0.8	-162.63	-0.8	50.0	56.7	55.0	1.64	34.548		
600.0	599.5	599.6	599.5	1.1	1.0	-161.81	-4.3	50.0	64.9	62.9	2.00	32.505		
700.0	698.7	698.9	698.6	1.3	1.2	-159.37	-11.2	50.0	76.4	74.0	2.37	32.174 SF		
800.0	797.5	797.5	796.7	1.6	1.4	-156.20	-21.4	49.9	91.4	88.6	2.79	32.707		
819.4	816.6	816.6	815.6	1.7	1.5	-155.56	-23.8	49.9	94.7	91.8	2.88	32.876		
900.0	895.8	895.6	893.9	2.0	1.7	-152.97	-34.5	49.8	109.0	105.7	3.26	33.420		
1,000.0	994.2	993.9	991.2	2.3	1.9	-150.47	-48.1	49.7	127.0	123.2	3.76	33.816		
1,100.0	1,092.6	1,092.1	1,088.5	2.6	2.2	-148.60	-61.7	49.6	145.2	140.9	4.26	34.041		
1,200.0	1,190.9	1,190.4	1,185.8	3.0	2.5	-147.14	-75.3	49.5	163.4	158.7	4.78	34.167		
1,300.0	1,289.3	1,288.6	1,283.1	3.4	2.7	-145.97	-88.8	49.4	181.8	176.5	5.31	34.237		
1,400.0	1,387.6	1,386.8	1,380.4	3.7	3.0	-145.02	-102.4	49.2	200.2	194.4	5.84	34.272		
1,500.0	1,486.0	1,485.1	1,477.7	4.1	3.3	-144.23	-116.0	49.1	218.7	212.3	6.38	34.287		
1,600.0	1,584.4	1,583.3	1,575.0	4.4	3.6	-143.57	-129.5	49.0	237.2	230.3	6.92	34.290		
1,700.0	1,682.7	1,681.6	1,672.3	4.8	3.9	-143.00	-143.1	48.9	255.7	248.3	7.46	34.285		
1,800.0	1,781.1	1,779.8	1,769.6	5.1	4.2	-142.50	-156.7	48.8	274.3	266.3	8.00	34.274		
1,900.0	1,879.4	1,878.0	1,866.9	5.5	4.5	-142.07	-170.3	48.7	292.8	284.3	8.55	34.262		
2,000.0	1,977.8	1,976.3	1,964.2	5.9	4.7	-141.69	-183.8	48.6	311.4	302.3	9.09	34.247		
2,100.0	2,076.2	2,074.5	2,061.5	6.2	5.0	-141.35	-197.4	48.5	330.0	320.4	9.64	34.232		
2,200.0	2,174.5	2,172.7	2,158.8	6.6	5.3	-141.05	-211.0	48.4	348.6	338.4	10.19	34.217		
2,300.0	2,272.9	2,271.0	2,256.1	6.9	5.6	-140.78	-224.5	48.3	367.2	356.5	10.74	34.201		
2,400.0	2,371.2	2,369.2	2,353.4	7.3	5.9	-140.54	-238.1	48.2	385.8	374.6	11.29	34.186		
2,500.0	2,469.6	2,467.5	2,450.7	7.7	6.2	-140.32	-251.7	48.1	404.5	392.6	11.84	34.172		
2,600.0	2,568.0	2,565.7	2,548.0	8.0	6.5	-140.11	-265.3	48.0	423.1	410.7	12.39	34.157		
2,700.0	2,666.3	2,663.9	2,645.2	8.4	6.8	-139.93	-278.8	47.8	441.7	428.8	12.94	34.144		
2,800.0	2,764.7	2,762.2	2,742.5	8.8	7.1	-139.76	-292.4	47.7	460.4	446.9	13.49	34.131		
2,900.0	2,863.1	2,860.4	2,839.8	9.1	7.3	-139.60	-306.0	47.6	479.0	465.0	14.04	34.118		
3,000.0	2,961.4	2,958.7	2,937.1	9.5	7.6	-139.46	-319.5	47.5	497.7	483.1	14.59	34.106		
3,100.0	3,059.8	3,056.9	3,034.4	9.8	7.9	-139.32	-333.1	47.4	516.3	501.2	15.14	34.095		
3,200.0	3,158.1	3,155.1	3,131.7	10.2	8.2	-139.20	-346.7	47.3	535.0	519.3	15.70	34.084		
3,300.0	3,256.5	3,253.4	3,229.0	10.6	8.5	-139.08	-360.3	47.2	553.6	537.4	16.25	34.073		
3,400.0	3,354.9	3,351.6	3,326.3	10.9	8.8	-138.97	-373.8	47.1	572.3	555.5	16.80	34.063		
3,500.0	3,453.2	3,449.9	3,423.6	11.3	9.1	-138.87	-387.4	47.0	590.9	573.6	17.35	34.054		
3,600.0	3,551.6	3,548.1	3,520.9	11.7	9.4	-138.77	-401.0	46.9	609.6	591.7	17.91	34.044		
3,700.0	3,649.9	3,646.3	3,618.2	12.0	9.7	-138.68	-414.5	46.8	628.2	609.8	18.46	34.036		
3,800.0	3,748.3	3,744.6	3,715.5	12.4	10.0	-138.60	-428.1	46.7	646.9	627.9	19.01	34.027		
3,900.0	3,846.7	3,842.8	3,812.8	12.8	10.3	-138.52	-441.7	46.6	665.6	646.0	19.56	34.019		
4,000.0	3,945.0	3,941.0	3,910.1	13.1	10.6	-138.44	-455.3	46.5	684.2	664.1	20.12	34.012		
4,100.0	4,043.4	4,039.3	4,007.4	13.5	10.8	-138.37	-468.8	46.3	702.9	682.2	20.67	34.004		
4,200.0	4,141.7	4,137.5	4,104.7	13.8	11.1	-138.30	-482.4	46.2	721.5	700.3	21.22	33.997		
4,300.0	4,240.1	4,235.8	4,202.0	14.2	11.4	-138.23	-496.0	46.1	740.2	718.4	21.78	33.990		
4,400.0	4,338.5	4,334.0	4,299.3	14.6	11.7	-138.17	-509.5	46.0	758.9	736.6	22.33	33.984		
4,500.0	4,436.8	4,432.2	4,396.6	14.9	12.0	-138.11	-523.1	45.9	777.5	754.7	22.88	33.978		
4,600.0	4,535.2	4,530.5	4,493.9	15.3	12.3	-138.06	-536.7	45.8	796.2	772.8	23.44	33.972		
4,700.0	4,633.5	4,628.7	4,591.2	15.7	12.6	-138.00	-550.3	45.7	814.9	790.9	23.99	33.966		
4,800.0	4,731.9	4,727.0	4,688.5	16.0	12.9	-137.95	-563.8	45.6	833.6	809.0	24.55	33.960		
4,900.0	4,830.3	4,825.2	4,785.8	16.4	13.2	-137.90	-577.4	45.5	852.2	827.1	25.10	33.955		
5,000.0	4,928.6	4,923.4	4,883.1	16.7	13.5	-137.86	-591.0	45.4	870.9	845.2	25.65	33.950		

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 4C-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 4C-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 #3	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	Separation Factor							
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis							
5,100.0	5,027.0	5,021.7	4,980.4	17.1	13.8	-137.81	-604.5	45.3	889.6	863.4	26.21	33.945						
5,200.0	5,125.4	5,119.9	5,077.7	17.5	14.1	-137.77	-618.1	45.2	908.2	881.5	26.76	33.940						
5,300.0	5,223.7	5,218.2	5,175.0	17.8	14.3	-137.73	-631.7	45.1	926.9	899.6	27.31	33.935						
5,400.0	5,322.1	5,316.4	5,272.3	18.2	14.6	-137.69	-645.3	45.0	945.6	917.7	27.87	33.931						
5,500.0	5,420.4	5,414.6	5,369.6	18.6	14.9	-137.65	-658.8	44.8	964.3	935.8	28.42	33.927						
5,600.0	5,518.8	5,512.9	5,466.9	18.9	15.2	-137.62	-672.4	44.7	982.9	954.0	28.98	33.923						

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4I-17H-P267 - DD - Plan #4													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth 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	90.36	-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		
300.0	300.0	300.0	300.0	0.5	0.5	90.36	-0.4	60.1	60.1	59.2	0.94	63.785 CC, ES		
400.0	400.0	400.0	400.0	0.6	0.6	-161.37	-0.4	60.1	61.8	60.5	1.29	47.831		
500.0	499.8	499.8	499.8	0.8	0.8	-162.02	-1.2	60.1	66.7	65.1	1.64	40.677		
600.0	599.5	599.5	599.4	1.1	1.0	-162.03	-3.8	60.2	75.0	73.0	1.99	37.630		
700.0	698.7	698.8	698.7	1.3	1.2	-161.58	-8.2	60.3	86.6	84.3	2.36	36.774		
800.0	797.5	797.7	797.3	1.6	1.4	-160.85	-14.2	60.4	101.6	98.8	2.73	37.166		
819.4	816.6	816.8	816.4	1.7	1.4	-160.69	-15.5	60.4	104.8	102.0	2.81	37.331		
900.0	895.8	896.1	895.5	2.0	1.6	-159.91	-21.8	60.5	118.7	115.6	3.13	37.887		
1,000.0	994.2	994.4	993.4	2.3	1.8	-158.52	-31.2	60.7	136.0	132.5	3.56	38.206		
1,100.0	1,092.6	1,092.6	1,090.9	2.6	2.0	-156.81	-42.2	60.8	153.6	149.6	4.02	38.227		
1,200.0	1,190.9	1,190.6	1,188.1	3.0	2.3	-154.88	-54.8	61.1	171.4	166.9	4.51	38.037		
1,300.0	1,289.3	1,288.3	1,284.7	3.4	2.6	-152.82	-69.1	61.3	189.7	184.6	5.03	37.721		
1,400.0	1,387.6	1,386.3	1,381.5	3.7	2.9	-150.87	-84.2	61.6	208.3	202.7	5.57	37.402		
1,500.0	1,486.0	1,484.3	1,478.4	4.1	3.1	-149.24	-99.4	61.8	227.1	220.9	6.12	37.121		
1,600.0	1,584.4	1,582.3	1,575.2	4.4	3.4	-147.86	-114.6	62.1	246.0	239.3	6.67	36.873		
1,700.0	1,682.7	1,680.4	1,672.1	4.8	3.7	-146.68	-129.7	62.4	265.1	257.8	7.23	36.657		
1,800.0	1,781.1	1,778.4	1,768.9	5.1	4.0	-145.66	-144.9	62.6	284.2	276.4	7.79	36.468		
1,900.0	1,879.4	1,872.5	1,861.9	5.5	4.3	-144.85	-159.3	63.5	304.0	295.7	8.34	36.462 SF		
2,000.0	1,977.8	1,965.6	1,953.9	5.9	4.6	-144.27	-173.4	65.8	325.3	316.4	8.87	36.678		
2,100.0	2,076.2	2,058.1	2,045.3	6.2	4.9	-143.87	-187.0	69.6	348.0	338.6	9.39	37.074		
2,200.0	2,174.5	2,153.2	2,139.3	6.6	5.2	-143.61	-200.8	74.7	371.8	361.9	9.90	37.542		
2,300.0	2,272.9	2,250.3	2,235.2	6.9	5.5	-143.37	-214.9	80.0	395.8	385.4	10.43	37.956		
2,400.0	2,371.2	2,347.4	2,331.1	7.3	5.8	-143.17	-229.0	85.4	419.8	408.8	10.95	38.331		
2,500.0	2,469.6	2,444.4	2,427.0	7.7	6.1	-142.99	-243.1	90.7	443.7	432.3	11.47	38.671		
2,600.0	2,568.0	2,541.5	2,522.9	8.0	6.4	-142.82	-257.1	96.0	467.7	455.7	12.00	38.982		
2,700.0	2,666.3	2,638.6	2,618.8	8.4	6.7	-142.68	-271.2	101.4	491.7	479.2	12.52	39.267		
2,800.0	2,764.7	2,735.7	2,714.7	8.8	7.0	-142.54	-285.3	106.7	515.7	502.6	13.05	39.529		
2,900.0	2,863.1	2,832.7	2,810.6	9.1	7.3	-142.42	-299.4	112.0	539.7	526.1	13.57	39.772		
3,000.0	2,961.4	2,929.8	2,906.5	9.5	7.6	-142.31	-313.4	117.4	563.6	549.5	14.09	39.996		
3,100.0	3,059.8	3,026.9	3,002.4	9.8	7.9	-142.21	-327.5	122.7	587.6	573.0	14.62	40.204		
3,200.0	3,158.1	3,124.0	3,098.3	10.2	8.2	-142.11	-341.6	128.1	611.6	596.5	15.14	40.398		
3,300.0	3,256.5	3,221.0	3,194.2	10.6	8.5	-142.02	-355.7	133.4	635.6	619.9	15.66	40.579		
3,400.0	3,354.9	3,318.1	3,290.1	10.9	8.8	-141.94	-369.7	138.7	659.6	643.4	16.19	40.748		
3,500.0	3,453.2	3,415.2	3,386.0	11.3	9.2	-141.87	-383.8	144.1	683.6	666.9	16.71	40.907		
3,600.0	3,551.6	3,512.3	3,481.9	11.7	9.5	-141.80	-397.9	149.4	707.6	690.4	17.24	41.056		
3,700.0	3,649.9	3,609.3	3,577.8	12.0	9.8	-141.73	-412.0	154.8	731.6	713.8	17.76	41.196		
3,800.0	3,748.3	3,706.4	3,673.7	12.4	10.1	-141.67	-426.0	160.1	755.6	737.3	18.28	41.328		
3,900.0	3,846.7	3,803.5	3,769.6	12.8	10.4	-141.61	-440.1	165.4	779.6	760.8	18.81	41.453		
4,000.0	3,945.0	3,900.6	3,865.5	13.1	10.7	-141.56	-454.2	170.8	803.6	784.3	19.33	41.571		
4,100.0	4,043.4	3,997.6	3,961.4	13.5	11.0	-141.51	-468.3	176.1	827.6	807.7	19.85	41.683		
4,200.0	4,141.7	4,094.7	4,057.3	13.8	11.3	-141.46	-482.3	181.4	851.6	831.2	20.38	41.789		
4,300.0	4,240.1	4,191.8	4,153.2	14.2	11.6	-141.41	-496.4	186.8	875.6	854.7	20.90	41.890		
4,400.0	4,338.5	4,288.8	4,249.1	14.6	11.9	-141.37	-510.5	192.1	899.6	878.2	21.43	41.986		
4,500.0	4,436.8	4,385.9	4,345.0	14.9	12.2	-141.33	-524.6	197.5	923.6	901.6	21.95	42.077		
4,600.0	4,535.2	4,483.0	4,440.9	15.3	12.6	-141.29	-538.6	202.8	947.6	925.1	22.47	42.164		
4,700.0	4,633.5	4,580.1	4,536.8	15.7	12.9	-141.26	-552.7	208.1	971.6	948.6	23.00	42.247		
