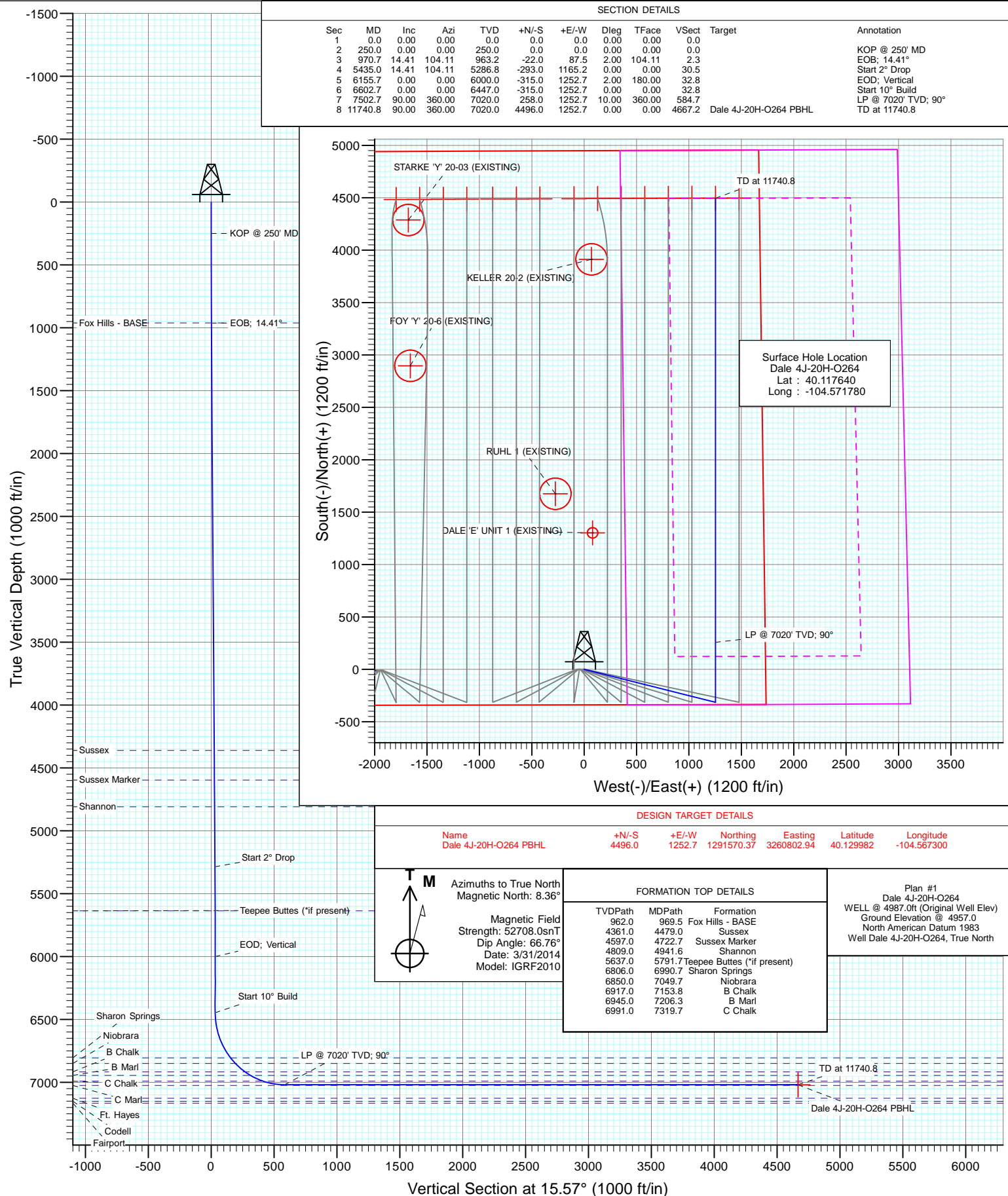




Project: DJ Wattenberg
Site: S20-T2N-R64W (Dale)
Well: Dale 4J-20H-O264
Wellbore: HZ
Design: Plan #1





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 4J-20H-O264
Wellbore: HZ
Design: Plan #1

Local Co-ordinate Reference: Well Dale 4J-20H-O264
TVD Reference: WELL @ 4987.0ft (Original Well Elev)
MD Reference: WELL @ 4987.0ft (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:
From: Lat/Long
Position Uncertainty: 0.0 ft
Northing: 1,287,029.38 ft
Easting: 3,257,598.23 ft
Slot Radius: 13.200 in
Latitude: 40.117609
Longitude: -104.578929
Grid Convergence: 0.60 °

Well Dale 4J-20H-O264

Well Position **+N/-S** 0.0 ft **Northing:** 1,287,061.51 ft **Latitude:** 40.117640
+E/-W 0.0 ft **Easting:** 3,259,597.37 ft **Longitude:** -104.571780
Position Uncertainty 0.0 ft **Wellhead Elevation:** ft **Ground Level:** 4,957.0 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	15.57

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	
970.7	14.41	104.11	963.2	-22.0	87.5	2.00	2.00	0.00	104.11	
5,435.0	14.41	104.11	5,286.8	-293.0	1,165.2	0.00	0.00	0.00	0.00	
6,155.7	0.00	0.00	6,000.0	-315.0	1,252.7	2.00	-2.00	0.00	180.00	
6,602.7	0.00	0.00	6,447.0	-315.0	1,252.7	0.00	0.00	0.00	0.00	
7,502.7	90.00	360.00	7,020.0	258.0	1,252.7	10.00	10.00	0.00	360.00	
11,740.8	90.00	360.00	7,020.0	4,496.0	1,252.7	0.00	0.00	0.00	0.00	Dale 4J-20H-O264 PE



Planning Report

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TVD Reference: WELL @ 4987.0ft (Original Well Elev)
MD Reference: WELL @ 4987.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
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	104.11	300.0	-0.1	0.4	0.0	2.00	2.00	
400.0	3.00	104.11	399.9	-1.0	3.8	0.1	2.00	2.00	
500.0	5.00	104.11	499.7	-2.7	10.6	0.3	2.00	2.00	
600.0	7.00	104.11	599.1	-5.2	20.7	0.5	2.00	2.00	
700.0	9.00	104.11	698.2	-8.6	34.2	0.9	2.00	2.00	
800.0	11.00	104.11	796.6	-12.8	51.0	1.3	2.00	2.00	
900.0	13.00	104.11	894.4	-17.9	71.2	1.9	2.00	2.00	
969.5	14.39	104.11	962.0	-21.9	87.2	2.3	2.00	2.00	Fox Hills - BASE
970.7	14.41	104.11	963.2	-22.0	87.5	2.3	2.00	2.00	EOB; 14.41°
1,000.0	14.41	104.11	991.5	-23.8	94.5	2.5	0.00	0.00	
1,100.0	14.41	104.11	1,088.4	-29.8	118.7	3.1	0.00	0.00	
1,200.0	14.41	104.11	1,185.2	-35.9	142.8	3.7	0.00	0.00	
1,300.0	14.41	104.11	1,282.1	-42.0	167.0	4.4	0.00	0.00	
1,400.0	14.41	104.11	1,378.9	-48.1	191.1	5.0	0.00	0.00	
1,500.0	14.41	104.11	1,475.8	-54.1	215.2	5.6	0.00	0.00	
1,600.0	14.41	104.11	1,572.6	-60.2	239.4	6.3	0.00	0.00	
1,700.0	14.41	104.11	1,669.5	-66.3	263.5	6.9	0.00	0.00	
1,800.0	14.41	104.11	1,766.3	-72.3	287.7	7.5	0.00	0.00	
1,900.0	14.41	104.11	1,863.2	-78.4	311.8	8.2	0.00	0.00	
2,000.0	14.41	104.11	1,960.0	-84.5	336.0	8.8	0.00	0.00	
2,100.0	14.41	104.11	2,056.9	-90.5	360.1	9.4	0.00	0.00	
2,200.0	14.41	104.11	2,153.7	-96.6	384.2	10.1	0.00	0.00	
2,300.0	14.41	104.11	2,250.6	-102.7	408.4	10.7	0.00	0.00	
2,400.0	14.41	104.11	2,347.4	-108.8	432.5	11.3	0.00	0.00	
2,500.0	14.41	104.11	2,444.3	-114.8	456.7	12.0	0.00	0.00	
2,600.0	14.41	104.11	2,541.1	-120.9	480.8	12.6	0.00	0.00	
2,700.0	14.41	104.11	2,638.0	-127.0	504.9	13.2	0.00	0.00	
2,800.0	14.41	104.11	2,734.8	-133.0	529.1	13.8	0.00	0.00	
2,900.0	14.41	104.11	2,831.7	-139.1	553.2	14.5	0.00	0.00	
3,000.0	14.41	104.11	2,928.5	-145.2	577.4	15.1	0.00	0.00	
3,100.0	14.41	104.11	3,025.4	-151.3	601.5	15.7	0.00	0.00	
3,200.0	14.41	104.11	3,122.2	-157.3	625.7	16.4	0.00	0.00	
3,300.0	14.41	104.11	3,219.1	-163.4	649.8	17.0	0.00	0.00	
3,400.0	14.41	104.11	3,315.9	-169.5	673.9	17.6	0.00	0.00	
3,500.0	14.41	104.11	3,412.8	-175.5	698.1	18.3	0.00	0.00	
3,600.0	14.41	104.11	3,509.6	-181.6	722.2	18.9	0.00	0.00	
3,700.0	14.41	104.11	3,606.5	-187.7	746.4	19.5	0.00	0.00	
3,800.0	14.41	104.11	3,703.4	-193.8	770.5	20.2	0.00	0.00	
3,900.0	14.41	104.11	3,800.2	-199.8	794.7	20.8	0.00	0.00	
4,000.0	14.41	104.11	3,897.1	-205.9	818.8	21.4	0.00	0.00	
4,100.0	14.41	104.11	3,993.9	-212.0	842.9	22.1	0.00	0.00	
4,200.0	14.41	104.11	4,090.8	-218.0	867.1	22.7	0.00	0.00	
4,300.0	14.41	104.11	4,187.6	-224.1	891.2	23.3	0.00	0.00	
4,400.0	14.41	104.11	4,284.5	-230.2	915.4	24.0	0.00	0.00	
4,479.0	14.41	104.11	4,361.0	-235.0	934.5	24.5	0.00	0.00	Sussex
4,500.0	14.41	104.11	4,381.3	-236.2	939.5	24.6	0.00	0.00	
4,600.0	14.41	104.11	4,478.2	-242.3	963.7	25.2	0.00	0.00	
4,700.0	14.41	104.11	4,575.0	-248.4	987.8	25.9	0.00	0.00	



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MD Reference: WELL @ 4987.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,722.7	14.41	104.11	4,597.0	-249.8	993.3	26.0	0.00	0.00	Sussex Marker
4,800.0	14.41	104.11	4,671.9	-254.5	1,011.9	26.5	0.00	0.00	
4,900.0	14.41	104.11	4,768.7	-260.5	1,036.1	27.1	0.00	0.00	
4,941.6	14.41	104.11	4,809.0	-263.1	1,046.1	27.4	0.00	0.00	Shannon
5,000.0	14.41	104.11	4,865.6	-266.6	1,060.2	27.7	0.00	0.00	
5,100.0	14.41	104.11	4,962.4	-272.7	1,084.4	28.4	0.00	0.00	
5,200.0	14.41	104.11	5,059.3	-278.7	1,108.5	29.0	0.00	0.00	
5,300.0	14.41	104.11	5,156.1	-284.8	1,132.7	29.6	0.00	0.00	
5,400.0	14.41	104.11	5,253.0	-290.9	1,156.8	30.3	0.00	0.00	
5,435.0	14.41	104.11	5,286.8	-293.0	1,165.2	30.5	0.00	0.00	Start 2° Drop
5,500.0	13.11	104.11	5,350.0	-296.8	1,180.2	30.9	2.00	-2.00	
5,600.0	11.11	104.11	5,447.8	-301.9	1,200.6	31.4	2.00	-2.00	
5,700.0	9.11	104.11	5,546.2	-306.2	1,217.6	31.9	2.00	-2.00	
5,791.7	7.28	104.11	5,637.0	-309.4	1,230.3	32.2	2.00	-2.00	Teepee Buttes (*if present)
5,800.0	7.11	104.11	5,645.2	-309.6	1,231.3	32.2	2.00	-2.00	
5,900.0	5.11	104.11	5,744.6	-312.2	1,241.6	32.5	2.00	-2.00	
6,000.0	3.11	104.11	5,844.4	-314.0	1,248.6	32.7	2.00	-2.00	
6,100.0	1.11	104.11	5,944.3	-314.9	1,252.2	32.8	2.00	-2.00	
6,155.7	0.00	0.00	6,000.0	-315.0	1,252.7	32.8	2.00	-2.00	EOD; Vertical
6,200.0	0.00	0.00	6,044.3	-315.0	1,252.7	32.8	0.00	0.00	
6,300.0	0.00	0.00	6,144.3	-315.0	1,252.7	32.8	0.00	0.00	
6,400.0	0.00	0.00	6,244.3	-315.0	1,252.7	32.8	0.00	0.00	
6,500.0	0.00	0.00	6,344.3	-315.0	1,252.7	32.8	0.00	0.00	
6,602.7	0.00	0.00	6,447.0	-315.0	1,252.7	32.8	0.00	0.00	Start 10° Build
6,650.0	4.73	360.00	6,494.2	-313.1	1,252.7	34.7	10.00	10.00	
6,700.0	9.73	360.00	6,543.8	-306.8	1,252.7	40.7	10.00	10.00	
6,750.0	14.73	360.00	6,592.7	-296.2	1,252.7	50.9	10.00	10.00	
6,800.0	19.73	360.00	6,640.4	-281.4	1,252.7	65.2	10.00	10.00	
6,850.0	24.73	360.00	6,686.7	-262.5	1,252.7	83.4	10.00	10.00	
6,900.0	29.73	360.00	6,731.1	-239.6	1,252.7	105.4	10.00	10.00	
6,950.0	34.73	360.00	6,773.4	-212.9	1,252.7	131.1	10.00	10.00	
6,990.7	38.79	360.00	6,806.0	-188.6	1,252.7	154.5	10.00	10.00	Sharon Springs
7,000.0	39.73	360.00	6,813.2	-182.7	1,252.7	160.2	10.00	10.00	
7,049.7	44.69	360.00	6,850.0	-149.4	1,252.7	192.3	10.00	10.00	Niobrara
7,050.0	44.73	360.00	6,850.2	-149.1	1,252.7	192.6	10.00	10.00	
7,100.0	49.73	360.00	6,884.2	-112.4	1,252.7	227.9	10.00	10.00	
7,150.0	54.73	360.00	6,914.8	-72.9	1,252.7	266.0	10.00	10.00	
7,153.8	55.11	360.00	6,917.0	-69.8	1,252.7	269.0	10.00	10.00	B Chalk
7,200.0	59.73	360.00	6,941.9	-30.9	1,252.7	306.5	10.00	10.00	
7,206.3	60.35	360.00	6,945.0	-25.4	1,252.7	311.7	10.00	10.00	B Marl
7,250.0	64.73	360.00	6,965.2	13.3	1,252.7	349.1	10.00	10.00	
7,300.0	69.73	360.00	6,984.5	59.4	1,252.7	393.5	10.00	10.00	
7,319.7	71.69	360.00	6,991.0	78.0	1,252.7	411.3	10.00	10.00	C Chalk
7,350.0	74.73	360.00	6,999.8	107.0	1,252.7	439.3	10.00	10.00	
7,400.0	79.73	360.00	7,010.8	155.8	1,252.7	486.3	10.00	10.00	
7,450.0	84.73	360.00	7,017.6	205.3	1,252.7	534.0	10.00	10.00	
7,502.7	90.00	360.00	7,020.0	258.0	1,252.7	584.7	10.00	10.00	LP @ 7020' TVD; 90°
7,600.0	90.00	360.00	7,020.0	355.2	1,252.7	678.4	0.00	0.00	
7,700.0	90.00	360.00	7,020.0	455.2	1,252.7	774.7	0.00	0.00	
7,800.0	90.00	360.00	7,020.0	555.2	1,252.7	871.1	0.00	0.00	
7,900.0	90.00	360.00	7,020.0	655.2	1,252.7	967.4	0.00	0.00	
8,000.0	90.00	360.00	7,020.0	755.2	1,252.7	1,063.7	0.00	0.00	



