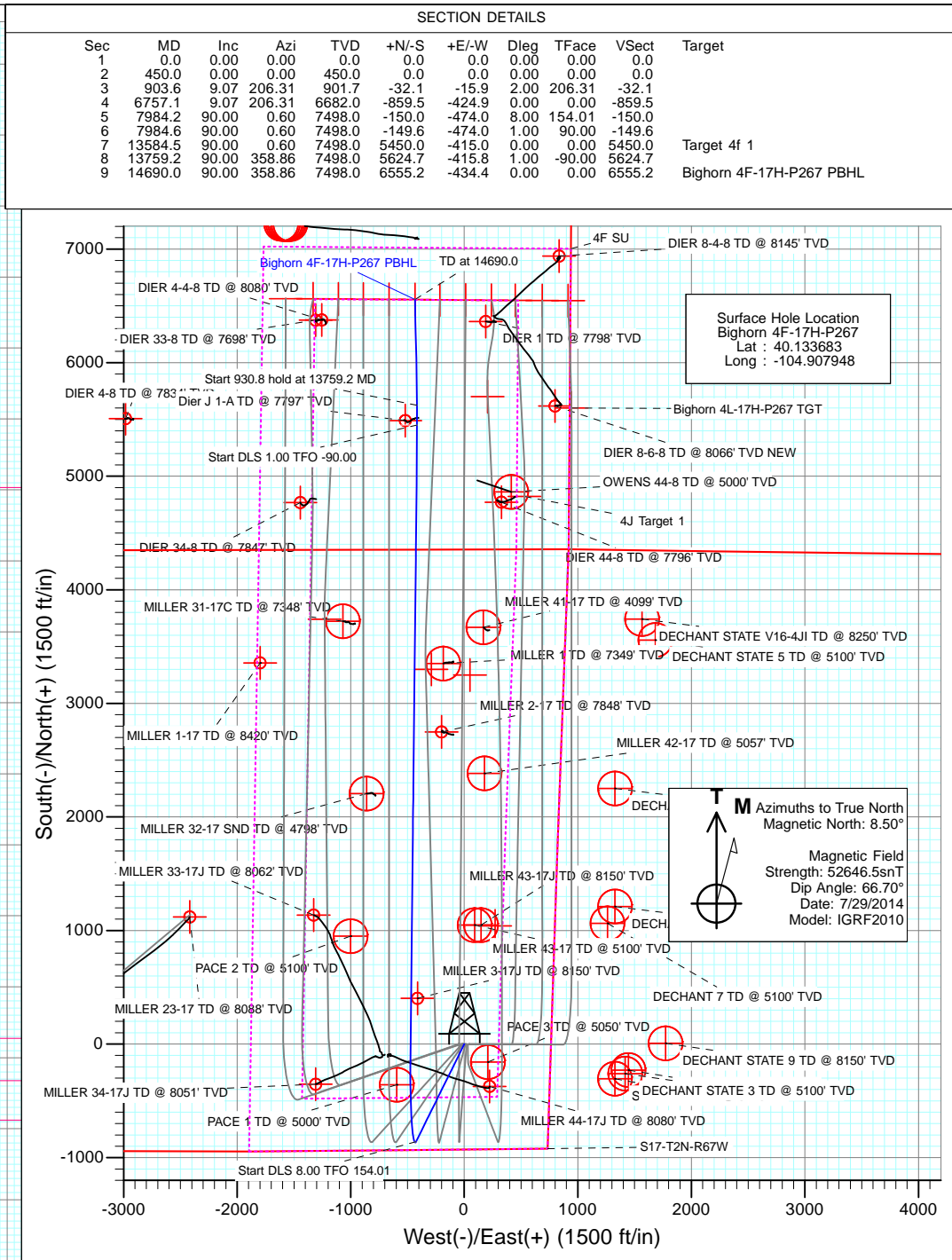
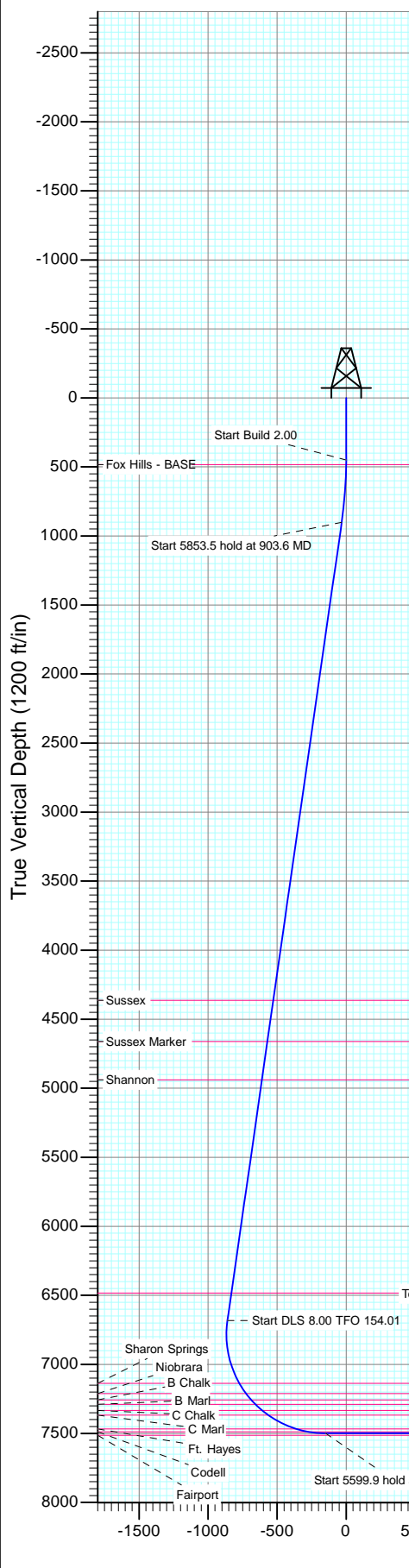




Project: DJ Wattenberg
Site: S17-T2N-R67W (Big Horn)
Well: Bighorn 4F-17H-P267
Wellbore: DD
Design: Plan #4



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Bighorn 4F-17H-P267 PBHL	6555.2	-434.4	1298651.82	3165067.31	40.151678	-104.909502
Target 4f 1	5450.0	-415.0	1297546.73	3165094.08	40.148644	-104.909433

Plan #4
Bighorn 4F-17H-P267
WELL @ 4983.0ft
Ground Elevation @ 4953.0
North American Datum 1983
Well Bighorn 4F-17H-P267, True North

Planning Report

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

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		S17-T2N-R67W (Big Horn)			
Site Position:		Northing:	1,292,301.45 ft	Latitude:	40.134300
From:	Lat/Long	Easting:	3,162,073.61 ft	Longitude:	-104.920360
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.37 °

Well	Bighorn 4F-17H-P267					
Well Position	+N/-S	0.0 ft	Northing:	1,292,099.62 ft	Latitude:	40.133683
	+E/-W	0.0 ft	Easting:	3,165,545.46 ft	Longitude:	-104.907948
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,953.0 ft

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

Design	Plan #4			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	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	
450.0	0.00	0.00	450.0	0.0	0.0	0.00	0.00	0.00	0.00	
903.6	9.07	206.31	901.7	-32.1	-15.9	2.00	2.00	0.00	206.31	
6,757.1	9.07	206.31	6,682.0	-859.5	-424.9	0.00	0.00	0.00	0.00	
7,984.2	90.00	0.60	7,498.0	-150.0	-474.0	8.00	6.60	12.57	154.01	
7,984.6	90.00	0.60	7,498.0	-149.6	-474.0	1.00	0.00	1.00	90.00	
13,584.5	90.00	0.60	7,498.0	5,450.0	-415.0	0.00	0.00	0.00	0.00	Target 4f 1
13,759.2	90.00	358.86	7,498.0	5,624.7	-415.8	1.00	0.00	-1.00	-90.00	
14,690.0	90.00	358.86	7,498.0	6,555.2	-434.4	0.00	0.00	0.00	0.00	Bighorn 4F-17H-P267

Planning Report

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

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	Start Build 2.00
483.0	0.66	206.31	483.0	-0.2	-0.1	-0.2	2.00	2.00	Fox Hills - BASE
500.0	1.00	206.31	500.0	-0.4	-0.2	-0.4	2.00	2.00	
600.0	3.00	206.31	599.9	-3.5	-1.7	-3.5	2.00	2.00	
700.0	5.00	206.31	699.7	-9.8	-4.8	-9.8	2.00	2.00	
800.0	7.00	206.31	799.1	-19.1	-9.5	-19.1	2.00	2.00	
900.0	9.00	206.31	898.2	-31.6	-15.6	-31.6	2.00	2.00	
903.6	9.07	206.31	901.7	-32.1	-15.9	-32.1	2.00	2.00	Start 5853.5 hold at 903.6 MD
1,000.0	9.07	206.31	996.9	-45.7	-22.6	-45.7	0.00	0.00	
1,100.0	9.07	206.31	1,095.7	-59.9	-29.6	-59.9	0.00	0.00	
1,200.0	9.07	206.31	1,194.4	-74.0	-36.6	-74.0	0.00	0.00	
1,300.0	9.07	206.31	1,293.1	-88.2	-43.6	-88.2	0.00	0.00	
1,400.0	9.07	206.31	1,391.9	-102.3	-50.6	-102.3	0.00	0.00	
1,500.0	9.07	206.31	1,490.6	-116.4	-57.6	-116.4	0.00	0.00	
1,600.0	9.07	206.31	1,589.4	-130.6	-64.5	-130.6	0.00	0.00	
1,700.0	9.07	206.31	1,688.1	-144.7	-71.5	-144.7	0.00	0.00	
1,800.0	9.07	206.31	1,786.9	-158.8	-78.5	-158.8	0.00	0.00	
1,900.0	9.07	206.31	1,885.6	-173.0	-85.5	-173.0	0.00	0.00	
2,000.0	9.07	206.31	1,984.4	-187.1	-92.5	-187.1	0.00	0.00	
2,100.0	9.07	206.31	2,083.1	-201.2	-99.5	-201.2	0.00	0.00	
2,200.0	9.07	206.31	2,181.9	-215.4	-106.5	-215.4	0.00	0.00	
2,300.0	9.07	206.31	2,280.6	-229.5	-113.5	-229.5	0.00	0.00	
2,400.0	9.07	206.31	2,379.4	-243.6	-120.4	-243.6	0.00	0.00	
2,500.0	9.07	206.31	2,478.1	-257.8	-127.4	-257.8	0.00	0.00	
2,600.0	9.07	206.31	2,576.9	-271.9	-134.4	-271.9	0.00	0.00	
2,700.0	9.07	206.31	2,675.6	-286.0	-141.4	-286.0	0.00	0.00	
2,800.0	9.07	206.31	2,774.4	-300.2	-148.4	-300.2	0.00	0.00	
2,900.0	9.07	206.31	2,873.1	-314.3	-155.4	-314.3	0.00	0.00	
3,000.0	9.07	206.31	2,971.9	-328.4	-162.4	-328.4	0.00	0.00	
3,100.0	9.07	206.31	3,070.6	-342.6	-169.4	-342.6	0.00	0.00	
3,200.0	9.07	206.31	3,169.4	-356.7	-176.3	-356.7	0.00	0.00	
3,300.0	9.07	206.31	3,268.1	-370.8	-183.3	-370.8	0.00	0.00	
3,400.0	9.07	206.31	3,366.9	-385.0	-190.3	-385.0	0.00	0.00	
3,500.0	9.07	206.31	3,465.6	-399.1	-197.3	-399.1	0.00	0.00	
3,600.0	9.07	206.31	3,564.4	-413.2	-204.3	-413.2	0.00	0.00	
3,700.0	9.07	206.31	3,663.1	-427.4	-211.3	-427.4	0.00	0.00	
3,800.0	9.07	206.31	3,761.9	-441.5	-218.3	-441.5	0.00	0.00	
3,900.0	9.07	206.31	3,860.6	-455.6	-225.3	-455.6	0.00	0.00	
4,000.0	9.07	206.31	3,959.4	-469.8	-232.3	-469.8	0.00	0.00	
4,100.0	9.07	206.31	4,058.1	-483.9	-239.2	-483.9	0.00	0.00	
4,200.0	9.07	206.31	4,156.9	-498.1	-246.2	-498.1	0.00	0.00	
4,300.0	9.07	206.31	4,255.6	-512.2	-253.2	-512.2	0.00	0.00	
4,400.0	9.07	206.31	4,354.4	-526.3	-260.2	-526.3	0.00	0.00	
4,408.7	9.07	206.31	4,363.0	-527.6	-260.8	-527.6	0.00	0.00	Sussex
4,500.0	9.07	206.31	4,453.1	-540.5	-267.2	-540.5	0.00	0.00	
4,600.0	9.07	206.31	4,551.9	-554.6	-274.2	-554.6	0.00	0.00	
4,700.0	9.07	206.31	4,650.6	-568.7	-281.2	-568.7	0.00	0.00	

Planning Report

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

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,710.5	9.07	206.31	4,661.0	-570.2	-281.9	-570.2	0.00	0.00	Sussex Marker
4,800.0	9.07	206.31	4,749.4	-582.9	-288.2	-582.9	0.00	0.00	
4,900.0	9.07	206.31	4,848.1	-597.0	-295.1	-597.0	0.00	0.00	
4,992.0	9.07	206.31	4,939.0	-610.0	-301.6	-610.0	0.00	0.00	Shannon
5,000.0	9.07	206.31	4,946.9	-611.1	-302.1	-611.1	0.00	0.00	
5,100.0	9.07	206.31	5,045.6	-625.3	-309.1	-625.3	0.00	0.00	
5,200.0	9.07	206.31	5,144.4	-639.4	-316.1	-639.4	0.00	0.00	
5,300.0	9.07	206.31	5,243.1	-653.5	-323.1	-653.5	0.00	0.00	
5,400.0	9.07	206.31	5,341.9	-667.7	-330.1	-667.7	0.00	0.00	
5,500.0	9.07	206.31	5,440.6	-681.8	-337.1	-681.8	0.00	0.00	
5,600.0	9.07	206.31	5,539.4	-695.9	-344.1	-695.9	0.00	0.00	
5,700.0	9.07	206.31	5,638.1	-710.1	-351.0	-710.1	0.00	0.00	
5,800.0	9.07	206.31	5,736.9	-724.2	-358.0	-724.2	0.00	0.00	
5,900.0	9.07	206.31	5,835.6	-738.3	-365.0	-738.3	0.00	0.00	
6,000.0	9.07	206.31	5,934.4	-752.5	-372.0	-752.5	0.00	0.00	
6,100.0	9.07	206.31	6,033.1	-766.6	-379.0	-766.6	0.00	0.00	
6,200.0	9.07	206.31	6,131.9	-780.7	-386.0	-780.7	0.00	0.00	
6,300.0	9.07	206.31	6,230.6	-794.9	-393.0	-794.9	0.00	0.00	
6,400.0	9.07	206.31	6,329.4	-809.0	-400.0	-809.0	0.00	0.00	
6,500.0	9.07	206.31	6,428.1	-823.1	-406.9	-823.1	0.00	0.00	
6,555.6	9.07	206.31	6,483.0	-831.0	-410.8	-831.0	0.00	0.00	Teepee Buttes (*if present)
6,600.0	9.07	206.31	6,526.9	-837.3	-413.9	-837.3	0.00	0.00	
6,700.0	9.07	206.31	6,625.6	-851.4	-420.9	-851.4	0.00	0.00	
6,757.1	9.07	206.31	6,682.0	-859.5	-424.9	-859.5	0.00	0.00	Start DLS 8.00 TFO 154.01
6,800.0	6.17	220.42	6,724.5	-864.3	-427.9	-864.3	8.00	-6.76	
6,900.0	5.13	310.12	6,824.2	-865.5	-434.8	-865.5	8.00	-1.04	
7,000.0	11.93	341.47	6,923.1	-852.8	-441.5	-852.8	8.00	6.80	
7,100.0	19.65	349.42	7,019.2	-826.4	-447.9	-826.4	8.00	7.72	
7,200.0	27.53	352.96	7,110.8	-786.9	-453.9	-786.9	8.00	7.88	
7,228.7	29.80	353.65	7,136.0	-773.2	-455.5	-773.2	8.00	7.92	Sharon Springs
7,300.0	35.46	355.02	7,196.0	-735.0	-459.2	-735.0	8.00	7.93	
7,318.6	36.93	355.31	7,211.0	-724.0	-460.1	-724.0	8.00	7.95	Niobrara
7,378.0	41.66	356.14	7,257.0	-686.5	-462.9	-686.5	8.00	7.95	B Chalk
7,400.0	43.41	356.40	7,273.2	-671.7	-463.9	-671.7	8.00	7.96	
7,422.1	45.17	356.65	7,289.0	-656.3	-464.8	-656.3	8.00	7.96	B Marl
7,487.6	50.38	357.31	7,333.0	-607.9	-467.4	-607.9	8.00	7.97	C Chalk
7,500.0	51.37	357.43	7,340.8	-598.3	-467.8	-598.3	8.00	7.97	
7,543.6	54.85	357.80	7,367.0	-563.4	-469.3	-563.4	8.00	7.97	C Marl
7,600.0	59.34	358.25	7,397.6	-516.1	-470.9	-516.1	8.00	7.97	
7,700.0	67.32	358.94	7,442.5	-426.8	-473.1	-426.8	8.00	7.98	
7,769.1	72.83	359.37	7,466.0	-361.9	-474.0	-361.9	8.00	7.98	Ft. Hayes
7,800.0	75.30	359.56	7,474.5	-332.2	-474.3	-332.2	8.00	7.98	
7,864.3	80.43	359.93	7,488.0	-269.4	-474.6	-269.4	8.00	7.98	Codell
7,900.0	83.28	0.13	7,493.1	-234.0	-474.5	-234.0	8.00	7.98	
7,984.2	90.00	0.60	7,498.0	-150.0	-474.0	-150.0	8.00	7.98	
7,984.6	90.00	0.60	7,498.0	-149.6	-474.0	-149.6	1.00	0.00	Start 5599.9 hold at 7984.6 MD
8,000.0	90.00	0.60	7,498.0	-134.2	-473.8	-134.2	0.00	0.00	
8,100.0	90.00	0.60	7,498.0	-34.2	-472.8	-34.2	0.00	0.00	
8,200.0	90.00	0.60	7,498.0	65.8	-471.7	65.8	0.00	0.00	
8,300.0	90.00	0.60	7,498.0	165.8	-470.7	165.8	0.00	0.00	
8,400.0	90.00	0.60	7,498.0	265.8	-469.6	265.8	0.00	0.00	
8,500.0	90.00	0.60	7,498.0	365.8	-468.6	365.8	0.00	0.00	

Planning Report

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

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,600.0	90.00	0.60	7,498.0	465.7	-467.5	465.7	0.00	0.00	
8,700.0	90.00	0.60	7,498.0	565.7	-466.5	565.7	0.00	0.00	
8,800.0	90.00	0.60	7,498.0	665.7	-465.4	665.7	0.00	0.00	
8,900.0	90.00	0.60	7,498.0	765.7	-464.4	765.7	0.00	0.00	
9,000.0	90.00	0.60	7,498.0	865.7	-463.3	865.7	0.00	0.00	
9,100.0	90.00	0.60	7,498.0	965.7	-462.2	965.7	0.00	0.00	
9,200.0	90.00	0.60	7,498.0	1,065.7	-461.2	1,065.7	0.00	0.00	
9,300.0	90.00	0.60	7,498.0	1,165.7	-460.1	1,165.7	0.00	0.00	
9,400.0	90.00	0.60	7,498.0	1,265.7	-459.1	1,265.7	0.00	0.00	
9,500.0	90.00	0.60	7,498.0	1,365.7	-458.0	1,365.7	0.00	0.00	
9,600.0	90.00	0.60	7,498.0	1,465.7	-457.0	1,465.7	0.00	0.00	
9,700.0	90.00	0.60	7,498.0	1,565.7	-455.9	1,565.7	0.00	0.00	
9,800.0	90.00	0.60	7,498.0	1,665.7	-454.9	1,665.7	0.00	0.00	
9,900.0	90.00	0.60	7,498.0	1,765.7	-453.8	1,765.7	0.00	0.00	
10,000.0	90.00	0.60	7,498.0	1,865.7	-452.8	1,865.7	0.00	0.00	
10,100.0	90.00	0.60	7,498.0	1,965.7	-451.7	1,965.7	0.00	0.00	
10,200.0	90.00	0.60	7,498.0	2,065.7	-450.7	2,065.7	0.00	0.00	
10,300.0	90.00	0.60	7,498.0	2,165.7	-449.6	2,165.7	0.00	0.00	
10,400.0	90.00	0.60	7,498.0	2,265.6	-448.5	2,265.6	0.00	0.00	
10,500.0	90.00	0.60	7,498.0	2,365.6	-447.5	2,365.6	0.00	0.00	
10,600.0	90.00	0.60	7,498.0	2,465.6	-446.4	2,465.6	0.00	0.00	
10,700.0	90.00	0.60	7,498.0	2,565.6	-445.4	2,565.6	0.00	0.00	
10,800.0	90.00	0.60	7,498.0	2,665.6	-444.3	2,665.6	0.00	0.00	
10,900.0	90.00	0.60	7,498.0	2,765.6	-443.3	2,765.6	0.00	0.00	
11,000.0	90.00	0.60	7,498.0	2,865.6	-442.2	2,865.6	0.00	0.00	
11,100.0	90.00	0.60	7,498.0	2,965.6	-441.2	2,965.6	0.00	0.00	
11,200.0	90.00	0.60	7,498.0	3,065.6	-440.1	3,065.6	0.00	0.00	
11,300.0	90.00	0.60	7,498.0	3,165.6	-439.1	3,165.6	0.00	0.00	
11,400.0	90.00	0.60	7,498.0	3,265.6	-438.0	3,265.6	0.00	0.00	
11,500.0	90.00	0.60	7,498.0	3,365.6	-437.0	3,365.6	0.00	0.00	
11,600.0	90.00	0.60	7,498.0	3,465.6	-435.9	3,465.6	0.00	0.00	
11,700.0	90.00	0.60	7,498.0	3,565.6	-434.9	3,565.6	0.00	0.00	
11,800.0	90.00	0.60	7,498.0	3,665.6	-433.8	3,665.6	0.00	0.00	
11,900.0	90.00	0.60	7,498.0	3,765.6	-432.7	3,765.6	0.00	0.00	
12,000.0	90.00	0.60	7,498.0	3,865.6	-431.7	3,865.6	0.00	0.00	
12,100.0	90.00	0.60	7,498.0	3,965.6	-430.6	3,965.6	0.00	0.00	
12,200.0	90.00	0.60	7,498.0	4,065.5	-429.6	4,065.5	0.00	0.00	
12,300.0	90.00	0.60	7,498.0	4,165.5	-428.5	4,165.5	0.00	0.00	
12,400.0	90.00	0.60	7,498.0	4,265.5	-427.5	4,265.5	0.00	0.00	
12,500.0	90.00	0.60	7,498.0	4,365.5	-426.4	4,365.5	0.00	0.00	
12,600.0	90.00	0.60	7,498.0	4,465.5	-425.4	4,465.5	0.00	0.00	
12,700.0	90.00	0.60	7,498.0	4,565.5	-424.3	4,565.5	0.00	0.00	
12,800.0	90.00	0.60	7,498.0	4,665.5	-423.3	4,665.5	0.00	0.00	
12,900.0	90.00	0.60	7,498.0	4,765.5	-422.2	4,765.5	0.00	0.00	
13,000.0	90.00	0.60	7,498.0	4,865.5	-421.2	4,865.5	0.00	0.00	
13,100.0	90.00	0.60	7,498.0	4,965.5	-420.1	4,965.5	0.00	0.00	
13,200.0	90.00	0.60	7,498.0	5,065.5	-419.1	5,065.5	0.00	0.00	
13,300.0	90.00	0.60	7,498.0	5,165.5	-418.0	5,165.5	0.00	0.00	
13,400.0	90.00	0.60	7,498.0	5,265.5	-416.9	5,265.5	0.00	0.00	
13,500.0	90.00	0.60	7,498.0	5,365.5	-415.9	5,365.5	0.00	0.00	
13,584.5	90.00	0.60	7,498.0	5,450.0	-415.0	5,450.0	0.00	0.00	Start DLS 1.00 TFO -90.00
13,600.0	90.00	0.45	7,498.0	5,465.5	-414.9	5,465.5	1.00	0.00	

Planning Report

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

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
13,700.0	90.00	359.45	7,498.0	5,565.5	-414.9	5,565.5	1.00	0.00	
13,759.2	90.00	358.86	7,498.0	5,624.7	-415.8	5,624.7	1.00	0.00	Start 930.8 hold at 13759.2 MD
13,800.0	90.00	358.86	7,498.0	5,665.5	-416.6	5,665.5	0.00	0.00	
13,900.0	90.00	358.86	7,498.0	5,765.4	-418.6	5,765.4	0.00	0.00	
14,000.0	90.00	358.86	7,498.0	5,865.4	-420.6	5,865.4	0.00	0.00	
14,100.0	90.00	358.86	7,498.0	5,965.4	-422.6	5,965.4	0.00	0.00	
14,200.0	90.00	358.86	7,498.0	6,065.4	-424.6	6,065.4	0.00	0.00	
14,300.0	90.00	358.86	7,498.0	6,165.4	-426.6	6,165.4	0.00	0.00	
14,400.0	90.00	358.86	7,498.0	6,265.3	-428.6	6,265.3	0.00	0.00	
14,500.0	90.00	358.86	7,498.0	6,365.3	-430.6	6,365.3	0.00	0.00	
14,600.0	90.00	358.86	7,498.0	6,465.3	-432.6	6,465.3	0.00	0.00	
14,690.0	90.00	358.86	7,498.0	6,555.2	-434.4	6,555.2	0.00	0.00	TD at 14690.0

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Target 4f 1 - plan hits target center - Point	0.00	0.00	7,498.0	5,450.0	-415.0	1,297,546.73	3,165,094.08	40.148644	-104.909433
Bighorn 4F-17H-P267 P - plan hits target center - Point	0.00	0.38	7,498.0	6,555.2	-434.4	1,298,651.82	3,165,067.31	40.151678	-104.909502

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
483.0	483.0	Fox Hills - BASE			
4,408.7	4,363.0	Sussex			
4,710.5	4,661.0	Sussex Marker			
4,992.0	4,939.0	Shannon			
6,555.6	6,483.0	Teepee Buttes (*if present)			
7,228.7	7,136.0	Sharon Springs			
7,318.6	7,211.0	Niobrara			
7,378.0	7,257.0	B Chalk			
7,422.1	7,289.0	B Marl			
7,487.6	7,333.0	C Chalk			
7,543.6	7,367.0	C Marl			
7,769.1	7,466.0	Ft. Hayes			
7,864.3	7,488.0	Codell			

Planning Report

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

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
450.0	450.0	0.0	0.0	Start Build 2.00
903.6	901.7	-32.1	-15.9	Start 5853.5 hold at 903.6 MD
6,757.1	6,682.0	-859.5	-424.9	Start DLS 8.00 TFO 154.01
7,984.6	7,498.0	-149.6	-474.0	Start 5599.9 hold at 7984.6 MD
13,584.5	7,498.0	5,450.0	-415.0	Start DLS 1.00 TFO -90.00
13,759.2	7,498.0	5,624.7	-415.8	Start 930.8 hold at 13759.2 MD
14,690.0	7,498.0	6,555.2	-434.4	TD at 14690.0

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S17-T2N-R67W (Big Horn)

