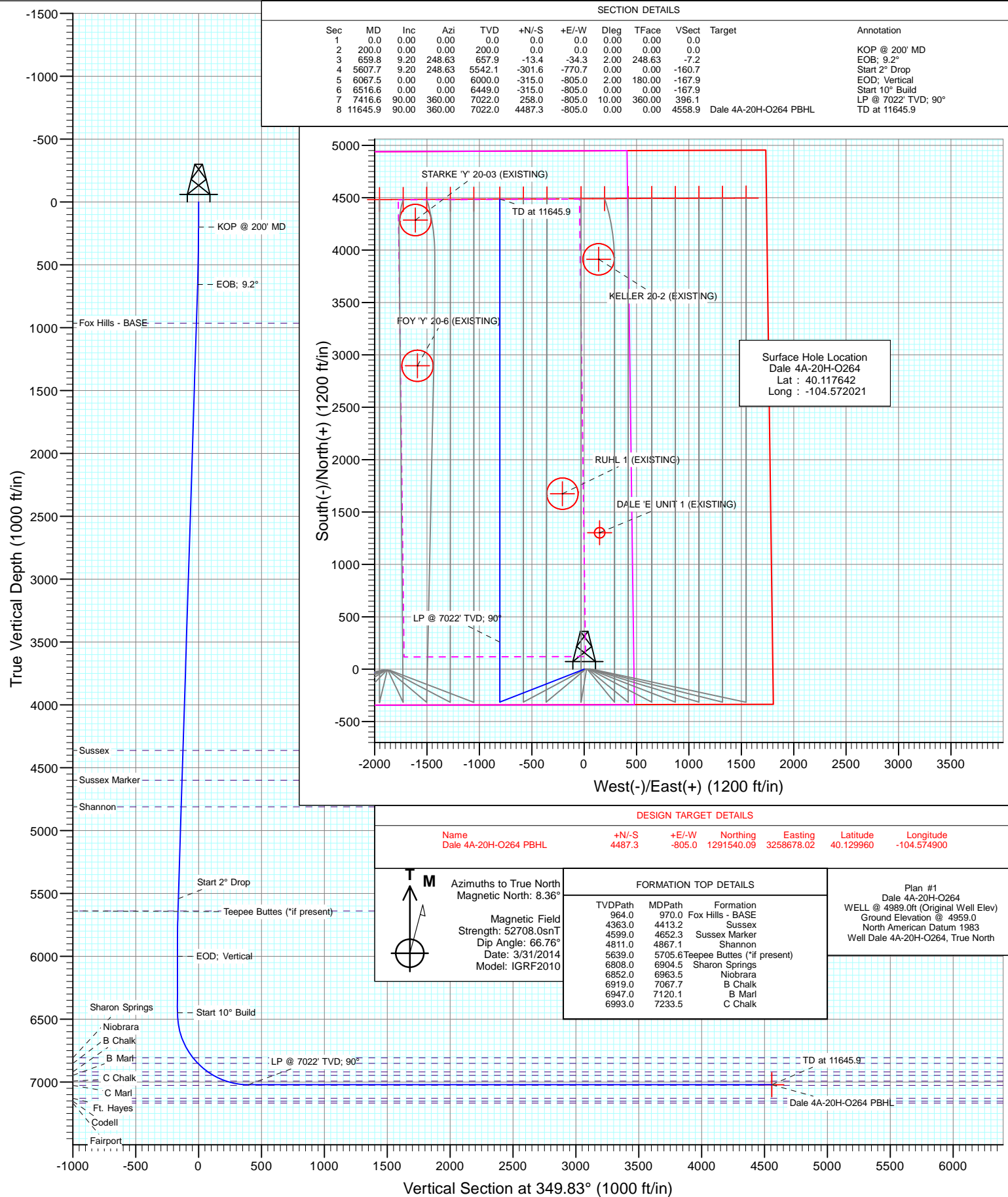




Project: DJ Wattenberg
Site: S20-T2N-R64W (Dale)
Well: Dale 4A-20H-O264
Wellbore: HZ
Design: Plan #1





Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site:	S20-T2N-R64W (Dale)	North Reference:	True
Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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

Site		S20-T2N-R64W (Dale)			
Site Position:		Northing:	1,287,029.38 ft	Latitude:	40.117609
From:	Lat/Long	Easting:	3,257,598.23 ft	Longitude:	-104.578929
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.60 °

Well	Dale 4A-20H-O264					
Well Position	+N/-S	0.0 ft	Northing:	1,287,061.51 ft	Latitude:	40.117642
	+E/-W	0.0 ft	Easting:	3,259,529.96 ft	Longitude:	-104.572021
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,959.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/31/2014	8.36	66.76	52,708

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	349.83

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
659.8	9.20	248.63	657.9	-13.4	-34.3	2.00	2.00	0.00	248.63	
5,607.7	9.20	248.63	5,542.1	-301.6	-770.7	0.00	0.00	0.00	0.00	
6,067.5	0.00	0.00	6,000.0	-315.0	-805.0	2.00	-2.00	0.00	180.00	
6,516.6	0.00	0.00	6,449.0	-315.0	-805.0	0.00	0.00	0.00	0.00	
7,416.6	90.00	360.00	7,022.0	258.0	-805.0	10.00	10.00	0.00	360.00	
11,645.9	90.00	360.00	7,022.0	4,487.3	-805.0	0.00	0.00	0.00	0.00	Dale 4A-20H-O264 PI



Planning Report

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Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Dale 4A-20H-O264
TVD Reference: WELL @ 4989.0ft (Original Well Elev)
MD Reference: WELL @ 4989.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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	KOP @ 200' MD
300.0	2.00	248.63	300.0	-0.6	-1.6	-0.3	2.00	2.00	
400.0	4.00	248.63	399.8	-2.5	-6.5	-1.4	2.00	2.00	
500.0	6.00	248.63	499.5	-5.7	-14.6	-3.0	2.00	2.00	
600.0	8.00	248.63	598.7	-10.2	-26.0	-5.4	2.00	2.00	
659.8	9.20	248.63	657.9	-13.4	-34.3	-7.2	2.00	2.00	EOB; 9.2°
700.0	9.20	248.63	697.5	-15.8	-40.3	-8.4	0.00	0.00	
800.0	9.20	248.63	796.2	-21.6	-55.2	-11.5	0.00	0.00	
900.0	9.20	248.63	894.9	-27.4	-70.0	-14.6	0.00	0.00	
970.0	9.20	248.63	964.0	-31.5	-80.5	-16.8	0.00	0.00	Fox Hills - BASE
1,000.0	9.20	248.63	993.7	-33.2	-84.9	-17.7	0.00	0.00	
1,100.0	9.20	248.63	1,092.4	-39.1	-99.8	-20.8	0.00	0.00	
1,200.0	9.20	248.63	1,191.1	-44.9	-114.7	-23.9	0.00	0.00	
1,300.0	9.20	248.63	1,289.8	-50.7	-129.6	-27.0	0.00	0.00	
1,400.0	9.20	248.63	1,388.5	-56.5	-144.5	-30.1	0.00	0.00	
1,500.0	9.20	248.63	1,487.2	-62.3	-159.3	-33.2	0.00	0.00	
1,600.0	9.20	248.63	1,585.9	-68.2	-174.2	-36.3	0.00	0.00	
1,700.0	9.20	248.63	1,684.7	-74.0	-189.1	-39.4	0.00	0.00	
1,800.0	9.20	248.63	1,783.4	-79.8	-204.0	-42.5	0.00	0.00	
1,900.0	9.20	248.63	1,882.1	-85.6	-218.9	-45.7	0.00	0.00	
2,000.0	9.20	248.63	1,980.8	-91.5	-233.8	-48.8	0.00	0.00	
2,100.0	9.20	248.63	2,079.5	-97.3	-248.6	-51.9	0.00	0.00	
2,200.0	9.20	248.63	2,178.2	-103.1	-263.5	-55.0	0.00	0.00	
2,300.0	9.20	248.63	2,276.9	-108.9	-278.4	-58.1	0.00	0.00	
2,400.0	9.20	248.63	2,375.7	-114.8	-293.3	-61.2	0.00	0.00	
2,500.0	9.20	248.63	2,474.4	-120.6	-308.2	-64.3	0.00	0.00	
2,600.0	9.20	248.63	2,573.1	-126.4	-323.1	-67.4	0.00	0.00	
2,700.0	9.20	248.63	2,671.8	-132.2	-337.9	-70.5	0.00	0.00	
2,800.0	9.20	248.63	2,770.5	-138.1	-352.8	-73.6	0.00	0.00	
2,900.0	9.20	248.63	2,869.2	-143.9	-367.7	-76.7	0.00	0.00	
3,000.0	9.20	248.63	2,967.9	-149.7	-382.6	-79.8	0.00	0.00	
3,100.0	9.20	248.63	3,066.7	-155.5	-397.5	-82.9	0.00	0.00	
3,200.0	9.20	248.63	3,165.4	-161.4	-412.4	-86.0	0.00	0.00	
3,300.0	9.20	248.63	3,264.1	-167.2	-427.2	-89.1	0.00	0.00	
3,400.0	9.20	248.63	3,362.8	-173.0	-442.1	-92.2	0.00	0.00	
3,500.0	9.20	248.63	3,461.5	-178.8	-457.0	-95.3	0.00	0.00	
3,600.0	9.20	248.63	3,560.2	-184.7	-471.9	-98.4	0.00	0.00	
3,700.0	9.20	248.63	3,658.9	-190.5	-486.8	-101.5	0.00	0.00	
3,800.0	9.20	248.63	3,757.7	-196.3	-501.7	-104.6	0.00	0.00	
3,900.0	9.20	248.63	3,856.4	-202.1	-516.5	-107.7	0.00	0.00	
4,000.0	9.20	248.63	3,955.1	-207.9	-531.4	-110.8	0.00	0.00	
4,100.0	9.20	248.63	4,053.8	-213.8	-546.3	-113.9	0.00	0.00	
4,200.0	9.20	248.63	4,152.5	-219.6	-561.2	-117.0	0.00	0.00	
4,300.0	9.20	248.63	4,251.2	-225.4	-576.1	-120.2	0.00	0.00	
4,400.0	9.20	248.63	4,350.0	-231.2	-591.0	-123.3	0.00	0.00	
4,413.2	9.20	248.63	4,363.0	-232.0	-592.9	-123.7	0.00	0.00	Sussex
4,500.0	9.20	248.63	4,448.7	-237.1	-605.8	-126.4	0.00	0.00	
4,600.0	9.20	248.63	4,547.4	-242.9	-620.7	-129.5	0.00	0.00	
4,652.3	9.20	248.63	4,599.0	-245.9	-628.5	-131.1	0.00	0.00	Sussex Marker
4,700.0	9.20	248.63	4,646.1	-248.7	-635.6	-132.6	0.00	0.00	



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North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	9.20	248.63	4,744.8	-254.5	-650.5	-135.7	0.00	0.00	
4,867.1	9.20	248.63	4,811.0	-258.4	-660.5	-137.8	0.00	0.00	Shannon
4,900.0	9.20	248.63	4,843.5	-260.4	-665.4	-138.8	0.00	0.00	
5,000.0	9.20	248.63	4,942.2	-266.2	-680.3	-141.9	0.00	0.00	
5,100.0	9.20	248.63	5,041.0	-272.0	-695.1	-145.0	0.00	0.00	
5,200.0	9.20	248.63	5,139.7	-277.8	-710.0	-148.1	0.00	0.00	
5,300.0	9.20	248.63	5,238.4	-283.7	-724.9	-151.2	0.00	0.00	
5,400.0	9.20	248.63	5,337.1	-289.5	-739.8	-154.3	0.00	0.00	
5,500.0	9.20	248.63	5,435.8	-295.3	-754.7	-157.4	0.00	0.00	
5,607.7	9.20	248.63	5,542.1	-301.6	-770.7	-160.7	0.00	0.00	Start 2° Drop
5,700.0	7.35	248.63	5,633.5	-306.4	-783.1	-163.3	2.00	-2.00	
5,705.6	7.24	248.63	5,639.0	-306.7	-783.7	-163.5	2.00	-2.00	Teepee Buttes (*if present)
5,800.0	5.35	248.63	5,732.8	-310.5	-793.4	-165.5	2.00	-2.00	
5,900.0	3.35	248.63	5,832.5	-313.2	-800.4	-166.9	2.00	-2.00	
6,000.0	1.35	248.63	5,932.5	-314.7	-804.3	-167.7	2.00	-2.00	
6,067.5	0.00	0.00	6,000.0	-315.0	-805.0	-167.9	2.00	-2.00	EOD; Vertical
6,100.0	0.00	0.00	6,032.5	-315.0	-805.0	-167.9	0.00	0.00	
6,200.0	0.00	0.00	6,132.5	-315.0	-805.0	-167.9	0.00	0.00	
6,300.0	0.00	0.00	6,232.5	-315.0	-805.0	-167.9	0.00	0.00	
6,400.0	0.00	0.00	6,332.5	-315.0	-805.0	-167.9	0.00	0.00	
6,500.0	0.00	0.00	6,432.5	-315.0	-805.0	-167.9	0.00	0.00	
6,516.6	0.00	0.00	6,449.0	-315.0	-805.0	-167.9	0.00	0.00	Start 10° Build
6,550.0	3.34	360.00	6,482.4	-314.0	-805.0	-166.9	10.00	10.00	
6,600.0	8.34	360.00	6,532.2	-308.9	-805.0	-161.9	10.00	10.00	
6,650.0	13.34	360.00	6,581.3	-299.5	-805.0	-152.7	10.00	10.00	
6,700.0	18.34	360.00	6,629.3	-285.9	-805.0	-139.3	10.00	10.00	
6,750.0	23.34	360.00	6,676.1	-268.1	-805.0	-121.7	10.00	10.00	
6,800.0	28.34	360.00	6,721.0	-246.3	-805.0	-100.3	10.00	10.00	
6,850.0	33.34	360.00	6,764.0	-220.7	-805.0	-75.1	10.00	10.00	
6,900.0	38.34	360.00	6,804.5	-191.4	-805.0	-46.3	10.00	10.00	
6,904.5	38.79	360.00	6,808.0	-188.6	-805.0	-43.5	10.00	10.00	Sharon Springs
6,950.0	43.34	360.00	6,842.3	-158.7	-805.0	-14.1	10.00	10.00	
6,963.5	44.69	360.00	6,852.0	-149.4	-805.0	-4.9	10.00	10.00	Niobrara
7,000.0	48.34	360.00	6,877.1	-122.9	-805.0	21.2	10.00	10.00	
7,050.0	53.34	360.00	6,908.7	-84.1	-805.0	59.3	10.00	10.00	
7,067.7	55.11	360.00	6,919.0	-69.8	-805.0	73.5	10.00	10.00	B Chalk
7,100.0	58.34	360.00	6,936.7	-42.8	-805.0	100.1	10.00	10.00	
7,120.1	60.35	360.00	6,947.0	-25.4	-805.0	117.1	10.00	10.00	B Marl
7,150.0	63.34	360.00	6,961.1	0.9	-805.0	143.0	10.00	10.00	
7,200.0	68.34	360.00	6,981.5	46.5	-805.0	187.9	10.00	10.00	
7,233.5	71.69	360.00	6,993.0	78.0	-805.0	218.9	10.00	10.00	C Chalk
7,250.0	73.34	360.00	6,998.0	93.7	-805.0	234.4	10.00	10.00	
7,300.0	78.34	360.00	7,010.2	142.2	-805.0	282.1	10.00	10.00	
7,350.0	83.34	360.00	7,018.1	191.5	-805.0	330.7	10.00	10.00	
7,400.0	88.34	360.00	7,021.8	241.4	-805.0	379.7	10.00	10.00	
7,416.6	90.00	360.00	7,022.0	258.0	-805.0	396.1	10.00	10.00	LP @ 7022' TVD; 90°
7,500.0	90.00	360.00	7,022.0	341.4	-805.0	478.2	0.00	0.00	
7,600.0	90.00	360.00	7,022.0	441.4	-805.0	576.6	0.00	0.00	
7,700.0	90.00	360.00	7,022.0	541.4	-805.0	675.0	0.00	0.00	
7,800.0	90.00	360.00	7,022.0	641.4	-805.0	773.4	0.00	0.00	
7,900.0	90.00	360.00	7,022.0	741.4	-805.0	871.9	0.00	0.00	
8,000.0	90.00	360.00	7,022.0	841.4	-805.0	970.3	0.00	0.00	



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Survey Calculation Method: Minimum Curvature

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
8,100.0	90.00	360.00	7,022.0	941.4	-805.0	1,068.7	0.00	0.00	
8,200.0	90.00	360.00	7,022.0	1,041.4	-805.0	1,167.2	0.00	0.00	
8,300.0	90.00	360.00	7,022.0	1,141.4	-805.0	1,265.6	0.00	0.00	
8,400.0	90.00	360.00	7,022.0	1,241.4	-805.0	1,364.0	0.00	0.00	
8,500.0	90.00	360.00	7,022.0	1,341.4	-805.0	1,462.4	0.00	0.00	
8,600.0	90.00	360.00	7,022.0	1,441.4	-805.0	1,560.9	0.00	0.00	
8,700.0	90.00	360.00	7,022.0	1,541.4	-805.0	1,659.3	0.00	0.00	
8,800.0	90.00	360.00	7,022.0	1,641.4	-805.0	1,757.7	0.00	0.00	
8,900.0	90.00	360.00	7,022.0	1,741.4	-805.0	1,856.2	0.00	0.00	
9,000.0	90.00	360.00	7,022.0	1,841.4	-805.0	1,954.6	0.00	0.00	
9,100.0	90.00	360.00	7,022.0	1,941.4	-805.0	2,053.0	0.00	0.00	
9,200.0	90.00	360.00	7,022.0	2,041.4	-805.0	2,151.4	0.00	0.00	
9,300.0	90.00	360.00	7,022.0	2,141.4	-805.0	2,249.9	0.00	0.00	
9,400.0	90.00	360.00	7,022.0	2,241.4	-805.0	2,348.3	0.00	0.00	
9,500.0	90.00	360.00	7,022.0	2,341.4	-805.0	2,446.7	0.00	0.00	
9,600.0	90.00	360.00	7,022.0	2,441.4	-805.0	2,545.2	0.00	0.00	
9,700.0	90.00	360.00	7,022.0	2,541.4	-805.0	2,643.6	0.00	0.00	
9,800.0	90.00	360.00	7,022.0	2,641.4	-805.0	2,742.0	0.00	0.00	
9,900.0	90.00	360.00	7,022.0	2,741.4	-805.0	2,840.4	0.00	0.00	
10,000.0	90.00	360.00	7,022.0	2,841.4	-805.0	2,938.9	0.00	0.00	
10,100.0	90.00	360.00	7,022.0	2,941.4	-805.0	3,037.3	0.00	0.00	
10,200.0	90.00	360.00	7,022.0	3,041.4	-805.0	3,135.7	0.00	0.00	
10,300.0	90.00	360.00	7,022.0	3,141.4	-805.0	3,234.2	0.00	0.00	
10,400.0	90.00	360.00	7,022.0	3,241.4	-805.0	3,332.6	0.00	0.00	
10,500.0	90.00	360.00	7,022.0	3,341.4	-805.0	3,431.0	0.00	0.00	
10,600.0	90.00	360.00	7,022.0	3,441.4	-805.0	3,529.4	0.00	0.00	
10,700.0	90.00	360.00	7,022.0	3,541.4	-805.0	3,627.9	0.00	0.00	
10,800.0	90.00	360.00	7,022.0	3,641.4	-805.0	3,726.3	0.00	0.00	
10,900.0	90.00	360.00	7,022.0	3,741.4	-805.0	3,824.7	0.00	0.00	
11,000.0	90.00	360.00	7,022.0	3,841.4	-805.0	3,923.2	0.00	0.00	
11,100.0	90.00	360.00	7,022.0	3,941.4	-805.0	4,021.6	0.00	0.00	
11,200.0	90.00	360.00	7,022.0	4,041.4	-805.0	4,120.0	0.00	0.00	
11,300.0	90.00	360.00	7,022.0	4,141.4	-805.0	4,218.4	0.00	0.00	
11,400.0	90.00	360.00	7,022.0	4,241.4	-805.0	4,316.9	0.00	0.00	
11,500.0	90.00	360.00	7,022.0	4,341.4	-805.0	4,415.3	0.00	0.00	
11,600.0	90.00	360.00	7,022.0	4,441.4	-805.0	4,513.7	0.00	0.00	
11,645.9	90.00	360.00	7,022.0	4,487.3	-805.0	4,558.9	0.00	0.00	TD at 11645.9

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Dale 4A-20H-O264 PBH	0.00	0.00	7,022.0	4,487.3	-805.0	1,291,540.09	3,258,678.02	40.129960	-104.574900
- plan hits target center									
- Point									



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site:	S20-T2N-R64W (Dale)	North Reference:	True
Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
970.0	964.0	Fox Hills - BASE			
4,413.2	4,363.0	Sussex			
4,652.3	4,599.0	Sussex Marker			
4,867.1	4,811.0	Shannon			
5,705.6	5,639.0	Teepee Buttes (*if present)			
6,904.5	6,808.0	Sharon Springs			
6,963.5	6,852.0	Niobrara			
7,067.7	6,919.0	B Chalk			
7,120.1	6,947.0	B Marl			
7,233.5	6,993.0	C Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200' MD
659.8	657.9	-13.4	-34.3	EOB; 9.2°
5,607.7	5,542.1	-301.6	-770.7	Start 2° Drop
6,067.5	6,000.0	-315.0	-805.0	EOD; Vertical
6,516.6	6,449.0	-315.0	-805.0	Start 10° Build
7,416.6	7,022.0	258.0	-805.0	LP @ 7022' TVD; 90°
11,645.9	7,022.0	4,487.3	-805.0	TD at 11645.9



EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S20-T2N-R64W (Dale)

Dale 4A-20H-O264

HZ

Plan #1

Anticollision Report

02 April, 2014



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	4/2/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,645.9	Plan #1 (HZ)	Geolink MWD	Geolink MWD	



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
S20-T2N-R64W (Dale)						
DALE 1 (EXISTING) - EXISTING - NOBLE WELL						Out of range
Dale 3A-20H-N264 - HZ - Plan #1						Out of range
Dale 3B-20H-N264 - HZ - Plan #1						Out of range
Dale 3C-20H-N264 - HZ - Plan #1						Out of range
Dale 3D-20H-N264 - HZ - Plan #1						Out of range
Dale 3E-20H-N264 - HZ - Plan #1						Out of range
Dale 3F-20H-N264 - HZ - Plan #1						Out of range
Dale 3G-20H-N264 - HZ - Plan #1	11,633.5	11,598.5	1,372.4	1,210.0	8.452	CC
Dale 3G-20H-N264 - HZ - Plan #1	11,645.9	11,604.3	1,372.4	1,209.7	8.436	ES, SF
Dale 3H-20H-N264 - HZ - Plan #1	6,516.6	6,472.5	1,147.7	1,122.7	45.905	CC
Dale 3H-20H-N264 - HZ - Plan #1	11,645.9	11,739.2	1,155.9	994.3	7.153	ES, SF
Dale 3I-20H-N264 - HZ - Plan #1	6,423.8	6,380.8	922.6	897.8	37.331	CC
Dale 3I-20H-N264 - HZ - Plan #1	11,645.9	11,518.0	926.2	764.2	5.716	ES, SF
Dale 3J-20H-N264 - HZ - Plan #1	11,111.5	11,080.4	621.4	477.0	4.306	CC
Dale 3J-20H-N264 - HZ - Plan #1	11,200.0	11,151.5	622.3	475.2	4.231	ES
Dale 3J-20H-N264 - HZ - Plan #1	11,400.0	11,300.0	636.3	483.2	4.156	SF
Dale 3K-20H-N264 - HZ - Plan #1	6,516.6	6,504.0	472.6	447.6	18.868	CC
Dale 3K-20H-N264 - HZ - Plan #1	11,645.9	11,773.8	492.9	336.5	3.152	ES, SF
Dale 3L-20H-N264 - HZ - Plan #1	6,467.9	6,480.2	247.6	222.7	9.938	CC
Dale 3L-20H-N264 - HZ - Plan #1	11,645.9	11,572.7	261.7	107.5	1.697	ES, SF
Dale 4B-20H-O264 - HZ - Plan #1	200.0	200.0	7.6	7.0	12.725	CC, ES
Dale 4B-20H-O264 - HZ - Plan #1	11,645.9	11,751.5	261.5	120.0	1.849	SF
Dale 4C-20H-O264 - HZ - Plan #1	200.0	199.0	15.1	14.5	25.525	CC, ES
Dale 4C-20H-O264 - HZ - Plan #1	11,645.9	11,506.4	459.5	300.1	2.883	SF
Dale 4D-20H-O264 - HZ - Plan #1	200.0	199.0	22.7	22.1	38.287	CC, ES
Dale 4D-20H-O264 - HZ - Plan #1	11,645.9	11,587.7	775.1	612.5	4.767	SF
Dale 4E-20H-O264 - HZ - Plan #1	200.0	199.0	29.9	29.3	50.581	CC, ES
Dale 4E-20H-O264 - HZ - Plan #1	11,645.9	11,747.9	1,010.1	848.9	6.266	SF
Dale 4F-20H-O264 - HZ - Plan #1	200.0	199.0	37.5	36.9	63.342	CC, ES
Dale 4F-20H-O264 - HZ - Plan #1	11,645.9	11,508.3	1,228.5	1,066.4	7.579	SF
Dale 4G-20H-O264 - HZ - Plan #1	200.0	199.0	45.0	44.4	76.104	CC, ES
Dale 4G-20H-O264 - HZ - Plan #1	11,645.9	11,622.7	1,450.1	1,287.5	8.918	SF
Dale 4H-20H-O264 - HZ - Plan #1	200.0	199.0	52.6	52.0	88.866	CC, ES
Dale 4H-20H-O264 - HZ - Plan #1	500.0	496.9	69.1	67.5	42.184	SF
Dale 4I-20H-O264 - HZ - Plan #1	200.0	199.0	60.1	59.5	101.628	CC, ES
Dale 4I-20H-O264 - HZ - Plan #1	500.0	493.4	81.2	79.6	49.666	SF
Dale 4J-20H-O264 - HZ - Plan #1	200.0	198.0	67.4	66.8	114.260	CC, ES
Dale 4J-20H-O264 - HZ - Plan #1	500.0	490.3	92.1	90.5	56.476	SF
Dale 4K-20H-O264 - HZ - Plan #1	200.0	198.0	75.0	74.4	127.059	CC, ES
Dale 4K-20H-O264 - HZ - Plan #1	500.0	487.8	104.2	102.6	64.015	SF
DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WE	8,460.2	6,958.0	952.9	913.4	24.087	CC, ES
DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WE	8,800.0	6,958.0	1,011.7	966.7	22.486	SF
FOY 1 (EXISTING) - EXISTING - NOBLE WELL						Out of range
FOY 'Y' 20-6 (EXISTING) - EXISTING - NOBLE WELL	10,054.0	6,951.0	785.8	719.8	11.906	CC, ES
FOY 'Y' 20-6 (EXISTING) - EXISTING - NOBLE WELL	10,200.0	6,951.0	799.3	730.8	11.668	SF
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	11,070.3	6,927.0	942.3	858.9	11.294	CC
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	11,100.0	6,927.0	942.8	858.8	11.231	ES
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	11,300.0	6,927.0	969.9	882.5	11.097	SF
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	8,833.3	6,952.0	597.5	552.0	13.125	CC, ES
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	9,000.0	6,952.0	620.3	572.1	12.855	SF
STARKE 'Y' 20-03 (EXISTING) - EXISTING - NOBLE WE	11,445.6	6,937.0	805.3	715.4	8.954	CC, ES
STARKE 'Y' 20-03 (EXISTING) - EXISTING - NOBLE WE	11,600.0	6,937.0	820.0	727.4	8.854	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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3G-20H-N264 - HZ - 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				
3,900.0	3,856.4	3,791.5	3,781.1	12.0	8.0	21.62	-197.1	-2,063.1	1,549.2	1,534.2	15.01	103.223				
4,000.0	3,955.1	3,891.1	3,880.3	12.3	8.2	21.61	-203.1	-2,068.9	1,540.0	1,524.6	15.41	99.919				
4,100.0	4,053.8	3,990.7	3,979.5	12.7	8.4	21.60	-209.1	-2,074.6	1,530.9	1,515.0	15.82	96.783				
4,200.0	4,152.5	4,090.2	4,078.8	13.0	8.7	21.60	-215.2	-2,080.4	1,521.7	1,505.5	16.22	93.804				
4,300.0	4,251.2	4,189.8	4,178.0	13.3	8.9	21.59	-221.2	-2,086.1	1,512.6	1,495.9	16.63	90.970				
4,400.0	4,350.0	4,289.4	4,277.2	13.7	9.1	21.58	-227.2	-2,091.9	1,503.4	1,486.4	17.03	88.271				
4,500.0	4,448.7	4,389.0	4,376.5	14.0	9.3	21.58	-233.2	-2,097.6	1,494.3	1,476.8	17.44	85.698				
4,600.0	4,547.4	4,488.6	4,475.7	14.3	9.6	21.57	-239.3	-2,103.4	1,485.1	1,467.3	17.84	83.241				
4,700.0	4,646.1	4,588.1	4,574.9	14.6	9.8	21.56	-245.3	-2,109.1	1,476.0	1,457.7	18.25	80.894				
4,800.0	4,744.8	4,687.7	4,674.2	15.0	10.0	21.55	-251.3	-2,114.9	1,466.8	1,448.2	18.65	78.648				
4,900.0	4,843.5	4,787.3	4,773.4	15.3	10.2	21.55	-257.4	-2,120.6	1,457.7	1,438.6	19.05	76.498				
5,000.0	4,942.2	4,886.9	4,872.6	15.6	10.5	21.54	-263.4	-2,126.4	1,448.5	1,429.1	19.46	74.437				
5,100.0	5,041.0	4,986.5	4,971.9	16.0	10.7	21.53	-269.4	-2,132.1	1,439.4	1,419.5	19.86	72.461				
5,200.0	5,139.7	5,086.0	5,071.1	16.3	10.9	21.52	-275.4	-2,137.9	1,430.2	1,410.0	20.27	70.564				
5,300.0	5,238.4	5,185.6	5,170.3	16.6	11.1	21.52	-281.5	-2,143.6	1,421.1	1,400.4	20.67	68.741				
5,400.0	5,337.1	5,285.2	5,269.6	17.0	11.4	21.51	-287.5	-2,149.4	1,411.9	1,390.8	21.08	66.988				
5,500.0	5,435.8	5,384.8	5,368.8	17.3	11.6	21.50	-293.5	-2,155.1	1,402.8	1,381.3	21.48	65.301				
5,607.7	5,542.1	5,492.0	5,475.7	17.7	11.8	21.49	-300.0	-2,161.3	1,392.9	1,371.0	21.92	63.554				
5,700.0	5,633.5	5,593.5	5,576.7	17.9	12.1	21.41	-306.0	-2,167.0	1,385.7	1,363.4	22.31	62.125				
5,800.0	5,732.8	5,713.2	5,696.3	18.2	12.3	21.34	-311.5	-2,172.2	1,379.8	1,357.1	22.71	60.764				
5,900.0	5,832.5	5,833.1	5,816.0	18.3	12.5	21.30	-315.1	-2,175.7	1,375.6	1,352.6	23.07	59.619				
6,000.0	5,932.5	5,952.9	5,935.8	18.5	12.7	21.28	-317.0	-2,177.5	1,373.3	1,349.9	23.41	58.673				
6,067.5	6,000.0	6,031.1	6,014.0	18.5	12.8	-90.10	-317.3	-2,177.8	1,372.8	1,349.2	23.61	58.140				
6,100.0	6,032.5	6,063.6	6,046.5	18.6	12.9	-90.10	-317.3	-2,177.8	1,372.8	1,349.1	23.71	57.893				
6,200.0	6,132.5	6,163.6	6,146.5	18.7	13.0	-90.10	-317.3	-2,177.8	1,372.8	1,348.7	24.02	57.142				
6,300.0	6,232.5	6,263.6	6,246.5	18.8	13.1	-90.10	-317.3	-2,177.8	1,372.8	1,348.4	24.34	56.409				
6,400.0	6,332.5	6,363.6	6,346.5	18.9	13.3	-90.10	-317.3	-2,177.8	1,372.8	1,348.1	24.65	55.691				
6,500.0	6,432.5	6,463.6	6,446.5	19.0	13.4	-90.10	-317.3	-2,177.8	1,372.8	1,347.8	24.96	54.990				
6,516.6	6,449.0	6,480.1	6,463.0	19.0	13.5	-90.10	-317.3	-2,177.8	1,372.8	1,347.7	25.02	54.876				
6,550.0	6,482.4	6,513.7	6,496.6	19.0	13.5	-90.09	-316.2	-2,177.8	1,372.8	1,347.7	25.09	54.715				
6,600.0	6,532.2	6,563.9	6,546.5	19.0	13.5	-90.09	-311.0	-2,177.8	1,372.8	1,347.6	25.14	54.602				
6,650.0	6,581.3	6,614.1	6,595.7	19.0	13.5	-90.08	-301.5	-2,177.8	1,372.8	1,347.6	25.14	54.613				
6,700.0	6,629.3	6,664.3	6,644.0	19.0	13.5	-90.08	-287.6	-2,177.8	1,372.8	1,347.7	25.08	54.728				
6,750.0	6,676.1	6,714.4	6,690.8	19.0	13.4	-90.07	-269.7	-2,177.8	1,372.8	1,347.8	24.99	54.925				
6,800.0	6,721.0	6,764.6	6,735.8	18.9	13.4	-90.06	-247.6	-2,177.8	1,372.8	1,347.9	24.88	55.178				
6,850.0	6,764.0	6,814.7	6,778.8	18.9	13.3	-90.06	-221.8	-2,177.8	1,372.8	1,348.0	24.76	55.452				
6,900.0	6,804.5	6,864.8	6,819.3	18.9	13.3	-90.05	-192.3	-2,177.8	1,372.8	1,348.1	24.64	55.711				
6,950.0	6,842.3	6,914.9	6,857.0	18.8	13.2	-90.04	-159.4	-2,177.8	1,372.8	1,348.2	24.55	55.913				
7,000.0	6,877.1	6,965.0	6,891.7	18.8	13.2	-90.03	-123.3	-2,177.7	1,372.7	1,348.2	24.51	56.015				
7,050.0	6,908.7	7,015.1	6,923.2	18.8	13.2	-90.02	-84.4	-2,177.7	1,372.7	1,348.2	24.52	55.975				
7,100.0	6,936.7	7,065.1	6,951.1	18.8	13.3	-90.01	-42.9	-2,177.7	1,372.7	1,348.1	24.62	55.756				
7,150.0	6,961.1	7,115.1	6,975.2	18.9	13.4	-90.01	0.9	-2,177.7	1,372.7	1,347.9	24.81	55.330				
7,200.0	6,981.5	7,165.1	6,995.5	19.0	13.5	-90.00	46.6	-2,177.7	1,372.7	1,347.6	25.10	54.686				
7,250.0	6,998.0	7,215.1	7,011.7	19.1	13.7	-89.99	93.9	-2,177.7	1,372.7	1,347.2	25.50	53.824				
7,300.0	7,010.2	7,265.1	7,023.7	19.2	14.0	-89.98	142.4	-2,177.7	1,372.7	1,346.7	26.02	52.764				
7,350.0	7,018.1	7,315.0	7,031.4	19.4	14.3	-89.97	191.7	-2,177.7	1,372.7	1,346.1	26.64	51.534				
7,400.0	7,021.8	7,365.0	7,034.8	19.7	14.6	-89.96	241.5	-2,177.7	1,372.7	1,345.4	27.36	50.181				
7,416.6	7,022.0	7,381.5	7,035.0	19.8	14.7	-89.96	258.1	-2,177.7	1,372.7	1,345.1	27.61	49.711				
7,500.0	7,022.0	7,464.9	7,035.0	20.3	15.4	-89.96	341.5	-2,177.7	1,372.7	1,343.6	29.08	47.205				
7,600.0	7,022.0	7,564.9	7,035.0	21.0	16.4	-89.96	441.5	-2,177.7	1,372.7	1,341.6	31.09	44.154				
7,700.0	7,022.0	7,664.9	7,035.0	21.8	17.5	-89.96	541.5	-2,177.7	1,372.7	1,339.3	33.35	41.163				
7,800.0	7,022.0	7,764.9	7,035.0	22.8	18.7	-89.96	641.5	-2,177.7	1,372.7	1,336.9	35.81	38.335				