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Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,100.0	90.00	360.00	7,020.0	855.2	1,252.7	1,160.1	0.00	0.00	
8,200.0	90.00	360.00	7,020.0	955.2	1,252.7	1,256.4	0.00	0.00	
8,300.0	90.00	360.00	7,020.0	1,055.2	1,252.7	1,352.7	0.00	0.00	
8,400.0	90.00	360.00	7,020.0	1,155.2	1,252.7	1,449.1	0.00	0.00	
8,500.0	90.00	360.00	7,020.0	1,255.2	1,252.7	1,545.4	0.00	0.00	
8,600.0	90.00	360.00	7,020.0	1,355.2	1,252.7	1,641.7	0.00	0.00	
8,700.0	90.00	360.00	7,020.0	1,455.2	1,252.7	1,738.0	0.00	0.00	
8,800.0	90.00	360.00	7,020.0	1,555.2	1,252.7	1,834.4	0.00	0.00	
8,900.0	90.00	360.00	7,020.0	1,655.2	1,252.7	1,930.7	0.00	0.00	
9,000.0	90.00	360.00	7,020.0	1,755.2	1,252.7	2,027.0	0.00	0.00	
9,100.0	90.00	360.00	7,020.0	1,855.2	1,252.7	2,123.4	0.00	0.00	
9,200.0	90.00	360.00	7,020.0	1,955.2	1,252.7	2,219.7	0.00	0.00	
9,300.0	90.00	360.00	7,020.0	2,055.2	1,252.7	2,316.0	0.00	0.00	
9,400.0	90.00	360.00	7,020.0	2,155.2	1,252.7	2,412.4	0.00	0.00	
9,500.0	90.00	360.00	7,020.0	2,255.2	1,252.7	2,508.7	0.00	0.00	
9,600.0	90.00	360.00	7,020.0	2,355.2	1,252.7	2,605.0	0.00	0.00	
9,700.0	90.00	360.00	7,020.0	2,455.2	1,252.7	2,701.4	0.00	0.00	
9,800.0	90.00	360.00	7,020.0	2,555.2	1,252.7	2,797.7	0.00	0.00	
9,900.0	90.00	360.00	7,020.0	2,655.2	1,252.7	2,894.0	0.00	0.00	
10,000.0	90.00	360.00	7,020.0	2,755.2	1,252.7	2,990.3	0.00	0.00	
10,100.0	90.00	360.00	7,020.0	2,855.2	1,252.7	3,086.7	0.00	0.00	
10,200.0	90.00	360.00	7,020.0	2,955.2	1,252.7	3,183.0	0.00	0.00	
10,300.0	90.00	360.00	7,020.0	3,055.2	1,252.7	3,279.3	0.00	0.00	
10,400.0	90.00	360.00	7,020.0	3,155.2	1,252.7	3,375.7	0.00	0.00	
10,500.0	90.00	360.00	7,020.0	3,255.2	1,252.7	3,472.0	0.00	0.00	
10,600.0	90.00	360.00	7,020.0	3,355.2	1,252.7	3,568.3	0.00	0.00	
10,700.0	90.00	360.00	7,020.0	3,455.2	1,252.7	3,664.7	0.00	0.00	
10,800.0	90.00	360.00	7,020.0	3,555.2	1,252.7	3,761.0	0.00	0.00	
10,900.0	90.00	360.00	7,020.0	3,655.2	1,252.7	3,857.3	0.00	0.00	
11,000.0	90.00	360.00	7,020.0	3,755.2	1,252.7	3,953.7	0.00	0.00	
11,100.0	90.00	360.00	7,020.0	3,855.2	1,252.7	4,050.0	0.00	0.00	
11,200.0	90.00	360.00	7,020.0	3,955.2	1,252.7	4,146.3	0.00	0.00	
11,300.0	90.00	360.00	7,020.0	4,055.2	1,252.7	4,242.6	0.00	0.00	
11,400.0	90.00	360.00	7,020.0	4,155.2	1,252.7	4,339.0	0.00	0.00	
11,500.0	90.00	360.00	7,020.0	4,255.2	1,252.7	4,435.3	0.00	0.00	
11,600.0	90.00	360.00	7,020.0	4,355.2	1,252.7	4,531.6	0.00	0.00	
11,700.0	90.00	360.00	7,020.0	4,455.2	1,252.7	4,628.0	0.00	0.00	
11,740.8	90.00	360.00	7,020.0	4,496.0	1,252.7	4,667.2	0.00	0.00	TD at 11740.8

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Dale 4J-20H-O264 PBH - plan hits target center - Point	0.00	0.00	7,020.0	4,496.0	1,252.7	1,291,570.37	3,260,802.94	40.129982	-104.567300



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site:	S20-T2N-R64W (Dale)	North Reference:	True
Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
969.5	962.0	Fox Hills - BASE			
4,479.0	4,361.0	Sussex			
4,722.7	4,597.0	Sussex Marker			
4,941.6	4,809.0	Shannon			
5,791.7	5,637.0	Teepee Buttes (*if present)			
6,990.7	6,806.0	Sharon Springs			
7,049.7	6,850.0	Niobrara			
7,153.8	6,917.0	B Chalk			
7,206.3	6,945.0	B Marl			
7,319.7	6,991.0	C Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
250.0	250.0	0.0	0.0	KOP @ 250' MD
970.7	963.2	-22.0	87.5	EOB; 14.41°
5,435.0	5,286.8	-293.0	1,165.2	Start 2° Drop
6,155.7	6,000.0	-315.0	1,252.7	EOD; Vertical
6,602.7	6,447.0	-315.0	1,252.7	Start 10° Build
7,502.7	7,020.0	258.0	1,252.7	LP @ 7020' TVD; 90°
11,740.8	7,020.0	4,496.0	1,252.7	TD at 11740.8



EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S20-T2N-R64W (Dale)

Dale 4J-20H-O264

HZ

Plan #1

Anticollision Report

02 April, 2014



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	11,740.8	Plan #1 (HZ)	Geolink MWD	Geolink MWD



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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						Out of range
Dale 3I-20H-N264 - HZ - Plan #1						Out of range
Dale 3J-20H-N264 - HZ - Plan #1						Out of range
Dale 3K-20H-N264 - HZ - Plan #1						Out of range
Dale 3L-20H-N264 - HZ - Plan #1						Out of range
Dale 4A-20H-O264 - HZ - Plan #1	166.0	168.0	67.4	66.9	140.962	CC
Dale 4A-20H-O264 - HZ - Plan #1	200.0	202.0	67.4	66.8	112.927	ES
Dale 4A-20H-O264 - HZ - Plan #1	500.0	493.3	92.4	90.8	56.454	SF
Dale 4B-20H-O264 - HZ - Plan #1	232.6	234.6	59.9	59.1	84.202	CC
Dale 4B-20H-O264 - HZ - Plan #1	250.0	252.0	59.9	59.1	77.594	ES
Dale 4B-20H-O264 - HZ - Plan #1	500.0	495.9	80.0	78.3	48.743	SF
Dale 4C-20H-O264 - HZ - Plan #1	250.0	251.0	52.3	51.5	67.954	CC, ES
Dale 4C-20H-O264 - HZ - Plan #1	500.0	497.2	68.2	66.5	41.506	SF
Dale 4D-20H-O264 - HZ - Plan #1	250.0	251.0	44.8	44.0	58.145	CC, ES
Dale 4D-20H-O264 - HZ - Plan #1	11,740.8	11,590.6	1,350.0	1,187.2	8.291	SF
Dale 4E-20H-O264 - HZ - Plan #1	250.0	251.0	37.5	36.7	48.692	CC, ES
Dale 4E-20H-O264 - HZ - Plan #1	11,740.8	11,528.2	1,099.7	941.7	6.961	SF
Dale 4F-20H-O264 - HZ - Plan #1	250.0	251.0	29.9	29.2	38.882	CC, ES
Dale 4F-20H-O264 - HZ - Plan #1	11,740.8	11,512.7	904.9	742.9	5.587	SF
Dale 4G-20H-O264 - HZ - Plan #1	250.0	251.0	22.4	21.6	29.072	CC, ES
Dale 4G-20H-O264 - HZ - Plan #1	11,740.8	11,628.2	675.0	512.1	4.144	SF
Dale 4H-20H-O264 - HZ - Plan #1	250.0	251.0	14.8	14.1	19.264	CC, ES
Dale 4H-20H-O264 - HZ - Plan #1	11,740.8	11,801.7	471.5	315.4	3.021	SF
Dale 4I-20H-O264 - HZ - Plan #1	250.0	251.0	7.3	6.5	9.460	CC, ES
Dale 4I-20H-O264 - HZ - Plan #1	11,740.8	11,605.6	243.6	92.5	1.613	SF
Dale 4K-20H-O264 - HZ - Plan #1	200.0	200.0	7.6	7.0	12.725	CC, ES
Dale 4K-20H-O264 - HZ - Plan #1	11,740.8	11,937.1	265.6	126.3	1.907	SF
DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WE	8,547.1	6,958.0	1,172.2	1,132.5	29.558	CC, ES
DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WE	9,100.0	6,958.0	1,296.0	1,247.5	26.686	SF
FOY 1 (EXISTING) - EXISTING - NOBLE WELL						Out of range
FOY 'Y' 20-6 (EXISTING) - EXISTING - NOBLE WELL						Out of range
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	11,157.2	6,927.0	1,182.8	1,099.3	14.167	CC, ES
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	11,400.0	6,927.0	1,207.5	1,119.8	13.770	SF
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	8,920.1	6,952.0	1,527.6	1,482.0	33.494	CC, ES
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	9,100.0	6,952.0	1,538.2	1,489.6	31.679	SF
STARKE 'Y' 20-03 (EXISTING) - EXISTING - NOBLE WE						Out of range