4,800.0	4,731.9	4,677.1	4,632.7	16.0	13.2	-141.22	-566.8	213.5	995.6	972.1	23.52	42.327		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	90.30	-0.4	70.2	70.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.30	-0.4	70.2	70.2	69.9	0.24	287.223		
200.0	200.0	200.0	200.0	0.3	0.3	90.30	-0.4	70.2	70.2	69.6	0.59	118.268		
300.0	300.0	300.0	300.0	0.5	0.5	90.30	-0.4	70.2	70.2	69.2	0.94	74.465 CC, ES		
400.0	400.0	398.8	398.8	0.6	0.6	-161.33	-0.4	70.6	72.3	71.0	1.29	56.048		
500.0	499.8	495.8	495.7	0.8	0.8	-162.42	-0.4	73.9	80.6	79.0	1.63	49.372		
600.0	599.5	594.2	594.0	1.1	1.0	-163.82	-0.4	79.5	94.6	92.7	1.98	47.831 SF		
700.0	698.7	692.6	692.2	1.3	1.2	-165.30	-0.5	85.2	112.1	109.8	2.32	48.250		
800.0	797.5	790.4	789.8	1.6	1.4	-166.71	-0.5	90.9	133.0	130.3	2.67	49.884		
819.4	816.6	809.3	808.7	1.7	1.4	-166.97	-0.5	92.0	137.4	134.7	2.73	50.309		
900.0	895.8	887.6	886.9	2.0	1.6	-167.97	-0.6	96.5	156.2	153.1	3.01	51.844		
1,000.0	994.2	984.8	983.9	2.3	1.8	-168.93	-0.6	102.1	179.4	176.1	3.36	53.417		
1,100.0	1,092.6	1,082.0	1,081.0	2.6	2.0	-169.67	-0.7	107.7	202.8	199.1	3.71	54.711		
1,200.0	1,190.9	1,179.2	1,178.0	3.0	2.2	-170.26	-0.7	113.4	226.1	222.1	4.05	55.795		
1,300.0	1,289.3	1,276.4	1,275.1	3.4	2.4	-170.73	-0.8	119.0	249.5	245.1	4.40	56.716		
1,400.0	1,387.6	1,373.6	1,372.1	3.7	2.5	-171.13	-0.8	124.6	272.9	268.1	4.75	57.507		
1,500.0	1,486.0	1,470.9	1,469.2	4.1	2.7	-171.46	-0.8	130.2	296.3	291.2	5.09	58.194		
1,600.0	1,584.4	1,568.1	1,566.2	4.4	2.9	-171.75	-0.9	135.9	319.7	314.3	5.44	58.797		
1,700.0	1,682.7	1,665.3	1,663.3	4.8	3.1	-171.99	-0.9	141.5	343.1	337.3	5.78	59.329		
1,800.0	1,781.1	1,762.5	1,760.3	5.1	3.3	-172.20	-1.0	147.1	366.5	360.4	6.13	59.803		
1,900.0	1,879.4	1,859.7	1,857.4	5.5	3.5	-172.39	-1.0	152.7	390.0	383.5	6.47	60.227		
2,000.0	1,977.8	1,956.9	1,954.4	5.9	3.7	-172.56	-1.1	158.4	413.4	406.6	6.82	60.609		
2,100.0	2,076.2	2,054.1	2,051.5	6.2	3.9	-172.71	-1.1	164.0	436.8	429.6	7.17	60.955		
2,200.0	2,174.5	2,151.3	2,148.5	6.6	4.1	-172.84	-1.1	169.6	460.2	452.7	7.51	61.270		
2,300.0	2,272.9	2,248.5	2,245.6	6.9	4.3	-172.96	-1.2	175.2	483.7	475.8	7.86	61.557		
2,400.0	2,371.2	2,345.8	2,342.6	7.3	4.5	-173.07	-1.2	180.9	507.1	498.9	8.20	61.820		
2,500.0	2,469.6	2,443.0	2,439.6	7.7	4.7	-173.17	-1.3	186.5	530.5	522.0	8.55	62.063		
2,600.0	2,568.0	2,540.2	2,536.7	8.0	4.9	-173.26	-1.3	192.1	554.0	545.1	8.89	62.287		
2,700.0	2,666.3	2,637.4	2,633.7	8.4	5.1	-173.35	-1.4	197.7	577.4	568.2	9.24	62.494		
2,800.0	2,764.7	2,734.6	2,730.8	8.8	5.3	-173.43	-1.4	203.4	600.9	591.3	9.59	62.687		
2,900.0	2,863.1	2,831.8	2,827.8	9.1	5.5	-173.50	-1.5	209.0	624.3	614.4	9.93	62.866		
3,000.0	2,961.4	2,929.0	2,924.9	9.5	5.7	-173.56	-1.5	214.6	647.7	637.5	10.28	63.034		
3,100.0	3,059.8	3,026.2	3,021.9	9.8	5.9	-173.63	-1.5	220.2	671.2	660.6	10.62	63.190		
3,200.0	3,158.1	3,123.4	3,119.0	10.2	6.1	-173.68	-1.6	225.9	694.6	683.7	10.97	63.337		
3,300.0	3,256.5	3,220.7	3,216.0	10.6	6.3	-173.74	-1.6	231.5	718.1	706.8	11.31	63.475		
3,400.0	3,354.9	3,317.9	3,313.1	10.9	6.5	-173.79	-1.7	237.1	741.5	729.9	11.66	63.605		
3,500.0	3,453.2	3,415.1	3,410.1	11.3	6.7	-173.84	-1.7	242.7	765.0	753.0	12.00	63.727		
3,600.0	3,551.6	3,512.3	3,507.2	11.7	6.8	-173.88	-1.8	248.4	788.4	776.1	12.35	63.843		
3,700.0	3,649.9	3,609.5	3,604.2	12.0	7.0	-173.92	-1.8	254.0	811.9	799.2	12.69	63.953		
3,800.0	3,748.3	3,706.7	3,701.3	12.4	7.2	-173.96	-1.9	259.6	835.3	822.3	13.04	64.056		
3,900.0	3,846.7	3,803.9	3,798.3	12.8	7.4	-174.00	-1.9	265.2	858.8	845.4	13.39	64.154		
4,000.0	3,945.0	3,901.1	3,895.4	13.1	7.6	-174.03	-1.9	270.9	882.2	868.5	13.73	64.248		
4,100.0	4,043.4	3,998.3	3,992.4	13.5	7.8	-174.07	-2.0	276.5	905.7	891.6	14.08	64.337		
4,200.0	4,141.7	4,095.6	4,089.5	13.8	8.0	-174.10	-2.0	282.1	929.1	914.7	14.42	64.421		
4,300.0	4,240.1	4,192.8	4,186.5	14.2	8.2	-174.13	-2.1	287.7	952.5	937.8	14.77	64.502		
4,400.0	4,338.5	4,290.0	4,283.6	14.6	8.4	-174.16	-2.1	293.4	976.0	960.9	15.11	64.579		
4,500.0	4,436.8	4,387.2	4,380.6	14.9	8.6	-174.19	-2.2	299.0	999.4	984.0	15.46	64.653		

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 4C-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 4C-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 #3	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	90.51	-0.7	80.0	80.0					
100.0	100.0	100.0	100.0	0.1	0.1	90.51	-0.7	80.0	80.0	79.7	0.24	327.282		
200.0	200.0	200.0	200.0	0.3	0.3	90.51	-0.7	80.0	80.0	79.4	0.59	134.763		
300.0	300.0	300.0	300.0	0.5	0.5	90.51	-0.7	80.0	80.0	79.0	0.94	84.851 CC, ES		
400.0	400.0	397.2	397.2	0.6	0.6	-161.06	-0.7	81.6	83.3	82.0	1.29	64.763		
500.0	499.8	493.7	493.5	0.8	0.8	-162.02	-0.7	86.5	93.3	91.7	1.63	57.295		
600.0	599.5	589.7	589.3	1.1	1.0	-163.22	-0.7	94.5	109.9	108.0	1.97	55.776 SF		
700.0	698.7	687.5	686.6	1.3	1.2	-164.49	-0.7	103.6	130.8	128.5	2.31	56.506		
800.0	797.5	784.5	783.1	1.6	1.5	-165.70	-0.8	112.6	155.0	152.4	2.66	58.359		
819.4	816.6	803.2	801.8	1.7	1.5	-165.92	-0.8	114.3	160.1	157.4	2.72	58.820		
900.0	895.8	880.8	879.1	2.0	1.7	-166.82	-0.8	121.5	181.5	178.5	3.00	60.457		
1,000.0	994.2	977.2	975.0	2.3	1.9	-167.69	-0.8	130.5	208.1	204.8	3.35	62.128		
1,100.0	1,092.6	1,073.5	1,071.0	2.6	2.1	-168.36	-0.8	139.4	234.8	231.1	3.70	63.499		
1,200.0	1,190.9	1,169.9	1,166.9	3.0	2.4	-168.89	-0.8	148.3	261.4	257.4	4.04	64.644		
1,300.0	1,289.3	1,266.2	1,262.8	3.4	2.6	-169.32	-0.8	157.3	288.1	283.7	4.39	65.614		
1,400.0	1,387.6	1,362.6	1,358.8	3.7	2.8	-169.68	-0.8	166.2	314.8	310.1	4.74	66.446		
1,500.0	1,486.0	1,459.0	1,454.7	4.1	3.0	-169.99	-0.8	175.2	341.5	336.4	5.08	67.168		
1,600.0	1,584.4	1,555.3	1,550.7	4.4	3.3	-170.25	-0.8	184.1	368.2	362.8	5.43	67.800		
1,700.0	1,682.7	1,651.7	1,646.6	4.8	3.5	-170.47	-0.9	193.0	394.9	389.2	5.78	68.358		
1,800.0	1,781.1	1,748.0	1,742.5	5.1	3.7	-170.67	-0.9	202.0	421.7	415.5	6.12	68.854		
1,900.0	1,879.4	1,844.4	1,838.5	5.5	4.0	-170.84	-0.9	210.9	448.4	441.9	6.47	69.298		
2,000.0	1,977.8	1,940.7	1,934.4	5.9	4.2	-170.99	-0.9	219.9	475.1	468.3	6.82	69.697		
2,100.0	2,076.2	2,037.1	2,030.3	6.2	4.4	-171.13	-0.9	228.8	501.9	494.7	7.16	70.058		
2,200.0	2,174.5	2,133.4	2,126.3	6.6	4.6	-171.25	-0.9	237.7	528.6	521.1	7.51	70.387		
2,300.0	2,272.9	2,229.8	2,222.2	6.9	4.9	-171.36	-0.9	246.7	555.3	547.5	7.86	70.687		
2,400.0	2,371.2	2,326.1	2,318.2	7.3	5.1	-171.46	-0.9	255.6	582.1	573.9	8.20	70.962		
2,500.0	2,469.6	2,422.5	2,414.1	7.7	5.3	-171.56	-0.9	264.5	608.8	600.3	8.55	71.215		
2,600.0	2,568.0	2,518.8	2,510.0	8.0	5.6	-171.64	-1.0	273.5	635.6	626.7	8.90	71.448		
2,700.0	2,666.3	2,615.2	2,606.0	8.4	5.8	-171.72	-1.0	282.4	662.3	653.1	9.24	71.664		
2,800.0	2,764.7	2,711.5	2,701.9	8.8	6.0	-171.79	-1.0	291.4	689.1	679.5	9.59	71.864		
2,900.0	2,863.1	2,807.9	2,797.9	9.1	6.2	-171.86	-1.0	300.3	715.8	705.9	9.93	72.051		
3,000.0	2,961.4	2,904.3	2,893.8	9.5	6.5	-171.92	-1.0	309.2	742.6	732.3	10.28	72.225		
3,100.0	3,059.8	3,000.6	2,989.7	9.8	6.7	-171.97	-1.0	318.2	769.3	758.7	10.63	72.388		
3,200.0	3,158.1	3,097.0	3,085.7	10.2	6.9	-172.03	-1.0	327.1	796.1	785.1	10.97	72.541		
3,300.0	3,256.5	3,193.3	3,181.6	10.6	7.2	-172.08	-1.0	336.1	822.8	811.5	11.32	72.685		
3,400.0	3,354.9	3,289.7	3,277.5	10.9	7.4	-172.12	-1.0	345.0	849.6	837.9	11.67	72.820		
3,500.0	3,453.2	3,386.0	3,373.5	11.3	7.6	-172.17	-1.1	353.9	876.3	864.3	12.01	72.947		
3,600.0	3,551.6	3,482.4	3,469.4	11.7	7.9	-172.21	-1.1	362.9	903.1	890.7	12.36	73.067		
3,700.0	3,649.9	3,578.7	3,565.4	12.0	8.1	-172.25	-1.1	371.8	929.8	917.1	12.71	73.181		
3,800.0	3,748.3	3,675.1	3,661.3	12.4	8.3	-172.29	-1.1	380.8	956.6	943.5	13.05	73.288		
3,900.0	3,846.7	3,771.4	3,757.2	12.8	8.5	-172.32	-1.1	389.7	983.3	969.9	13.40	73.391		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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	90.46	-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 CC, ES		
300.0	300.0	296.9	296.9	0.5	0.5	90.45	-0.7	91.7	91.7	90.8	0.94	97.531		
400.0	400.0	393.5	393.3	0.6	0.7	-161.04	-0.7	96.6	98.4	97.2	1.28	76.913		
500.0	499.8	489.1	488.6	0.8	0.9	-161.79	-0.8	104.6	111.8	110.2	1.62	68.979		
600.0	599.5	584.4	583.3	1.1	1.1	-162.75	-0.8	115.6	131.5	129.6	1.96	67.095 SF		
700.0	698.7	681.5	679.6	1.3	1.4	-163.80	-0.9	127.6	155.4	153.1	2.30	67.454		
800.0	797.5	777.7	775.1	1.6	1.6	-164.81	-0.9	139.4	182.5	179.8	2.64	69.021		
819.4	816.6	796.2	793.5	1.7	1.7	-165.00	-0.9	141.7	188.1	185.4	2.71	69.434		
900.0	895.8	873.2	869.9	2.0	1.9	-165.81	-0.9	151.2	211.8	208.9	2.99	70.855		
1,000.0	994.2	968.7	964.6	2.3	2.1	-166.60	-1.0	162.9	241.3	238.0	3.34	72.302		
1,100.0	1,092.6	1,064.2	1,059.4	2.6	2.4	-167.21	-1.0	174.7	270.8	267.1	3.69	73.487		
1,200.0	1,190.9	1,159.7	1,154.2	3.0	2.7	-167.70	-1.1	186.5	300.3	296.3	4.03	74.476		
1,300.0	1,289.3	1,255.2	1,249.0	3.4	2.9	-168.11	-1.1	198.2	329.9	325.5	4.38	75.313		
1,400.0	1,387.6	1,350.8	1,343.8	3.7	3.2	-168.45	-1.2	210.0	359.5	354.7	4.73	76.031		
1,500.0	1,486.0	1,446.3	1,438.6	4.1	3.5	-168.73	-1.2	221.8	389.0	383.9	5.08	76.654		
1,600.0	1,584.4	1,541.8	1,533.4	4.4	3.7	-168.98	-1.2	233.5	418.6	413.2	5.42	77.198		
1,700.0	1,682.7	1,637.3	1,628.1	4.8	4.0	-169.19	-1.3	245.3	448.2	442.4	5.77	77.679		
