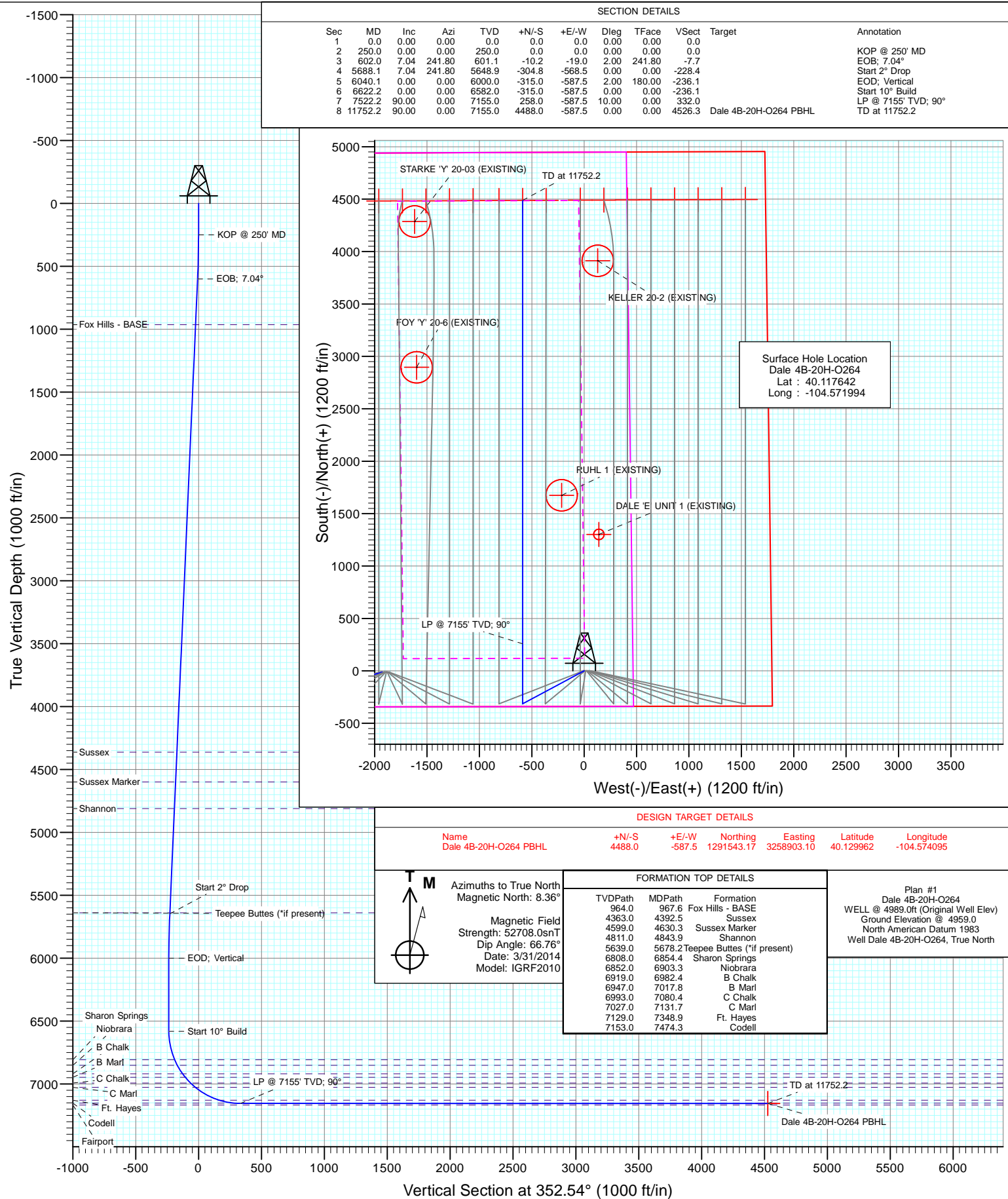




Project: DJ Wattenberg
Site: S20-T2N-R64W (Dale)
Well: Dale 4B-20H-O264
Wellbore: HZ
Design: Plan #1





Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: DJ Wattenberg
Site: S20-T2N-R64W (Dale)
Well: Dale 4B-20H-O264
Wellbore: HZ
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Local Co-ordinate Reference: Well Dale 4B-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

Project DJ Wattenberg

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

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 4B-20H-O264

Well Position +N/-S 0.0 ft Northing: 1,287,061.60 ft Latitude: 40.117642
+E/-W 0.0 ft Easting: 3,259,537.51 ft Longitude: -104.571994
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	352.54

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
602.0	7.04	241.80	601.1	-10.2	-19.0	2.00	2.00	0.00	241.80	
5,688.1	7.04	241.80	5,648.9	-304.8	-568.5	0.00	0.00	0.00	0.00	
6,040.1	0.00	0.00	6,000.0	-315.0	-587.5	2.00	-2.00	0.00	180.00	
6,622.2	0.00	0.00	6,582.0	-315.0	-587.5	0.00	0.00	0.00	0.00	
7,522.2	90.00	0.00	7,155.0	258.0	-587.5	10.00	10.00	0.00	0.00	
11,752.2	90.00	0.00	7,155.0	4,488.0	-587.5	0.00	0.00	0.00	0.00	Dale 4B-20H-O264 PI



Planning Report

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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
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	KOP @ 250' MD
300.0	1.00	241.80	300.0	-0.2	-0.4	-0.2	2.00	2.00	
400.0	3.00	241.80	399.9	-1.9	-3.5	-1.4	2.00	2.00	
500.0	5.00	241.80	499.7	-5.2	-9.6	-3.9	2.00	2.00	
602.0	7.04	241.80	601.1	-10.2	-19.0	-7.7	2.00	2.00	EOB; 7.04°
700.0	7.04	241.80	698.4	-15.9	-29.6	-11.9	0.00	0.00	
800.0	7.04	241.80	797.6	-21.7	-40.4	-16.2	0.00	0.00	
900.0	7.04	241.80	896.9	-27.5	-51.2	-20.6	0.00	0.00	
967.6	7.04	241.80	964.0	-31.4	-58.5	-23.5	0.00	0.00	Fox Hills - BASE
1,000.0	7.04	241.80	996.1	-33.3	-62.0	-24.9	0.00	0.00	
1,100.0	7.04	241.80	1,095.4	-39.1	-72.8	-29.3	0.00	0.00	
1,200.0	7.04	241.80	1,194.6	-44.8	-83.6	-33.6	0.00	0.00	
1,300.0	7.04	241.80	1,293.9	-50.6	-94.4	-37.9	0.00	0.00	
1,400.0	7.04	241.80	1,393.1	-56.4	-105.2	-42.3	0.00	0.00	
1,500.0	7.04	241.80	1,492.3	-62.2	-116.0	-46.6	0.00	0.00	
1,600.0	7.04	241.80	1,591.6	-68.0	-126.8	-51.0	0.00	0.00	
1,700.0	7.04	241.80	1,690.8	-73.8	-137.6	-55.3	0.00	0.00	
1,800.0	7.04	241.80	1,790.1	-79.6	-148.4	-59.7	0.00	0.00	
1,900.0	7.04	241.80	1,889.3	-85.4	-159.3	-64.0	0.00	0.00	
2,000.0	7.04	241.80	1,988.6	-91.2	-170.1	-68.3	0.00	0.00	
2,100.0	7.04	241.80	2,087.8	-97.0	-180.9	-72.7	0.00	0.00	
2,200.0	7.04	241.80	2,187.1	-102.8	-191.7	-77.0	0.00	0.00	
2,300.0	7.04	241.80	2,286.3	-108.6	-202.5	-81.4	0.00	0.00	
2,400.0	7.04	241.80	2,385.6	-114.3	-213.3	-85.7	0.00	0.00	
2,500.0	7.04	241.80	2,484.8	-120.1	-224.1	-90.0	0.00	0.00	
2,600.0	7.04	241.80	2,584.0	-125.9	-234.9	-94.4	0.00	0.00	
2,700.0	7.04	241.80	2,683.3	-131.7	-245.7	-98.7	0.00	0.00	
2,800.0	7.04	241.80	2,782.5	-137.5	-256.5	-103.1	0.00	0.00	
2,900.0	7.04	241.80	2,881.8	-143.3	-267.3	-107.4	0.00	0.00	
3,000.0	7.04	241.80	2,981.0	-149.1	-278.1	-111.7	0.00	0.00	
3,100.0	7.04	241.80	3,080.3	-154.9	-288.9	-116.1	0.00	0.00	
3,200.0	7.04	241.80	3,179.5	-160.7	-299.7	-120.4	0.00	0.00	
3,300.0	7.04	241.80	3,278.8	-166.5	-310.5	-124.8	0.00	0.00	
3,400.0	7.04	241.80	3,378.0	-172.3	-321.3	-129.1	0.00	0.00	
3,500.0	7.04	241.80	3,477.3	-178.1	-332.1	-133.4	0.00	0.00	
3,600.0	7.04	241.80	3,576.5	-183.9	-342.9	-137.8	0.00	0.00	
3,700.0	7.04	241.80	3,675.8	-189.6	-353.7	-142.1	0.00	0.00	
3,800.0	7.04	241.80	3,775.0	-195.4	-364.5	-146.5	0.00	0.00	
3,900.0	7.04	241.80	3,874.2	-201.2	-375.3	-150.8	0.00	0.00	
4,000.0	7.04	241.80	3,973.5	-207.0	-386.1	-155.2	0.00	0.00	
4,100.0	7.04	241.80	4,072.7	-212.8	-396.9	-159.5	0.00	0.00	
4,200.0	7.04	241.80	4,172.0	-218.6	-407.7	-163.8	0.00	0.00	
4,300.0	7.04	241.80	4,271.2	-224.4	-418.5	-168.2	0.00	0.00	
4,392.5	7.04	241.80	4,363.0	-229.7	-428.5	-172.2	0.00	0.00	Sussex
4,400.0	7.04	241.80	4,370.5	-230.2	-429.3	-172.5	0.00	0.00	
4,500.0	7.04	241.80	4,469.7	-236.0	-440.1	-176.9	0.00	0.00	
4,600.0	7.04	241.80	4,569.0	-241.8	-450.9	-181.2	0.00	0.00	
4,630.3	7.04	241.80	4,599.0	-243.5	-454.2	-182.5	0.00	0.00	Sussex Marker
4,700.0	7.04	241.80	4,668.2	-247.6	-461.7	-185.5	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
4,800.0	7.04	241.80	4,767.5	-253.4	-472.5	-189.9	0.00	0.00	
4,843.9	7.04	241.80	4,811.0	-255.9	-477.3	-191.8	0.00	0.00	Shannon
4,900.0	7.04	241.80	4,866.7	-259.1	-483.3	-194.2	0.00	0.00	
5,000.0	7.04	241.80	4,966.0	-264.9	-494.1	-198.6	0.00	0.00	
5,100.0	7.04	241.80	5,065.2	-270.7	-504.9	-202.9	0.00	0.00	
5,200.0	7.04	241.80	5,164.4	-276.5	-515.7	-207.2	0.00	0.00	
5,300.0	7.04	241.80	5,263.7	-282.3	-526.5	-211.6	0.00	0.00	
5,400.0	7.04	241.80	5,362.9	-288.1	-537.3	-215.9	0.00	0.00	
5,500.0	7.04	241.80	5,462.2	-293.9	-548.1	-220.3	0.00	0.00	
5,600.0	7.04	241.80	5,561.4	-299.7	-558.9	-224.6	0.00	0.00	
5,678.2	7.04	241.80	5,639.0	-304.2	-567.4	-228.0	0.00	0.00	Teepee Buttes (*if present)
5,688.1	7.04	241.80	5,648.9	-304.8	-568.5	-228.4	0.00	0.00	Start 2° Drop
5,700.0	6.80	241.80	5,660.7	-305.5	-569.7	-228.9	2.00	-2.00	
5,800.0	4.80	241.80	5,760.2	-310.2	-578.6	-232.5	2.00	-2.00	
5,900.0	2.80	241.80	5,859.9	-313.4	-584.5	-234.9	2.00	-2.00	
6,000.0	0.80	241.80	5,959.9	-314.9	-587.3	-236.0	2.00	-2.00	
6,040.1	0.00	0.00	6,000.0	-315.0	-587.5	-236.1	2.00	-2.00	EOD; Vertical
6,100.0	0.00	0.00	6,059.9	-315.0	-587.5	-236.1	0.00	0.00	
6,200.0	0.00	0.00	6,159.9	-315.0	-587.5	-236.1	0.00	0.00	
6,300.0	0.00	0.00	6,259.9	-315.0	-587.5	-236.1	0.00	0.00	
6,400.0	0.00	0.00	6,359.9	-315.0	-587.5	-236.1	0.00	0.00	
6,500.0	0.00	0.00	6,459.9	-315.0	-587.5	-236.1	0.00	0.00	
6,600.0	0.00	0.00	6,559.9	-315.0	-587.5	-236.1	0.00	0.00	
6,622.2	0.00	0.00	6,582.0	-315.0	-587.5	-236.1	0.00	0.00	Start 10° Build
6,650.0	2.78	0.00	6,609.9	-314.3	-587.5	-235.4	10.00	10.00	
6,700.0	7.78	0.00	6,659.6	-309.7	-587.5	-230.8	10.00	10.00	
6,750.0	12.78	0.00	6,708.8	-300.8	-587.5	-222.0	10.00	10.00	
6,800.0	17.78	0.00	6,757.0	-287.6	-587.5	-208.9	10.00	10.00	
6,850.0	22.78	0.00	6,803.9	-270.3	-587.5	-191.8	10.00	10.00	
6,854.4	23.23	0.00	6,808.0	-268.6	-587.5	-190.0	10.00	10.00	Sharon Springs
6,900.0	27.78	0.00	6,849.1	-248.9	-587.5	-170.6	10.00	10.00	
6,903.3	28.11	0.00	6,852.0	-247.4	-587.5	-169.1	10.00	10.00	Niobrara
6,950.0	32.78	0.00	6,892.3	-223.7	-587.5	-145.6	10.00	10.00	
6,982.4	36.02	0.00	6,919.0	-205.4	-587.5	-127.5	10.00	10.00	B Chalk
7,000.0	37.78	0.00	6,933.1	-194.9	-587.5	-117.0	10.00	10.00	
7,017.8	39.57	0.00	6,947.0	-183.7	-587.5	-105.9	10.00	10.00	B Marl
7,050.0	42.78	0.00	6,971.2	-162.6	-587.5	-84.9	10.00	10.00	
7,080.4	45.83	0.00	6,993.0	-141.3	-587.5	-63.8	10.00	10.00	C Chalk
7,100.0	47.78	0.00	7,006.4	-127.0	-587.5	-49.7	10.00	10.00	
7,131.7	50.95	0.00	7,027.0	-103.0	-587.5	-25.9	10.00	10.00	C Marl
7,150.0	52.78	0.00	7,038.3	-88.6	-587.5	-11.6	10.00	10.00	
7,200.0	57.78	0.00	7,066.8	-47.5	-587.5	29.2	10.00	10.00	
7,250.0	62.78	0.00	7,091.6	-4.1	-587.5	72.2	10.00	10.00	
7,300.0	67.78	0.00	7,112.5	41.3	-587.5	117.2	10.00	10.00	
7,348.9	72.67	0.00	7,129.0	87.3	-587.5	162.8	10.00	10.00	Ft. Hayes
7,350.0	72.78	0.00	7,129.3	88.4	-587.5	163.9	10.00	10.00	
7,400.0	77.78	0.00	7,142.0	136.7	-587.5	211.8	10.00	10.00	
7,450.0	82.78	0.00	7,150.5	186.0	-587.5	260.7	10.00	10.00	
7,474.3	85.21	0.00	7,153.0	210.1	-587.5	284.6	10.00	10.00	Codell
7,500.0	87.78	0.00	7,154.6	235.8	-587.5	310.1	10.00	10.00	
7,522.2	90.00	0.00	7,155.0	258.0	-587.5	332.0	10.00	10.00	LP @ 7155' TVD; 90°
7,600.0	90.00	0.00	7,155.0	335.8	-587.5	409.2	0.00	0.00	



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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
7,700.0	90.00	0.00	7,155.0	435.8	-587.5	508.4	0.00	0.00	
7,800.0	90.00	0.00	7,155.0	535.8	-587.5	607.5	0.00	0.00	
7,900.0	90.00	0.00	7,155.0	635.8	-587.5	706.7	0.00	0.00	
8,000.0	90.00	0.00	7,155.0	735.8	-587.5	805.8	0.00	0.00	
8,100.0	90.00	0.00	7,155.0	835.8	-587.5	905.0	0.00	0.00	
8,200.0	90.00	0.00	7,155.0	935.8	-587.5	1,004.1	0.00	0.00	
8,300.0	90.00	0.00	7,155.0	1,035.8	-587.5	1,103.3	0.00	0.00	
8,400.0	90.00	0.00	7,155.0	1,135.8	-587.5	1,202.4	0.00	0.00	
8,500.0	90.00	0.00	7,155.0	1,235.8	-587.5	1,301.6	0.00	0.00	
8,600.0	90.00	0.00	7,155.0	1,335.8	-587.5	1,400.7	0.00	0.00	
8,700.0	90.00	0.00	7,155.0	1,435.8	-587.5	1,499.9	0.00	0.00	
8,800.0	90.00	0.00	7,155.0	1,535.8	-587.5	1,599.1	0.00	0.00	
8,900.0	90.00	0.00	7,155.0	1,635.8	-587.5	1,698.2	0.00	0.00	
9,000.0	90.00	0.00	7,155.0	1,735.8	-587.5	1,797.4	0.00	0.00	
9,100.0	90.00	0.00	7,155.0	1,835.8	-587.5	1,896.5	0.00	0.00	
9,200.0	90.00	0.00	7,155.0	1,935.8	-587.5	1,995.7	0.00	0.00	
9,300.0	90.00	0.00	7,155.0	2,035.8	-587.5	2,094.8	0.00	0.00	
9,400.0	90.00	0.00	7,155.0	2,135.8	-587.5	2,194.0	0.00	0.00	
9,500.0	90.00	0.00	7,155.0	2,235.8	-587.5	2,293.1	0.00	0.00	
9,600.0	90.00	0.00	7,155.0	2,335.8	-587.5	2,392.3	0.00	0.00	
9,700.0	90.00	0.00	7,155.0	2,435.8	-587.5	2,491.4	0.00	0.00	
9,800.0	90.00	0.00	7,155.0	2,535.8	-587.5	2,590.6	0.00	0.00	
9,900.0	90.00	0.00	7,155.0	2,635.8	-587.5	2,689.7	0.00	0.00	
10,000.0	90.00	0.00	7,155.0	2,735.8	-587.5	2,788.9	0.00	0.00	
10,100.0	90.00	0.00	7,155.0	2,835.8	-587.5	2,888.1	0.00	0.00	
10,200.0	90.00	0.00	7,155.0	2,935.8	-587.5	2,987.2	0.00	0.00	
10,300.0	90.00	0.00	7,155.0	3,035.8	-587.5	3,086.4	0.00	0.00	
10,400.0	90.00	0.00	7,155.0	3,135.8	-587.5	3,185.5	0.00	0.00	
10,500.0	90.00	0.00	7,155.0	3,235.8	-587.5	3,284.7	0.00	0.00	
10,600.0	90.00	0.00	7,155.0	3,335.8	-587.5	3,383.8	0.00	0.00	
10,700.0	90.00	0.00	7,155.0	3,435.8	-587.5	3,483.0	0.00	0.00	
10,800.0	90.00	0.00	7,155.0	3,535.8	-587.5	3,582.1	0.00	0.00	
10,900.0	90.00	0.00	7,155.0	3,635.8	-587.5	3,681.3	0.00	0.00	
11,000.0	90.00	0.00	7,155.0	3,735.8	-587.5	3,780.4	0.00	0.00	
11,100.0	90.00	0.00	7,155.0	3,835.8	-587.5	3,879.6	0.00	0.00	
11,200.0	90.00	0.00	7,155.0	3,935.8	-587.5	3,978.8	0.00	0.00	
11,300.0	90.00	0.00	7,155.0	4,035.8	-587.5	4,077.9	0.00	0.00	
11,400.0	90.00	0.00	7,155.0	4,135.8	-587.5	4,177.1	0.00	0.00	
11,500.0	90.00	0.00	7,155.0	4,235.8	-587.5	4,276.2	0.00	0.00	
11,600.0	90.00	0.00	7,155.0	4,335.8	-587.5	4,375.4	0.00	0.00	
11,700.0	90.00	0.00	7,155.0	4,435.8	-587.5	4,474.5	0.00	0.00	
11,752.2	90.00	0.00	7,155.0	4,488.0	-587.5	4,526.3	0.00	0.00	TD at 11752.2



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Dale 4B-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 4B-20H-O264	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Dale 4B-20H-O264 PBH	0.00	0.00	7,155.0	4,488.0	-587.5	1,291,543.17	3,258,903.10	40.129962	-104.574095
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
967.6	964.0	Fox Hills - BASE				
4,392.5	4,363.0	Sussex				
4,630.3	4,599.0	Sussex Marker				
4,843.9	4,811.0	Shannon				
5,678.2	5,639.0	Teepee Buttes (*if present)				
6,854.4	6,808.0	Sharon Springs				
6,903.3	6,852.0	Niobrara				
6,982.4	6,919.0	B Chalk				
7,017.8	6,947.0	B Marl				
7,080.4	6,993.0	C Chalk				
7,131.7	7,027.0	C Marl				
7,348.9	7,129.0	Ft. Hayes				
7,474.3	7,153.0	Codell				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
250.0	250.0	0.0	0.0	KOP @ 250' MD
602.0	601.1	-10.2	-19.0	EOB; 7.04°
5,688.1	5,648.9	-304.8	-568.5	Start 2° Drop
6,040.1	6,000.0	-315.0	-587.5	EOD; Vertical
6,622.2	6,582.0	-315.0	-587.5	Start 10° Build
7,522.2	7,155.0	258.0	-587.5	LP @ 7155' TVD; 90°
11,752.2	7,155.0	4,488.0	-587.5	TD at 11752.2



EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S20-T2N-R64W (Dale)

Dale 4B-20H-O264

HZ

Plan #1

Anticollision Report

02 April, 2014



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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	11,752.2	Plan #1 (HZ)	Geolink MWD	Geolink MWD



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
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						Out of range
Dale 3H-20H-N264 - HZ - Plan #1	11,738.2	11,731.0	1,372.4	1,209.9	8.448	CC
Dale 3H-20H-N264 - HZ - Plan #1	11,752.2	11,739.2	1,372.4	1,209.6	8.428	ES, SF
Dale 3I-20H-N264 - HZ - Plan #1	6,400.0	6,384.4	1,147.6	1,122.9	46.481	CC
Dale 3I-20H-N264 - HZ - Plan #1	11,752.2	11,518.0	1,168.0	1,008.0	7.299	ES, SF
Dale 3J-20H-N264 - HZ - Plan #1	11,222.4	11,085.7	857.0	714.1	5.998	CC
Dale 3J-20H-N264 - HZ - Plan #1	11,300.0	11,143.6	857.7	712.5	5.907	ES
Dale 3J-20H-N264 - HZ - Plan #1	11,600.0	11,343.7	881.7	727.9	5.733	SF
Dale 3K-20H-N264 - HZ - Plan #1	11,739.2	11,763.7	697.4	534.9	4.292	CC
Dale 3K-20H-N264 - HZ - Plan #1	11,752.2	11,773.8	697.4	534.5	4.281	ES, SF
Dale 3L-20H-N264 - HZ - Plan #1	6,448.3	6,487.9	472.6	447.7	18.986	CC
Dale 3L-20H-N264 - HZ - Plan #1	11,752.2	11,572.7	520.6	372.1	3.506	ES, SF
Dale 4A-20H-O264 - HZ - Plan #1	200.0	200.0	7.6	7.0	12.725	CC, ES
Dale 4A-20H-O264 - HZ - Plan #1	11,752.2	11,645.9	261.5	120.0	1.849	SF
Dale 4C-20H-O264 - HZ - Plan #1	250.0	249.0	7.6	6.8	9.855	CC, ES
Dale 4C-20H-O264 - HZ - Plan #1	11,752.2	11,507.5	318.3	200.6	2.705	SF
Dale 4D-20H-O264 - HZ - Plan #1	250.0	249.0	15.1	14.3	19.711	CC, ES
Dale 4D-20H-O264 - HZ - Plan #1	11,752.2	11,588.4	565.6	407.3	3.572	SF
Dale 4E-20H-O264 - HZ - Plan #1	250.0	249.0	22.4	21.6	29.205	CC, ES
Dale 4E-20H-O264 - HZ - Plan #1	11,752.2	11,747.9	775.2	612.4	4.763	SF
Dale 4F-20H-O264 - HZ - Plan #1	250.0	249.0	29.9	29.2	39.059	CC, ES
Dale 4F-20H-O264 - HZ - Plan #1	11,752.2	11,509.1	1,025.1	866.3	6.455	SF
Dale 4G-20H-O264 - HZ - Plan #1	250.0	249.0	37.5	36.7	48.914	CC, ES
Dale 4G-20H-O264 - HZ - Plan #1	11,752.2	11,623.4	1,232.2	1,070.4	7.617	SF
Dale 4H-20H-O264 - HZ - Plan #1	250.0	249.0	45.0	44.3	58.768	CC, ES
Dale 4H-20H-O264 - HZ - Plan #1	11,752.2	11,796.3	1,450.1	1,287.4	8.910	SF
Dale 4I-20H-O264 - HZ - Plan #1	250.0	249.0	52.6	51.8	68.623	CC, ES
Dale 4I-20H-O264 - HZ - Plan #1	500.0	494.4	68.7	67.1	41.946	SF
Dale 4J-20H-O264 - HZ - Plan #1	250.0	248.0	59.9	59.1	78.296	CC, ES
Dale 4J-20H-O264 - HZ - Plan #1	500.0	491.5	79.6	78.0	48.734	SF
Dale 4K-20H-O264 - HZ - Plan #1	200.0	198.0	67.4	66.8	114.260	CC, ES
Dale 4K-20H-O264 - HZ - Plan #1	500.0	489.2	91.7	90.1	56.254	SF
DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WE	8,565.8	7,091.0	727.9	688.0	18.245	CC, ES
DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WE	8,800.0	7,091.0	764.6	721.0	17.535	SF
FOY 1 (EXISTING) - EXISTING - NOBLE WELL						Out of range
FOY 'Y' 20-6 (EXISTING) - EXISTING - NOBLE WELL	10,159.6	7,084.0	1,010.9	944.6	15.249	CC, ES
FOY 'Y' 20-6 (EXISTING) - EXISTING - NOBLE WELL	10,400.0	7,084.0	1,039.1	968.7	14.759	SF
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	11,175.9	7,060.0	717.2	633.5	8.568	CC
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	11,200.0	7,060.0	717.6	633.5	8.530	ES
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	11,300.0	7,060.0	727.9	642.0	8.478	SF
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	8,938.8	7,085.0	372.4	326.6	8.124	CC, ES
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	9,000.0	7,085.0	377.4	330.6	8.058	SF
STARKE 'Y' 20-03 (EXISTING) - EXISTING - NOBLE WE	11,551.1	7,070.0	1,030.4	940.2	11.421	CC, ES
STARKE 'Y' 20-03 (EXISTING) - EXISTING - NOBLE WE	11,752.2	7,070.0	1,049.8	956.1	11.204	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 4B-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 4B-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: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
4,000.0	3,973.5	3,971.2	3,965.2	10.4	7.7	28.43	-204.4	-1,933.3	1,547.3	1,531.8	15.51	99.734		
4,100.0	4,072.7	4,070.7	4,064.5	10.7	7.9	28.42	-210.4	-1,934.7	1,538.0	1,522.0	15.92	96.619		
4,200.0	4,172.0	4,170.3	4,163.9	11.0	8.1	28.41	-216.4	-1,936.2	1,528.6	1,512.3	16.32	93.657		
4,300.0	4,271.2	4,269.9	4,263.3	11.3	8.3	28.41	-222.4	-1,937.6	1,519.2	1,502.5	16.72	90.838		
4,400.0	4,370.5	4,369.4	4,362.6	11.5	8.5	28.40	-228.4	-1,939.0	1,509.9	1,492.8	17.13	88.151		
4,500.0	4,469.7	4,469.0	4,462.0	11.8	8.7	28.39	-234.3	-1,940.5	1,500.5	1,483.0	17.53	85.589		
4,600.0	4,569.0	4,568.5	4,561.4	12.1	8.9	28.39	-240.3	-1,941.9	1,491.2	1,473.2	17.94	83.141		
4,700.0	4,668.2	4,668.1	4,660.8	12.4	9.1	28.38	-246.3	-1,943.4	1,481.8	1,463.5	18.34	80.802		
4,800.0	4,767.5	4,767.7	4,760.1	12.6	9.3	28.37	-252.3	-1,944.8	1,472.5	1,453.7	18.74	78.563		
4,900.0	4,866.7	4,867.2	4,859.5	12.9	9.6	28.36	-258.3	-1,946.3	1,463.1	1,443.9	19.15	76.419		
5,000.0	4,966.0	4,966.8	4,958.9	13.2	9.8	28.36	-264.3	-1,947.7	1,453.7	1,434.2	19.55	74.363		
5,100.0	5,065.2	5,066.3	5,058.2	13.5	10.0	28.35	-270.3	-1,949.2	1,444.4	1,424.4	19.95	72.390		
5,200.0	5,164.4	5,165.9	5,157.6	13.7	10.2	28.34	-276.3	-1,950.6	1,435.0	1,414.7	20.36	70.496		
5,300.0	5,263.7	5,265.5	5,257.0	14.0	10.4	28.33	-282.2	-1,952.0	1,425.7	1,404.9	20.76	68.675		
5,400.0	5,362.9	5,365.0	5,356.3	14.3	10.6	28.33	-288.2	-1,953.5	1,416.3	1,395.1	21.16	66.924		
5,500.0	5,462.2	5,464.6	5,455.7	14.6	10.8	28.32	-294.2	-1,954.9	1,406.9	1,385.4	21.57	65.238		
5,600.0	5,561.4	5,564.1	5,555.1	14.9	11.0	28.31	-300.2	-1,956.4	1,397.6	1,375.6	21.97	63.615		
5,688.1	5,648.9	5,651.8	5,642.6	15.1	11.2	28.30	-305.5	-1,957.6	1,389.3	1,367.0	22.32	62.233		
5,700.0	5,660.7	5,664.2	5,655.0	15.1	11.2	28.29	-306.2	-1,957.8	1,388.2	1,365.9	22.38	62.044		
5,800.0	5,760.2	5,770.0	5,760.6	15.4	11.4	28.21	-311.5	-1,959.1	1,380.5	1,357.8	22.77	60.629		
5,900.0	5,859.9	5,875.8	5,866.4	15.5	11.6	28.16	-314.8	-1,959.9	1,375.4	1,352.3	23.13	59.476		
6,000.0	5,959.9	5,981.8	5,972.3	15.7	11.7	28.14	-316.3	-1,960.2	1,373.0	1,349.6	23.44	58.567		
6,040.1	6,000.0	6,023.5	6,014.0	15.7	11.8	-90.06	-316.3	-1,960.3	1,372.8	1,349.2	23.56	58.261		
6,100.0	6,059.9	6,083.3	6,073.9	15.8	11.9	-90.06	-316.3	-1,960.3	1,372.8	1,349.0	23.75	57.804		
6,200.0	6,159.9	6,183.3	6,173.9	15.9	12.0	-90.06	-316.3	-1,960.3	1,372.8	1,348.7	24.06	57.056		
6,300.0	6,259.9	6,283.3	6,273.9	16.0	12.2	-90.06	-316.3	-1,960.3	1,372.8	1,348.4	24.37	56.324		
6,400.0	6,359.9	6,383.3	6,373.9	16.1	12.4	-90.06	-316.3	-1,960.3	1,372.8	1,348.1	24.69	55.609		
6,500.0	6,459.9	6,483.3	6,473.9	16.3	12.5	-90.06	-316.3	-1,960.3	1,372.8	1,347.8	25.00	54.909		
6,600.0	6,559.9	6,583.3	6,573.9	16.4	12.7	-90.06	-316.3	-1,960.3	1,372.8	1,347.4	25.32	54.225		
6,622.2	6,582.0	6,605.5	6,596.0	16.4	12.7	-90.06	-316.3	-1,960.3	1,372.8	1,347.4	25.39	54.076		
6,650.0	6,609.9	6,633.4	6,623.9	16.4	12.7	-90.07	-316.0	-1,960.3	1,372.8	1,347.3	25.45	53.932		
6,700.0	6,659.6	6,683.6	6,673.9	16.5	12.8	-90.10	-312.0	-1,960.3	1,372.8	1,347.2	25.52	53.799		
6,750.0	6,708.8	6,733.8	6,723.5	16.5	12.8	-90.13	-303.7	-1,960.3	1,372.8	1,347.2	25.52	53.787		
6,800.0	6,757.0	6,784.1	6,772.1	16.4	12.8	-90.15	-291.1	-1,960.3	1,372.8	1,347.3	25.48	53.878		
6,850.0	6,803.9	6,834.5	6,819.6	16.4	12.7	-90.18	-274.2	-1,960.3	1,372.8	1,347.4	25.40	54.051		
6,900.0	6,849.1	6,884.9	6,865.4	16.4	12.7	-90.20	-253.3	-1,960.3	1,372.8	1,347.5	25.29	54.281		
6,950.0	6,892.3	6,935.3	6,909.2	16.3	12.6	-90.23	-228.3	-1,960.3	1,372.8	1,347.6	25.17	54.537		
7,000.0	6,933.1	6,985.8	6,950.7	16.3	12.6	-90.25	-199.5	-1,960.3	1,372.8	1,347.7	25.06	54.784		
7,050.0	6,971.2	7,036.4	6,989.6	16.2	12.5	-90.27	-167.2	-1,960.3	1,372.8	1,347.8	24.97	54.982		
7,100.0	7,006.4	7,087.0	7,025.4	16.2	12.5	-90.28	-131.6	-1,960.2	1,372.8	1,347.8	24.92	55.090		
7,150.0	7,038.3	7,137.6	7,058.1	16.2	12.5	-90.30	-92.9	-1,960.2	1,372.8	1,347.8	24.93	55.067		
7,200.0	7,066.8	7,188.3	7,087.1	16.2	12.6	-90.31	-51.4	-1,960.2	1,372.8	1,347.7	25.02	54.877		
7,250.0	7,091.6	7,238.9	7,112.5	16.3	12.7	-90.32	-7.6	-1,960.2	1,372.8	1,347.6	25.19	54.492		
7,300.0	7,112.5	7,289.6	7,133.8	16.4	12.8	-90.33	38.4	-1,960.2	1,372.8	1,347.3	25.47	53.898		
7,350.0	7,129.3	7,340.3	7,151.0	16.5	13.0	-90.34	86.1	-1,960.2	1,372.8	1,346.9	25.86	53.093		
7,400.0	7,142.0	7,391.0	7,164.0	16.7	13.3	-90.34	135.1	-1,960.2	1,372.8	1,346.4	26.35	52.092		
7,450.0	7,150.5	7,441.8	7,172.5	16.9	13.6	-90.34	185.1	-1,960.2	1,372.7	1,345.8	26.96	50.924		
7,500.0	7,154.6	7,492.5	7,176.6	17.2	13.9	-90.34	235.6	-1,960.2	1,372.7	1,345.1	27.66	49.624		
7,522.2	7,155.0	7,514.9	7,177.0	17.3	14.1	-90.33	258.1	-1,960.2	1,372.7	1,344.7	28.00	49.019		
7,600.0	7,155.0	7,592.8	7,177.0	17.9	14.8	-90.33	335.9	-1,960.2	1,372.7	1,343.4	29.34	46.789		
7,700.0	7,155.0	7,692.8	7,177.0	18.7	15.8	-90.33	435.9	-1,960.2	1,372.7	1,341.4	31.32	43.833		