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	2.0	2.0	0.0	0.0	-89.40	0.7	-67.4	67.4					
100.0	100.0	102.0	102.0	0.1	0.1	-89.40	0.7	-67.4	67.4	67.2	0.25	271.970		
166.0	166.0	168.0	168.0	0.2	0.2	-89.40	0.7	-67.4	67.4	66.9	0.48	140.962 CC		
200.0	200.0	202.0	202.0	0.3	0.3	-89.40	0.7	-67.4	67.4	66.8	0.60	112.927 ES		
250.0	250.0	250.9	250.9	0.4	0.4	-89.54	0.5	-67.8	67.8	67.1	0.77	87.942		
300.0	300.0	300.0	300.0	0.5	0.5	166.02	0.1	-69.0	69.5	68.5	0.94	73.684		
400.0	399.9	397.1	396.9	0.7	0.7	165.22	-1.8	-73.7	77.7	76.4	1.29	60.267		
500.0	499.7	493.3	492.8	0.9	0.9	164.39	-4.8	-81.4	92.4	90.8	1.64	56.454 SF		
600.0	599.1	587.9	586.7	1.1	1.1	163.66	-8.8	-91.8	113.5	111.5	1.99	57.154		
700.0	698.2	681.1	678.9	1.4	1.4	163.08	-14.0	-104.9	140.8	138.5	2.34	60.232		
800.0	796.6	776.1	772.6	1.7	1.7	162.86	-19.5	-119.0	172.1	169.5	2.70	63.849		
900.0	894.4	869.9	865.2	2.1	2.0	162.92	-25.0	-133.0	206.7	203.6	3.06	67.607		
970.7	963.2	935.6	930.1	2.4	2.2	163.06	-28.8	-142.7	233.0	229.6	3.31	70.334		
1,000.0	991.5	962.6	956.7	2.6	2.3	163.19	-30.3	-146.8	244.2	240.7	3.42	71.338		
1,100.0	1,088.4	1,055.0	1,047.9	3.0	2.6	163.57	-35.7	-160.5	282.4	278.6	3.80	74.311		
1,200.0	1,185.2	1,147.3	1,139.1	3.5	2.9	163.86	-41.1	-174.3	320.7	316.6	4.18	76.724		
1,300.0	1,282.1	1,239.7	1,230.3	4.0	3.2	164.09	-46.5	-188.0	359.0	354.5	4.56	78.720		
1,400.0	1,378.9	1,332.1	1,321.5	4.4	3.5	164.27	-51.9	-201.7	397.3	392.4	4.94	80.399		
1,500.0	1,475.8	1,424.4	1,412.6	4.9	3.8	164.42	-57.2	-215.5	435.6	430.3	5.32	81.830		
1,600.0	1,572.6	1,516.8	1,503.8	5.4	4.1	164.55	-62.6	-229.2	473.9	468.2	5.71	83.063		
1,700.0	1,669.5	1,609.2	1,595.0	5.8	4.4	164.66	-68.0	-243.0	512.3	506.2	6.09	84.137		
1,800.0	1,766.3	1,701.5	1,686.2	6.3	4.7	164.75	-73.4	-256.7	550.6	544.1	6.47	85.081		
1,900.0	1,863.2	1,793.9	1,777.4	6.8	5.0	164.83	-78.8	-270.5	588.9	582.0	6.85	85.917		
2,000.0	1,960.0	1,886.3	1,868.5	7.3	5.3	164.90	-84.1	-284.2	627.2	620.0	7.24	86.662		
2,100.0	2,056.9	1,978.6	1,959.7	7.7	5.6	164.96	-89.5	-298.0	665.5	657.9	7.62	87.330		
2,200.0	2,153.7	2,071.0	2,050.9	8.2	5.9	165.02	-94.9	-311.7	703.8	695.8	8.00	87.933		
2,300.0	2,250.6	2,163.4	2,142.1	8.7	6.2	165.07	-100.3	-325.5	742.1	733.7	8.39	88.480		
2,400.0	2,347.4	2,255.7	2,233.3	9.2	6.6	165.11	-105.7	-339.2	780.4	771.7	8.77	88.978		
2,500.0	2,444.3	2,348.1	2,324.4	9.7	6.9	165.15	-111.0	-353.0	818.8	809.6	9.15	89.433		
2,600.0	2,541.1	2,440.5	2,415.6	10.1	7.2	165.19	-116.4	-366.7	857.1	847.5	9.54	89.851		
2,700.0	2,638.0	2,532.8	2,506.8	10.6	7.5	165.23	-121.8	-380.5	895.4	885.5	9.92	90.236		
2,800.0	2,734.8	2,625.2	2,598.0	11.1	7.8	165.26	-127.2	-394.2	933.7	923.4	10.31	90.592		
2,900.0	2,831.7	2,717.6	2,689.2	11.6	8.1	165.29	-132.6	-408.0	972.0	961.3	10.69	90.922		
3,000.0	2,928.5	2,809.9	2,780.3	12.0	8.4	165.31	-137.9	-421.7	1,010.3	999.3	11.07	91.228		
3,100.0	3,025.4	2,902.3	2,871.5	12.5	8.7	165.34	-143.3	-435.5	1,048.7	1,037.2	11.46	91.514		
3,200.0	3,122.2	2,994.7	2,962.7	13.0	9.0	165.36	-148.7	-449.2	1,087.0	1,075.1	11.84	91.781		
3,300.0	3,219.1	3,087.0	3,053.9	13.5	9.3	165.38	-154.1	-462.9	1,125.3	1,113.1	12.23	92.031		
3,400.0	3,315.9	3,179.4	3,145.1	14.0	9.6	165.40	-159.5	-476.7	1,163.6	1,151.0	12.61	92.265		
3,500.0	3,412.8	3,271.8	3,236.2	14.4	9.9	165.42	-164.8	-490.4	1,201.9	1,188.9	13.00	92.486		
3,600.0	3,509.6	3,364.1	3,327.4	14.9	10.2	165.44	-170.2	-504.2	1,240.2	1,226.9	13.38	92.693		
3,700.0	3,606.5	3,456.5	3,418.6	15.4	10.5	165.45	-175.6	-517.9	1,278.6	1,264.8	13.76	92.889		
3,800.0	3,703.4	3,548.9	3,509.8	15.9	10.8	165.47	-181.0	-531.7	1,316.9	1,302.7	14.15	93.074		
3,900.0	3,800.2	3,641.2	3,601.0	16.4	11.1	165.48	-186.4	-545.4	1,355.2	1,340.7	14.53	93.249		
4,000.0	3,897.1	3,733.6	3,692.1	16.8	11.4	165.50	-191.7	-559.2	1,393.5	1,378.6	14.92	93.415		
4,100.0	3,993.9	3,826.0	3,783.3	17.3	11.8	165.51	-197.1	-572.9	1,431.8	1,416.5	15.30	93.572		
4,200.0	4,090.8	3,918.3	3,874.5	17.8	12.1	165.52	-202.5	-586.7	1,470.1	1,454.5	15.69	93.722		
4,300.0	4,187.6	4,010.7	3,965.7	18.3	12.4	165.54	-207.9	-600.4	1,508.5	1,492.4	16.07	93.865		
4,400.0	4,284.5	4,103.1	4,056.9	18.7	12.7	165.55	-213.2	-614.2	1,546.8	1,530.3	16.45	94.000		

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4B-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program:		0-Geolink MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	2.0	2.0	0.0	0.0	-89.31	0.7	-59.8	59.9					
100.0	100.0	102.0	102.0	0.1	0.1	-89.31	0.7	-59.8	59.9	59.6	0.25	241.505		
200.0	200.0	202.0	202.0	0.3	0.3	-89.31	0.7	-59.8	59.9	59.3	0.60	100.274		
232.6	232.6	234.6	234.6	0.4	0.4	-89.31	0.7	-59.8	59.9	59.1	0.71	84.202 CC		
250.0	250.0	252.0	252.0	0.4	0.4	-89.31	0.7	-59.9	59.9	59.1	0.77	77.594 ES		
300.0	300.0	301.1	301.0	0.5	0.5	166.45	0.5	-60.3	60.7	59.7	0.94	64.262		
400.0	399.9	398.9	398.9	0.7	0.7	165.70	-1.1	-63.3	67.1	65.8	1.29	52.003		
500.0	499.7	495.9	495.6	0.9	0.9	164.57	-4.3	-69.1	80.0	78.3	1.64	48.743 SF		
600.0	599.1	591.3	590.5	1.1	1.1	163.42	-8.9	-77.8	99.1	97.1	1.99	49.684		
700.0	698.2	688.0	686.5	1.4	1.3	162.64	-14.5	-88.2	123.3	120.9	2.35	52.354		
800.0	796.6	784.2	781.9	1.7	1.6	162.46	-20.0	-98.6	150.7	148.0	2.72	55.435		
900.0	894.4	879.4	876.4	2.1	1.8	162.60	-25.6	-108.8	181.3	178.2	3.08	58.778		
970.7	963.2	946.1	942.6	2.4	2.0	162.82	-29.4	-116.1	204.9	201.6	3.34	61.264		
1,000.0	991.5	973.5	969.8	2.6	2.1	162.97	-31.0	-119.0	215.0	211.5	3.46	62.200		
1,100.0	1,088.4	1,067.4	1,063.0	3.0	2.3	163.41	-36.4	-129.2	249.4	245.6	3.84	64.972		
1,200.0	1,185.2	1,161.3	1,156.1	3.5	2.6	163.75	-41.9	-139.3	283.9	279.7	4.22	67.226		
1,300.0	1,282.1	1,255.1	1,249.3	4.0	2.8	164.01	-47.3	-149.4	318.3	313.7	4.61	69.095		
1,400.0	1,378.9	1,349.0	1,342.5	4.4	3.1	164.22	-52.8	-159.6	352.8	347.8	4.99	70.668		
1,500.0	1,475.8	1,442.8	1,435.6	4.9	3.4	164.39	-58.2	-169.7	387.3	381.9	5.38	72.010		
1,600.0	1,572.6	1,536.7	1,528.8	5.4	3.6	164.53	-63.6	-179.9	421.8	416.0	5.76	73.169		
1,700.0	1,669.5	1,630.6	1,621.9	5.8	3.9	164.66	-69.1	-190.0	456.2	450.1	6.15	74.180		
1,800.0	1,766.3	1,724.4	1,715.1	6.3	4.1	164.76	-74.5	-200.1	490.7	484.2	6.54	75.068		
1,900.0	1,863.2	1,818.3	1,808.2	6.8	4.4	164.85	-79.9	-210.3	525.2	518.3	6.92	75.856		
2,000.0	1,960.0	1,912.2	1,901.4	7.3	4.7	164.93	-85.4	-220.4	559.7	552.4	7.31	76.559		
2,100.0	2,056.9	2,006.0	1,994.6	7.7	4.9	165.01	-90.8	-230.6	594.1	586.4	7.70	77.189		
2,200.0	2,153.7	2,099.9	2,087.7	8.2	5.2	165.07	-96.2	-240.7	628.6	620.5	8.08	77.759		
2,300.0	2,250.6	2,193.8	2,180.9	8.7	5.4	165.13	-101.7	-250.8	663.1	654.6	8.47	78.275		
2,400.0	2,347.4	2,287.6	2,274.0	9.2	5.7	165.18	-107.1	-261.0	697.6	688.7	8.86	78.746		
2,500.0	2,444.3	2,381.5	2,367.2	9.7	5.9	165.22	-112.6	-271.1	732.1	722.8	9.25	79.177		
2,600.0	2,541.1	2,475.4	2,460.4	10.1	6.2	165.26	-118.0	-281.3	766.6	756.9	9.63	79.572		
2,700.0	2,638.0	2,569.2	2,553.5	10.6	6.5	165.30	-123.4	-291.4	801.0	791.0	10.02	79.937		
2,800.0	2,734.8	2,663.1	2,646.7	11.1	6.7	165.34	-128.9	-301.5	835.5	825.1	10.41	80.274		
2,900.0	2,831.7	2,757.0	2,739.8	11.6	7.0	165.37	-134.3	-311.7	870.0	859.2	10.80	80.586		
3,000.0	2,928.5	2,850.8	2,833.0	12.0	7.2	165.40	-139.7	-321.8	904.5	893.3	11.18	80.877		
3,100.0	3,025.4	2,944.7	2,926.1	12.5	7.5	165.43	-145.2	-332.0	939.0	927.4	11.57	81.148		
3,200.0	3,122.2	3,038.6	3,019.3	13.0	7.8	165.45	-150.6	-342.1	973.5	961.5	11.96	81.401		
3,300.0	3,219.1	3,132.4	3,112.5	13.5	8.0	165.48	-156.1	-352.2	1,007.9	995.6	12.35	81.638		
3,400.0	3,315.9	3,226.3	3,205.6	14.0	8.3	165.50	-161.5	-362.4	1,042.4	1,029.7	12.73	81.860		
3,500.0	3,412.8	3,320.1	3,298.8	14.4	8.5	165.52	-166.9	-372.5	1,076.9	1,063.8	13.12	82.069		
3,600.0	3,509.6	3,414.0	3,391.9	14.9	8.8	165.54	-172.4	-382.7	1,111.4	1,097.9	13.51	82.267		
3,700.0	3,606.5	3,507.9	3,485.1	15.4	9.1	165.56	-177.8	-392.8	1,145.9	1,132.0	13.90	82.452		
3,800.0	3,703.4	3,601.7	3,578.2	15.9	9.3	165.58	-183.2	-402.9	1,180.4	1,166.1	14.29	82.628		
3,900.0	3,800.2	3,695.6	3,671.4	16.4	9.6	165.59	-188.7	-413.1	1,214.8	1,200.2	14.67	82.795		
4,000.0	3,897.1	3,789.5	3,764.6	16.8	9.8	165.61	-194.1	-423.2	1,249.3	1,234.3	15.06	82.952		
4,100.0	3,993.9	3,883.3	3,857.7	17.3	10.1	165.62	-199.5	-433.4	1,283.8	1,268.4	15.45	83.102		
4,200.0	4,090.8	3,977.2	3,950.9	17.8	10.4	165.64	-205.0	-443.5	1,318.3	1,302.5	15.84	83.244		
4,300.0	4,187.6	4,071.1	4,044.0	18.3	10.6	165.65	-210.4	-453.6	1,352.8	1,336.6	16.22	83.380		
4,400.0	4,284.5	4,164.9	4,137.2	18.7	10.9	165.66	-215.9	-463.8	1,387.3	1,370.7	16.61	83.509		
4,500.0	4,381.3	4,258.8	4,230.3	19.2	11.1	165.68	-221.3	-473.9	1,421.8	1,404.8	17.00	83.632		
4,600.0	4,478.2	4,352.7	4,323.5	19.7	11.4	165.69	-226.7	-484.1	1,456.2	1,438.9	17.39	83.749		
4,700.0	4,575.0	4,446.5	4,416.7	20.2	11.7	165.70	-232.2	-494.2	1,490.7	1,473.0	17.78	83.862		
4,800.0	4,671.9	4,540.4	4,509.8	20.7	11.9	165.71	-237.6	-504.3	1,525.2	1,507.1	18.16	83.969		