1,800.0	1,781.1	1,732.8	1,722.9	5.1	4.2	-169.38	-1.3	257.1	477.8	471.6	6.12	78.106		
1,900.0	1,879.4	1,828.3	1,817.7	5.5	4.5	-169.55	-1.4	268.8	507.3	500.9	6.46	78.488		
2,000.0	1,977.8	1,923.8	1,912.5	5.9	4.8	-169.69	-1.4	280.6	536.9	530.1	6.81	78.832		
2,100.0	2,076.2	2,019.3	2,007.3	6.2	5.0	-169.83	-1.5	292.3	566.5	559.4	7.16	79.143		
2,200.0	2,174.5	2,114.9	2,102.1	6.6	5.3	-169.95	-1.5	304.1	596.1	588.6	7.51	79.426		
2,300.0	2,272.9	2,210.4	2,196.9	6.9	5.6	-170.05	-1.5	315.9	625.7	617.9	7.85	79.684		
2,400.0	2,371.2	2,305.9	2,291.6	7.3	5.8	-170.15	-1.6	327.6	655.3	647.1	8.20	79.920		
2,500.0	2,469.6	2,401.4	2,386.4	7.7	6.1	-170.24	-1.6	339.4	684.9	676.4	8.55	80.138		
2,600.0	2,568.0	2,496.9	2,481.2	8.0	6.4	-170.32	-1.7	351.2	714.5	705.7	8.89	80.338		
2,700.0	2,666.3	2,592.4	2,576.0	8.4	6.6	-170.40	-1.7	362.9	744.2	734.9	9.24	80.524		
2,800.0	2,764.7	2,687.9	2,670.8	8.8	6.9	-170.47	-1.8	374.7	773.8	764.2	9.59	80.697		
2,900.0	2,863.1	2,783.4	2,765.6	9.1	7.2	-170.53	-1.8	386.4	803.4	793.4	9.94	80.857		
3,000.0	2,961.4	2,878.9	2,860.4	9.5	7.4	-170.59	-1.8	398.2	833.0	822.7	10.28	81.007		
3,100.0	3,059.8	2,974.5	2,955.1	9.8	7.7	-170.65	-1.9	410.0	862.6	852.0	10.63	81.147		
3,200.0	3,158.1	3,070.0	3,049.9	10.2	8.0	-170.70	-1.9	421.7	892.2	881.2	10.98	81.278		
3,300.0	3,256.5	3,165.5	3,144.7	10.6	8.2	-170.75	-2.0	433.5	921.8	910.5	11.32	81.402		
3,400.0	3,354.9	3,261.0	3,239.5	10.9	8.5	-170.79	-2.0	445.3	951.4	939.8	11.67	81.518		
3,500.0	3,453.2	3,356.5	3,334.3	11.3	8.8	-170.84	-2.1	457.0	981.0	969.0	12.02	81.627		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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						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		
12,900.0	7,267.0	7,204.7	7,203.1	99.4	12.7	-84.26	6,363.2	-1,276.8	969.2	860.7	108.49	8.934		
13,000.0	7,267.0	7,206.5	7,204.9	101.1	12.7	-84.80	6,363.3	-1,276.9	871.4	761.0	110.31	7.899		
13,100.0	7,267.0	7,208.3	7,206.7	102.8	12.7	-85.35	6,363.3	-1,276.9	774.0	661.9	112.13	6.903		
13,200.0	7,267.0	7,210.2	7,208.5	104.5	12.7	-85.90	6,363.3	-1,276.9	677.5	563.6	113.94	5.946		
13,300.0	7,267.0	7,212.0	7,210.3	106.1	12.7	-86.45	6,363.4	-1,276.9	582.1	466.4	115.75	5.029		
13,400.0	7,267.0	7,213.8	7,212.2	107.8	12.7	-87.01	6,363.4	-1,276.9	488.6	371.1	117.55	4.157		
13,500.0	7,267.0	7,215.7	7,214.0	109.5	12.7	-87.58	6,363.4	-1,276.9	398.2	278.9	119.34	3.337		
13,600.0	7,267.0	7,217.6	7,215.9	111.2	12.7	-88.15	6,363.5	-1,276.9	313.8	192.6	121.12	2.591		
13,700.0	7,267.0	7,219.5	7,217.8	112.9	12.7	-88.72	6,363.5	-1,276.9	241.4	118.5	122.89	1.965		
13,800.0	7,267.0	7,221.4	7,219.7	114.6	12.7	-89.30	6,363.5	-1,277.0	195.2	70.6	124.65	1.566		
13,850.9	7,267.0	7,222.3	7,220.7	115.5	12.7	-89.59	6,363.6	-1,277.0	188.5	63.0	125.55	1.501	CC, ES, SF	
13,900.0	7,267.0	7,223.3	7,221.6	116.4	12.7	-89.88	6,363.6	-1,277.0	194.8	68.4	126.41	1.541		
14,000.0	7,267.0	7,225.2	7,223.5	118.1	12.7	-90.47	6,363.6	-1,277.0	240.3	112.2	128.15	1.876		
14,055.8	7,267.0	7,226.3	7,224.6	119.0	12.7	-90.80	6,363.6	-1,277.0	278.4	149.3	129.11	2.156		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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							
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
11,300.0	7,267.0	7,202.4	7,200.0	72.8	12.8	-84.83	4,756.8	-1,407.5	972.8	890.8	81.93	11.873	
11,400.0	7,267.0	7,203.9	7,201.6	74.4	12.8	-85.58	4,756.8	-1,407.5	875.6	792.3	83.36	10.504	
11,500.0	7,267.0	7,205.4	7,203.1	76.1	12.8	-86.20	4,756.9	-1,407.5	779.7	695.0	84.75	9.200	
11,545.9	7,267.0	7,206.1	7,203.8	76.8	12.8	-86.45	4,756.9	-1,407.5	736.2	650.9	85.38	8.623	
11,600.0	7,267.0	7,207.0	7,204.6	77.7	12.8	-86.64	4,756.9	-1,407.6	685.5	599.2	86.33	7.940	
11,700.0	7,267.0	7,208.5	7,206.1	79.4	12.8	-87.00	4,756.9	-1,407.6	593.2	505.1	88.08	6.735	
11,800.0	7,267.0	7,210.0	7,207.7	81.0	12.8	-87.36	4,756.9	-1,407.6	503.9	414.1	89.83	5.609	
11,900.0	7,267.0	7,211.6	7,209.2	82.7	12.8	-87.72	4,757.0	-1,407.6	419.4	327.9	91.58	4.580	
12,000.0	7,267.0	7,213.1	7,210.8	84.3	12.8	-88.08	4,757.0	-1,407.7	343.4	250.1	93.33	3.679	
12,100.0	7,267.0	7,214.7	7,212.3	86.0	12.8	-88.45	4,757.0	-1,407.7	282.7	187.6	95.08	2.973	
12,200.0	7,267.0	7,216.3	7,213.9	87.6	12.8	-88.81	4,757.0	-1,407.7	248.8	152.0	96.83	2.570	
12,240.1	7,267.0	7,216.9	7,214.6	88.3	12.8	-88.96	4,757.0	-1,407.7	245.6	148.1	97.53	2.518	CC, ES, SF
12,300.0	7,267.0	7,217.8	7,215.5	89.3	12.8	-89.19	4,757.1	-1,407.7	252.8	154.2	98.57	2.565	
12,400.0	7,267.0	7,219.5	7,217.1	91.0	12.8	-89.56	4,757.1	-1,407.8	293.1	192.8	100.31	2.922	
12,500.0	7,267.0	7,221.1	7,218.7	92.7	12.8	-89.94	4,757.1	-1,407.8	357.6	255.5	102.05	3.504	
12,600.0	7,267.0	7,222.7	7,220.3	94.3	12.8	-90.31	4,757.1	-1,407.8	435.7	331.9	103.79	4.198	
12,700.0	7,267.0	7,224.3	7,222.0	96.0	12.8	-90.70	4,757.2	-1,407.9	521.4	415.8	105.52	4.941	
12,800.0	7,267.0	7,226.0	7,223.6	97.7	12.8	-91.08	4,757.2	-1,407.9	611.4	504.1	107.25	5.701	
12,900.0	7,267.0	7,227.6	7,225.3	99.4	12.8	-91.47	4,757.2	-1,407.9	704.1	595.1	108.97	6.461	
13,000.0	7,267.0	7,229.3	7,227.0	101.1	12.9	-91.86	4,757.3	-1,407.9	798.6	687.9	110.69	7.214	
13,100.0	7,267.0	7,231.0	7,228.7	102.8	12.9	-92.25	4,757.3	-1,408.0	894.2	781.8	112.40	7.955	
13,200.0	7,267.0	7,232.7	7,230.4	104.5	12.9	-92.64	4,757.3	-1,408.0	990.7	876.6	114.11	8.682	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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		
12,900.0	7,267.0	7,202.0	7,202.0	99.4	12.6	-90.00	6,375.7	-1,224.9	975.0	866.1	108.95	8.950		
13,000.0	7,267.0	7,202.0	7,202.0	101.1	12.6	-90.00	6,375.7	-1,224.9	876.2	765.5	110.69	7.916		
13,100.0	7,267.0	7,202.0	7,202.0	102.8	12.6	-90.00	6,375.7	-1,224.9	777.5	665.1	112.43	6.916		
13,200.0	7,267.0	7,202.0	7,202.0	104.5	12.6	-90.00	6,375.7	-1,224.9	679.3	565.2	114.17	5.950		
13,300.0	7,267.0	7,202.0	7,202.0	106.1	12.6	-90.00	6,375.7	-1,224.9	581.7	465.8	115.91	5.019		
13,400.0	7,267.0	7,202.0	7,202.0	107.8	12.6	-90.00	6,375.7	-1,224.9	485.1	367.5	117.65	4.124		
13,500.0	7,267.0	7,202.0	7,202.0	109.5	12.6	-90.00	6,375.7	-1,224.9	390.2	270.8	119.39	3.268		
13,600.0	7,267.0	7,202.0	7,202.0	111.2	12.6	-90.00	6,375.7	-1,224.9	298.7	177.5	121.13	2.466		
13,700.0	7,267.0	7,202.0	7,202.0	112.9	12.6	-90.00	6,375.7	-1,224.9	214.8	91.9	122.88	1.748		
13,800.0	7,267.0	7,202.0	7,202.0	114.6	12.6	-90.00	6,375.7	-1,224.9	151.9	27.2	124.62	1.219	Level 2	
13,865.4	7,267.0	7,202.0	7,202.0	115.8	12.6	-90.00	6,375.7	-1,224.9	137.1	11.3	125.76	1.090	Level 2, CC, ES, SF	
13,900.0	7,267.0	7,202.0	7,202.0	116.4	12.6	-90.00	6,375.7	-1,224.9	141.4	15.0	126.36	1.119	Level 2	
14,000.0	7,267.0	7,202.0	7,202.0	118.1	12.6	-90.00	6,375.7	-1,224.9	192.1	64.0	128.11	1.500	Level 3	
14,055.8	7,267.0	7,202.0	7,202.0	119.0	12.6	-90.00	6,375.7	-1,224.9	234.6	105.6	129.08	1.818		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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		
12,300.0	7,267.0	7,245.6	7,243.8	89.3	12.8	91.17	5,494.3	-501.0	953.0	854.4	98.60	9.665		
12,400.0	7,267.0	7,244.5	7,242.6	91.0	12.8	91.06	5,494.3	-501.0	880.1	779.7	100.33	8.772		
12,500.0	7,267.0	7,243.3	7,241.5	92.7	12.8	90.96	5,494.3	-501.0	813.0	710.9	102.07	7.965		
12,600.0	7,267.0	7,242.3	7,240.4	94.3	12.8	90.86	5,494.3	-501.0	753.2	649.4	103.80	7.256		
12,700.0	7,267.0	7,241.2	7,239.3	96.0	12.8	90.76	5,494.3	-501.0	702.6	597.1	105.54	6.657		
12,800.0	7,267.0	7,240.2	7,238.3	97.7	12.8	90.67	5,494.3	-501.0	663.4	556.1	107.28	6.184		
12,900.0	7,267.0	7,239.2	7,237.3	99.4	12.8	90.58	5,494.3	-501.0	637.5	528.5	109.02	5.848		
13,000.0	7,267.0	7,238.2	7,236.3	101.1	12.8	90.49	5,494.4	-501.0	626.8	516.0	110.76	5.659		
13,018.1	7,267.0	7,238.0	7,236.2	101.4	12.8	90.47	5,494.4	-501.0	626.5	515.4	111.07	5.641 CC, ES		
13,100.0	7,267.0	7,237.3	7,235.4	102.8	12.8	90.40	5,494.4	-501.0	631.8	519.3	112.49	5.617 SF		
13,200.0	7,267.0	7,236.4	7,234.5	104.5	12.8	90.32	5,494.4	-500.9	652.4	538.1	114.23	5.711		
13,300.0	7,267.0	7,235.5	7,233.6	106.1	12.8	90.24	5,494.4	-500.9	687.0	571.0	115.97	5.924		
13,400.0	7,267.0	7,234.6	7,232.7	107.8	12.8	90.16	5,494.4	-500.9	733.7	616.0	117.71	6.233		
13,500.0	7,267.0	7,233.7	7,231.9	109.5	12.8	90.08	5,494.4	-500.9	790.4	670.9	119.45	6.617		
13,600.0	7,267.0	7,232.9	7,231.1	111.2	12.8	90.01	5,494.4	-500.9	855.0	733.8	121.19	7.055		
13,700.0	7,267.0	7,232.1	7,230.3	112.9	12.8	89.93	5,494.4	-500.9	926.0	803.0	122.94	7.532		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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		
10,100.0	7,267.0	7,225.0	7,225.0	53.4	12.6	-90.00	3,356.6	-1,768.5	947.1	885.2	61.90	15.300		
10,200.0	7,267.0	7,225.0	7,225.0	55.0	12.6	-90.00	3,356.6	-1,768.5	869.5	805.9	63.60	13.672		
10,300.0	7,267.0	7,225.0	7,225.0	56.6	12.6	-90.00	3,356.6	-1,768.5	796.9	731.6	65.30	12.204		
10,400.0	7,267.0	7,225.0	7,225.0	58.1	12.6	-90.00	3,356.6	-1,768.5	730.8	663.8	67.00	10.907		
10,500.0	7,267.0	7,225.0	7,225.0	59.7	12.6	-90.00	3,356.6	-1,768.5	673.1	604.4	68.71	9.796		
10,600.0	7,267.0	7,225.0	7,225.0	61.4	12.6	-90.00	3,356.6	-1,768.5	626.1	555.7	70.42	8.892		
10,700.0	7,267.0	7,225.0	7,225.0	63.0	12.6	-90.00	3,356.6	-1,768.5	592.5	520.4	72.13	8.215		
10,800.0	7,267.0	7,225.0	7,225.0	64.6	12.6	-90.00	3,356.6	-1,768.5	574.5	500.7	73.84	7.780		