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 4B-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 4B-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: 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)				
7,800.0	7,155.0	7,792.8	7,177.0	19.6	16.9	-90.33	535.9	-1,960.2	1,372.7	1,339.2	33.55	40.921		
7,900.0	7,155.0	7,892.8	7,177.0	20.7	18.1	-90.33	635.9	-1,960.2	1,372.7	1,336.7	35.98	38.153		
8,000.0	7,155.0	7,992.8	7,177.0	21.8	19.4	-90.33	735.9	-1,960.2	1,372.7	1,334.1	38.58	35.583		
8,100.0	7,155.0	8,092.8	7,177.0	23.0	20.8	-90.33	835.9	-1,960.2	1,372.7	1,331.4	41.31	33.228		
8,200.0	7,155.0	8,192.8	7,177.0	24.3	22.2	-90.33	935.9	-1,960.2	1,372.7	1,328.5	44.15	31.088		
8,300.0	7,155.0	8,292.8	7,177.0	25.6	23.7	-90.33	1,035.9	-1,960.1	1,372.7	1,325.6	47.09	29.151		
8,400.0	7,155.0	8,392.8	7,177.0	27.0	25.2	-90.33	1,135.9	-1,960.1	1,372.7	1,322.6	50.10	27.401		
8,500.0	7,155.0	8,492.8	7,177.0	28.4	26.7	-90.33	1,235.9	-1,960.1	1,372.7	1,319.5	53.16	25.819		
8,600.0	7,155.0	8,592.8	7,177.0	29.9	28.3	-90.33	1,335.9	-1,960.1	1,372.7	1,316.4	56.28	24.388		
8,700.0	7,155.0	8,692.8	7,177.0	31.4	29.8	-90.33	1,435.9	-1,960.1	1,372.6	1,313.2	59.45	23.090		
8,800.0	7,155.0	8,792.8	7,177.0	32.9	31.4	-90.33	1,535.9	-1,960.1	1,372.6	1,310.0	62.65	21.911		
8,900.0	7,155.0	8,892.8	7,177.0	34.4	33.1	-90.33	1,635.9	-1,960.1	1,372.6	1,306.8	65.88	20.836		
9,000.0	7,155.0	8,992.8	7,177.0	36.0	34.7	-90.33	1,735.9	-1,960.1	1,372.6	1,303.5	69.14	19.854		
9,100.0	7,155.0	9,092.8	7,177.0	37.5	36.3	-90.33	1,835.9	-1,960.1	1,372.6	1,300.2	72.42	18.954		
9,200.0	7,155.0	9,192.8	7,177.0	39.1	38.0	-90.33	1,935.9	-1,960.1	1,372.6	1,296.9	75.72	18.127		
9,300.0	7,155.0	9,292.8	7,177.0	40.7	39.6	-90.33	2,035.9	-1,960.1	1,372.6	1,293.6	79.04	17.366		
9,400.0	7,155.0	9,392.8	7,177.0	42.4	41.3	-90.33	2,135.9	-1,960.1	1,372.6	1,290.2	82.38	16.663		
9,500.0	7,155.0	9,492.8	7,177.0	44.0	43.0	-90.33	2,235.9	-1,960.0	1,372.6	1,286.9	85.72	16.012		
9,600.0	7,155.0	9,592.8	7,177.0	45.6	44.7	-90.33	2,335.9	-1,960.0	1,372.6	1,283.5	89.09	15.407		
9,700.0	7,155.0	9,692.8	7,177.0	47.3	46.4	-90.33	2,435.9	-1,960.0	1,372.6	1,280.1	92.46	14.845		
9,800.0	7,155.0	9,792.8	7,177.0	48.9	48.0	-90.33	2,535.9	-1,960.0	1,372.6	1,276.7	95.84	14.321		
9,900.0	7,155.0	9,892.8	7,177.0	50.6	49.7	-90.33	2,635.9	-1,960.0	1,372.5	1,273.3	99.23	13.832		
10,000.0	7,155.0	9,992.8	7,177.0	52.2	51.4	-90.33	2,735.9	-1,960.0	1,372.5	1,269.9	102.63	13.374		
10,100.0	7,155.0	10,092.8	7,177.0	53.9	53.1	-90.33	2,835.9	-1,960.0	1,372.5	1,266.5	106.04	12.944		
10,200.0	7,155.0	10,192.8	7,177.0	55.6	54.8	-90.33	2,935.9	-1,960.0	1,372.5	1,263.1	109.45	12.540		
10,300.0	7,155.0	10,292.8	7,177.0	57.3	56.6	-90.33	3,035.9	-1,960.0	1,372.5	1,259.7	112.87	12.161		
10,400.0	7,155.0	10,392.8	7,177.0	58.9	58.3	-90.33	3,135.9	-1,960.0	1,372.5	1,256.2	116.29	11.803		
10,500.0	7,155.0	10,492.8	7,177.0	60.6	60.0	-90.33	3,235.9	-1,960.0	1,372.5	1,252.8	119.72	11.464		
10,600.0	7,155.0	10,592.8	7,177.0	62.3	61.7	-90.33	3,335.9	-1,960.0	1,372.5	1,249.3	123.15	11.145		
10,700.0	7,155.0	10,692.8	7,177.0	64.0	63.4	-90.33	3,435.9	-1,959.9	1,372.5	1,245.9	126.59	10.842		
10,800.0	7,155.0	10,792.8	7,177.0	65.7	65.1	-90.33	3,535.9	-1,959.9	1,372.5	1,242.4	130.03	10.555		
10,900.0	7,155.0	10,892.8	7,177.0	67.4	66.9	-90.33	3,635.9	-1,959.9	1,372.5	1,239.0	133.47	10.283		
11,000.0	7,155.0	10,992.8	7,177.0	69.1	68.6	-90.33	3,735.9	-1,959.9	1,372.5	1,235.5	136.92	10.024		
11,100.0	7,155.0	11,092.8	7,177.0	70.8	70.3	-90.33	3,835.9	-1,959.9	1,372.5	1,232.1	140.37	9.777		
11,200.0	7,155.0	11,192.8	7,177.0	72.5	72.0	-90.33	3,935.9	-1,959.9	1,372.4	1,228.6	143.82	9.543		
11,300.0	7,155.0	11,292.8	7,177.0	74.3	73.8	-90.33	4,035.9	-1,959.9	1,372.4	1,225.2	147.28	9.319		
11,400.0	7,155.0	11,392.8	7,177.0	76.0	75.5	-90.33	4,135.9	-1,959.9	1,372.4	1,221.7	150.74	9.105		
11,500.0	7,155.0	11,492.8	7,177.0	77.7	77.2	-90.33	4,235.9	-1,959.9	1,372.4	1,218.2	154.20	8.900		
11,600.0	7,155.0	11,592.8	7,177.0	79.4	78.9	-90.33	4,335.9	-1,959.9	1,372.4	1,214.8	157.66	8.705		
11,700.0	7,155.0	11,692.8	7,177.0	81.1	80.7	-90.33	4,435.9	-1,959.9	1,372.4	1,211.3	161.13	8.518		
11,738.2	7,155.0	11,731.0	7,177.0	81.8	81.3	-90.33	4,474.2	-1,959.9	1,372.4	1,209.9	162.45	8.448 CC		
11,752.2	7,155.0	11,739.2	7,177.0	82.0	81.5	-90.33	4,482.4	-1,959.9	1,372.4	1,209.6	162.84	8.428 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 4B-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 4B-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		
2,900.0	2,881.8	2,942.9	2,938.1	7.4	5.8	28.25	-149.1	-1,814.5	1,547.8	1,536.5	11.24	137.745		
3,000.0	2,981.0	3,041.9	3,037.0	7.7	6.0	28.25	-154.9	-1,811.7	1,534.3	1,522.6	11.64	131.847		
3,100.0	3,080.3	3,141.0	3,135.9	7.9	6.2	28.25	-160.6	-1,809.0	1,520.7	1,508.7	12.04	126.340		
3,200.0	3,179.5	3,240.1	3,234.7	8.2	6.4	28.25	-166.4	-1,806.3	1,507.2	1,494.7	12.44	121.187		
3,300.0	3,278.8	3,339.2	3,333.6	8.5	6.6	28.25	-172.1	-1,803.6	1,493.6	1,480.8	12.84	116.354		
3,400.0	3,378.0	3,438.3	3,432.5	8.8	6.8	28.25	-177.9	-1,800.8	1,480.1	1,466.9	13.24	111.814		
3,500.0	3,477.3	3,537.3	3,531.4	9.0	7.0	28.25	-183.6	-1,798.1	1,466.6	1,452.9	13.64	107.540		
3,600.0	3,576.5	3,636.4	3,630.2	9.3	7.2	28.25	-189.4	-1,795.4	1,453.0	1,439.0	14.04	103.509		
3,700.0	3,675.8	3,735.5	3,729.1	9.6	7.4	28.25	-195.1	-1,792.7	1,439.5	1,425.1	14.44	99.701		
3,800.0	3,775.0	3,834.6	3,828.0	9.9	7.6	28.25	-200.8	-1,789.9	1,426.0	1,411.1	14.84	96.099		
3,900.0	3,874.2	3,933.7	3,926.9	10.1	7.8	28.25	-206.6	-1,787.2	1,412.4	1,397.2	15.24	92.686		
4,000.0	3,973.5	4,032.7	4,025.7	10.4	8.0	28.25	-212.3	-1,784.5	1,398.9	1,383.3	15.64	89.448		
4,100.0	4,072.7	4,131.8	4,124.6	10.7	8.2	28.25	-218.1	-1,781.8	1,385.4	1,369.3	16.04	86.371		
4,200.0	4,172.0	4,230.9	4,223.5	11.0	8.4	28.25	-223.8	-1,779.0	1,371.8	1,355.4	16.44	83.444		
4,300.0	4,271.2	4,330.0	4,322.4	11.3	8.6	28.25	-229.6	-1,776.3	1,358.3	1,341.5	16.84	80.656		
4,400.0	4,370.5	4,429.1	4,421.2	11.5	8.8	28.25	-235.3	-1,773.6	1,344.8	1,327.5	17.24	77.997		
4,500.0	4,469.7	4,528.1	4,520.1	11.8	9.0	28.25	-241.1	-1,770.8	1,331.2	1,313.6	17.64	75.459		
4,600.0	4,569.0	4,627.2	4,619.0	12.1	9.2	28.25	-246.8	-1,768.1	1,317.7	1,299.7	18.04	73.034		
4,700.0	4,668.2	4,726.3	4,717.9	12.4	9.4	28.25	-252.6	-1,765.4	1,304.2	1,285.7	18.44	70.714		
4,800.0	4,767.5	4,825.4	4,816.8	12.6	9.7	28.25	-258.3	-1,762.7	1,290.6	1,271.8	18.84	68.492		
4,900.0	4,866.7	4,924.4	4,915.6	12.9	9.9	28.25	-264.0	-1,759.9	1,277.1	1,257.9	19.24	66.363		
5,000.0	4,966.0	5,023.5	5,014.5	13.2	10.1	28.25	-269.8	-1,757.2	1,263.6	1,243.9	19.64	64.321		
5,100.0	5,065.2	5,122.6	5,113.4	13.5	10.3	28.25	-275.5	-1,754.5	1,250.0	1,230.0	20.05	62.360		
5,200.0	5,164.4	5,221.7	5,212.3	13.7	10.5	28.25	-281.3	-1,751.8	1,236.5	1,216.0	20.45	60.476		
5,300.0	5,263.7	5,320.8	5,311.1	14.0	10.7	28.25	-287.0	-1,749.0	1,223.0	1,202.1	20.85	58.665		
5,400.0	5,362.9	5,419.8	5,410.0	14.3	10.9	28.25	-292.8	-1,746.3	1,209.4	1,188.2	21.25	56.922		
5,500.0	5,462.2	5,518.9	5,508.9	14.6	11.1	28.25	-298.5	-1,743.6	1,195.9	1,174.2	21.65	55.243		
5,600.0	5,561.4	5,618.0	5,607.8	14.9	11.3	28.25	-304.3	-1,740.9	1,182.4	1,160.3	22.05	53.625		
5,688.1	5,648.9	5,700.0	5,689.6	15.1	11.5	28.26	-308.8	-1,738.7	1,170.6	1,148.2	22.39	52.287		
5,700.0	5,660.7	5,711.1	5,700.7	15.1	11.5	28.25	-309.3	-1,738.5	1,169.0	1,146.6	22.43	52.108		
5,800.0	5,760.2	5,800.0	5,789.5	15.4	11.6	28.18	-312.9	-1,736.8	1,158.2	1,135.4	22.80	50.790		
5,900.0	5,859.9	5,894.5	5,883.9	15.5	11.8	28.14	-315.3	-1,735.6	1,151.2	1,128.0	23.15	49.733		
6,000.0	5,959.9	5,986.5	5,975.9	15.7	11.9	28.13	-316.3	-1,735.1	1,147.9	1,124.4	23.45	48.952		
6,040.1	6,000.0	6,024.6	6,014.0	15.7	12.0	-90.07	-316.4	-1,735.1	1,147.6	1,124.0	23.57	48.697		
6,100.0	6,059.9	6,084.4	6,073.9	15.8	12.1	-90.07	-316.4	-1,735.1	1,147.6	1,123.9	23.75	48.316		
6,200.0	6,159.9	6,184.4	6,173.9	15.9	12.2	-90.07	-316.4	-1,735.1	1,147.6	1,123.5	24.06	47.690		
6,300.0	6,259.9	6,284.4	6,273.9	16.0	12.4	-90.07	-316.4	-1,735.1	1,147.6	1,123.2	24.38	47.079		
6,400.0	6,359.9	6,384.4	6,373.9	16.1	12.6	-90.07	-316.4	-1,735.1	1,147.6	1,122.9	24.69	46.481 CC		
6,500.0	6,459.9	6,482.1	6,471.2	16.3	12.6	-89.68	-308.6	-1,735.2	1,147.7	1,122.8	24.94	46.023		
6,600.0	6,559.9	6,574.6	6,560.7	16.4	12.6	-88.56	-286.1	-1,735.4	1,148.3	1,123.2	25.13	45.690		
6,622.2	6,582.0	6,594.0	6,579.0	16.4	12.6	-88.23	-279.6	-1,735.4	1,148.6	1,123.4	25.17	45.627		
6,650.0	6,609.9	6,617.8	6,601.1	16.4	12.5	-87.77	-270.7	-1,735.5	1,149.1	1,123.8	25.21	45.571		
6,700.0	6,659.6	6,659.9	6,639.3	16.5	12.5	-86.96	-252.8	-1,735.7	1,150.1	1,124.8	25.25	45.550		
6,750.0	6,708.8	6,700.0	6,674.2	16.5	12.5	-86.18	-233.3	-1,735.8	1,151.3	1,126.1	25.24	45.608		
6,800.0	6,757.0	6,741.7	6,709.0	16.4	12.4	-85.40	-210.4	-1,736.0	1,152.8	1,127.6	25.21	45.735		
6,850.0	6,803.9	6,781.6	6,740.7	16.4	12.4	-84.66	-186.2	-1,736.2	1,154.4	1,129.3	25.14	45.915		
6,900.0	6,849.1	6,820.8	6,770.1	16.4	12.3	-83.95	-160.3	-1,736.5	1,156.1	1,131.1	25.06	46.135		
6,950.0	6,892.3	6,859.5	6,797.4	16.3	12.3	-83.28	-132.8	-1,736.7	1,157.9	1,133.0	24.97	46.379		
7,000.0	6,933.1	6,900.0	6,823.8	16.3	12.3	-82.62	-102.1	-1,737.0	1,159.8	1,134.9	24.88	46.622		
7,050.0	6,971.2	6,935.6	6,845.2	16.2	12.3	-82.06	-73.7	-1,737.2	1,161.6	1,136.8	24.80	46.832		
7,100.0	7,006.4	6,973.0	6,865.8	16.2	12.4	-81.53	-42.4	-1,737.5	1,163.4	1,138.6	24.76	46.983		
7,150.0	7,038.3	7,010.2	6,884.2	16.2	12.4	-81.04	-10.1	-1,737.8	1,165.1	1,140.4	24.76	47.064		

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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				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)				
7,200.0	7,066.8	7,050.0	6,901.4	16.2	12.5	-80.59	25.7	-1,738.1	1,166.8	1,141.9	24.82	47.006		
7,250.0	7,091.6	7,083.8	6,914.1	16.3	12.7	-80.23	57.1	-1,738.3	1,168.3	1,143.3	24.95	46.822		
7,300.0	7,112.5	7,120.3	6,925.8	16.4	12.8	-79.91	91.7	-1,738.6	1,169.6	1,144.4	25.17	46.464		
7,350.0	7,129.3	7,150.0	6,933.6	16.5	13.0	-79.67	120.3	-1,738.9	1,170.8	1,145.3	25.45	46.011		
7,400.0	7,142.0	7,193.0	6,942.2	16.7	13.2	-79.45	162.4	-1,739.3	1,171.7	1,145.8	25.90	45.234		
7,450.0	7,150.5	7,229.2	6,947.0	16.9	13.4	-79.32	198.3	-1,739.6	1,172.5	1,146.0	26.43	44.365		
7,500.0	7,154.6	7,265.4	6,949.6	17.2	13.7	-79.25	234.3	-1,739.9	1,173.0	1,146.0	27.05	43.372		
7,522.2	7,155.0	7,281.4	6,950.0	17.3	13.8	-79.24	250.4	-1,740.0	1,173.2	1,145.8	27.35	42.897		
7,600.0	7,155.0	7,356.8	6,950.0	17.9	14.5	-79.25	325.8	-1,740.7	1,173.8	1,145.2	28.65	40.966		
7,700.0	7,155.0	7,456.8	6,950.0	18.7	15.5	-79.25	425.8	-1,741.5	1,174.7	1,144.1	30.59	38.397		
7,800.0	7,155.0	7,556.8	6,950.0	19.6	16.6	-79.26	525.8	-1,742.4	1,175.5	1,142.7	32.78	35.859		
7,900.0	7,155.0	7,656.8	6,950.0	20.7	17.8	-79.27	625.8	-1,743.3	1,176.4	1,141.2	35.17	33.445		
8,000.0	7,155.0	7,756.8	6,950.0	21.8	19.1	-79.28	725.8	-1,744.1	1,177.2	1,139.5	37.73	31.203		
8,100.0	7,155.0	7,856.8	6,950.0	23.0	20.5	-79.29	825.8	-1,745.0	1,178.1	1,137.7	40.42	29.148		
8,200.0	7,155.0	7,956.8	6,950.0	24.3	21.9	-79.29	925.8	-1,745.9	1,178.9	1,135.7	43.21	27.281		
8,300.0	7,155.0	8,056.8	6,950.0	25.6	23.4	-79.30	1,025.8	-1,746.7	1,179.8	1,133.7	46.10	25.592		
8,400.0	7,155.0	8,156.8	6,950.0	27.0	24.9	-79.31	1,125.8	-1,747.6	1,180.6	1,131.6	49.06	24.066		
8,500.0	7,155.0	8,256.8	6,950.0	28.4	26.4	-79.32	1,225.7	-1,748.5	1,181.5	1,129.4	52.08	22.687		
8,600.0	7,155.0	8,356.8	6,950.0	29.9	28.0	-79.33	1,325.7	-1,749.3	1,182.3	1,127.2	55.15	21.440		
8,700.0	7,155.0	8,456.8	6,950.0	31.4	29.5	-79.33	1,425.7	-1,750.2	1,183.2	1,124.9	58.26	20.309		
8,800.0	7,155.0	8,556.8	6,950.0	32.9	31.1	-79.34	1,525.7	-1,751.0	1,184.0	1,122.6	61.41	19.282		
8,900.0	7,155.0	8,656.8	6,950.0	34.4	32.8	-79.35	1,625.7	-1,751.9	1,184.9	1,120.3	64.59	18.346		
9,000.0	7,155.0	8,756.8	6,950.0	36.0	34.4	-79.36	1,725.7	-1,752.8	1,185.7	1,117.9	67.79	17.491		
9,100.0	7,155.0	8,856.8	6,950.0	37.5	36.0	-79.36	1,825.7	-1,753.6	1,186.6	1,115.6	71.02	16.707		
9,200.0	7,155.0	8,956.8	6,950.0	39.1	37.7	-79.37	1,925.7	-1,754.5	1,187.4	1,113.2	74.27	15.988		
9,300.0	7,155.0	9,056.8	6,950.0	40.7	39.3	-79.38	2,025.7	-1,755.4	1,188.3	1,110.7	77.54	15.325		
9,400.0	7,155.0	9,156.8	6,950.0	42.4	41.0	-79.39	2,125.7	-1,756.2	1,189.1	1,108.3	80.82	14.713		
9,500.0	7,155.0	9,256.8	6,950.0	44.0	42.7	-79.39	2,225.7	-1,757.1	1,190.0	1,105.9	84.12	14.147		
9,600.0	7,155.0	9,356.8	6,950.0	45.6	44.4	-79.40	2,325.7	-1,758.0	1,190.8	1,103.4	87.42	13.622		
9,700.0	7,155.0	9,456.8	6,950.0	47.3	46.1	-79.41	2,425.7	-1,758.8	1,191.7	1,100.9	90.74	13.133		
9,800.0	7,155.0	9,556.8	6,950.0	48.9	47.8	-79.42	2,525.7	-1,759.7	1,192.5	1,098.5	94.07	12.677		
9,900.0	7,155.0	9,656.8	6,950.0	50.6	49.5	-79.43	2,625.6	-1,760.6	1,193.4	1,096.0	97.41	12.252		
10,000.0	7,155.0	9,756.8	6,950.0	52.2	51.2	-79.43	2,725.6	-1,761.4	1,194.2	1,093.5	100.75	11.853		
10,100.0	7,155.0	9,856.7	6,950.0	53.9	52.9	-79.44	2,825.6	-1,762.3	1,195.1	1,091.0	104.10	11.480		
10,200.0	7,155.0	9,956.7	6,950.0	55.6	54.6	-79.45	2,925.6	-1,763.2	1,195.9	1,088.5	107.46	11.129		
10,300.0	7,155.0	10,056.7	6,950.0	57.3	56.3	-79.46	3,025.6	-1,764.0	1,196.8	1,086.0	110.83	10.799		
10,400.0	7,155.0	10,156.7	6,950.0	58.9	58.0	-79.46	3,125.6	-1,764.9	1,197.6	1,083.4	114.20	10.488		
10,500.0	7,155.0	10,256.7	6,950.0	60.6	59.7	-79.47	3,225.6	-1,765.8	1,198.5	1,080.9	117.57	10.194		
10,600.0	7,155.0	10,356.7	6,950.0	62.3	61.4	-79.48	3,325.6	-1,766.6	1,199.3	1,078.4	120.95	9.916		
10,700.0	7,155.0	10,456.7	6,950.0	64.0	63.1	-79.49	3,425.6	-1,767.5	1,200.2	1,075.9	124.33	9.653		
10,800.0	7,155.0	10,556.7	6,950.0	65.7	64.9	-79.49	3,525.6	-1,768.3	1,201.0	1,073.3	127.72	9.404		
10,900.0	7,155.0	10,656.7	6,950.0	67.4	66.6	-79.50	3,625.6	-1,769.2	1,201.9	1,070.8	131.11	9.167		
11,000.0	7,155.0	10,756.7	6,950.0	69.1	68.3	-79.51	3,725.6	-1,770.1	1,202.7	1,068.2	134.51	8.942		
11,100.0	7,155.0	10,856.7	6,950.0	70.8	70.0	-79.52	3,825.6	-1,770.9	1,203.6	1,065.7	137.90	8.728		
11,200.0	7,155.0	10,956.7	6,950.0	72.5	71.8	-79.52	3,925.5	-1,771.8	1,204.4	1,063.1	141.30	8.524		
11,300.0	7,155.0	11,056.7	6,950.0	74.3	73.5	-79.53	4,025.5	-1,772.7	1,205.3	1,060.6	144.71	8.329		
11,400.0	7,155.0	11,156.7	6,950.0	76.0	75.2	-79.54	4,125.5	-1,773.5	1,206.1	1,058.0	148.11	8.144		
11,500.0	7,155.0	11,256.7	6,950.0	77.7	81.4	-79.19	4,482.9	-1,734.8	1,193.9	1,038.1	155.73	7.666		
11,600.0	7,155.0	11,356.7	6,950.0	79.4	81.4	-79.19	4,482.9	-1,734.8	1,177.2	1,019.8	157.43	7.478		
11,700.0	7,155.0	11,456.7	6,950.0	81.1	81.4	-79.19	4,482.9	-1,734.8	1,168.9	1,009.8	159.13	7.346		
11,747.1	7,155.0	11,518.0	6,950.0	81.9	81.4	-79.19	4,482.9	-1,734.8	1,168.0	1,008.1	159.93	7.303		
11,752.2	7,155.0	11,518.0	6,950.0	82.0	81.4	-79.19	4,482.9	-1,734.8	1,168.0	1,008.0	160.02	7.299 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 4B-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 4B-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 4B-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 4B-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		
2,300.0	2,286.3	2,415.9	2,408.6	5.7	5.1	28.22	-119.2	-1,745.4	1,546.7	1,537.8	8.96	172.567		
2,400.0	2,385.6	2,514.3	2,506.6	6.0	5.3	28.21	-125.0	-1,738.4	1,529.0	1,519.6	9.36	163.326		
2,500.0	2,484.8	2,612.7	2,604.6	6.3	5.6	28.21	-130.8	-1,731.5	1,511.2	1,501.4	9.76	154.838		
2,600.0	2,584.0	2,711.1	2,702.6	6.6	5.8	28.20	-136.6	-1,724.6	1,493.4	1,483.3	10.16	147.015		
2,700.0	2,683.3	2,809.5	2,800.6	6.8	6.0	28.19	-142.4	-1,717.7	1,475.7	1,465.1	10.56	139.781		
2,800.0	2,782.5	2,907.9	2,898.6	7.1	6.3	28.19	-148.3	-1,710.7	1,457.9	1,446.9	10.96	133.073		
2,900.0	2,881.8	3,006.3	2,996.6	7.4	6.5	28.18	-154.1	-1,703.8	1,440.1	1,428.8	11.35	126.834		
3,000.0	2,981.0	3,104.8	3,094.6	7.7	6.7	28.18	-159.9	-1,696.9	1,422.4	1,410.6	11.75	121.019		
3,100.0	3,080.3	3,203.2	3,192.6	7.9	7.0	28.17	-165.7	-1,690.0	1,404.6	1,392.4	12.15	115.585		
3,200.0	3,179.5	3,301.6	3,290.6	8.2	7.2	28.16	-171.5	-1,683.1	1,386.8	1,374.3	12.55	110.496		
3,300.0	3,278.8	3,400.0	3,388.6	8.5	7.4	28.16	-177.3	-1,676.1	1,369.1	1,356.1	12.95	105.720		
3,400.0	3,378.0	3,498.4	3,486.6	8.8	7.7	28.15	-183.2	-1,669.2	1,351.3	1,337.9	13.35	101.229		
3,500.0	3,477.3	3,596.8	3,584.6	9.0	7.9	28.14	-189.0	-1,662.3	1,333.5	1,319.8	13.75	96.999		
3,600.0	3,576.5	3,695.2	3,682.6	9.3	8.1	28.13	-194.8	-1,655.4	1,315.8	1,301.6	14.15	93.007		
3,700.0	3,675.8	3,793.6	3,780.5	9.6	8.4	28.13	-200.6	-1,648.5	1,298.0	1,283.4	14.55	89.234		
3,800.0	3,775.0	3,892.0	3,878.5	9.9	8.6	28.12	-206.4	-1,641.5	1,280.2	1,265.3	14.95	85.662		
3,900.0	3,874.2	3,990.4	3,976.5	10.1	8.8	28.11	-212.2	-1,634.6	1,262.5	1,247.1	15.34	82.276		
4,000.0	3,973.5	4,088.8	4,074.5	10.4	9.1	28.10	-218.1	-1,627.7	1,244.7	1,228.9	15.74	79.062		
4,100.0	4,072.7	4,187.3	4,172.5	10.7	9.3	28.09	-223.9	-1,620.8	1,226.9	1,210.8	16.14	76.007		
4,200.0	4,172.0	4,285.7	4,270.5	11.0	9.5	28.08	-229.7	-1,613.9	1,209.2	1,192.6	16.54	73.099		
4,300.0	4,271.2	4,384.1	4,368.5	11.3	9.8	28.08	-235.5	-1,606.9	1,191.4	1,174.5	16.94	70.328		
4,400.0	4,370.5	4,482.5	4,466.5	11.5	10.0	28.07	-241.3	-1,600.0	1,173.6	1,156.3	17.34	67.684		
4,500.0	4,469.7	4,580.9	4,564.5	11.8	10.2	28.06	-247.1	-1,593.1	1,155.9	1,138.1	17.74	65.160		
4,600.0	4,569.0	4,679.3	4,662.5	12.1	10.5	28.05	-253.0	-1,586.2	1,138.1	1,120.0	18.14	62.746		
4,700.0	4,668.2	4,777.7	4,760.5	12.4	10.7	28.04	-258.8	-1,579.3	1,120.3	1,101.8	18.54	60.437		
4,800.0	4,767.5	4,876.1	4,858.5	12.6	10.9	28.02	-264.6	-1,572.3	1,102.6	1,083.6	18.94	58.225		
4,900.0	4,866.7	4,974.5	4,956.5	12.9	11.2	28.01	-270.4	-1,565.4	1,084.8	1,065.5	19.34	56.104		
5,000.0	4,966.0	5,072.9	5,054.5	13.2	11.4	28.00	-276.2	-1,558.5	1,067.0	1,047.3	19.73	54.069		
5,100.0	5,065.2	5,171.3	5,152.4	13.5	11.6	27.99	-282.0	-1,551.6	1,049.3	1,029.1	20.13	52.115		
5,200.0	5,164.4	5,269.8	5,250.4	13.7	11.9	27.98	-287.8	-1,544.7	1,031.5	1,011.0	20.53	50.237		
5,300.0	5,263.7	5,368.2	5,348.4	14.0	12.1	27.97	-293.7	-1,537.7	1,013.7	992.8	20.93	48.430		
5,400.0	5,362.9	5,466.6	5,446.4	14.3	12.3	27.95	-299.5	-1,530.8	996.0	974.6	21.33	46.691		
5,500.0	5,462.2	5,565.8	5,536.3	14.6	12.5	27.95	-304.6	-1,524.7	978.5	956.8	21.71	45.075		
5,600.0	5,561.4	5,664.2	5,623.5	14.9	12.7	28.01	-308.7	-1,519.8	962.1	940.0	22.07	43.585		
5,688.1	5,648.9	5,721.5	5,700.6	15.1	12.9	28.10	-311.6	-1,516.3	948.6	926.3	22.39	42.361		
5,700.0	5,660.7	5,731.9	5,711.0	15.1	12.9	28.09	-312.0	-1,515.9	946.9	924.5	22.44	42.195		
5,800.0	5,760.2	5,820.1	5,799.2	15.4	13.0	28.09	-314.4	-1,513.0	934.7	911.9	22.82	40.970		
5,900.0	5,859.9	5,908.8	5,887.8	15.5	13.2	28.09	-316.0	-1,511.2	926.8	903.7	23.16	40.025		
6,000.0	5,959.9	6,000.0	5,979.0	15.7	13.3	28.09	-316.7	-1,510.4	923.1	899.7	23.47	39.340		
6,040.1	6,000.0	6,035.0	6,014.0	15.7	13.3	-90.10	-316.7	-1,510.3	922.8	899.3	23.58	39.136		
6,100.0	6,059.9	6,094.9	6,073.9	15.8	13.4	-90.10	-316.7	-1,510.3	922.8	899.1	23.77	38.830		
6,200.0	6,159.9	6,194.9	6,173.9	15.9	13.6	-90.10	-316.7	-1,510.3	922.8	898.8	24.08	38.327		
6,300.0	6,259.9	6,294.9	6,273.9	16.0	13.7	-90.10	-316.7	-1,510.3	922.8	898.5	24.39	37.836		
6,400.0	6,359.9	6,394.9	6,373.9	16.1	13.8	-90.10	-316.7	-1,510.3	922.8	898.1	24.70	37.356		
6,500.0	6,459.9	6,495.3	6,474.3	16.3	14.0	-90.10	-316.5	-1,510.3	922.8	897.8	25.02	36.889		
6,600.0	6,559.9	6,597.6	6,575.8	16.4	14.0	-89.40	-305.3	-1,510.1	922.7	897.4	25.25	36.544		
6,622.2	6,582.0	6,619.5	6,597.2	16.4	14.0	-89.10	-300.5	-1,510.0	922.6	897.3	25.29	36.485		
6,650.0	6,609.9	6,646.7	6,623.4	16.4	14.0	-88.71	-293.5	-1,509.9	922.6	897.3	25.33	36.427		
6,678.1	6,637.9	6,673.8	6,649.3	16.5	14.0	-88.31	-285.2	-1,509.7	922.6	897.2	25.34	36.409		
6,700.0	6,659.6	6,694.7	6,668.9	16.5	14.0	-88.01	-278.0	-1,509.5	922.6	897.2	25.35	36.396		
6,750.0	6,708.8	6,741.8	6,712.1	16.5	14.0	-87.33	-259.2	-1,509.1	922.6	897.3	25.33	36.427		
6,800.0	6,757.0	6,788.1	6,752.8	16.4	13.9	-86.68	-237.4	-1,508.7	922.7	897.4	25.27	36.509		

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 4B-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 4B-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				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)				
6,850.0	6,803.9	6,833.6	6,791.1	16.4	13.9	-86.06	-212.7	-1,508.2	922.8	897.6	25.20	36.627		
6,900.0	6,849.1	6,878.4	6,826.8	16.4	13.8	-85.46	-185.6	-1,507.6	923.0	897.9	25.10	36.767		
6,950.0	6,892.3	6,922.6	6,859.7	16.3	13.8	-84.90	-156.2	-1,507.0	923.1	898.1	25.01	36.910		
7,000.0	6,933.1	6,966.3	6,890.0	16.3	13.8	-84.38	-124.7	-1,506.3	923.2	898.3	24.93	37.038		
7,050.0	6,971.2	7,009.4	6,917.4	16.2	13.8	-83.89	-91.5	-1,505.6	923.3	898.5	24.87	37.132		
7,100.0	7,006.4	7,050.0	6,940.9	16.2	13.8	-83.47	-58.3	-1,504.9	923.4	898.6	24.84	37.178		
7,150.0	7,038.3	7,094.3	6,963.7	16.2	13.9	-83.05	-20.5	-1,504.1	923.4	898.5	24.87	37.123		
7,200.0	7,066.8	7,136.1	6,982.6	16.2	14.0	-82.69	16.9	-1,503.3	923.3	898.4	24.97	36.971		
7,250.0	7,091.6	7,177.7	6,998.6	16.3	14.1	-82.39	55.2	-1,502.5	923.2	898.0	25.15	36.702		
7,300.0	7,112.5	7,218.9	7,011.6	16.4	14.3	-82.13	94.4	-1,501.7	922.9	897.5	25.42	36.309		
7,350.0	7,129.3	7,260.0	7,021.8	16.5	14.5	-81.92	134.1	-1,500.9	922.5	896.8	25.78	35.791		
7,400.0	7,142.0	7,300.0	7,028.9	16.7	14.7	-81.77	173.5	-1,500.0	922.1	895.9	26.23	35.159		
7,450.0	7,150.5	7,341.5	7,033.4	16.9	15.0	-81.66	214.7	-1,499.2	921.5	894.7	26.79	34.395		
7,500.0	7,154.6	7,383.0	7,035.0	17.2	15.3	-81.61	256.1	-1,498.3	920.8	893.3	27.45	33.549		
7,522.2	7,155.0	7,404.0	7,035.0	17.3	15.4	-81.62	277.1	-1,497.9	920.4	892.6	27.79	33.118		
7,600.0	7,155.0	7,481.8	7,035.0	17.9	16.1	-81.61	354.9	-1,496.2	918.8	889.6	29.15	31.523		
7,700.0	7,155.0	7,581.7	7,035.0	18.7	17.1	-81.59	454.9	-1,494.1	916.7	885.5	31.13	29.444		
7,800.0	7,155.0	7,681.7	7,035.0	19.6	18.1	-81.57	554.8	-1,492.0	914.6	881.2	33.36	27.413		
7,900.0	7,155.0	7,781.7	7,035.0	20.7	19.3	-81.55	654.8	-1,489.9	912.5	876.7	35.79	25.495		
8,000.0	7,155.0	7,881.7	7,035.0	21.8	20.6	-81.53	754.7	-1,487.8	910.4	872.1	38.38	23.722		
8,100.0	7,155.0	7,981.7	7,035.0	23.0	21.9	-81.51	854.7	-1,485.7	908.4	867.3	41.10	22.102		
8,200.0	7,155.0	8,081.6	7,035.0	24.3	23.3	-81.49	954.6	-1,483.6	906.3	862.4	43.92	20.634		
8,300.0	7,155.0	8,181.6	7,035.0	25.6	24.7	-81.47	1,054.6	-1,481.5	904.2	857.4	46.83	19.308		
8,400.0	7,155.0	8,281.6	7,035.0	27.0	26.2	-81.45	1,154.5	-1,479.4	902.1	852.3	49.81	18.110		
8,500.0	7,155.0	8,381.6	7,035.0	28.4	27.7	-81.43	1,254.5	-1,477.3	900.1	847.2	52.85	17.029		
8,600.0	7,155.0	8,481.5	7,035.0	29.9	29.3	-81.41	1,354.5	-1,475.2	898.0	842.0	55.94	16.052		
8,700.0	7,155.0	8,581.5	7,035.0	31.4	30.8	-81.39	1,454.4	-1,473.1	895.9	836.8	59.07	15.166		
8,800.0	7,155.0	8,681.5	7,035.0	32.9	32.4	-81.37	1,554.4	-1,471.0	893.8	831.6	62.24	14.361		
8,900.0	7,155.0	8,781.5	7,035.0	34.4	34.0	-81.35	1,654.3	-1,468.9	891.7	826.3	65.44	13.627		
9,000.0	7,155.0	8,881.5	7,035.0	36.0	35.6	-81.33	1,754.3	-1,466.8	889.7	821.0	68.66	12.958		
9,100.0	7,155.0	8,981.4	7,035.0	37.5	37.2	-81.31	1,854.2	-1,464.7	887.6	815.7	71.90	12.344		
9,200.0	7,155.0	9,081.4	7,035.0	39.1	38.8	-81.29	1,954.2	-1,462.6	885.5	810.3	75.17	11.780		
9,300.0	7,155.0	9,181.4	7,035.0	40.7	40.5	-81.27	2,054.1	-1,460.5	883.4	805.0	78.45	11.261		
9,400.0	7,155.0	9,281.4	7,035.0	42.4	42.1	-81.25	2,154.1	-1,458.4	881.4	799.6	81.74	10.782		
9,500.0	7,155.0	9,381.3	7,035.0	44.0	43.8	-81.23	2,254.1	-1,456.3	879.3	794.2	85.05	10.338		
9,600.0	7,155.0	9,481.3	7,035.0	45.6	45.5	-81.21	2,354.0	-1,454.2	877.2	788.8	88.37	9.926		
9,700.0	7,155.0	9,581.3	7,035.0	47.3	47.1	-81.19	2,454.0	-1,452.1	875.1	783.4	91.70	9.543		
9,800.0	7,155.0	9,681.3	7,035.0	48.9	48.8	-81.17	2,553.9	-1,450.0	873.0	778.0	95.04	9.186		
9,900.0	7,155.0	9,781.3	7,035.0	50.6	50.5	-81.14	2,653.9	-1,447.9	871.0	772.6	98.39	8.852		
10,000.0	7,155.0	9,881.2	7,035.0	52.2	52.2	-81.12	2,753.8	-1,445.8	868.9	767.2	101.74	8.540		
10,100.0	7,155.0	9,981.2	7,035.0	53.9	53.9	-81.10	2,853.8	-1,443.7	866.8	761.7	105.10	8.247		
10,200.0	7,155.0	10,081.2	7,035.0	55.6	55.6	-81.08	2,953.7	-1,441.6	864.7	756.3	108.47	7.972		
10,300.0	7,155.0	10,181.2	7,035.0	57.3	57.3	-81.06	3,053.7	-1,439.5	862.7	750.8	111.84	7.713		
10,400.0	7,155.0	10,281.2	7,035.0	58.9	59.0	-81.04	3,153.7	-1,437.4	860.6	745.4	115.22	7.469		
10,500.0	7,155.0	10,381.1	7,035.0	60.6	60.7	-81.02	3,253.6	-1,435.3	858.5	739.9	118.60	7.239		
10,600.0	7,155.0	10,468.5	7,035.0	62.3	62.2	-81.00	3,341.0	-1,434.1	857.2	735.4	121.77	7.039		
10,656.7	7,155.0	10,520.1	7,035.0	63.3	63.1	-81.00	3,392.6	-1,434.0	857.0	733.4	123.61	6.933		
10,700.0	7,155.0	10,563.4	7,035.0	64.0	63.8	-81.00	3,435.9	-1,434.0	857.0	732.0	125.08	6.852		
10,800.0	7,155.0	10,663.4	7,035.0	65.7	65.5	-81.00	3,535.9	-1,434.0	857.0	728.5	128.48	6.670		
10,900.0	7,155.0	10,763.4	7,035.0	67.4	67.2	-81.00	3,635.9	-1,434.0	857.0	725.1	131.88	6.498		
11,000.0	7,155.0	10,863.4	7,035.0	69.1	68.9	-81.00	3,735.9	-1,434.0	857.0	721.7	135.29	6.335		
11,100.0	7,155.0	10,963.4	7,035.0	70.8	70.7	-81.00	3,835.9	-1,433.9	857.0	718.3	138.70	6.179		