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3G-20H-N264 - HZ - 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)				
7,900.0	7,022.0	7,864.9	7,035.0	23.8	19.9	-89.96	741.5	-2,177.7	1,372.7	1,334.2	38.43	35.717		
8,000.0	7,022.0	7,964.9	7,035.0	24.9	21.3	-89.96	841.5	-2,177.7	1,372.7	1,331.5	41.19	33.328		
8,100.0	7,022.0	8,064.9	7,035.0	26.1	22.7	-89.96	941.5	-2,177.7	1,372.7	1,328.6	44.05	31.161		
8,200.0	7,022.0	8,164.9	7,035.0	27.3	24.1	-89.96	1,041.5	-2,177.7	1,372.7	1,325.7	47.00	29.205		
8,300.0	7,022.0	8,264.9	7,035.0	28.6	25.6	-89.96	1,141.5	-2,177.7	1,372.6	1,322.6	50.02	27.440		
8,400.0	7,022.0	8,364.9	7,035.0	30.0	27.1	-89.96	1,241.5	-2,177.6	1,372.6	1,319.5	53.11	25.847		
8,500.0	7,022.0	8,464.9	7,035.0	31.4	28.7	-89.96	1,341.5	-2,177.6	1,372.6	1,316.4	56.24	24.407		
8,600.0	7,022.0	8,564.9	7,035.0	32.8	30.2	-89.96	1,441.5	-2,177.6	1,372.6	1,313.2	59.41	23.103		
8,700.0	7,022.0	8,664.9	7,035.0	34.3	31.8	-89.96	1,541.5	-2,177.6	1,372.6	1,310.0	62.62	21.919		
8,800.0	7,022.0	8,764.9	7,035.0	35.7	33.4	-89.96	1,641.5	-2,177.6	1,372.6	1,306.7	65.86	20.840		
8,900.0	7,022.0	8,864.9	7,035.0	37.2	35.0	-89.96	1,741.5	-2,177.6	1,372.6	1,303.5	69.13	19.855		
9,000.0	7,022.0	8,964.9	7,035.0	38.8	36.6	-89.96	1,841.5	-2,177.6	1,372.6	1,300.2	72.42	18.953		
9,100.0	7,022.0	9,064.9	7,035.0	40.3	38.3	-89.96	1,941.5	-2,177.6	1,372.6	1,296.9	75.73	18.125		
9,200.0	7,022.0	9,164.9	7,035.0	41.9	39.9	-89.96	2,041.5	-2,177.6	1,372.6	1,293.5	79.05	17.362		
9,300.0	7,022.0	9,264.9	7,035.0	43.5	41.6	-89.96	2,141.5	-2,177.6	1,372.6	1,290.2	82.40	16.658		
9,400.0	7,022.0	9,364.9	7,035.0	45.0	43.3	-89.96	2,241.5	-2,177.6	1,372.6	1,286.8	85.75	16.006		
9,500.0	7,022.0	9,464.9	7,035.0	46.6	44.9	-89.96	2,341.5	-2,177.6	1,372.5	1,283.4	89.12	15.402		
9,600.0	7,022.0	9,564.9	7,035.0	48.3	46.6	-89.96	2,441.5	-2,177.6	1,372.5	1,280.0	92.49	14.839		
9,700.0	7,022.0	9,664.9	7,035.0	49.9	48.3	-89.96	2,541.5	-2,177.5	1,372.5	1,276.7	95.88	14.315		
9,800.0	7,022.0	9,764.9	7,035.0	51.5	50.0	-89.96	2,641.5	-2,177.5	1,372.5	1,273.3	99.27	13.826		
9,900.0	7,022.0	9,864.9	7,035.0	53.1	51.7	-89.96	2,741.5	-2,177.5	1,372.5	1,269.8	102.68	13.367		
10,000.0	7,022.0	9,964.9	7,035.0	54.8	53.4	-89.96	2,841.5	-2,177.5	1,372.5	1,266.4	106.09	12.938		
10,100.0	7,022.0	10,064.9	7,035.0	56.4	55.1	-89.96	2,941.5	-2,177.5	1,372.5	1,263.0	109.50	12.534		
10,200.0	7,022.0	10,164.9	7,035.0	58.1	56.8	-89.96	3,041.5	-2,177.5	1,372.5	1,259.6	112.92	12.154		
10,300.0	7,022.0	10,264.9	7,035.0	59.8	58.5	-89.96	3,141.5	-2,177.5	1,372.5	1,256.1	116.35	11.796		
10,400.0	7,022.0	10,364.9	7,035.0	61.4	60.2	-89.96	3,241.5	-2,177.5	1,372.5	1,252.7	119.78	11.458		
10,500.0	7,022.0	10,464.9	7,035.0	63.1	61.9	-89.96	3,341.5	-2,177.5	1,372.5	1,249.3	123.22	11.139		
10,600.0	7,022.0	10,564.9	7,035.0	64.8	63.6	-89.96	3,441.5	-2,177.5	1,372.5	1,245.8	126.66	10.836		
10,700.0	7,022.0	10,664.9	7,035.0	66.5	65.3	-89.96	3,541.5	-2,177.5	1,372.5	1,242.4	130.10	10.549		
10,800.0	7,022.0	10,764.9	7,035.0	68.1	67.1	-89.96	3,641.5	-2,177.5	1,372.4	1,238.9	133.55	10.277		
10,900.0	7,022.0	10,864.9	7,035.0	69.8	68.8	-89.96	3,741.5	-2,177.5	1,372.4	1,235.4	136.99	10.018		
11,000.0	7,022.0	10,964.9	7,035.0	71.5	70.5	-89.96	3,841.5	-2,177.5	1,372.4	1,232.0	140.45	9.772		
11,100.0	7,022.0	11,064.9	7,035.0	73.2	72.2	-89.96	3,941.5	-2,177.4	1,372.4	1,228.5	143.90	9.537		
11,200.0	7,022.0	11,164.9	7,035.0	74.9	74.0	-89.96	4,041.5	-2,177.4	1,372.4	1,225.1	147.36	9.313		
11,300.0	7,022.0	11,264.9	7,035.0	76.6	75.7	-89.96	4,141.5	-2,177.4	1,372.4	1,221.6	150.82	9.100		
11,400.0	7,022.0	11,364.9	7,035.0	78.3	77.4	-89.96	4,241.5	-2,177.4	1,372.4	1,218.1	154.28	8.895		
11,500.0	7,022.0	11,464.9	7,035.0	80.0	79.1	-89.96	4,341.5	-2,177.4	1,372.4	1,214.6	157.75	8.700		
11,600.0	7,022.0	11,564.9	7,035.0	81.7	80.9	-89.96	4,441.5	-2,177.4	1,372.4	1,211.2	161.21	8.513		
11,633.5	7,022.0	11,598.5	7,035.0	82.3	81.4	-89.96	4,475.0	-2,177.4	1,372.4	1,210.0	162.37	8.452 CC		
11,645.9	7,022.0	11,604.3	7,035.0	82.5	81.5	-89.96	4,480.8	-2,177.4	1,372.4	1,209.7	162.69	8.436 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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3H-20H-N264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total 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)				
2,900.0	2,869.2	2,865.1	2,861.2	8.7	5.5	21.80	-137.9	-1,909.7	1,542.1	1,531.1	11.06	139.385		
3,000.0	2,967.9	2,964.2	2,960.1	9.0	5.7	21.80	-143.8	-1,911.1	1,528.7	1,517.2	11.47	133.318		
3,100.0	3,066.7	3,063.3	3,059.0	9.3	5.9	21.79	-149.8	-1,912.5	1,515.2	1,503.4	11.87	127.661		
3,200.0	3,165.4	3,162.3	3,157.9	9.7	6.1	21.79	-155.8	-1,914.0	1,501.8	1,489.5	12.27	122.375		
3,300.0	3,264.1	3,261.4	3,256.8	10.0	6.3	21.79	-161.7	-1,915.4	1,488.3	1,475.7	12.67	117.424		
3,400.0	3,362.8	3,360.5	3,355.7	10.3	6.5	21.78	-167.7	-1,916.9	1,474.9	1,461.8	13.08	112.778		
3,500.0	3,461.5	3,459.6	3,454.6	10.7	6.7	21.78	-173.6	-1,918.3	1,461.4	1,448.0	13.48	108.409		
3,600.0	3,560.2	3,558.7	3,553.5	11.0	6.9	21.78	-179.6	-1,919.7	1,448.0	1,434.1	13.88	104.293		
3,700.0	3,658.9	3,657.8	3,652.4	11.3	7.1	21.77	-185.6	-1,921.2	1,434.6	1,420.3	14.29	100.410		
3,800.0	3,757.7	3,756.9	3,751.3	11.7	7.3	21.77	-191.5	-1,922.6	1,421.1	1,406.4	14.69	96.739		
3,900.0	3,856.4	3,856.0	3,850.2	12.0	7.5	21.77	-197.5	-1,924.0	1,407.7	1,392.6	15.09	93.264		
4,000.0	3,955.1	3,955.1	3,949.1	12.3	7.7	21.76	-203.4	-1,925.5	1,394.2	1,378.7	15.50	89.970		
4,100.0	4,053.8	4,054.2	4,048.0	12.7	7.9	21.76	-209.4	-1,926.9	1,380.8	1,364.9	15.90	86.842		
4,200.0	4,152.5	4,153.3	4,146.9	13.0	8.1	21.75	-215.3	-1,928.4	1,367.3	1,351.0	16.30	83.870		
4,300.0	4,251.2	4,252.4	4,245.8	13.3	8.3	21.75	-221.3	-1,929.8	1,353.9	1,337.2	16.71	81.041		
4,400.0	4,350.0	4,351.4	4,344.7	13.7	8.5	21.75	-227.3	-1,931.2	1,340.4	1,323.3	17.11	78.345		
4,500.0	4,448.7	4,450.5	4,443.6	14.0	8.7	21.74	-233.2	-1,932.7	1,327.0	1,309.5	17.51	75.773		
4,600.0	4,547.4	4,549.6	4,542.5	14.3	8.9	21.74	-239.2	-1,934.1	1,313.5	1,295.6	17.92	73.317		
4,700.0	4,646.1	4,648.7	4,641.4	14.6	9.1	21.73	-245.1	-1,935.5	1,300.1	1,281.8	18.32	70.969		
4,800.0	4,744.8	4,747.8	4,740.3	15.0	9.3	21.73	-251.1	-1,937.0	1,286.6	1,267.9	18.72	68.722		
4,900.0	4,843.5	4,846.9	4,839.2	15.3	9.5	21.72	-257.1	-1,938.4	1,273.2	1,254.1	19.13	66.570		
5,000.0	4,942.2	4,946.0	4,938.1	15.6	9.7	21.72	-263.0	-1,939.9	1,259.7	1,240.2	19.53	64.507		
5,100.0	5,041.0	5,045.1	5,037.0	16.0	9.9	21.71	-269.0	-1,941.3	1,246.3	1,226.4	19.93	62.528		
5,200.0	5,139.7	5,144.2	5,135.9	16.3	10.1	21.71	-274.9	-1,942.7	1,232.8	1,212.5	20.33	60.627		
5,300.0	5,238.4	5,243.3	5,234.8	16.6	10.3	21.70	-280.9	-1,944.2	1,219.4	1,198.7	20.74	58.800		
5,400.0	5,337.1	5,342.4	5,333.7	17.0	10.5	21.70	-286.9	-1,945.6	1,205.9	1,184.8	21.14	57.042		
5,500.0	5,435.8	5,441.5	5,432.6	17.3	10.7	21.69	-292.8	-1,947.0	1,192.5	1,171.0	21.54	55.351		
5,607.7	5,542.1	5,548.2	5,539.2	17.7	10.9	21.69	-299.2	-1,948.6	1,178.0	1,156.0	21.98	53.598		
5,700.0	5,633.5	5,639.8	5,630.6	17.9	11.1	21.57	-304.7	-1,949.9	1,167.0	1,144.6	22.36	52.199		
5,800.0	5,732.8	5,743.6	5,734.2	18.2	11.3	21.44	-310.3	-1,951.3	1,158.0	1,135.2	22.74	50.926		
5,900.0	5,832.5	5,848.4	5,838.9	18.3	11.5	21.35	-314.1	-1,952.2	1,151.8	1,128.7	23.09	49.890		
6,000.0	5,932.5	5,953.3	5,943.8	18.5	11.7	21.31	-316.0	-1,952.6	1,148.4	1,125.0	23.40	49.076		
6,067.5	6,000.0	6,023.5	6,014.0	18.5	11.8	-90.07	-316.3	-1,952.7	1,147.7	1,124.1	23.60	48.638		
6,100.0	6,032.5	6,055.9	6,046.5	18.6	11.8	-90.07	-316.3	-1,952.7	1,147.7	1,124.0	23.70	48.431		
6,200.0	6,132.5	6,155.9	6,146.5	18.7	12.0	-90.07	-316.3	-1,952.7	1,147.7	1,123.7	24.01	47.803		
6,300.0	6,232.5	6,255.9	6,246.5	18.8	12.2	-90.07	-316.3	-1,952.7	1,147.7	1,123.4	24.32	47.188		
6,400.0	6,332.5	6,355.9	6,346.5	18.9	12.3	-90.07	-316.3	-1,952.7	1,147.7	1,123.1	24.64	46.588		
6,500.0	6,432.5	6,455.9	6,446.5	19.0	12.5	-90.07	-316.3	-1,952.7	1,147.7	1,122.8	24.95	46.001		
6,516.6	6,449.0	6,472.5	6,463.0	19.0	12.5	-90.07	-316.3	-1,952.7	1,147.7	1,122.7	25.00	45.905 CC		
6,550.0	6,482.4	6,505.9	6,496.4	19.0	12.6	-90.11	-316.3	-1,952.7	1,147.7	1,122.6	25.09	45.750		
6,600.0	6,532.2	6,555.6	6,546.2	19.0	12.6	-90.36	-316.3	-1,952.7	1,147.7	1,122.6	25.16	45.615		
6,650.0	6,581.3	6,604.7	6,595.3	19.0	12.7	-90.81	-316.3	-1,952.7	1,147.8	1,122.6	25.19	45.573		
6,700.0	6,629.3	6,654.9	6,645.4	19.0	12.8	-91.40	-314.8	-1,952.7	1,148.1	1,122.9	25.16	45.632		
6,750.0	6,676.1	6,706.6	6,696.7	19.0	12.8	-91.99	-308.8	-1,952.7	1,148.5	1,123.4	25.09	45.775		
6,800.0	6,721.0	6,759.5	6,748.5	18.9	12.8	-92.58	-297.8	-1,952.7	1,148.9	1,124.0	24.99	45.974		
6,850.0	6,764.0	6,813.7	6,800.2	18.9	12.7	-93.15	-281.7	-1,952.7	1,149.5	1,124.7	24.88	46.208		
6,900.0	6,804.5	6,869.3	6,851.4	18.9	12.7	-93.71	-260.2	-1,952.7	1,150.2	1,125.5	24.76	46.451		
6,950.0	6,842.3	6,926.2	6,901.5	18.8	12.6	-94.24	-233.1	-1,952.7	1,151.0	1,126.3	24.66	46.673		
7,000.0	6,877.1	6,984.6	6,949.7	18.8	12.6	-94.74	-200.3	-1,952.7	1,151.8	1,127.2	24.59	46.839		
7,050.0	6,908.7	7,044.4	6,995.4	18.8	12.5	-95.21	-161.8	-1,952.7	1,152.6	1,128.1	24.57	46.911		
7,100.0	6,936.7	7,105.5	7,037.7	18.8	12.5	-95.64	-117.8	-1,952.7	1,153.4	1,128.8	24.62	46.847		
7,150.0	6,961.1	7,167.8	7,075.8	18.9	12.5	-96.03	-68.4	-1,952.7	1,154.2	1,129.4	24.77	46.603		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3H-20H-N264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
7,200.0	6,981.5	7,231.4	7,108.9	19.0	12.6	-96.35	-14.2	-1,952.7	1,154.9	1,129.9	25.02	46.164		
7,250.0	6,998.0	7,295.9	7,136.2	19.1	12.8	-96.62	44.2	-1,952.7	1,155.4	1,130.1	25.39	45.511		
7,300.0	7,010.2	7,361.2	7,156.9	19.2	13.1	-96.82	106.1	-1,952.7	1,155.9	1,130.0	25.90	44.631		
7,350.0	7,018.1	7,427.1	7,170.5	19.4	13.5	-96.95	170.6	-1,952.7	1,156.2	1,129.6	26.54	43.561		
7,400.0	7,021.8	7,493.4	7,176.6	19.7	13.9	-97.00	236.5	-1,952.7	1,156.3	1,129.0	27.31	42.345		
7,416.6	7,022.0	7,514.9	7,177.0	19.8	14.1	-97.00	258.1	-1,952.7	1,156.3	1,128.7	27.58	41.923		
7,500.0	7,022.0	7,598.3	7,177.0	20.3	14.8	-97.00	341.5	-1,952.7	1,156.3	1,127.3	29.02	39.848		
7,600.0	7,022.0	7,698.3	7,177.0	21.0	15.8	-97.00	441.5	-1,952.6	1,156.3	1,125.3	31.01	37.286		
7,700.0	7,022.0	7,798.3	7,177.0	21.8	16.9	-97.00	541.5	-1,952.6	1,156.3	1,123.0	33.25	34.774		
7,800.0	7,022.0	7,898.3	7,177.0	22.8	18.2	-97.00	641.5	-1,952.6	1,156.3	1,120.6	35.69	32.397		
7,900.0	7,022.0	7,998.3	7,177.0	23.8	19.5	-97.00	741.5	-1,952.6	1,156.2	1,118.0	38.29	30.196		
8,000.0	7,022.0	8,098.3	7,177.0	24.9	20.9	-97.00	841.5	-1,952.6	1,156.2	1,115.2	41.02	28.185		
8,100.0	7,022.0	8,198.3	7,177.0	26.1	22.3	-97.00	941.5	-1,952.6	1,156.2	1,112.4	43.86	26.361		
8,200.0	7,022.0	8,298.3	7,177.0	27.3	23.7	-97.00	1,041.5	-1,952.6	1,156.2	1,109.4	46.79	24.712		
8,300.0	7,022.0	8,398.3	7,177.0	28.6	25.3	-97.00	1,141.5	-1,952.6	1,156.2	1,106.4	49.78	23.225		
8,400.0	7,022.0	8,498.3	7,177.0	30.0	26.8	-97.00	1,241.5	-1,952.6	1,156.2	1,103.4	52.84	21.881		
8,500.0	7,022.0	8,598.3	7,177.0	31.4	28.4	-97.00	1,341.5	-1,952.6	1,156.2	1,100.2	55.95	20.666		
8,600.0	7,022.0	8,698.3	7,177.0	32.8	29.9	-97.00	1,441.5	-1,952.6	1,156.2	1,097.1	59.10	19.565		
8,700.0	7,022.0	8,798.3	7,177.0	34.3	31.5	-97.00	1,541.5	-1,952.6	1,156.2	1,093.9	62.28	18.564		
8,800.0	7,022.0	8,898.3	7,177.0	35.7	33.2	-97.00	1,641.5	-1,952.5	1,156.2	1,090.7	65.49	17.653		
8,900.0	7,022.0	8,998.3	7,177.0	37.2	34.8	-97.00	1,741.5	-1,952.5	1,156.2	1,087.4	68.73	16.821		
9,000.0	7,022.0	9,098.3	7,177.0	38.8	36.4	-97.01	1,841.5	-1,952.5	1,156.1	1,084.2	72.00	16.058		
9,100.0	7,022.0	9,198.3	7,177.0	40.3	38.1	-97.01	1,941.5	-1,952.5	1,156.1	1,080.9	75.28	15.358		
9,200.0	7,022.0	9,298.3	7,177.0	41.9	39.7	-97.01	2,041.5	-1,952.5	1,156.1	1,077.6	78.58	14.713		
9,300.0	7,022.0	9,398.3	7,177.0	43.5	41.4	-97.01	2,141.5	-1,952.5	1,156.1	1,074.2	81.89	14.117		
9,400.0	7,022.0	9,498.3	7,177.0	45.0	43.1	-97.01	2,241.5	-1,952.5	1,156.1	1,070.9	85.22	13.566		
9,500.0	7,022.0	9,598.3	7,177.0	46.6	44.8	-97.01	2,341.5	-1,952.5	1,156.1	1,067.5	88.56	13.054		
9,600.0	7,022.0	9,698.3	7,177.0	48.3	46.4	-97.01	2,441.5	-1,952.5	1,156.1	1,064.2	91.91	12.578		
9,700.0	7,022.0	9,798.3	7,177.0	49.9	48.1	-97.01	2,541.5	-1,952.5	1,156.1	1,060.8	95.27	12.134		
9,800.0	7,022.0	9,898.3	7,177.0	51.5	49.8	-97.01	2,641.5	-1,952.5	1,156.1	1,057.4	98.64	11.720		
9,900.0	7,022.0	9,998.3	7,177.0	53.1	51.5	-97.01	2,741.5	-1,952.5	1,156.1	1,054.1	102.02	11.332		
10,000.0	7,022.0	10,098.3	7,177.0	54.8	53.2	-97.01	2,841.5	-1,952.4	1,156.1	1,050.7	105.40	10.968		
10,100.0	7,022.0	10,198.3	7,177.0	56.4	54.9	-97.01	2,941.5	-1,952.4	1,156.1	1,047.3	108.79	10.626		
10,200.0	7,022.0	10,298.3	7,177.0	58.1	56.6	-97.01	3,041.5	-1,952.4	1,156.0	1,043.9	112.19	10.305		
10,300.0	7,022.0	10,398.3	7,177.0	59.8	58.4	-97.01	3,141.5	-1,952.4	1,156.0	1,040.4	115.59	10.002		
10,400.0	7,022.0	10,498.3	7,177.0	61.4	60.1	-97.01	3,241.5	-1,952.4	1,156.0	1,037.0	118.99	9.715		
10,500.0	7,022.0	10,598.3	7,177.0	63.1	61.8	-97.01	3,341.5	-1,952.4	1,156.0	1,033.6	122.40	9.445		
10,600.0	7,022.0	10,698.3	7,177.0	64.8	63.5	-97.01	3,441.5	-1,952.4	1,156.0	1,030.2	125.81	9.188		
10,700.0	7,022.0	10,798.3	7,177.0	66.5	65.2	-97.01	3,541.5	-1,952.4	1,156.0	1,026.8	129.23	8.945		
10,800.0	7,022.0	10,898.3	7,177.0	68.1	67.0	-97.01	3,641.5	-1,952.4	1,156.0	1,023.3	132.65	8.715		
10,900.0	7,022.0	10,998.3	7,177.0	69.8	68.7	-97.01	3,741.5	-1,952.4	1,156.0	1,019.9	136.07	8.495		
11,000.0	7,022.0	11,098.3	7,177.0	71.5	70.4	-97.01	3,841.5	-1,952.4	1,156.0	1,016.5	139.50	8.287		
11,100.0	7,022.0	11,198.3	7,177.0	73.2	72.1	-97.01	3,941.5	-1,952.4	1,156.0	1,013.0	142.93	8.088		
11,200.0	7,022.0	11,298.3	7,177.0	74.9	73.9	-97.01	4,041.5	-1,952.3	1,156.0	1,009.6	146.36	7.898		
11,300.0	7,022.0	11,398.3	7,177.0	76.6	75.6	-97.01	4,141.5	-1,952.3	1,155.9	1,006.1	149.79	7.717		
11,400.0	7,022.0	11,498.3	7,177.0	78.3	77.3	-97.01	4,241.5	-1,952.3	1,155.9	1,002.7	153.23	7.544		
11,500.0	7,022.0	11,598.3	7,177.0	80.0	79.0	-97.01	4,341.5	-1,952.3	1,155.9	999.3	156.67	7.378		
11,600.0	7,022.0	11,698.3	7,177.0	81.7	80.8	-97.01	4,441.5	-1,952.3	1,155.9	995.8	160.11	7.220		
11,634.3	7,022.0	11,732.6	7,177.0	82.3	81.4	-97.01	4,475.8	-1,952.3	1,155.9	994.6	161.29	7.167		
11,645.9	7,022.0	11,739.2	7,177.0	82.5	81.5	-97.01	4,482.4	-1,952.3	1,155.9	994.3	161.60	7.153 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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3I-20H-N264 - HZ - 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		
2,300.0	2,276.9	2,336.8	2,333.3	6.7	4.5	21.53	-114.0	-1,823.6	1,545.8	1,537.0	8.81	175.464		
2,400.0	2,375.7	2,435.2	2,431.5	7.0	4.7	21.53	-119.7	-1,820.9	1,528.2	1,519.0	9.21	165.962		
2,500.0	2,474.4	2,533.6	2,529.7	7.4	4.9	21.53	-125.4	-1,818.2	1,510.6	1,501.0	9.61	157.246		
2,600.0	2,573.1	2,632.1	2,628.0	7.7	5.1	21.53	-131.1	-1,815.5	1,493.0	1,483.0	10.01	149.222		
2,700.0	2,671.8	2,730.5	2,726.2	8.0	5.3	21.54	-136.8	-1,812.8	1,475.4	1,465.0	10.40	141.812		
2,800.0	2,770.5	2,828.9	2,824.4	8.4	5.5	21.54	-142.5	-1,810.1	1,457.8	1,447.0	10.80	134.948		
2,900.0	2,869.2	2,927.4	2,922.7	8.7	5.7	21.54	-148.2	-1,807.3	1,440.2	1,429.0	11.20	128.571		
3,000.0	2,967.9	3,025.8	3,020.9	9.0	5.9	21.54	-153.9	-1,804.6	1,422.6	1,411.0	11.60	122.633		
3,100.0	3,066.7	3,124.3	3,119.2	9.3	6.1	21.55	-159.6	-1,801.9	1,405.0	1,393.0	12.00	117.088		
3,200.0	3,165.4	3,222.7	3,217.4	9.7	6.3	21.55	-165.4	-1,799.2	1,387.4	1,375.0	12.40	111.900		
3,300.0	3,264.1	3,321.1	3,315.6	10.0	6.5	21.55	-171.1	-1,796.5	1,369.8	1,357.0	12.80	107.035		
3,400.0	3,362.8	3,419.6	3,413.9	10.3	6.7	21.56	-176.8	-1,793.8	1,352.2	1,339.0	13.20	102.463		
3,500.0	3,461.5	3,518.0	3,512.1	10.7	6.9	21.56	-182.5	-1,791.1	1,334.6	1,321.0	13.60	98.160		
3,600.0	3,560.2	3,616.5	3,610.3	11.0	7.1	21.56	-188.2	-1,788.4	1,317.0	1,303.0	14.00	94.102		
3,700.0	3,658.9	3,714.9	3,708.6	11.3	7.4	21.56	-193.9	-1,785.7	1,299.4	1,285.0	14.39	90.268		
3,800.0	3,757.7	3,813.3	3,806.8	11.7	7.6	21.57	-199.6	-1,783.0	1,281.8	1,267.0	14.79	86.642		
3,900.0	3,856.4	3,911.8	3,905.0	12.0	7.8	21.57	-205.3	-1,780.3	1,264.2	1,249.0	15.19	83.206		
4,000.0	3,955.1	4,010.2	4,003.3	12.3	8.0	21.57	-211.0	-1,777.5	1,246.6	1,231.0	15.59	79.945		
4,100.0	4,053.8	4,108.7	4,101.5	12.7	8.2	21.58	-216.7	-1,774.8	1,229.0	1,213.0	15.99	76.848		
4,200.0	4,152.5	4,207.1	4,199.8	13.0	8.4	21.58	-222.4	-1,772.1	1,211.4	1,195.0	16.39	73.901		
4,300.0	4,251.2	4,305.5	4,298.0	13.3	8.6	21.58	-228.1	-1,769.4	1,193.8	1,177.0	16.79	71.094		
4,400.0	4,350.0	4,404.0	4,396.2	13.7	8.8	21.59	-233.9	-1,766.7	1,176.2	1,159.0	17.19	68.417		
4,500.0	4,448.7	4,502.4	4,494.5	14.0	9.0	21.59	-239.6	-1,764.0	1,158.6	1,141.0	17.59	65.862		
4,600.0	4,547.4	4,600.9	4,592.7	14.3	9.2	21.60	-245.3	-1,761.3	1,141.0	1,123.0	17.99	63.421		
4,700.0	4,646.1	4,699.3	4,690.9	14.6	9.4	21.60	-251.0	-1,758.6	1,123.4	1,105.0	18.39	61.085		
4,800.0	4,744.8	4,797.7	4,789.2	15.0	9.6	21.60	-256.7	-1,755.9	1,105.8	1,087.0	18.79	58.849		
4,900.0	4,843.5	4,896.2	4,887.4	15.3	9.8	21.61	-262.4	-1,753.2	1,088.2	1,069.0	19.19	56.705		
5,000.0	4,942.2	4,994.6	4,985.6	15.6	10.0	21.61	-268.1	-1,750.5	1,070.6	1,051.0	19.59	54.650		
5,100.0	5,041.0	5,093.0	5,083.9	16.0	10.2	21.62	-273.8	-1,747.7	1,053.0	1,033.0	19.99	52.676		
5,200.0	5,139.7	5,191.5	5,182.1	16.3	10.4	21.62	-279.5	-1,745.0	1,035.4	1,015.0	20.39	50.779		
5,300.0	5,238.4	5,289.9	5,280.3	16.6	10.6	21.63	-285.2	-1,742.3	1,017.8	997.0	20.79	48.956		
5,400.0	5,337.1	5,388.4	5,378.6	17.0	10.8	21.63	-290.9	-1,739.6	1,000.2	979.0	21.19	47.201		
5,500.0	5,435.8	5,486.8	5,476.8	17.3	11.0	21.64	-296.6	-1,736.9	982.6	961.0	21.59	45.511		
5,607.7	5,542.1	5,592.8	5,582.6	17.7	11.2	21.64	-302.8	-1,734.0	963.7	941.6	22.02	43.759		
5,700.0	5,633.5	5,681.2	5,670.8	17.9	11.4	21.51	-307.8	-1,731.6	948.8	926.4	22.40	42.361		
5,800.0	5,732.8	5,773.9	5,763.4	18.2	11.6	21.40	-311.9	-1,729.7	936.4	913.7	22.77	41.132		
5,900.0	5,832.5	5,867.0	5,856.5	18.3	11.8	21.32	-314.7	-1,728.3	927.9	904.8	23.10	40.166		
6,000.0	5,932.5	5,960.5	5,949.9	18.5	11.9	21.29	-316.1	-1,727.7	923.4	900.0	23.41	39.450		
6,067.5	6,000.0	6,024.6	6,014.0	18.5	12.0	-90.08	-316.3	-1,727.6	922.6	899.0	23.60	39.091		
6,100.0	6,032.5	6,057.0	6,046.5	18.6	12.0	-90.08	-316.3	-1,727.6	922.6	898.9	23.70	38.925		
6,200.0	6,132.5	6,157.0	6,146.5	18.7	12.2	-90.08	-316.3	-1,727.6	922.6	898.5	24.01	38.420		
6,300.0	6,232.5	6,257.0	6,246.5	18.8	12.4	-90.08	-316.3	-1,727.6	922.6	898.2	24.33	37.926		
6,400.0	6,332.5	6,357.0	6,346.5	18.9	12.5	-90.08	-316.3	-1,727.6	922.6	897.9	24.64	37.444		
6,423.8	6,356.2	6,380.8	6,370.2	18.9	12.5	-90.08	-316.3	-1,727.6	922.6	897.8	24.71	37.331 CC		
6,500.0	6,432.5	6,455.9	6,445.2	19.0	12.6	-89.83	-312.3	-1,727.6	922.6	897.7	24.92	37.017		
6,516.6	6,449.0	6,472.0	6,461.1	19.0	12.6	-89.70	-310.1	-1,727.6	922.6	897.7	24.96	36.957		
6,550.0	6,482.4	6,504.2	6,492.8	19.0	12.6	-89.40	-304.5	-1,727.7	922.7	897.7	25.03	36.858		
6,600.0	6,532.2	6,551.9	6,539.1	19.0	12.6	-88.95	-293.0	-1,727.8	922.9	897.8	25.08	36.797		
6,650.0	6,581.3	6,600.0	6,584.6	19.0	12.6	-88.51	-277.4	-1,727.9	923.2	898.1	25.08	36.815		
6,700.0	6,629.3	6,645.8	6,626.5	19.0	12.5	-88.10	-259.2	-1,728.1	923.6	898.6	25.03	36.901		
6,750.0	6,676.1	6,692.0	6,667.3	19.0	12.5	-87.69	-237.4	-1,728.2	924.0	899.1	24.95	37.041		
6,800.0	6,721.0	6,737.8	6,705.8	18.9	12.4	-87.30	-212.6	-1,728.5	924.5	899.7	24.84	37.217		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3I-20H-N264 - HZ - 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		
6,850.0	6,764.0	6,783.2	6,742.0	18.9	12.4	-86.93	-185.1	-1,728.7	925.1	900.4	24.73	37.410		
6,900.0	6,804.5	6,828.3	6,775.5	18.9	12.3	-86.58	-155.1	-1,729.0	925.7	901.0	24.62	37.597		
6,950.0	6,842.3	6,873.0	6,806.5	18.8	12.3	-86.26	-122.7	-1,729.2	926.3	901.7	24.54	37.753		
7,000.0	6,877.1	6,917.5	6,834.6	18.8	12.3	-85.96	-88.3	-1,729.5	926.9	902.4	24.49	37.851		
7,050.0	6,908.7	6,961.8	6,859.8	18.8	12.4	-85.69	-52.0	-1,729.8	927.5	903.0	24.50	37.862		
7,100.0	6,936.7	7,005.8	6,882.1	18.8	12.4	-85.45	-14.0	-1,730.2	928.2	903.6	24.58	37.768		
7,150.0	6,961.1	7,050.0	6,901.4	18.9	12.5	-85.25	25.7	-1,730.5	928.8	904.0	24.74	37.538		
7,200.0	6,981.5	7,093.3	6,917.4	19.0	12.7	-85.07	66.0	-1,730.9	929.4	904.4	25.01	37.159		
7,250.0	6,998.0	7,136.9	6,930.3	19.1	12.9	-84.93	107.7	-1,731.2	929.9	904.5	25.39	36.632		
7,300.0	7,010.2	7,180.5	6,940.0	19.2	13.1	-84.82	150.1	-1,731.6	930.4	904.6	25.87	35.969		
7,350.0	7,018.1	7,223.9	6,946.5	19.4	13.4	-84.74	193.1	-1,732.0	930.9	904.5	26.46	35.185		
7,400.0	7,021.8	7,267.4	6,949.6	19.7	13.7	-84.71	236.4	-1,732.3	931.3	904.2	27.15	34.308		
7,416.6	7,022.0	7,281.8	6,950.0	19.8	13.8	-84.70	250.8	-1,732.5	931.5	904.1	27.40	34.001		
7,500.0	7,022.0	7,364.4	6,950.0	20.3	14.6	-84.71	333.3	-1,733.2	932.2	903.3	28.84	32.322		
7,600.0	7,022.0	7,464.3	6,950.0	21.0	15.5	-84.71	433.3	-1,734.0	933.0	902.2	30.83	30.260		
7,700.0	7,022.0	7,564.3	6,950.0	21.8	16.7	-84.72	533.3	-1,734.9	933.9	900.8	33.08	28.234		
7,800.0	7,022.0	7,664.3	6,950.0	22.8	17.9	-84.72	633.3	-1,735.8	934.8	899.2	35.52	26.314		
7,900.0	7,022.0	7,764.3	6,950.0	23.8	19.2	-84.73	733.3	-1,736.6	935.6	897.5	38.13	24.535		
8,000.0	7,022.0	7,864.3	6,950.0	24.9	20.6	-84.73	833.3	-1,737.5	936.5	895.6	40.88	22.910		
8,100.0	7,022.0	7,964.3	6,950.0	26.1	22.0	-84.74	933.3	-1,738.4	937.4	893.6	43.73	21.437		
8,200.0	7,022.0	8,064.3	6,950.0	27.3	23.5	-84.74	1,033.3	-1,739.2	938.2	891.6	46.66	20.106		
8,300.0	7,022.0	8,164.3	6,950.0	28.6	25.0	-84.75	1,133.3	-1,740.1	939.1	889.4	49.67	18.905		
8,400.0	7,022.0	8,264.3	6,950.0	30.0	26.5	-84.75	1,233.3	-1,741.0	939.9	887.2	52.74	17.821		
8,500.0	7,022.0	8,364.3	6,950.0	31.4	28.1	-84.75	1,333.3	-1,741.8	940.8	884.9	55.86	16.841		
8,600.0	7,022.0	8,464.3	6,950.0	32.8	29.7	-84.76	1,433.3	-1,742.7	941.7	882.6	59.02	15.954		
8,700.0	7,022.0	8,564.3	6,950.0	34.3	31.3	-84.76	1,533.3	-1,743.6	942.5	880.3	62.22	15.148		
8,800.0	7,022.0	8,664.3	6,950.0	35.7	32.9	-84.77	1,633.2	-1,744.4	943.4	877.9	65.45	14.414		
8,900.0	7,022.0	8,764.3	6,950.0	37.2	34.5	-84.77	1,733.2	-1,745.3	944.2	875.5	68.70	13.744		
9,000.0	7,022.0	8,864.3	6,950.0	38.8	36.2	-84.78	1,833.2	-1,746.2	945.1	873.1	71.98	13.130		
9,100.0	7,022.0	8,964.3	6,950.0	40.3	37.8	-84.78	1,933.2	-1,747.0	946.0	870.7	75.27	12.567		
9,200.0	7,022.0	9,064.3	6,950.0	41.9	39.5	-84.79	2,033.2	-1,747.9	946.8	868.2	78.59	12.048		
9,300.0	7,022.0	9,164.3	6,950.0	43.5	41.1	-84.79	2,133.2	-1,748.8	947.7	865.8	81.92	11.569		
9,400.0	7,022.0	9,264.3	6,950.0	45.0	42.8	-84.80	2,233.2	-1,749.6	948.5	863.3	85.26	11.126		
9,500.0	7,022.0	9,364.3	6,950.0	46.6	44.5	-84.80	2,333.2	-1,750.5	949.4	860.8	88.61	10.714		
9,600.0	7,022.0	9,464.3	6,950.0	48.3	46.2	-84.81	2,433.2	-1,751.3	950.3	858.3	91.98	10.332		
9,700.0	7,022.0	9,564.3	6,950.0	49.9	47.9	-84.81	2,533.2	-1,752.2	951.1	855.8	95.35	9.975		
9,800.0	7,022.0	9,664.3	6,950.0	51.5	49.6	-84.82	2,633.2	-1,753.1	952.0	853.3	98.73	9.642		
9,900.0	7,022.0	9,764.3	6,950.0	53.1	51.3	-84.82	2,733.2	-1,753.9	952.9	850.7	102.12	9.331		
10,000.0	7,022.0	9,864.3	6,950.0	54.8	53.0	-84.83	2,833.2	-1,754.8	953.7	848.2	105.52	9.039		
10,100.0	7,022.0	9,964.3	6,950.0	56.4	54.7	-84.83	2,933.1	-1,755.7	954.6	845.7	108.92	8.764		
10,200.0	7,022.0	10,064.3	6,950.0	58.1	56.4	-84.84	3,033.1	-1,756.5	955.4	843.1	112.33	8.506		
10,300.0	7,022.0	10,164.2	6,950.0	59.8	58.1	-84.84	3,133.1	-1,757.4	956.3	840.6	115.74	8.262		
10,400.0	7,022.0	10,264.2	6,950.0	61.4	59.8	-84.84	3,233.1	-1,758.3	957.2	838.0	119.16	8.033		
10,500.0	7,022.0	10,364.2	6,950.0	63.1	61.5	-84.85	3,333.1	-1,759.1	958.0	835.4	122.58	7.815		
10,600.0	7,022.0	10,464.2	6,950.0	64.8	63.3	-84.85	3,433.1	-1,760.0	958.9	832.9	126.01	7.610		
10,700.0	7,022.0	10,564.2	6,950.0	66.5	65.0	-84.86	3,533.1	-1,760.9	959.7	830.3	129.44	7.415		
10,800.0	7,022.0	10,664.2	6,950.0	68.1	66.7	-84.86	3,633.1	-1,761.7	960.6	827.7	132.87	7.229		
10,900.0	7,022.0	10,764.2	6,950.0	69.8	68.4	-84.87	3,733.1	-1,762.6	961.5	825.2	136.31	7.054		
11,000.0	7,022.0	10,864.2	6,950.0	71.5	70.2	-84.87	3,833.1	-1,763.5	962.3	822.6	139.75	6.886		
11,100.0	7,022.0	10,964.2	6,950.0	73.2	71.9	-84.88	3,933.1	-1,764.3	963.2	820.0	143.19	6.727		
11,200.0	7,022.0	11,064.2	6,950.0	74.9	73.6	-84.88	4,033.1	-1,765.2	964.0	817.4	146.64	6.574		
11,300.0	7,022.0	11,164.2	6,950.0	76.6	75.3	-84.89	4,133.1	-1,766.1	964.9	814.8	150.08	6.429		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													S20-T2N-R64W (Dale) - Dale 3I-20H-N264 - HZ - Plan #1		Offset Site Error:		0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error:		0.0 ft			
Reference		Offset		Semi Major Axis			Distance							Warning				
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)								
11,400.0	7,022.0	11,518.0	6,950.0	78.3	81.4	-84.67	4,482.9	-1,727.2	957.2	799.4	157.79	6.066						
11,500.0	7,022.0	11,518.0	6,950.0	80.0	81.4	-84.67	4,482.9	-1,727.2	936.9	777.4	159.51	5.874						
11,600.0	7,022.0	11,518.0	6,950.0	81.7	81.4	-84.67	4,482.9	-1,727.2	927.1	765.9	161.24	5.750						
11,641.6	7,022.0	11,518.0	6,950.0	82.4	81.4	-84.67	4,482.9	-1,727.2	926.2	764.2	161.96	5.719						
11,645.9	7,022.0	11,518.0	6,950.0	82.5	81.4	-84.67	4,482.9	-1,727.2	926.2	764.2	162.03	5.716 ES, SF						