10,855.0	7,267.0	7,225.0	7,225.0	65.5	12.6	-90.00	3,356.6	-1,768.5	571.9	497.1	74.78	7.647 CC, ES		
10,900.0	7,267.0	7,225.0	7,225.0	66.2	12.6	-90.00	3,356.6	-1,768.5	573.6	498.1	75.56	7.592 SF		
11,000.0	7,267.0	7,225.0	7,225.0	67.9	12.6	-90.00	3,356.6	-1,768.5	590.0	512.7	77.28	7.635		
11,100.0	7,267.0	7,225.0	7,225.0	69.5	12.6	-90.00	3,356.6	-1,768.5	622.2	543.2	79.00	7.876		
11,200.0	7,267.0	7,225.0	7,225.0	71.1	12.6	-90.00	3,356.6	-1,768.5	667.9	587.2	80.72	8.274		
11,233.4	7,267.0	7,225.0	7,225.0	71.7	12.6	-90.00	3,356.6	-1,768.5	685.8	604.5	81.29	8.436		
11,300.0	7,267.0	7,225.0	7,225.0	72.8	12.6	-90.00	3,356.6	-1,768.5	724.9	642.7	82.21	8.818		
11,400.0	7,267.0	7,225.0	7,225.0	74.4	12.6	-90.00	3,356.6	-1,768.5	791.7	708.2	83.56	9.475		
11,500.0	7,267.0	7,225.0	7,225.0	76.1	12.6	-90.00	3,356.6	-1,768.5	866.1	781.2	84.90	10.201		
11,545.9	7,267.0	7,225.0	7,225.0	76.8	12.6	-90.00	3,356.6	-1,768.5	902.2	816.7	85.51	10.551		
11,600.0	7,267.0	7,225.0	7,225.0	77.7	12.6	-90.00	3,356.6	-1,768.5	946.0	859.6	86.44	10.944		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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		
10,300.0	7,267.0	7,216.0	7,214.8	56.6	12.7	91.30	3,722.1	-1,034.1	929.0	863.7	65.28	14.230		
10,400.0	7,267.0	7,216.2	7,214.9	58.1	12.7	91.35	3,722.1	-1,034.2	830.8	763.8	66.99	12.403		
10,500.0	7,267.0	7,216.3	7,215.1	59.7	12.7	91.40	3,722.1	-1,034.2	733.1	664.4	68.69	10.672		
10,600.0	7,267.0	7,216.5	7,215.2	61.4	12.7	91.46	3,722.1	-1,034.2	636.1	565.7	70.40	9.035		
10,700.0	7,267.0	7,216.7	7,215.4	63.0	12.7	91.51	3,722.1	-1,034.2	540.1	468.0	72.11	7.491		
10,800.0	7,267.0	7,216.8	7,215.5	64.6	12.7	91.57	3,722.1	-1,034.2	446.0	372.2	73.82	6.042		
10,900.0	7,267.0	7,217.0	7,215.7	66.2	12.7	91.62	3,722.1	-1,034.2	355.1	279.6	75.53	4.702		
11,000.0	7,267.0	7,217.1	7,215.9	67.9	12.7	91.68	3,722.1	-1,034.2	270.7	193.5	77.25	3.505		
11,100.0	7,267.0	7,217.3	7,216.0	69.5	12.7	91.74	3,722.1	-1,034.2	201.2	122.2	78.97	2.548		
11,200.0	7,267.0	7,217.5	7,216.2	71.1	12.7	91.79	3,722.1	-1,034.2	166.3	85.6	80.69	2.061		
11,214.1	7,267.0	7,217.5	7,216.2	71.4	12.7	91.80	3,722.1	-1,034.2	165.7	84.8	80.93	2.048	CC, ES, SF	
11,233.4	7,267.0	7,217.5	7,216.2	71.7	12.7	91.81	3,722.1	-1,034.2	166.8	85.6	81.26	2.053		
11,300.0	7,267.0	7,217.6	7,216.3	72.8	12.7	91.84	3,722.1	-1,034.2	186.3	104.2	82.17	2.267		
11,400.0	7,267.0	7,217.7	7,216.4	74.4	12.7	91.85	3,722.1	-1,034.2	247.4	163.9	83.53	2.962		
11,500.0	7,267.0	7,217.8	7,216.5	76.1	12.7	91.82	3,722.1	-1,034.2	327.3	242.5	84.87	3.857		
11,545.9	7,267.0	7,217.8	7,216.5	76.8	12.7	91.80	3,722.1	-1,034.2	367.0	281.6	85.47	4.294		
11,600.0	7,267.0	7,217.8	7,216.5	77.7	12.7	91.80	3,722.1	-1,034.2	415.4	329.0	86.41	4.807		
11,700.0	7,267.0	7,217.8	7,216.5	79.4	12.7	91.79	3,722.1	-1,034.2	507.8	419.7	88.14	5.762		
11,800.0	7,267.0	7,217.8	7,216.5	81.0	12.7	91.79	3,722.1	-1,034.2	602.7	512.8	89.86	6.707		
11,900.0	7,267.0	7,217.7	7,216.5	82.7	12.7	91.79	3,722.1	-1,034.2	699.0	607.4	91.59	7.631		
12,000.0	7,267.0	7,217.7	7,216.5	84.3	12.7	91.79	3,722.1	-1,034.2	796.2	702.9	93.32	8.531		
12,100.0	7,267.0	7,217.7	7,216.4	86.0	12.7	91.78	3,722.1	-1,034.2	894.0	798.9	95.06	9.405		
12,200.0	7,267.0	7,217.7	7,216.4	87.6	12.7	91.78	3,722.1	-1,034.2	992.3	895.5	96.79	10.252		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-43.51	402.9	-382.5	556.4					
100.0	100.0	70.0	70.0	0.1	0.1	-43.51	402.9	-382.5	555.6	555.3	0.24		2,271.792	
200.0	200.0	170.0	170.0	0.3	0.3	-43.51	402.9	-382.5	555.6	555.0	0.59		935.894	
300.0	300.0	270.0	270.0	0.5	0.5	-43.51	402.9	-382.5	555.6	554.6	0.94		589.340	
400.0	400.0	370.0	370.0	0.6	0.6	65.47	402.9	-382.5	554.8	553.5	1.29		428.772	
500.0	499.8	469.8	469.8	0.8	0.8	66.00	402.9	-382.5	552.7	551.0	1.66		333.539	
600.0	599.5	569.5	569.5	1.1	1.0	66.89	402.9	-382.5	549.2	547.1	2.04		268.743	
700.0	698.7	668.7	668.7	1.3	1.2	68.15	402.9	-382.5	544.5	542.0	2.47		220.853	
800.0	797.5	767.5	767.5	1.6	1.3	69.78	402.9	-382.5	538.8	535.9	2.93		183.671	
819.4	816.6	786.6	786.6	1.7	1.4	70.14	402.9	-382.5	537.6	534.6	3.03		177.539	
900.0	895.8	865.8	865.8	2.0	1.5	71.59	402.9	-382.5	532.8	529.4	3.43		155.410	
1,000.0	994.2	964.2	964.2	2.3	1.7	73.42	402.9	-382.5	527.3	523.3	3.94		133.921	
1,100.0	1,092.6	1,062.6	1,062.6	2.6	1.9	75.29	402.9	-382.5	522.3	517.9	4.46		117.213	
1,200.0	1,190.9	1,160.9	1,160.9	3.0	2.0	77.19	402.9	-382.5	518.0	513.0	4.98		103.955	
1,300.0	1,289.3	1,259.3	1,259.3	3.4	2.2	79.12	402.9	-382.5	514.2	508.7	5.51		93.250	
1,400.0	1,387.6	1,357.6	1,357.6	3.7	2.4	81.07	402.9	-382.5	511.1	505.0	6.05		84.478	
1,500.0	1,486.0	1,456.0	1,456.0	4.1	2.5	83.05	402.9	-382.5	508.5	502.0	6.59		77.203	
1,600.0	1,584.4	1,554.4	1,554.4	4.4	2.7	85.04	402.9	-382.5	506.6	499.5	7.12		71.108	
1,700.0	1,682.7	1,652.7	1,652.7	4.8	2.9	87.04	402.9	-382.5	505.4	497.7	7.66		65.958	
1,800.0	1,781.1	1,751.1	1,751.1	5.1	3.1	89.05	402.9	-382.5	504.8	496.6	8.20		61.577	
1,847.0	1,827.3	1,797.3	1,797.3	5.3	3.1	90.00	402.9	-382.5	504.7	496.2	8.45		59.744 CC	
1,900.0	1,879.4	1,849.4	1,849.4	5.5	3.2	91.07	402.9	-382.5	504.8	496.0	8.73		57.827 ES	
2,000.0	1,977.8	1,947.8	1,947.8	5.9	3.4	93.08	402.9	-382.5	505.4	496.2	9.26		54.604	
2,100.0	2,076.2	2,046.2	2,046.2	6.2	3.6	95.08	402.9	-382.5	506.7	497.0	9.78		51.823	
2,200.0	2,174.5	2,144.5	2,144.5	6.6	3.7	97.07	402.9	-382.5	508.7	498.4	10.29		49.416	
2,300.0	2,272.9	2,242.9	2,242.9	6.9	3.9	99.05	402.9	-382.5	511.2	500.4	10.80		47.329	
2,400.0	2,371.2	2,341.2	2,341.2	7.3	4.1	101.00	402.9	-382.5	514.4	503.1	11.30		45.516	
2,500.0	2,469.6	2,439.6	2,439.6	7.7	4.3	102.93	402.9	-382.5	518.2	506.4	11.79		43.941	
2,600.0	2,568.0	2,538.0	2,538.0	8.0	4.4	104.82	402.9	-382.5	522.6	510.4	12.28		42.571	
2,700.0	2,666.3	2,636.3	2,636.3	8.4	4.6	106.69	402.9	-382.5	527.6	514.9	12.75		41.381	
2,800.0	2,764.7	2,734.7	2,734.7	8.8	4.8	108.52	402.9	-382.5	533.1	519.9	13.21		40.348	
2,900.0	2,863.1	2,833.1	2,833.1	9.1	4.9	110.31	402.9	-382.5	539.2	525.6	13.67		39.454	
3,000.0	2,961.4	2,931.4	2,931.4	9.5	5.1	112.06	402.9	-382.5	545.8	531.7	14.11		38.680	
3,100.0	3,059.8	3,029.8	3,029.8	9.8	5.3	113.77	402.9	-382.5	553.0	538.4	14.55		38.015	
3,200.0	3,158.1	3,128.1	3,128.1	10.2	5.5	115.43	402.9	-382.5	560.6	545.6	14.97		37.444	
3,300.0	3,256.5	3,226.5	3,226.5	10.6	5.6	117.05	402.9	-382.5	568.6	553.3	15.39		36.957	
3,400.0	3,354.9	3,324.9	3,324.9	10.9	5.8	118.63	402.9	-382.5	577.2	561.4	15.79		36.545	
3,500.0	3,453.2	3,423.2	3,423.2	11.3	6.0	120.15	402.9	-382.5	586.1	569.9	16.19		36.199	
3,600.0	3,551.6	3,521.6	3,521.6	11.7	6.1	121.64	402.9	-382.5	595.5	578.9	16.58		35.911	
3,700.0	3,649.9	3,619.9	3,619.9	12.0	6.3	123.07	402.9	-382.5	605.3	588.3	16.97		35.677	
3,800.0	3,748.3	3,718.3	3,718.3	12.4	6.5	124.46	402.9	-382.5	615.4	598.1	17.34		35.489	
3,900.0	3,846.7	3,816.7	3,816.7	12.8	6.7	125.81	402.9	-382.5	625.9	608.2	17.71		35.342	
4,000.0	3,945.0	3,915.0	3,915.0	13.1	6.8	127.11	402.9	-382.5	636.7	618.7	18.07		35.232	
4,100.0	4,043.4	4,013.4	4,013.4	13.5	7.0	128.37	402.9	-382.5	647.9	629.5	18.43		35.156	
4,200.0	4,141.7	4,111.7	4,111.7	13.8	7.2	129.59	402.9	-382.5	659.3	640.6	18.78		35.108	
4,300.0	4,240.1	4,210.1	4,210.1	14.2	7.3	130.76	402.9	-382.5	671.1	652.0	19.13		35.086	
4,400.0	4,338.5	4,308.5	4,308.5	14.6	7.5	131.90	402.9	-382.5	683.1	663.6	19.47		35.088	
4,500.0	4,436.8	4,406.8	4,406.8	14.9	7.7	133.00	402.9	-382.5	695.4	675.6	19.81		35.109	
4,600.0	4,535.2	4,505.2	4,505.2	15.3	7.9	134.05	402.9	-382.5	707.9	687.8	20.14		35.149	
4,700.0	4,633.5	4,603.5	4,603.5	15.7	8.0	135.08	402.9	-382.5	720.7	700.2	20.47		35.205	
4,800.0	4,731.9	4,701.9	4,701.9	16.0	8.2	136.06	402.9	-382.5	733.7	712.9	20.80		35.275	
4,900.0	4,830.3	4,800.3	4,800.3	16.4	8.4	137.02	402.9	-382.5	746.9	725.7	21.12		35.357	

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 4C-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 4C-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 #3	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		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			
5,000.0	4,928.6	4,898.6	4,898.6	16.7	8.5	137.94	402.9	-382.5	760.2	738.8	21.45		35.450	
5,100.0	5,027.0	4,997.0	4,997.0	17.1	8.7	138.82	402.9	-382.5	773.8	752.1	21.77		35.553	
5,200.0	5,125.4	5,095.4	5,095.4	17.5	8.9	139.68	402.9	-382.5	787.6	765.5	22.08		35.664	
5,300.0	5,223.7	5,193.7	5,193.7	17.8	9.1	140.51	402.9	-382.5	801.5	779.1	22.40		35.782	
5,400.0	5,322.1	5,292.1	5,292.1	18.2	9.2	141.31	402.9	-382.5	815.6	792.9	22.71		35.906	
5,500.0	5,420.4	5,390.4	5,390.4	18.6	9.4	142.08	402.9	-382.5	829.8	806.8	23.03		36.036	
5,600.0	5,518.8	5,488.8	5,488.8	18.9	9.6	142.83	402.9	-382.5	844.2	820.9	23.34		36.170	
5,700.0	5,617.2	5,587.2	5,587.2	19.3	9.8	143.55	402.9	-382.5	858.7	835.1	23.65		36.308	
5,800.0	5,715.5	5,685.5	5,685.5	19.7	9.9	144.25	402.9	-382.5	873.4	849.4	23.96		36.449	
5,900.0	5,813.9	5,783.9	5,783.9	20.0	10.1	144.93	402.9	-382.5	888.2	863.9	24.27		36.593	
6,000.0	5,912.2	5,882.2	5,882.2	20.4	10.3	145.58	402.9	-382.5	903.1	878.5	24.58		36.738	
6,100.0	6,010.6	5,980.6	5,980.6	20.7	10.4	146.22	402.9	-382.5	918.1	893.2	24.89		36.885	