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	1.0	1.0	0.0	0.0	-89.20	0.7	-52.3	52.3					
100.0	100.0	101.0	101.0	0.1	0.1	-89.20	0.7	-52.3	52.3	52.1	0.25	212.537		
200.0	200.0	201.0	201.0	0.3	0.3	-89.20	0.7	-52.3	52.3	51.7	0.60	87.882		
250.0	250.0	251.0	251.0	0.4	0.4	-89.20	0.7	-52.3	52.3	51.5	0.77	67.954	CC, ES	
300.0	300.0	301.0	301.0	0.5	0.5	166.79	0.7	-52.3	52.7	51.8	0.94	55.848		
400.0	399.9	400.0	400.0	0.7	0.6	166.42	-0.4	-53.6	57.5	56.2	1.29	44.463		
500.0	499.7	497.2	497.0	0.9	0.8	164.96	-3.6	-57.5	68.2	66.5	1.64	41.506	SF	
600.0	599.1	594.6	594.1	1.1	1.0	163.18	-8.8	-63.7	84.8	82.7	2.00	42.346		
700.0	698.2	692.4	691.5	1.4	1.3	162.28	-14.5	-70.5	105.2	102.8	2.37	44.437		
800.0	796.6	789.6	788.3	1.7	1.5	162.11	-20.1	-77.2	128.8	126.1	2.74	47.096		
900.0	894.4	885.9	884.2	2.1	1.7	162.33	-25.6	-83.9	155.7	152.6	3.11	50.117		
970.7	963.2	953.5	951.5	2.4	1.8	162.62	-29.5	-88.6	176.7	173.3	3.37	52.421		
1,000.0	991.5	981.3	979.2	2.6	1.9	162.80	-31.1	-90.5	185.7	182.2	3.48	53.307		
1,100.0	1,088.4	1,076.4	1,074.0	3.0	2.1	163.30	-36.6	-97.1	216.4	212.5	3.87	55.935		
1,200.0	1,185.2	1,171.6	1,168.7	3.5	2.3	163.68	-42.1	-103.7	247.2	242.9	4.26	58.076		
1,300.0	1,282.1	1,266.7	1,263.5	4.0	2.6	163.97	-47.6	-110.2	278.0	273.3	4.64	59.853		
1,400.0	1,378.9	1,361.8	1,358.2	4.4	2.8	164.21	-53.0	-116.8	308.7	303.7	5.03	61.351		
1,500.0	1,475.8	1,457.0	1,453.0	4.9	3.0	164.40	-58.5	-123.4	339.5	334.1	5.42	62.630		
1,600.0	1,572.6	1,552.1	1,547.7	5.4	3.2	164.56	-64.0	-130.0	370.3	364.5	5.81	63.736		
1,700.0	1,669.5	1,647.3	1,642.5	5.8	3.5	164.70	-69.5	-136.6	401.1	394.9	6.20	64.700		
1,800.0	1,766.3	1,742.4	1,737.2	6.3	3.7	164.81	-75.0	-143.2	431.9	425.3	6.59	65.549		
1,900.0	1,863.2	1,837.5	1,832.0	6.8	3.9	164.92	-80.5	-149.7	462.7	455.7	6.98	66.302		
2,000.0	1,960.0	1,932.7	1,926.7	7.3	4.1	165.00	-86.0	-156.3	493.5	486.1	7.37	66.974		
2,100.0	2,056.9	2,027.8	2,021.5	7.7	4.3	165.08	-91.4	-162.9	524.3	516.5	7.76	67.578		
2,200.0	2,153.7	2,122.9	2,116.2	8.2	4.6	165.15	-96.9	-169.5	555.1	546.9	8.15	68.123		
2,300.0	2,250.6	2,218.1	2,211.0	8.7	4.8	165.21	-102.4	-176.1	585.9	577.3	8.54	68.618		
2,400.0	2,347.4	2,313.2	2,305.7	9.2	5.0	165.27	-107.9	-182.7	616.7	607.7	8.93	69.069		
2,500.0	2,444.3	2,408.4	2,400.5	9.7	5.2	165.32	-113.4	-189.2	647.5	638.1	9.32	69.482		
2,600.0	2,541.1	2,503.5	2,495.2	10.1	5.5	165.37	-118.9	-195.8	678.2	668.5	9.71	69.861		
2,700.0	2,638.0	2,598.6	2,590.0	10.6	5.7	165.41	-124.4	-202.4	709.0	698.9	10.10	70.210		
2,800.0	2,734.8	2,693.8	2,684.7	11.1	5.9	165.45	-129.8	-209.0	739.8	729.4	10.49	70.534		
2,900.0	2,831.7	2,788.9	2,779.5	11.6	6.1	165.48	-135.3	-215.6	770.6	759.8	10.88	70.834		
3,000.0	2,928.5	2,884.1	2,874.3	12.0	6.4	165.51	-140.8	-222.1	801.4	790.2	11.27	71.113		
3,100.0	3,025.4	2,979.2	2,969.0	12.5	6.6	165.54	-146.3	-228.7	832.2	820.6	11.66	71.373		
3,200.0	3,122.2	3,074.3	3,063.8	13.0	6.8	165.57	-151.8	-235.3	863.0	851.0	12.05	71.616		
3,300.0	3,219.1	3,169.5	3,158.5	13.5	7.0	165.60	-157.3	-241.9	893.8	881.4	12.44	71.844		
3,400.0	3,315.9	3,264.6	3,253.3	14.0	7.2	165.62	-162.7	-248.5	924.6	911.8	12.83	72.057		
3,500.0	3,412.8	3,359.7	3,348.0	14.4	7.5	165.65	-168.2	-255.1	955.4	942.2	13.22	72.258		
3,600.0	3,509.6	3,454.9	3,442.8	14.9	7.7	165.67	-173.7	-261.6	986.2	972.6	13.61	72.448		
3,700.0	3,606.5	3,550.0	3,537.5	15.4	7.9	165.69	-179.2	-268.2	1,017.0	1,003.0	14.00	72.626		
3,800.0	3,703.4	3,645.2	3,632.3	15.9	8.1	165.71	-184.7	-274.8	1,047.8	1,033.4	14.39	72.795		
3,900.0	3,800.2	3,740.3	3,727.0	16.4	8.4	165.72	-190.2	-281.4	1,078.6	1,063.9	14.78	72.955		
4,000.0	3,897.1	3,835.4	3,821.8	16.8	8.6	165.74	-195.7	-288.0	1,109.4	1,094.3	15.18	73.107		
4,100.0	3,993.9	3,930.6	3,916.5	17.3	8.8	165.76	-201.1	-294.5	1,140.2	1,124.7	15.57	73.251		
4,200.0	4,090.8	4,025.7	4,011.3	17.8	9.0	165.77	-206.6	-301.1	1,171.0	1,155.1	15.96	73.388		
4,300.0	4,187.6	4,120.8	4,106.0	18.3	9.3	165.79	-212.1	-307.7	1,201.8	1,185.5	16.35	73.518		
4,400.0	4,284.5	4,216.0	4,200.8	18.7	9.5	165.80	-217.6	-314.3	1,232.6	1,215.9	16.74	73.642		
4,500.0	4,381.3	4,311.1	4,295.5	19.2	9.7	165.81	-223.1	-320.9	1,263.4	1,246.3	17.13	73.761		
4,600.0	4,478.2	4,406.3	4,390.3	19.7	9.9	165.83	-228.6	-327.5	1,294.2	1,276.7	17.52	73.874		
4,700.0	4,575.0	4,501.4	4,485.0	20.2	10.1	165.84	-234.1	-334.0	1,325.0	1,307.1	17.91	73.982		
4,800.0	4,671.9	4,596.5	4,579.8	20.7	10.4	165.85	-239.5	-340.6	1,355.8	1,337.5	18.30	74.086		
4,900.0	4,768.7	4,691.7	4,674.5	21.1	10.6	165.86	-245.0	-347.2	1,386.6	1,368.0	18.69	74.185		

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)								
5,000.0	4,865.6	4,786.8	4,769.3	21.6	10.8	165.87	-250.5	-353.8	1,417.4	1,398.4	19.08	74.280						
5,100.0	4,962.4	4,882.0	4,864.0	22.1	11.0	165.88	-256.0	-360.4	1,448.2	1,428.8	19.47	74.371						
5,200.0	5,059.3	4,977.1	4,958.8	22.6	11.3	165.89	-261.5	-366.9	1,479.0	1,459.2	19.86	74.459						
5,300.0	5,156.1	5,072.2	5,053.5	23.1	11.5	165.90	-267.0	-373.5	1,509.8	1,489.6	20.25	74.543						
5,400.0	5,253.0	5,167.4	5,148.3	23.5	11.7	165.91	-272.4	-380.1	1,540.6	1,520.0	20.65	74.624						



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	1.0	1.0	0.0	0.0	-89.05	0.7	-44.7	44.8						
100.0	100.0	101.0	101.0	0.1	0.1	-89.05	0.7	-44.7	44.8	44.5	0.25	181.857	CC, ES		
200.0	200.0	201.0	201.0	0.3	0.3	-89.05	0.7	-44.7	44.8	44.2	0.60	75.196			
250.0	250.0	251.0	251.0	0.4	0.4	-89.05	0.7	-44.7	44.8	44.0	0.77	58.145			
300.0	300.0	301.0	301.0	0.5	0.5	166.96	0.7	-44.7	45.2	44.2	0.94	47.851			
400.0	399.9	400.9	400.9	0.7	0.6	167.61	0.5	-44.8	48.6	47.3	1.29	37.611			
500.0	499.7	500.5	500.5	0.9	0.8	167.33	-1.2	-45.1	55.7	54.0	1.64	33.899			
600.0	599.1	599.8	599.7	1.1	1.0	166.28	-4.6	-45.6	66.4	64.4	2.00	33.234			
700.0	698.2	698.5	698.3	1.4	1.2	164.90	-9.7	-46.5	80.7	78.3	2.36	34.182			
800.0	796.6	796.9	796.5	1.7	1.4	164.00	-15.5	-47.5	98.6	95.8	2.73	36.064			
900.0	894.4	894.6	894.0	2.1	1.6	163.81	-21.3	-48.4	119.7	116.6	3.11	38.513			
970.7	963.2	963.3	962.6	2.4	1.7	163.93	-25.4	-49.1	136.6	133.3	3.37	40.496			
1,000.0	991.5	991.6	990.9	2.6	1.8	164.05	-27.1	-49.4	144.0	140.5	3.49	41.283			
1,100.0	1,088.4	1,088.4	1,087.5	3.0	2.0	164.36	-32.8	-50.4	169.1	165.2	3.88	43.609			
1,200.0	1,185.2	1,185.2	1,184.1	3.5	2.1	164.60	-38.6	-51.3	194.2	189.9	4.27	45.494			
1,300.0	1,282.1	1,282.0	1,280.7	4.0	2.3	164.78	-44.3	-52.3	219.2	214.6	4.66	47.052			
1,400.0	1,378.9	1,378.8	1,377.4	4.4	2.5	164.93	-50.0	-53.2	244.3	239.3	5.05	48.361			
1,500.0	1,475.8	1,475.6	1,474.0	4.9	2.7	165.05	-55.8	-54.2	269.4	264.0	5.45	49.475			
1,600.0	1,572.6	1,572.4	1,570.6	5.4	2.9	165.15	-61.5	-55.1	294.5	288.7	5.84	50.434			
1,700.0	1,669.5	1,669.2	1,667.2	5.8	3.1	165.23	-67.2	-56.1	319.6	313.4	6.23	51.269			
1,800.0	1,766.3	1,766.0	1,763.9	6.3	3.3	165.30	-73.0	-57.1	344.7	338.1	6.63	52.002			
1,900.0	1,863.2	1,862.8	1,860.5	6.8	3.5	165.36	-78.7	-58.0	369.8	362.8	7.02	52.650			
2,000.0	1,960.0	1,959.6	1,957.1	7.3	3.7	165.41	-84.4	-59.0	394.9	387.5	7.42	53.228			
2,100.0	2,056.9	2,056.4	2,053.7	7.7	3.9	165.46	-90.2	-59.9	420.0	412.2	7.82	53.745			
2,200.0	2,153.7	2,153.2	2,150.4	8.2	4.1	165.50	-95.9	-60.9	445.1	436.9	8.21	54.212			
2,300.0	2,250.6	2,250.0	2,247.0	8.7	4.3	165.54	-101.7	-61.8	470.3	461.6	8.61	54.635			
2,400.0	2,347.4	2,346.8	2,343.6	9.2	4.5	165.57	-107.4	-62.8	495.4	486.3	9.00	55.020			
2,500.0	2,444.3	2,443.6	2,440.2	9.7	4.7	165.60	-113.1	-63.8	520.5	511.1	9.40	55.372			
2,600.0	2,541.1	2,540.4	2,536.8	10.1	4.9	165.63	-118.9	-64.7	545.6	535.8	9.80	55.694			
2,700.0	2,638.0	2,637.2	2,633.5	10.6	5.1	165.65	-124.6	-65.7	570.7	560.5	10.19	55.992			
2,800.0	2,734.8	2,734.0	2,730.1	11.1	5.3	165.68	-130.3	-66.6	595.8	585.2	10.59	56.266			
2,900.0	2,831.7	2,830.8	2,826.7	11.6	5.5	165.70	-136.1	-67.6	620.9	609.9	10.98	56.521			
3,000.0	2,928.5	2,927.6	2,923.3	12.0	5.7	165.72	-141.8	-68.6	646.0	634.6	11.38	56.757			
3,100.0	3,025.4	3,024.4	3,020.0	12.5	5.9	165.74	-147.6	-69.5	671.1	659.3	11.78	56.977			
3,200.0	3,122.2	3,121.2	3,116.6	13.0	6.1	165.75	-153.3	-70.5	696.2	684.0	12.17	57.183			
3,300.0	3,219.1	3,218.0	3,213.2	13.5	6.3	165.77	-159.0	-71.4	721.3	708.7	12.57	57.375			
3,400.0	3,315.9	3,314.8	3,309.8	14.0	6.5	165.78	-164.8	-72.4	746.4	733.4	12.97	57.556			
3,500.0	3,412.8	3,411.6	3,406.4	14.4	6.7	165.80	-170.5	-73.3	771.5	758.1	13.36	57.725			
3,600.0	3,509.6	3,508.4	3,503.1	14.9	6.9	165.81	-176.2	-74.3	796.6	782.8	13.76	57.885			
3,700.0	3,606.5	3,605.2	3,599.7	15.4	7.0	165.82	-182.0	-75.3	821.7	807.5	14.16	58.036			
3,800.0	3,703.4	3,702.0	3,696.3	15.9	7.2	165.83	-187.7	-76.2	846.8	832.2	14.56	58.178			
3,900.0	3,800.2	3,798.8	3,792.9	16.4	7.4	165.84	-193.4	-77.2	871.9	856.9	14.95	58.313			
4,000.0	3,897.1	3,895.6	3,889.6	16.8	7.6	165.85	-199.2	-78.1	897.0	881.7	15.35	58.440			
4,100.0	3,993.9	3,992.4	3,986.2	17.3	7.8	165.86	-204.9	-79.1	922.1	906.4	15.75	58.561			
4,200.0	4,090.8	4,089.1	4,082.8	17.8	8.0	165.87	-210.7	-80.0	947.2	931.1	16.14	58.676			
4,300.0	4,187.6	4,185.9	4,179.4	18.3	8.2	165.88	-216.4	-81.0	972.3	955.8	16.54	58.786			
4,400.0	4,284.5	4,282.7	4,276.1	18.7	8.4	165.89	-222.1	-82.0	997.4	980.5	16.94	58.890			
4,500.0	4,381.3	4,379.5	4,372.7	19.2	8.6	165.89	-227.9	-82.9	1,022.5	1,005.2	17.33	58.989			
4,600.0	4,478.2	4,476.3	4,469.3	19.7	8.8	165.90	-233.6	-83.9	1,047.6	1,029.9	17.73	59.084			
4,700.0	4,575.0	4,573.1	4,565.9	20.2	9.0	165.91	-239.3	-84.8	1,072.7	1,054.6	18.13	59.175			
4,800.0	4,671.9	4,669.9	4,662.5	20.7	9.2	165.92	-245.1	-85.8	1,097.8	1,079.3	18.53	59.262			
4,900.0	4,768.7	4,766.7	4,759.2	21.1	9.4	165.92	-250.8	-86.8	1,122.9	1,104.0	18.92	59.345			