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3J-20H-N264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
2,000.0	1,980.8	2,107.9	2,102.0	5.7	4.4	21.50	-101.0	-1,759.5	1,529.5	1,521.8	7.73	197.780		
2,100.0	2,079.5	2,205.5	2,199.2	6.0	4.6	21.50	-106.7	-1,752.6	1,507.7	1,499.6	8.13	185.465		
2,200.0	2,178.2	2,303.1	2,296.4	6.4	4.8	21.50	-112.5	-1,745.7	1,485.9	1,477.4	8.53	174.290		
2,300.0	2,276.9	2,400.7	2,393.5	6.7	5.1	21.49	-118.3	-1,738.9	1,464.1	1,455.2	8.92	164.105		
2,400.0	2,375.7	2,498.3	2,490.7	7.0	5.3	21.49	-124.0	-1,732.0	1,442.3	1,433.0	9.32	154.784		
2,500.0	2,474.4	2,595.9	2,587.9	7.4	5.5	21.49	-129.8	-1,725.1	1,420.5	1,410.8	9.71	146.222		
2,600.0	2,573.1	2,693.5	2,685.1	7.7	5.8	21.48	-135.6	-1,718.3	1,398.7	1,388.6	10.11	138.331		
2,700.0	2,671.8	2,791.1	2,782.3	8.0	6.0	21.48	-141.3	-1,711.4	1,376.9	1,366.4	10.51	131.034		
2,800.0	2,770.5	2,888.7	2,879.4	8.4	6.2	21.47	-147.1	-1,704.6	1,355.1	1,344.2	10.90	124.267		
2,900.0	2,869.2	2,986.3	2,976.6	8.7	6.5	21.47	-152.9	-1,697.7	1,333.3	1,322.0	11.30	117.975		
3,000.0	2,967.9	3,083.9	3,073.8	9.0	6.7	21.47	-158.6	-1,690.8	1,311.5	1,299.8	11.70	112.109		
3,100.0	3,066.7	3,181.5	3,171.0	9.3	6.9	21.46	-164.4	-1,684.0	1,289.7	1,277.6	12.10	106.627		
3,200.0	3,165.4	3,279.1	3,268.2	9.7	7.2	21.46	-170.2	-1,677.1	1,267.9	1,255.4	12.49	101.494		
3,300.0	3,264.1	3,376.7	3,365.4	10.0	7.4	21.45	-176.0	-1,670.2	1,246.1	1,233.2	12.89	96.676		
3,400.0	3,362.8	3,474.3	3,462.5	10.3	7.6	21.45	-181.7	-1,663.4	1,224.3	1,211.0	13.29	92.146		
3,500.0	3,461.5	3,571.9	3,559.7	10.7	7.8	21.44	-187.5	-1,656.5	1,202.5	1,188.8	13.68	87.879		
3,600.0	3,560.2	3,669.5	3,656.9	11.0	8.1	21.44	-193.3	-1,649.6	1,180.7	1,166.6	14.08	83.853		
3,700.0	3,658.9	3,767.0	3,754.1	11.3	8.3	21.43	-199.0	-1,642.8	1,158.9	1,144.4	14.48	80.047		
3,800.0	3,757.7	3,864.6	3,851.3	11.7	8.5	21.43	-204.8	-1,635.9	1,137.1	1,122.2	14.87	76.445		
3,900.0	3,856.4	3,962.2	3,948.4	12.0	8.8	21.42	-210.6	-1,629.1	1,115.3	1,100.0	15.27	73.029		
4,000.0	3,955.1	4,059.8	4,045.6	12.3	9.0	21.42	-216.3	-1,622.2	1,093.5	1,077.8	15.67	69.787		
4,100.0	4,053.8	4,157.4	4,142.8	12.7	9.2	21.41	-222.1	-1,615.3	1,071.7	1,055.6	16.07	66.705		
4,200.0	4,152.5	4,255.0	4,240.0	13.0	9.5	21.40	-227.9	-1,608.5	1,049.9	1,033.4	16.46	63.772		
4,300.0	4,251.2	4,352.6	4,337.2	13.3	9.7	21.40	-233.6	-1,601.6	1,028.1	1,011.2	16.86	60.977		
4,400.0	4,350.0	4,450.2	4,434.4	13.7	9.9	21.39	-239.4	-1,594.7	1,006.3	989.0	17.26	58.311		
4,500.0	4,448.7	4,547.8	4,531.5	14.0	10.2	21.38	-245.2	-1,587.9	984.5	966.8	17.65	55.764		
4,600.0	4,547.4	4,645.4	4,628.7	14.3	10.4	21.38	-250.9	-1,581.0	962.7	944.6	18.05	53.330		
4,700.0	4,646.1	4,743.0	4,725.9	14.6	10.6	21.37	-256.7	-1,574.1	940.9	922.4	18.45	51.001		
4,800.0	4,744.8	4,840.6	4,823.1	15.0	10.8	21.36	-262.5	-1,567.3	919.1	900.2	18.85	48.769		
4,900.0	4,843.5	4,938.2	4,920.3	15.3	11.1	21.35	-268.2	-1,560.4	897.3	878.0	19.24	46.630		
5,000.0	4,942.2	5,035.8	5,017.5	15.6	11.3	21.34	-274.0	-1,553.6	875.5	855.8	19.64	44.578		
5,100.0	5,041.0	5,133.4	5,114.6	16.0	11.5	21.33	-279.8	-1,546.7	853.7	833.6	20.04	42.607		
5,200.0	5,139.7	5,231.0	5,211.8	16.3	11.8	21.32	-285.5	-1,539.8	831.9	811.4	20.43	40.712		
5,300.0	5,238.4	5,328.6	5,309.0	16.6	12.0	21.31	-291.3	-1,533.0	810.1	789.2	20.83	38.890		
5,400.0	5,337.1	5,426.2	5,406.2	17.0	12.2	21.30	-297.1	-1,526.1	788.3	767.0	21.23	37.136		
5,500.0	5,435.8	5,521.0	5,500.6	17.3	12.5	21.29	-302.6	-1,519.5	766.5	744.9	21.62	35.461		
5,607.7	5,542.1	5,616.7	5,596.1	17.7	12.7	21.34	-307.5	-1,513.7	744.1	722.1	22.02	33.794		
5,700.0	5,633.5	5,700.0	5,679.2	17.9	12.8	21.29	-310.9	-1,509.7	727.3	704.9	22.39	32.481		
5,800.0	5,732.8	5,789.7	5,768.8	18.2	13.0	21.26	-313.7	-1,506.4	713.3	690.6	22.76	31.337		
5,900.0	5,832.5	5,880.7	5,859.7	18.3	13.1	21.24	-315.6	-1,504.1	703.8	680.7	23.11	30.460		
6,000.0	5,932.5	5,972.0	5,951.0	18.5	13.3	21.23	-316.5	-1,502.9	698.7	675.3	23.42	29.839		
6,067.5	6,000.0	6,035.0	6,014.0	18.5	13.3	-90.14	-316.7	-1,502.8	697.8	674.2	23.61	29.552		
6,100.0	6,032.5	6,067.5	6,046.5	18.6	13.4	-90.14	-316.7	-1,502.8	697.8	674.1	23.71	29.426		
6,200.0	6,132.5	6,167.5	6,146.5	18.7	13.5	-90.14	-316.7	-1,502.8	697.8	673.8	24.02	29.044		
6,300.0	6,232.5	6,267.5	6,246.5	18.8	13.7	-90.14	-316.7	-1,502.8	697.8	673.5	24.34	28.671		
6,400.0	6,332.5	6,367.5	6,346.5	18.9	13.8	-90.14	-316.7	-1,502.8	697.8	673.1	24.65	28.307		
6,500.0	6,432.5	6,467.5	6,446.5	19.0	13.9	-90.14	-316.7	-1,502.8	697.8	672.8	24.97	27.950		
6,516.6	6,449.0	6,484.1	6,463.1	19.0	14.0	-90.14	-316.7	-1,502.8	697.8	672.8	25.02	27.892		
6,550.0	6,482.4	6,518.5	6,497.4	19.0	14.0	-90.13	-315.6	-1,502.8	697.8	672.7	25.09	27.810		
6,600.0	6,532.2	6,569.9	6,548.6	19.0	14.0	-90.12	-310.1	-1,502.7	697.7	672.5	25.14	27.748		
6,650.0	6,581.3	6,621.3	6,599.0	19.0	14.0	-90.11	-300.1	-1,502.4	697.5	672.3	25.14	27.747		
6,700.0	6,629.3	6,672.7	6,648.3	19.0	14.0	-90.10	-285.6	-1,502.1	697.2	672.1	25.08	27.796		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3J-20H-N264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
6,750.0	6,676.1	6,724.0	6,696.0	19.0	14.0	-90.09	-266.7	-1,501.7	696.8	671.8	24.99	27.883		
6,800.0	6,721.0	6,775.3	6,741.8	18.9	13.9	-90.08	-243.7	-1,501.3	696.3	671.4	24.87	27.994		
6,850.0	6,764.0	6,826.5	6,785.3	18.9	13.9	-90.06	-216.8	-1,500.7	695.7	671.0	24.75	28.112		
6,900.0	6,804.5	6,877.6	6,826.1	18.9	13.8	-90.05	-186.1	-1,500.0	695.1	670.5	24.63	28.217		
6,950.0	6,842.3	6,928.6	6,864.0	18.8	13.8	-90.03	-152.0	-1,499.3	694.4	669.9	24.55	28.287		
7,000.0	6,877.1	6,979.5	6,898.7	18.8	13.8	-90.02	-114.7	-1,498.5	693.6	669.1	24.51	28.300		
7,050.0	6,908.7	7,030.3	6,929.8	18.8	13.8	-90.00	-74.6	-1,497.7	692.8	668.3	24.54	28.235		
7,100.0	6,936.7	7,081.0	6,957.2	18.8	13.9	-89.99	-32.0	-1,496.8	691.9	667.3	24.65	28.075		
7,150.0	6,961.1	7,131.6	6,980.7	18.9	14.0	-89.97	12.8	-1,495.9	691.0	666.1	24.85	27.807		
7,200.0	6,981.5	7,182.0	7,000.1	19.0	14.2	-89.95	59.3	-1,494.9	690.0	664.9	25.16	27.428		
7,250.0	6,998.0	7,232.4	7,015.3	19.1	14.4	-89.94	107.3	-1,493.9	689.0	663.4	25.58	26.940		
7,300.0	7,010.2	7,282.6	7,026.2	19.2	14.6	-89.93	156.3	-1,492.8	688.0	661.9	26.11	26.354		
7,350.0	7,018.1	7,332.7	7,032.7	19.4	14.9	-89.91	205.9	-1,491.8	687.0	660.2	26.74	25.688		
7,400.0	7,021.8	7,382.6	7,035.0	19.7	15.3	-89.90	255.8	-1,490.8	685.9	658.4	27.47	24.967		
7,416.6	7,022.0	7,399.2	7,035.0	19.8	15.4	-89.91	272.4	-1,490.4	685.6	657.8	27.74	24.717		
7,500.0	7,022.0	7,482.6	7,035.0	20.3	16.1	-89.91	355.7	-1,488.7	683.8	654.6	29.22	23.405		
7,600.0	7,022.0	7,582.6	7,035.0	21.0	17.1	-89.91	455.7	-1,486.6	681.7	650.5	31.25	21.818		
7,700.0	7,022.0	7,682.6	7,035.0	21.8	18.2	-89.91	555.7	-1,484.5	679.6	646.1	33.52	20.274		
7,800.0	7,022.0	7,782.5	7,035.0	22.8	19.3	-89.91	655.6	-1,482.4	677.5	641.5	35.99	18.823		
7,900.0	7,022.0	7,882.5	7,035.0	23.8	20.6	-89.91	755.6	-1,480.2	675.4	636.8	38.63	17.485		
8,000.0	7,022.0	7,982.5	7,035.0	24.9	21.9	-89.91	855.5	-1,478.1	673.3	631.9	41.39	16.266		
8,100.0	7,022.0	8,082.5	7,035.0	26.1	23.3	-89.91	955.5	-1,476.0	671.2	626.9	44.26	15.164		
8,200.0	7,022.0	8,182.4	7,035.0	27.3	24.8	-89.91	1,055.4	-1,473.9	669.1	621.9	47.22	14.170		
8,300.0	7,022.0	8,282.4	7,035.0	28.6	26.2	-89.91	1,155.4	-1,471.8	667.0	616.7	50.24	13.275		
8,400.0	7,022.0	8,382.4	7,035.0	30.0	27.7	-89.91	1,255.3	-1,469.7	664.9	611.6	53.33	12.467		
8,500.0	7,022.0	8,482.4	7,035.0	31.4	29.3	-89.91	1,355.3	-1,467.6	662.8	606.3	56.47	11.738		
8,600.0	7,022.0	8,582.4	7,035.0	32.8	30.8	-89.91	1,455.3	-1,465.5	660.7	601.0	59.64	11.077		
8,700.0	7,022.0	8,682.3	7,035.0	34.3	32.4	-89.91	1,555.2	-1,463.4	658.6	595.7	62.86	10.478		
8,800.0	7,022.0	8,782.3	7,035.0	35.7	34.0	-89.91	1,655.2	-1,461.3	656.5	590.4	66.10	9.932		
8,900.0	7,022.0	8,882.3	7,035.0	37.2	35.6	-89.91	1,755.1	-1,459.2	654.4	585.0	69.37	9.434		
9,000.0	7,022.0	8,982.3	7,035.0	38.8	37.2	-89.91	1,855.1	-1,457.1	652.3	579.6	72.66	8.977		
9,100.0	7,022.0	9,082.2	7,035.0	40.3	38.9	-89.91	1,955.0	-1,455.0	650.2	574.2	75.97	8.559		
9,200.0	7,022.0	9,182.2	7,035.0	41.9	40.5	-89.91	2,055.0	-1,452.9	648.1	568.8	79.29	8.173		
9,300.0	7,022.0	9,282.2	7,035.0	43.5	42.2	-89.91	2,154.9	-1,450.8	646.0	563.3	82.63	7.817		
9,400.0	7,022.0	9,382.2	7,035.0	45.0	43.8	-89.91	2,254.9	-1,448.7	643.9	557.9	85.99	7.488		
9,500.0	7,022.0	9,482.2	7,035.0	46.6	45.5	-89.91	2,354.9	-1,446.6	641.8	552.4	89.36	7.182		
9,600.0	7,022.0	9,582.1	7,035.0	48.3	47.2	-89.91	2,454.8	-1,444.5	639.7	546.9	92.73	6.898		
9,700.0	7,022.0	9,682.1	7,035.0	49.9	48.8	-89.91	2,554.8	-1,442.4	637.6	541.4	96.12	6.633		
9,800.0	7,022.0	9,782.1	7,035.0	51.5	50.5	-89.91	2,654.7	-1,440.3	635.4	535.9	99.52	6.385		
9,900.0	7,022.0	9,882.1	7,035.0	53.1	52.2	-89.91	2,754.7	-1,438.2	633.3	530.4	102.92	6.154		
10,000.0	7,022.0	9,982.0	7,035.0	54.8	53.9	-89.90	2,854.6	-1,436.1	631.2	524.9	106.33	5.937		
10,100.0	7,022.0	10,082.0	7,035.0	56.4	55.6	-89.90	2,954.6	-1,434.0	629.1	519.4	109.74	5.733		
10,200.0	7,022.0	10,182.0	7,035.0	58.1	57.3	-89.90	3,054.5	-1,431.9	627.0	513.9	113.16	5.541		
10,300.0	7,022.0	10,282.0	7,035.0	59.8	59.0	-89.90	3,154.5	-1,429.8	624.9	508.3	116.59	5.360		
10,400.0	7,022.0	10,382.0	7,035.0	61.4	60.7	-89.90	3,254.5	-1,427.7	622.8	502.8	120.02	5.189		
10,500.0	7,022.0	10,472.3	7,035.0	63.1	62.2	-89.90	3,344.8	-1,426.5	621.5	498.2	123.29	5.041		
10,552.2	7,022.0	10,521.1	7,035.0	64.0	63.1	-89.90	3,393.6	-1,426.4	621.4	496.4	125.03	4.970		
10,600.0	7,022.0	10,568.9	7,035.0	64.8	63.9	-89.90	3,441.4	-1,426.4	621.4	494.7	126.67	4.906		
10,700.0	7,022.0	10,668.9	7,035.0	66.5	65.6	-89.90	3,541.4	-1,426.4	621.4	491.3	130.12	4.776		
10,800.0	7,022.0	10,768.9	7,035.0	68.1	67.3	-89.90	3,641.4	-1,426.4	621.4	487.8	133.56	4.652		
10,900.0	7,022.0	10,868.9	7,035.0	69.8	69.0	-89.90	3,741.4	-1,426.4	621.4	484.4	137.01	4.535		
11,000.0	7,022.0	10,968.9	7,035.0	71.5	70.8	-89.90	3,841.4	-1,426.4	621.4	480.9	140.46	4.424		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3J-20H-N264 - HZ - 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		
11,100.0	7,022.0	11,068.9	7,035.0	73.2	72.5	-89.90	3,941.4	-1,426.4	621.4	477.4	143.92	4.317		
11,111.5	7,022.0	11,080.4	7,035.0	73.4	72.7	-89.90	3,952.9	-1,426.4	621.4	477.0	144.32	4.306	CC	
11,200.0	7,022.0	11,151.5	7,035.0	74.9	73.9	-89.90	4,024.0	-1,427.1	622.3	475.2	147.07	4.231	ES	
11,300.0	7,022.0	11,225.0	7,035.0	76.6	75.1	-89.90	4,097.4	-1,430.7	627.2	477.1	150.07	4.179		
11,400.0	7,022.0	11,300.0	7,035.0	78.3	76.4	-89.91	4,172.1	-1,437.5	636.3	483.2	153.10	4.156	SF	
11,500.0	7,022.0	11,370.3	7,035.0	80.0	77.6	-89.91	4,241.7	-1,446.9	649.6	493.5	156.03	4.163		
11,600.0	7,022.0	11,441.7	7,035.0	81.7	78.8	-89.91	4,312.0	-1,459.3	666.9	508.0	158.98	4.195		
11,645.9	7,022.0	11,474.1	7,035.0	82.5	79.3	-89.91	4,343.8	-1,465.9	676.3	515.9	160.32	4.218		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3K-20H-N264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
1,700.0	1,684.7	1,886.2	1,876.8	4.7	4.3	21.55	-86.4	-1,716.5	1,537.8	1,531.1	6.67	230.602		
1,800.0	1,783.4	1,982.7	1,972.5	5.0	4.6	21.54	-92.3	-1,705.3	1,511.5	1,504.5	7.06	214.041		
1,900.0	1,882.1	2,079.2	2,068.2	5.4	4.9	21.53	-98.2	-1,694.1	1,485.3	1,477.8	7.46	199.219		
2,000.0	1,980.8	2,175.7	2,163.8	5.7	5.2	21.52	-104.0	-1,682.9	1,459.0	1,451.1	7.85	185.877		
2,100.0	2,079.5	2,272.2	2,259.5	6.0	5.4	21.51	-109.9	-1,671.7	1,432.7	1,424.5	8.24	173.805		
2,200.0	2,178.2	2,368.6	2,355.1	6.4	5.7	21.49	-115.8	-1,660.5	1,406.5	1,397.8	8.64	162.832		
2,300.0	2,276.9	2,465.1	2,450.8	6.7	6.0	21.48	-121.7	-1,649.2	1,380.2	1,371.2	9.03	152.814		
2,400.0	2,375.7	2,561.6	2,546.4	7.0	6.3	21.47	-127.6	-1,638.0	1,353.9	1,344.5	9.43	143.632		
2,500.0	2,474.4	2,658.1	2,642.1	7.4	6.5	21.45	-133.4	-1,626.8	1,327.7	1,317.8	9.82	135.186		
2,600.0	2,573.1	2,754.6	2,737.7	7.7	6.8	21.44	-139.3	-1,615.6	1,301.4	1,291.2	10.22	127.391		
2,700.0	2,671.8	2,851.1	2,833.4	8.0	7.1	21.43	-145.2	-1,604.4	1,275.1	1,264.5	10.61	120.175		
2,800.0	2,770.5	2,947.6	2,929.0	8.4	7.4	21.41	-151.1	-1,593.2	1,248.9	1,237.8	11.01	113.477		
2,900.0	2,869.2	3,044.1	3,024.7	8.7	7.7	21.39	-157.0	-1,582.0	1,222.6	1,211.2	11.40	107.242		
3,000.0	2,967.9	3,140.6	3,120.3	9.0	7.9	21.38	-162.9	-1,570.8	1,196.3	1,184.5	11.80	101.424		
3,100.0	3,066.7	3,237.0	3,216.0	9.3	8.2	21.36	-168.7	-1,559.6	1,170.0	1,157.9	12.19	95.982		
3,200.0	3,165.4	3,333.5	3,311.7	9.7	8.5	21.34	-174.6	-1,548.4	1,143.8	1,131.2	12.59	90.882		
3,300.0	3,264.1	3,430.0	3,407.3	10.0	8.8	21.32	-180.5	-1,537.2	1,117.5	1,104.5	12.98	86.093		
3,400.0	3,362.8	3,526.5	3,503.0	10.3	9.0	21.30	-186.4	-1,526.0	1,091.2	1,077.9	13.38	81.586		
3,500.0	3,461.5	3,623.0	3,598.6	10.7	9.3	21.28	-192.3	-1,514.8	1,065.0	1,051.2	13.77	77.337		
3,600.0	3,560.2	3,719.5	3,694.3	11.0	9.6	21.26	-198.1	-1,503.6	1,038.7	1,024.6	14.17	73.326		
3,700.0	3,658.9	3,816.0	3,789.9	11.3	9.9	21.23	-204.0	-1,492.4	1,012.5	997.9	14.56	69.533		
3,800.0	3,757.7	3,912.5	3,885.6	11.7	10.2	21.21	-209.9	-1,481.1	986.2	971.2	14.96	65.939		
3,900.0	3,856.4	4,008.9	3,981.2	12.0	10.4	21.18	-215.8	-1,469.9	959.9	944.6	15.35	62.531		
4,000.0	3,955.1	4,105.4	4,076.9	12.3	10.7	21.16	-221.7	-1,458.7	933.7	917.9	15.75	59.294		
4,100.0	4,053.8	4,201.9	4,172.5	12.7	11.0	21.13	-227.5	-1,447.5	907.4	891.2	16.14	56.216		
4,200.0	4,152.5	4,298.4	4,268.2	13.0	11.3	21.10	-233.4	-1,436.3	881.1	864.6	16.54	53.285		
4,300.0	4,251.2	4,394.9	4,363.9	13.3	11.5	21.06	-239.3	-1,425.1	854.9	837.9	16.93	50.491		
4,400.0	4,350.0	4,491.4	4,459.5	13.7	11.8	21.03	-245.2	-1,413.9	828.6	811.3	17.33	47.824		
4,500.0	4,448.7	4,587.9	4,555.2	14.0	12.1	20.99	-251.1	-1,402.7	802.3	784.6	17.72	45.276		
4,600.0	4,547.4	4,684.4	4,650.8	14.3	12.4	20.95	-257.0	-1,391.5	776.1	758.0	18.12	42.840		
4,700.0	4,646.1	4,780.8	4,746.5	14.6	12.7	20.91	-262.8	-1,380.3	749.8	731.3	18.51	40.507		
4,800.0	4,744.8	4,877.3	4,842.1	15.0	12.9	20.86	-268.7	-1,369.1	723.5	704.6	18.90	38.273		
4,900.0	4,843.5	4,973.8	4,937.8	15.3	13.2	20.82	-274.6	-1,357.9	697.3	678.0	19.30	36.129		
5,000.0	4,942.2	5,070.3	5,033.4	15.6	13.5	20.76	-280.5	-1,346.7	671.0	651.3	19.69	34.072		
5,100.0	5,041.0	5,166.8	5,129.1	16.0	13.8	20.71	-286.4	-1,335.5	644.8	624.7	20.09	32.096		
5,200.0	5,139.7	5,263.3	5,224.7	16.3	14.1	20.64	-292.2	-1,324.3	618.5	598.0	20.48	30.197		
5,300.0	5,238.4	5,353.7	5,314.5	16.6	14.3	20.60	-297.6	-1,314.1	592.6	571.7	20.86	28.408		
5,400.0	5,337.1	5,442.8	5,402.9	17.0	14.5	20.62	-302.2	-1,305.3	568.0	546.8	21.23	26.752		
5,500.0	5,435.8	5,532.4	5,492.1	17.3	14.7	20.72	-306.2	-1,297.6	544.7	523.1	21.60	25.216		
5,607.7	5,542.1	5,629.5	5,589.0	17.7	14.9	20.91	-309.8	-1,290.7	521.1	499.1	22.00	23.689		
5,700.0	5,633.5	5,713.5	5,672.8	17.9	15.1	20.98	-312.4	-1,285.9	503.5	481.1	22.38	22.499		
5,800.0	5,732.8	5,805.4	5,764.6	18.2	15.2	21.06	-314.4	-1,281.9	488.9	466.1	22.76	21.475		
5,900.0	5,832.5	5,900.0	5,859.1	18.3	15.4	21.11	-315.9	-1,279.2	478.9	455.8	23.12	20.712		
6,000.0	5,932.5	5,991.0	5,950.1	18.5	15.5	21.15	-316.6	-1,277.8	473.6	450.1	23.44	20.204		
6,067.5	6,000.0	6,054.9	6,014.0	18.5	15.6	-90.21	-316.7	-1,277.6	472.6	449.0	23.64	19.990		
6,100.0	6,032.5	6,087.4	6,046.5	18.6	15.6	-90.21	-316.7	-1,277.6	472.6	448.9	23.75	19.905		
6,200.0	6,132.5	6,187.4	6,146.5	18.7	15.7	-90.21	-316.7	-1,277.6	472.6	448.6	24.06	19.647		
6,300.0	6,232.5	6,287.4	6,246.5	18.8	15.9	-90.21	-316.7	-1,277.6	472.6	448.3	24.37	19.395		
6,400.0	6,332.5	6,387.4	6,346.5	18.9	16.0	-90.21	-316.7	-1,277.6	472.6	448.0	24.68	19.148		
6,500.0	6,432.5	6,487.4	6,446.5	19.0	16.1	-90.21	-316.7	-1,277.6	472.6	447.6	25.00	18.907		
6,516.6	6,449.0	6,504.0	6,463.0	19.0	16.1	-90.21	-316.7	-1,277.6	472.6	447.6	25.05	18.868 CC		
6,550.0	6,482.4	6,537.4	6,496.4	19.0	16.2	-90.32	-316.7	-1,277.6	472.6	447.5	25.14	18.803		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3K-20H-N264 - HZ - 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		
6,600.0	6,532.2	6,587.1	6,546.2	19.0	16.2	-90.93	-316.7	-1,277.6	472.7	447.5	25.22	18.740		
6,650.0	6,581.3	6,636.2	6,595.3	19.0	16.3	-92.02	-316.7	-1,277.6	472.9	447.7	25.28	18.710		
6,700.0	6,629.3	6,686.4	6,645.5	19.0	16.3	-93.45	-315.2	-1,277.6	473.6	448.3	25.29	18.724		
6,750.0	6,676.1	6,738.1	6,696.8	19.0	16.3	-94.88	-309.1	-1,277.6	474.5	449.2	25.27	18.774		
6,800.0	6,721.0	6,791.1	6,748.6	18.9	16.3	-96.28	-298.2	-1,277.6	475.7	450.4	25.22	18.857		
6,850.0	6,764.0	6,845.3	6,800.3	18.9	16.3	-97.66	-282.0	-1,277.6	477.1	452.0	25.15	18.970		
6,900.0	6,804.5	6,900.9	6,851.6	18.9	16.3	-98.98	-260.5	-1,277.6	478.8	453.7	25.06	19.107		
6,950.0	6,842.3	6,957.9	6,901.7	18.8	16.2	-100.24	-233.3	-1,277.6	480.6	455.7	24.95	19.261		
7,000.0	6,877.1	7,016.3	6,949.9	18.8	16.2	-101.43	-200.5	-1,277.6	482.6	457.7	24.85	19.419		
7,050.0	6,908.7	7,076.1	6,995.6	18.8	16.1	-102.53	-162.0	-1,277.6	484.5	459.8	24.77	19.565		
7,100.0	6,936.7	7,137.2	7,037.9	18.8	16.1	-103.52	-117.9	-1,277.6	486.4	461.7	24.72	19.679		
7,150.0	6,961.1	7,199.6	7,076.0	18.9	16.1	-104.40	-68.5	-1,277.6	488.2	463.5	24.74	19.736		
7,200.0	6,981.5	7,263.2	7,109.1	19.0	16.2	-105.15	-14.3	-1,277.6	489.9	465.0	24.87	19.699		
7,250.0	6,998.0	7,327.7	7,136.3	19.1	16.4	-105.75	44.2	-1,277.6	491.2	466.1	25.11	19.563		
7,300.0	7,010.2	7,393.1	7,157.0	19.2	16.6	-106.20	106.2	-1,277.6	492.2	466.7	25.50	19.303		
7,350.0	7,018.1	7,459.0	7,170.6	19.4	16.9	-106.49	170.6	-1,277.6	492.9	466.8	26.06	18.914		
7,400.0	7,021.8	7,525.3	7,176.7	19.7	17.2	-106.61	236.6	-1,277.6	493.2	466.4	26.79	18.411		
7,416.6	7,022.0	7,546.7	7,177.0	19.8	17.4	-106.61	258.0	-1,277.6	493.2	466.1	27.05	18.230		
7,500.0	7,022.0	7,630.1	7,177.0	20.3	18.0	-106.61	341.4	-1,277.6	493.2	464.7	28.45	17.333		
7,600.0	7,022.0	7,730.1	7,177.0	21.0	18.8	-106.61	441.4	-1,277.6	493.2	462.8	30.37	16.238		
7,700.0	7,022.0	7,830.1	7,177.0	21.8	19.7	-106.61	541.4	-1,277.6	493.2	460.6	32.53	15.162		
7,800.0	7,022.0	7,930.1	7,177.0	22.8	20.8	-106.61	641.4	-1,277.6	493.2	458.3	34.87	14.142		
7,900.0	7,022.0	8,030.1	7,177.0	23.8	22.0	-106.61	741.4	-1,277.6	493.1	455.8	37.37	13.195		
8,000.0	7,022.0	8,130.1	7,177.0	24.9	23.2	-106.61	841.4	-1,277.6	493.1	453.1	40.00	12.328		
8,100.0	7,022.0	8,230.1	7,177.0	26.1	24.5	-106.61	941.4	-1,277.6	493.1	450.4	42.73	11.539		
8,200.0	7,022.0	8,330.1	7,177.0	27.3	25.8	-106.61	1,041.4	-1,277.5	493.1	447.6	45.55	10.826		
8,300.0	7,022.0	8,430.1	7,177.0	28.6	27.2	-106.61	1,141.4	-1,277.5	493.1	444.7	48.44	10.181		
8,400.0	7,022.0	8,530.1	7,177.0	30.0	28.6	-106.62	1,241.4	-1,277.5	493.1	441.7	51.38	9.597		
8,500.0	7,022.0	8,630.1	7,177.0	31.4	30.1	-106.62	1,341.4	-1,277.5	493.1	438.7	54.37	9.069		
8,600.0	7,022.0	8,730.1	7,177.0	32.8	31.6	-106.62	1,441.4	-1,277.5	493.1	435.7	57.41	8.589		
8,700.0	7,022.0	8,830.1	7,177.0	34.3	33.1	-106.62	1,541.4	-1,277.5	493.1	432.6	60.48	8.153		
8,800.0	7,022.0	8,930.1	7,177.0	35.7	34.7	-106.62	1,641.4	-1,277.5	493.1	429.5	63.58	7.756		
8,900.0	7,022.0	9,030.1	7,177.0	37.2	36.2	-106.62	1,741.4	-1,277.5	493.1	426.4	66.70	7.392		
9,000.0	7,022.0	9,130.1	7,177.0	38.8	37.8	-106.62	1,841.4	-1,277.5	493.1	423.2	69.85	7.059		
9,100.0	7,022.0	9,230.1	7,177.0	40.3	39.4	-106.62	1,941.4	-1,277.5	493.1	420.0	73.01	6.753		
9,200.0	7,022.0	9,330.1	7,177.0	41.9	41.0	-106.62	2,041.4	-1,277.5	493.1	416.9	76.20	6.471		
9,300.0	7,022.0	9,430.1	7,177.0	43.5	42.6	-106.62	2,141.4	-1,277.5	493.0	413.7	79.39	6.210		
9,400.0	7,022.0	9,530.1	7,177.0	45.0	44.3	-106.62	2,241.4	-1,277.5	493.0	410.4	82.61	5.969		
9,500.0	7,022.0	9,630.1	7,177.0	46.6	45.9	-106.62	2,341.4	-1,277.5	493.0	407.2	85.83	5.744		
9,600.0	7,022.0	9,730.1	7,177.0	48.3	47.5	-106.62	2,441.4	-1,277.4	493.0	404.0	89.06	5.536		
9,700.0	7,022.0	9,830.1	7,177.0	49.9	49.2	-106.62	2,541.4	-1,277.4	493.0	400.7	92.30	5.341		
9,800.0	7,022.0	9,930.1	7,177.0	51.5	50.9	-106.62	2,641.4	-1,277.4	493.0	397.5	95.55	5.160		
9,900.0	7,022.0	10,030.1	7,177.0	53.1	52.5	-106.62	2,741.4	-1,277.4	493.0	394.2	98.81	4.989		
10,000.0	7,022.0	10,130.1	7,177.0	54.8	54.2	-106.62	2,841.4	-1,277.4	493.0	390.9	102.08	4.830		
10,100.0	7,022.0	10,230.1	7,177.0	56.4	55.9	-106.62	2,941.4	-1,277.4	493.0	387.6	105.35	4.680		
10,200.0	7,022.0	10,330.1	7,177.0	58.1	57.6	-106.62	3,041.4	-1,277.4	493.0	384.4	108.62	4.538		
10,300.0	7,022.0	10,430.1	7,177.0	59.8	59.2	-106.62	3,141.4	-1,277.4	493.0	381.1	111.91	4.405		
10,400.0	7,022.0	10,530.1	7,177.0	61.4	60.9	-106.62	3,241.4	-1,277.4	493.0	377.8	115.19	4.279		
10,500.0	7,022.0	10,630.1	7,177.0	63.1	62.6	-106.62	3,341.4	-1,277.4	493.0	374.5	118.48	4.161		
10,600.0	7,022.0	10,730.1	7,177.0	64.8	64.3	-106.62	3,441.4	-1,277.4	493.0	371.2	121.78	4.048		
10,700.0	7,022.0	10,830.1	7,177.0	66.5	66.0	-106.62	3,541.4	-1,277.4	492.9	367.9	125.08	3.941		
10,800.0	7,022.0	10,930.1	7,177.0	68.1	67.7	-106.62	3,641.4	-1,277.4	492.9	364.6	128.38	3.840		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3K-20H-N264 - HZ - 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		
10,900.0	7,022.0	11,030.1	7,177.0	69.8	69.4	-106.62	3,741.4	-1,277.4	492.9	361.2	131.68	3.743		
11,000.0	7,022.0	11,130.1	7,177.0	71.5	71.1	-106.62	3,841.4	-1,277.4	492.9	357.9	134.99	3.652		
11,100.0	7,022.0	11,230.1	7,177.0	73.2	72.8	-106.62	3,941.4	-1,277.3	492.9	354.6	138.30	3.564		
11,200.0	7,022.0	11,330.1	7,177.0	74.9	74.6	-106.62	4,041.4	-1,277.3	492.9	351.3	141.62	3.481		
11,300.0	7,022.0	11,430.1	7,177.0	76.6	76.3	-106.62	4,141.4	-1,277.3	492.9	348.0	144.93	3.401		
11,400.0	7,022.0	11,530.1	7,177.0	78.3	78.0	-106.62	4,241.4	-1,277.3	492.9	344.6	148.25	3.325		
11,500.0	7,022.0	11,630.1	7,177.0	80.0	79.7	-106.62	4,341.4	-1,277.3	492.9	341.3	151.57	3.252		
11,600.0	7,022.0	11,730.1	7,177.0	81.7	81.4	-106.62	4,441.4	-1,277.3	492.9	338.0	154.89	3.182		
11,635.2	7,022.0	11,765.3	7,177.0	82.3	82.0	-106.62	4,476.6	-1,277.3	492.9	336.8	156.06	3.158		
11,645.9	7,022.0	11,773.8	7,177.0	82.5	82.2	-106.62	4,485.1	-1,277.3	492.9	336.5	156.38	3.152 ES, SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3L-20H-N264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
1,400.0	1,388.5	1,642.8	1,628.6	3.7	4.5	21.19	-81.0	-1,670.4	1,542.8	1,537.1	5.63	274.138		
1,500.0	1,487.2	1,738.4	1,723.0	4.1	4.8	21.19	-86.4	-1,656.3	1,513.5	1,507.5	6.02	251.599		
1,600.0	1,585.9	1,834.1	1,817.4	4.4	5.1	21.19	-91.7	-1,642.2	1,484.2	1,477.8	6.40	231.780		
1,700.0	1,684.7	1,929.7	1,911.9	4.7	5.4	21.19	-97.1	-1,628.1	1,454.9	1,448.1	6.79	214.218		
1,800.0	1,783.4	2,025.3	2,006.3	5.0	5.7	21.19	-102.5	-1,614.1	1,425.6	1,418.5	7.18	198.552		
1,900.0	1,882.1	2,120.9	2,100.7	5.4	6.1	21.19	-107.9	-1,600.0	1,396.4	1,388.8	7.57	184.489		
2,000.0	1,980.8	2,216.5	2,195.1	5.7	6.4	21.19	-113.2	-1,585.9	1,367.1	1,359.1	7.96	171.798		
2,100.0	2,079.5	2,312.2	2,289.5	6.0	6.7	21.19	-118.6	-1,571.8	1,337.8	1,329.5	8.35	160.286		
2,200.0	2,178.2	2,407.8	2,384.0	6.4	7.0	21.19	-124.0	-1,557.8	1,308.5	1,299.8	8.74	149.798		
2,300.0	2,276.9	2,503.4	2,478.4	6.7	7.3	21.19	-129.3	-1,543.7	1,279.3	1,270.1	9.12	140.202		
2,400.0	2,375.7	2,599.0	2,572.8	7.0	7.6	21.19	-134.7	-1,529.6	1,250.0	1,240.5	9.51	131.391		
2,500.0	2,474.4	2,694.6	2,667.2	7.4	7.9	21.19	-140.1	-1,515.5	1,220.7	1,210.8	9.90	123.271		
2,600.0	2,573.1	2,790.2	2,761.7	7.7	8.3	21.18	-145.5	-1,501.5	1,191.4	1,181.1	10.29	115.764		
2,700.0	2,671.8	2,885.9	2,856.1	8.0	8.6	21.18	-150.8	-1,487.4	1,162.1	1,151.5	10.68	108.804		
2,800.0	2,770.5	2,981.5	2,950.5	8.4	8.9	21.18	-156.2	-1,473.3	1,132.9	1,121.8	11.07	102.333		
2,900.0	2,869.2	3,077.1	3,044.9	8.7	9.2	21.18	-161.6	-1,459.2	1,103.6	1,092.1	11.46	96.301		
3,000.0	2,967.9	3,172.7	3,139.4	9.0	9.5	21.18	-166.9	-1,445.2	1,074.3	1,062.5	11.85	90.666		
3,100.0	3,066.7	3,268.3	3,233.8	9.3	9.8	21.18	-172.3	-1,431.1	1,045.0	1,032.8	12.24	85.388		
3,200.0	3,165.4	3,364.0	3,328.2	9.7	10.1	21.18	-177.7	-1,417.0	1,015.7	1,003.1	12.63	80.436		
3,300.0	3,264.1	3,459.6	3,422.6	10.0	10.4	21.18	-183.0	-1,402.9	986.5	973.5	13.02	75.781		
3,400.0	3,362.8	3,555.2	3,517.1	10.3	10.8	21.18	-188.4	-1,388.9	957.2	943.8	13.41	71.395		
3,500.0	3,461.5	3,650.8	3,611.5	10.7	11.1	21.18	-193.8	-1,374.8	927.9	914.1	13.80	67.257		
3,600.0	3,560.2	3,746.4	3,705.9	11.0	11.4	21.17	-199.2	-1,360.7	898.6	884.4	14.19	63.347		
3,700.0	3,658.9	3,842.0	3,800.3	11.3	11.7	21.17	-204.5	-1,346.6	869.4	854.8	14.58	59.645		
3,800.0	3,757.7	3,937.7	3,894.7	11.7	12.0	21.17	-209.9	-1,332.6	840.1	825.1	14.97	56.136		
3,900.0	3,856.4	4,033.3	3,989.2	12.0	12.3	21.17	-215.3	-1,318.5	810.8	795.4	15.35	52.805		
4,000.0	3,955.1	4,128.9	4,083.6	12.3	12.6	21.17	-220.6	-1,304.4	781.5	765.8	15.74	49.638		
4,100.0	4,053.8	4,224.5	4,178.0	12.7	13.0	21.17	-226.0	-1,290.3	752.2	736.1	16.13	46.625		
4,200.0	4,152.5	4,320.1	4,272.4	13.0	13.3	21.17	-231.4	-1,276.3	723.0	706.4	16.52	43.754		
4,300.0	4,251.2	4,415.7	4,366.9	13.3	13.6	21.16	-236.8	-1,262.2	693.7	676.8	16.91	41.014		
4,400.0	4,350.0	4,511.4	4,461.3	13.7	13.9	21.16	-242.1	-1,248.1	664.4	647.1	17.30	38.399		
4,500.0	4,448.7	4,607.0	4,555.7	14.0	14.2	21.16	-247.5	-1,234.0	635.1	617.4	17.69	35.898		
4,600.0	4,547.4	4,702.6	4,650.1	14.3	14.5	21.16	-252.9	-1,220.0	605.8	587.8	18.08	33.505		
4,700.0	4,646.1	4,798.2	4,744.6	14.6	14.8	21.15	-258.2	-1,205.9	576.6	558.1	18.47	31.213		
4,800.0	4,744.8	4,893.8	4,839.0	15.0	15.1	21.15	-263.6	-1,191.8	547.3	528.4	18.86	29.016		
4,900.0	4,843.5	4,989.5	4,933.4	15.3	15.5	21.15	-269.0	-1,177.7	518.0	498.8	19.25	26.908		
5,000.0	4,942.2	5,085.1	5,027.8	15.6	15.8	21.14	-274.3	-1,163.7	488.7	469.1	19.64	24.884		
5,100.0	5,041.0	5,180.7	5,122.3	16.0	16.1	21.14	-279.7	-1,149.6	459.5	439.4	20.03	22.938		
5,200.0	5,139.7	5,276.3	5,216.7	16.3	16.4	21.13	-285.1	-1,135.5	430.2	409.8	20.42	21.066		
5,300.0	5,238.4	5,371.9	5,311.1	16.6	16.7	21.13	-290.5	-1,121.4	400.9	380.1	20.81	19.265		
5,400.0	5,337.1	5,467.5	5,405.5	17.0	17.0	21.12	-295.8	-1,107.4	371.6	350.4	21.20	17.529		
5,500.0	5,435.8	5,563.2	5,499.9	17.3	17.3	21.11	-301.2	-1,093.3	342.3	320.8	21.59	15.857		
5,607.7	5,542.1	5,661.2	5,596.9	17.7	17.6	21.13	-306.6	-1,079.2	311.2	289.2	22.00	14.150		
5,700.0	5,633.5	5,742.7	5,677.6	17.9	17.9	21.04	-310.2	-1,069.6	288.1	265.7	22.39	12.870		
5,800.0	5,732.8	5,832.6	5,767.2	18.2	18.0	20.98	-313.3	-1,061.4	268.9	246.1	22.78	11.801		
5,900.0	5,832.5	5,924.0	5,858.3	18.3	18.2	20.95	-315.5	-1,055.9	255.7	232.6	23.15	11.048		
6,000.0	5,932.5	6,016.2	5,950.5	18.5	18.3	20.95	-316.6	-1,053.0	248.8	225.3	23.48	10.597		
6,067.5	6,000.0	6,079.7	6,014.0	18.5	18.4	-90.40	-316.7	-1,052.6	247.6	223.9	23.68	10.455		
6,100.0	6,032.5	6,112.2	6,046.5	18.6	18.4	-90.40	-316.7	-1,052.6	247.6	223.8	23.78	10.410		
6,200.0	6,132.5	6,212.2	6,146.5	18.7	18.5	-90.40	-316.7	-1,052.6	247.6	223.5	24.10	10.276		
6,300.0	6,232.5	6,312.2	6,246.5	18.8	18.6	-90.40	-316.7	-1,052.6	247.6	223.2	24.41	10.144		
6,400.0	6,332.5	6,412.2	6,346.5	18.9	18.7	-90.40	-316.7	-1,052.6	247.6	222.9	24.72	10.015		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3L-20H-N264 - HZ - 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	
6,467.9	6,400.4	6,480.2	6,414.4	18.9	18.8	-90.12	-315.5	-1,052.6	247.6	222.7	24.91	9.938	CC	
6,500.0	6,432.5	6,512.0	6,446.2	19.0	18.8	-89.43	-312.5	-1,052.6	247.6	222.6	24.99	9.908		
6,516.6	6,449.0	6,528.4	6,462.3	19.0	18.8	-88.92	-310.3	-1,052.6	247.6	222.6	25.03	9.895		
6,550.0	6,482.4	6,561.0	6,494.5	19.0	18.8	-87.79	-304.6	-1,052.6	247.8	222.7	25.09	9.876		
6,600.0	6,532.2	6,609.4	6,541.3	19.0	18.8	-86.12	-292.7	-1,052.6	248.2	223.0	25.15	9.867		
6,650.0	6,581.3	6,657.1	6,586.4	19.0	18.8	-84.49	-277.1	-1,052.6	248.8	223.6	25.18	9.878		
6,700.0	6,629.3	6,704.4	6,629.7	19.0	18.7	-82.92	-258.0	-1,052.6	249.5	224.3	25.19	9.906		
6,750.0	6,676.1	6,750.0	6,669.8	19.0	18.7	-81.45	-236.3	-1,052.6	250.4	225.3	25.16	9.953		
6,800.0	6,721.0	6,797.4	6,709.5	18.9	18.6	-79.98	-210.4	-1,052.6	251.5	226.3	25.12	10.011		
6,850.0	6,764.0	6,843.3	6,745.7	18.9	18.6	-78.64	-182.3	-1,052.6	252.6	227.5	25.05	10.082		
6,900.0	6,804.5	6,888.8	6,779.3	18.9	18.6	-77.38	-151.7	-1,052.6	253.8	228.8	24.97	10.164		
6,950.0	6,842.3	6,933.9	6,810.2	18.8	18.6	-76.23	-118.8	-1,052.6	255.0	230.1	24.87	10.250		
7,000.0	6,877.1	6,978.7	6,838.2	18.8	18.6	-75.18	-83.8	-1,052.6	256.2	231.4	24.78	10.336		
7,050.0	6,908.7	7,023.2	6,863.2	18.8	18.6	-74.24	-47.0	-1,052.6	257.3	232.6	24.74	10.399		
7,100.0	6,936.7	7,067.5	6,885.1	18.8	18.7	-73.40	-8.6	-1,052.6	258.4	233.7	24.64	10.486		
7,150.0	6,961.1	7,111.6	6,904.0	18.9	18.7	-72.69	31.3	-1,052.6	259.4	234.7	24.67	10.513		
7,200.0	6,981.5	7,155.5	6,919.7	19.0	18.8	-72.08	72.2	-1,052.6	260.2	235.4	24.77	10.505		
7,250.0	6,998.0	7,200.0	6,932.3	19.1	19.0	-71.59	114.9	-1,052.6	260.9	235.9	24.98	10.446		
7,300.0	7,010.2	7,242.8	6,941.3	19.2	19.1	-71.23	156.8	-1,052.6	261.5	236.2	25.30	10.335		
7,350.0	7,018.1	7,286.4	6,947.2	19.4	19.3	-70.98	199.9	-1,052.5	261.8	236.1	25.75	10.166		
7,400.0	7,021.8	7,329.9	6,949.9	19.7	19.6	-70.86	243.3	-1,052.5	262.0	235.7	26.34	9.949		
7,416.6	7,022.0	7,344.5	6,950.0	19.8	19.6	-70.84	258.0	-1,052.5	262.1	235.5	26.56	9.867		
7,500.0	7,022.0	7,427.9	6,950.0	20.3	20.1	-70.84	341.4	-1,052.5	262.0	234.1	27.95	9.376		
7,600.0	7,022.0	7,527.9	6,950.0	21.0	20.9	-70.84	441.4	-1,052.5	262.0	232.2	29.85	8.778		
7,700.0	7,022.0	7,627.9	6,950.0	21.8	21.7	-70.84	541.4	-1,052.5	262.0	230.0	31.99	8.192		
7,800.0	7,022.0	7,727.9	6,950.0	22.8	22.7	-70.84	641.4	-1,052.5	262.0	227.7	34.31	7.637		
7,900.0	7,022.0	7,827.9	6,950.0	23.8	23.8	-70.84	741.4	-1,052.5	262.0	225.2	36.78	7.123		
8,000.0	7,022.0	7,927.9	6,950.0	24.9	24.9	-70.84	841.4	-1,052.5	262.0	222.6	39.38	6.653		
8,100.0	7,022.0	8,027.9	6,950.0	26.1	26.1	-70.84	941.4	-1,052.5	262.0	219.9	42.08	6.226		
8,200.0	7,022.0	8,127.9	6,950.0	27.3	27.4	-70.84	1,041.4	-1,052.5	262.0	217.1	44.87	5.839		
8,300.0	7,022.0	8,227.9	6,950.0	28.6	28.7	-70.84	1,141.4	-1,052.5	262.0	214.3	47.72	5.490		
8,400.0	7,022.0	8,327.9	6,950.0	30.0	30.0	-70.84	1,241.4	-1,052.5	262.0	211.3	50.63	5.175		
8,500.0	7,022.0	8,427.9	6,950.0	31.4	31.4	-70.84	1,341.4	-1,052.5	262.0	208.4	53.58	4.889		
8,600.0	7,022.0	8,527.9	6,950.0	32.8	32.9	-70.83	1,441.4	-1,052.4	262.0	205.4	56.58	4.630		
8,700.0	7,022.0	8,627.9	6,950.0	34.3	34.3	-70.83	1,541.4	-1,052.4	262.0	202.3	59.60	4.395		
8,800.0	7,022.0	8,727.9	6,950.0	35.7	35.8	-70.83	1,641.4	-1,052.4	261.9	199.3	62.66	4.180		
8,900.0	7,022.0	8,827.9	6,950.0	37.2	37.3	-70.83	1,741.4	-1,052.4	261.9	196.2	65.75	3.984		
9,000.0	7,022.0	8,927.9	6,950.0	38.8	38.9	-70.83	1,841.4	-1,052.4	261.9	193.1	68.85	3.804		
9,100.0	7,022.0	9,027.9	6,950.0	40.3	40.4	-70.83	1,941.4	-1,052.4	261.9	189.9	71.97	3.639		
9,200.0	7,022.0	9,127.9	6,950.0	41.9	42.0	-70.83	2,041.4	-1,052.4	261.9	186.8	75.11	3.487		
9,300.0	7,022.0	9,227.9	6,950.0	43.5	43.6	-70.83	2,141.4	-1,052.4	261.9	183.6	78.27	3.346		
9,400.0	7,022.0	9,327.9	6,950.0	45.0	45.2	-70.83	2,241.4	-1,052.4	261.9	180.5	81.44	3.216		
9,500.0	7,022.0	9,427.9	6,950.0	46.6	46.8	-70.83	2,341.4	-1,052.4	261.9	177.3	84.61	3.095		
9,600.0	7,022.0	9,527.9	6,950.0	48.3	48.4	-70.83	2,441.4	-1,052.4	261.9	174.1	87.80	2.983		
9,700.0	7,022.0	9,627.9	6,950.0	49.9	50.0	-70.83	2,541.4	-1,052.4	261.9	170.9	91.00	2.878		
9,800.0	7,022.0	9,727.9	6,950.0	51.5	51.6	-70.83	2,641.4	-1,052.4	261.9	167.7	94.21	2.780		
9,900.0	7,022.0	9,827.9	6,950.0	53.1	53.3	-70.83	2,741.4	-1,052.3	261.9	164.4	97.42	2.688		
10,000.0	7,022.0	9,927.9	6,950.0	54.8	54.9	-70.83	2,841.4	-1,052.3	261.8	161.2	100.64	2.602		
10,100.0	7,022.0	10,027.9	6,950.0	56.4	56.6	-70.83	2,941.4	-1,052.3	261.8	158.0	103.87	2.521		
10,200.0	7,022.0	10,127.9	6,950.0	58.1	58.2	-70.82	3,041.4	-1,052.3	261.8	154.7	107.10	2.445		
10,300.0	7,022.0	10,227.9	6,950.0	59.8	59.9	-70.82	3,141.4	-1,052.3	261.8	151.5	110.33	2.373		
10,400.0	7,022.0	10,327.9	6,950.0	61.4	61.6	-70.82	3,241.4	-1,052.3	261.8	148.2	113.58	2.305		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3L-20H-N264 - HZ - 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	
10,500.0	7,022.0	10,427.9	6,950.0	63.1	63.2	-70.82	3,341.4	-1,052.3	261.8	145.0	116.82	2.241		
10,600.0	7,022.0	10,527.9	6,950.0	64.8	64.9	-70.82	3,441.4	-1,052.3	261.8	141.7	120.07	2.180		
10,700.0	7,022.0	10,627.9	6,950.0	66.5	66.6	-70.82	3,541.4	-1,052.3	261.8	138.5	123.32	2.123		
10,800.0	7,022.0	10,727.9	6,950.0	68.1	68.3	-70.82	3,641.4	-1,052.3	261.8	135.2	126.58	2.068		
10,900.0	7,022.0	10,827.9	6,950.0	69.8	70.0	-70.82	3,741.4	-1,052.3	261.8	131.9	129.84	2.016		
11,000.0	7,022.0	10,927.9	6,950.0	71.5	71.7	-70.82	3,841.4	-1,052.3	261.8	128.7	133.10	1.967		
11,100.0	7,022.0	11,027.9	6,950.0	73.2	73.4	-70.82	3,941.4	-1,052.3	261.8	125.4	136.36	1.920		
11,200.0	7,022.0	11,127.9	6,950.0	74.9	75.1	-70.82	4,041.4	-1,052.2	261.8	122.1	139.63	1.875		
11,300.0	7,022.0	11,227.9	6,950.0	76.6	76.8	-70.82	4,141.4	-1,052.2	261.7	118.8	142.90	1.832		
11,400.0	7,022.0	11,327.9	6,950.0	78.3	78.5	-70.82	4,241.4	-1,052.2	261.7	115.6	146.17	1.791		
11,500.0	7,022.0	11,427.9	6,950.0	80.0	80.2	-70.82	4,341.4	-1,052.2	261.7	112.3	149.44	1.751		
11,600.0	7,022.0	11,527.9	6,950.0	81.7	81.9	-70.82	4,441.4	-1,052.2	261.7	109.0	152.71	1.714		
11,635.7	7,022.0	11,563.6	6,950.0	82.3	82.5	-70.82	4,477.0	-1,052.2	261.7	107.8	153.88	1.701		
11,645.9	7,022.0	11,572.7	6,950.0	82.5	82.7	-70.82	4,486.2	-1,052.2	261.7	107.5	154.20	1.697 ES, SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4B-20H-O264 - HZ - 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	89.90	0.0	7.6	7.6					
100.0	100.0	100.0	100.0	0.1	0.1	89.90	0.0	7.6	7.6	7.3	0.24			
200.0	200.0	200.0	200.0	0.3	0.3	89.90	0.0	7.6	7.6	7.0	0.59	12.725 CC, ES		
300.0	300.0	300.1	300.1	0.5	0.5	-161.50	-0.2	7.2	8.8	7.9	0.94	9.336		
400.0	399.8	400.4	400.3	0.7	0.7	-162.38	-1.9	4.1	10.6	9.3	1.29	8.190		
500.0	499.5	500.8	500.4	0.9	0.9	-161.20	-5.2	-2.1	12.6	10.9	1.66	7.583		
600.0	598.7	601.2	600.3	1.2	1.1	-158.81	-10.1	-11.4	14.7	12.6	2.04	7.200		
659.8	657.9	661.0	659.6	1.3	1.3	-158.08	-13.6	-17.9	16.5	14.3	2.27	7.288		
700.0	697.5	701.1	699.5	1.5	1.4	-158.19	-15.9	-22.2	18.2	15.8	2.43	7.498		
800.0	796.2	801.0	798.6	1.8	1.6	-158.39	-21.7	-33.0	22.3	19.5	2.82	7.911		
900.0	894.9	900.9	897.8	2.1	1.9	-158.52	-27.5	-43.8	26.4	23.2	3.21	8.217		
1,000.0	993.7	1,000.8	997.0	2.4	2.2	-158.62	-33.3	-54.6	30.5	26.9	3.61	8.453		
1,100.0	1,092.4	1,100.8	1,096.1	2.8	2.4	-158.70	-39.1	-65.4	34.6	30.6	4.01	8.640		
1,200.0	1,191.1	1,200.7	1,195.3	3.1	2.7	-158.76	-44.9	-76.2	38.8	34.4	4.41	8.791		
1,300.0	1,289.8	1,300.6	1,294.4	3.4	3.0	-158.80	-50.7	-86.9	42.9	38.1	4.81	8.917		
1,400.0	1,388.5	1,400.5	1,393.6	3.7	3.2	-158.84	-56.4	-97.7	47.0	41.8	5.21	9.022		
1,500.0	1,487.2	1,500.4	1,492.8	4.1	3.5	-158.88	-62.2	-108.5	51.1	45.5	5.61	9.112		
1,600.0	1,585.9	1,600.3	1,591.9	4.4	3.8	-158.91	-68.0	-119.3	55.2	49.2	6.01	9.189		
1,700.0	1,684.7	1,700.3	1,691.1	4.7	4.1	-158.93	-73.8	-130.1	59.3	52.9	6.41	9.257		
1,800.0	1,783.4	1,800.2	1,790.3	5.0	4.3	-158.95	-79.6	-140.9	63.4	56.6	6.81	9.316		
1,900.0	1,882.1	1,900.1	1,889.4	5.4	4.6	-158.97	-85.4	-151.7	67.6	60.3	7.21	9.368		
2,000.0	1,980.8	2,000.0	1,988.6	5.7	4.9	-158.99	-91.2	-162.5	71.7	64.1	7.61	9.415		
2,100.0	2,079.5	2,099.9	2,087.7	6.0	5.2	-159.00	-97.0	-173.3	75.8	67.8	8.01	9.457		
2,200.0	2,178.2	2,199.8	2,186.9	6.4	5.4	-159.01	-102.7	-184.1	79.9	71.5	8.42	9.495		
2,300.0	2,276.9	2,299.7	2,286.1	6.7	5.7	-159.03	-108.5	-194.9	84.0	75.2	8.82	9.529		
2,400.0	2,375.7	2,399.7	2,385.2	7.0	6.0	-159.04	-114.3	-205.7	88.1	78.9	9.22	9.560		
2,500.0	2,474.4	2,499.6	2,484.4	7.4	6.3	-159.05	-120.1	-216.5	92.2	82.6	9.62	9.589		
2,600.0	2,573.1	2,599.5	2,583.5	7.7	6.6	-159.06	-125.9	-227.3	96.4	86.3	10.02	9.615		
2,700.0	2,671.8	2,699.4	2,682.7	8.0	6.8	-159.06	-131.7	-238.1	100.5	90.1	10.42	9.639		
2,800.0	2,770.5	2,799.3	2,781.9	8.4	7.1	-159.07	-137.5	-248.9	104.6	93.8	10.83	9.662		
2,900.0	2,869.2	2,899.2	2,881.0	8.7	7.4	-159.08	-143.2	-259.6	108.7	97.5	11.23	9.682		
3,000.0	2,967.9	2,999.2	2,980.2	9.0	7.7	-159.08	-149.0	-270.4	112.8	101.2	11.63	9.702		
3,100.0	3,066.7	3,099.1	3,079.4	9.3	7.9	-159.09	-154.8	-281.2	116.9	104.9	12.03	9.720		
3,200.0	3,165.4	3,199.0	3,178.5	9.7	8.2	-159.10	-160.6	-292.0	121.1	108.6	12.43	9.736		
3,300.0	3,264.1	3,298.9	3,277.7	10.0	8.5	-159.10	-166.4	-302.8	125.2	112.3	12.83	9.752		
3,400.0	3,362.8	3,398.8	3,376.8	10.3	8.8	-159.11	-172.2	-313.6	129.3	116.0	13.24	9.767		
3,500.0	3,461.5	3,498.7	3,476.0	10.7	9.0	-159.11	-178.0	-324.4	133.4	119.8	13.64	9.781		
3,600.0	3,560.2	3,598.6	3,575.2	11.0	9.3	-159.12	-183.8	-335.2	137.5	123.5	14.04	9.794		
3,700.0	3,658.9	3,698.6	3,674.3	11.3	9.6	-159.12	-189.5	-346.0	141.6	127.2	14.44	9.806		
3,800.0	3,757.7	3,798.5	3,773.5	11.7	9.9	-159.12	-195.3	-356.8	145.7	130.9	14.84	9.818		
3,900.0	3,856.4	3,898.4	3,872.7	12.0	10.1	-159.13	-201.1	-367.6	149.9	134.6	15.25	9.829		
4,000.0	3,955.1	3,998.3	3,971.8	12.3	10.4	-159.13	-206.9	-378.4	154.0	138.3	15.65	9.839		
4,100.0	4,053.8	4,098.2	4,071.0	12.7	10.7	-159.13	-212.7	-389.2	158.1	142.0	16.05	9.849		
4,200.0	4,152.5	4,198.1	4,170.1	13.0	11.0	-159.14	-218.5	-400.0	162.2	145.7	16.45	9.858		
4,300.0	4,251.2	4,298.1	4,269.3	13.3	11.3	-159.14	-224.3	-410.8	166.3	149.5	16.85	9.867		
4,400.0	4,350.0	4,398.0	4,368.5	13.7	11.5	-159.14	-230.1	-421.5	170.4	153.2	17.26	9.876		
4,500.0	4,448.7	4,497.9	4,467.6	14.0	11.8	-159.15	-235.8	-432.3	174.5	156.9	17.66	9.884		
4,600.0	4,547.4	4,597.8	4,566.8	14.3	12.1	-159.15	-241.6	-443.1	178.7	160.6	18.06	9.892		
4,700.0	4,646.1	4,697.7	4,665.9	14.6	12.4	-159.15	-247.4	-453.9	182.8	164.3	18.46	9.899		
4,800.0	4,744.8	4,797.6	4,765.1	15.0	12.6	-159.15	-253.2	-464.7	186.9	168.0	18.87	9.906		
4,900.0	4,843.5	4,897.5	4,864.3	15.3	12.9	-159.15	-259.0	-475.5	191.0	171.7	19.27	9.913		
5,000.0	4,942.2	4,997.5	4,963.4	15.6	13.2	-159.16	-264.8	-486.3	195.1	175.4	19.67	9.920		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4B-20H-O264 - HZ - 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	5,041.0	5,097.4	5,062.6	16.0	13.5	-159.16	-270.6	-497.1	199.2	179.2	20.07	9.926		
5,200.0	5,139.7	5,197.3	5,161.8	16.3	13.7	-159.16	-276.4	-507.9	203.3	182.9	20.47	9.932		
5,300.0	5,238.4	5,297.2	5,260.9	16.6	14.0	-159.16	-282.1	-518.7	207.5	186.6	20.88	9.938		
5,400.0	5,337.1	5,397.1	5,360.1	17.0	14.3	-159.16	-287.9	-529.5	211.6	190.3	21.28	9.943		
5,500.0	5,435.8	5,497.0	5,459.2	17.3	14.6	-159.17	-293.7	-540.3	215.7	194.0	21.68	9.948		
5,607.7	5,542.1	5,604.7	5,566.1	17.7	14.9	-159.17	-299.9	-551.9	220.1	198.0	22.11	9.954		
5,700.0	5,633.5	5,696.3	5,657.0	17.9	15.1	-159.05	-305.3	-561.8	222.5	200.0	22.51	9.888		
5,800.0	5,732.8	5,789.9	5,750.1	18.2	15.3	-158.85	-309.8	-570.3	223.7	200.8	22.90	9.770		
5,900.0	5,832.5	5,883.4	5,843.4	18.3	15.5	-158.72	-313.0	-576.2	224.5	201.3	23.24	9.660		
6,000.0	5,932.5	5,977.0	5,936.8	18.5	15.6	-158.65	-314.7	-579.3	225.0	201.4	23.54	9.558		
6,067.5	6,000.0	6,040.1	6,000.0	18.5	15.7	90.00	-315.0	-579.9	225.1	201.3	23.72	9.490		
6,100.0	6,032.5	6,072.6	6,032.5	18.6	15.8	90.00	-315.0	-579.9	225.1	201.2	23.82	9.450		
6,200.0	6,132.5	6,172.6	6,132.5	18.7	15.9	90.00	-315.0	-579.9	225.1	200.9	24.13	9.328		
6,300.0	6,232.5	6,272.6	6,232.5	18.8	16.0	90.00	-315.0	-579.9	225.1	200.6	24.44	9.209		
6,400.0	6,332.5	6,372.6	6,332.5	18.9	16.1	90.00	-315.0	-579.9	225.1	200.3	24.75	9.093		
6,500.0	6,432.5	6,472.6	6,432.5	19.0	16.2	90.00	-315.0	-579.9	225.1	200.0	25.06	8.979		
6,516.6	6,449.0	6,489.2	6,449.0	19.0	16.2	90.00	-315.0	-579.9	225.1	199.9	25.12	8.961		
6,522.4	6,454.9	6,495.0	6,454.9	19.0	16.3	90.00	-315.0	-579.9	225.1	199.9	25.13	8.954		
6,550.0	6,482.4	6,522.6	6,482.4	19.0	16.3	90.24	-315.0	-579.9	225.1	199.8	25.25	8.912		
6,600.0	6,532.2	6,572.3	6,532.2	19.0	16.4	91.52	-315.0	-579.9	225.1	199.5	25.60	8.795		
6,650.0	6,581.3	6,621.4	6,581.3	19.0	16.4	93.82	-315.0	-579.9	225.6	199.5	26.10	8.642		
6,700.0	6,629.3	6,671.9	6,631.7	19.0	16.4	96.67	-312.8	-579.9	226.7	200.0	26.63	8.513		
6,750.0	6,676.1	6,723.5	6,682.8	19.0	16.5	99.47	-306.1	-579.9	228.3	201.3	27.02	8.452		
6,800.0	6,721.0	6,776.3	6,734.3	18.9	16.4	102.19	-294.4	-579.9	230.5	203.3	27.24	8.462		
6,850.0	6,764.0	6,830.3	6,785.6	18.9	16.4	104.79	-277.6	-579.9	233.1	205.9	27.29	8.544		
6,900.0	6,804.5	6,885.5	6,836.2	18.9	16.4	107.27	-255.5	-579.9	236.1	209.0	27.15	8.699		
6,950.0	6,842.3	6,942.0	6,885.5	18.8	16.3	109.58	-228.0	-579.9	239.4	212.6	26.84	8.921		
7,000.0	6,877.1	6,999.8	6,932.9	18.8	16.3	111.72	-195.0	-579.9	242.8	216.4	26.39	9.202		
7,050.0	6,908.7	7,058.9	6,977.7	18.8	16.2	113.65	-156.4	-579.9	246.3	220.4	25.85	9.528		
7,100.0	6,936.7	7,119.2	7,019.1	18.8	16.2	115.37	-112.6	-579.9	249.6	224.3	25.28	9.873		
7,150.0	6,961.1	7,180.7	7,056.2	18.9	16.2	116.86	-63.6	-579.9	252.7	227.9	24.76	10.205		
7,200.0	6,981.5	7,243.2	7,088.4	19.0	16.3	118.11	-10.1	-579.9	255.5	231.1	24.39	10.474		
7,250.0	6,998.0	7,306.6	7,114.9	19.1	16.4	119.11	47.5	-579.9	257.8	233.6	24.23	10.639		
7,300.0	7,010.2	7,370.8	7,135.1	19.2	16.6	119.86	108.4	-579.9	259.6	235.3	24.37	10.653		
7,350.0	7,018.1	7,435.5	7,148.5	19.4	16.9	120.35	171.7	-579.9	260.8	236.0	24.84	10.500		
7,400.0	7,021.8	7,500.5	7,154.6	19.7	17.2	120.57	236.4	-579.9	261.4	235.7	25.66	10.186		
7,416.6	7,022.0	7,522.1	7,155.0	19.8	17.3	120.58	258.0	-579.9	261.4	235.4	26.01	10.052		
7,500.0	7,022.0	7,605.6	7,155.0	20.3	17.9	120.58	341.4	-579.9	261.4	234.2	27.22	9.605		
7,600.0	7,022.0	7,705.6	7,155.0	21.0	18.7	120.58	441.4	-579.9	261.4	232.5	28.89	9.049		
7,700.0	7,022.0	7,805.6	7,155.0	21.8	19.7	120.58	541.4	-579.9	261.4	230.7	30.77	8.497		
7,800.0	7,022.0	7,905.6	7,155.0	22.8	20.7	120.58	641.4	-579.9	261.4	228.6	32.82	7.966		
7,900.0	7,022.0	8,005.6	7,155.0	23.8	21.9	120.58	741.4	-579.9	261.4	226.4	35.01	7.467		
8,000.0	7,022.0	8,105.6	7,155.0	24.9	23.1	120.58	841.4	-579.9	261.4	224.1	37.32	7.005		
8,100.0	7,022.0	8,205.6	7,155.0	26.1	24.3	120.58	941.4	-579.9	261.4	221.7	39.73	6.581		
8,200.0	7,022.0	8,305.6	7,155.0	27.3	25.7	120.58	1,041.4	-579.9	261.4	219.2	42.21	6.193		
8,300.0	7,022.0	8,405.6	7,155.0	28.6	27.1	120.58	1,141.4	-579.9	261.4	216.7	44.77	5.840		
8,400.0	7,022.0	8,505.6	7,155.0	30.0	28.5	120.58	1,241.4	-579.9	261.4	214.1	47.37	5.518		
8,500.0	7,022.0	8,605.6	7,155.0	31.4	30.0	120.58	1,341.4	-579.9	261.4	211.4	50.03	5.225		
8,600.0	7,022.0	8,705.6	7,155.0	32.8	31.4	120.58	1,441.4	-579.9	261.4	208.7	52.73	4.958		
8,700.0	7,022.0	8,805.6	7,155.0	34.3	33.0	120.58	1,541.4	-579.9	261.4	206.0	55.46	4.714		
8,800.0	7,022.0	8,905.6	7,155.0	35.7	34.5	120.58	1,641.4	-579.9	261.4	203.2	58.21	4.491		
8,900.0	7,022.0	9,005.6	7,155.0	37.2	36.1	120.58	1,741.4	-579.9	261.4	200.4	61.00	4.286		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4B-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
9,000.0	7,022.0	9,105.6	7,155.0	38.8	37.6	120.58	1,841.4	-579.9	261.4	197.6	63.81	4.097		
9,100.0	7,022.0	9,205.6	7,155.0	40.3	39.2	120.58	1,941.4	-579.9	261.4	194.8	66.63	3.923		
9,200.0	7,022.0	9,305.6	7,155.0	41.9	40.8	120.58	2,041.4	-579.9	261.4	192.0	69.48	3.763		
9,300.0	7,022.0	9,405.6	7,155.0	43.5	42.4	120.58	2,141.4	-579.9	261.4	189.1	72.33	3.614		
9,400.0	7,022.0	9,505.6	7,155.0	45.0	44.1	120.58	2,241.4	-579.9	261.4	186.2	75.20	3.476		
9,500.0	7,022.0	9,605.6	7,155.0	46.6	45.7	120.58	2,341.4	-579.9	261.4	183.3	78.09	3.348		
9,600.0	7,022.0	9,705.6	7,155.0	48.3	47.4	120.58	2,441.4	-579.9	261.4	180.5	80.98	3.228		
9,700.0	7,022.0	9,805.6	7,155.0	49.9	49.0	120.58	2,541.4	-579.9	261.4	177.6	83.88	3.117		
9,800.0	7,022.0	9,905.6	7,155.0	51.5	50.7	120.58	2,641.4	-579.9	261.4	174.6	86.79	3.012		
9,900.0	7,022.0	10,005.6	7,155.0	53.1	52.3	120.58	2,741.4	-579.9	261.4	171.7	89.71	2.914		
10,000.0	7,022.0	10,105.6	7,155.0	54.8	54.0	120.58	2,841.4	-579.9	261.4	168.8	92.64	2.822		
10,100.0	7,022.0	10,205.6	7,155.0	56.4	55.7	120.58	2,941.4	-579.9	261.4	165.9	95.57	2.736		
10,200.0	7,022.0	10,305.6	7,155.0	58.1	57.4	120.58	3,041.4	-579.9	261.4	162.9	98.51	2.654		
10,300.0	7,022.0	10,405.6	7,155.0	59.8	59.0	120.58	3,141.4	-579.9	261.4	160.0	101.45	2.577		
10,400.0	7,022.0	10,505.6	7,155.0	61.4	60.7	120.58	3,241.4	-579.9	261.4	157.0	104.40	2.504		
10,500.0	7,022.0	10,605.6	7,155.0	63.1	62.4	120.58	3,341.4	-579.9	261.4	154.1	107.35	2.435		
10,600.0	7,022.0	10,705.6	7,155.0	64.8	64.1	120.58	3,441.4	-579.9	261.4	151.1	110.31	2.370		
10,700.0	7,022.0	10,805.6	7,155.0	66.5	65.8	120.58	3,541.4	-579.9	261.4	148.2	113.27	2.308		
10,800.0	7,022.0	10,905.6	7,155.0	68.1	67.5	120.58	3,641.4	-579.9	261.4	145.2	116.23	2.249		
10,900.0	7,022.0	11,005.6	7,155.0	69.8	69.2	120.58	3,741.4	-579.9	261.4	142.2	119.20	2.193		
11,000.0	7,022.0	11,105.6	7,155.0	71.5	70.9	120.58	3,841.4	-579.9	261.4	139.3	122.17	2.140		
11,100.0	7,022.0	11,205.6	7,155.0	73.2	72.6	120.58	3,941.4	-579.9	261.4	136.3	125.14	2.089		
11,200.0	7,022.0	11,305.6	7,155.0	74.9	74.3	120.58	4,041.4	-579.9	261.4	133.3	128.12	2.041		
11,300.0	7,022.0	11,405.6	7,155.0	76.6	76.1	120.58	4,141.4	-579.9	261.4	130.4	131.09	1.994		
11,400.0	7,022.0	11,505.6	7,155.0	78.3	77.8	120.58	4,241.4	-579.9	261.4	127.4	134.07	1.950		
11,500.0	7,022.0	11,605.6	7,155.0	80.0	79.5	120.58	4,341.4	-579.9	261.4	124.4	137.05	1.908		
11,600.0	7,022.0	11,705.6	7,155.0	81.7	81.2	120.58	4,441.4	-579.9	261.5	121.4	140.04	1.867		
11,645.9	7,022.0	11,751.5	7,155.0	82.5	82.0	120.58	4,487.3	-579.9	261.5	120.0	141.41	1.849 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4C-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program:		0-Geolink MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.90	0.0	15.1	15.1					
100.0	100.0	99.0	99.0	0.1	0.1	89.90	0.0	15.1	15.1	14.9	0.24	62.117	CC, ES	
200.0	200.0	199.0	199.0	0.3	0.3	89.90	0.0	15.1	15.1	14.5	0.59	25.525		
300.0	300.0	299.0	299.0	0.5	0.5	-160.88	0.0	15.1	16.7	15.8	0.94	17.793		
400.0	399.8	399.4	399.4	0.7	0.6	-162.75	-1.1	13.8	20.3	19.0	1.29	15.736		
500.0	499.5	500.0	499.8	0.9	0.8	-161.64	-4.4	9.7	24.4	22.8	1.65	14.783		
600.0	598.7	600.3	599.7	1.2	1.1	-159.26	-9.8	3.3	29.3	27.3	2.03	14.431		
659.8	657.9	660.0	659.2	1.3	1.2	-158.84	-13.3	-0.9	33.5	31.2	2.26	14.826		
700.0	697.5	700.0	699.1	1.5	1.3	-158.87	-15.6	-3.6	36.7	34.3	2.42	15.201		
800.0	796.2	799.7	798.3	1.8	1.5	-158.92	-21.3	-10.5	44.7	41.9	2.81	15.935		
900.0	894.9	899.3	897.6	2.1	1.7	-158.96	-27.1	-17.4	52.7	49.5	3.20	16.476		
1,000.0	993.7	999.0	996.9	2.4	1.9	-158.99	-32.8	-24.3	60.7	57.1	3.60	16.891		
1,100.0	1,092.4	1,098.7	1,096.2	2.8	2.2	-159.01	-38.6	-31.2	68.7	64.8	3.99	17.218		
1,200.0	1,191.1	1,198.4	1,195.4	3.1	2.4	-159.02	-44.3	-38.1	76.8	72.4	4.39	17.482		
1,300.0	1,289.8	1,298.1	1,294.7	3.4	2.6	-159.04	-50.1	-45.0	84.8	80.0	4.79	17.701		
1,400.0	1,388.5	1,397.7	1,394.0	3.7	2.9	-159.05	-55.8	-51.9	92.8	87.6	5.19	17.883		
1,500.0	1,487.2	1,497.4	1,493.3	4.1	3.1	-159.06	-61.6	-58.8	100.8	95.2	5.59	18.039		
1,600.0	1,585.9	1,597.1	1,592.5	4.4	3.3	-159.07	-67.3	-65.7	108.8	102.8	5.99	18.173		
1,700.0	1,684.7	1,696.8	1,691.8	4.7	3.6	-159.07	-73.1	-72.6	116.8	110.4	6.39	18.289		
1,800.0	1,783.4	1,796.5	1,791.1	5.0	3.8	-159.08	-78.8	-79.5	124.8	118.0	6.79	18.391		
1,900.0	1,882.1	1,896.1	1,890.4	5.4	4.0	-159.08	-84.6	-86.4	132.8	125.6	7.19	18.481		
2,000.0	1,980.8	1,995.8	1,989.6	5.7	4.3	-159.09	-90.3	-93.3	140.8	133.2	7.59	18.561		
2,100.0	2,079.5	2,095.5	2,088.9	6.0	4.5	-159.09	-96.0	-100.2	148.8	140.8	7.99	18.633		
2,200.0	2,178.2	2,195.2	2,188.2	6.4	4.7	-159.10	-101.8	-107.1	156.8	148.4	8.39	18.698		
2,300.0	2,276.9	2,294.9	2,287.4	6.7	5.0	-159.10	-107.5	-114.0	164.8	156.0	8.79	18.757		
2,400.0	2,375.7	2,394.5	2,386.7	7.0	5.2	-159.10	-113.3	-120.9	172.8	163.7	9.19	18.810		
2,500.0	2,474.4	2,494.2	2,486.0	7.4	5.4	-159.11	-119.0	-127.8	180.8	171.3	9.59	18.859		
2,600.0	2,573.1	2,593.9	2,585.3	7.7	5.7	-159.11	-124.8	-134.7	188.9	178.9	9.99	18.904		
2,700.0	2,671.8	2,693.6	2,684.5	8.0	5.9	-159.11	-130.5	-141.6	196.9	186.5	10.39	18.945		
2,800.0	2,770.5	2,793.2	2,783.8	8.4	6.1	-159.11	-136.3	-148.5	204.9	194.1	10.79	18.983		
2,900.0	2,869.2	2,892.9	2,883.1	8.7	6.4	-159.11	-142.0	-155.4	212.9	201.7	11.19	19.019		
3,000.0	2,967.9	2,992.6	2,982.4	9.0	6.6	-159.12	-147.8	-162.3	220.9	209.3	11.59	19.051		
3,100.0	3,066.7	3,092.3	3,081.6	9.3	6.8	-159.12	-153.5	-169.1	228.9	216.9	12.00	19.082		
3,200.0	3,165.4	3,192.0	3,180.9	9.7	7.1	-159.12	-159.3	-176.0	236.9	224.5	12.40	19.110		
3,300.0	3,264.1	3,291.6	3,280.2	10.0	7.3	-159.12	-165.0	-182.9	244.9	232.1	12.80	19.137		
3,400.0	3,362.8	3,391.3	3,379.5	10.3	7.5	-159.12	-170.8	-189.8	252.9	239.7	13.20	19.162		
3,500.0	3,461.5	3,491.0	3,478.7	10.7	7.8	-159.12	-176.5	-196.7	260.9	247.3	13.60	19.186		
3,600.0	3,560.2	3,590.7	3,578.0	11.0	8.0	-159.13	-182.3	-203.6	268.9	254.9	14.00	19.208		
3,700.0	3,658.9	3,690.4	3,677.3	11.3	8.2	-159.13	-188.0	-210.5	276.9	262.5	14.40	19.229		
3,800.0	3,757.7	3,790.0	3,776.6	11.7	8.5	-159.13	-193.7	-217.4	284.9	270.1	14.80	19.248		
3,900.0	3,856.4	3,889.7	3,875.8	12.0	8.7	-159.13	-199.5	-224.3	292.9	277.7	15.20	19.267		
4,000.0	3,955.1	3,989.4	3,975.1	12.3	8.9	-159.13	-205.2	-231.2	301.0	285.4	15.61	19.285		
4,100.0	4,053.8	4,089.1	4,074.4	12.7	9.2	-159.13	-211.0	-238.1	309.0	293.0	16.01	19.301		
4,200.0	4,152.5	4,188.8	4,173.7	13.0	9.4	-159.13	-216.7	-245.0	317.0	300.6	16.41	19.317		
4,300.0	4,251.2	4,288.4	4,272.9	13.3	9.6	-159.13	-222.5	-251.9	325.0	308.2	16.81	19.332		
4,400.0	4,350.0	4,388.1	4,372.2	13.7	9.9	-159.13	-228.2	-258.8	333.0	315.8	17.21	19.347		
4,500.0	4,448.7	4,487.8	4,471.5	14.0	10.1	-159.13	-234.0	-265.7	341.0	323.4	17.61	19.361		
4,600.0	4,547.4	4,587.5	4,570.7	14.3	10.4	-159.13	-239.7	-272.6	349.0	331.0	18.01	19.374		
4,700.0	4,646.1	4,687.1	4,670.0	14.6	10.6	-159.14	-245.5	-279.5	357.0	338.6	18.42	19.386		
4,800.0	4,744.8	4,786.8	4,769.3	15.0	10.8	-159.14	-251.2	-286.4	365.0	346.2	18.82	19.398		
4,900.0	4,843.5	4,886.5	4,868.6	15.3	11.1	-159.14	-257.0	-293.3	373.0	353.8	19.22	19.410		
5,000.0	4,942.2	4,986.2	4,967.8	15.6	11.3	-159.14	-262.7	-300.2	381.0	361.4	19.62	19.421		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4C-20H-O264 - HZ - 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	5,041.0	5,085.9	5,067.1	16.0	11.5	-159.14	-268.5	-307.1	389.0	369.0	20.02	19.432				
5,200.0	5,139.7	5,185.5	5,166.4	16.3	11.8	-159.14	-274.2	-314.0	397.0	376.6	20.42	19.442				
5,300.0	5,238.4	5,285.2	5,265.7	16.6	12.0	-159.14	-279.9	-320.9	405.0	384.2	20.82	19.451				
5,400.0	5,337.1	5,384.9	5,364.9	17.0	12.2	-159.14	-285.7	-327.8	413.1	391.8	21.22	19.461				
5,500.0	5,435.8	5,484.6	5,464.2	17.3	12.5	-159.14	-291.4	-334.7	421.1	399.4	21.63	19.470				
5,607.7	5,542.1	5,591.9	5,571.1	17.7	12.7	-159.14	-297.6	-342.1	429.7	407.6	22.06	19.479				
5,700.0	5,633.5	5,684.0	5,662.9	17.9	12.9	-159.11	-302.9	-348.5	435.7	413.3	22.44	19.414				
5,800.0	5,732.8	5,781.8	5,760.2	18.2	13.2	-158.92	-308.5	-355.2	439.1	416.3	22.86	19.212				
5,900.0	5,832.5	5,871.2	5,849.4	18.3	13.3	-158.75	-312.4	-359.9	440.9	417.7	23.21	18.998				
6,000.0	5,932.5	5,960.6	5,938.7	18.5	13.5	-158.65	-314.6	-362.4	441.9	418.4	23.51	18.797				
6,067.5	6,000.0	6,021.9	6,000.0	18.5	13.5	90.00	-315.0	-362.9	442.1	418.4	23.69	18.661				
6,078.7	6,011.2	6,032.0	6,010.2	18.5	13.6	90.00	-315.0	-362.9	442.1	418.4	23.72	18.635				
6,100.0	6,032.5	6,053.3	6,031.5	18.6	13.6	90.00	-315.0	-362.9	442.1	418.3	23.79	18.584				
6,200.0	6,132.5	6,153.3	6,131.5	18.7	13.7	90.00	-315.0	-362.9	442.1	418.0	24.10	18.345				
6,300.0	6,232.5	6,253.3	6,231.5	18.8	13.9	90.00	-315.0	-362.9	442.1	417.7	24.41	18.111				
6,400.0	6,332.5	6,353.3	6,331.5	18.9	14.0	90.00	-315.0	-362.9	442.1	417.4	24.72	17.882				
6,436.0	6,368.5	6,389.3	6,367.4	18.9	14.0	89.98	-314.9	-362.9	442.1	417.3	24.83	17.805				
6,500.0	6,432.5	6,452.8	6,430.7	19.0	14.1	89.36	-310.1	-362.9	442.1	417.3	24.88	17.773				
6,516.6	6,449.0	6,469.0	6,446.8	19.0	14.1	89.06	-307.7	-362.9	442.2	417.3	24.86	17.790				
6,550.0	6,482.4	6,501.4	6,478.6	19.0	14.1	88.39	-301.7	-362.9	442.3	417.5	24.79	17.842				
6,600.0	6,532.2	6,550.0	6,525.6	19.0	14.1	87.38	-289.3	-362.9	442.6	418.0	24.65	17.956				
6,650.0	6,581.3	6,596.7	6,569.6	19.0	14.0	86.43	-273.7	-362.8	443.1	418.6	24.49	18.091				
6,700.0	6,629.3	6,643.5	6,612.3	19.0	14.0	85.49	-254.5	-362.8	443.6	419.3	24.32	18.239				
6,750.0	6,676.1	6,689.9	6,652.8	19.0	13.9	84.59	-232.1	-362.8	444.3	420.1	24.16	18.387				
6,800.0	6,721.0	6,735.7	6,691.0	18.9	13.9	83.74	-206.8	-362.7	445.0	421.0	24.02	18.523				
6,850.0	6,764.0	6,781.1	6,726.8	18.9	13.8	82.93	-178.8	-362.7	445.8	421.9	23.92	18.636				
6,900.0	6,804.5	6,826.2	6,760.0	18.9	13.8	82.18	-148.4	-362.6	446.6	422.7	23.86	18.718				
6,950.0	6,842.3	6,870.8	6,790.4	18.8	13.8	81.48	-115.7	-362.6	447.4	423.6	23.85	18.762				
7,000.0	6,877.1	6,915.2	6,818.0	18.8	13.8	80.85	-81.0	-362.5	448.3	424.4	23.89	18.760				
7,050.0	6,908.7	6,959.3	6,842.7	18.8	13.8	80.28	-44.5	-362.4	449.1	425.1	24.01	18.706				
7,100.0	6,936.7	7,003.1	6,864.4	18.8	13.8	79.77	-6.4	-362.4	449.8	425.6	24.17	18.614				
7,150.0	6,961.1	7,046.7	6,883.0	18.9	13.9	79.34	33.0	-362.3	450.5	426.1	24.40	18.462				
7,200.0	6,981.5	7,090.2	6,898.5	19.0	14.1	78.98	73.6	-362.2	451.1	426.4	24.70	18.260				
7,250.0	6,998.0	7,133.5	6,910.9	19.1	14.2	78.69	115.1	-362.2	451.6	426.5	25.07	18.013				
7,300.0	7,010.2	7,176.7	6,920.1	19.2	14.5	78.47	157.3	-362.1	452.0	426.5	25.50	17.726				
7,350.0	7,018.1	7,219.8	6,926.1	19.4	14.7	78.34	200.0	-362.0	452.3	426.3	25.99	17.403				
7,400.0	7,021.8	7,262.9	6,928.8	19.7	15.0	78.27	243.0	-362.0	452.5	426.0	26.53	17.053				
7,416.6	7,022.0	7,277.9	6,929.0	19.8	15.1	78.27	258.0	-361.9	452.5	425.8	26.73	16.928				
7,416.6	7,022.0	7,277.9	6,929.0	19.8	15.1	78.27	258.0	-361.9	452.5	425.8	26.73	16.927				
7,500.0	7,022.0	7,360.5	6,929.0	20.3	15.7	78.27	340.6	-361.8	452.7	424.5	28.17	16.072				
7,600.0	7,022.0	7,460.5	6,929.0	21.0	16.7	78.28	440.6	-361.6	452.8	422.7	30.14	15.025				
7,700.0	7,022.0	7,560.5	6,929.0	21.8	17.7	78.28	540.6	-361.5	453.0	420.6	32.35	14.001				
7,800.0	7,022.0	7,660.5	6,929.0	22.8	18.9	78.29	640.6	-361.3	453.1	418.4	34.77	13.032				
7,900.0	7,022.0	7,760.5	6,929.0	23.8	20.1	78.29	740.6	-361.1	453.3	416.0	37.35	12.138				
8,000.0	7,022.0	7,860.5	6,929.0	24.9	21.4	78.29	840.6	-361.0	453.5	413.4	40.05	11.322				
8,100.0	7,022.0	7,960.5	6,929.0	26.1	22.8	78.30	940.6	-360.8	453.6	410.8	42.87	10.583				
8,200.0	7,022.0	8,060.5	6,929.0	27.3	24.2	78.30	1,040.6	-360.6	453.8	408.0	45.76	9.917				
8,300.0	7,022.0	8,160.5	6,929.0	28.6	25.6	78.31	1,140.6	-360.5	454.0	405.2	48.73	9.316				
8,400.0	7,022.0	8,260.5	6,929.0	30.0	27.1	78.31	1,240.6	-360.3	454.1	402.4	51.76	8.775				
8,500.0	7,022.0	8,360.5	6,929.0	31.4	28.7	78.32	1,340.6	-360.1	454.3	399.5	54.83	8.286				
8,600.0	7,022.0	8,460.5	6,929.0	32.8	30.2	78.32	1,440.6	-360.0	454.5	396.5	57.95	7.843				
8,700.0	7,022.0	8,560.5	6,929.0	34.3	31.8	78.32	1,540.6	-359.8	454.6	393.5	61.10	7.441				