6,200.0	6,109.0	6,079.0	6,079.0	21.1	10.6	146.83	402.9	-382.5	933.2	908.0	25.20		37.034	
6,300.0	6,207.3	6,177.3	6,177.3	21.5	10.8	147.42	402.9	-382.5	948.4	922.9	25.51		37.183	
6,400.0	6,305.7	6,275.7	6,275.7	21.8	11.0	148.00	402.9	-382.5	963.7	937.9	25.81		37.333	
6,500.0	6,404.0	6,374.0	6,374.0	22.2	11.1	148.55	402.9	-382.5	979.1	953.0	26.12		37.482	
6,600.0	6,502.4	6,472.4	6,472.4	22.6	11.3	149.09	402.9	-382.5	994.6	968.2	26.43		37.632	
7,150.0	7,023.5	6,993.5	6,993.5	24.0	12.2	67.17	402.9	-382.5	994.2	968.4	25.82		38.500	
7,200.0	7,062.8	7,032.8	7,032.8	24.0	12.3	67.95	402.9	-382.5	979.7	954.2	25.48		38.452	
7,250.0	7,099.3	7,069.3	7,069.3	24.1	12.3	69.43	402.9	-382.5	963.6	938.4	25.22		38.200	
7,300.0	7,132.8	7,102.8	7,102.8	24.1	12.4	71.44	402.9	-382.5	946.2	921.1	25.09		37.715	
7,350.0	7,163.0	7,133.0	7,133.0	24.2	12.4	73.84	402.9	-382.5	927.9	902.8	25.07		37.006	
7,400.0	7,189.7	7,159.7	7,159.7	24.2	12.5	76.48	402.9	-382.5	909.1	883.9	25.17		36.120	
7,450.0	7,212.7	7,182.7	7,182.7	24.3	12.5	79.21	402.9	-382.5	890.3	864.9	25.34		35.128	
7,500.0	7,231.8	7,201.8	7,201.8	24.4	12.6	81.90	402.9	-382.5	871.9	846.3	25.57		34.104	
7,550.0	7,246.9	7,216.9	7,216.9	24.5	12.6	84.41	402.9	-382.5	854.3	828.5	25.81		33.103	
7,600.0	7,257.8	7,227.8	7,227.8	24.7	12.6	86.64	402.9	-382.5	838.1	812.0	26.06		32.157	
7,650.0	7,264.5	7,234.5	7,234.5	24.8	12.6	88.50	402.9	-382.5	823.5	797.1	26.32		31.282	
7,703.4	7,267.0	7,237.0	7,237.0	25.0	12.6	90.00	402.9	-382.5	810.0	783.4	26.62		30.432	
7,800.0	7,267.0	7,237.0	7,237.0	25.4	12.6	90.00	402.9	-382.5	793.4	766.0	27.37		28.987	
7,889.3	7,267.0	7,237.0	7,237.0	25.9	12.6	90.00	402.9	-382.5	788.4	760.1	28.21		27.948	
7,900.0	7,267.0	7,237.0	7,237.0	26.0	12.6	90.00	402.9	-382.5	788.4	760.1	28.31		27.852	
8,000.0	7,267.0	7,237.0	7,237.0	26.6	12.6	90.00	402.9	-382.5	796.1	766.7	29.38		27.099	
8,100.0	7,267.0	7,237.0	7,237.0	27.4	12.6	90.00	402.9	-382.5	816.0	785.5	30.55		26.708	
8,200.0	7,267.0	7,237.0	7,237.0	28.2	12.6	90.00	402.9	-382.5	847.4	815.5	31.82		26.630 SF	
8,300.0	7,267.0	7,237.0	7,237.0	29.1	12.6	90.00	402.9	-382.5	888.9	855.7	33.16		26.809	
8,400.0	7,267.0	7,237.0	7,237.0	30.1	12.6	90.00	402.9	-382.5	939.3	904.7	34.55		27.184	
8,500.0	7,267.0	7,237.0	7,237.0	31.2	12.6	90.00	402.9	-382.5	997.2	961.2	36.00		27.702	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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	-97.86	-92.5	-670.2	677.1					
100.0	100.0	74.0	74.0	0.1	0.1	-97.86	-92.5	-670.2	676.6	676.3	0.25	2,690.100		
200.0	200.0	174.0	174.0	0.3	0.3	-97.86	-92.5	-670.2	676.6	676.0	0.60	1,126.608		
300.0	300.0	274.0	274.0	0.5	0.5	-97.86	-92.5	-670.2	676.6	675.6	0.95	712.501		
400.0	400.0	374.0	374.0	0.6	0.7	10.98	-92.5	-670.2	674.9	673.6	1.30	519.838		
500.0	499.8	473.8	473.8	0.8	0.8	11.08	-92.5	-670.2	669.7	668.1	1.65	406.888		
600.0	599.5	573.5	573.5	1.1	1.0	11.26	-92.5	-670.2	661.2	659.2	1.99	331.780		
700.0	698.7	670.5	670.5	1.3	1.2	11.51	-92.6	-670.3	649.3	647.0	2.34	278.083		
800.0	797.5	768.2	768.2	1.6	1.3	11.82	-92.9	-670.7	634.5	631.8	2.68	236.811		
819.4	816.6	787.3	787.3	1.7	1.4	11.89	-93.0	-670.8	631.2	628.5	2.75	229.842		
900.0	895.8	866.3	866.3	2.0	1.5	12.13	-93.4	-671.2	617.4	614.4	3.03	203.625		
1,000.0	994.2	964.5	964.5	2.3	1.7	12.43	-94.1	-671.7	600.4	597.0	3.39	177.182		
1,100.0	1,092.6	1,062.5	1,062.5	2.6	1.9	12.73	-95.0	-672.3	583.4	579.6	3.75	155.732		
1,200.0	1,190.9	1,160.5	1,160.5	3.0	2.0	13.05	-95.9	-672.9	566.5	562.4	4.11	137.993		
1,300.0	1,289.3	1,258.5	1,258.5	3.4	2.2	13.39	-96.7	-673.6	549.8	545.3	4.47	123.085		
1,400.0	1,387.6	1,356.4	1,356.4	3.7	2.4	13.75	-97.6	-674.5	533.1	528.3	4.83	110.394		
1,500.0	1,486.0	1,454.2	1,454.2	4.1	2.5	14.17	-98.2	-675.4	516.7	511.5	5.19	99.468		
1,600.0	1,584.4	1,552.0	1,552.0	4.4	2.7	14.64	-98.5	-676.6	500.4	494.8	5.56	89.956		
1,700.0	1,682.7	1,649.9	1,649.9	4.8	2.9	15.18	-98.5	-677.9	484.3	478.3	5.93	81.601		
1,800.0	1,781.1	1,748.1	1,748.0	5.1	3.1	15.76	-98.6	-679.3	468.3	462.0	6.31	74.205		
1,900.0	1,879.4	1,846.2	1,846.2	5.5	3.2	16.36	-98.8	-680.9	452.5	445.8	6.69	67.625		
2,000.0	1,977.8	1,944.4	1,944.3	5.9	3.4	16.98	-99.2	-682.5	436.8	429.8	7.08	61.737		
2,100.0	2,076.2	2,042.1	2,042.0	6.2	3.6	17.60	-99.9	-684.2	421.4	413.9	7.46	56.464		
2,200.0	2,174.5	2,141.1	2,141.0	6.6	3.8	18.31	-100.4	-686.1	406.1	398.3	7.86	51.674		
2,300.0	2,272.9	2,240.0	2,239.8	6.9	3.9	19.39	-98.7	-687.9	390.8	382.5	8.27	47.236		
2,400.0	2,371.2	2,337.8	2,337.6	7.3	4.1	20.59	-96.8	-689.8	375.7	367.0	8.70	43.187		
2,500.0	2,469.6	2,435.8	2,435.5	7.7	4.3	21.79	-95.4	-691.8	361.0	351.9	9.14	39.515		
2,600.0	2,568.0	2,533.8	2,533.6	8.0	4.4	23.00	-94.7	-694.1	346.6	337.0	9.58	36.176		
2,700.0	2,666.3	2,637.3	2,637.0	8.4	4.6	24.63	-92.5	-695.7	331.7	321.7	10.07	32.951		
2,800.0	2,764.7	2,736.8	2,736.4	8.8	4.8	26.73	-88.5	-695.9	316.2	305.6	10.59	29.849		
2,900.0	2,863.1	2,835.4	2,835.0	9.1	5.0	28.94	-84.9	-696.1	300.9	289.7	11.14	27.008		
3,000.0	2,961.4	2,934.1	2,933.6	9.5	5.1	31.27	-82.0	-696.2	285.9	274.2	11.72	24.402		
3,100.0	3,059.8	3,031.8	3,031.3	9.8	5.3	33.71	-79.6	-696.4	271.3	259.0	12.32	22.029		
3,200.0	3,158.1	3,128.9	3,128.4	10.2	5.5	36.34	-77.4	-696.9	257.6	244.7	12.95	19.897		
3,300.0	3,256.5	3,226.3	3,225.7	10.6	5.7	39.18	-75.3	-698.0	245.0	231.4	13.62	17.992		
3,400.0	3,354.9	3,323.8	3,323.2	10.9	5.8	42.24	-73.4	-699.6	233.4	219.1	14.32	16.300		
3,500.0	3,453.2	3,421.7	3,421.1	11.3	6.0	45.54	-71.6	-701.5	222.9	207.8	15.06	14.800		
3,600.0	3,551.6	3,519.8	3,519.1	11.7	6.2	49.10	-69.8	-703.8	213.5	197.6	15.84	13.480		
3,700.0	3,649.9	3,617.9	3,617.2	12.0	6.4	52.91	-68.1	-706.3	205.2	188.6	16.64	12.332		
3,800.0	3,748.3	3,717.3	3,716.5	12.4	6.5	57.04	-66.4	-709.0	197.9	180.4	17.47	11.328		
3,900.0	3,846.7	3,816.6	3,815.8	12.8	6.7	61.53	-64.8	-711.2	191.3	173.0	18.32	10.446		
4,000.0	3,945.0	3,915.8	3,915.0	13.1	6.9	66.37	-63.2	-713.0	185.7	166.5	19.17	9.689		
4,100.0	4,043.4	4,014.2	4,013.3	13.5	7.1	71.56	-61.7	-714.2	181.1	161.2	19.99	9.060		
4,137.3	4,080.1	4,045.8	4,044.9	13.6	7.1	73.51	-60.4	-714.3	180.4	160.2	20.28	8.898		
4,200.0	4,141.7	4,098.8	4,097.7	13.8	7.2	77.05	-55.9	-714.9	182.5	161.7	20.75	8.792		
4,300.0	4,240.1	4,191.0	4,189.3	14.2	7.4	83.13	-45.2	-716.8	190.8	169.3	21.46	8.890		
4,400.0	4,338.5	4,279.7	4,276.9	14.6	7.6	88.37	-31.6	-720.2	205.3	183.2	22.05	9.309		
4,500.0	4,436.8	4,372.5	4,368.1	14.9	7.8	92.97	-15.4	-725.0	224.0	201.5	22.57	9.925		
4,600.0	4,535.2	4,458.2	4,451.8	15.3	8.0	96.28	2.0	-731.2	247.2	224.2	23.04	10.729		
4,700.0	4,633.5	4,541.6	4,532.5	15.7	8.3	98.90	22.0	-738.2	274.9	251.4	23.49	11.702		
4,800.0	4,731.9	4,620.3	4,607.3	16.0	8.5	100.73	44.7	-746.4	308.2	284.2	23.94	12.873		
4,900.0	4,830.3	4,701.6	4,683.5	16.4	8.8	102.10	71.3	-756.1	345.6	321.2	24.41	14.162		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 33-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 608-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,928.6	4,784.0	4,759.9	16.7	9.2	103.11	100.3	-766.9	385.9	361.0	24.88	15.507		
5,100.0	5,027.0	4,860.5	4,830.0	17.1	9.5	103.90	129.2	-776.8	428.6	403.3	25.36	16.902		
5,200.0	5,125.4	4,937.1	4,899.2	17.5	9.9	104.59	160.6	-786.6	474.6	448.7	25.84	18.366		
5,300.0	5,223.7	5,003.0	4,957.9	17.8	10.3	104.98	189.0	-795.9	522.9	496.6	26.32	19.870		
5,400.0	5,322.1	5,079.4	5,024.3	18.2	10.8	105.09	224.5	-808.9	574.5	547.6	26.84	21.407		
5,500.0	5,420.4	5,185.8	5,116.3	18.6	11.5	104.74	272.8	-831.5	625.3	597.9	27.46	22.769		
5,600.0	5,518.8	5,262.7	5,183.0	18.9	12.0	104.44	307.1	-848.7	675.4	647.4	28.02	24.103		
5,700.0	5,617.2	5,347.0	5,256.3	19.3	12.6	104.23	344.7	-866.8	725.5	696.9	28.59	25.370		
5,800.0	5,715.5	5,412.5	5,312.7	19.7	13.1	104.14	375.0	-880.2	777.2	748.1	29.12	26.693		
5,900.0	5,813.9	5,496.9	5,384.1	20.0	13.8	103.81	415.4	-900.2	830.6	800.9	29.71	27.960		
6,000.0	5,912.2	5,618.9	5,488.5	20.4	14.8	103.37	471.3	-929.5	882.2	851.8	30.41	29.015		
6,100.0	6,010.6	5,736.9	5,592.4	20.7	15.7	103.07	519.9	-956.9	928.8	897.7	31.09	29.877		
6,200.0	6,109.0	5,784.0	5,633.8	21.1	16.0	103.02	539.9	-967.1	977.1	945.5	31.57	30.947		
7,650.0	7,264.5	7,450.0	7,156.5	24.8	26.9	-18.87	1,106.8	-1,249.6	957.0	936.3	20.66	46.322		
7,703.4	7,267.0	7,459.0	7,165.5	25.0	26.9	-44.12	1,107.5	-1,250.2	904.1	873.4	30.77	29.384		
7,800.0	7,267.0	7,468.8	7,175.3	25.4	27.0	-48.31	1,108.2	-1,250.9	808.3	775.5	32.76	24.670		
7,900.0	7,267.0	7,477.9	7,184.3	26.0	27.0	-52.72	1,108.9	-1,251.5	709.1	674.2	34.91	20.310		
8,000.0	7,267.0	7,486.5	7,192.8	26.6	27.0	-57.28	1,109.5	-1,252.0	610.0	572.9	37.16	16.417		
8,100.0	7,267.0	7,494.6	7,200.9	27.4	27.0	-62.03	1,110.1	-1,252.5	511.3	471.8	39.48	12.951		
8,200.0	7,267.0	7,502.3	7,208.6	28.2	27.0	-66.93	1,110.6	-1,253.0	412.9	371.1	41.80	9.878		
8,300.0	7,267.0	7,509.9	7,216.2	29.1	27.1	-71.99	1,111.1	-1,253.5	315.5	271.4	44.09	7.156		
8,400.0	7,267.0	7,517.1	7,223.3	30.1	27.1	-77.04	1,111.6	-1,253.9	220.2	173.9	46.23	4.762		
8,500.0	7,267.0	7,523.9	7,230.1	31.2	27.1	-81.99	1,112.0	-1,254.2	131.6	83.4	48.19	2.731		
8,600.0	7,267.0	7,530.4	7,236.6	32.3	27.1	-86.76	1,112.4	-1,254.6	77.9	28.0	49.92	1.561		