Bighorn 4F-17H-P267

DD

Plan #4

Anticollision Report

25 November, 2014

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Reference	Plan #4		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,639.3ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	11/25/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,689.9	Plan #4 (DD)	Geolink MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
S17-T2N-R67W (Big Horn)						
ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SU	400.0	396.0	1,463.5	1,462.2	1,094.521	CC
ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SU	500.0	496.0	1,463.6	1,461.9	867.960	ES
ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SU	3,300.0	3,264.1	1,635.1	1,620.9	115.155	SF
Bighorn 4A-17H-P267 - DD - Plan #2	200.0	200.0	49.8	49.2	83.873	CC, ES
Bighorn 4A-17H-P267 - DD - Plan #2	14,690.0	14,261.1	1,161.2	929.9	5.021	SF
Bighorn 4B-17H-P267 - DD - Plan #4	233.4	233.4	40.0	39.3	56.324	CC, ES
Bighorn 4B-17H-P267 - DD - Plan #4	14,690.0	14,412.1	896.8	661.0	3.804	SF
Bighorn 4C-17H-P267 - DD - Plan #3	300.0	300.0	29.9	29.0	31.746	CC, ES
Bighorn 4C-17H-P267 - DD - Plan #3	14,690.0	14,055.8	713.2	489.8	3.192	SF
Bighorn 4D-17H-P267 - DD - Plan #1	333.9	333.9	19.9	18.8	18.716	CC, ES
Bighorn 4D-17H-P267 - DD - Plan #1	14,690.0	14,783.0	454.8	219.2	1.930	SF
Bighorn 4E-17H-P267 - DD - Plan #1	400.0	400.0	9.8	8.5	7.581	CC, ES
Bighorn 4E-17H-P267 - DD - Plan #1	14,690.0	14,534.5	324.4	155.5	1.920	SF
Bighorn 4G-17H-P267 - DD - Plan #3	400.0	400.0	10.1	8.8	7.794	CC
Bighorn 4G-17H-P267 - DD - Plan #3	500.0	500.0	10.3	8.6	6.257	ES
Bighorn 4G-17H-P267 - DD - Plan #3	14,690.0	14,507.0	318.3	153.0	1.925	SF
Bighorn 4H-17H-P267 - DD - Plan #3	400.0	400.0	20.1	18.8	15.587	CC
Bighorn 4H-17H-P267 - DD - Plan #3	500.0	500.0	20.3	18.7	12.367	ES
Bighorn 4H-17H-P267 - DD - Plan #3	14,690.0	14,666.8	447.0	211.7	1.900	SF
Bighorn 4I-17H-P267 - DD - Plan #5	400.0	400.0	30.2	28.9	23.381	CC
Bighorn 4I-17H-P267 - DD - Plan #5	500.0	500.0	30.4	28.8	18.529	ES
Bighorn 4I-17H-P267 - DD - Plan #5	14,690.0	14,512.3	712.7	489.8	3.197	SF
Bighorn 4J-17H-P267 - DD - Plan #3	333.3	333.3	40.3	39.2	38.026	CC, ES
Bighorn 4J-17H-P267 - DD - Plan #3	14,690.0	13,818.5	884.2	649.4	3.765	SF
Bighorn 4K-17H-P267 - DD - Plan #2	300.0	300.0	50.1	49.1	53.105	CC, ES
Bighorn 4K-17H-P267 - DD - Plan #2	14,690.0	13,598.5	1,144.8	914.8	4.978	SF
Bighorn 4L-17H-P267 - DD - Plan #3	200.0	200.0	60.1	59.5	101.306	CC, ES
Bighorn 4L-17H-P267 - DD - Plan #3	14,690.0	13,855.2	1,348.2	1,113.6	5.747	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	400.0	396.0	1,440.7	1,439.3	1,077.440	CC
DECHANT-STATE 3 (EXISTING) - FOUNDATION - NO S	500.0	496.0	1,440.8	1,439.1	854.407	ES
DECHANT-STATE 3 (EXISTING) - FOUNDATION - NO S	3,700.0	3,659.1	1,637.0	1,620.9	102.264	SF
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	14,484.9	7,480.1	630.0	502.9	4.956	CC
DIER 1 (EXISTING) - ENCANA WELL - GYRO	14,500.0	7,480.2	630.2	502.8	4.947	ES, SF
DIER 33-8 (EXISTING) - ENCANA WELL - GYRO	14,520.3	7,446.4	877.4	749.6	6.866	CC, ES
DIER 33-8 (EXISTING) - ENCANA WELL - GYRO	14,600.0	7,447.9	881.0	751.8	6.820	SF
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO	12,885.2	7,438.2	1,018.9	919.7	10.274	CC
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO	12,900.0	7,438.5	1,019.0	919.5	10.249	ES
DIER 34-8 (EXISTING) - ENCANA WELL - GYRO	13,100.0	7,442.3	1,041.2	938.4	10.119	SF
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO	12,914.8	7,438.9	737.3	637.7	7.400	CC, ES
DIER 44-8 (EXISTING) - ENCANA WELL - GYRO	13,000.0	7,437.0	742.2	641.1	7.342	SF
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY	14,527.2	7,433.0	823.8	696.0	6.443	CC, ES
DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEY	14,600.0	7,433.0	827.1	697.9	6.405	SF
DIER 4-8 (EXISTING) - ENCANA - GYRO						Out of range
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS	14,690.0	7,514.9	1,307.3	1,173.8	9.792	CC, ES, SF
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS	13,740.6	7,615.9	1,231.0	1,110.7	10.226	CC, ES
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS	14,000.0	7,615.3	1,259.6	1,134.7	10.080	SF
DIER J 1-A (EXISTING) - ENCANA WELL - GYRO	13,625.2	7,465.3	115.7	3.6	1.032	Level 2, CC, ES, 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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S17-T2N-R67W (Big Horn)						
MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO	11,487.2	7,350.0	272.9	203.2	3.916	CC, ES
MILLER 1 (EXISTING) - SUNDANCE WELL - GYRO	11,500.0	7,350.0	273.2	203.3	3.909	SF
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV	11,477.0	7,456.0	1,361.3	1,286.4	18.164	CC
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV	11,500.0	7,456.0	1,361.5	1,286.2	18.071	ES
MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURV	11,900.0	7,456.0	1,425.5	1,343.3	17.343	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	10,888.0	7,473.9	247.2	182.3	3.805	CC, ES
MILLER 2-17 (EXISTING) - ENCANA WELL - GYRO	10,900.0	7,473.7	247.5	182.4	3.798	SF
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	11,850.8	7,350.0	643.0	562.6	7.994	CC, ES
MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYR	11,900.0	7,350.0	644.9	563.6	7.935	SF
MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS	8,538.1	7,468.0	55.8	26.1	1.883	CC, ES, SF
MILLER 32-17 (EXISTING) SUNDANCE - SUNDANCE W						Out of range
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	2,855.5	2,794.8	615.2	602.5	48.303	CC
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	3,000.0	2,939.5	615.5	602.0	45.692	ES
MILLER 33-17J (EXISTING) - ENCANA - SURVEYS	9,500.0	7,723.0	872.4	818.0	16.038	SF
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	3,175.3	3,112.3	612.2	597.9	42.692	CC
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	3,200.0	3,136.1	612.2	597.8	42.329	ES
MILLER 34-17J (EXISTING) - ENCANA - SURVEYS	6,900.0	6,726.6	910.0	876.2	26.940	SF
MILLER 41-17 (EXISTING) - SUNDANCE WELL - GYRO						Out of range
MILLER 42-17 (EXISTING) - SUNDANCE WELL - NO SU						Out of range
MILLER 43-17 (EXISTING) - SUNDANCE - NO SURVEY	400.0	377.0	1,051.3	1,050.0	806.218	CC
MILLER 43-17 (EXISTING) - SUNDANCE - NO SURVEY	427.8	404.8	1,051.3	1,049.9	750.457	ES
MILLER 43-17 (EXISTING) - SUNDANCE - NO SURVEY	4,500.0	4,430.1	1,627.7	1,611.8	102.434	SF
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE	9,188.4	7,476.0	608.7	571.1	16.173	CC
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE	9,200.0	7,476.0	608.8	571.0	16.105	ES
MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVE	9,300.0	7,476.0	618.8	579.6	15.761	SF
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	3,223.9	3,172.8	538.8	524.2	36.853	CC
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	5,985.1	6,038.2	546.5	522.4	22.738	ES
MILLER 44-17J (EXISTING) - ENCANA - SURVEYS	7,600.0	7,478.7	675.0	645.2	22.640	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	4,383.8	4,315.3	374.4	354.1	18.375	CC
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,500.0	4,430.1	374.9	353.9	17.897	ES
PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	5,100.0	5,000.0	391.8	368.2	16.662	SF
PACE 2 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	400.0	364.0	1,380.2	1,378.9	1,077.218	CC
PACE 2 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	500.0	464.0	1,380.3	1,378.7	846.601	ES
PACE 2 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	4,200.0	4,120.9	1,632.9	1,614.9	90.804	SF
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	995.0	971.9	256.9	253.2	70.176	CC
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	1,000.0	976.9	256.9	253.2	69.737	ES
PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS	2,900.0	2,853.1	395.3	383.8	34.574	SF
SATER 21-8 (EXISTING) - KERRMCGEE WELL - SURV						Out of range
SATER 24-8 (EXISTING) - KERRMCGEE WELL - SURV	14,690.0	7,589.2	539.5	430.2	4.936	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	14,690.0	7,484.6	1,258.3	1,126.2	9.526	CC, ES, SF
SATER 8-8 (EXISTING) - KERRMCGEE WELL - SURVE	14,690.0	7,849.3	1,330.0	1,196.7	9.980	CC, ES, SF
STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS	400.0	428.0	1,361.2	1,359.8	977.229	CC
STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS	500.0	528.0	1,361.3	1,359.6	781.418	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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S17-T2N-R67W (Big Horn)						
STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS	4,800.0	4,777.4	1,638.7	1,617.9	78.673	SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - ALVIN-STATE 1 (EXISTING) - MERIT ENERGY - NO SURVEYS														Offset Site Error:	0.0 ft
Survey Program: 7650-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	98.98	-228.4	1,445.6	1,463.5						
100.0	100.0	96.0	96.0	0.1	0.2	98.98	-228.4	1,445.6	1,463.5	1,463.2	0.29	5,047.895			
200.0	200.0	196.0	196.0	0.3	0.3	98.98	-228.4	1,445.6	1,463.5	1,462.9	0.64	2,290.345			
300.0	300.0	296.0	296.0	0.5	0.5	98.98	-228.4	1,445.6	1,463.5	1,462.5	0.99	1,481.200			
400.0	400.0	396.0	396.0	0.6	0.7	98.98	-228.4	1,445.6	1,463.5	1,462.2	1.34	1,094.521 CC			
427.8	427.8	423.8	423.8	0.7	0.7	-107.33	-228.4	1,445.6	1,463.5	1,462.1	1.43	1,020.437			
500.0	500.0	496.0	496.0	0.8	0.9	-107.34	-228.4	1,445.6	1,463.6	1,461.9	1.69	867.960 ES			
600.0	599.9	595.9	595.9	1.0	1.0	-107.45	-228.4	1,445.6	1,464.7	1,462.6	2.04	717.923			
700.0	699.7	695.7	695.7	1.2	1.2	-107.67	-228.4	1,445.6	1,466.8	1,464.4	2.41	608.877			
800.0	799.1	795.1	795.1	1.4	1.4	-108.00	-228.4	1,445.6	1,470.0	1,467.2	2.80	524.298			
900.0	898.2	894.2	894.2	1.7	1.6	-108.42	-228.4	1,445.6	1,474.4	1,471.2	3.24	455.750			
1,000.0	996.9	992.9	992.9	2.0	1.7	-108.99	-228.4	1,445.6	1,479.5	1,475.8	3.68	401.923			
1,100.0	1,095.7	1,091.7	1,091.7	2.3	1.9	-109.56	-228.4	1,445.6	1,484.8	1,480.6	4.14	358.966			
1,200.0	1,194.4	1,190.4	1,190.4	2.6	2.1	-110.13	-228.4	1,445.6	1,490.2	1,485.6	4.60	324.185			
1,300.0	1,293.1	1,289.1	1,289.1	2.9	2.3	-110.69	-228.4	1,445.6	1,495.7	1,490.7	5.06	295.585			
1,400.0	1,391.9	1,387.9	1,387.9	3.2	2.4	-111.25	-228.4	1,445.6	1,501.4	1,495.9	5.53	271.728			
1,500.0	1,490.6	1,486.6	1,486.6	3.5	2.6	-111.80	-228.4	1,445.6	1,507.3	1,501.3	5.99	251.567			
1,600.0	1,589.4	1,585.4	1,585.4	3.8	2.8	-112.35	-228.4	1,445.6	1,513.3	1,506.8	6.46	234.333			
1,700.0	1,688.1	1,684.1	1,684.1	4.2	2.9	-112.89	-228.4	1,445.6	1,519.4	1,512.5	6.92	219.450			
1,800.0	1,786.9	1,782.9	1,782.9	4.5	3.1	-113.43	-228.4	1,445.6	1,525.7	1,518.3	7.39	206.480			
1,900.0	1,885.6	1,881.6	1,881.6	4.8	3.3	-113.97	-228.4	1,445.6	1,532.1	1,524.2	7.85	195.086			
2,000.0	1,984.4	1,980.4	1,980.4	5.1	3.5	-114.50	-228.4	1,445.6	1,538.6	1,530.3	8.32	185.005			
2,100.0	2,083.1	2,079.1	2,079.1	5.4	3.6	-115.02	-228.4	1,445.6	1,545.3	1,536.5	8.78	176.028			
2,200.0	2,181.9	2,177.9	2,177.9	5.8	3.8	-115.55	-228.4	1,445.6	1,552.1	1,542.9	9.24	167.987			
2,300.0	2,280.6	2,276.6	2,276.6	6.1	4.0	-116.06	-228.4	1,445.6	1,559.0	1,549.3	9.70	160.747			
2,400.0	2,379.4	2,375.4	2,375.4	6.4	4.1	-116.58	-228.4	1,445.6	1,566.1	1,555.9	10.16	154.198			
2,500.0	2,478.1	2,474.1	2,474.1	6.7	4.3	-117.08	-228.4	1,445.6	1,573.3	1,562.7	10.61	148.248			
2,600.0	2,576.9	2,572.9	2,572.9	7.0	4.5	-117.59	-228.4	1,445.6	1,580.6	1,569.5	11.07	142.821			
2,700.0	2,675.6	2,671.6	2,671.6	7.4	4.7	-118.09	-228.4	1,445.6	1,588.0	1,576.5	11.52	137.853			
2,800.0	2,774.4	2,770.4	2,770.4	7.7	4.8	-118.58	-228.4	1,445.6	1,595.6	1,583.6	11.97	133.290			
2,900.0	2,873.1	2,869.1	2,869.1	8.0	5.0	-119.07	-228.4	1,445.6	1,603.3	1,590.8	12.42	129.087			
3,000.0	2,971.9	2,967.9	2,967.9	8.3	5.2	-119.56	-228.4	1,445.6	1,611.1	1,598.2	12.87	125.203			
3,100.0	3,070.6	3,066.6	3,066.6	8.7	5.4	-120.04	-228.4	1,445.6	1,619.0	1,605.7	13.31	121.605			
3,200.0	3,169.4	3,165.4	3,165.4	9.0	5.5	-120.51	-228.4	1,445.6	1,627.0	1,613.2	13.76	118.264			
3,300.0	3,268.1	3,264.1	3,264.1	9.3	5.7	-120.99	-228.4	1,445.6	1,635.1	1,620.9	14.20	115.155 SF			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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	-89.59	0.4	-49.8	49.8					
100.0	100.0	100.0	100.0	0.1	0.1	-89.59	0.4	-49.8	49.8	49.5	0.24	203.690		
200.0	200.0	200.0	200.0	0.3	0.3	-89.59	0.4	-49.8	49.8	49.2	0.59	83.873 CC, ES		
300.0	300.0	298.4	298.3	0.5	0.5	-90.21	-0.2	-51.4	51.4	50.5	0.94	54.691		
400.0	400.0	396.5	396.3	0.6	0.7	-91.88	-1.8	-56.1	56.3	55.0	1.29	43.764		
500.0	500.0	494.2	493.6	0.8	0.9	59.86	-4.6	-64.0	64.3	62.6	1.64	39.293		
600.0	599.9	591.4	590.2	1.0	1.1	59.59	-8.4	-75.0	74.1	72.1	1.99	37.195		
700.0	699.7	688.2	685.8	1.2	1.4	60.71	-13.2	-89.0	85.3	83.0	2.37	36.071		
800.0	799.1	784.3	780.3	1.4	1.8	62.68	-19.1	-105.9	98.2	95.5	2.78	35.339		
900.0	898.2	879.8	873.5	1.7	2.2	65.08	-25.9	-125.6	112.9	109.6	3.25	34.682		
1,000.0	996.9	978.3	969.1	2.0	2.6	67.65	-33.6	-147.6	128.6	124.9	3.78	34.019		
1,100.0	1,095.7	1,076.9	1,064.9	2.3	3.1	69.66	-41.2	-169.7	144.6	140.3	4.34	33.341		
1,200.0	1,194.4	1,175.5	1,160.7	2.6	3.5	71.27	-48.8	-191.7	160.7	155.8	4.91	32.711		
1,300.0	1,293.1	1,274.1	1,256.5	2.9	3.9	72.59	-56.5	-213.8	177.0	171.5	5.51	32.145		
1,400.0	1,391.9	1,372.7	1,352.3	3.2	4.4	73.69	-64.1	-235.8	193.3	187.1	6.11	31.644		
1,500.0	1,490.6	1,471.3	1,448.1	3.5	4.8	74.62	-71.8	-257.9	209.6	202.9	6.72	31.205		
1,600.0	1,589.4	1,569.9	1,543.9	3.8	5.3	75.41	-79.4	-279.9	226.0	218.7	7.33	30.818		
1,700.0	1,688.1	1,668.5	1,639.7	4.2	5.7	76.09	-87.1	-302.0	242.4	234.5	7.95	30.477		
1,800.0	1,786.9	1,767.1	1,735.5	4.5	6.2	76.69	-94.7	-324.0	258.9	250.3	8.58	30.175		
1,900.0	1,885.6	1,865.7	1,831.3	4.8	6.6	77.22	-102.3	-346.1	275.4	266.2	9.21	29.907		
2,000.0	1,984.4	1,964.3	1,927.1	5.1	7.1	77.68	-110.0	-368.1	291.9	282.1	9.84	29.667		
2,100.0	2,083.1	2,062.9	2,022.9	5.4	7.5	78.10	-117.6	-390.2	308.4	297.9	10.47	29.452		
2,200.0	2,181.9	2,161.5	2,118.7	5.8	8.0	78.48	-125.3	-412.2	325.0	313.8	11.11	29.258		
2,300.0	2,280.6	2,260.1	2,214.5	6.1	8.4	78.81	-132.9	-434.3	341.5	329.8	11.74	29.083		
2,400.0	2,379.4	2,358.7	2,310.3	6.4	8.9	79.12	-140.6	-456.3	358.1	345.7	12.38	28.923		
2,500.0	2,478.1	2,457.3	2,406.1	6.7	9.3	79.40	-148.2	-478.4	374.6	361.6	13.02	28.778		
2,600.0	2,576.9	2,555.9	2,501.9	7.0	9.8	79.66	-155.8	-500.4	391.2	377.6	13.66	28.645		
2,700.0	2,675.6	2,654.5	2,597.7	7.4	10.2	79.89	-163.5	-522.5	407.8	393.5	14.30	28.522		
2,800.0	2,774.4	2,753.1	2,693.5	7.7	10.7	80.11	-171.1	-544.5	424.4	409.5	14.94	28.409		
2,900.0	2,873.1	2,851.7	2,789.3	8.0	11.1	80.31	-178.8	-566.6	441.0	425.4	15.58	28.305		
3,000.0	2,971.9	2,950.3	2,885.1	8.3	11.6	80.50	-186.4	-588.6	457.6	441.4	16.22	28.208		
3,100.0	3,070.6	3,048.9	2,980.9	8.7	12.0	80.67	-194.1	-610.7	474.2	457.3	16.86	28.118		
3,200.0	3,169.4	3,147.5	3,076.7	9.0	12.5	80.83	-201.7	-632.7	490.8	473.3	17.51	28.034		
3,300.0	3,268.1	3,246.1	3,172.5	9.3	12.9	80.98	-209.3	-654.8	507.4	489.3	18.15	27.956		
3,400.0	3,366.9	3,344.7	3,268.3	9.6	13.4	81.12	-217.0	-676.8	524.0	505.2	18.79	27.883		
3,500.0	3,465.6	3,443.3	3,364.1	10.0	13.8	81.25	-224.6	-698.9	540.7	521.2	19.44	27.814		
3,600.0	3,564.4	3,541.9	3,459.9	10.3	14.3	81.38	-232.3	-720.9	557.3	537.2	20.08	27.750		
3,700.0	3,663.1	3,640.5	3,555.7	10.6	14.7	81.50	-239.9	-743.0	573.9	553.2	20.73	27.689		
3,800.0	3,761.9	3,739.1	3,651.5	10.9	15.2	81.61	-247.6	-765.0	590.5	569.2	21.37	27.632		
3,900.0	3,860.6	3,837.7	3,747.3	11.3	15.6	81.71	-255.2	-787.1	607.2	585.1	22.02	27.578		
4,000.0	3,959.4	3,936.3	3,843.1	11.6	16.1	81.81	-262.9	-809.1	623.8	601.1	22.66	27.527		
4,100.0	4,058.1	4,034.9	3,938.9	11.9	16.5	81.91	-270.5	-831.2	640.4	617.1	23.31	27.478		
4,200.0	4,156.9	4,133.5	4,034.7	12.2	17.0	81.99	-278.1	-853.2	657.1	633.1	23.95	27.433		
4,300.0	4,255.6	4,232.1	4,130.5	12.6	17.4	82.08	-285.8	-875.3	673.7	649.1	24.60	27.389		
4,400.0	4,354.4	4,330.7	4,226.3	12.9	17.9	82.16	-293.4	-897.3	690.3	665.1	25.24	27.347		
4,500.0	4,453.1	4,429.3	4,322.1	13.2	18.3	82.24	-301.1	-919.4	707.0	681.1	25.89	27.308		
4,600.0	4,551.9	4,527.9	4,417.9	13.6	18.8	82.31	-308.7	-941.4	723.6	697.1	26.53	27.270		
4,700.0	4,650.6	4,626.5	4,513.7	13.9	19.2	82.38	-316.4	-963.5	740.2	713.1	27.18	27.234		
4,800.0	4,749.4	4,725.1	4,609.5	14.2	19.7	82.45	-324.0	-985.5	756.9	729.1	27.83	27.200		
4,900.0	4,848.1	4,823.7	4,705.3	14.5	20.1	82.51	-331.6	-1,007.6	773.5	745.1	28.47	27.167		
5,000.0	4,946.9	4,922.3	4,801.1	14.9	20.6	82.57	-339.3	-1,029.6	790.2	761.1	29.12	27.136		
5,100.0	5,045.6	5,020.9	4,896.9	15.2	21.0	82.63	-346.9	-1,051.7	806.8	777.1	29.77	27.106		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,144.4	5,119.5	4,992.7	15.5	21.5	82.69	-354.6	-1,073.7	823.5	793.1	30.41	27.077		
5,300.0	5,243.1	5,218.1	5,088.5	15.8	21.9	82.74	-362.2	-1,095.8	840.1	809.1	31.06	27.049		
5,400.0	5,341.9	5,316.7	5,184.3	16.2	22.4	82.80	-369.9	-1,117.8	856.8	825.1	31.71	27.023		
5,500.0	5,440.6	5,415.3	5,280.1	16.5	22.8	82.85	-377.5	-1,139.9	873.4	841.1	32.35	26.997		
5,600.0	5,539.4	5,513.9	5,375.9	16.8	23.3	82.89	-385.1	-1,161.9	890.1	857.1	33.00	26.972		
5,700.0	5,638.1	5,612.5	5,471.7	17.1	23.7	82.94	-392.8	-1,184.0	906.7	873.1	33.65	26.949		
5,800.0	5,736.9	5,711.1	5,567.5	17.5	24.2	82.99	-400.4	-1,206.0	923.3	889.1	34.29	26.926		
5,900.0	5,835.6	5,809.7	5,663.3	17.8	24.6	83.03	-408.1	-1,228.1	940.0	905.1	34.94	26.904		
6,000.0	5,934.4	5,908.3	5,759.1	18.1	25.1	83.07	-415.7	-1,250.1	956.6	921.1	35.59	26.883		
6,100.0	6,033.1	6,006.9	5,854.9	18.4	25.5	83.11	-423.4	-1,272.2	973.3	937.1	36.23	26.862		
6,200.0	6,131.9	6,105.6	5,950.7	18.8	26.0	83.15	-431.0	-1,294.2	989.9	953.1	36.88	26.843		
6,300.0	6,230.6	6,204.2	6,046.5	19.1	26.5	83.19	-438.6	-1,316.3	1,006.6	969.1	37.53	26.823		
6,400.0	6,329.4	6,302.8	6,142.3	19.4	26.9	83.22	-446.3	-1,338.3	1,023.3	985.1	38.17	26.805		
6,500.0	6,428.1	6,401.4	6,238.1	19.7	27.4	83.26	-453.9	-1,360.4	1,039.9	1,001.1	38.82	26.787		
6,600.0	6,526.9	6,500.0	6,333.9	20.1	27.8	83.29	-461.6	-1,382.4	1,056.6	1,017.1	39.47	26.770		
6,700.0	6,625.6	6,598.6	6,429.7	20.4	28.3	83.33	-469.2	-1,404.5	1,073.2	1,033.1	40.12	26.753		
6,800.0	6,724.5	6,697.2	6,525.6	20.7	28.7	69.81	-476.9	-1,426.5	1,089.4	1,048.5	40.91	26.628		
6,900.0	6,824.2	6,795.7	6,621.3	20.8	29.2	-19.28	-484.5	-1,448.5	1,101.8	1,060.4	41.40	26.610		
7,000.0	6,923.1	6,872.4	6,695.8	20.7	29.5	-50.61	-489.6	-1,465.7	1,110.2	1,068.9	41.22	26.932		
7,100.0	7,019.2	6,932.1	6,753.9	20.5	29.7	-58.58	-487.8	-1,479.0	1,117.3	1,076.7	40.53	27.567		
7,200.0	7,110.8	7,000.0	6,819.4	20.2	29.9	-62.43	-478.2	-1,494.1	1,123.5	1,084.1	39.36	28.544		
7,300.0	7,196.0	7,050.0	6,866.7	19.7	30.1	-64.62	-466.1	-1,504.9	1,128.8	1,090.9	37.92	29.769		
7,400.0	7,273.2	7,119.4	6,930.3	19.1	30.2	-66.58	-442.4	-1,519.4	1,133.3	1,097.2	36.09	31.401		
7,500.0	7,340.8	7,185.8	6,988.0	18.5	30.3	-68.24	-412.6	-1,532.6	1,137.0	1,102.8	34.15	33.297		
7,600.0	7,397.6	7,250.0	7,040.4	17.9	30.4	-69.73	-377.3	-1,544.5	1,140.0	1,107.8	32.23	35.375		
7,700.0	7,442.5	7,327.2	7,097.7	17.3	30.5	-71.41	-327.4	-1,557.5	1,142.3	1,111.9	30.38	37.597		
7,800.0	7,474.5	7,403.6	7,147.5	16.8	30.5	-73.02	-270.6	-1,568.8	1,143.9	1,115.1	28.89	39.601		
7,900.0	7,493.1	7,484.8	7,191.8	16.5	30.6	-74.68	-203.4	-1,578.7	1,144.9	1,117.1	27.85	41.113		
8,000.0	7,498.0	7,571.7	7,228.6	16.3	30.6	-76.39	-125.2	-1,586.9	1,145.2	1,117.9	27.38	41.820		
8,100.0	7,498.0	7,667.7	7,255.2	16.4	30.7	-77.77	-33.3	-1,592.7	1,145.9	1,118.5	27.46	41.726		
8,200.0	7,498.0	7,770.8	7,266.8	16.6	30.8	-78.37	69.0	-1,595.0	1,146.8	1,118.9	27.95	41.034		
8,300.0	7,498.0	7,871.5	7,267.0	16.9	31.0	-78.39	169.7	-1,594.7	1,147.5	1,118.7	28.84	39.785		
8,400.0	7,498.0	7,971.5	7,267.0	17.5	31.3	-78.39	269.7	-1,594.3	1,148.2	1,118.1	30.09	38.165		
8,500.0	7,498.0	8,071.5	7,267.0	18.2	31.7	-78.40	369.7	-1,594.0	1,148.9	1,117.2	31.65	36.295		
8,600.0	7,498.0	8,171.5	7,267.0	19.1	32.2	-78.41	469.7	-1,593.6	1,149.6	1,116.1	33.50	34.312		
8,700.0	7,498.0	8,271.5	7,267.0	20.0	32.7	-78.41	569.7	-1,593.3	1,150.3	1,114.7	35.59	32.320		
8,800.0	7,498.0	8,371.5	7,267.0	21.1	33.4	-78.42	669.7	-1,592.9	1,151.0	1,113.1	37.87	30.389		
8,900.0	7,498.0	8,471.5	7,267.0	22.2	34.1	-78.43	769.7	-1,592.6	1,151.7	1,111.3	40.32	28.561		
9,000.0	7,498.0	8,571.5	7,267.0	23.5	34.9	-78.44	869.7	-1,592.2	1,152.3	1,109.4	42.91	26.856		
9,100.0	7,498.0	8,671.5	7,267.0	24.8	35.7	-78.44	969.7	-1,591.9	1,153.0	1,107.4	45.61	25.283		
9,200.0	7,498.0	8,771.5	7,267.0	26.1	36.7	-78.45	1,069.7	-1,591.6	1,153.7	1,105.3	48.40	23.838		
9,300.0	7,498.0	8,871.5	7,267.0	27.5	37.7	-78.46	1,169.7	-1,591.2	1,154.4	1,103.1	51.27	22.517		
9,400.0	7,498.0	8,971.5	7,267.0	28.9	38.7	-78.46	1,269.7	-1,590.9	1,155.1	1,100.9	54.21	21.309		
9,500.0	7,498.0	9,071.5	7,267.0	30.4	39.8	-78.47	1,369.7	-1,590.5	1,155.8	1,098.6	57.20	20.206		
9,600.0	7,498.0	9,171.5	7,267.0	31.9	40.9	-78.48	1,469.7	-1,590.2	1,156.5	1,096.2	60.24	19.198		
9,700.0	7,498.0	9,271.5	7,267.0	33.4	42.1	-78.48	1,569.6	-1,589.8	1,157.2	1,093.9	63.32	18.274		
9,800.0	7,498.0	9,371.5	7,267.0	34.9	43.3	-78.49	1,669.6	-1,589.5	1,157.9	1,091.4	66.44	17.427		
9,900.0	7,498.0	9,471.4	7,267.0	36.5	44.6	-78.50	1,769.6	-1,589.1	1,158.6	1,089.0	69.59	16.649		
10,000.0	7,498.0	9,571.4	7,267.0	38.1	45.9	-78.51	1,869.6	-1,588.8	1,159.2	1,086.5	72.76	15.932		
10,100.0	7,498.0	9,671.4	7,267.0	39.7	47.2	-78.51	1,969.6	-1,588.4	1,159.9	1,084.0	75.96	15.270		
10,200.0	7,498.0	9,771.4	7,267.0	41.3	48.6	-78.52	2,069.6	-1,588.1	1,160.6	1,081.4	79.18	14.658		
10,300.0	7,498.0	9,871.4	7,267.0	42.9	49.9	-78.53	2,169.6	-1,587.7	1,161.3	1,078.9	82.42	14.091		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4A-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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)				
10,400.0	7,498.0	9,971.4	7,267.0	44.5	51.3	-78.53	2,269.6	-1,587.4	1,162.0	1,076.3	85.67	13.564		
10,500.0	7,498.0	10,071.4	7,267.0	46.2	52.8	-78.54	2,369.6	-1,587.0	1,162.7	1,073.8	88.94	13.074		
10,600.0	7,498.0	10,171.4	7,267.0	47.8	54.2	-78.55	2,469.6	-1,586.7	1,163.4	1,071.2	92.21	12.616		
10,700.0	7,498.0	10,271.4	7,267.0	49.5	55.7	-78.55	2,569.6	-1,586.3	1,164.1	1,068.6	95.51	12.189		
10,800.0	7,498.0	10,371.4	7,267.0	51.1	57.1	-78.56	2,669.6	-1,586.0	1,164.8	1,066.0	98.81	11.788		
10,900.0	7,498.0	10,471.4	7,267.0	52.8	58.6	-78.57	2,769.6	-1,585.6	1,165.5	1,063.3	102.12	11.413		
11,000.0	7,498.0	10,571.4	7,267.0	54.5	60.1	-78.57	2,869.6	-1,585.3	1,166.2	1,060.7	105.44	11.060		
11,100.0	7,498.0	10,671.4	7,267.0	56.1	61.6	-78.58	2,969.6	-1,584.9	1,166.8	1,058.1	108.77	10.728		
11,200.0	7,498.0	10,771.4	7,267.0	57.8	63.2	-78.59	3,069.6	-1,584.6	1,167.5	1,055.4	112.10	10.415		
11,300.0	7,498.0	10,871.4	7,267.0	59.5	64.7	-78.60	3,169.6	-1,584.2	1,168.2	1,052.8	115.44	10.120		
11,400.0	7,498.0	10,971.4	7,267.0	61.2	66.3	-78.60	3,269.6	-1,583.9	1,168.9	1,050.1	118.79	9.840		
11,500.0	7,498.0	11,071.4	7,267.0	62.9	67.8	-78.61	3,369.6	-1,583.5	1,169.6	1,047.5	122.14	9.576		
11,600.0	7,498.0	11,171.4	7,267.0	64.6	69.4	-78.62	3,469.6	-1,583.2	1,170.3	1,044.8	125.50	9.325		
11,700.0	7,498.0	11,271.4	7,267.0	66.3	71.0	-78.62	3,569.6	-1,582.8	1,171.0	1,042.1	128.86	9.087		
11,800.0	7,498.0	11,371.4	7,267.0	68.0	72.6	-78.63	3,669.6	-1,582.5	1,171.7	1,039.4	132.22	8.861		
11,900.0	7,498.0	11,471.4	7,267.0	69.7	74.2	-78.64	3,769.6	-1,582.1	1,172.4	1,036.8	135.59	8.646		
12,000.0	7,498.0	11,571.4	7,267.0	71.4	75.8	-78.64	3,869.6	-1,581.8	1,173.1	1,034.1	138.97	8.441		
12,100.0	7,498.0	11,671.4	7,267.0	73.1	77.4	-78.65	3,969.6	-1,581.4	1,173.7	1,031.4	142.35	8.246		
12,200.0	7,498.0	11,771.4	7,267.0	74.8	79.0	-78.66	4,069.6	-1,581.1	1,174.4	1,028.7	145.73	8.059		
12,300.0	7,498.0	11,871.4	7,267.0	76.5	80.6	-78.66	4,169.6	-1,580.7	1,175.1	1,026.0	149.11	7.881		
12,400.0	7,498.0	11,971.4	7,267.0	78.2	82.3	-78.67	4,269.6	-1,580.4	1,175.8	1,023.3	152.50	7.710		
12,500.0	7,498.0	12,071.4	7,267.0	79.9	83.9	-78.68	4,369.6	-1,580.0	1,176.5	1,020.6	155.89	7.547		
12,600.0	7,498.0	12,171.4	7,267.0	81.7	85.5	-78.68	4,469.6	-1,579.7	1,177.2	1,017.9	159.28	7.391		
12,700.0	7,498.0	12,271.4	7,267.0	83.4	87.2	-78.69	4,569.6	-1,579.3	1,177.9	1,015.2	162.67	7.241		
12,800.0	7,498.0	12,371.4	7,267.0	85.1	88.8	-78.70	4,669.6	-1,579.0	1,178.6	1,012.5	166.07	7.097		
12,900.0	7,498.0	12,471.4	7,267.0	86.8	90.5	-78.70	4,769.5	-1,578.6	1,179.3	1,009.8	169.47	6.959		
13,000.0	7,498.0	12,571.4	7,267.0	88.6	92.1	-78.71	4,869.5	-1,578.3	1,180.0	1,007.1	172.87	6.826		
13,100.0	7,498.0	12,671.4	7,267.0	90.3	93.8	-78.72	4,969.5	-1,577.9	1,180.7	1,004.4	176.27	6.698		
13,200.0	7,498.0	12,771.4	7,267.0	92.0	95.5	-78.72	5,069.5	-1,577.6	1,181.3	1,001.7	179.67	6.575		
13,300.0	7,498.0	12,871.4	7,267.0	93.7	97.1	-78.73	5,169.5	-1,577.2	1,182.0	999.0	183.08	6.456		
13,400.0	7,498.0	12,971.4	7,267.0	95.5	98.8	-78.74	5,269.5	-1,576.9	1,182.7	996.2	186.49	6.342		
13,500.0	7,498.0	13,071.4	7,267.0	97.2	100.5	-78.74	5,369.5	-1,576.5	1,183.4	993.5	189.89	6.232		
13,600.0	7,498.0	13,171.4	7,267.0	98.9	102.1	-78.75	5,469.5	-1,576.2	1,184.1	990.7	193.40	6.123		
13,700.0	7,498.0	13,271.4	7,267.0	100.6	103.8	-78.75	5,569.5	-1,575.8	1,183.7	986.3	197.36	5.997		
13,800.0	7,498.0	13,371.3	7,267.0	102.4	105.5	-78.72	5,669.5	-1,575.5	1,181.7	980.6	201.06	5.877		
13,900.0	7,498.0	13,471.3	7,267.0	104.1	107.2	-78.70	5,769.5	-1,575.1	1,179.4	974.9	204.45	5.768		
14,000.0	7,498.0	13,571.3	7,267.0	105.9	108.8	-78.68	5,869.4	-1,574.8	1,177.1	969.2	207.85	5.663		
14,100.0	7,498.0	13,671.3	7,267.0	107.6	110.5	-78.66	5,969.4	-1,574.4	1,174.8	963.5	211.24	5.561		
14,200.0	7,498.0	13,771.2	7,267.0	109.3	112.2	-78.63	6,069.4	-1,574.1	1,172.5	957.8	214.64	5.462		
14,300.0	7,498.0	13,871.2	7,267.0	111.1	113.9	-78.61	6,169.4	-1,573.7	1,170.2	952.1	218.03	5.367		
14,400.0	7,498.0	13,971.2	7,267.0	112.8	115.6	-78.59	6,269.3	-1,573.4	1,167.9	946.4	221.43	5.274		
14,500.0	7,498.0	14,071.1	7,267.0	114.5	117.3	-78.57	6,369.3	-1,573.0	1,165.6	940.7	224.83	5.184		
14,600.0	7,498.0	14,171.1	7,267.0	116.3	119.0	-78.54	6,469.3	-1,572.7	1,163.3	935.0	228.22	5.097		
14,690.0	7,498.0	14,261.1	7,267.0	117.8	120.5	-78.52	6,559.2	-1,572.4	1,161.2	929.9	231.28	5.021 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error:	0.0 ft
Survey Program: 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	-89.49	0.4	-40.0	40.0					
100.0	100.0	100.0	100.0	0.1	0.1	-89.49	0.4	-40.0	40.0	39.7	0.24	163.641		
200.0	200.0	200.0	200.0	0.3	0.3	-89.49	0.4	-40.0	40.0	39.4	0.59	67.382		
233.4	233.4	233.4	233.4	0.4	0.4	-89.49	0.4	-40.0	40.0	39.3	0.71	56.324	CC, ES	
300.0	300.0	299.3	299.3	0.5	0.5	-89.69	0.2	-40.4	40.4	39.4	0.94	42.908		
400.0	400.0	397.9	397.9	0.6	0.7	-91.17	-0.9	-43.6	43.7	42.4	1.29	33.889		
500.0	500.0	496.2	495.9	0.8	0.9	60.51	-3.1	-50.0	50.0	48.4	1.64	30.557		
600.0	599.9	594.1	593.2	1.0	1.1	60.58	-6.4	-59.5	58.2	56.2	1.99	29.220		
700.0	699.7	691.5	689.8	1.2	1.4	62.30	-10.7	-72.1	68.0	65.6	2.37	28.713		
800.0	799.1	788.4	785.3	1.4	1.7	64.93	-16.1	-87.7	79.5	76.7	2.78	28.546		
900.0	898.2	885.7	880.5	1.7	2.1	68.03	-22.5	-106.2	92.7	89.4	3.27	28.384		
1,000.0	996.9	984.6	977.2	2.0	2.4	71.35	-29.3	-125.7	106.2	102.4	3.80	27.947		
1,100.0	1,095.7	1,083.5	1,074.0	2.3	2.8	73.92	-36.1	-145.2	120.0	115.7	4.37	27.492		
1,200.0	1,194.4	1,182.4	1,170.7	2.6	3.2	75.96	-42.8	-164.7	134.0	129.1	4.95	27.067		
1,300.0	1,293.1	1,281.3	1,267.5	2.9	3.6	77.61	-49.6	-184.3	148.1	142.6	5.55	26.687		
1,400.0	1,391.9	1,380.3	1,364.2	3.2	4.0	78.97	-56.3	-203.8	162.3	156.2	6.16	26.353		
1,500.0	1,490.6	1,479.2	1,460.9	3.5	4.4	80.12	-63.1	-223.3	176.6	169.9	6.78	26.060		
1,600.0	1,589.4	1,578.1	1,557.7	3.8	4.8	81.09	-69.8	-242.8	191.0	183.6	7.40	25.805		
1,700.0	1,688.1	1,677.0	1,654.4	4.2	5.2	81.93	-76.6	-262.3	205.4	197.4	8.03	25.581		
1,800.0	1,786.9	1,775.9	1,751.1	4.5	5.6	82.66	-83.3	-281.9	219.8	211.2	8.66	25.383		
1,900.0	1,885.6	1,874.8	1,847.9	4.8	6.0	83.29	-90.1	-301.4	234.3	225.0	9.29	25.209		
2,000.0	1,984.4	1,973.8	1,944.6	5.1	6.4	83.86	-96.8	-320.9	248.8	238.9	9.93	25.053		
2,100.0	2,083.1	2,072.7	2,041.3	5.4	6.8	84.36	-103.6	-340.4	263.3	252.7	10.57	24.915		
2,200.0	2,181.9	2,171.6	2,138.1	5.8	7.2	84.81	-110.4	-359.9	277.8	266.6	11.21	24.790		
2,300.0	2,280.6	2,270.5	2,234.8	6.1	7.6	85.21	-117.1	-379.5	292.4	280.5	11.85	24.678		
2,400.0	2,379.4	2,369.4	2,331.5	6.4	8.0	85.58	-123.9	-399.0	306.9	294.5	12.49	24.576		
2,500.0	2,478.1	2,468.3	2,428.3	6.7	8.4	85.91	-130.6	-418.5	321.5	308.4	13.13	24.484		
2,600.0	2,576.9	2,567.3	2,525.0	7.0	8.8	86.21	-137.4	-438.0	336.1	322.3	13.78	24.399		
2,700.0	2,675.6	2,666.2	2,621.8	7.4	9.2	86.49	-144.1	-457.5	350.7	336.3	14.42	24.322		
2,800.0	2,774.4	2,765.1	2,718.5	7.7	9.6	86.75	-150.9	-477.1	365.3	350.2	15.06	24.250		
2,900.0	2,873.1	2,864.0	2,815.2	8.0	10.1	86.99	-157.6	-496.6	379.9	364.2	15.71	24.185		
3,000.0	2,971.9	2,962.9	2,912.0	8.3	10.5	87.21	-164.4	-516.1	394.5	378.1	16.35	24.124		
3,100.0	3,070.6	3,061.8	3,008.7	8.7	10.9	87.41	-171.1	-535.6	409.1	392.1	17.00	24.067		
3,200.0	3,169.4	3,160.7	3,105.4	9.0	11.3	87.60	-177.9	-555.1	423.7	406.1	17.64	24.015		
3,300.0	3,268.1	3,259.7	3,202.2	9.3	11.7	87.78	-184.6	-574.7	438.4	420.1	18.29	23.966		
3,400.0	3,366.9	3,358.6	3,298.9	9.6	12.1	87.94	-191.4	-594.2	453.0	434.0	18.94	23.921		
3,500.0	3,465.6	3,457.5	3,395.6	10.0	12.5	88.10	-198.2	-613.7	467.6	448.0	19.58	23.878		
3,600.0	3,564.4	3,556.4	3,492.4	10.3	12.9	88.24	-204.9	-633.2	482.2	462.0	20.23	23.838		
3,700.0	3,663.1	3,655.3	3,589.1	10.6	13.3	88.38	-211.7	-652.7	496.9	476.0	20.88	23.800		
3,800.0	3,761.9	3,754.2	3,685.8	10.9	13.7	88.51	-218.4	-672.3	511.5	490.0	21.52	23.765		
3,900.0	3,860.6	3,853.2	3,782.6	11.3	14.1	88.63	-225.2	-691.8	526.2	504.0	22.17	23.731		
4,000.0	3,959.4	3,952.1	3,879.3	11.6	14.5	88.75	-231.9	-711.3	540.8	518.0	22.82	23.700		
4,100.0	4,058.1	4,051.0	3,976.1	11.9	14.9	88.85	-238.7	-730.8	555.5	532.0	23.47	23.670		
4,200.0	4,156.9	4,149.9	4,072.8	12.2	15.3	88.96	-245.4	-750.3	570.1	546.0	24.11	23.641		
4,300.0	4,255.6	4,248.8	4,169.5	12.6	15.7	89.06	-252.2	-769.9	584.8	560.0	24.76	23.614		
4,400.0	4,354.4	4,347.7	4,266.3	12.9	16.1	89.15	-258.9	-789.4	599.4	574.0	25.41	23.589		
4,500.0	4,453.1	4,446.7	4,363.0	13.2	16.5	89.24	-265.7	-808.9	614.1	588.0	26.06	23.565		
4,600.0	4,551.9	4,545.6	4,459.7	13.6	16.9	89.32	-272.5	-828.4	628.7	602.0	26.71	23.541		
4,700.0	4,650.6	4,644.5	4,556.5	13.9	17.3	89.41	-279.2	-847.9	643.4	616.0	27.35	23.519		
4,800.0	4,749.4	4,743.4	4,653.2	14.2	17.8	89.48	-286.0	-867.5	658.0	630.0	28.00	23.498		
4,900.0	4,848.1	4,842.3	4,749.9	14.5	18.2	89.56	-292.7	-887.0	672.7	644.0	28.65	23.478		
5,000.0	4,946.9	4,941.2	4,846.7	14.9	18.6	89.63	-299.5	-906.5	687.3	658.0	29.30	23.459		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,045.6	5,040.2	4,943.4	15.2	19.0	89.70	-306.2	-926.0	702.0	672.1	29.95	23.441		
5,200.0	5,144.4	5,139.1	5,040.1	15.5	19.4	89.76	-313.0	-945.5	716.7	686.1	30.60	23.423		
5,300.0	5,243.1	5,238.0	5,136.9	15.8	19.8	89.83	-319.7	-965.1	731.3	700.1	31.24	23.406		
5,400.0	5,341.9	5,336.9	5,233.6	16.2	20.2	89.89	-326.5	-984.6	746.0	714.1	31.89	23.390		
5,500.0	5,440.6	5,435.8	5,330.4	16.5	20.6	89.94	-333.2	-1,004.1	760.6	728.1	32.54	23.374		
5,600.0	5,539.4	5,534.7	5,427.1	16.8	21.0	90.00	-340.0	-1,023.6	775.3	742.1	33.19	23.359		
5,700.0	5,638.1	5,633.7	5,523.8	17.1	21.4	90.05	-346.7	-1,043.1	790.0	756.1	33.84	23.345		
5,800.0	5,736.9	5,732.6	5,620.6	17.5	21.8	90.10	-353.5	-1,062.7	804.6	770.2	34.49	23.331		
5,900.0	5,835.6	5,831.5	5,717.3	17.8	22.2	90.15	-360.3	-1,082.2	819.3	784.2	35.14	23.317		
6,000.0	5,934.4	5,930.4	5,814.0	18.1	22.6	90.20	-367.0	-1,101.7	834.0	798.2	35.79	23.305		
6,100.0	6,033.1	6,029.3	5,910.8	18.4	23.0	90.25	-373.8	-1,121.2	848.6	812.2	36.43	23.292		
6,200.0	6,131.9	6,128.2	6,007.5	18.8	23.4	90.29	-380.5	-1,140.7	863.3	826.2	37.08	23.280		
6,300.0	6,230.6	6,227.2	6,104.2	19.1	23.8	90.34	-387.3	-1,160.3	878.0	840.2	37.73	23.268		
6,400.0	6,329.4	6,326.1	6,201.0	19.4	24.2	90.38	-394.0	-1,179.8	892.6	854.3	38.38	23.257		
6,500.0	6,428.1	6,425.0	6,297.7	19.7	24.7	90.42	-400.8	-1,199.3	907.3	868.3	39.03	23.246		
6,600.0	6,526.9	6,523.9	6,394.4	20.1	25.1	90.46	-407.5	-1,218.8	922.0	882.3	39.68	23.236		
6,700.0	6,625.6	6,622.8	6,491.2	20.4	25.5	90.50	-414.3	-1,238.3	936.7	896.3	40.33	23.226		
6,800.0	6,724.5	6,721.8	6,588.0	20.7	25.9	76.88	-421.0	-1,257.9	950.8	909.7	41.07	23.219		
6,900.0	6,824.2	6,820.7	6,684.7	20.8	26.3	-12.56	-427.8	-1,277.4	959.7	918.2	41.45	23.155		
7,000.0	6,923.1	6,917.9	6,779.7	20.7	26.7	-44.75	-434.4	-1,296.6	962.6	921.5	41.14	23.397		
7,100.0	7,019.2	7,011.4	6,871.2	20.5	27.1	-54.53	-440.8	-1,315.0	960.4	920.2	40.23	23.877		
7,200.0	7,110.8	7,076.6	6,935.0	20.2	27.3	-59.92	-443.9	-1,327.9	955.2	916.3	38.89	24.565		
7,300.0	7,196.0	7,133.8	6,991.0	19.7	27.5	-63.74	-440.9	-1,339.0	950.0	912.8	37.27	25.489		
7,400.0	7,273.2	7,200.0	7,055.1	19.1	27.7	-67.24	-430.4	-1,351.6	945.5	910.0	35.45	26.671		
7,500.0	7,340.8	7,250.0	7,102.5	18.5	27.8	-69.88	-417.5	-1,360.9	941.8	908.1	33.70	27.949		
7,600.0	7,397.6	7,321.3	7,167.8	17.9	27.9	-72.98	-391.9	-1,373.4	939.6	907.7	31.91	29.440		
7,678.4	7,433.9	7,376.2	7,215.8	17.4	27.9	-75.22	-366.7	-1,382.5	939.0	908.3	30.69	30.596		
7,700.0	7,442.5	7,391.9	7,229.0	17.3	28.0	-75.84	-358.7	-1,385.0	939.1	908.7	30.38	30.914		
7,800.0	7,474.5	7,469.0	7,290.7	16.8	28.0	-78.70	-313.9	-1,396.4	940.4	911.3	29.14	32.278		
7,900.0	7,493.1	7,554.7	7,351.6	16.5	28.1	-81.60	-254.9	-1,407.4	943.7	915.5	28.26	33.399		
8,000.0	7,498.0	7,652.2	7,409.7	16.3	28.1	-84.65	-177.4	-1,417.4	948.6	920.9	27.77	34.163		
8,100.0	7,498.0	7,770.6	7,461.7	16.4	28.2	-87.81	-71.5	-1,425.6	954.2	926.6	27.65	34.504		
8,200.0	7,498.0	7,910.3	7,494.1	16.6	28.4	-89.77	64.0	-1,429.2	957.5	929.4	28.09	34.092		
8,300.0	7,498.0	8,032.3	7,498.0	16.9	28.6	-90.00	185.8	-1,427.5	957.0	927.9	29.10	32.885		
8,400.0	7,498.0	8,132.3	7,498.0	17.5	28.9	-90.00	285.8	-1,425.4	956.0	925.5	30.41	31.439		
8,500.0	7,498.0	8,232.3	7,498.0	18.2	29.3	-90.00	385.8	-1,423.3	954.9	922.9	32.04	29.799		
8,600.0	7,498.0	8,332.3	7,498.0	19.1	29.8	-90.00	485.7	-1,421.2	953.9	919.9	33.97	28.082		
8,700.0	7,498.0	8,432.3	7,498.0	20.0	30.4	-90.00	585.7	-1,419.1	952.8	916.7	36.13	26.373		
8,800.0	7,498.0	8,532.3	7,498.0	21.1	31.1	-90.00	685.7	-1,417.0	951.8	913.3	38.49	24.728		
8,900.0	7,498.0	8,632.2	7,498.0	22.2	31.9	-90.00	785.6	-1,414.9	950.7	909.7	41.02	23.180		
9,000.0	7,498.0	8,732.2	7,498.0	23.5	32.8	-90.00	885.6	-1,412.8	949.7	906.0	43.68	21.744		
9,100.0	7,498.0	8,832.2	7,498.0	24.8	33.7	-90.00	985.6	-1,410.7	948.7	902.2	46.45	20.423		
9,200.0	7,498.0	8,932.2	7,498.0	26.1	34.7	-90.00	1,085.6	-1,408.6	947.6	898.3	49.32	19.214		
9,300.0	7,498.0	9,032.2	7,498.0	27.5	35.7	-90.00	1,185.5	-1,406.5	946.6	894.3	52.27	18.111		
9,400.0	7,498.0	9,132.2	7,498.0	28.9	36.8	-90.00	1,285.5	-1,404.4	945.5	890.3	55.28	17.105		
9,500.0	7,498.0	9,232.2	7,498.0	30.4	38.0	-90.00	1,385.5	-1,402.3	944.5	886.2	58.34	16.188		
9,600.0	7,498.0	9,332.2	7,498.0	31.9	39.1	-90.00	1,485.5	-1,400.2	943.5	882.0	61.46	15.351		
9,700.0	7,498.0	9,432.2	7,498.0	33.4	40.4	-90.00	1,585.4	-1,398.1	942.4	877.8	64.61	14.585		
9,800.0	7,498.0	9,532.2	7,498.0	34.9	41.7	-90.00	1,685.4	-1,396.0	941.4	873.6	67.80	13.884		
9,900.0	7,498.0	9,632.2	7,498.0	36.5	43.0	-90.00	1,785.4	-1,393.9	940.3	869.3	71.02	13.240		
10,000.0	7,498.0	9,732.2	7,498.0	38.1	44.3	-90.00	1,885.3	-1,391.9	939.3	865.0	74.27	12.647		
10,100.0	7,498.0	9,832.2	7,498.0	39.7	45.7	-90.00	1,985.3	-1,389.8	938.3	860.7	77.54	12.100		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4B-17H-P267 - DD - Plan #4													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,200.0	7,498.0	9,932.2	7,498.0	41.3	47.1	-90.00	2,085.3	-1,387.7	937.2	856.4	80.83	11.595		
10,300.0	7,498.0	10,032.2	7,498.0	42.9	48.5	-90.00	2,185.3	-1,385.6	936.2	852.0	84.13	11.127		
10,400.0	7,498.0	10,132.2	7,498.0	44.5	49.9	-90.00	2,285.2	-1,383.5	935.1	847.7	87.46	10.692		
10,500.0	7,498.0	10,232.2	7,498.0	46.2	51.4	-90.00	2,385.2	-1,381.4	934.1	843.3	90.79	10.288		
10,600.0	7,498.0	10,332.2	7,498.0	47.8	52.9	-90.00	2,485.2	-1,379.3	933.0	838.9	94.14	9.911		
10,700.0	7,498.0	10,432.1	7,498.0	49.5	54.4	-90.00	2,585.2	-1,377.2	932.0	834.5	97.50	9.559		
10,800.0	7,498.0	10,532.1	7,498.0	51.1	55.9	-90.00	2,685.1	-1,375.1	931.0	830.1	100.87	9.229		
10,900.0	7,498.0	10,632.1	7,498.0	52.8	57.4	-90.00	2,785.1	-1,373.0	929.9	825.7	104.25	8.920		
11,000.0	7,498.0	10,732.1	7,498.0	54.5	58.9	-90.00	2,885.1	-1,370.9	928.9	821.2	107.64	8.630		
11,100.0	7,498.0	10,832.1	7,498.0	56.1	60.5	-90.00	2,985.0	-1,368.8	927.8	816.8	111.03	8.356		
11,200.0	7,498.0	10,932.1	7,498.0	57.8	62.0	-90.00	3,085.0	-1,366.7	926.8	812.4	114.44	8.099		
11,300.0	7,498.0	11,032.1	7,498.0	59.5	63.6	-90.00	3,185.0	-1,364.6	925.8	807.9	117.84	7.856		
11,400.0	7,498.0	11,132.1	7,498.0	61.2	65.2	-90.00	3,285.0	-1,362.5	924.7	803.5	121.26	7.626		
11,500.0	7,498.0	11,232.1	7,498.0	62.9	66.8	-90.00	3,384.9	-1,360.4	923.7	799.0	124.68	7.409		
11,600.0	7,498.0	11,332.1	7,498.0	64.6	68.4	-90.00	3,484.9	-1,358.3	922.6	794.5	128.10	7.202		
11,700.0	7,498.0	11,432.1	7,498.0	66.3	70.0	-90.00	3,584.9	-1,356.2	921.6	790.1	131.53	7.007		
11,800.0	7,498.0	11,532.1	7,498.0	68.0	71.6	-90.00	3,684.9	-1,354.2	920.6	785.6	134.96	6.821		
11,900.0	7,498.0	11,632.1	7,498.0	69.7	73.2	-90.00	3,784.8	-1,352.1	919.5	781.1	138.40	6.644		
12,000.0	7,498.0	11,732.1	7,498.0	71.4	74.8	-90.00	3,884.8	-1,350.0	918.5	776.6	141.84	6.475		
12,100.0	7,498.0	11,832.1	7,498.0	73.1	76.5	-90.00	3,984.8	-1,347.9	917.4	772.2	145.28	6.315		
12,200.0	7,498.0	11,932.1	7,498.0	74.8	78.1	-90.00	4,084.7	-1,345.8	916.4	767.7	148.73	6.162		
12,300.0	7,498.0	12,032.1	7,498.0	76.5	79.7	-90.00	4,184.7	-1,343.7	915.4	763.2	152.18	6.015		
12,400.0	7,498.0	12,132.1	7,498.0	78.2	81.4	-90.00	4,284.7	-1,341.6	914.3	758.7	155.63	5.875		
12,500.0	7,498.0	12,232.1	7,498.0	79.9	83.0	-90.00	4,384.7	-1,339.5	913.3	754.2	159.08	5.741		
12,600.0	7,498.0	12,332.0	7,498.0	81.7	84.7	-90.00	4,484.6	-1,337.4	912.2	749.7	162.54	5.612		
12,700.0	7,498.0	12,432.0	7,498.0	83.4	86.3	-90.00	4,584.6	-1,335.3	911.2	745.2	166.00	5.489		
12,784.9	7,498.0	12,507.4	7,498.0	84.8	87.6	-90.00	4,660.0	-1,334.0	910.7	741.9	168.77	5.396		
12,800.0	7,498.0	12,520.5	7,498.0	85.1	87.8	-90.00	4,673.0	-1,333.9	910.7	741.4	169.26	5.380		
12,900.0	7,498.0	12,606.8	7,498.0	86.8	89.3	-90.00	4,759.3	-1,333.9	911.7	739.2	172.48	5.286		
13,000.0	7,498.0	12,697.0	7,498.0	88.6	90.8	-90.00	4,849.6	-1,335.1	914.1	738.3	175.78	5.200		
13,100.0	7,498.0	12,797.0	7,498.0	90.3	92.5	-90.00	4,949.5	-1,336.8	916.9	737.6	179.24	5.115		
13,200.0	7,498.0	12,896.9	7,498.0	92.0	94.2	-90.00	5,049.4	-1,338.6	919.7	737.0	182.71	5.034		
13,300.0	7,498.0	12,996.9	7,498.0	93.7	95.8	-90.00	5,149.4	-1,340.3	922.5	736.3	186.18	4.955		
13,400.0	7,498.0	13,096.9	7,498.0	95.5	97.5	-90.00	5,249.3	-1,342.1	925.3	735.6	189.65	4.879		
13,500.0	7,498.0	13,196.8	7,498.0	97.2	99.2	-90.00	5,349.3	-1,343.8	928.1	735.0	193.12	4.806		
13,600.0	7,498.0	13,296.8	7,498.0	98.9	100.9	-90.00	5,449.2	-1,345.6	930.9	734.2	196.67	4.733		
13,700.0	7,498.0	13,396.8	7,498.0	100.6	102.6	-90.00	5,549.2	-1,347.3	932.5	731.8	200.66	4.647		
13,800.0	7,498.0	13,496.8	7,498.0	102.4	104.3	-90.00	5,649.2	-1,349.1	932.6	728.2	204.41	4.562		
13,900.0	7,498.0	13,596.8	7,498.0	104.1	106.0	-90.00	5,749.2	-1,350.8	932.3	724.4	207.89	4.485		
14,000.0	7,498.0	13,696.8	7,498.0	105.9	107.7	-90.00	5,849.2	-1,352.5	932.1	720.7	211.37	4.410		
14,100.0	7,498.0	13,796.8	7,498.0	107.6	109.4	-90.00	5,949.1	-1,354.3	931.8	717.0	214.85	4.337		
14,200.0	7,498.0	13,896.8	7,498.0	109.3	111.1	-90.00	6,049.1	-1,356.0	931.6	713.2	218.33	4.267		
14,300.0	7,498.0	13,996.8	7,498.0	111.1	112.9	-90.00	6,149.1	-1,357.8	931.3	709.5	221.81	4.199		
14,400.0	7,498.0	14,096.8	7,498.0	112.8	114.6	-90.00	6,249.1	-1,359.5	931.1	705.8	225.29	4.133		
14,500.0	7,498.0	14,112.1	7,498.0	114.5	116.8	-90.00	6,349.1	-1,361.3	930.7	702.1	228.77	4.067		
14,600.0	7,498.0	14,112.1	7,498.0	116.3	119.8	-90.00	6,449.1	-1,363.1	930.3	698.4	232.25	3.999		
14,690.0	7,498.0	14,112.1	7,498.0	117.8	119.8	-90.00	6,549.1	-1,364.9	896.8	661.0	235.77	3.804 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #3													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		
0.0	0.0	0.0	0.0	0.0	0.0	-89.33	0.3	-29.9	29.9					
100.0	100.0	100.0	100.0	0.1	0.1	-89.33	0.3	-29.9	29.9	29.7	0.24	122.448		
200.0	200.0	200.0	200.0	0.3	0.3	-89.33	0.3	-29.9	29.9	29.3	0.59	50.420		
300.0	300.0	300.0	300.0	0.5	0.5	-89.33	0.3	-29.9	29.9	29.0	0.94	31.746	CC, ES	
400.0	400.0	399.0	399.0	0.6	0.6	-90.37	-0.2	-31.5	31.6	30.3	1.29	24.464		
500.0	500.0	497.8	497.6	0.8	0.8	61.33	-1.9	-36.4	36.3	34.7	1.64	22.150		
600.0	599.9	596.2	595.7	1.0	1.1	62.03	-4.6	-44.4	42.9	40.9	1.99	21.515		
700.0	699.7	694.3	693.1	1.2	1.3	64.76	-8.4	-55.6	51.2	48.8	2.37	21.598		
800.0	799.1	792.0	789.6	1.4	1.6	68.40	-13.2	-69.8	61.4	58.6	2.79	21.993		
900.0	898.2	890.6	886.6	1.7	1.9	72.66	-18.9	-86.5	72.9	69.7	3.28	22.216		
1,000.0	996.9	989.8	984.1	2.0	2.3	77.10	-24.7	-103.4	84.5	80.7	3.83	22.074		
1,100.0	1,095.7	1,088.9	1,081.6	2.3	2.6	80.46	-30.4	-120.4	96.4	92.0	4.40	21.910		
1,200.0	1,194.4	1,188.0	1,179.2	2.6	3.0	83.07	-36.2	-137.3	108.6	103.6	4.99	21.755		
1,300.0	1,293.1	1,287.2	1,276.7	2.9	3.3	85.16	-42.0	-154.2	121.0	115.4	5.60	21.617		
1,400.0	1,391.9	1,386.3	1,374.2	3.2	3.7	86.86	-47.7	-171.1	133.5	127.3	6.21	21.498		
1,500.0	1,490.6	1,485.5	1,471.7	3.5	4.0	88.26	-53.5	-188.1	146.1	139.3	6.83	21.396		
1,600.0	1,589.4	1,584.6	1,569.2	3.8	4.4	89.45	-59.3	-205.0	158.8	151.3	7.45	21.308		
1,700.0	1,688.1	1,683.8	1,666.8	4.2	4.7	90.45	-65.0	-221.9	171.5	163.5	8.08	21.233		
1,800.0	1,786.9	1,782.9	1,764.3	4.5	5.1	91.32	-70.8	-238.8	184.3	175.6	8.71	21.169		
1,900.0	1,885.6	1,882.1	1,861.8	4.8	5.4	92.08	-76.5	-255.8	197.1	187.8	9.34	21.112		
2,000.0	1,984.4	1,981.2	1,959.3	5.1	5.8	92.74	-82.3	-272.7	210.0	200.0	9.97	21.063		
2,100.0	2,083.1	2,080.3	2,056.8	5.4	6.2	93.33	-88.1	-289.6	222.8	212.2	10.60	21.020		
2,200.0	2,181.9	2,179.5	2,154.4	5.8	6.5	93.85	-93.8	-306.5	235.7	224.5	11.23	20.982		
2,300.0	2,280.6	2,278.6	2,251.9	6.1	6.9	94.32	-99.6	-323.5	248.6	236.7	11.87	20.948		
2,400.0	2,379.4	2,377.8	2,349.4	6.4	7.2	94.74	-105.3	-340.4	261.5	249.0	12.50	20.918		
2,500.0	2,478.1	2,476.9	2,446.9	6.7	7.6	95.12	-111.1	-357.3	274.5	261.3	13.14	20.891		
2,600.0	2,576.9	2,576.1	2,544.4	7.0	7.9	95.47	-116.9	-374.2	287.4	273.6	13.77	20.867		
2,700.0	2,675.6	2,675.2	2,641.9	7.4	8.3	95.79	-122.6	-391.2	300.4	285.9	14.41	20.844		
2,800.0	2,774.4	2,774.4	2,739.5	7.7	8.7	96.08	-128.4	-408.1	313.3	298.3	15.05	20.824		
2,900.0	2,873.1	2,873.5	2,837.0	8.0	9.0	96.35	-134.1	-425.0	326.3	310.6	15.68	20.806		
3,000.0	2,971.9	2,972.6	2,934.5	8.3	9.4	96.60	-139.9	-441.9	339.3	322.9	16.32	20.789		
3,100.0	3,070.6	3,071.8	3,032.0	8.7	9.7	96.83	-145.7	-458.9	352.2	335.3	16.96	20.774		
3,200.0	3,169.4	3,170.9	3,129.5	9.0	10.1	97.04	-151.4	-475.8	365.2	347.6	17.59	20.759		
3,300.0	3,268.1	3,270.1	3,227.1	9.3	10.5	97.24	-157.2	-492.7	378.2	360.0	18.23	20.746		
3,400.0	3,366.9	3,369.2	3,324.6	9.6	10.8	97.43	-163.0	-509.6	391.2	372.3	18.87	20.734		
3,500.0	3,465.6	3,468.4	3,422.1	10.0	11.2	97.60	-168.7	-526.6	404.2	384.7	19.51	20.723		
3,600.0	3,564.4	3,567.5	3,519.6	10.3	11.5	97.76	-174.5	-543.5	417.2	397.1	20.14	20.712		
3,700.0	3,663.1	3,666.7	3,617.1	10.6	11.9	97.92	-180.2	-560.4	430.2	409.4	20.78	20.702		
3,800.0	3,761.9	3,765.8	3,714.7	10.9	12.3	98.06	-186.0	-577.3	443.2	421.8	21.42	20.693		
3,900.0	3,860.6	3,864.9	3,812.2	11.3	12.6	98.20	-191.8	-594.2	456.2	434.2	22.06	20.684		
4,000.0	3,959.4	3,964.1	3,909.7	11.6	13.0	98.32	-197.5	-611.2	469.2	446.5	22.69	20.676		
4,100.0	4,058.1	4,063.2	4,007.2	11.9	13.3	98.44	-203.3	-628.1	482.2	458.9	23.33	20.669		
4,200.0	4,156.9	4,162.4	4,104.7	12.2	13.7	98.56	-209.0	-645.0	495.3	471.3	23.97	20.662		
4,300.0	4,255.6	4,261.5	4,202.3	12.6	14.1	98.67	-214.8	-661.9	508.3	483.7	24.61	20.655		
4,400.0	4,354.4	4,360.7	4,299.8	12.9	14.4	98.77	-220.6	-678.9	521.3	496.0	25.25	20.648		
4,500.0	4,453.1	4,459.8	4,397.3	13.2	14.8	98.87	-226.3	-695.8	534.3	508.4	25.88	20.642		
4,600.0	4,551.9	4,559.0	4,494.8	13.6	15.1	98.97	-232.1	-712.7	547.3	520.8	26.52	20.637		
4,700.0	4,650.6	4,658.1	4,592.3	13.9	15.5	99.05	-237.8	-729.6	560.4	533.2	27.16	20.631		
4,800.0	4,749.4	4,757.2	4,689.9	14.2	15.9	99.14	-243.6	-746.6	573.4	545.6	27.80	20.626		
4,900.0	4,848.1	4,856.4	4,787.4	14.5	16.2	99.22	-249.4	-763.5	586.4	558.0	28.44	20.621		
5,000.0	4,946.9	4,955.5	4,884.9	14.9	16.6	99.30	-255.1	-780.4	599.4	570.4	29.08	20.616		
5,100.0	5,045.6	5,054.7	4,982.4	15.2	16.9	99.37	-260.9	-797.3	612.5	582.8	29.71	20.612		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #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		
5,200.0	5,144.4	5,153.8	5,079.9	15.5	17.3	99.45	-266.7	-814.3	625.5	595.1	30.35	20.608		
5,300.0	5,243.1	5,253.0	5,177.5	15.8	17.7	99.52	-272.4	-831.2	638.5	607.5	30.99	20.603		
5,400.0	5,341.9	5,352.1	5,275.0	16.2	18.0	99.58	-278.2	-848.1	651.6	619.9	31.63	20.600		
5,500.0	5,440.6	5,451.3	5,372.5	16.5	18.4	99.64	-283.9	-865.0	664.6	632.3	32.27	20.596		
5,600.0	5,539.4	5,550.4	5,470.0	16.8	18.7	99.71	-289.7	-882.0	677.6	644.7	32.91	20.592		
5,700.0	5,638.1	5,649.5	5,567.5	17.1	19.1	99.76	-295.5	-898.9	690.7	657.1	33.55	20.589		
5,800.0	5,736.9	5,748.7	5,665.0	17.5	19.5	99.82	-301.2	-915.8	703.7	669.5	34.18	20.586		
5,900.0	5,835.6	5,847.8	5,762.6	17.8	19.8	99.88	-307.0	-932.7	716.7	681.9	34.82	20.582		
6,000.0	5,934.4	5,947.0	5,860.1	18.1	20.2	99.93	-312.7	-949.7	729.8	694.3	35.46	20.579		
6,100.0	6,033.1	6,046.1	5,957.6	18.4	20.6	99.98	-318.5	-966.6	742.8	706.7	36.10	20.576		
6,200.0	6,131.9	6,145.3	6,055.1	18.8	20.9	100.03	-324.3	-983.5	755.8	719.1	36.74	20.574		
6,300.0	6,230.6	6,244.4	6,152.6	19.1	21.3	100.07	-330.0	-1,000.4	768.9	731.5	37.38	20.571		
6,400.0	6,329.4	6,343.6	6,250.2	19.4	21.6	100.12	-335.8	-1,017.4	781.9	743.9	38.02	20.568		
6,500.0	6,428.1	6,442.7	6,347.7	19.7	22.0	100.16	-341.6	-1,034.3	794.9	756.3	38.65	20.566		
6,600.0	6,526.9	6,541.8	6,445.2	20.1	22.4	100.21	-347.3	-1,051.2	808.0	768.7	39.29	20.563		
6,700.0	6,625.6	6,641.0	6,542.7	20.4	22.7	100.25	-353.1	-1,068.1	821.0	781.1	39.93	20.561		
6,800.0	6,724.5	6,740.2	6,640.3	20.7	23.1	86.54	-358.8	-1,085.1	833.3	792.7	40.62	20.513		
6,900.0	6,824.2	6,800.0	6,699.2	20.8	23.3	-2.76	-361.6	-1,095.3	840.1	799.2	40.86	20.562		
7,000.0	6,923.1	6,850.0	6,748.4	20.7	23.4	-33.97	-359.8	-1,103.9	844.0	803.5	40.50	20.839		
7,100.0	7,019.2	6,912.8	6,809.6	20.5	23.6	-42.24	-351.4	-1,114.6	845.0	805.4	39.60	21.339		
7,200.0	7,110.8	6,966.0	6,860.6	20.2	23.7	-46.30	-338.9	-1,123.6	843.7	805.5	38.24	22.065		
7,300.0	7,196.0	7,019.8	6,910.7	19.7	23.8	-49.16	-321.5	-1,132.4	840.0	803.5	36.49	23.020		
7,400.0	7,273.2	7,074.2	6,959.5	19.1	23.9	-51.64	-299.2	-1,141.1	834.2	799.7	34.48	24.194		
7,500.0	7,340.8	7,129.5	7,006.7	18.5	23.9	-54.03	-271.7	-1,149.6	826.5	794.1	32.36	25.543		
7,600.0	7,397.6	7,186.0	7,052.0	17.9	24.0	-56.48	-239.1	-1,157.8	817.3	787.0	30.31	26.967		
7,700.0	7,442.5	7,250.0	7,099.3	17.3	24.1	-59.23	-196.8	-1,166.4	807.1	778.6	28.52	28.299		
7,800.0	7,474.5	7,300.0	7,132.8	16.8	24.1	-61.68	-160.2	-1,172.5	796.2	769.0	27.22	29.254		
7,900.0	7,493.1	7,364.9	7,171.3	16.5	24.2	-64.66	-108.5	-1,179.7	785.2	758.7	26.49	29.637		
8,000.0	7,498.0	7,429.3	7,203.6	16.3	24.3	-67.56	-53.2	-1,185.8	774.7	748.3	26.40	29.344		
8,100.0	7,498.0	7,500.0	7,231.8	16.4	24.4	-69.68	11.4	-1,191.2	767.6	740.8	26.71	28.740		
8,200.0	7,498.0	7,577.5	7,253.4	16.6	24.6	-71.34	85.6	-1,195.7	764.4	737.1	27.29	28.015		
8,263.2	7,498.0	7,629.4	7,262.3	16.8	24.8	-72.03	136.6	-1,197.6	763.9	736.1	27.82	27.462		
8,300.0	7,498.0	7,660.2	7,265.4	16.9	24.9	-72.28	167.3	-1,198.5	764.1	735.9	28.14	27.150		
8,400.0	7,498.0	7,752.3	7,267.0	17.5	25.2	-72.44	259.4	-1,199.5	765.6	736.3	29.34	26.096		
8,500.0	7,498.0	7,852.3	7,267.0	18.2	25.7	-72.48	359.4	-1,200.4	767.5	736.6	30.87	24.861		
8,600.0	7,498.0	7,952.3	7,267.0	19.1	26.3	-72.52	459.3	-1,201.3	769.3	736.6	32.67	23.545		
8,700.0	7,498.0	8,052.3	7,267.0	20.0	27.0	-72.57	559.3	-1,202.2	771.1	736.4	34.71	22.217		
8,800.0	7,498.0	8,152.3	7,267.0	21.1	27.8	-72.61	659.3	-1,203.0	773.0	736.0	36.94	20.926		
8,900.0	7,498.0	8,252.2	7,267.0	22.2	28.7	-72.65	759.3	-1,203.9	774.8	735.5	39.33	19.701		
9,000.0	7,498.0	8,352.2	7,267.0	23.5	29.6	-72.69	859.3	-1,204.8	776.7	734.8	41.85	18.557		
9,100.0	7,498.0	8,452.2	7,267.0	24.8	30.7	-72.74	959.2	-1,205.6	778.5	734.0	44.49	17.499		
9,200.0	7,498.0	8,552.2	7,267.0	26.1	31.8	-72.78	1,059.2	-1,206.5	780.3	733.1	47.22	16.527		
9,300.0	7,498.0	8,652.2	7,267.0	27.5	32.9	-72.82	1,159.2	-1,207.4	782.2	732.1	50.02	15.636		
9,400.0	7,498.0	8,752.2	7,267.0	28.9	34.1	-72.86	1,259.2	-1,208.3	784.0	731.1	52.89	14.822		
9,500.0	7,498.0	8,852.1	7,267.0	30.4	35.4	-72.90	1,359.1	-1,209.1	785.9	730.0	55.82	14.078		
9,600.0	7,498.0	8,952.1	7,267.0	31.9	36.7	-72.94	1,459.1	-1,210.0	787.7	728.9	58.80	13.396		
9,700.0	7,498.0	9,052.1	7,267.0	33.4	38.0	-72.98	1,559.1	-1,210.9	789.5	727.7	61.82	12.772		
9,800.0	7,498.0	9,152.1	7,267.0	34.9	39.3	-73.03	1,659.1	-1,211.8	791.4	726.5	64.87	12.200		
9,900.0	7,498.0	9,252.1	7,267.0	36.5	40.7	-73.07	1,759.1	-1,212.6	793.2	725.3	67.95	11.673		
10,000.0	7,498.0	9,352.0	7,267.0	38.1	42.2	-73.11	1,859.0	-1,213.5	795.1	724.0	71.06	11.188		
10,100.0	7,498.0	9,452.0	7,267.0	39.7	43.6	-73.15	1,959.0	-1,214.4	796.9	722.7	74.20	10.740		
10,200.0	7,498.0	9,552.0	7,267.0	41.3	45.1	-73.19	2,059.0	-1,215.2	798.7	721.4	77.35	10.326		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4C-17H-P267 - DD - Plan #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		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
10,300.0	7,498.0	9,652.0	7,267.0	42.9	46.6	-73.23	2,159.0	-1,216.1	800.6	720.1	80.53	9.942		
10,400.0	7,498.0	9,752.0	7,267.0	44.5	48.1	-73.27	2,258.9	-1,217.0	802.4	718.7	83.72	9.585		
10,500.0	7,498.0	9,851.9	7,267.0	46.2	49.6	-73.31	2,358.9	-1,217.9	804.3	717.4	86.93	9.252		
10,600.0	7,498.0	9,951.9	7,267.0	47.8	51.1	-73.35	2,458.9	-1,218.7	806.1	716.0	90.15	8.942		
10,700.0	7,498.0	10,051.9	7,267.0	49.5	52.7	-73.38	2,558.9	-1,219.6	808.0	714.6	93.38	8.653		
10,800.0	7,498.0	10,151.9	7,267.0	51.1	54.2	-73.42	2,658.9	-1,220.5	809.8	713.2	96.62	8.381		
10,900.0	7,498.0	10,251.9	7,267.0	52.8	55.8	-73.46	2,758.8	-1,221.3	811.7	711.8	99.88	8.127		
11,000.0	7,498.0	10,351.9	7,267.0	54.5	57.4	-73.50	2,858.8	-1,222.2	813.5	710.4	103.14	7.887		
11,100.0	7,498.0	10,451.8	7,267.0	56.1	59.0	-73.54	2,958.8	-1,223.1	815.4	708.9	106.41	7.662		
11,200.0	7,498.0	10,551.8	7,267.0	57.8	60.6	-73.58	3,058.8	-1,224.0	817.2	707.5	109.69	7.450		
11,300.0	7,498.0	10,651.8	7,267.0	59.5	62.2	-73.62	3,158.7	-1,224.8	819.1	706.1	112.98	7.250		
11,400.0	7,498.0	10,751.8	7,267.0	61.2	63.8	-73.65	3,258.7	-1,225.7	820.9	704.6	116.27	7.060		
11,500.0	7,498.0	10,851.8	7,267.0	62.9	65.4	-73.69	3,358.7	-1,226.6	822.7	703.2	119.57	6.881		
11,600.0	7,498.0	10,951.7	7,267.0	64.6	67.1	-73.73	3,458.7	-1,227.5	824.6	701.7	122.88	6.711		
11,700.0	7,498.0	11,051.7	7,267.0	66.3	68.7	-73.77	3,558.7	-1,228.3	826.4	700.3	126.19	6.549		
11,800.0	7,498.0	11,151.7	7,267.0	68.0	70.3	-73.80	3,658.6	-1,229.2	828.3	698.8	129.51	6.396		