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4C-20H-O264 - HZ - 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		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
8,800.0	7,022.0	8,660.5	6,929.0	35.7	33.4	78.33	1,640.6	-359.6	454.8	390.5	64.27	7.076		
8,900.0	7,022.0	8,760.5	6,929.0	37.2	35.0	78.33	1,740.6	-359.4	455.0	387.5	67.48	6.742		
9,000.0	7,022.0	8,860.5	6,929.0	38.8	36.6	78.34	1,840.6	-359.3	455.1	384.4	70.71	6.437		
9,100.0	7,022.0	8,960.5	6,929.0	40.3	38.2	78.34	1,940.6	-359.1	455.3	381.3	73.95	6.157		
9,200.0	7,022.0	9,060.5	6,929.0	41.9	39.9	78.35	2,040.6	-358.9	455.5	378.2	77.21	5.899		
9,300.0	7,022.0	9,160.5	6,929.0	43.5	41.5	78.35	2,140.6	-358.8	455.6	375.1	80.49	5.660		
9,400.0	7,022.0	9,260.5	6,929.0	45.0	43.2	78.35	2,240.6	-358.6	455.8	372.0	83.78	5.440		
9,500.0	7,022.0	9,360.5	6,929.0	46.6	44.8	78.36	2,340.6	-358.4	456.0	368.9	87.08	5.236		
9,600.0	7,022.0	9,460.5	6,929.0	48.3	46.5	78.36	2,440.6	-358.3	456.1	365.7	90.40	5.046		
9,700.0	7,022.0	9,560.5	6,929.0	49.9	48.2	78.37	2,540.6	-358.1	456.3	362.6	93.72	4.869		
9,800.0	7,022.0	9,660.5	6,929.0	51.5	49.9	78.37	2,640.6	-357.9	456.4	359.4	97.05	4.703		
9,900.0	7,022.0	9,760.5	6,929.0	53.1	51.6	78.38	2,740.6	-357.8	456.6	356.2	100.38	4.549		
10,000.0	7,022.0	9,860.5	6,929.0	54.8	53.3	78.38	2,840.6	-357.6	456.8	353.0	103.73	4.404		
10,100.0	7,022.0	9,960.5	6,929.0	56.4	55.0	78.38	2,940.6	-357.4	456.9	349.9	107.08	4.267		
10,200.0	7,022.0	10,060.5	6,929.0	58.1	56.7	78.39	3,040.6	-357.3	457.1	346.7	110.43	4.139		
10,300.0	7,022.0	10,160.5	6,929.0	59.8	58.4	78.39	3,140.6	-357.1	457.3	343.5	113.79	4.018		
10,400.0	7,022.0	10,260.5	6,929.0	61.4	60.1	78.40	3,240.6	-356.9	457.4	340.3	117.16	3.904		
10,500.0	7,022.0	10,360.5	6,929.0	63.1	61.8	78.40	3,340.6	-356.8	457.6	337.1	120.53	3.797		
10,600.0	7,022.0	10,460.5	6,929.0	64.8	63.5	78.41	3,440.6	-356.6	457.8	333.9	123.90	3.695		
10,700.0	7,022.0	10,560.5	6,929.0	66.5	65.2	78.41	3,540.6	-356.4	457.9	330.7	127.28	3.598		
10,800.0	7,022.0	10,660.5	6,929.0	68.1	66.9	78.41	3,640.6	-356.3	458.1	327.4	130.66	3.506		
10,900.0	7,022.0	10,760.5	6,929.0	69.8	68.6	78.42	3,740.6	-356.1	458.3	324.2	134.04	3.419		
11,000.0	7,022.0	10,860.5	6,929.0	71.5	70.3	78.42	3,840.6	-355.9	458.4	321.0	137.43	3.336		
11,100.0	7,022.0	10,960.5	6,929.0	73.2	72.1	78.43	3,940.6	-355.8	458.6	317.8	140.82	3.257		
11,200.0	7,022.0	11,060.5	6,929.0	74.9	73.8	78.43	4,040.6	-355.6	458.8	314.5	144.21	3.181		
11,300.0	7,022.0	11,160.5	6,929.0	76.6	75.5	78.44	4,140.6	-355.4	458.9	311.3	147.60	3.109		
11,400.0	7,022.0	11,260.5	6,929.0	78.3	77.2	78.44	4,240.6	-355.3	459.1	308.1	151.00	3.040		
11,500.0	7,022.0	11,360.5	6,929.0	80.0	79.0	78.44	4,340.6	-355.1	459.2	304.9	154.39	2.975		
11,600.0	7,022.0	11,460.5	6,929.0	81.7	80.7	78.45	4,440.6	-354.9	459.4	301.6	157.79	2.911		
11,645.9	7,022.0	11,506.4	6,929.0	82.5	81.5	78.45	4,486.5	-354.8	459.5	300.1	159.35	2.883 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4D-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program:		0-Geolink MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.90	0.0	22.7	22.7					
100.0	100.0	99.0	99.0	0.1	0.1	89.90	0.0	22.7	22.7	22.4	0.24	93.176	CC, ES	
200.0	200.0	199.0	199.0	0.3	0.3	89.90	0.0	22.7	22.7	22.1	0.59	38.287		
300.0	300.0	299.0	299.0	0.5	0.5	-160.21	0.0	22.7	24.3	23.3	0.94	25.815		
400.0	399.8	398.9	398.9	0.7	0.6	-163.26	-0.2	22.6	29.2	27.9	1.29	22.641		
500.0	499.5	498.7	498.7	0.9	0.8	-164.51	-1.9	22.3	37.2	35.5	1.64	22.629		
600.0	598.7	598.3	598.3	1.2	1.0	-164.36	-5.3	21.8	48.0	46.0	2.00	23.995		
659.8	657.9	657.8	657.6	1.3	1.1	-163.92	-8.1	21.3	55.8	53.6	2.22	25.155		
700.0	697.5	697.7	697.4	1.5	1.2	-163.51	-10.4	20.9	61.4	59.1	2.37	25.907		
800.0	796.2	796.7	796.3	1.8	1.4	-162.53	-16.2	19.9	75.3	72.5	2.75	27.334		
900.0	894.9	895.7	895.1	2.1	1.6	-161.86	-22.1	19.0	89.2	86.0	3.14	28.374		
1,000.0	993.7	994.7	994.0	2.4	1.8	-161.37	-28.0	18.0	103.0	99.5	3.53	29.160		
1,100.0	1,092.4	1,093.8	1,092.8	2.8	2.0	-161.00	-33.8	17.0	116.9	113.0	3.93	29.773		
1,200.0	1,191.1	1,192.8	1,191.7	3.1	2.2	-160.70	-39.7	16.0	130.8	126.5	4.32	30.263		
1,300.0	1,289.8	1,291.8	1,290.5	3.4	2.4	-160.46	-45.6	15.0	144.7	140.0	4.72	30.663		
1,400.0	1,388.5	1,390.9	1,389.4	3.7	2.6	-160.27	-51.4	14.1	158.6	153.5	5.12	30.995		
1,500.0	1,487.2	1,489.9	1,488.2	4.1	2.8	-160.10	-57.3	13.1	172.5	167.0	5.52	31.274		
1,600.0	1,585.9	1,588.9	1,587.1	4.4	3.0	-159.96	-63.2	12.1	186.4	180.5	5.91	31.513		
1,700.0	1,684.7	1,687.9	1,685.9	4.7	3.2	-159.84	-69.1	11.1	200.3	194.0	6.31	31.720		
1,800.0	1,783.4	1,787.0	1,784.8	5.0	3.4	-159.74	-74.9	10.1	214.2	207.5	6.71	31.899		
1,900.0	1,882.1	1,886.0	1,883.6	5.4	3.6	-159.64	-80.8	9.2	228.1	221.0	7.12	32.057		
2,000.0	1,980.8	1,985.0	1,982.5	5.7	3.8	-159.56	-86.7	8.2	242.0	234.5	7.52	32.197		
2,100.0	2,079.5	2,084.1	2,081.3	6.0	4.0	-159.49	-92.5	7.2	255.9	248.0	7.92	32.322		
2,200.0	2,178.2	2,183.1	2,180.2	6.4	4.2	-159.42	-98.4	6.2	269.8	261.5	8.32	32.434		
2,300.0	2,276.9	2,282.1	2,279.0	6.7	4.4	-159.37	-104.3	5.2	283.7	275.0	8.72	32.535		
2,400.0	2,375.7	2,381.1	2,377.9	7.0	4.6	-159.31	-110.1	4.3	297.6	288.5	9.12	32.626		
2,500.0	2,474.4	2,480.2	2,476.7	7.4	4.8	-159.26	-116.0	3.3	311.5	302.0	9.52	32.709		
2,600.0	2,573.1	2,579.2	2,575.6	7.7	5.0	-159.22	-121.9	2.3	325.4	315.5	9.93	32.786		
2,700.0	2,671.8	2,678.2	2,674.4	8.0	5.2	-159.18	-127.7	1.3	339.3	329.0	10.33	32.855		
2,800.0	2,770.5	2,777.3	2,773.3	8.4	5.4	-159.14	-133.6	0.3	353.2	342.5	10.73	32.920		
2,900.0	2,869.2	2,876.3	2,872.1	8.7	5.6	-159.11	-139.5	-0.6	367.1	356.0	11.13	32.979		
3,000.0	2,967.9	2,975.3	2,971.0	9.0	5.8	-159.07	-145.3	-1.6	381.0	369.5	11.53	33.034		
3,100.0	3,066.7	3,074.3	3,069.8	9.3	6.0	-159.04	-151.2	-2.6	394.9	383.0	11.94	33.085		
3,200.0	3,165.4	3,173.4	3,168.7	9.7	6.2	-159.02	-157.1	-3.6	408.8	396.5	12.34	33.133		
3,300.0	3,264.1	3,272.4	3,267.5	10.0	6.4	-158.99	-163.0	-4.6	422.7	410.0	12.74	33.178		
3,400.0	3,362.8	3,371.4	3,366.4	10.3	6.6	-158.97	-168.8	-5.5	436.6	423.5	13.14	33.219		
3,500.0	3,461.5	3,470.5	3,465.2	10.7	6.8	-158.94	-174.7	-6.5	450.5	437.0	13.55	33.258		
3,600.0	3,560.2	3,569.5	3,564.1	11.0	7.0	-158.92	-180.6	-7.5	464.4	450.5	13.95	33.295		
3,700.0	3,658.9	3,668.5	3,662.9	11.3	7.2	-158.90	-186.4	-8.5	478.3	464.0	14.35	33.330		
3,800.0	3,757.7	3,767.5	3,761.8	11.7	7.4	-158.88	-192.3	-9.5	492.2	477.5	14.75	33.362		
3,900.0	3,856.4	3,866.6	3,860.6	12.0	7.6	-158.86	-198.2	-10.4	506.1	491.0	15.16	33.393		
4,000.0	3,955.1	3,965.6	3,959.5	12.3	7.8	-158.85	-204.0	-11.4	520.0	504.5	15.56	33.422		
4,100.0	4,053.8	4,064.6	4,058.3	12.7	8.0	-158.83	-209.9	-12.4	533.9	518.0	15.96	33.450		
4,200.0	4,152.5	4,163.7	4,157.2	13.0	8.2	-158.81	-215.8	-13.4	547.8	531.5	16.37	33.476		
4,300.0	4,251.2	4,262.7	4,256.0	13.3	8.4	-158.80	-221.6	-14.4	561.8	545.0	16.77	33.501		
4,400.0	4,350.0	4,361.7	4,354.9	13.7	8.6	-158.79	-227.5	-15.3	575.7	558.5	17.17	33.524		
4,500.0	4,448.7	4,460.7	4,453.7	14.0	8.8	-158.77	-233.4	-16.3	589.6	572.0	17.57	33.547		
4,600.0	4,547.4	4,559.8	4,552.6	14.3	9.0	-158.76	-239.3	-17.3	603.5	585.5	17.98	33.568		
4,700.0	4,646.1	4,658.8	4,651.4	14.6	9.2	-158.75	-245.1	-18.3	617.4	599.0	18.38	33.589		
4,800.0	4,744.8	4,757.8	4,750.3	15.0	9.4	-158.74	-251.0	-19.3	631.3	612.5	18.78	33.609		
4,900.0	4,843.5	4,856.9	4,849.1	15.3	9.6	-158.73	-256.9	-20.2	645.2	626.0	19.19	33.627		
5,000.0	4,942.2	4,955.9	4,948.0	15.6	9.8	-158.71	-262.7	-21.2	659.1	639.5	19.59	33.645		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4D-20H-O264 - HZ - 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	5,041.0	5,054.9	5,046.8	16.0	10.0	-158.70	-268.6	-22.2	673.0	653.0	19.99	33.662		
5,200.0	5,139.7	5,153.9	5,145.7	16.3	10.2	-158.69	-274.5	-23.2	686.9	666.5	20.40	33.679		
5,300.0	5,238.4	5,253.0	5,244.5	16.6	10.4	-158.69	-280.3	-24.2	700.8	680.0	20.80	33.695		
5,400.0	5,337.1	5,352.0	5,343.4	17.0	10.6	-158.68	-286.2	-25.1	714.7	693.5	21.20	33.710		
5,500.0	5,435.8	5,451.0	5,442.2	17.3	10.8	-158.67	-292.1	-26.1	728.6	707.0	21.60	33.725		
5,607.7	5,542.1	5,557.7	5,548.7	17.7	11.0	-158.66	-298.4	-27.2	743.6	721.5	22.04	33.740		
5,700.0	5,633.5	5,649.3	5,640.1	17.9	11.2	-158.69	-303.8	-28.1	755.0	732.6	22.43	33.667		
5,800.0	5,732.8	5,747.0	5,737.7	18.2	11.4	-158.67	-309.0	-29.0	764.4	741.6	22.82	33.502		
5,900.0	5,832.5	5,844.6	5,835.2	18.3	11.6	-158.65	-312.6	-29.6	770.9	747.7	23.17	33.274		
6,000.0	5,932.5	5,942.3	5,933.0	18.5	11.7	-158.63	-314.6	-29.9	774.4	750.9	23.48	32.982		
6,067.5	6,000.0	6,009.4	6,000.0	18.5	11.8	90.00	-315.0	-29.9	775.1	751.4	23.67	32.743		
6,078.7	6,011.2	6,019.6	6,010.2	18.5	11.8	90.00	-315.0	-29.9	775.1	751.3	23.70	32.697		
6,100.0	6,032.5	6,040.9	6,031.5	18.6	11.9	90.00	-315.0	-29.9	775.1	751.3	23.77	32.607		
6,200.0	6,132.5	6,140.9	6,131.5	18.7	12.0	90.00	-315.0	-29.9	775.1	751.0	24.08	32.187		
6,300.0	6,232.5	6,240.9	6,231.5	18.8	12.2	90.00	-315.0	-29.9	775.1	750.7	24.39	31.776		
6,400.0	6,332.5	6,340.9	6,331.5	18.9	12.3	90.00	-315.0	-29.9	775.1	750.4	24.70	31.374		
6,500.0	6,432.5	6,440.9	6,431.5	19.0	12.5	90.00	-315.0	-29.9	775.1	750.0	25.02	30.982		
6,516.6	6,449.0	6,457.4	6,448.0	19.0	12.5	90.00	-315.0	-29.9	775.1	750.0	25.07	30.917		
6,550.0	6,482.4	6,490.8	6,481.4	19.0	12.6	90.00	-314.0	-29.9	775.1	749.9	25.14	30.828		
6,600.0	6,532.2	6,540.9	6,531.2	19.0	12.6	90.01	-309.0	-29.9	775.1	749.9	25.19	30.766		
6,650.0	6,581.3	6,590.9	6,580.3	19.0	12.6	90.01	-299.7	-29.9	775.1	749.9	25.18	30.774		
6,700.0	6,629.3	6,640.9	6,628.4	19.0	12.6	90.02	-286.2	-29.9	775.1	749.9	25.13	30.844		
6,750.0	6,676.1	6,690.9	6,675.2	19.0	12.5	90.03	-268.4	-29.9	775.1	750.0	25.03	30.961		
6,800.0	6,721.0	6,740.9	6,720.2	18.9	12.4	90.03	-246.7	-29.9	775.1	750.1	24.91	31.111		
6,850.0	6,764.0	6,791.0	6,763.2	18.9	12.4	90.04	-221.1	-29.9	775.1	750.3	24.78	31.276		
6,900.0	6,804.5	6,841.0	6,803.8	18.9	12.3	90.04	-191.9	-29.9	775.1	750.4	24.66	31.435		
6,950.0	6,842.3	6,891.1	6,841.7	18.8	12.3	90.05	-159.2	-29.9	775.1	750.5	24.56	31.564		
7,000.0	6,877.1	6,941.2	6,876.6	18.8	12.2	90.05	-123.4	-29.9	775.1	750.6	24.50	31.637		
7,050.0	6,908.7	6,991.2	6,908.3	18.8	12.2	90.06	-84.6	-29.9	775.1	750.6	24.50	31.632		
7,100.0	6,936.7	7,041.3	6,936.4	18.8	12.3	90.06	-43.2	-29.9	775.1	750.5	24.58	31.526		
7,150.0	6,961.1	7,091.4	6,960.9	18.9	12.4	90.06	0.5	-29.9	775.1	750.3	24.76	31.303		
7,200.0	6,981.5	7,141.4	6,981.4	19.0	12.5	90.07	46.1	-29.9	775.1	750.0	25.04	30.956		
7,250.0	6,998.0	7,191.5	6,997.9	19.1	12.7	90.07	93.4	-29.9	775.1	749.6	25.43	30.483		
7,300.0	7,010.2	7,241.6	7,010.1	19.2	13.0	90.07	142.0	-29.9	775.1	749.1	25.93	29.895		
7,350.0	7,018.1	7,291.7	7,018.1	19.4	13.3	90.07	191.4	-29.9	775.1	748.5	26.54	29.208		
7,400.0	7,021.8	7,341.8	7,021.8	19.7	13.6	90.07	241.3	-29.9	775.1	747.8	27.25	28.446		
7,416.6	7,022.0	7,358.4	7,022.0	19.8	13.7	90.07	258.0	-29.9	775.1	747.6	27.50	28.183		
7,500.0	7,022.0	7,441.8	7,022.0	20.3	14.5	90.07	341.4	-29.9	775.1	746.1	28.95	26.770		
7,600.0	7,022.0	7,541.8	7,022.0	21.0	15.5	90.07	441.4	-29.9	775.1	744.1	30.95	25.045		
7,700.0	7,022.0	7,641.8	7,022.0	21.8	16.6	90.07	541.4	-29.9	775.1	741.9	33.19	23.351		
7,800.0	7,022.0	7,741.8	7,022.0	22.8	17.8	90.07	641.4	-29.9	775.1	739.4	35.64	21.746		
7,900.0	7,022.0	7,841.8	7,022.0	23.8	19.1	90.07	741.4	-29.9	775.1	736.8	38.26	20.259		
8,000.0	7,022.0	7,941.8	7,022.0	24.9	20.5	90.07	841.4	-29.9	775.1	734.1	41.01	18.901		
8,100.0	7,022.0	8,041.8	7,022.0	26.1	21.9	90.07	941.4	-29.9	775.1	731.2	43.87	17.669		
8,200.0	7,022.0	8,141.8	7,022.0	27.3	23.4	90.07	1,041.4	-29.9	775.1	728.3	46.81	16.557		
8,300.0	7,022.0	8,241.8	7,022.0	28.6	24.9	90.07	1,141.4	-29.9	775.1	725.2	49.83	15.554		
8,400.0	7,022.0	8,341.8	7,022.0	30.0	26.4	90.07	1,241.4	-29.9	775.1	722.2	52.91	14.649		
8,500.0	7,022.0	8,441.8	7,022.0	31.4	28.0	90.07	1,341.4	-29.9	775.1	719.0	56.04	13.831		
8,600.0	7,022.0	8,541.8	7,022.0	32.8	29.6	90.07	1,441.4	-29.9	775.1	715.9	59.21	13.090		
8,700.0	7,022.0	8,641.8	7,022.0	34.3	31.2	90.07	1,541.4	-29.9	775.1	712.7	62.42	12.417		
8,800.0	7,022.0	8,741.8	7,022.0	35.7	32.8	90.07	1,641.4	-29.9	775.1	709.4	65.66	11.804		
8,900.0	7,022.0	8,841.8	7,022.0	37.2	34.5	90.07	1,741.4	-29.9	775.1	706.2	68.93	11.245		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4D-20H-O264 - HZ - 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		
9,000.0	7,022.0	8,941.8	7,022.0	38.8	36.1	90.07	1,841.4	-29.9	775.1	702.9	72.21	10.733		
9,100.0	7,022.0	9,041.8	7,022.0	40.3	37.8	90.07	1,941.4	-29.9	775.1	699.6	75.52	10.263		
9,200.0	7,022.0	9,141.8	7,022.0	41.9	39.4	90.07	2,041.4	-29.9	775.1	696.2	78.85	9.830		
9,300.0	7,022.0	9,241.8	7,022.0	43.5	41.1	90.07	2,141.4	-29.9	775.1	692.9	82.19	9.431		
9,400.0	7,022.0	9,341.8	7,022.0	45.0	42.8	90.07	2,241.4	-29.9	775.1	689.5	85.54	9.061		
9,500.0	7,022.0	9,441.8	7,022.0	46.6	44.4	90.07	2,341.4	-29.9	775.1	686.2	88.91	8.718		
9,600.0	7,022.0	9,541.8	7,022.0	48.3	46.1	90.07	2,441.4	-29.9	775.1	682.8	92.29	8.399		
9,700.0	7,022.0	9,641.8	7,022.0	49.9	47.8	90.07	2,541.4	-29.9	775.1	679.4	95.67	8.102		
9,800.0	7,022.0	9,741.8	7,022.0	51.5	49.5	90.07	2,641.4	-29.9	775.1	676.0	99.07	7.824		
9,900.0	7,022.0	9,841.8	7,022.0	53.1	51.2	90.07	2,741.4	-29.9	775.1	672.6	102.47	7.564		
10,000.0	7,022.0	9,941.8	7,022.0	54.8	52.9	90.07	2,841.4	-29.9	775.1	669.2	105.88	7.321		
10,100.0	7,022.0	10,041.8	7,022.0	56.4	54.6	90.07	2,941.4	-29.9	775.1	665.8	109.29	7.092		
10,200.0	7,022.0	10,141.8	7,022.0	58.1	56.4	90.07	3,041.4	-29.9	775.1	662.4	112.71	6.877		
10,300.0	7,022.0	10,241.8	7,022.0	59.8	58.1	90.07	3,141.4	-29.9	775.1	659.0	116.14	6.674		
10,400.0	7,022.0	10,341.8	7,022.0	61.4	59.8	90.07	3,241.4	-29.9	775.1	655.5	119.57	6.482		
10,500.0	7,022.0	10,441.8	7,022.0	63.1	61.5	90.07	3,341.4	-29.9	775.1	652.1	123.01	6.301		
10,600.0	7,022.0	10,541.8	7,022.0	64.8	63.2	90.07	3,441.4	-29.9	775.1	648.7	126.44	6.130		
10,700.0	7,022.0	10,641.8	7,022.0	66.5	64.9	90.07	3,541.4	-29.9	775.1	645.2	129.89	5.967		
10,800.0	7,022.0	10,741.8	7,022.0	68.1	66.7	90.07	3,641.4	-29.9	775.1	641.8	133.33	5.813		
10,900.0	7,022.0	10,841.8	7,022.0	69.8	68.4	90.07	3,741.4	-29.9	775.1	638.3	136.78	5.667		
11,000.0	7,022.0	10,941.8	7,022.0	71.5	70.1	90.07	3,841.4	-29.9	775.1	634.9	140.24	5.527		
11,100.0	7,022.0	11,041.8	7,022.0	73.2	71.8	90.07	3,941.4	-29.9	775.1	631.4	143.69	5.394		
11,200.0	7,022.0	11,141.8	7,022.0	74.9	73.6	90.07	4,041.4	-29.9	775.1	628.0	147.15	5.267		
11,300.0	7,022.0	11,241.8	7,022.0	76.6	75.3	90.07	4,141.4	-29.9	775.1	624.5	150.61	5.146		
11,400.0	7,022.0	11,341.8	7,022.0	78.3	77.0	90.07	4,241.4	-29.9	775.1	621.0	154.07	5.031		
11,500.0	7,022.0	11,441.8	7,022.0	80.0	78.8	90.07	4,341.4	-29.9	775.1	617.6	157.54	4.920		
11,600.0	7,022.0	11,541.8	7,022.0	81.7	80.5	90.07	4,441.4	-29.9	775.1	614.1	161.00	4.814		
11,645.9	7,022.0	11,587.7	7,022.0	82.5	81.3	90.07	4,487.3	-29.9	775.1	612.5	162.59	4.767 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4E-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program:		0-Geolink MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.71	-0.4	29.9	29.9					CC, ES
100.0	100.0	99.0	99.0	0.1	0.1	90.71	-0.4	29.9	29.9	29.7	0.24	123.093		
200.0	200.0	199.0	199.0	0.3	0.3	90.71	-0.4	29.9	29.9	29.3	0.59	50.581		
300.0	300.0	299.0	299.0	0.5	0.5	-159.10	-0.4	29.9	31.6	30.6	0.94	33.533		
400.0	399.8	398.8	398.8	0.7	0.6	-162.00	-0.4	29.9	36.5	35.2	1.29	28.275		
500.0	499.5	498.0	498.0	0.9	0.8	-164.49	-1.0	30.5	45.3	43.7	1.64	27.646		
600.0	598.7	596.7	596.6	1.2	1.0	-165.51	-3.0	32.1	58.5	56.5	1.99	29.394		
659.8	657.9	655.3	655.2	1.3	1.1	-165.67	-4.8	33.5	68.4	66.2	2.20	31.068		
700.0	697.5	694.6	694.4	1.5	1.2	-165.64	-6.2	34.7	75.6	73.3	2.35	32.231		
800.0	796.2	792.0	791.7	1.8	1.4	-164.97	-10.7	38.4	94.3	91.6	2.72	34.708		
900.0	894.9	889.5	888.9	2.1	1.6	-163.86	-16.4	43.1	113.8	110.7	3.10	36.746		
1,000.0	993.7	987.5	986.6	2.4	1.8	-162.96	-22.4	48.0	133.5	130.1	3.48	38.328		
1,100.0	1,092.4	1,085.5	1,084.3	2.8	2.0	-162.28	-28.4	53.0	153.3	149.4	3.87	39.569		
1,200.0	1,191.1	1,183.5	1,182.0	3.1	2.2	-161.76	-34.4	57.9	173.1	168.8	4.27	40.564		
1,300.0	1,289.8	1,281.6	1,279.8	3.4	2.4	-161.35	-40.3	62.8	192.9	188.2	4.66	41.379		
1,400.0	1,388.5	1,379.6	1,377.5	3.7	2.6	-161.01	-46.3	67.7	212.6	207.6	5.06	42.058		
1,500.0	1,487.2	1,477.6	1,475.2	4.1	2.8	-160.74	-52.3	72.6	232.4	227.0	5.45	42.632		
1,600.0	1,585.9	1,575.6	1,572.9	4.4	3.0	-160.50	-58.3	77.5	252.2	246.4	5.85	43.122		
1,700.0	1,684.7	1,673.6	1,670.6	4.7	3.2	-160.30	-64.3	82.5	272.1	265.8	6.25	43.547		
1,800.0	1,783.4	1,771.6	1,768.3	5.0	3.5	-160.13	-70.2	87.4	291.9	285.2	6.65	43.917		
1,900.0	1,882.1	1,869.7	1,866.0	5.4	3.7	-159.97	-76.2	92.3	311.7	304.6	7.04	44.244		
2,000.0	1,980.8	1,967.7	1,963.7	5.7	3.9	-159.84	-82.2	97.2	331.5	324.0	7.44	44.533		
2,100.0	2,079.5	2,065.7	2,061.4	6.0	4.1	-159.72	-88.2	102.1	351.3	343.5	7.84	44.792		
2,200.0	2,178.2	2,163.7	2,159.1	6.4	4.3	-159.62	-94.2	107.0	371.1	362.9	8.24	45.024		
2,300.0	2,276.9	2,261.7	2,256.8	6.7	4.5	-159.52	-100.1	112.0	390.9	382.3	8.64	45.233		
2,400.0	2,375.7	2,359.7	2,354.5	7.0	4.8	-159.44	-106.1	116.9	410.8	401.7	9.04	45.423		
2,500.0	2,474.4	2,457.7	2,452.3	7.4	5.0	-159.36	-112.1	121.8	430.6	421.1	9.44	45.597		
2,600.0	2,573.1	2,555.8	2,550.0	7.7	5.2	-159.29	-118.1	126.7	450.4	440.5	9.84	45.755		
2,700.0	2,671.8	2,653.8	2,647.7	8.0	5.4	-159.22	-124.1	131.6	470.2	460.0	10.24	45.901		
2,800.0	2,770.5	2,751.8	2,745.4	8.4	5.6	-159.16	-130.0	136.5	490.0	479.4	10.64	46.035		
2,900.0	2,869.2	2,849.8	2,843.1	8.7	5.8	-159.11	-136.0	141.5	509.9	498.8	11.05	46.159		
3,000.0	2,967.9	2,947.8	2,940.8	9.0	6.1	-159.06	-142.0	146.4	529.7	518.2	11.45	46.274		
3,100.0	3,066.7	3,045.8	3,038.5	9.3	6.3	-159.01	-148.0	151.3	549.5	537.6	11.85	46.381		
3,200.0	3,165.4	3,143.8	3,136.2	9.7	6.5	-158.96	-154.0	156.2	569.3	557.1	12.25	46.481		
3,300.0	3,264.1	3,241.9	3,233.9	10.0	6.7	-158.92	-159.9	161.1	589.1	576.5	12.65	46.574		
3,400.0	3,362.8	3,339.9	3,331.6	10.3	6.9	-158.88	-165.9	166.0	609.0	595.9	13.05	46.661		
3,500.0	3,461.5	3,437.9	3,429.3	10.7	7.1	-158.85	-171.9	171.0	628.8	615.3	13.45	46.743		
3,600.0	3,560.2	3,535.9	3,527.1	11.0	7.4	-158.81	-177.9	175.9	648.6	634.8	13.85	46.820		
3,700.0	3,658.9	3,633.9	3,624.8	11.3	7.6	-158.78	-183.9	180.8	668.4	654.2	14.25	46.893		
3,800.0	3,757.7	3,731.9	3,722.5	11.7	7.8	-158.75	-189.8	185.7	688.3	673.6	14.66	46.961		
3,900.0	3,856.4	3,829.9	3,820.2	12.0	8.0	-158.72	-195.8	190.6	708.1	693.0	15.06	47.026		
4,000.0	3,955.1	3,928.0	3,917.9	12.3	8.2	-158.70	-201.8	195.6	727.9	712.4	15.46	47.087		
4,100.0	4,053.8	4,026.0	4,015.6	12.7	8.4	-158.67	-207.8	200.5	747.7	731.9	15.86	47.145		
4,200.0	4,152.5	4,124.0	4,113.3	13.0	8.7	-158.65	-213.8	205.4	767.6	751.3	16.26	47.200		
4,300.0	4,251.2	4,222.0	4,211.0	13.3	8.9	-158.63	-219.7	210.3	787.4	770.7	16.66	47.252		
4,400.0	4,350.0	4,320.0	4,308.7	13.7	9.1	-158.60	-225.7	215.2	807.2	790.1	17.06	47.302		
4,500.0	4,448.7	4,418.0	4,406.4	14.0	9.3	-158.58	-231.7	220.1	827.0	809.6	17.47	47.349		
4,600.0	4,547.4	4,516.1	4,504.1	14.3	9.5	-158.56	-237.7	225.1	846.8	829.0	17.87	47.395		
4,700.0	4,646.1	4,614.1	4,601.8	14.6	9.7	-158.54	-243.7	230.0	866.7	848.4	18.27	47.438		
4,800.0	4,744.8	4,712.1	4,699.6	15.0	10.0	-158.53	-249.6	234.9	886.5	867.8	18.67	47.479		
4,900.0	4,843.5	4,810.1	4,797.3	15.3	10.2	-158.51	-255.6	239.8	906.3	887.2	19.07	47.519		
5,000.0	4,942.2	4,908.1	4,895.0	15.6	10.4	-158.49	-261.6	244.7	926.1	906.7	19.47	47.556		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4E-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,041.0	5,006.1	4,992.7	16.0	10.6	-158.48	-267.6	249.6	946.0	926.1	19.88	47.593		
5,200.0	5,139.7	5,104.1	5,090.4	16.3	10.8	-158.46	-273.6	254.6	965.8	945.5	20.28	47.627		
5,300.0	5,238.4	5,202.2	5,188.1	16.6	11.1	-158.45	-279.5	259.5	985.6	964.9	20.68	47.661		
5,400.0	5,337.1	5,300.2	5,285.8	17.0	11.3	-158.43	-285.5	264.4	1,005.4	984.4	21.08	47.693		
5,500.0	5,435.8	5,398.2	5,383.5	17.3	11.5	-158.42	-291.5	269.3	1,025.3	1,003.8	21.48	47.724		
5,607.7	5,542.1	5,503.8	5,488.8	17.7	11.7	-158.41	-297.9	274.6	1,046.6	1,024.7	21.92	47.756		
5,700.0	5,633.5	5,598.7	5,583.4	17.9	11.9	-158.49	-303.7	279.3	1,063.5	1,041.2	22.32	47.647		
5,800.0	5,732.8	5,711.0	5,695.5	18.2	12.2	-158.55	-309.1	283.8	1,077.8	1,055.0	22.74	47.397		
5,900.0	5,832.5	5,824.1	5,808.5	18.3	12.4	-158.59	-312.9	286.9	1,087.6	1,064.5	23.12	47.037		
6,000.0	5,932.5	5,937.7	5,922.0	18.5	12.5	-158.61	-315.0	288.6	1,092.9	1,069.4	23.47	46.571		
6,067.5	6,000.0	6,014.5	5,998.9	18.5	12.6	90.02	-315.4	288.9	1,093.9	1,070.2	23.68	46.192		
6,100.0	6,032.5	6,047.1	6,031.5	18.6	12.7	90.02	-315.4	288.9	1,093.9	1,070.1	23.78	45.997		
6,200.0	6,132.5	6,147.1	6,131.5	18.7	12.8	90.02	-315.4	288.9	1,093.9	1,069.8	24.09	45.405		
6,300.0	6,232.5	6,247.1	6,231.5	18.8	13.0	90.02	-315.4	288.9	1,093.9	1,069.5	24.40	44.826		
6,400.0	6,332.5	6,347.1	6,331.5	18.9	13.1	90.02	-315.4	288.9	1,093.9	1,069.2	24.72	44.259		
6,500.0	6,432.5	6,447.1	6,431.5	19.0	13.3	90.02	-315.4	288.9	1,093.9	1,068.9	25.03	43.706		
6,516.6	6,449.0	6,463.7	6,448.0	19.0	13.3	90.02	-315.4	288.9	1,093.9	1,068.8	25.08	43.615		
6,516.6	6,449.1	6,463.7	6,448.1	19.0	13.3	90.02	-315.4	288.9	1,093.9	1,068.8	25.08	43.615		
6,550.0	6,482.4	6,497.1	6,481.4	19.0	13.3	90.07	-315.4	288.9	1,093.9	1,068.8	25.18	43.452		
6,600.0	6,532.2	6,546.8	6,531.2	19.0	13.4	90.33	-315.4	288.9	1,093.9	1,068.6	25.30	43.244		
6,650.0	6,581.3	6,595.9	6,580.3	19.0	13.5	90.81	-315.4	288.9	1,094.0	1,068.6	25.40	43.069		
6,700.0	6,629.3	6,646.1	6,630.4	19.0	13.5	91.42	-313.9	288.9	1,094.3	1,068.8	25.46	42.973		
6,750.0	6,676.1	6,697.6	6,681.6	19.0	13.6	92.05	-307.8	288.9	1,094.7	1,069.2	25.47	42.984		
6,800.0	6,721.0	6,750.4	6,733.2	18.9	13.6	92.66	-296.9	288.9	1,095.2	1,069.8	25.42	43.090		
6,850.0	6,764.0	6,804.5	6,784.8	18.9	13.5	93.26	-280.9	288.9	1,095.8	1,070.5	25.32	43.278		
6,900.0	6,804.5	6,860.0	6,835.9	18.9	13.5	93.84	-259.4	288.9	1,096.5	1,071.3	25.19	43.523		
6,950.0	6,842.3	6,916.8	6,885.9	18.8	13.4	94.40	-232.4	288.9	1,097.3	1,072.3	25.06	43.794		
7,000.0	6,877.1	6,975.0	6,934.1	18.8	13.3	94.93	-199.8	288.9	1,098.2	1,073.2	24.93	44.053		
7,050.0	6,908.7	7,034.7	6,979.8	18.8	13.3	95.43	-161.4	288.9	1,099.0	1,074.2	24.83	44.254		
7,100.0	6,936.7	7,095.7	7,022.1	18.8	13.2	95.88	-117.5	288.9	1,099.9	1,075.1	24.80	44.343		
7,150.0	6,961.1	7,157.9	7,060.2	18.9	13.3	96.29	-68.4	288.9	1,100.7	1,075.8	24.87	44.256		
7,200.0	6,981.5	7,221.4	7,093.3	19.0	13.3	96.64	-14.3	288.9	1,101.4	1,076.3	25.06	43.953		
7,250.0	6,998.0	7,285.8	7,120.7	19.1	13.5	96.92	44.0	288.9	1,102.0	1,076.6	25.39	43.398		
7,300.0	7,010.2	7,351.1	7,141.5	19.2	13.7	97.13	105.8	288.9	1,102.5	1,076.6	25.88	42.594		
7,350.0	7,018.1	7,416.9	7,155.3	19.4	14.1	97.28	170.2	288.9	1,102.8	1,076.3	26.55	41.539		
7,400.0	7,021.8	7,483.1	7,161.6	19.7	14.5	97.34	236.1	288.9	1,103.0	1,075.6	27.37	40.300		
7,416.6	7,022.0	7,505.0	7,162.0	19.8	14.7	97.34	258.0	288.9	1,103.0	1,075.3	27.67	39.868		
7,500.0	7,022.0	7,588.4	7,162.0	20.3	15.3	97.34	341.4	288.9	1,103.0	1,073.9	29.08	37.925		
7,600.0	7,022.0	7,688.4	7,162.0	21.0	16.3	97.34	441.4	288.9	1,103.0	1,071.9	31.05	35.526		
7,700.0	7,022.0	7,788.4	7,162.0	21.8	17.4	97.34	541.4	288.9	1,103.0	1,069.7	33.26	33.162		
7,800.0	7,022.0	7,888.4	7,162.0	22.8	18.5	97.34	641.4	288.9	1,103.0	1,067.3	35.68	30.917		
7,900.0	7,022.0	7,988.4	7,162.0	23.8	19.8	97.34	741.4	288.9	1,103.0	1,064.7	38.26	28.832		
8,000.0	7,022.0	8,088.4	7,162.0	24.9	21.1	97.34	841.4	288.9	1,103.0	1,062.0	40.97	26.922		
8,100.0	7,022.0	8,188.4	7,162.0	26.1	22.5	97.34	941.4	288.9	1,103.0	1,059.2	43.79	25.187		
8,200.0	7,022.0	8,288.4	7,162.0	27.3	24.0	97.34	1,041.4	288.9	1,103.0	1,056.3	46.70	23.617		
8,300.0	7,022.0	8,388.4	7,162.0	28.6	25.4	97.34	1,141.4	288.9	1,103.0	1,053.3	49.69	22.199		
8,400.0	7,022.0	8,488.4	7,162.0	30.0	27.0	97.34	1,241.4	288.9	1,103.0	1,050.2	52.73	20.917		
8,500.0	7,022.0	8,588.4	7,162.0	31.4	28.5	97.34	1,341.4	288.9	1,103.0	1,047.2	55.83	19.757		
8,600.0	7,022.0	8,688.4	7,162.0	32.8	30.1	97.34	1,441.4	288.9	1,103.0	1,044.0	58.96	18.706		
8,700.0	7,022.0	8,788.4	7,162.0	34.3	31.6	97.34	1,541.4	288.9	1,103.0	1,040.8	62.14	17.750		
8,800.0	7,022.0	8,888.4	7,162.0	35.7	33.2	97.34	1,641.4	288.9	1,103.0	1,037.6	65.35	16.879		
8,900.0	7,022.0	8,988.4	7,162.0	37.2	34.9	97.34	1,741.4	288.9	1,103.0	1,034.4	68.58	16.083		