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 4B-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 4B-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		
11,200.0	7,155.0	11,063.4	7,035.0	72.5	72.4	-81.00	3,935.9	-1,433.9	857.0	714.9	142.11	6.031		
11,222.4	7,155.0	11,085.7	7,035.0	72.9	72.8	-81.00	3,958.2	-1,433.9	857.0	714.1	142.87	5.998 CC		
11,300.0	7,155.0	11,143.6	7,035.0	74.3	73.7	-81.01	4,016.0	-1,434.4	857.7	712.5	145.19	5.907 ES		
11,400.0	7,155.0	11,200.0	7,035.0	76.0	74.7	-81.03	4,072.4	-1,436.6	862.0	714.1	147.87	5.830		
11,500.0	7,155.0	11,277.4	7,035.0	77.7	76.0	-81.09	4,149.6	-1,442.7	869.9	719.0	150.92	5.764		
11,600.0	7,155.0	11,343.7	7,035.0	79.4	77.1	-81.17	4,215.4	-1,450.6	881.7	727.9	153.78	5.733 SF		
11,700.0	7,155.0	11,400.0	7,035.0	81.1	78.1	-81.26	4,271.0	-1,459.3	897.3	740.8	156.48	5.734		
11,752.2	7,155.0	11,443.1	7,035.0	82.0	78.8	-81.34	4,313.4	-1,467.1	906.8	748.6	158.13	5.734		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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		
2,000.0	1,988.6	2,191.6	2,179.6	4.9	5.2	28.24	-105.0	-1,688.6	1,528.9	1,521.0	7.90	193.621		
2,100.0	2,087.8	2,289.1	2,276.3	5.2	5.5	28.23	-111.0	-1,677.2	1,506.6	1,498.3	8.29	181.672		
2,200.0	2,187.1	2,386.6	2,372.9	5.4	5.8	28.22	-116.9	-1,665.9	1,484.3	1,475.6	8.69	170.811		
2,300.0	2,286.3	2,484.1	2,469.6	5.7	6.1	28.20	-122.9	-1,654.6	1,462.0	1,452.9	9.09	160.895		
2,400.0	2,385.6	2,581.6	2,566.2	6.0	6.3	28.19	-128.8	-1,643.3	1,439.8	1,430.3	9.48	151.808		
2,500.0	2,484.8	2,679.1	2,662.9	6.3	6.6	28.17	-134.7	-1,632.0	1,417.5	1,407.6	9.88	143.448		
2,600.0	2,584.0	2,776.6	2,759.5	6.6	6.9	28.16	-140.7	-1,620.6	1,395.2	1,384.9	10.28	135.734		
2,700.0	2,683.3	2,874.0	2,856.1	6.8	7.2	28.14	-146.6	-1,609.3	1,372.9	1,362.3	10.68	128.592		
2,800.0	2,782.5	2,971.5	2,952.8	7.1	7.4	28.12	-152.6	-1,598.0	1,350.7	1,339.6	11.07	121.963		
2,900.0	2,881.8	3,069.0	3,049.4	7.4	7.7	28.10	-158.5	-1,586.7	1,328.4	1,316.9	11.47	115.792		
3,000.0	2,981.0	3,166.5	3,146.1	7.7	8.0	28.09	-164.4	-1,575.3	1,306.1	1,294.2	11.87	110.034		
3,100.0	3,080.3	3,264.0	3,242.7	7.9	8.3	28.07	-170.4	-1,564.0	1,283.8	1,271.6	12.27	104.649		
3,200.0	3,179.5	3,361.5	3,339.4	8.2	8.6	28.05	-176.3	-1,552.7	1,261.6	1,248.9	12.67	99.602		
3,300.0	3,278.8	3,459.0	3,436.0	8.5	8.9	28.03	-182.3	-1,541.4	1,239.3	1,226.2	13.06	94.861		
3,400.0	3,378.0	3,556.4	3,532.7	8.8	9.1	28.01	-188.2	-1,530.0	1,217.0	1,203.6	13.46	90.401		
3,500.0	3,477.3	3,653.9	3,629.3	9.0	9.4	27.98	-194.2	-1,518.7	1,194.7	1,180.9	13.86	86.197		
3,600.0	3,576.5	3,751.4	3,725.9	9.3	9.7	27.96	-200.1	-1,507.4	1,172.5	1,158.2	14.26	82.227		
3,700.0	3,675.8	3,848.9	3,822.6	9.6	10.0	27.94	-206.0	-1,496.1	1,150.2	1,135.5	14.66	78.473		
3,800.0	3,775.0	3,946.4	3,919.2	9.9	10.3	27.91	-212.0	-1,484.8	1,127.9	1,112.9	15.06	74.917		
3,900.0	3,874.2	4,043.9	4,015.9	10.1	10.5	27.89	-217.9	-1,473.4	1,105.6	1,090.2	15.45	71.544		
4,000.0	3,973.5	4,141.4	4,112.5	10.4	10.8	27.86	-223.9	-1,462.1	1,083.4	1,067.5	15.85	68.341		
4,100.0	4,072.7	4,238.9	4,209.2	10.7	11.1	27.83	-229.8	-1,450.8	1,061.1	1,044.9	16.25	65.295		
4,200.0	4,172.0	4,336.3	4,305.8	11.0	11.4	27.81	-235.8	-1,439.5	1,038.8	1,022.2	16.65	62.394		
4,300.0	4,271.2	4,433.8	4,402.5	11.3	11.7	27.78	-241.7	-1,428.1	1,016.6	999.5	17.05	59.629		
4,400.0	4,370.5	4,531.3	4,499.1	11.5	11.9	27.74	-247.6	-1,416.8	994.3	976.8	17.45	56.990		
4,500.0	4,469.7	4,628.8	4,595.7	11.8	12.2	27.71	-253.6	-1,405.5	972.0	954.2	17.85	54.468		
4,600.0	4,569.0	4,726.3	4,692.4	12.1	12.5	27.68	-259.5	-1,394.2	949.7	931.5	18.24	52.057		
4,700.0	4,668.2	4,823.8	4,789.0	12.4	12.8	27.64	-265.5	-1,382.8	927.5	908.8	18.64	49.749		
4,800.0	4,767.5	4,921.3	4,885.7	12.6	13.1	27.60	-271.4	-1,371.5	905.2	886.2	19.04	47.538		
4,900.0	4,866.7	5,018.8	4,982.3	12.9	13.3	27.56	-277.3	-1,360.2	882.9	863.5	19.44	45.417		
5,000.0	4,966.0	5,116.2	5,079.0	13.2	13.6	27.52	-283.3	-1,348.9	860.7	840.8	19.84	43.381		
5,100.0	5,065.2	5,213.7	5,175.6	13.5	13.9	27.48	-289.2	-1,337.6	838.4	818.2	20.24	41.426		
5,200.0	5,164.4	5,308.5	5,269.6	13.7	14.2	27.44	-295.0	-1,326.6	816.2	795.5	20.63	39.560		
5,300.0	5,263.7	5,400.0	5,360.4	14.0	14.4	27.43	-300.1	-1,316.9	794.9	773.9	21.01	37.832		
5,400.0	5,362.9	5,483.0	5,443.0	14.3	14.6	27.47	-304.1	-1,309.2	774.9	753.5	21.37	36.264		
5,500.0	5,462.2	5,570.9	5,530.5	14.6	14.8	27.56	-307.8	-1,302.2	756.2	734.5	21.73	34.801		
5,600.0	5,561.4	5,659.3	5,618.6	14.9	15.0	27.71	-310.8	-1,296.4	738.8	716.8	22.09	33.453		
5,688.1	5,648.9	5,737.4	5,696.6	15.1	15.1	27.88	-313.0	-1,292.3	724.7	702.3	22.40	32.354		
5,700.0	5,660.7	5,748.0	5,707.2	15.1	15.1	27.89	-313.2	-1,291.8	722.9	700.4	22.45	32.204		
5,800.0	5,760.2	5,837.3	5,796.4	15.4	15.3	27.97	-315.0	-1,288.4	710.1	687.3	22.83	31.108		
5,900.0	5,859.9	5,927.2	5,886.2	15.5	15.4	28.02	-316.2	-1,286.2	701.8	678.6	23.18	30.282		
6,000.0	5,959.9	6,017.3	5,976.4	15.7	15.5	28.05	-316.7	-1,285.2	698.0	674.5	23.49	29.712		
6,040.1	6,000.0	6,054.9	6,014.0	15.7	15.6	-90.14	-316.7	-1,285.2	697.7	674.1	23.61	29.546		
6,100.0	6,059.9	6,114.8	6,073.9	15.8	15.6	-90.14	-316.7	-1,285.2	697.7	673.9	23.80	29.315		
6,200.0	6,159.9	6,214.8	6,173.9	15.9	15.8	-90.14	-316.7	-1,285.2	697.7	673.6	24.11	28.936		
6,300.0	6,259.9	6,314.8	6,273.9	16.0	15.9	-90.14	-316.7	-1,285.2	697.7	673.3	24.42	28.566		
6,400.0	6,359.9	6,414.8	6,373.9	16.1	16.0	-90.14	-316.7	-1,285.2	697.7	673.0	24.74	28.204		
6,500.0	6,459.9	6,514.8	6,473.9	16.3	16.1	-90.14	-316.7	-1,285.2	697.7	672.6	25.05	27.850		
6,600.0	6,559.9	6,614.8	6,573.9	16.4	16.3	-90.14	-316.7	-1,285.2	697.7	672.3	25.37	27.503		
6,622.2	6,582.0	6,637.0	6,596.0	16.4	16.3	-90.14	-316.7	-1,285.2	697.7	672.3	25.44	27.427		
6,650.0	6,609.9	6,664.9	6,623.9	16.4	16.3	-90.17	-316.4	-1,285.2	697.7	672.2	25.51	27.355		
6,700.0	6,659.6	6,715.1	6,674.0	16.5	16.3	-90.22	-312.4	-1,285.2	697.7	672.1	25.57	27.285		

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 4B-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 4B-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		
6,750.0	6,708.8	6,765.3	6,723.5	16.5	16.3	-90.28	-304.1	-1,285.2	697.7	672.1	25.58	27.277		
6,800.0	6,757.0	6,815.7	6,772.2	16.4	16.3	-90.33	-291.5	-1,285.2	697.7	672.2	25.54	27.321		
6,850.0	6,803.9	6,866.0	6,819.7	16.4	16.3	-90.38	-274.6	-1,285.2	697.7	672.2	25.46	27.407		
6,900.0	6,849.1	6,916.5	6,865.5	16.4	16.3	-90.43	-253.6	-1,285.2	697.7	672.4	25.35	27.523		
6,950.0	6,892.3	6,967.0	6,909.4	16.3	16.2	-90.47	-228.6	-1,285.2	697.7	672.5	25.23	27.652		
7,000.0	6,933.1	7,017.5	6,950.9	16.3	16.2	-90.51	-199.8	-1,285.2	697.7	672.6	25.12	27.777		
7,050.0	6,971.2	7,068.1	6,989.7	16.2	16.1	-90.55	-167.5	-1,285.2	697.7	672.7	25.03	27.878		
7,100.0	7,006.4	7,118.7	7,025.6	16.2	16.1	-90.58	-131.8	-1,285.2	697.7	672.7	24.98	27.934		
7,150.0	7,038.3	7,169.3	7,058.2	16.2	16.1	-90.61	-93.1	-1,285.2	697.7	672.7	24.99	27.924		
7,200.0	7,066.8	7,220.0	7,087.3	16.2	16.2	-90.63	-51.6	-1,285.2	697.7	672.6	25.07	27.830		
7,250.0	7,091.6	7,270.7	7,112.6	16.3	16.2	-90.65	-7.7	-1,285.2	697.7	672.5	25.25	27.634		
7,300.0	7,112.5	7,321.4	7,133.9	16.4	16.3	-90.66	38.3	-1,285.2	697.7	672.2	25.53	27.334		
7,350.0	7,129.3	7,372.1	7,151.1	16.5	16.5	-90.67	86.0	-1,285.2	697.7	671.8	25.91	26.927		
7,400.0	7,142.0	7,422.8	7,164.0	16.7	16.7	-90.67	135.0	-1,285.2	697.7	671.3	26.41	26.421		
7,450.0	7,150.5	7,473.5	7,172.6	16.9	16.9	-90.67	185.0	-1,285.2	697.7	670.7	27.01	25.829		
7,500.0	7,154.6	7,524.3	7,176.6	17.2	17.2	-90.66	235.6	-1,285.2	697.7	670.0	27.72	25.171		
7,522.2	7,155.0	7,546.7	7,177.0	17.3	17.4	-90.66	258.0	-1,285.1	697.7	669.6	28.06	24.866		
7,600.0	7,155.0	7,624.6	7,177.0	17.9	17.9	-90.66	335.8	-1,285.1	697.7	668.3	29.40	23.730		
7,700.0	7,155.0	7,724.6	7,177.0	18.7	18.7	-90.66	435.8	-1,285.1	697.7	666.3	31.37	22.237		
7,800.0	7,155.0	7,824.6	7,177.0	19.6	19.7	-90.66	535.8	-1,285.1	697.7	664.1	33.60	20.765		
7,900.0	7,155.0	7,924.6	7,177.0	20.7	20.7	-90.66	635.8	-1,285.1	697.7	661.6	36.03	19.364		
8,000.0	7,155.0	8,024.6	7,177.0	21.8	21.9	-90.66	735.8	-1,285.1	697.7	659.0	38.63	18.062		
8,100.0	7,155.0	8,124.6	7,177.0	23.0	23.1	-90.66	835.8	-1,285.1	697.7	656.3	41.36	16.869		
8,200.0	7,155.0	8,224.6	7,177.0	24.3	24.4	-90.66	935.8	-1,285.1	697.7	653.5	44.20	15.785		
8,300.0	7,155.0	8,324.6	7,177.0	25.6	25.7	-90.66	1,035.8	-1,285.1	697.6	650.5	47.13	14.803		
8,400.0	7,155.0	8,424.6	7,177.0	27.0	27.1	-90.66	1,135.8	-1,285.1	697.6	647.5	50.13	13.916		
8,500.0	7,155.0	8,524.6	7,177.0	28.4	28.6	-90.66	1,235.8	-1,285.1	697.6	644.4	53.20	13.113		
8,600.0	7,155.0	8,624.6	7,177.0	29.9	30.0	-90.66	1,335.8	-1,285.1	697.6	641.3	56.32	12.387		
8,700.0	7,155.0	8,724.6	7,177.0	31.4	31.5	-90.66	1,435.8	-1,285.1	697.6	638.1	59.48	11.729		
8,800.0	7,155.0	8,824.6	7,177.0	32.9	33.0	-90.66	1,535.8	-1,285.1	697.6	634.9	62.68	11.130		
8,900.0	7,155.0	8,924.6	7,177.0	34.4	34.6	-90.66	1,635.8	-1,285.1	697.6	631.7	65.91	10.584		
9,000.0	7,155.0	9,024.6	7,177.0	36.0	36.1	-90.66	1,735.8	-1,285.0	697.6	628.4	69.17	10.086		
9,100.0	7,155.0	9,124.6	7,177.0	37.5	37.7	-90.66	1,835.8	-1,285.0	697.6	625.1	72.45	9.629		
9,200.0	7,155.0	9,224.6	7,177.0	39.1	39.3	-90.66	1,935.8	-1,285.0	697.6	621.8	75.75	9.209		
9,300.0	7,155.0	9,324.6	7,177.0	40.7	40.9	-90.66	2,035.8	-1,285.0	697.6	618.5	79.07	8.823		
9,400.0	7,155.0	9,424.6	7,177.0	42.4	42.5	-90.66	2,135.8	-1,285.0	697.6	615.2	82.40	8.466		
9,500.0	7,155.0	9,524.6	7,177.0	44.0	44.2	-90.66	2,235.8	-1,285.0	697.6	611.8	85.75	8.135		
9,600.0	7,155.0	9,624.6	7,177.0	45.6	45.8	-90.66	2,335.8	-1,285.0	697.6	608.5	89.11	7.828		
9,700.0	7,155.0	9,724.6	7,177.0	47.3	47.5	-90.66	2,435.8	-1,285.0	697.6	605.1	92.48	7.543		
9,800.0	7,155.0	9,824.6	7,177.0	48.9	49.1	-90.66	2,535.8	-1,285.0	697.5	601.7	95.86	7.276		
9,900.0	7,155.0	9,924.6	7,177.0	50.6	50.8	-90.66	2,635.8	-1,285.0	697.5	598.3	99.25	7.028		
10,000.0	7,155.0	10,024.6	7,177.0	52.2	52.4	-90.66	2,735.8	-1,285.0	697.5	594.9	102.65	6.795		
10,100.0	7,155.0	10,124.6	7,177.0	53.9	54.1	-90.66	2,835.8	-1,285.0	697.5	591.5	106.06	6.577		
10,200.0	7,155.0	10,224.6	7,177.0	55.6	55.8	-90.66	2,935.8	-1,285.0	697.5	588.1	109.47	6.372		
10,300.0	7,155.0	10,324.6	7,177.0	57.3	57.5	-90.66	3,035.8	-1,285.0	697.5	584.6	112.89	6.179		
10,400.0	7,155.0	10,424.6	7,177.0	58.9	59.1	-90.66	3,135.8	-1,284.9	697.5	581.2	116.31	5.997		
10,500.0	7,155.0	10,524.6	7,177.0	60.6	60.8	-90.66	3,235.8	-1,284.9	697.5	577.8	119.74	5.825		
10,600.0	7,155.0	10,624.6	7,177.0	62.3	62.5	-90.66	3,335.8	-1,284.9	697.5	574.3	123.17	5.663		
10,700.0	7,155.0	10,724.6	7,177.0	64.0	64.2	-90.66	3,435.8	-1,284.9	697.5	570.9	126.61	5.509		
10,800.0	7,155.0	10,824.6	7,177.0	65.7	65.9	-90.66	3,535.8	-1,284.9	697.5	567.4	130.05	5.363		
10,900.0	7,155.0	10,924.6	7,177.0	67.4	67.6	-90.66	3,635.8	-1,284.9	697.5	564.0	133.49	5.225		
11,000.0	7,155.0	11,024.6	7,177.0	69.1	69.3	-90.66	3,735.8	-1,284.9	697.5	560.5	136.94	5.093		

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 4B-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 4B-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 Depth (ft)	Vertical Depth (ft)	Measured Depth 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	7,155.0	11,124.6	7,177.0	70.8	71.0	-90.66	3,835.8	-1,284.9	697.5	557.1	140.39	4.968		
11,200.0	7,155.0	11,224.6	7,177.0	72.5	72.8	-90.66	3,935.8	-1,284.9	697.5	553.6	143.84	4.849		
11,300.0	7,155.0	11,324.6	7,177.0	74.3	74.5	-90.66	4,035.8	-1,284.9	697.4	550.2	147.29	4.735		
11,400.0	7,155.0	11,424.6	7,177.0	76.0	76.2	-90.66	4,135.8	-1,284.9	697.4	546.7	150.75	4.626		
11,500.0	7,155.0	11,524.6	7,177.0	77.7	77.9	-90.66	4,235.8	-1,284.9	697.4	543.2	154.21	4.523		
11,600.0	7,155.0	11,624.6	7,177.0	79.4	79.6	-90.66	4,335.8	-1,284.9	697.4	539.8	157.68	4.423		
11,700.0	7,155.0	11,724.6	7,177.0	81.1	81.3	-90.66	4,435.8	-1,284.9	697.4	536.3	161.14	4.328		
11,739.2	7,155.0	11,763.7	7,177.0	81.8	82.0	-90.66	4,475.0	-1,284.9	697.4	534.9	162.50	4.292 CC		
11,752.2	7,155.0	11,773.8	7,177.0	82.0	82.2	-90.66	4,485.1	-1,284.9	697.4	534.5	162.90	4.281 ES, SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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		
1,600.0	1,591.6	1,847.7	1,830.9	3.8	5.2	27.94	-92.5	-1,647.8	1,537.7	1,531.3	6.45	238.361		
1,700.0	1,690.8	1,944.5	1,926.4	4.1	5.5	27.94	-98.0	-1,633.5	1,512.4	1,505.5	6.84	221.026		
1,800.0	1,790.1	2,041.2	2,022.0	4.3	5.8	27.94	-103.4	-1,619.3	1,487.1	1,479.8	7.23	205.562		
1,900.0	1,889.3	2,137.9	2,117.5	4.6	6.1	27.94	-108.8	-1,605.0	1,461.7	1,454.1	7.63	191.682		
2,000.0	1,988.6	2,234.7	2,213.0	4.9	6.4	27.94	-114.3	-1,590.8	1,436.4	1,428.4	8.02	179.155		
2,100.0	2,087.8	2,331.4	2,308.6	5.2	6.7	27.93	-119.7	-1,576.6	1,411.1	1,402.7	8.41	167.794		
2,200.0	2,187.1	2,428.2	2,404.1	5.4	7.1	27.93	-125.1	-1,562.3	1,385.8	1,377.0	8.80	157.443		
2,300.0	2,286.3	2,524.9	2,499.6	5.7	7.4	27.93	-130.6	-1,548.1	1,360.5	1,351.3	9.19	147.973		
2,400.0	2,385.6	2,621.7	2,595.2	6.0	7.7	27.93	-136.0	-1,533.8	1,335.2	1,325.6	9.59	139.277		
2,500.0	2,484.8	2,718.4	2,690.7	6.3	8.0	27.92	-141.4	-1,519.6	1,309.8	1,299.9	9.98	131.264		
2,600.0	2,584.0	2,815.1	2,786.2	6.6	8.3	27.92	-146.9	-1,505.3	1,284.5	1,274.1	10.37	123.857		
2,700.0	2,683.3	2,911.9	2,881.8	6.8	8.6	27.92	-152.3	-1,491.1	1,259.2	1,248.4	10.76	116.989		
2,800.0	2,782.5	3,008.6	2,977.3	7.1	9.0	27.92	-157.7	-1,476.9	1,233.9	1,222.7	11.16	110.603		
2,900.0	2,881.8	3,105.4	3,072.8	7.4	9.3	27.91	-163.2	-1,462.6	1,208.6	1,197.0	11.55	104.651		
3,000.0	2,981.0	3,202.1	3,168.4	7.7	9.6	27.91	-168.6	-1,448.4	1,183.2	1,171.3	11.94	99.090		
3,100.0	3,080.3	3,298.8	3,263.9	7.9	9.9	27.91	-174.0	-1,434.1	1,157.9	1,145.6	12.33	93.883		
3,200.0	3,179.5	3,395.6	3,359.4	8.2	10.2	27.90	-179.5	-1,419.9	1,132.6	1,119.9	12.73	88.997		
3,300.0	3,278.8	3,492.3	3,455.0	8.5	10.6	27.90	-184.9	-1,405.7	1,107.3	1,094.2	13.12	84.403		
3,400.0	3,378.0	3,589.1	3,550.5	8.8	10.9	27.90	-190.3	-1,391.4	1,082.0	1,068.4	13.51	80.076		
3,500.0	3,477.3	3,685.8	3,646.0	9.0	11.2	27.89	-195.8	-1,377.2	1,056.6	1,042.7	13.90	75.994		
3,600.0	3,576.5	3,782.5	3,741.6	9.3	11.5	27.89	-201.2	-1,362.9	1,031.3	1,017.0	14.30	72.135		
3,700.0	3,675.8	3,879.3	3,837.1	9.6	11.8	27.89	-206.6	-1,348.7	1,006.0	991.3	14.69	68.482		
3,800.0	3,775.0	3,976.0	3,932.6	9.9	12.1	27.88	-212.1	-1,334.5	980.7	965.6	15.08	65.020		
3,900.0	3,874.2	4,072.8	4,028.2	10.1	12.5	27.88	-217.5	-1,320.2	955.4	939.9	15.48	61.734		
4,000.0	3,973.5	4,169.5	4,123.7	10.4	12.8	27.87	-222.9	-1,306.0	930.0	914.2	15.87	58.610		
4,100.0	4,072.7	4,266.3	4,219.2	10.7	13.1	27.87	-228.4	-1,291.7	904.7	888.5	16.26	55.636		
4,200.0	4,172.0	4,363.0	4,314.8	11.0	13.4	27.86	-233.8	-1,277.5	879.4	862.7	16.65	52.804		
4,300.0	4,271.2	4,459.7	4,410.3	11.3	13.7	27.86	-239.2	-1,263.3	854.1	837.0	17.05	50.101		
4,400.0	4,370.5	4,556.5	4,505.8	11.5	14.0	27.85	-244.7	-1,249.0	828.8	811.3	17.44	47.520		
4,500.0	4,469.7	4,653.2	4,601.4	11.8	14.4	27.85	-250.1	-1,234.8	803.4	785.6	17.83	45.053		
4,600.0	4,569.0	4,750.0	4,696.9	12.1	14.7	27.84	-255.5	-1,220.5	778.1	759.9	18.23	42.693		
4,700.0	4,668.2	4,846.7	4,792.4	12.4	15.0	27.83	-261.0	-1,206.3	752.8	734.2	18.62	40.432		
4,800.0	4,767.5	4,943.4	4,888.0	12.6	15.3	27.82	-266.4	-1,192.1	727.5	708.5	19.01	38.264		
4,900.0	4,866.7	5,040.2	4,983.5	12.9	15.6	27.82	-271.8	-1,177.8	702.2	682.8	19.41	36.184		
5,000.0	4,966.0	5,136.9	5,079.0	13.2	15.9	27.81	-277.3	-1,163.6	676.8	657.0	19.80	34.187		
5,100.0	5,065.2	5,233.7	5,174.6	13.5	16.3	27.80	-282.7	-1,149.3	651.5	631.3	20.19	32.267		
5,200.0	5,164.4	5,330.4	5,270.1	13.7	16.6	27.79	-288.1	-1,135.1	626.2	605.6	20.58	30.421		
5,300.0	5,263.7	5,427.2	5,365.6	14.0	16.9	27.78	-293.6	-1,120.8	600.9	579.9	20.98	28.643		
5,400.0	5,362.9	5,523.9	5,461.2	14.3	17.2	27.76	-299.0	-1,106.6	575.6	554.2	21.37	26.932		
5,500.0	5,462.2	5,619.4	5,555.5	14.6	17.5	27.75	-304.4	-1,092.6	550.3	528.5	21.76	25.286		
5,600.0	5,561.4	5,700.0	5,635.3	14.9	17.8	27.80	-308.4	-1,081.9	526.5	504.3	22.11	23.807		
5,688.1	5,648.9	5,775.8	5,710.6	15.1	17.9	27.93	-311.5	-1,073.8	507.7	485.2	22.42	22.640		
5,700.0	5,660.7	5,785.8	5,720.5	15.1	18.0	27.93	-311.9	-1,072.9	505.3	482.8	22.47	22.486		
5,800.0	5,760.2	5,870.7	5,805.1	15.4	18.1	27.94	-314.4	-1,066.3	488.7	465.8	22.86	21.379		
5,900.0	5,859.9	5,966.6	5,890.9	15.5	18.2	27.96	-316.0	-1,062.1	477.9	454.7	23.21	20.590		
6,000.0	5,959.9	6,043.1	5,977.4	15.7	18.3	27.98	-316.7	-1,060.2	473.0	449.5	23.53	20.102		
6,040.1	6,000.0	6,079.7	6,014.0	15.7	18.4	-90.21	-316.7	-1,060.1	472.6	449.0	23.65	19.983		
6,100.0	6,059.9	6,139.6	6,073.9	15.8	18.4	-90.21	-316.7	-1,060.1	472.6	448.8	23.84	19.827		
6,200.0	6,159.9	6,239.6	6,173.9	15.9	18.5	-90.21	-316.7	-1,060.1	472.6	448.5	24.15	19.571		
6,300.0	6,259.9	6,339.6	6,273.9	16.0	18.6	-90.21	-316.7	-1,060.1	472.6	448.2	24.46	19.321		
6,400.0	6,359.9	6,439.6	6,373.9	16.1	18.7	-90.21	-316.7	-1,060.1	472.6	447.9	24.78	19.076		
6,448.3	6,408.1	6,487.9	6,422.1	16.2	18.8	-90.00	-315.0	-1,060.1	472.6	447.7	24.89	18.986 CC		

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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							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		
6,500.0	6,459.9	6,539.0	6,472.8	16.3	18.8	-89.23	-308.7	-1,060.1	472.7	447.7	24.98	18.923		
6,600.0	6,559.9	6,632.9	6,563.7	16.4	18.8	-86.43	-285.5	-1,060.1	473.7	448.6	25.10	18.871		
6,622.2	6,582.0	6,652.5	6,582.2	16.4	18.8	-85.62	-278.8	-1,060.1	474.2	449.1	25.13	18.867		
6,650.0	6,609.9	6,676.7	6,604.5	16.4	18.7	-84.49	-269.6	-1,060.1	475.1	450.0	25.18	18.873		
6,700.0	6,659.6	6,719.4	6,643.0	16.5	18.7	-82.52	-251.3	-1,060.1	477.2	452.0	25.24	18.908		
6,750.0	6,708.8	6,761.1	6,679.2	16.5	18.7	-80.61	-230.6	-1,060.1	479.8	454.5	25.30	18.967		
6,800.0	6,757.0	6,800.0	6,711.6	16.4	18.6	-78.86	-208.9	-1,060.1	482.8	457.5	25.34	19.056		
6,850.0	6,803.9	6,842.2	6,744.9	16.4	18.6	-77.05	-183.1	-1,060.1	486.1	460.8	25.37	19.159		
6,900.0	6,849.1	6,881.7	6,774.3	16.4	18.6	-75.41	-156.6	-1,060.1	489.7	464.3	25.38	19.294		
6,950.0	6,892.3	6,920.7	6,801.5	16.3	18.6	-73.87	-128.7	-1,060.1	493.4	468.0	25.35	19.461		
7,000.0	6,933.1	6,959.2	6,826.4	16.3	18.6	-72.45	-99.3	-1,060.1	497.1	471.8	25.28	19.659		
7,050.0	6,971.2	7,000.0	6,850.5	16.2	18.6	-71.08	-66.5	-1,060.1	500.7	475.6	25.19	19.876		
7,100.0	7,006.4	7,035.0	6,869.3	16.2	18.6	-69.96	-37.0	-1,060.1	504.3	479.2	25.10	20.089		
7,150.0	7,038.3	7,072.3	6,887.3	16.2	18.7	-68.90	-4.3	-1,060.1	507.6	482.7	24.91	20.377		
7,200.0	7,066.8	7,109.3	6,903.1	16.2	18.7	-67.97	29.2	-1,060.1	510.7	485.9	24.82	20.579		
7,250.0	7,091.6	7,150.0	6,917.9	16.3	18.8	-67.12	67.1	-1,060.1	513.5	488.7	24.77	20.733		
7,300.0	7,112.5	7,182.8	6,927.8	16.4	18.9	-66.50	98.3	-1,060.1	515.8	491.1	24.73	20.856		
7,350.0	7,129.3	7,219.2	6,936.7	16.5	19.1	-65.97	133.7	-1,060.1	517.8	493.0	24.81	20.869		
7,400.0	7,142.0	7,250.0	6,942.5	16.7	19.2	-65.60	163.9	-1,060.1	519.3	494.4	24.95	20.811		
7,450.0	7,150.5	7,291.8	6,947.7	16.9	19.4	-65.29	205.3	-1,060.1	520.3	495.0	25.30	20.564		
7,500.0	7,154.6	7,328.0	6,949.8	17.2	19.5	-65.16	241.5	-1,060.1	520.8	495.1	25.74	20.236		
7,522.2	7,155.0	7,344.5	6,950.0	17.3	19.6	-65.14	258.0	-1,060.1	520.9	494.9	25.97	20.056		
7,600.0	7,155.0	7,422.4	6,950.0	17.9	20.1	-65.14	335.8	-1,060.1	520.9	493.7	27.21	19.142		
7,700.0	7,155.0	7,522.4	6,950.0	18.7	20.8	-65.14	435.8	-1,060.1	520.9	491.8	29.02	17.946		
7,800.0	7,155.0	7,622.4	6,950.0	19.6	21.7	-65.14	535.8	-1,060.1	520.9	489.8	31.06	16.770		
7,900.0	7,155.0	7,722.4	6,950.0	20.7	22.6	-65.14	635.8	-1,060.1	520.8	487.6	33.27	15.653		
8,000.0	7,155.0	7,822.4	6,950.0	21.8	23.7	-65.14	735.8	-1,060.1	520.8	485.2	35.64	14.615		
8,100.0	7,155.0	7,922.4	6,950.0	23.0	24.8	-65.14	835.8	-1,060.0	520.8	482.7	38.12	13.663		
8,200.0	7,155.0	8,022.4	6,950.0	24.3	26.0	-65.13	935.8	-1,060.0	520.8	480.1	40.70	12.796		
8,300.0	7,155.0	8,122.4	6,950.0	25.6	27.3	-65.13	1,035.8	-1,060.0	520.8	477.5	43.37	12.010		
8,400.0	7,155.0	8,222.4	6,950.0	27.0	28.6	-65.13	1,135.8	-1,060.0	520.8	474.7	46.09	11.299		
8,500.0	7,155.0	8,322.4	6,950.0	28.4	30.0	-65.13	1,235.8	-1,060.0	520.8	471.9	48.88	10.655		
8,600.0	7,155.0	8,422.4	6,950.0	29.9	31.3	-65.13	1,335.8	-1,060.0	520.8	469.1	51.71	10.072		
8,700.0	7,155.0	8,522.4	6,950.0	31.4	32.8	-65.13	1,435.8	-1,060.0	520.8	466.2	54.58	9.542		
8,800.0	7,155.0	8,622.4	6,950.0	32.9	34.2	-65.13	1,535.8	-1,060.0	520.8	463.3	57.48	9.060		
8,900.0	7,155.0	8,722.4	6,950.0	34.4	35.7	-65.13	1,635.8	-1,060.0	520.8	460.4	60.41	8.620		
9,000.0	7,155.0	8,822.4	6,950.0	36.0	37.2	-65.13	1,735.8	-1,060.0	520.8	457.4	63.37	8.218		
9,100.0	7,155.0	8,922.4	6,950.0	37.5	38.8	-65.13	1,835.8	-1,060.0	520.8	454.4	66.35	7.849		
9,200.0	7,155.0	9,022.4	6,950.0	39.1	40.3	-65.13	1,935.8	-1,060.0	520.8	451.4	69.35	7.510		
9,300.0	7,155.0	9,122.4	6,950.0	40.7	41.9	-65.13	2,035.8	-1,060.0	520.8	448.4	72.36	7.197		
9,400.0	7,155.0	9,222.4	6,950.0	42.4	43.5	-65.13	2,135.8	-1,059.9	520.7	445.4	75.39	6.908		
9,500.0	7,155.0	9,322.4	6,950.0	44.0	45.1	-65.13	2,235.8	-1,059.9	520.7	442.3	78.43	6.640		
9,600.0	7,155.0	9,422.4	6,950.0	45.6	46.7	-65.13	2,335.8	-1,059.9	520.7	439.3	81.48	6.391		
9,700.0	7,155.0	9,522.4	6,950.0	47.3	48.3	-65.13	2,435.8	-1,059.9	520.7	436.2	84.54	6.160		
9,800.0	7,155.0	9,622.4	6,950.0	48.9	49.9	-65.13	2,535.8	-1,059.9	520.7	433.1	87.61	5.944		
9,900.0	7,155.0	9,722.4	6,950.0	50.6	51.5	-65.13	2,635.8	-1,059.9	520.7	430.0	90.68	5.742		
10,000.0	7,155.0	9,822.4	6,950.0	52.2	53.2	-65.13	2,735.8	-1,059.9	520.7	426.9	93.77	5.553		
10,100.0	7,155.0	9,922.4	6,950.0	53.9	54.8	-65.13	2,835.8	-1,059.9	520.7	423.8	96.86	5.376		
10,200.0	7,155.0	10,022.4	6,950.0	55.6	56.5	-65.13	2,935.8	-1,059.9	520.7	420.7	99.96	5.209		
10,300.0	7,155.0	10,122.4	6,950.0	57.3	58.1	-65.13	3,035.8	-1,059.9	520.7	417.6	103.06	5.052		
10,400.0	7,155.0	10,222.4	6,950.0	58.9	59.8	-65.13	3,135.8	-1,059.9	520.7	414.5	106.17	4.904		
10,500.0	7,155.0	10,322.4	6,950.0	60.6	61.5	-65.13	3,235.8	-1,059.9	520.7	411.4	109.28	4.764		