11,900.0	7,498.0	11,254.6	7,267.0	69.7	72.0	-73.84	3,761.6	-1,230.1	830.1	697.2	132.88	6.247		
12,000.0	7,498.0	11,370.8	7,267.0	71.4	74.0	-73.85	3,877.7	-1,229.5	830.6	694.2	136.46	6.087		
12,100.0	7,498.0	11,487.0	7,267.0	73.1	75.9	-73.82	3,993.8	-1,226.5	829.2	689.2	140.01	5.922		
12,200.0	7,498.0	11,595.1	7,267.0	74.8	77.6	-73.75	4,101.9	-1,221.9	826.1	682.7	143.41	5.760		
12,300.0	7,498.0	11,695.0	7,267.0	76.5	79.3	-73.68	4,201.7	-1,217.3	822.7	676.0	146.67	5.609		
12,400.0	7,498.0	11,795.0	7,267.0	78.2	80.9	-73.61	4,301.5	-1,212.7	819.3	669.4	149.94	5.464		
12,500.0	7,498.0	11,894.9	7,267.0	79.9	82.6	-73.54	4,401.4	-1,208.1	815.9	662.7	153.20	5.326		
12,600.0	7,498.0	11,994.8	7,267.0	81.7	84.2	-73.47	4,501.2	-1,203.6	812.5	656.1	156.46	5.193		
12,700.0	7,498.0	12,094.8	7,267.0	83.4	85.9	-73.40	4,601.0	-1,199.0	809.2	649.4	159.72	5.066		
12,800.0	7,498.0	12,194.7	7,267.0	85.1	87.6	-73.33	4,700.9	-1,194.4	805.8	642.8	162.98	4.944		
12,900.0	7,498.0	12,294.7	7,267.0	86.8	89.2	-73.26	4,800.7	-1,189.8	802.4	636.2	166.23	4.827		
13,000.0	7,498.0	12,394.6	7,267.0	88.6	90.9	-73.19	4,900.5	-1,185.3	799.0	629.5	169.49	4.714		
13,100.0	7,498.0	12,494.5	7,267.0	90.3	92.6	-73.11	5,000.4	-1,180.7	795.6	622.9	172.75	4.606		
13,200.0	7,498.0	12,594.5	7,267.0	92.0	94.2	-73.04	5,100.2	-1,176.1	792.3	616.3	176.00	4.502		
13,300.0	7,498.0	12,694.4	7,267.0	93.7	95.9	-72.96	5,200.0	-1,171.5	788.9	609.6	179.25	4.401		
13,400.0	7,498.0	12,794.3	7,267.0	95.5	97.6	-72.89	5,299.9	-1,166.9	785.5	603.0	182.50	4.304		
13,500.0	7,498.0	12,894.3	7,267.0	97.2	99.3	-72.81	5,399.7	-1,162.4	782.2	596.4	185.74	4.211		
13,600.0	7,498.0	12,994.2	7,267.0	98.9	101.0	-72.73	5,499.5	-1,157.8	778.8	589.7	189.06	4.119		
13,700.0	7,498.0	13,094.1	7,267.0	100.6	102.7	-72.62	5,599.3	-1,153.2	774.3	581.6	192.69	4.018		
13,800.0	7,498.0	13,193.9	7,267.0	102.4	104.3	-72.47	5,699.0	-1,148.6	768.3	572.3	196.07	3.919		
13,900.0	7,498.0	13,293.7	7,267.0	104.1	106.0	-72.32	5,798.7	-1,144.1	762.1	562.8	199.23	3.825		
14,000.0	7,498.0	13,393.5	7,267.0	105.9	107.7	-72.17	5,898.4	-1,139.5	755.8	553.4	202.38	3.735		
14,100.0	7,498.0	13,493.3	7,267.0	107.6	109.4	-72.01	5,998.1	-1,134.9	749.6	544.0	205.51	3.647		
14,200.0	7,498.0	13,593.0	7,267.0	109.3	111.1	-71.86	6,097.7	-1,130.4	743.3	534.7	208.64	3.563		
14,300.0	7,498.0	13,692.8	7,267.0	111.1	112.8	-71.70	6,197.4	-1,125.8	737.1	525.3	211.76	3.481		
14,400.0	7,498.0	13,792.6	7,267.0	112.8	114.5	-71.54	6,297.1	-1,121.2	730.8	515.9	214.87	3.401		
14,500.0	7,498.0	13,892.4	7,267.0	114.5	116.2	-71.37	6,396.8	-1,116.7	724.6	506.6	217.97	3.324		
14,600.0	7,498.0	13,992.2	7,267.0	116.3	117.9	-71.20	6,496.4	-1,112.1	718.4	497.3	221.06	3.250		
14,690.0	7,498.0	14,055.8	7,267.0	117.8	119.0	-71.10	6,560.0	-1,109.2	713.2	489.8	223.45	3.192 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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	-89.02	0.3	-19.9	19.9					
100.0	100.0	100.0	100.0	0.1	0.1	-89.02	0.3	-19.9	19.9	19.6	0.24	81.257		
200.0	200.0	200.0	200.0	0.3	0.3	-89.02	0.3	-19.9	19.9	19.3	0.59	33.459		
300.0	300.0	300.0	300.0	0.5	0.5	-89.02	0.3	-19.9	19.9	18.9	0.94	21.067		
333.9	333.9	333.9	333.9	0.5	0.5	-89.02	0.3	-19.9	19.9	18.8	1.06	18.716 CC, ES		
400.0	400.0	399.8	399.8	0.6	0.6	-89.94	0.0	-20.1	20.1	18.9	1.29	15.603		
500.0	500.0	499.2	499.1	0.8	0.8	58.20	-2.5	-22.5	22.4	20.8	1.64	13.640		
600.0	599.9	598.5	598.2	1.0	1.0	54.44	-7.6	-27.1	25.8	23.8	2.00	12.868		
700.0	699.7	697.6	696.8	1.2	1.3	52.93	-15.2	-34.1	29.9	27.5	2.38	12.536		
800.0	799.1	796.6	794.8	1.4	1.5	52.95	-25.3	-43.3	34.7	31.9	2.80	12.376		
900.0	898.2	895.6	892.3	1.7	1.8	54.00	-37.8	-54.8	40.1	36.8	3.28	12.244		
1,000.0	996.9	995.5	990.5	2.0	2.2	55.84	-51.3	-67.2	45.4	41.6	3.79	11.973		
1,100.0	1,095.7	1,095.3	1,088.6	2.3	2.5	57.30	-64.8	-79.6	50.8	46.4	4.33	11.710		
1,200.0	1,194.4	1,195.2	1,186.8	2.6	2.9	58.49	-78.3	-92.0	56.1	51.2	4.89	11.470		
1,300.0	1,293.1	1,295.0	1,285.0	2.9	3.2	59.46	-91.9	-104.4	61.5	56.0	5.46	11.257		
1,400.0	1,391.9	1,394.9	1,383.1	3.2	3.6	60.28	-105.4	-116.8	66.9	60.9	6.04	11.069		
1,500.0	1,490.6	1,494.7	1,481.3	3.5	3.9	60.98	-118.9	-129.2	72.3	65.7	6.63	10.904		
1,600.0	1,589.4	1,594.6	1,579.4	3.8	4.3	61.58	-132.4	-141.6	77.7	70.5	7.23	10.759		
1,700.0	1,688.1	1,694.4	1,677.6	4.2	4.7	62.10	-145.9	-154.0	83.2	75.3	7.82	10.630		
1,800.0	1,786.9	1,794.3	1,775.7	4.5	5.0	62.56	-159.4	-166.4	88.6	80.2	8.43	10.516		
1,900.0	1,885.6	1,894.1	1,873.9	4.8	5.4	62.96	-173.0	-178.8	94.0	85.0	9.03	10.415		
2,000.0	1,984.4	1,994.0	1,972.0	5.1	5.7	63.32	-186.5	-191.2	99.5	89.9	9.64	10.324		
2,100.0	2,083.1	2,093.8	2,070.2	5.4	6.1	63.64	-200.0	-203.6	104.9	94.7	10.25	10.242		
2,200.0	2,181.9	2,193.7	2,168.3	5.8	6.5	63.93	-213.5	-216.0	110.4	99.5	10.86	10.168		
2,300.0	2,280.6	2,293.5	2,266.5	6.1	6.8	64.20	-227.0	-228.4	115.8	104.4	11.47	10.101		
2,400.0	2,379.4	2,393.4	2,364.6	6.4	7.2	64.44	-240.5	-240.8	121.3	109.2	12.08	10.040		
2,500.0	2,478.1	2,493.2	2,462.8	6.7	7.6	64.66	-254.1	-253.2	126.8	114.1	12.70	9.984		
2,600.0	2,576.9	2,593.1	2,560.9	7.0	7.9	64.86	-267.6	-265.6	132.2	118.9	13.31	9.933		
2,700.0	2,675.6	2,692.9	2,659.1	7.4	8.3	65.04	-281.1	-278.0	137.7	123.7	13.93	9.886		
2,800.0	2,774.4	2,792.8	2,757.2	7.7	8.7	65.21	-294.6	-290.4	143.1	128.6	14.54	9.843		
2,900.0	2,873.1	2,892.6	2,855.4	8.0	9.0	65.37	-308.1	-302.8	148.6	133.4	15.16	9.802		
3,000.0	2,971.9	2,992.5	2,953.5	8.3	9.4	65.52	-321.6	-315.2	154.1	138.3	15.78	9.765		
3,100.0	3,070.6	3,092.3	3,051.7	8.7	9.7	65.66	-335.1	-327.6	159.5	143.1	16.40	9.730		
3,200.0	3,169.4	3,192.2	3,149.8	9.0	10.1	65.78	-348.7	-340.0	165.0	148.0	17.01	9.698		
3,300.0	3,268.1	3,292.0	3,248.0	9.3	10.5	65.90	-362.2	-352.4	170.5	152.8	17.63	9.667		
3,400.0	3,366.9	3,391.9	3,346.1	9.6	10.8	66.02	-375.7	-364.8	175.9	157.7	18.25	9.639		
3,500.0	3,465.6	3,491.7	3,444.3	10.0	11.2	66.12	-389.2	-377.2	181.4	162.5	18.87	9.612		
3,600.0	3,564.4	3,591.6	3,542.4	10.3	11.6	66.22	-402.7	-389.6	186.9	167.4	19.49	9.587		
3,700.0	3,663.1	3,691.4	3,640.6	10.6	11.9	66.32	-416.2	-402.0	192.3	172.2	20.11	9.563		
3,800.0	3,761.9	3,791.3	3,738.7	10.9	12.3	66.40	-429.8	-414.4	197.8	177.1	20.73	9.541		
3,900.0	3,860.6	3,891.1	3,836.9	11.3	12.7	66.49	-443.3	-426.8	203.3	181.9	21.35	9.520		
4,000.0	3,959.4	3,991.0	3,935.0	11.6	13.0	66.57	-456.8	-439.2	208.7	186.8	21.97	9.500		
4,100.0	4,058.1	4,090.8	4,033.2	11.9	13.4	66.64	-470.3	-451.6	214.2	191.6	22.59	9.481		
4,200.0	4,156.9	4,190.7	4,131.3	12.2	13.8	66.71	-483.8	-464.0	219.7	196.5	23.21	9.463		
4,300.0	4,255.6	4,290.5	4,229.5	12.6	14.1	66.78	-497.3	-476.3	225.2	201.3	23.84	9.446		
4,400.0	4,354.4	4,390.4	4,327.6	12.9	14.5	66.85	-510.9	-488.7	230.6	206.2	24.46	9.430		
4,500.0	4,453.1	4,490.2	4,425.8	13.2	14.9	66.91	-524.4	-501.1	236.1	211.0	25.08	9.414		
4,600.0	4,551.9	4,590.1	4,523.9	13.6	15.2	66.97	-537.9	-513.5	241.6	215.9	25.70	9.399		
4,700.0	4,650.6	4,689.9	4,622.1	13.9	15.6	67.02	-551.4	-525.9	247.0	220.7	26.32	9.385		
4,800.0	4,749.4	4,789.8	4,720.2	14.2	16.0	67.08	-564.9	-538.3	252.5	225.6	26.94	9.372		
4,900.0	4,848.1	4,889.6	4,818.4	14.5	16.3	67.13	-578.4	-550.7	258.0	230.4	27.57	9.359		
5,000.0	4,946.9	4,989.5	4,916.5	14.9	16.7	67.18	-591.9	-563.1	263.5	235.3	28.19	9.346		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						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	5,045.6	5,089.3	5,014.7	15.2	17.1	67.23	-605.5	-575.5	268.9	240.1	28.81	9.334		
5,200.0	5,144.4	5,189.2	5,112.8	15.5	17.4	67.27	-619.0	-587.9	274.4	245.0	29.43	9.323		
5,300.0	5,243.1	5,289.0	5,211.0	15.8	17.8	67.32	-632.5	-600.3	279.9	249.8	30.06	9.312		
5,400.0	5,341.9	5,388.9	5,309.1	16.2	18.2	67.36	-646.0	-612.7	285.4	254.7	30.68	9.302		
5,500.0	5,440.6	5,488.7	5,407.3	16.5	18.5	67.40	-659.5	-625.1	290.8	259.5	31.30	9.292		
5,600.0	5,539.4	5,588.6	5,505.4	16.8	18.9	67.44	-673.0	-637.5	296.3	264.4	31.92	9.282		
5,700.0	5,638.1	5,688.4	5,603.6	17.1	19.3	67.48	-686.6	-649.9	301.8	269.2	32.54	9.273		
5,800.0	5,736.9	5,788.3	5,701.7	17.5	19.6	67.51	-700.1	-662.3	307.2	274.1	33.17	9.264		
5,900.0	5,835.6	5,888.1	5,799.9	17.8	20.0	67.55	-713.6	-674.7	312.7	278.9	33.79	9.255		
6,000.0	5,934.4	5,988.0	5,898.1	18.1	20.4	67.58	-727.1	-687.1	318.2	283.8	34.41	9.246		
6,100.0	6,033.1	6,087.8	5,996.2	18.4	20.7	67.61	-740.6	-699.5	323.7	288.6	35.04	9.238		
6,200.0	6,131.9	6,187.7	6,094.4	18.8	21.1	67.65	-754.1	-711.9	329.1	293.5	35.66	9.231		
6,300.0	6,230.6	6,287.5	6,192.5	19.1	21.5	67.68	-767.7	-724.3	334.6	298.3	36.28	9.223		
6,400.0	6,329.4	6,387.4	6,290.7	19.4	21.8	67.71	-781.2	-736.7	340.1	303.2	36.90	9.216		
6,500.0	6,428.1	6,487.2	6,388.8	19.7	22.2	67.74	-794.7	-749.1	345.6	308.0	37.53	9.209		
6,600.0	6,526.9	6,587.1	6,487.0	20.1	22.6	67.76	-808.2	-761.5	351.0	312.9	38.15	9.202		
6,700.0	6,625.6	6,686.9	6,585.1	20.4	22.9	67.79	-821.7	-773.9	356.5	317.7	38.77	9.195		
6,800.0	6,724.5	6,786.8	6,683.2	20.7	23.3	53.80	-835.2	-786.3	361.9	322.6	39.36	9.196		
6,900.0	6,824.2	6,885.8	6,780.6	20.8	23.7	-37.21	-848.6	-798.6	366.7	327.4	39.30	9.331		
7,000.0	6,923.1	6,982.4	6,875.6	20.7	24.0	-71.68	-861.2	-810.6	372.2	333.7	38.50	9.668		
7,100.0	7,019.2	7,082.4	6,974.7	20.5	24.2	-82.88	-862.0	-823.1	379.5	342.2	37.28	10.180		
7,200.0	7,110.8	7,188.3	7,078.1	20.2	24.2	-89.04	-843.9	-836.2	387.9	352.0	35.92	10.800		
7,300.0	7,196.0	7,299.8	7,181.4	19.7	23.9	-92.96	-804.5	-849.2	396.4	361.9	34.52	11.485		
7,400.0	7,273.2	7,416.0	7,278.9	19.1	23.5	-95.32	-742.9	-861.5	404.0	370.8	33.15	12.185		
7,500.0	7,340.8	7,535.2	7,364.0	18.5	23.0	-96.38	-660.4	-872.3	409.9	378.0	31.90	12.847		
7,600.0	7,397.6	7,655.4	7,430.8	17.9	22.4	-96.26	-561.2	-880.7	413.6	382.8	30.80	13.429		
7,700.0	7,442.5	7,774.1	7,475.2	17.3	21.8	-95.08	-451.4	-886.3	415.3	385.4	29.88	13.899		
7,800.0	7,474.5	7,889.4	7,496.0	16.8	21.3	-92.98	-338.3	-888.9	415.3	386.1	29.15	14.246		
7,894.0	7,492.3	7,987.8	7,498.0	16.5	21.1	-90.79	-240.0	-889.2	414.7	386.0	28.67	14.466		
7,900.0	7,493.1	7,993.7	7,498.0	16.5	21.0	-90.69	-234.0	-889.2	414.7	386.1	28.63	14.483		
8,000.0	7,498.0	8,093.5	7,498.0	16.3	20.9	-90.00	-134.2	-889.2	415.4	387.0	28.33	14.662		
8,100.0	7,498.0	8,193.5	7,498.0	16.4	20.9	-90.00	-34.2	-889.2	416.4	388.0	28.37	14.676		
8,200.0	7,498.0	8,293.5	7,498.0	16.6	21.1	-90.00	65.8	-889.2	417.5	388.6	28.85	14.471		
8,300.0	7,498.0	8,393.5	7,498.0	16.9	21.4	-90.00	165.8	-889.2	418.5	388.8	29.73	14.077		
8,400.0	7,498.0	8,493.5	7,498.0	17.5	21.8	-90.00	265.8	-889.2	419.6	388.6	30.99	13.540		
8,500.0	7,498.0	8,593.5	7,498.0	18.2	22.4	-90.00	365.8	-889.2	420.6	388.1	32.58	12.912		
8,600.0	7,498.0	8,693.5	7,498.0	19.1	23.1	-90.00	465.7	-889.2	421.7	387.2	34.45	12.241		
8,700.0	7,498.0	8,793.5	7,498.0	20.0	23.9	-90.00	565.7	-889.2	422.7	386.2	36.56	11.562		
8,800.0	7,498.0	8,893.5	7,498.0	21.1	24.8	-90.00	665.7	-889.2	423.8	384.9	38.88	10.900		
8,900.0	7,498.0	8,993.5	7,498.0	22.2	25.8	-90.00	765.7	-889.2	424.8	383.5	41.36	10.271		
9,000.0	7,498.0	9,093.4	7,498.0	23.5	26.9	-90.00	865.7	-889.2	425.9	381.9	43.99	9.682		
9,100.0	7,498.0	9,193.4	7,498.0	24.8	28.0	-90.00	965.7	-889.2	426.9	380.2	46.73	9.137		
9,200.0	7,498.0	9,293.4	7,498.0	26.1	29.2	-90.00	1,065.7	-889.2	428.0	378.4	49.57	8.635		
9,300.0	7,498.0	9,393.4	7,498.0	27.5	30.5	-90.00	1,165.7	-889.2	429.1	376.6	52.49	8.175		
9,400.0	7,498.0	9,493.4	7,498.0	28.9	31.8	-90.00	1,265.7	-889.2	430.1	374.6	55.47	7.754		
9,500.0	7,498.0	9,593.4	7,498.0	30.4	33.1	-90.00	1,365.7	-889.2	431.2	372.6	58.52	7.368		
9,600.0	7,498.0	9,693.4	7,498.0	31.9	34.5	-90.00	1,465.7	-889.2	432.2	370.6	61.61	7.015		
9,700.0	7,498.0	9,793.4	7,498.0	33.4	35.9	-90.00	1,565.7	-889.2	433.3	368.5	64.75	6.692		
9,800.0	7,498.0	9,893.4	7,498.0	34.9	37.4	-90.00	1,665.7	-889.2	434.3	366.4	67.92	6.395		
9,900.0	7,498.0	9,993.4	7,498.0	36.5	38.8	-90.00	1,765.7	-889.2	435.4	364.3	71.12	6.121		
10,000.0	7,498.0	10,093.4	7,498.0	38.1	40.3	-90.00	1,865.7	-889.2	436.4	362.1	74.36	5.869		
10,100.0	7,498.0	10,193.4	7,498.0	39.7	41.8	-90.00	1,965.7	-889.2	437.5	359.9	77.61	5.637		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4D-17H-P267 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,200.0	7,498.0	10,293.4	7,498.0	41.3	43.4	-90.00	2,065.7	-889.2	438.5	357.6	80.89	5.421	
10,300.0	7,498.0	10,393.4	7,498.0	42.9	44.9	-90.00	2,165.7	-889.2	439.6	355.4	84.18	5.222	
10,400.0	7,498.0	10,493.4	7,498.0	44.5	46.5	-90.00	2,265.7	-889.2	440.6	353.1	87.50	5.036	
10,500.0	7,498.0	10,593.4	7,498.0	46.2	48.0	-90.00	2,365.6	-889.2	441.7	350.9	90.82	4.863	
10,600.0	7,498.0	10,693.4	7,498.0	47.8	49.6	-90.00	2,465.6	-889.2	442.7	348.6	94.16	4.702	
10,700.0	7,498.0	10,793.4	7,498.0	49.5	51.2	-90.00	2,565.6	-889.2	443.8	346.3	97.51	4.551	
10,800.0	7,498.0	10,893.3	7,498.0	51.1	52.8	-90.00	2,665.6	-889.2	444.9	344.0	100.88	4.410	
10,900.0	7,498.0	10,993.3	7,498.0	52.8	54.4	-90.00	2,765.6	-889.2	445.9	341.7	104.25	4.277	
11,000.0	7,498.0	11,093.3	7,498.0	54.5	56.1	-90.00	2,865.6	-889.2	447.0	339.3	107.63	4.153	
11,100.0	7,498.0	11,193.3	7,498.0	56.1	57.7	-90.00	2,965.6	-889.2	448.0	337.0	111.02	4.036	
11,200.0	7,498.0	11,293.3	7,498.0	57.8	59.3	-90.00	3,065.6	-889.2	449.1	334.7	114.41	3.925	
11,300.0	7,498.0	11,393.3	7,498.0	59.5	61.0	-90.00	3,165.6	-889.2	450.1	332.3	117.81	3.821	
11,400.0	7,498.0	11,493.3	7,498.0	61.2	62.6	-90.00	3,265.6	-889.2	451.2	330.0	121.22	3.722	
11,500.0	7,498.0	11,593.3	7,498.0	62.9	64.3	-90.00	3,365.6	-889.2	452.2	327.6	124.64	3.628	
11,600.0	7,498.0	11,693.3	7,498.0	64.6	66.0	-90.00	3,465.6	-889.2	453.3	325.2	128.06	3.540	
11,700.0	7,498.0	11,793.3	7,498.0	66.3	67.6	-90.00	3,565.6	-889.2	454.3	322.9	131.48	3.456	
11,800.0	7,498.0	11,893.3	7,498.0	68.0	69.3	-90.00	3,665.6	-889.2	455.4	320.5	134.91	3.376	
11,900.0	7,498.0	11,993.3	7,498.0	69.7	71.0	-90.00	3,765.6	-889.2	456.4	318.1	138.34	3.299	
12,000.0	7,498.0	12,093.3	7,498.0	71.4	72.6	-90.00	3,865.6	-889.2	457.5	315.7	141.77	3.227	
12,100.0	7,498.0	12,193.3	7,498.0	73.1	74.3	-90.00	3,965.6	-889.2	458.6	313.3	145.21	3.158	
12,200.0	7,498.0	12,293.3	7,498.0	74.8	76.0	-90.00	4,065.6	-889.2	459.6	310.9	148.66	3.092	
12,300.0	7,498.0	12,393.3	7,498.0	76.5	77.7	-90.00	4,165.5	-889.2	460.7	308.6	152.10	3.029	
12,400.0	7,498.0	12,493.3	7,498.0	78.2	79.4	-90.00	4,265.5	-889.2	461.7	306.2	155.55	2.968	
12,500.0	7,498.0	12,593.3	7,498.0	79.9	81.1	-90.00	4,365.5	-889.2	462.8	303.8	159.00	2.910	
12,600.0	7,498.0	12,693.2	7,498.0	81.7	82.8	-90.00	4,465.5	-889.2	463.8	301.4	162.45	2.855	
12,700.0	7,498.0	12,793.2	7,498.0	83.4	84.5	-90.00	4,565.5	-889.2	464.9	299.0	165.91	2.802	
12,800.0	7,498.0	12,893.2	7,498.0	85.1	86.2	-90.00	4,665.5	-889.2	465.9	296.6	169.37	2.751	
12,900.0	7,498.0	12,993.2	7,498.0	86.8	87.9	-90.00	4,765.5	-889.2	467.0	294.2	172.83	2.702	
13,000.0	7,498.0	13,093.2	7,498.0	88.6	89.6	-90.00	4,865.5	-889.2	468.0	291.7	176.29	2.655	
13,100.0	7,498.0	13,193.2	7,498.0	90.3	91.3	-90.00	4,965.5	-889.2	469.1	289.3	179.75	2.610	
13,200.0	7,498.0	13,293.2	7,498.0	92.0	93.0	-90.00	5,065.5	-889.2	470.1	286.9	183.22	2.566	
13,300.0	7,498.0	13,393.2	7,498.0	93.7	94.7	-90.00	5,165.5	-889.2	471.2	284.5	186.68	2.524	
13,400.0	7,498.0	13,493.2	7,498.0	95.5	96.4	-90.00	5,265.5	-889.2	472.2	282.1	190.15	2.484	
13,500.0	7,498.0	13,593.2	7,498.0	97.2	98.1	-90.00	5,365.5	-889.2	473.3	279.7	193.62	2.444	
13,600.0	7,498.0	13,693.2	7,498.0	98.9	99.9	-90.00	5,465.5	-889.2	474.3	277.2	197.16	2.406	
13,700.0	7,498.0	13,793.2	7,498.0	100.6	101.6	-90.00	5,565.5	-889.2	474.2	273.2	201.01	2.359	
13,800.0	7,498.0	13,893.2	7,498.0	102.4	103.3	-90.00	5,665.5	-889.2	472.6	267.9	204.68	2.309	
13,900.0	7,498.0	13,993.2	7,498.0	104.1	105.0	-90.00	5,765.4	-889.2	470.6	262.4	208.15	2.261	
14,000.0	7,498.0	14,093.1	7,498.0	105.9	106.7	-90.00	5,865.4	-889.2	468.6	256.9	211.63	2.214	
14,100.0	7,498.0	14,193.1	7,498.0	107.6	108.4	-90.00	5,965.4	-889.2	466.6	251.5	215.11	2.169	
14,200.0	7,498.0	14,293.1	7,498.0	109.3	110.2	-90.00	6,065.4	-889.2	464.6	246.0	218.58	2.125	
14,300.0	7,498.0	14,393.1	7,498.0	111.1	111.9	-90.00	6,165.4	-889.2	462.6	240.5	222.06	2.083	
14,400.0	7,498.0	14,493.1	7,498.0	112.8	113.6	-90.00	6,265.3	-889.2	460.6	235.0	225.54	2.042	
14,500.0	7,498.0	14,593.0	7,498.0	114.5	115.3	-90.00	6,365.3	-889.2	458.6	229.6	229.02	2.002	
14,600.0	7,498.0	14,693.0	7,498.0	116.3	117.1	-90.00	6,465.3	-889.2	456.6	224.1	232.50	1.964	
14,690.0	7,498.0	14,783.0	7,498.0	117.8	118.6	-90.00	6,555.2	-889.2	454.8	219.2	235.64	1.930 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-17H-P267 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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	-88.06	0.3	-9.8	9.8					
100.0	100.0	100.0	100.0	0.1	0.1	-88.06	0.3	-9.8	9.8	9.5	0.24	40.073		
200.0	200.0	200.0	200.0	0.3	0.3	-88.06	0.3	-9.8	9.8	9.2	0.59	16.501		
300.0	300.0	300.0	300.0	0.5	0.5	-88.06	0.3	-9.8	9.8	8.8	0.94	10.389		
400.0	400.0	400.0	400.0	0.6	0.6	-88.06	0.3	-9.8	9.8	8.5	1.29	7.581 CC, ES		
500.0	500.0	499.8	499.8	0.8	0.8	59.82	-1.1	-10.8	10.6	9.0	1.64	6.457		
600.0	599.9	599.5	599.4	1.0	1.0	54.68	-5.4	-13.7	12.1	10.1	2.00	6.061		
700.0	699.7	699.2	698.6	1.2	1.2	52.09	-12.6	-18.6	14.1	11.7	2.38	5.915		
800.0	799.1	798.8	797.5	1.4	1.5	51.33	-22.5	-25.4	16.4	13.6	2.80	5.868		
900.0	898.2	898.3	895.8	1.7	1.8	51.78	-35.3	-34.2	19.1	15.8	3.26	5.843		
1,000.0	996.9	998.3	994.3	2.0	2.1	53.04	-49.5	-43.9	21.8	18.0	3.77	5.774		
1,100.0	1,095.7	1,098.2	1,092.7	2.3	2.4	54.03	-63.7	-53.6	24.5	20.2	4.30	5.694		
1,200.0	1,194.4	1,198.2	1,191.2	2.6	2.7	54.82	-77.9	-63.3	27.2	22.3	4.84	5.615		
1,300.0	1,293.1	1,298.1	1,289.7	2.9	3.1	55.47	-92.1	-73.0	29.9	24.5	5.40	5.542		
1,400.0	1,391.9	1,398.1	1,388.1	3.2	3.4	56.01	-106.3	-82.7	32.6	26.7	5.96	5.475		
1,500.0	1,490.6	1,498.1	1,486.6	3.5	3.7	56.46	-120.5	-92.4	35.3	28.8	6.53	5.415		
1,600.0	1,589.4	1,598.0	1,585.1	3.8	4.1	56.86	-134.7	-102.1	38.1	31.0	7.10	5.362		
1,700.0	1,688.1	1,698.0	1,683.6	4.2	4.4	57.19	-148.9	-111.8	40.8	33.1	7.68	5.314		
1,800.0	1,786.9	1,798.0	1,782.0	4.5	4.8	57.49	-163.1	-121.5	43.5	35.3	8.26	5.271		
1,900.0	1,885.6	1,897.9	1,880.5	4.8	5.1	57.75	-177.3	-131.3	46.2	37.4	8.84	5.232		
2,000.0	1,984.4	1,997.9	1,979.0	5.1	5.4	57.98	-191.5	-141.0	49.0	39.5	9.42	5.197		
2,100.0	2,083.1	2,097.8	2,077.5	5.4	5.8	58.19	-205.7	-150.7	51.7	41.7	10.01	5.165		
2,200.0	2,181.9	2,197.8	2,175.9	5.8	6.1	58.38	-219.9	-160.4	54.4	43.8	10.60	5.136		
2,300.0	2,280.6	2,297.8	2,274.4	6.1	6.5	58.55	-234.1	-170.1	57.1	46.0	11.18	5.110		
2,400.0	2,379.4	2,397.7	2,372.9	6.4	6.8	58.70	-248.3	-179.8	59.9	48.1	11.77	5.086		
2,500.0	2,478.1	2,497.7	2,471.3	6.7	7.2	58.84	-262.5	-189.5	62.6	50.2	12.36	5.063		
2,600.0	2,576.9	2,597.7	2,569.8	7.0	7.5	58.97	-276.6	-199.2	65.3	52.4	12.96	5.043		
2,700.0	2,675.6	2,697.6	2,668.3	7.4	7.9	59.09	-290.8	-208.9	68.1	54.5	13.55	5.024		
2,800.0	2,774.4	2,797.6	2,766.8	7.7	8.2	59.20	-305.0	-218.6	70.8	56.7	14.14	5.007		
2,900.0	2,873.1	2,897.5	2,865.2	8.0	8.6	59.30	-319.2	-228.3	73.5	58.8	14.73	4.990		
3,000.0	2,971.9	2,997.5	2,963.7	8.3	8.9	59.39	-333.4	-238.0	76.3	60.9	15.33	4.975		
3,100.0	3,070.6	3,097.5	3,062.2	8.7	9.2	59.48	-347.6	-247.7	79.0	63.1	15.92	4.961		
3,200.0	3,169.4	3,197.4	3,160.7	9.0	9.6	59.56	-361.8	-257.4	81.7	65.2	16.52	4.948		
3,300.0	3,268.1	3,297.4	3,259.1	9.3	9.9	59.64	-376.0	-267.1	84.5	67.3	17.11	4.936		
3,400.0	3,366.9	3,397.4	3,357.6	9.6	10.3	59.71	-390.2	-276.9	87.2	69.5	17.71	4.924		
3,500.0	3,465.6	3,497.3	3,456.1	10.0	10.6	59.78	-404.4	-286.6	89.9	71.6	18.30	4.913		
3,600.0	3,564.4	3,597.3	3,554.5	10.3	11.0	59.84	-418.6	-296.3	92.6	73.7	18.90	4.903		
3,700.0	3,663.1	3,697.2	3,653.0	10.6	11.3	59.90	-432.8	-306.0	95.4	75.9	19.49	4.893		
3,800.0	3,761.9	3,797.2	3,751.5	10.9	11.7	59.96	-447.0	-315.7	98.1	78.0	20.09	4.884		
3,900.0	3,860.6	3,897.2	3,850.0	11.3	12.0	60.01	-461.2	-325.4	100.8	80.2	20.69	4.875		
4,000.0	3,959.4	3,997.1	3,948.4	11.6	12.4	60.06	-475.4	-335.1	103.6	82.3	21.28	4.867		
4,100.0	4,058.1	4,097.1	4,046.9	11.9	12.7	60.11	-489.6	-344.8	106.3	84.4	21.88	4.859		
4,200.0	4,156.9	4,197.1	4,145.4	12.2	13.1	60.15	-503.7	-354.5	109.0	86.6	22.47	4.852		
4,300.0	4,255.6	4,297.0	4,243.9	12.6	13.4	60.20	-517.9	-364.2	111.8	88.7	23.07	4.844		
4,400.0	4,354.4	4,397.0	4,342.3	12.9	13.8	60.24	-532.1	-373.9	114.5	90.8	23.67	4.838		
4,500.0	4,453.1	4,496.9	4,440.8	13.2	14.1	60.28	-546.3	-383.6	117.2	93.0	24.27	4.831		
4,600.0	4,551.9	4,596.9	4,539.3	13.6	14.5	60.32	-560.5	-393.3	120.0	95.1	24.86	4.825		
4,700.0	4,650.6	4,696.9	4,637.7	13.9	14.8	60.35	-574.7	-403.0	122.7	97.2	25.46	4.819		
4,800.0	4,749.4	4,796.8	4,736.2	14.2	15.2	60.39	-588.9	-412.7	125.4	99.4	26.06	4.814		
4,900.0	4,848.1	4,896.8	4,834.7	14.5	15.5	60.42	-603.1	-422.5	128.2	101.5	26.66	4.808		
5,000.0	4,946.9	4,996.8	4,933.2	14.9	15.8	60.45	-617.3	-432.2	130.9	103.6	27.25	4.803		
5,100.0	5,045.6	5,096.7	5,031.6	15.2	16.2	60.48	-631.5	-441.9	133.6	105.8	27.85	4.798		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-17H-P267 - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,144.4	5,196.7	5,130.1	15.5	16.5	60.51	-645.7	-451.6	136.4	107.9	28.45	4.793		
5,300.0	5,243.1	5,296.6	5,228.6	15.8	16.9	60.54	-659.9	-461.3	139.1	110.0	29.05	4.789		
5,400.0	5,341.9	5,396.6	5,327.0	16.2	17.2	60.56	-674.1	-471.0	141.8	112.2	29.64	4.784		
5,500.0	5,440.6	5,496.6	5,425.5	16.5	17.6	60.59	-688.3	-480.7	144.6	114.3	30.24	4.780		
5,600.0	5,539.4	5,596.5	5,524.0	16.8	17.9	60.61	-702.5	-490.4	147.3	116.5	30.84	4.776		
5,700.0	5,638.1	5,696.5	5,622.5	17.1	18.3	60.64	-716.7	-500.1	150.0	118.6	31.44	4.772		
5,800.0	5,736.9	5,796.5	5,720.9	17.5	18.6	60.66	-730.9	-509.8	152.8	120.7	32.04	4.768		
5,900.0	5,835.6	5,896.4	5,819.4	17.8	19.0	60.68	-745.0	-519.5	155.5	122.9	32.63	4.765		
6,000.0	5,934.4	5,996.4	5,917.9	18.1	19.3	60.70	-759.2	-529.2	158.2	125.0	33.23	4.761		
6,100.0	6,033.1	6,096.4	6,016.4	18.4	19.7	60.72	-773.4	-538.9	161.0	127.1	33.83	4.758		
6,200.0	6,131.9	6,196.3	6,114.8	18.8	20.0	60.74	-787.6	-548.6	163.7	129.3	34.43	4.754		
6,300.0	6,230.6	6,296.3	6,213.3	19.1	20.4	60.76	-801.8	-558.3	166.4	131.4	35.03	4.751		
6,400.0	6,329.4	6,396.2	6,311.8	19.4	20.7	60.78	-816.0	-568.1	169.2	133.5	35.63	4.748		
6,500.0	6,428.1	6,496.2	6,410.2	19.7	21.1	60.80	-830.2	-577.8	171.9	135.7	36.22	4.745		
6,600.0	6,526.9	6,596.2	6,508.7	20.1	21.4	60.82	-844.4	-587.5	174.6	137.8	36.82	4.742		
6,700.0	6,625.6	6,696.1	6,607.2	20.4	21.8	60.83	-858.6	-597.2	177.4	139.9	37.42	4.740		
6,800.0	6,724.5	6,796.7	6,706.9	20.7	22.0	48.87	-865.6	-607.0	180.0	141.6	38.36	4.692		
6,900.0	6,824.2	6,895.2	6,804.3	20.8	22.0	-36.72	-855.4	-616.6	183.1	143.9	39.26	4.664		
7,000.0	6,923.1	6,991.2	6,896.2	20.7	21.8	-63.20	-829.5	-625.7	187.5	147.8	39.76	4.716		
7,100.0	7,019.2	7,084.3	6,980.0	20.5	21.5	-65.82	-790.0	-633.9	193.5	153.8	39.70	4.875		
7,200.0	7,110.8	7,174.3	7,053.9	20.2	21.0	-63.84	-739.3	-641.2	201.5	162.5	38.97	5.170		
7,300.0	7,196.0	7,261.4	7,117.1	19.7	20.5	-60.41	-679.9	-647.4	211.4	173.8	37.57	5.627		
7,400.0	7,273.2	7,345.5	7,168.9	19.1	20.0	-56.53	-614.0	-652.5	223.1	187.6	35.56	6.275		
7,500.0	7,340.8	7,426.9	7,209.4	18.5	19.5	-52.65	-543.6	-656.5	236.4	203.3	33.10	7.140		
7,600.0	7,397.6	7,505.7	7,238.8	17.9	19.1	-48.98	-470.5	-659.4	250.7	220.3	30.42	8.241		
7,700.0	7,442.5	7,582.3	7,257.6	17.3	18.7	-45.61	-396.4	-661.3	265.6	237.8	27.76	9.568		
7,800.0	7,474.5	7,656.8	7,266.2	16.8	18.4	-42.59	-322.4	-662.1	280.6	255.2	25.41	11.044		
7,900.0	7,493.1	7,745.2	7,267.0	16.5	18.1	-39.90	-234.0	-662.2	293.8	270.2	23.66	12.418		
8,000.0	7,498.0	7,845.0	7,267.0	16.3	17.9	-39.20	-134.2	-662.2	298.1	274.9	23.15	12.878		
8,100.0	7,498.0	7,945.0	7,267.0	16.4	18.0	-39.35	-34.2	-662.2	298.7	275.3	23.45	12.738		
8,200.0	7,498.0	8,045.0	7,267.0	16.6	18.1	-39.51	65.8	-662.2	299.4	275.4	23.97	12.492		
8,300.0	7,498.0	8,145.0	7,267.0	16.9	18.5	-39.66	165.8	-662.2	300.1	275.4	24.68	12.159		
8,400.0	7,498.0	8,245.0	7,267.0	17.5	19.0	-39.82	265.8	-662.2	300.8	275.2	25.57	11.760		
8,500.0	7,498.0	8,345.0	7,267.0	18.2	19.7	-39.97	365.8	-662.2	301.4	274.8	26.64	11.315		
8,600.0	7,498.0	8,445.0	7,267.0	19.1	20.5	-40.12	465.7	-662.2	302.1	274.2	27.86	10.845		
8,700.0	7,498.0	8,545.0	7,267.0	20.0	21.4	-40.28	565.7	-662.2	302.8	273.6	29.21	10.364		
8,800.0	7,498.0	8,645.0	7,267.0	21.1	22.4	-40.43	665.7	-662.2	303.5	272.8	30.69	9.887		
8,900.0	7,498.0	8,745.0	7,267.0	22.2	23.5	-40.58	765.7	-662.2	304.2	271.9	32.28	9.422		
9,000.0	7,498.0	8,845.0	7,267.0	23.5	24.6	-40.73	865.7	-662.2	304.8	270.9	33.97	8.975		
9,100.0	7,498.0	8,945.0	7,267.0	24.8	25.9	-40.88	965.7	-662.2	305.5	269.8	35.74	8.550		
9,200.0	7,498.0	9,044.9	7,267.0	26.1	27.2	-41.03	1,065.7	-662.2	306.2	268.6	37.58	8.148		
9,300.0	7,498.0	9,144.9	7,267.0	27.5	28.5	-41.18	1,165.7	-662.2	306.9	267.4	39.49	7.771		
9,400.0	7,498.0	9,244.9	7,267.0	28.9	29.9	-41.32	1,265.7	-662.2	307.6	266.1	41.46	7.419		
9,500.0	7,498.0	9,344.9	7,267.0	30.4	31.3	-41.47	1,365.7	-662.2	308.3	264.8	43.49	7.089		
9,600.0	7,498.0	9,444.9	7,267.0	31.9	32.8	-41.62	1,465.7	-662.2	309.0	263.4	45.57	6.782		
9,700.0	7,498.0	9,544.9	7,267.0	33.4	34.3	-41.76	1,565.7	-662.2	309.7	262.0	47.68	6.495		
9,800.0	7,498.0	9,644.9	7,267.0	34.9	35.8	-41.91	1,665.7	-662.2	310.4	260.6	49.84	6.228		
9,900.0	7,498.0	9,744.9	7,267.0	36.5	37.3	-42.05	1,765.7	-662.2	311.1	259.1	52.04	5.978		
10,000.0	7,498.0	9,844.9	7,267.0	38.1	38.8	-42.20	1,865.7	-662.2	311.8	257.5	54.27	5.746		
10,100.0	7,498.0	9,944.9	7,267.0	39.7	40.4	-42.34	1,965.7	-662.2	312.5	256.0	56.53	5.528		
10,200.0	7,498.0	10,044.9	7,267.0	41.3	42.0	-42.48	2,065.7	-662.2	313.2	254.4	58.82	5.325		
10,300.0	7,498.0	10,144.9	7,267.0	42.9	43.6	-42.62	2,165.7	-662.2	313.9	252.8	61.14	5.135		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4E-17H-P267 - DD - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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)			
10,400.0	7,498.0	10,244.9	7,267.0	44.5	45.2	-42.77	2,265.6	-662.2	314.7	251.2	63.48	4.957	
10,500.0	7,498.0	10,344.9	7,267.0	46.2	46.8	-42.91	2,365.6	-662.2	315.4	249.5	65.85	4.789	
10,600.0	7,498.0	10,444.9	7,267.0	47.8	48.4	-43.05	2,465.6	-662.2	316.1	247.9	68.24	4.632	
10,700.0	7,498.0	10,544.9	7,267.0	49.5	50.1	-43.19	2,565.6	-662.2	316.8	246.2	70.65	4.484	
10,800.0	7,498.0	10,644.9	7,267.0	51.1	51.7	-43.32	2,665.6	-662.2	317.5	244.5	73.08	4.345	
10,900.0	7,498.0	10,744.9	7,267.0	52.8	53.3	-43.46	2,765.6	-662.2	318.3	242.7	75.54	4.213	
11,000.0	7,498.0	10,844.8	7,267.0	54.5	55.0	-43.60	2,865.6	-662.2	319.0	241.0	78.01	4.089	
11,100.0	7,498.0	10,944.8	7,267.0	56.1	56.7	-43.74	2,965.6	-662.2	319.7	239.2	80.50	3.972	
11,200.0	7,498.0	11,044.8	7,267.0	57.8	58.3	-43.87	3,065.6	-662.2	320.4	237.4	83.00	3.861	
11,300.0	7,498.0	11,144.8	7,267.0	59.5	60.0	-44.01	3,165.6	-662.2	321.2	235.7	85.52	3.755	
11,400.0	7,498.0	11,244.8	7,267.0	61.2	61.7	-44.14	3,265.6	-662.2	321.9	233.8	88.06	3.655	
11,500.0	7,498.0	11,344.8	7,267.0	62.9	63.4	-44.28	3,365.6	-662.2	322.6	232.0	90.62	3.561	
11,600.0	7,498.0	11,444.8	7,267.0	64.6	65.0	-44.41	3,465.6	-662.2	323.4	230.2	93.18	3.470	
11,700.0	7,498.0	11,544.8	7,267.0	66.3	66.7	-44.54	3,565.6	-662.2	324.1	228.3	95.77	3.384	
11,800.0	7,498.0	11,644.8	7,267.0	68.0	68.4	-44.68	3,665.6	-662.2	324.9	226.5	98.37	3.303	
11,900.0	7,498.0	11,744.8	7,267.0	69.7	70.1	-44.81	3,765.6	-662.2	325.6	224.6	100.98	3.224	
12,000.0	7,498.0	11,844.8	7,267.0	71.4	71.8	-44.94	3,865.6	-662.2	326.3	222.7	103.60	3.150	
12,100.0	7,498.0	11,944.8	7,267.0	73.1	73.5	-45.07	3,965.6	-662.2	327.1	220.8	106.24	3.079	
12,200.0	7,498.0	12,044.8	7,267.0	74.8	75.2	-45.20	4,065.5	-662.2	327.8	218.9	108.89	3.011	
12,300.0	7,498.0	12,144.8	7,267.0	76.5	76.9	-45.33	4,165.5	-662.2	328.6	217.0	111.55	2.946	
12,400.0	7,498.0	12,244.8	7,267.0	78.2	78.6	-45.46	4,265.5	-662.2	329.3	215.1	114.23	2.883	
12,500.0	7,498.0	12,344.8	7,267.0	79.9	80.3	-45.59	4,365.5	-662.2	330.1	213.2	116.91	2.823	
12,600.0	7,498.0	12,444.8	7,267.0	81.7	82.0	-45.71	4,465.5	-662.2	330.8	211.2	119.61	2.766	
12,700.0	7,498.0	12,544.8	7,267.0	83.4	83.8	-45.84	4,565.5	-662.2	331.6	209.3	122.32	2.711	
12,800.0	7,498.0	12,644.7	7,267.0	85.1	85.5	-45.97	4,665.5	-662.2	332.3	207.3	125.04	2.658	
12,900.0	7,498.0	12,744.7	7,267.0	86.8	87.2	-46.09	4,765.5	-662.2	333.1	205.3	127.78	2.607	
13,000.0	7,498.0	12,844.7	7,267.0	88.6	88.9	-46.22	4,865.5	-662.2	333.9	203.3	130.52	2.558	
13,100.0	7,498.0	12,944.7	7,267.0	90.3	90.6	-46.34	4,965.5	-662.2	334.6	201.4	133.27	2.511	
13,200.0	7,498.0	13,044.7	7,267.0	92.0	92.3	-46.47	5,065.5	-662.2	335.4	199.4	136.03	2.465	
13,300.0	7,498.0	13,144.7	7,267.0	93.7	94.1	-46.59	5,165.5	-662.2	336.2	197.3	138.81	2.422	
13,400.0	7,498.0	13,244.7	7,267.0	95.5	95.8	-46.71	5,265.5	-662.2	336.9	195.3	141.59	2.380	
13,500.0	7,498.0	13,344.7	7,267.0	97.2	97.5	-46.84	5,365.5	-662.2	337.7	193.3	144.38	2.339	
13,600.0	7,498.0	13,444.7	7,267.0	98.9	99.2	-46.96	5,465.5	-662.2	338.4	191.2	147.22	2.299	
13,700.0	7,498.0	13,544.7	7,267.0	100.6	101.0	-46.95	5,565.5	-662.2	338.4	188.4	149.95	2.257	
13,800.0	7,498.0	13,644.7	7,267.0	102.4	102.7	-46.75	5,665.5	-662.2	337.1	185.0	152.14	2.216	
13,900.0	7,498.0	13,744.7	7,267.0	104.1	104.4	-46.51	5,765.4	-662.2	335.7	181.6	154.13	2.178	
14,000.0	7,498.0	13,844.6	7,267.0	105.9	106.1	-46.28	5,865.4	-662.2	334.3	178.2	156.10	2.141	
14,100.0	7,498.0	13,944.6	7,267.0	107.6	107.9	-46.04	5,965.4	-662.2	332.8	174.8	158.04	2.106	
14,200.0	7,498.0	14,044.6	7,267.0	109.3	109.6	-45.80	6,065.4	-662.2	331.4	171.4	159.96	2.072	
14,300.0	7,498.0	14,144.6	7,267.0	111.1	111.3	-45.56	6,165.4	-662.2	330.0	168.1	161.85	2.039	
14,400.0	7,498.0	14,244.6	7,267.0	112.8	113.1	-45.32	6,265.3	-662.2	328.5	164.8	163.71	2.007	
14,500.0	7,498.0	14,344.5	7,267.0	114.5	114.8	-45.07	6,365.3	-662.2	327.1	161.6	165.54	1.976	
14,600.0	7,498.0	14,444.5	7,267.0	116.3	116.5	-44.82	6,465.3	-662.2	325.7	158.4	167.35	1.946	
14,690.0	7,498.0	14,534.5	7,267.0	117.8	118.1	-44.60	6,555.2	-662.2	324.4	155.5	168.95	1.920 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #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	90.05	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		
400.0	400.0	400.0	400.0	0.6	0.6	90.05	0.0	10.1	10.1	8.8	1.29	7.794 CC		
430.0	430.0	430.0	430.0	0.7	0.7	-116.66	0.0	10.1	10.1	8.7	1.40	7.233		
500.0	500.0	500.0	500.0	0.8	0.8	-118.44	0.0	10.1	10.3	8.6	1.64	6.257 ES		
600.0	599.9	600.1	600.1	1.0	1.0	-125.41	-1.7	9.6	11.5	9.5	1.99	5.766		
700.0	699.7	700.3	700.1	1.2	1.2	-129.23	-6.8	8.3	13.4	11.1	2.37	5.683		
800.0	799.1	800.5	799.9	1.4	1.4	-130.57	-15.2	6.0	16.0	13.2	2.77	5.773		
900.0	898.2	900.7	899.4	1.7	1.6	-130.29	-27.1	2.9	19.1	15.9	3.23	5.918		
1,000.0	996.9	1,000.8	998.4	2.0	1.9	-127.85	-41.4	-1.0	22.2	18.4	3.74	5.930		
1,100.0	1,095.7	1,100.7	1,097.2	2.3	2.2	-125.69	-55.8	-4.8	25.2	20.9	4.28	5.889		
1,200.0	1,194.4	1,200.7	1,196.0	2.6	2.5	-123.99	-70.3	-8.7	28.2	23.4	4.83	5.840		
1,300.0	1,293.1	1,300.6	1,294.9	2.9	2.8	-122.62	-84.8	-12.5	31.3	25.9	5.41	5.789		
1,400.0	1,391.9	1,400.6	1,393.7	3.2	3.1	-121.50	-99.2	-16.4	34.4	28.4	5.99	5.741		
1,500.0	1,490.6	1,500.5	1,492.5	3.5	3.4	-120.57	-113.7	-20.2	37.5	30.9	6.58	5.697		
1,600.0	1,589.4	1,600.5	1,591.3	3.8	3.7	-119.78	-128.1	-24.1	40.6	33.4	7.18	5.657		
1,700.0	1,688.1	1,700.4	1,690.1	4.2	4.0	-119.10	-142.6	-27.9	43.7	35.9	7.78	5.620		
1,800.0	1,786.9	1,800.4	1,789.0	4.5	4.3	-118.51	-157.1	-31.8	46.8	38.5	8.38	5.588		
1,900.0	1,885.6	1,900.3	1,887.8	4.8	4.6	-117.99	-171.5	-35.6	50.0	41.0	8.99	5.558		
2,000.0	1,984.4	2,000.3	1,986.6	5.1	4.9	-117.54	-186.0	-39.5	53.1	43.5	9.60	5.531		
2,100.0	2,083.1	2,100.2	2,085.4	5.4	5.2	-117.13	-200.5	-43.3	56.2	46.0	10.21	5.507		
2,200.0	2,181.9	2,200.2	2,184.3	5.8	5.5	-116.77	-214.9	-47.2	59.4	48.5	10.82	5.485		
2,300.0	2,280.6	2,300.1	2,283.1	6.1	5.8	-116.45	-229.4	-51.0	62.5	51.1	11.44	5.465		
2,400.0	2,379.4	2,400.1	2,381.9	6.4	6.1	-116.15	-243.8	-54.9	65.6	53.6	12.05	5.447		
2,500.0	2,478.1	2,500.0	2,480.7	6.7	6.4	-115.89	-258.3	-58.7	68.8	56.1	12.67	5.430		
2,600.0	2,576.9	2,600.0	2,579.6	7.0	6.8	-115.64	-272.8	-62.6	71.9	58.6	13.28	5.414		
2,700.0	2,675.6	2,700.0	2,678.4	7.4	7.1	-115.42	-287.2	-66.4	75.1	61.2	13.90	5.400		
2,800.0	2,774.4	2,799.9	2,777.2	7.7	7.4	-115.21	-301.7	-70.3	78.2	63.7	14.52	5.387		
2,900.0	2,873.1	2,899.9	2,876.0	8.0	7.7	-115.02	-316.1	-74.1	81.3	66.2	15.13	5.374		
3,000.0	2,971.9	2,999.8	2,974.9	8.3	8.0	-114.85	-330.6	-78.0	84.5	68.7	15.75	5.363		
3,100.0	3,070.6	3,099.8	3,073.7	8.7	8.3	-114.69	-345.1	-81.8	87.6	71.3	16.37	5.352		
3,200.0	3,169.4	3,199.7	3,172.5	9.0	8.6	-114.53	-359.5	-85.7	90.8	73.8	16.99	5.342		
3,300.0	3,268.1	3,299.7	3,271.3	9.3	8.9	-114.39	-374.0	-89.5	93.9	76.3	17.61	5.333		
3,400.0	3,366.9	3,399.6	3,370.1	9.6	9.3	-114.26	-388.5	-93.4	97.1	78.8	18.23	5.324		
3,500.0	3,465.6	3,499.6	3,469.0	10.0	9.6	-114.14	-402.9	-97.2	100.2	81.4	18.85	5.316		
3,600.0	3,564.4	3,599.5	3,567.8	10.3	9.9	-114.02	-417.4	-101.1	103.4	83.9	19.47	5.309		
3,700.0	3,663.1	3,699.5	3,666.6	10.6	10.2	-113.91	-431.8	-104.9	106.5	86.4	20.09	5.301		
3,800.0	3,761.9	3,799.4	3,765.4	10.9	10.5	-113.81	-446.3	-108.8	109.7	88.9	20.71	5.295		
3,900.0	3,860.6	3,899.4	3,864.3	11.3	10.8	-113.71	-460.8	-112.6	112.8	91.5	21.33	5.288		
4,000.0	3,959.4	3,999.3	3,963.1	11.6	11.1	-113.62	-475.2	-116.5	116.0	94.0	21.95	5.282		
4,100.0	4,058.1	4,099.3	4,061.9	11.9	11.4	-113.53	-489.7	-120.3	119.1	96.5	22.57	5.276		
4,200.0	4,156.9	4,199.2	4,160.7	12.2	11.8	-113.45	-504.1	-124.2	122.3	99.1	23.20	5.271		
4,300.0	4,255.6	4,299.2	4,259.6	12.6	12.1	-113.37	-518.6	-128.0	125.4	101.6	23.82	5.265		
4,400.0	4,354.4	4,399.1	4,358.4	12.9	12.4	-113.29	-533.1	-131.9	128.6	104.1	24.44	5.260		
4,500.0	4,453.1	4,499.1	4,457.2	13.2	12.7	-113.22	-547.5	-135.7	131.7	106.6	25.06	5.256		
4,600.0	4,551.9	4,599.0	4,556.0	13.6	13.0	-113.15	-562.0	-139.6	134.9	109.2	25.68	5.251		
4,700.0	4,650.6	4,699.0	4,654.9	13.9	13.3	-113.09	-576.5	-143.4	138.0	111.7	26.30	5.247		
4,800.0	4,749.4	4,798.9	4,753.7	14.2	13.6	-113.03	-590.9	-147.3	141.2	114.2	26.93	5.242		
4,900.0	4,848.1	4,898.9	4,852.5	14.5	14.0	-112.97	-605.4	-151.1	144.3	116.8	27.55	5.239		
5,000.0	4,946.9	4,998.8	4,951.3	14.9	14.3	-112.91	-619.8	-155.0	147.5	119.3	28.17	5.235		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #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	5,045.6	5,098.8	5,050.1	15.2	14.6	-112.86	-634.3	-158.8	150.6	121.8	28.79	5.231		
5,200.0	5,144.4	5,198.7	5,149.0	15.5	14.9	-112.81	-648.8	-162.7	153.8	124.3	29.41	5.228		
5,300.0	5,243.1	5,298.7	5,247.8	15.8	15.2	-112.76	-663.2	-166.5	156.9	126.9	30.04	5.224		
5,400.0	5,341.9	5,398.6	5,346.6	16.2	15.5	-112.71	-677.7	-170.4	160.1	129.4	30.66	5.221		
5,500.0	5,440.6	5,498.6	5,445.4	16.5	15.8	-112.66	-692.1	-174.2	163.2	131.9	31.28	5.218		
5,600.0	5,539.4	5,598.5	5,544.3	16.8	16.1	-112.62	-706.6	-178.1	166.4	134.5	31.90	5.215		
5,700.0	5,638.1	5,698.5	5,643.1	17.1	16.5	-112.57	-721.1	-182.0	169.5	137.0	32.53	5.212		
5,800.0	5,736.9	5,798.4	5,741.9	17.5	16.8	-112.53	-735.5	-185.8	172.7	139.5	33.15	5.209		
5,900.0	5,835.6	5,898.4	5,840.7	17.8	17.1	-112.49	-750.0	-189.7	175.8	142.1	33.77	5.207		
6,000.0	5,934.4	5,998.3	5,939.6	18.1	17.4	-112.45	-764.5	-193.5	179.0	144.6	34.39	5.204		
6,100.0	6,033.1	6,098.3	6,038.4	18.4	17.7	-112.42	-778.9	-197.4	182.1	147.1	35.02	5.201		
6,200.0	6,131.9	6,198.2	6,137.2	18.8	18.0	-112.38	-793.4	-201.2	185.3	149.6	35.64	5.199		
6,300.0	6,230.6	6,298.2	6,236.0	19.1	18.3	-112.35	-807.8	-205.1	188.4	152.2	36.26	5.197		
6,400.0	6,329.4	6,398.1	6,334.9	19.4	18.7	-112.31	-822.3	-208.9	191.6	154.7	36.88	5.194		
6,500.0	6,428.1	6,498.1	6,433.7	19.7	19.0	-112.28	-836.8	-212.8	194.7	157.2	37.51	5.192		
6,600.0	6,526.9	6,598.0	6,532.5	20.1	19.3	-112.25	-851.2	-216.6	197.9	159.8	38.13	5.190		
6,700.0	6,625.6	6,698.5	6,631.9	20.4	19.6	-112.32	-865.4	-220.5	201.0	162.3	38.73	5.190		
6,800.0	6,724.5	6,799.5	6,732.7	20.7	19.7	-129.52	-867.6	-224.4	203.7	165.1	38.62	5.274		
6,900.0	6,824.2	6,897.3	6,829.1	20.8	19.5	136.32	-852.8	-228.2	207.1	169.4	37.75	5.486		
7,000.0	6,923.1	6,991.7	6,918.6	20.7	19.2	100.02	-823.1	-231.7	212.0	175.7	36.32	5.837		
7,100.0	7,019.2	7,082.6	6,999.0	20.5	18.7	86.87	-781.1	-234.8	218.8	184.3	34.51	6.341		
7,200.0	7,110.8	7,170.0	7,069.2	20.2	18.2	78.13	-729.1	-237.5	227.8	195.2	32.51	7.005		
7,300.0	7,196.0	7,254.2	7,128.5	19.7	17.6	71.11	-669.6	-239.8	238.7	208.2	30.49	7.827		
7,400.0	7,273.2	7,335.3	7,176.8	19.1	17.0	65.12	-604.6	-241.7	251.3	222.7	28.59	8.789		
7,500.0	7,340.8	7,413.6	7,214.3	18.5	16.4	59.96	-535.9	-243.2	265.2	238.3	26.89	9.864		
7,600.0	7,397.6	7,489.4	7,241.5	17.9	15.8	55.49	-465.1	-244.2	279.9	254.5	25.43	11.009		
7,700.0	7,442.5	7,563.1	7,258.6	17.3	15.3	51.67	-393.5	-244.9	294.9	270.7	24.24	12.166		
7,800.0	7,474.5	7,634.9	7,266.4	16.8	15.0	48.41	-322.2	-245.2	309.6	286.3	23.35	13.259		
7,900.0	7,493.1	7,725.7	7,267.0	16.5	14.6	45.51	-231.4	-245.6	321.8	299.0	22.77	14.132		
8,000.0	7,498.0	7,829.0	7,267.0	16.3	14.5	44.38	-128.1	-247.7	323.3	300.6	22.74	14.219		
8,100.0	7,498.0	7,928.9	7,267.0	16.4	14.5	43.91	-28.2	-250.4	320.7	297.8	22.92	13.993		
8,200.0	7,498.0	8,028.9	7,267.0	16.6	14.8	43.42	71.7	-253.1	318.1	294.8	23.35	13.623		
8,300.0	7,498.0	8,128.8	7,267.0	16.9	15.3	42.93	171.6	-255.7	315.6	291.6	24.01	13.141		
8,400.0	7,498.0	8,228.7	7,267.0	17.5	15.9	42.43	271.4	-258.4	313.0	288.2	24.88	12.584		
8,500.0	7,498.0	8,328.7	7,267.0	18.2	16.7	41.92	371.3	-261.1	310.5	284.6	25.90	11.988		
8,600.0	7,498.0	8,428.6	7,267.0	19.1	17.7	41.40	471.2	-263.8	308.0	281.0	27.07	11.381		
8,700.0	7,498.0	8,528.5	7,267.0	20.0	18.7	40.87	571.1	-266.5	305.6	277.2	28.33	10.785		
8,800.0	7,498.0	8,628.5	7,267.0	21.1	19.9	40.34	671.0	-269.2	303.1	273.5	29.68	10.212		
8,900.0	7,498.0	8,728.4	7,267.0	22.2	21.1	39.79	770.9	-271.9	300.7	269.6	31.09	9.672		
9,000.0	7,498.0	8,828.3	7,267.0	23.5	22.4	39.24	870.8	-274.6	298.3	265.8	32.54	9.168		
9,100.0	7,498.0	8,928.2	7,267.0	24.8	23.8	38.68	970.7	-277.2	296.0	262.0	34.01	8.702		
9,200.0	7,498.0	9,028.2	7,267.0	26.1	25.2	38.11	1,070.6	-279.9	293.7	258.2	35.49	8.274		
9,300.0	7,498.0	9,128.1	7,267.0	27.5	26.7	37.53	1,170.5	-282.6	291.4	254.4	36.97	7.880		
9,400.0	7,498.0	9,228.0	7,267.0	28.9	28.2	36.94	1,270.4	-285.3	289.1	250.7	38.44	7.520		
9,500.0	7,498.0	9,328.0	7,267.0	30.4	29.7	36.35	1,370.3	-288.0	286.9	247.0	39.89	7.192		
9,600.0	7,498.0	9,427.9	7,267.0	31.9	31.2	35.74	1,470.2	-290.7	284.7	243.4	41.31	6.891		
9,700.0	7,498.0	9,527.8	7,267.0	33.4	32.8	35.12	1,570.1	-293.4	282.5	239.8	42.69	6.617		
9,800.0	7,498.0	9,627.8	7,267.0	34.9	34.4	34.50	1,670.0	-296.1	280.4	236.3	44.04	6.366		
9,900.0	7,498.0	9,727.7	7,267.0	36.5	36.0	33.86	1,769.9	-298.8	278.2	232.9	45.34	6.138		
10,000.0	7,498.0	9,827.6	7,267.0	38.1	37.6	33.22	1,869.7	-301.4	276.2	229.6	46.58	5.929		
10,100.0	7,498.0	9,927.5	7,267.0	39.7	39.2	32.56	1,969.6	-304.1	274.1	226.4	47.78	5.738		
10,200.0	7,498.0	10,027.5	7,267.0	41.3	40.8	31.90	2,069.5	-306.8	272.1	223.2	48.91	5.564		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4G-17H-P267 - DD - Plan #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			
10,300.0	7,498.0	10,127.4	7,267.0	42.9	42.5	31.23	2,169.4	-309.5	270.2	220.2	49.98	5.406		
10,400.0	7,498.0	10,227.3	7,267.0	44.5	44.1	30.54	2,269.3	-312.2	268.3	217.3	50.99	5.262		
10,500.0	7,498.0	10,327.3	7,267.0	46.2	45.8	29.85	2,369.2	-314.9	266.4	214.5	51.92	5.130		
10,600.0	7,498.0	10,427.2	7,267.0	47.8	47.5	29.15	2,469.1	-317.6	264.5	211.7	52.79	5.011		
10,700.0	7,498.0	10,527.1	7,267.0	49.5	49.1	28.44	2,569.0	-320.3	262.7	209.2	53.58	4.904		
10,800.0	7,498.0	10,627.1	7,267.0	51.1	50.8	27.71	2,668.9	-323.0	261.0	206.7	54.30	4.807		
10,900.0	7,498.0	10,727.0	7,267.0	52.8	52.5	26.98	2,768.8	-325.6	259.3	204.3	54.93	4.720		
11,000.0	7,498.0	10,826.9	7,267.0	54.5	54.2	26.24	2,868.7	-328.3	257.6	202.1	55.49	4.642		
11,100.0	7,498.0	10,926.8	7,267.0	56.1	55.9	25.49	2,968.6	-331.0	255.9	200.0	55.96	4.574		
11,200.0	7,498.0	11,026.8	7,267.0	57.8	57.6	24.73	3,068.5	-333.7	254.3	198.0	56.35	4.514		
11,300.0	7,498.0	11,126.7	7,267.0	59.5	59.3	23.96	3,168.4	-336.4	252.8	196.2	56.65	4.462		
11,400.0	7,498.0	11,226.6	7,267.0	61.2	61.0	23.18	3,268.3	-339.1	251.3	194.4	56.87	4.419		
11,500.0	7,498.0	11,325.4	7,267.0	62.9	62.6	22.48	3,367.0	-341.3	250.0	192.9	57.14	4.376		
11,600.0	7,498.0	11,423.8	7,267.0	64.6	64.3	22.12	3,465.4	-342.0	249.4	191.5	57.88	4.309		
11,649.9	7,498.0	11,472.9	7,267.0	65.4	65.2	22.08	3,514.5	-341.7	249.3	190.8	58.45	4.265		
11,700.0	7,498.0	11,522.2	7,267.0	66.3	66.0	22.12	3,563.8	-341.0	249.4	190.2	59.17	4.214		
11,800.0	7,498.0	11,620.6	7,267.0	68.0	67.7	22.48	3,662.1	-338.2	250.0	188.9	61.07	4.094		
11,900.0	7,498.0	11,719.9	7,267.0	69.7	69.4	23.13	3,761.4	-334.1	251.2	187.7	63.53	3.954		
12,000.0	7,498.0	11,819.9	7,267.0	71.4	71.1	23.80	3,861.2	-329.9	252.5	186.4	66.11	3.819		
12,100.0	7,498.0	11,919.8	7,267.0	73.1	72.8	24.46	3,961.1	-325.6	253.8	185.0	68.75	3.692		
12,200.0	7,498.0	12,019.8	7,267.0	74.8	74.5	25.11	4,060.9	-321.4	255.1	183.7	71.45	3.571		
12,300.0	7,498.0	12,119.7	7,267.0	76.5	76.2	25.76	4,160.8	-317.1	256.5	182.3	74.22	3.456		
12,400.0	7,498.0	12,219.6	7,267.0	78.2	77.9	26.40	4,260.7	-312.9	257.9	180.9	77.04	3.348		
12,500.0	7,498.0	12,319.6	7,267.0	79.9	79.6	27.03	4,360.5	-308.6	259.4	179.4	79.92	3.245		
12,600.0	7,498.0	12,419.5	7,267.0	81.7	81.4	27.66	4,460.4	-304.4	260.8	178.0	82.85	3.148		
12,700.0	7,498.0	12,519.5	7,267.0	83.4	83.1	28.28	4,560.2	-300.1	262.3	176.5	85.83	3.057		
12,800.0	7,498.0	12,619.4	7,267.0	85.1	84.8	28.89	4,660.1	-295.9	263.9	175.0	88.85	2.970		
12,900.0	7,498.0	12,719.4	7,267.0	86.8	86.5	29.49	4,759.9	-291.6	265.4	173.5	91.93	2.887		
13,000.0	7,498.0	12,819.3	7,267.0	88.6	88.2	30.09	4,859.8	-287.3	267.0	172.0	95.05	2.809		
13,100.0	7,498.0	12,919.3	7,267.0	90.3	90.0	30.68	4,959.7	-283.1	268.6	170.4	98.21	2.735		
13,200.0	7,498.0	13,019.2	7,267.0	92.0	91.7	31.27	5,059.5	-278.8	270.3	168.9	101.41	2.665		
13,300.0	7,498.0	13,119.2	7,267.0	93.7	93.4	31.84	5,159.4	-274.6	272.0	167.3	104.65	2.599		
13,400.0	7,498.0	13,219.1	7,267.0	95.5	95.1	32.41	5,259.2	-270.3	273.7	165.7	107.92	2.536		
13,500.0	7,498.0	13,319.1	7,267.0	97.2	96.9	32.97	5,359.1	-266.1	275.4	164.2	111.23	2.476		
13,600.0	7,498.0	13,419.0	7,267.0	98.9	98.6	33.53	5,459.0	-261.8	277.2	162.6	114.60	2.418		
13,700.0	7,498.0	13,518.9	7,267.0	100.6	100.3	34.25	5,558.8	-257.6	279.6	161.0	118.56	2.358		
13,800.0	7,498.0	13,618.8	7,267.0	102.4	102.1	35.23	5,658.5	-253.3	283.0	159.8	123.20	2.297		
13,900.0	7,498.0	13,718.6	7,267.0	104.1	103.8	36.25	5,758.2	-249.1	286.6	158.7	127.95	2.240		
14,000.0	7,498.0	13,818.4	7,267.0	105.9	105.5	37.24	5,857.9	-244.9	290.4	157.7	132.71	2.188		
14,100.0	7,498.0	13,918.2	7,267.0	107.6	107.3	38.21	5,957.6	-240.6	294.2	156.7	137.47	2.140		
14,200.0	7,498.0	14,018.0	7,267.0	109.3	109.0	39.15	6,057.4	-236.4	298.1	155.9	142.22	2.096		
14,300.0	7,498.0	14,117.8	7,267.0	111.1	110.7	40.07	6,157.1	-232.1	302.1	155.1	146.96	2.056		
14,400.0	7,498.0	14,217.6	7,267.0	112.8	112.5	40.96	6,256.8	-227.9	306.2	154.5	151.69	2.018		
14,500.0	7,498.0	14,317.4	7,267.0	114.5	114.2	41.83	6,356.5	-223.6	310.3	153.9	156.41	1.984		
14,600.0	7,498.0	14,417.2	7,267.0	116.3	115.9	42.68	6,456.2	-219.4	314.5	153.4	161.11	1.952		
14,690.0	7,498.0	14,507.0	7,267.0	117.8	117.5	43.42	6,545.9	-215.6	318.3	153.0	165.33	1.925 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.05	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		
400.0	400.0	400.0	400.0	0.6	0.6	90.05	0.0	20.1	20.1	18.8	1.29	15.587 CC		
427.8	427.8	427.8	427.8	0.7	0.7	-116.43	0.0	20.1	20.2	18.8	1.39	14.519		
500.0	500.0	500.0	500.0	0.8	0.8	-116.13	-0.5	20.1	20.3	18.7	1.64	12.367 ES		
600.0	599.9	600.1	600.0	1.0	1.0	-115.18	-3.9	19.8	21.6	19.6	2.00	10.791		
700.0	699.7	700.1	699.7	1.2	1.2	-113.58	-10.9	19.3	24.2	21.8	2.39	10.113		
800.0	799.1	800.0	799.1	1.4	1.4	-111.73	-21.3	18.5	28.1	25.2	2.84	9.900		
900.0	898.2	899.8	898.0	1.7	1.7	-110.52	-34.8	17.5	33.3	29.9	3.35	9.944		
1,000.0	996.9	999.7	996.9	2.0	1.9	-111.48	-48.9	16.5	39.2	35.3	3.89	10.085		
1,100.0	1,095.7	1,099.5	1,095.7	2.3	2.2	-112.20	-62.9	15.4	45.1	40.7	4.44	10.155		
1,200.0	1,194.4	1,199.3	1,194.5	2.6	2.5	-112.75	-77.0	14.3	51.0	46.0	5.01	10.187		
1,300.0	1,293.1	1,299.1	1,293.3	2.9	2.8	-113.19	-91.0	13.3	56.9	51.4	5.58	10.199		
1,400.0	1,391.9	1,399.0	1,392.2	3.2	3.1	-113.54	-105.1	12.2	62.9	56.7	6.16	10.201		
1,500.0	1,490.6	1,498.8	1,491.0	3.5	3.4	-113.84	-119.1	11.2	68.8	62.0	6.75	10.196		
1,600.0	1,589.4	1,598.6	1,589.8	3.8	3.7	-114.08	-133.2	10.1	74.7	67.4	7.33	10.189		
1,700.0	1,688.1	1,698.4	1,688.6	4.2	4.0	-114.29	-147.2	9.1	80.6	72.7	7.92	10.179		
1,800.0	1,786.9	1,798.3	1,787.5	4.5	4.3	-114.48	-161.3	8.0	86.6	78.0	8.51	10.169		
1,900.0	1,885.6	1,898.1	1,886.3	4.8	4.6	-114.64	-175.3	6.9	92.5	83.4	9.10	10.158		
2,000.0	1,984.4	1,997.9	1,985.1	5.1	4.8	-114.78	-189.4	5.9	98.4	88.7	9.70	10.148		
2,100.0	2,083.1	2,097.7	2,083.9	5.4	5.1	-114.90	-203.4	4.8	104.3	94.0	10.29	10.138		
2,200.0	2,181.9	2,197.6	2,182.8	5.8	5.4	-115.01	-217.5	3.8	110.3	99.4	10.89	10.128		
2,300.0	2,280.6	2,297.4	2,281.6	6.1	5.7	-115.11	-231.5	2.7	116.2	104.7	11.48	10.119		
2,400.0	2,379.4	2,397.2	2,380.4	6.4	6.0	-115.20	-245.5	1.7	122.1	110.0	12.08	10.110		
2,500.0	2,478.1	2,497.0	2,479.2	6.7	6.3	-115.28	-259.6	0.6	128.1	115.4	12.68	10.101		
2,600.0	2,576.9	2,596.9	2,578.1	7.0	6.6	-115.35	-273.6	-0.5	134.0	120.7	13.27	10.093		
2,700.0	2,675.6	2,696.7	2,676.9	7.4	6.9	-115.42	-287.7	-1.5	139.9	126.0	13.87	10.086		
2,800.0	2,774.4	2,796.5	2,775.7	7.7	7.2	-115.48	-301.7	-2.6	145.8	131.4	14.47	10.079		
2,900.0	2,873.1	2,896.3	2,874.5	8.0	7.5	-115.54	-315.8	-3.6	151.8	136.7	15.07	10.072		
3,000.0	2,971.9	2,996.1	2,973.4	8.3	7.8	-115.59	-329.8	-4.7	157.7	142.0	15.67	10.066		
3,100.0	3,070.6	3,096.0	3,072.2	8.7	8.1	-115.64	-343.9	-5.7	163.6	147.4	16.27	10.060		
3,200.0	3,169.4	3,195.8	3,171.0	9.0	8.4	-115.69	-357.9	-6.8	169.6	152.7	16.86	10.054		
3,300.0	3,268.1	3,295.6	3,269.8	9.3	8.7	-115.73	-372.0	-7.9	175.5	158.0	17.46	10.049		
3,400.0	3,366.9	3,395.4	3,368.7	9.6	9.0	-115.77	-386.0	-8.9	181.4	163.4	18.06	10.043		
3,500.0	3,465.6	3,495.3	3,467.5	10.0	9.3	-115.81	-400.1	-10.0	187.4	168.7	18.66	10.039		
3,600.0	3,564.4	3,595.1	3,566.3	10.3	9.6	-115.84	-414.1	-11.0	193.3	174.0	19.26	10.034		
3,700.0	3,663.1	3,694.9	3,665.1	10.6	9.9	-115.88	-428.2	-12.1	199.2	179.3	19.86	10.029		
3,800.0	3,761.9	3,794.7	3,764.0	10.9	10.2	-115.91	-442.2	-13.1	205.1	184.7	20.46	10.025		
3,900.0	3,860.6	3,894.6	3,862.8	11.3	10.5	-115.94	-456.3	-14.2	211.1	190.0	21.06	10.021		
4,000.0	3,959.4	3,994.4	3,961.6	11.6	10.8	-115.96	-470.3	-15.3	217.0	195.3	21.66	10.017		
4,100.0	4,058.1	4,094.2	4,060.4	11.9	11.1	-115.99	-484.4	-16.3	222.9	200.7	22.26	10.014		
4,200.0	4,156.9	4,194.0	4,159.3	12.2	11.4	-116.02	-498.4	-17.4	228.9	206.0	22.86	10.010		
4,300.0	4,255.6	4,293.9	4,258.1	12.6	11.7	-116.04	-512.5	-18.4	234.8	211.3	23.46	10.007		
4,400.0	4,354.4	4,393.7	4,356.9	12.9	12.0	-116.06	-526.5	-19.5	240.7	216.7	24.06	10.004		
4,500.0	4,453.1	4,493.5	4,455.7	13.2	12.3	-116.08	-540.6	-20.5	246.7	222.0	24.66	10.000		
4,600.0	4,551.9	4,593.3	4,554.6	13.6	12.6	-116.10	-554.6	-21.6	252.6	227.3	25.27	9.998		
4,700.0	4,650.6	4,693.2	4,653.4	13.9	12.9	-116.12	-568.7	-22.7	258.5	232.7	25.87	9.995		
4,800.0	4,749.4	4,793.0	4,752.2	14.2	13.2	-116.14	-582.7	-23.7	264.5	238.0	26.47	9.992		
4,900.0	4,848.1	4,892.8	4,851.0	14.5	13.5	-116.16	-596.8	-24.8	270.4	243.3	27.07	9.989		
5,000.0	4,946.9	4,992.6	4,949.9	14.9	13.8	-116.18	-610.8	-25.8	276.3	248.6	27.67	9.987		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #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 Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,045.6	5,092.5	5,048.7	15.2	14.1	-116.19	-624.8	-26.9	282.2	254.0	28.27	9.984		
5,200.0	5,144.4	5,192.3	5,147.5	15.5	14.4	-116.21	-638.9	-27.9	288.2	259.3	28.87	9.982		
5,300.0	5,243.1	5,292.1	5,246.3	15.8	14.7	-116.22	-652.9	-29.0	294.1	264.6	29.47	9.980		
5,400.0	5,341.9	5,391.9	5,345.2	16.2	15.0	-116.24	-667.0	-30.1	300.0	270.0	30.07	9.978		
5,500.0	5,440.6	5,491.7	5,444.0	16.5	15.3	-116.25	-681.0	-31.1	306.0	275.3	30.67	9.976		
5,600.0	5,539.4	5,591.6	5,542.8	16.8	15.6	-116.26	-695.1	-32.2	311.9	280.6	31.27	9.973		
5,700.0	5,638.1	5,691.4	5,641.6	17.1	15.9	-116.28	-709.1	-33.2	317.8	286.0	31.87	9.972		
5,800.0	5,736.9	5,791.2	5,740.5	17.5	16.3	-116.29	-723.2	-34.3	323.8	291.3	32.48	9.970		
5,900.0	5,835.6	5,891.0	5,839.3	17.8	16.6	-116.30	-737.2	-35.3	329.7	296.6	33.08	9.968		
6,000.0	5,934.4	5,990.9	5,938.1	18.1	16.9	-116.31	-751.3	-36.4	335.6	302.0	33.68	9.966		
6,100.0	6,033.1	6,090.7	6,036.9	18.4	17.2	-116.32	-765.3	-37.5	341.6	307.3	34.28	9.964		
6,200.0	6,131.9	6,190.5	6,135.8	18.8	17.5	-116.34	-779.4	-38.5	347.5	312.6	34.88	9.963		
6,300.0	6,230.6	6,290.3	6,234.6	19.1	17.8	-116.35	-793.4	-39.6	353.4	317.9	35.48	9.961		
6,400.0	6,329.4	6,390.2	6,333.4	19.4	18.1	-116.36	-807.5	-40.6	359.4	323.3	36.08	9.959		
6,500.0	6,428.1	6,490.0	6,432.2	19.7	18.4	-116.37	-821.5	-41.7	365.3	328.6	36.68	9.958		
6,600.0	6,526.9	6,589.8	6,531.1	20.1	18.7	-116.37	-835.6	-42.7	371.2	333.9	37.28	9.956		
6,700.0	6,625.6	6,689.6	6,629.9	20.4	19.0	-116.38	-849.6	-43.8	377.1	339.3	37.89	9.955		
6,800.0	6,724.5	6,789.1	6,728.5	20.7	19.2	-130.64	-862.0	-44.8	383.1	344.7	38.38	9.983		
6,900.0	6,824.2	6,888.1	6,827.5	20.8	19.3	139.36	-862.6	-45.8	389.1	350.6	38.45	10.118		
7,000.0	6,923.1	6,987.0	6,925.4	20.7	19.2	107.75	-849.5	-46.6	395.0	356.8	38.17	10.347		
7,100.0	7,019.2	7,085.8	7,020.6	20.5	18.9	99.59	-823.0	-47.3	400.7	363.1	37.56	10.667		
7,200.0	7,110.8	7,184.7	7,111.2	20.2	18.4	95.88	-783.8	-47.8	406.1	369.4	36.66	11.076		
7,300.0	7,196.0	7,283.5	7,195.5	19.7	17.9	93.73	-732.4	-48.1	411.1	375.6	35.53	11.569		
7,400.0	7,273.2	7,382.4	7,272.0	19.1	17.2	92.33	-669.9	-48.3	415.6	381.4	34.24	12.138		
7,500.0	7,340.8	7,481.3	7,339.3	18.5	16.5	91.37	-597.4	-48.3	419.5	386.6	32.86	12.767		
7,600.0	7,397.6	7,580.3	7,395.9	17.9	15.8	90.71	-516.3	-48.1	422.8	391.3	31.49	13.426		
7,700.0	7,442.5	7,679.4	7,440.8	17.3	15.2	90.27	-428.1	-47.8	425.3	395.0	30.23	14.068		
7,800.0	7,474.5	7,778.5	7,473.2	16.8	14.6	90.03	-334.5	-47.3	427.0	397.8	29.19	14.631		
7,900.0	7,493.1	7,877.8	7,492.4	16.5	14.3	89.95	-237.2	-46.6	427.9	399.5	28.45	15.041		
8,000.0	7,498.0	7,977.3	7,498.0	16.3	14.1	90.00	-138.0	-45.8	428.1	400.0	28.09	15.238		
8,100.0	7,498.0	8,077.3	7,498.0	16.4	14.1	90.00	-38.0	-44.9	427.9	399.7	28.16	15.194		
8,200.0	7,498.0	8,177.3	7,498.0	16.6	14.3	90.00	62.0	-44.1	427.7	399.0	28.65	14.929		
8,300.0	7,498.0	8,277.3	7,498.0	16.9	14.8	90.00	162.0	-43.2	427.5	398.0	29.55	14.470		
8,400.0	7,498.0	8,377.3	7,498.0	17.5	15.4	90.00	262.0	-42.3	427.3	396.5	30.82	13.866		
8,500.0	7,498.0	8,477.3	7,498.0	18.2	16.2	90.00	362.0	-41.4	427.1	394.7	32.42	13.175		
8,600.0	7,498.0	8,577.3	7,498.0	19.1	17.2	90.00	462.0	-40.6	427.0	392.7	34.31	12.444		
8,700.0	7,498.0	8,677.3	7,498.0	20.0	18.2	90.00	562.0	-39.7	426.8	390.3	36.44	11.712		
8,800.0	7,498.0	8,777.3	7,498.0	21.1	19.4	90.00	662.0	-38.8	426.6	387.8	38.77	11.003		
8,900.0	7,498.0	8,877.3	7,498.0	22.2	20.7	90.00	762.0	-37.9	426.4	385.2	41.27	10.333		