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4D-20H-O264 - HZ - Plan #1													Offset Site Error: 0.0 ft			
Survey Program: 0-Geolink MWD															Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor				
5,000.0	4,865.6	4,863.5	4,855.8	21.6	9.6	165.93	-256.6	-87.7	1,148.0	1,128.7	19.32	59.425				
5,100.0	4,962.4	4,960.3	4,952.4	22.1	9.8	165.93	-262.3	-88.7	1,173.1	1,153.4	19.72	59.501				
5,200.0	5,059.3	5,057.1	5,049.0	22.6	10.0	165.94	-268.0	-89.6	1,198.2	1,178.1	20.11	59.574				
5,300.0	5,156.1	5,153.9	5,145.7	23.1	10.2	165.94	-273.8	-90.6	1,223.3	1,202.8	20.51	59.645				
5,400.0	5,253.0	5,250.7	5,242.3	23.5	10.4	165.95	-279.5	-91.5	1,248.4	1,227.5	20.91	59.713				
5,435.0	5,286.8	5,284.6	5,276.1	23.7	10.5	165.95	-281.5	-91.9	1,257.2	1,236.2	21.05	59.736				
5,500.0	5,350.0	5,347.7	5,339.1	24.0	10.6	166.02	-285.2	-92.5	1,272.9	1,251.5	21.33	59.666				
5,600.0	5,447.8	5,445.4	5,436.6	24.4	10.8	166.09	-291.0	-93.5	1,294.2	1,272.4	21.76	59.464				
5,700.0	5,546.2	5,543.7	5,534.8	24.7	11.0	166.10	-296.9	-94.4	1,312.2	1,290.0	22.18	59.149				
5,800.0	5,645.2	5,642.6	5,633.5	25.0	11.2	166.06	-302.7	-95.4	1,326.8	1,304.2	22.59	58.727				
5,900.0	5,744.6	5,744.9	5,735.6	25.2	11.4	165.99	-308.2	-96.3	1,338.0	1,315.0	22.98	58.221				
6,000.0	5,844.4	5,848.6	5,839.2	25.3	11.6	165.94	-312.0	-97.0	1,345.6	1,322.3	23.33	57.675				
6,100.0	5,944.3	5,952.5	5,943.1	25.4	11.7	165.92	-314.0	-97.3	1,349.5	1,325.8	23.64	57.092				
6,155.7	6,000.0	6,010.4	6,001.0	25.5	11.8	-89.97	-314.3	-97.3	1,350.0	1,326.3	23.79	56.743				
6,200.0	6,044.3	6,054.7	6,045.3	25.5	11.9	-89.97	-314.3	-97.3	1,350.0	1,326.1	23.93	56.417				
6,300.0	6,144.3	6,154.7	6,145.3	25.6	12.1	-89.97	-314.3	-97.3	1,350.0	1,325.8	24.24	55.693				
6,400.0	6,244.3	6,254.7	6,245.3	25.7	12.2	-89.97	-314.3	-97.3	1,350.0	1,325.5	24.55	54.985				
6,500.0	6,344.3	6,354.7	6,345.3	25.7	12.4	-89.97	-314.3	-97.3	1,350.0	1,325.2	24.87	54.293				
6,602.7	6,447.0	6,457.4	6,448.0	25.8	12.5	-89.97	-314.3	-97.3	1,350.0	1,324.9	25.19	53.598				
6,650.0	6,494.2	6,504.6	6,495.2	25.8	12.6	-89.97	-312.4	-97.3	1,350.0	1,324.8	25.28	53.404				
6,700.0	6,543.8	6,554.6	6,544.7	25.9	12.6	-89.98	-306.2	-97.3	1,350.0	1,324.7	25.32	53.330				
6,750.0	6,592.7	6,604.5	6,593.6	25.8	12.6	-89.98	-295.7	-97.3	1,350.0	1,324.8	25.29	53.373				
6,800.0	6,640.4	6,654.5	6,641.3	25.8	12.5	-89.98	-281.0	-97.3	1,350.0	1,324.8	25.23	53.514				
6,850.0	6,686.7	6,704.5	6,687.6	25.8	12.5	-89.99	-262.2	-97.3	1,350.0	1,324.9	25.13	53.730				
6,900.0	6,731.1	6,754.5	6,732.1	25.8	12.4	-89.99	-239.5	-97.3	1,350.0	1,325.0	25.00	53.995				
6,950.0	6,773.4	6,804.5	6,774.4	25.7	12.4	-90.00	-212.9	-97.3	1,350.0	1,325.2	24.87	54.275				
7,000.0	6,813.2	6,854.5	6,814.3	25.7	12.3	-90.00	-182.8	-97.3	1,350.0	1,325.3	24.76	54.533				
7,050.0	6,850.2	6,904.5	6,851.4	25.7	12.3	-90.01	-149.2	-97.3	1,350.0	1,325.4	24.67	54.728				
7,100.0	6,884.2	6,954.5	6,885.4	25.7	12.2	-90.01	-112.6	-97.3	1,350.0	1,325.4	24.63	54.818				
7,150.0	6,914.8	7,004.5	6,916.1	25.7	12.2	-90.02	-73.1	-97.3	1,350.0	1,325.4	24.65	54.762				
7,200.0	6,941.9	7,054.6	6,943.3	25.7	12.3	-90.02	-31.1	-97.3	1,350.0	1,325.3	24.76	54.525				
7,250.0	6,965.2	7,104.6	6,966.7	25.7	12.4	-90.02	13.1	-97.3	1,350.0	1,325.1	24.96	54.083				
7,300.0	6,984.5	7,154.7	6,986.1	25.8	12.6	-90.03	59.2	-97.3	1,350.0	1,324.8	25.27	53.425				
7,350.0	6,999.8	7,204.7	7,001.5	25.9	12.8	-90.03	106.8	-97.3	1,350.0	1,324.4	25.69	52.556				
7,400.0	7,010.8	7,254.8	7,012.7	26.0	13.0	-90.04	155.6	-97.3	1,350.0	1,323.8	26.22	51.496				
7,450.0	7,017.6	7,304.9	7,019.5	26.2	13.3	-90.04	205.2	-97.3	1,350.0	1,323.2	26.85	50.276				
7,502.7	7,020.0	7,357.7	7,022.0	26.3	13.7	-90.04	258.0	-97.3	1,350.0	1,322.4	27.63	48.864				
7,600.0	7,020.0	7,455.0	7,022.0	26.8	14.6	-90.04	355.2	-97.3	1,350.0	1,320.7	29.33	46.023				
7,700.0	7,020.0	7,555.0	7,022.0	27.3	15.6	-90.04	455.2	-97.3	1,350.0	1,318.7	31.36	43.051				
7,800.0	7,020.0	7,655.0	7,022.0	27.9	16.7	-90.04	555.2	-97.3	1,350.0	1,316.4	33.63	40.145				
7,900.0	7,020.0	7,755.0	7,022.0	28.7	18.0	-90.04	655.2	-97.3	1,350.0	1,313.9	36.10	37.400				
8,000.0	7,020.0	7,855.0	7,022.0	29.5	19.3	-90.04	755.2	-97.3	1,350.0	1,311.3	38.73	34.860				
8,100.0	7,020.0	7,955.0	7,022.0	30.4	20.7	-90.04	855.2	-97.3	1,350.0	1,308.6	41.49	32.541				
8,200.0	7,020.0	8,055.0	7,022.0	31.4	22.1	-90.04	955.2	-97.3	1,350.0	1,305.7	44.35	30.438				
8,300.0	7,020.0	8,155.0	7,022.0	32.4	23.6	-90.04	1,055.2	-97.3	1,350.0	1,302.7	47.31	28.538				
8,400.0	7,020.0	8,255.0	7,022.0	33.5	25.1	-90.04	1,155.2	-97.3	1,350.0	1,299.7	50.33	26.823				
8,500.0	7,020.0	8,355.0	7,022.0	34.7	26.7	-90.04	1,255.2	-97.3	1,350.0	1,296.6	53.41	25.275				
8,600.0	7,020.0	8,455.0	7,022.0	35.9	28.2	-90.04	1,355.2	-97.3	1,350.0	1,293.5	56.55	23.875				
8,700.0	7,020.0	8,555.0	7,022.0	37.1	29.8	-90.04	1,455.2	-97.3	1,350.0	1,290.3	59.72	22.605				
8,800.0	7,020.0	8,655.0	7,022.0	38.4	31.4	-90.04	1,555.2	-97.3	1,350.0	1,287.1	62.93	21.452				
8,900.0	7,020.0	8,755.0	7,022.0	39.8	33.0	-90.04	1,655.2	-97.3	1,350.0	1,283.9	66.17	20.402				
9,000.0	7,020.0	8,855.0	7,022.0	41.1	34.7	-90.04	1,755.2	-97.3	1,350.0	1,280.6	69.44	19.442				

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4D-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
9,100.0	7,020.0	9,955.0	7,022.0	42.5	36.3	-90.04	1,855.2	-97.3	1,350.0	1,277.3	72.73	18.563		
9,200.0	7,020.0	9,055.0	7,022.0	43.9	38.0	-90.04	1,955.2	-97.3	1,350.0	1,274.0	76.04	17.755		
9,300.0	7,020.0	9,155.0	7,022.0	45.4	39.6	-90.04	2,055.2	-97.3	1,350.0	1,270.7	79.36	17.011		
9,400.0	7,020.0	9,255.0	7,022.0	46.9	41.3	-90.04	2,155.2	-97.3	1,350.0	1,267.3	82.70	16.324		
9,500.0	7,020.0	9,355.0	7,022.0	48.3	43.0	-90.04	2,255.2	-97.3	1,350.0	1,264.0	86.06	15.688		
9,600.0	7,020.0	9,455.0	7,022.0	49.8	44.7	-90.04	2,355.2	-97.3	1,350.0	1,260.6	89.42	15.097		
9,700.0	7,020.0	9,555.0	7,022.0	51.4	46.4	-90.04	2,455.2	-97.3	1,350.0	1,257.2	92.80	14.548		
9,800.0	7,020.0	9,655.0	7,022.0	52.9	48.1	-90.04	2,555.2	-97.3	1,350.0	1,253.8	96.19	14.036		
9,900.0	7,020.0	9,755.0	7,022.0	54.4	49.8	-90.04	2,655.2	-97.3	1,350.0	1,250.4	99.58	13.557		
10,000.0	7,020.0	9,855.0	7,022.0	56.0	51.5	-90.04	2,755.2	-97.3	1,350.0	1,247.0	102.98	13.109		
10,100.0	7,020.0	9,955.0	7,022.0	57.6	53.2	-90.04	2,855.2	-97.3	1,350.0	1,243.6	106.39	12.689		
10,200.0	7,020.0	10,055.0	7,022.0	59.2	54.9	-90.04	2,955.2	-97.3	1,350.0	1,240.2	109.81	12.295		
10,300.0	7,020.0	10,155.0	7,022.0	60.7	56.6	-90.04	3,055.2	-97.3	1,350.0	1,236.8	113.23	11.923		
10,400.0	7,020.0	10,255.0	7,022.0	62.3	58.3	-90.04	3,155.2	-97.3	1,350.0	1,233.4	116.65	11.573		
10,500.0	7,020.0	10,355.0	7,022.0	64.0	60.0	-90.04	3,255.2	-97.3	1,350.0	1,229.9	120.08	11.242		
10,600.0	7,020.0	10,455.0	7,022.0	65.6	61.7	-90.04	3,355.2	-97.3	1,350.0	1,226.5	123.52	10.930		
10,700.0	7,020.0	10,555.0	7,022.0	67.2	63.4	-90.04	3,455.2	-97.3	1,350.0	1,223.1	126.96	10.634		
10,800.0	7,020.0	10,655.0	7,022.0	68.8	65.2	-90.04	3,555.2	-97.3	1,350.0	1,219.6	130.40	10.353		
10,900.0	7,020.0	10,755.0	7,022.0	70.5	66.9	-90.04	3,655.2	-97.3	1,350.0	1,216.2	133.85	10.086		
11,000.0	7,020.0	10,855.0	7,022.0	72.1	68.6	-90.04	3,755.2	-97.3	1,350.0	1,212.7	137.30	9.833		
11,100.0	7,020.0	10,955.0	7,022.0	73.7	70.3	-90.04	3,855.2	-97.3	1,350.0	1,209.3	140.75	9.592		
11,200.0	7,020.0	11,055.0	7,022.0	75.4	72.1	-90.04	3,955.2	-97.3	1,350.0	1,205.8	144.20	9.362		
11,300.0	7,020.0	11,155.0	7,022.0	77.0	73.8	-90.04	4,055.2	-97.3	1,350.0	1,202.3	147.66	9.143		
11,400.0	7,020.0	11,255.0	7,022.0	78.7	75.5	-90.04	4,155.2	-97.3	1,350.0	1,198.9	151.12	8.933		
11,500.0	7,020.0	11,355.0	7,022.0	80.4	77.3	-90.04	4,255.2	-97.3	1,350.0	1,195.4	154.58	8.733		
11,600.0	7,020.0	11,455.0	7,022.0	82.0	79.0	-90.04	4,355.2	-97.3	1,350.0	1,192.0	158.05	8.542		
11,700.0	7,020.0	11,555.0	7,022.0	83.7	80.7	-90.04	4,455.2	-97.3	1,350.0	1,188.5	161.51	8.359		
11,730.3	7,020.0	11,585.2	7,022.0	84.2	81.2	-90.04	4,485.5	-97.3	1,350.0	1,187.4	162.56	8.305		
11,740.8	7,020.0	11,590.6	7,022.0	84.4	81.3	-90.04	4,490.9	-97.3	1,350.0	1,187.2	162.84	8.291 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4E-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	-89.49	0.3	-37.5	37.5					
100.0	100.0	101.0	101.0	0.1	0.1	-89.49	0.3	-37.5	37.5	37.2	0.25	152.290		
200.0	200.0	201.0	201.0	0.3	0.3	-89.49	0.3	-37.5	37.5	36.9	0.60	62.971		
250.0	250.0	251.0	251.0	0.4	0.4	-89.49	0.3	-37.5	37.5	36.7	0.77	48.692 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	166.55	0.3	-37.5	37.9	37.0	0.94	40.144		
400.0	399.9	400.9	400.9	0.7	0.6	167.66	0.3	-37.5	41.3	40.0	1.29	31.953		
500.0	499.7	501.3	501.2	0.9	0.8	168.63	-0.4	-36.9	47.5	45.9	1.64	28.959		
600.0	599.1	601.5	601.5	1.1	1.0	168.71	-2.4	-35.2	56.0	54.0	1.99	28.121		
700.0	698.2	701.6	701.5	1.4	1.2	168.22	-5.8	-32.4	66.7	64.4	2.35	28.434		
800.0	796.6	801.6	801.3	1.7	1.4	167.43	-10.5	-28.5	79.7	77.0	2.71	29.402		
900.0	894.4	900.9	900.3	2.1	1.6	166.61	-16.4	-23.7	95.0	92.0	3.08	30.823		
970.7	963.2	970.5	969.7	2.4	1.7	166.35	-20.7	-20.2	107.8	104.5	3.35	32.197		
1,000.0	991.5	999.2	998.3	2.6	1.8	166.33	-22.4	-18.8	113.5	110.0	3.46	32.770		
1,100.0	1,088.4	1,097.3	1,096.1	3.0	2.0	166.26	-28.4	-13.9	132.7	128.8	3.85	34.447		
1,200.0	1,185.2	1,195.5	1,193.9	3.5	2.2	166.22	-34.4	-8.9	151.9	147.7	4.25	35.794		
1,300.0	1,282.1	1,293.6	1,291.8	4.0	2.4	166.18	-40.4	-4.0	171.2	166.5	4.64	36.896		
1,400.0	1,378.9	1,391.7	1,389.6	4.4	2.6	166.15	-46.4	0.9	190.4	185.4	5.04	37.814		
1,500.0	1,475.8	1,489.9	1,487.4	4.9	2.8	166.12	-52.3	5.8	209.7	204.2	5.43	38.590		
1,600.0	1,572.6	1,588.0	1,585.2	5.4	3.1	166.10	-58.3	10.8	228.9	223.1	5.83	39.253		
1,700.0	1,669.5	1,686.1	1,683.1	5.8	3.3	166.09	-64.3	15.7	248.2	241.9	6.23	39.827		
1,800.0	1,766.3	1,784.3	1,780.9	6.3	3.5	166.07	-70.3	20.6	267.4	260.8	6.63	40.327		
1,900.0	1,863.2	1,882.4	1,878.7	6.8	3.7	166.06	-76.3	25.5	286.7	279.6	7.03	40.768		
2,000.0	1,960.0	1,980.5	1,976.5	7.3	3.9	166.05	-82.3	30.5	305.9	298.5	7.43	41.159		
2,100.0	2,056.9	2,078.7	2,074.4	7.7	4.1	166.04	-88.3	35.4	325.1	317.3	7.83	41.507		
2,200.0	2,153.7	2,176.8	2,172.2	8.2	4.3	166.03	-94.3	40.3	344.4	336.2	8.23	41.820		
2,300.0	2,250.6	2,274.9	2,270.0	8.7	4.6	166.02	-100.2	45.2	363.6	355.0	8.64	42.103		
2,400.0	2,347.4	2,373.0	2,367.8	9.2	4.8	166.02	-106.2	50.1	382.9	373.8	9.04	42.359		
2,500.0	2,444.3	2,471.2	2,465.6	9.7	5.0	166.01	-112.2	55.1	402.1	392.7	9.44	42.593		
2,600.0	2,541.1	2,569.3	2,563.5	10.1	5.2	166.00	-118.2	60.0	421.4	411.5	9.84	42.807		
2,700.0	2,638.0	2,667.4	2,661.3	10.6	5.4	166.00	-124.2	64.9	440.6	430.4	10.25	43.003		
2,800.0	2,734.8	2,765.6	2,759.1	11.1	5.6	165.99	-130.2	69.8	459.9	449.2	10.65	43.184		
2,900.0	2,831.7	2,863.7	2,856.9	11.6	5.9	165.99	-136.2	74.8	479.1	468.0	11.05	43.351		
3,000.0	2,928.5	2,961.8	2,954.8	12.0	6.1	165.98	-142.2	79.7	498.3	486.9	11.45	43.506		
3,100.0	3,025.4	3,060.0	3,052.6	12.5	6.3	165.98	-148.1	84.6	517.6	505.7	11.86	43.650		
3,200.0	3,122.2	3,158.1	3,150.4	13.0	6.5	165.98	-154.1	89.5	536.8	524.6	12.26	43.784		
3,300.0	3,219.1	3,256.2	3,248.2	13.5	6.7	165.97	-160.1	94.5	556.1	543.4	12.66	43.909		
3,400.0	3,315.9	3,354.4	3,346.1	14.0	7.0	165.97	-166.1	99.4	575.3	562.3	13.07	44.027		
3,500.0	3,412.8	3,452.5	3,443.9	14.4	7.2	165.97	-172.1	104.3	594.6	581.1	13.47	44.137		
3,600.0	3,509.6	3,550.6	3,541.7	14.9	7.4	165.97	-178.1	109.2	613.8	599.9	13.87	44.240		
3,700.0	3,606.5	3,648.7	3,639.5	15.4	7.6	165.96	-184.1	114.1	633.1	618.8	14.28	44.338		
3,800.0	3,703.4	3,746.9	3,737.4	15.9	7.8	165.96	-190.1	119.1	652.3	637.6	14.68	44.430		
3,900.0	3,800.2	3,845.0	3,835.2	16.4	8.0	165.96	-196.0	124.0	671.5	656.5	15.09	44.517		
4,000.0	3,897.1	3,943.1	3,933.0	16.8	8.3	165.96	-202.0	128.9	690.8	675.3	15.49	44.599		
4,100.0	3,993.9	4,041.3	4,030.8	17.3	8.5	165.95	-208.0	133.8	710.0	694.1	15.89	44.677		
4,200.0	4,090.8	4,139.4	4,128.7	17.8	8.7	165.95	-214.0	138.8	729.3	713.0	16.30	44.751		
4,300.0	4,187.6	4,237.5	4,226.5	18.3	8.9	165.95	-220.0	143.7	748.5	731.8	16.70	44.821		
4,400.0	4,284.5	4,335.7	4,324.3	18.7	9.1	165.95	-226.0	148.6	767.8	750.7	17.10	44.888		
4,500.0	4,381.3	4,433.8	4,422.1	19.2	9.3	165.95	-232.0	153.5	787.0	769.5	17.51	44.952		
4,600.0	4,478.2	4,531.9	4,520.0	19.7	9.6	165.95	-238.0	158.4	806.3	788.3	17.91	45.013		
4,700.0	4,575.0	4,630.1	4,617.8	20.2	9.8	165.94	-243.9	163.4	825.5	807.2	18.32	45.071		
4,800.0	4,671.9	4,728.2	4,715.6	20.7	10.0	165.94	-249.9	168.3	844.7	826.0	18.72	45.126		
4,900.0	4,768.7	4,826.3	4,813.4	21.1	10.2	165.94	-255.9	173.2	864.0	844.9	19.12	45.179		