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4E-20H-O264 - HZ - 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		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		
9,000.0	7,022.0	9,088.4	7,162.0	38.8	36.5	97.34	1,841.4	288.9	1,103.0	1,031.1	71.83	15.354		
9,100.0	7,022.0	9,188.4	7,162.0	40.3	38.1	97.34	1,941.4	288.9	1,103.0	1,027.9	75.11	14.685		
9,200.0	7,022.0	9,288.4	7,162.0	41.9	39.8	97.34	2,041.4	288.9	1,103.0	1,024.6	78.40	14.068		
9,300.0	7,022.0	9,388.4	7,162.0	43.5	41.4	97.34	2,141.4	288.9	1,103.0	1,021.3	81.71	13.498		
9,400.0	7,022.0	9,488.4	7,162.0	45.0	43.1	97.34	2,241.4	288.9	1,103.0	1,017.9	85.04	12.971		
9,500.0	7,022.0	9,588.4	7,162.0	46.6	44.8	97.34	2,341.4	288.9	1,103.0	1,014.6	88.37	12.481		
9,600.0	7,022.0	9,688.4	7,162.0	48.3	46.4	97.34	2,441.4	288.9	1,103.0	1,011.3	91.72	12.026		
9,700.0	7,022.0	9,788.4	7,162.0	49.9	48.1	97.34	2,541.4	288.9	1,103.0	1,007.9	95.07	11.602		
9,800.0	7,022.0	9,888.4	7,162.0	51.5	49.8	97.34	2,641.4	288.9	1,103.0	1,004.5	98.43	11.205		
9,900.0	7,022.0	9,988.4	7,162.0	53.1	51.5	97.34	2,741.4	288.9	1,103.0	1,001.2	101.81	10.834		
10,000.0	7,022.0	10,088.4	7,162.0	54.8	53.2	97.34	2,841.4	288.9	1,103.0	997.8	105.18	10.486		
10,100.0	7,022.0	10,188.4	7,162.0	56.4	54.9	97.34	2,941.4	288.9	1,103.0	994.4	108.57	10.159		
10,200.0	7,022.0	10,288.4	7,162.0	58.1	56.6	97.34	3,041.4	288.9	1,103.0	991.0	111.96	9.852		
10,300.0	7,022.0	10,388.4	7,162.0	59.8	58.3	97.34	3,141.4	288.9	1,103.0	987.6	115.36	9.562		
10,400.0	7,022.0	10,488.4	7,162.0	61.4	60.0	97.34	3,241.4	288.9	1,103.0	984.2	118.76	9.288		
10,500.0	7,022.0	10,588.4	7,162.0	63.1	61.7	97.34	3,341.4	288.9	1,103.0	980.8	122.16	9.029		
10,600.0	7,022.0	10,688.4	7,162.0	64.8	63.5	97.34	3,441.4	288.9	1,103.0	977.4	125.57	8.784		
10,700.0	7,022.0	10,788.4	7,162.0	66.5	65.2	97.34	3,541.4	288.9	1,103.0	974.0	128.98	8.551		
10,800.0	7,022.0	10,888.4	7,162.0	68.1	66.9	97.34	3,641.4	288.9	1,103.0	970.6	132.40	8.331		
10,900.0	7,022.0	10,988.4	7,162.0	69.8	68.6	97.34	3,741.4	288.9	1,103.0	967.2	135.82	8.121		
11,000.0	7,022.0	11,088.4	7,162.0	71.5	70.3	97.34	3,841.4	288.9	1,103.0	963.7	139.24	7.921		
11,100.0	7,022.0	11,241.1	7,162.0	73.2	73.0	97.36	3,994.0	286.7	1,102.1	958.5	143.57	7.676		
11,200.0	7,022.0	11,475.2	7,162.0	74.9	76.9	97.53	4,226.6	261.0	1,091.2	941.9	149.20	7.313		
11,300.0	7,022.0	11,699.7	7,162.0	76.6	80.7	97.91	4,445.0	209.6	1,068.4	913.8	154.53	6.914		
11,400.0	7,022.0	11,747.9	7,162.0	78.3	81.4	98.02	4,490.9	195.2	1,040.5	883.5	156.99	6.627		
11,500.0	7,022.0	11,747.9	7,162.0	80.0	81.4	98.02	4,490.9	195.2	1,021.1	862.4	158.71	6.434		
11,600.0	7,022.0	11,747.9	7,162.0	81.7	81.4	98.02	4,490.9	195.2	1,011.3	850.9	160.42	6.304		
11,645.9	7,022.0	11,747.9	7,162.0	82.5	81.4	98.02	4,490.9	195.2	1,010.1	848.9	161.21	6.266 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4F-20H-O264 - HZ - Plan #1														Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		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	0.0	0.0	0.0	0.0	90.54	-0.4	37.5	37.5						
100.0	100.0	99.0	99.0	0.1	0.1	90.54	-0.4	37.5	37.5	37.2	0.24	154.149			
200.0	200.0	199.0	199.0	0.3	0.3	90.54	-0.4	37.5	37.5	36.9	0.59	63.342 CC, ES			
300.0	300.0	299.0	299.0	0.5	0.5	-159.03	-0.4	37.5	39.1	38.2	0.94	41.558			
400.0	399.8	398.8	398.8	0.7	0.6	-161.44	-0.4	37.5	44.0	42.7	1.29	34.114			
500.0	499.5	498.1	498.1	0.9	0.8	-164.26	-0.5	37.6	52.5	50.9	1.64	32.032			
600.0	598.7	596.6	596.6	1.2	1.0	-166.03	-1.5	38.9	65.5	63.5	1.99	32.953			
659.8	657.9	655.1	655.0	1.3	1.1	-166.60	-2.7	40.3	75.4	73.2	2.19	34.350			
700.0	697.5	694.2	694.1	1.5	1.2	-166.82	-3.7	41.5	82.7	80.4	2.34	35.383			
800.0	796.2	791.4	791.2	1.8	1.3	-166.74	-6.8	45.3	101.6	98.9	2.70	37.702			
900.0	894.9	888.0	887.6	2.1	1.5	-166.10	-11.0	50.4	121.7	118.6	3.06	39.740			
1,000.0	993.7	984.2	983.4	2.4	1.7	-165.16	-16.2	56.7	142.9	139.5	3.44	41.559			
1,100.0	1,092.4	1,081.1	1,079.9	2.8	2.0	-164.13	-22.2	64.0	165.1	161.3	3.82	43.165			
1,200.0	1,191.1	1,178.6	1,176.8	3.1	2.2	-163.32	-28.3	71.5	187.3	183.1	4.21	44.454			
1,300.0	1,289.8	1,276.0	1,273.8	3.4	2.4	-162.68	-34.5	78.9	209.6	205.0	4.61	45.508			
1,400.0	1,388.5	1,373.5	1,370.8	3.7	2.6	-162.16	-40.6	86.4	232.0	227.0	5.00	46.384			
1,500.0	1,487.2	1,470.9	1,467.8	4.1	2.9	-161.73	-46.7	93.8	254.3	248.9	5.40	47.124			
1,600.0	1,585.9	1,568.4	1,564.8	4.4	3.1	-161.37	-52.9	101.2	276.6	270.8	5.79	47.756			
1,700.0	1,684.7	1,665.9	1,661.7	4.7	3.3	-161.07	-59.0	108.7	299.0	292.8	6.19	48.303			
1,800.0	1,783.4	1,763.3	1,758.7	5.0	3.6	-160.81	-65.1	116.1	321.3	314.7	6.59	48.779			
1,900.0	1,882.1	1,860.8	1,855.7	5.4	3.8	-160.58	-71.3	123.6	343.7	336.7	6.99	49.199			
2,000.0	1,980.8	1,958.2	1,952.7	5.7	4.0	-160.38	-77.4	131.0	366.1	358.7	7.38	49.570			
2,100.0	2,079.5	2,055.7	2,049.7	6.0	4.3	-160.20	-83.5	138.5	388.4	380.7	7.78	49.902			
2,200.0	2,178.2	2,153.1	2,146.6	6.4	4.5	-160.04	-89.7	145.9	410.8	402.6	8.18	50.200			
2,300.0	2,276.9	2,250.6	2,243.6	6.7	4.7	-159.90	-95.8	153.4	433.2	424.6	8.58	50.468			
2,400.0	2,375.7	2,348.1	2,340.6	7.0	5.0	-159.77	-101.9	160.8	455.6	446.6	8.98	50.712			
2,500.0	2,474.4	2,445.5	2,437.6	7.4	5.2	-159.66	-108.1	168.3	477.9	468.6	9.38	50.934			
2,600.0	2,573.1	2,543.0	2,534.6	7.7	5.4	-159.55	-114.2	175.7	500.3	490.5	9.78	51.137			
2,700.0	2,671.8	2,640.4	2,631.5	8.0	5.7	-159.45	-120.3	183.2	522.7	512.5	10.18	51.324			
2,800.0	2,770.5	2,737.9	2,728.5	8.4	5.9	-159.37	-126.5	190.6	545.1	534.5	10.59	51.496			
2,900.0	2,869.2	2,835.4	2,825.5	8.7	6.1	-159.28	-132.6	198.1	567.5	556.5	10.99	51.655			
3,000.0	2,967.9	2,932.8	2,922.5	9.0	6.4	-159.21	-138.7	205.5	589.9	578.5	11.39	51.802			
3,100.0	3,066.7	3,030.3	3,019.5	9.3	6.6	-159.14	-144.9	212.9	612.3	600.5	11.79	51.939			
3,200.0	3,165.4	3,127.7	3,116.4	9.7	6.9	-159.07	-151.0	220.4	634.6	622.5	12.19	52.066			
3,300.0	3,264.1	3,225.2	3,213.4	10.0	7.1	-159.01	-157.1	227.8	657.0	644.4	12.59	52.185			
3,400.0	3,362.8	3,322.7	3,310.4	10.3	7.3	-158.96	-163.3	235.3	679.4	666.4	12.99	52.297			
3,500.0	3,461.5	3,420.1	3,407.4	10.7	7.6	-158.90	-169.4	242.7	701.8	688.4	13.39	52.402			
3,600.0	3,560.2	3,517.6	3,504.4	11.0	7.8	-158.85	-175.5	250.2	724.2	710.4	13.79	52.500			
3,700.0	3,658.9	3,615.0	3,601.3	11.3	8.1	-158.81	-181.6	257.6	746.6	732.4	14.20	52.593			
3,800.0	3,757.7	3,712.5	3,698.3	11.7	8.3	-158.76	-187.8	265.1	769.0	754.4	14.60	52.680			
3,900.0	3,856.4	3,810.0	3,795.3	12.0	8.5	-158.72	-193.9	272.5	791.4	776.4	15.00	52.763			
4,000.0	3,955.1	3,907.4	3,892.3	12.3	8.8	-158.68	-200.0	280.0	813.8	798.4	15.40	52.841			
4,100.0	4,053.8	4,004.9	3,989.3	12.7	9.0	-158.65	-206.2	287.4	836.2	820.4	15.80	52.915			
4,200.0	4,152.5	4,102.3	4,086.3	13.0	9.2	-158.61	-212.3	294.9	858.6	842.4	16.20	52.985			
4,300.0	4,251.2	4,199.8	4,183.2	13.3	9.5	-158.58	-218.4	302.3	881.0	864.4	16.61	53.052			
4,400.0	4,350.0	4,297.2	4,280.2	13.7	9.7	-158.55	-224.6	309.8	903.4	886.3	17.01	53.116			
4,500.0	4,448.7	4,394.7	4,377.2	14.0	10.0	-158.52	-230.7	317.2	925.7	908.3	17.41	53.176			
4,600.0	4,547.4	4,492.2	4,474.2	14.3	10.2	-158.49	-236.8	324.6	948.1	930.3	17.81	53.234			
4,700.0	4,646.1	4,589.6	4,571.2	14.6	10.4	-158.46	-243.0	332.1	970.5	952.3	18.21	53.289			
4,800.0	4,744.8	4,687.1	4,668.1	15.0	10.7	-158.43	-249.1	339.5	992.9	974.3	18.61	53.342			
4,900.0	4,843.5	4,784.5	4,765.1	15.3	10.9	-158.41	-255.2	347.0	1,015.3	996.3	19.02	53.393			
5,000.0	4,942.2	4,882.0	4,862.1	15.6	11.2	-158.38	-261.4	354.4	1,037.7	1,018.3	19.42	53.441			