9,000.0	7,498.0	8,977.3	7,498.0	23.5	22.0	90.00	862.0	-37.1	426.2	382.3	43.90	9.709		
9,100.0	7,498.0	9,077.3	7,498.0	24.8	23.4	90.00	962.0	-36.2	426.1	379.4	46.65	9.132		
9,200.0	7,498.0	9,177.3	7,498.0	26.1	24.8	90.00	1,062.0	-35.3	425.9	376.4	49.50	8.603		
9,300.0	7,498.0	9,277.3	7,498.0	27.5	26.2	90.00	1,162.0	-34.5	425.7	373.3	52.43	8.120		
9,400.0	7,498.0	9,377.3	7,498.0	28.9	27.7	90.00	1,262.0	-33.6	425.5	370.1	55.42	7.677		
9,500.0	7,498.0	9,477.3	7,498.0	30.4	29.3	90.00	1,362.0	-32.7	425.3	366.9	58.48	7.274		
9,600.0	7,498.0	9,577.3	7,498.0	31.9	30.8	90.00	1,462.0	-31.8	425.2	363.6	61.58	6.904		
9,700.0	7,498.0	9,677.3	7,498.0	33.4	32.4	90.00	1,562.0	-31.0	425.0	360.3	64.72	6.566		
9,800.0	7,498.0	9,777.3	7,498.0	34.9	34.0	90.00	1,662.0	-30.1	424.8	356.9	67.90	6.256		
9,900.0	7,498.0	9,877.3	7,498.0	36.5	35.6	90.00	1,762.0	-29.2	424.6	353.5	71.11	5.972		
10,000.0	7,498.0	9,977.3	7,498.0	38.1	37.2	90.00	1,862.0	-28.3	424.4	350.1	74.34	5.709		
10,100.0	7,498.0	10,077.3	7,498.0	39.7	38.8	90.00	1,962.0	-27.5	424.3	346.6	77.60	5.467		
10,200.0	7,498.0	10,177.3	7,498.0	41.3	40.5	90.00	2,062.0	-26.6	424.1	343.2	80.88	5.243		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4H-17H-P267 - DD - Plan #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			
10,300.0	7,498.0	10,277.3	7,498.0	42.9	42.1	90.00	2,162.0	-25.7	423.9	339.7	84.18	5.035		
10,400.0	7,498.0	10,377.3	7,498.0	44.5	43.8	90.00	2,262.0	-24.9	423.7	336.2	87.50	4.842		
10,500.0	7,498.0	10,477.3	7,498.0	46.2	45.4	90.00	2,361.9	-24.0	423.5	332.7	90.83	4.663		
10,600.0	7,498.0	10,577.3	7,498.0	47.8	47.1	90.00	2,461.9	-23.1	423.3	329.2	94.17	4.496		
10,700.0	7,498.0	10,677.3	7,498.0	49.5	48.8	90.00	2,561.9	-22.2	423.2	325.6	97.53	4.339		
10,800.0	7,498.0	10,777.3	7,498.0	51.1	50.5	90.00	2,661.9	-21.4	423.0	322.1	100.89	4.193		
10,900.0	7,498.0	10,877.3	7,498.0	52.8	52.2	90.00	2,761.9	-20.5	422.8	318.5	104.26	4.055		
11,000.0	7,498.0	10,977.3	7,498.0	54.5	53.8	90.00	2,861.9	-19.6	422.6	315.0	107.65	3.926		
11,100.0	7,498.0	11,077.3	7,498.0	56.1	55.5	90.00	2,961.9	-18.7	422.4	311.4	111.04	3.804		
11,200.0	7,498.0	11,177.3	7,498.0	57.8	57.2	90.00	3,061.9	-17.9	422.3	307.8	114.44	3.690		
11,300.0	7,498.0	11,277.3	7,498.0	59.5	58.9	90.00	3,161.9	-17.0	422.1	304.2	117.84	3.582		
11,400.0	7,498.0	11,377.3	7,498.0	61.2	60.6	90.00	3,261.9	-16.1	421.9	300.6	121.25	3.480		
11,500.0	7,498.0	11,477.3	7,498.0	62.9	62.4	90.00	3,361.9	-15.3	421.7	297.1	124.67	3.383		
11,600.0	7,498.0	11,577.3	7,498.0	64.6	64.1	90.00	3,461.9	-14.4	421.5	293.5	128.09	3.291		
11,700.0	7,498.0	11,677.3	7,498.0	66.3	65.8	90.00	3,561.9	-13.5	421.4	289.8	131.51	3.204		
11,800.0	7,498.0	11,777.3	7,498.0	68.0	67.5	90.00	3,661.9	-12.6	421.2	286.2	134.94	3.121		
11,900.0	7,498.0	11,877.3	7,498.0	69.7	69.2	90.00	3,761.9	-11.8	421.0	282.6	138.37	3.042		
12,000.0	7,498.0	11,977.3	7,498.0	71.4	70.9	90.00	3,861.9	-10.9	420.8	279.0	141.81	2.967		
12,100.0	7,498.0	12,077.3	7,498.0	73.1	72.6	90.00	3,961.9	-10.0	420.6	275.4	145.25	2.896		
12,200.0	7,498.0	12,177.3	7,498.0	74.8	74.4	90.00	4,061.9	-9.1	420.5	271.8	148.70	2.828		
12,300.0	7,498.0	12,277.3	7,498.0	76.5	76.1	90.00	4,161.9	-8.3	420.3	268.1	152.14	2.762		
12,400.0	7,498.0	12,377.3	7,498.0	78.2	77.8	90.00	4,261.9	-7.4	420.1	264.5	155.59	2.700		
12,500.0	7,498.0	12,477.3	7,498.0	79.9	79.5	90.00	4,361.9	-6.5	419.9	260.9	159.04	2.640		
12,600.0	7,498.0	12,577.3	7,498.0	81.7	81.3	90.00	4,461.9	-5.7	419.7	257.2	162.50	2.583		
12,700.0	7,498.0	12,677.3	7,498.0	83.4	83.0	90.00	4,561.9	-4.8	419.5	253.6	165.96	2.528		
12,800.0	7,498.0	12,777.3	7,498.0	85.1	84.7	90.00	4,661.9	-3.9	419.4	250.0	169.41	2.475		
12,900.0	7,498.0	12,877.3	7,498.0	86.8	86.5	90.00	4,761.9	-3.0	419.2	246.3	172.87	2.425		
13,000.0	7,498.0	12,977.3	7,498.0	88.6	88.2	90.00	4,861.8	-2.2	419.0	242.7	176.34	2.376		
13,100.0	7,498.0	13,077.3	7,498.0	90.3	89.9	90.00	4,961.8	-1.3	418.8	239.0	179.80	2.329		
13,200.0	7,498.0	13,177.3	7,498.0	92.0	91.6	90.00	5,061.8	-0.4	418.6	235.4	183.27	2.284		
13,300.0	7,498.0	13,277.3	7,498.0	93.7	93.4	90.00	5,161.8	0.4	418.5	231.7	186.74	2.241		
13,400.0	7,498.0	13,377.3	7,498.0	95.5	95.1	90.00	5,261.8	1.3	418.3	228.1	190.20	2.199		
13,500.0	7,498.0	13,477.3	7,498.0	97.2	96.9	90.00	5,361.8	2.2	418.1	224.4	193.68	2.159		
13,589.9	7,498.0	13,567.2	7,498.0	98.7	98.4	90.00	5,451.8	3.0	418.0	221.2	196.82	2.124		
13,600.0	7,498.0	13,577.3	7,498.0	98.9	98.6	90.00	5,461.8	3.1	417.9	220.8	197.17	2.120		
13,700.0	7,498.0	13,677.3	7,498.0	100.6	100.3	90.00	5,561.8	3.9	418.9	218.1	200.77	2.086		
13,800.0	7,498.0	13,777.2	7,498.0	102.4	102.1	90.00	5,661.8	4.8	421.5	217.2	204.29	2.063		
13,900.0	7,498.0	13,877.2	7,498.0	104.1	103.8	90.00	5,761.7	5.7	424.3	216.6	207.77	2.042		
14,000.0	7,498.0	13,977.1	7,498.0	105.9	105.5	90.00	5,861.7	6.6	427.2	216.0	211.24	2.022		
14,100.0	7,498.0	14,077.1	7,498.0	107.6	107.3	90.00	5,961.6	7.4	430.1	215.3	214.72	2.003		
14,200.0	7,498.0	14,177.1	7,498.0	109.3	109.0	90.00	6,061.6	8.3	432.9	214.7	218.19	1.984		
14,300.0	7,498.0	14,277.0	7,498.0	111.1	110.8	90.00	6,161.6	9.2	435.8	214.1	221.67	1.966		
14,400.0	7,498.0	14,377.0	7,498.0	112.8	112.5	90.00	6,261.5	10.0	438.7	213.5	225.15	1.948		
14,500.0	7,498.0	14,476.9	7,498.0	114.5	114.2	90.00	6,361.5	10.9	441.5	212.9	228.63	1.931		
14,600.0	7,498.0	14,576.9	7,498.0	116.3	116.0	90.00	6,461.4	11.8	444.4	212.3	232.11	1.915		
14,690.0	7,498.0	14,666.8	7,498.0	117.8	117.5	90.00	6,551.3	12.6	447.0	211.7	235.24	1.900 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4F-17H-P267 - DD - Plan #5													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	30.2	30.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	30.2	30.2	30.0	0.24	123.584		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.2	30.2	29.6	0.59	50.888		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	30.2	30.2	29.3	0.94	32.040		
400.0	400.0	400.0	400.0	0.6	0.6	90.05	0.0	30.2	30.2	28.9	1.29	23.381 CC		
423.9	423.9	423.9	423.9	0.7	0.7	-116.25	-0.1	30.2	30.2	28.8	1.38	21.977		
500.0	500.0	500.0	500.0	0.8	0.8	-115.35	-0.9	30.2	30.4	28.8	1.64	18.529 ES		
600.0	599.9	600.0	599.9	1.0	1.0	-116.29	-3.5	30.3	32.0	30.0	2.00	16.015		
700.0	699.7	699.9	699.8	1.2	1.2	-119.32	-7.9	30.3	35.2	32.8	2.37	14.840		
800.0	799.1	799.8	799.4	1.4	1.4	-123.55	-14.0	30.4	40.2	37.5	2.77	14.505		
900.0	898.2	899.6	898.9	1.7	1.6	-128.09	-21.8	30.6	47.2	44.0	3.20	14.746		
1,000.0	996.9	999.4	998.3	2.0	1.8	-131.23	-31.3	30.7	55.3	51.6	3.65	15.135		
1,100.0	1,095.7	1,099.4	1,097.6	2.3	2.1	-132.05	-42.6	30.9	63.0	58.9	4.13	15.239		
1,200.0	1,194.4	1,199.4	1,196.8	2.6	2.3	-131.32	-55.7	31.2	70.2	65.6	4.65	15.100		
1,300.0	1,293.1	1,299.4	1,295.7	2.9	2.6	-129.46	-70.5	31.4	77.1	71.9	5.21	14.789		
1,400.0	1,391.9	1,399.1	1,394.2	3.2	2.9	-127.44	-85.9	31.7	83.9	78.1	5.80	14.473		
1,500.0	1,490.6	1,498.9	1,492.8	3.5	3.2	-125.72	-101.3	32.0	90.8	84.4	6.39	14.203		
1,600.0	1,589.4	1,598.6	1,591.3	3.8	3.5	-124.25	-116.7	32.2	97.8	90.8	7.00	13.973		
1,700.0	1,688.1	1,698.3	1,689.8	4.2	3.8	-122.97	-132.2	32.5	104.8	97.2	7.61	13.775		
1,800.0	1,786.9	1,797.9	1,788.2	4.5	4.1	-121.85	-147.6	32.8	111.9	103.7	8.22	13.606		
1,900.0	1,885.6	1,895.6	1,884.7	4.8	4.4	-120.93	-162.5	34.0	120.0	111.1	8.83	13.585		
2,000.0	1,984.4	1,993.0	1,981.0	5.1	4.7	-120.21	-177.1	36.8	129.8	120.3	9.44	13.753		
2,100.0	2,083.1	2,090.0	2,076.9	5.4	5.0	-119.67	-191.3	41.3	141.3	131.2	10.03	14.077		
2,200.0	2,181.9	2,189.1	2,174.8	5.8	5.3	-119.24	-205.7	46.7	153.7	143.0	10.64	14.444		
2,300.0	2,280.6	2,288.3	2,272.8	6.1	5.6	-118.88	-220.1	52.2	166.1	154.9	11.24	14.772		
2,400.0	2,379.4	2,387.6	2,370.8	6.4	5.9	-118.56	-234.5	57.6	178.5	166.7	11.85	15.067		
2,500.0	2,478.1	2,486.8	2,468.8	6.7	6.2	-118.29	-248.9	63.1	191.0	178.5	12.45	15.334		
2,600.0	2,576.9	2,586.0	2,566.9	7.0	6.5	-118.05	-263.2	68.6	203.4	190.4	13.06	15.576		
2,700.0	2,675.6	2,685.2	2,664.9	7.4	6.8	-117.84	-277.6	74.0	215.9	202.2	13.66	15.797		
2,800.0	2,774.4	2,784.4	2,762.9	7.7	7.2	-117.65	-292.0	79.5	228.3	214.0	14.27	15.999		
2,900.0	2,873.1	2,883.7	2,860.9	8.0	7.5	-117.48	-306.4	84.9	240.8	225.9	14.88	16.184		
3,000.0	2,971.9	2,982.9	2,958.9	8.3	7.8	-117.33	-320.8	90.4	253.2	237.7	15.48	16.356		
3,100.0	3,070.6	3,082.1	3,057.0	8.7	8.1	-117.19	-335.2	95.8	265.7	249.6	16.09	16.514		
3,200.0	3,169.4	3,181.3	3,155.0	9.0	8.4	-117.07	-349.6	101.3	278.1	261.4	16.69	16.661		
3,300.0	3,268.1	3,280.5	3,253.0	9.3	8.7	-116.95	-363.9	106.8	290.6	273.3	17.30	16.797		
3,400.0	3,366.9	3,379.8	3,351.0	9.6	9.0	-116.85	-378.3	112.2	303.0	285.1	17.90	16.925		
3,500.0	3,465.6	3,479.0	3,449.0	10.0	9.4	-116.75	-392.7	117.7	315.5	297.0	18.51	17.044		
3,600.0	3,564.4	3,578.2	3,547.1	10.3	9.7	-116.66	-407.1	123.1	327.9	308.8	19.12	17.155		
3,700.0	3,663.1	3,677.4	3,645.1	10.6	10.0	-116.58	-421.5	128.6	340.4	320.7	19.72	17.259		
3,800.0	3,761.9	3,776.6	3,743.1	10.9	10.3	-116.50	-435.9	134.0	352.9	332.5	20.33	17.358		
3,900.0	3,860.6	3,875.9	3,841.1	11.3	10.6	-116.43	-450.3	139.5	365.3	344.4	20.93	17.450		
4,000.0	3,959.4	3,975.1	3,939.1	11.6	10.9	-116.36	-464.6	144.9	377.8	356.2	21.54	17.538		
4,100.0	4,058.1	4,074.3	4,037.2	11.9	11.2	-116.30	-479.0	150.4	390.2	368.1	22.15	17.620		
4,200.0	4,156.9	4,173.5	4,135.2	12.2	11.6	-116.24	-493.4	155.9	402.7	379.9	22.75	17.698		
4,300.0	4,255.6	4,272.7	4,233.2	12.6	11.9	-116.18	-507.8	161.3	415.2	391.8	23.36	17.772		
4,400.0	4,354.4	4,372.0	4,331.2	12.9	12.2	-116.13	-522.2	166.8	427.6	403.7	23.97	17.843		
4,500.0	4,453.1	4,471.2	4,429.2	13.2	12.5	-116.08	-536.6	172.2	440.1	415.5	24.57	17.910		
4,600.0	4,551.9	4,570.4	4,527.2	13.6	12.8	-116.03	-551.0	177.7	452.5	427.4	25.18	17.973		
4,700.0	4,650.6	4,669.6	4,625.3	13.9	13.2	-115.99	-565.3	183.1	465.0	439.2	25.79	18.034		
4,800.0	4,749.4	4,768.8	4,723.3	14.2	13.5	-115.95	-579.7	188.6	477.5	451.1	26.39	18.092		
4,900.0	4,848.1	4,868.1	4,821.3	14.5	13.8	-115.91	-594.1	194.1	489.9	462.9	27.00	18.147		
5,000.0	4,946.9	4,967.3	4,919.3	14.9	14.1	-115.87	-608.5	199.5	502.4	474.8	27.61	18.199		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4I-17H-P267 - DD - Plan #5													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,045.6	5,066.5	5,017.3	15.2	14.4	-115.84	-622.9	205.0	514.9	486.7	28.21	18.250		
5,200.0	5,144.4	5,165.7	5,115.4	15.5	14.7	-115.80	-637.3	210.4	527.3	498.5	28.82	18.298		
5,300.0	5,243.1	5,264.9	5,213.4	15.8	15.1	-115.77	-651.7	215.9	539.8	510.4	29.43	18.345		
5,400.0	5,341.9	5,364.2	5,311.4	16.2	15.4	-115.74	-666.0	221.3	552.3	522.2	30.03	18.389		
5,500.0	5,440.6	5,463.4	5,409.4	16.5	15.7	-115.71	-680.4	226.8	564.7	534.1	30.64	18.432		
5,600.0	5,539.4	5,562.6	5,507.4	16.8	16.0	-115.68	-694.8	232.3	577.2	545.9	31.25	18.473		
5,700.0	5,638.1	5,661.8	5,605.5	17.1	16.3	-115.65	-709.2	237.7	589.7	557.8	31.85	18.512		
5,800.0	5,736.9	5,761.0	5,703.5	17.5	16.6	-115.63	-723.6	243.2	602.1	569.7	32.46	18.550		
5,900.0	5,835.6	5,860.3	5,801.5	17.8	17.0	-115.60	-738.0	248.6	614.6	581.5	33.07	18.587		
6,000.0	5,934.4	5,959.5	5,899.5	18.1	17.3	-115.58	-752.4	254.1	627.1	593.4	33.67	18.622		
6,100.0	6,033.1	6,058.7	5,997.5	18.4	17.6	-115.55	-766.7	259.5	639.5	605.2	34.28	18.656		
6,200.0	6,131.9	6,157.9	6,095.6	18.8	17.9	-115.53	-781.1	265.0	652.0	617.1	34.89	18.689		
6,300.0	6,230.6	6,257.1	6,193.6	19.1	18.2	-115.51	-795.5	270.4	664.4	629.0	35.49	18.721		
6,400.0	6,329.4	6,356.4	6,291.6	19.4	18.6	-115.49	-809.9	275.9	676.9	640.8	36.10	18.751		
6,500.0	6,428.1	6,455.6	6,389.6	19.7	18.9	-115.47	-824.3	281.4	689.4	652.7	36.71	18.781		
6,600.0	6,526.9	6,554.8	6,487.6	20.1	19.2	-115.45	-838.7	286.8	701.8	664.5	37.31	18.809		
6,700.0	6,625.6	6,654.0	6,585.7	20.4	19.5	-115.43	-853.1	292.3	714.3	676.4	37.92	18.837		
6,800.0	6,724.5	6,753.2	6,684.1	20.7	19.7	-130.10	-862.9	297.8	726.8	688.4	38.37	18.944		
6,900.0	6,824.2	6,851.3	6,781.7	20.8	19.7	138.86	-856.4	303.2	739.3	700.9	38.34	19.282		
7,000.0	6,923.1	6,947.5	6,875.0	20.7	19.5	106.01	-833.8	308.4	751.7	713.8	37.91	19.829		
7,100.0	7,019.2	7,041.6	6,961.4	20.5	19.1	96.44	-797.0	313.2	763.9	726.7	37.12	20.579		
7,200.0	7,110.8	7,133.3	7,038.6	20.2	18.6	91.21	-748.0	317.5	775.7	739.6	36.04	21.523		
7,300.0	7,196.0	7,222.4	7,105.3	19.7	18.0	87.47	-689.2	321.2	787.0	752.2	34.75	22.648		
7,400.0	7,273.2	7,309.0	7,160.6	19.1	17.3	84.44	-622.8	324.3	797.7	764.3	33.33	23.930		
7,500.0	7,340.8	7,393.0	7,204.2	18.5	16.7	81.85	-551.0	326.7	807.6	775.7	31.88	25.329		
7,600.0	7,397.6	7,474.6	7,236.0	17.9	16.1	79.59	-476.0	328.5	816.5	786.0	30.49	26.779		
7,700.0	7,442.5	7,550.0	7,255.7	17.3	15.6	77.66	-403.3	329.6	824.4	795.1	29.27	28.166		
7,800.0	7,474.5	7,631.2	7,266.1	16.8	15.2	75.88	-322.8	330.1	831.0	802.8	28.23	29.443		
7,900.0	7,493.1	7,720.0	7,267.0	16.5	14.9	74.40	-234.0	330.2	835.9	808.4	27.47	30.433		
8,000.0	7,498.0	7,819.8	7,267.0	16.3	14.7	73.97	-134.2	330.2	836.6	809.4	27.13	30.837		
8,100.0	7,498.0	7,919.8	7,267.0	16.4	14.8	73.95	-34.2	330.2	835.5	808.3	27.22	30.701		
8,200.0	7,498.0	8,019.8	7,267.0	16.6	15.0	73.93	65.8	330.2	834.5	806.8	27.72	30.111		
8,300.0	7,498.0	8,119.8	7,267.0	16.9	15.4	73.91	165.8	330.2	833.5	804.9	28.61	29.137		
8,400.0	7,498.0	8,219.8	7,267.0	17.5	16.0	73.89	265.8	330.2	832.5	802.7	29.85	27.886		
8,500.0	7,498.0	8,319.8	7,267.0	18.2	16.8	73.87	365.8	330.2	831.5	800.1	31.41	26.468		
8,600.0	7,498.0	8,419.8	7,267.0	19.1	17.7	73.85	465.8	330.2	830.5	797.2	33.24	24.981		
8,700.0	7,498.0	8,519.8	7,267.0	20.0	18.8	73.83	565.7	330.2	829.5	794.2	35.30	23.497		
8,800.0	7,498.0	8,619.8	7,267.0	21.1	19.9	73.81	665.7	330.2	828.5	790.9	37.55	22.064		
8,900.0	7,498.0	8,719.8	7,267.0	22.2	21.1	73.79	765.7	330.2	827.4	787.5	39.95	20.710		
9,000.0	7,498.0	8,819.8	7,267.0	23.5	22.4	73.77	865.7	330.2	826.4	783.9	42.49	19.451		
9,100.0	7,498.0	8,919.8	7,267.0	24.8	23.8	73.75	965.7	330.2	825.4	780.3	45.13	18.289		
9,200.0	7,498.0	9,020.0	7,267.0	26.1	25.2	73.73	1,066.0	330.2	824.4	776.5	47.87	17.222		
9,300.0	7,498.0	9,120.9	7,267.0	27.5	26.6	73.70	1,166.9	330.1	823.3	772.6	50.69	16.242		
9,400.0	7,498.0	9,221.8	7,267.0	28.9	28.1	73.68	1,267.8	329.9	822.1	768.5	53.58	15.344		
9,500.0	7,498.0	9,322.7	7,267.0	30.4	29.6	73.65	1,368.7	329.6	820.8	764.3	56.52	14.523		
9,600.0	7,498.0	9,423.6	7,267.0	31.9	31.2	73.62	1,469.6	329.1	819.4	759.9	59.50	13.771		
9,700.0	7,498.0	9,524.5	7,267.0	33.4	32.8	73.59	1,570.5	328.6	817.8	755.3	62.52	13.080		
9,800.0	7,498.0	9,625.4	7,267.0	34.9	34.4	73.56	1,671.4	327.9	816.2	750.6	65.58	12.446		
9,900.0	7,498.0	9,726.3	7,267.0	36.5	36.0	73.52	1,772.3	327.1	814.4	745.7	68.66	11.861		
10,000.0	7,498.0	9,827.2	7,267.0	38.1	37.6	73.48	1,873.1	326.2	812.5	740.8	71.77	11.322		
10,100.0	7,498.0	9,928.1	7,267.0	39.7	39.2	73.44	1,974.0	325.2	810.5	735.7	74.89	10.823		
10,200.0	7,498.0	10,029.0	7,267.0	41.3	40.9	73.39	2,074.9	324.0	808.5	730.4	78.04	10.360		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4I-17H-P267 - DD - Plan #5												Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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)			
10,300.0	7,498.0	10,129.8	7,267.0	42.9	42.5	73.35	2,175.7	322.8	806.2	725.0	81.20	9.929	
10,400.0	7,498.0	10,230.7	7,267.0	44.5	44.2	73.30	2,276.6	321.4	803.9	719.6	84.37	9.529	
10,500.0	7,498.0	10,331.6	7,267.0	46.2	45.8	73.24	2,377.5	319.9	801.5	714.0	87.55	9.155	
10,600.0	7,498.0	10,432.4	7,267.0	47.8	47.5	73.19	2,478.3	318.3	799.0	708.2	90.74	8.805	
10,700.0	7,498.0	10,533.3	7,267.0	49.5	49.2	73.13	2,579.1	316.6	796.3	702.4	93.94	8.476	
10,800.0	7,498.0	10,634.1	7,267.0	51.1	50.9	73.07	2,679.9	314.7	793.6	696.4	97.15	8.168	
10,900.0	7,498.0	10,734.9	7,267.0	52.8	52.6	73.01	2,780.8	312.8	790.7	690.3	100.36	7.878	
11,000.0	7,498.0	10,835.8	7,267.0	54.5	54.3	72.94	2,881.6	310.7	787.7	684.1	103.58	7.605	
11,100.0	7,498.0	10,936.6	7,267.0	56.1	56.0	72.87	2,982.4	308.5	784.6	677.8	106.80	7.347	
11,200.0	7,498.0	11,037.4	7,267.0	57.8	57.7	72.80	3,083.1	306.2	781.4	671.4	110.02	7.103	
11,300.0	7,498.0	11,138.2	7,267.0	59.5	59.4	72.72	3,183.9	303.8	778.1	664.9	113.24	6.871	
11,400.0	7,498.0	11,239.0	7,267.0	61.2	61.1	72.64	3,284.7	301.2	774.7	658.2	116.47	6.652	
11,500.0	7,498.0	11,339.8	7,267.0	62.9	62.8	72.56	3,385.4	298.6	771.2	651.5	119.69	6.443	
11,600.0	7,498.0	11,440.5	7,267.0	64.6	64.5	72.47	3,486.2	295.8	767.6	644.6	122.91	6.245	
11,700.0	7,498.0	11,541.3	7,267.0	66.3	66.3	72.38	3,586.9	292.9	763.8	637.7	126.13	6.056	
11,800.0	7,498.0	11,642.1	7,267.0	68.0	68.0	72.29	3,687.6	289.9	760.0	630.6	129.35	5.875	
11,900.0	7,498.0	11,742.8	7,267.0	69.7	69.7	72.19	3,788.3	286.7	756.0	623.4	132.57	5.703	
12,000.0	7,498.0	11,843.6	7,267.0	71.4	71.4	72.09	3,889.0	283.5	751.9	616.2	135.79	5.538	
12,100.0	7,498.0	11,944.3	7,267.0	73.1	73.1	71.99	3,989.7	280.1	747.8	608.8	139.00	5.380	
12,200.0	7,498.0	12,045.0	7,267.0	74.8	74.9	71.88	4,090.3	276.7	743.5	601.3	142.20	5.228	
12,300.0	7,498.0	12,145.7	7,267.0	76.5	76.6	71.77	4,191.0	273.1	739.1	593.7	145.40	5.083	
12,400.0	7,498.0	12,246.4	7,267.0	78.2	78.3	71.65	4,291.6	269.4	734.6	586.0	148.60	4.944	
12,500.0	7,498.0	12,347.1	7,267.0	79.9	80.1	71.53	4,392.2	265.5	730.0	578.2	151.78	4.809	
12,600.0	7,498.0	12,447.8	7,267.0	81.7	81.8	71.41	4,492.8	261.6	725.3	570.3	154.97	4.680	
12,700.0	7,498.0	12,548.5	7,267.0	83.4	83.5	71.28	4,593.4	257.5	720.5	562.3	158.14	4.556	
12,800.0	7,498.0	12,649.1	7,267.0	85.1	85.3	71.14	4,694.0	253.4	715.6	554.2	161.30	4.436	
12,900.0	7,498.0	12,749.7	7,267.0	86.8	87.0	71.00	4,794.5	249.1	710.5	546.1	164.46	4.320	
13,000.0	7,498.0	12,850.4	7,267.0	88.6	88.7	70.86	4,895.1	244.7	705.4	537.8	167.61	4.209	
13,100.0	7,498.0	12,951.0	7,267.0	90.3	90.5	70.71	4,995.6	240.2	700.2	529.4	170.74	4.101	
13,200.0	7,498.0	13,051.6	7,267.0	92.0	92.2	70.55	5,096.1	235.5	694.8	521.0	173.87	3.996	
13,300.0	7,498.0	13,152.2	7,267.0	93.7	94.0	70.39	5,196.5	230.8	689.4	512.4	176.98	3.895	
13,400.0	7,498.0	13,252.7	7,267.0	95.5	95.7	70.22	5,297.0	225.9	683.8	503.7	180.08	3.797	
13,500.0	7,498.0	13,353.3	7,267.0	97.2	97.4	70.05	5,397.4	220.9	678.2	495.0	183.17	3.702	
13,600.0	7,498.0	13,453.9	7,267.0	98.9	99.2	69.88	5,497.9	215.8	672.4	486.2	186.26	3.610	
13,700.0	7,498.0	13,554.5	7,267.0	100.6	100.9	69.74	5,598.3	210.6	667.7	478.2	189.45	3.524	
13,800.0	7,498.0	13,655.1	7,267.0	102.4	102.7	69.64	5,698.8	205.3	664.3	471.7	192.62	3.449	
13,887.0	7,498.0	13,721.2	7,267.0	103.9	103.8	69.61	5,764.8	202.8	662.9	467.8	195.07	3.398	
13,900.0	7,498.0	13,731.0	7,267.0	104.1	104.0	69.61	5,774.6	202.7	662.9	467.5	195.44	3.392	
14,000.0	7,498.0	13,800.0	7,267.0	105.9	105.2	69.65	5,843.7	202.9	665.3	467.0	198.26	3.356	
14,100.0	7,498.0	13,881.5	7,267.0	107.6	106.6	69.81	5,925.1	206.4	671.3	469.9	201.40	3.333	
14,200.0	7,498.0	13,956.1	7,267.0	109.3	107.9	70.03	5,999.5	212.6	681.0	476.4	204.53	3.330	
14,300.0	7,498.0	14,030.1	7,267.0	111.1	109.2	70.33	6,072.8	221.6	694.3	486.6	207.73	3.343	
14,400.0	7,498.0	14,100.0	7,267.0	112.8	110.4	70.68	6,141.9	232.8	711.3	500.4	210.93	3.372	
14,500.0	7,498.0	14,324.8	7,267.0	114.5	114.3	71.54	6,364.3	261.6	729.7	512.4	217.30	3.358	
14,600.0	7,498.0	14,512.3	7,267.0	116.3	117.5	71.08	6,550.1	239.8	716.0	494.6	221.46	3.233	
14,671.4	7,498.0	14,512.3	7,267.0	117.5	117.5	71.08	6,550.1	239.8	712.5	489.8	222.63	3.200	
14,690.0	7,498.0	14,512.3	7,267.0	117.8	117.5	71.08	6,550.1	239.8	712.7	489.8	222.94	3.197 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 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	90.03	0.0	40.3	40.3					
100.0	100.0	100.0	100.0	0.1	0.1	90.03	0.0	40.3	40.3	40.0	0.24	164.779		
200.0	200.0	200.0	200.0	0.3	0.3	90.03	0.0	40.3	40.3	39.7	0.59	67.850		
300.0	300.0	300.0	300.0	0.5	0.5	90.03	0.0	40.3	40.3	39.3	0.94	42.720		
333.3	333.3	333.3	333.3	0.5	0.5	90.03	0.0	40.3	40.3	39.2	1.06	38.026 CC, ES		
400.0	400.0	399.3	399.3	0.6	0.6	90.03	0.0	40.7	40.7	39.4	1.29	31.536		
500.0	500.0	497.8	497.7	0.8	0.8	-116.70	-0.1	44.1	44.3	42.7	1.64	27.082		
600.0	599.9	597.2	596.9	1.0	1.0	-119.93	-0.1	49.8	51.7	49.7	1.99	26.004		
700.0	699.7	696.6	696.2	1.2	1.2	-125.04	-0.1	55.5	61.2	58.9	2.35	26.046		
800.0	799.1	795.6	795.0	1.4	1.4	-130.80	-0.2	61.3	73.3	70.6	2.72	26.915		
900.0	898.2	894.1	893.4	1.7	1.6	-136.43	-0.2	67.0	88.5	85.4	3.11	28.461		
1,000.0	996.9	992.3	991.4	2.0	1.8	-141.18	-0.3	72.6	105.7	102.2	3.49	30.259		
1,100.0	1,095.7	1,090.5	1,089.4	2.3	2.0	-144.60	-0.3	78.3	123.4	119.5	3.88	31.846		
1,200.0	1,194.4	1,188.7	1,187.4	2.6	2.2	-147.15	-0.4	84.0	141.5	137.2	4.26	33.236		
1,300.0	1,293.1	1,286.8	1,285.5	2.9	2.4	-149.13	-0.4	89.7	159.7	155.1	4.64	34.453		
1,400.0	1,391.9	1,385.0	1,383.5	3.2	2.6	-150.70	-0.5	95.4	178.1	173.1	5.02	35.522		
1,500.0	1,490.6	1,483.2	1,481.5	3.5	2.8	-151.97	-0.5	101.0	196.7	191.3	5.39	36.465		
1,600.0	1,589.4	1,581.4	1,579.5	3.8	3.0	-153.03	-0.5	106.7	215.3	209.5	5.77	37.302		
1,700.0	1,688.1	1,679.6	1,677.5	4.2	3.2	-153.92	-0.6	112.4	233.9	227.8	6.15	38.048		
1,800.0	1,786.9	1,777.8	1,775.6	4.5	3.4	-154.68	-0.6	118.1	252.6	246.1	6.52	38.716		
1,900.0	1,885.6	1,876.0	1,873.6	4.8	3.6	-155.33	-0.7	123.8	271.3	264.4	6.90	39.319		
2,000.0	1,984.4	1,974.1	1,971.6	5.1	3.8	-155.90	-0.7	129.4	290.1	282.8	7.28	39.865		
2,100.0	2,083.1	2,072.3	2,069.6	5.4	3.9	-156.40	-0.8	135.1	308.9	301.2	7.65	40.360		
2,200.0	2,181.9	2,170.5	2,167.7	5.8	4.1	-156.84	-0.8	140.8	327.7	319.7	8.03	40.813		
2,300.0	2,280.6	2,268.7	2,265.7	6.1	4.3	-157.23	-0.9	146.5	346.5	338.1	8.41	41.227		
2,400.0	2,379.4	2,366.9	2,363.7	6.4	4.5	-157.59	-0.9	152.2	365.4	356.6	8.78	41.609		
2,500.0	2,478.1	2,465.1	2,461.7	6.7	4.7	-157.90	-0.9	157.9	384.2	375.1	9.16	41.960		
2,600.0	2,576.9	2,563.3	2,559.7	7.0	4.9	-158.19	-1.0	163.5	403.1	393.5	9.53	42.285		
2,700.0	2,675.6	2,661.4	2,657.8	7.4	5.1	-158.46	-1.0	169.2	421.9	412.0	9.91	42.587		
2,800.0	2,774.4	2,759.6	2,755.8	7.7	5.3	-158.70	-1.1	174.9	440.8	430.5	10.28	42.868		
2,900.0	2,873.1	2,857.8	2,853.8	8.0	5.5	-158.92	-1.1	180.6	459.7	449.0	10.66	43.129		
3,000.0	2,971.9	2,956.0	2,951.8	8.3	5.7	-159.12	-1.2	186.3	478.6	467.6	11.03	43.374		
3,100.0	3,070.6	3,054.2	3,049.8	8.7	5.9	-159.31	-1.2	191.9	497.5	486.1	11.41	43.603		
3,200.0	3,169.4	3,152.4	3,147.9	9.0	6.1	-159.48	-1.3	197.6	516.4	504.6	11.79	43.818		
3,300.0	3,268.1	3,250.6	3,245.9	9.3	6.3	-159.65	-1.3	203.3	535.3	523.1	12.16	44.020		
3,400.0	3,366.9	3,348.7	3,343.9	9.6	6.5	-159.80	-1.3	209.0	554.2	541.7	12.54	44.211		
3,500.0	3,465.6	3,446.9	3,441.9	10.0	6.7	-159.94	-1.4	214.7	573.1	560.2	12.91	44.390		
3,600.0	3,564.4	3,545.1	3,540.0	10.3	6.9	-160.07	-1.4	220.4	592.0	578.8	13.29	44.560		
3,700.0	3,663.1	3,643.3	3,638.0	10.6	7.1	-160.19	-1.5	226.0	611.0	597.3	13.66	44.721		
3,800.0	3,761.9	3,741.5	3,736.0	10.9	7.3	-160.31	-1.5	231.7	629.9	615.8	14.04	44.873		
3,900.0	3,860.6	3,839.7	3,834.0	11.3	7.5	-160.42	-1.6	237.4	648.8	634.4	14.41	45.018		
4,000.0	3,959.4	3,937.9	3,932.0	11.6	7.7	-160.52	-1.6	243.1	667.7	652.9	14.79	45.155		
4,100.0	4,058.1	4,036.0	4,030.1	11.9	7.9	-160.62	-1.7	248.8	686.7	671.5	15.16	45.286		
4,200.0	4,156.9	4,134.2	4,128.1	12.2	8.1	-160.71	-1.7	254.4	705.6	690.1	15.54	45.411		
4,300.0	4,255.6	4,232.4	4,226.1	12.6	8.3	-160.80	-1.7	260.1	724.5	708.6	15.91	45.530		
4,400.0	4,354.4	4,330.6	4,324.1	12.9	8.5	-160.88	-1.8	265.8	743.5	727.2	16.29	45.643		
4,500.0	4,453.1	4,428.8	4,422.1	13.2	8.7	-160.96	-1.8	271.5	762.4	745.7	16.66	45.752		
4,600.0	4,551.9	4,527.0	4,520.2	13.6	8.9	-161.04	-1.9	277.2	781.3	764.3	17.04	45.856		
4,700.0	4,650.6	4,625.2	4,618.2	13.9	9.1	-161.11	-1.9	282.9	800.3	782.9	17.41	45.955		
4,800.0	4,749.4	4,723.3	4,716.2	14.2	9.3	-161.18	-2.0	288.5	819.2	801.4	17.79	46.050		
4,900.0	4,848.1	4,821.5	4,814.2	14.5	9.5	-161.24	-2.0	294.2	838.1	820.0	18.16	46.142		
5,000.0	4,946.9	4,919.7	4,912.2	14.9	9.7	-161.30	-2.1	299.9	857.1	838.5	18.54	46.230		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			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	5,045.6	5,017.9	5,010.3	15.2	9.9	-161.36	-2.1	305.6	876.0	857.1	18.91	46.314		
5,200.0	5,144.4	5,116.1	5,108.3	15.5	10.1	-161.42	-2.2	311.3	895.0	875.7	19.29	46.395		
5,300.0	5,243.1	5,214.3	5,206.3	15.8	10.3	-161.48	-2.2	316.9	913.9	894.2	19.67	46.474		
5,400.0	5,341.9	5,312.5	5,304.3	16.2	10.5	-161.53	-2.2	322.6	932.9	912.8	20.04	46.549		
5,500.0	5,440.6	5,410.6	5,402.4	16.5	10.7	-161.58	-2.3	328.3	951.8	931.4	20.42	46.621		
5,600.0	5,539.4	5,508.8	5,500.4	16.8	10.9	-161.63	-2.3	334.0	970.7	950.0	20.79	46.691		
5,700.0	5,638.1	5,607.0	5,598.4	17.1	11.1	-161.67	-2.4	339.7	989.7	968.5	21.17	46.759		
5,800.0	5,736.9	5,705.2	5,696.4	17.5	11.3	-161.72	-2.4	345.4	1,008.6	987.1	21.54	46.824		
5,900.0	5,835.6	5,803.4	5,794.4	17.8	11.5	-161.76	-2.5	351.0	1,027.6	1,005.7	21.92	46.887		
6,000.0	5,934.4	5,901.6	5,892.5	18.1	11.7	-161.80	-2.5	356.7	1,046.5	1,024.2	22.29	46.948		
6,100.0	6,033.1	5,999.8	5,990.5	18.4	11.9	-161.84	-2.6	362.4	1,065.5	1,042.8	22.67	47.007		
6,200.0	6,131.9	6,097.9	6,088.5	18.8	12.1	-161.88	-2.6	368.1	1,084.4	1,061.4	23.04	47.064		
6,300.0	6,230.6	6,196.1	6,186.5	19.1	12.3	-161.92	-2.6	373.8	1,103.4	1,080.0	23.42	47.119		
6,400.0	6,329.4	6,294.3	6,284.5	19.4	12.5	-161.96	-2.7	379.4	1,122.3	1,098.5	23.79	47.173		
6,500.0	6,428.1	6,392.5	6,382.6	19.7	12.7	-161.99	-2.7	385.1	1,141.3	1,117.1	24.17	47.225		
6,600.0	6,526.9	6,490.7	6,480.6	20.1	12.9	-162.03	-2.8	390.8	1,160.2	1,135.7	24.54	47.275		
6,700.0	6,625.6	6,588.9	6,578.6	20.4	13.1	-162.06	-2.8	396.5	1,179.2	1,154.3	24.92	47.324		
6,800.0	6,724.5	6,687.2	6,676.8	20.7	13.2	-176.45	-2.9	402.2	1,197.2	1,171.9	25.31	47.294		
6,900.0	6,824.2	6,786.3	6,775.7	20.8	13.4	93.99	-2.9	407.9	1,206.9	1,181.2	25.66	47.038		
7,000.0	6,923.1	6,884.6	6,873.9	20.7	13.6	63.77	-3.0	413.6	1,206.6	1,180.7	25.88	46.619		
7,100.0	7,019.2	6,950.0	6,939.1	20.5	13.8	57.44	-2.8	417.4	1,197.3	1,171.4	25.91	46.201		
7,200.0	7,110.8	7,000.0	6,988.9	20.2	13.9	55.83	0.5	420.3	1,182.8	1,157.0	25.79	45.853		
7,300.0	7,196.0	7,032.1	7,020.6	19.7	13.9	55.82	4.9	422.1	1,164.0	1,138.4	25.57	45.525		
7,400.0	7,273.2	7,070.8	7,058.5	19.1	14.0	57.02	12.6	424.3	1,141.6	1,116.2	25.38	44.987		
7,500.0	7,340.8	7,100.0	7,086.7	18.5	14.1	58.73	20.1	425.9	1,116.1	1,090.9	25.21	44.273		
7,600.0	7,397.6	7,150.0	7,133.9	17.9	14.2	61.65	36.2	428.7	1,088.0	1,062.8	25.27	43.059		
7,700.0	7,442.5	7,186.5	7,167.4	17.3	14.3	64.69	50.6	430.6	1,058.4	1,033.0	25.39	41.678		
7,800.0	7,474.5	7,224.9	7,201.6	16.8	14.4	68.21	67.9	432.6	1,028.1	1,002.4	25.66	40.073		
7,900.0	7,493.1	7,263.0	7,234.3	16.5	14.5	72.02	87.4	434.5	998.3	972.3	26.01	38.377		
8,000.0	7,498.0	7,300.0	7,264.7	16.3	14.6	75.59	108.3	436.3	970.3	943.9	26.39	36.773		
8,100.0	7,498.0	7,350.0	7,303.6	16.4	14.8	77.94	139.6	438.5	947.9	921.1	26.77	35.403		
8,200.0	7,498.0	7,400.0	7,339.6	16.6	15.0	80.14	174.2	440.6	932.3	904.9	27.37	34.059		
8,300.0	7,498.0	7,458.1	7,377.5	16.9	15.3	82.48	218.2	442.8	922.9	894.6	28.25	32.666		
8,400.0	7,498.0	7,533.4	7,419.7	17.5	15.8	85.10	280.6	445.2	918.3	888.8	29.49	31.144		
8,500.0	7,498.0	7,622.4	7,458.4	18.2	16.5	87.52	360.5	447.5	916.9	885.8	31.08	29.506		
8,600.0	7,498.0	7,723.5	7,486.8	19.1	17.4	89.30	457.4	449.1	916.7	883.7	33.04	27.748		
8,700.0	7,498.0	7,832.2	7,498.0	20.0	18.5	90.00	565.3	449.8	916.2	880.9	35.34	25.929		
8,772.4	7,498.0	7,895.6	7,498.0	20.8	19.2	90.00	628.7	450.1	915.8	878.9	36.96	24.781		
8,800.0	7,498.0	7,919.4	7,498.0	21.1	19.5	90.00	652.5	450.4	915.9	878.3	37.58	24.371		
8,900.0	7,498.0	8,015.2	7,498.0	22.2	20.7	90.00	748.3	452.1	916.7	876.6	40.08	22.868		
9,000.0	7,498.0	8,115.2	7,498.0	23.5	22.0	90.00	848.2	454.0	917.5	874.7	42.77	21.450		
9,100.0	7,498.0	8,215.2	7,498.0	24.8	23.4	90.00	948.2	455.9	918.4	872.8	45.58	20.150		
9,200.0	7,498.0	8,315.2	7,498.0	26.1	24.8	90.00	1,048.2	457.8	919.2	870.7	48.47	18.965		
9,300.0	7,498.0	8,415.2	7,498.0	27.5	26.2	90.00	1,148.2	459.8	920.1	868.6	51.44	17.887		
9,400.0	7,498.0	8,515.1	7,498.0	28.9	27.7	90.00	1,248.2	461.7	920.9	866.4	54.47	16.906		
9,500.0	7,498.0	8,615.1	7,498.0	30.4	29.2	90.00	1,348.1	463.6	921.8	864.2	57.56	16.014		
9,600.0	7,498.0	8,715.1	7,498.0	31.9	30.8	90.00	1,448.1	465.5	922.6	861.9	60.69	15.201		
9,700.0	7,498.0	8,815.1	7,498.0	33.4	32.3	90.00	1,548.1	467.4	923.5	859.6	63.87	14.460		
9,800.0	7,498.0	8,915.1	7,498.0	34.9	33.9	90.00	1,648.1	469.3	924.3	857.2	67.07	13.781		
9,900.0	7,498.0	9,015.1	7,498.0	36.5	35.5	90.00	1,748.1	471.2	925.2	854.9	70.31	13.159		
10,000.0	7,498.0	9,115.1	7,498.0	38.1	37.1	90.00	1,848.0	473.1	926.0	852.5	73.57	12.588		
10,100.0	7,498.0	9,215.1	7,498.0	39.7	38.7	90.00	1,948.0	475.0	926.9	850.0	76.85	12.061		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4J-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			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)				
10,200.0	7,498.0	9,315.1	7,498.0	41.3	40.4	90.00	2,048.0	476.9	927.7	847.6	80.15	11.575		
10,300.0	7,498.0	9,415.1	7,498.0	42.9	42.0	90.00	2,148.0	478.8	928.6	845.1	83.47	11.125		
10,400.0	7,498.0	9,515.1	7,498.0	44.5	43.7	90.00	2,247.9	480.7	929.4	842.6	86.80	10.708		
10,500.0	7,498.0	9,615.1	7,498.0	46.2	45.3	90.00	2,347.9	482.6	930.3	840.1	90.14	10.320		
10,600.0	7,498.0	9,715.1	7,498.0	47.8	47.0	90.00	2,447.9	484.5	931.1	837.6	93.50	9.958		
10,700.0	7,498.0	9,815.1	7,498.0	49.5	48.7	90.00	2,547.9	486.4	932.0	835.1	96.87	9.621		
10,800.0	7,498.0	9,915.1	7,498.0	51.1	50.4	90.00	2,647.9	488.3	932.8	832.6	100.25	9.305		
10,900.0	7,498.0	10,015.1	7,498.0	52.8	52.0	90.00	2,747.8	490.2	933.7	830.0	103.64	9.009		
11,000.0	7,498.0	10,115.1	7,498.0	54.5	53.7	90.00	2,847.8	492.1	934.5	827.5	107.03	8.731		
11,100.0	7,498.0	10,215.1	7,498.0	56.1	55.4	90.00	2,947.8	494.0	935.4	825.0	110.43	8.470		
11,200.0	7,498.0	10,315.1	7,498.0	57.8	57.1	90.00	3,047.8	495.9	936.2	822.4	113.84	8.224		
11,300.0	7,498.0	10,415.1	7,498.0	59.5	58.8	90.00	3,147.7	497.9	937.1	819.8	117.25	7.992		
11,400.0	7,498.0	10,515.1	7,498.0	61.2	60.5	90.00	3,247.7	499.8	937.9	817.3	120.67	7.772		
11,500.0	7,498.0	10,615.1	7,498.0	62.9	62.2	90.00	3,347.7	501.7	938.8	814.7	124.10	7.565		
11,600.0	7,498.0	10,715.1	7,498.0	64.6	63.9	90.00	3,447.7	503.6	939.6	812.1	127.53	7.368		
11,700.0	7,498.0	10,815.1	7,498.0	66.3	65.6	90.00	3,547.7	505.5	940.5	809.5	130.96	7.181		
11,800.0	7,498.0	10,915.1	7,498.0	68.0	67.4	90.00	3,647.6	507.4	941.3	806.9	134.40	7.004		
11,900.0	7,498.0	11,015.1	7,498.0	69.7	69.1	90.00	3,747.6	509.3	942.2	804.4	137.84	6.835		
12,000.0	7,498.0	11,115.1	7,498.0	71.4	70.8	90.00	3,847.6	511.2	943.0	801.8	141.28	6.675		
12,100.0	7,498.0	11,215.0	7,498.0	73.1	72.5	90.00	3,947.6	513.1	943.9	799.2	144.73	6.522		
12,200.0	7,498.0	11,315.0	7,498.0	74.8	74.2	90.00	4,047.6	515.0	944.8	796.6	148.18	6.376		
12,300.0	7,498.0	11,415.0	7,498.0	76.5	75.9	90.00	4,147.5	516.9	945.6	794.0	151.63	6.236		
12,400.0	7,498.0	11,515.0	7,498.0	78.2	77.7	90.00	4,247.5	518.8	946.5	791.4	155.09	6.103		
12,500.0	7,498.0	11,615.0	7,498.0	79.9	79.4	90.00	4,347.5	520.7	947.3	788.8	158.55	5.975		
12,600.0	7,498.0	11,715.0	7,498.0	81.7	81.1	90.00	4,447.5	522.6	948.2	786.2	162.01	5.853		
12,700.0	7,498.0	11,815.0	7,498.0	83.4	82.9	90.00	4,547.4	524.5	949.0	783.5	165.47	5.735		
12,800.0	7,498.0	11,915.0	7,498.0	85.1	84.6	90.00	4,647.4	526.4	949.9	780.9	168.93	5.623		
12,900.0	7,498.0	12,015.0	7,498.0	86.8	86.3	90.00	4,747.4	528.3	950.7	778.3	172.40	5.515		
13,000.0	7,498.0	12,120.0	7,498.0	88.6	88.1	90.00	4,852.4	530.2	951.5	775.5	175.95	5.408		
13,100.0	7,498.0	12,239.9	7,498.0	90.3	90.2	90.00	4,972.3	530.6	950.8	771.0	179.76	5.289		
13,200.0	7,498.0	12,359.7	7,498.0	92.0	92.3	90.00	5,092.1	528.5	948.0	764.4	183.58	5.164		
13,300.0	7,498.0	12,479.4	7,498.0	93.7	94.3	90.00	5,211.6	523.9	943.1	755.7	187.39	5.033		
13,400.0	7,498.0	12,585.4	7,498.0	95.5	96.1	90.00	5,317.4	518.2	936.6	745.6	190.96	4.904		
13,500.0	7,498.0	12,685.1	7,498.0	97.2	97.9	90.00	5,417.1	512.6	930.0	735.5	194.43	4.783		
13,600.0	7,498.0	12,784.9	7,498.0	98.9	99.6	90.00	5,516.7	507.1	923.4	725.5	197.91	4.666		
13,700.0	7,498.0	12,884.8	7,498.0	100.6	101.3	90.00	5,616.4	501.6	917.9	716.6	201.36	4.559		
13,800.0	7,498.0	12,984.7	7,498.0	102.4	103.0	90.00	5,716.2	496.0	914.1	709.3	204.80	4.463		
13,900.0	7,498.0	13,084.6	7,498.0	104.1	104.8	90.00	5,816.0	490.5	910.5	702.2	208.28	4.372		
14,000.0	7,498.0	13,184.6	7,498.0	105.9	106.5	90.00	5,915.7	484.9	907.0	695.2	211.76	4.283		
14,100.0	7,498.0	13,284.5	7,498.0	107.6	108.2	90.00	6,015.5	479.4	903.4	688.2	215.24	4.197		
14,200.0	7,498.0	13,384.4	7,498.0	109.3	110.0	90.00	6,115.3	473.8	899.9	681.1	218.72	4.114		
14,300.0	7,498.0	13,484.4	7,498.0	111.1	111.7	90.00	6,215.1	468.3	896.3	674.1	222.20	4.034		
14,400.0	7,498.0	13,584.3	7,498.0	112.8	113.4	90.00	6,314.9	462.8	892.7	667.1	225.69	3.956		
14,500.0	7,498.0	13,684.3	7,498.0	114.5	115.1	90.00	6,414.7	457.2	889.2	660.0	229.17	3.880		
14,600.0	7,498.0	13,784.2	7,498.0	116.3	116.9	90.00	6,514.4	451.7	885.6	653.0	232.66	3.807		
14,665.8	7,498.0	13,818.5	7,498.0	117.4	117.5	90.00	6,548.7	449.8	883.9	649.5	234.40	3.771		
14,690.0	7,498.0	13,818.5	7,498.0	117.8	117.5	90.00	6,548.7	449.8	884.2	649.4	234.82	3.765 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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4K-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			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	398.2	398.2	0.6	0.6	90.41	-0.4	51.7	51.8	50.5	1.29	40.158		
500.0	500.0	496.2	496.1	0.8	0.8	-116.26	-0.4	56.8	57.1	55.5	1.63	34.940		
600.0	599.9	594.2	593.7	1.0	1.0	-118.72	-0.4	65.0	67.1	65.1	1.98	33.838		
700.0	699.7	693.3	692.3	1.2	1.3	-122.59	-0.4	74.2	79.9	77.6	2.35	34.073		
800.0	799.1	791.8	790.5	1.4	1.5	-127.00	-0.4	83.3	95.1	92.3	2.72	34.901		
900.0	898.2	889.9	888.1	1.7	1.7	-131.45	-0.4	92.4	112.9	109.8	3.12	36.189		
1,000.0	996.9	987.5	985.3	2.0	1.9	-135.45	-0.4	101.5	132.6	129.1	3.52	37.651		
1,100.0	1,095.7	1,085.2	1,082.6	2.3	2.2	-138.41	-0.4	110.6	152.8	148.9	3.93	38.916		
1,200.0	1,194.4	1,182.9	1,179.9	2.6	2.4	-140.69	-0.5	119.6	173.3	169.0	4.33	40.013		
1,300.0	1,293.1	1,280.6	1,277.1	2.9	2.6	-142.48	-0.5	128.7	194.0	189.2	4.73	40.967		
1,400.0	1,391.9	1,378.2	1,374.4	3.2	2.9	-143.92	-0.5	137.7	214.8	209.7	5.14	41.802		
1,500.0	1,490.6	1,475.9	1,471.6	3.5	3.1	-145.12	-0.5	146.8	235.7	230.2	5.54	42.536		
1,600.0	1,589.4	1,573.6	1,568.9	3.8	3.3	-146.11	-0.5	155.9	256.8	250.8	5.95	43.186		
1,700.0	1,688.1	1,671.3	1,666.1	4.2	3.5	-146.96	-0.5	164.9	277.8	271.5	6.35	43.765		
1,800.0	1,786.9	1,769.0	1,763.4	4.5	3.8	-147.68	-0.5	174.0	299.0	292.2	6.75	44.283		
1,900.0	1,885.6	1,866.6	1,860.6	4.8	4.0	-148.31	-0.5	183.1	320.1	313.0	7.15	44.748		
2,000.0	1,984.4	1,964.3	1,957.9	5.1	4.2	-148.87	-0.5	192.1	341.3	333.8	7.56	45.170		
2,100.0	2,083.1	2,062.0	2,055.1	5.4	4.5	-149.35	-0.6	201.2	362.6	354.6	7.96	45.552		
2,200.0	2,181.9	2,159.7	2,152.4	5.8	4.7	-149.79	-0.6	210.2	383.8	375.5	8.36	45.901		
2,300.0	2,280.6	2,257.3	2,249.7	6.1	4.9	-150.18	-0.6	219.3	405.1	396.3	8.76	46.220		
2,400.0	2,379.4	2,355.0	2,346.9	6.4	5.2	-150.53	-0.6	228.4	426.4	417.2	9.17	46.513		
2,500.0	2,478.1	2,452.7	2,444.2	6.7	5.4	-150.84	-0.6	237.4	447.7	438.1	9.57	46.784		
2,600.0	2,576.9	2,550.4	2,541.4	7.0	5.6	-151.13	-0.6	246.5	469.0	459.0	9.97	47.033		
2,700.0	2,675.6	2,648.0	2,638.7	7.4	5.9	-151.39	-0.6	255.6	490.3	479.9	10.37	47.265		
2,800.0	2,774.4	2,745.7	2,735.9	7.7	6.1	-151.63	-0.6	264.6	511.6	500.9	10.78	47.480		
2,900.0	2,873.1	2,843.4	2,833.2	8.0	6.3	-151.85	-0.6	273.7	533.0	521.8	11.18	47.681		
3,000.0	2,971.9	2,941.1	2,930.4	8.3	6.6	-152.06	-0.7	282.7	554.3	542.8	11.58	47.869		
3,100.0	3,070.6	3,038.7	3,027.7	8.7	6.8	-152.25	-0.7	291.8	575.7	563.7	11.98	48.044		
3,200.0	3,169.4	3,136.4	3,125.0	9.0	7.0	-152.42	-0.7	300.9	597.0	584.7	12.38	48.209		
3,300.0	3,268.1	3,234.1	3,222.2	9.3	7.3	-152.59	-0.7	309.9	618.4	605.6	12.79	48.363		
3,400.0	3,366.9	3,331.8	3,319.5	9.6	7.5	-152.74	-0.7	319.0	639.8	626.6	13.19	48.509		
3,500.0	3,465.6	3,429.5	3,416.7	10.0	7.7	-152.88	-0.7	328.1	661.2	647.6	13.59	48.647		
3,600.0	3,564.4	3,527.1	3,514.0	10.3	8.0	-153.02	-0.7	337.1	682.5	668.5	13.99	48.776		
3,700.0	3,663.1	3,624.8	3,611.2	10.6	8.2	-153.14	-0.7	346.2	703.9	689.5	14.40	48.899		
3,800.0	3,761.9	3,722.5	3,708.5	10.9	8.4	-153.26	-0.7	355.2	725.3	710.5	14.80	49.016		
3,900.0	3,860.6	3,820.2	3,805.7	11.3	8.7	-153.37	-0.8	364.3	746.7	731.5	15.20	49.126		
4,000.0	3,959.4	3,917.8	3,903.0	11.6	8.9	-153.48	-0.8	373.4	768.1	752.5	15.60	49.231		
4,100.0	4,058.1	4,015.5	4,000.3	11.9	9.1	-153.58	-0.8	382.4	789.5	773.5	16.00	49.331		
4,200.0	4,156.9	4,113.2	4,097.5	12.2	9.4	-153.67	-0.8	391.5	810.8	794.4	16.41	49.426		
4,300.0	4,255.6	4,210.9	4,194.8	12.6	9.6	-153.76	-0.8	400.6	832.2	815.4	16.81	49.517		
4,400.0	4,354.4	4,308.5	4,292.0	12.9	9.8	-153.85	-0.8	409.6	853.6	836.4	17.21	49.604		
4,500.0	4,453.1	4,406.2	4,389.3	13.2	10.1	-153.93	-0.8	418.7	875.0	857.4	17.61	49.687		
4,600.0	4,551.9	4,503.9	4,486.5	13.6	10.3	-154.00	-0.8	427.7	896.4	878.4	18.01	49.766		
4,700.0	4,650.6	4,601.6	4,583.8	13.9	10.5	-154.08	-0.8	436.8	917.8	899.4	18.42	49.842		
4,800.0	4,749.4	4,699.2	4,681.0	14.2	10.8	-154.15	-0.9	445.9	939.2	920.4	18.82	49.914		
4,900.0	4,848.1	4,796.9	4,778.3	14.5	11.0	-154.21	-0.9	454.9	960.6	941.4	19.22	49.984		
5,000.0	4,946.9	4,894.6	4,875.6	14.9	11.2	-154.28	-0.9	464.0	982.1	962.4	19.62	50.051		
5,100.0	5,045.6	4,992.3	4,972.8	15.2	11.4	-154.34	-0.9	473.0	1,003.5	983.4	20.02	50.115		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4K-17H-P267 - DD - Plan #2													Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,144.4	5,090.0	5,070.1	15.5	11.7	-154.40	-0.9	482.1	1,024.9	1,004.4	20.42	50.177		
5,300.0	5,243.1	5,187.6	5,167.3	15.8	11.9	-154.46	-0.9	491.2	1,046.3	1,025.4	20.83	50.237		
5,400.0	5,341.9	5,285.3	5,264.6	16.2	12.1	-154.51	-0.9	500.2	1,067.7	1,046.5	21.23	50.294		
5,500.0	5,440.6	5,383.0	5,361.8	16.5	12.4	-154.56	-0.9	509.3	1,089.1	1,067.5	21.63	50.349		
5,600.0	5,539.4	5,480.7	5,459.1	16.8	12.6	-154.61	-0.9	518.4	1,110.5	1,088.5	22.03	50.403		
5,700.0	5,638.1	5,578.3	5,556.3	17.1	12.8	-154.66	-1.0	527.4	1,131.9	1,109.5	22.43	50.454		
5,800.0	5,736.9	5,676.0	5,653.6	17.5	13.1	-154.71	-1.0	536.5	1,153.3	1,130.5	22.84	50.504		
5,900.0	5,835.6	5,773.7	5,750.8	17.8	13.3	-154.75	-1.0	545.5	1,174.7	1,151.5	23.24	50.552		
6,000.0	5,934.4	5,871.4	5,848.1	18.1	13.5	-154.79	-1.0	554.6	1,196.2	1,172.5	23.64	50.598		
6,100.0	6,033.1	5,969.0	5,945.4	18.4	13.8	-154.83	-1.0	563.7	1,217.6	1,193.5	24.04	50.643		
6,200.0	6,131.9	6,066.7	6,042.6	18.8	14.0	-154.87	-1.0	572.7	1,239.0	1,214.5	24.44	50.686		
6,300.0	6,230.6	6,164.4	6,139.9	19.1	14.2	-154.91	-1.0	581.8	1,260.4	1,235.6	24.85	50.728		
6,400.0	6,329.4	6,262.1	6,237.1	19.4	14.5	-154.95	-1.0	590.9	1,281.8	1,256.6	25.25	50.769		
6,500.0	6,428.1	6,359.7	6,334.4	19.7	14.7	-154.99	-1.0	599.9	1,303.2	1,277.6	25.65	50.808		
6,600.0	6,526.9	6,457.4	6,431.6	20.1	14.9	-155.02	-1.1	609.0	1,324.6	1,298.6	26.05	50.847		
6,700.0	6,625.6	6,555.1	6,528.9	20.4	15.2	-155.06	-1.1	618.0	1,346.1	1,319.6	26.45	50.884		
6,800.0	6,724.5	6,652.9	6,626.3	20.7	15.4	-169.57	-1.1	627.1	1,366.7	1,339.8	26.88	50.851		
6,900.0	6,824.2	6,734.6	6,707.6	20.8	15.6	100.46	-1.0	634.7	1,380.2	1,353.0	27.18	50.777		
7,000.0	6,923.1	6,773.9	6,746.7	20.7	15.7	69.17	1.1	638.3	1,388.0	1,360.8	27.19	51.041		
7,100.0	7,019.2	6,800.0	6,772.5	20.5	15.8	61.52	4.0	640.7	1,391.3	1,364.3	26.98	51.565		
7,200.0	7,110.8	6,850.0	6,821.5	20.2	15.9	58.87	12.8	645.3	1,389.7	1,363.1	26.65	52.142		
7,300.0	7,196.0	6,900.0	6,869.5	19.7	16.0	58.11	25.9	649.8	1,384.0	1,357.7	26.22	52.777		
7,400.0	7,273.2	6,931.4	6,899.1	19.1	16.1	58.16	36.3	652.5	1,373.9	1,348.1	25.74	53.377		
7,500.0	7,340.8	6,970.9	6,935.3	18.5	16.2	59.06	51.5	655.9	1,359.9	1,334.6	25.32	53.703		
7,600.0	7,397.6	7,000.0	6,961.3	17.9	16.3	60.31	64.4	658.3	1,342.6	1,317.6	25.01	53.689		
7,700.0	7,442.5	7,050.0	7,004.3	17.3	16.4	62.53	89.5	662.3	1,322.0	1,297.0	24.97	52.946		
7,800.0	7,474.5	7,100.0	7,045.0	16.8	16.6	65.24	118.3	666.1	1,299.2	1,274.0	25.19	51.574		
7,900.0	7,493.1	7,129.3	7,067.6	16.5	16.7	67.79	136.7	668.2	1,274.5	1,249.0	25.52	49.942		
8,000.0	7,498.0	7,169.0	7,096.8	16.3	16.9	70.64	163.6	671.0	1,249.1	1,223.1	26.03	47.987		
8,100.0	7,498.0	7,212.7	7,126.6	16.4	17.1	72.01	195.4	673.7	1,226.9	1,200.4	26.42	46.443		
8,200.0	7,498.0	7,263.0	7,157.8	16.6	17.4	73.47	234.7	676.6	1,209.6	1,182.5	27.08	44.669		
8,300.0	7,498.0	7,320.7	7,189.2	16.9	17.7	74.96	283.0	679.6	1,196.7	1,168.7	28.03	42.691		
8,400.0	7,498.0	7,385.9	7,218.7	17.5	18.1	76.36	341.1	682.3	1,187.7	1,158.4	29.28	40.561		
8,500.0	7,498.0	7,458.4	7,243.5	18.2	18.7	77.55	409.1	684.6	1,181.7	1,150.9	30.82	38.340		
8,600.0	7,498.0	7,536.7	7,260.5	19.1	19.4	78.36	485.5	686.2	1,178.1	1,145.5	32.63	36.107		
8,700.0	7,498.0	7,618.4	7,267.0	20.0	20.2	78.67	566.8	686.8	1,176.2	1,141.6	34.63	33.965		
8,800.0	7,498.0	7,717.3	7,267.0	21.1	21.2	78.66	665.7	686.8	1,175.2	1,138.2	36.99	31.766		
8,900.0	7,498.0	7,817.3	7,267.0	22.2	22.4	78.65	765.7	686.8	1,174.1	1,134.6	39.52	29.708		
9,000.0	7,498.0	7,917.3	7,267.0	23.5	23.6	78.64	865.7	686.8	1,173.1	1,130.9	42.18	27.812		
9,100.0	7,498.0	8,017.3	7,267.0	24.8	24.9	78.63	965.7	686.8	1,172.1	1,127.1	44.94	26.080		
9,200.0	7,498.0	8,117.3	7,267.0	26.1	26.2	78.62	1,065.7	686.8	1,171.0	1,123.2	47.79	24.503		
9,300.0	7,498.0	8,217.3	7,267.0	27.5	27.6	78.61	1,165.7	686.8	1,170.0	1,119.3	50.71	23.070		
9,400.0	7,498.0	8,317.3	7,267.0	28.9	29.0	78.60	1,265.7	686.8	1,169.0	1,115.3	53.70	21.769		
9,500.0	7,498.0	8,417.3	7,267.0	30.4	30.5	78.59	1,365.7	686.8	1,167.9	1,111.2	56.73	20.586		
9,600.0	7,498.0	8,517.3	7,267.0	31.9	32.0	78.58	1,465.7	686.8	1,166.9	1,107.1	59.81	19.509		
9,700.0	7,498.0	8,617.3	7,267.0	33.4	33.5	78.57	1,565.7	686.8	1,165.9	1,102.9	62.93	18.527		
9,800.0	7,498.0	8,717.3	7,267.0	34.9	35.0	78.56	1,665.7	686.8	1,164.8	1,098.7	66.07	17.629		
9,900.0	7,498.0	8,817.3	7,267.0	36.5	36.6	78.55	1,765.7	686.8	1,163.8	1,094.5	69.25	16.806		
10,000.0	7,498.0	8,917.3	7,267.0	38.1	38.1	78.54	1,865.7	686.8	1,162.8	1,090.3	72.45	16.050		
10,100.0	7,498.0	9,017.3	7,267.0	39.7	39.7	78.53	1,965.7	686.8	1,161.7	1,086.1	75.66	15.354		
10,200.0	7,498.0	9,117.2	7,267.0	41.3	41.3	78.52	2,065.7	686.8	1,160.7	1,081.8	78.90	14.711		
10,300.0	7,498.0	9,217.2	7,267.0	42.9	42.9	78.51	2,165.7	686.8	1,159.7	1,077.5	82.15	14.116		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4K-17H-P267 - DD - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
10,400.0	7,498.0	9,317.2	7,267.0	44.5	44.6	78.50	2,265.7	686.8	1,158.6	1,073.2	85.42	13.564		
10,500.0	7,498.0	9,417.2	7,267.0	46.2	46.2	78.49	2,365.6	686.8	1,157.6	1,068.9	88.70	13.051		
10,600.0	7,498.0	9,517.2	7,267.0	47.8	47.8	78.48	2,465.6	686.8	1,156.6	1,064.6	91.99	12.573		
10,700.0	7,498.0	9,617.2	7,267.0	49.5	49.5	78.47	2,565.6	686.8	1,155.5	1,060.2	95.29	12.126		
10,800.0	7,498.0	9,717.2	7,267.0	51.1	51.1	78.46	2,665.6	686.8	1,154.5	1,055.9	98.60	11.709		
10,900.0	7,498.0	9,817.2	7,267.0	52.8	52.8	78.45	2,765.6	686.8	1,153.5	1,051.5	101.92	11.317		
11,000.0	7,498.0	9,917.2	7,267.0	54.5	54.5	78.44	2,865.6	686.8	1,152.4	1,047.2	105.24	10.950		
11,100.0	7,498.0	10,017.2	7,267.0	56.1	56.1	78.43	2,965.6	686.8	1,151.4	1,042.8	108.57	10.605		
11,200.0	7,498.0	10,117.2	7,267.0	57.8	57.8	78.42	3,065.6	686.8	1,150.4	1,038.5	111.91	10.279		
11,300.0	7,498.0	10,217.2	7,267.0	59.5	59.5	78.40	3,165.6	686.8	1,149.3	1,034.1	115.25	9.972		
11,400.0	7,498.0	10,317.2	7,267.0	61.2	61.2	78.39	3,265.6	686.8	1,148.3	1,029.7	118.60	9.682		
11,500.0	7,498.0	10,417.2	7,267.0	62.9	62.9	78.38	3,365.6	686.8	1,147.3	1,025.3	121.95	9.407		
11,600.0	7,498.0	10,517.2	7,267.0	64.6	64.6	78.37	3,465.6	686.8	1,146.2	1,020.9	125.31	9.147		
11,700.0	7,498.0	10,617.2	7,267.0	66.3	66.3	78.36	3,565.6	686.8	1,145.2	1,016.5	128.67	8.900		
11,800.0	7,498.0	10,717.2	7,267.0	68.0	68.0	78.35	3,665.6	686.8	1,144.2	1,012.1	132.03	8.666		
11,900.0	7,498.0	10,817.2	7,267.0	69.7	69.7	78.34	3,765.6	686.8	1,143.1	1,007.7	135.40	8.443		
12,000.0	7,498.0	10,917.1	7,267.0	71.4	71.4	78.33	3,865.6	686.8	1,142.1	1,003.3	138.77	8.230		
12,100.0	7,498.0	11,017.1	7,267.0	73.1	73.1	78.32	3,965.6	686.8	1,141.1	998.9	142.14	8.028		
12,200.0	7,498.0	11,117.1	7,267.0	74.8	74.8	78.31	4,065.6	686.8	1,140.0	994.5	145.52	7.834		
12,300.0	7,498.0	11,217.1	7,267.0	76.5	76.5	78.30	4,165.5	686.8	1,139.0	990.1	148.89	7.650		
12,400.0	7,498.0	11,317.1	7,267.0	78.2	78.2	78.29	4,265.5	686.8	1,138.0	985.7	152.27	7.473		
12,500.0	7,498.0	11,417.1	7,267.0	79.9	79.9	78.28	4,365.5	686.8	1,137.0	981.3	155.65	7.304		
12,600.0	7,498.0	11,517.1	7,267.0	81.7	81.7	78.27	4,465.5	686.8	1,135.9	976.9	159.04	7.143		
12,700.0	7,498.0	11,617.1	7,267.0	83.4	83.4	78.26	4,565.5	686.8	1,134.9	972.5	162.42	6.987		
12,800.0	7,498.0	11,717.1	7,267.0	85.1	85.1	78.24	4,665.5	686.8	1,133.9	968.0	165.81	6.838		
12,900.0	7,498.0	11,817.1	7,267.0	86.8	86.8	78.23	4,765.5	686.8	1,132.8	963.6	169.19	6.695		
13,000.0	7,498.0	11,917.1	7,267.0	88.6	88.5	78.22	4,865.5	686.8	1,131.8	959.2	172.58	6.558		
13,100.0	7,498.0	12,017.1	7,267.0	90.3	90.3	78.21	4,965.5	686.8	1,130.8	954.8	175.97	6.426		
13,200.0	7,498.0	12,117.1	7,267.0	92.0	92.0	78.20	5,065.5	686.8	1,129.7	950.4	179.37	6.298		
13,300.0	7,498.0	12,217.1	7,267.0	93.7	93.7	78.19	5,165.5	686.8	1,128.7	945.9	182.76	6.176		
13,400.0	7,498.0	12,317.1	7,267.0	95.5	95.4	78.18	5,265.5	686.8	1,127.7	941.5	186.15	6.058		
13,500.0	7,498.0	12,417.1	7,267.0	97.2	97.2	78.17	5,365.5	686.8	1,126.6	937.1	189.55	5.944		
13,600.0	7,498.0	12,517.1	7,267.0	98.9	98.9	78.16	5,465.5	686.8	1,125.6	932.7	192.94	5.834		
13,644.9	7,498.0	12,562.0	7,267.0	99.7	99.7	78.16	5,510.4	686.8	1,125.5	931.0	194.44	5.788		
13,700.0	7,498.0	12,617.1	7,267.0	100.6	100.6	78.16	5,565.5	686.8	1,125.7	929.4	196.28	5.735		
13,800.0	7,498.0	12,717.0	7,267.0	102.4	102.4	78.17	5,665.5	686.8	1,127.4	927.7	199.63	5.647		
13,900.0	7,498.0	12,817.0	7,267.0	104.1	104.1	78.19	5,765.4	686.8	1,129.3	926.3	203.05	5.562		
14,000.0	7,498.0	12,917.0	7,267.0	105.9	105.8	78.22	5,865.4	686.8	1,131.3	924.8	206.47	5.479		
14,100.0	7,498.0	13,017.0	7,267.0	107.6	107.6	78.24	5,965.4	686.8	1,133.2	923.3	209.89	5.399		
14,200.0	7,498.0	13,117.0	7,267.0	109.3	109.3	78.26	6,065.4	686.8	1,135.2	921.9	213.32	5.322		
14,300.0	7,498.0	13,216.9	7,267.0	111.1	111.0	78.28	6,165.4	686.8	1,137.1	920.4	216.74	5.246		
14,400.0	7,498.0	13,316.9	7,267.0	112.8	112.8	78.30	6,265.3	686.8	1,139.1	918.9	220.17	5.174		
14,500.0	7,498.0	13,416.9	7,267.0	114.5	114.5	78.32	6,365.3	686.8	1,141.0	917.4	223.60	5.103		
14,600.0	7,498.0	13,516.9	7,267.0	116.3	116.2	78.34	6,465.3	686.8	1,143.0	916.0	227.03	5.035		
14,690.0	7,498.0	13,598.5	7,267.0	117.8	117.6	78.35	6,546.9	686.8	1,144.8	914.8	229.97	4.978 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4L-17H-P267 - DD - Plan #3														Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	90.36	-0.4	60.1	60.1						
100.0	100.0	100.0	100.0	0.1	0.1	90.36	-0.4	60.1	60.1	59.9	0.24	246.029			
200.0	200.0	200.0	200.0	0.3	0.3	90.36	-0.4	60.1	60.1	59.5	0.59	101.306 CC, ES			
300.0	300.0	297.9	297.9	0.5	0.5	90.35	-0.4	61.8	61.8	60.9	0.94	65.801			
400.0	400.0	395.6	395.4	0.6	0.7	90.34	-0.4	66.8	66.9	65.7	1.29	51.949			
500.0	500.0	492.8	492.3	0.8	0.9	-116.18	-0.4	75.1	75.7	74.0	1.63	46.469			
600.0	599.9	590.2	589.0	1.0	1.1	-117.93	-0.5	86.4	88.9	86.9	1.98	44.982			
700.0	699.7	688.8	686.9	1.2	1.4	-120.80	-0.5	98.6	104.6	102.3	2.34	44.733			
800.0	799.1	786.9	784.2	1.4	1.6	-124.19	-0.6	110.6	122.4	119.7	2.72	45.025			
900.0	898.2	884.4	881.0	1.7	1.9	-127.74	-0.6	122.7	142.8	139.6	3.12	45.686			
1,000.0	996.9	981.6	977.4	2.0	2.2	-131.14	-0.6	134.6	164.7	161.2	3.54	46.527			
1,100.0	1,095.7	1,078.7	1,073.8	2.3	2.4	-133.75	-0.7	146.6	187.1	183.2	3.96	47.246			
1,200.0	1,194.4	1,175.9	1,170.2	2.6	2.7	-135.80	-0.7	158.5	209.8	205.5	4.38	47.871			
1,300.0	1,293.1	1,273.0	1,266.6	2.9	3.0	-137.45	-0.8	170.5	232.7	227.9	4.81	48.419			
1,400.0	1,391.9	1,370.1	1,363.0	3.2	3.2	-138.80	-0.8	182.5	255.8	250.6	5.23	48.903			
1,500.0	1,490.6	1,467.3	1,459.4	3.5	3.5	-139.93	-0.9	194.4	279.0	273.3	5.66	49.331			
1,600.0	1,589.4	1,564.4	1,555.8	3.8	3.8	-140.89	-0.9	206.4	302.2	296.2	6.08	49.713			
1,700.0	1,688.1	1,661.6	1,652.2	4.2	4.1	-141.71	-0.9	218.4	325.6	319.1	6.50	50.055			
1,800.0	1,786.9	1,758.7	1,748.6	4.5	4.3	-142.42	-1.0	230.3	348.9	342.0	6.93	50.364			
1,900.0	1,885.6	1,855.9	1,845.0	4.8	4.6	-143.04	-1.0	242.3	372.4	365.0	7.35	50.643			
2,000.0	1,984.4	1,953.0	1,941.4	5.1	4.9	-143.59	-1.1	254.3	395.8	388.1	7.78	50.896			
2,100.0	2,083.1	2,050.1	2,037.8	5.4	5.1	-144.07	-1.1	266.2	419.3	411.1	8.20	51.127			
2,200.0	2,181.9	2,147.3	2,134.3	5.8	5.4	-144.51	-1.2	278.2	442.8	434.2	8.63	51.339			
2,300.0	2,280.6	2,244.4	2,230.7	6.1	5.7	-144.90	-1.2	290.1	466.4	457.3	9.05	51.533			
2,400.0	2,379.4	2,341.6	2,327.1	6.4	5.9	-145.25	-1.3	302.1	489.9	480.5	9.47	51.713			
2,500.0	2,478.1	2,438.7	2,423.5	6.7	6.2	-145.57	-1.3	314.1	513.5	503.6	9.90	51.879			
2,600.0	2,576.9	2,535.9	2,519.9	7.0	6.5	-145.87	-1.3	326.0	537.1	526.8	10.32	52.032			
2,700.0	2,675.6	2,633.0	2,616.3	7.4	6.7	-146.14	-1.4	338.0	560.7	550.0	10.75	52.175			
2,800.0	2,774.4	2,730.1	2,712.7	7.7	7.0	-146.38	-1.4	350.0	584.3	573.1	11.17	52.308			
2,900.0	2,873.1	2,827.3	2,809.1	8.0	7.3	-146.61	-1.5	361.9	607.9	596.3	11.59	52.432			
3,000.0	2,971.9	2,924.4	2,905.5	8.3	7.6	-146.82	-1.5	373.9	631.6	619.5	12.02	52.549			
3,100.0	3,070.6	3,021.6	3,001.9	8.7	7.8	-147.02	-1.6	385.9	655.2	642.8	12.44	52.658			
3,200.0	3,169.4	3,118.7	3,098.3	9.0	8.1	-147.20	-1.6	397.8	678.8	666.0	12.87	52.761			
3,300.0	3,268.1	3,215.9	3,194.7	9.3	8.4	-147.37	-1.6	409.8	702.5	689.2	13.29	52.857			
3,400.0	3,366.9	3,313.0	3,291.1	9.6	8.6	-147.53	-1.7	421.7	726.1	712.4	13.71	52.948			
3,500.0	3,465.6	3,410.1	3,387.5	10.0	8.9	-147.67	-1.7	433.7	749.8	735.7	14.14	53.034			
3,600.0	3,564.4	3,507.3	3,483.9	10.3	9.2	-147.81	-1.8	445.7	773.5	758.9	14.56	53.116			
3,700.0	3,663.1	3,604.4	3,580.3	10.6	9.4	-147.94	-1.8	457.6	797.1	782.1	14.99	53.193			
3,800.0	3,761.9	3,701.6	3,676.7	10.9	9.7	-148.07	-1.9	469.6	820.8	805.4	15.41	53.266			
3,900.0	3,860.6	3,798.7	3,773.1	11.3	10.0	-148.19	-1.9	481.6	844.5	828.6	15.83	53.336			
4,000.0	3,959.4	3,895.9	3,869.5	11.6	10.3	-148.30	-1.9	493.5	868.2	851.9	16.26	53.402			
4,100.0	4,058.1	3,993.0	3,965.9	11.9	10.5	-148.40	-2.0	505.5	891.8	875.2	16.68	53.465			
4,200.0	4,156.9	4,090.1	4,062.3	12.2	10.8	-148.50	-2.0	517.5	915.5	898.4	17.10	53.525			
4,300.0	4,255.6	4,187.3	4,158.7	12.6	11.1	-148.59	-2.1	529.4	939.2	921.7	17.53	53.582			
4,400.0	4,354.4	4,284.4	4,255.1	12.9	11.3	-148.68	-2.1	541.4	962.9	944.9	17.95	53.637			
4,500.0	4,453.1	4,381.6	4,351.5	13.2	11.6	-148.77	-2.2	553.3	986.6	968.2	18.38	53.690			
4,600.0	4,551.9	4,478.7	4,447.9	13.6	11.9	-148.85	-2.2	565.3	1,010.3	991.5	18.80	53.740			
4,700.0	4,650.6	4,575.9	4,544.3	13.9	12.1	-148.93	-2.3	577.3	1,034.0	1,014.7	19.22	53.788			
4,800.0	4,749.4	4,673.0	4,640.7	14.2	12.4	-149.00	-2.3	589.2	1,057.7	1,038.0	19.65	53.834			
4,900.0	4,848.1	4,770.1	4,737.2	14.5	12.7	-149.07	-2.3	601.2	1,081.4	1,061.3	20.07	53.878			
5,000.0	4,946.9	4,867.3	4,833.6	14.9	13.0	-149.14	-2.4	613.2	1,105.1	1,084.6	20.49	53.921			
5,100.0	5,045.6	4,964.4	4,930.0	15.2	13.2	-149.20	-2.4	625.1	1,128.8	1,107.8	20.92	53.962			