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 4B-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 4B-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					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)	Total Uncertainty Axis			
10,600.0	7,155.0	10,422.4	6,950.0	62.3	63.2	-65.13	3,335.8	-1,059.9	520.7	408.3	112.40	4.632		
10,700.0	7,155.0	10,522.4	6,950.0	64.0	64.8	-65.13	3,435.8	-1,059.8	520.7	405.1	115.52	4.507		
10,800.0	7,155.0	10,622.4	6,950.0	65.7	66.5	-65.13	3,535.8	-1,059.8	520.6	402.0	118.64	4.388		
10,900.0	7,155.0	10,722.4	6,950.0	67.4	68.2	-65.13	3,635.8	-1,059.8	520.6	398.9	121.77	4.276		
11,000.0	7,155.0	10,822.4	6,950.0	69.1	69.9	-65.13	3,735.8	-1,059.8	520.6	395.7	124.90	4.168		
11,100.0	7,155.0	10,922.4	6,950.0	70.8	71.6	-65.12	3,835.8	-1,059.8	520.6	392.6	128.03	4.066		
11,200.0	7,155.0	11,022.4	6,950.0	72.5	73.3	-65.12	3,935.8	-1,059.8	520.6	389.5	131.17	3.969		
11,300.0	7,155.0	11,122.4	6,950.0	74.3	75.0	-65.12	4,035.8	-1,059.8	520.6	386.3	134.31	3.876		
11,400.0	7,155.0	11,222.4	6,950.0	76.0	76.7	-65.12	4,135.8	-1,059.8	520.6	383.2	137.45	3.788		
11,500.0	7,155.0	11,322.4	6,950.0	77.7	78.4	-65.12	4,235.8	-1,059.8	520.6	380.0	140.59	3.703		
11,600.0	7,155.0	11,422.4	6,950.0	79.4	80.1	-65.12	4,335.8	-1,059.8	520.6	376.9	143.73	3.622		
11,700.0	7,155.0	11,522.4	6,950.0	81.1	81.8	-65.12	4,435.8	-1,059.8	520.6	373.7	146.88	3.544		
11,739.7	7,155.0	11,562.0	6,950.0	81.8	82.5	-65.12	4,475.5	-1,059.8	520.6	372.5	148.13	3.514		
11,752.2	7,155.0	11,572.7	6,950.0	82.0	82.7	-65.12	4,486.2	-1,059.8	520.6	372.1	148.49	3.506 ES, SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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 4A-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	-90.10	0.0	-7.6	7.6							
100.0	100.0	100.0	100.0	0.1	0.1	-90.10	0.0	-7.6	7.6	7.3	0.24	30.903				
200.0	200.0	200.0	200.0	0.3	0.3	-90.10	0.0	-7.6	7.6	7.0	0.59	12.725	CC, ES			
250.0	250.0	249.9	249.9	0.4	0.4	-91.23	-0.2	-8.0	8.0	7.2	0.77	10.352				
300.0	300.0	299.7	299.7	0.5	0.5	25.33	-0.6	-9.2	8.8	7.9	0.94	9.336				
400.0	399.9	399.4	399.2	0.7	0.7	24.43	-2.5	-14.0	10.6	9.3	1.29	8.189				
500.0	499.7	499.0	498.4	0.9	0.9	25.58	-5.7	-22.1	12.5	10.9	1.65	7.580				
602.0	601.1	600.5	599.2	1.1	1.2	27.98	-10.2	-33.6	14.7	12.6	2.04	7.190				
700.0	698.4	698.2	695.7	1.4	1.5	28.58	-15.7	-47.5	18.1	15.7	2.43	7.475				
800.0	797.6	798.1	794.3	1.6	1.8	28.38	-21.5	-62.4	22.2	19.4	2.82	7.892				
900.0	896.9	898.0	892.9	1.9	2.1	28.24	-27.3	-77.3	26.4	23.1	3.21	8.201				
1,000.0	996.1	997.9	991.6	2.2	2.4	28.14	-33.1	-92.2	30.5	26.9	3.61	8.439				
1,100.0	1,095.4	1,097.8	1,090.2	2.4	2.7	28.07	-38.9	-107.0	34.6	30.6	4.01	8.627				
1,200.0	1,194.6	1,197.7	1,188.8	2.7	3.1	28.01	-44.8	-121.9	38.7	34.3	4.41	8.780				
1,300.0	1,293.9	1,297.6	1,287.5	3.0	3.4	27.96	-50.6	-136.8	42.8	38.0	4.81	8.906				
1,400.0	1,393.1	1,397.6	1,386.1	3.2	3.7	27.92	-56.4	-151.6	46.9	41.7	5.21	9.012				
1,500.0	1,492.3	1,497.5	1,484.7	3.5	4.1	27.88	-62.2	-166.5	51.0	45.4	5.61	9.103				
1,600.0	1,591.6	1,597.4	1,583.4	3.8	4.4	27.86	-68.0	-181.4	55.2	49.1	6.01	9.181				
1,700.0	1,690.8	1,697.3	1,682.0	4.1	4.7	27.83	-73.9	-196.3	59.3	52.9	6.41	9.249				
1,800.0	1,790.1	1,797.2	1,780.6	4.3	5.0	27.81	-79.7	-211.1	63.4	56.6	6.81	9.309				
1,900.0	1,889.3	1,897.1	1,879.3	4.6	5.4	27.79	-85.5	-226.0	67.5	60.3	7.21	9.361				
2,000.0	1,988.6	1,997.0	1,977.9	4.9	5.7	27.78	-91.3	-240.9	71.6	64.0	7.61	9.409				
2,100.0	2,087.8	2,097.0	2,076.5	5.2	6.0	27.76	-97.1	-255.7	75.7	67.7	8.01	9.451				
2,200.0	2,187.1	2,196.9	2,175.2	5.4	6.4	27.75	-102.9	-270.6	79.8	71.4	8.41	9.489				
2,300.0	2,286.3	2,296.8	2,273.8	5.7	6.7	27.74	-108.8	-285.5	84.0	75.1	8.82	9.524				
2,400.0	2,385.6	2,396.7	2,372.4	6.0	7.0	27.73	-114.6	-300.4	88.1	78.9	9.22	9.555				
2,500.0	2,484.8	2,496.6	2,471.0	6.3	7.4	27.72	-120.4	-315.2	92.2	82.6	9.62	9.584				
2,600.0	2,584.0	2,596.5	2,569.7	6.6	7.7	27.71	-126.2	-330.1	96.3	86.3	10.02	9.610				
2,700.0	2,683.3	2,696.5	2,668.3	6.8	8.0	27.70	-132.0	-345.0	100.4	90.0	10.42	9.635				
2,800.0	2,782.5	2,796.4	2,766.9	7.1	8.3	27.69	-137.9	-359.8	104.5	93.7	10.82	9.657				
2,900.0	2,881.8	2,896.3	2,865.6	7.4	8.7	27.68	-143.7	-374.7	108.6	97.4	11.23	9.678				
3,000.0	2,981.0	2,996.2	2,964.2	7.7	9.0	27.68	-149.5	-389.6	112.8	101.1	11.63	9.698				
3,100.0	3,080.3	3,096.1	3,062.8	7.9	9.3	27.67	-155.3	-404.4	116.9	104.8	12.03	9.716				
3,200.0	3,179.5	3,196.0	3,161.5	8.2	9.7	27.67	-161.1	-419.3	121.0	108.6	12.43	9.732				
3,300.0	3,278.8	3,295.9	3,260.1	8.5	10.0	27.66	-167.0	-434.2	125.1	112.3	12.83	9.748				
3,400.0	3,378.0	3,395.9	3,358.7	8.8	10.3	27.65	-172.8	-449.1	129.2	116.0	13.24	9.763				
3,500.0	3,477.3	3,495.8	3,457.4	9.0	10.7	27.65	-178.6	-463.9	133.3	119.7	13.64	9.777				
3,600.0	3,576.5	3,595.7	3,556.0	9.3	11.0	27.65	-184.4	-478.8	137.4	123.4	14.04	9.790				
3,700.0	3,675.8	3,695.6	3,654.6	9.6	11.3	27.64	-190.2	-493.7	141.6	127.1	14.44	9.803				
3,800.0	3,775.0	3,795.5	3,753.2	9.9	11.7	27.64	-196.1	-508.5	145.7	130.8	14.84	9.814				
3,900.0	3,874.2	3,895.4	3,851.9	10.1	12.0	27.63	-201.9	-523.4	149.8	134.5	15.25	9.825				
4,000.0	3,973.5	3,995.4	3,950.5	10.4	12.3	27.63	-207.7	-538.3	153.9	138.3	15.65	9.836				
4,100.0	4,072.7	4,095.3	4,049.1	10.7	12.6	27.63	-213.5	-553.2	158.0	142.0	16.05	9.846				
4,200.0	4,172.0	4,195.2	4,147.8	11.0	13.0	27.62	-219.3	-568.0	162.1	145.7	16.45	9.855				
4,300.0	4,271.2	4,295.1	4,246.4	11.3	13.3	27.62	-225.1	-582.9	166.3	149.4	16.85	9.864				
4,400.0	4,370.5	4,395.0	4,345.0	11.5	13.6	27.62	-231.0	-597.8	170.4	153.1	17.26	9.873				
4,500.0	4,469.7	4,494.9	4,443.7	11.8	14.0	27.62	-236.8	-612.6	174.5	156.8	17.66	9.881				
4,600.0	4,569.0	4,594.8	4,542.3	12.1	14.3	27.61	-242.6	-627.5	178.6	160.5	18.06	9.889				
4,700.0	4,668.2	4,694.8	4,640.9	12.4	14.6	27.61	-248.4	-642.4	182.7	164.2	18.46	9.897				
4,800.0	4,767.5	4,794.7	4,739.6	12.6	15.0	27.61	-254.2	-657.3	186.8	168.0	18.86	9.904				
4,900.0	4,866.7	4,894.6	4,838.2	12.9	15.3	27.61	-260.1	-672.1	190.9	171.7	19.27	9.911				
5,000.0	4,966.0	4,994.5	4,936.8	13.2	15.6	27.60	-265.9	-687.0	195.1	175.4	19.67	9.917				

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 4B-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 4B-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 4A-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)				
5,100.0	5,065.2	5,094.4	5,035.4	13.5	16.0	27.60	-271.7	-701.9	199.2	179.1	20.07	9.923		
5,200.0	5,164.4	5,194.3	5,134.1	13.7	16.3	27.60	-277.5	-716.7	203.3	182.8	20.47	9.929		
5,300.0	5,263.7	5,294.3	5,232.7	14.0	16.6	27.60	-283.3	-731.6	207.4	186.5	20.87	9.935		
5,400.0	5,362.9	5,394.2	5,331.3	14.3	17.0	27.60	-289.2	-746.5	211.5	190.2	21.28	9.941		
5,500.0	5,462.2	5,494.1	5,430.0	14.6	17.3	27.59	-295.0	-761.3	215.6	193.9	21.68	9.946		
5,600.0	5,561.4	5,594.0	5,528.6	14.9	17.6	27.59	-300.8	-776.2	219.7	197.7	22.08	9.951		
5,688.1	5,648.9	5,687.8	5,621.4	15.1	17.9	27.69	-305.9	-789.2	222.4	199.9	22.46	9.902		
5,700.0	5,660.7	5,700.7	5,634.1	15.1	17.9	27.73	-306.5	-790.7	222.6	200.1	22.51	9.886		
5,800.0	5,760.2	5,808.5	5,741.3	15.4	18.2	27.96	-310.7	-801.7	223.8	200.9	22.93	9.761		
5,900.0	5,859.9	5,916.4	5,848.9	15.5	18.4	28.12	-313.6	-808.8	224.6	201.3	23.29	9.644		
6,000.0	5,959.9	6,024.3	5,966.7	15.7	18.5	28.19	-314.9	-812.2	225.0	201.4	23.60	9.534		
6,040.1	6,000.0	6,067.5	6,000.0	15.7	18.5	-90.00	-315.0	-812.6	225.1	201.3	23.72	9.490		
6,100.0	6,059.9	6,127.4	6,059.9	15.8	18.6	-90.00	-315.0	-812.6	225.1	201.2	23.90	9.416		
6,200.0	6,159.9	6,227.4	6,159.9	15.9	18.7	-90.00	-315.0	-812.6	225.1	200.8	24.21	9.295		
6,300.0	6,259.9	6,327.4	6,259.9	16.0	18.8	-90.00	-315.0	-812.6	225.1	200.5	24.52	9.177		
6,400.0	6,359.9	6,427.4	6,359.9	16.1	18.9	-90.00	-315.0	-812.6	225.1	200.2	24.84	9.061		
6,465.0	6,424.9	6,492.4	6,424.9	16.2	19.0	-90.00	-315.0	-812.6	225.1	200.0	25.04	8.988		
6,500.0	6,459.9	6,527.4	6,459.9	16.3	19.0	-89.98	-314.9	-812.6	225.1	199.9	25.15	8.948		
6,518.8	6,478.7	6,546.2	6,478.7	16.3	19.0	-89.81	-314.2	-812.6	225.1	199.8	25.23	8.919		
6,600.0	6,559.9	6,626.1	6,557.9	16.4	19.0	-87.35	-304.6	-812.6	225.3	199.5	25.85	8.715		
6,622.2	6,582.0	6,647.3	6,578.6	16.4	19.0	-86.23	-300.2	-812.6	225.6	199.5	26.10	8.643		
6,650.0	6,609.9	6,673.6	6,604.1	16.4	19.0	-84.69	-293.6	-812.6	226.1	199.7	26.41	8.559		
6,700.0	6,659.6	6,720.1	6,648.3	16.5	19.0	-81.97	-279.2	-812.6	227.4	200.5	26.91	8.450		
6,750.0	6,708.8	6,765.9	6,690.6	16.5	19.0	-79.37	-261.6	-812.6	229.2	201.9	27.29	8.397		
6,800.0	6,757.0	6,811.1	6,730.7	16.4	18.9	-76.88	-241.0	-812.6	231.3	203.8	27.54	8.401		
6,850.0	6,803.9	6,855.5	6,768.6	16.4	18.9	-74.54	-217.7	-812.6	233.8	206.2	27.63	8.463		
6,900.0	6,849.1	6,900.0	6,804.5	16.4	18.9	-72.33	-191.4	-812.6	236.5	209.0	27.57	8.580		
6,950.0	6,892.3	6,942.8	6,837.0	16.3	18.8	-70.33	-163.7	-812.6	239.4	212.0	27.36	8.751		
7,000.0	6,933.1	6,985.7	6,867.5	16.3	18.8	-68.48	-133.5	-812.6	242.3	215.3	27.02	8.969		
7,050.0	6,971.2	7,028.1	6,895.3	16.2	18.8	-66.81	-101.4	-812.6	245.3	218.7	26.58	9.229		
7,100.0	7,006.4	7,070.2	6,920.5	16.2	18.8	-65.30	-67.7	-812.6	248.1	222.0	26.06	9.519		
7,150.0	7,038.3	7,112.0	6,942.9	16.2	18.8	-63.97	-32.5	-812.6	250.8	225.3	25.51	9.831		
7,200.0	7,066.8	7,150.0	6,961.1	16.2	18.9	-62.89	0.9	-812.6	253.3	228.2	25.06	10.109		
7,250.0	7,091.6	7,194.7	6,979.6	16.3	18.9	-61.84	41.6	-812.6	255.5	230.8	24.65	10.365		
7,300.0	7,112.5	7,235.8	6,993.7	16.4	19.0	-61.03	80.1	-812.6	257.4	233.0	24.39	10.555		
7,350.0	7,129.3	7,276.6	7,005.0	16.5	19.2	-60.38	119.4	-812.6	259.0	234.7	24.32	10.648		
7,400.0	7,142.0	7,317.4	7,013.4	16.7	19.3	-59.90	159.2	-812.6	260.2	235.7	24.49	10.624		
7,450.0	7,150.5	7,358.0	7,019.0	16.9	19.5	-59.59	199.5	-812.6	261.0	236.1	24.92	10.473		
7,500.0	7,154.6	7,400.0	7,021.8	17.2	19.7	-59.43	241.4	-812.6	261.4	235.8	25.62	10.201		
7,500.5	7,154.6	7,400.0	7,021.8	17.2	19.7	-59.43	241.4	-812.6	261.4	235.8	25.63	10.198		
7,522.2	7,155.0	7,416.6	7,022.0	17.3	19.8	-59.42	258.0	-812.6	261.4	235.4	26.01	10.051		
7,600.0	7,155.0	7,494.4	7,022.0	17.9	20.2	-59.42	335.8	-812.6	261.4	234.3	27.13	9.635		
7,700.0	7,155.0	7,594.4	7,022.0	18.7	20.9	-59.42	435.8	-812.6	261.4	232.6	28.79	9.080		
7,800.0	7,155.0	7,694.4	7,022.0	19.6	21.8	-59.42	535.8	-812.6	261.4	230.8	30.66	8.527		
7,900.0	7,155.0	7,794.4	7,022.0	20.7	22.7	-59.42	635.8	-812.6	261.4	228.7	32.70	7.994		
8,000.0	7,155.0	7,894.4	7,022.0	21.8	23.7	-59.42	735.8	-812.6	261.4	226.5	34.89	7.494		
8,100.0	7,155.0	7,994.4	7,022.0	23.0	24.8	-59.42	835.8	-812.6	261.4	224.2	37.19	7.029		
8,200.0	7,155.0	8,094.4	7,022.0	24.3	26.0	-59.42	935.8	-812.6	261.4	221.8	39.59	6.603		
8,300.0	7,155.0	8,194.4	7,022.0	25.6	27.3	-59.42	1,035.8	-812.6	261.4	219.4	42.07	6.214		
8,400.0	7,155.0	8,294.4	7,022.0	27.0	28.6	-59.42	1,135.8	-812.6	261.4	216.8	44.62	5.859		
8,500.0	7,155.0	8,394.4	7,022.0	28.4	29.9	-59.42	1,235.8	-812.6	261.4	214.2	47.23	5.535		
8,600.0	7,155.0	8,494.4	7,022.0	29.9	31.3	-59.42	1,335.8	-812.6	261.4	211.5	49.88	5.241		

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 4B-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 4B-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 4A-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		
8,700.0	7,155.0	8,594.4	7,022.0	31.4	32.7	-59.42	1,435.8	-812.6	261.4	208.9	52.57	4.972		
8,800.0	7,155.0	8,694.4	7,022.0	32.9	34.2	-59.42	1,535.8	-812.6	261.4	206.1	55.30	4.727		
8,900.0	7,155.0	8,794.4	7,022.0	34.4	35.7	-59.42	1,635.8	-812.6	261.4	203.4	58.06	4.503		
9,000.0	7,155.0	8,894.4	7,022.0	36.0	37.2	-59.42	1,735.8	-812.6	261.4	200.6	60.84	4.297		
9,100.0	7,155.0	8,994.4	7,022.0	37.5	38.7	-59.42	1,835.8	-812.6	261.4	197.8	63.65	4.107		
9,200.0	7,155.0	9,094.4	7,022.0	39.1	40.2	-59.42	1,935.8	-812.6	261.4	195.0	66.47	3.933		
9,300.0	7,155.0	9,194.4	7,022.0	40.7	41.8	-59.42	2,035.8	-812.6	261.4	192.1	69.32	3.772		
9,400.0	7,155.0	9,294.4	7,022.0	42.4	43.4	-59.42	2,135.8	-812.6	261.4	189.3	72.17	3.622		
9,500.0	7,155.0	9,394.4	7,022.0	44.0	45.0	-59.42	2,235.8	-812.6	261.4	186.4	75.04	3.484		
9,600.0	7,155.0	9,494.4	7,022.0	45.6	46.6	-59.42	2,335.8	-812.6	261.4	183.5	77.93	3.355		
9,700.0	7,155.0	9,594.4	7,022.0	47.3	48.2	-59.42	2,435.8	-812.6	261.4	180.6	80.82	3.235		
9,800.0	7,155.0	9,694.4	7,022.0	48.9	49.8	-59.42	2,535.8	-812.6	261.4	177.7	83.72	3.123		
9,900.0	7,155.0	9,794.4	7,022.0	50.6	51.4	-59.42	2,635.8	-812.6	261.4	174.8	86.63	3.018		
10,000.0	7,155.0	9,894.4	7,022.0	52.2	53.1	-59.42	2,735.8	-812.6	261.4	171.9	89.55	2.919		
10,100.0	7,155.0	9,994.4	7,022.0	53.9	54.7	-59.42	2,835.8	-812.6	261.4	169.0	92.48	2.827		
10,200.0	7,155.0	10,094.4	7,022.0	55.6	56.4	-59.42	2,935.8	-812.6	261.4	166.0	95.41	2.740		
10,300.0	7,155.0	10,194.4	7,022.0	57.3	58.0	-59.42	3,035.8	-812.6	261.4	163.1	98.35	2.658		
10,400.0	7,155.0	10,294.4	7,022.0	58.9	59.7	-59.42	3,135.8	-812.6	261.4	160.2	101.29	2.581		
10,500.0	7,155.0	10,394.4	7,022.0	60.6	61.3	-59.42	3,235.8	-812.6	261.4	157.2	104.24	2.508		
10,600.0	7,155.0	10,494.4	7,022.0	62.3	63.0	-59.42	3,335.8	-812.6	261.4	154.3	107.19	2.439		
10,700.0	7,155.0	10,594.4	7,022.0	64.0	64.7	-59.42	3,435.8	-812.6	261.4	151.3	110.14	2.374		
10,800.0	7,155.0	10,694.4	7,022.0	65.7	66.4	-59.42	3,535.8	-812.6	261.4	148.3	113.10	2.312		
10,900.0	7,155.0	10,794.4	7,022.0	67.4	68.1	-59.42	3,635.8	-812.6	261.4	145.4	116.07	2.253		
11,000.0	7,155.0	10,894.4	7,022.0	69.1	69.7	-59.42	3,735.8	-812.6	261.4	142.4	119.03	2.196		
11,100.0	7,155.0	10,994.4	7,022.0	70.8	71.4	-59.42	3,835.8	-812.6	261.4	139.4	122.00	2.143		
11,200.0	7,155.0	11,094.4	7,022.0	72.5	73.1	-59.42	3,935.8	-812.6	261.4	136.5	124.98	2.092		
11,300.0	7,155.0	11,194.4	7,022.0	74.3	74.8	-59.42	4,035.8	-812.6	261.4	133.5	127.95	2.043		
11,400.0	7,155.0	11,294.4	7,022.0	76.0	76.5	-59.42	4,135.8	-812.6	261.4	130.5	130.93	1.997		
11,500.0	7,155.0	11,394.4	7,022.0	77.7	78.2	-59.42	4,235.8	-812.6	261.4	127.5	133.91	1.952		
11,600.0	7,155.0	11,494.4	7,022.0	79.4	79.9	-59.42	4,335.8	-812.6	261.4	124.6	136.89	1.910		
11,700.0	7,155.0	11,594.4	7,022.0	81.1	81.6	-59.42	4,435.8	-812.6	261.5	121.6	139.87	1.869		
11,728.9	7,155.0	11,623.3	7,022.0	81.6	82.1	-59.42	4,464.7	-812.6	261.5	120.7	140.73	1.858		
11,752.2	7,155.0	11,645.9	7,022.0	82.0	82.5	-59.42	4,487.2	-812.6	261.5	120.0	141.42	1.849 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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	7.6	7.6							
100.0	100.0	99.0	99.0	0.1	0.1	89.90	0.0	7.6	7.6	7.3	0.24	31.059				
200.0	200.0	199.0	199.0	0.3	0.3	89.90	0.0	7.6	7.6	7.0	0.59	12.762				
250.0	250.0	249.0	249.0	0.4	0.4	89.90	0.0	7.6	7.6	6.8	0.77	9.855	CC, ES			
300.0	300.0	299.0	299.0	0.5	0.5	-153.38	0.0	7.6	7.9	7.0	0.94	8.439				
400.0	399.9	399.2	399.2	0.7	0.6	-156.34	-1.1	6.2	9.7	8.4	1.29	7.529				
500.0	499.7	499.5	499.3	0.9	0.8	-155.31	-4.4	2.2	11.9	10.2	1.65	7.183				
602.0	601.1	601.7	601.2	1.1	1.1	-152.90	-9.9	-4.4	14.7	12.6	2.04	7.206				
700.0	698.4	699.6	698.7	1.4	1.3	-152.78	-15.6	-11.2	18.5	16.1	2.42	7.657				
800.0	797.6	799.5	798.2	1.6	1.5	-152.70	-21.3	-18.1	22.4	19.6	2.81	7.980				
900.0	896.9	899.4	897.7	1.9	1.7	-152.64	-27.1	-25.0	26.3	23.1	3.20	8.217				
1,000.0	996.1	999.4	997.2	2.2	2.0	-152.60	-32.9	-31.9	30.2	26.6	3.60	8.397				
1,100.0	1,095.4	1,099.3	1,096.7	2.4	2.2	-152.56	-38.6	-38.8	34.1	30.1	3.99	8.539				
1,200.0	1,194.6	1,199.2	1,196.3	2.7	2.4	-152.54	-44.4	-45.7	38.0	33.6	4.39	8.653				
1,300.0	1,293.9	1,299.1	1,295.8	3.0	2.6	-152.52	-50.1	-52.6	41.9	37.1	4.79	8.747				
1,400.0	1,393.1	1,399.1	1,395.3	3.2	2.9	-152.50	-55.9	-59.6	45.8	40.6	5.19	8.826				
1,500.0	1,492.3	1,499.0	1,494.8	3.5	3.1	-152.48	-61.7	-66.5	49.7	44.1	5.59	8.893				
1,600.0	1,591.6	1,598.9	1,594.3	3.8	3.3	-152.47	-67.4	-73.4	53.6	47.6	5.99	8.950				
1,700.0	1,690.8	1,698.8	1,693.9	4.1	3.6	-152.46	-73.2	-80.3	57.5	51.1	6.39	9.000				
1,800.0	1,790.1	1,798.8	1,793.4	4.3	3.8	-152.45	-79.0	-87.2	61.4	54.6	6.79	9.043				
1,900.0	1,889.3	1,898.7	1,892.9	4.6	4.0	-152.44	-84.7	-94.1	65.3	58.1	7.19	9.081				
2,000.0	1,988.6	1,998.6	1,992.4	4.9	4.3	-152.43	-90.5	-101.0	69.2	61.6	7.59	9.116				
2,100.0	2,087.8	2,098.5	2,091.9	5.2	4.5	-152.43	-96.2	-107.9	73.1	65.1	7.99	9.146				
2,200.0	2,187.1	2,198.5	2,191.4	5.4	4.7	-152.42	-102.0	-114.9	77.0	68.6	8.39	9.174				
2,300.0	2,286.3	2,298.4	2,291.0	5.7	5.0	-152.42	-107.8	-121.8	80.9	72.1	8.79	9.199				
2,400.0	2,385.6	2,398.3	2,390.5	6.0	5.2	-152.41	-113.5	-128.7	84.8	75.6	9.19	9.221				
2,500.0	2,484.8	2,498.2	2,490.0	6.3	5.4	-152.41	-119.3	-135.6	88.7	79.1	9.60	9.242				
2,600.0	2,584.0	2,598.2	2,589.5	6.6	5.7	-152.40	-125.0	-142.5	92.6	82.6	10.00	9.261				
2,700.0	2,683.3	2,698.1	2,689.0	6.8	5.9	-152.40	-130.8	-149.4	96.5	86.1	10.40	9.278				
2,800.0	2,782.5	2,798.0	2,788.6	7.1	6.1	-152.40	-136.6	-156.3	100.4	89.6	10.80	9.294				
2,900.0	2,881.8	2,897.9	2,888.1	7.4	6.4	-152.39	-142.3	-163.3	104.3	93.1	11.20	9.309				
3,000.0	2,981.0	2,997.9	2,987.6	7.7	6.6	-152.39	-148.1	-170.2	108.2	96.6	11.60	9.323				
3,100.0	3,080.3	3,097.8	3,087.1	7.9	6.9	-152.39	-153.8	-177.1	112.1	100.1	12.01	9.336				
3,200.0	3,179.5	3,197.7	3,186.6	8.2	7.1	-152.38	-159.6	-184.0	116.0	103.6	12.41	9.348				
3,300.0	3,278.8	3,297.6	3,286.1	8.5	7.3	-152.38	-165.4	-190.9	119.9	107.1	12.81	9.359				
3,400.0	3,378.0	3,397.5	3,385.7	8.8	7.6	-152.38	-171.1	-197.8	123.8	110.6	13.21	9.370				
3,500.0	3,477.3	3,497.5	3,485.2	9.0	7.8	-152.38	-176.9	-204.7	127.7	114.1	13.61	9.380				
3,600.0	3,576.5	3,597.4	3,584.7	9.3	8.0	-152.37	-182.7	-211.6	131.6	117.6	14.01	9.389				
3,700.0	3,675.8	3,697.3	3,684.2	9.6	8.3	-152.37	-188.4	-218.6	135.5	121.1	14.42	9.398				
3,800.0	3,775.0	3,797.2	3,783.7	9.9	8.5	-152.37	-194.2	-225.5	139.4	124.6	14.82	9.406				
3,900.0	3,874.2	3,897.2	3,883.2	10.1	8.7	-152.37	-199.9	-232.4	143.3	128.1	15.22	9.414				
4,000.0	3,973.5	3,997.1	3,982.8	10.4	9.0	-152.37	-205.7	-239.3	147.2	131.6	15.62	9.421				
4,100.0	4,072.7	4,097.0	4,082.3	10.7	9.2	-152.37	-211.5	-246.2	151.1	135.0	16.02	9.428				
4,200.0	4,172.0	4,196.9	4,181.8	11.0	9.4	-152.36	-217.2	-253.1	155.0	138.5	16.42	9.435				
4,300.0	4,271.2	4,296.9	4,281.3	11.3	9.7	-152.36	-223.0	-260.0	158.9	142.0	16.83	9.442				
4,400.0	4,370.5	4,396.8	4,380.8	11.5	9.9	-152.36	-228.7	-267.0	162.8	145.5	17.23	9.448				
4,500.0	4,469.7	4,496.7	4,480.4	11.8	10.1	-152.36	-234.5	-273.9	166.7	149.0	17.63	9.453				
4,600.0	4,569.0	4,596.6	4,579.9	12.1	10.4	-152.36	-240.3	-280.8	170.6	152.5	18.03	9.459				
4,700.0	4,668.2	4,696.6	4,679.4	12.4	10.6	-152.36	-246.0	-287.7	174.5	156.0	18.43	9.464				
4,800.0	4,767.5	4,796.5	4,778.9	12.6	10.8	-152.36	-251.8	-294.6	178.4	159.5	18.84	9.469				
4,900.0	4,866.7	4,896.4	4,878.4	12.9	11.1	-152.36	-257.5	-301.5	182.3	163.0	19.24	9.474				
5,000.0	4,966.0	4,996.3	4,977.9	13.2	11.3	-152.36	-263.3	-308.4	186.2	166.5	19.64	9.479				

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 4B-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 4B-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									
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	5,065.2	5,096.3	5,077.5	13.5	11.5	-152.35	-269.1	-315.3	190.1	170.0	20.04	9.483				
5,200.0	5,164.4	5,196.2	5,177.0	13.7	11.8	-152.35	-274.8	-322.3	194.0	173.5	20.44	9.487				
5,300.0	5,263.7	5,296.1	5,276.5	14.0	12.0	-152.35	-280.6	-329.2	197.9	177.0	20.85	9.491				
5,400.0	5,362.9	5,396.0	5,376.0	14.3	12.3	-152.35	-286.3	-336.1	201.8	180.5	21.25	9.495				
5,500.0	5,462.2	5,495.9	5,475.5	14.6	12.5	-152.35	-292.1	-343.0	205.7	184.0	21.65	9.499				
5,600.0	5,561.4	5,595.9	5,575.1	14.9	12.7	-152.35	-297.9	-349.9	209.6	187.5	22.05	9.503				
5,688.1	5,648.9	5,683.9	5,662.7	15.1	12.9	-152.35	-302.9	-356.0	213.0	190.6	22.41	9.506				
5,700.0	5,660.7	5,695.8	5,674.6	15.1	13.0	-152.35	-303.6	-356.8	213.4	191.0	22.46	9.505				
5,800.0	5,760.2	5,794.0	5,772.4	15.4	13.2	-152.14	-309.2	-363.5	215.6	192.7	22.87	9.425				
5,900.0	5,859.9	5,888.5	5,866.7	15.5	13.4	-151.92	-313.0	-368.1	216.6	193.3	23.23	9.320				
6,000.0	5,959.9	5,983.0	5,961.1	15.7	13.5	-151.82	-314.8	-370.2	217.0	193.5	23.54	9.219				
6,040.1	6,000.0	6,020.9	5,999.1	15.7	13.5	90.00	-315.0	-370.4	217.1	193.4	23.65	9.177				
6,060.4	6,020.3	6,041.1	6,019.3	15.7	13.6	90.00	-315.0	-370.4	217.1	193.3	23.71	9.153				
6,100.0	6,059.9	6,080.7	6,058.9	15.8	13.6	90.00	-315.0	-370.4	217.1	193.2	23.84	9.106				
6,200.0	6,159.9	6,180.7	6,158.9	15.9	13.8	90.00	-315.0	-370.4	217.1	192.9	24.15	8.989				
6,300.0	6,259.9	6,280.7	6,258.9	16.0	13.9	90.00	-315.0	-370.4	217.1	192.6	24.46	8.874				
6,365.7	6,325.6	6,346.4	6,324.6	16.1	14.0	90.00	-315.0	-370.4	217.1	192.4	24.66	8.800				
6,400.0	6,359.9	6,380.7	6,358.9	16.1	14.0	89.99	-315.0	-370.4	217.1	192.3	24.77	8.763				
6,422.1	6,382.0	6,402.8	6,381.0	16.2	14.1	89.85	-314.4	-370.4	217.1	192.2	24.81	8.748				
6,500.0	6,459.9	6,479.6	6,457.2	16.3	14.1	87.62	-306.0	-370.4	217.3	192.6	24.68	8.803				
6,600.0	6,559.9	6,572.7	6,547.1	16.4	14.0	81.40	-282.2	-370.4	219.9	195.8	24.11	9.119				
6,622.2	6,582.0	6,592.2	6,565.4	16.4	14.0	79.66	-275.4	-370.4	221.3	197.3	23.97	9.230				
6,650.0	6,609.9	6,616.1	6,587.4	16.4	14.0	77.25	-266.2	-370.4	223.4	199.7	23.78	9.397				
6,700.0	6,659.6	6,658.3	6,625.4	16.5	14.0	73.11	-247.7	-370.3	228.3	204.8	23.50	9.713				
6,750.0	6,708.8	6,700.0	6,661.4	16.5	13.9	69.22	-226.8	-370.3	234.1	210.8	23.32	10.037				
6,800.0	6,757.0	6,740.2	6,694.7	16.4	13.9	65.68	-204.2	-370.3	240.7	217.4	23.23	10.360				
6,850.0	6,803.9	6,780.0	6,725.9	16.4	13.8	62.43	-179.6	-370.2	247.7	224.5	23.19	10.683				
6,900.0	6,849.1	6,819.2	6,755.0	16.4	13.8	59.49	-153.3	-370.2	255.1	231.9	23.16	11.012				
6,950.0	6,892.3	6,857.8	6,781.8	16.3	13.8	56.86	-125.5	-370.1	262.5	239.4	23.12	11.351				
7,000.0	6,933.1	6,900.0	6,808.8	16.3	13.8	54.35	-93.1	-370.1	269.8	246.8	23.07	11.699				
7,050.0	6,971.2	6,933.7	6,828.7	16.2	13.8	52.47	-65.9	-370.0	276.9	253.9	22.96	12.061				
7,100.0	7,006.4	6,971.0	6,848.8	16.2	13.8	50.67	-34.4	-370.0	283.6	260.7	22.84	12.418				
7,150.0	7,038.3	7,008.0	6,866.6	16.2	13.9	49.13	-2.0	-369.9	289.8	267.2	22.60	12.821				
7,200.0	7,066.8	7,050.0	6,884.3	16.2	14.0	47.69	36.0	-369.9	295.5	273.0	22.41	13.184				
7,250.0	7,091.6	7,081.3	6,895.6	16.3	14.0	46.71	65.2	-369.8	300.3	278.2	22.17	13.548				
7,300.0	7,112.5	7,117.6	6,906.7	16.4	14.2	45.81	99.8	-369.8	304.5	282.6	21.96	13.867				
7,350.0	7,129.3	7,150.0	6,914.8	16.5	14.3	45.15	131.1	-369.7	308.0	286.2	21.77	14.148				
7,400.0	7,142.0	7,189.8	6,922.2	16.7	14.5	44.60	170.2	-369.6	310.6	288.9	21.67	14.332				
7,450.0	7,150.5	7,225.8	6,926.6	16.9	14.7	44.27	205.9	-369.6	312.3	290.7	21.63	14.440				
7,500.0	7,154.6	7,261.7	6,928.8	17.2	15.0	44.11	241.8	-369.5	313.2	291.5	21.68	14.449				
7,522.2	7,155.0	7,277.9	6,929.0	17.3	15.1	44.10	258.0	-369.5	313.3	291.6	21.73	14.417				
7,522.3	7,155.0	7,277.9	6,929.0	17.3	15.1	44.10	258.0	-369.5	313.3	291.6	21.73	14.416				
7,600.0	7,155.0	7,355.4	6,929.0	17.9	15.7	44.11	335.4	-369.4	313.4	290.7	22.72	13.791				
7,700.0	7,155.0	7,455.4	6,929.0	18.7	16.6	44.14	435.4	-369.2	313.5	289.4	24.15	12.981				
7,800.0	7,155.0	7,555.4	6,929.0	19.6	17.6	44.16	535.4	-369.0	313.6	287.9	25.74	12.186				
7,900.0	7,155.0	7,655.4	6,929.0	20.7	18.8	44.18	635.4	-368.9	313.7	286.3	27.45	11.429				
8,000.0	7,155.0	7,755.4	6,929.0	21.8	20.0	44.20	735.4	-368.7	313.9	284.6	29.28	10.720				
8,100.0	7,155.0	7,855.4	6,929.0	23.0	21.3	44.22	835.4	-368.5	314.0	282.8	31.19	10.066				
8,200.0	7,155.0	7,955.4	6,929.0	24.3	22.7	44.24	935.4	-368.4	314.1	280.9	33.18	9.466				
8,300.0	7,155.0	8,055.4	6,929.0	25.6	24.1	44.27	1,035.4	-368.2	314.2	279.0	35.23	8.918				
8,400.0	7,155.0	8,155.4	6,929.0	27.0	25.6	44.29	1,135.4	-368.0	314.3	277.0	37.34	8.418				
8,500.0	7,155.0	8,255.3	6,929.0	28.4	27.1	44.31	1,235.4	-367.8	314.4	274.9	39.49	7.963				