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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		
5,000.0	4,865.6	4,924.4	4,911.3	21.6	10.4	165.94	-261.9	178.1	883.2	863.7	19.53	45.230		
5,100.0	4,962.4	5,022.6	5,009.1	22.1	10.7	165.94	-267.9	183.1	902.5	882.5	19.93	45.279		
5,200.0	5,059.3	5,120.7	5,106.9	22.6	10.9	165.94	-273.9	188.0	921.7	901.4	20.34	45.326		
5,300.0	5,156.1	5,218.8	5,204.7	23.1	11.1	165.94	-279.9	192.9	941.0	920.2	20.74	45.371		
5,400.0	5,253.0	5,317.0	5,302.5	23.5	11.3	165.94	-285.8	197.8	960.2	939.1	21.14	45.414		
5,435.0	5,286.8	5,351.3	5,336.7	23.7	11.4	165.94	-287.9	199.6	966.9	945.7	21.28	45.428		
5,500.0	5,350.0	5,415.2	5,400.5	24.0	11.5	165.98	-291.8	202.8	978.7	957.2	21.57	45.378		
5,600.0	5,447.8	5,514.0	5,499.0	24.4	11.7	166.00	-297.9	207.7	994.2	972.2	22.00	45.190		
5,700.0	5,546.2	5,608.2	5,592.9	24.7	12.0	165.97	-303.5	212.3	1,006.3	983.9	22.41	44.911		
5,800.0	5,645.2	5,700.0	5,684.5	25.0	12.1	165.94	-308.0	216.0	1,016.0	993.3	22.78	44.609		
5,900.0	5,744.6	5,787.2	5,771.6	25.2	12.3	165.92	-311.1	218.6	1,023.3	1,000.2	23.10	44.295		
6,000.0	5,844.4	5,876.9	5,861.2	25.3	12.4	165.91	-313.4	220.5	1,028.3	1,004.9	23.40	43.940		
6,100.0	5,944.3	5,966.6	5,950.9	25.4	12.6	165.90	-314.5	221.4	1,030.8	1,007.1	23.67	43.553		
6,155.7	6,000.0	6,016.7	6,001.0	25.5	12.6	-89.98	-314.7	221.5	1,031.2	1,007.4	23.80	43.318		
6,200.0	6,044.3	6,061.0	6,045.3	25.5	12.7	-89.98	-314.7	221.5	1,031.2	1,007.2	23.94	43.069		
6,300.0	6,144.3	6,161.0	6,145.3	25.6	12.9	-89.98	-314.7	221.5	1,031.2	1,006.9	24.25	42.517		
6,400.0	6,244.3	6,261.0	6,245.3	25.7	13.0	-89.98	-314.7	221.5	1,031.2	1,006.6	24.57	41.977		
6,500.0	6,344.3	6,361.0	6,345.3	25.7	13.1	-89.98	-314.7	221.5	1,031.2	1,006.3	24.88	41.449		
6,602.7	6,447.0	6,463.7	6,448.0	25.8	13.3	-89.98	-314.7	221.5	1,031.2	1,006.0	25.20	40.918		
6,622.3	6,466.6	6,483.3	6,467.6	25.8	13.3	-90.00	-314.7	221.5	1,031.2	1,005.9	25.25	40.832		
6,650.0	6,494.2	6,510.9	6,495.2	25.8	13.4	-90.09	-314.7	221.5	1,031.2	1,005.8	25.34	40.689		
6,700.0	6,543.8	6,560.5	6,544.8	25.9	13.4	-90.43	-314.7	221.5	1,031.2	1,005.7	25.51	40.426		
6,750.0	6,592.7	6,609.5	6,593.8	25.8	13.5	-90.99	-314.6	221.5	1,031.3	1,005.7	25.68	40.158		
6,800.0	6,640.4	6,660.1	6,644.4	25.8	13.6	-91.66	-312.0	221.5	1,031.6	1,005.8	25.81	39.970		
6,850.0	6,686.7	6,712.0	6,695.7	25.8	13.6	-92.31	-304.6	221.5	1,032.1	1,006.2	25.87	39.897		
6,900.0	6,731.1	6,765.1	6,747.3	25.8	13.5	-92.96	-292.4	221.5	1,032.6	1,006.8	25.86	39.932		
6,950.0	6,773.4	6,819.5	6,798.8	25.7	13.5	-93.59	-274.9	221.5	1,033.3	1,007.5	25.79	40.066		
7,000.0	6,813.2	6,875.2	6,849.6	25.7	13.5	-94.21	-252.0	221.5	1,034.1	1,008.4	25.67	40.279		
7,050.0	6,850.2	6,932.3	6,899.1	25.7	13.4	-94.80	-223.5	221.5	1,035.0	1,009.4	25.53	40.545		
7,100.0	6,884.2	6,990.9	6,946.6	25.7	13.3	-95.35	-189.3	221.5	1,035.9	1,010.5	25.37	40.825		
7,150.0	6,914.8	7,050.8	6,991.4	25.7	13.3	-95.87	-149.6	221.5	1,036.8	1,011.5	25.24	41.070		
7,200.0	6,941.9	7,112.1	7,032.7	25.7	13.2	-96.34	-104.3	221.5	1,037.7	1,012.5	25.18	41.211		
7,250.0	6,965.2	7,174.6	7,069.5	25.7	13.3	-96.75	-53.8	221.5	1,038.5	1,013.3	25.21	41.189		
7,300.0	6,984.5	7,238.3	7,101.2	25.8	13.4	-97.11	1.4	221.5	1,039.3	1,013.9	25.39	40.940		
7,350.0	6,999.8	7,302.9	7,126.8	25.9	13.6	-97.39	60.7	221.5	1,039.9	1,014.2	25.72	40.436		
7,400.0	7,010.8	7,368.4	7,145.8	26.0	13.8	-97.60	123.3	221.5	1,040.4	1,014.1	26.25	39.637		
7,450.0	7,017.6	7,434.3	7,157.6	26.2	14.2	-97.73	188.1	221.5	1,040.7	1,013.7	26.97	38.591		
7,502.7	7,020.0	7,504.2	7,162.0	26.3	14.7	-97.78	257.9	221.5	1,040.8	1,012.8	27.92	37.279		
7,600.0	7,020.0	7,601.6	7,162.0	26.8	15.5	-97.78	355.2	221.5	1,040.8	1,011.2	29.57	35.196		
7,700.0	7,020.0	7,701.6	7,162.0	27.3	16.4	-97.78	455.2	221.5	1,040.8	1,009.2	31.56	32.981		
7,800.0	7,020.0	7,801.6	7,162.0	27.9	17.5	-97.78	555.2	221.5	1,040.8	1,007.0	33.78	30.807		
7,900.0	7,020.0	7,901.6	7,162.0	28.7	18.7	-97.78	655.2	221.5	1,040.8	1,004.6	36.21	28.744		
8,000.0	7,020.0	8,001.6	7,162.0	29.5	20.0	-97.78	755.2	221.5	1,040.8	1,002.0	38.79	26.828		
8,100.0	7,020.0	8,101.6	7,162.0	30.4	21.3	-97.78	855.2	221.5	1,040.8	999.3	41.51	25.073		
8,200.0	7,020.0	8,201.6	7,162.0	31.4	22.7	-97.78	955.2	221.5	1,040.8	996.4	44.33	23.477		
8,300.0	7,020.0	8,301.6	7,162.0	32.4	24.2	-97.78	1,055.2	221.5	1,040.8	993.5	47.24	22.031		
8,400.0	7,020.0	8,401.6	7,162.0	33.5	25.6	-97.78	1,155.2	221.5	1,040.8	990.5	50.22	20.724		
8,500.0	7,020.0	8,501.6	7,162.0	34.7	27.2	-97.78	1,255.2	221.5	1,040.8	987.5	53.26	19.540		
8,600.0	7,020.0	8,601.6	7,162.0	35.9	28.7	-97.78	1,355.2	221.5	1,040.8	984.4	56.35	18.468		
8,700.0	7,020.0	8,701.6	7,162.0	37.1	30.3	-97.78	1,455.2	221.5	1,040.8	981.3	59.49	17.495		
8,800.0	7,020.0	8,801.6	7,162.0	38.4	31.9	-97.78	1,555.2	221.5	1,040.8	978.1	62.66	16.610		
8,900.0	7,020.0	8,901.6	7,162.0	39.8	33.5	-97.78	1,655.2	221.5	1,040.8	974.9	65.86	15.803		