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4L-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,144.4	5,061.6	5,026.4	15.5	13.5	-149.27	-2.5	637.1	1,152.5	1,131.1	21.34	54.001		
5,300.0	5,243.1	5,158.7	5,122.8	15.8	13.8	-149.32	-2.5	649.1	1,176.2	1,154.4	21.77	54.039		
5,400.0	5,341.9	5,255.9	5,219.2	16.2	14.0	-149.38	-2.6	661.0	1,199.9	1,177.7	22.19	54.075		
5,500.0	5,440.6	5,353.0	5,315.6	16.5	14.3	-149.44	-2.6	673.0	1,223.6	1,201.0	22.61	54.111		
5,600.0	5,539.4	5,450.1	5,412.0	16.8	14.6	-149.49	-2.6	684.9	1,247.3	1,224.2	23.04	54.145		
5,700.0	5,638.1	5,547.3	5,508.4	17.1	14.8	-149.54	-2.7	696.9	1,271.0	1,247.5	23.46	54.177		
5,800.0	5,736.9	5,644.4	5,604.8	17.5	15.1	-149.59	-2.7	708.9	1,294.7	1,270.8	23.88	54.209		
5,900.0	5,835.6	5,741.6	5,701.2	17.8	15.4	-149.64	-2.8	720.8	1,318.4	1,294.1	24.31	54.240		
6,000.0	5,934.4	5,838.7	5,797.6	18.1	15.7	-149.68	-2.8	732.8	1,342.1	1,317.4	24.73	54.269		
6,100.0	6,033.1	5,935.9	5,894.0	18.4	15.9	-149.73	-2.9	744.8	1,365.8	1,340.7	25.15	54.298		
6,200.0	6,131.9	6,033.0	5,990.4	18.8	16.2	-149.77	-2.9	756.7	1,389.5	1,364.0	25.58	54.326		
6,300.0	6,230.6	6,130.2	6,086.8	19.1	16.5	-149.81	-2.9	768.7	1,413.2	1,387.2	26.00	54.353		
6,400.0	6,329.4	6,227.3	6,183.2	19.4	16.7	-149.85	-3.0	780.7	1,437.0	1,410.5	26.43	54.379		
6,500.0	6,428.1	6,324.4	6,279.6	19.7	17.0	-149.89	-3.0	792.6	1,460.7	1,433.8	26.85	54.404		
6,600.0	6,526.9	6,421.6	6,376.0	20.1	17.3	-149.93	-3.1	804.6	1,484.4	1,457.1	27.27	54.428		
6,700.0	6,625.6	6,518.7	6,472.4	20.4	17.5	-149.96	-3.1	816.5	1,508.1	1,480.4	27.70	54.452		
6,800.0	6,724.5	6,616.0	6,569.0	20.7	17.8	-164.59	-3.2	828.5	1,531.1	1,503.0	28.15	54.386		
6,900.0	6,824.2	6,714.1	6,666.3	20.8	18.1	105.25	-3.2	840.6	1,547.6	1,519.1	28.52	54.262		
7,000.0	6,923.1	6,811.4	6,762.8	20.7	18.4	74.37	-3.3	852.6	1,556.3	1,527.6	28.69	54.242		
7,100.0	7,019.2	6,906.0	6,856.8	20.5	18.6	67.75	-3.3	864.2	1,557.5	1,528.8	28.67	54.317		
7,200.0	7,110.8	6,986.2	6,936.4	20.2	18.8	66.12	-3.3	874.1	1,551.8	1,523.3	28.48	54.494		
7,300.0	7,196.0	7,023.3	6,973.1	19.7	18.9	65.73	-1.6	878.7	1,541.9	1,513.8	28.04	54.989		
7,400.0	7,273.2	7,050.0	6,999.5	19.1	19.0	66.08	1.0	881.9	1,529.3	1,501.8	27.52	55.576		
7,500.0	7,340.8	7,100.0	7,048.4	18.5	19.2	67.60	9.4	888.0	1,514.3	1,487.2	27.07	55.929		
7,600.0	7,397.6	7,133.2	7,080.4	17.9	19.3	69.21	17.3	892.0	1,497.5	1,470.8	26.67	56.146		
7,700.0	7,442.5	7,169.3	7,114.6	17.3	19.4	71.23	27.9	896.2	1,479.6	1,453.2	26.41	56.028		
7,800.0	7,474.5	7,200.0	7,143.1	16.8	19.4	73.34	38.7	899.8	1,461.3	1,435.0	26.28	55.612		
7,900.0	7,493.1	7,240.0	7,179.4	16.5	19.6	75.92	55.0	904.3	1,443.3	1,416.9	26.35	54.777		
8,000.0	7,498.0	7,274.3	7,209.5	16.3	19.7	78.19	71.0	908.0	1,426.5	1,400.0	26.52	53.796		
8,100.0	7,498.0	7,313.4	7,242.6	16.4	19.8	79.54	91.4	912.1	1,413.8	1,387.1	26.73	52.886		
8,200.0	7,498.0	7,362.7	7,282.2	16.6	20.0	81.16	120.3	917.0	1,406.5	1,379.3	27.22	51.670		
8,300.0	7,498.0	7,425.6	7,328.9	16.9	20.2	83.08	161.9	922.8	1,403.7	1,375.7	28.01	50.123		
8,322.6	7,498.0	7,442.1	7,340.4	17.1	20.3	83.55	173.7	924.3	1,403.6	1,375.4	28.24	49.700		
8,400.0	7,498.0	7,506.2	7,381.7	17.5	20.6	85.25	222.4	929.4	1,404.5	1,375.4	29.13	48.210		
8,500.0	7,498.0	7,608.6	7,435.7	18.2	21.2	87.46	308.9	936.1	1,407.2	1,376.5	30.70	45.842		
8,600.0	7,498.0	7,733.3	7,479.7	19.1	22.0	89.25	425.3	941.5	1,409.8	1,377.0	32.80	42.986		
8,700.0	7,498.0	7,873.6	7,498.0	20.0	23.1	90.00	564.1	943.8	1,410.3	1,374.8	35.42	39.813		
8,800.0	7,498.0	7,975.3	7,498.0	21.1	24.1	90.00	665.7	943.8	1,409.2	1,371.4	37.86	37.224		
8,900.0	7,498.0	8,075.3	7,498.0	22.2	25.1	90.00	765.7	943.8	1,408.2	1,367.7	40.43	34.833		
9,000.0	7,498.0	8,175.3	7,498.0	23.5	26.2	90.00	865.7	943.8	1,407.1	1,364.0	43.13	32.628		
9,100.0	7,498.0	8,275.3	7,498.0	24.8	27.4	90.00	965.7	943.8	1,406.1	1,360.1	45.94	30.609		
9,200.0	7,498.0	8,375.3	7,498.0	26.1	28.6	90.00	1,065.7	943.8	1,405.0	1,356.2	48.84	28.770		
9,300.0	7,498.0	8,475.3	7,498.0	27.5	29.8	90.00	1,165.7	943.8	1,404.0	1,352.1	51.81	27.097		
9,400.0	7,498.0	8,575.3	7,498.0	28.9	31.2	90.00	1,265.7	943.8	1,402.9	1,348.0	54.85	25.577		
9,500.0	7,498.0	8,675.3	7,498.0	30.4	32.5	90.00	1,365.7	943.8	1,401.8	1,343.9	57.94	24.194		
9,600.0	7,498.0	8,775.3	7,498.0	31.9	33.9	90.00	1,465.7	943.8	1,400.8	1,339.7	61.08	22.935		
9,700.0	7,498.0	8,875.3	7,498.0	33.4	35.4	90.00	1,565.7	943.8	1,399.7	1,335.5	64.25	21.785		
9,800.0	7,498.0	8,975.3	7,498.0	34.9	36.8	90.00	1,665.7	943.8	1,398.7	1,331.2	67.46	20.734		
9,900.0	7,498.0	9,075.3	7,498.0	36.5	38.3	90.00	1,765.7	943.8	1,397.6	1,326.9	70.70	19.770		
10,000.0	7,498.0	9,175.3	7,498.0	38.1	39.8	90.00	1,865.7	943.8	1,396.6	1,322.6	73.96	18.884		
10,100.0	7,498.0	9,275.3	7,498.0	39.7	41.3	90.00	1,965.7	943.8	1,395.5	1,318.3	77.24	18.068		
10,200.0	7,498.0	9,375.3	7,498.0	41.3	42.9	90.00	2,065.7	943.8	1,394.5	1,313.9	80.54	17.314		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - Bighorn 4L-17H-P267 - DD - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
10,300.0	7,498.0	9,475.2	7,498.0	42.9	44.4	90.00	2,165.7	943.8	1,393.4	1,309.6	83.86	16.616		
10,400.0	7,498.0	9,575.2	7,498.0	44.5	46.0	90.00	2,265.7	943.8	1,392.4	1,305.2	87.19	15.969		
10,500.0	7,498.0	9,675.2	7,498.0	46.2	47.6	90.00	2,365.6	943.8	1,391.3	1,300.8	90.54	15.367		
10,600.0	7,498.0	9,775.2	7,498.0	47.8	49.2	90.00	2,465.6	943.8	1,390.3	1,296.4	93.90	14.806		
10,700.0	7,498.0	9,875.2	7,498.0	49.5	50.8	90.00	2,565.6	943.8	1,389.2	1,291.9	97.27	14.283		
10,800.0	7,498.0	9,975.2	7,498.0	51.1	52.4	90.00	2,665.6	943.8	1,388.1	1,287.5	100.64	13.793		
10,900.0	7,498.0	10,075.2	7,498.0	52.8	54.0	90.00	2,765.6	943.8	1,387.1	1,283.1	104.03	13.333		
11,000.0	7,498.0	10,175.2	7,498.0	54.5	55.7	90.00	2,865.6	943.8	1,386.0	1,278.6	107.43	12.902		
11,100.0	7,498.0	10,275.2	7,498.0	56.1	57.3	90.00	2,965.6	943.8	1,385.0	1,274.2	110.83	12.497		
11,200.0	7,498.0	10,375.2	7,498.0	57.8	59.0	90.00	3,065.6	943.8	1,383.9	1,269.7	114.24	12.115		
11,300.0	7,498.0	10,475.2	7,498.0	59.5	60.6	90.00	3,165.6	943.8	1,382.9	1,265.2	117.65	11.754		
11,400.0	7,498.0	10,575.2	7,498.0	61.2	62.3	90.00	3,265.6	943.8	1,381.8	1,260.8	121.07	11.414		
11,500.0	7,498.0	10,675.2	7,498.0	62.9	63.9	90.00	3,365.6	943.8	1,380.8	1,256.3	124.49	11.091		
11,600.0	7,498.0	10,775.2	7,498.0	64.6	65.6	90.00	3,465.6	943.8	1,379.7	1,251.8	127.92	10.786		
11,700.0	7,498.0	10,875.2	7,498.0	66.3	67.3	90.00	3,565.6	943.8	1,378.7	1,247.3	131.35	10.496		
11,800.0	7,498.0	10,975.2	7,498.0	68.0	68.9	90.00	3,665.6	943.8	1,377.6	1,242.8	134.79	10.220		
11,900.0	7,498.0	11,075.2	7,498.0	69.7	70.6	90.00	3,765.6	943.8	1,376.6	1,238.3	138.23	9.958		
12,000.0	7,498.0	11,175.2	7,498.0	71.4	72.3	90.00	3,865.6	943.8	1,375.5	1,233.8	141.68	9.709		
12,100.0	7,498.0	11,275.1	7,498.0	73.1	74.0	90.00	3,965.6	943.8	1,374.4	1,229.3	145.12	9.471		
12,200.0	7,498.0	11,375.1	7,498.0	74.8	75.7	90.00	4,065.6	943.8	1,373.4	1,224.8	148.57	9.244		
12,300.0	7,498.0	11,475.1	7,498.0	76.5	77.4	90.00	4,165.5	943.8	1,372.3	1,220.3	152.02	9.027		
12,400.0	7,498.0	11,575.1	7,498.0	78.2	79.1	90.00	4,265.5	943.8	1,371.3	1,215.8	155.48	8.820		
12,500.0	7,498.0	11,675.1	7,498.0	79.9	80.8	90.00	4,365.5	943.8	1,370.2	1,211.3	158.94	8.621		
12,600.0	7,498.0	11,775.1	7,498.0	81.7	82.5	90.00	4,465.5	943.8	1,369.2	1,206.8	162.40	8.431		
12,700.0	7,498.0	11,875.1	7,498.0	83.4	84.2	90.00	4,565.5	943.8	1,368.1	1,202.3	165.86	8.249		
12,800.0	7,498.0	11,975.1	7,498.0	85.1	85.9	90.00	4,665.5	943.8	1,367.1	1,197.7	169.32	8.074		
12,900.0	7,498.0	12,075.1	7,498.0	86.8	87.6	90.00	4,765.5	943.8	1,366.0	1,193.2	172.79	7.906		
13,000.0	7,498.0	12,175.1	7,498.0	88.6	89.3	90.00	4,865.5	943.8	1,365.0	1,188.7	176.25	7.744		
13,100.0	7,498.0	12,275.1	7,498.0	90.3	91.0	90.00	4,965.5	943.8	1,363.9	1,184.2	179.72	7.589		
13,200.0	7,498.0	12,375.1	7,498.0	92.0	92.7	90.00	5,065.5	943.8	1,362.9	1,179.7	183.19	7.440		
13,300.0	7,498.0	12,475.1	7,498.0	93.7	94.4	90.00	5,165.5	943.8	1,361.8	1,175.1	186.66	7.296		
13,400.0	7,498.0	12,575.1	7,498.0	95.5	96.1	90.00	5,265.5	943.8	1,360.7	1,170.6	190.14	7.157		
13,500.0	7,498.0	12,675.1	7,498.0	97.2	97.9	90.00	5,365.5	943.8	1,359.7	1,166.1	193.61	7.023		
13,600.0	7,498.0	12,775.1	7,498.0	98.9	99.6	90.00	5,465.5	943.8	1,358.7	1,161.6	197.07	6.894		
13,644.9	7,498.0	12,820.0	7,498.0	99.7	100.4	90.00	5,510.4	943.8	1,358.5	1,159.9	198.57	6.841		
13,700.0	7,498.0	12,875.1	7,498.0	100.6	101.3	90.00	5,565.5	943.8	1,358.7	1,158.3	200.40	6.780		
13,800.0	7,498.0	12,995.5	7,498.0	102.4	103.4	90.00	5,685.9	943.2	1,359.9	1,155.8	204.12	6.662		
13,900.0	7,498.0	13,123.4	7,498.0	104.1	105.6	90.00	5,813.8	939.8	1,359.3	1,151.2	208.09	6.532		
14,000.0	7,498.0	13,223.4	7,498.0	105.9	107.3	90.00	5,913.7	936.3	1,357.7	1,146.2	211.56	6.418		
14,100.0	7,498.0	13,323.4	7,498.0	107.6	109.0	90.00	6,013.6	932.7	1,356.2	1,141.1	215.05	6.306		
14,200.0	7,498.0	13,423.4	7,498.0	109.3	110.7	90.00	6,113.5	929.1	1,354.6	1,136.1	218.53	6.199		
14,300.0	7,498.0	13,523.4	7,498.0	111.1	112.4	90.00	6,213.5	925.6	1,353.1	1,131.0	222.01	6.095		
14,400.0	7,498.0	13,623.3	7,498.0	112.8	114.1	90.00	6,313.4	922.0	1,351.5	1,126.0	225.49	5.993		
14,500.0	7,498.0	13,723.3	7,498.0	114.5	115.9	90.00	6,413.3	918.5	1,349.9	1,121.0	228.98	5.895		
14,600.0	7,498.0	13,823.3	7,498.0	116.3	117.6	90.00	6,513.2	914.9	1,348.4	1,115.9	232.46	5.800		
14,652.9	7,498.0	13,855.2	7,498.0	117.2	118.1	90.00	6,545.1	913.8	1,347.7	1,113.8	233.94	5.761		
14,690.0	7,498.0	13,855.2	7,498.0	117.8	118.1	90.00	6,545.1	913.8	1,348.2	1,113.6	234.58	5.747 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DECHANT-STATE 3 (EXISTING) - FOUNDATION - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5100-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	100.38	-259.7	1,417.1	1,440.7					
100.0	100.0	96.0	96.0	0.1	0.2	100.38	-259.7	1,417.1	1,440.7	1,440.4	0.29	4,969.118		
200.0	200.0	196.0	196.0	0.3	0.3	100.38	-259.7	1,417.1	1,440.7	1,440.0	0.64	2,254.602		
300.0	300.0	296.0	296.0	0.5	0.5	100.38	-259.7	1,417.1	1,440.7	1,439.7	0.99	1,458.084		
400.0	400.0	396.0	396.0	0.6	0.7	100.38	-259.7	1,417.1	1,440.7	1,439.3	1.34	1,077.440 CC		
427.8	427.8	423.8	423.8	0.7	0.7	-105.92	-259.7	1,417.1	1,440.7	1,439.2	1.43	1,004.502		
500.0	500.0	496.0	496.0	0.8	0.9	-105.94	-259.7	1,417.1	1,440.8	1,439.1	1.69	854.407 ES		
600.0	599.9	595.9	595.9	1.0	1.0	-106.05	-259.7	1,417.1	1,441.7	1,439.7	2.04	706.648		
700.0	699.7	695.7	695.7	1.2	1.2	-106.28	-259.7	1,417.1	1,443.7	1,441.3	2.41	599.178		
800.0	799.1	795.1	795.1	1.4	1.4	-106.62	-259.7	1,417.1	1,446.7	1,443.9	2.80	515.750		
900.0	898.2	894.2	894.2	1.7	1.6	-107.06	-259.7	1,417.1	1,450.7	1,447.5	3.24	448.081		
1,000.0	996.9	992.9	992.9	2.0	1.7	-107.64	-259.7	1,417.1	1,455.5	1,451.8	3.69	394.965		
1,100.0	1,095.7	1,091.7	1,091.7	2.3	1.9	-108.23	-259.7	1,417.1	1,460.4	1,456.2	4.14	352.590		
1,200.0	1,194.4	1,190.4	1,190.4	2.6	2.1	-108.81	-259.7	1,417.1	1,465.5	1,460.9	4.60	318.294		
1,300.0	1,293.1	1,289.1	1,289.1	2.9	2.3	-109.38	-259.7	1,417.1	1,470.7	1,465.6	5.07	290.103		
1,400.0	1,391.9	1,387.9	1,387.9	3.2	2.4	-109.95	-259.7	1,417.1	1,476.0	1,470.5	5.54	266.594		
1,500.0	1,490.6	1,486.6	1,486.6	3.5	2.6	-110.52	-259.7	1,417.1	1,481.6	1,475.5	6.00	246.734		
1,600.0	1,589.4	1,585.4	1,585.4	3.8	2.8	-111.08	-259.7	1,417.1	1,487.2	1,480.7	6.47	229.762		
1,700.0	1,688.1	1,684.1	1,684.1	4.2	2.9	-111.64	-259.7	1,417.1	1,493.0	1,486.1	6.94	215.109		
1,800.0	1,786.9	1,782.9	1,782.9	4.5	3.1	-112.20	-259.7	1,417.1	1,499.0	1,491.6	7.41	202.342		
1,900.0	1,885.6	1,881.6	1,881.6	4.8	3.3	-112.74	-259.7	1,417.1	1,505.1	1,497.2	7.87	191.130		
2,000.0	1,984.4	1,980.4	1,980.4	5.1	3.5	-113.29	-259.7	1,417.1	1,511.3	1,503.0	8.34	181.212		
2,100.0	2,083.1	2,079.1	2,079.1	5.4	3.6	-113.83	-259.7	1,417.1	1,517.7	1,508.9	8.80	172.382		
2,200.0	2,181.9	2,177.9	2,177.9	5.8	3.8	-114.37	-259.7	1,417.1	1,524.2	1,514.9	9.27	164.475		
2,300.0	2,280.6	2,276.6	2,276.6	6.1	4.0	-114.90	-259.7	1,417.1	1,530.8	1,521.1	9.73	157.358		
2,400.0	2,379.4	2,375.4	2,375.4	6.4	4.1	-115.43	-259.7	1,417.1	1,537.6	1,527.4	10.19	150.920		
2,500.0	2,478.1	2,474.1	2,474.1	6.7	4.3	-115.95	-259.7	1,417.1	1,544.5	1,533.8	10.65	145.073		
2,600.0	2,576.9	2,572.9	2,572.9	7.0	4.5	-116.47	-259.7	1,417.1	1,551.5	1,540.4	11.10	139.741		
2,700.0	2,675.6	2,671.6	2,671.6	7.4	4.7	-116.98	-259.7	1,417.1	1,558.7	1,547.1	11.56	134.861		
2,800.0	2,774.4	2,770.4	2,770.4	7.7	4.8	-117.49	-259.7	1,417.1	1,566.0	1,554.0	12.01	130.380		
2,900.0	2,873.1	2,869.1	2,869.1	8.0	5.0	-118.00	-259.7	1,417.1	1,573.4	1,560.9	12.46	126.253		
3,000.0	2,971.9	2,967.9	2,967.9	8.3	5.2	-118.50	-259.7	1,417.1	1,580.9	1,568.0	12.91	122.441		
3,100.0	3,070.6	3,066.6	3,066.6	8.7	5.4	-118.99	-259.7	1,417.1	1,588.6	1,575.2	13.36	118.910		
3,200.0	3,169.4	3,165.4	3,165.4	9.0	5.5	-119.48	-259.7	1,417.1	1,596.4	1,582.5	13.81	115.633		
3,300.0	3,268.1	3,264.1	3,264.1	9.3	5.7	-119.97	-259.7	1,417.1	1,604.2	1,590.0	14.25	112.583		
3,400.0	3,366.9	3,362.9	3,362.9	9.6	5.9	-120.45	-259.7	1,417.1	1,612.3	1,597.6	14.69	109.740		
3,500.0	3,465.6	3,461.6	3,461.6	10.0	6.0	-120.92	-259.7	1,417.1	1,620.4	1,605.2	15.13	107.083		
3,600.0	3,564.4	3,560.4	3,560.4	10.3	6.2	-121.40	-259.7	1,417.1	1,628.6	1,613.0	15.57	104.596		
3,700.0	3,663.1	3,659.1	3,659.1	10.6	6.4	-121.86	-259.7	1,417.1	1,637.0	1,620.9	16.01	102.264 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 1 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,000.0	7,498.0	7,474.9	7,473.9	88.6	13.1	91.70	6,362.8	199.4	1,620.9	1,519.7	101.17	16.021		
13,100.0	7,498.0	7,475.2	7,474.3	90.3	13.1	91.73	6,362.8	199.4	1,528.6	1,425.7	102.90	14.854		
13,200.0	7,498.0	7,475.6	7,474.6	92.0	13.1	91.76	6,362.8	199.4	1,437.3	1,332.7	104.64	13.736		
13,300.0	7,498.0	7,475.9	7,474.9	93.7	13.1	91.79	6,362.8	199.3	1,347.2	1,240.9	106.37	12.666		
13,400.0	7,498.0	7,476.2	7,475.2	95.5	13.1	91.82	6,362.8	199.3	1,258.7	1,150.6	108.10	11.644		
13,500.0	7,498.0	7,476.5	7,475.6	97.2	13.1	91.85	6,362.8	199.3	1,172.0	1,062.2	109.83	10.671		
13,600.0	7,498.0	7,476.8	7,475.9	98.9	13.1	91.87	6,362.8	199.3	1,087.6	976.0	111.59	9.746		
13,700.0	7,498.0	7,477.2	7,476.2	100.6	13.1	91.86	6,362.8	199.3	1,006.7	893.3	113.45	8.874		
13,800.0	7,498.0	7,477.6	7,476.6	102.4	13.1	91.87	6,362.8	199.3	930.6	815.4	115.24	8.076		
13,900.0	7,498.0	7,478.0	7,477.0	104.1	13.1	91.91	6,362.8	199.3	859.7	742.7	116.98	7.349		
14,000.0	7,498.0	7,478.4	7,477.4	105.9	13.1	91.95	6,362.8	199.3	795.1	676.4	118.71	6.697		
14,100.0	7,498.0	7,478.8	7,477.8	107.6	13.1	91.98	6,362.8	199.2	738.3	617.9	120.45	6.130		
14,200.0	7,498.0	7,479.1	7,478.2	109.3	13.1	92.02	6,362.8	199.2	691.5	569.3	122.19	5.659		
14,300.0	7,498.0	7,479.5	7,478.5	111.1	13.1	92.05	6,362.8	199.2	656.6	532.7	123.93	5.299		
14,400.0	7,498.0	7,479.8	7,478.9	112.8	13.1	92.08	6,362.8	199.2	635.7	510.1	125.66	5.059		
14,484.9	7,498.0	7,480.1	7,479.2	114.3	13.1	92.11	6,362.8	199.2	630.0	502.9	127.14	4.956 CC		
14,500.0	7,498.0	7,480.2	7,479.2	114.5	13.1	92.11	6,362.8	199.2	630.2	502.8	127.40	4.947 ES, SF		
14,600.0	7,498.0	7,480.5	7,479.6	116.3	13.1	92.14	6,362.8	199.2	640.5	511.3	129.14	4.960		
14,690.0	7,498.0	7,480.8	7,479.9	117.8	13.1	92.17	6,362.8	199.2	662.6	531.9	130.70	5.069		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 33-8 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							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		
13,200.0	7,498.0	7,424.8	7,423.1	92.0	13.1	-88.10	6,367.7	-1,307.9	1,576.9	1,472.4	104.55	15.083		
13,300.0	7,498.0	7,426.3	7,424.6	93.7	13.1	-88.20	6,367.7	-1,308.0	1,496.1	1,389.8	106.29	14.075		
13,400.0	7,498.0	7,427.8	7,426.1	95.5	13.1	-88.29	6,367.8	-1,308.0	1,417.6	1,309.6	108.03	13.122		
13,500.0	7,498.0	7,429.3	7,427.6	97.2	13.1	-88.39	6,367.8	-1,308.0	1,342.0	1,232.3	109.77	12.226		
13,600.0	7,498.0	7,430.9	7,429.2	98.9	13.1	-88.48	6,367.8	-1,308.0	1,269.8	1,158.3	111.54	11.385		
13,700.0	7,498.0	7,432.4	7,430.7	100.6	13.1	-88.56	6,367.8	-1,308.0	1,200.8	1,087.4	113.40	10.589		
13,800.0	7,498.0	7,434.1	7,432.3	102.4	13.1	-88.65	6,367.9	-1,308.0	1,135.1	1,019.9	115.20	9.853		
13,900.0	7,498.0	7,435.7	7,434.0	104.1	13.1	-88.76	6,367.9	-1,308.0	1,074.4	957.5	116.95	9.187		
14,000.0	7,498.0	7,437.4	7,435.7	105.9	13.1	-88.87	6,367.9	-1,308.1	1,020.0	901.3	118.69	8.593		
14,100.0	7,498.0	7,439.1	7,437.3	107.6	13.1	-88.98	6,367.9	-1,308.1	972.8	852.3	120.44	8.077		
14,200.0	7,498.0	7,440.8	7,439.1	109.3	13.1	-89.09	6,368.0	-1,308.1	934.0	811.8	122.18	7.644		
14,300.0	7,498.0	7,442.5	7,440.8	111.1	13.1	-89.20	6,368.0	-1,308.1	904.6	780.6	123.93	7.299		
14,400.0	7,498.0	7,444.3	7,442.6	112.8	13.1	-89.32	6,368.0	-1,308.1	885.6	759.9	125.68	7.046		
14,500.0	7,498.0	7,446.1	7,444.4	114.5	13.1	-89.44	6,368.1	-1,308.1	877.6	750.2	127.42	6.887		
14,520.3	7,498.0	7,446.4	7,444.7	114.9	13.1	-89.46	6,368.1	-1,308.1	877.4	749.6	127.78	6.866 CC, ES		
14,600.0	7,498.0	7,447.9	7,446.2	116.3	13.1	-89.56	6,368.1	-1,308.2	881.0	751.8	129.17	6.820 SF		
14,690.0	7,498.0	7,449.6	7,447.9	117.8	13.1	-89.66	6,368.1	-1,308.2	893.6	762.9	130.74	6.835		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 34-8 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
11,700.0	7,498.0	7,416.8	7,414.4	66.3	13.2	-88.00	4,761.0	-1,440.8	1,562.8	1,484.1	78.68	19.862		
11,800.0	7,498.0	7,418.5	7,416.1	68.0	13.2	-88.09	4,761.0	-1,440.8	1,488.4	1,408.0	80.40	18.512		
11,900.0	7,498.0	7,420.3	7,417.9	69.7	13.2	-88.19	4,761.1	-1,440.8	1,417.1	1,335.0	82.12	17.257		
12,000.0	7,498.0	7,422.0	7,419.6	71.4	13.2	-88.29	4,761.1	-1,440.8	1,349.6	1,265.7	83.85	16.096		
12,100.0	7,498.0	7,423.8	7,421.4	73.1	13.2	-88.39	4,761.1	-1,440.9	1,286.2	1,200.6	85.57	15.031		
12,200.0	7,498.0	7,425.6	7,423.2	74.8	13.2	-88.49	4,761.2	-1,440.9	1,227.7	1,140.4	87.30	14.064		
12,300.0	7,498.0	7,427.4	7,425.0	76.5	13.2	-88.59	4,761.2	-1,440.9	1,174.9	1,085.9	89.03	13.197		
12,400.0	7,498.0	7,429.2	7,426.8	78.2	13.2	-88.70	4,761.2	-1,440.9	1,128.4	1,037.7	90.76	12.433		
12,500.0	7,498.0	7,431.0	7,428.6	79.9	13.2	-88.80	4,761.3	-1,441.0	1,089.2	996.7	92.49	11.777		
12,600.0	7,498.0	7,432.9	7,430.5	81.7	13.2	-88.90	4,761.3	-1,441.0	1,058.0	963.8	94.22	11.229		
12,700.0	7,498.0	7,434.7	7,432.3	83.4	13.2	-89.01	4,761.3	-1,441.0	1,035.5	939.6	95.95	10.792		
12,800.0	7,498.0	7,436.6	7,434.2	85.1	13.2	-89.11	4,761.4	-1,441.0	1,022.4	924.7	97.69	10.466		
12,885.2	7,498.0	7,438.2	7,435.8	86.6	13.2	-89.20	4,761.4	-1,441.1	1,018.9	919.7	99.17	10.274 CC		
12,900.0	7,498.0	7,438.5	7,436.1	86.8	13.2	-89.22	4,761.4	-1,441.1	1,019.0	919.5	99.42	10.249 ES		
13,000.0	7,498.0	7,440.3	7,437.9	88.6	13.2	-89.32	4,761.4	-1,441.1	1,025.3	924.1	101.16	10.135		
13,100.0	7,498.0	7,442.3	7,439.8	90.3	13.2	-89.43	4,761.5	-1,441.1	1,041.2	938.4	102.90	10.119 SF		
13,200.0	7,498.0	7,444.2	7,441.8	92.0	13.2	-89.54	4,761.5	-1,441.1	1,066.4	961.7	104.63	10.191		
13,300.0	7,498.0	7,446.1	7,443.7	93.7	13.2	-89.65	4,761.6	-1,441.2	1,100.0	993.7	106.37	10.341		
13,400.0	7,498.0	7,448.1	7,445.6	95.5	13.2	-89.76	4,761.6	-1,441.2	1,141.5	1,033.4	108.11	10.559		
13,500.0	7,498.0	7,450.0	7,447.6	97.2	13.2	-89.87	4,761.6	-1,441.2	1,189.9	1,080.1	109.85	10.832		
13,600.0	7,498.0	7,452.0	7,449.6	98.9	13.2	-89.98	4,761.7	-1,441.3	1,244.5	1,132.9	111.61	11.151		
13,700.0	7,498.0	7,454.0	7,451.6	100.6	13.2	-90.09	4,761.7	-1,441.3	1,303.6	1,190.1	113.47	11.489		
13,800.0	7,498.0	7,456.0	7,453.6	102.4	13.2	-90.20	4,761.7	-1,441.3	1,366.3	1,251.0	115.27	11.853		
13,900.0	7,498.0	7,458.1	7,455.7	104.1	13.2	-90.31	4,761.8	-1,441.3	1,432.9	1,315.9	117.01	12.246		
14,000.0	7,498.0	7,460.2	7,457.8	105.9	13.3	-90.43	4,761.8	-1,441.4	1,503.3	1,384.5	118.75	12.660		
14,100.0	7,498.0	7,462.3	7,459.9	107.6	13.3	-90.54	4,761.9	-1,441.4	1,576.9	1,456.4	120.49	13.087		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 44-8 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				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)				
11,500.0	7,498.0	7,468.4	7,464.9	62.9	13.3	90.23	4,771.9	315.8	1,595.1	1,519.7	75.39	21.157		
11,600.0	7,498.0	7,466.5	7,463.0	64.6	13.3	90.07	4,771.9	315.7	1,507.2	1,430.1	77.10	19.548		
11,700.0	7,498.0	7,464.5	7,461.0	66.3	13.3	89.92	4,772.0	315.6	1,420.8	1,342.0	78.81	18.029		
11,800.0	7,498.0	7,462.5	7,459.0	68.0	13.2	89.77	4,772.0	315.6	1,336.3	1,255.8	80.52	16.597		
11,900.0	7,498.0	7,460.5	7,457.0	69.7	13.2	89.61	4,772.1	315.5	1,254.2	1,171.9	82.23	15.252		
12,000.0	7,498.0	7,458.4	7,454.9	71.4	13.2	89.45	4,772.1	315.4	1,174.8	1,090.8	83.94	13.995		
12,100.0	7,498.0	7,456.4	7,452.9	73.1	13.2	89.29	4,772.2	315.3	1,098.7	1,013.1	85.65	12.828		
12,200.0	7,498.0	7,454.3	7,450.8	74.8	13.2	89.13	4,772.2	315.3	1,026.8	939.4	87.37	11.753		
12,300.0	7,498.0	7,452.2	7,448.7	76.5	13.2	88.97	4,772.3	315.2	959.9	870.8	89.08	10.775		
12,400.0	7,498.0	7,450.1	7,446.6	78.2	13.2	88.81	4,772.3	315.1	899.2	808.4	90.80	9.903		
12,500.0	7,498.0	7,448.0	7,444.5	79.9	13.2	88.64	4,772.3	315.0	845.9	753.4	92.51	9.144		
12,600.0	7,498.0	7,445.8	7,442.4	81.7	13.2	88.47	4,772.4	315.0	801.7	707.4	94.23	8.508		
12,700.0	7,498.0	7,443.7	7,440.2	83.4	13.2	88.31	4,772.4	314.9	767.9	672.0	95.95	8.004		
12,800.0	7,498.0	7,441.5	7,438.0	85.1	13.2	88.14	4,772.5	314.8	746.2	648.5	97.66	7.640		
12,900.0	7,498.0	7,439.3	7,435.8	86.8	13.2	87.96	4,772.5	314.7	737.4	638.1	99.38	7.421		
12,914.8	7,498.0	7,438.9	7,435.5	87.1	13.2	87.94	4,772.5	314.7	737.3	637.7	99.63	7.400 CC, ES		
13,000.0	7,498.0	7,437.0	7,433.6	88.6	13.2	87.79	4,772.6	314.7	742.2	641.1	101.09	7.342 SF		
13,100.0	7,498.0	7,434.8	7,431.3	90.3	13.2	87.62	4,772.6	314.6	760.2	657.4	102.81	7.394		
13,200.0	7,498.0	7,432.5	7,429.1	92.0	13.2	87.44	4,772.7	314.5	790.5	686.0	104.52	7.563		
13,300.0	7,498.0	7,430.2	7,426.8	93.7	13.2	87.26	4,772.7	314.4	831.8	725.6	106.23	7.830		
13,400.0	7,498.0	7,427.9	7,424.4	95.5	13.2	87.08	4,772.8	314.3	882.6	774.6	107.95	8.176		
13,500.0	7,498.0	7,425.6	7,422.1	97.2	13.2	86.90	4,772.8	314.2	941.2	831.6	109.66	8.583		
13,600.0	7,498.0	7,423.2	7,419.7	98.9	13.2	86.71	4,772.9	314.2	1,006.4	895.0	111.39	9.035		
13,700.0	7,498.0	7,420.8	7,417.3	100.6	13.2	86.46	4,772.9	314.1	1,077.8	964.5	113.21	9.520		
13,800.0	7,498.0	7,418.3	7,414.8	102.4	13.2	86.21	4,773.0	314.0	1,154.3	1,039.4	114.97	10.041		
13,900.0	7,498.0	7,415.7	7,412.3	104.1	13.2	86.01	4,773.1	313.9	1,234.4	1,117.8	116.67	10.581		
14,000.0	7,498.0	7,413.1	7,409.7	105.9	13.2	85.80	4,773.1	313.8	1,317.3	1,198.9	118.37	11.128		
14,100.0	7,498.0	7,410.5	7,407.1	107.6	13.2	85.59	4,773.2	313.7	1,402.3	1,282.3	120.07	11.679		
14,200.0	7,498.0	7,407.9	7,404.4	109.3	13.2	85.38	4,773.2	313.6	1,489.3	1,367.5	121.77	12.231		
14,300.0	7,498.0	7,405.2	7,401.8	111.1	13.2	85.17	4,773.3	313.5	1,577.7	1,454.3	123.46	12.779		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 4-4-8 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8080-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,100.0	7,498.0	7,433.0	7,433.0	90.3	13.0	-90.00	6,376.0	-1,254.8	1,639.0	1,536.1	102.87	15.933		
13,200.0	7,498.0	7,433.0	7,433.0	92.0	13.0	-90.00	6,376.0	-1,254.8	1,554.4	1,449.8	104.60	14.860		
13,300.0	7,498.0	7,433.0	7,433.0	93.7	13.0	-90.00	6,376.0	-1,254.8	1,471.6	1,365.3	106.33	13.840		
13,400.0	7,498.0	7,433.0	7,433.0	95.5	13.0	-90.00	6,376.0	-1,254.8	1,391.2	1,283.1	108.07	12.873		
13,500.0	7,498.0	7,433.0	7,433.0	97.2	13.0	-90.00	6,376.0	-1,254.8	1,313.4	1,203.6	109.80	11.961		
13,600.0	7,498.0	7,433.0	7,433.0	98.9	13.0	-90.00	6,376.0	-1,254.8	1,238.8	1,127.3	111.56	11.104		
13,700.0	7,498.0	7,433.0	7,433.0	100.6	13.0	-90.00	6,376.0	-1,254.8	1,167.2	1,053.8	113.42	10.291		
13,800.0	7,498.0	7,433.0	7,433.0	102.4	13.0	-90.00	6,376.0	-1,254.8	1,098.9	983.6	115.22	9.537		
13,900.0	7,498.0	7,433.0	7,433.0	104.1	13.0	-90.00	6,376.0	-1,254.8	1,035.4	918.4	116.96	8.853		
14,000.0	7,498.0	7,433.0	7,433.0	105.9	13.0	-90.00	6,376.0	-1,254.8	978.1	859.4	118.69	8.240		
14,100.0	7,498.0	7,433.0	7,433.0	107.6	13.0	-90.00	6,376.0	-1,254.8	928.0	807.6	120.43	7.706		
14,200.0	7,498.0	7,433.0	7,433.0	109.3	13.0	-90.00	6,376.0	-1,254.8	886.4	764.3	122.17	7.256		
14,300.0	7,498.0	7,433.0	7,433.0	111.1	13.0	-90.00	6,376.0	-1,254.8	854.6	730.7	123.91	6.897		
14,400.0	7,498.0	7,433.0	7,433.0	112.8	13.0	-90.00	6,376.0	-1,254.8	833.6	707.9	125.65	6.634		
14,500.0	7,498.0	7,433.0	7,433.0	114.5	13.0	-90.00	6,376.0	-1,254.8	824.3	696.9	127.39	6.470		
14,527.2	7,498.0	7,433.0	7,433.0	115.0	13.0	-90.00	6,376.0	-1,254.8	823.8	696.0	127.87	6.443 CC, ES		
14,600.0	7,498.0	7,433.0	7,433.0	116.3	13.0	-90.00	6,376.0	-1,254.8	827.1	697.9	129.13	6.405 SF		
14,690.0	7,498.0	7,433.0	7,433.0	117.8	13.0	-90.00	6,376.0	-1,254.8	839.8	709.1	130.70	6.425		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 78-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	Factor		
14,000.0	7,498.0	7,495.4	7,405.5	105.9	18.7	87.34	6,919.4	820.0	1,628.9	1,507.5	121.42	13.416		
14,100.0	7,498.0	7,498.2	7,408.3	107.6	18.7	87.47	6,919.5	820.0	1,567.7	1,444.5	123.17	12.728		
14,200.0	7,498.0	7,501.0	7,411.1	109.3	18.7	87.60	6,919.6	820.1	1,510.6	1,385.6	124.92	12.092		
14,300.0	7,498.0	7,503.8	7,413.9	111.1	18.7	87.73	6,919.7	820.2	1,458.1	1,331.4	126.68	11.510		
14,400.0	7,498.0	7,506.7	7,416.8	112.8	18.7	87.86	6,919.7	820.2	1,410.7	1,282.3	128.43	10.984		
14,500.0	7,498.0	7,509.5	7,419.6	114.5	18.7	87.98	6,919.8	820.3	1,369.0	1,238.8	130.18	10.516		
14,600.0	7,498.0	7,512.3	7,422.4	116.3	18.7	88.11	6,919.9	820.4	1,333.5	1,201.6	131.94	10.107		
14,690.0	7,498.0	7,514.9	7,424.9	117.8	18.7	88.23	6,920.0	820.4	1,307.3	1,173.8	133.51	9.792 CC, ES, SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 52-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)						
12,700.0	7,498.0	7,619.4	7,510.3	83.4	21.5	92.16	5,623.1	814.6	1,629.6	1,527.6	102.01	15.974		
12,800.0	7,498.0	7,619.1	7,509.9	85.1	21.5	92.14	5,623.1	814.6	1,565.7	1,462.0	103.74	15.093		
12,900.0	7,498.0	7,618.7	7,509.6	86.8	21.5	92.13	5,623.1	814.7	1,505.8	1,400.3	105.47	14.277		
13,000.0	7,498.0	7,618.4	7,509.2	88.6	21.5	92.11	5,623.1	814.7	1,450.2	1,343.0	107.20	13.528		
13,100.0	7,498.0	7,618.0	7,508.9	90.3	21.5	92.09	5,623.1	814.7	1,399.7	1,290.7	108.93	12.849		
13,200.0	7,498.0	7,617.7	7,508.5	92.0	21.5	92.08	5,623.1	814.7	1,354.6	1,244.0	110.66	12.241		
13,300.0	7,498.0	7,617.3	7,508.2	93.7	21.5	92.06	5,623.1	814.7	1,315.6	1,203.2	112.40	11.705		
13,400.0	7,498.0	7,617.0	7,507.8	95.5	21.5	92.04	5,623.1	814.7	1,283.3	1,169.1	114.13	11.244		
13,500.0	7,498.0	7,616.6	7,507.5	97.2	21.5	92.03	5,623.1	814.7	1,258.0	1,142.2	115.87	10.858		
13,600.0	7,498.0	7,616.3	7,507.1	98.9	21.5	92.01	5,623.1	814.7	1,240.4	1,122.8	117.64	10.544		
13,700.0	7,498.0	7,616.0	7,506.8	100.6	21.5	91.99	5,623.1	814.7	1,231.8	1,112.2	119.62	10.297		
13,740.6	7,498.0	7,615.9	7,506.7	101.4	21.5	91.99	5,623.1	814.8	1,231.0	1,110.7	120.38	10.226 CC, ES		
13,800.0	7,498.0	7,615.7	7,506.6	102.4	21.5	91.98	5,623.1	814.8	1,232.9	1,111.4	121.49	10.148		
13,900.0	7,498.0	7,615.5	7,506.3	104.1	21.5	91.97	5,623.1	814.8	1,242.3	1,119.1	123.23	10.081		
14,000.0	7,498.0	7,615.3	7,506.1	105.9	21.5	91.96	5,623.1	814.8	1,259.6	1,134.7	124.97	10.080 SF		
14,100.0	7,498.0	7,615.0	7,505.8	107.6	21.5	91.95	5,623.1	814.8	1,284.6	1,157.9	126.70	10.138		
14,200.0	7,498.0	7,614.8	7,505.6	109.3	21.5	91.94	5,623.1	814.8	1,316.6	1,188.2	128.44	10.251		
14,300.0	7,498.0	7,614.5	7,505.4	111.1	21.5	91.93	5,623.1	814.8	1,355.3	1,225.1	130.18	10.411		
14,400.0	7,498.0	7,614.3	7,505.1	112.8	21.5	91.91	5,623.1	814.8	1,400.1	1,268.2	131.92	10.613		
14,500.0	7,498.0	7,614.1	7,504.9	114.5	21.5	91.90	5,623.1	814.8	1,450.4	1,316.7	133.66	10.851		
14,600.0	7,498.0	7,613.8	7,504.7	116.3	21.5	91.89	5,623.1	814.8	1,505.7	1,370.3	135.40	11.120		
14,690.0	7,498.0	7,613.6	7,504.4	117.8	21.5	91.88	5,623.1	814.8	1,559.2	1,422.2	136.97	11.383		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - DIER J 1-A (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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)						
12,000.0	7,498.0	7,484.2	7,482.3	71.4	13.3	-99.95	5,490.8	-530.1	1,628.4	1,545.6	82.80	19.667		
12,100.0	7,498.0	7,483.1	7,481.2	73.1	13.3	-99.44	5,490.8	-530.2	1,528.6	1,444.0	84.61	18.068		
12,200.0	7,498.0	7,482.1	7,480.1	74.8	13.2	-98.92	5,490.8	-530.2	1,429.0	1,342.5	86.42	16.535		
12,300.0	7,498.0	7,481.0	7,479.1	76.5	13.2	-98.40	5,490.9	-530.2	1,329.3	1,241.1	88.23	15.066		
12,400.0	7,498.0	7,479.9	7,478.0	78.2	13.2	-97.87	5,490.9	-530.2	1,229.7	1,139.7	90.05	13.657		
12,500.0	7,498.0	7,478.8	7,476.9	79.9	13.2	-97.33	5,490.9	-530.2	1,130.2	1,038.4	91.86	12.304		
12,600.0	7,498.0	7,477.7	7,475.7	81.7	13.2	-96.78	5,490.9	-530.2	1,030.8	937.1	93.67	11.004		
12,700.0	7,498.0	7,476.5	7,474.6	83.4	13.2	-96.22	5,490.9	-530.2	931.5	836.0	95.49	9.755		
12,800.0	7,498.0	7,475.4	7,473.5	85.1	13.2	-95.66	5,490.9	-530.2	832.4	735.1	97.30	8.555		
12,900.0	7,498.0	7,474.2	7,472.3	86.8	13.2	-95.09	5,490.9	-530.3	733.5	634.4	99.10	7.401		
13,000.0	7,498.0	7,473.0	7,471.1	88.6	13.2	-94.51	5,491.0	-530.3	635.0	534.1	100.91	6.293		
13,100.0	7,498.0	7,471.8	7,469.9	90.3	13.2	-93.92	5,491.0	-530.3	537.0	434.2	102.71	5.228		
13,200.0	7,498.0	7,470.6	7,468.7	92.0	13.2	-93.32	5,491.0	-530.3	439.8	335.3	104.50	4.209		
13,300.0	7,498.0	7,469.4	7,467.5	93.7	13.2	-92.72	5,491.0	-530.3	344.4	238.1	106.28	3.240		
13,400.0	7,498.0	7,468.2	7,466.2	95.5	13.2	-92.10	5,491.0	-530.3	252.5	144.4	108.06	2.336		
13,500.0	7,498.0	7,466.9	7,465.0	97.2	13.2	-91.48	5,491.0	-530.4	169.9	60.1	109.83	1.547		
13,600.0	7,498.0	7,465.6	7,463.7	98.9	13.2	-90.85	5,491.0	-530.4	118.3	6.7	111.61	1.060 Level 2		
13,625.2	7,498.0	7,465.3	7,463.4	99.4	13.2	-90.69	5,491.0	-530.4	115.7	3.6	112.08	1.032 Level 2, CC, ES, SF		
13,700.0	7,498.0	7,464.3	7,462.4	100.6	13.2	-90.20	5,491.1	-530.4	137.3	23.9	113.48	1.210 Level 2		
13,800.0	7,498.0	7,463.0	7,461.1	102.4	13.2	-89.55	5,491.1	-530.4	208.2	92.9	115.27	1.806		
13,900.0	7,498.0	7,461.6	7,459.7	104.1	13.2	-88.88	5,491.1	-530.4	296.2	179.3	116.99	2.532		
14,000.0	7,498.0	7,460.2	7,458.3	105.9	13.2	-88.21	5,491.1	-530.4	390.1	271.4	118.70	3.286		
14,100.0	7,498.0	7,458.8	7,456.9	107.6	13.2	-87.53	5,491.1	-530.4	486.4	366.0	120.39	4.040		
14,200.0	7,498.0	7,457.4	7,455.5	109.3	13.2	-86.83	5,491.2	-530.5	583.9	461.9	122.06	4.784		
14,300.0	7,498.0	7,456.0	7,454.1	111.1	13.2	-86.14	5,491.2	-530.5	682.2	558.5	123.71	5.514		
14,400.0	7,498.0	7,454.5	7,452.6	112.8	13.2	-85.43	5,491.2	-530.5	780.9	655.5	125.34	6.230		
14,500.0	7,498.0	7,453.0	7,451.1	114.5	13.2	-84.71	5,491.2	-530.5	879.9	752.9	126.95	6.931		
14,600.0	7,498.0	7,451.5	7,449.6	116.3	13.2	-83.99	5,491.2	-530.5	979.1	850.5	128.53	7.617		
14,690.0	7,498.0	7,450.2	7,448.3	117.8	13.2	-83.33	5,491.3	-530.5	1,068.4	938.5	129.94	8.223		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 1 (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		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)		Between Centres (ft)	Between Ellipses (ft)						
9,900.0	7,498.0	7,350.0	7,349.0	36.5	12.9	67.15	3,350.1	-185.6	1,610.5	1,565.2	45.23	35.606		
10,000.0	7,498.0	7,350.0	7,349.0	38.1	12.9	67.15	3,350.1	-185.6	1,512.0	1,465.3	46.72	32.363		
10,100.0	7,498.0	7,350.0	7,349.0	39.7	12.9	67.15	3,350.1	-185.6	1,413.8	1,365.5	48.22	29.319		
10,200.0	7,498.0	7,350.0	7,349.0	41.3	12.9	67.15	3,350.1	-185.6	1,315.8	1,266.0	49.73	26.458		
10,300.0	7,498.0	7,350.0	7,349.0	42.9	12.9	67.15	3,350.1	-185.6	1,218.1	1,166.9	51.25	23.768		
10,400.0	7,498.0	7,350.0	7,349.0	44.5	12.9	67.15	3,350.1	-185.6	1,120.9	1,068.1	52.78	21.238		
10,500.0	7,498.0	7,350.0	7,349.0	46.2	12.9	67.15	3,350.1	-185.6	1,024.2	969.9	54.31	18.858		
10,600.0	7,498.0	7,350.0	7,349.0	47.8	12.9	67.15	3,350.1	-185.6	928.2	872.3	55.85	16.619		
10,700.0	7,498.0	7,350.0	7,349.0	49.5	12.9	67.15	3,350.1	-185.6	833.1	775.7	57.40	14.516		
10,800.0	7,498.0	7,350.0	7,349.0	51.1	12.9	67.15	3,350.1	-185.6	739.4	680.4	58.95	12.543		
10,900.0	7,498.0	7,350.0	7,349.0	52.8	12.9	67.15	3,350.1	-185.6	647.5	587.0	60.50	10.702		
11,000.0	7,498.0	7,350.0	7,349.0	54.5	12.9	67.15	3,350.1	-185.6	558.4	496.3	62.06	8.998		
11,100.0	7,498.0	7,350.0	7,349.0	56.1	12.9	67.15	3,350.1	-185.6	473.7	410.1	63.62	7.445		
11,200.0	7,498.0	7,350.0	7,349.0	57.8	12.9	67.15	3,350.1	-185.6	396.2	331.0	65.19	6.077		
11,300.0	7,498.0	7,350.0	7,349.0	59.5	12.9	67.15	3,350.1	-185.6	330.9	264.2	66.76	4.957		
11,400.0	7,498.0	7,350.0	7,349.0	61.2	12.9	67.15	3,350.1	-185.6	286.5	218.2	68.33	4.193		
11,487.2	7,498.0	7,350.0	7,349.0	62.7	12.9	67.15	3,350.1	-185.6	272.9	203.2	69.70	3.916 CC, ES		
11,500.0	7,498.0	7,350.0	7,349.0	62.9	12.9	67.15	3,350.1	-185.6	273.2	203.3	69.90	3.909 SF		
11,600.0	7,498.0	7,350.0	7,349.0	64.6	12.9	67.15	3,350.1	-185.6	295.3	223.9	71.48	4.132		
11,700.0	7,498.0	7,350.0	7,349.0	66.3	12.9	67.15	3,350.1	-185.6	346.1	273.1	73.06	4.738		
11,800.0	7,498.0	7,350.0	7,349.0	68.0	12.9	67.15	3,350.1	-185.6	415.2	340.5	74.64	5.562		
11,900.0	7,498.0	7,350.0	7,349.0	69.7	12.9	67.15	3,350.1	-185.6	494.9	418.7	76.22	6.493		
12,000.0	7,498.0	7,350.0	7,349.0	71.4	12.9	67.15	3,350.1	-185.6	580.9	503.1	77.80	7.467		
12,100.0	7,498.0	7,350.0	7,349.0	73.1	12.9	67.15	3,350.1	-185.6	670.9	591.5	79.39	8.450		
12,200.0	7,498.0	7,350.0	7,349.0	74.8	12.9	67.15	3,350.1	-185.6	763.3	682.3	80.98	9.426		
12,300.0	7,498.0	7,350.0	7,349.0	76.5	12.9	67.15	3,350.1	-185.6	857.4	774.9	82.57	10.385		
12,400.0	7,498.0	7,350.0	7,349.0	78.2	12.9	67.15	3,350.1	-185.6	952.8	868.6	84.16	11.321		
12,500.0	7,498.0	7,350.0	7,349.0	79.9	12.9	67.15	3,350.1	-185.6	1,049.0	963.2	85.75	12.233		
12,600.0	7,498.0	7,350.0	7,349.0	81.7	12.9	67.15	3,350.1	-185.6	1,145.8	1,058.5	87.34	13.119		
12,700.0	7,498.0	7,350.0	7,349.0	83.4	12.9	67.15	3,350.1	-185.6	1,243.2	1,154.2	88.93	13.979		
12,800.0	7,498.0	7,350.0	7,349.0	85.1	12.9	67.15	3,350.1	-185.6	1,340.9	1,250.4	90.53	14.812		
12,900.0	7,498.0	7,350.0	7,349.0	86.8	12.9	67.15	3,350.1	-185.6	1,439.0	1,346.8	92.12	15.620		
13,000.0	7,498.0	7,350.0	7,349.0	88.6	12.9	67.15	3,350.1	-185.6	1,537.3	1,443.5	93.72	16.403		
13,100.0	7,498.0	7,350.0	7,349.0	90.3	12.9	67.15	3,350.1	-185.6	1,635.8	1,540.5	95.32	17.161		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 1-17 (EXISTING) - ENCANA WELL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8420-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,600.0	7,498.0	7,456.0	7,456.0	47.8	13.0	-90.00	3,356.9	-1,798.5	1,619.4	1,559.3	60.10	26.946		
10,700.0	7,498.0	7,456.0	7,456.0	49.5	13.0	-90.00	3,356.9	-1,798.5	1,567.5	1,505.7	61.77	25.375		
10,800.0	7,498.0	7,456.0	7,456.0	51.1	13.0	-90.00	3,356.9	-1,798.5	1,520.4	1,456.9	63.45	23.960		
10,900.0	7,498.0	7,456.0	7,456.0	52.8	13.0	-90.00	3,356.9	-1,798.5	1,478.6	1,413.4	65.14	22.697		
11,000.0	7,498.0	7,456.0	7,456.0	54.5	13.0	-90.00	3,356.9	-1,798.5	1,442.5	1,375.6	66.83	21.583		
11,100.0	7,498.0	7,456.0	7,456.0	56.1	13.0	-90.00	3,356.9	-1,798.5	1,412.6	1,344.0	68.53	20.613		
11,200.0	7,498.0	7,456.0	7,456.0	57.8	13.0	-90.00	3,356.9	-1,798.5	1,389.2	1,319.0	70.23	19.782		
11,300.0	7,498.0	7,456.0	7,456.0	59.5	13.0	-90.00	3,356.9	-1,798.5	1,372.8	1,300.9	71.93	19.085		
11,400.0	7,498.0	7,456.0	7,456.0	61.2	13.0	-90.00	3,356.9	-1,798.5	1,363.5	1,289.9	73.63	18.517		
11,477.0	7,498.0	7,456.0	7,456.0	62.5	13.0	-90.00	3,356.9	-1,798.5	1,361.3	1,286.4	74.95	18.164 CC		
11,500.0	7,498.0	7,456.0	7,456.0	62.9	13.0	-90.00	3,356.9	-1,798.5	1,361.5	1,286.2	75.34	18.071 ES		
11,600.0	7,498.0	7,456.0	7,456.0	64.6	13.0	-90.00	3,356.9	-1,798.5	1,366.9	1,289.8	77.05	17.740		
11,700.0	7,498.0	7,456.0	7,456.0	66.3	13.0	-90.00	3,356.9	-1,798.5	1,379.5	1,300.7	78.76	17.514		
11,800.0	7,498.0	7,456.0	7,456.0	68.0	13.0	-90.00	3,356.9	-1,798.5	1,399.1	1,318.6	80.48	17.385		
11,900.0	7,498.0	7,456.0	7,456.0	69.7	13.0	-90.00	3,356.9	-1,798.5	1,425.5	1,343.3	82.20	17.343 SF		
12,000.0	7,498.0	7,456.0	7,456.0	71.4	13.0	-90.00	3,356.9	-1,798.5	1,458.3	1,374.4	83.91	17.379		
12,100.0	7,498.0	7,456.0	7,456.0	73.1	13.0	-90.00	3,356.9	-1,798.5	1,497.1	1,411.5	85.63	17.483		
12,200.0	7,498.0	7,456.0	7,456.0	74.8	13.0	-90.00	3,356.9	-1,798.5	1,541.4	1,454.1	87.36	17.645		
12,300.0	7,498.0	7,456.0	7,456.0	76.5	13.0	-90.00	3,356.9	-1,798.5	1,590.8	1,501.7	89.08	17.858		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 2-17 (EXISTING) - ENCANA WELL - GYRO													Offset Site Error:	0.0 ft
Survey Program: 100-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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)						
9,300.0	7,498.0	7,500.0	7,498.4	27.5	13.2	96.79	2,750.5	-196.6	1,606.9	1,567.7	39.16	41.036		
9,400.0	7,498.0	7,500.0	7,498.4	28.9	13.2	96.79	2,750.5	-196.6	1,508.1	1,467.5	40.64	37.109		
9,500.0	7,498.0	7,499.0	7,497.3	30.4	13.2	96.54	2,750.6	-196.6	1,409.6	1,367.4	42.17	33.430		
9,600.0	7,498.0	7,497.0	7,495.3	31.9	13.2	96.09	2,750.6	-196.5	1,311.3	1,267.6	43.73	29.988		
9,700.0	7,498.0	7,495.0	7,493.4	33.4	13.2	95.64	2,750.6	-196.5	1,213.3	1,167.9	45.31	26.777		
9,800.0	7,498.0	7,493.1	7,491.4	34.9	13.2	95.19	2,750.7	-196.5	1,115.6	1,068.6	46.91	23.780		
9,900.0	7,498.0	7,491.2	7,489.5	36.5	13.2	94.76	2,750.7	-196.5	1,018.3	969.8	48.53	20.984		
10,000.0	7,498.0	7,489.3	7,487.7	38.1	13.2	94.32	2,750.7	-196.4	921.6	871.5	50.16	18.375		
10,100.0	7,498.0	7,487.5	7,485.8	39.7	13.2	93.90	2,750.8	-196.4	825.7	773.9	51.80	15.941		
10,200.0	7,498.0	7,485.7	7,484.0	41.3	13.2	93.48	2,750.8	-196.4	730.9	677.5	53.45	13.676		
10,300.0	7,498.0	7,483.9	7,482.2	42.9	13.2	93.06	2,750.8	-196.3	637.8	582.6	55.11	11.573		
10,400.0	7,498.0	7,482.1	7,480.5	44.5	13.2	92.66	2,750.8	-196.3	547.0	490.2	56.78	9.634		
10,500.0	7,498.0	7,480.4	7,478.7	46.2	13.2	92.26	2,750.9	-196.3	460.0	401.6	58.45	7.870		
10,600.0	7,498.0	7,478.7	7,477.0	47.8	13.2	91.86	2,750.9	-196.3	379.5	319.4	60.12	6.312		
10,700.0	7,498.0	7,477.0	7,475.3	49.5	13.2	91.47	2,750.9	-196.2	310.6	248.8	61.81	5.025		
10,800.0	7,498.0	7,475.3	7,473.7	51.1	13.2	91.08	2,751.0	-196.2	262.4	198.9	63.49	4.133		
10,888.0	7,498.0	7,473.9	7,472.2	52.6	13.2	90.75	2,751.0	-196.2	247.2	182.3	64.98	3.805 CC, ES		
10,900.0	7,498.0	7,473.7	7,472.0	52.8	13.2	90.70	2,751.0	-196.2	247.5	182.4	65.18	3.798 SF		
11,000.0	7,498.0	7,472.1	7,470.4	54.5	13.2	90.33	2,751.0	-196.2	271.4	204.6	66.87	4.059		
11,100.0	7,498.0	7,470.5	7,468.8	56.1	13.2	89.96	2,751.0	-196.2	325.7	257.1	68.56	4.750		
11,200.0	7,498.0	7,468.9	7,467.3	57.8	13.1	89.60	2,751.1	-196.1	398.1	327.8	70.25	5.666		
11,300.0	7,498.0	7,467.3	7,465.7	59.5	13.1	89.24	2,751.1	-196.1	480.5	408.5	71.95	6.678		
11,400.0	7,498.0	7,465.8	7,464.2	61.2	13.1	88.88	2,751.1	-196.1	568.5	494.9	73.64	7.721		
11,500.0	7,498.0	7,464.3	7,462.7	62.9	13.1	88.53	2,751.1	-196.1	660.0	584.7	75.33	8.761		
11,600.0	7,498.0	7,462.8	7,461.2	64.6	13.1	88.19	2,751.1	-196.1	753.7	676.6	77.03	9.784		
11,700.0	7,498.0	7,461.3	7,459.7	66.3	13.1	87.85	2,751.2	-196.1	848.7	770.0	78.72	10.782		
11,800.0	7,498.0	7,459.9	7,458.3	68.0	13.1	87.52	2,751.2	-196.0	944.9	864.4	80.42	11.750		
11,900.0	7,498.0	7,458.5	7,456.8	69.7	13.1	87.19	2,751.2	-196.0	1,041.7	959.6	82.11	12.687		
12,000.0	7,498.0	7,457.1	7,455.4	71.4	13.1	86.86	2,751.2	-196.0	1,139.1	1,055.3	83.80	13.593		
12,100.0	7,498.0	7,455.7	7,454.0	73.1	13.1	86.54	2,751.3	-196.0	1,236.9	1,151.4	85.49	14.468		
12,200.0	7,498.0	7,454.3	7,452.7	74.8	13.1	86.22	2,751.3	-196.0	1,335.0	1,247.8	87.17	15.314		
12,300.0	7,498.0	7,452.9	7,451.3	76.5	13.1	85.91	2,751.3	-196.0	1,433.4	1,344.5	88.86	16.130		
12,400.0	7,498.0	7,451.6	7,450.0	78.2	13.1	85.60	2,751.3	-195.9	1,531.9	1,441.4	90.55	16.919		
12,500.0	7,498.0	7,450.3	7,448.6	79.9	13.1	85.30	2,751.3	-195.9	1,630.7	1,538.5	92.23	17.681		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 31-17C (EXISTING) - SUNDANCE WELL - GYRO												Offset Site Error: 0.0 ft	
Survey Program: 100-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
10,400.0	7,498.0	7,350.0	7,348.6	44.5	13.0	-81.65	3,723.1	-1,069.4	1,586.9	1,530.8	56.12	28.276	
10,500.0	7,498.0	7,350.0	7,348.6	46.2	13.0	-81.65	3,723.1	-1,069.4	1,496.1	1,438.3	57.77	25.897	
10,600.0	7,498.0	7,350.0	7,348.6	47.8	13.0	-81.65	3,723.1	-1,069.4	1,406.4	1,347.0	59.42	23.669	
10,700.0	7,498.0	7,350.0	7,348.6	49.5	13.0	-81.65	3,723.1	-1,069.4	1,318.3	1,257.2	61.08	21.583	
10,800.0	7,498.0	7,350.0	7,348.6	51.1	13.0	-81.65	3,723.1	-1,069.4	1,232.0	1,169.2	62.74	19.635	
10,900.0	7,498.0	7,350.0	7,348.6	52.8	13.0	-81.65	3,723.1	-1,069.4	1,147.9	1,083.4	64.41	17.821	
11,000.0	7,498.0	7,350.0	7,348.6	54.5	13.0	-81.65	3,723.1	-1,069.4	1,066.5	1,000.4	66.08	16.139	
11,100.0	7,498.0	7,350.0	7,348.6	56.1	13.0	-81.65	3,723.1	-1,069.4	988.6	920.8	67.76	14.589	
11,200.0	7,498.0	7,350.0	7,348.6	57.8	13.0	-81.65	3,723.1	-1,069.4	914.9	845.5	69.44	13.176	
11,300.0	7,498.0	7,350.0	7,348.6	59.5	13.0	-81.65	3,723.1	-1,069.4	846.7	775.6	71.12	11.905	
11,400.0	7,498.0	7,350.0	7,348.6	61.2	13.0	-81.65	3,723.1	-1,069.4	785.3	712.5	72.81	10.786	
11,500.0	7,498.0	7,350.0	7,348.6	62.9	13.0	-81.65	3,723.1	-1,069.4	732.5	658.0	74.50	9.833	
11,600.0	7,498.0	7,350.0	7,348.6	64.6	13.0	-81.65	3,723.1	-1,069.4	690.2	614.0	76.19	9.059	
11,700.0	7,498.0	7,350.0	7,348.6	66.3	13.0	-81.65	3,723.1	-1,069.4	660.5	582.6	77.88	8.480	
11,800.0	7,498.0	7,350.0	7,348.6	68.0	13.0	-81.65	3,723.1	-1,069.4	645.0	565.5	79.58	8.106	
11,850.8	7,498.0	7,350.0	7,348.6	68.8	13.0	-81.65	3,723.1	-1,069.4	643.0	562.6	80.44	7.994 CC, ES	
11,900.0	7,498.0	7,350.0	7,348.6	69.7	13.0	-81.65	3,723.1	-1,069.4	644.9	563.6	81.28	7.935 SF	
12,000.0	7,498.0	7,350.0	7,348.6	71.4	13.0	-81.65	3,723.1	-1,069.4	660.1	577.1	82.98	7.955	
12,100.0	7,498.0	7,350.0	7,348.6	73.1	13.0	-81.65	3,723.1	-1,069.4	689.6	604.9	84.68	8.144	
12,200.0	7,498.0	7,350.0	7,348.6	74.8	13.0	-81.65	3,723.1	-1,069.4	731.7	645.3	86.38	8.471	
12,300.0	7,498.0	7,350.0	7,348.6	76.5	13.0	-81.65	3,723.1	-1,069.4	784.4	696.3	88.09	8.905	
12,400.0	7,498.0	7,350.0	7,348.6	78.2	13.0	-81.65	3,723.1	-1,069.4	845.6	755.8	89.79	9.417	
12,500.0	7,498.0	7,350.0	7,348.6	79.9	13.0	-81.65	3,723.1	-1,069.4	913.7	822.2	91.50	9.986	
12,600.0	7,498.0	7,350.0	7,348.6	81.7	13.0	-81.65	3,723.1	-1,069.4	987.3	894.1	93.21	10.592	
12,700.0	7,498.0	7,350.0	7,348.6	83.4	13.0	-81.65	3,723.1	-1,069.4	1,065.2	970.2	94.92	11.222	
12,800.0	7,498.0	7,350.0	7,348.6	85.1	13.0	-81.65	3,723.1	-1,069.4	1,146.5	1,049.8	96.63	11.865	
12,900.0	7,498.0	7,350.0	7,348.6	86.8	13.0	-81.65	3,723.1	-1,069.4	1,230.5	1,132.2	98.34	12.513	
13,000.0	7,498.0	7,350.0	7,348.6	88.6	13.0	-81.65	3,723.1	-1,069.4	1,316.8	1,216.8	100.05	13.161	
13,100.0	7,498.0	7,350.0	7,348.6	90.3	13.0	-81.65	3,723.1	-1,069.4	1,405.0	1,303.2	101.77	13.806	
13,200.0	7,498.0	7,350.0	7,348.6	92.0	13.0	-81.65	3,723.1	-1,069.4	1,494.6	1,391.1	103.48	14.443	
13,300.0	7,498.0	7,350.0	7,348.6	93.7	13.0	-81.65	3,723.1	-1,069.4	1,585.4	1,480.2	105.20	15.071	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8150-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-45.64	403.3	-412.4	577.6					
100.0	100.0	70.0	70.0	0.1	0.1	-45.64	403.3	-412.4	576.8	576.6	0.24	2,358.686		
200.0	200.0	170.0	170.0	0.3	0.3	-45.64	403.3	-412.4	576.8	576.2	0.59	971.691		
300.0	300.0	270.0	270.0	0.5	0.5	-45.64	403.3	-412.4	576.8	575.9	0.94	611.882		
400.0	400.0	370.0	370.0	0.6	0.6	-45.64	403.3	-412.4	576.8	575.5	1.29	446.534		
427.8	427.8	397.8	397.8	0.7	0.7	108.06	403.3	-412.4	576.8	575.4	1.39	415.289		
500.0	500.0	470.0	470.0	0.8	0.8	108.09	403.3	-412.4	576.9	575.3	1.64	351.598		
600.0	599.9	569.9	569.9	1.0	1.0	108.40	403.3	-412.4	578.0	576.0	1.99	289.783		
700.0	699.7	669.7	669.7	1.2	1.2	109.01	403.3	-412.4	580.3	577.9	2.36	245.549		
800.0	799.1	769.1	769.1	1.4	1.3	109.91	403.3	-412.4	583.8	581.0	2.76	211.776		
900.0	898.2	868.2	868.2	1.7	1.5	111.08	403.3	-412.4	588.7	585.5	3.18	184.880		
1,000.0	996.9	966.9	966.9	2.0	1.7	112.48	403.3	-412.4	594.6	591.0	3.62	164.068		
1,100.0	1,095.7	1,065.7	1,065.7	2.3	1.9	113.85	403.3	-412.4	600.9	596.8	4.07	147.620		
1,200.0	1,194.4	1,164.4	1,164.4	2.6	2.0	115.20	403.3	-412.4	607.5	603.0	4.52	134.429		
1,300.0	1,293.1	1,263.1	1,263.1	2.9	2.2	116.51	403.3	-412.4	614.4	609.5	4.97	123.687		
1,400.0	1,391.9	1,361.9	1,361.9	3.2	2.4	117.80	403.3	-412.4	621.7	616.3	5.41	114.813		
1,500.0	1,490.6	1,460.6	1,460.6	3.5	2.5	119.06	403.3	-412.4	629.3	623.4	5.86	107.390		
1,600.0	1,589.4	1,559.4	1,559.4	3.8	2.7	120.29	403.3	-412.4	637.2	630.9	6.30	101.109		
1,700.0	1,688.1	1,658.1	1,658.1	4.2	2.9	121.49	403.3	-412.4	645.3	638.6	6.74	95.743		
1,800.0	1,786.9	1,756.9	1,756.9	4.5	3.1	122.65	403.3	-412.4	653.8	646.6	7.18	91.119		
1,900.0	1,885.6	1,855.6	1,855.6	4.8	3.2	123.79	403.3	-412.4	662.5	654.9	7.61	87.102		
2,000.0	1,984.4	1,954.4	1,954.4	5.1	3.4	124.90	403.3	-412.4	671.5	663.4	8.03	83.589		
2,100.0	2,083.1	2,053.1	2,053.1	5.4	3.6	125.98	403.3	-412.4	680.7	672.2	8.46	80.497		
2,200.0	2,181.9	2,151.9	2,151.9	5.8	3.8	127.03	403.3	-412.4	690.1	681.3	8.88	77.762		
2,300.0	2,280.6	2,250.6	2,250.6	6.1	3.9	128.05	403.3	-412.4	699.8	690.5	9.29	75.331		
2,400.0	2,379.4	2,349.4	2,349.4	6.4	4.1	129.05	403.3	-412.4	709.7	700.0	9.70	73.159		
2,500.0	2,478.1	2,448.1	2,448.1	6.7	4.3	130.02	403.3	-412.4	719.8	709.7	10.11	71.211		
2,600.0	2,576.9	2,546.9	2,546.9	7.0	4.4	130.96	403.3	-412.4	730.2	719.6	10.51	69.457		
2,700.0	2,675.6	2,645.6	2,645.6	7.4	4.6	131.87	403.3	-412.4	740.7	729.7	10.91	67.874		
2,800.0	2,774.4	2,744.4	2,744.4	7.7	4.8	132.76	403.3	-412.4	751.3	740.0	11.31	66.438		
2,900.0	2,873.1	2,843.1	2,843.1	8.0	5.0	133.63	403.3	-412.4	762.2	750.5	11.70	65.134		
3,000.0	2,971.9	2,941.9	2,941.9	8.3	5.1	134.47	403.3	-412.4	773.2	761.2	12.09	63.946		
3,100.0	3,070.6	3,040.6	3,040.6	8.7	5.3	135.28	403.3	-412.4	784.4	772.0	12.48	62.861		
3,200.0	3,169.4	3,139.4	3,139.4	9.0	5.5	136.08	403.3	-412.4	795.8	782.9	12.86	61.867		
3,300.0	3,268.1	3,238.1	3,238.1	9.3	5.7	136.85	403.3	-412.4	807.3	794.0	13.24	60.954		
3,400.0	3,366.9	3,336.9	3,336.9	9.6	5.8	137.60	403.3	-412.4	818.9	805.3	13.62	60.116		
3,500.0	3,465.6	3,435.6	3,435.6	10.0	6.0	138.33	403.3	-412.4	830.7	816.7	14.00	59.343		
3,600.0	3,564.4	3,534.4	3,534.4	10.3	6.2	139.04	403.3	-412.4	842.6	828.2	14.37	58.630		
3,700.0	3,663.1	3,633.1	3,633.1	10.6	6.3	139.73	403.3	-412.4	854.6	839.9	14.74	57.970		
3,800.0	3,761.9	3,731.9	3,731.9	10.9	6.5	140.40	403.3	-412.4	866.8	851.7	15.11	57.359		
3,900.0	3,860.6	3,830.6	3,830.6	11.3	6.7	141.05	403.3	-412.4	879.1	863.6	15.48	56.792		
4,000.0	3,959.4	3,929.4	3,929.4	11.6	6.9	141.68	403.3	-412.4	891.4	875.6	15.84	56.266		
4,100.0	4,058.1	4,028.1	4,028.1	11.9	7.0	142.30	403.3	-412.4	903.9	887.7	16.21	55.776		
4,200.0	4,156.9	4,126.9	4,126.9	12.2	7.2	142.90	403.3	-412.4	916.5	899.9	16.57	55.319		
4,300.0	4,255.6	4,225.6	4,225.6	12.6	7.4	143.48	403.3	-412.4	929.2	912.3	16.93	54.893		
4,400.0	4,354.4	4,324.4	4,324.4	12.9	7.5	144.05	403.3	-412.4	942.0	924.7	17.29	54.496		
4,500.0	4,453.1	4,423.1	4,423.1	13.2	7.7	144.61	403.3	-412.4	954.8	937.2	17.64	54.123		
4,600.0	4,551.9	4,521.9	4,521.9	13.6	7.9	145.14	403.3	-412.4	967.8	949.8	18.00	53.775		
4,700.0	4,650.6	4,620.6	4,620.6	13.9	8.1	145.67	403.3	-412.4	980.8	962.5	18.35	53.449		
4,800.0	4,749.4	4,719.4	4,719.4	14.2	8.2	146.18	403.3	-412.4	993.9	975.2	18.70	53.142		
4,900.0	4,848.1	4,818.1	4,818.1	14.5	8.4	146.68	403.3	-412.4	1,007.1	988.1	19.05	52.854		
5,000.0	4,946.9	4,916.9	4,916.9	14.9	8.6	147.16	403.3	-412.4	1,020.4	1,001.0	19.40	52.584		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 3-17J (EXISTING) - ENCANA - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 8150-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)				Between Ellipses (ft)	
5,100.0	5,045.6	5,015.6	5,015.6	15.2	8.8	147.63	403.3	-412.4	1,033.7	1,013.9	19.75	52.329		
5,200.0	5,144.4	5,114.4	5,114.4	15.5	8.9	148.09	403.3	-412.4	1,047.1	1,027.0	20.10	52.089		
5,300.0	5,243.1	5,213.1	5,213.1	15.8	9.1	148.54	403.3	-412.4	1,060.6	1,040.1	20.45	51.862		
5,400.0	5,341.9	5,311.9	5,311.9	16.2	9.3	148.98	403.3	-412.4	1,074.1	1,053.3	20.80	51.648		
5,500.0	5,440.6	5,410.6	5,410.6	16.5	9.4	149.41	403.3	-412.4	1,087.7	1,066.5	21.14	51.446		
5,600.0	5,539.4	5,509.4	5,509.4	16.8	9.6	149.82	403.3	-412.4	1,101.3	1,079.8	21.49	51.255		
5,700.0	5,638.1	5,608.1	5,608.1	17.1	9.8	150.23	403.3	-412.4	1,115.0	1,093.2	21.83	51.075		
5,800.0	5,736.9	5,706.9	5,706.9	17.5	10.0	150.62	403.3	-412.4	1,128.8	1,106.6	22.17	50.903		
5,900.0	5,835.6	5,805.6	5,805.6	17.8	10.1	151.01	403.3	-412.4	1,142.6	1,120.1	22.52	50.741		
6,000.0	5,934.4	5,904.4	5,904.4	18.1	10.3	151.39	403.3	-412.4	1,156.4	1,133.6	22.86	50.587		
6,100.0	6,033.1	6,003.1	6,003.1	18.4	10.5	151.76	403.3	-412.4	1,170.3	1,147.1	23.20	50.441		
6,200.0	6,131.9	6,101.9	6,101.9	18.8	10.6	152.12	403.3	-412.4	1,184.3	1,160.8	23.54	50.302		
6,300.0	6,230.6	6,200.6	6,200.6	19.1	10.8	152.47	403.3	-412.4	1,198.3	1,174.4	23.88	50.169		
6,400.0	6,329.4	6,299.4	6,299.4	19.4	11.0	152.81	403.3	-412.4	1,212.3	1,188.1	24.23	50.044		
6,500.0	6,428.1	6,398.1	6,398.1	19.7	11.2	153.15	403.3	-412.4	1,226.4	1,201.9	24.57	49.924		
6,600.0	6,526.9	6,496.9	6,496.9	20.1	11.3	153.48	403.3	-412.4	1,240.5	1,215.6	24.91	49.810		
6,700.0	6,625.6	6,595.6	6,595.6	20.4	11.5	153.80	403.3	-412.4	1,254.7	1,229.5	25.25	49.701		
6,800.0	6,724.5	6,694.5	6,694.5	20.7	11.7	140.12	403.3	-412.4	1,267.6	1,242.0	25.62	49.471		
6,900.0	6,824.2	6,794.2	6,794.2	20.8	11.9	51.00	403.3	-412.4	1,268.9	1,243.1	25.80	49.183		
7,000.0	6,923.1	6,893.1	6,893.1	20.7	12.0	20.27	403.3	-412.4	1,256.4	1,230.8	25.62	49.041		
7,100.0	7,019.2	6,989.2	6,989.2	20.5	12.2	12.97	403.3	-412.4	1,230.2	1,205.1	25.09	49.035		
7,200.0	7,110.8	7,080.8	7,080.8	20.2	12.4	10.16	403.3	-412.4	1,190.9	1,166.6	24.23	49.144		
7,300.0	7,196.0	7,166.0	7,166.0	19.7	12.5	8.98	403.3	-412.4	1,139.2	1,116.1	23.10	49.322		
7,400.0	7,273.2	7,243.2	7,243.2	19.1	12.6	8.70	403.3	-412.4	1,076.2	1,054.4	21.75	49.469		
7,500.0	7,340.8	7,310.8	7,310.8	18.5	12.8	9.15	403.3	-412.4	1,003.0	982.7	20.31	49.381		
7,600.0	7,397.6	7,367.6	7,367.6	17.9	12.9	10.49	403.3	-412.4	921.2	902.3	18.93	48.656		
7,700.0	7,442.5	7,412.5	7,412.5	17.3	12.9	13.37	403.3	-412.4	832.3	814.4	17.89	46.528		
7,800.0	7,474.5	7,444.5	7,444.5	16.8	13.0	19.90	403.3	-412.4	738.1	720.3	17.78	41.519		
7,900.0	7,493.1	7,463.1	7,463.1	16.5	13.0	39.11	403.3	-412.4	640.3	619.4	20.86	30.697		
8,000.0	7,498.0	7,468.0	7,468.0	16.3	13.0	90.00	403.3	-412.4	541.0	513.9	27.10	19.960		
8,100.0	7,498.0	7,468.0	7,468.0	16.4	13.0	90.00	403.3	-412.4	441.6	414.5	27.13	16.279		
8,200.0	7,498.0	7,468.0	7,468.0	16.6	13.0	90.00	403.3	-412.4	342.7	315.3	27.37	12.520		
8,300.0	7,498.0	7,468.0	7,468.0	16.9	13.0	90.00	403.3	-412.4	244.5	216.7	27.82	8.791		
8,400.0	7,498.0	7,468.0	7,468.0	17.5	13.0	90.00	403.3	-412.4	148.9	120.5	28.45	5.234		
8,500.0	7,498.0	7,468.0	7,468.0	18.2	13.0	90.00	403.3	-412.4	67.5	38.3	29.25	2.308		
8,538.1	7,498.0	7,468.0	7,468.0	18.5	13.0	90.00	403.3	-412.4	55.8	26.1	29.61	1.883 CC, ES, SF		
8,600.0	7,498.0	7,468.0	7,468.0	19.1	13.0	90.00	403.3	-412.4	83.3	53.1	30.20	2.759		
8,700.0	7,498.0	7,468.0	7,468.0	20.0	13.0	90.00	403.3	-412.4	171.2	140.0	31.26	5.478		
8,800.0	7,498.0	7,468.0	7,468.0	21.1	13.0	90.00	403.3	-412.4	267.8	235.3	32.43	8.258		
8,900.0	7,498.0	7,468.0	7,468.0	22.2	13.0	90.00	403.3	-412.4	366.2	332.5	33.67	10.874		
9,000.0	7,498.0	7,468.0	7,468.0	23.5	13.0	90.00	403.3	-412.4	465.3	430.3	34.99	13.297		
9,100.0	7,498.0	7,468.0	7,468.0	24.8	13.0	90.00	403.3	-412.4	564.7	528.3	36.37	15.528		
9,200.0	7,498.0	7,468.0	7,468.0	26.1	13.0	90.00	403.3	-412.4	664.2	626.5	37.79	17.578		
9,300.0	7,498.0	7,468.0	7,468.0	27.5	13.0	90.00	403.3	-412.4	763.9	724.7	39.25	19.463		
9,400.0	7,498.0	7,468.0	7,468.0	28.9	13.0	90.00	403.3	-412.4	863.7	823.0	40.75	21.196		
9,500.0	7,498.0	7,468.0	7,468.0	30.4	13.0	90.00	403.3	-412.4	963.5	921.2	42.27	22.793		
9,600.0	7,498.0	7,468.0	7,468.0	31.9	13.0	90.00	403.3	-412.4	1,063.4	1,019.5	43.82	24.265		
9,700.0	7,498.0	7,468.0	7,468.0	33.4	13.0	90.00	403.3	-412.4	1,163.2	1,117.8	45.39	25.626		
9,800.0	7,498.0	7,468.0	7,468.0	34.9	13.0	90.00	403.3	-412.4	1,263.1	1,216.2	46.98	26.885		
9,900.0	7,498.0	7,468.0	7,468.0	36.5	13.0	90.00	403.3	-412.4	1,363.0	1,314.5	48.59	28.054		
10,000.0	7,498.0	7,468.0	7,468.0	38.1	13.0	90.00	403.3	-412.4	1,463.0	1,412.8	50.20	29.140		
10,100.0	7,498.0	7,468.0	7,468.0	39.7	13.0	90.00	403.3	-412.4	1,562.9	1,511.1	51.83	30.152		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 33-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 608-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-97.50	-92.2	-700.1	706.7					
100.0	100.0	74.0	74.0	0.1	0.1	-97.50	-92.2	-700.1	706.2	705.9	0.25	2,807.805		
200.0	200.0	174.0	174.0	0.3	0.3	-97.50	-92.2	-700.1	706.2	705.6	0.60	1,175.903		
300.0	300.0	274.0	274.0	0.5	0.5	-97.50	-92.2	-700.1	706.2	705.2	0.95	743.676		
400.0	400.0	374.0	374.0	0.6	0.7	-97.50	-92.2	-700.1	706.2	704.9	1.30	543.794		
500.0	500.0	474.0	474.0	0.8	0.8	56.23	-92.2	-700.1	705.9	704.3	1.65	428.439		
600.0	599.9	573.9	573.9	1.0	1.0	56.50	-92.2	-700.1	704.0	702.0	2.00	351.996		
700.0	699.7	671.3	671.3	1.2	1.2	57.02	-92.2	-700.2	700.3	697.9	2.36	296.798		
800.0	799.1	769.6	769.6	1.4	1.3	57.79	-92.5	-700.7	695.1	692.4	2.74	253.468		
900.0	898.2	868.4	868.4	1.7	1.5	58.84	-93.1	-701.1	688.3	685.1	3.16	217.872		
1,000.0	996.9	966.9	966.9	2.0	1.7	59.91	-93.8	-701.6	680.7	677.1	3.59	189.405		
1,100.0	1,095.7	1,065.3	1,065.3	2.3	1.9	60.99	-94.7	-702.2	673.5	669.5	4.04	166.633		
1,200.0	1,194.4	1,163.6	1,163.5	2.6	2.0	62.08	-95.5	-702.8	666.6	662.1	4.50	148.158		
1,300.0	1,293.1	1,261.8	1,261.8	2.9	2.2	63.20	-96.4	-703.6	660.1	655.1	4.96	132.947		
1,400.0	1,391.9	1,359.9	1,359.9	3.2	2.4	64.34	-97.2	-704.4	653.9	648.4	5.44	120.273		
1,500.0	1,490.6	1,457.7	1,457.6	3.5	2.5	65.52	-97.8	-705.4	648.1	642.2	5.91	109.598		
1,600.0	1,589.4	1,555.4	1,555.3	3.8	2.7	66.74	-98.1	-706.5	642.9	636.5	6.40	100.504		
1,700.0	1,688.1	1,653.2	1,653.1	4.2	2.9	68.01	-98.2	-707.9	638.1	631.2	6.88	92.686		
1,800.0	1,786.9	1,751.5	1,751.5	4.5	3.1	69.29	-98.2	-709.3	633.8	626.4	7.38	85.896		
1,900.0	1,885.6	1,849.9	1,849.9	4.8	3.2	70.58	-98.5	-710.8	629.8	622.0	7.88	79.972		
2,000.0	1,984.4	1,948.4	1,948.3	5.1	3.4	71.87	-98.9	-712.5	626.3	617.9	8.38	74.770		
2,100.0	2,083.1	2,046.4	2,046.3	5.4	3.6	73.13	-99.6	-714.2	623.2	614.3	8.88	70.188		
2,200.0	2,181.9	2,143.9	2,143.8	5.8	3.8	74.43	-100.0	-716.1	620.6	611.2	9.38	66.145		
2,300.0	2,280.6	2,241.0	2,240.8	6.1	3.9	75.91	-98.4	-717.9	618.6	608.7	9.89	62.564		
2,400.0	2,379.4	2,339.2	2,339.0	6.4	4.1	77.44	-96.4	-719.7	617.3	606.9	10.40	59.360		
2,500.0	2,478.1	2,437.6	2,437.3	6.7	4.3	78.92	-95.1	-721.8	616.4	605.5	10.91	56.499		
2,600.0	2,576.9	2,536.2	2,536.0	7.0	4.5	80.36	-94.3	-724.0	616.0	604.5	11.42	53.935		
2,700.0	2,675.6	2,639.1	2,638.8	7.4	4.6	82.00	-92.1	-725.6	615.6	603.7	11.94	51.568		
2,800.0	2,774.4	2,739.3	2,739.0	7.7	4.8	83.80	-88.0	-725.9	615.3	602.8	12.45	49.409		
2,855.5	2,829.2	2,794.8	2,794.4	7.9	4.9	84.79	-86.0	-726.0	615.2	602.5	12.74	48.303 CC		
2,900.0	2,873.1	2,839.3	2,838.9	8.0	5.0	85.57	-84.5	-726.0	615.3	602.3	12.96	47.460		
3,000.0	2,971.9	2,939.5	2,939.0	8.3	5.2	87.28	-81.5	-726.1	615.5	602.0	13.47	45.692 ES		
3,100.0	3,070.6	3,036.9	3,036.4	8.7	5.3	88.90	-79.1	-726.3	616.2	602.2	13.97	44.105		
3,200.0	3,169.4	3,133.0	3,132.5	9.0	5.5	90.46	-76.9	-726.9	617.6	603.2	14.46	42.703		
3,300.0	3,268.1	3,229.3	3,228.7	9.3	5.7	91.99	-74.9	-728.0	620.0	605.0	14.95	41.462		
3,400.0	3,366.9	3,325.7	3,325.1	9.6	5.8	93.47	-73.0	-729.5	623.1	607.7	15.44	40.363		
3,500.0	3,465.6	3,422.7	3,422.1	10.0	6.0	94.92	-71.2	-731.4	627.0	611.1	15.92	39.383		
3,600.0	3,564.4	3,519.8	3,519.1	10.3	6.2	96.34	-69.4	-733.7	631.5	615.1	16.40	38.512		
3,700.0	3,663.1	3,616.9	3,616.2	10.6	6.4	97.71	-67.7	-736.2	636.7	619.8	16.87	37.737		
3,800.0	3,761.9	3,717.7	3,716.9	10.9	6.5	99.11	-66.0	-738.9	642.2	624.9	17.35	37.025		
3,900.0	3,860.6	3,818.9	3,818.1	11.3	6.7	100.51	-64.4	-741.2	647.7	629.9	17.81	36.359		
4,000.0	3,959.4	3,920.1	3,919.2	11.6	6.9	101.90	-62.8	-743.0	653.2	634.9	18.28	35.739		
4,100.0	4,058.1	4,018.9	4,018.0	11.9	7.1	103.28	-61.2	-744.1	658.6	639.9	18.73	35.166		
4,200.0	4,156.9	4,083.2	4,082.2	12.2	7.2	104.37	-57.1	-744.6	667.2	648.1	19.12	34.891		
4,300.0	4,255.6	4,164.1	4,162.6	12.6	7.4	105.91	-48.2	-746.0	680.1	660.6	19.52	34.836		
4,400.0	4,354.4	4,235.3	4,233.1	12.9	7.5	107.27	-38.4	-748.3	696.7	676.8	19.91	34.996		
4,500.0	4,453.1	4,316.0	4,312.6	13.2	7.7	108.84	-25.0	-751.8	716.7	696.4	20.29	35.321		
4,600.0	4,551.9	4,392.0	4,387.2	13.6	7.9	110.24	-11.4	-756.1	739.3	718.6	20.66	35.775		
4,700.0	4,650.6	4,459.8	4,453.3	13.9	8.0	111.46	2.7	-761.3	765.8	744.8	21.03	36.420		
4,800.0	4,749.4	4,534.0	4,525.1	14.2	8.2	112.80	20.3	-767.4	795.5	774.1	21.39	37.197		
4,900.0	4,848.1	4,585.6	4,574.4	14.5	8.4	113.73	34.5	-772.4	829.4	807.7	21.72	38.179		
5,000.0	4,946.9	4,647.4	4,632.8	14.9	8.6	114.81	53.6	-779.5	867.6	845.5	22.07	39.319		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 33-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 608-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)				Between Ellipses (ft)	
5,100.0	5,045.6	4,715.2	4,696.2	15.2	8.9	115.98	76.3	-787.7	908.7	886.3	22.40	40.560		
5,200.0	5,144.4	4,779.9	4,756.1	15.5	9.2	117.03	99.2	-796.2	952.5	929.8	22.74	41.887		
5,300.0	5,243.1	4,847.0	4,817.7	15.8	9.5	118.09	124.2	-805.0	998.3	975.3	23.07	43.272		
5,400.0	5,341.9	4,909.0	4,873.9	16.2	9.8	119.09	149.2	-812.8	1,046.7	1,023.3	23.39	44.743		
5,500.0	5,440.6	4,972.0	4,930.4	16.5	10.1	120.04	175.7	-821.3	1,097.4	1,073.7	23.72	46.272		
5,600.0	5,539.4	5,012.6	4,966.4	16.8	10.4	120.62	193.7	-827.3	1,150.7	1,126.7	24.03	47.891		
5,700.0	5,638.1	5,058.4	5,006.2	17.1	10.7	121.23	215.0	-834.9	1,207.1	1,182.7	24.34	49.590		
5,800.0	5,736.9	5,142.9	5,079.0	17.5	11.2	122.13	254.2	-852.0	1,265.1	1,240.4	24.68	51.254		
5,900.0	5,835.6	5,222.0	5,147.8	17.8	11.8	122.78	289.1	-869.5	1,322.2	1,297.2	25.03	52.817		
6,000.0	5,934.4	5,313.1	5,226.8	18.1	12.4	123.49	329.9	-889.5	1,379.9	1,354.5	25.39	54.338		
6,100.0	6,033.1	5,378.0	5,283.1	18.4	12.9	123.99	359.2	-903.0	1,437.4	1,411.6	25.73	55.862		
6,200.0	6,131.9	5,418.2	5,317.5	18.8	13.2	124.30	378.1	-911.4	1,496.8	1,470.8	26.05	57.466		
6,300.0	6,230.6	5,481.6	5,371.1	19.1	13.7	124.70	408.5	-926.4	1,558.0	1,531.6	26.39	59.043		
6,400.0	6,329.4	5,501.2	5,560.8	19.4	15.4	125.77	505.9	-978.9	1,617.3	1,590.4	26.89	60.148		
7,900.0	7,493.1	7,674.4	7,380.3	16.5	27.3	-73.41	1,118.9	-1,291.5	1,582.8	1,544.7	38.17	41.473		
8,000.0	7,498.0	7,681.8	7,387.6	16.3	27.4	-84.20	1,119.2	-1,291.9	1,499.1	1,460.0	39.13	38.310		
8,100.0	7,498.0	7,684.7	7,390.6	16.4	27.4	-84.40	1,119.3	-1,292.0	1,417.2	1,378.0	39.17	36.180		
8,200.0	7,498.0	7,687.6	7,393.5	16.6	27.4	-84.61	1,119.4	-1,292.2	1,337.7	1,298.2	39.42	33.932		
8,300.0	7,498.0	7,691.0	7,396.9	16.9	27.4	-84.84	1,119.5	-1,292.3	1,261.1	1,221.2	39.88	31.622		
8,400.0	7,498.0	7,691.0	7,396.9	17.5	27.4	-84.84	1,119.5	-1,292.3	1,188.0	1,147.5	40.51	29.325		
8,500.0	7,498.0	7,696.0	7,401.9	18.2	27.4	-85.18	1,119.7	-1,292.6	1,119.1	1,077.8	41.33	27.079		
8,600.0	7,498.0	7,698.7	7,404.6	19.1	27.4	-85.37	1,119.7	-1,292.8	1,055.1	1,012.9	42.27	24.959		
8,700.0	7,498.0	7,701.4	7,407.3	20.0	27.4	-85.55	1,119.8	-1,292.9	997.1	953.8	43.34	23.006		
8,800.0	7,498.0	7,704.1	7,409.9	21.1	27.4	-85.74	1,119.9	-1,293.1	946.1	901.6	44.51	21.256		
8,900.0	7,498.0	7,706.8	7,412.6	22.2	27.4	-85.92	1,120.0	-1,293.2	903.4	857.6	45.76	19.740		
9,000.0	7,498.0	7,709.5	7,415.3	23.5	27.4	-86.11	1,120.1	-1,293.4	870.0	822.9	47.09	18.477		
9,100.0	7,498.0	7,712.2	7,418.0	24.8	27.4	-86.29	1,120.2	-1,293.5	847.2	798.8	48.47	17.481		
9,200.0	7,498.0	7,714.9	7,420.7	26.1	27.4	-86.47	1,120.3	-1,293.7	835.9	786.0	49.89	16.753		
9,245.8	7,498.0	7,716.1	7,421.9	26.7	27.4	-86.56	1,120.3	-1,293.8	834.6	784.0	50.57	16.505		
9,300.0	7,498.0	7,717.5	7,423.3	27.5	27.4	-86.66	1,120.4	-1,293.8	836.4	785.0	51.36	16.283		
9,400.0	7,498.0	7,723.0	7,428.8	28.9	27.4	-87.03	1,120.6	-1,294.2	848.7	795.8	52.88	16.051		
9,500.0	7,498.0	7,723.0	7,428.8	30.4	27.4	-87.03	1,120.6	-1,294.2	872.4	818.0	54.40	16.038 SF		
9,600.0	7,498.0	7,726.2	7,431.9	31.9	27.4	-87.25	1,120.7	-1,294.4	906.6	850.6	55.96	16.201		
9,700.0	7,498.0	7,729.5	7,435.3	33.4	27.4	-87.48	1,120.8	-1,294.6	950.1	892.5	57.54	16.513		
9,800.0	7,498.0	7,733.0	7,438.7	34.9	27.4	-87.72	1,120.9	-1,294.8	1,001.7	942.5	59.13	16.939		
9,900.0	7,498.0	7,736.5	7,442.2	36.5	27.4	-87.95	1,121.0	-1,295.0	1,060.2	999.5	60.75	17.453		
10,000.0	7,498.0	7,740.0	7,445.8	38.1	27.5	-88.20	1,121.1	-1,295.2	1,124.6	1,062.2	62.37	18.030		
10,100.0	7,498.0	7,743.6	7,449.4	39.7	27.5	-88.45	1,121.3	-1,295.4	1,193.9	1,129.9	64.01	18.651		
10,200.0	7,498.0	7,747.3	7,453.1	41.3	27.5	-88.70	1,121.4	-1,295.7	1,267.3	1,201.6	65.66	19.301		
10,300.0	7,498.0	7,751.1	7,456.8	42.9	27.5	-88.96	1,121.5	-1,295.9	1,344.1	1,276.8	67.32	19.967		
10,400.0	7,498.0	7,754.0	7,459.7	44.5	27.5	-89.16	1,121.6	-1,296.1	1,423.8	1,354.8	68.98	20.641		
10,500.0	7,498.0	7,754.0	7,459.7	46.2	27.5	-89.16	1,121.6	-1,296.1	1,505.9	1,435.3	70.64	21.317		
10,600.0	7,498.0	7,759.9	7,465.6	47.8	27.5	-89.56	1,121.8	-1,296.4	1,590.1	1,517.8	72.33	21.985		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 34-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 627-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-98.74	-111.1	-722.2	731.2					
100.0	100.0	74.0	74.0	0.1	0.1	-98.74	-111.1	-722.2	730.7	730.5	0.25	2,905.391		
200.0	200.0	174.0	174.0	0.3	0.3	-98.74	-111.1	-722.2	730.7	730.1	0.60	1,216.772		
300.0	300.0	274.0	274.0	0.5	0.5	-98.74	-111.1	-722.2	730.7	729.8	0.95	769.523		
400.0	400.0	374.0	374.0	0.6	0.7	-98.74	-111.1	-722.2	730.7	729.4	1.30	562.694		
500.0	500.0	474.0	474.0	0.8	0.8	54.98	-111.1	-722.2	730.5	728.8	1.65	443.332		
600.0	599.9	573.9	573.9	1.0	1.0	55.24	-111.1	-722.2	728.5	726.5	2.00	364.259		
700.0	699.7	672.4	672.4	1.2	1.2	55.74	-111.2	-722.3	724.6	722.2	2.36	306.915		
800.0	799.1	768.9	768.9	1.4	1.3	56.46	-111.7	-722.5	719.1	716.3	2.74	262.518		
900.0	898.2	864.8	864.8	1.7	1.5	57.43	-112.3	-723.3	712.2	709.1	3.15	226.221		
1,000.0	996.9	960.4	960.4	2.0	1.7	58.43	-113.0	-724.4	705.1	701.5	3.58	197.176		
1,100.0	1,095.7	1,057.5	1,057.4	2.3	1.8	59.46	-113.6	-726.0	698.6	694.5	4.02	173.840		
1,200.0	1,194.4	1,159.0	1,159.0	2.6	2.0	60.55	-114.3	-727.5	692.2	687.7	4.48	154.534		
1,300.0	1,293.1	1,260.5	1,260.5	2.9	2.2	61.67	-115.0	-728.7	685.7	680.7	4.95	138.576		
1,400.0	1,391.9	1,361.4	1,361.3	3.2	2.4	62.81	-115.6	-729.5	679.0	673.6	5.42	125.227		
1,500.0	1,490.6	1,458.7	1,458.7	3.5	2.6	63.93	-116.2	-730.2	672.7	666.8	5.90	114.083		
1,600.0	1,589.4	1,556.1	1,556.0	3.8	2.7	65.08	-116.6	-731.2	666.8	660.5	6.38	104.585		
1,700.0	1,688.1	1,653.4	1,653.3	4.2	2.9	66.25	-117.0	-732.4	661.5	654.6	6.86	96.422		
1,800.0	1,786.9	1,752.8	1,752.7	4.5	3.1	67.48	-117.2	-733.7	656.5	649.2	7.35	89.287		
1,900.0	1,885.6	1,852.3	1,852.2	4.8	3.2	68.75	-117.2	-734.9	651.8	644.0	7.85	83.029		
2,000.0	1,984.4	1,951.6	1,951.5	5.1	3.4	70.05	-117.0	-736.0	647.3	639.0	8.35	77.511		
2,100.0	2,083.1	2,051.5	2,051.4	5.4	3.6	71.39	-116.7	-736.9	643.1	634.2	8.86	72.605		
2,200.0	2,181.9	2,152.1	2,152.0	5.8	3.8	72.74	-116.6	-737.7	638.9	629.5	9.37	68.211		
2,300.0	2,280.6	2,252.7	2,252.6	6.1	3.9	74.08	-116.8	-738.2	634.8	624.9	9.88	64.265		
2,400.0	2,379.4	2,352.8	2,352.7	6.4	4.1	75.42	-117.2	-738.5	630.8	620.4	10.39	60.710		
2,500.0	2,478.1	2,452.1	2,452.0	6.7	4.3	76.74	-117.9	-738.7	627.0	616.1	10.90	57.512		
2,600.0	2,576.9	2,551.4	2,551.3	7.0	4.5	78.06	-118.8	-738.9	623.5	612.1	11.42	54.621		
2,700.0	2,675.6	2,650.5	2,650.3	7.4	4.6	79.37	-119.9	-739.1	620.3	608.4	11.93	52.003		
2,800.0	2,774.4	2,748.4	2,748.2	7.7	4.8	80.70	-120.8	-739.3	617.5	605.1	12.44	49.646		
2,900.0	2,873.1	2,846.2	2,846.0	8.0	5.0	82.06	-121.3	-739.5	615.2	602.3	12.95	47.515		
3,000.0	2,971.9	2,941.0	2,940.9	8.3	5.1	83.43	-121.3	-739.8	613.5	600.0	13.45	45.607		
3,100.0	3,070.6	3,039.9	3,039.8	8.7	5.3	84.88	-121.1	-740.3	612.4	598.5	13.96	43.867		
3,175.3	3,145.0	3,112.3	3,112.2	8.9	5.4	85.95	-120.9	-741.0	612.2	597.9	14.34	42.692 CC		
3,200.0	3,169.4	3,136.1	3,135.9	9.0	5.5	86.29	-120.8	-741.2	612.2	597.8	14.46	42.329 ES		
3,300.0	3,268.1	3,232.2	3,232.0	9.3	5.7	87.70	-120.3	-742.5	612.8	597.9	14.96	40.955		
3,400.0	3,366.9	3,329.0	3,328.8	9.6	5.8	89.10	-119.8	-744.3	614.2	598.8	15.46	39.724		
3,500.0	3,465.6	3,426.1	3,425.9	10.0	6.0	90.47	-119.5	-746.4	616.3	600.3	15.96	38.618		
3,600.0	3,564.4	3,523.2	3,523.0	10.3	6.2	91.80	-119.4	-748.9	619.0	602.6	16.45	37.624		
3,700.0	3,663.1	3,621.4	3,621.2	10.6	6.3	93.11	-119.3	-751.7	622.3	605.3	16.94	36.729		
3,800.0	3,761.9	3,720.3	3,720.0	10.9	6.5	94.47	-118.7	-754.3	625.9	608.5	17.43	35.914		
3,900.0	3,860.6	3,818.9	3,818.6	11.3	6.7	95.87	-117.5	-756.5	629.9	612.0	17.91	35.174		
4,000.0	3,959.4	3,918.2	3,917.9	11.6	6.9	97.31	-115.8	-758.4	634.3	615.9	18.39	34.502		
4,100.0	4,058.1	4,019.1	4,018.7	11.9	7.1	98.72	-114.6	-760.3	638.8	620.0	18.86	33.874		
4,200.0	4,156.9	4,120.1	4,119.7	12.2	7.2	100.08	-113.9	-762.2	643.4	624.1	19.33	33.285		
4,300.0	4,255.6	4,220.8	4,220.4	12.6	7.4	101.37	-113.8	-764.2	647.9	628.1	19.79	32.733		
4,400.0	4,354.4	4,320.2	4,319.7	12.9	7.6	102.63	-113.8	-765.9	652.6	632.4	20.25	32.228		
4,500.0	4,453.1	4,419.5	4,419.0	13.2	7.8	103.90	-113.6	-767.3	657.6	636.9	20.70	31.766		
4,600.0	4,551.9	4,518.6	4,518.1	13.6	7.9	105.17	-113.1	-768.5	662.8	641.7	21.14	31.347		
4,700.0	4,650.6	4,617.2	4,616.8	13.9	8.1	106.44	-112.6	-769.6	668.3	646.8	21.58	30.969		
4,800.0	4,749.4	4,715.9	4,715.4	14.2	8.3	107.68	-112.0	-770.6	674.2	652.2	22.01	30.631		
4,900.0	4,848.1	4,814.5	4,814.0	14.5	8.4	108.91	-111.4	-771.7	680.4	658.0	22.43	30.330		
5,000.0	4,946.9	4,912.4	4,911.9	14.9	8.6	110.11	-110.7	-772.7	687.0	664.1	22.85	30.064		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 34-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 627-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,045.6	5,010.3	5,009.8	15.2	8.8	111.29	-109.9	-773.8	694.0	670.7	23.26	29.834		
5,200.0	5,144.4	5,108.1	5,107.6	15.5	9.0	112.45	-108.9	-774.9	701.4	677.8	23.67	29.638		
5,300.0	5,243.1	5,205.0	5,204.5	15.8	9.1	113.57	-107.9	-776.2	709.3	685.2	24.07	29.473		
5,400.0	5,341.9	5,301.6	5,301.1	16.2	9.3	114.64	-106.9	-777.8	717.8	693.3	24.46	29.341		
5,500.0	5,440.6	5,395.8	5,395.2	16.5	9.5	115.61	-105.9	-780.2	726.9	702.0	24.86	29.242		
5,600.0	5,539.4	5,505.0	5,504.2	16.8	9.7	116.29	-108.1	-787.2	736.2	710.9	25.31	29.091		
5,700.0	5,638.1	5,590.1	5,588.8	17.1	9.8	116.58	-112.1	-794.6	744.9	719.2	25.75	28.933		
5,800.0	5,736.9	5,686.2	5,684.1	17.5	10.0	116.70	-116.4	-806.4	755.8	729.5	26.23	28.812		
5,900.0	5,835.6	5,794.9	5,791.2	17.8	10.3	116.46	-124.8	-823.1	765.9	739.1	26.79	28.591		
6,000.0	5,934.4	5,887.1	5,881.5	18.1	10.5	116.07	-133.5	-839.3	776.0	748.7	27.34	28.387		
6,100.0	6,033.1	5,987.3	5,978.8	18.4	10.8	115.37	-145.2	-860.0	786.3	758.4	27.96	28.127		
6,200.0	6,131.9	6,072.3	6,060.8	18.8	11.0	114.62	-156.2	-879.8	797.5	768.9	28.56	27.919		
6,300.0	6,230.6	6,153.2	6,137.7	19.1	11.3	113.68	-167.4	-902.2	810.9	781.7	29.20	27.768		
6,400.0	6,329.4	6,239.1	6,218.2	19.4	11.6	112.47	-180.0	-929.4	826.6	796.7	29.91	27.638		
6,500.0	6,428.1	6,323.1	6,296.0	19.7	11.9	111.19	-193.1	-958.1	843.8	813.1	30.64	27.542		
6,600.0	6,526.9	6,406.1	6,372.2	20.1	12.3	109.87	-205.9	-988.3	863.2	831.8	31.38	27.506		
6,700.0	6,625.6	6,530.3	6,485.4	20.4	12.9	107.82	-227.1	-1,035.0	883.1	850.7	32.38	27.271		
6,800.0	6,724.5	6,629.0	6,575.0	20.7	13.5	92.51	-247.7	-1,070.8	899.3	866.0	33.23	27.060		
6,900.0	6,824.2	6,726.6	6,664.6	20.8	14.0	1.69	-265.2	-1,105.5	910.0	876.2	33.78	26.940 SF		
7,000.0	6,923.1	6,800.5	6,732.6	20.7	14.4	-31.08	-277.8	-1,131.5	913.0	879.2	33.85	26.972		
7,100.0	7,019.2	6,874.0	6,800.9	20.5	14.8	-41.08	-287.9	-1,156.7	910.7	877.1	33.57	27.126		
7,200.0	7,110.8	7,011.7	6,931.2	20.2	15.4	-49.65	-303.6	-1,198.1	900.6	867.3	33.25	27.088		
7,300.0	7,196.0	7,114.6	7,030.3	19.7	15.9	-56.66	-313.6	-1,224.0	884.4	851.9	32.50	27.212		
7,400.0	7,273.2	7,222.8	7,136.0	19.1	16.3	-64.28	-322.6	-1,245.4	863.1	831.5	31.61	27.308		
7,500.0	7,340.8	7,309.0	7,220.8	18.5	16.5	-71.29	-328.9	-1,258.9	840.9	810.3	30.64	27.445		
7,600.0	7,397.6	7,391.7	7,302.7	17.9	16.8	-78.26	-333.9	-1,268.8	821.3	791.6	29.73	27.622		
7,700.0	7,442.5	7,436.3	7,347.1	17.3	16.9	-82.54	-336.4	-1,273.0	808.0	779.0	28.96	27.902		
7,781.9	7,469.7	7,466.1	7,376.8	16.9	16.9	-85.03	-338.0	-1,275.6	804.3	775.9	28.48	28.244		
7,800.0	7,474.5	7,471.8	7,382.4	16.8	17.0	-85.44	-338.2	-1,276.1	804.5	776.2	28.38	28.350		
7,900.0	7,493.1	7,489.3	7,399.8	16.5	17.0	-86.13	-339.0	-1,277.5	812.5	784.5	28.01	29.007		
8,000.0	7,498.0	7,489.8	7,400.3	16.3	17.0	-84.89	-339.0	-1,277.5	832.4	804.6	27.82	29.923		
8,100.0	7,498.0	7,484.3	7,394.9	16.4	17.0	-84.50	-338.8	-1,277.1	863.5	835.6	27.83	31.023		
8,200.0	7,498.0	7,479.0	7,389.6	16.6	17.0	-84.12	-338.5	-1,276.7	904.5	876.5	28.06	32.235		
8,300.0	7,498.0	7,473.8	7,384.3	16.9	17.0	-83.75	-338.3	-1,276.2	954.3	925.8	28.49	33.496		
8,400.0	7,498.0	7,465.8	7,376.4	17.5	16.9	-83.18	-338.0	-1,275.6	1,011.5	982.4	29.10	34.766		
8,500.0	7,498.0	7,454.9	7,365.6	18.2	16.9	-82.41	-337.4	-1,274.6	1,075.0	1,045.1	29.85	36.013		
8,600.0	7,498.0	7,441.8	7,352.5	19.1	16.9	-81.48	-336.7	-1,273.5	1,143.6	1,112.9	30.73	37.218		
8,700.0	7,498.0	7,435.6	7,346.4	20.0	16.9	-81.04	-336.4	-1,272.9	1,216.5	1,184.8	31.75	38.321		
8,800.0	7,498.0	7,429.8	7,340.7	21.1	16.9	-80.63	-336.1	-1,272.4	1,293.1	1,260.2	32.86	39.349		
8,900.0	7,498.0	7,424.1	7,334.9	22.2	16.8	-80.23	-335.8	-1,271.8	1,372.6	1,338.6	34.06	40.306		
9,000.0	7,498.0	7,418.2	7,329.1	23.5	16.8	-79.82	-335.4	-1,271.3	1,454.7	1,419.3	35.31	41.194		
9,100.0	7,498.0	7,412.4	7,323.3	24.8	16.8	-79.40	-335.1	-1,270.7	1,538.8	1,502.2	36.62	42.020		
9,200.0	7,498.0	7,403.4	7,314.4	26.1	16.8	-78.77	-334.6	-1,269.9	1,624.7	1,586.8	37.95	42.814		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 43-17 (EXISTING) - SUNDANCE - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program:		5100-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	4.97	1,047.3	91.1	1,051.5					
100.0	100.0	77.0	77.0	0.1	0.1	4.97	1,047.3	91.1	1,051.3	1,051.0	0.26	4,094.340		
200.0	200.0	177.0	177.0	0.3	0.3	4.97	1,047.3	91.1	1,051.3	1,050.7	0.61	1,735.269		
300.0	300.0	277.0	277.0	0.5	0.5	4.97	1,047.3	91.1	1,051.3	1,050.3	0.95	1,100.934		
400.0	400.0	377.0	377.0	0.6	0.7	4.97	1,047.3	91.1	1,051.3	1,050.0	1.30	806.218 CC		
427.8	427.8	404.8	404.8	0.7	0.7	158.67	1,047.3	91.1	1,051.3	1,049.9	1.40	750.457 ES		
500.0	500.0	477.0	477.0	0.8	0.8	158.67	1,047.3	91.1	1,051.7	1,050.0	1.65	636.266		
600.0	599.9	576.9	576.9	1.0	1.0	158.72	1,047.3	91.1	1,054.9	1,052.9	2.00	527.128		
700.0	699.7	676.7	676.7	1.2	1.2	158.81	1,047.3	91.1	1,061.4	1,059.1	2.35	451.688		
800.0	799.1	776.1	776.1	1.4	1.4	158.94	1,047.3	91.1	1,071.2	1,068.5	2.70	396.751		
900.0	898.2	875.2	875.2	1.7	1.5	159.11	1,047.3	91.1	1,084.2	1,081.1	3.05	355.193		
1,000.0	996.9	973.9	973.9	2.0	1.7	159.40	1,047.3	91.1	1,099.0	1,095.5	3.41	321.975		
1,100.0	1,095.7	1,072.7	1,072.7	2.3	1.9	159.68	1,047.3	91.1	1,113.8	1,110.0	3.78	295.000		
1,200.0	1,194.4	1,171.4	1,171.4	2.6	2.0	159.96	1,047.3	91.1	1,128.6	1,124.4	4.14	272.723		
1,300.0	1,293.1	1,270.1	1,270.1	2.9	2.2	160.23	1,047.3	91.1	1,143.4	1,138.9	4.50	254.035		
1,400.0	1,391.9	1,368.9	1,368.9	3.2	2.4	160.49	1,047.3	91.1	1,158.3	1,153.4	4.86	238.146		
1,500.0	1,490.6	1,467.6	1,467.6	3.5	2.6	160.75	1,047.3	91.1	1,173.2	1,168.0	5.23	224.480		
1,600.0	1,589.4	1,566.4	1,566.4	3.8	2.7	161.00	1,047.3	91.1	1,188.1	1,182.5	5.59	212.606		
1,700.0	1,688.1	1,665.1	1,665.1	4.2	2.9	161.25	1,047.3	91.1	1,203.0	1,197.1	5.95	202.195		
1,800.0	1,786.9	1,763.9	1,763.9	4.5	3.1	161.48	1,047.3	91.1	1,218.0	1,211.7	6.31	192.996		
1,900.0	1,885.6	1,862.6	1,862.6	4.8	3.3	161.72	1,047.3	91.1	1,233.0	1,226.3	6.67	184.810		
2,000.0	1,984.4	1,961.4	1,961.4	5.1	3.4	161.94	1,047.3	91.1	1,248.0	1,241.0	7.03	177.480		
2,100.0	2,083.1	2,060.1	2,060.1	5.4	3.6	162.17	1,047.3	91.1	1,263.0	1,255.6	7.39	170.879		
2,200.0	2,181.9	2,158.9	2,158.9	5.8	3.8	162.38	1,047.3	91.1	1,278.0	1,270.3	7.75	164.904		
2,300.0	2,280.6	2,257.6	2,257.6	6.1	3.9	162.59	1,047.3	91.1	1,293.1	1,285.0	8.11	159.471		
2,400.0	2,379.4	2,356.4	2,356.4	6.4	4.1	162.80	1,047.3	91.1	1,308.2	1,299.7	8.47	154.509		
2,500.0	2,478.1	2,455.1	2,455.1	6.7	4.3	163.00	1,047.3	91.1	1,323.3	1,314.4	8.82	149.959		
2,600.0	2,576.9	2,553.9	2,553.9	7.0	4.5	163.20	1,047.3	91.1	1,338.4	1,329.2	9.18	145.774		
2,700.0	2,675.6	2,652.6	2,652.6	7.4	4.6	163.39	1,047.3	91.1	1,353.5	1,343.9	9.54	141.910		
2,800.0	2,774.4	2,751.4	2,751.4	7.7	4.8	163.58	1,047.3	91.1	1,368.6	1,358.7	9.89	138.333		
2,900.0	2,873.1	2,850.1	2,850.1	8.0	5.0	163.76	1,047.3	91.1	1,383.7	1,373.5	10.25	135.012		
3,000.0	2,971.9	2,948.9	2,948.9	8.3	5.1	163.94	1,047.3	91.1	1,398.9	1,388.3	10.60	131.919		
3,100.0	3,070.6	3,047.6	3,047.6	8.7	5.3	164.12	1,047.3	91.1	1,414.1	1,403.1	10.96	129.034		
3,200.0	3,169.4	3,146.4	3,146.4	9.0	5.5	164.29	1,047.3	91.1	1,429.3	1,418.0	11.31	126.335		
3,300.0	3,268.1	3,245.1	3,245.1	9.3	5.7	164.46	1,047.3	91.1	1,444.5	1,432.8	11.67	123.804		
3,400.0	3,366.9	3,343.9	3,343.9	9.6	5.8	164.63	1,047.3	91.1	1,459.7	1,447.7	12.02	121.428		
3,500.0	3,465.6	3,442.6	3,442.6	10.0	6.0	164.79	1,047.3	91.1	1,474.9	1,462.5	12.37	119.192		
3,600.0	3,564.4	3,541.4	3,541.4	10.3	6.2	164.95	1,047.3	91.1	1,490.1	1,477.4	12.73	117.083		
3,700.0	3,663.1	3,640.1	3,640.1	10.6	6.4	165.10	1,047.3	91.1	1,505.4	1,492.3	13.08	115.093		
3,800.0	3,761.9	3,738.9	3,738.9	10.9	6.5	165.26	1,047.3	91.1	1,520.6	1,507.2	13.43	113.210		
3,900.0	3,860.6	3,837.6	3,837.6	11.3	6.7	165.41	1,047.3	91.1	1,535.9	1,522.1	13.78	111.427		
4,000.0	3,959.4	3,936.4	3,936.4	11.6	6.9	165.55	1,047.3	91.1	1,551.2	1,537.0	14.14	109.735		
4,100.0	4,058.1	4,035.1	4,035.1	11.9	7.0	165.70	1,047.3	91.1	1,566.5	1,552.0	14.49	108.128		
4,200.0	4,156.9	4,133.9	4,133.9	12.2	7.2	165.84	1,047.3	91.1	1,581.8	1,566.9	14.84	106.600		
4,300.0	4,255.6	4,232.6	4,232.6	12.6	7.4	165.98	1,047.3	91.1	1,597.1	1,581.9	15.19	105.145		
4,400.0	4,354.4	4,331.4	4,331.4	12.9	7.6	166.11	1,047.3	91.1	1,612.4	1,596.8	15.54	103.758		
4,500.0	4,453.1	4,430.1	4,430.1	13.2	7.7	166.25	1,047.3	91.1	1,627.7	1,611.8	15.89	102.434 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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 43-17J (EXISTING) - SUNDANCE - NO SURVEYS														Offset Site Error:	0.0 ft
Survey Program:		8150-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	8.01	1,047.7	147.3	1,058.2						
100.0	100.0	78.0	78.0	0.1	0.1	8.01	1,047.7	147.3	1,058.0	1,057.7	0.26	4,092.661			
200.0	200.0	178.0	178.0	0.3	0.3	8.01	1,047.7	147.3	1,058.0	1,057.4	0.61	1,741.332			
300.0	300.0	278.0	278.0	0.5	0.5	8.01	1,047.7	147.3	1,058.0	1,057.0	0.96	1,105.942			
400.0	400.0	378.0	378.0	0.6	0.7	8.01	1,047.7	147.3	1,058.0	1,056.7	1.31	810.281			
427.8	427.8	405.8	405.8	0.7	0.7	161.70	1,047.7	147.3	1,058.0	1,056.6	1.40	754.310			
500.0	500.0	478.0	478.0	0.8	0.8	161.70	1,047.7	147.3	1,058.4	1,056.7	1.65	639.660			
600.0	599.9	577.9	577.9	1.0	1.0	161.74	1,047.7	147.3	1,061.7	1,059.7	2.00	530.121			
700.0	699.7	677.7	677.7	1.2	1.2	161.82	1,047.7	147.3	1,068.3	1,066.0	2.35	454.507			
800.0	799.1	777.1	777.1	1.4	1.4	161.93	1,047.7	147.3	1,078.3	1,075.6	2.70	399.574			
900.0	898.2	876.2	876.2	1.7	1.5	162.07	1,047.7	147.3	1,091.5	1,088.5	3.05	358.156			
1,000.0	996.9	974.9	974.9	2.0	1.7	162.32	1,047.7	147.3	1,106.6	1,103.1	3.40	325.009			
1,100.0	1,095.7	1,073.7	1,073.7	2.3	1.9	162.57	1,047.7	147.3	1,121.6	1,117.8	3.76	298.064			
1,200.0	1,194.4	1,172.4	1,172.4	2.6	2.0	162.80	1,047.7	147.3	1,136.7	1,132.5	4.12	275.785			
1,300.0	1,293.1	1,271.1	1,271.1	2.9	2.2	163.03	1,047.7	147.3	1,151.8	1,147.3	4.48	257.073			
1,400.0	1,391.9	1,369.9	1,369.9	3.2	2.4	163.26	1,047.7	147.3	1,166.9	1,162.0	4.84	241.143			
1,500.0	1,490.6	1,468.6	1,468.6	3.5	2.6	163.48	1,047.7	147.3	1,182.0	1,176.8	5.20	227.425			
1,600.0	1,589.4	1,567.4	1,567.4	3.8	2.7	163.69	1,047.7	147.3	1,197.1	1,191.6	5.56	215.491			
1,700.0	1,688.1	1,666.1	1,666.1	4.2	2.9	163.90	1,047.7	147.3	1,212.3	1,206.4	5.91	205.018			
1,800.0	1,786.9	1,764.9	1,764.9	4.5	3.1	164.11	1,047.7	147.3	1,227.5	1,221.2	6.27	195.753			
1,900.0	1,885.6	1,863.6	1,863.6	4.8	3.3	164.31	1,047.7	147.3	1,242.6	1,236.0	6.63	187.501			
2,000.0	1,984.4	1,962.4	1,962.4	5.1	3.4	164.50	1,047.7	147.3	1,257.8	1,250.9	6.98	180.105			
2,100.0	2,083.1	2,061.1	2,061.1	5.4	3.6	164.69	1,047.7	147.3	1,273.1	1,265.7	7.34	173.439			
2,200.0	2,181.9	2,159.9	2,159.9	5.8	3.8	164.88	1,047.7	147.3	1,288.3	1,280.6	7.70	167.401			
2,300.0	2,280.6	2,258.6	2,258.6	6.1	3.9	165.06	1,047.7	147.3	1,303.5	1,295.5	8.05	161.906			
2,400.0	2,379.4	2,357.4	2,357.4	6.4	4.1	165.23	1,047.7	147.3	1,318.8	1,310.4	8.41	156.884			
2,500.0	2,478.1	2,456.1	2,456.1	6.7	4.3	165.40	1,047.7	147.3	1,334.0	1,325.3	8.76	152.277			
2,600.0	2,576.9	2,554.9	2,554.9	7.0	4.5	165.57	1,047.7	147.3	1,349.3	1,340.2	9.11	148.035			
2,700.0	2,675.6	2,653.6	2,653.6	7.4	4.6	165.74	1,047.7	147.3	1,364.6	1,355.1	9.47	144.118			
2,800.0	2,774.4	2,752.4	2,752.4	7.7	4.8	165.90	1,047.7	147.3	1,379.9	1,370.1	9.82	140.489			
2,900.0	2,873.1	2,851.1	2,851.1	8.0	5.0	166.06	1,047.7	147.3	1,395.2	1,385.0	10.18	137.117			
3,000.0	2,971.9	2,949.9	2,949.9	8.3	5.1	166.21	1,047.7	147.3	1,410.5	1,400.0	10.53	133.977			
3,100.0	3,070.6	3,048.6	3,048.6	8.7	5.3	166.36	1,047.7	147.3	1,425.9	1,415.0	10.88	131.045			
3,200.0	3,169.4	3,147.4	3,147.4	9.0	5.5	166.51	1,047.7	147.3	1,441.2	1,430.0	11.23	128.301			
3,300.0	3,268.1	3,246.1	3,246.1	9.3	5.7	166.65	1,047.7	147.3	1,456.5	1,445.0	11.58	125.728			
3,400.0	3,366.9	3,344.9	3,344.9	9.6	5.8	166.80	1,047.7	147.3	1,471.9	1,460.0	11.94	123.310			
3,500.0	3,465.6	3,443.6	3,443.6	10.0	6.0	166.93	1,047.7	147.3	1,487.3	1,475.0	12.29	121.034			
3,600.0	3,564.4	3,542.4	3,542.4	10.3	6.2	167.07	1,047.7	147.3	1,502.6	1,490.0	12.64	118.888			
3,700.0	3,663.1	3,641.1	3,641.1	10.6	6.4	167.20	1,047.7	147.3	1,518.0	1,505.0	12.99	116.861			
3,800.0	3,761.9	3,739.9	3,739.9	10.9	6.5	167.33	1,047.7	147.3	1,533.4	1,520.1	13.34	114.942			
3,900.0	3,860.6	3,838.6	3,838.6	11.3	6.7	167.46	1,047.7	147.3	1,548.8	1,535.1	13.69	113.125			
4,000.0	3,959.4	3,937.4	3,937.4	11.6	6.9	167.59	1,047.7	147.3	1,564.2	1,550.2	14.04	111.400			
4,100.0	4,058.1	4,036.1	4,036.1	11.9	7.0	167.71	1,047.7	147.3	1,579.6	1,565.2	14.39	109.761			
4,200.0	4,156.9	4,134.9	4,134.9	12.2	7.2	167.83	1,047.7	147.3	1,595.0	1,580.3	14.74	108.202			
4,300.0	4,255.6	4,233.6	4,233.6	12.6	7.4	167.95	1,047.7	147.3	1,610.5	1,595.4	15.09	106.718			
4,400.0	4,354.4	4,332.4	4,332.4	12.9	7.6	168.06	1,047.7	147.3	1,625.9	1,610.5	15.44	105.302			
7,700.0	7,442.5	7,420.5	7,420.5	17.3	13.0	48.94	1,047.7	147.3	1,599.7	1,576.7	23.01	69.512			
7,800.0	7,474.5	7,452.5	7,452.5	16.8	13.0	61.10	1,047.7	147.3	1,513.4	1,488.5	24.90	60.783			
7,900.0	7,493.1	7,471.1	7,471.1	16.5	13.0	76.36	1,047.7	147.3	1,424.6	1,398.0	26.61	53.543			
8,000.0	7,498.0	7,476.0	7,476.0	16.3	13.0	90.00	1,047.7	147.3	1,335.2	1,308.1	27.12	49.239			
8,100.0	7,498.0	7,476.0	7,476.0	16.4	13.0	90.00	1,047.7	147.3	1,247.0	1,219.9	27.14	45.944			
8,200.0	7,498.0	7,476.0	7,476.0	16.6	13.0	90.00	1,047.7	147.3	1,160.8	1,133.4	27.38	42.388			