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4F-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,041.0	4,979.5	4,959.1	16.0	11.4	-158.36	-267.5	361.9	1,060.1	1,040.3	19.82	53.487		
5,200.0	5,139.7	5,076.9	5,056.1	16.3	11.6	-158.34	-273.6	369.3	1,082.5	1,062.3	20.22	53.532		
5,300.0	5,238.4	5,174.4	5,153.0	16.6	11.9	-158.32	-279.8	376.8	1,104.9	1,084.3	20.62	53.574		
5,400.0	5,337.1	5,271.8	5,250.0	17.0	12.1	-158.30	-285.9	384.2	1,127.3	1,106.3	21.03	53.615		
5,500.0	5,435.8	5,369.3	5,347.0	17.3	12.4	-158.28	-292.0	391.7	1,149.7	1,128.3	21.43	53.655		
5,607.7	5,542.1	5,477.8	5,455.0	17.7	12.6	-158.26	-298.8	399.9	1,173.8	1,151.9	21.87	53.679		
5,700.0	5,633.5	5,585.4	5,562.1	17.9	12.9	-158.39	-304.7	407.0	1,192.2	1,169.9	22.29	53.483		
5,800.0	5,732.8	5,703.2	5,679.7	18.2	13.1	-158.50	-309.7	413.1	1,207.6	1,184.8	22.72	53.152		
5,900.0	5,832.5	5,822.1	5,798.5	18.3	13.3	-158.57	-313.1	417.2	1,218.1	1,195.0	23.11	52.707		
6,000.0	5,932.5	5,941.6	5,917.9	18.5	13.5	-158.61	-315.0	419.5	1,223.9	1,200.4	23.47	52.149		
6,067.5	6,000.0	6,022.5	5,998.8	18.5	13.6	90.02	-315.4	420.0	1,225.0	1,201.3	23.69	51.703		
6,100.0	6,032.5	6,055.1	6,031.5	18.6	13.6	90.02	-315.4	420.0	1,225.0	1,201.2	23.79	51.484		
6,200.0	6,132.5	6,155.1	6,131.5	18.7	13.8	90.02	-315.4	420.0	1,225.0	1,200.9	24.10	50.821		
6,300.0	6,232.5	6,255.1	6,231.5	18.8	13.9	90.02	-315.4	420.0	1,225.0	1,200.6	24.42	50.173		
6,400.0	6,332.5	6,355.1	6,331.5	18.9	14.0	90.02	-315.4	420.0	1,225.0	1,200.2	24.73	49.539		
6,443.5	6,376.0	6,398.7	6,375.0	18.9	14.1	90.00	-315.0	420.0	1,225.0	1,200.1	24.86	49.281		
6,500.0	6,432.5	6,454.7	6,430.8	19.0	14.1	89.78	-310.3	420.0	1,225.0	1,200.0	24.97	49.067		
6,516.6	6,449.0	6,470.9	6,446.9	19.0	14.1	89.67	-307.9	420.0	1,225.0	1,200.0	24.99	49.029		
6,550.0	6,482.4	6,503.4	6,478.7	19.0	14.1	89.42	-301.8	420.0	1,225.0	1,200.0	25.01	48.988		
6,600.0	6,532.2	6,551.4	6,525.1	19.0	14.1	89.06	-289.5	420.0	1,225.1	1,200.2	24.99	49.032		
6,650.0	6,581.3	6,598.8	6,569.8	19.0	14.1	88.71	-273.6	420.0	1,225.3	1,200.4	24.92	49.168		
6,700.0	6,629.3	6,645.6	6,612.4	19.0	14.0	88.36	-254.3	420.0	1,225.5	1,200.7	24.82	49.374		
6,750.0	6,676.1	6,692.0	6,653.0	19.0	14.0	88.03	-231.8	420.0	1,225.7	1,201.0	24.70	49.625		
6,800.0	6,721.0	6,737.8	6,691.1	18.9	13.9	87.72	-206.4	420.0	1,226.0	1,201.4	24.57	49.893		
6,850.0	6,764.0	6,783.3	6,726.8	18.9	13.9	87.42	-178.3	420.0	1,226.2	1,201.8	24.45	50.151		
6,900.0	6,804.5	6,828.3	6,759.9	18.9	13.8	87.14	-147.8	420.0	1,226.5	1,202.2	24.35	50.366		
6,950.0	6,842.3	6,873.0	6,790.3	18.8	13.8	86.88	-115.0	420.0	1,226.8	1,202.5	24.29	50.508		
7,000.0	6,877.1	6,917.3	6,817.8	18.8	13.8	86.64	-80.3	420.0	1,227.1	1,202.8	24.28	50.546		
7,050.0	6,908.7	6,961.4	6,842.4	18.8	13.8	86.43	-43.7	420.0	1,227.4	1,203.1	24.32	50.460		
7,100.0	6,936.7	7,005.2	6,863.9	18.8	13.9	86.24	-5.6	420.0	1,227.6	1,203.2	24.45	50.208		
7,150.0	6,961.1	7,050.0	6,883.0	18.9	14.0	86.07	34.9	420.0	1,227.9	1,203.2	24.66	49.793		
7,200.0	6,981.5	7,092.2	6,897.9	19.0	14.1	85.93	74.4	420.0	1,228.1	1,203.1	24.96	49.207		
7,250.0	6,998.0	7,135.5	6,910.2	19.1	14.3	85.82	115.9	420.0	1,228.2	1,202.9	25.35	48.453		
7,300.0	7,010.2	7,178.6	6,919.3	19.2	14.5	85.74	158.0	420.0	1,228.4	1,202.5	25.83	47.553		
7,350.0	7,018.1	7,221.7	6,925.2	19.4	14.8	85.69	200.7	420.0	1,228.5	1,202.1	26.40	46.530		
7,400.0	7,021.8	7,264.7	6,927.8	19.7	15.0	85.66	243.6	420.0	1,228.5	1,201.5	27.05	45.414		
7,416.6	7,022.0	7,279.0	6,928.0	19.8	15.1	85.66	258.0	420.0	1,228.5	1,201.2	27.28	45.027		
7,500.0	7,022.0	7,362.5	6,928.0	20.3	15.8	85.66	341.4	420.0	1,228.5	1,199.8	28.74	42.749		
7,600.0	7,022.0	7,462.5	6,928.0	21.0	16.7	85.66	441.4	420.0	1,228.5	1,197.8	30.73	39.972		
7,700.0	7,022.0	7,562.5	6,928.0	21.8	17.8	85.66	541.4	420.0	1,228.5	1,195.5	32.98	37.248		
7,800.0	7,022.0	7,662.5	6,928.0	22.8	18.9	85.66	641.4	420.0	1,228.5	1,193.1	35.43	34.671		
7,900.0	7,022.0	7,762.5	6,928.0	23.8	20.1	85.66	741.4	420.0	1,228.5	1,190.5	38.05	32.288		
8,000.0	7,022.0	7,862.5	6,928.0	24.9	21.4	85.66	841.4	420.0	1,228.5	1,187.7	40.80	30.113		
8,100.0	7,022.0	7,962.5	6,928.0	26.1	22.8	85.66	941.4	420.0	1,228.5	1,184.9	43.65	28.143		
8,200.0	7,022.0	8,062.5	6,928.0	27.3	24.2	85.66	1,041.4	420.0	1,228.5	1,181.9	46.60	26.365		
8,300.0	7,022.0	8,162.5	6,928.0	28.6	25.7	85.66	1,141.4	420.0	1,228.5	1,178.9	49.61	24.762		
8,400.0	7,022.0	8,262.5	6,928.0	30.0	27.2	85.66	1,241.4	420.0	1,228.5	1,175.8	52.69	23.317		
8,500.0	7,022.0	8,362.5	6,928.0	31.4	28.7	85.66	1,341.4	420.0	1,228.5	1,172.7	55.81	22.011		
8,600.0	7,022.0	8,462.5	6,928.0	32.8	30.3	85.66	1,441.4	420.0	1,228.5	1,169.5	58.98	20.829		
8,700.0	7,022.0	8,562.5	6,928.0	34.3	31.8	85.66	1,541.4	420.0	1,228.5	1,166.3	62.18	19.757		
8,800.0	7,022.0	8,662.5	6,928.0	35.7	33.4	85.66	1,641.4	420.0	1,228.5	1,163.1	65.42	18.780		
8,900.0	7,022.0	8,762.5	6,928.0	37.2	35.0	85.66	1,741.4	420.0	1,228.5	1,159.8	68.67	17.889		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4F-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
9,000.0	7,022.0	8,862.5	6,928.0	38.8	36.6	85.66	1,841.4	420.0	1,228.5	1,156.6	71.96	17.073		
9,100.0	7,022.0	8,962.5	6,928.0	40.3	38.3	85.66	1,941.4	420.0	1,228.5	1,153.3	75.26	16.324		
9,200.0	7,022.0	9,062.5	6,928.0	41.9	39.9	85.66	2,041.4	420.0	1,228.5	1,149.9	78.58	15.635		
9,300.0	7,022.0	9,162.5	6,928.0	43.5	41.6	85.66	2,141.4	420.0	1,228.5	1,146.6	81.91	14.999		
9,400.0	7,022.0	9,262.5	6,928.0	45.0	43.2	85.66	2,241.4	420.0	1,228.5	1,143.3	85.25	14.410		
9,500.0	7,022.0	9,362.5	6,928.0	46.6	44.9	85.66	2,341.4	420.0	1,228.5	1,139.9	88.61	13.864		
9,600.0	7,022.0	9,462.5	6,928.0	48.3	46.6	85.66	2,441.4	420.0	1,228.5	1,136.5	91.98	13.356		
9,700.0	7,022.0	9,562.5	6,928.0	49.9	48.2	85.66	2,541.4	420.0	1,228.5	1,133.2	95.36	12.883		
9,800.0	7,022.0	9,662.5	6,928.0	51.5	49.9	85.66	2,641.4	420.0	1,228.5	1,129.8	98.75	12.441		
9,900.0	7,022.0	9,762.5	6,928.0	53.1	51.6	85.66	2,741.4	420.0	1,228.5	1,126.4	102.14	12.028		
10,000.0	7,022.0	9,862.5	6,928.0	54.8	53.3	85.66	2,841.4	420.0	1,228.5	1,123.0	105.54	11.640		
10,100.0	7,022.0	9,962.5	6,928.0	56.4	55.0	85.66	2,941.4	420.0	1,228.5	1,119.6	108.95	11.276		
10,200.0	7,022.0	10,062.5	6,928.0	58.1	56.7	85.66	3,041.4	420.0	1,228.5	1,116.2	112.36	10.934		
10,300.0	7,022.0	10,162.5	6,928.0	59.8	58.4	85.66	3,141.4	420.0	1,228.5	1,112.8	115.78	10.611		
10,400.0	7,022.0	10,262.5	6,928.0	61.4	60.1	85.66	3,241.4	420.0	1,228.5	1,109.3	119.20	10.307		
10,500.0	7,022.0	10,362.5	6,928.0	63.1	61.8	85.66	3,341.4	420.0	1,228.5	1,105.9	122.62	10.019		
10,600.0	7,022.0	10,462.5	6,928.0	64.8	63.5	85.66	3,441.4	420.0	1,228.5	1,102.5	126.06	9.746		
10,700.0	7,022.0	10,562.5	6,928.0	66.5	65.2	85.66	3,541.4	420.0	1,228.5	1,099.0	129.49	9.488		
10,800.0	7,022.0	10,662.5	6,928.0	68.1	67.0	85.66	3,641.4	420.0	1,228.5	1,095.6	132.93	9.242		
10,900.0	7,022.0	10,762.5	6,928.0	69.8	68.7	85.66	3,741.4	420.0	1,228.5	1,092.2	136.37	9.009		
11,000.0	7,022.0	10,862.5	6,928.0	71.5	70.4	85.66	3,841.4	420.0	1,228.5	1,088.7	139.81	8.787		
11,100.0	7,022.0	10,962.5	6,928.0	73.2	72.1	85.66	3,941.4	420.0	1,228.5	1,085.3	143.26	8.576		
11,200.0	7,022.0	11,062.5	6,928.0	74.9	73.8	85.66	4,041.4	420.0	1,228.5	1,081.8	146.70	8.374		
11,300.0	7,022.0	11,162.5	6,928.0	76.6	75.6	85.66	4,141.4	420.0	1,228.5	1,078.4	150.16	8.182		
11,400.0	7,022.0	11,262.5	6,928.0	78.3	77.3	85.66	4,241.4	420.0	1,228.5	1,074.9	153.61	7.998		
11,500.0	7,022.0	11,362.5	6,928.0	80.0	79.0	85.66	4,341.4	420.0	1,228.5	1,071.5	157.06	7.822		
11,600.0	7,022.0	11,462.5	6,928.0	81.7	80.7	85.66	4,441.4	420.0	1,228.5	1,068.0	160.52	7.654		
11,645.9	7,022.0	11,508.3	6,928.0	82.5	81.5	85.66	4,487.3	420.0	1,228.5	1,066.4	162.11	7.579 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4G-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	90.43	-0.3	45.0	45.0					
100.0	100.0	99.0	99.0	0.1	0.1	90.43	-0.3	45.0	45.0	44.8	0.24	185.207		
200.0	200.0	199.0	199.0	0.3	0.3	90.43	-0.3	45.0	45.0	44.4	0.59	76.104 CC, ES		
300.0	300.0	299.0	299.0	0.5	0.5	-158.98	-0.3	45.0	46.7	45.7	0.94	49.583		
400.0	399.8	398.8	398.8	0.7	0.6	-161.04	-0.3	45.0	51.6	50.3	1.29	39.955		
500.0	499.5	497.6	497.6	0.9	0.8	-163.25	-0.7	45.8	60.6	59.0	1.64	36.962		
600.0	598.7	595.6	595.6	1.2	1.0	-164.81	-1.9	48.0	74.4	72.5	1.99	37.456		
659.8	657.9	653.8	653.8	1.3	1.1	-165.44	-3.0	50.0	85.0	82.8	2.20	38.714		
700.0	697.5	692.8	692.6	1.5	1.2	-165.76	-3.8	51.6	92.8	90.4	2.34	39.687		
800.0	796.2	789.3	789.0	1.8	1.4	-166.02	-6.5	56.7	113.1	110.4	2.69	41.963		
900.0	894.9	885.2	884.6	2.1	1.6	-165.79	-9.9	63.2	134.7	131.7	3.06	44.073		
1,000.0	993.7	980.5	979.5	2.4	1.8	-165.28	-14.0	71.0	157.7	154.3	3.42	46.047		
1,100.0	1,092.4	1,075.2	1,073.6	2.8	2.0	-164.62	-18.8	80.2	182.0	178.2	3.80	47.909		
1,200.0	1,191.1	1,169.1	1,166.8	3.1	2.2	-163.87	-24.3	90.7	207.7	203.5	4.18	49.681		
1,300.0	1,289.8	1,264.3	1,261.1	3.4	2.5	-163.10	-30.4	102.4	234.5	229.9	4.57	51.317		
1,400.0	1,388.5	1,360.6	1,356.4	3.7	2.8	-162.47	-36.7	114.3	261.4	256.4	4.96	52.679		
1,500.0	1,487.2	1,456.9	1,451.8	4.1	3.0	-161.95	-43.0	126.2	288.3	282.9	5.36	53.832		
1,600.0	1,585.9	1,553.2	1,547.1	4.4	3.3	-161.53	-49.2	138.2	315.2	309.5	5.75	54.821		
1,700.0	1,684.7	1,649.4	1,642.4	4.7	3.6	-161.17	-55.5	150.1	342.2	336.1	6.15	55.679		
1,800.0	1,783.4	1,745.7	1,737.7	5.0	3.9	-160.86	-61.8	162.0	369.2	362.6	6.54	56.429		
1,900.0	1,882.1	1,842.0	1,833.1	5.4	4.1	-160.59	-68.0	174.0	396.2	389.2	6.94	57.090		
2,000.0	1,980.8	1,938.3	1,928.4	5.7	4.4	-160.36	-74.3	185.9	423.1	415.8	7.34	57.678		
2,100.0	2,079.5	2,034.5	2,023.7	6.0	4.7	-160.16	-80.5	197.8	450.1	442.4	7.73	58.204		
2,200.0	2,178.2	2,130.8	2,119.1	6.4	5.0	-159.98	-86.8	209.8	477.1	469.0	8.13	58.677		
2,300.0	2,276.9	2,227.1	2,214.4	6.7	5.3	-159.82	-93.1	221.7	504.1	495.6	8.53	59.104		
2,400.0	2,375.7	2,323.4	2,309.7	7.0	5.6	-159.67	-99.3	233.6	531.1	522.2	8.93	59.492		
2,500.0	2,474.4	2,419.6	2,405.0	7.4	5.9	-159.54	-105.6	245.6	558.1	548.8	9.33	59.847		
2,600.0	2,573.1	2,515.9	2,500.4	7.7	6.1	-159.42	-111.9	257.5	585.1	575.4	9.72	60.172		
2,700.0	2,671.8	2,612.2	2,595.7	8.0	6.4	-159.32	-118.1	269.4	612.2	602.0	10.12	60.470		
2,800.0	2,770.5	2,708.5	2,691.0	8.4	6.7	-159.22	-124.4	281.4	639.2	628.7	10.52	60.746		
2,900.0	2,869.2	2,804.8	2,786.4	8.7	7.0	-159.13	-130.7	293.3	666.2	655.3	10.92	61.001		
3,000.0	2,967.9	2,901.0	2,881.7	9.0	7.3	-159.04	-136.9	305.2	693.2	681.9	11.32	61.237		
3,100.0	3,066.7	2,997.3	2,977.0	9.3	7.6	-158.96	-143.2	317.2	720.2	708.5	11.72	61.457		
3,200.0	3,165.4	3,093.6	3,072.3	9.7	7.9	-158.89	-149.5	329.1	747.2	735.1	12.12	61.663		
3,300.0	3,264.1	3,189.9	3,167.7	10.0	8.1	-158.82	-155.7	341.0	774.3	761.7	12.52	61.855		
3,400.0	3,362.8	3,286.1	3,263.0	10.3	8.4	-158.76	-162.0	353.0	801.3	788.4	12.92	62.035		
3,500.0	3,461.5	3,382.4	3,358.3	10.7	8.7	-158.70	-168.2	364.9	828.3	815.0	13.32	62.204		
3,600.0	3,560.2	3,478.7	3,453.7	11.0	9.0	-158.65	-174.5	376.8	855.3	841.6	13.72	62.363		
3,700.0	3,658.9	3,575.0	3,549.0	11.3	9.3	-158.60	-180.8	388.8	882.3	868.2	14.11	62.512		
3,800.0	3,757.7	3,671.2	3,644.3	11.7	9.6	-158.55	-187.0	400.7	909.4	894.9	14.51	62.654		
3,900.0	3,856.4	3,767.5	3,739.6	12.0	9.9	-158.50	-193.3	412.6	936.4	921.5	14.91	62.788		
4,000.0	3,955.1	3,863.8	3,835.0	12.3	10.2	-158.46	-199.6	424.6	963.4	948.1	15.31	62.914		
4,100.0	4,053.8	3,960.1	3,930.3	12.7	10.5	-158.42	-205.8	436.5	990.4	974.7	15.71	63.034		
4,200.0	4,152.5	4,056.4	4,025.6	13.0	10.7	-158.38	-212.1	448.4	1,017.5	1,001.4	16.11	63.149		
4,300.0	4,251.2	4,152.6	4,121.0	13.3	11.0	-158.34	-218.4	460.4	1,044.5	1,028.0	16.51	63.257		
4,400.0	4,350.0	4,248.9	4,216.3	13.7	11.3	-158.31	-224.6	472.3	1,071.5	1,054.6	16.91	63.360		
4,500.0	4,448.7	4,345.2	4,311.6	14.0	11.6	-158.28	-230.9	484.2	1,098.5	1,081.2	17.31	63.459		
4,600.0	4,547.4	4,441.5	4,406.9	14.3	11.9	-158.25	-237.1	496.2	1,125.6	1,107.9	17.71	63.553		
4,700.0	4,646.1	4,537.7	4,502.3	14.6	12.2	-158.22	-243.4	508.1	1,152.6	1,134.5	18.11	63.642		
4,800.0	4,744.8	4,634.0	4,597.6	15.0	12.5	-158.19	-249.7	520.0	1,179.6	1,161.1	18.51	63.728		
4,900.0	4,843.5	4,730.3	4,692.9	15.3	12.8	-158.16	-255.9	532.0	1,206.7	1,187.7	18.91	63.810		
5,000.0	4,942.2	4,826.6	4,788.3	15.6	13.1	-158.13	-262.2	543.9	1,233.7	1,214.4	19.31	63.889		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4G-20H-O264 - HZ - Plan #1												Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,041.0	4,922.8	4,883.6	16.0	13.4	-158.11	-268.5	555.8	1,260.7	1,241.0	19.71	63.965	
5,200.0	5,139.7	5,019.1	4,978.9	16.3	13.6	-158.09	-274.7	567.8	1,287.7	1,267.6	20.11	64.037	
5,300.0	5,238.4	5,115.4	5,074.3	16.6	13.9	-158.06	-281.0	579.7	1,314.8	1,294.3	20.51	64.107	
5,400.0	5,337.1	5,211.7	5,169.6	17.0	14.2	-158.04	-287.3	591.6	1,341.8	1,320.9	20.91	64.174	
5,500.0	5,435.8	5,326.1	5,283.0	17.3	14.5	-158.03	-294.4	605.2	1,368.4	1,347.0	21.34	64.122	
5,607.7	5,542.1	5,458.9	5,414.9	17.7	14.9	-158.07	-301.4	618.6	1,395.0	1,373.2	21.81	63.963	
5,700.0	5,633.5	5,574.0	5,529.5	17.9	15.1	-158.27	-306.3	628.0	1,414.8	1,392.6	22.25	63.590	
5,800.0	5,732.8	5,700.5	5,655.6	18.2	15.4	-158.44	-310.5	636.0	1,431.4	1,408.7	22.70	63.068	
5,900.0	5,832.5	5,828.2	5,783.2	18.3	15.6	-158.55	-313.4	641.5	1,442.7	1,419.6	23.11	62.435	
6,000.0	5,932.5	5,956.7	5,911.7	18.5	15.8	-158.60	-315.0	644.5	1,448.9	1,425.4	23.49	61.691	
6,067.5	6,000.0	6,043.7	5,998.7	18.5	15.9	90.01	-315.3	645.1	1,450.1	1,426.4	23.73	61.121	
6,100.0	6,032.5	6,076.5	6,031.5	18.6	15.9	90.01	-315.3	645.1	1,450.1	1,426.3	23.83	60.862	
6,200.0	6,132.5	6,176.5	6,131.5	18.7	16.0	90.01	-315.3	645.1	1,450.1	1,426.0	24.14	60.079	
6,300.0	6,232.5	6,276.5	6,231.5	18.8	16.2	90.01	-315.3	645.1	1,450.1	1,425.7	24.45	59.314	
6,400.0	6,332.5	6,376.5	6,331.5	18.9	16.3	90.01	-315.3	645.1	1,450.1	1,425.4	24.76	58.566	
6,500.0	6,432.5	6,476.5	6,431.5	19.0	16.4	90.01	-315.3	645.1	1,450.1	1,425.1	25.07	57.834	
6,516.6	6,449.0	6,493.1	6,448.0	19.0	16.4	90.01	-315.3	645.1	1,450.1	1,425.0	25.13	57.714	
6,550.0	6,482.4	6,526.5	6,481.5	19.0	16.4	90.01	-314.4	645.1	1,450.1	1,424.9	25.20	57.554	
6,600.0	6,532.2	6,576.5	6,531.2	19.0	16.5	90.01	-309.3	645.1	1,450.1	1,424.9	25.25	57.441	
6,650.0	6,581.3	6,626.6	6,580.3	19.0	16.4	90.01	-299.9	645.1	1,450.1	1,424.9	25.24	57.459	
6,700.0	6,629.3	6,676.6	6,628.4	19.0	16.4	90.01	-286.2	645.1	1,450.1	1,424.9	25.18	57.589	
6,750.0	6,676.1	6,726.6	6,675.2	19.0	16.4	90.01	-268.4	645.1	1,450.1	1,425.0	25.09	57.807	
6,800.0	6,721.0	6,776.6	6,720.2	18.9	16.3	90.01	-246.6	645.1	1,450.1	1,425.2	24.97	58.086	
6,850.0	6,764.0	6,826.7	6,763.1	18.9	16.3	90.01	-220.9	645.1	1,450.1	1,425.3	24.83	58.392	
6,900.0	6,804.5	6,876.7	6,803.6	18.9	16.2	90.01	-191.6	645.1	1,450.1	1,425.4	24.71	58.684	
6,950.0	6,842.3	6,926.7	6,841.5	18.8	16.2	90.01	-158.9	645.1	1,450.1	1,425.5	24.61	58.920	
7,000.0	6,877.1	6,976.7	6,876.3	18.8	16.2	90.01	-123.0	645.1	1,450.1	1,425.6	24.56	59.054	
7,050.0	6,908.7	7,026.8	6,907.8	18.8	16.2	90.01	-84.2	645.1	1,450.1	1,425.6	24.56	59.040	
7,100.0	6,936.7	7,076.8	6,935.9	18.8	16.2	90.01	-42.8	645.1	1,450.1	1,425.5	24.65	58.839	
7,150.0	6,961.1	7,126.8	6,960.2	18.9	16.3	90.01	0.8	645.1	1,450.1	1,425.3	24.82	58.422	
7,200.0	6,981.5	7,176.8	6,980.7	19.0	16.4	90.01	46.5	645.1	1,450.1	1,425.0	25.10	57.773	
7,250.0	6,998.0	7,226.8	6,997.0	19.1	16.5	90.00	93.7	645.1	1,450.1	1,424.6	25.49	56.894	
7,300.0	7,010.2	7,276.8	7,009.2	19.2	16.7	90.00	142.2	645.1	1,450.1	1,424.1	25.99	55.800	
7,350.0	7,018.1	7,326.8	7,017.2	19.4	16.9	90.00	191.5	645.1	1,450.1	1,423.5	26.60	54.525	
7,400.0	7,021.8	7,376.8	7,020.8	19.7	17.2	90.00	241.4	645.1	1,450.1	1,422.8	27.30	53.112	
7,416.6	7,022.0	7,393.4	7,021.0	19.8	17.3	90.00	258.0	645.1	1,450.1	1,422.6	27.56	52.626	
7,500.0	7,022.0	7,476.8	7,021.0	20.3	17.9	90.00	341.4	645.1	1,450.1	1,421.1	29.00	50.003	
7,600.0	7,022.0	7,576.8	7,021.0	21.0	18.7	90.00	441.4	645.1	1,450.1	1,419.1	30.99	46.789	
7,700.0	7,022.0	7,676.8	7,021.0	21.8	19.6	90.00	541.4	645.1	1,450.1	1,416.9	33.24	43.631	
7,800.0	7,022.0	7,776.8	7,021.0	22.8	20.7	90.00	641.4	645.1	1,450.1	1,414.4	35.68	40.637	
7,900.0	7,022.0	7,876.8	7,021.0	23.8	21.8	90.00	741.4	645.1	1,450.1	1,411.8	38.30	37.864	
8,000.0	7,022.0	7,976.8	7,021.0	24.9	23.0	90.00	841.4	645.1	1,450.1	1,409.1	41.05	35.329	
8,100.0	7,022.0	8,076.8	7,021.0	26.1	24.3	90.00	941.4	645.1	1,450.1	1,406.2	43.90	33.031	
8,200.0	7,022.0	8,176.8	7,021.0	27.3	25.7	90.00	1,041.4	645.1	1,450.1	1,403.3	46.85	30.955	
8,300.0	7,022.0	8,276.8	7,021.0	28.6	27.0	90.00	1,141.4	645.1	1,450.1	1,400.3	49.86	29.081	
8,400.0	7,022.0	8,376.8	7,021.0	30.0	28.5	90.00	1,241.4	645.1	1,450.1	1,397.2	52.94	27.390	
8,500.0	7,022.0	8,476.8	7,021.0	31.4	29.9	90.00	1,341.4	645.1	1,450.1	1,394.1	56.07	25.862	
8,600.0	7,022.0	8,576.8	7,021.0	32.8	31.4	90.00	1,441.4	645.1	1,450.1	1,390.9	59.24	24.478	
8,700.0	7,022.0	8,676.8	7,021.0	34.3	32.9	90.00	1,541.4	645.1	1,450.1	1,387.7	62.45	23.220	
8,800.0	7,022.0	8,776.8	7,021.0	35.7	34.5	90.00	1,641.4	645.1	1,450.1	1,384.4	65.69	22.076	
8,900.0	7,022.0	8,876.8	7,021.0	37.2	36.0	90.00	1,741.4	645.1	1,450.1	1,381.2	68.95	21.031	
9,000.0	7,022.0	8,976.8	7,021.0	38.8	37.6	90.00	1,841.4	645.1	1,450.1	1,377.9	72.24	20.073	