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	7,020.0	9,001.6	7,162.0	41.1	35.1	-97.78	1,755.2	221.5	1,040.8	971.7	69.09	15.065		
9,100.0	7,020.0	9,101.6	7,162.0	42.5	36.7	-97.78	1,855.2	221.5	1,040.8	968.4	72.34	14.388		
9,200.0	7,020.0	9,201.6	7,162.0	43.9	38.3	-97.78	1,955.2	221.5	1,040.8	965.2	75.61	13.765		
9,300.0	7,020.0	9,301.6	7,162.0	45.4	40.0	-97.78	2,055.2	221.5	1,040.8	961.9	78.90	13.191		
9,400.0	7,020.0	9,401.6	7,162.0	46.9	41.7	-97.78	2,155.2	221.5	1,040.8	958.6	82.20	12.661		
9,500.0	7,020.0	9,501.6	7,162.0	48.3	43.3	-97.78	2,255.2	221.5	1,040.8	955.2	85.52	12.170		
9,600.0	7,020.0	9,601.6	7,162.0	49.8	45.0	-97.78	2,355.2	221.5	1,040.8	951.9	88.85	11.714		
9,700.0	7,020.0	9,701.6	7,162.0	51.4	46.7	-97.78	2,455.2	221.5	1,040.8	948.6	92.19	11.290		
9,800.0	7,020.0	9,801.6	7,162.0	52.9	48.4	-97.78	2,555.2	221.5	1,040.8	945.2	95.54	10.894		
9,900.0	7,020.0	9,901.6	7,162.0	54.4	50.0	-97.78	2,655.2	221.5	1,040.8	941.9	98.90	10.524		
10,000.0	7,020.0	10,001.6	7,162.0	56.0	51.7	-97.78	2,755.2	221.5	1,040.8	938.5	102.26	10.177		
10,100.0	7,020.0	10,101.6	7,162.0	57.6	53.4	-97.78	2,855.2	221.5	1,040.8	935.1	105.64	9.852		
10,200.0	7,020.0	10,201.6	7,162.0	59.2	55.1	-97.78	2,955.2	221.5	1,040.8	931.7	109.02	9.547		
10,300.0	7,020.0	10,301.6	7,162.0	60.7	56.8	-97.78	3,055.2	221.5	1,040.8	928.4	112.40	9.259		
10,400.0	7,020.0	10,401.6	7,162.0	62.3	58.5	-97.78	3,155.2	221.5	1,040.8	925.0	115.79	8.988		
10,500.0	7,020.0	10,501.6	7,162.0	64.0	60.3	-97.78	3,255.2	221.5	1,040.8	921.6	119.19	8.732		
10,600.0	7,020.0	10,601.6	7,162.0	65.6	62.0	-97.78	3,355.2	221.5	1,040.8	918.2	122.59	8.490		
10,700.0	7,020.0	10,701.6	7,162.0	67.2	63.7	-97.78	3,455.2	221.5	1,040.8	914.8	126.00	8.260		
10,800.0	7,020.0	10,801.6	7,162.0	68.8	65.4	-97.78	3,555.2	221.5	1,040.8	911.4	129.41	8.043		
10,900.0	7,020.0	10,901.6	7,162.0	70.5	67.1	-97.78	3,655.2	221.5	1,040.8	907.9	132.82	7.836		
11,000.0	7,020.0	11,001.6	7,162.0	72.1	68.8	-97.78	3,755.2	221.5	1,040.8	904.5	136.23	7.640		
11,100.0	7,020.0	11,101.6	7,162.0	73.7	70.6	-97.78	3,855.2	221.5	1,040.8	901.1	139.65	7.453		
11,136.2	7,020.0	11,137.8	7,162.0	74.3	71.2	-97.78	3,891.4	221.5	1,040.8	899.9	140.89	7.387		
11,200.0	7,020.0	11,183.4	7,162.0	75.4	72.0	-97.78	3,937.0	221.2	1,041.2	898.4	142.76	7.293		
11,300.0	7,020.0	11,248.0	7,162.0	77.0	73.1	-97.77	4,001.6	219.0	1,044.7	899.1	145.58	7.176		
11,400.0	7,020.0	11,300.0	7,162.0	78.7	74.0	-97.74	4,053.5	215.6	1,051.6	903.4	148.19	7.096		
11,500.0	7,020.0	11,376.4	7,162.0	80.4	75.3	-97.68	4,129.5	208.0	1,061.6	910.4	151.22	7.021		
11,600.0	7,020.0	11,439.9	7,162.0	82.0	76.3	-97.62	4,192.4	199.3	1,075.1	921.1	154.03	6.980		
11,700.0	7,020.0	11,500.0	7,162.0	83.7	77.3	-97.55	4,251.6	189.2	1,091.9	935.1	156.79	6.964		
11,740.8	7,020.0	11,528.2	7,162.0	84.4	77.8	-97.51	4,279.3	183.8	1,099.7	941.7	157.97	6.961 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	1.0	1.0	0.0	0.0	-89.33	0.4	-29.9	29.9					
100.0	100.0	101.0	101.0	0.1	0.1	-89.33	0.4	-29.9	29.9	29.7	0.25	121.608		
200.0	200.0	201.0	201.0	0.3	0.3	-89.33	0.4	-29.9	29.9	29.3	0.60	50.284		
250.0	250.0	251.0	251.0	0.4	0.4	-89.33	0.4	-29.9	29.9	29.2	0.77	38.882	CC, ES	
300.0	300.0	301.0	301.0	0.5	0.5	166.75	0.4	-29.9	30.4	29.4	0.94	32.147		
400.0	399.9	400.9	400.9	0.7	0.6	168.09	0.4	-29.9	33.8	32.5	1.29	26.116		
500.0	499.7	501.0	501.0	0.9	0.8	169.92	0.2	-29.7	40.4	38.8	1.64	24.643		
600.0	599.1	601.2	601.2	1.1	1.0	170.84	-0.9	-28.4	49.3	47.3	1.99	24.793		
700.0	698.2	701.4	701.3	1.4	1.2	171.03	-3.2	-25.7	60.2	57.8	2.34	25.746		
800.0	796.6	801.5	801.3	1.7	1.4	170.79	-6.5	-21.6	73.0	70.3	2.69	27.166		
900.0	894.4	901.6	901.1	2.1	1.6	170.33	-11.0	-16.2	87.9	84.8	3.04	28.863		
970.7	963.2	972.3	971.6	2.4	1.7	169.93	-14.8	-11.6	99.6	96.3	3.30	30.160		
1,000.0	991.5	1,001.5	1,000.7	2.6	1.8	169.76	-16.5	-9.4	104.6	101.1	3.41	30.641		
1,100.0	1,088.4	1,100.4	1,099.1	3.0	2.0	169.15	-22.7	-1.9	121.2	117.4	3.80	31.924		
1,200.0	1,185.2	1,199.0	1,197.2	3.5	2.2	168.68	-28.9	5.6	137.8	133.6	4.18	32.935		
1,300.0	1,282.1	1,297.6	1,295.3	4.0	2.5	168.31	-35.1	13.2	154.4	149.9	4.58	33.749		
1,400.0	1,378.9	1,396.2	1,393.4	4.4	2.7	168.01	-41.3	20.7	171.1	166.1	4.97	34.416		
1,500.0	1,475.8	1,494.8	1,491.5	4.9	2.9	167.77	-47.5	28.2	187.7	182.3	5.37	34.970		
1,600.0	1,572.6	1,593.4	1,589.7	5.4	3.1	167.56	-53.7	35.8	204.4	198.6	5.77	35.437		
1,700.0	1,669.5	1,692.0	1,687.8	5.8	3.4	167.39	-59.9	43.3	221.0	214.8	6.17	35.835		
1,800.0	1,766.3	1,790.6	1,785.9	6.3	3.6	167.24	-66.1	50.8	237.7	231.1	6.57	36.177		
1,900.0	1,863.2	1,889.2	1,884.0	6.8	3.9	167.11	-72.4	58.4	254.3	247.3	6.97	36.475		
2,000.0	1,960.0	1,987.8	1,982.1	7.3	4.1	167.00	-78.6	65.9	270.9	263.6	7.38	36.736		
2,100.0	2,056.9	2,086.4	2,080.2	7.7	4.3	166.90	-84.8	73.4	287.6	279.8	7.78	36.967		
2,200.0	2,153.7	2,185.0	2,178.4	8.2	4.6	166.81	-91.0	81.0	304.3	296.1	8.19	37.171		
2,300.0	2,250.6	2,283.6	2,276.5	8.7	4.8	166.73	-97.2	88.5	320.9	312.3	8.59	37.355		
2,400.0	2,347.4	2,382.2	2,374.6	9.2	5.0	166.65	-103.4	96.0	337.6	328.6	9.00	37.519		
2,500.0	2,444.3	2,480.8	2,472.7	9.7	5.3	166.59	-109.6	103.6	354.2	344.8	9.40	37.668		
2,600.0	2,541.1	2,579.4	2,570.8	10.1	5.5	166.53	-115.8	111.1	370.9	361.0	9.81	37.803		
2,700.0	2,638.0	2,678.0	2,669.0	10.6	5.8	166.47	-122.0	118.6	387.5	377.3	10.22	37.926		
2,800.0	2,734.8	2,776.6	2,767.1	11.1	6.0	166.42	-128.2	126.2	404.2	393.5	10.63	38.038		
2,900.0	2,831.7	2,875.2	2,865.2	11.6	6.2	166.38	-134.4	133.7	420.8	409.8	11.03	38.142		
3,000.0	2,928.5	2,973.9	2,963.3	12.0	6.5	166.33	-140.6	141.2	437.5	426.0	11.44	38.237		
3,100.0	3,025.4	3,072.5	3,061.4	12.5	6.7	166.29	-146.8	148.8	454.1	442.3	11.85	38.325		
3,200.0	3,122.2	3,171.1	3,159.6	13.0	7.0	166.26	-153.0	156.3	470.8	458.5	12.26	38.407		
3,300.0	3,219.1	3,269.7	3,257.7	13.5	7.2	166.22	-159.2	163.8	487.4	474.8	12.67	38.482		
3,400.0	3,315.9	3,368.3	3,355.8	14.0	7.5	166.19	-165.4	171.4	504.1	491.0	13.08	38.553		
3,500.0	3,412.8	3,466.9	3,453.9	14.4	7.7	166.16	-171.6	178.9	520.7	507.3	13.48	38.619		
3,600.0	3,509.6	3,565.5	3,552.0	14.9	7.9	166.13	-177.8	186.4	537.4	523.5	13.89	38.681		
3,700.0	3,606.5	3,664.1	3,650.1	15.4	8.2	166.11	-184.0	194.0	554.1	539.8	14.30	38.738		
3,800.0	3,703.4	3,762.7	3,748.3	15.9	8.4	166.08	-190.2	201.5	570.7	556.0	14.71	38.793		
3,900.0	3,800.2	3,861.3	3,846.4	16.4	8.7	166.06	-196.4	209.0	587.4	572.3	15.12	38.844		
4,000.0	3,897.1	3,959.9	3,944.5	16.8	8.9	166.04	-202.6	216.6	604.0	588.5	15.53	38.892		
4,100.0	3,993.9	4,058.5	4,042.6	17.3	9.1	166.02	-208.9	224.1	620.7	604.7	15.94	38.938		
4,200.0	4,090.8	4,157.1	4,140.7	17.8	9.4	166.00	-215.1	231.6	637.3	621.0	16.35	38.981		
4,300.0	4,187.6	4,255.7	4,238.9	18.3	9.6	165.98	-221.3	239.2	654.0	637.2	16.76	39.022		
4,400.0	4,284.5	4,354.3	4,337.0	18.7	9.9	165.96	-227.5	246.7	670.7	653.5	17.17	39.060		
4,500.0	4,381.3	4,452.9	4,435.1	19.2	10.1	165.94	-233.7	254.2	687.3	669.7	17.58	39.097		
4,600.0	4,478.2	4,551.5	4,533.2	19.7	10.3	165.93	-239.9	261.8	704.0	686.0	17.99	39.132		
4,700.0	4,575.0	4,650.1	4,631.3	20.2	10.6	165.91	-246.1	269.3	720.6	702.2	18.40	39.165		
4,800.0	4,671.9	4,748.7	4,729.5	20.7	10.8	165.90	-252.3	276.8	737.3	718.5	18.81	39.197		
4,900.0	4,768.7	4,847.3	4,827.6	21.1	11.1	165.88	-258.5	284.4	753.9	734.7	19.22	39.227		

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4F-20H-O264 - HZ - Plan #1													Offset Site Error: 0.0 ft			
Survey Program: 0-Geolink MWD															Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning			
5,000.0	4,865.6	4,945.9	4,925.7	21.6	11.3	165.87	-264.7	291.9	770.6	751.0	19.63	39.256				
5,100.0	4,962.4	5,044.5	5,023.8	22.1	11.6	165.86	-270.9	299.4	787.2	767.2	20.04	39.284				
5,200.0	5,059.3	5,143.1	5,121.9	22.6	11.8	165.84	-277.1	307.0	803.9	783.5	20.45	39.310				
5,300.0	5,156.1	5,241.7	5,220.0	23.1	12.0	165.83	-283.3	314.5	820.6	799.7	20.86	39.336				
5,400.0	5,253.0	5,340.3	5,318.2	23.5	12.3	165.82	-289.5	322.0	837.2	815.9	21.27	39.360				
5,435.0	5,286.8	5,374.8	5,352.5	23.7	12.4	165.82	-291.7	324.7	843.0	821.6	21.41	39.368				
5,500.0	5,350.0	5,439.0	5,416.4	24.0	12.5	165.85	-295.7	329.6	853.2	831.5	21.70	39.316				
5,600.0	5,447.8	5,529.6	5,506.5	24.4	12.7	165.86	-301.1	336.1	866.4	844.3	22.11	39.194				
5,700.0	5,546.2	5,618.5	5,595.2	24.7	12.9	165.88	-305.5	341.5	877.4	854.9	22.48	39.035				
5,800.0	5,645.2	5,707.5	5,684.0	25.0	13.1	165.89	-309.1	345.8	886.3	863.5	22.82	38.834				
5,900.0	5,744.6	5,800.0	5,776.4	25.2	13.3	165.90	-311.9	349.2	893.0	869.8	23.14	38.584				
6,000.0	5,844.4	5,885.7	5,862.1	25.3	13.4	165.90	-313.6	351.3	897.5	874.0	23.42	38.315				
6,100.0	5,944.3	5,974.9	5,951.2	25.4	13.5	165.91	-314.5	352.4	899.8	876.1	23.68	37.996				
6,155.7	6,000.0	6,024.7	6,001.0	25.5	13.6	-89.98	-314.6	352.6	900.1	876.3	23.82	37.797				
6,200.0	6,044.3	6,069.0	6,045.3	25.5	13.6	-89.98	-314.6	352.6	900.1	876.2	23.95	37.580				
6,300.0	6,144.3	6,169.0	6,145.3	25.6	13.8	-89.98	-314.6	352.6	900.1	875.9	24.26	37.098				
6,400.0	6,244.3	6,269.0	6,245.3	25.7	13.9	-89.98	-314.6	352.6	900.1	875.5	24.58	36.627				
6,500.0	6,344.3	6,369.0	6,345.3	25.7	14.1	-89.98	-314.6	352.6	900.1	875.2	24.89	36.166				
6,531.9	6,376.2	6,400.8	6,377.1	25.8	14.1	-89.95	-314.2	352.6	900.1	875.1	24.98	36.040				
6,602.7	6,447.0	6,470.8	6,446.8	25.8	14.1	-89.51	-307.3	352.6	900.2	875.1	25.02	35.978				
6,650.0	6,494.2	6,516.6	6,491.6	25.8	14.1	-89.03	-298.1	352.6	900.3	875.3	24.96	36.072				
6,700.0	6,543.8	6,564.4	6,537.5	25.9	14.1	-88.54	-284.8	352.6	900.4	875.6	24.85	36.233				
6,750.0	6,592.7	6,611.6	6,581.5	25.8	14.0	-88.07	-268.0	352.6	900.6	875.9	24.72	36.437				
6,800.0	6,640.4	6,658.2	6,623.6	25.8	14.0	-87.61	-247.8	352.6	900.9	876.4	24.57	36.662				
6,850.0	6,686.7	6,704.4	6,663.5	25.8	13.9	-87.16	-224.5	352.6	901.2	876.8	24.43	36.889				
6,900.0	6,731.1	6,750.0	6,700.9	25.8	13.9	-86.74	-198.5	352.6	901.6	877.3	24.30	37.096				
6,950.0	6,773.4	6,795.4	6,735.9	25.7	13.8	-86.35	-169.7	352.6	902.0	877.8	24.21	37.259				
7,000.0	6,813.2	6,840.3	6,768.3	25.7	13.8	-85.98	-138.6	352.6	902.4	878.2	24.15	37.358				
7,050.0	6,850.2	6,884.8	6,797.9	25.7	13.8	-85.63	-105.3	352.6	902.8	878.6	24.15	37.377				
7,100.0	6,884.2	6,929.0	6,824.6	25.7	13.8	-85.32	-70.0	352.6	903.2	878.9	24.21	37.303				
7,150.0	6,914.8	6,973.0	6,848.4	25.7	13.8	-85.04	-33.1	352.6	903.5	879.2	24.34	37.122				
7,200.0	6,941.9	7,016.7	6,869.2	25.7	13.9	-84.80	5.4	352.6	903.9	879.3	24.53	36.855				
7,250.0	6,965.2	7,060.3	6,886.9	25.7	14.0	-84.59	45.1	352.6	904.2	879.4	24.79	36.471				
7,300.0	6,984.5	7,103.6	6,901.5	25.8	14.2	-84.41	85.9	352.6	904.4	879.3	25.13	35.990				
7,350.0	6,999.8	7,150.0	6,913.6	25.9	14.4	-84.27	130.7	352.6	904.6	879.1	25.56	35.395				
7,400.0	7,010.8	7,190.0	6,921.1	26.0	14.6	-84.18	169.9	352.6	904.8	878.8	26.03	34.760				
7,450.0	7,017.6	7,233.0	6,926.2	26.2	14.8	-84.12	212.7	352.6	904.9	878.3	26.58	34.042				
7,502.7	7,020.0	7,278.7	6,928.0	26.3	15.1	-84.10	258.3	352.6	904.9	877.7	27.23	33.238				
7,536.0	7,020.0	7,311.6	6,928.0	26.5	15.4	-84.10	291.2	352.6	904.9	877.1	27.79	32.559				
7,600.0	7,020.0	7,375.6	6,928.0	26.8	15.9	-84.10	355.2	352.6	904.9	876.0	28.93	31.279				
7,700.0	7,020.0	7,475.6	6,928.0	27.3	16.8	-84.10	455.2	352.6	904.9	874.0	30.96	29.226				
7,800.0	7,020.0	7,575.6	6,928.0	27.9	17.9	-84.10	555.2	352.6	904.9	871.7	33.24	27.226				
7,900.0	7,020.0	7,675.6	6,928.0	28.7	19.1	-84.10	655.2	352.6	904.9	869.2	35.71	25.341				
8,000.0	7,020.0	7,775.6	6,928.0	29.5	20.3	-84.10	755.2	352.6	904.9	866.6	38.34	23.603				
8,100.0	7,020.0	7,875.6	6,928.0	30.4	21.6	-84.10	855.2	352.6	904.9	863.8	41.10	22.018				
8,200.0	7,020.0	7,975.6	6,928.0	31.4	23.0	-84.10	955.2	352.6	904.9	860.9	43.96	20.585				
8,300.0	7,020.0	8,075.6	6,928.0	32.4	24.4	-84.10	1,055.2	352.6	904.9	858.0	46.91	19.291				
8,400.0	7,020.0	8,175.6	6,928.0	33.5	25.9	-84.10	1,155.2	352.6	904.9	855.0	49.93	18.125				
8,500.0	7,020.0	8,275.6	6,928.0	34.7	27.4	-84.10	1,255.2	352.6	904.9	851.9	53.00	17.073				
8,600.0	7,020.0	8,375.6	6,928.0	35.9	28.9	-84.10	1,355.2	352.6	904.9	848.8	56.13	16.123				
8,700.0	7,020.0	8,475.6	6,928.0	37.1	30.5	-84.10	1,455.2	352.6	904.9	845.6	59.29	15.262				
8,800.0	7,020.0	8,575.6	6,928.0	38.4	32.0	-84.10	1,555.2	352.6	904.9	842.4	62.49	14.480				