8,606.4	7,267.0	7,530.8	7,237.0	32.4	27.1	-87.06	1,112.4	-1,254.6	77.6	27.6	50.02	1.552	CC, ES, SF	
8,700.0	7,267.0	7,536.6	7,242.7	33.5	27.1	-91.29	1,112.8	-1,254.9	121.4	70.0	51.42	2.362		
8,800.0	7,267.0	7,542.4	7,248.6	34.7	27.1	-95.53	1,113.1	-1,255.2	208.2	155.5	52.70	3.951		
8,900.0	7,267.0	7,548.0	7,254.2	36.0	27.1	-99.53	1,113.5	-1,255.5	303.1	249.4	53.77	5.638		
9,000.0	7,267.0	7,553.4	7,259.5	37.3	27.1	-103.27	1,113.8	-1,255.7	400.5	345.8	54.66	7.326		
9,100.0	7,267.0	7,558.6	7,264.7	38.6	27.1	-106.74	1,114.1	-1,256.0	498.8	443.4	55.39	9.005		
9,200.0	7,267.0	7,563.6	7,269.7	40.0	27.2	-109.95	1,114.3	-1,256.2	597.6	541.6	55.99	10.673		
9,300.0	7,267.0	7,566.0	7,272.1	41.4	27.2	-111.42	1,114.5	-1,256.3	696.7	639.7	57.03	12.218		
9,400.0	7,267.0	7,572.1	7,278.2	42.8	27.2	-115.08	1,114.8	-1,256.6	796.0	738.9	57.13	13.933		
9,500.0	7,267.0	7,575.9	7,282.0	44.3	27.2	-117.20	1,115.0	-1,256.8	895.5	837.8	57.69	15.522		
9,600.0	7,267.0	7,579.4	7,285.5	45.8	27.2	-119.11	1,115.1	-1,257.0	995.0	936.8	58.24	17.085		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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)				
0.0	0.0	0.0	0.0	0.0	0.0	-99.14	-111.4	-692.3	701.7					
100.0	100.0	74.0	74.0	0.1	0.1	-99.14	-111.4	-692.3	701.2	701.0	0.25	2,788.097		
200.0	200.0	174.0	174.0	0.3	0.3	-99.14	-111.4	-692.3	701.2	700.6	0.60	1,167.649		
300.0	300.0	274.0	274.0	0.5	0.5	-99.14	-111.4	-692.3	701.2	700.3	0.95	738.456		
400.0	400.0	374.0	374.0	0.6	0.7	9.68	-111.4	-692.3	699.5	698.2	1.30	538.829		
500.0	499.8	473.8	473.8	0.8	0.8	9.77	-111.4	-692.3	694.3	692.7	1.65	421.892		
600.0	599.5	573.5	573.5	1.1	1.0	9.93	-111.4	-692.3	685.8	683.8	1.99	344.222		
700.0	698.7	671.5	671.5	1.3	1.2	10.14	-111.5	-692.3	673.8	671.5	2.34	288.521		
800.0	797.5	767.6	767.6	1.6	1.3	10.39	-112.0	-692.6	658.8	656.1	2.67	246.277		
819.4	816.6	786.1	786.1	1.7	1.4	10.44	-112.1	-692.7	655.5	652.8	2.74	239.180		
900.0	895.8	863.1	863.1	2.0	1.5	10.63	-112.7	-693.3	641.9	638.9	3.02	212.469		
1,000.0	994.2	958.8	958.8	2.3	1.7	10.88	-113.3	-694.5	625.4	622.1	3.37	185.553		
1,100.0	1,092.6	1,055.7	1,055.7	2.6	1.8	11.16	-114.0	-696.0	609.4	605.7	3.72	163.666		
1,200.0	1,190.9	1,156.6	1,156.6	3.0	2.0	11.45	-114.7	-697.6	593.3	589.2	4.08	145.243		
1,300.0	1,289.3	1,257.4	1,257.3	3.4	2.2	11.77	-115.3	-698.7	576.8	572.4	4.45	129.698		
1,400.0	1,387.6	1,357.7	1,357.6	3.7	2.4	12.10	-116.0	-699.5	560.0	555.2	4.81	116.408		
1,500.0	1,486.0	1,455.0	1,454.9	4.1	2.5	12.44	-116.5	-700.3	543.2	538.0	5.17	105.061		
1,600.0	1,584.4	1,552.4	1,552.3	4.4	2.7	12.82	-116.9	-701.2	526.6	521.1	5.53	95.193		
1,700.0	1,682.7	1,649.8	1,649.8	4.8	2.9	13.24	-117.3	-702.4	510.3	504.4	5.90	86.541		
1,800.0	1,781.1	1,748.9	1,748.8	5.1	3.1	13.71	-117.5	-703.7	494.0	487.8	6.27	78.839		
1,900.0	1,879.4	1,848.1	1,848.0	5.5	3.2	14.24	-117.6	-704.9	477.7	471.1	6.64	71.942		
2,000.0	1,977.8	1,947.2	1,947.1	5.9	3.4	14.82	-117.4	-706.0	461.3	454.3	7.02	65.729		
2,100.0	2,076.2	2,046.5	2,046.4	6.2	3.6	15.47	-117.1	-707.0	444.8	437.4	7.40	60.097		
2,200.0	2,174.5	2,145.9	2,145.8	6.6	3.8	16.14	-117.0	-707.7	428.2	420.4	7.79	54.966		
2,300.0	2,272.9	2,245.3	2,245.2	6.9	3.9	16.83	-117.1	-708.2	411.4	403.2	8.18	50.274		
2,400.0	2,371.2	2,344.4	2,344.3	7.3	4.1	17.53	-117.5	-708.5	394.4	385.8	8.58	45.971		
2,500.0	2,469.6	2,442.9	2,442.8	7.7	4.3	18.26	-118.2	-708.7	377.4	368.5	8.98	42.026		
2,600.0	2,568.0	2,541.4	2,541.3	8.0	4.4	19.02	-119.0	-708.9	360.5	351.1	9.39	38.399		
2,700.0	2,666.3	2,639.9	2,639.7	8.4	4.6	19.81	-120.1	-709.1	343.7	333.9	9.80	35.055		
2,800.0	2,764.7	2,738.1	2,738.0	8.8	4.8	20.71	-121.1	-709.3	326.9	316.7	10.23	31.958		
2,900.0	2,863.1	2,836.4	2,836.2	9.1	5.0	21.79	-121.6	-709.6	310.3	299.6	10.67	29.077		
3,000.0	2,961.4	2,934.6	2,934.5	9.5	5.1	23.06	-121.7	-709.9	293.9	282.7	11.14	26.392		
3,100.0	3,059.8	3,031.9	3,031.7	9.8	5.3	24.53	-121.5	-710.4	277.8	266.2	11.62	23.909		
3,200.0	3,158.1	3,129.2	3,129.1	10.2	5.5	26.19	-121.2	-711.2	262.4	250.3	12.13	21.629		
3,300.0	3,256.5	3,226.7	3,226.5	10.6	5.6	28.07	-120.7	-712.5	247.7	235.0	12.68	19.538		
3,400.0	3,354.9	3,324.4	3,324.2	10.9	5.8	30.18	-120.2	-714.2	233.7	220.4	13.26	17.624		
3,500.0	3,453.2	3,422.2	3,422.0	11.3	6.0	32.49	-119.9	-716.4	220.4	206.5	13.88	15.882		
3,600.0	3,551.6	3,520.2	3,520.0	11.7	6.2	35.01	-119.7	-718.9	207.8	193.3	14.53	14.301		
3,700.0	3,649.9	3,618.8	3,618.6	12.0	6.3	37.81	-119.6	-721.7	196.0	180.7	15.23	12.865		
3,800.0	3,748.3	3,717.8	3,717.5	12.4	6.5	41.14	-119.0	-724.3	184.6	168.6	16.00	11.534		
3,900.0	3,846.7	3,816.6	3,816.3	12.8	6.7	45.11	-117.9	-726.5	173.9	157.0	16.86	10.315		
4,000.0	3,945.0	3,915.4	3,915.0	13.1	6.9	49.76	-116.2	-728.4	164.1	146.3	17.79	9.225		
4,100.0	4,043.4	4,014.5	4,014.1	13.5	7.0	54.88	-115.0	-730.3	155.2	136.5	18.76	8.275		
4,200.0	4,141.7	4,113.7	4,113.3	13.8	7.2	60.37	-114.3	-732.2	147.4	127.6	19.74	7.465		
4,300.0	4,240.1	4,212.8	4,212.4	14.2	7.4	66.25	-114.2	-734.1	140.6	119.9	20.71	6.789		
4,400.0	4,338.5	4,311.5	4,311.0	14.6	7.6	72.65	-114.2	-735.8	135.3	113.7	21.64	6.255		
4,500.0	4,436.8	4,410.0	4,409.6	14.9	7.7	79.59	-113.9	-737.3	131.9	109.5	22.48	5.869		
4,600.0	4,535.2	4,508.5	4,508.0	15.3	7.9	86.90	-113.5	-738.5	130.7	107.5	23.18	5.638		
4,604.2	4,539.3	4,512.7	4,512.2	15.3	7.9	87.21	-113.5	-738.5	130.7	107.5	23.21	5.631		
4,700.0	4,633.5	4,607.0	4,606.5	15.7	8.1	94.28	-113.0	-739.6	131.8	108.0	23.71	5.558		
4,800.0	4,731.9	4,705.4	4,704.9	16.0	8.3	101.45	-112.4	-740.6	135.0	111.0	24.04	5.617		
4,900.0	4,830.3	4,803.8	4,803.3	16.4	8.4	108.20	-111.8	-741.6	140.5	116.2	24.21	5.801		

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 4C-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 4C-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 #3	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							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,000.0	4,928.6	4,902.2	4,901.7	16.7	8.6	114.37	-111.1	-742.7	147.8	123.5	24.26	6.091	
5,100.0	5,027.0	5,000.5	5,000.0	17.1	8.8	119.89	-110.3	-743.7	156.8	132.5	24.23	6.469	
5,200.0	5,125.4	5,098.8	5,098.3	17.5	8.9	124.76	-109.4	-744.9	167.2	143.0	24.17	6.916	
5,300.0	5,223.7	5,197.4	5,196.9	17.8	9.1	129.00	-108.4	-746.1	178.7	154.6	24.11	7.410	
5,400.0	5,322.1	5,296.2	5,295.6	18.2	9.3	132.61	-107.3	-747.8	190.9	166.9	24.08	7.929	
5,500.0	5,420.4	5,399.6	5,399.0	18.6	9.5	135.71	-106.3	-750.4	203.4	179.3	24.09	8.443	
5,600.0	5,518.8	5,509.3	5,508.4	18.9	9.7	138.03	-108.6	-757.6	211.7	187.4	24.21	8.742	
5,700.0	5,617.2	5,611.7	5,610.3	19.3	9.9	139.72	-113.2	-767.0	216.9	192.5	24.40	8.888	
5,800.0	5,715.5	5,723.0	5,720.4	19.7	10.1	140.60	-119.2	-781.9	219.1	194.4	24.74	8.857	
5,900.0	5,813.9	5,829.3	5,824.9	20.0	10.4	141.27	-128.4	-798.9	217.3	192.2	25.10	8.658	
6,000.0	5,912.2	5,937.9	5,931.0	20.4	10.6	141.49	-139.5	-819.4	212.6	187.0	25.55	8.321	
6,100.0	6,010.6	6,043.5	6,033.2	20.7	10.9	141.28	-152.7	-842.7	204.1	178.0	26.07	7.828	
6,200.0	6,109.0	6,151.0	6,135.6	21.1	11.3	139.89	-167.4	-871.6	191.9	165.1	26.84	7.150	
6,300.0	6,207.3	6,255.2	6,233.2	21.5	11.7	137.00	-182.8	-904.9	176.3	148.3	27.94	6.309	
6,400.0	6,305.7	6,355.4	6,325.8	21.8	12.1	132.76	-198.4	-939.8	159.0	129.7	29.33	5.421	
6,500.0	6,404.0	6,455.1	6,417.1	22.2	12.6	126.64	-213.9	-976.7	142.0	110.9	31.13	4.563	
6,600.0	6,502.4	6,557.3	6,509.9	22.6	13.1	118.85	-232.9	-1,014.9	123.9	90.7	33.19	3.732	
6,700.0	6,600.8	6,651.3	6,595.3	22.9	13.6	110.03	-252.3	-1,049.0	106.5	71.3	35.20	3.026	
6,771.0	6,670.6	6,720.1	6,658.5	23.2	13.9	102.42	-264.4	-1,073.4	98.5	61.9	36.58	2.692	
6,800.0	6,699.2	6,748.3	6,684.5	23.3	14.1	82.93	-269.4	-1,083.1	94.9	57.8	37.04	2.561	
6,850.0	6,748.4	6,794.2	6,726.8	23.4	14.3	48.99	-277.2	-1,099.4	86.8	49.4	37.46	2.318	
6,900.0	6,797.2	6,840.2	6,769.4	23.6	14.6	21.12	-284.0	-1,115.2	77.2	40.0	37.25	2.074	
6,950.0	6,845.4	6,885.5	6,811.6	23.7	14.8	-2.65	-289.6	-1,130.7	67.4	31.4	35.96	1.874	
7,000.0	6,892.4	6,932.1	6,855.3	23.8	15.1	-27.66	-294.9	-1,146.0	58.8	26.0	32.80	1.791 ES, SF	
7,050.0	6,938.0	6,977.7	6,898.6	23.8	15.3	-55.41	-300.2	-1,159.0	54.3	26.3	27.93	1.943	
7,051.5	6,939.4	6,979.0	6,899.9	23.8	15.3	-56.23	-300.3	-1,159.4	54.2	26.5	27.79	1.952 CC	
7,100.0	6,981.8	7,019.3	6,938.5	23.9	15.5	-81.44	-304.8	-1,170.2	60.3	35.4	24.84	2.426	
7,150.0	7,023.5	7,059.7	6,977.2	24.0	15.6	-101.67	-308.9	-1,180.9	78.2	53.2	24.99	3.129	
7,200.0	7,062.8	7,098.4	7,014.5	24.0	15.8	-115.48	-312.4	-1,190.4	104.2	78.4	25.76	4.044	
7,250.0	7,099.3	7,133.6	7,048.7	24.1	15.9	-124.44	-315.6	-1,198.4	135.9	110.0	25.94	5.239	
7,300.0	7,132.8	7,166.5	7,080.7	24.1	16.1	-130.48	-318.4	-1,205.1	171.8	146.2	25.54	6.725	
7,350.0	7,163.0	7,195.3	7,108.9	24.2	16.2	-134.16	-320.8	-1,210.6	211.0	186.3	24.78	8.518	
7,400.0	7,189.7	7,219.7	7,132.9	24.2	16.2	-135.85	-322.7	-1,215.0	253.1	229.3	23.86	10.608	
7,450.0	7,212.7	7,241.0	7,153.8	24.3	16.3	-135.87	-324.4	-1,218.6	297.6	274.5	23.03	12.921	
7,500.0	7,231.8	7,258.1	7,170.6	24.4	16.4	-133.72	-325.7	-1,221.4	343.8	321.3	22.55	15.249	
7,550.0	7,246.9	7,270.9	7,183.3	24.5	16.4	-128.13	-326.6	-1,223.3	391.5	368.7	22.84	17.145	
7,600.0	7,257.8	7,279.3	7,191.5	24.7	16.4	-115.98	-327.2	-1,224.6	440.2	415.8	24.46	17.996	