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 43-17J (EXISTING) - SUNDANCE - 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			
8,300.0	7,498.0	7,476.0	7,476.0	16.9	13.0	90.00	1,047.7	147.3	1,076.9	1,049.1	27.83		38.693	
8,400.0	7,498.0	7,476.0	7,476.0	17.5	13.0	90.00	1,047.7	147.3	996.0	967.5	28.47		34.988	
8,500.0	7,498.0	7,476.0	7,476.0	18.2	13.0	90.00	1,047.7	147.3	918.9	889.6	29.27		31.396	
8,600.0	7,498.0	7,476.0	7,476.0	19.1	13.0	90.00	1,047.7	147.3	846.6	816.4	30.21		28.022	
8,700.0	7,498.0	7,476.0	7,476.0	20.0	13.0	90.00	1,047.7	147.3	780.4	749.1	31.27		24.953	
8,800.0	7,498.0	7,476.0	7,476.0	21.1	13.0	90.00	1,047.7	147.3	722.0	689.6	32.44		22.258	
8,900.0	7,498.0	7,476.0	7,476.0	22.2	13.0	90.00	1,047.7	147.3	673.5	639.9	33.69		19.994	
9,000.0	7,498.0	7,476.0	7,476.0	23.5	13.0	90.00	1,047.7	147.3	637.2	602.2	35.00		18.203	
9,100.0	7,498.0	7,476.0	7,476.0	24.8	13.0	90.00	1,047.7	147.3	615.1	578.7	36.38		16.907	
9,188.4	7,498.0	7,476.0	7,476.0	25.9	13.0	90.00	1,047.7	147.3	608.7	571.1	37.64		16.173 CC	
9,200.0	7,498.0	7,476.0	7,476.0	26.1	13.0	90.00	1,047.7	147.3	608.8	571.0	37.80		16.105 ES	
9,300.0	7,498.0	7,476.0	7,476.0	27.5	13.0	90.00	1,047.7	147.3	618.8	579.6	39.27		15.761 SF	
9,400.0	7,498.0	7,476.0	7,476.0	28.9	13.0	90.00	1,047.7	147.3	644.4	603.7	40.76		15.810	
9,500.0	7,498.0	7,476.0	7,476.0	30.4	13.0	90.00	1,047.7	147.3	683.8	641.5	42.29		16.171	
9,600.0	7,498.0	7,476.0	7,476.0	31.9	13.0	90.00	1,047.7	147.3	734.8	691.0	43.84		16.762	
9,700.0	7,498.0	7,476.0	7,476.0	33.4	13.0	90.00	1,047.7	147.3	795.2	749.8	45.41		17.511	
9,800.0	7,498.0	7,476.0	7,476.0	34.9	13.0	90.00	1,047.7	147.3	862.9	815.9	47.00		18.361	
9,900.0	7,498.0	7,476.0	7,476.0	36.5	13.0	90.00	1,047.7	147.3	936.4	887.8	48.60		19.268	
10,000.0	7,498.0	7,476.0	7,476.0	38.1	13.0	90.00	1,047.7	147.3	1,014.5	964.3	50.22		20.202	
10,100.0	7,498.0	7,476.0	7,476.0	39.7	13.0	90.00	1,047.7	147.3	1,096.2	1,044.3	51.85		21.142	
10,200.0	7,498.0	7,476.0	7,476.0	41.3	13.0	90.00	1,047.7	147.3	1,180.6	1,127.2	53.49		22.073	
10,300.0	7,498.0	7,476.0	7,476.0	42.9	13.0	90.00	1,047.7	147.3	1,267.4	1,212.2	55.14		22.986	
10,400.0	7,498.0	7,476.0	7,476.0	44.5	13.0	90.00	1,047.7	147.3	1,355.9	1,299.1	56.79		23.874	
10,500.0	7,498.0	7,476.0	7,476.0	46.2	13.0	90.00	1,047.7	147.3	1,446.0	1,387.5	58.46		24.735	
10,600.0	7,498.0	7,476.0	7,476.0	47.8	13.0	90.00	1,047.7	147.3	1,537.3	1,477.1	60.13		25.566	
10,700.0	7,498.0	7,476.0	7,476.0	49.5	13.0	90.00	1,047.7	147.3	1,629.6	1,567.8	61.81		26.365	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 44-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 642-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-99.43	-111.5	-671.1	680.7					
100.0	100.0	74.0	74.0	0.1	0.1	-99.43	-111.5	-671.1	680.2	680.0	0.25	2,704.717		
200.0	200.0	174.0	174.0	0.3	0.3	-99.43	-111.5	-671.1	680.2	679.6	0.60	1,132.730		
300.0	300.0	274.0	274.0	0.5	0.5	-99.43	-111.5	-671.1	680.2	679.3	0.95	716.373		
400.0	400.0	374.0	374.0	0.6	0.7	-99.43	-111.5	-671.1	680.2	679.0	1.30	523.829		
500.0	500.0	474.0	474.0	0.8	0.8	54.30	-111.5	-671.1	680.0	678.3	1.65	412.699		
600.0	599.9	573.9	573.9	1.0	1.0	54.57	-111.5	-671.1	678.0	676.0	2.00	339.017		
700.0	699.7	675.0	675.0	1.2	1.2	55.16	-111.1	-671.1	673.9	671.5	2.37	284.931		
800.0	799.1	773.8	773.8	1.4	1.4	56.14	-109.3	-671.2	667.8	665.1	2.75	242.975		
900.0	898.2	872.1	872.1	1.7	1.5	57.42	-107.4	-671.4	660.1	656.9	3.16	208.651		
1,000.0	996.9	970.1	970.0	2.0	1.7	58.75	-105.4	-671.6	651.8	648.2	3.60	181.161		
1,100.0	1,095.7	1,065.9	1,065.8	2.3	1.9	60.08	-103.4	-672.2	644.0	640.0	4.04	159.282		
1,200.0	1,194.4	1,161.6	1,161.5	2.6	2.0	61.46	-101.3	-673.1	637.1	632.6	4.50	141.589		
1,300.0	1,293.1	1,257.3	1,257.2	2.9	2.2	62.87	-99.1	-674.4	631.0	626.0	4.96	127.093		
1,400.0	1,391.9	1,360.9	1,360.7	3.2	2.4	64.40	-96.9	-675.9	625.3	619.9	5.45	114.780		
1,500.0	1,490.6	1,467.8	1,467.6	3.5	2.6	65.88	-96.1	-676.0	618.8	612.9	5.94	104.147		
1,600.0	1,589.4	1,574.9	1,574.7	3.8	2.8	67.27	-96.8	-674.8	611.3	604.9	6.44	94.918		
1,700.0	1,688.1	1,664.5	1,664.3	4.2	2.9	68.48	-97.2	-673.5	603.9	597.0	6.91	87.331		
1,800.0	1,786.9	1,769.2	1,768.9	4.5	3.1	70.23	-94.4	-672.9	597.9	590.5	7.43	80.485		
1,900.0	1,885.6	1,881.8	1,881.5	4.8	3.3	72.22	-90.9	-669.6	590.2	582.2	7.97	74.085		
2,000.0	1,984.4	1,976.0	1,975.6	5.1	3.5	73.77	-89.8	-666.3	582.2	573.7	8.46	68.799		
2,100.0	2,083.1	2,072.1	2,071.7	5.4	3.6	75.22	-90.3	-663.7	575.2	566.2	8.96	64.175		
2,200.0	2,181.9	2,168.5	2,168.0	5.8	3.8	76.71	-90.7	-661.5	569.0	559.5	9.47	60.106		
2,300.0	2,280.6	2,265.1	2,264.6	6.1	4.0	78.23	-90.9	-659.6	563.5	553.6	9.97	56.512		
2,400.0	2,379.4	2,361.8	2,361.2	6.4	4.1	79.80	-91.0	-658.0	558.9	548.4	10.48	53.335		
2,500.0	2,478.1	2,458.6	2,458.1	6.7	4.3	81.40	-90.8	-656.7	555.0	544.1	10.99	50.519		
2,600.0	2,576.9	2,556.5	2,555.9	7.0	4.5	83.07	-90.4	-655.6	551.9	540.4	11.50	47.996		
2,700.0	2,675.6	2,654.2	2,653.6	7.4	4.7	84.80	-89.4	-654.4	549.4	537.3	12.01	45.748		
2,800.0	2,774.4	2,751.7	2,751.2	7.7	4.8	86.58	-88.0	-653.1	547.5	535.0	12.52	43.746		
2,900.0	2,873.1	2,865.4	2,864.8	8.0	5.0	88.50	-88.6	-650.8	544.7	531.6	13.04	41.759		
3,000.0	2,971.9	2,960.1	2,959.5	8.3	5.2	90.01	-90.4	-648.6	541.6	528.0	13.53	40.014		
3,100.0	3,070.6	3,054.9	3,054.2	8.7	5.4	91.54	-91.7	-647.0	539.6	525.6	14.02	38.484		
3,200.0	3,169.4	3,149.9	3,149.2	9.0	5.5	93.10	-92.7	-646.0	538.8	524.3	14.51	37.147		
3,223.9	3,193.0	3,172.8	3,172.1	9.1	5.6	93.47	-92.8	-645.8	538.8	524.2	14.62	36.853	CC	
3,300.0	3,268.1	3,245.9	3,245.2	9.3	5.7	94.67	-93.4	-645.5	539.1	524.1	14.99	35.973		
3,400.0	3,366.9	3,342.0	3,341.3	9.6	5.9	96.22	-93.9	-645.5	540.3	524.8	15.46	34.944		
3,500.0	3,465.6	3,442.0	3,441.3	10.0	6.0	97.80	-94.4	-646.0	542.4	526.5	15.94	34.035		
3,600.0	3,564.4	3,533.7	3,533.0	10.3	6.2	99.24	-94.6	-646.9	545.4	529.0	16.39	33.270		
3,700.0	3,663.1	3,629.2	3,628.5	10.6	6.4	100.73	-94.4	-648.3	549.5	532.6	16.85	32.608		
3,800.0	3,761.9	3,724.6	3,723.9	10.9	6.5	102.19	-93.8	-650.1	554.6	537.3	17.30	32.051		
3,900.0	3,860.6	3,841.4	3,840.7	11.3	6.7	103.97	-93.5	-651.5	559.3	541.5	17.77	31.467		
4,000.0	3,959.4	3,941.2	3,940.5	11.6	6.9	105.48	-94.7	-650.8	562.1	543.8	18.22	30.855		
4,100.0	4,058.1	4,039.6	4,038.9	11.9	7.1	106.94	-96.0	-650.3	565.3	546.6	18.65	30.311		
4,200.0	4,156.9	4,138.1	4,137.3	12.2	7.2	108.36	-97.3	-650.0	568.9	549.9	19.08	29.824		
4,300.0	4,255.6	4,235.1	4,234.3	12.6	7.4	109.74	-98.5	-649.9	573.1	553.6	19.49	29.398		
4,400.0	4,354.4	4,331.6	4,330.8	12.9	7.6	111.08	-99.5	-650.0	578.1	558.1	19.91	29.038		
4,500.0	4,453.1	4,428.1	4,427.3	13.2	7.7	112.40	-100.2	-650.5	583.7	563.4	20.31	28.738		
4,600.0	4,551.9	4,525.7	4,524.9	13.6	7.9	113.70	-100.7	-651.2	590.1	569.4	20.71	28.489		
4,700.0	4,650.6	4,624.2	4,623.5	13.9	8.1	114.99	-101.1	-652.0	596.8	575.7	21.11	28.276		
4,800.0	4,749.4	4,722.8	4,722.0	14.2	8.2	116.25	-101.4	-652.7	603.9	582.4	21.50	28.094		
4,900.0	4,848.1	4,821.0	4,820.2	14.5	8.4	117.48	-101.7	-653.5	611.4	589.5	21.88	27.943		
5,000.0	4,946.9	4,921.8	4,921.0	14.9	8.6	118.73	-101.7	-654.3	619.3	597.0	22.26	27.824		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - MILLER 44-17J (EXISTING) - ENCANA - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 642-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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)						
5,100.0	5,045.6	5,061.6	5,060.5	15.2	8.8	121.07	-102.0	-646.5	623.9	601.3	22.61	27.596		
5,200.0	5,144.4	5,198.9	5,196.3	15.5	9.1	124.05	-106.2	-627.3	622.3	599.4	22.89	27.191		
5,300.0	5,243.1	5,345.6	5,339.7	15.8	9.4	127.60	-117.5	-598.7	615.0	591.9	23.11	26.612		
5,400.0	5,341.9	5,466.5	5,455.7	16.2	9.7	131.05	-132.0	-567.7	602.4	579.1	23.29	25.866		
5,500.0	5,440.6	5,566.0	5,549.8	16.5	10.0	134.35	-144.8	-538.0	589.1	565.6	23.44	25.129		
5,600.0	5,539.4	5,675.4	5,651.7	16.8	10.4	138.61	-157.7	-500.5	577.3	553.8	23.54	24.526		
5,700.0	5,638.1	5,782.9	5,748.9	17.1	10.9	143.57	-171.8	-456.9	565.4	541.8	23.61	23.951		
5,800.0	5,736.9	5,877.8	5,833.1	17.5	11.4	148.37	-185.9	-415.3	555.0	531.3	23.71	23.405		
5,900.0	5,835.6	5,966.5	5,910.8	17.8	11.9	153.14	-199.0	-374.7	548.9	525.0	23.86	23.002		
5,985.1	5,919.6	6,038.2	5,973.0	18.1	12.3	157.14	-210.5	-340.9	546.5	522.4	24.03	22.738 ES		
6,000.0	5,934.4	6,048.8	5,982.3	18.1	12.4	157.72	-212.1	-336.0	546.5	522.5	24.07	22.709		
6,100.0	6,033.1	6,126.9	6,051.4	18.4	12.9	161.84	-222.7	-301.3	551.2	526.9	24.34	22.651		
6,200.0	6,131.9	6,218.1	6,131.4	18.8	13.5	166.68	-236.2	-259.8	559.6	534.9	24.71	22.643		
6,300.0	6,230.6	6,311.5	6,214.1	19.1	14.1	171.37	-250.3	-218.5	571.9	546.7	25.20	22.697		
6,400.0	6,329.4	6,416.6	6,306.0	19.4	14.9	176.61	-268.4	-171.0	587.1	561.2	25.89	22.677		
6,500.0	6,428.1	6,491.2	6,370.3	19.7	15.5	-179.67	-283.0	-136.1	605.1	578.5	26.55	22.792		
6,600.0	6,526.9	6,572.3	6,440.6	20.1	16.1	-175.87	-297.6	-98.3	628.1	600.8	27.30	23.006		
6,700.0	6,625.6	6,634.0	6,494.6	20.4	16.6	-173.26	-306.7	-69.9	656.5	628.5	27.95	23.488		
6,800.0	6,724.5	6,727.9	6,577.0	20.7	17.3	175.83	-319.2	-26.7	687.6	658.7	28.94	23.757		
6,900.0	6,824.2	6,842.5	6,679.7	20.8	18.2	89.72	-334.8	21.8	710.1	680.1	29.98	23.684		
7,000.0	6,923.1	6,947.0	6,775.2	20.7	18.9	62.20	-349.2	61.5	722.1	691.5	30.62	23.586		
7,100.0	7,019.2	7,048.1	6,870.4	20.5	19.4	58.46	-360.3	93.5	724.9	694.0	30.90	23.457		
7,200.0	7,110.8	7,123.0	6,941.3	20.2	19.9	58.85	-367.6	116.8	722.5	691.7	30.84	23.432		
7,300.0	7,196.0	7,248.6	7,062.4	19.7	20.4	64.01	-376.4	148.6	713.9	683.0	30.90	23.102		
7,400.0	7,273.2	7,337.0	7,149.2	19.1	20.8	68.85	-380.3	165.0	700.0	669.4	30.63	22.851		
7,500.0	7,340.8	7,417.8	7,228.9	18.5	21.0	74.36	-383.1	177.7	685.9	655.6	30.28	22.648		
7,600.0	7,397.6	7,478.7	7,289.2	17.9	21.2	79.07	-384.8	186.0	675.0	645.2	29.81	22.640 SF		
7,698.0	7,441.7	7,533.9	7,344.0	17.3	21.3	83.34	-386.0	192.7	670.9	641.6	29.32	22.879		
7,700.0	7,442.5	7,535.0	7,345.1	17.3	21.3	83.42	-386.0	192.8	670.9	641.6	29.31	22.887		
7,800.0	7,474.5	7,584.8	7,394.7	16.8	21.4	86.84	-386.1	197.4	675.9	647.1	28.83	23.445		
7,900.0	7,493.1	7,607.3	7,417.1	16.5	21.5	87.28	-386.0	199.1	692.4	663.9	28.44	24.346		
8,000.0	7,498.0	7,613.3	7,423.0	16.3	21.5	85.86	-386.0	199.5	720.6	692.4	28.19	25.559		
8,100.0	7,498.0	7,613.8	7,423.6	16.4	21.5	85.90	-386.0	199.6	760.4	732.1	28.22	26.944		
8,200.0	7,498.0	7,614.3	7,424.1	16.6	21.5	85.95	-386.0	199.6	810.6	782.1	28.46	28.478		
8,300.0	7,498.0	7,614.8	7,424.6	16.9	21.5	85.99	-386.0	199.7	869.5	840.6	28.91	30.072		
8,400.0	7,498.0	7,615.3	7,425.1	17.5	21.5	86.03	-386.0	199.7	935.4	905.8	29.55	31.654		
8,500.0	7,498.0	7,615.8	7,425.6	18.2	21.5	86.07	-386.0	199.7	1,006.9	976.6	30.35	33.174		
8,600.0	7,498.0	7,616.2	7,426.0	19.1	21.5	86.11	-386.0	199.8	1,083.0	1,051.7	31.30	34.603		
8,700.0	7,498.0	7,616.7	7,426.5	20.0	21.5	86.15	-386.0	199.8	1,162.6	1,130.3	32.36	35.928		
8,800.0	7,498.0	7,617.2	7,426.9	21.1	21.5	86.19	-386.0	199.8	1,245.2	1,211.7	33.52	37.144		
8,900.0	7,498.0	7,617.6	7,427.4	22.2	21.5	86.23	-386.0	199.9	1,330.3	1,295.5	34.77	38.256		
9,000.0	7,498.0	7,618.0	7,427.8	23.5	21.5	86.26	-386.0	199.9	1,417.2	1,381.1	36.09	39.269		
9,100.0	7,498.0	7,618.5	7,428.2	24.8	21.5	86.30	-386.0	199.9	1,505.8	1,468.3	37.46	40.193		
9,200.0	7,498.0	7,618.9	7,428.6	26.1	21.5	86.33	-386.0	200.0	1,595.7	1,556.8	38.89	41.036		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5000-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-121.05	-358.1	-594.7	694.6					
100.0	100.0	77.0	77.0	0.1	0.1	-121.05	-358.1	-594.7	694.2	694.0	0.26	2,703.714		
200.0	200.0	177.0	177.0	0.3	0.3	-121.05	-358.1	-594.7	694.2	693.6	0.61	1,145.892		
300.0	300.0	277.0	277.0	0.5	0.5	-121.05	-358.1	-594.7	694.2	693.3	0.95	727.007		
400.0	400.0	377.0	377.0	0.6	0.7	-121.05	-358.1	-594.7	694.2	692.9	1.30	532.389		
500.0	500.0	477.0	477.0	0.8	0.8	32.66	-358.1	-594.7	693.8	692.2	1.65	419.764		
600.0	599.9	576.9	576.9	1.0	1.0	32.85	-358.1	-594.7	690.9	688.9	2.00	345.028		
700.0	699.7	676.7	676.7	1.2	1.2	33.23	-358.1	-594.7	685.1	682.7	2.36	290.818		
800.0	799.1	776.1	776.1	1.4	1.4	33.82	-358.1	-594.7	676.3	673.6	2.72	248.957		
900.0	898.2	875.2	875.2	1.7	1.5	34.61	-358.1	-594.7	664.8	661.7	3.09	215.033		
1,000.0	996.9	973.9	973.9	2.0	1.7	35.40	-358.1	-594.7	651.8	648.3	3.48	187.275		
1,100.0	1,095.7	1,072.7	1,072.7	2.3	1.9	36.22	-358.1	-594.7	639.0	635.1	3.88	164.759		
1,200.0	1,194.4	1,171.4	1,171.4	2.6	2.0	37.07	-358.1	-594.7	626.3	622.0	4.28	146.210		
1,300.0	1,293.1	1,270.1	1,270.1	2.9	2.2	37.95	-358.1	-594.7	613.7	609.0	4.70	130.702		
1,400.0	1,391.9	1,368.9	1,368.9	3.2	2.4	38.87	-358.1	-594.7	601.3	596.2	5.11	117.569		
1,500.0	1,490.6	1,467.6	1,467.6	3.5	2.6	39.83	-358.1	-594.7	589.0	583.5	5.54	106.324		
1,600.0	1,589.4	1,566.4	1,566.4	3.8	2.7	40.82	-358.1	-594.7	576.9	571.0	5.97	96.602		
1,700.0	1,688.1	1,665.1	1,665.1	4.2	2.9	41.86	-358.1	-594.7	565.0	558.6	6.41	88.126		
1,800.0	1,786.9	1,763.9	1,763.9	4.5	3.1	42.95	-358.1	-594.7	553.3	546.5	6.86	80.682		
1,900.0	1,885.6	1,862.6	1,862.6	4.8	3.3	44.08	-358.1	-594.7	541.8	534.5	7.31	74.102		
2,000.0	1,984.4	1,961.4	1,961.4	5.1	3.4	45.25	-358.1	-594.7	530.5	522.8	7.77	68.254		
2,100.0	2,083.1	2,060.1	2,060.1	5.4	3.6	46.48	-358.1	-594.7	519.5	511.2	8.24	63.031		
2,200.0	2,181.9	2,158.9	2,158.9	5.8	3.8	47.76	-358.1	-594.7	508.7	500.0	8.72	58.345		
2,300.0	2,280.6	2,257.6	2,257.6	6.1	3.9	49.09	-358.1	-594.7	498.2	488.9	9.20	54.128		
2,400.0	2,379.4	2,356.4	2,356.4	6.4	4.1	50.48	-358.1	-594.7	487.9	478.2	9.70	50.319		
2,500.0	2,478.1	2,455.1	2,455.1	6.7	4.3	51.93	-358.1	-594.7	477.9	467.7	10.20	46.871		
2,600.0	2,576.9	2,553.9	2,553.9	7.0	4.5	53.43	-358.1	-594.7	468.3	457.6	10.71	43.743		
2,700.0	2,675.6	2,652.6	2,652.6	7.4	4.6	55.00	-358.1	-594.7	459.0	447.8	11.22	40.899		
2,800.0	2,774.4	2,751.4	2,751.4	7.7	4.8	56.63	-358.1	-594.7	450.1	438.3	11.75	38.311		
2,900.0	2,873.1	2,850.1	2,850.1	8.0	5.0	58.33	-358.1	-594.7	441.5	429.2	12.28	35.954		
3,000.0	2,971.9	2,948.9	2,948.9	8.3	5.1	60.08	-358.1	-594.7	433.4	420.6	12.82	33.806		
3,100.0	3,070.6	3,047.6	3,047.6	8.7	5.3	61.91	-358.1	-594.7	425.7	412.3	13.36	31.849		
3,200.0	3,169.4	3,146.4	3,146.4	9.0	5.5	63.79	-358.1	-594.7	418.4	404.5	13.92	30.065		
3,300.0	3,268.1	3,245.1	3,245.1	9.3	5.7	65.74	-358.1	-594.7	411.6	397.1	14.47	28.441		
3,400.0	3,366.9	3,343.9	3,343.9	9.6	5.8	67.75	-358.1	-594.7	405.3	390.3	15.03	26.965		
3,500.0	3,465.6	3,442.6	3,442.6	10.0	6.0	69.82	-358.1	-594.7	399.5	383.9	15.59	25.624		
3,600.0	3,564.4	3,541.4	3,541.4	10.3	6.2	71.95	-358.1	-594.7	394.3	378.2	16.15	24.409		
3,700.0	3,663.1	3,640.1	3,640.1	10.6	6.4	74.13	-358.1	-594.7	389.7	372.9	16.71	23.312		
3,800.0	3,761.9	3,738.9	3,738.9	10.9	6.5	76.36	-358.1	-594.7	385.6	368.3	17.27	22.324		
3,900.0	3,860.6	3,837.6	3,837.6	11.3	6.7	78.63	-358.1	-594.7	382.1	364.3	17.83	21.437		
4,000.0	3,959.4	3,936.4	3,936.4	11.6	6.9	80.93	-358.1	-594.7	379.3	360.9	18.37	20.644		
4,100.0	4,058.1	4,035.1	4,035.1	11.9	7.0	83.27	-358.1	-594.7	377.1	358.2	18.91	19.941		
4,200.0	4,156.9	4,133.9	4,133.9	12.2	7.2	85.63	-358.1	-594.7	375.6	356.1	19.44	19.319		
4,300.0	4,255.6	4,232.6	4,232.6	12.6	7.4	88.01	-358.1	-594.7	374.7	354.7	19.96	18.775		
4,383.8	4,338.3	4,315.3	4,315.3	12.8	7.5	90.00	-358.1	-594.7	374.4	354.1	20.38	18.375 CC		
4,400.0	4,354.4	4,331.4	4,331.4	12.9	7.6	90.39	-358.1	-594.7	374.5	354.0	20.46	18.303		
4,500.0	4,453.1	4,430.1	4,430.1	13.2	7.7	92.77	-358.1	-594.7	374.9	353.9	20.95	17.897 ES		
4,600.0	4,551.9	4,528.9	4,528.9	13.6	7.9	95.14	-358.1	-594.7	376.0	354.6	21.42	17.554		
4,700.0	4,650.6	4,627.6	4,627.6	13.9	8.1	97.49	-358.1	-594.7	377.7	355.9	21.87	17.269		
4,800.0	4,749.4	4,726.4	4,726.4	14.2	8.2	99.82	-358.1	-594.7	380.1	357.8	22.31	17.037		
4,900.0	4,848.1	4,825.1	4,825.1	14.5	8.4	102.12	-358.1	-594.7	383.2	360.5	22.73	16.855		
5,000.0	4,946.9	4,923.9	4,923.9	14.9	8.6	104.37	-358.1	-594.7	386.8	363.7	23.14	16.718		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 1 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5000-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,045.6	5,000.0	5,000.0	15.2	8.7	106.08	-358.1	-594.7	391.8	368.2	23.51	16.662 SF		
5,200.0	5,144.4	5,000.0	5,000.0	15.5	8.7	106.08	-358.1	-594.7	414.1	390.3	23.83	17.379		
5,300.0	5,243.1	5,000.0	5,000.0	15.8	8.7	106.08	-358.1	-594.7	457.7	433.6	24.15	18.957		
5,400.0	5,341.9	5,000.0	5,000.0	16.2	8.7	106.08	-358.1	-594.7	517.3	492.8	24.46	21.145		
5,500.0	5,440.6	5,000.0	5,000.0	16.5	8.7	106.08	-358.1	-594.7	587.9	563.1	24.78	23.724		
5,600.0	5,539.4	5,000.0	5,000.0	16.8	8.7	106.08	-358.1	-594.7	666.0	640.9	25.10	26.539		
5,700.0	5,638.1	5,000.0	5,000.0	17.1	8.7	106.08	-358.1	-594.7	749.4	724.0	25.41	29.489		
5,800.0	5,736.9	5,000.0	5,000.0	17.5	8.7	106.08	-358.1	-594.7	836.5	810.7	25.73	32.508		
5,900.0	5,835.6	5,000.0	5,000.0	17.8	8.7	106.08	-358.1	-594.7	926.1	900.1	26.05	35.555		
6,000.0	5,934.4	5,000.0	5,000.0	18.1	8.7	106.08	-358.1	-594.7	1,017.7	991.3	26.36	38.601		
6,100.0	6,033.1	5,000.0	5,000.0	18.4	8.7	106.08	-358.1	-594.7	1,110.7	1,084.1	26.68	41.630		
6,200.0	6,131.9	5,000.0	5,000.0	18.8	8.7	106.08	-358.1	-594.7	1,204.9	1,177.9	27.00	44.628		
6,300.0	6,230.6	5,000.0	5,000.0	19.1	8.7	106.08	-358.1	-594.7	1,299.9	1,272.6	27.32	47.589		
6,400.0	6,329.4	5,000.0	5,000.0	19.4	8.7	106.08	-358.1	-594.7	1,395.6	1,368.0	27.63	50.507		
6,500.0	6,428.1	5,000.0	5,000.0	19.7	8.7	106.08	-358.1	-594.7	1,491.9	1,464.0	27.95	53.379		
6,600.0	6,526.9	5,000.0	5,000.0	20.1	8.7	106.08	-358.1	-594.7	1,588.7	1,560.4	28.27	56.203		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 2 (EXISTING) - TEXAS TEA OIL - NO SURVEYS														Offset Site Error:	0.0 ft
Survey Program: 5100-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	-46.52	949.7	-1,001.5	1,380.7						
100.0	100.0	64.0	64.0	0.1	0.1	-46.52	949.7	-1,001.5	1,380.2	1,380.0	0.23	5,896.457			
200.0	200.0	164.0	164.0	0.3	0.3	-46.52	949.7	-1,001.5	1,380.2	1,379.6	0.58	2,366.857			
300.0	300.0	264.0	264.0	0.5	0.5	-46.52	949.7	-1,001.5	1,380.2	1,379.3	0.93	1,480.584			
400.0	400.0	364.0	364.0	0.6	0.6	-46.52	949.7	-1,001.5	1,380.2	1,378.9	1.28	1,077.218 CC			
427.8	427.8	391.8	391.8	0.7	0.7	107.17	949.7	-1,001.5	1,380.2	1,378.8	1.38	1,001.351			
500.0	500.0	464.0	464.0	0.8	0.8	107.19	949.7	-1,001.5	1,380.3	1,378.7	1.63	846.601 ES			
600.0	599.9	563.9	563.9	1.0	1.0	107.31	949.7	-1,001.5	1,381.4	1,379.4	1.98	696.141			
700.0	699.7	663.7	663.7	1.2	1.2	107.54	949.7	-1,001.5	1,383.5	1,381.1	2.35	587.904			
800.0	799.1	763.1	763.1	1.4	1.3	107.89	949.7	-1,001.5	1,386.6	1,383.9	2.75	504.601			
900.0	898.2	862.2	862.2	1.7	1.5	108.35	949.7	-1,001.5	1,391.0	1,387.8	3.18	437.521			
1,000.0	996.9	960.9	960.9	2.0	1.7	108.95	949.7	-1,001.5	1,396.1	1,392.5	3.63	385.095			
1,100.0	1,095.7	1,059.7	1,059.7	2.3	1.8	109.55	949.7	-1,001.5	1,401.4	1,397.3	4.08	343.435			
1,200.0	1,194.4	1,158.4	1,158.4	2.6	2.0	110.15	949.7	-1,001.5	1,406.8	1,402.2	4.54	309.814			
1,300.0	1,293.1	1,257.1	1,257.1	2.9	2.2	110.75	949.7	-1,001.5	1,412.4	1,407.4	5.00	282.244			
1,400.0	1,391.9	1,355.9	1,355.9	3.2	2.4	111.34	949.7	-1,001.5	1,418.1	1,412.6	5.47	259.297			
1,500.0	1,490.6	1,454.6	1,454.6	3.5	2.5	111.92	949.7	-1,001.5	1,424.0	1,418.0	5.93	239.945			
1,600.0	1,589.4	1,553.4	1,553.4	3.8	2.7	112.50	949.7	-1,001.5	1,430.0	1,423.6	6.40	223.430			
1,700.0	1,688.1	1,652.1	1,652.1	4.2	2.9	113.08	949.7	-1,001.5	1,436.2	1,429.3	6.87	209.189			
1,800.0	1,786.9	1,750.9	1,750.9	4.5	3.1	113.65	949.7	-1,001.5	1,442.5	1,435.1	7.33	196.796			
1,900.0	1,885.6	1,849.6	1,849.6	4.8	3.2	114.21	949.7	-1,001.5	1,448.9	1,441.1	7.79	185.923			
2,000.0	1,984.4	1,948.4	1,948.4	5.1	3.4	114.77	949.7	-1,001.5	1,455.5	1,447.3	8.26	176.313			
2,100.0	2,083.1	2,047.1	2,047.1	5.4	3.6	115.33	949.7	-1,001.5	1,462.3	1,453.6	8.72	167.764			
2,200.0	2,181.9	2,145.9	2,145.9	5.8	3.7	115.88	949.7	-1,001.5	1,469.2	1,460.0	9.18	160.115			
2,300.0	2,280.6	2,244.6	2,244.6	6.1	3.9	116.42	949.7	-1,001.5	1,476.2	1,466.6	9.63	153.235			
2,400.0	2,379.4	2,343.4	2,343.4	6.4	4.1	116.96	949.7	-1,001.5	1,483.3	1,473.2	10.09	147.016			
2,500.0	2,478.1	2,442.1	2,442.1	6.7	4.3	117.50	949.7	-1,001.5	1,490.6	1,480.1	10.54	141.371			
2,600.0	2,576.9	2,540.9	2,540.9	7.0	4.4	118.03	949.7	-1,001.5	1,498.0	1,487.0	11.00	136.226			
2,700.0	2,675.6	2,639.6	2,639.6	7.4	4.6	118.55	949.7	-1,001.5	1,505.6	1,494.1	11.45	131.520			
2,800.0	2,774.4	2,738.4	2,738.4	7.7	4.8	119.07	949.7	-1,001.5	1,513.3	1,501.4	11.90	127.201			
2,900.0	2,873.1	2,837.1	2,837.1	8.0	5.0	119.58	949.7	-1,001.5	1,521.1	1,508.7	12.34	123.225			
3,000.0	2,971.9	2,935.9	2,935.9	8.3	5.1	120.09	949.7	-1,001.5	1,529.0	1,516.2	12.79	119.554			
3,100.0	3,070.6	3,034.6	3,034.6	8.7	5.3	120.60	949.7	-1,001.5	1,537.0	1,523.8	13.23	116.156			
3,200.0	3,169.4	3,133.4	3,133.4	9.0	5.5	121.10	949.7	-1,001.5	1,545.2	1,531.5	13.67	113.002			
3,300.0	3,268.1	3,232.1	3,232.1	9.3	5.6	121.59	949.7	-1,001.5	1,553.5	1,539.3	14.11	110.070			
3,400.0	3,366.9	3,330.9	3,330.9	9.6	5.8	122.08	949.7	-1,001.5	1,561.8	1,547.3	14.55	107.336			
3,500.0	3,465.6	3,429.6	3,429.6	10.0	6.0	122.56	949.7	-1,001.5	1,570.4	1,555.4	14.99	104.784			
3,600.0	3,564.4	3,528.4	3,528.4	10.3	6.2	123.04	949.7	-1,001.5	1,579.0	1,563.5	15.42	102.395			
3,700.0	3,663.1	3,627.1	3,627.1	10.6	6.3	123.51	949.7	-1,001.5	1,587.7	1,571.8	15.85	100.156			
3,800.0	3,761.9	3,725.9	3,725.9	10.9	6.5	123.98	949.7	-1,001.5	1,596.5	1,580.2	16.28	98.054			
3,900.0	3,860.6	3,824.6	3,824.6	11.3	6.7	124.44	949.7	-1,001.5	1,605.5	1,588.8	16.71	96.078			
4,000.0	3,959.4	3,923.4	3,923.4	11.6	6.8	124.90	949.7	-1,001.5	1,614.5	1,597.4	17.14	94.216			
4,100.0	4,058.1	4,022.1	4,022.1	11.9	7.0	125.35	949.7	-1,001.5	1,623.7	1,606.1	17.56	92.461			
4,200.0	4,156.9	4,120.9	4,120.9	12.2	7.2	125.80	949.7	-1,001.5	1,632.9	1,614.9	17.98	90.804 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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5050-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		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	127.36	-158.8	208.0	262.5					
100.0	100.0	80.0	80.0	0.1	0.1	127.36	-158.8	208.0	261.7	261.5	0.26	998.971		
200.0	200.0	180.0	180.0	0.3	0.3	127.36	-158.8	208.0	261.7	261.1	0.61	428.317		
300.0	300.0	280.0	280.0	0.5	0.5	127.36	-158.8	208.0	261.7	260.8	0.96	272.598		
400.0	400.0	380.0	380.0	0.6	0.7	127.36	-158.8	208.0	261.7	260.4	1.31	199.916		
500.0	500.0	480.0	480.0	0.8	0.8	-79.04	-158.8	208.0	261.6	260.0	1.66	157.771		
600.0	599.9	579.9	579.9	1.0	1.0	-79.81	-158.8	208.0	261.0	259.0	2.01	129.681		
700.0	699.7	679.7	679.7	1.2	1.2	-81.34	-158.8	208.0	259.9	257.5	2.38	109.029		
800.0	799.1	779.1	779.1	1.4	1.4	-83.64	-158.8	208.0	258.5	255.7	2.78	92.872		
900.0	898.2	878.2	878.2	1.7	1.5	-86.72	-158.8	208.0	257.3	254.1	3.22	79.785		
995.0	991.9	971.9	971.9	2.0	1.7	-90.00	-158.8	208.0	256.9	253.2	3.66	70.176 CC		
1,000.0	996.9	976.9	976.9	2.0	1.7	-90.19	-158.8	208.0	256.9	253.2	3.68	69.737 ES		
1,100.0	1,095.7	1,075.7	1,075.7	2.3	1.9	-93.66	-158.8	208.0	257.4	253.3	4.15	62.012		
1,200.0	1,194.4	1,174.4	1,174.4	2.6	2.0	-97.10	-158.8	208.0	258.9	254.3	4.62	56.026		
1,300.0	1,293.1	1,273.1	1,273.1	2.9	2.2	-100.49	-158.8	208.0	261.3	256.3	5.09	51.349		
1,400.0	1,391.9	1,371.9	1,371.9	3.2	2.4	-103.81	-158.8	208.0	264.7	259.2	5.55	47.669		
1,500.0	1,490.6	1,470.6	1,470.6	3.5	2.6	-107.03	-158.8	208.0	268.9	262.9	6.01	44.759		
1,600.0	1,589.4	1,569.4	1,569.4	3.8	2.7	-110.15	-158.8	208.0	274.0	267.6	6.46	42.449		
1,700.0	1,688.1	1,668.1	1,668.1	4.2	2.9	-113.15	-158.8	208.0	279.9	273.0	6.89	40.614		
1,800.0	1,786.9	1,766.9	1,766.9	4.5	3.1	-116.02	-158.8	208.0	286.5	279.2	7.32	39.156		
1,900.0	1,885.6	1,865.6	1,865.6	4.8	3.3	-118.76	-158.8	208.0	293.9	286.1	7.73	38.000		
2,000.0	1,984.4	1,964.4	1,964.4	5.1	3.4	-121.36	-158.8	208.0	301.8	293.7	8.14	37.089		
2,100.0	2,083.1	2,063.1	2,063.1	5.4	3.6	-123.82	-158.8	208.0	310.4	301.9	8.53	36.376		
2,200.0	2,181.9	2,161.9	2,161.9	5.8	3.8	-126.15	-158.8	208.0	319.5	310.6	8.92	35.825		
2,300.0	2,280.6	2,260.6	2,260.6	6.1	3.9	-128.35	-158.8	208.0	329.2	319.9	9.30	35.404		
2,400.0	2,379.4	2,359.4	2,359.4	6.4	4.1	-130.43	-158.8	208.0	339.2	329.6	9.67	35.092		
2,500.0	2,478.1	2,458.1	2,458.1	6.7	4.3	-132.38	-158.8	208.0	349.7	339.7	10.03	34.867		
2,600.0	2,576.9	2,556.9	2,556.9	7.0	4.5	-134.22	-158.8	208.0	360.6	350.2	10.39	34.715		
2,700.0	2,675.6	2,655.6	2,655.6	7.4	4.6	-135.95	-158.8	208.0	371.9	361.1	10.74	34.623		
2,800.0	2,774.4	2,754.4	2,754.4	7.7	4.8	-137.58	-158.8	208.0	383.4	372.3	11.09	34.578		
2,900.0	2,873.1	2,853.1	2,853.1	8.0	5.0	-139.11	-158.8	208.0	395.3	383.8	11.43	34.574 SF		
3,000.0	2,971.9	2,951.9	2,951.9	8.3	5.2	-140.56	-158.8	208.0	407.4	395.6	11.77	34.602		
3,100.0	3,070.6	3,050.6	3,050.6	8.7	5.3	-141.92	-158.8	208.0	419.7	407.6	12.11	34.656		
3,200.0	3,169.4	3,149.4	3,149.4	9.0	5.5	-143.20	-158.8	208.0	432.3	419.9	12.45	34.731		
3,300.0	3,268.1	3,248.1	3,248.1	9.3	5.7	-144.41	-158.8	208.0	445.1	432.3	12.78	34.824		
3,400.0	3,366.9	3,346.9	3,346.9	9.6	5.8	-145.56	-158.8	208.0	458.1	445.0	13.11	34.930		
3,500.0	3,465.6	3,445.6	3,445.6	10.0	6.0	-146.64	-158.8	208.0	471.2	457.8	13.44	35.047		
3,600.0	3,564.4	3,544.4	3,544.4	10.3	6.2	-147.66	-158.8	208.0	484.5	470.7	13.77	35.173		
3,700.0	3,663.1	3,643.1	3,643.1	10.6	6.4	-148.63	-158.8	208.0	497.9	483.8	14.10	35.305		
3,800.0	3,761.9	3,741.9	3,741.9	10.9	6.5	-149.54	-158.8	208.0	511.5	497.1	14.43	35.442		
3,900.0	3,860.6	3,840.6	3,840.6	11.3	6.7	-150.41	-158.8	208.0	525.2	510.4	14.76	35.581		
4,000.0	3,959.4	3,939.4	3,939.4	11.6	6.9	-151.24	-158.8	208.0	539.0	523.9	15.09	35.724		
4,100.0	4,058.1	4,038.1	4,038.1	11.9	7.0	-152.02	-158.8	208.0	552.9	537.5	15.42	35.867		
4,200.0	4,156.9	4,136.9	4,136.9	12.2	7.2	-152.77	-158.8	208.0	566.9	551.2	15.74	36.011		
4,300.0	4,255.6	4,235.6	4,235.6	12.6	7.4	-153.48	-158.8	208.0	581.0	565.0	16.07	36.154		
4,400.0	4,354.4	4,334.4	4,334.4	12.9	7.6	-154.15	-158.8	208.0	595.2	578.8	16.40	36.297		
4,500.0	4,453.1	4,433.1	4,433.1	13.2	7.7	-154.80	-158.8	208.0	609.5	592.8	16.73	36.439		
4,600.0	4,551.9	4,531.9	4,531.9	13.6	7.9	-155.41	-158.8	208.0	623.8	606.8	17.05	36.579		
4,700.0	4,650.6	4,630.6	4,630.6	13.9	8.1	-156.00	-158.8	208.0	638.2	620.8	17.38	36.718		
4,800.0	4,749.4	4,729.4	4,729.4	14.2	8.3	-156.56	-158.8	208.0	652.7	635.0	17.71	36.854		
4,900.0	4,848.1	4,828.1	4,828.1	14.5	8.4	-157.10	-158.8	208.0	667.2	649.2	18.04	36.988		
5,000.0	4,946.9	4,926.9	4,926.9	14.9	8.6	-157.61	-158.8	208.0	681.8	663.4	18.37	37.120		