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 4B-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 4B-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		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)						
8,600.0	7,155.0	8,355.3	6,929.0	29.9	28.6	44.33	1,335.4	-367.7	314.6	272.9	41.67	7.548		
8,700.0	7,155.0	8,455.3	6,929.0	31.4	30.1	44.35	1,435.4	-367.5	314.7	270.8	43.89	7.169		
8,800.0	7,155.0	8,555.3	6,929.0	32.9	31.7	44.38	1,535.4	-367.3	314.8	268.6	46.14	6.822		
8,900.0	7,155.0	8,655.3	6,929.0	34.4	33.3	44.40	1,635.4	-367.2	314.9	266.5	48.42	6.504		
9,000.0	7,155.0	8,755.3	6,929.0	36.0	34.9	44.42	1,735.4	-367.0	315.0	264.3	50.71	6.212		
9,100.0	7,155.0	8,855.3	6,929.0	37.5	36.5	44.44	1,835.4	-366.8	315.1	262.1	53.02	5.943		
9,200.0	7,155.0	8,955.3	6,929.0	39.1	38.1	44.46	1,935.4	-366.7	315.3	259.9	55.35	5.695		
9,300.0	7,155.0	9,055.3	6,929.0	40.7	39.8	44.48	2,035.4	-366.5	315.4	257.7	57.70	5.466		
9,400.0	7,155.0	9,155.3	6,929.0	42.4	41.4	44.51	2,135.4	-366.3	315.5	255.4	60.06	5.253		
9,500.0	7,155.0	9,255.3	6,929.0	44.0	43.1	44.53	2,235.4	-366.2	315.6	253.2	62.43	5.056		
9,600.0	7,155.0	9,355.3	6,929.0	45.6	44.8	44.55	2,335.4	-366.0	315.7	250.9	64.81	4.872		
9,700.0	7,155.0	9,455.3	6,929.0	47.3	46.4	44.57	2,435.4	-365.8	315.8	248.6	67.20	4.700		
9,800.0	7,155.0	9,555.3	6,929.0	48.9	48.1	44.59	2,535.4	-365.7	316.0	246.4	69.60	4.540		
9,900.0	7,155.0	9,655.3	6,929.0	50.6	49.8	44.61	2,635.4	-365.5	316.1	244.1	72.01	4.389		
10,000.0	7,155.0	9,755.3	6,929.0	52.2	51.5	44.64	2,735.4	-365.3	316.2	241.8	74.43	4.248		
10,100.0	7,155.0	9,855.3	6,929.0	53.9	53.2	44.66	2,835.4	-365.2	316.3	239.5	76.85	4.116		
10,200.0	7,155.0	9,955.3	6,929.0	55.6	54.9	44.68	2,935.4	-365.0	316.4	237.1	79.28	3.991		
10,300.0	7,155.0	10,055.3	6,929.0	57.3	56.6	44.70	3,035.4	-364.8	316.5	234.8	81.72	3.873		
10,400.0	7,155.0	10,155.3	6,929.0	58.9	58.3	44.72	3,135.4	-364.7	316.7	232.5	84.17	3.762		
10,500.0	7,155.0	10,255.3	6,929.0	60.6	60.0	44.74	3,235.4	-364.5	316.8	230.2	86.61	3.657		
10,600.0	7,155.0	10,355.3	6,929.0	62.3	61.7	44.77	3,335.4	-364.3	316.9	227.8	89.07	3.558		
10,700.0	7,155.0	10,455.3	6,929.0	64.0	63.4	44.79	3,435.4	-364.2	317.0	225.5	91.53	3.464		
10,800.0	7,155.0	10,555.3	6,929.0	65.7	65.1	44.81	3,535.4	-364.0	317.1	223.1	93.99	3.374		
10,900.0	7,155.0	10,655.3	6,929.0	67.4	66.8	44.83	3,635.4	-363.8	317.3	220.8	96.46	3.289		
11,000.0	7,155.0	10,755.3	6,929.0	69.1	68.5	44.85	3,735.4	-363.7	317.4	218.4	98.94	3.208		
11,100.0	7,155.0	10,855.3	6,929.0	70.8	70.3	44.87	3,835.4	-363.5	317.5	216.1	101.41	3.131		
11,200.0	7,155.0	10,955.3	6,929.0	72.5	72.0	44.89	3,935.4	-363.3	317.6	213.7	103.89	3.057		
11,300.0	7,155.0	11,055.3	6,929.0	74.3	73.7	44.92	4,035.4	-363.1	317.7	211.3	106.38	2.987		
11,400.0	7,155.0	11,155.3	6,929.0	76.0	75.4	44.94	4,135.4	-363.0	317.8	209.0	108.87	2.920		
11,500.0	7,155.0	11,255.3	6,929.0	77.7	77.2	44.96	4,235.4	-362.8	318.0	206.6	111.36	2.855		
11,600.0	7,155.0	11,355.3	6,929.0	79.4	78.9	44.98	4,335.4	-362.6	318.1	204.2	113.86	2.794		
11,700.0	7,155.0	11,455.3	6,929.0	81.1	80.6	45.00	4,435.4	-362.5	318.2	201.8	116.36	2.735		
11,752.2	7,155.0	11,507.5	6,929.0	82.0	81.5	45.01	4,487.6	-362.4	318.3	200.6	117.66	2.705 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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	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			
250.0	250.0	249.0	249.0	0.4	0.4	89.90	0.0	15.1	15.1	14.3	0.77	19.711			
300.0	300.0	299.0	299.0	0.5	0.5	-152.65	0.0	15.1	15.5	14.5	0.94	16.465			
400.0	399.9	399.0	399.0	0.7	0.6	-156.94	-0.2	15.1	18.6	17.3	1.29	14.418			
500.0	499.7	498.9	498.9	0.9	0.8	-159.37	-1.9	14.8	24.6	23.0	1.64	14.983			
602.0	601.1	600.7	600.6	1.1	1.0	-159.95	-5.4	14.2	33.6	31.6	2.01	16.718			
700.0	698.4	698.3	698.1	1.4	1.2	-158.95	-10.4	13.4	43.3	41.0	2.38	18.235			
800.0	797.6	797.9	797.5	1.6	1.4	-157.49	-16.3	12.4	53.1	50.3	2.76	19.228			
900.0	896.9	897.4	896.8	1.9	1.6	-156.48	-22.2	11.4	62.8	59.7	3.15	19.955			
1,000.0	996.1	996.9	996.1	2.2	1.8	-155.75	-28.1	10.4	72.6	69.1	3.54	20.506			
1,100.0	1,095.4	1,096.4	1,095.5	2.4	2.0	-155.19	-34.0	9.4	82.4	78.5	3.94	20.937			
1,200.0	1,194.6	1,195.9	1,194.8	2.7	2.2	-154.74	-39.9	8.4	92.2	87.9	4.33	21.281			
1,300.0	1,293.9	1,295.4	1,294.1	3.0	2.4	-154.39	-45.8	7.4	102.0	97.3	4.73	21.563			
1,400.0	1,393.1	1,395.0	1,393.5	3.2	2.6	-154.09	-51.7	6.5	111.8	106.7	5.13	21.797			
1,500.0	1,492.3	1,494.5	1,492.8	3.5	2.8	-153.84	-57.6	5.5	121.6	116.1	5.53	21.994			
1,600.0	1,591.6	1,594.0	1,592.2	3.8	3.0	-153.63	-63.5	4.5	131.4	125.5	5.93	22.163			
1,700.0	1,690.8	1,693.5	1,691.5	4.1	3.2	-153.45	-69.4	3.5	141.2	134.9	6.33	22.308			
1,800.0	1,790.1	1,793.0	1,790.8	4.3	3.4	-153.30	-75.3	2.5	151.0	144.3	6.73	22.435			
1,900.0	1,889.3	1,892.5	1,890.2	4.6	3.6	-153.16	-81.2	1.5	160.9	153.7	7.13	22.547			
2,000.0	1,988.6	1,992.1	1,989.5	4.9	3.8	-153.04	-87.1	0.6	170.7	163.1	7.54	22.646			
2,100.0	2,087.8	2,091.6	2,088.8	5.2	4.0	-152.93	-93.0	-0.4	180.5	172.5	7.94	22.734			
2,200.0	2,187.1	2,191.1	2,188.2	5.4	4.2	-152.83	-98.9	-1.4	190.3	182.0	8.34	22.813			
2,300.0	2,286.3	2,290.6	2,287.5	5.7	4.4	-152.74	-104.8	-2.4	200.1	191.4	8.74	22.885			
2,400.0	2,385.6	2,390.1	2,386.9	6.0	4.6	-152.66	-110.7	-3.4	209.9	200.8	9.15	22.949			
2,500.0	2,484.8	2,489.6	2,486.2	6.3	4.8	-152.59	-116.6	-4.4	219.7	210.2	9.55	23.008			
2,600.0	2,584.0	2,589.2	2,585.5	6.6	5.0	-152.52	-122.5	-5.4	229.6	219.6	9.95	23.062			
2,700.0	2,683.3	2,688.7	2,684.9	6.8	5.2	-152.46	-128.4	-6.3	239.4	229.0	10.36	23.112			
2,800.0	2,782.5	2,788.2	2,784.2	7.1	5.4	-152.40	-134.3	-7.3	249.2	238.4	10.76	23.157			
2,900.0	2,881.8	2,887.7	2,883.5	7.4	5.6	-152.35	-140.2	-8.3	259.0	247.8	11.16	23.199			
3,000.0	2,981.0	2,987.2	2,982.9	7.7	5.8	-152.30	-146.1	-9.3	268.8	257.3	11.57	23.239			
3,100.0	3,080.3	3,086.7	3,082.2	7.9	6.0	-152.26	-152.0	-10.3	278.6	266.7	11.97	23.275			
3,200.0	3,179.5	3,186.3	3,181.6	8.2	6.2	-152.22	-157.9	-11.3	288.5	276.1	12.38	23.309			
3,300.0	3,278.8	3,285.8	3,280.9	8.5	6.4	-152.18	-163.8	-12.2	298.3	285.5	12.78	23.340			
3,400.0	3,378.0	3,385.3	3,380.2	8.8	6.6	-152.14	-169.7	-13.2	308.1	294.9	13.18	23.370			
3,500.0	3,477.3	3,484.8	3,479.6	9.0	6.8	-152.11	-175.6	-14.2	317.9	304.3	13.59	23.397			
3,600.0	3,576.5	3,584.3	3,578.9	9.3	7.0	-152.07	-181.5	-15.2	327.7	313.7	13.99	23.423			
3,700.0	3,675.8	3,683.8	3,678.2	9.6	7.2	-152.04	-187.4	-16.2	337.5	323.1	14.40	23.448			
3,800.0	3,775.0	3,783.4	3,777.6	9.9	7.4	-152.02	-193.3	-17.2	347.4	332.6	14.80	23.471			
3,900.0	3,874.2	3,882.9	3,876.9	10.1	7.6	-151.99	-199.1	-18.2	357.2	342.0	15.20	23.493			
4,000.0	3,973.5	3,982.4	3,976.2	10.4	7.8	-151.96	-205.0	-19.1	367.0	351.4	15.61	23.514			
4,100.0	4,072.7	4,081.9	4,075.6	10.7	8.0	-151.94	-210.9	-20.1	376.8	360.8	16.01	23.533			
4,200.0	4,172.0	4,181.4	4,174.9	11.0	8.2	-151.92	-216.8	-21.1	386.6	370.2	16.42	23.552			
4,300.0	4,271.2	4,280.9	4,274.3	11.3	8.4	-151.89	-222.7	-22.1	396.4	379.6	16.82	23.569			
4,400.0	4,370.5	4,380.5	4,373.6	11.5	8.6	-151.87	-228.6	-23.1	406.3	389.0	17.22	23.586			
4,500.0	4,469.7	4,480.0	4,472.9	11.8	8.8	-151.85	-234.5	-24.1	416.1	398.4	17.63	23.602			
4,600.0	4,569.0	4,579.5	4,572.3	12.1	9.0	-151.83	-240.4	-25.1	425.9	407.9	18.03	23.617			
4,700.0	4,668.2	4,679.0	4,671.6	12.4	9.2	-151.82	-246.3	-26.0	435.7	417.3	18.44	23.632			
4,800.0	4,767.5	4,778.5	4,770.9	12.6	9.4	-151.80	-252.2	-27.0	445.5	426.7	18.84	23.646			
4,900.0	4,866.7	4,878.0	4,870.3	12.9	9.6	-151.78	-258.1	-28.0	455.3	436.1	19.25	23.659			
5,000.0	4,966.0	4,977.6	4,969.6	13.2	9.8	-151.77	-264.0	-29.0	465.2	445.5	19.65	23.672			

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 4B-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 4B-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: 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	5,065.2	5,077.1	5,069.0	13.5	10.0	-151.75	-269.9	-30.0	475.0	454.9	20.05	23.684	
5,200.0	5,164.4	5,176.6	5,168.3	13.7	10.2	-151.74	-275.8	-31.0	484.8	464.3	20.46	23.696	
5,300.0	5,263.7	5,276.1	5,267.6	14.0	10.4	-151.72	-281.7	-31.9	494.6	473.8	20.86	23.707	
5,400.0	5,362.9	5,375.6	5,367.0	14.3	10.7	-151.71	-287.6	-32.9	504.4	483.2	21.27	23.718	
5,500.0	5,462.2	5,475.1	5,466.3	14.6	10.9	-151.70	-293.5	-33.9	514.3	492.6	21.67	23.728	
5,600.0	5,561.4	5,574.7	5,565.6	14.9	11.1	-151.68	-299.4	-34.9	524.1	502.0	22.08	23.738	
5,688.1	5,648.9	5,662.3	5,653.1	15.1	11.2	-151.67	-304.6	-35.8	532.7	510.3	22.43	23.747	
5,700.0	5,660.7	5,674.0	5,664.8	15.1	11.3	-151.68	-305.3	-35.9	533.9	511.4	22.48	23.746	
5,800.0	5,760.2	5,772.2	5,762.9	15.4	11.4	-151.74	-310.1	-36.7	542.0	519.1	22.87	23.702	
5,900.0	5,859.9	5,870.5	5,861.1	15.5	11.6	-151.78	-313.3	-37.2	547.3	524.1	23.21	23.579	
6,000.0	5,959.9	5,968.9	5,959.5	15.7	11.8	-151.80	-314.8	-37.5	549.8	526.3	23.52	23.379	
6,040.1	6,000.0	6,008.4	5,999.0	15.7	11.8	90.00	-315.0	-37.5	550.0	526.4	23.63	23.274	
6,060.4	6,020.3	6,028.7	6,019.3	15.7	11.9	90.00	-315.0	-37.5	550.0	526.3	23.69	23.212	
6,100.0	6,059.9	6,068.3	6,058.9	15.8	11.9	90.00	-315.0	-37.5	550.0	526.2	23.82	23.093	
6,200.0	6,159.9	6,168.3	6,158.9	15.9	12.1	90.00	-315.0	-37.5	550.0	525.9	24.13	22.796	
6,300.0	6,259.9	6,268.3	6,258.9	16.0	12.2	90.00	-315.0	-37.5	550.0	525.6	24.44	22.505	
6,400.0	6,359.9	6,368.3	6,358.9	16.1	12.4	90.00	-315.0	-37.5	550.0	525.3	24.75	22.221	
6,464.5	6,424.4	6,432.8	6,423.4	16.2	12.5	90.00	-315.0	-37.5	550.0	525.0	24.95	22.042	
6,500.0	6,459.9	6,468.3	6,458.9	16.3	12.5	89.99	-314.9	-37.5	550.0	524.9	25.06	21.949	
6,519.4	6,479.3	6,487.6	6,478.2	16.3	12.6	89.92	-314.2	-37.5	550.0	524.9	25.10	21.910	
6,600.0	6,559.9	6,567.0	6,556.9	16.4	12.6	88.93	-304.7	-37.5	550.1	524.9	25.17	21.852	
6,622.2	6,582.0	6,588.2	6,577.7	16.4	12.6	88.47	-300.4	-37.5	550.2	525.0	25.17	21.862	
6,650.0	6,609.9	6,614.5	6,603.2	16.4	12.6	87.84	-293.9	-37.5	550.4	525.3	25.14	21.896	
6,700.0	6,659.6	6,661.1	6,647.5	16.5	12.5	86.73	-279.5	-37.5	550.9	525.9	25.05	21.998	
6,750.0	6,708.8	6,706.9	6,689.8	16.5	12.5	85.64	-261.9	-37.5	551.7	526.7	24.92	22.134	
6,800.0	6,757.0	6,750.0	6,728.2	16.4	12.4	84.64	-242.4	-37.5	552.6	527.8	24.79	22.288	
6,850.0	6,803.9	6,796.6	6,767.9	16.4	12.4	83.60	-218.0	-37.5	553.6	528.9	24.65	22.462	
6,900.0	6,849.1	6,840.5	6,803.5	16.4	12.3	82.64	-192.2	-37.5	554.7	530.2	24.51	22.628	
6,950.0	6,892.3	6,884.0	6,836.5	16.3	12.3	81.74	-164.1	-37.5	555.9	531.5	24.40	22.780	
7,000.0	6,933.1	6,926.9	6,867.0	16.3	12.2	80.90	-133.9	-37.5	557.2	532.9	24.33	22.904	
7,050.0	6,971.2	6,969.4	6,894.9	16.2	12.2	80.13	-101.8	-37.5	558.4	534.2	24.29	22.992	
7,100.0	7,006.4	7,011.6	6,920.2	16.2	12.2	79.42	-68.1	-37.5	559.7	535.4	24.30	23.032	
7,150.0	7,038.3	7,050.0	6,941.0	16.2	12.3	78.82	-35.8	-37.5	560.9	536.5	24.36	23.025	
7,200.0	7,066.8	7,094.9	6,962.5	16.2	12.4	78.22	3.7	-37.5	562.0	537.5	24.50	22.941	
7,250.0	7,091.6	7,136.2	6,979.4	16.3	12.5	77.73	41.3	-37.5	562.9	538.3	24.70	22.795	
7,300.0	7,112.5	7,177.3	6,993.6	16.4	12.6	77.33	79.9	-37.5	563.8	538.8	24.97	22.583	
7,350.0	7,129.3	7,218.2	7,004.9	16.5	12.8	77.00	119.2	-37.5	564.5	539.2	25.31	22.308	
7,400.0	7,142.0	7,259.0	7,013.4	16.7	13.1	76.75	159.1	-37.5	565.1	539.3	25.72	21.973	
7,450.0	7,150.5	7,300.0	7,019.0	16.9	13.3	76.59	199.6	-37.5	565.4	539.2	26.20	21.583	
7,500.0	7,154.6	7,340.4	7,021.7	17.2	13.6	76.51	239.9	-37.5	565.6	538.9	26.75	21.143	
7,522.2	7,155.0	7,358.4	7,022.0	17.3	13.7	76.50	258.0	-37.5	565.6	538.6	27.01	20.938	
7,540.9	7,155.0	7,377.2	7,022.0	17.5	13.9	76.50	276.7	-37.5	565.6	538.3	27.32	20.703	
7,600.0	7,155.0	7,436.2	7,022.0	17.9	14.4	76.50	335.8	-37.5	565.6	537.3	28.33	19.968	
7,700.0	7,155.0	7,536.2	7,022.0	18.7	15.4	76.50	435.8	-37.5	565.6	535.4	30.25	18.698	
7,800.0	7,155.0	7,636.2	7,022.0	19.6	16.5	76.50	535.8	-37.5	565.6	533.2	32.42	17.446	
7,900.0	7,155.0	7,736.2	7,022.0	20.7	17.7	76.50	635.8	-37.5	565.6	530.8	34.79	16.258	
8,000.0	7,155.0	7,836.2	7,022.0	21.8	19.0	76.50	735.8	-37.5	565.6	528.3	37.32	15.155	
8,100.0	7,155.0	7,936.2	7,022.0	23.0	20.4	76.50	835.8	-37.5	565.6	525.6	39.99	14.145	
8,200.0	7,155.0	8,036.2	7,022.0	24.3	21.8	76.50	935.8	-37.5	565.6	522.9	42.76	13.229	
8,300.0	7,155.0	8,136.2	7,022.0	25.6	23.3	76.50	1,035.8	-37.5	565.6	520.0	45.61	12.400	
8,400.0	7,155.0	8,236.2	7,022.0	27.0	24.8	76.50	1,135.8	-37.5	565.6	517.1	48.54	11.652	
8,500.0	7,155.0	8,336.2	7,022.0	28.4	26.4	76.50	1,235.8	-37.5	565.6	514.1	51.53	10.976	

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 4B-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 4B-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		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)						
8,600.0	7,155.0	8,436.2	7,022.0	29.9	27.9	76.50	1,335.8	-37.5	565.6	511.1	54.57	10.365		
8,700.0	7,155.0	8,536.2	7,022.0	31.4	29.5	76.50	1,435.8	-37.5	565.6	508.0	57.65	9.811		
8,800.0	7,155.0	8,636.2	7,022.0	32.9	31.1	76.50	1,535.8	-37.5	565.6	504.9	60.77	9.308		
8,900.0	7,155.0	8,736.2	7,022.0	34.4	32.7	76.50	1,635.8	-37.5	565.6	501.7	63.91	8.850		
9,000.0	7,155.0	8,836.2	7,022.0	36.0	34.4	76.50	1,735.8	-37.5	565.6	498.5	67.09	8.431		
9,100.0	7,155.0	8,936.2	7,022.0	37.5	36.0	76.50	1,835.8	-37.5	565.6	495.3	70.28	8.048		
9,200.0	7,155.0	9,036.2	7,022.0	39.1	37.7	76.50	1,935.8	-37.5	565.6	492.1	73.50	7.696		
9,300.0	7,155.0	9,136.2	7,022.0	40.7	39.3	76.50	2,035.8	-37.5	565.6	488.9	76.73	7.372		
9,400.0	7,155.0	9,236.2	7,022.0	42.4	41.0	76.50	2,135.8	-37.5	565.6	485.7	79.97	7.073		
9,500.0	7,155.0	9,336.2	7,022.0	44.0	42.7	76.50	2,235.8	-37.5	565.6	482.4	83.23	6.796		
9,600.0	7,155.0	9,436.2	7,022.0	45.6	44.4	76.50	2,335.8	-37.5	565.6	479.1	86.50	6.539		
9,700.0	7,155.0	9,536.2	7,022.0	47.3	46.0	76.50	2,435.8	-37.5	565.6	475.8	89.79	6.300		
9,800.0	7,155.0	9,636.2	7,022.0	48.9	47.7	76.50	2,535.8	-37.5	565.6	472.5	93.08	6.077		
9,900.0	7,155.0	9,736.2	7,022.0	50.6	49.4	76.50	2,635.8	-37.5	565.6	469.2	96.38	5.869		
10,000.0	7,155.0	9,836.2	7,022.0	52.2	51.1	76.50	2,735.8	-37.5	565.6	465.9	99.69	5.674		
10,100.0	7,155.0	9,936.2	7,022.0	53.9	52.8	76.50	2,835.8	-37.5	565.6	462.6	103.00	5.492		
10,200.0	7,155.0	10,036.2	7,022.0	55.6	54.5	76.50	2,935.8	-37.5	565.6	459.3	106.32	5.320		
10,300.0	7,155.0	10,136.2	7,022.0	57.3	56.3	76.50	3,035.8	-37.5	565.6	456.0	109.65	5.159		
10,400.0	7,155.0	10,236.2	7,022.0	58.9	58.0	76.50	3,135.8	-37.5	565.6	452.7	112.98	5.007		
10,500.0	7,155.0	10,336.2	7,022.0	60.6	59.7	76.50	3,235.8	-37.5	565.6	449.3	116.31	4.863		
10,600.0	7,155.0	10,436.2	7,022.0	62.3	61.4	76.50	3,335.8	-37.5	565.6	446.0	119.65	4.727		
10,700.0	7,155.0	10,536.2	7,022.0	64.0	63.1	76.50	3,435.8	-37.5	565.6	442.6	123.00	4.599		
10,800.0	7,155.0	10,636.2	7,022.0	65.7	64.8	76.50	3,535.8	-37.5	565.6	439.3	126.35	4.477		
10,900.0	7,155.0	10,736.2	7,022.0	67.4	66.6	76.50	3,635.8	-37.5	565.6	435.9	129.70	4.361		
11,000.0	7,155.0	10,836.2	7,022.0	69.1	68.3	76.50	3,735.8	-37.5	565.6	432.6	133.05	4.251		
11,100.0	7,155.0	10,936.2	7,022.0	70.8	70.0	76.50	3,835.8	-37.5	565.6	429.2	136.41	4.147		
11,200.0	7,155.0	11,036.2	7,022.0	72.5	71.7	76.50	3,935.8	-37.5	565.6	425.9	139.77	4.047		
11,300.0	7,155.0	11,136.2	7,022.0	74.3	73.5	76.50	4,035.8	-37.5	565.6	422.5	143.13	3.952		
11,400.0	7,155.0	11,236.2	7,022.0	76.0	75.2	76.50	4,135.8	-37.5	565.6	419.1	146.50	3.861		
11,500.0	7,155.0	11,336.2	7,022.0	77.7	76.9	76.50	4,235.8	-37.5	565.6	415.8	149.86	3.774		
11,600.0	7,155.0	11,436.2	7,022.0	79.4	78.7	76.50	4,335.8	-37.5	565.6	412.4	153.23	3.691		
11,700.0	7,155.0	11,536.2	7,022.0	81.1	80.4	76.50	4,435.8	-37.5	565.6	409.0	156.60	3.612		
11,752.2	7,155.0	11,588.4	7,022.0	82.0	81.3	76.50	4,488.0	-37.5	565.6	407.3	158.36	3.572 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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	90.98	-0.4	22.4	22.4					
100.0	100.0	99.0	99.0	0.1	0.1	90.98	-0.4	22.4	22.4	22.1	0.24	92.039		
200.0	200.0	199.0	199.0	0.3	0.3	90.98	-0.4	22.4	22.4	21.8	0.59	37.820		
250.0	250.0	249.0	249.0	0.4	0.4	90.98	-0.4	22.4	22.4	21.6	0.77	29.205 CC, ES		
300.0	300.0	299.0	299.0	0.5	0.5	-151.36	-0.4	22.4	22.8	21.8	0.94	24.193		
400.0	399.9	398.9	398.9	0.7	0.6	-155.04	-0.4	22.4	25.9	24.6	1.29	20.052		
500.0	499.7	498.4	498.4	0.9	0.8	-158.93	-1.0	22.9	32.8	31.1	1.64	19.979		
602.0	601.1	599.4	599.4	1.1	1.0	-160.93	-3.1	24.6	44.2	42.2	2.00	22.095		
700.0	698.4	696.0	695.9	1.4	1.2	-161.19	-6.3	27.2	57.7	55.3	2.36	24.483		
800.0	797.6	794.4	794.1	1.6	1.4	-160.19	-10.9	31.0	72.3	69.5	2.73	26.487		
900.0	896.9	892.8	892.2	1.9	1.6	-158.65	-16.6	35.7	87.7	84.6	3.11	28.181		
1,000.0	996.1	991.5	990.6	2.2	1.8	-157.42	-22.7	40.7	103.4	99.9	3.50	29.514		
1,100.0	1,095.4	1,090.2	1,089.0	2.4	2.0	-156.52	-28.7	45.6	119.0	115.2	3.89	30.565		
1,200.0	1,194.6	1,189.0	1,187.5	2.7	2.2	-155.83	-34.7	50.6	134.8	130.5	4.29	31.414		
1,300.0	1,293.9	1,287.7	1,285.9	3.0	2.4	-155.28	-40.7	55.6	150.5	145.8	4.69	32.112		
1,400.0	1,393.1	1,386.5	1,384.3	3.2	2.6	-154.83	-46.8	60.5	166.2	161.1	5.08	32.696		
1,500.0	1,492.3	1,485.2	1,482.8	3.5	2.8	-154.47	-52.8	65.5	181.9	176.5	5.48	33.191		
1,600.0	1,591.6	1,584.0	1,581.2	3.8	3.0	-154.16	-58.8	70.4	197.7	191.8	5.88	33.615		
1,700.0	1,690.8	1,682.7	1,679.7	4.1	3.3	-153.89	-64.8	75.4	213.4	207.2	6.28	33.984		
1,800.0	1,790.1	1,781.5	1,778.1	4.3	3.5	-153.67	-70.9	80.3	229.2	222.5	6.68	34.306		
1,900.0	1,889.3	1,880.2	1,876.5	4.6	3.7	-153.47	-76.9	85.3	245.0	237.9	7.08	34.591		
2,000.0	1,988.6	1,979.0	1,975.0	4.9	3.9	-153.30	-82.9	90.2	260.7	253.2	7.48	34.844		
2,100.0	2,087.8	2,077.7	2,073.4	5.2	4.1	-153.14	-88.9	95.2	276.5	268.6	7.88	35.070		
2,200.0	2,187.1	2,176.5	2,171.9	5.4	4.3	-153.00	-95.0	100.1	292.2	284.0	8.29	35.273		
2,300.0	2,286.3	2,275.2	2,270.3	5.7	4.6	-152.88	-101.0	105.1	308.0	299.3	8.69	35.457		
2,400.0	2,385.6	2,374.0	2,368.7	6.0	4.8	-152.77	-107.0	110.0	323.8	314.7	9.09	35.625		
2,500.0	2,484.8	2,472.7	2,467.2	6.3	5.0	-152.67	-113.0	115.0	339.5	330.1	9.49	35.777		
2,600.0	2,584.0	2,571.5	2,565.6	6.6	5.2	-152.58	-119.1	119.9	355.3	345.4	9.89	35.917		
2,700.0	2,683.3	2,670.2	2,664.1	6.8	5.4	-152.49	-125.1	124.9	371.1	360.8	10.29	36.046		
2,800.0	2,782.5	2,768.9	2,762.5	7.1	5.7	-152.41	-131.1	129.9	386.9	376.2	10.70	36.164		
2,900.0	2,881.8	2,867.7	2,860.9	7.4	5.9	-152.34	-137.1	134.8	402.6	391.5	11.10	36.274		
3,000.0	2,981.0	2,966.4	2,959.4	7.7	6.1	-152.28	-143.2	139.8	418.4	406.9	11.50	36.376		
3,100.0	3,080.3	3,065.2	3,057.8	7.9	6.3	-152.22	-149.2	144.7	434.2	422.3	11.90	36.471		
3,200.0	3,179.5	3,163.9	3,156.2	8.2	6.5	-152.16	-155.2	149.7	449.9	437.6	12.31	36.559		
3,300.0	3,278.8	3,262.7	3,254.7	8.5	6.7	-152.11	-161.2	154.6	465.7	453.0	12.71	36.642		
3,400.0	3,378.0	3,361.4	3,353.1	8.8	7.0	-152.06	-167.3	159.6	481.5	468.4	13.11	36.719		
3,500.0	3,477.3	3,460.2	3,451.6	9.0	7.2	-152.01	-173.3	164.5	497.3	483.7	13.52	36.792		
3,600.0	3,576.5	3,558.9	3,550.0	9.3	7.4	-151.97	-179.3	169.5	513.0	499.1	13.92	36.860		
3,700.0	3,675.8	3,657.7	3,648.4	9.6	7.6	-151.92	-185.3	174.4	528.8	514.5	14.32	36.925		
3,800.0	3,775.0	3,756.4	3,746.9	9.9	7.8	-151.89	-191.4	179.4	544.6	529.9	14.72	36.986		
3,900.0	3,874.2	3,855.2	3,845.3	10.1	8.1	-151.85	-197.4	184.3	560.4	545.2	15.13	37.043		
4,000.0	3,973.5	3,953.9	3,943.8	10.4	8.3	-151.82	-203.4	189.3	576.1	560.6	15.53	37.098		
4,100.0	4,072.7	4,052.7	4,042.2	10.7	8.5	-151.78	-209.4	194.3	591.9	576.0	15.93	37.149		
4,200.0	4,172.0	4,151.4	4,140.6	11.0	8.7	-151.75	-215.5	199.2	607.7	591.4	16.34	37.198		
4,300.0	4,271.2	4,250.2	4,239.1	11.3	8.9	-151.72	-221.5	204.2	623.5	606.7	16.74	37.245		
4,400.0	4,370.5	4,348.9	4,337.5	11.5	9.2	-151.69	-227.5	209.1	639.2	622.1	17.14	37.290		
4,500.0	4,469.7	4,447.7	4,436.0	11.8	9.4	-151.67	-233.5	214.1	655.0	637.5	17.55	37.332		
4,600.0	4,569.0	4,546.4	4,534.4	12.1	9.6	-151.64	-239.6	219.0	670.8	652.8	17.95	37.372		
4,700.0	4,668.2	4,645.1	4,632.8	12.4	9.8	-151.62	-245.6	224.0	686.6	668.2	18.35	37.411		
4,800.0	4,767.5	4,743.9	4,731.3	12.6	10.0	-151.60	-251.6	228.9	702.3	683.6	18.76	37.448		
4,900.0	4,866.7	4,842.6	4,829.7	12.9	10.3	-151.57	-257.6	233.9	718.1	699.0	19.16	37.483		
5,000.0	4,966.0	4,941.4	4,928.1	13.2	10.5	-151.55	-263.7	238.8	733.9	714.3	19.56	37.517		

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 4B-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 4B-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							
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	5,065.2	5,040.1	5,026.6	13.5	10.7	-151.53	-269.7	243.8	749.7	729.7	19.96	37.550		
5,200.0	5,164.4	5,138.9	5,125.0	13.7	10.9	-151.51	-275.7	248.7	765.4	745.1	20.37	37.581		
5,300.0	5,263.7	5,237.6	5,223.5	14.0	11.1	-151.49	-281.7	253.7	781.2	760.5	20.77	37.611		
5,400.0	5,362.9	5,336.4	5,321.9	14.3	11.4	-151.48	-287.7	258.7	797.0	775.8	21.17	37.639		
5,500.0	5,462.2	5,435.1	5,420.3	14.6	11.6	-151.46	-293.8	263.6	812.8	791.2	21.58	37.667		
5,600.0	5,561.4	5,533.9	5,518.8	14.9	11.8	-151.44	-299.8	268.6	828.6	806.6	21.98	37.694		
5,688.1	5,648.9	5,626.9	5,611.5	15.1	12.0	-151.45	-305.2	273.0	842.2	819.9	22.34	37.698		
5,700.0	5,660.7	5,639.9	5,624.5	15.1	12.0	-151.47	-305.9	273.5	844.0	821.6	22.39	37.689		
5,800.0	5,760.2	5,749.4	5,733.9	15.4	12.2	-151.63	-310.6	277.4	856.5	833.7	22.81	37.555		
5,900.0	5,859.9	5,859.6	5,844.0	15.5	12.4	-151.73	-313.7	280.0	864.6	841.5	23.18	37.301		
6,000.0	5,959.9	5,970.2	5,954.5	15.7	12.6	-151.77	-315.2	281.3	868.5	845.0	23.52	36.933		
6,040.1	6,000.0	6,014.6	5,998.9	15.7	12.6	90.03	-315.4	281.4	868.9	845.2	23.64	36.748		
6,100.0	6,059.9	6,074.5	6,058.9	15.8	12.7	90.03	-315.4	281.4	868.9	845.0	23.83	36.462		
6,200.0	6,159.9	6,174.5	6,158.9	15.9	12.9	90.03	-315.4	281.4	868.9	844.7	24.14	35.993		
6,300.0	6,259.9	6,274.5	6,258.9	16.0	13.0	90.03	-315.4	281.4	868.9	844.4	24.45	35.535		
6,400.0	6,359.9	6,374.5	6,358.9	16.1	13.2	90.03	-315.4	281.4	868.9	844.1	24.76	35.087		
6,500.0	6,459.9	6,474.5	6,458.9	16.3	13.3	90.03	-315.4	281.4	868.9	843.8	25.08	34.649		
6,600.0	6,559.9	6,574.5	6,558.9	16.4	13.5	90.03	-315.4	281.4	868.9	843.5	25.39	34.220		
6,622.2	6,582.0	6,596.7	6,581.0	16.4	13.5	90.03	-315.4	281.4	868.9	843.4	25.46	34.126		
6,650.0	6,609.9	6,624.6	6,608.9	16.4	13.5	90.05	-315.0	281.4	868.9	843.3	25.53	34.037		
6,700.0	6,659.6	6,674.6	6,658.8	16.5	13.6	90.09	-311.1	281.4	868.9	843.3	25.59	33.950		
6,750.0	6,708.8	6,724.8	6,708.3	16.5	13.6	90.14	-302.8	281.4	868.9	843.3	25.60	33.941		
6,800.0	6,757.0	6,775.0	6,756.8	16.4	13.5	90.18	-290.2	281.4	868.9	843.3	25.56	33.999		
6,850.0	6,803.9	6,825.3	6,804.2	16.4	13.5	90.22	-273.4	281.4	868.9	843.4	25.47	34.112		
6,900.0	6,849.1	6,875.6	6,849.9	16.4	13.5	90.26	-252.5	281.4	868.9	843.5	25.36	34.263		
6,950.0	6,892.3	6,926.0	6,893.7	16.3	13.4	90.30	-227.6	281.4	868.9	843.7	25.23	34.434		
7,000.0	6,933.1	6,976.4	6,935.2	16.3	13.3	90.34	-199.0	281.4	868.9	843.8	25.11	34.602		
7,050.0	6,971.2	7,026.9	6,974.0	16.2	13.3	90.37	-166.7	281.4	868.9	843.9	25.01	34.743		
7,100.0	7,006.4	7,077.4	7,009.9	16.2	13.3	90.40	-131.2	281.4	868.9	843.9	24.95	34.829		
7,150.0	7,038.3	7,127.9	7,042.5	16.2	13.2	90.43	-92.6	281.4	868.9	844.0	24.94	34.835		
7,200.0	7,066.8	7,178.5	7,071.6	16.2	13.3	90.46	-51.2	281.4	868.9	843.9	25.01	34.736		
7,250.0	7,091.6	7,229.2	7,097.0	16.3	13.4	90.48	-7.4	281.4	868.9	843.7	25.18	34.514		
7,300.0	7,112.5	7,279.8	7,118.4	16.4	13.5	90.49	38.4	281.4	868.9	843.5	25.44	34.157		
7,350.0	7,129.3	7,330.5	7,135.7	16.5	13.7	90.51	86.1	281.4	868.9	843.1	25.81	33.665		
7,400.0	7,142.0	7,381.2	7,148.7	16.7	13.9	90.52	135.0	281.4	868.9	842.6	26.29	33.046		
7,450.0	7,150.5	7,431.9	7,157.3	16.9	14.2	90.52	185.0	281.4	868.9	842.0	26.89	32.317		
7,500.0	7,154.6	7,482.6	7,161.5	17.2	14.5	90.53	235.5	281.4	868.9	841.3	27.59	31.499		
7,522.2	7,155.0	7,505.0	7,162.0	17.3	14.7	90.52	258.0	281.4	868.9	841.0	27.92	31.123		
7,600.0	7,155.0	7,582.9	7,162.0	17.9	15.3	90.52	335.8	281.4	868.9	839.7	29.24	29.712		
7,700.0	7,155.0	7,682.9	7,162.0	18.7	16.2	90.52	435.8	281.4	868.9	837.7	31.20	27.846		
7,800.0	7,155.0	7,782.9	7,162.0	19.6	17.3	90.52	535.8	281.4	868.9	835.5	33.42	26.001		
7,900.0	7,155.0	7,882.9	7,162.0	20.7	18.5	90.52	635.8	281.4	868.9	833.1	35.84	24.245		
8,000.0	7,155.0	7,982.9	7,162.0	21.8	19.7	90.52	735.8	281.4	868.9	830.5	38.43	22.612		
8,100.0	7,155.0	8,082.9	7,162.0	23.0	21.1	90.52	835.8	281.4	868.9	827.8	41.15	21.114		
8,200.0	7,155.0	8,182.9	7,162.0	24.3	22.5	90.52	935.8	281.4	868.9	824.9	43.99	19.753		
8,300.0	7,155.0	8,282.9	7,162.0	25.6	23.9	90.52	1,035.8	281.4	868.9	822.0	46.92	18.520		
8,400.0	7,155.0	8,382.9	7,162.0	27.0	25.4	90.52	1,135.8	281.4	868.9	819.0	49.92	17.406		
8,500.0	7,155.0	8,482.9	7,162.0	28.4	26.9	90.52	1,235.8	281.4	868.9	815.9	52.98	16.399		
8,600.0	7,155.0	8,582.9	7,162.0	29.9	28.4	90.52	1,335.8	281.4	868.9	812.8	56.10	15.488		
8,700.0	7,155.0	8,682.9	7,162.0	31.4	30.0	90.52	1,435.8	281.4	868.9	809.6	59.26	14.662		
8,800.0	7,155.0	8,782.9	7,162.0	32.9	31.6	90.52	1,535.8	281.4	868.9	806.4	62.46	13.912		
8,900.0	7,155.0	8,882.9	7,162.0	34.4	33.2	90.52	1,635.8	281.4	868.9	803.2	65.69	13.228		