7,650.0	7,264.5	7,283.0	7,195.1	24.8	16.5	-90.86	-327.5	-1,225.2	489.6	462.6	26.91	18.190	
7,703.4	7,267.0	7,281.6	7,193.8	25.0	16.4	-52.00	-327.4	-1,225.0	542.5	517.9	24.63	22.022	
7,800.0	7,267.0	7,273.9	7,186.2	25.4	16.4	-47.26	-326.9	-1,223.8	638.2	613.8	24.37	26.185	
7,900.0	7,267.0	7,265.7	7,178.1	26.0	16.4	-42.70	-326.3	-1,222.5	737.5	713.4	24.11	30.592	
8,000.0	7,267.0	7,257.2	7,169.7	26.6	16.4	-38.50	-325.6	-1,221.2	836.8	813.0	23.84	35.103	
8,100.0	7,267.0	7,248.5	7,161.2	27.4	16.3	-34.72	-325.0	-1,219.8	936.3	912.7	23.59	39.695	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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	-99.89	-111.8	-641.1	651.3					
100.0	100.0	74.0	74.0	0.1	0.1	-99.89	-111.8	-641.1	650.8	650.6	0.25	2,587.680		
200.0	200.0	174.0	174.0	0.3	0.3	-99.89	-111.8	-641.1	650.8	650.2	0.60	1,083.715		
300.0	300.0	274.0	274.0	0.5	0.5	-99.89	-111.8	-641.1	650.8	649.9	0.95	685.374		
400.0	400.0	374.0	374.0	0.6	0.7	8.94	-111.8	-641.1	649.1	647.8	1.30	500.004		
500.0	499.8	473.8	473.8	0.8	0.8	9.02	-111.8	-641.1	643.9	642.3	1.65	391.279		
600.0	599.5	573.5	573.5	1.1	1.0	9.18	-111.8	-641.1	635.3	633.3	1.99	318.954		
700.0	698.7	674.1	674.1	1.3	1.2	9.43	-111.4	-641.2	623.2	620.9	2.34	266.433		
800.0	797.5	772.3	772.3	1.6	1.3	9.89	-109.7	-641.3	607.6	604.9	2.68	226.441		
819.4	816.6	791.4	791.3	1.7	1.4	10.00	-109.3	-641.3	604.2	601.5	2.75	219.708		
900.0	895.8	870.2	870.2	2.0	1.5	10.39	-107.8	-641.5	589.8	586.8	3.03	194.354		
1,000.0	994.2	968.1	968.0	2.3	1.7	10.92	-105.8	-641.7	572.1	568.7	3.39	168.753		
1,100.0	1,092.6	1,064.1	1,064.1	2.6	1.9	11.48	-103.8	-642.2	554.6	550.9	3.75	148.046		
1,200.0	1,190.9	1,160.2	1,160.1	3.0	2.0	12.09	-101.7	-643.1	537.6	533.5	4.11	130.956		
1,300.0	1,289.3	1,256.4	1,256.3	3.4	2.2	12.76	-99.4	-644.5	521.1	516.6	4.47	116.635		
1,400.0	1,387.6	1,358.2	1,358.1	3.7	2.4	13.49	-97.3	-645.9	504.7	499.9	4.84	104.302		
1,500.0	1,486.0	1,462.3	1,462.1	4.1	2.6	14.11	-96.5	-646.1	487.3	482.1	5.21	93.466		
1,600.0	1,584.4	1,566.0	1,565.8	4.4	2.7	14.60	-97.0	-645.1	468.8	463.3	5.59	83.885		
1,700.0	1,682.7	1,659.9	1,659.7	4.8	2.9	15.07	-97.6	-643.6	450.0	444.0	5.95	75.583		
1,800.0	1,781.1	1,762.5	1,762.3	5.1	3.1	16.07	-94.9	-643.1	431.9	425.6	6.35	68.020		
1,900.0	1,879.4	1,870.7	1,870.4	5.5	3.3	17.29	-91.6	-640.1	411.8	405.0	6.77	60.835		
2,000.0	1,977.8	1,964.1	1,963.7	5.9	3.4	18.25	-90.1	-636.7	390.9	383.8	7.16	54.627		
2,100.0	2,076.2	2,060.0	2,059.6	6.2	3.6	19.02	-90.6	-634.1	371.1	363.6	7.55	49.168		
2,200.0	2,174.5	2,156.6	2,156.1	6.6	3.8	19.89	-91.0	-631.8	351.8	343.8	7.95	44.251		
2,300.0	2,272.9	2,253.5	2,253.0	6.9	4.0	20.89	-91.2	-629.9	332.9	324.5	8.36	39.799		
2,400.0	2,371.2	2,350.5	2,350.0	7.3	4.1	22.04	-91.3	-628.3	314.4	305.6	8.79	35.758		
2,500.0	2,469.6	2,447.7	2,447.1	7.7	4.3	23.36	-91.2	-627.0	296.4	287.2	9.24	32.081		
2,600.0	2,568.0	2,545.7	2,545.2	8.0	4.5	24.94	-90.8	-625.8	278.8	269.1	9.71	28.697		
2,700.0	2,666.3	2,643.7	2,643.1	8.4	4.6	26.82	-89.9	-624.6	261.4	251.2	10.22	25.576		
2,800.0	2,764.7	2,741.6	2,741.0	8.8	4.8	29.07	-88.5	-623.4	244.4	233.6	10.77	22.700		
2,900.0	2,863.1	2,844.5	2,843.9	9.1	5.0	31.48	-88.5	-621.4	227.0	215.6	11.35	20.003		
3,000.0	2,961.4	2,941.2	2,940.6	9.5	5.2	33.64	-90.4	-619.1	208.9	197.0	11.92	17.533		
3,100.0	3,059.8	3,037.9	3,037.2	9.8	5.3	36.26	-91.9	-617.4	191.9	179.4	12.54	15.308		
3,200.0	3,158.1	3,134.7	3,134.1	10.2	5.5	39.46	-92.9	-616.2	176.2	162.9	13.22	13.321		
3,300.0	3,256.5	3,232.1	3,231.5	10.6	5.7	43.28	-93.6	-615.6	161.7	147.7	13.98	11.562		
3,400.0	3,354.9	3,329.7	3,329.0	10.9	5.8	47.77	-94.2	-615.6	148.6	133.8	14.81	10.030		
3,500.0	3,453.2	3,427.4	3,426.7	11.3	6.0	53.00	-94.7	-616.0	137.1	121.4	15.71	8.727		
3,600.0	3,551.6	3,525.1	3,524.5	11.7	6.2	59.05	-94.9	-616.9	127.5	110.8	16.65	7.656		
3,700.0	3,649.9	3,623.0	3,622.3	12.0	6.3	65.94	-94.7	-618.3	120.2	102.6	17.61	6.824		
3,800.0	3,748.3	3,720.9	3,720.1	12.4	6.5	73.51	-94.1	-620.1	115.5	97.0	18.53	6.236		
3,900.0	3,846.7	3,821.9	3,821.2	12.8	6.7	81.93	-93.7	-621.6	112.8	93.4	19.34	5.831		
4,000.0	3,945.0	3,921.3	3,920.5	13.1	6.9	91.19	-94.8	-621.0	110.4	90.4	19.96	5.529		
4,033.0	3,977.5	3,953.7	3,953.0	13.2	6.9	94.27	-95.2	-620.8	110.2	90.1	20.12	5.480 CC, ES		
4,100.0	4,043.4	4,019.6	4,018.9	13.5	7.0	100.47	-96.0	-620.5	110.9	90.6	20.34	5.453 SF		
4,200.0	4,141.7	4,118.0	4,117.3	13.8	7.2	109.35	-97.3	-620.1	114.3	93.8	20.46	5.583		
4,300.0	4,240.1	4,216.3	4,215.5	14.2	7.4	117.45	-98.6	-619.9	120.2	99.8	20.41	5.889		
4,400.0	4,338.5	4,314.5	4,313.7	14.6	7.5	124.52	-99.7	-620.1	128.5	108.3	20.27	6.343		
4,500.0	4,436.8	4,412.7	4,411.9	14.9	7.7	130.52	-100.5	-620.5	138.8	118.7	20.10	6.904		
4,600.0	4,535.2	4,511.1	4,510.3	15.3	7.9	135.53	-100.9	-621.2	150.5	130.5	19.97	7.535		
4,700.0	4,633.5	4,609.5	4,608.7	15.7	8.1	139.76	-101.3	-621.9	163.2	143.3	19.88	8.209		
4,800.0	4,731.9	4,708.0	4,707.2	16.0	8.2	143.37	-101.7	-622.7	176.6	156.8	19.83	8.908		
4,900.0	4,830.3	4,806.3	4,805.5	16.4	8.4	146.43	-102.0	-623.5	190.8	170.9	19.83	9.618		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 44-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 642-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,000.0	4,928.6	4,904.8	4,904.0	16.7	8.6	149.04	-102.1	-624.3	205.6	185.7	19.89	10.337		
5,100.0	5,027.0	4,993.3	4,992.4	17.1	8.7	151.61	-102.2	-622.2	222.7	202.8	19.91	11.185		
5,200.0	5,125.4	5,081.4	5,080.2	17.5	8.9	154.90	-102.6	-614.3	244.8	225.0	19.84	12.343		
5,300.0	5,223.7	5,174.1	5,172.0	17.8	9.1	158.84	-105.4	-601.3	269.9	250.2	19.69	13.708		
5,400.0	5,322.1	5,266.3	5,262.6	18.2	9.2	162.85	-110.4	-585.4	297.3	277.7	19.57	15.192		
5,500.0	5,420.4	5,351.7	5,345.7	18.6	9.4	166.82	-118.5	-567.4	327.2	307.6	19.50	16.774		
5,600.0	5,518.8	5,437.8	5,428.3	18.9	9.6	170.84	-128.8	-545.4	361.2	341.6	19.52	18.502		
5,700.0	5,617.2	5,514.3	5,501.0	19.3	9.9	174.09	-138.6	-524.0	398.5	378.8	19.66	20.268		
5,800.0	5,715.5	5,592.4	5,574.6	19.7	10.1	177.02	-148.3	-499.8	439.9	420.0	19.89	22.118		
5,900.0	5,813.9	5,660.0	5,637.6	20.0	10.3	179.24	-156.2	-476.4	485.6	465.4	20.17	24.073		
6,000.0	5,912.2	5,723.0	5,695.0	20.4	10.6	-178.79	-164.0	-451.6	536.1	515.6	20.49	26.166		
6,100.0	6,010.6	5,796.1	5,760.7	20.7	10.9	-176.65	-174.1	-421.4	589.1	568.2	20.87	28.226		
6,200.0	6,109.0	5,859.3	5,816.8	21.1	11.3	-174.94	-183.5	-393.8	644.6	623.4	21.25	30.329		
6,300.0	6,207.3	5,932.7	5,881.3	21.5	11.7	-173.19	-194.3	-360.4	702.4	680.7	21.69	32.380		
6,400.0	6,305.7	5,998.8	5,938.8	21.8	12.1	-171.75	-204.5	-329.5	761.6	739.5	22.12	34.429		
6,500.0	6,404.0	6,104.3	6,031.4	22.2	12.7	-169.88	-220.1	-281.4	820.2	797.5	22.69	36.151		
6,600.0	6,502.4	6,172.5	6,091.6	22.6	13.2	-168.90	-229.6	-250.8	878.5	855.4	23.12	38.000		
6,700.0	6,600.8	6,272.6	6,179.6	22.9	13.9	-167.56	-244.6	-205.7	937.4	913.7	23.67	39.605		
6,771.0	6,670.6	6,323.2	6,224.5	23.2	14.2	-166.94	-252.4	-183.5	978.4	954.4	23.99	40.792		
6,800.0	6,699.2	6,338.9	6,238.3	23.3	14.3	175.16	-255.0	-176.5	995.3	971.4	23.96	41.540		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error: 0.0 ft	
Survey Program: 5000-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-122.40	-358.4	-564.8	669.3					
100.0	100.0	77.0	77.0	0.1	0.1	-122.40	-358.4	-564.8	668.9	668.7	0.26	2,605.310		
200.0	200.0	177.0	177.0	0.3	0.3	-122.40	-358.4	-564.8	668.9	668.3	0.61	1,104.186		
300.0	300.0	277.0	277.0	0.5	0.5	-122.40	-358.4	-564.8	668.9	668.0	0.95	700.546		
400.0	400.0	377.0	377.0	0.6	0.7	-13.64	-358.4	-564.8	667.2	665.9	1.30	511.844		
500.0	499.8	476.8	476.8	0.8	0.8	-13.77	-358.4	-564.8	662.2	660.5	1.65	400.881		
600.0	599.5	576.5	576.5	1.1	1.0	-14.00	-358.4	-564.8	653.7	651.7	2.00	326.905		
700.0	698.7	675.7	675.7	1.3	1.2	-14.32	-358.4	-564.8	641.9	639.5	2.35	273.384		
800.0	797.5	774.5	774.5	1.6	1.4	-14.75	-358.4	-564.8	626.7	624.0	2.70	232.333		
819.4	816.6	793.6	793.6	1.7	1.4	-14.85	-358.4	-564.8	623.4	620.6	2.77	225.418		
900.0	895.8	872.8	872.8	2.0	1.5	-15.20	-358.4	-564.8	609.3	606.3	3.06	199.416		
1,000.0	994.2	971.2	971.2	2.3	1.7	-15.65	-358.4	-564.8	591.9	588.5	3.42	173.165		
1,100.0	1,092.6	1,069.6	1,069.6	2.6	1.9	-16.14	-358.4	-564.8	574.6	570.8	3.78	151.843		
1,200.0	1,190.9	1,167.9	1,167.9	3.0	2.0	-16.65	-358.4	-564.8	557.3	553.1	4.15	134.187		
1,300.0	1,289.3	1,266.3	1,266.3	3.4	2.2	-17.20	-358.4	-564.8	540.0	535.5	4.52	119.333		
1,400.0	1,387.6	1,364.6	1,364.6	3.7	2.4	-17.78	-358.4	-564.8	522.8	517.9	4.90	106.667		
1,500.0	1,486.0	1,463.0	1,463.0	4.1	2.6	-18.41	-358.4	-564.8	505.6	500.3	5.28	95.740		
1,600.0	1,584.4	1,561.4	1,561.4	4.4	2.7	-19.07	-358.4	-564.8	488.5	482.8	5.67	86.221		
1,700.0	1,682.7	1,659.7	1,659.7	4.8	2.9	-19.79	-358.4	-564.8	471.5	465.4	6.06	77.855		
1,800.0	1,781.1	1,758.1	1,758.1	5.1	3.1	-20.56	-358.4	-564.8	454.5	448.0	6.45	70.449		
1,900.0	1,879.4	1,856.4	1,856.4	5.5	3.2	-21.38	-358.4	-564.8	437.6	430.8	6.85	63.848		
2,000.0	1,977.8	1,954.8	1,954.8	5.9	3.4	-22.28	-358.4	-564.8	420.8	413.6	7.26	57.930		
2,100.0	2,076.2	2,053.2	2,053.2	6.2	3.6	-23.24	-358.4	-564.8	404.2	396.5	7.68	52.599		
2,200.0	2,174.5	2,151.5	2,151.5	6.6	3.8	-24.29	-358.4	-564.8	387.6	379.5	8.11	47.773		