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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - PACE 3 (EXISTING) - TEXAS TEA OIL - NO SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 5050-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							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	5,045.6	5,025.6	5,025.6	15.2	8.8	-158.11	-158.8	208.0	696.4	677.7	18.70	37.250		
5,200.0	5,144.4	5,050.0	5,050.0	15.5	8.8	-158.23	-158.8	208.0	715.0	696.0	18.93	37.770		
5,300.0	5,243.1	5,050.0	5,050.0	15.8	8.8	-158.23	-158.8	208.0	746.2	727.1	19.13	39.001		
5,400.0	5,341.9	5,050.0	5,050.0	16.2	8.8	-158.23	-158.8	208.0	788.9	769.6	19.33	40.803		
5,500.0	5,440.6	5,050.0	5,050.0	16.5	8.8	-158.23	-158.8	208.0	841.4	821.9	19.54	43.068		
5,600.0	5,539.4	5,050.0	5,050.0	16.8	8.8	-158.23	-158.8	208.0	902.0	882.2	19.74	45.694		
5,700.0	5,638.1	5,050.0	5,050.0	17.1	8.8	-158.23	-158.8	208.0	969.1	949.2	19.94	48.596		
5,800.0	5,736.9	5,050.0	5,050.0	17.5	8.8	-158.23	-158.8	208.0	1,041.5	1,021.4	20.14	51.702		
5,900.0	5,835.6	5,050.0	5,050.0	17.8	8.8	-158.23	-158.8	208.0	1,118.2	1,097.9	20.35	54.956		
6,000.0	5,934.4	5,050.0	5,050.0	18.1	8.8	-158.23	-158.8	208.0	1,198.3	1,177.8	20.55	58.313		
6,100.0	6,033.1	5,050.0	5,050.0	18.4	8.8	-158.23	-158.8	208.0	1,281.2	1,260.5	20.75	61.740		
6,200.0	6,131.9	5,050.0	5,050.0	18.8	8.8	-158.23	-158.8	208.0	1,366.4	1,345.5	20.95	65.209		
6,300.0	6,230.6	5,050.0	5,050.0	19.1	8.8	-158.23	-158.8	208.0	1,453.5	1,432.4	21.16	68.701		
6,400.0	6,329.4	5,050.0	5,050.0	19.4	8.8	-158.23	-158.8	208.0	1,542.2	1,520.8	21.36	72.200		
6,500.0	6,428.1	5,050.0	5,050.0	19.7	8.8	-158.23	-158.8	208.0	1,632.2	1,610.6	21.56	75.695		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - 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		
13,600.0	7,498.0	7,607.9	7,455.4	98.9	24.2	-140.96	7,094.1	-427.6	1,629.0	1,553.5	75.52	21.570		
13,700.0	7,498.0	7,606.3	7,453.9	100.6	24.2	175.87	7,094.1	-427.5	1,529.0	1,498.0	30.98	49.357		
13,800.0	7,498.0	7,604.8	7,452.3	102.4	24.2	147.95	7,094.2	-427.4	1,429.0	1,362.6	66.48	21.495		
13,900.0	7,498.0	7,603.2	7,450.8	104.1	24.2	146.33	7,094.2	-427.3	1,329.1	1,259.3	69.78	19.048		
14,000.0	7,498.0	7,601.6	7,449.2	105.9	24.2	144.54	7,094.2	-427.2	1,229.1	1,155.7	73.39	16.748		
14,100.0	7,498.0	7,600.0	7,447.5	107.6	24.2	142.54	7,094.3	-427.1	1,129.1	1,051.8	77.36	14.596		
14,200.0	7,498.0	7,598.3	7,445.8	109.3	24.2	140.30	7,094.3	-427.0	1,029.2	947.4	81.72	12.594		
14,300.0	7,498.0	7,596.5	7,444.1	111.1	24.2	137.79	7,094.3	-426.9	929.2	842.7	86.50	10.742		
14,400.0	7,498.0	7,594.7	7,442.3	112.8	24.2	134.95	7,094.4	-426.8	829.3	737.5	91.72	9.041		
14,500.0	7,498.0	7,592.9	7,440.5	114.5	24.2	131.75	7,094.4	-426.7	729.3	631.9	97.40	7.488		
14,600.0	7,498.0	7,591.0	7,438.6	116.3	24.2	128.13	7,094.5	-426.6	629.4	525.9	103.50	6.081		
14,690.0	7,498.0	7,589.2	7,436.8	117.8	24.2	124.47	7,094.5	-426.5	539.5	430.2	109.30	4.936 CC, ES, SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - SATER 7-8 (EXISTING) - KERRMCGEE WELL - SURVEYS												Offset Site Error: 0.0 ft	
Survey Program: 15-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)			
14,300.0	7,498.0	7,482.9	7,427.6	111.1	15.9	-90.28	7,567.2	-1,182.2	1,592.5	1,467.2	125.29	12.710	
14,400.0	7,498.0	7,483.4	7,428.0	112.8	15.9	-90.32	7,567.2	-1,182.2	1,504.2	1,377.2	127.04	11.841	
14,500.0	7,498.0	7,483.8	7,428.4	114.5	15.9	-90.35	7,567.2	-1,182.2	1,417.5	1,288.8	128.78	11.008	
14,600.0	7,498.0	7,484.2	7,428.9	116.3	15.9	-90.38	7,567.2	-1,182.2	1,332.7	1,202.2	130.52	10.211	
14,690.0	7,498.0	7,484.6	7,429.3	117.8	15.9	-90.41	7,567.2	-1,182.2	1,258.3	1,126.2	132.09	9.526 CC, ES, SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - SATER 8-8 (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							
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
14,400.0	7,498.0	7,849.6	7,454.8	112.8	37.4	92.43	7,683.9	268.5	1,580.9	1,452.7	128.22	12.330	
14,500.0	7,498.0	7,849.5	7,454.7	114.5	37.4	92.43	7,683.9	268.5	1,492.8	1,362.8	129.96	11.487	
14,600.0	7,498.0	7,849.4	7,454.7	116.3	37.4	92.42	7,683.9	268.5	1,406.2	1,274.6	131.70	10.678	
14,690.0	7,498.0	7,849.3	7,454.6	117.8	37.4	92.41	7,683.9	268.5	1,330.0	1,196.7	133.26	9.980 CC, ES, SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Bighorn 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Offset Design S17-T2N-R67W (Big Horn) - STANLEY 2 (EXISTING) - GERRITY OIL - NO SURVEYS														Offset Site Error:	0.0 ft
Survey Program: 5175-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor			
0.0	0.0	28.0	28.0	0.0	0.0	102.93	-304.5	1,326.7	1,361.2						
100.0	100.0	128.0	128.0	0.1	0.2	102.93	-304.5	1,326.7	1,361.2	1,360.9	0.35	3,936.823			
200.0	200.0	228.0	228.0	0.3	0.4	102.93	-304.5	1,326.7	1,361.2	1,360.5	0.69	1,959.087			
300.0	300.0	328.0	328.0	0.5	0.6	102.93	-304.5	1,326.7	1,361.2	1,360.2	1.04	1,303.999			
400.0	400.0	428.0	428.0	0.6	0.7	102.93	-304.5	1,326.7	1,361.2	1,359.8	1.39	977.229 CC			
427.8	427.8	455.8	455.8	0.7	0.8	-103.38	-304.5	1,326.7	1,361.3	1,359.8	1.49	913.533			
500.0	500.0	528.0	528.0	0.8	0.9	-103.40	-304.5	1,326.7	1,361.3	1,359.6	1.74	781.418 ES			
600.0	599.9	627.9	627.9	1.0	1.1	-103.52	-304.5	1,326.7	1,362.2	1,360.1	2.10	649.804			
700.0	699.7	727.7	727.7	1.2	1.3	-103.78	-304.5	1,326.7	1,363.8	1,361.3	2.47	553.041			
800.0	799.1	827.1	827.1	1.4	1.4	-104.15	-304.5	1,326.7	1,366.3	1,363.5	2.86	477.280			
900.0	898.2	926.2	926.2	1.7	1.6	-104.64	-304.5	1,326.7	1,369.8	1,366.5	3.30	415.406			
1,000.0	996.9	1,024.9	1,024.9	2.0	1.8	-105.27	-304.5	1,326.7	1,373.9	1,370.2	3.75	366.641			
1,100.0	1,095.7	1,123.7	1,123.7	2.3	2.0	-105.89	-304.5	1,326.7	1,378.2	1,374.0	4.21	327.621			
1,200.0	1,194.4	1,222.4	1,222.4	2.6	2.1	-106.51	-304.5	1,326.7	1,382.7	1,378.0	4.67	295.969			
1,300.0	1,293.1	1,321.1	1,321.1	2.9	2.3	-107.13	-304.5	1,326.7	1,387.3	1,382.2	5.14	269.905			
1,400.0	1,391.9	1,419.9	1,419.9	3.2	2.5	-107.74	-304.5	1,326.7	1,392.1	1,386.5	5.61	248.140			
1,500.0	1,490.6	1,518.6	1,518.6	3.5	2.7	-108.35	-304.5	1,326.7	1,397.0	1,390.9	6.08	229.734			
1,600.0	1,589.4	1,617.4	1,617.4	3.8	2.8	-108.96	-304.5	1,326.7	1,402.1	1,395.6	6.55	213.991			
1,700.0	1,688.1	1,716.1	1,716.1	4.2	3.0	-109.56	-304.5	1,326.7	1,407.4	1,400.4	7.02	200.391			
1,800.0	1,786.9	1,814.9	1,814.9	4.5	3.2	-110.15	-304.5	1,326.7	1,412.8	1,405.3	7.49	188.535			
1,900.0	1,885.6	1,913.6	1,913.6	4.8	3.3	-110.75	-304.5	1,326.7	1,418.4	1,410.4	7.96	178.119			
2,000.0	1,984.4	2,012.4	2,012.4	5.1	3.5	-111.33	-304.5	1,326.7	1,424.1	1,415.7	8.43	168.903			
2,100.0	2,083.1	2,111.1	2,111.1	5.4	3.7	-111.91	-304.5	1,326.7	1,430.0	1,421.1	8.90	160.697			
2,200.0	2,181.9	2,209.9	2,209.9	5.8	3.9	-112.49	-304.5	1,326.7	1,436.0	1,426.6	9.36	153.348			
2,300.0	2,280.6	2,308.6	2,308.6	6.1	4.0	-113.06	-304.5	1,326.7	1,442.2	1,432.3	9.83	146.732			
2,400.0	2,379.4	2,407.4	2,407.4	6.4	4.2	-113.63	-304.5	1,326.7	1,448.5	1,438.2	10.29	140.750			
2,500.0	2,478.1	2,506.1	2,506.1	6.7	4.4	-114.20	-304.5	1,326.7	1,454.9	1,444.2	10.75	135.316			
2,600.0	2,576.9	2,604.9	2,604.9	7.0	4.5	-114.75	-304.5	1,326.7	1,461.5	1,450.3	11.21	130.362			
2,700.0	2,675.6	2,703.6	2,703.6	7.4	4.7	-115.31	-304.5	1,326.7	1,468.3	1,456.6	11.67	125.829			
2,800.0	2,774.4	2,802.4	2,802.4	7.7	4.9	-115.85	-304.5	1,326.7	1,475.1	1,463.0	12.12	121.668			
2,900.0	2,873.1	2,901.1	2,901.1	8.0	5.1	-116.40	-304.5	1,326.7	1,482.2	1,469.6	12.58	117.836			
3,000.0	2,971.9	2,999.9	2,999.9	8.3	5.2	-116.94	-304.5	1,326.7	1,489.3	1,476.3	13.03	114.298			
3,100.0	3,070.6	3,098.6	3,098.6	8.7	5.4	-117.47	-304.5	1,326.7	1,496.6	1,483.1	13.48	111.023			
3,200.0	3,169.4	3,197.4	3,197.4	9.0	5.6	-118.00	-304.5	1,326.7	1,504.0	1,490.1	13.93	107.984			
3,300.0	3,268.1	3,296.1	3,296.1	9.3	5.8	-118.52	-304.5	1,326.7	1,511.5	1,497.2	14.37	105.157			
3,400.0	3,366.9	3,394.9	3,394.9	9.6	5.9	-119.04	-304.5	1,326.7	1,519.2	1,504.4	14.82	102.523			
3,500.0	3,465.6	3,493.6	3,493.6	10.0	6.1	-119.55	-304.5	1,326.7	1,527.0	1,511.7	15.26	100.063			
3,600.0	3,564.4	3,592.4	3,592.4	10.3	6.3	-120.06	-304.5	1,326.7	1,534.9	1,519.2	15.70	97.762			
3,700.0	3,663.1	3,691.1	3,691.1	10.6	6.4	-120.56	-304.5	1,326.7	1,542.9	1,526.8	16.14	95.605			
3,800.0	3,761.9	3,789.9	3,789.9	10.9	6.6	-121.05	-304.5	1,326.7	1,551.1	1,534.5	16.57	93.581			
3,900.0	3,860.6	3,888.6	3,888.6	11.3	6.8	-121.55	-304.5	1,326.7	1,559.3	1,542.3	17.01	91.678			
4,000.0	3,959.4	3,987.4	3,987.4	11.6	7.0	-122.03	-304.5	1,326.7	1,567.7	1,550.3	17.44	89.887			
4,100.0	4,058.1	4,086.1	4,086.1	11.9	7.1	-122.51	-304.5	1,326.7	1,576.2	1,558.4	17.87	88.198			
4,200.0	4,156.9	4,184.9	4,184.9	12.2	7.3	-122.99	-304.5	1,326.7	1,584.8	1,566.5	18.30	86.604			
4,300.0	4,255.6	4,283.6	4,283.6	12.6	7.5	-123.46	-304.5	1,326.7	1,593.5	1,574.8	18.73	85.098			
4,400.0	4,354.4	4,382.4	4,382.4	12.9	7.6	-123.93	-304.5	1,326.7	1,602.4	1,583.2	19.15	83.672			
4,500.0	4,453.1	4,481.1	4,481.1	13.2	7.8	-124.39	-304.5	1,326.7	1,611.3	1,591.7	19.57	82.322			
4,600.0	4,551.9	4,579.9	4,579.9	13.6	8.0	-124.85	-304.5	1,326.7	1,620.3	1,600.3	19.99	81.042			
4,700.0	4,650.6	4,678.6	4,678.6	13.9	8.2	-125.30	-304.5	1,326.7	1,629.5	1,609.1	20.41	79.827			
4,800.0	4,749.4	4,777.4	4,777.4	14.2	8.3	-125.74	-304.5	1,326.7	1,638.7	1,617.9	20.83	78.673 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 4F-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 4F-17H-P267	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #4	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4983.0ft