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4G-20H-O264 - HZ - 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		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			
9,100.0	7,022.0	9,076.8	7,021.0	40.3	39.2	90.00	1,941.4	645.1	1,450.1	1,374.6	75.55	19.195		
9,200.0	7,022.0	9,176.8	7,021.0	41.9	40.8	90.00	2,041.4	645.1	1,450.1	1,371.2	78.87	18.386		
9,300.0	7,022.0	9,276.8	7,021.0	43.5	42.4	90.00	2,141.4	645.1	1,450.1	1,367.9	82.21	17.639		
9,400.0	7,022.0	9,376.8	7,021.0	45.0	44.0	90.00	2,241.4	645.1	1,450.1	1,364.6	85.57	16.947		
9,500.0	7,022.0	9,476.8	7,021.0	46.6	45.7	90.00	2,341.4	645.1	1,450.1	1,361.2	88.93	16.306		
9,600.0	7,022.0	9,576.8	7,021.0	48.3	47.3	90.00	2,441.4	645.1	1,450.1	1,357.8	92.31	15.710		
9,700.0	7,022.0	9,676.8	7,021.0	49.9	49.0	90.00	2,541.4	645.1	1,450.1	1,354.4	95.69	15.154		
9,800.0	7,022.0	9,776.8	7,021.0	51.5	50.6	90.00	2,641.4	645.1	1,450.1	1,351.0	99.09	14.635		
9,900.0	7,022.0	9,876.8	7,021.0	53.1	52.3	90.00	2,741.4	645.1	1,450.1	1,347.6	102.49	14.149		
10,000.0	7,022.0	9,976.8	7,021.0	54.8	54.0	90.00	2,841.4	645.1	1,450.1	1,344.2	105.90	13.694		
10,100.0	7,022.0	10,076.8	7,021.0	56.4	55.7	90.00	2,941.4	645.1	1,450.1	1,340.8	109.31	13.266		
10,200.0	7,022.0	10,176.8	7,021.0	58.1	57.3	90.00	3,041.4	645.1	1,450.1	1,337.4	112.73	12.863		
10,300.0	7,022.0	10,276.8	7,021.0	59.8	59.0	90.00	3,141.4	645.1	1,450.1	1,334.0	116.16	12.484		
10,400.0	7,022.0	10,376.8	7,021.0	61.4	60.7	90.00	3,241.4	645.1	1,450.1	1,330.5	119.59	12.126		
10,500.0	7,022.0	10,476.8	7,021.0	63.1	62.4	90.00	3,341.4	645.1	1,450.1	1,327.1	123.02	11.787		
10,600.0	7,022.0	10,576.8	7,021.0	64.8	64.1	90.00	3,441.4	645.1	1,450.1	1,323.7	126.46	11.467		
10,700.0	7,022.0	10,676.8	7,021.0	66.5	65.8	90.00	3,541.4	645.1	1,450.1	1,320.2	129.91	11.163		
10,800.0	7,022.0	10,776.8	7,021.0	68.1	67.5	90.00	3,641.4	645.1	1,450.1	1,316.8	133.35	10.874		
10,900.0	7,022.0	10,876.8	7,021.0	69.8	69.2	90.00	3,741.4	645.1	1,450.1	1,313.3	136.80	10.600		
11,000.0	7,022.0	10,976.8	7,021.0	71.5	70.9	90.00	3,841.4	645.1	1,450.1	1,309.9	140.25	10.339		
11,100.0	7,022.0	11,076.8	7,021.0	73.2	72.6	90.00	3,941.4	645.1	1,450.1	1,306.4	143.71	10.091		
11,200.0	7,022.0	11,176.8	7,021.0	74.9	74.3	90.00	4,041.4	645.1	1,450.1	1,302.9	147.17	9.854		
11,300.0	7,022.0	11,276.8	7,021.0	76.6	76.0	90.00	4,141.4	645.1	1,450.1	1,299.5	150.63	9.627		
11,400.0	7,022.0	11,376.8	7,021.0	78.3	77.8	90.00	4,241.4	645.1	1,450.1	1,296.0	154.09	9.411		
11,500.0	7,022.0	11,476.8	7,021.0	80.0	79.5	90.00	4,341.4	645.1	1,450.1	1,292.6	157.55	9.204		
11,600.0	7,022.0	11,576.8	7,021.0	81.7	81.2	90.00	4,441.4	645.1	1,450.1	1,289.1	161.02	9.006		
11,645.9	7,022.0	11,622.7	7,021.0	82.5	82.0	90.00	4,487.3	645.1	1,450.1	1,287.5	162.61	8.918 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4H-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.36	-0.3	52.6	52.6					
100.0	100.0	99.0	99.0	0.1	0.1	90.36	-0.3	52.6	52.6	52.3	0.24	216.264		
200.0	200.0	199.0	199.0	0.3	0.3	90.36	-0.3	52.6	52.6	52.0	0.59	88.866 CC, ES		
300.0	300.0	299.0	299.0	0.5	0.5	-158.94	-0.3	52.6	54.2	53.3	0.94	57.608		
400.0	399.8	398.4	398.4	0.7	0.6	-160.65	-0.4	52.8	59.3	58.0	1.29	45.972		
500.0	499.5	496.9	496.8	0.9	0.8	-162.41	-1.0	54.3	69.1	67.5	1.64	42.184 SF		
600.0	598.7	594.6	594.5	1.2	1.0	-163.84	-2.2	57.4	83.9	81.9	1.99	42.194		
659.8	657.9	652.5	652.4	1.3	1.1	-164.51	-3.2	60.0	95.0	92.8	2.20	43.260		
700.0	697.5	691.3	691.1	1.5	1.2	-164.88	-4.0	62.1	103.2	100.8	2.34	44.129		
800.0	796.2	787.3	786.8	1.8	1.4	-165.35	-6.3	68.1	124.5	121.8	2.69	46.236		
900.0	894.9	882.6	881.9	2.1	1.6	-165.37	-9.2	75.7	147.3	144.3	3.05	48.269		
1,000.0	993.7	977.3	976.1	2.4	1.8	-165.14	-12.7	84.6	171.6	168.1	3.42	50.232		
1,100.0	1,092.4	1,071.3	1,069.4	2.8	2.0	-164.74	-16.6	94.9	197.2	193.4	3.78	52.132		
1,200.0	1,191.1	1,164.5	1,161.8	3.1	2.3	-164.25	-21.1	106.5	224.3	220.1	4.15	53.979		
1,300.0	1,289.8	1,256.9	1,253.1	3.4	2.6	-163.71	-26.1	119.4	252.7	248.2	4.53	55.782		
1,400.0	1,388.5	1,348.5	1,343.4	3.7	2.8	-163.14	-31.5	133.6	282.6	277.7	4.91	57.547		
1,500.0	1,487.2	1,439.2	1,432.7	4.1	3.2	-162.56	-37.4	148.9	313.8	308.6	5.29	59.293		
1,600.0	1,585.9	1,533.9	1,525.7	4.4	3.5	-162.01	-43.9	165.6	345.8	340.1	5.69	60.811		
1,700.0	1,684.7	1,628.6	1,618.7	4.7	3.8	-161.55	-50.3	182.3	377.8	371.7	6.08	62.131		
1,800.0	1,783.4	1,723.4	1,711.7	5.0	4.2	-161.17	-56.7	198.9	409.7	403.3	6.47	63.288		
1,900.0	1,882.1	1,818.1	1,804.7	5.4	4.5	-160.84	-63.1	215.6	441.7	434.9	6.87	64.310		
2,000.0	1,980.8	1,912.8	1,897.7	5.7	4.8	-160.55	-69.6	232.3	473.7	466.5	7.26	65.221		
2,100.0	2,079.5	2,007.5	1,990.7	6.0	5.2	-160.30	-76.0	249.0	505.8	498.1	7.66	66.036		
2,200.0	2,178.2	2,102.2	2,083.8	6.4	5.5	-160.08	-82.4	265.7	537.8	529.7	8.05	66.770		
2,300.0	2,276.9	2,196.9	2,176.8	6.7	5.9	-159.89	-88.9	282.3	569.8	561.4	8.45	67.435		
2,400.0	2,375.7	2,291.6	2,269.8	7.0	6.2	-159.71	-95.3	299.0	601.8	593.0	8.85	68.040		
2,500.0	2,474.4	2,386.4	2,362.8	7.4	6.6	-159.55	-101.7	315.7	633.9	624.6	9.24	68.592		
2,600.0	2,573.1	2,481.1	2,455.8	7.7	6.9	-159.41	-108.1	332.4	665.9	656.3	9.64	69.099		
2,700.0	2,671.8	2,575.8	2,548.8	8.0	7.3	-159.28	-114.6	349.1	698.0	688.0	10.03	69.566		
2,800.0	2,770.5	2,670.5	2,641.8	8.4	7.6	-159.17	-121.0	365.8	730.0	719.6	10.43	69.997		
2,900.0	2,869.2	2,765.2	2,734.8	8.7	8.0	-159.06	-127.4	382.4	762.1	751.3	10.83	70.396		
3,000.0	2,967.9	2,859.9	2,827.8	9.0	8.3	-158.96	-133.8	399.1	794.1	782.9	11.22	70.767		
3,100.0	3,066.7	2,954.6	2,920.9	9.3	8.7	-158.87	-140.3	415.8	826.2	814.6	11.62	71.112		
3,200.0	3,165.4	3,049.4	3,013.9	9.7	9.0	-158.78	-146.7	432.5	858.3	846.2	12.01	71.434		
3,300.0	3,264.1	3,144.1	3,106.9	10.0	9.4	-158.71	-153.1	449.2	890.3	877.9	12.41	71.736		
3,400.0	3,362.8	3,238.8	3,199.9	10.3	9.8	-158.63	-159.5	465.8	922.4	909.6	12.81	72.019		
3,500.0	3,461.5	3,333.5	3,292.9	10.7	10.1	-158.56	-166.0	482.5	954.5	941.2	13.20	72.285		
3,600.0	3,560.2	3,428.2	3,385.9	11.0	10.5	-158.50	-172.4	499.2	986.5	972.9	13.60	72.535		
3,700.0	3,658.9	3,522.9	3,478.9	11.3	10.8	-158.44	-178.8	515.9	1,018.6	1,004.6	14.00	72.771		
3,800.0	3,757.7	3,617.6	3,571.9	11.7	11.2	-158.39	-185.3	532.6	1,050.7	1,036.3	14.39	72.994		
3,900.0	3,856.4	3,712.4	3,665.0	12.0	11.5	-158.33	-191.7	549.2	1,082.7	1,067.9	14.79	73.205		
4,000.0	3,955.1	3,807.1	3,758.0	12.3	11.9	-158.28	-198.1	565.9	1,114.8	1,099.6	15.19	73.405		
4,100.0	4,053.8	3,901.8	3,851.0	12.7	12.2	-158.24	-204.5	582.6	1,146.9	1,131.3	15.58	73.594		
4,200.0	4,152.5	3,996.5	3,944.0	13.0	12.6	-158.19	-211.0	599.3	1,178.9	1,162.9	15.98	73.775		
4,300.0	4,251.2	4,091.2	4,037.0	13.3	13.0	-158.15	-217.4	616.0	1,211.0	1,194.6	16.38	73.946		
4,400.0	4,350.0	4,185.9	4,130.0	13.7	13.3	-158.11	-223.8	632.7	1,243.1	1,226.3	16.77	74.109		
4,500.0	4,448.7	4,280.6	4,223.0	14.0	13.7	-158.07	-230.2	649.3	1,275.1	1,258.0	17.17	74.265		
4,600.0	4,547.4	4,375.4	4,316.0	14.3	14.0	-158.04	-236.7	666.0	1,307.2	1,289.6	17.57	74.413		
4,700.0	4,646.1	4,470.1	4,409.0	14.6	14.4	-158.00	-243.1	682.7	1,339.3	1,321.3	17.96	74.555		
4,800.0	4,744.8	4,564.8	4,502.1	15.0	14.7	-157.97	-249.5	699.4	1,371.4	1,353.0	18.36	74.691		
4,900.0	4,843.5	4,659.5	4,595.1	15.3	15.1	-157.94	-255.9	716.1	1,403.4	1,384.7	18.76	74.821		
5,000.0	4,942.2	4,754.2	4,688.1	15.6	15.4	-157.91	-262.4	732.7	1,435.5	1,416.4	19.15	74.946		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												S20-T2N-R64W (Dale) - Dale 4H-20H-O264 - HZ - 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	5,041.0	4,848.9	4,781.1	16.0	15.8	-157.88	-268.8	749.4	1,467.6	1,448.0	19.55	75.066					
5,200.0	5,139.7	4,943.6	4,874.1	16.3	16.2	-157.85	-275.2	766.1	1,499.7	1,479.7	19.95	75.180					
5,300.0	5,238.4	5,054.8	4,983.4	16.6	16.6	-157.83	-282.6	785.3	1,531.5	1,511.1	20.37	75.166					



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4I-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft	
Survey Program: 0-Geolink MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	90.31	-0.3	60.1	60.1						
100.0	100.0	99.0	99.0	0.1	0.1	90.31	-0.3	60.1	60.1	59.9	0.24	247.322			
200.0	200.0	199.0	199.0	0.3	0.3	90.31	-0.3	60.1	60.1	59.5	0.59	101.628 CC, ES			
300.0	300.0	299.0	299.0	0.5	0.5	-158.90	-0.3	60.1	61.8	60.8	0.94	65.633			
400.0	399.8	396.7	396.7	0.7	0.6	-160.00	-0.8	61.7	68.2	67.0	1.29	53.005			
500.0	499.5	493.4	493.3	0.9	0.8	-160.88	-2.2	66.4	81.2	79.6	1.64	49.666 SF			
600.0	598.7	588.7	588.2	1.2	1.0	-161.43	-4.6	74.0	100.6	98.6	1.99	50.660			
659.8	657.9	644.7	643.9	1.3	1.2	-161.62	-6.4	79.9	115.2	113.0	2.20	52.434			
700.0	697.5	682.0	680.8	1.5	1.3	-161.73	-7.7	84.5	126.0	123.6	2.34	53.808			
800.0	796.2	773.5	771.3	1.8	1.5	-161.67	-11.7	97.5	154.8	152.1	2.70	57.258			
900.0	894.9	863.3	859.7	2.1	1.9	-161.30	-16.4	112.9	186.5	183.4	3.07	60.726			
1,000.0	993.7	951.8	946.2	2.4	2.2	-160.78	-21.8	130.8	220.9	217.5	3.44	64.203			
1,100.0	1,092.4	1,045.3	1,037.3	2.8	2.6	-160.28	-27.9	150.7	256.5	252.7	3.82	67.075			
1,200.0	1,191.1	1,138.7	1,128.4	3.1	3.0	-159.90	-34.0	170.6	292.1	287.9	4.21	69.407			
1,300.0	1,289.8	1,232.1	1,219.5	3.4	3.3	-159.61	-40.0	190.5	327.7	323.1	4.59	71.333			
1,400.0	1,388.5	1,325.6	1,310.5	3.7	3.7	-159.37	-46.1	210.5	363.3	358.3	4.98	72.950			
1,500.0	1,487.2	1,419.0	1,401.6	4.1	4.1	-159.18	-52.2	230.4	398.9	393.6	5.37	74.327			
1,600.0	1,585.9	1,512.4	1,492.7	4.4	4.5	-159.01	-58.2	250.3	434.6	428.8	5.76	75.512			
1,700.0	1,684.7	1,605.9	1,583.8	4.7	4.9	-158.87	-64.3	270.3	470.2	464.1	6.14	76.543			
1,800.0	1,783.4	1,699.3	1,674.9	5.0	5.3	-158.76	-70.4	290.2	505.8	499.3	6.53	77.448			
1,900.0	1,882.1	1,792.7	1,766.0	5.4	5.7	-158.65	-76.4	310.1	541.5	534.5	6.92	78.249			
2,000.0	1,980.8	1,886.2	1,857.0	5.7	6.1	-158.56	-82.5	330.1	577.1	569.8	7.31	78.962			
2,100.0	2,079.5	1,979.6	1,948.1	6.0	6.5	-158.48	-88.6	350.0	612.7	605.0	7.70	79.602			
2,200.0	2,178.2	2,073.0	2,039.2	6.4	6.9	-158.41	-94.6	369.9	648.4	640.3	8.09	80.179			
2,300.0	2,276.9	2,166.5	2,130.3	6.7	7.3	-158.35	-100.7	389.8	684.0	675.5	8.48	80.701			
2,400.0	2,375.7	2,259.9	2,221.4	7.0	7.7	-158.29	-106.7	409.8	719.6	710.8	8.86	81.177			
2,500.0	2,474.4	2,353.3	2,312.4	7.4	8.1	-158.24	-112.8	429.7	755.3	746.0	9.25	81.612			
2,600.0	2,573.1	2,446.8	2,403.5	7.7	8.6	-158.19	-118.9	449.6	790.9	781.3	9.64	82.011			
2,700.0	2,671.8	2,540.2	2,494.6	8.0	9.0	-158.15	-124.9	469.6	826.5	816.5	10.03	82.378			
2,800.0	2,770.5	2,633.6	2,585.7	8.4	9.4	-158.11	-131.0	489.5	862.2	851.7	10.42	82.718			
2,900.0	2,869.2	2,727.1	2,676.8	8.7	9.8	-158.07	-137.1	509.4	897.8	887.0	10.81	83.032			
3,000.0	2,967.9	2,820.5	2,767.8	9.0	10.2	-158.04	-143.1	529.3	933.4	922.2	11.20	83.324			
3,100.0	3,066.7	2,913.9	2,858.9	9.3	10.6	-158.01	-149.2	549.3	969.1	957.5	11.59	83.597			
3,200.0	3,165.4	3,007.4	2,950.0	9.7	11.0	-157.98	-155.3	569.2	1,004.7	992.7	11.98	83.851			
3,300.0	3,264.1	3,100.8	3,041.1	10.0	11.4	-157.95	-161.3	589.1	1,040.4	1,028.0	12.37	84.089			
3,400.0	3,362.8	3,194.2	3,132.2	10.3	11.8	-157.92	-167.4	609.1	1,076.0	1,063.2	12.76	84.312			
3,500.0	3,461.5	3,287.7	3,223.2	10.7	12.2	-157.90	-173.5	629.0	1,111.6	1,098.5	13.15	84.522			
3,600.0	3,560.2	3,381.1	3,314.3	11.0	12.6	-157.88	-179.5	648.9	1,147.3	1,133.7	13.54	84.719			
3,700.0	3,658.9	3,474.5	3,405.4	11.3	13.0	-157.86	-185.6	668.9	1,182.9	1,169.0	13.93	84.905			
3,800.0	3,757.7	3,568.0	3,496.5	11.7	13.4	-157.84	-191.7	688.8	1,218.5	1,204.2	14.32	85.081			
3,900.0	3,856.4	3,661.4	3,587.6	12.0	13.8	-157.82	-197.7	708.7	1,254.2	1,239.5	14.71	85.248			
4,000.0	3,955.1	3,754.8	3,678.7	12.3	14.2	-157.80	-203.8	728.6	1,289.8	1,274.7	15.10	85.406			
4,100.0	4,053.8	3,848.3	3,769.7	12.7	14.6	-157.79	-209.9	748.6	1,325.5	1,310.0	15.49	85.555			
4,200.0	4,152.5	3,941.7	3,860.8	13.0	15.0	-157.77	-215.9	768.5	1,361.1	1,345.2	15.88	85.698			
4,300.0	4,251.2	4,035.1	3,951.9	13.3	15.4	-157.75	-222.0	788.4	1,396.7	1,380.5	16.27	85.833			
4,400.0	4,350.0	4,128.6	4,043.0	13.7	15.8	-157.74	-228.1	808.4	1,432.4	1,415.7	16.66	85.962			
4,500.0	4,448.7	4,222.0	4,134.1	14.0	16.2	-157.73	-234.1	828.3	1,468.0	1,451.0	17.05	86.085			
4,600.0	4,547.4	4,315.4	4,225.1	14.3	16.6	-157.71	-240.2	848.2	1,503.7	1,486.2	17.44	86.203			
4,700.0	4,646.1	4,408.9	4,316.2	14.6	17.1	-157.70	-246.3	868.1	1,539.3	1,521.5	17.83	86.315			