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 4B-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 4B-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									
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	7,155.0	9,982.9	7,162.0	36.0	34.8	90.52	1,735.8	281.4	868.9	800.0	68.94	12.603				
9,100.0	7,155.0	9,082.9	7,162.0	37.5	36.4	90.52	1,835.8	281.4	868.9	796.7	72.22	12.031				
9,200.0	7,155.0	9,182.9	7,162.0	39.1	38.0	90.52	1,935.8	281.4	868.9	793.4	75.52	11.505				
9,300.0	7,155.0	9,282.9	7,162.0	40.7	39.7	90.52	2,035.8	281.4	868.9	790.1	78.84	11.021				
9,400.0	7,155.0	9,382.9	7,162.0	42.4	41.3	90.52	2,135.8	281.4	868.9	786.7	82.18	10.573				
9,500.0	7,155.0	9,482.9	7,162.0	44.0	43.0	90.52	2,235.8	281.4	868.9	783.4	85.53	10.159				
9,600.0	7,155.0	9,582.9	7,162.0	45.6	44.7	90.52	2,335.8	281.4	868.9	780.0	88.89	9.775				
9,700.0	7,155.0	9,682.9	7,162.0	47.3	46.4	90.52	2,435.8	281.4	868.9	776.6	92.26	9.418				
9,800.0	7,155.0	9,782.9	7,162.0	48.9	48.0	90.52	2,535.8	281.4	868.9	773.3	95.64	9.085				
9,900.0	7,155.0	9,882.9	7,162.0	50.6	49.7	90.52	2,635.8	281.4	868.9	769.9	99.03	8.774				
10,000.0	7,155.0	9,982.9	7,162.0	52.2	51.4	90.52	2,735.8	281.4	868.9	766.5	102.43	8.483				
10,100.0	7,155.0	10,082.9	7,162.0	53.9	53.1	90.52	2,835.8	281.4	868.9	763.1	105.83	8.210				
10,200.0	7,155.0	10,182.9	7,162.0	55.6	54.8	90.52	2,935.8	281.4	868.9	759.7	109.24	7.954				
10,300.0	7,155.0	10,282.9	7,162.0	57.3	56.5	90.52	3,035.8	281.4	868.9	756.2	112.66	7.712				
10,400.0	7,155.0	10,382.9	7,162.0	58.9	58.2	90.52	3,135.8	281.4	868.9	752.8	116.08	7.485				
10,500.0	7,155.0	10,482.9	7,162.0	60.6	59.9	90.52	3,235.8	281.4	868.9	749.4	119.51	7.270				
10,600.0	7,155.0	10,582.9	7,162.0	62.3	61.6	90.52	3,335.8	281.4	868.9	745.9	122.94	7.067				
10,700.0	7,155.0	10,682.9	7,162.0	64.0	63.4	90.52	3,435.8	281.4	868.9	742.5	126.38	6.875				
10,800.0	7,155.0	10,782.9	7,162.0	65.7	65.1	90.52	3,535.8	281.4	868.9	739.1	129.82	6.693				
10,900.0	7,155.0	10,882.9	7,162.0	67.4	66.8	90.52	3,635.8	281.4	868.9	735.6	133.27	6.520				
11,000.0	7,155.0	10,982.9	7,162.0	69.1	68.5	90.52	3,735.8	281.4	868.9	732.2	136.71	6.356				
11,100.0	7,155.0	11,082.9	7,162.0	70.8	70.2	90.52	3,835.8	281.4	868.9	728.7	140.16	6.199				
11,200.0	7,155.0	11,210.8	7,162.0	72.5	72.4	90.53	3,963.7	280.4	868.4	724.3	144.10	6.026				
11,300.0	7,155.0	11,394.5	7,162.0	74.3	75.6	90.53	4,146.7	265.6	860.3	711.3	148.98	5.774				
11,400.0	7,155.0	11,573.7	7,162.0	76.0	78.6	90.56	4,323.0	234.1	842.7	688.9	153.75	5.481				
11,500.0	7,155.0	11,745.4	7,162.0	77.7	81.4	90.59	4,488.5	188.4	816.0	657.7	158.34	5.154				
11,600.0	7,155.0	11,747.9	7,162.0	79.4	81.4	90.59	4,490.9	187.6	790.5	630.4	160.12	4.937				
11,700.0	7,155.0	11,747.9	7,162.0	81.1	81.4	90.59	4,490.9	187.6	777.1	615.3	161.85	4.801				
11,752.2	7,155.0	11,747.9	7,162.0	82.0	81.4	90.59	4,490.9	187.6	775.2	612.4	162.75	4.763 SF				



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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							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	90.70	-0.4	29.9	29.9					
100.0	100.0	99.0	99.0	0.1	0.1	90.70	-0.4	29.9	29.9	29.7	0.24	123.093		
200.0	200.0	199.0	199.0	0.3	0.3	90.70	-0.4	29.9	29.9	29.3	0.59	50.581		
250.0	250.0	249.0	249.0	0.4	0.4	90.70	-0.4	29.9	29.9	29.2	0.77	39.059	CC, ES	
300.0	300.0	299.0	299.0	0.5	0.5	-151.50	-0.4	29.9	30.3	29.4	0.94	32.220		
400.0	399.9	398.9	398.9	0.7	0.6	-154.33	-0.4	29.9	33.4	32.1	1.29	25.895		
500.0	499.7	498.4	498.4	0.9	0.8	-158.41	-0.5	30.1	40.0	38.3	1.64	24.358		
602.0	601.1	599.3	599.3	1.1	1.0	-161.31	-1.6	31.4	51.2	49.2	2.00	25.629		
700.0	698.4	695.7	695.6	1.4	1.2	-162.45	-3.7	34.0	64.8	62.4	2.35	27.614		
800.0	797.6	793.8	793.6	1.6	1.4	-162.26	-6.9	37.9	79.7	77.0	2.71	29.444		
900.0	896.9	891.5	891.0	1.9	1.5	-161.36	-11.2	43.0	95.8	92.7	3.08	31.110		
1,000.0	996.1	988.8	988.0	2.2	1.8	-160.08	-16.5	49.5	113.0	109.5	3.46	32.650		
1,100.0	1,095.4	1,086.7	1,085.4	2.4	2.0	-158.72	-22.6	56.9	131.1	127.2	3.85	34.047		
1,200.0	1,194.6	1,185.0	1,183.3	2.7	2.2	-157.67	-28.8	64.4	149.3	145.0	4.24	35.179		
1,300.0	1,293.9	1,283.3	1,281.1	3.0	2.4	-156.84	-34.9	71.9	167.5	162.9	4.64	36.112		
1,400.0	1,393.1	1,381.6	1,378.9	3.2	2.6	-156.17	-41.1	79.4	185.8	180.7	5.04	36.893		
1,500.0	1,492.3	1,479.9	1,476.7	3.5	2.9	-155.63	-47.3	86.9	204.0	198.6	5.43	37.556		
1,600.0	1,591.6	1,578.2	1,574.5	3.8	3.1	-155.17	-53.5	94.4	222.3	216.5	5.83	38.125		
1,700.0	1,690.8	1,676.5	1,672.3	4.1	3.3	-154.79	-59.7	102.0	240.7	234.4	6.23	38.619		
1,800.0	1,790.1	1,774.8	1,770.1	4.3	3.6	-154.46	-65.9	109.5	259.0	252.3	6.63	39.051		
1,900.0	1,889.3	1,873.1	1,868.0	4.6	3.8	-154.17	-72.1	117.0	277.3	270.3	7.03	39.433		
2,000.0	1,988.6	1,971.4	1,965.8	4.9	4.1	-153.92	-78.2	124.5	295.6	288.2	7.43	39.772		
2,100.0	2,087.8	2,069.7	2,063.6	5.2	4.3	-153.69	-84.4	132.0	314.0	306.1	7.83	40.076		
2,200.0	2,187.1	2,168.0	2,161.4	5.4	4.5	-153.50	-90.6	139.5	332.3	324.1	8.24	40.349		
2,300.0	2,286.3	2,266.3	2,259.2	5.7	4.8	-153.32	-96.8	147.0	350.6	342.0	8.64	40.597		
2,400.0	2,385.6	2,364.6	2,357.0	6.0	5.0	-153.16	-103.0	154.5	369.0	360.0	9.04	40.821		
2,500.0	2,484.8	2,462.9	2,454.8	6.3	5.2	-153.01	-109.2	162.0	387.3	377.9	9.44	41.026		
2,600.0	2,584.0	2,561.2	2,552.7	6.6	5.5	-152.88	-115.3	169.6	405.7	395.9	9.84	41.214		
2,700.0	2,683.3	2,659.5	2,650.5	6.8	5.7	-152.76	-121.5	177.1	424.1	413.8	10.25	41.387		
2,800.0	2,782.5	2,757.8	2,748.3	7.1	6.0	-152.65	-127.7	184.6	442.4	431.8	10.65	41.547		
2,900.0	2,881.8	2,856.1	2,846.1	7.4	6.2	-152.55	-133.9	192.1	460.8	449.7	11.05	41.695		
3,000.0	2,981.0	2,954.4	2,943.9	7.7	6.4	-152.46	-140.1	199.6	479.1	467.7	11.45	41.832		
3,100.0	3,080.3	3,052.7	3,041.7	7.9	6.7	-152.37	-146.3	207.1	497.5	485.6	11.86	41.959		
3,200.0	3,179.5	3,151.0	3,139.6	8.2	6.9	-152.29	-152.5	214.6	515.8	503.6	12.26	42.078		
3,300.0	3,278.8	3,249.3	3,237.4	8.5	7.2	-152.22	-158.6	222.1	534.2	521.5	12.66	42.190		
3,400.0	3,378.0	3,347.6	3,335.2	8.8	7.4	-152.15	-164.8	229.6	552.6	539.5	13.06	42.294		
3,500.0	3,477.3	3,445.9	3,433.0	9.0	7.6	-152.08	-171.0	237.1	570.9	557.5	13.47	42.392		
3,600.0	3,576.5	3,544.1	3,530.8	9.3	7.9	-152.02	-177.2	244.7	589.3	575.4	13.87	42.484		
3,700.0	3,675.8	3,642.4	3,628.6	9.6	8.1	-151.96	-183.4	252.2	607.7	593.4	14.27	42.571		
3,800.0	3,775.0	3,740.7	3,726.4	9.9	8.4	-151.91	-189.6	259.7	626.0	611.3	14.68	42.653		
3,900.0	3,874.2	3,839.0	3,824.3	10.1	8.6	-151.86	-195.8	267.2	644.4	629.3	15.08	42.731		
4,000.0	3,973.5	3,937.3	3,922.1	10.4	8.8	-151.81	-201.9	274.7	662.7	647.3	15.48	42.804		
4,100.0	4,072.7	4,035.6	4,019.9	10.7	9.1	-151.76	-208.1	282.2	681.1	665.2	15.89	42.874		
4,200.0	4,172.0	4,133.9	4,117.7	11.0	9.3	-151.72	-214.3	289.7	699.5	683.2	16.29	42.940		
4,300.0	4,271.2	4,232.2	4,215.5	11.3	9.6	-151.68	-220.5	297.2	717.8	701.2	16.69	43.003		
4,400.0	4,370.5	4,330.5	4,313.3	11.5	9.8	-151.64	-226.7	304.7	736.2	719.1	17.10	43.063		
4,500.0	4,469.7	4,428.8	4,411.1	11.8	10.0	-151.60	-232.9	312.3	754.6	737.1	17.50	43.120		
4,600.0	4,569.0	4,527.1	4,509.0	12.1	10.3	-151.57	-239.1	319.8	772.9	755.0	17.90	43.175		
4,700.0	4,668.2	4,625.4	4,606.8	12.4	10.5	-151.53	-245.2	327.3	791.3	773.0	18.31	43.227		
4,800.0	4,767.5	4,723.7	4,704.6	12.6	10.8	-151.50	-251.4	334.8	809.7	791.0	18.71	43.277		
4,900.0	4,866.7	4,822.0	4,802.4	12.9	11.0	-151.47	-257.6	342.3	828.0	808.9	19.11	43.325		
5,000.0	4,966.0	4,920.3	4,900.2	13.2	11.3	-151.44	-263.8	349.8	846.4	826.9	19.52	43.370		

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 4B-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 4B-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							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	5,065.2	5,018.6	4,998.0	13.5	11.5	-151.41	-270.0	357.3	864.8	844.9	19.92	43.414		
5,200.0	5,164.4	5,116.9	5,095.9	13.7	11.7	-151.38	-276.2	364.8	883.2	862.8	20.32	43.456		
5,300.0	5,263.7	5,215.2	5,193.7	14.0	12.0	-151.36	-282.4	372.3	901.5	880.8	20.73	43.497		
5,400.0	5,362.9	5,313.5	5,291.5	14.3	12.2	-151.33	-288.5	379.8	919.9	898.8	21.13	43.536		
5,500.0	5,462.2	5,411.8	5,389.3	14.6	12.5	-151.31	-294.7	387.4	938.3	916.7	21.53	43.573		
5,600.0	5,561.4	5,518.2	5,495.2	14.9	12.7	-151.30	-301.2	395.2	956.4	934.5	21.95	43.575		
5,688.1	5,648.9	5,618.0	5,594.7	15.1	12.9	-151.35	-306.2	401.3	971.3	948.9	22.31	43.527		
5,700.0	5,660.7	5,631.5	5,608.2	15.1	12.9	-151.38	-306.8	402.1	973.2	950.8	22.37	43.509		
5,800.0	5,760.2	5,745.7	5,722.2	15.4	13.2	-151.58	-311.1	407.2	986.6	963.8	22.79	43.292		
5,900.0	5,859.9	5,860.7	5,837.1	15.5	13.4	-151.71	-313.9	410.6	995.4	972.2	23.17	42.952		
6,000.0	5,959.9	5,976.1	5,952.5	15.7	13.5	-151.78	-315.2	412.3	999.5	976.0	23.52	42.494		
6,040.1	6,000.0	6,022.5	5,998.8	15.7	13.6	90.02	-315.4	412.4	999.9	976.3	23.65	42.272		
6,100.0	6,059.9	6,082.5	6,058.9	15.8	13.7	90.02	-315.4	412.4	999.9	976.1	23.84	41.943		
6,200.0	6,159.9	6,182.5	6,158.9	15.9	13.8	90.02	-315.4	412.4	999.9	975.8	24.15	41.404		
6,300.0	6,259.9	6,282.5	6,258.9	16.0	13.9	90.02	-315.4	412.4	999.9	975.5	24.46	40.877		
6,400.0	6,359.9	6,382.5	6,358.9	16.1	14.1	90.02	-315.4	412.4	999.9	975.2	24.77	40.363		
6,427.5	6,387.3	6,410.0	6,386.3	16.2	14.1	89.97	-314.5	412.4	999.9	975.1	24.84	40.249		
6,500.0	6,459.9	6,481.5	6,457.3	16.3	14.1	89.49	-306.2	412.4	1,000.0	975.0	24.97	40.049		
6,600.0	6,559.9	6,574.6	6,547.2	16.4	14.1	88.12	-282.2	412.4	1,000.5	975.5	25.03	39.967		
6,622.2	6,582.0	6,594.1	6,565.4	16.4	14.1	87.73	-275.4	412.4	1,000.8	975.8	25.04	39.974		
6,650.0	6,609.9	6,618.0	6,587.5	16.4	14.0	87.18	-266.1	412.4	1,001.3	976.3	25.02	40.014		
6,700.0	6,659.6	6,660.2	6,625.4	16.5	14.0	86.22	-247.6	412.4	1,002.4	977.4	24.97	40.149		
6,750.0	6,708.8	6,700.0	6,659.8	16.5	13.9	85.31	-227.6	412.4	1,003.8	978.9	24.88	40.337		
6,800.0	6,757.0	6,742.0	6,694.5	16.4	13.9	84.38	-204.0	412.4	1,005.3	980.5	24.78	40.577		
6,850.0	6,803.9	6,781.8	6,725.7	16.4	13.9	83.51	-179.3	412.4	1,007.0	982.4	24.66	40.832		
6,900.0	6,849.1	6,821.0	6,754.7	16.4	13.8	82.68	-153.0	412.4	1,008.9	984.3	24.55	41.092		
6,950.0	6,892.3	6,859.6	6,781.4	16.3	13.8	81.90	-125.1	412.4	1,010.8	986.3	24.45	41.336		
7,000.0	6,933.1	6,900.0	6,807.3	16.3	13.8	81.13	-94.1	412.4	1,012.7	988.3	24.37	41.550		
7,050.0	6,971.2	6,935.4	6,828.2	16.2	13.8	80.48	-65.5	412.4	1,014.6	990.3	24.34	41.692		
7,100.0	7,006.4	6,972.7	6,848.2	16.2	13.8	79.86	-34.1	412.4	1,016.5	992.1	24.33	41.778		
7,150.0	7,038.3	7,009.7	6,866.0	16.2	13.9	79.30	-1.7	412.4	1,018.2	993.8	24.40	41.730		
7,200.0	7,066.8	7,050.0	6,883.0	16.2	14.0	78.77	34.9	412.4	1,019.8	995.3	24.52	41.597		
7,250.0	7,091.6	7,082.8	6,894.9	16.3	14.1	78.37	65.5	412.4	1,021.3	996.6	24.70	41.339		
7,300.0	7,112.5	7,119.1	6,905.9	16.4	14.2	78.00	100.1	412.4	1,022.5	997.6	24.97	40.958		
7,350.0	7,129.3	7,150.0	6,913.6	16.5	14.4	77.73	130.0	412.4	1,023.6	998.3	25.27	40.502		
7,400.0	7,142.0	7,191.3	6,921.3	16.7	14.6	77.49	170.5	412.4	1,024.3	998.6	25.72	39.832		
7,450.0	7,150.5	7,227.2	6,925.7	16.9	14.8	77.34	206.2	412.4	1,024.9	998.6	26.21	39.098		
7,500.0	7,154.6	7,263.1	6,927.8	17.2	15.0	77.27	242.0	412.4	1,025.1	998.3	26.78	38.283		
7,522.2	7,155.0	7,279.1	6,928.0	17.3	15.1	77.26	258.0	412.4	1,025.1	998.1	27.05	37.897		
7,600.0	7,155.0	7,356.9	6,928.0	17.9	15.7	77.26	335.8	412.4	1,025.1	996.8	28.37	36.136		
7,700.0	7,155.0	7,456.9	6,928.0	18.7	16.7	77.26	435.8	412.4	1,025.1	994.8	30.30	33.834		
7,800.0	7,155.0	7,556.9	6,928.0	19.6	17.7	77.26	535.8	412.4	1,025.1	992.7	32.48	31.566		
7,900.0	7,155.0	7,656.9	6,928.0	20.7	18.8	77.26	635.8	412.4	1,025.1	990.3	34.85	29.413		
8,000.0	7,155.0	7,756.9	6,928.0	21.8	20.1	77.26	735.8	412.4	1,025.1	987.8	37.39	27.415		
8,100.0	7,155.0	7,856.9	6,928.0	23.0	21.4	77.26	835.8	412.4	1,025.1	985.1	40.07	25.586		
8,200.0	7,155.0	7,956.9	6,928.0	24.3	22.7	77.26	935.8	412.4	1,025.1	982.3	42.85	23.926		
8,300.0	7,155.0	8,056.9	6,928.0	25.6	24.2	77.26	1,035.8	412.4	1,025.1	979.4	45.71	22.426		
8,400.0	7,155.0	8,156.9	6,928.0	27.0	25.6	77.26	1,135.8	412.4	1,025.1	976.5	48.65	21.071		
8,500.0	7,155.0	8,256.9	6,928.0	28.4	27.1	77.26	1,235.8	412.4	1,025.1	973.5	51.65	19.848		
8,600.0	7,155.0	8,356.9	6,928.0	29.9	28.6	77.26	1,335.8	412.4	1,025.1	970.4	54.70	18.742		
8,700.0	7,155.0	8,456.9	6,928.0	31.4	30.2	77.26	1,435.8	412.4	1,025.1	967.4	57.79	17.740		
8,800.0	7,155.0	8,556.9	6,928.0	32.9	31.7	77.26	1,535.8	412.4	1,025.1	964.2	60.91	16.829		

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 4B-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 4B-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				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
8,900.0	7,155.0	8,656.9	6,928.0	34.4	33.3	77.26	1,635.8	412.4	1,025.1	961.1	64.07	16.000		
9,000.0	7,155.0	8,756.9	6,928.0	36.0	34.9	77.26	1,735.8	412.4	1,025.1	957.9	67.25	15.243		
9,100.0	7,155.0	8,856.9	6,928.0	37.5	36.6	77.26	1,835.8	412.4	1,025.1	954.7	70.46	14.550		
9,200.0	7,155.0	8,956.9	6,928.0	39.1	38.2	77.26	1,935.8	412.4	1,025.1	951.5	73.68	13.913		
9,300.0	7,155.0	9,056.9	6,928.0	40.7	39.8	77.26	2,035.8	412.4	1,025.1	948.2	76.93	13.327		
9,400.0	7,155.0	9,156.9	6,928.0	42.4	41.5	77.26	2,135.8	412.4	1,025.1	945.0	80.18	12.785		
9,500.0	7,155.0	9,256.9	6,928.0	44.0	43.1	77.26	2,235.8	412.4	1,025.1	941.7	83.45	12.284		
9,600.0	7,155.0	9,356.9	6,928.0	45.6	44.8	77.26	2,335.8	412.4	1,025.1	938.4	86.73	11.819		
9,700.0	7,155.0	9,456.9	6,928.0	47.3	46.5	77.26	2,435.8	412.4	1,025.1	935.1	90.03	11.387		
9,800.0	7,155.0	9,556.9	6,928.0	48.9	48.1	77.26	2,535.8	412.4	1,025.1	931.8	93.33	10.984		
9,900.0	7,155.0	9,656.9	6,928.0	50.6	49.8	77.26	2,635.8	412.4	1,025.1	928.5	96.64	10.608		
10,000.0	7,155.0	9,756.9	6,928.0	52.2	51.5	77.26	2,735.8	412.4	1,025.1	925.2	99.96	10.256		
10,100.0	7,155.0	9,856.9	6,928.0	53.9	53.2	77.26	2,835.8	412.4	1,025.1	921.9	103.28	9.926		
10,200.0	7,155.0	9,956.9	6,928.0	55.6	54.9	77.26	2,935.8	412.4	1,025.1	918.5	106.61	9.616		
10,300.0	7,155.0	10,056.9	6,928.0	57.3	56.6	77.26	3,035.8	412.4	1,025.1	915.2	109.95	9.324		
10,400.0	7,155.0	10,156.9	6,928.0	58.9	58.3	77.26	3,135.8	412.4	1,025.1	911.9	113.29	9.049		
10,500.0	7,155.0	10,256.9	6,928.0	60.6	60.0	77.26	3,235.8	412.4	1,025.1	908.5	116.64	8.789		
10,600.0	7,155.0	10,356.9	6,928.0	62.3	61.7	77.26	3,335.8	412.4	1,025.1	905.2	119.99	8.544		
10,700.0	7,155.0	10,456.9	6,928.0	64.0	63.4	77.26	3,435.8	412.4	1,025.1	901.8	123.34	8.311		
10,800.0	7,155.0	10,556.9	6,928.0	65.7	65.1	77.26	3,535.8	412.4	1,025.1	898.4	126.70	8.091		
10,900.0	7,155.0	10,656.9	6,928.0	67.4	66.9	77.26	3,635.8	412.4	1,025.1	895.1	130.06	7.882		
11,000.0	7,155.0	10,756.9	6,928.0	69.1	68.6	77.26	3,735.8	412.4	1,025.1	891.7	133.43	7.683		
11,100.0	7,155.0	10,856.9	6,928.0	70.8	70.3	77.26	3,835.8	412.4	1,025.1	888.4	136.79	7.494		
11,200.0	7,155.0	10,956.9	6,928.0	72.5	72.0	77.26	3,935.8	412.4	1,025.1	885.0	140.16	7.314		
11,300.0	7,155.0	11,056.9	6,928.0	74.3	73.7	77.26	4,035.8	412.4	1,025.1	881.6	143.54	7.142		
11,400.0	7,155.0	11,156.9	6,928.0	76.0	75.5	77.26	4,135.8	412.4	1,025.1	878.2	146.91	6.978		
11,500.0	7,155.0	11,256.9	6,928.0	77.7	77.2	77.26	4,235.8	412.4	1,025.1	874.9	150.29	6.821		
11,600.0	7,155.0	11,356.9	6,928.0	79.4	78.9	77.26	4,335.8	412.4	1,025.1	871.5	153.67	6.671		
11,700.0	7,155.0	11,456.9	6,928.0	81.1	80.6	77.26	4,435.8	412.4	1,025.1	868.1	157.05	6.527		
11,752.2	7,155.0	11,509.1	6,928.0	82.0	81.5	77.26	4,488.0	412.4	1,025.1	866.3	158.82	6.455 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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							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	90.54	-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		
250.0	250.0	249.0	249.0	0.4	0.4	90.54	-0.4	37.5	37.5	36.7	0.77	48.914	CC, ES	
300.0	300.0	299.0	299.0	0.5	0.5	-151.58	-0.4	37.5	37.9	36.9	0.94	40.247		
400.0	399.9	398.9	398.9	0.7	0.6	-153.87	-0.4	37.5	41.0	39.7	1.29	31.740		
500.0	499.7	498.0	498.0	0.9	0.8	-156.96	-0.7	38.2	48.0	46.4	1.64	29.275		
602.0	601.1	598.5	598.5	1.1	1.0	-159.48	-1.9	40.5	60.2	58.2	2.00	30.088		
700.0	698.4	694.4	694.3	1.4	1.2	-160.82	-3.9	44.2	74.8	72.5	2.35	31.868		
800.0	797.6	792.0	791.7	1.6	1.4	-161.09	-6.6	49.3	91.2	88.5	2.71	33.656		
900.0	896.9	889.0	888.4	1.9	1.6	-160.74	-10.0	55.9	108.8	105.8	3.08	35.390		
1,000.0	996.1	985.6	984.6	2.2	1.8	-160.05	-14.2	64.0	127.8	124.4	3.45	37.073		
1,100.0	1,095.4	1,081.6	1,080.0	2.4	2.0	-159.16	-19.2	73.3	148.2	144.4	3.83	38.712		
1,200.0	1,194.6	1,177.0	1,174.6	2.7	2.3	-158.17	-24.8	84.1	169.9	165.7	4.22	40.314		
1,300.0	1,293.9	1,273.6	1,270.3	3.0	2.5	-157.20	-31.1	96.0	192.7	188.1	4.61	41.819		
1,400.0	1,393.1	1,370.9	1,366.7	3.2	2.8	-156.41	-37.4	108.0	215.6	210.6	5.01	43.082		
1,500.0	1,492.3	1,468.2	1,463.0	3.5	3.1	-155.77	-43.7	120.1	238.5	233.1	5.40	44.157		
1,600.0	1,591.6	1,565.5	1,559.3	3.8	3.3	-155.25	-50.0	132.2	261.5	255.7	5.80	45.084		
1,700.0	1,690.8	1,662.9	1,655.7	4.1	3.6	-154.81	-56.4	144.2	284.5	278.3	6.20	45.890		
1,800.0	1,790.1	1,760.2	1,752.0	4.3	3.9	-154.44	-62.7	156.3	307.4	300.8	6.60	46.598		
1,900.0	1,889.3	1,857.5	1,848.4	4.6	4.2	-154.11	-69.0	168.3	330.4	323.4	7.00	47.224		
2,000.0	1,988.6	1,954.8	1,944.7	4.9	4.5	-153.83	-75.4	180.4	353.4	346.0	7.40	47.782		
2,100.0	2,087.8	2,052.1	2,041.1	5.2	4.8	-153.59	-81.7	192.5	376.4	368.6	7.80	48.282		
2,200.0	2,187.1	2,149.4	2,137.4	5.4	5.0	-153.37	-88.0	204.5	399.4	391.2	8.20	48.733		
2,300.0	2,286.3	2,246.7	2,233.8	5.7	5.3	-153.18	-94.4	216.6	422.4	413.8	8.60	49.141		
2,400.0	2,385.6	2,344.0	2,330.1	6.0	5.6	-153.00	-100.7	228.6	445.5	436.5	9.00	49.513		
2,500.0	2,484.8	2,441.3	2,426.5	6.3	5.9	-152.85	-107.0	240.7	468.5	459.1	9.40	49.853		
2,600.0	2,584.0	2,538.6	2,522.8	6.6	6.2	-152.70	-113.4	252.8	491.5	481.7	9.80	50.165		
2,700.0	2,683.3	2,635.9	2,619.2	6.8	6.5	-152.57	-119.7	264.8	514.5	504.3	10.20	50.452		
2,800.0	2,782.5	2,733.2	2,715.5	7.1	6.8	-152.46	-126.0	276.9	537.5	526.9	10.60	50.717		
2,900.0	2,881.8	2,830.5	2,811.9	7.4	7.1	-152.35	-132.3	288.9	560.6	549.6	11.00	50.963		
3,000.0	2,981.0	2,927.8	2,908.2	7.7	7.4	-152.25	-138.7	301.0	583.6	572.2	11.40	51.191		
3,100.0	3,080.3	3,025.1	3,004.6	7.9	7.7	-152.15	-145.0	313.1	606.6	594.8	11.80	51.404		
3,200.0	3,179.5	3,122.5	3,100.9	8.2	7.9	-152.07	-151.3	325.1	629.7	617.5	12.20	51.603		
3,300.0	3,278.8	3,219.8	3,197.3	8.5	8.2	-151.99	-157.7	337.2	652.7	640.1	12.60	51.788		
3,400.0	3,378.0	3,317.1	3,293.6	8.8	8.5	-151.92	-164.0	349.2	675.8	662.7	13.00	51.963		
3,500.0	3,477.3	3,414.4	3,390.0	9.0	8.8	-151.85	-170.3	361.3	698.8	685.4	13.41	52.127		
3,600.0	3,576.5	3,511.7	3,486.3	9.3	9.1	-151.78	-176.7	373.4	721.8	708.0	13.81	52.281		
3,700.0	3,675.8	3,609.0	3,582.7	9.6	9.4	-151.72	-183.0	385.4	744.9	730.7	14.21	52.426		
3,800.0	3,775.0	3,706.3	3,679.0	9.9	9.7	-151.66	-189.3	397.5	767.9	753.3	14.61	52.564		
3,900.0	3,874.2	3,803.6	3,775.4	10.1	10.0	-151.61	-195.7	409.5	791.0	775.9	15.01	52.694		
4,000.0	3,973.5	3,900.9	3,871.7	10.4	10.3	-151.56	-202.0	421.6	814.0	798.6	15.41	52.817		
4,100.0	4,072.7	3,998.2	3,968.1	10.7	10.6	-151.51	-208.3	433.7	837.0	821.2	15.81	52.934		
4,200.0	4,172.0	4,095.5	4,064.4	11.0	10.9	-151.47	-214.6	445.7	860.1	843.9	16.21	53.045		
4,300.0	4,271.2	4,192.8	4,160.8	11.3	11.2	-151.42	-221.0	457.8	883.1	866.5	16.62	53.151		
4,400.0	4,370.5	4,290.1	4,257.1	11.5	11.4	-151.38	-227.3	469.9	906.2	889.1	17.02	53.252		
4,500.0	4,469.7	4,387.4	4,353.5	11.8	11.7	-151.34	-233.6	481.9	929.2	911.8	17.42	53.348		
4,600.0	4,569.0	4,484.7	4,449.8	12.1	12.0	-151.31	-240.0	494.0	952.3	934.4	17.82	53.440		
4,700.0	4,668.2	4,582.1	4,546.2	12.4	12.3	-151.27	-246.3	506.0	975.3	957.1	18.22	53.527		
4,800.0	4,767.5	4,679.4	4,642.5	12.6	12.6	-151.24	-252.6	518.1	998.3	979.7	18.62	53.611		
4,900.0	4,866.7	4,776.7	4,738.9	12.9	12.9	-151.20	-259.0	530.2	1,021.4	1,002.4	19.02	53.691		
5,000.0	4,966.0	4,874.0	4,835.2	13.2	13.2	-151.17	-265.3	542.2	1,044.4	1,025.0	19.42	53.768		

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 4B-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 4B-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	5,065.2	4,971.3	4,931.5	13.5	13.5	-151.14	-271.6	554.3	1,067.5	1,047.7	19.83	53.842	
5,200.0	5,164.4	5,068.6	5,027.9	13.7	13.8	-151.12	-278.0	566.3	1,090.5	1,070.3	20.23	53.913	
5,300.0	5,263.7	5,165.9	5,124.2	14.0	14.1	-151.09	-284.3	578.4	1,113.6	1,092.9	20.63	53.981	
5,400.0	5,362.9	5,268.1	5,225.4	14.3	14.4	-151.06	-290.9	591.0	1,136.6	1,115.5	21.04	54.022	
5,500.0	5,462.2	5,386.8	5,343.2	14.6	14.7	-151.08	-297.8	604.1	1,158.3	1,136.8	21.47	53.940	
5,600.0	5,561.4	5,506.5	5,462.3	14.9	15.0	-151.14	-303.6	615.2	1,178.2	1,156.3	21.90	53.797	
5,688.1	5,648.9	5,612.6	5,568.0	15.1	15.2	-151.25	-307.8	623.1	1,194.3	1,172.0	22.27	53.623	
5,700.0	5,660.7	5,627.0	5,582.3	15.1	15.2	-151.29	-308.3	624.1	1,196.3	1,174.0	22.33	53.581	
5,800.0	5,760.2	5,748.6	5,703.7	15.4	15.5	-151.54	-311.8	630.8	1,210.7	1,187.9	22.77	53.169	
5,900.0	5,859.9	5,871.1	5,826.1	15.5	15.7	-151.70	-314.1	635.2	1,220.2	1,197.0	23.18	52.643	
6,000.0	5,959.9	5,994.3	5,949.3	15.7	15.8	-151.78	-315.2	637.4	1,224.7	1,201.1	23.55	52.008	
6,040.1	6,000.0	6,043.8	5,998.8	15.7	15.9	90.02	-315.4	637.6	1,225.1	1,201.4	23.69	51.718	
6,100.0	6,059.9	6,103.9	6,058.9	15.8	16.0	90.02	-315.4	637.6	1,225.1	1,201.2	23.87	51.316	
6,200.0	6,159.9	6,203.9	6,158.9	15.9	16.1	90.02	-315.4	637.6	1,225.1	1,200.9	24.18	50.657	
6,300.0	6,259.9	6,303.9	6,258.9	16.0	16.2	90.02	-315.4	637.6	1,225.1	1,200.6	24.50	50.013	
6,400.0	6,359.9	6,403.9	6,358.9	16.1	16.3	90.02	-315.4	637.6	1,225.1	1,200.3	24.81	49.383	
6,500.0	6,459.9	6,503.9	6,458.9	16.3	16.4	90.01	-315.2	637.6	1,225.1	1,200.0	25.12	48.774	
6,522.1	6,482.0	6,526.0	6,480.9	16.3	16.4	89.97	-314.4	637.6	1,225.1	1,199.9	25.17	48.671	
6,600.0	6,559.9	6,602.6	6,556.9	16.4	16.5	89.53	-304.9	637.6	1,225.1	1,199.8	25.32	48.381	
6,622.2	6,582.0	6,623.8	6,577.7	16.4	16.5	89.32	-300.5	637.6	1,225.2	1,199.8	25.35	48.331	
6,650.0	6,609.9	6,650.0	6,603.0	16.4	16.4	89.04	-294.0	637.6	1,225.3	1,199.9	25.37	48.289	
6,700.0	6,659.6	6,696.7	6,647.4	16.5	16.4	88.53	-279.5	637.6	1,225.5	1,200.1	25.36	48.318	
6,750.0	6,708.8	6,742.6	6,689.7	16.5	16.4	88.04	-261.9	637.6	1,225.8	1,200.5	25.31	48.433	
6,800.0	6,757.0	6,787.7	6,729.9	16.4	16.3	87.56	-241.3	637.6	1,226.2	1,201.0	25.22	48.614	
6,850.0	6,803.9	6,832.2	6,767.7	16.4	16.3	87.10	-217.9	637.6	1,226.7	1,201.6	25.12	48.842	
6,900.0	6,849.1	6,876.1	6,803.2	16.4	16.2	86.67	-192.0	637.6	1,227.2	1,202.2	25.00	49.092	
6,950.0	6,892.3	6,919.5	6,836.2	16.3	16.2	86.26	-163.9	637.6	1,227.8	1,202.9	24.88	49.338	
7,000.0	6,933.1	6,962.4	6,866.6	16.3	16.2	85.87	-133.7	637.6	1,228.3	1,203.6	24.79	49.553	
7,050.0	6,971.2	7,004.9	6,894.4	16.2	16.2	85.51	-101.6	637.6	1,228.9	1,204.2	24.72	49.709	
7,100.0	7,006.4	7,050.0	6,921.3	16.2	16.2	85.16	-65.3	637.6	1,229.5	1,204.8	24.70	49.773	
7,150.0	7,038.3	7,088.7	6,942.1	16.2	16.2	84.88	-32.6	637.6	1,230.0	1,205.3	24.74	49.714	
7,200.0	7,066.8	7,130.2	6,961.8	16.2	16.3	84.62	3.9	637.6	1,230.6	1,205.7	24.87	49.486	
7,250.0	7,091.6	7,171.5	6,978.7	16.3	16.4	84.39	41.5	637.6	1,231.0	1,206.0	25.05	49.147	
7,300.0	7,112.5	7,212.5	6,992.8	16.4	16.5	84.20	80.0	637.6	1,231.4	1,206.1	25.32	48.632	
7,350.0	7,129.3	7,250.0	7,003.2	16.5	16.6	84.05	116.0	637.6	1,231.8	1,206.1	25.67	47.990	
7,400.0	7,142.0	7,294.1	7,012.5	16.7	16.8	83.92	159.2	637.6	1,232.0	1,205.9	26.14	47.126	
7,450.0	7,150.5	7,334.8	7,018.0	16.9	17.0	83.85	199.4	637.6	1,232.2	1,205.5	26.69	46.161	
7,500.0	7,154.6	7,375.4	7,020.7	17.2	17.2	83.81	239.9	637.6	1,232.3	1,204.9	27.32	45.099	
7,522.2	7,155.0	7,393.4	7,021.0	17.3	17.3	83.80	258.0	637.6	1,232.3	1,204.6	27.63	44.606	
7,600.0	7,155.0	7,471.3	7,021.0	17.9	17.8	83.80	335.8	637.6	1,232.3	1,203.3	28.96	42.556	
7,700.0	7,155.0	7,571.3	7,021.0	18.7	18.7	83.80	435.8	637.6	1,232.3	1,201.4	30.91	39.864	
7,800.0	7,155.0	7,671.3	7,021.0	19.6	19.6	83.80	535.8	637.6	1,232.3	1,199.1	33.12	37.206	
7,900.0	7,155.0	7,771.3	7,021.0	20.7	20.6	83.80	635.8	637.6	1,232.3	1,196.7	35.53	34.678	
8,000.0	7,155.0	7,871.3	7,021.0	21.8	21.8	83.80	735.8	637.6	1,232.3	1,194.1	38.12	32.330	
8,100.0	7,155.0	7,971.3	7,021.0	23.0	23.0	83.80	835.8	637.6	1,232.3	1,191.4	40.83	30.179	
8,200.0	7,155.0	8,071.3	7,021.0	24.3	24.2	83.80	935.8	637.6	1,232.3	1,188.6	43.66	28.226	
8,300.0	7,155.0	8,171.3	7,021.0	25.6	25.6	83.80	1,035.8	637.6	1,232.3	1,185.7	46.57	26.458	
8,400.0	7,155.0	8,271.3	7,021.0	27.0	27.0	83.80	1,135.8	637.6	1,232.3	1,182.7	49.56	24.862	
8,500.0	7,155.0	8,371.3	7,021.0	28.4	28.4	83.80	1,235.8	637.6	1,232.3	1,179.6	52.61	23.420	
8,600.0	7,155.0	8,471.3	7,021.0	29.9	29.8	83.80	1,335.8	637.6	1,232.3	1,176.5	55.72	22.116	
8,700.0	7,155.0	8,571.3	7,021.0	31.4	31.3	83.80	1,435.8	637.6	1,232.3	1,173.4	58.86	20.934	
8,800.0	7,155.0	8,671.3	7,021.0	32.9	32.9	83.80	1,535.8	637.6	1,232.3	1,170.2	62.05	19.860	