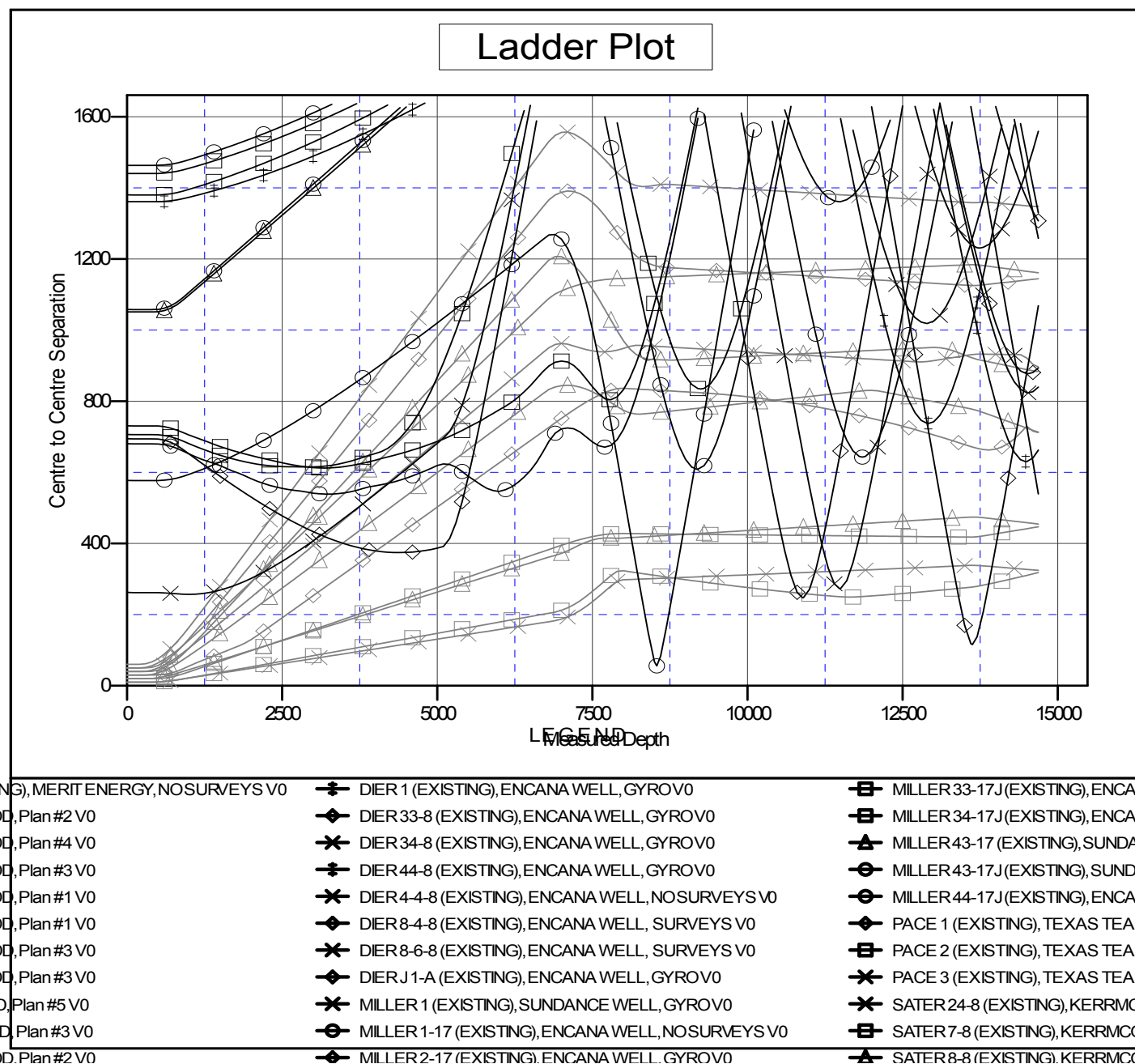
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Bighorn 4F-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