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4J-20H-O264 - HZ - 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	90.60	-0.7	67.4	67.4					
100.0	100.0	98.0	98.0	0.1	0.1	90.60	-0.7	67.4	67.4	67.2	0.24	278.642		
200.0	200.0	198.0	198.0	0.3	0.3	90.60	-0.7	67.4	67.4	66.8	0.59	114.260 CC, ES		
300.0	300.0	296.9	296.9	0.5	0.5	-158.47	-0.8	67.8	69.4	68.5	0.94	74.051		
400.0	399.8	394.1	394.1	0.7	0.6	-159.22	-1.6	70.9	77.5	76.2	1.28	60.393		
500.0	499.5	490.3	490.0	0.9	0.8	-159.96	-3.2	77.2	92.1	90.5	1.63	56.476 SF		
600.0	598.7	584.8	584.0	1.2	1.1	-160.55	-5.5	86.4	113.1	111.1	1.98	57.110		
659.8	657.9	640.3	639.1	1.3	1.2	-160.81	-7.2	93.1	128.7	126.5	2.19	58.739		
700.0	697.5	677.2	675.6	1.5	1.3	-160.99	-8.5	98.2	140.1	137.8	2.33	60.026		
800.0	796.2	767.7	764.9	1.8	1.6	-161.13	-12.1	112.6	170.6	167.9	2.69	63.333		
900.0	894.9	856.5	851.9	2.1	2.0	-160.98	-16.3	129.4	203.9	200.9	3.06	66.730		
1,000.0	993.7	943.3	936.5	2.4	2.3	-160.67	-21.1	148.4	240.0	236.6	3.42	70.185		
1,100.0	1,092.4	1,033.5	1,023.9	2.8	2.7	-160.30	-26.5	170.0	278.2	274.4	3.79	73.332		
1,200.0	1,191.1	1,125.8	1,113.4	3.1	3.1	-160.00	-32.1	192.3	316.5	312.3	4.17	75.851		
1,300.0	1,289.8	1,218.2	1,202.8	3.4	3.6	-159.77	-37.7	214.6	354.8	350.2	4.55	77.934		
1,400.0	1,388.5	1,310.6	1,292.3	3.7	4.0	-159.58	-43.3	236.9	393.1	388.1	4.93	79.685		
1,500.0	1,487.2	1,402.9	1,381.7	4.1	4.4	-159.43	-48.9	259.2	431.4	426.0	5.31	81.176		
1,600.0	1,585.9	1,495.3	1,471.2	4.4	4.9	-159.30	-54.5	281.5	469.7	464.0	5.70	82.462		
1,700.0	1,684.7	1,587.7	1,560.7	4.7	5.3	-159.19	-60.1	303.8	508.0	501.9	6.08	83.581		
1,800.0	1,783.4	1,680.0	1,650.1	5.0	5.7	-159.09	-65.8	326.1	546.3	539.8	6.46	84.565		
1,900.0	1,882.1	1,772.4	1,739.6	5.4	6.2	-159.01	-71.4	348.4	584.6	577.8	6.84	85.435		
2,000.0	1,980.8	1,864.8	1,829.0	5.7	6.6	-158.94	-77.0	370.7	622.9	615.7	7.23	86.211		
2,100.0	2,079.5	1,957.1	1,918.5	6.0	7.1	-158.88	-82.6	393.0	661.2	653.6	7.61	86.908		
2,200.0	2,178.2	2,049.5	2,008.0	6.4	7.5	-158.82	-88.2	415.3	699.5	691.5	7.99	87.536		
2,300.0	2,276.9	2,141.9	2,097.4	6.7	7.9	-158.77	-93.8	437.6	737.8	729.5	8.37	88.105		
2,400.0	2,375.7	2,234.2	2,186.9	7.0	8.4	-158.72	-99.4	459.9	776.2	767.4	8.76	88.623		
2,500.0	2,474.4	2,326.6	2,276.3	7.4	8.8	-158.68	-105.0	482.2	814.5	805.3	9.14	89.097		
2,600.0	2,573.1	2,419.0	2,365.8	7.7	9.3	-158.64	-110.6	504.5	852.8	843.3	9.52	89.532		
2,700.0	2,671.8	2,511.3	2,455.3	8.0	9.7	-158.61	-116.2	526.8	891.1	881.2	9.91	89.933		
2,800.0	2,770.5	2,603.7	2,544.7	8.4	10.1	-158.58	-121.8	549.1	929.4	919.1	10.29	90.304		
2,900.0	2,869.2	2,696.1	2,634.2	8.7	10.6	-158.55	-127.4	571.4	967.7	957.1	10.68	90.647		
3,000.0	2,967.9	2,788.4	2,723.6	9.0	11.0	-158.52	-133.0	593.7	1,006.1	995.0	11.06	90.966		
3,100.0	3,066.7	2,880.8	2,813.1	9.3	11.5	-158.50	-138.7	616.0	1,044.4	1,032.9	11.44	91.263		
3,200.0	3,165.4	2,973.2	2,902.5	9.7	11.9	-158.47	-144.3	638.3	1,082.7	1,070.9	11.83	91.541		
3,300.0	3,264.1	3,065.5	2,992.0	10.0	12.4	-158.45	-149.9	660.6	1,121.0	1,108.8	12.21	91.801		
3,400.0	3,362.8	3,157.9	3,081.5	10.3	12.8	-158.43	-155.5	682.9	1,159.3	1,146.7	12.60	92.045		
3,500.0	3,461.5	3,250.3	3,170.9	10.7	13.2	-158.41	-161.1	705.2	1,197.6	1,184.7	12.98	92.274		
3,600.0	3,560.2	3,342.6	3,260.4	11.0	13.7	-158.40	-166.7	727.5	1,235.9	1,222.6	13.36	92.490		
3,700.0	3,658.9	3,435.0	3,349.8	11.3	14.1	-158.38	-172.3	749.8	1,274.3	1,260.5	13.75	92.694		
3,800.0	3,757.7	3,527.4	3,439.3	11.7	14.6	-158.36	-177.9	772.1	1,312.6	1,298.5	14.13	92.886		
3,900.0	3,856.4	3,619.7	3,528.8	12.0	15.0	-158.35	-183.5	794.4	1,350.9	1,336.4	14.52	93.068		
4,000.0	3,955.1	3,712.1	3,618.2	12.3	15.5	-158.34	-189.1	816.7	1,389.2	1,374.3	14.90	93.241		
4,100.0	4,053.8	3,804.5	3,707.7	12.7	15.9	-158.32	-194.7	839.0	1,427.5	1,412.3	15.28	93.405		
4,200.0	4,152.5	3,896.8	3,797.1	13.0	16.3	-158.31	-200.3	861.3	1,465.9	1,450.2	15.67	93.560		
4,300.0	4,251.2	3,989.2	3,886.6	13.3	16.8	-158.30	-205.9	883.6	1,504.2	1,488.1	16.05	93.708		
4,400.0	4,350.0	4,081.6	3,976.1	13.7	17.2	-158.29	-211.5	905.9	1,542.5	1,526.1	16.44	93.850		

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4K-20H-O264 - HZ - Plan #1													Offset Site Error: 0.0 ft			
Survey Program: 0-Geolink MWD															Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	90.53	-0.7	75.0	75.0							
100.0	100.0	98.0	98.0	0.1	0.1	90.53	-0.7	75.0	75.0	74.7	0.24	309.856				
200.0	200.0	198.0	198.0	0.3	0.3	90.53	-0.7	75.0	75.0	74.4	0.59	127.059	CC, ES			
300.0	300.0	295.4	295.4	0.5	0.5	-158.31	-1.0	76.5	78.2	77.2	0.93	83.616				
400.0	399.8	392.2	392.1	0.7	0.7	-158.82	-2.0	81.3	87.9	86.7	1.28	68.669				
500.0	499.5	487.8	487.3	0.9	0.9	-159.43	-3.7	89.1	104.2	102.6	1.63	64.015	SF			
600.0	598.7	581.5	580.4	1.2	1.1	-159.99	-6.0	99.8	126.8	124.9	1.98	64.170				
659.8	657.9	636.5	634.8	1.3	1.3	-160.27	-7.6	107.4	143.4	141.2	2.19	65.592				
700.0	697.5	672.9	670.8	1.5	1.4	-160.48	-8.9	113.0	155.4	153.1	2.33	66.753				
800.0	796.2	762.5	758.8	1.8	1.7	-160.73	-12.2	128.8	187.5	184.8	2.69	69.825				
900.0	894.9	850.1	844.5	2.1	2.1	-160.72	-16.1	146.8	222.4	219.4	3.04	73.067				
1,000.0	993.7	935.8	927.7	2.4	2.5	-160.55	-20.4	166.8	260.1	256.7	3.40	76.407				
1,100.0	1,092.4	1,019.4	1,008.3	2.8	2.9	-160.29	-25.1	188.8	300.3	296.6	3.76	79.819				
1,200.0	1,191.1	1,107.4	1,092.5	3.1	3.4	-159.99	-30.4	213.7	342.6	338.4	4.13	82.898				
1,300.0	1,289.8	1,197.9	1,179.1	3.4	3.8	-159.75	-35.9	239.4	384.9	380.4	4.51	85.388				
1,400.0	1,388.5	1,288.5	1,265.8	3.7	4.3	-159.55	-41.4	265.1	427.3	422.4	4.88	87.483				
1,500.0	1,487.2	1,379.1	1,352.5	4.1	4.8	-159.39	-47.0	290.9	469.7	464.4	5.26	89.271				
1,600.0	1,585.9	1,469.7	1,439.1	4.4	5.3	-159.26	-52.5	316.6	512.0	506.4	5.64	90.814				
1,700.0	1,684.7	1,560.2	1,525.8	4.7	5.8	-159.15	-58.0	342.4	554.4	548.4	6.02	92.159				
1,800.0	1,783.4	1,650.8	1,612.4	5.0	6.3	-159.05	-63.5	368.1	596.8	590.4	6.39	93.341				
1,900.0	1,882.1	1,741.4	1,699.1	5.4	6.8	-158.96	-69.0	393.9	639.1	632.4	6.77	94.389				
2,000.0	1,980.8	1,832.0	1,785.8	5.7	7.3	-158.89	-74.5	419.6	681.5	674.4	7.15	95.324				
2,100.0	2,079.5	1,922.5	1,872.4	6.0	7.8	-158.83	-80.1	445.4	723.9	716.3	7.53	96.163				
2,200.0	2,178.2	2,013.1	1,959.1	6.4	8.3	-158.77	-85.6	471.1	766.3	758.3	7.91	96.920				
2,300.0	2,276.9	2,103.7	2,045.8	6.7	8.8	-158.72	-91.1	496.9	808.6	800.3	8.28	97.607				
2,400.0	2,375.7	2,194.3	2,132.4	7.0	9.3	-158.67	-96.6	522.6	851.0	842.3	8.66	98.233				
2,500.0	2,474.4	2,284.8	2,219.1	7.4	9.8	-158.63	-102.1	548.4	893.4	884.3	9.04	98.805				
2,600.0	2,573.1	2,375.4	2,305.8	7.7	10.3	-158.59	-107.6	574.1	935.8	926.3	9.42	99.331				
2,700.0	2,671.8	2,466.0	2,392.4	8.0	10.8	-158.55	-113.2	599.8	978.1	968.3	9.80	99.816				
2,800.0	2,770.5	2,556.6	2,479.1	8.4	11.3	-158.52	-118.7	625.6	1,020.5	1,010.3	10.18	100.264				
2,900.0	2,869.2	2,647.1	2,565.7	8.7	11.8	-158.49	-124.2	651.3	1,062.9	1,052.3	10.56	100.679				
3,000.0	2,967.9	2,737.7	2,652.4	9.0	12.3	-158.46	-129.7	677.1	1,105.3	1,094.3	10.94	101.065				
3,100.0	3,066.7	2,828.3	2,739.1	9.3	12.8	-158.44	-135.2	702.8	1,147.6	1,136.3	11.32	101.425				
3,200.0	3,165.4	2,918.9	2,825.7	9.7	13.3	-158.41	-140.7	728.6	1,190.0	1,178.3	11.69	101.761				
3,300.0	3,264.1	3,009.4	2,912.4	10.0	13.8	-158.39	-146.2	754.3	1,232.4	1,220.3	12.07	102.076				
3,400.0	3,362.8	3,100.0	2,999.1	10.3	14.3	-158.37	-151.8	780.1	1,274.8	1,262.3	12.45	102.372				
3,500.0	3,461.5	3,190.6	3,085.7	10.7	14.8	-158.35	-157.3	805.8	1,317.2	1,304.3	12.83	102.650				
3,600.0	3,560.2	3,281.2	3,172.4	11.0	15.3	-158.33	-162.8	831.6	1,359.5	1,346.3	13.21	102.911				
3,700.0	3,658.9	3,371.7	3,259.1	11.3	15.8	-158.32	-168.3	857.3	1,401.9	1,388.3	13.59	103.158				
3,800.0	3,757.7	3,462.3	3,345.7	11.7	16.3	-158.30	-173.8	883.1	1,444.3	1,430.3	13.97	103.392				
3,900.0	3,856.4	3,552.9	3,432.4	12.0	16.8	-158.29	-179.3	908.8	1,486.7	1,472.3	14.35	103.613				
4,000.0	3,955.1	3,643.5	3,519.1	12.3	17.3	-158.27	-184.9	934.5	1,529.0	1,514.3	14.73	103.822				



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WELL													Offset Site Error:	0.0 ft
Survey Program:		7877-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	6.48	1,301.6	147.9	1,311.6					
100.0	100.0	36.0	36.0	0.1	0.1	6.48	1,301.6	147.9	1,310.0	1,309.8	0.19	7,073.218		
200.0	200.0	136.0	136.0	0.3	0.2	6.48	1,301.6	147.9	1,310.0	1,309.5	0.53	2,451.935		
300.0	300.0	236.0	236.0	0.5	0.4	117.91	1,301.6	147.9	1,310.8	1,309.9	0.89	1,478.973		
400.0	399.8	335.8	335.8	0.7	0.6	118.07	1,301.6	147.9	1,313.3	1,312.0	1.25	1,049.235		
500.0	499.5	435.5	435.5	0.9	0.8	118.33	1,301.6	147.9	1,317.4	1,315.8	1.64	802.984		
600.0	598.7	534.7	534.7	1.2	0.9	118.69	1,301.6	147.9	1,323.2	1,321.2	2.06	641.891		
659.8	657.9	593.9	593.9	1.3	1.0	118.95	1,301.6	147.9	1,327.6	1,325.3	2.33	570.383		
700.0	697.5	633.5	633.5	1.5	1.1	119.18	1,301.6	147.9	1,330.7	1,328.2	2.51	530.546		
800.0	796.2	732.2	732.2	1.8	1.3	119.78	1,301.6	147.9	1,338.7	1,335.7	2.96	451.978		
900.0	894.9	830.9	830.9	2.1	1.5	120.36	1,301.6	147.9	1,346.8	1,343.4	3.42	394.019		
1,000.0	993.7	929.7	929.7	2.4	1.6	120.94	1,301.6	147.9	1,355.0	1,351.1	3.87	349.684		
1,100.0	1,092.4	1,028.4	1,028.4	2.8	1.8	121.51	1,301.6	147.9	1,363.4	1,359.0	4.33	314.760		
1,200.0	1,191.1	1,127.1	1,127.1	3.1	2.0	122.07	1,301.6	147.9	1,371.9	1,367.1	4.79	286.583		
1,300.0	1,289.8	1,225.8	1,225.8	3.4	2.1	122.63	1,301.6	147.9	1,380.5	1,375.3	5.24	263.399		
1,400.0	1,388.5	1,324.5	1,324.5	3.7	2.3	123.18	1,301.6	147.9	1,389.3	1,383.6	5.69	244.005		
1,500.0	1,487.2	1,423.2	1,423.2	4.1	2.5	123.72	1,301.6	147.9	1,398.1	1,392.0	6.14	227.554		
1,600.0	1,585.9	1,521.9	1,521.9	4.4	2.7	124.26	1,301.6	147.9	1,407.2	1,400.6	6.59	213.434		
1,700.0	1,684.7	1,620.7	1,620.7	4.7	2.8	124.79	1,301.6	147.9	1,416.3	1,409.3	7.04	201.188		
1,800.0	1,783.4	1,719.4	1,719.4	5.0	3.0	125.31	1,301.6	147.9	1,425.6	1,418.1	7.48	190.471		
1,900.0	1,882.1	1,818.1	1,818.1	5.4	3.2	125.83	1,301.6	147.9	1,434.9	1,427.0	7.93	181.020		
2,000.0	1,980.8	1,916.8	1,916.8	5.7	3.3	126.34	1,301.6	147.9	1,444.4	1,436.1	8.37	172.626		
2,100.0	2,079.5	2,015.5	2,015.5	6.0	3.5	126.84	1,301.6	147.9	1,454.0	1,445.2	8.81	165.124		
2,200.0	2,178.2	2,114.2	2,114.2	6.4	3.7	127.34	1,301.6	147.9	1,463.7	1,454.5	9.24	158.382		
2,300.0	2,276.9	2,212.9	2,212.9	6.7	3.9	127.83	1,301.6	147.9	1,473.6	1,463.9	9.68	152.293		
2,400.0	2,375.7	2,311.7	2,311.7	7.0	4.0	128.31	1,301.6	147.9	1,483.5	1,473.4	10.11	146.768		
2,500.0	2,474.4	2,410.4	2,410.4	7.4	4.2	128.79	1,301.6	147.9	1,493.5	1,483.0	10.54	141.734		
2,600.0	2,573.1	2,509.1	2,509.1	7.7	4.4	129.26	1,301.6	147.9	1,503.7	1,492.7	10.97	137.130		
2,700.0	2,671.8	2,607.8	2,607.8	8.0	4.6	129.73	1,301.6	147.9	1,513.9	1,502.5	11.39	132.905		
2,800.0	2,770.5	2,706.5	2,706.5	8.4	4.7	130.18	1,301.6	147.9	1,524.3	1,512.5	11.81	129.015		
2,900.0	2,869.2	2,805.2	2,805.2	8.7	4.9	130.64	1,301.6	147.9	1,534.7	1,522.5	12.24	125.423		
3,000.0	2,967.9	2,903.9	2,903.9	9.0	5.1	131.08	1,301.6	147.9	1,545.2	1,532.6	12.66	122.097		
7,250.0	6,998.0	6,934.0	6,934.0	19.1	12.1	70.03	1,301.6	147.9	1,538.5	1,514.6	23.96	64.202		
7,300.0	7,010.2	6,946.2	6,946.2	19.2	12.1	76.19	1,301.6	147.9	1,500.8	1,476.2	24.63	60.935		
7,350.0	7,018.1	6,954.1	6,954.1	19.4	12.1	82.31	1,301.6	147.9	1,463.0	1,437.8	25.24	57.957		
7,400.0	7,021.8	6,957.8	6,957.8	19.7	12.1	88.16	1,301.6	147.9	1,425.6	1,399.8	25.78	55.306		
7,416.6	7,022.0	6,958.0	6,958.0	19.8	12.1	90.00	1,301.6	147.9	1,413.3	1,387.3	25.94	54.489		
7,500.0	7,022.0	6,958.0	6,958.0	20.3	12.1	90.00	1,301.6	147.9	1,352.8	1,326.2	26.65	50.760		
7,600.0	7,022.0	6,958.0	6,958.0	21.0	12.1	90.00	1,301.6	147.9	1,283.8	1,256.1	27.65	46.434		
7,700.0	7,022.0	6,958.0	6,958.0	21.8	12.1	90.00	1,301.6	147.9	1,219.0	1,190.3	28.77	42.373		
7,800.0	7,022.0	6,958.0	6,958.0	22.8	12.1	90.00	1,301.6	147.9	1,159.3	1,129.3	29.99	38.652		
7,900.0	7,022.0	6,958.0	6,958.0	23.8	12.1	90.00	1,301.6	147.9	1,105.4	1,074.1	31.30	35.317		
8,000.0	7,022.0	6,958.0	6,958.0	24.9	12.1	90.00	1,301.6	147.9	1,058.3	1,025.6	32.67	32.389		
8,100.0	7,022.0	6,958.0	6,958.0	26.1	12.1	90.00	1,301.6	147.9	1,018.8	984.7	34.10	29.874		
8,200.0	7,022.0	6,958.0	6,958.0	27.3	12.1	90.00	1,301.6	147.9	987.8	952.3	35.57	27.769		
8,300.0	7,022.0	6,958.0	6,958.0	28.6	12.1	90.00	1,301.6	147.9	966.3	929.2	37.08	26.059		
8,400.0	7,022.0	6,958.0	6,958.0	30.0	12.1	90.00	1,301.6	147.9	954.8	916.2	38.62	24.724		
8,460.2	7,022.0	6,958.0	6,958.0	30.8	12.1	90.00	1,301.6	147.9	952.9	913.4	39.56	24.087 CC, ES		
8,500.0	7,022.0	6,958.0	6,958.0	31.4	12.1	90.00	1,301.6	147.9	953.8	913.6	40.19	23.734		
8,600.0	7,022.0	6,958.0	6,958.0	32.8	12.1	90.00	1,301.6	147.9	963.1	921.4	41.77	23.058		
8,700.0	7,022.0	6,958.0	6,958.0	34.3	12.1	90.00	1,301.6	147.9	982.6	939.3	43.37	22.655		
8,800.0	7,022.0	6,958.0	6,958.0	35.7	12.1	90.00	1,301.6	147.9	1,011.7	966.7	44.99	22.486 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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WELL													Offset Site Error: 0.0 ft
Survey Program: 7877-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
8,900.0	7,022.0	6,958.0	6,958.0	37.2	12.1	90.00	1,301.6	147.9	1,049.5	1,002.9	46.63	22.510	
9,000.0	7,022.0	6,958.0	6,958.0	38.8	12.1	90.00	1,301.6	147.9	1,095.2	1,046.9	48.27	22.690	
9,100.0	7,022.0	6,958.0	6,958.0	40.3	12.1	90.00	1,301.6	147.9	1,147.8	1,097.9	49.92	22.992	
9,200.0	7,022.0	6,958.0	6,958.0	41.9	12.1	90.00	1,301.6	147.9	1,206.4	1,154.8	51.58	23.387	
9,300.0	7,022.0	6,958.0	6,958.0	43.5	12.1	90.00	1,301.6	147.9	1,270.2	1,216.9	53.25	23.851	
9,400.0	7,022.0	6,958.0	6,958.0	45.0	12.1	90.00	1,301.6	147.9	1,338.4	1,283.5	54.93	24.365	
9,500.0	7,022.0	6,958.0	6,958.0	46.6	12.1	90.00	1,301.6	147.9	1,410.4	1,353.8	56.61	24.913	
9,600.0	7,022.0	6,958.0	6,958.0	48.3	12.1	90.00	1,301.6	147.9	1,485.7	1,427.4	58.30	25.483	



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - FOY 'Y' 20-6 (EXISTING) - EXISTING - NOBLE WELL													Offset Site Error:	0.0 ft
Survey Program: 7721-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,800.0	7,022.0	6,951.0	6,951.0	35.7	12.1	-90.00	2,895.4	-1,590.9	1,479.9	1,434.9	44.98	32.901		
8,900.0	7,022.0	6,951.0	6,951.0	37.2	12.1	-90.00	2,895.4	-1,590.9	1,396.2	1,349.6	46.61	29.953		
9,000.0	7,022.0	6,951.0	6,951.0	38.8	12.1	-90.00	2,895.4	-1,590.9	1,314.7	1,266.5	48.26	27.245		
9,100.0	7,022.0	6,951.0	6,951.0	40.3	12.1	-90.00	2,895.4	-1,590.9	1,236.0	1,186.1	49.91	24.765		
9,200.0	7,022.0	6,951.0	6,951.0	41.9	12.1	-90.00	2,895.4	-1,590.9	1,160.6	1,109.0	51.57	22.504		
9,300.0	7,022.0	6,951.0	6,951.0	43.5	12.1	-90.00	2,895.4	-1,590.9	1,089.1	1,035.8	53.24	20.455		
9,400.0	7,022.0	6,951.0	6,951.0	45.0	12.1	-90.00	2,895.4	-1,590.9	1,022.4	967.5	54.92	18.617		
9,500.0	7,022.0	6,951.0	6,951.0	46.6	12.1	-90.00	2,895.4	-1,590.9	961.5	904.9	56.60	16.987		
9,600.0	7,022.0	6,951.0	6,951.0	48.3	12.1	-90.00	2,895.4	-1,590.9	907.6	849.3	58.29	15.570		
9,700.0	7,022.0	6,951.0	6,951.0	49.9	12.1	-90.00	2,895.4	-1,590.9	861.9	801.9	59.98	14.370		
9,800.0	7,022.0	6,951.0	6,951.0	51.5	12.1	-90.00	2,895.4	-1,590.9	825.9	764.2	61.68	13.390		
9,900.0	7,022.0	6,951.0	6,951.0	53.1	12.1	-90.00	2,895.4	-1,590.9	800.8	737.4	63.38	12.635		
10,000.0	7,022.0	6,951.0	6,951.0	54.8	12.1	-90.00	2,895.4	-1,590.9	787.7	722.6	65.08	12.103		
10,054.0	7,022.0	6,951.0	6,951.0	55.7	12.1	-90.00	2,895.4	-1,590.9	785.8	719.8	66.01	11.906 CC, ES		
10,100.0	7,022.0	6,951.0	6,951.0	56.4	12.1	-90.00	2,895.4	-1,590.9	787.2	720.4	66.79	11.786		
10,200.0	7,022.0	6,951.0	6,951.0	58.1	12.1	-90.00	2,895.4	-1,590.9	799.3	730.8	68.50	11.668 SF		
10,300.0	7,022.0	6,951.0	6,951.0	59.8	12.1	-90.00	2,895.4	-1,590.9	823.4	753.2	70.21	11.728		
10,400.0	7,022.0	6,951.0	6,951.0	61.4	12.1	-90.00	2,895.4	-1,590.9	858.6	786.7	71.93	11.937		
10,500.0	7,022.0	6,951.0	6,951.0	63.1	12.1	-90.00	2,895.4	-1,590.9	903.6	829.9	73.65	12.269		
10,600.0	7,022.0	6,951.0	6,951.0	64.8	12.1	-90.00	2,895.4	-1,590.9	956.9	881.5	75.37	12.697		
10,700.0	7,022.0	6,951.0	6,951.0	66.5	12.1	-90.00	2,895.4	-1,590.9	1,017.3	940.2	77.09	13.196		
10,800.0	7,022.0	6,951.0	6,951.0	68.1	12.1	-90.00	2,895.4	-1,590.9	1,083.5	1,004.7	78.81	13.749		
10,900.0	7,022.0	6,951.0	6,951.0	69.8	12.1	-90.00	2,895.4	-1,590.9	1,154.7	1,074.1	80.53	14.337		
11,000.0	7,022.0	6,951.0	6,951.0	71.5	12.1	-90.00	2,895.4	-1,590.9	1,229.8	1,147.5	82.26	14.950		
11,100.0	7,022.0	6,951.0	6,951.0	73.2	12.1	-90.00	2,895.4	-1,590.9	1,308.3	1,224.3	83.99	15.577		
11,200.0	7,022.0	6,951.0	6,951.0	74.9	12.1	-90.00	2,895.4	-1,590.9	1,389.5	1,303.8	85.72	16.211		
11,300.0	7,022.0	6,951.0	6,951.0	76.6	12.1	-90.00	2,895.4	-1,590.9	1,473.1	1,385.7	87.45	16.846		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL													Offset Site Error: 0.0 ft
Survey Program: 7693-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
9,900.0	7,022.0	6,927.0	6,927.0	53.1	12.1	90.00	3,911.7	137.3	1,502.5	1,439.2	63.34	23.723	
10,000.0	7,022.0	6,927.0	6,927.0	54.8	12.1	90.00	3,911.7	137.3	1,426.0	1,361.0	65.04	21.925	
10,100.0	7,022.0	6,927.0	6,927.0	56.4	12.1	90.00	3,911.7	137.3	1,352.6	1,285.8	66.75	20.264	
10,200.0	7,022.0	6,927.0	6,927.0	58.1	12.1	90.00	3,911.7	137.3	1,282.7	1,214.3	68.46	18.737	
10,300.0	7,022.0	6,927.0	6,927.0	59.8	12.1	90.00	3,911.7	137.3	1,217.1	1,146.9	70.17	17.345	
10,400.0	7,022.0	6,927.0	6,927.0	61.4	12.1	90.00	3,911.7	137.3	1,156.4	1,084.5	71.89	16.086	
10,500.0	7,022.0	6,927.0	6,927.0	63.1	12.1	90.00	3,911.7	137.3	1,101.5	1,027.9	73.60	14.965	
10,600.0	7,022.0	6,927.0	6,927.0	64.8	12.1	90.00	3,911.7	137.3	1,053.2	977.8	75.32	13.982	
10,700.0	7,022.0	6,927.0	6,927.0	66.5	12.1	90.00	3,911.7	137.3	1,012.5	935.4	77.04	13.141	
10,800.0	7,022.0	6,927.0	6,927.0	68.1	12.1	90.00	3,911.7	137.3	980.3	901.6	78.77	12.446	
10,900.0	7,022.0	6,927.0	6,927.0	69.8	12.1	90.00	3,911.7	137.3	957.6	877.1	80.49	11.897	
11,000.0	7,022.0	6,927.0	6,927.0	71.5	12.1	90.00	3,911.7	137.3	944.9	862.7	82.22	11.493	
11,070.3	7,022.0	6,927.0	6,927.0	72.7	12.1	90.00	3,911.7	137.3	942.3	858.9	83.43	11.294 CC	
11,100.0	7,022.0	6,927.0	6,927.0	73.2	12.1	90.00	3,911.7	137.3	942.8	858.8	83.95	11.231 ES	
11,200.0	7,022.0	6,927.0	6,927.0	74.9	12.1	90.00	3,911.7	137.3	951.2	865.5	85.67	11.103	
11,300.0	7,022.0	6,927.0	6,927.0	76.6	12.1	90.00	3,911.7	137.3	969.9	882.5	87.40	11.097 SF	
11,400.0	7,022.0	6,927.0	6,927.0	78.3	12.1	90.00	3,911.7	137.3	998.3	909.2	89.13	11.200	
11,500.0	7,022.0	6,927.0	6,927.0	80.0	12.1	90.00	3,911.7	137.3	1,035.7	944.8	90.87	11.398	
11,600.0	7,022.0	6,927.0	6,927.0	81.7	12.1	90.00	3,911.7	137.3	1,081.0	988.4	92.60	11.674	
11,645.9	7,022.0	6,927.0	6,927.0	82.5	12.1	90.00	3,911.7	137.3	1,104.2	1,010.8	93.40	11.823	

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 Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design		S20-T2N-R64W (Dale) - RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL											Offset Site Error:		0.0 ft
Survey Program:		7638-Geolink MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis				Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
7,416.6	7,022.0	6,952.0	6,952.0	19.8	12.1	90.00	1,674.6	-207.5	1,537.5	1,511.6	25.93	59.304			
7,500.0	7,022.0	6,952.0	6,952.0	20.3	12.1	90.00	1,674.6	-207.5	1,461.0	1,434.4	26.64	54.842			
7,600.0	7,022.0	6,952.0	6,952.0	21.0	12.1	90.00	1,674.6	-207.5	1,370.4	1,342.7	27.64	49.585			
7,700.0	7,022.0	6,952.0	6,952.0	21.8	12.1	90.00	1,674.6	-207.5	1,281.1	1,252.4	28.76	44.547			
7,800.0	7,022.0	6,952.0	6,952.0	22.8	12.1	90.00	1,674.6	-207.5	1,193.6	1,163.6	29.98	39.809			
7,900.0	7,022.0	6,952.0	6,952.0	23.8	12.1	90.00	1,674.6	-207.5	1,108.1	1,076.9	31.29	35.416			
8,000.0	7,022.0	6,952.0	6,952.0	24.9	12.1	90.00	1,674.6	-207.5	1,025.3	992.7	32.66	31.391			
8,100.0	7,022.0	6,952.0	6,952.0	26.1	12.1	90.00	1,674.6	-207.5	945.9	911.8	34.09	27.746			
8,200.0	7,022.0	6,952.0	6,952.0	27.3	12.1	90.00	1,674.6	-207.5	870.7	835.1	35.56	24.482			
8,300.0	7,022.0	6,952.0	6,952.0	28.6	12.1	90.00	1,674.6	-207.5	800.9	763.8	37.07	21.603			
8,400.0	7,022.0	6,952.0	6,952.0	30.0	12.1	90.00	1,674.6	-207.5	738.1	699.4	38.61	19.115			
8,500.0	7,022.0	6,952.0	6,952.0	31.4	12.1	90.00	1,674.6	-207.5	684.2	644.0	40.17	17.030			
8,600.0	7,022.0	6,952.0	6,952.0	32.8	12.1	90.00	1,674.6	-207.5	641.4	599.7	41.76	15.360			
8,700.0	7,022.0	6,952.0	6,952.0	34.3	12.1	90.00	1,674.6	-207.5	612.2	568.8	43.36	14.118			
8,800.0	7,022.0	6,952.0	6,952.0	35.7	12.1	90.00	1,674.6	-207.5	598.4	553.5	44.98	13.304			
8,833.3	7,022.0	6,952.0	6,952.0	36.2	12.1	90.00	1,674.6	-207.5	597.5	552.0	45.53	13.125 CC, ES			
8,900.0	7,022.0	6,952.0	6,952.0	37.2	12.1	90.00	1,674.6	-207.5	601.2	554.6	46.61	12.898			
9,000.0	7,022.0	6,952.0	6,952.0	38.8	12.1	90.00	1,674.6	-207.5	620.3	572.1	48.26	12.855 SF			
9,100.0	7,022.0	6,952.0	6,952.0	40.3	12.1	90.00	1,674.6	-207.5	654.3	604.4	49.91	13.110			
9,200.0	7,022.0	6,952.0	6,952.0	41.9	12.1	90.00	1,674.6	-207.5	701.1	649.5	51.57	13.594			
9,300.0	7,022.0	6,952.0	6,952.0	43.5	12.1	90.00	1,674.6	-207.5	758.2	705.0	53.24	14.240			
9,400.0	7,022.0	6,952.0	6,952.0	45.0	12.1	90.00	1,674.6	-207.5	823.5	768.6	54.92	14.995			
9,500.0	7,022.0	6,952.0	6,952.0	46.6	12.1	90.00	1,674.6	-207.5	895.3	838.7	56.60	15.817			
9,600.0	7,022.0	6,952.0	6,952.0	48.3	12.1	90.00	1,674.6	-207.5	972.1	913.8	58.29	16.676			
9,700.0	7,022.0	6,952.0	6,952.0	49.9	12.1	90.00	1,674.6	-207.5	1,052.7	992.8	59.98	17.551			
9,800.0	7,022.0	6,952.0	6,952.0	51.5	12.1	90.00	1,674.6	-207.5	1,136.5	1,074.8	61.68	18.426			
9,900.0	7,022.0	6,952.0	6,952.0	53.1	12.1	90.00	1,674.6	-207.5	1,222.7	1,159.3	63.38	19.291			
10,000.0	7,022.0	6,952.0	6,952.0	54.8	12.1	90.00	1,674.6	-207.5	1,310.8	1,245.8	65.08	20.141			
10,100.0	7,022.0	6,952.0	6,952.0	56.4	12.1	90.00	1,674.6	-207.5	1,400.6	1,333.8	66.79	20.969			
10,200.0	7,022.0	6,952.0	6,952.0	58.1	12.1	90.00	1,674.6	-207.5	1,491.6	1,423.1	68.50	21.775			



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - STARKE 'Y' 20-03 (EXISTING) - EXISTING - NOBLE WELL													Offset Site Error:	0.0 ft
Survey Program: 7768-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	7,022.0	6,937.0	6,937.0	58.1	12.1	-90.00	4,286.9	-1,610.3	1,483.2	1,414.8	68.48	21.661		
10,300.0	7,022.0	6,937.0	6,937.0	59.8	12.1	-90.00	4,286.9	-1,610.3	1,400.3	1,330.1	70.19	19.951		
10,400.0	7,022.0	6,937.0	6,937.0	61.4	12.1	-90.00	4,286.9	-1,610.3	1,319.8	1,247.9	71.90	18.354		
10,500.0	7,022.0	6,937.0	6,937.0	63.1	12.1	-90.00	4,286.9	-1,610.3	1,242.0	1,168.4	73.62	16.871		
10,600.0	7,022.0	6,937.0	6,937.0	64.8	12.1	-90.00	4,286.9	-1,610.3	1,167.7	1,092.4	75.34	15.499		
10,700.0	7,022.0	6,937.0	6,937.0	66.5	12.1	-90.00	4,286.9	-1,610.3	1,097.5	1,020.4	77.06	14.241		
10,800.0	7,022.0	6,937.0	6,937.0	68.1	12.1	-90.00	4,286.9	-1,610.3	1,032.1	953.3	78.79	13.101		
10,900.0	7,022.0	6,937.0	6,937.0	69.8	12.1	-90.00	4,286.9	-1,610.3	972.7	892.2	80.51	12.082		
11,000.0	7,022.0	6,937.0	6,937.0	71.5	12.1	-90.00	4,286.9	-1,610.3	920.4	838.1	82.24	11.192		
11,100.0	7,022.0	6,937.0	6,937.0	73.2	12.1	-90.00	4,286.9	-1,610.3	876.3	792.4	83.96	10.437		
11,200.0	7,022.0	6,937.0	6,937.0	74.9	12.1	-90.00	4,286.9	-1,610.3	841.9	756.2	85.69	9.825		
11,300.0	7,022.0	6,937.0	6,937.0	76.6	12.1	-90.00	4,286.9	-1,610.3	818.4	730.9	87.42	9.361		
11,400.0	7,022.0	6,937.0	6,937.0	78.3	12.1	-90.00	4,286.9	-1,610.3	806.6	717.5	89.15	9.048		
11,445.6	7,022.0	6,937.0	6,937.0	79.1	12.1	-90.00	4,286.9	-1,610.3	805.3	715.4	89.94	8.954 CC, ES		
11,500.0	7,022.0	6,937.0	6,937.0	80.0	12.1	-90.00	4,286.9	-1,610.3	807.2	716.3	90.88	8.881		
11,600.0	7,022.0	6,937.0	6,937.0	81.7	12.1	-90.00	4,286.9	-1,610.3	820.0	727.4	92.62	8.854 SF		
11,645.9	7,022.0	6,937.0	6,937.0	82.5	12.1	-90.00	4,286.9	-1,610.3	829.9	736.4	93.41	8.884		

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4A-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4989.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4989.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4A-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4989.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Dale 4A-20H-O264
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.60°