2,300.0	2,272.9	2,249.9	2,249.9	6.9	3.9	-25.44	-358.4	-564.8	371.2	362.7	8.56	43.389		
2,400.0	2,371.2	2,348.2	2,348.2	7.3	4.1	-26.68	-358.4	-564.8	355.0	346.0	9.01	39.393		
2,500.0	2,469.6	2,446.6	2,446.6	7.7	4.3	-28.05	-358.4	-564.8	338.9	329.4	9.48	35.741		
2,600.0	2,568.0	2,545.0	2,545.0	8.0	4.4	-29.54	-358.4	-564.8	323.0	313.1	9.97	32.396		
2,700.0	2,666.3	2,643.3	2,643.3	8.4	4.6	-31.19	-358.4	-564.8	307.4	296.9	10.48	29.328		
2,800.0	2,764.7	2,741.7	2,741.7	8.8	4.8	-33.02	-358.4	-564.8	292.1	281.0	11.02	26.513		
2,900.0	2,863.1	2,840.1	2,840.1	9.1	5.0	-35.04	-358.4	-564.8	277.0	265.5	11.58	23.928		
3,000.0	2,961.4	2,938.4	2,938.4	9.5	5.1	-37.29	-358.4	-564.8	262.4	250.2	12.17	21.559		
3,100.0	3,059.8	3,036.8	3,036.8	9.8	5.3	-39.79	-358.4	-564.8	248.2	235.4	12.80	19.392		
3,200.0	3,158.1	3,135.1	3,135.1	10.2	5.5	-42.59	-358.4	-564.8	234.5	221.1	13.46	17.417		
3,300.0	3,256.5	3,233.5	3,233.5	10.6	5.6	-45.72	-358.4	-564.8	221.5	207.3	14.17	15.628		
3,400.0	3,354.9	3,331.9	3,331.9	10.9	5.8	-49.23	-358.4	-564.8	209.2	194.3	14.92	14.019		
3,500.0	3,453.2	3,430.2	3,430.2	11.3	6.0	-53.15	-358.4	-564.8	197.8	182.0	15.71	12.588		
3,600.0	3,551.6	3,528.6	3,528.6	11.7	6.2	-57.51	-358.4	-564.8	187.4	170.8	16.53	11.334		
3,700.0	3,649.9	3,626.9	3,626.9	12.0	6.3	-62.35	-358.4	-564.8	178.2	160.8	17.37	10.257		
3,800.0	3,748.3	3,725.3	3,725.3	12.4	6.5	-67.65	-358.4	-564.8	170.5	152.3	18.22	9.357		
3,900.0	3,846.7	3,823.7	3,823.7	12.8	6.7	-73.38	-358.4	-564.8	164.4	145.3	19.04	8.634		
4,000.0	3,945.0	3,922.0	3,922.0	13.1	6.8	-79.48	-358.4	-564.8	160.1	140.3	19.80	8.085		
4,100.0	4,043.4	4,020.4	4,020.4	13.5	7.0	-85.83	-358.4	-564.8	157.7	137.3	20.47	7.706		
4,164.7	4,107.0	4,084.0	4,084.0	13.7	7.1	-90.00	-358.4	-564.8	157.3	136.5	20.84	7.548 CC		
4,200.0	4,141.7	4,118.7	4,118.7	13.8	7.2	-92.28	-358.4	-564.8	157.4	136.4	21.02	7.489 ES		
4,300.0	4,240.1	4,217.1	4,217.1	14.2	7.4	-98.67	-358.4	-564.8	159.2	137.7	21.44	7.423 SF		
4,400.0	4,338.5	4,315.5	4,315.5	14.6	7.5	-104.86	-358.4	-564.8	162.9	141.2	21.74	7.493		
4,500.0	4,436.8	4,413.8	4,413.8	14.9	7.7	-110.71	-358.4	-564.8	168.5	146.6	21.93	7.684		
4,600.0	4,535.2	4,512.2	4,512.2	15.3	7.9	-116.14	-358.4	-564.8	175.8	153.8	22.03	7.979		
4,700.0	4,633.5	4,610.5	4,610.5	15.7	8.0	-121.12	-358.4	-564.8	184.6	162.5	22.08	8.359		
4,800.0	4,731.9	4,708.9	4,708.9	16.0	8.2	-125.62	-358.4	-564.8	194.6	172.5	22.09	8.809		
4,900.0	4,830.3	4,807.3	4,807.3	16.4	8.4	-129.66	-358.4	-564.8	205.7	183.6	22.09	9.313		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5000-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,928.6	4,905.6	4,905.6	16.7	8.6	-133.29	-358.4	-564.8	217.8	195.7	22.09	9.859		
5,100.0	5,027.0	5,000.0	5,000.0	17.1	8.7	-136.40	-358.4	-564.8	230.7	208.5	22.11	10.430		
5,200.0	5,125.4	5,000.0	5,000.0	17.5	8.7	-136.40	-358.4	-564.8	264.7	242.3	22.40	11.820		
5,300.0	5,223.7	5,000.0	5,000.0	17.8	8.7	-136.40	-358.4	-564.8	327.0	304.3	22.68	14.421		
5,400.0	5,322.1	5,000.0	5,000.0	18.2	8.7	-136.40	-358.4	-564.8	404.7	381.8	22.96	17.630		
5,500.0	5,420.4	5,000.0	5,000.0	18.6	8.7	-136.40	-358.4	-564.8	490.6	467.3	23.24	21.111		
5,600.0	5,518.8	5,000.0	5,000.0	18.9	8.7	-136.40	-358.4	-564.8	581.0	557.5	23.52	24.703		
5,700.0	5,617.2	5,000.0	5,000.0	19.3	8.7	-136.40	-358.4	-564.8	674.1	650.3	23.80	28.324		
5,800.0	5,715.5	5,000.0	5,000.0	19.7	8.7	-136.40	-358.4	-564.8	768.9	744.9	24.08	31.932		
5,900.0	5,813.9	5,000.0	5,000.0	20.0	8.7	-136.40	-358.4	-564.8	865.0	840.6	24.36	35.505		
6,000.0	5,912.2	5,000.0	5,000.0	20.4	8.7	-136.40	-358.4	-564.8	961.8	937.1	24.64	39.029		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	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		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)				Between Centres (ft)	Between Ellipses (ft)	
0.0	0.0	0.0	0.0	0.0	0.0	123.78	-159.2	237.9	287.0					
100.0	100.0	80.0	80.0	0.1	0.1	123.78	-159.2	237.9	286.3	286.0	0.26	1,092.671		
200.0	200.0	180.0	180.0	0.3	0.3	123.78	-159.2	237.9	286.3	285.7	0.61	468.492		
300.0	300.0	280.0	280.0	0.5	0.5	123.78	-159.2	237.9	286.3	285.3	0.96	298.167 CC, ES		
400.0	400.0	380.0	380.0	0.6	0.7	-127.68	-159.2	237.9	287.3	286.0	1.31	219.216		
500.0	499.8	479.8	479.8	0.8	0.8	-128.45	-159.2	237.9	290.6	288.9	1.67	174.044		
600.0	599.5	579.5	579.5	1.1	1.0	-129.68	-159.2	237.9	296.1	294.0	2.04	144.908		
700.0	698.7	678.7	678.7	1.3	1.2	-131.32	-159.2	237.9	304.0	301.6	2.44	124.803		
800.0	797.5	777.5	777.5	1.6	1.4	-133.29	-159.2	237.9	314.6	311.8	2.85	110.440		
819.4	816.6	796.6	796.6	1.7	1.4	-133.70	-159.2	237.9	317.0	314.1	2.93	108.211		
900.0	895.8	875.8	875.8	2.0	1.5	-135.53	-159.2	237.9	327.3	324.0	3.27	100.214		
1,000.0	994.2	974.2	974.2	2.3	1.7	-137.64	-159.2	237.9	340.5	336.8	3.68	92.540		
1,100.0	1,092.6	1,072.6	1,072.6	2.6	1.9	-139.59	-159.2	237.9	354.1	350.0	4.09	86.651		
1,200.0	1,190.9	1,170.9	1,170.9	3.0	2.0	-141.40	-159.2	237.9	368.1	363.7	4.49	82.038		
1,300.0	1,289.3	1,269.3	1,269.3	3.4	2.2	-143.07	-159.2	237.9	382.5	377.6	4.88	78.356		
1,400.0	1,387.6	1,367.6	1,367.6	3.7	2.4	-144.63	-159.2	237.9	397.1	391.9	5.27	75.372		
1,500.0	1,486.0	1,466.0	1,466.0	4.1	2.6	-146.07	-159.2	237.9	412.0	406.4	5.65	72.919		
1,600.0	1,584.4	1,564.4	1,564.4	4.4	2.7	-147.42	-159.2	237.9	427.2	421.2	6.03	70.879		
1,700.0	1,682.7	1,662.7	1,662.7	4.8	2.9	-148.67	-159.2	237.9	442.6	436.2	6.40	69.163		
1,800.0	1,781.1	1,761.1	1,761.1	5.1	3.1	-149.84	-159.2	237.9	458.1	451.4	6.77	67.706		
1,900.0	1,879.4	1,859.4	1,859.4	5.5	3.2	-150.93	-159.2	237.9	473.9	466.7	7.13	66.459		
2,000.0	1,977.8	1,957.8	1,957.8	5.9	3.4	-151.95	-159.2	237.9	489.8	482.3	7.49	65.382		
2,100.0	2,076.2	2,056.2	2,056.2	6.2	3.6	-152.91	-159.2	237.9	505.8	498.0	7.85	64.446		
2,200.0	2,174.5	2,154.5	2,154.5	6.6	3.8	-153.81	-159.2	237.9	522.0	513.8	8.20	63.628		
2,300.0	2,272.9	2,252.9	2,252.9	6.9	3.9	-154.65	-159.2	237.9	538.3	529.7	8.56	62.907		
2,400.0	2,371.2	2,351.2	2,351.2	7.3	4.1	-155.45	-159.2	237.9	554.7	545.8	8.91	62.269		
2,500.0	2,469.6	2,449.6	2,449.6	7.7	4.3	-156.19	-159.2	237.9	571.2	561.9	9.26	61.702		
2,600.0	2,568.0	2,548.0	2,548.0	8.0	4.4	-156.90	-159.2	237.9	587.8	578.1	9.60	61.194		
2,700.0	2,666.3	2,646.3	2,646.3	8.4	4.6	-157.57	-159.2	237.9	604.4	594.5	9.95	60.738		
2,800.0	2,764.7	2,744.7	2,744.7	8.8	4.8	-158.20	-159.2	237.9	621.2	610.9	10.30	60.327		
2,900.0	2,863.1	2,843.1	2,843.1	9.1	5.0	-158.80	-159.2	237.9	638.0	627.3	10.64	59.955		
3,000.0	2,961.4	2,941.4	2,941.4	9.5	5.1	-159.37	-159.2	237.9	654.9	643.9	10.98	59.616		
3,100.0	3,059.8	3,039.8	3,039.8	9.8	5.3	-159.91	-159.2	237.9	671.8	660.5	11.33	59.307		
3,200.0	3,158.1	3,138.1	3,138.1	10.2	5.5	-160.43	-159.2	237.9	688.8	677.1	11.67	59.024		
3,300.0	3,256.5	3,236.5	3,236.5	10.6	5.6	-160.92	-159.2	237.9	705.8	693.8	12.01	58.765		
3,400.0	3,354.9	3,334.9	3,334.9	10.9	5.8	-161.38	-159.2	237.9	722.9	710.6	12.35	58.525		
3,500.0	3,453.2	3,433.2	3,433.2	11.3	6.0	-161.83	-159.2	237.9	740.1	727.4	12.69	58.304		
3,600.0	3,551.6	3,531.6	3,531.6	11.7	6.2	-162.25	-159.2	237.9	757.3	744.2	13.03	58.099		
3,700.0	3,649.9	3,629.9	3,629.9	12.0	6.3	-162.66	-159.2	237.9	774.5	761.1	13.37	57.909		
3,800.0	3,748.3	3,728.3	3,728.3	12.4	6.5	-163.05	-159.2	237.9	791.7	778.0	13.71	57.732		
3,900.0	3,846.7	3,826.7	3,826.7	12.8	6.7	-163.42	-159.2	237.9	809.0	795.0	14.05	57.566		
4,000.0	3,945.0	3,925.0	3,925.0	13.1	6.9	-163.78	-159.2	237.9	826.3	811.9	14.39	57.411		
4,100.0	4,043.4	4,023.4	4,023.4	13.5	7.0	-164.12	-159.2	237.9	843.7	829.0	14.73	57.266		
4,200.0	4,141.7	4,121.7	4,121.7	13.8	7.2	-164.45	-159.2	237.9	861.1	846.0	15.07	57.130		
4,300.0	4,240.1	4,220.1	4,220.1	14.2	7.4	-164.76	-159.2	237.9	878.5	863.1	15.41	57.002		
4,400.0	4,338.5	4,318.5	4,318.5	14.6	7.5	-165.06	-159.2	237.9	895.9	880.2	15.75	56.881		
4,500.0	4,436.8	4,416.8	4,416.8	14.9	7.7	-165.36	-159.2	237.9	913.4	897.3	16.09	56.767		
4,600.0	4,535.2	4,515.2	4,515.2	15.3	7.9	-165.64	-159.2	237.9	930.8	914.4	16.43	56.659		
4,700.0	4,633.5	4,613.5	4,613.5	15.7	8.1	-165.91	-159.2	237.9	948.3	931.6	16.77	56.556		
4,800.0	4,731.9	4,711.9	4,711.9	16.0	8.2	-166.17	-159.2	237.9	965.8	948.7	17.11	56.459		
4,900.0	4,830.3	4,810.3	4,810.3	16.4	8.4	-166.42	-159.2	237.9	983.4	965.9	17.45	56.366 SF		

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 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - SATER 24-8 (EXISTING) - KERRMCGEE WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 15-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,900.0	7,267.0	7,369.0	7,217.0	116.4	24.2	92.05	7,099.6	-385.5	987.8	861.3	126.53	7.807		
14,000.0	7,267.0	7,366.6	7,214.6	118.1	24.2	91.85	7,099.7	-385.4	916.7	788.4	128.29	7.146		
14,055.8	7,267.0	7,365.3	7,213.3	119.0	24.2	91.74	7,099.7	-385.4	879.5	750.2	129.27	6.804 CC, ES, SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4C-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 4C-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 #3	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4983.0ft

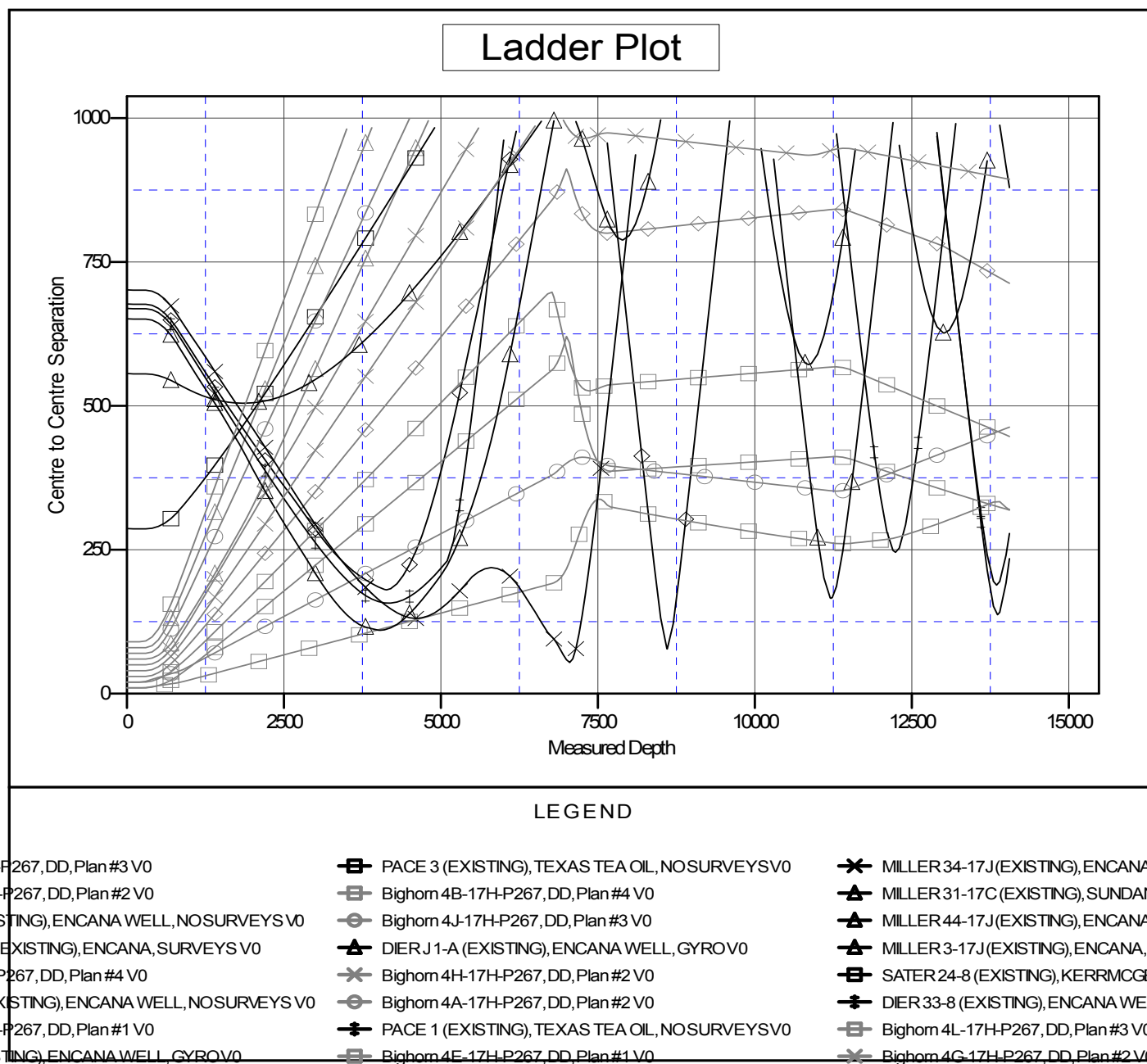
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Bighorn 4C-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