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 4B-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 4B-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							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	7,155.0	8,771.3	7,021.0	34.4	34.4	83.80	1,635.8	637.6	1,232.3	1,167.0	65.26	18.882														
9,000.0	7,155.0	8,871.3	7,021.0	36.0	35.9	83.80	1,735.8	637.6	1,232.2	1,163.7	68.50	17.989														
9,100.0	7,155.0	8,971.3	7,021.0	37.5	37.5	83.80	1,835.8	637.6	1,232.2	1,160.5	71.76	17.171														
9,200.0	7,155.0	9,071.3	7,021.0	39.1	39.1	83.80	1,935.8	637.6	1,232.2	1,157.2	75.05	16.419														
9,300.0	7,155.0	9,171.3	7,021.0	40.7	40.7	83.80	2,035.8	637.6	1,232.2	1,153.9	78.35	15.728														
9,400.0	7,155.0	9,271.3	7,021.0	42.4	42.3	83.80	2,135.8	637.6	1,232.2	1,150.6	81.67	15.089														
														9,500.0	7,155.0	9,371.3	7,021.0	44.0	44.0	83.80	2,235.8	637.6	1,232.2	1,147.2	85.00	14.497
														9,600.0	7,155.0	9,471.3	7,021.0	45.6	45.6	83.80	2,335.8	637.6	1,232.2	1,143.9	88.34	13.949
														9,700.0	7,155.0	9,571.3	7,021.0	47.3	47.2	83.80	2,435.8	637.6	1,232.2	1,140.5	91.69	13.439
														9,800.0	7,155.0	9,671.3	7,021.0	48.9	48.9	83.80	2,535.8	637.6	1,232.2	1,137.2	95.06	12.963
9,900.0	7,155.0	9,771.3	7,021.0	50.6	50.5	83.80	2,635.8	637.6	1,232.2	1,133.8	98.43	12.519														
														10,000.0	7,155.0	9,871.3	7,021.0	52.2	52.2	83.80	2,735.8	637.5	1,232.2	1,130.4	101.81	12.103
														10,100.0	7,155.0	9,971.3	7,021.0	53.9	53.9	83.80	2,835.8	637.5	1,232.2	1,127.0	105.20	11.714
														10,200.0	7,155.0	10,071.3	7,021.0	55.6	55.6	83.80	2,935.8	637.5	1,232.2	1,123.6	108.59	11.348
														10,300.0	7,155.0	10,171.3	7,021.0	57.3	57.2	83.80	3,035.8	637.5	1,232.2	1,120.2	111.99	11.003
10,400.0	7,155.0	10,271.3	7,021.0	58.9	58.9	83.80	3,135.8	637.5	1,232.2	1,116.8	115.39	10.679														
														10,500.0	7,155.0	10,371.3	7,021.0	60.6	60.6	83.80	3,235.8	637.5	1,232.2	1,113.4	118.80	10.372
														10,600.0	7,155.0	10,471.3	7,021.0	62.3	62.3	83.80	3,335.8	637.5	1,232.2	1,110.0	122.22	10.082
														10,700.0	7,155.0	10,571.3	7,021.0	64.0	64.0	83.80	3,435.8	637.5	1,232.2	1,106.6	125.63	9.808
														10,800.0	7,155.0	10,671.3	7,021.0	65.7	65.7	83.80	3,535.8	637.5	1,232.2	1,103.2	129.05	9.548
10,900.0	7,155.0	10,771.3	7,021.0	67.4	67.4	83.80	3,635.8	637.5	1,232.2	1,099.7	132.48	9.301														
														11,000.0	7,155.0	10,871.3	7,021.0	69.1	69.1	83.80	3,735.8	637.5	1,232.2	1,096.3	135.91	9.067
														11,100.0	7,155.0	10,971.3	7,021.0	70.8	70.8	83.80	3,835.8	637.5	1,232.2	1,092.9	139.34	8.843
														11,200.0	7,155.0	11,071.3	7,021.0	72.5	72.5	83.80	3,935.8	637.5	1,232.2	1,089.4	142.77	8.631
														11,300.0	7,155.0	11,171.3	7,021.0	74.3	74.2	83.80	4,035.8	637.5	1,232.2	1,086.0	146.21	8.428
11,400.0	7,155.0	11,271.3	7,021.0	76.0	75.9	83.80	4,135.8	637.5	1,232.2	1,082.6	149.65	8.234														
														11,500.0	7,155.0	11,371.3	7,021.0	77.7	77.7	83.80	4,235.8	637.5	1,232.2	1,079.1	153.09	8.049
														11,600.0	7,155.0	11,471.3	7,021.0	79.4	79.4	83.80	4,335.8	637.5	1,232.2	1,075.7	156.53	7.872
														11,700.0	7,155.0	11,571.3	7,021.0	81.1	81.1	83.80	4,435.8	637.5	1,232.2	1,072.2	159.98	7.702
														11,752.2	7,155.0	11,623.4	7,021.0	82.0	82.0	83.80	4,488.0	637.5	1,232.2	1,070.4	161.77	7.617 SF



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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		
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	CC, ES	
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		
250.0	250.0	249.0	249.0	0.4	0.4	90.43	-0.3	45.0	45.0	44.3	0.77	58.768		
300.0	300.0	299.0	299.0	0.5	0.5	-151.63	-0.3	45.0	45.4	44.5	0.94	48.274		
400.0	399.9	398.6	398.6	0.7	0.6	-153.46	-0.4	45.2	48.7	47.4	1.29	37.754		
500.0	499.7	497.4	497.4	0.9	0.8	-155.86	-1.0	46.8	56.6	54.9	1.64	34.486		
602.0	601.1	597.6	597.5	1.1	1.0	-158.12	-2.3	50.0	69.6	67.6	2.00	34.787		
700.0	698.4	693.1	692.9	1.4	1.2	-159.54	-4.0	54.6	85.2	82.8	2.35	36.265		
800.0	797.6	790.2	789.8	1.6	1.4	-160.07	-6.4	60.8	102.6	99.9	2.71	37.881		
900.0	896.9	886.8	886.0	1.9	1.6	-160.06	-9.4	68.5	121.5	118.4	3.07	39.536		
1,000.0	996.1	982.8	981.5	2.2	1.8	-159.73	-12.9	77.6	141.8	138.3	3.44	41.202		
1,100.0	1,095.4	1,078.1	1,076.2	2.4	2.0	-159.20	-17.0	88.1	163.5	159.7	3.81	42.868		
1,200.0	1,194.6	1,172.9	1,170.0	2.7	2.3	-158.55	-21.5	100.1	186.7	182.5	4.19	44.530		
1,300.0	1,293.9	1,266.9	1,263.0	3.0	2.6	-157.85	-26.7	113.3	211.3	206.7	4.57	46.188		
1,400.0	1,393.1	1,360.1	1,354.9	3.2	2.9	-157.13	-32.3	127.9	237.3	232.4	4.96	47.842		
1,500.0	1,492.3	1,453.2	1,446.4	3.5	3.2	-156.40	-38.4	143.8	264.8	259.4	5.35	49.494		
1,600.0	1,591.6	1,549.1	1,540.6	3.8	3.5	-155.73	-44.9	160.7	292.8	287.0	5.75	50.947		
1,700.0	1,690.8	1,645.1	1,634.8	4.1	3.9	-155.18	-51.4	177.6	320.8	314.7	6.14	52.215		
1,800.0	1,790.1	1,741.0	1,729.1	4.3	4.2	-154.72	-57.9	194.5	348.8	342.3	6.54	53.330		
1,900.0	1,889.3	1,837.0	1,823.3	4.6	4.6	-154.33	-64.4	211.4	376.9	370.0	6.94	54.319		
2,000.0	1,988.6	1,932.9	1,917.5	4.9	4.9	-154.00	-71.0	228.3	405.0	397.6	7.34	55.201		
2,100.0	2,087.8	2,028.9	2,011.8	5.2	5.3	-153.70	-77.5	245.2	433.1	425.3	7.73	55.993		
2,200.0	2,187.1	2,124.9	2,106.0	5.4	5.6	-153.44	-84.0	262.1	461.2	453.0	8.13	56.708		
2,300.0	2,286.3	2,220.8	2,200.2	5.7	6.0	-153.22	-90.5	279.0	489.3	480.7	8.53	57.356		
2,400.0	2,385.6	2,316.8	2,294.4	6.0	6.3	-153.01	-97.0	295.9	517.4	508.4	8.93	57.947		
2,500.0	2,484.8	2,412.7	2,388.7	6.3	6.7	-152.83	-103.5	312.8	545.5	536.2	9.33	58.488		
2,600.0	2,584.0	2,508.7	2,482.9	6.6	7.0	-152.67	-110.0	329.7	573.6	563.9	9.72	58.984		
2,700.0	2,683.3	2,604.6	2,577.1	6.8	7.4	-152.52	-116.5	346.6	601.7	591.6	10.12	59.442		
2,800.0	2,782.5	2,700.6	2,671.4	7.1	7.7	-152.38	-123.0	363.5	629.9	619.3	10.52	59.865		
2,900.0	2,881.8	2,796.5	2,765.6	7.4	8.1	-152.26	-129.5	380.4	658.0	647.1	10.92	60.258		
3,000.0	2,981.0	2,892.5	2,859.8	7.7	8.5	-152.14	-136.1	397.3	686.1	674.8	11.32	60.622		
3,100.0	3,080.3	2,988.4	2,954.0	7.9	8.8	-152.04	-142.6	414.2	714.3	702.5	11.72	60.963		
3,200.0	3,179.5	3,084.4	3,048.3	8.2	9.2	-151.94	-149.1	431.1	742.4	730.3	12.11	61.280		
3,300.0	3,278.8	3,180.3	3,142.5	8.5	9.5	-151.85	-155.6	448.0	770.5	758.0	12.51	61.578		
3,400.0	3,378.0	3,276.3	3,236.7	8.8	9.9	-151.77	-162.1	464.9	798.7	785.8	12.91	61.857		
3,500.0	3,477.3	3,372.2	3,330.9	9.0	10.3	-151.69	-168.6	481.8	826.8	813.5	13.31	62.120		
3,600.0	3,576.5	3,468.2	3,425.2	9.3	10.6	-151.62	-175.1	498.7	855.0	841.2	13.71	62.367		
3,700.0	3,675.8	3,564.1	3,519.4	9.6	11.0	-151.55	-181.6	515.6	883.1	869.0	14.11	62.601		
3,800.0	3,775.0	3,660.1	3,613.6	9.9	11.3	-151.48	-188.1	532.5	911.2	896.7	14.51	62.821		
3,900.0	3,874.2	3,756.0	3,707.9	10.1	11.7	-151.42	-194.7	549.4	939.4	924.5	14.90	63.030		
4,000.0	3,973.5	3,852.0	3,802.1	10.4	12.1	-151.37	-201.2	566.3	967.5	952.2	15.30	63.228		
4,100.0	4,072.7	3,948.0	3,896.3	10.7	12.4	-151.31	-207.7	583.2	995.7	980.0	15.70	63.416		
4,200.0	4,172.0	4,043.9	3,990.5	11.0	12.8	-151.26	-214.2	600.1	1,023.8	1,007.7	16.10	63.595		
4,300.0	4,271.2	4,139.9	4,084.8	11.3	13.1	-151.22	-220.7	617.0	1,052.0	1,035.5	16.50	63.765		
4,400.0	4,370.5	4,235.8	4,179.0	11.5	13.5	-151.17	-227.2	633.9	1,080.1	1,063.2	16.90	63.927		
4,500.0	4,469.7	4,331.8	4,273.2	11.8	13.9	-151.13	-233.7	650.8	1,108.3	1,091.0	17.30	64.081		
4,600.0	4,569.0	4,427.7	4,367.5	12.1	14.2	-151.09	-240.2	667.7	1,136.4	1,118.7	17.69	64.229		
4,700.0	4,668.2	4,523.7	4,461.7	12.4	14.6	-151.05	-246.7	684.6	1,164.6	1,146.5	18.09	64.370		
4,800.0	4,767.5	4,619.6	4,555.9	12.6	14.9	-151.01	-253.3	701.5	1,192.7	1,174.3	18.49	64.505		
4,900.0	4,866.7	4,715.6	4,650.1	12.9	15.3	-150.98	-259.8	718.4	1,220.9	1,202.0	18.89	64.635		
5,000.0	4,966.0	4,811.5	4,744.4	13.2	15.7	-150.94	-266.3	735.3	1,249.1	1,229.8	19.29	64.759		

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 4B-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 4B-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					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			
5,100.0	5,065.2	4,907.5	4,838.6	13.5	16.0	-150.91	-272.8	752.2	1,277.2	1,257.5	19.69	64.878		
5,200.0	5,164.4	5,007.4	4,936.7	13.7	16.4	-150.88	-279.6	769.8	1,305.3	1,285.2	20.09	64.966		
5,300.0	5,263.7	5,130.1	5,057.6	14.0	16.8	-150.87	-287.3	789.8	1,332.2	1,311.7	20.54	64.867		
5,400.0	5,362.9	5,254.2	5,180.2	14.3	17.2	-150.90	-294.1	807.6	1,357.2	1,336.2	20.98	64.688		
5,500.0	5,462.2	5,379.6	5,304.4	14.6	17.5	-150.97	-300.1	823.1	1,380.2	1,358.8	21.42	64.434		
5,600.0	5,561.4	5,506.0	5,430.1	14.9	17.9	-151.08	-305.1	836.1	1,401.1	1,379.3	21.86	64.111		
5,688.1	5,648.9	5,618.3	5,541.9	15.1	18.1	-151.20	-308.7	845.5	1,417.9	1,395.7	22.23	63.773		
5,700.0	5,660.7	5,633.5	5,557.1	15.1	18.1	-151.24	-309.2	846.6	1,420.1	1,397.8	22.29	63.700		
5,800.0	5,760.2	5,762.3	5,685.6	15.4	18.3	-151.52	-312.2	854.6	1,435.1	1,412.3	22.76	63.045		
5,900.0	5,859.9	5,892.3	5,815.5	15.5	18.5	-151.70	-314.3	859.9	1,445.0	1,421.8	23.19	62.299		
6,000.0	5,959.9	6,023.0	5,946.2	15.7	18.7	-151.78	-315.2	862.4	1,449.7	1,426.1	23.59	61.466		
6,040.1	6,000.0	6,075.6	5,998.7	15.7	18.7	90.01	-315.3	862.6	1,450.1	1,426.4	23.73	61.102		
6,100.0	6,059.9	6,135.8	6,058.9	15.8	18.8	90.01	-315.3	862.6	1,450.1	1,426.2	23.92	60.627		
6,200.0	6,159.9	6,235.8	6,158.9	15.9	18.9	90.01	-315.3	862.6	1,450.1	1,425.9	24.23	59.849		
6,300.0	6,259.9	6,335.8	6,258.9	16.0	19.0	90.01	-315.3	862.6	1,450.1	1,425.6	24.54	59.089		
6,400.0	6,359.9	6,435.8	6,358.9	16.1	19.1	90.01	-315.3	862.6	1,450.1	1,425.3	24.85	58.346		
6,500.0	6,459.9	6,535.8	6,458.9	16.3	19.2	90.01	-315.3	862.6	1,450.1	1,425.0	25.17	57.619		
6,600.0	6,559.9	6,635.8	6,558.9	16.4	19.3	90.01	-315.3	862.6	1,450.1	1,424.6	25.48	56.908		
6,622.2	6,582.0	6,657.9	6,581.0	16.4	19.3	90.01	-315.3	862.6	1,450.1	1,424.6	25.55	56.752		
6,650.0	6,609.9	6,685.8	6,608.9	16.4	19.4	90.03	-315.0	862.6	1,450.1	1,424.5	25.62	56.600		
6,700.0	6,659.6	6,735.9	6,658.8	16.5	19.4	90.05	-311.1	862.6	1,450.1	1,424.4	25.68	56.462		
6,750.0	6,708.8	6,786.0	6,708.2	16.5	19.4	90.08	-302.8	862.6	1,450.1	1,424.4	25.69	56.451		
6,800.0	6,757.0	6,836.2	6,756.8	16.4	19.4	90.11	-290.2	862.6	1,450.1	1,424.5	25.64	56.550		
6,850.0	6,803.9	6,886.5	6,804.2	16.4	19.3	90.13	-273.4	862.6	1,450.1	1,424.6	25.56	56.738		
6,900.0	6,849.1	6,936.8	6,849.9	16.4	19.3	90.16	-252.5	862.6	1,450.1	1,424.7	25.45	56.988		
6,950.0	6,892.3	6,987.2	6,893.7	16.3	19.3	90.18	-227.6	862.6	1,450.1	1,424.8	25.32	57.270		
7,000.0	6,933.1	7,037.6	6,935.2	16.3	19.2	90.20	-199.0	862.6	1,450.1	1,424.9	25.20	57.545		
7,050.0	6,971.2	7,088.1	6,974.0	16.2	19.2	90.22	-166.7	862.6	1,450.1	1,425.0	25.10	57.774		
7,100.0	7,006.4	7,138.6	7,009.9	16.2	19.2	90.24	-131.2	862.6	1,450.1	1,425.1	25.04	57.912		
7,150.0	7,038.3	7,189.1	7,042.5	16.2	19.2	90.26	-92.6	862.6	1,450.1	1,425.1	25.04	57.916		
7,200.0	7,066.8	7,239.7	7,071.6	16.2	19.2	90.27	-51.2	862.6	1,450.1	1,425.0	25.11	57.748		
7,250.0	7,091.6	7,290.4	7,097.0	16.3	19.2	90.29	-7.4	862.6	1,450.1	1,424.9	25.27	57.377		
7,300.0	7,112.5	7,341.0	7,118.4	16.4	19.3	90.30	38.4	862.6	1,450.1	1,424.6	25.54	56.785		
7,350.0	7,129.3	7,391.7	7,135.7	16.5	19.4	90.31	86.1	862.6	1,450.1	1,424.2	25.91	55.971		
7,400.0	7,142.0	7,442.4	7,148.7	16.7	19.6	90.31	135.0	862.6	1,450.1	1,423.8	26.39	54.949		
7,450.0	7,150.5	7,493.1	7,157.4	16.9	19.8	90.32	185.0	862.6	1,450.1	1,423.2	26.98	53.745		
7,500.0	7,154.6	7,543.8	7,161.6	17.2	20.0	90.32	235.5	862.6	1,450.1	1,422.5	27.68	52.399		
7,522.2	7,155.0	7,566.3	7,162.0	17.3	20.1	90.32	258.0	862.6	1,450.1	1,422.1	28.01	51.771		
7,600.0	7,155.0	7,644.1	7,162.0	17.9	20.6	90.32	335.8	862.6	1,450.1	1,420.8	29.34	49.423		
7,700.0	7,155.0	7,744.1	7,162.0	18.7	21.3	90.32	435.8	862.6	1,450.1	1,418.9	31.29	46.338		
7,800.0	7,155.0	7,844.1	7,162.0	19.6	22.1	90.32	535.8	862.6	1,450.1	1,416.6	33.50	43.285		
7,900.0	7,155.0	7,944.1	7,162.0	20.7	23.0	90.32	635.8	862.6	1,450.1	1,414.2	35.92	40.374		
8,000.0	7,155.0	8,044.1	7,162.0	21.8	24.0	90.32	735.8	862.6	1,450.1	1,411.6	38.50	37.665		
8,100.0	7,155.0	8,144.1	7,162.0	23.0	25.1	90.32	835.8	862.6	1,450.1	1,408.9	41.22	35.179		
8,200.0	7,155.0	8,244.1	7,162.0	24.3	26.3	90.32	935.8	862.6	1,450.1	1,406.1	44.05	32.917		
8,300.0	7,155.0	8,344.1	7,162.0	25.6	27.5	90.32	1,035.8	862.6	1,450.1	1,403.2	46.98	30.868		
8,400.0	7,155.0	8,444.1	7,162.0	27.0	28.8	90.32	1,135.8	862.6	1,450.1	1,400.2	49.98	29.016		
8,500.0	7,155.0	8,544.1	7,162.0	28.4	30.1	90.32	1,235.8	862.6	1,450.1	1,397.1	53.04	27.341		
8,600.0	7,155.0	8,644.1	7,162.0	29.9	31.5	90.32	1,335.8	862.6	1,450.1	1,394.0	56.15	25.825		
8,700.0	7,155.0	8,744.1	7,162.0	31.4	32.9	90.32	1,435.8	862.6	1,450.1	1,390.8	59.31	24.450		
8,800.0	7,155.0	8,844.1	7,162.0	32.9	34.4	90.32	1,535.8	862.6	1,450.1	1,387.6	62.51	23.200		
8,900.0	7,155.0	8,944.1	7,162.0	34.4	35.9	90.32	1,635.8	862.6	1,450.1	1,384.4	65.73	22.061		

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
9,000.0	7,155.0	9,044.1	7,162.0	36.0	37.4	90.32	1,735.8	862.6	1,450.1	1,381.2	68.99	21.020		
9,100.0	7,155.0	9,144.1	7,162.0	37.5	38.9	90.32	1,835.8	862.6	1,450.1	1,377.9	72.27	20.066		
9,200.0	7,155.0	9,244.1	7,162.0	39.1	40.4	90.32	1,935.8	862.6	1,450.1	1,374.6	75.57	19.190		
9,300.0	7,155.0	9,344.1	7,162.0	40.7	42.0	90.32	2,035.8	862.6	1,450.1	1,371.3	78.88	18.383		
9,400.0	7,155.0	9,444.1	7,162.0	42.4	43.5	90.32	2,135.8	862.6	1,450.1	1,367.9	82.22	17.638		
9,500.0	7,155.0	9,544.1	7,162.0	44.0	45.1	90.32	2,235.8	862.6	1,450.1	1,364.6	85.56	16.948		
9,600.0	7,155.0	9,644.1	7,162.0	45.6	46.7	90.32	2,335.8	862.6	1,450.1	1,361.2	88.92	16.308		
9,700.0	7,155.0	9,744.1	7,162.0	47.3	48.3	90.32	2,435.8	862.6	1,450.1	1,357.8	92.29	15.712		
9,800.0	7,155.0	9,844.1	7,162.0	48.9	49.9	90.32	2,535.8	862.6	1,450.1	1,354.5	95.67	15.157		
9,900.0	7,155.0	9,944.1	7,162.0	50.6	51.6	90.32	2,635.8	862.6	1,450.1	1,351.1	99.06	14.638		
10,000.0	7,155.0	10,044.1	7,162.0	52.2	53.2	90.32	2,735.8	862.6	1,450.1	1,347.7	102.46	14.153		
10,100.0	7,155.0	10,144.1	7,162.0	53.9	54.8	90.32	2,835.8	862.6	1,450.1	1,344.3	105.87	13.698		
10,200.0	7,155.0	10,244.1	7,162.0	55.6	56.5	90.32	2,935.8	862.6	1,450.1	1,340.9	109.28	13.270		
10,300.0	7,155.0	10,344.1	7,162.0	57.3	58.1	90.32	3,035.8	862.6	1,450.1	1,337.4	112.69	12.868		
10,400.0	7,155.0	10,444.1	7,162.0	58.9	59.8	90.32	3,135.8	862.6	1,450.1	1,334.0	116.12	12.489		
10,500.0	7,155.0	10,544.1	7,162.0	60.6	61.5	90.32	3,235.8	862.6	1,450.1	1,330.6	119.54	12.131		
10,600.0	7,155.0	10,644.1	7,162.0	62.3	63.1	90.32	3,335.8	862.6	1,450.1	1,327.2	122.98	11.792		
10,700.0	7,155.0	10,744.1	7,162.0	64.0	64.8	90.32	3,435.8	862.6	1,450.1	1,323.7	126.41	11.472		
10,800.0	7,155.0	10,844.1	7,162.0	65.7	66.5	90.32	3,535.8	862.6	1,450.1	1,320.3	129.85	11.168		
10,900.0	7,155.0	10,944.1	7,162.0	67.4	68.2	90.32	3,635.8	862.6	1,450.1	1,316.8	133.29	10.879		
11,000.0	7,155.0	11,044.1	7,162.0	69.1	69.9	90.32	3,735.8	862.6	1,450.1	1,313.4	136.74	10.605		
11,100.0	7,155.0	11,144.1	7,162.0	70.8	71.6	90.32	3,835.8	862.6	1,450.1	1,309.9	140.19	10.344		
11,200.0	7,155.0	11,244.1	7,162.0	72.5	73.2	90.32	3,935.8	862.6	1,450.1	1,306.5	143.64	10.095		
11,300.0	7,155.0	11,344.1	7,162.0	74.3	74.9	90.32	4,035.8	862.6	1,450.1	1,303.0	147.10	9.858		
11,400.0	7,155.0	11,444.1	7,162.0	76.0	76.6	90.32	4,135.8	862.6	1,450.1	1,299.6	150.56	9.632		
11,500.0	7,155.0	11,544.1	7,162.0	77.7	78.3	90.32	4,235.8	862.6	1,450.1	1,296.1	154.02	9.415		
11,600.0	7,155.0	11,644.1	7,162.0	79.4	80.0	90.32	4,335.8	862.6	1,450.1	1,292.7	157.48	9.208		
11,700.0	7,155.0	11,744.1	7,162.0	81.1	81.7	90.32	4,435.8	862.6	1,450.1	1,289.2	160.94	9.010		
11,752.2	7,155.0	11,796.3	7,162.0	82.0	82.6	90.32	4,488.0	862.6	1,450.1	1,287.4	162.75	8.910 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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	90.37	-0.3	52.6	52.6					
100.0	100.0	99.0	99.0	0.1	0.1	90.37	-0.3	52.6	52.6	52.3	0.24	216.264		
200.0	200.0	199.0	199.0	0.3	0.3	90.37	-0.3	52.6	52.6	52.0	0.59	88.866		
250.0	250.0	249.0	249.0	0.4	0.4	90.37	-0.3	52.6	52.6	51.8	0.77	68.623	CC, ES	
300.0	300.0	299.0	299.0	0.5	0.5	-151.65	-0.3	52.6	53.0	52.0	0.94	56.301		
400.0	399.9	397.1	397.1	0.7	0.6	-152.76	-0.8	54.2	57.7	56.4	1.29	44.769		
500.0	499.7	494.4	494.3	0.9	0.8	-153.99	-2.3	58.9	68.7	67.1	1.64	41.946	SF	
602.0	601.1	592.4	591.9	1.1	1.0	-155.03	-4.7	66.8	86.5	84.5	2.00	43.225		
700.0	698.4	685.0	683.9	1.4	1.3	-155.56	-7.9	77.3	108.1	105.7	2.36	45.878		
800.0	797.6	778.2	776.0	1.6	1.6	-155.43	-11.9	90.7	133.1	130.3	2.72	48.857		
900.0	896.9	869.8	866.1	1.9	1.9	-154.95	-16.8	106.6	161.0	157.9	3.10	51.986		
1,000.0	996.1	960.7	954.9	2.2	2.2	-154.29	-22.4	125.1	191.7	188.2	3.47	55.197		
1,100.0	1,095.4	1,055.5	1,047.3	2.4	2.6	-153.71	-28.6	145.3	223.4	219.6	3.86	57.875		
1,200.0	1,194.6	1,150.4	1,139.8	2.7	3.0	-153.27	-34.7	165.6	255.1	250.9	4.25	60.055		
1,300.0	1,293.9	1,245.2	1,232.2	3.0	3.4	-152.93	-40.9	185.8	286.9	282.2	4.64	61.860		
1,400.0	1,393.1	1,340.0	1,324.6	3.2	3.8	-152.65	-47.0	206.0	318.6	313.6	5.03	63.378		
1,500.0	1,492.3	1,434.8	1,417.1	3.5	4.2	-152.43	-53.2	226.2	350.4	344.9	5.42	64.673		
1,600.0	1,591.6	1,529.6	1,509.5	3.8	4.6	-152.24	-59.3	246.5	382.1	376.3	5.81	65.790		
1,700.0	1,690.8	1,624.5	1,601.9	4.1	5.0	-152.08	-65.5	266.7	413.9	407.7	6.20	66.763		
1,800.0	1,790.1	1,719.3	1,694.3	4.3	5.4	-151.95	-71.7	286.9	445.6	439.0	6.59	67.619		
1,900.0	1,889.3	1,814.1	1,786.8	4.6	5.8	-151.83	-77.8	307.1	477.4	470.4	6.98	68.377		
2,000.0	1,988.6	1,908.9	1,879.2	4.9	6.2	-151.72	-84.0	327.4	509.1	501.8	7.37	69.053		
2,100.0	2,087.8	2,003.7	1,971.6	5.2	6.6	-151.63	-90.1	347.6	540.9	533.1	7.76	69.659		
2,200.0	2,187.1	2,098.6	2,064.1	5.4	7.0	-151.55	-96.3	367.8	572.6	564.5	8.16	70.206		
2,300.0	2,286.3	2,193.4	2,156.5	5.7	7.5	-151.48	-102.4	388.0	604.4	595.9	8.55	70.702		
2,400.0	2,385.6	2,288.2	2,248.9	6.0	7.9	-151.41	-108.6	408.3	636.2	627.2	8.94	71.154		
2,500.0	2,484.8	2,383.0	2,341.4	6.3	8.3	-151.36	-114.8	428.5	667.9	658.6	9.33	71.568		
2,600.0	2,584.0	2,477.8	2,433.8	6.6	8.7	-151.30	-120.9	448.7	699.7	690.0	9.73	71.948		
2,700.0	2,683.3	2,572.7	2,526.2	6.8	9.1	-151.25	-127.1	468.9	731.5	721.3	10.12	72.297		
2,800.0	2,782.5	2,667.5	2,618.7	7.1	9.5	-151.21	-133.2	489.2	763.2	752.7	10.51	72.621		
2,900.0	2,881.8	2,762.3	2,711.1	7.4	9.9	-151.17	-139.4	509.4	795.0	784.1	10.90	72.921		
3,000.0	2,981.0	2,857.1	2,803.5	7.7	10.3	-151.13	-145.5	529.6	826.8	815.5	11.29	73.199		
3,100.0	3,080.3	2,951.9	2,896.0	7.9	10.7	-151.09	-151.7	549.8	858.5	846.8	11.69	73.459		
3,200.0	3,179.5	3,046.7	2,988.4	8.2	11.1	-151.06	-157.8	570.1	890.3	878.2	12.08	73.702		
3,300.0	3,278.8	3,141.6	3,080.8	8.5	11.6	-151.03	-164.0	590.3	922.0	909.6	12.47	73.929		
3,400.0	3,378.0	3,236.4	3,173.3	8.8	12.0	-151.00	-170.2	610.5	953.8	940.9	12.86	74.142		
3,500.0	3,477.3	3,331.2	3,265.7	9.0	12.4	-150.97	-176.3	630.7	985.6	972.3	13.26	74.343		
3,600.0	3,576.5	3,426.0	3,358.1	9.3	12.8	-150.95	-182.5	651.0	1,017.3	1,003.7	13.65	74.531		
3,700.0	3,675.8	3,520.8	3,450.6	9.6	13.2	-150.93	-188.6	671.2	1,049.1	1,035.1	14.04	74.709		
3,800.0	3,775.0	3,615.7	3,543.0	9.9	13.6	-150.90	-194.8	691.4	1,080.9	1,066.4	14.44	74.878		
3,900.0	3,874.2	3,710.5	3,635.4	10.1	14.0	-150.88	-200.9	711.6	1,112.6	1,097.8	14.83	75.037		
4,000.0	3,973.5	3,805.3	3,727.9	10.4	14.4	-150.86	-207.1	731.9	1,144.4	1,129.2	15.22	75.188		
4,100.0	4,072.7	3,900.1	3,820.3	10.7	14.8	-150.84	-213.3	752.1	1,176.2	1,160.6	15.61	75.331		
4,200.0	4,172.0	3,994.9	3,912.7	11.0	15.3	-150.83	-219.4	772.3	1,207.9	1,191.9	16.01	75.468		
4,300.0	4,271.2	4,089.8	4,005.2	11.3	15.7	-150.81	-225.6	792.5	1,239.7	1,223.3	16.40	75.597		
4,400.0	4,370.5	4,184.6	4,097.6	11.5	16.1	-150.79	-231.7	812.8	1,271.5	1,254.7	16.79	75.721		
4,500.0	4,469.7	4,279.4	4,190.0	11.8	16.5	-150.78	-237.9	833.0	1,303.3	1,286.1	17.18	75.839		
4,600.0	4,569.0	4,374.2	4,282.5	12.1	16.9	-150.77	-244.0	853.2	1,335.0	1,317.4	17.58	75.951		
4,700.0	4,668.2	4,469.0	4,374.9	12.4	17.3	-150.75	-250.2	873.4	1,366.8	1,348.8	17.97	76.059		
4,800.0	4,767.5	4,563.9	4,467.3	12.6	17.7	-150.74	-256.3	893.7	1,398.6	1,380.2	18.36	76.162		
4,900.0	4,866.7	4,658.7	4,559.8	12.9	18.1	-150.73	-262.5	913.9	1,430.3	1,411.6	18.76	76.260		
5,000.0	4,966.0	4,753.5	4,652.2	13.2	18.6	-150.71	-268.7	934.1	1,462.1	1,442.9	19.15	76.355		

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 4B-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 4B-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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis						
5,100.0	5,065.2	4,855.9	4,752.0	13.5	19.0	-150.70	-275.3	955.9	1,493.8	1,474.2	19.56	76.387					
5,200.0	5,164.4	4,983.4	4,876.8	13.7	19.5	-150.71	-283.0	981.1	1,524.1	1,504.1	20.01	76.173					



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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: 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	90.69	-0.7	59.8	59.9	59.6	0.24	247.429		
100.0	100.0	98.0	98.0	0.1	0.1	90.69	-0.7	59.8	59.9	59.3	0.59	101.461		
200.0	200.0	198.0	198.0	0.3	0.3	90.69	-0.7	59.8	59.9	59.1	0.76	78.296 CC, ES		
250.0	250.0	248.0	248.0	0.4	0.4	90.69	-0.7	59.8	59.9	59.1	0.76	78.296 CC, ES		
300.0	300.0	297.0	297.0	0.5	0.5	-151.22	-0.8	60.2	60.6	59.7	0.94	64.675		
400.0	399.9	394.7	394.7	0.7	0.6	-151.91	-1.6	63.4	66.9	65.7	1.28	52.135		
500.0	499.7	491.5	491.2	0.9	0.8	-152.94	-3.2	69.7	79.6	78.0	1.63	48.734 SF		
602.0	601.1	588.7	588.0	1.1	1.1	-153.97	-5.6	79.2	99.0	97.0	2.00	49.631		
700.0	698.4	680.5	678.9	1.4	1.3	-154.65	-8.6	91.2	122.3	119.9	2.35	52.043		
800.0	797.6	772.7	769.8	1.6	1.6	-154.77	-12.3	106.0	148.9	146.2	2.71	54.875		
900.0	896.9	863.3	858.6	1.9	2.0	-154.55	-16.7	123.3	178.6	175.5	3.08	57.924		
1,000.0	996.1	952.1	945.1	2.2	2.4	-154.16	-21.6	142.9	211.0	207.6	3.45	61.123		
1,100.0	1,095.4	1,044.7	1,034.8	2.4	2.8	-153.71	-27.2	165.2	245.4	241.6	3.83	64.041		
1,200.0	1,194.6	1,138.5	1,125.7	2.7	3.2	-153.37	-32.9	187.8	279.8	275.6	4.21	66.394		
1,300.0	1,293.9	1,232.4	1,216.6	3.0	3.6	-153.10	-38.6	210.5	314.3	309.7	4.60	68.343		
1,400.0	1,393.1	1,326.3	1,307.5	3.2	4.1	-152.89	-44.3	233.1	348.8	343.8	4.98	69.985		
1,500.0	1,492.3	1,420.1	1,398.4	3.5	4.5	-152.71	-50.0	255.8	383.2	377.9	5.37	71.385		
1,600.0	1,591.6	1,514.0	1,489.3	3.8	5.0	-152.56	-55.7	278.5	417.7	412.0	5.75	72.593		
1,700.0	1,690.8	1,607.9	1,580.2	4.1	5.4	-152.44	-61.4	301.1	452.2	446.0	6.14	73.646		
1,800.0	1,790.1	1,701.7	1,671.1	4.3	5.8	-152.33	-67.1	323.8	486.7	480.1	6.53	74.573		
1,900.0	1,889.3	1,795.6	1,762.1	4.6	6.3	-152.24	-72.8	346.5	521.1	514.2	6.91	75.393		
2,000.0	1,988.6	1,889.5	1,853.0	4.9	6.7	-152.16	-78.5	369.1	555.6	548.3	7.30	76.125		
2,100.0	2,087.8	1,983.3	1,943.9	5.2	7.2	-152.09	-84.2	391.8	590.1	582.4	7.69	76.782		
2,200.0	2,187.1	2,077.2	2,034.8	5.4	7.6	-152.02	-89.9	414.4	624.6	616.5	8.07	77.375		
2,300.0	2,286.3	2,171.1	2,125.7	5.7	8.1	-151.96	-95.6	437.1	659.1	650.6	8.46	77.913		
2,400.0	2,385.6	2,264.9	2,216.6	6.0	8.5	-151.91	-101.3	459.8	693.5	684.7	8.85	78.403		
2,500.0	2,484.8	2,358.8	2,307.5	6.3	9.0	-151.87	-107.0	482.4	728.0	718.8	9.23	78.852		
2,600.0	2,584.0	2,452.7	2,398.4	6.6	9.4	-151.82	-112.7	505.1	762.5	752.9	9.62	79.264		
2,700.0	2,683.3	2,546.5	2,489.3	6.8	9.9	-151.78	-118.4	527.7	797.0	787.0	10.01	79.643		
2,800.0	2,782.5	2,640.4	2,580.2	7.1	10.3	-151.75	-124.1	550.4	831.5	821.1	10.39	79.994		
2,900.0	2,881.8	2,734.3	2,671.2	7.4	10.8	-151.72	-129.8	573.1	866.0	855.2	10.78	80.320		
3,000.0	2,981.0	2,828.1	2,762.1	7.7	11.2	-151.69	-135.5	595.7	900.4	889.3	11.17	80.622		
3,100.0	3,080.3	2,922.0	2,853.0	7.9	11.7	-151.66	-141.2	618.4	934.9	923.4	11.56	80.904		
3,200.0	3,179.5	3,015.9	2,943.9	8.2	12.1	-151.63	-146.9	641.1	969.4	957.5	11.94	81.167		
3,300.0	3,278.8	3,109.7	3,034.8	8.5	12.6	-151.61	-152.6	663.7	1,003.9	991.6	12.33	81.414		
3,400.0	3,378.0	3,203.6	3,125.7	8.8	13.0	-151.58	-158.3	686.4	1,038.4	1,025.7	12.72	81.646		
3,500.0	3,477.3	3,297.4	3,216.6	9.0	13.5	-151.56	-164.0	709.0	1,072.9	1,059.8	13.11	81.863		
3,600.0	3,576.5	3,391.3	3,307.5	9.3	13.9	-151.54	-169.7	731.7	1,107.4	1,093.9	13.49	82.068		
3,700.0	3,675.8	3,485.2	3,398.4	9.6	14.4	-151.53	-175.4	754.4	1,141.8	1,128.0	13.88	82.262		
3,800.0	3,775.0	3,579.0	3,489.4	9.9	14.8	-151.51	-181.1	777.0	1,176.3	1,162.1	14.27	82.445		
3,900.0	3,874.2	3,672.9	3,580.3	10.1	15.3	-151.49	-186.8	799.7	1,210.8	1,196.2	14.66	82.618		
4,000.0	3,973.5	3,766.8	3,671.2	10.4	15.7	-151.48	-192.4	822.3	1,245.3	1,230.3	15.04	82.782		
4,100.0	4,072.7	3,860.6	3,762.1	10.7	16.2	-151.46	-198.1	845.0	1,279.8	1,264.3	15.43	82.938		
4,200.0	4,172.0	3,954.5	3,853.0	11.0	16.6	-151.45	-203.8	867.7	1,314.3	1,298.4	15.82	83.086		
4,300.0	4,271.2	4,048.4	3,943.9	11.3	17.1	-151.43	-209.5	890.3	1,348.8	1,332.5	16.21	83.227		
4,400.0	4,370.5	4,142.2	4,034.8	11.5	17.5	-151.42	-215.2	913.0	1,383.2	1,366.6	16.59	83.361		
4,500.0	4,469.7	4,236.1	4,125.7	11.8	18.0	-151.41	-220.9	935.7	1,417.7	1,400.7	16.98	83.489		
4,600.0	4,569.0	4,330.0	4,216.6	12.1	18.4	-151.40	-226.6	958.3	1,452.2	1,434.8	17.37	83.611		
4,700.0	4,668.2	4,423.8	4,307.5	12.4	18.9	-151.39	-232.3	981.0	1,486.7	1,468.9	17.76	83.728		
4,800.0	4,767.5	4,517.7	4,398.5	12.6	19.3	-151.38	-238.0	1,003.6	1,521.2	1,503.0	18.14	83.840		

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 4B-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 4B-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		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.60	-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		
250.0	250.0	246.9	246.9	0.4	0.4	90.66	-0.8	67.8	67.8	67.0	0.76	88.716		
300.0	300.0	295.7	295.7	0.5	0.5	-151.09	-1.0	69.0	69.4	68.5	0.94	74.201		
400.0	399.9	393.0	392.8	0.7	0.7	-151.52	-2.1	73.8	77.4	76.1	1.28	60.393		
500.0	499.7	489.2	488.7	0.9	0.9	-152.36	-3.8	81.7	91.7	90.1	1.63	56.254 SF		
602.0	601.1	585.6	584.5	1.1	1.1	-153.30	-6.1	92.7	112.8	110.8	1.99	56.647		
700.0	698.4	676.5	674.3	1.4	1.4	-154.04	-9.0	106.1	137.6	135.3	2.34	58.715		
800.0	797.6	767.8	764.1	1.6	1.7	-154.29	-12.5	122.2	165.9	163.2	2.71	61.309		
900.0	896.9	857.3	851.6	1.9	2.1	-154.23	-16.4	140.8	197.2	194.1	3.07	64.196		
1,000.0	996.1	945.0	936.6	2.2	2.5	-154.01	-20.9	161.6	231.2	227.8	3.44	67.271		
1,100.0	1,095.4	1,030.7	1,019.1	2.4	3.0	-153.69	-25.8	184.4	268.0	264.2	3.80	70.488		
1,200.0	1,194.6	1,121.7	1,106.2	2.7	3.4	-153.34	-31.3	210.2	306.6	302.4	4.18	73.354		
1,300.0	1,293.9	1,213.9	1,194.4	3.0	3.9	-153.06	-36.9	236.4	345.1	340.6	4.56	75.704		
1,400.0	1,393.1	1,306.2	1,282.7	3.2	4.4	-152.84	-42.5	262.6	383.7	378.8	4.94	77.684		
1,500.0	1,492.3	1,398.4	1,371.0	3.5	4.9	-152.66	-48.1	288.8	422.3	417.0	5.32	79.376		
1,600.0	1,591.6	1,490.7	1,459.2	3.8	5.4	-152.51	-53.8	315.1	461.0	455.2	5.70	80.836		
1,700.0	1,690.8	1,582.9	1,547.5	4.1	5.9	-152.39	-59.4	341.3	499.6	493.5	6.08	82.111		
1,800.0	1,790.1	1,675.1	1,635.7	4.3	6.4	-152.28	-65.0	367.5	538.2	531.7	6.47	83.232		
1,900.0	1,889.3	1,767.4	1,724.0	4.6	7.0	-152.18	-70.6	393.7	576.8	569.9	6.85	84.227		
2,000.0	1,988.6	1,859.6	1,812.2	4.9	7.5	-152.10	-76.2	419.9	615.4	608.2	7.23	85.115		
2,100.0	2,087.8	1,951.9	1,900.5	5.2	8.0	-152.03	-81.9	446.2	654.0	646.4	7.61	85.913		
2,200.0	2,187.1	2,044.1	1,988.8	5.4	8.5	-151.96	-87.5	472.4	692.6	684.6	7.99	86.633		
2,300.0	2,286.3	2,136.4	2,077.0	5.7	9.0	-151.91	-93.1	498.6	731.2	722.8	8.38	87.287		
2,400.0	2,385.6	2,228.6	2,165.3	6.0	9.5	-151.85	-98.7	524.8	769.8	761.1	8.76	87.883		
2,500.0	2,484.8	2,320.8	2,253.5	6.3	10.0	-151.81	-104.3	551.0	808.5	799.3	9.14	88.428		
2,600.0	2,584.0	2,413.1	2,341.8	6.6	10.5	-151.76	-109.9	577.3	847.1	837.5	9.53	88.929		
2,700.0	2,683.3	2,505.3	2,430.1	6.8	11.0	-151.73	-115.6	603.5	885.7	875.8	9.91	89.391		
2,800.0	2,782.5	2,597.6	2,518.3	7.1	11.5	-151.69	-121.2	629.7	924.3	914.0	10.29	89.818		
2,900.0	2,881.8	2,689.8	2,606.6	7.4	12.1	-151.66	-126.8	655.9	962.9	952.2	10.67	90.214		
3,000.0	2,981.0	2,782.1	2,694.8	7.7	12.6	-151.63	-132.4	682.1	1,001.5	990.5	11.06	90.583		
3,100.0	3,080.3	2,874.3	2,783.1	7.9	13.1	-151.60	-138.0	708.4	1,040.1	1,028.7	11.44	90.927		
3,200.0	3,179.5	2,966.5	2,871.4	8.2	13.6	-151.57	-143.6	734.6	1,078.8	1,066.9	11.82	91.248		
3,300.0	3,278.8	3,058.8	2,959.6	8.5	14.1	-151.55	-149.3	760.8	1,117.4	1,105.2	12.21	91.549		
3,400.0	3,378.0	3,151.0	3,047.9	8.8	14.6	-151.53	-154.9	787.0	1,156.0	1,143.4	12.59	91.831		
3,500.0	3,477.3	3,243.3	3,136.1	9.0	15.1	-151.50	-160.5	813.2	1,194.6	1,181.6	12.97	92.096		
3,600.0	3,576.5	3,335.5	3,224.4	9.3	15.6	-151.48	-166.1	839.5	1,233.2	1,219.9	13.35	92.347		
3,700.0	3,675.8	3,427.7	3,312.6	9.6	16.1	-151.47	-171.7	865.7	1,271.8	1,258.1	13.74	92.583		
3,800.0	3,775.0	3,520.0	3,400.9	9.9	16.7	-151.45	-177.4	891.9	1,310.5	1,296.3	14.12	92.806		
3,900.0	3,874.2	3,612.2	3,489.2	10.1	17.2	-151.43	-183.0	918.1	1,349.1	1,334.6	14.50	93.017		
4,000.0	3,973.5	3,704.5	3,577.4	10.4	17.7	-151.42	-188.6	944.3	1,387.7	1,372.8	14.89	93.218		
4,100.0	4,072.7	3,796.7	3,665.7	10.7	18.2	-151.40	-194.2	970.6	1,426.3	1,411.0	15.27	93.408		
4,200.0	4,172.0	3,889.0	3,753.9	11.0	18.7	-151.39	-199.8	996.8	1,464.9	1,449.3	15.65	93.589		
4,300.0	4,271.2	3,981.2	3,842.2	11.3	19.2	-151.37	-205.4	1,023.0	1,503.5	1,487.5	16.04	93.761		
4,400.0	4,370.5	4,073.4	3,930.5	11.5	19.7	-151.36	-211.1	1,049.2	1,542.2	1,525.7	16.42	93.925		

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 4B-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 4B-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	6.16	1,301.6	140.4	1,310.7					
100.0	100.0	36.0	36.0	0.1	0.1	6.16	1,301.6	140.4	1,309.1	1,309.0	0.19	7,068.662		
200.0	200.0	136.0	136.0	0.3	0.2	6.16	1,301.6	140.4	1,309.1	1,308.6	0.53	2,450.356		
250.0	250.0	186.0	186.0	0.4	0.3	6.16	1,301.6	140.4	1,309.1	1,308.4	0.71	1,846.991		
300.0	300.0	236.0	236.0	0.5	0.4	124.37	1,301.6	140.4	1,309.4	1,308.5	0.88	1,482.106		
400.0	399.9	335.9	335.9	0.7	0.6	124.46	1,301.6	140.4	1,311.4	1,310.1	1.24	1,059.317		
500.0	499.7	435.7	435.7	0.9	0.8	124.64	1,301.6	140.4	1,315.3	1,313.7	1.61	818.410		
602.0	601.1	537.1	537.1	1.1	0.9	124.92	1,301.6	140.4	1,321.5	1,319.4	2.01	658.050		
700.0	698.4	634.4	634.4	1.4	1.1	125.35	1,301.6	140.4	1,328.4	1,326.0	2.40	552.923		
800.0	797.6	733.6	733.6	1.6	1.3	125.77	1,301.6	140.4	1,335.6	1,332.8	2.81	475.420		
900.0	896.9	832.9	832.9	1.9	1.5	126.20	1,301.6	140.4	1,342.8	1,339.6	3.22	417.282		
1,000.0	996.1	932.1	932.1	2.2	1.6	126.61	1,301.6	140.4	1,350.1	1,346.5	3.63	372.183		
1,100.0	1,095.4	1,031.4	1,031.4	2.4	1.8	127.03	1,301.6	140.4	1,357.5	1,353.5	4.04	336.241		
1,200.0	1,194.6	1,130.6	1,130.6	2.7	2.0	127.44	1,301.6	140.4	1,364.9	1,360.5	4.45	306.956		
1,300.0	1,293.9	1,229.9	1,229.9	3.0	2.1	127.84	1,301.6	140.4	1,372.5	1,367.6	4.86	282.654		
1,400.0	1,393.1	1,329.1	1,329.1	3.2	2.3	128.24	1,301.6	140.4	1,380.1	1,374.8	5.26	262.175		
1,500.0	1,492.3	1,428.3	1,428.3	3.5	2.5	128.64	1,301.6	140.4	1,387.7	1,382.0	5.67	244.692		
1,600.0	1,591.6	1,527.6	1,527.6	3.8	2.7	129.03	1,301.6	140.4	1,395.4	1,389.4	6.08	229.597		
1,700.0	1,690.8	1,626.8	1,626.8	4.1	2.8	129.41	1,301.6	140.4	1,403.2	1,396.7	6.48	216.437		
1,800.0	1,790.1	1,726.1	1,726.1	4.3	3.0	129.80	1,301.6	140.4	1,411.1	1,404.2	6.89	204.865		
1,900.0	1,889.3	1,825.3	1,825.3	4.6	3.2	130.18	1,301.6	140.4	1,419.0	1,411.7	7.29	194.613		
2,000.0	1,988.6	1,924.6	1,924.6	4.9	3.4	130.55	1,301.6	140.4	1,427.0	1,419.3	7.69	185.469		
2,100.0	2,087.8	2,023.8	2,023.8	5.2	3.5	130.92	1,301.6	140.4	1,435.0	1,426.9	8.10	177.265		
2,200.0	2,187.1	2,123.1	2,123.1	5.4	3.7	131.29	1,301.6	140.4	1,443.1	1,434.6	8.50	169.865		
2,300.0	2,286.3	2,222.3	2,222.3	5.7	3.9	131.65	1,301.6	140.4	1,451.2	1,442.3	8.89	163.156		
2,400.0	2,385.6	2,321.6	2,321.6	6.0	4.1	132.01	1,301.6	140.4	1,459.4	1,450.1	9.29	157.048		
2,500.0	2,484.8	2,420.8	2,420.8	6.3	4.2	132.36	1,301.6	140.4	1,467.7	1,458.0	9.69	151.464		
2,600.0	2,584.0	2,520.0	2,520.0	6.6	4.4	132.71	1,301.6	140.4	1,476.0	1,465.9	10.09	146.341		
2,700.0	2,683.3	2,619.3	2,619.3	6.8	4.6	133.06	1,301.6	140.4	1,484.4	1,473.9	10.48	141.624		
2,800.0	2,782.5	2,718.5	2,718.5	7.1	4.7	133.40	1,301.6	140.4	1,492.8	1,482.0	10.88	137.268		
2,900.0	2,881.8	2,817.8	2,817.8	7.4	4.9	133.74	1,301.6	140.4	1,501.3	1,490.0	11.27	133.233		
3,000.0	2,981.0	2,917.0	2,917.0	7.7	5.1	134.07	1,301.6	140.4	1,509.8	1,498.2	11.66	129.486		
3,100.0	3,080.3	3,016.3	3,016.3	7.9	5.3	134.40	1,301.6	140.4	1,518.4	1,506.4	12.05	125.997		
3,200.0	3,179.5	3,115.5	3,115.5	8.2	5.4	134.73	1,301.6	140.4	1,527.1	1,514.6	12.44	122.742		
3,300.0	3,278.8	3,214.8	3,214.8	8.5	5.6	135.05	1,301.6	140.4	1,535.7	1,522.9	12.83	119.697		
3,400.0	3,378.0	3,314.0	3,314.0	8.8	5.8	135.37	1,301.6	140.4	1,544.5	1,531.3	13.22	116.843		
7,200.0	7,066.8	7,002.8	7,002.8	16.2	12.2	45.34	1,301.6	140.4	1,532.9	1,511.1	21.86	70.127		
7,250.0	7,091.6	7,027.6	7,027.6	16.3	12.3	50.63	1,301.6	140.4	1,494.9	1,472.6	22.22	67.267		
7,300.0	7,112.5	7,048.5	7,048.5	16.4	12.3	56.79	1,301.6	140.4	1,455.4	1,432.5	22.87	63.641		
7,350.0	7,129.3	7,065.3	7,065.3	16.5	12.3	63.74	1,301.6	140.4	1,414.8	1,391.1	23.72	59.651		
7,400.0	7,142.0	7,078.0	7,078.0	16.7	12.4	71.29	1,301.6	140.4	1,373.6	1,349.0	24.63	55.758		
7,450.0	7,150.5	7,086.5	7,086.5	16.9	12.4	79.10	1,301.6	140.4	1,332.1	1,306.6	25.47	52.305		
7,500.0	7,154.6	7,090.6	7,090.6	17.2	12.4	86.76	1,301.6	140.4	1,290.6	1,264.5	26.12	49.414		
7,522.2	7,155.0	7,091.0	7,091.0	17.3	12.4	90.00	1,301.6	140.4	1,272.4	1,246.1	26.34	48.299		
7,600.0	7,155.0	7,091.0	7,091.0	17.9	12.4	90.00	1,301.6	140.4	1,209.4	1,182.4	27.00	44.790		
7,700.0	7,155.0	7,091.0	7,091.0	18.7	12.4	90.00	1,301.6	140.4	1,131.1	1,103.1	27.98	40.425		
7,800.0	7,155.0	7,091.0	7,091.0	19.6	12.4	90.00	1,301.6	140.4	1,056.5	1,027.4	29.09	36.323		
7,900.0	7,155.0	7,091.0	7,091.0	20.7	12.4	90.00	1,301.6	140.4	986.5	956.2	30.30	32.559		
8,000.0	7,155.0	7,091.0	7,091.0	21.8	12.4	90.00	1,301.6	140.4	921.9	890.3	31.59	29.182		
8,100.0	7,155.0	7,091.0	7,091.0	23.0	12.4	90.00	1,301.6	140.4	864.2	831.2	32.95	26.223		
8,200.0	7,155.0	7,091.0	7,091.0	24.3	12.4	90.00	1,301.6	140.4	814.6	780.3	34.37	23.700		
8,300.0	7,155.0	7,091.0	7,091.0	25.6	12.4	90.00	1,301.6	140.4	774.9	739.1	35.84	21.623		

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 4B-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 4B-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		
8,400.0	7,155.0	7,091.0	7,091.0	27.0	12.4	90.00	1,301.6	140.4	746.5	709.2	37.34	19.994		
8,500.0	7,155.0	7,091.0	7,091.0	28.4	12.4	90.00	1,301.6	140.4	730.9	692.0	38.87	18.803		
8,565.8	7,155.0	7,091.0	7,091.0	29.4	12.4	90.00	1,301.6	140.4	727.9	688.0	39.89	18.245	CC, ES	
8,600.0	7,155.0	7,091.0	7,091.0	29.9	12.4	90.00	1,301.6	140.4	728.7	688.3	40.43	18.025		
8,700.0	7,155.0	7,091.0	7,091.0	31.4	12.4	90.00	1,301.6	140.4	740.1	698.1	42.01	17.619		
8,800.0	7,155.0	7,091.0	7,091.0	32.9	12.4	90.00	1,301.6	140.4	764.6	721.0	43.61	17.535	SF	
8,900.0	7,155.0	7,091.0	7,091.0	34.4	12.4	90.00	1,301.6	140.4	800.9	755.7	45.22	17.712		
9,000.0	7,155.0	7,091.0	7,091.0	36.0	12.4	90.00	1,301.6	140.4	847.5	800.7	46.85	18.091		
9,100.0	7,155.0	7,091.0	7,091.0	37.5	12.4	90.00	1,301.6	140.4	902.9	854.4	48.49	18.620		
9,200.0	7,155.0	7,091.0	7,091.0	39.1	12.4	90.00	1,301.6	140.4	965.4	915.3	50.14	19.255		
9,300.0	7,155.0	7,091.0	7,091.0	40.7	12.4	90.00	1,301.6	140.4	1,033.9	982.1	51.80	19.959		
9,400.0	7,155.0	7,091.0	7,091.0	42.4	12.4	90.00	1,301.6	140.4	1,107.1	1,053.6	53.46	20.707		
9,500.0	7,155.0	7,091.0	7,091.0	44.0	12.4	90.00	1,301.6	140.4	1,184.3	1,129.1	55.14	21.478		
9,600.0	7,155.0	7,091.0	7,091.0	45.6	12.4	90.00	1,301.6	140.4	1,264.7	1,207.8	56.82	22.258		
9,700.0	7,155.0	7,091.0	7,091.0	47.3	12.4	90.00	1,301.6	140.4	1,347.7	1,289.2	58.50	23.035		
9,800.0	7,155.0	7,091.0	7,091.0	48.9	12.4	90.00	1,301.6	140.4	1,432.8	1,372.7	60.20	23.803		
9,900.0	7,155.0	7,091.0	7,091.0	50.6	12.4	90.00	1,301.6	140.4	1,519.8	1,457.9	61.89	24.557		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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		
9,000.0	7,155.0	7,084.0	7,084.0	36.0	12.4	-90.00	2,895.4	-1,598.4	1,538.4	1,491.5	46.84	32.846		
9,100.0	7,155.0	7,084.0	7,084.0	37.5	12.4	-90.00	2,895.4	-1,598.4	1,464.5	1,416.0	48.48	30.210		
9,200.0	7,155.0	7,084.0	7,084.0	39.1	12.4	-90.00	2,895.4	-1,598.4	1,393.8	1,343.7	50.13	27.806		
9,300.0	7,155.0	7,084.0	7,084.0	40.7	12.4	-90.00	2,895.4	-1,598.4	1,327.0	1,275.2	51.79	25.624		
9,400.0	7,155.0	7,084.0	7,084.0	42.4	12.4	-90.00	2,895.4	-1,598.4	1,264.5	1,211.0	53.45	23.656		
9,500.0	7,155.0	7,084.0	7,084.0	44.0	12.4	-90.00	2,895.4	-1,598.4	1,207.1	1,151.9	55.13	21.896		
9,600.0	7,155.0	7,084.0	7,084.0	45.6	12.4	-90.00	2,895.4	-1,598.4	1,155.5	1,098.7	56.81	20.340		
9,700.0	7,155.0	7,084.0	7,084.0	47.3	12.4	-90.00	2,895.4	-1,598.4	1,110.5	1,052.0	58.49	18.985		
9,800.0	7,155.0	7,084.0	7,084.0	48.9	12.4	-90.00	2,895.4	-1,598.4	1,073.0	1,012.8	60.18	17.828		
9,900.0	7,155.0	7,084.0	7,084.0	50.6	12.4	-90.00	2,895.4	-1,598.4	1,043.7	981.8	61.88	16.867		
10,000.0	7,155.0	7,084.0	7,084.0	52.2	12.4	-90.00	2,895.4	-1,598.4	1,023.4	959.9	63.58	16.098		
10,100.0	7,155.0	7,084.0	7,084.0	53.9	12.4	-90.00	2,895.4	-1,598.4	1,012.7	947.4	65.28	15.513		
10,159.6	7,155.0	7,084.0	7,084.0	54.9	12.4	-90.00	2,895.4	-1,598.4	1,010.9	944.6	66.30	15.249 CC, ES		
10,200.0	7,155.0	7,084.0	7,084.0	55.6	12.4	-90.00	2,895.4	-1,598.4	1,011.7	944.7	66.99	15.104		
10,300.0	7,155.0	7,084.0	7,084.0	57.3	12.4	-90.00	2,895.4	-1,598.4	1,020.6	951.9	68.69	14.858		
10,400.0	7,155.0	7,084.0	7,084.0	58.9	12.4	-90.00	2,895.4	-1,598.4	1,039.1	968.7	70.41	14.759 SF		
10,500.0	7,155.0	7,084.0	7,084.0	60.6	12.4	-90.00	2,895.4	-1,598.4	1,066.7	994.6	72.12	14.791		
10,600.0	7,155.0	7,084.0	7,084.0	62.3	12.4	-90.00	2,895.4	-1,598.4	1,102.7	1,028.9	73.84	14.934		
10,700.0	7,155.0	7,084.0	7,084.0	64.0	12.4	-90.00	2,895.4	-1,598.4	1,146.3	1,070.8	75.55	15.172		
10,800.0	7,155.0	7,084.0	7,084.0	65.7	12.4	-90.00	2,895.4	-1,598.4	1,196.7	1,119.4	77.27	15.486		
10,900.0	7,155.0	7,084.0	7,084.0	67.4	12.4	-90.00	2,895.4	-1,598.4	1,253.1	1,174.1	79.00	15.862		
11,000.0	7,155.0	7,084.0	7,084.0	69.1	12.4	-90.00	2,895.4	-1,598.4	1,314.6	1,233.9	80.72	16.286		
11,100.0	7,155.0	7,084.0	7,084.0	70.8	12.4	-90.00	2,895.4	-1,598.4	1,380.7	1,298.3	82.45	16.747		
11,200.0	7,155.0	7,084.0	7,084.0	72.5	12.4	-90.00	2,895.4	-1,598.4	1,450.7	1,366.5	84.17	17.235		
11,300.0	7,155.0	7,084.0	7,084.0	74.3	12.4	-90.00	2,895.4	-1,598.4	1,524.0	1,438.1	85.90	17.742		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
9,900.0	7,155.0	7,060.0	7,060.0	50.6	12.3	90.00	3,911.7	129.7	1,463.6	1,401.8	61.84	23.670		
10,000.0	7,155.0	7,060.0	7,060.0	52.2	12.3	90.00	3,911.7	129.7	1,377.4	1,313.8	63.54	21.679		
10,100.0	7,155.0	7,060.0	7,060.0	53.9	12.3	90.00	3,911.7	129.7	1,293.0	1,227.8	65.24	19.820		
10,200.0	7,155.0	7,060.0	7,060.0	55.6	12.3	90.00	3,911.7	129.7	1,211.1	1,144.1	66.94	18.091		
10,300.0	7,155.0	7,060.0	7,060.0	57.3	12.3	90.00	3,911.7	129.7	1,132.1	1,063.4	68.65	16.490		
10,400.0	7,155.0	7,060.0	7,060.0	58.9	12.3	90.00	3,911.7	129.7	1,056.6	986.2	70.36	15.016		
10,500.0	7,155.0	7,060.0	7,060.0	60.6	12.3	90.00	3,911.7	129.7	985.5	913.4	72.08	13.673		
10,600.0	7,155.0	7,060.0	7,060.0	62.3	12.3	90.00	3,911.7	129.7	919.8	846.0	73.79	12.465		
10,700.0	7,155.0	7,060.0	7,060.0	64.0	12.3	90.00	3,911.7	129.7	860.7	785.2	75.51	11.399		
10,800.0	7,155.0	7,060.0	7,060.0	65.7	12.3	90.00	3,911.7	129.7	809.8	732.5	77.23	10.485		
10,900.0	7,155.0	7,060.0	7,060.0	67.4	12.3	90.00	3,911.7	129.7	768.5	689.5	78.95	9.733		
11,000.0	7,155.0	7,060.0	7,060.0	69.1	12.3	90.00	3,911.7	129.7	738.5	657.8	80.68	9.153		
11,100.0	7,155.0	7,060.0	7,060.0	70.8	12.3	90.00	3,911.7	129.7	721.2	638.8	82.40	8.752		
11,175.9	7,155.0	7,060.0	7,060.0	72.1	12.3	90.00	3,911.7	129.7	717.2	633.5	83.71	8.568 CC		
11,200.0	7,155.0	7,060.0	7,060.0	72.5	12.3	90.00	3,911.7	129.7	717.6	633.5	84.13	8.530 ES		
11,300.0	7,155.0	7,060.0	7,060.0	74.3	12.3	90.00	3,911.7	129.7	727.9	642.0	85.86	8.478 SF		
11,400.0	7,155.0	7,060.0	7,060.0	76.0	12.3	90.00	3,911.7	129.7	751.4	663.8	87.59	8.579		
11,500.0	7,155.0	7,060.0	7,060.0	77.7	12.3	90.00	3,911.7	129.7	787.1	697.8	89.32	8.812		
11,600.0	7,155.0	7,060.0	7,060.0	79.4	12.3	90.00	3,911.7	129.7	833.3	742.2	91.05	9.152		
11,700.0	7,155.0	7,060.0	7,060.0	81.1	12.3	90.00	3,911.7	129.7	888.3	795.6	92.78	9.575		
11,752.2	7,155.0	7,060.0	7,060.0	82.0	12.3	90.00	3,911.7	129.7	920.1	826.4	93.68	9.821		

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



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Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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		
7,450.0	7,150.5	7,080.5	7,080.5	16.9	12.4	63.34	1,674.6	-215.1	1,534.5	1,510.6	23.95	64.060		
7,500.0	7,154.6	7,084.6	7,084.6	17.2	12.4	81.50	1,674.6	-215.1	1,486.2	1,460.3	25.90	57.383		
7,522.2	7,155.0	7,085.0	7,085.0	17.3	12.4	90.00	1,674.6	-215.1	1,464.8	1,438.5	26.33	55.625		
7,600.0	7,155.0	7,085.0	7,085.0	17.9	12.4	90.00	1,674.6	-215.1	1,389.7	1,362.7	26.99	51.487		
7,700.0	7,155.0	7,085.0	7,085.0	18.7	12.4	90.00	1,674.6	-215.1	1,293.6	1,265.6	27.97	46.250		
7,800.0	7,155.0	7,085.0	7,085.0	19.6	12.4	90.00	1,674.6	-215.1	1,198.2	1,169.1	29.08	41.208		
7,900.0	7,155.0	7,085.0	7,085.0	20.7	12.4	90.00	1,674.6	-215.1	1,103.6	1,073.3	30.29	36.437		
8,000.0	7,155.0	7,085.0	7,085.0	21.8	12.4	90.00	1,674.6	-215.1	1,010.0	978.4	31.58	31.981		
8,100.0	7,155.0	7,085.0	7,085.0	23.0	12.4	90.00	1,674.6	-215.1	917.8	884.8	32.94	27.859		
8,200.0	7,155.0	7,085.0	7,085.0	24.3	12.4	90.00	1,674.6	-215.1	827.4	793.0	34.36	24.079		
8,300.0	7,155.0	7,085.0	7,085.0	25.6	12.4	90.00	1,674.6	-215.1	739.5	703.6	35.83	20.641		
8,400.0	7,155.0	7,085.0	7,085.0	27.0	12.4	90.00	1,674.6	-215.1	655.0	617.7	37.33	17.548		
8,500.0	7,155.0	7,085.0	7,085.0	28.4	12.4	90.00	1,674.6	-215.1	575.6	536.7	38.86	14.812		
8,600.0	7,155.0	7,085.0	7,085.0	29.9	12.4	90.00	1,674.6	-215.1	503.5	463.1	40.42	12.458		
8,700.0	7,155.0	7,085.0	7,085.0	31.4	12.4	90.00	1,674.6	-215.1	442.4	400.4	42.00	10.535		
8,800.0	7,155.0	7,085.0	7,085.0	32.9	12.4	90.00	1,674.6	-215.1	397.5	353.9	43.60	9.117		
8,900.0	7,155.0	7,085.0	7,085.0	34.4	12.4	90.00	1,674.6	-215.1	374.5	329.2	45.21	8.283		
8,938.8	7,155.0	7,085.0	7,085.0	35.0	12.4	90.00	1,674.6	-215.1	372.4	326.6	45.84	8.124 CC, ES		
9,000.0	7,155.0	7,085.0	7,085.0	36.0	12.4	90.00	1,674.6	-215.1	377.4	330.6	46.84	8.058 SF		
9,100.0	7,155.0	7,085.0	7,085.0	37.5	12.4	90.00	1,674.6	-215.1	405.8	357.3	48.48	8.371		
9,200.0	7,155.0	7,085.0	7,085.0	39.1	12.4	90.00	1,674.6	-215.1	454.9	404.8	50.13	9.074		
9,300.0	7,155.0	7,085.0	7,085.0	40.7	12.4	90.00	1,674.6	-215.1	518.8	467.0	51.79	10.018		
9,400.0	7,155.0	7,085.0	7,085.0	42.4	12.4	90.00	1,674.6	-215.1	592.8	539.3	53.45	11.089		
9,500.0	7,155.0	7,085.0	7,085.0	44.0	12.4	90.00	1,674.6	-215.1	673.5	618.4	55.13	12.217		
9,600.0	7,155.0	7,085.0	7,085.0	45.6	12.4	90.00	1,674.6	-215.1	758.9	702.0	56.81	13.358		
9,700.0	7,155.0	7,085.0	7,085.0	47.3	12.4	90.00	1,674.6	-215.1	847.4	788.9	58.49	14.487		
9,800.0	7,155.0	7,085.0	7,085.0	48.9	12.4	90.00	1,674.6	-215.1	938.3	878.1	60.18	15.590		
9,900.0	7,155.0	7,085.0	7,085.0	50.6	12.4	90.00	1,674.6	-215.1	1,030.8	968.9	61.88	16.658		
10,000.0	7,155.0	7,085.0	7,085.0	52.2	12.4	90.00	1,674.6	-215.1	1,124.6	1,061.1	63.58	17.689		
10,100.0	7,155.0	7,085.0	7,085.0	53.9	12.4	90.00	1,674.6	-215.1	1,219.4	1,154.2	65.28	18.680		
10,200.0	7,155.0	7,085.0	7,085.0	55.6	12.4	90.00	1,674.6	-215.1	1,315.0	1,248.0	66.99	19.631		
10,300.0	7,155.0	7,085.0	7,085.0	57.3	12.4	90.00	1,674.6	-215.1	1,411.2	1,342.5	68.70	20.543		
10,400.0	7,155.0	7,085.0	7,085.0	58.9	12.4	90.00	1,674.6	-215.1	1,507.9	1,437.5	70.41	21.417		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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		
10,400.0	7,155.0	7,070.0	7,070.0	58.9	12.3	-90.00	4,286.9	-1,617.9	1,544.9	1,474.6	70.38	21.951		
10,500.0	7,155.0	7,070.0	7,070.0	60.6	12.3	-90.00	4,286.9	-1,617.9	1,471.9	1,399.8	72.10	20.417		
10,600.0	7,155.0	7,070.0	7,070.0	62.3	12.3	-90.00	4,286.9	-1,617.9	1,402.3	1,328.5	73.81	18.998		
10,700.0	7,155.0	7,070.0	7,070.0	64.0	12.3	-90.00	4,286.9	-1,617.9	1,336.5	1,260.9	75.53	17.695		
10,800.0	7,155.0	7,070.0	7,070.0	65.7	12.3	-90.00	4,286.9	-1,617.9	1,275.1	1,197.9	77.25	16.506		
10,900.0	7,155.0	7,070.0	7,070.0	67.4	12.3	-90.00	4,286.9	-1,617.9	1,218.9	1,139.9	78.97	15.435		
11,000.0	7,155.0	7,070.0	7,070.0	69.1	12.3	-90.00	4,286.9	-1,617.9	1,168.5	1,087.8	80.70	14.481		
11,100.0	7,155.0	7,070.0	7,070.0	70.8	12.3	-90.00	4,286.9	-1,617.9	1,124.8	1,042.4	82.42	13.648		
11,200.0	7,155.0	7,070.0	7,070.0	72.5	12.3	-90.00	4,286.9	-1,617.9	1,088.6	1,004.4	84.15	12.937		
11,300.0	7,155.0	7,070.0	7,070.0	74.3	12.3	-90.00	4,286.9	-1,617.9	1,060.6	974.7	85.88	12.350		
11,400.0	7,155.0	7,070.0	7,070.0	76.0	12.3	-90.00	4,286.9	-1,617.9	1,041.4	953.8	87.60	11.888		
11,500.0	7,155.0	7,070.0	7,070.0	77.7	12.3	-90.00	4,286.9	-1,617.9	1,031.7	942.3	89.33	11.549		
11,551.1	7,155.0	7,070.0	7,070.0	78.6	12.3	-90.00	4,286.9	-1,617.9	1,030.4	940.2	90.22	11.421 CC, ES		
11,600.0	7,155.0	7,070.0	7,070.0	79.4	12.3	-90.00	4,286.9	-1,617.9	1,031.6	940.5	91.07	11.328		
11,700.0	7,155.0	7,070.0	7,070.0	81.1	12.3	-90.00	4,286.9	-1,617.9	1,041.1	948.3	92.80	11.219		
11,752.2	7,155.0	7,070.0	7,070.0	82.0	12.3	-90.00	4,286.9	-1,617.9	1,049.8	956.1	93.70	11.204 SF		

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4B-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 4B-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 4B-20H-O264

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