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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		
8,900.0	7,020.0	8,675.6	6,928.0	39.8	33.6	-84.10	1,655.2	352.6	904.9	839.2	65.72	13.769		
9,000.0	7,020.0	8,775.6	6,928.0	41.1	35.2	-84.10	1,755.2	352.6	904.9	835.9	68.98	13.119		
9,100.0	7,020.0	8,875.6	6,928.0	42.5	36.9	-84.10	1,855.2	352.6	904.9	832.7	72.25	12.524		
9,200.0	7,020.0	8,975.6	6,928.0	43.9	38.5	-84.10	1,955.2	352.6	904.9	829.4	75.55	11.978		
9,300.0	7,020.0	9,075.6	6,928.0	45.4	40.1	-84.10	2,055.2	352.6	904.9	826.0	78.86	11.475		
9,400.0	7,020.0	9,175.6	6,928.0	46.9	41.8	-84.10	2,155.2	352.6	904.9	822.7	82.19	11.010		
9,500.0	7,020.0	9,275.6	6,928.0	48.3	43.4	-84.10	2,255.2	352.6	904.9	819.4	85.53	10.580		
9,600.0	7,020.0	9,375.6	6,928.0	49.8	45.1	-84.10	2,355.2	352.6	904.9	816.0	88.88	10.181		
9,700.0	7,020.0	9,475.6	6,928.0	51.4	46.8	-84.10	2,455.2	352.6	904.9	812.7	92.24	9.810		
9,800.0	7,020.0	9,575.6	6,928.0	52.9	48.5	-84.10	2,555.2	352.6	904.9	809.3	95.61	9.464		
9,900.0	7,020.0	9,675.6	6,928.0	54.4	50.1	-84.10	2,655.2	352.6	904.9	805.9	98.99	9.141		
10,000.0	7,020.0	9,775.6	6,928.0	56.0	51.8	-84.10	2,755.2	352.6	904.9	802.5	102.38	8.839		
10,100.0	7,020.0	9,875.6	6,928.0	57.6	53.5	-84.10	2,855.2	352.6	904.9	799.1	105.77	8.555		
10,200.0	7,020.0	9,975.6	6,928.0	59.2	55.2	-84.10	2,955.2	352.6	904.9	795.7	109.17	8.289		
10,300.0	7,020.0	10,075.6	6,928.0	60.7	56.9	-84.10	3,055.2	352.6	904.9	792.3	112.58	8.038		
10,400.0	7,020.0	10,175.6	6,928.0	62.3	58.6	-84.10	3,155.2	352.6	904.9	788.9	115.99	7.802		
10,500.0	7,020.0	10,275.6	6,928.0	64.0	60.3	-84.10	3,255.2	352.6	904.9	785.5	119.40	7.579		
10,600.0	7,020.0	10,375.6	6,928.0	65.6	62.0	-84.10	3,355.2	352.6	904.9	782.1	122.82	7.368		
10,700.0	7,020.0	10,475.6	6,928.0	67.2	63.7	-84.10	3,455.2	352.6	904.9	778.7	126.24	7.168		
10,800.0	7,020.0	10,575.6	6,928.0	68.8	65.5	-84.10	3,555.2	352.6	904.9	775.2	129.67	6.979		
10,900.0	7,020.0	10,675.6	6,928.0	70.5	67.2	-84.10	3,655.2	352.6	904.9	771.8	133.10	6.799		
11,000.0	7,020.0	10,775.6	6,928.0	72.1	68.9	-84.10	3,755.2	352.6	904.9	768.4	136.53	6.628		
11,100.0	7,020.0	10,875.6	6,928.0	73.7	70.6	-84.10	3,855.2	352.6	904.9	764.9	139.97	6.465		
11,200.0	7,020.0	10,975.6	6,928.0	75.4	72.3	-84.10	3,955.2	352.6	904.9	761.5	143.40	6.310		
11,300.0	7,020.0	11,075.6	6,928.0	77.0	74.1	-84.10	4,055.2	352.6	904.9	758.0	146.84	6.162		
11,400.0	7,020.0	11,175.6	6,928.0	78.7	75.8	-84.10	4,155.2	352.6	904.9	754.6	150.29	6.021		
11,500.0	7,020.0	11,275.6	6,928.0	80.4	77.5	-84.10	4,255.2	352.6	904.9	751.2	153.73	5.886		
11,600.0	7,020.0	11,375.6	6,928.0	82.0	79.2	-84.10	4,355.2	352.6	904.9	747.7	157.18	5.757		
11,700.0	7,020.0	11,475.6	6,928.0	83.7	81.0	-84.10	4,455.2	352.6	904.9	744.3	160.63	5.633		
11,730.9	7,020.0	11,506.5	6,928.0	84.2	81.5	-84.10	4,486.1	352.6	904.9	743.2	161.69	5.596		
11,740.8	7,020.0	11,512.7	6,928.0	84.4	81.6	-84.10	4,492.3	352.6	904.9	742.9	161.97	5.587 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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		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	1.0	1.0	0.0	0.0	-89.07	0.4	-22.4	22.4					
100.0	100.0	101.0	101.0	0.1	0.1	-89.07	0.4	-22.4	22.4	22.1	0.25	90.928		
200.0	200.0	201.0	201.0	0.3	0.3	-89.07	0.4	-22.4	22.4	21.8	0.60	37.598		
250.0	250.0	251.0	251.0	0.4	0.4	-89.07	0.4	-22.4	22.4	21.6	0.77	29.072 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	167.07	0.4	-22.4	22.8	21.9	0.94	24.151		
400.0	399.9	400.9	400.9	0.7	0.6	168.76	0.4	-22.4	26.2	24.9	1.29	20.281		
500.0	499.7	501.2	501.2	0.9	0.8	170.50	-0.1	-21.6	32.3	30.6	1.64	19.664		
600.0	599.1	601.5	601.4	1.1	1.0	171.47	-1.3	-19.2	40.2	38.2	1.99	20.196		
700.0	698.2	701.7	701.6	1.4	1.2	171.92	-3.3	-15.3	49.9	47.5	2.34	21.354		
800.0	796.6	802.0	801.6	1.7	1.4	172.07	-6.2	-9.9	61.4	58.7	2.68	22.885		
900.0	894.4	902.2	901.5	2.1	1.6	172.03	-9.9	-2.9	74.8	71.8	3.03	24.651		
970.7	963.2	973.0	972.1	2.4	1.7	171.94	-12.9	3.0	85.3	82.1	3.28	25.994		
1,000.0	991.5	1,002.4	1,001.3	2.6	1.8	171.89	-14.3	5.6	89.8	86.4	3.39	26.493		
1,100.0	1,088.4	1,102.9	1,101.2	3.0	2.1	171.52	-19.7	15.8	104.1	100.3	3.76	27.658		
1,200.0	1,185.2	1,203.9	1,201.3	3.5	2.3	170.91	-25.8	27.5	116.8	112.6	4.15	28.149		
1,300.0	1,282.1	1,303.2	1,299.6	4.0	2.6	170.27	-32.3	39.8	128.6	124.1	4.54	28.352		
1,400.0	1,378.9	1,402.5	1,397.9	4.4	2.9	169.74	-38.7	52.1	140.5	135.5	4.93	28.499		
1,500.0	1,475.8	1,501.8	1,496.2	4.9	3.2	169.29	-45.2	64.4	152.4	147.0	5.33	28.606		
1,600.0	1,572.6	1,601.1	1,594.5	5.4	3.4	168.91	-51.6	76.7	164.2	158.5	5.73	28.684		
1,700.0	1,669.5	1,700.4	1,692.8	5.8	3.7	168.57	-58.1	89.0	176.1	170.0	6.13	28.739		
1,800.0	1,766.3	1,799.7	1,791.2	6.3	4.0	168.28	-64.6	101.3	188.0	181.5	6.53	28.778		
1,900.0	1,863.2	1,898.9	1,889.5	6.8	4.3	168.03	-71.0	113.6	199.9	193.0	6.94	28.805		
2,000.0	1,960.0	1,998.2	1,987.8	7.3	4.6	167.80	-77.5	125.9	211.8	204.5	7.35	28.823		
2,100.0	2,056.9	2,097.5	2,086.1	7.7	4.9	167.60	-83.9	138.2	223.7	216.0	7.76	28.834		
2,200.0	2,153.7	2,196.8	2,184.4	8.2	5.2	167.42	-90.4	150.5	235.7	227.5	8.17	28.839		
2,300.0	2,250.6	2,296.1	2,282.7	8.7	5.5	167.26	-96.9	162.8	247.6	239.0	8.58	28.841		
2,400.0	2,347.4	2,395.4	2,381.0	9.2	5.8	167.11	-103.3	175.2	259.5	250.5	9.00	28.839		
2,500.0	2,444.3	2,494.7	2,479.3	9.7	6.1	166.97	-109.8	187.5	271.4	262.0	9.41	28.835		
2,600.0	2,541.1	2,593.9	2,577.6	10.1	6.4	166.85	-116.2	199.8	283.3	273.5	9.83	28.830		
2,700.0	2,638.0	2,693.2	2,675.9	10.6	6.7	166.73	-122.7	212.1	295.2	285.0	10.24	28.823		
2,800.0	2,734.8	2,792.5	2,774.2	11.1	7.0	166.63	-129.2	224.4	307.1	296.5	10.66	28.815		
2,900.0	2,831.7	2,891.8	2,872.5	11.6	7.3	166.53	-135.6	236.7	319.1	308.0	11.08	28.806		
3,000.0	2,928.5	2,991.1	2,970.8	12.0	7.6	166.44	-142.1	249.0	331.0	319.5	11.49	28.797		
3,100.0	3,025.4	3,090.4	3,069.2	12.5	7.9	166.35	-148.5	261.3	342.9	331.0	11.91	28.787		
3,200.0	3,122.2	3,189.7	3,167.5	13.0	8.1	166.27	-155.0	273.6	354.8	342.5	12.33	28.777		
3,300.0	3,219.1	3,288.9	3,265.8	13.5	8.4	166.20	-161.5	285.9	366.8	354.0	12.75	28.767		
3,400.0	3,315.9	3,388.2	3,364.1	14.0	8.7	166.13	-167.9	298.2	378.7	365.5	13.17	28.757		
3,500.0	3,412.8	3,487.5	3,462.4	14.4	9.0	166.07	-174.4	310.5	390.6	377.0	13.59	28.747		
3,600.0	3,509.6	3,586.8	3,560.7	14.9	9.3	166.01	-180.8	322.8	402.5	388.5	14.01	28.737		
3,700.0	3,606.5	3,686.1	3,659.0	15.4	9.6	165.95	-187.3	335.1	414.5	400.0	14.43	28.727		
3,800.0	3,703.4	3,785.4	3,757.3	15.9	9.9	165.89	-193.8	347.4	426.4	411.5	14.85	28.718		
3,900.0	3,800.2	3,884.6	3,855.6	16.4	10.2	165.84	-200.2	359.7	438.3	423.0	15.27	28.708		
4,000.0	3,897.1	3,983.9	3,953.9	16.8	10.5	165.79	-206.7	372.1	450.2	434.5	15.69	28.699		
4,100.0	3,993.9	4,083.2	4,052.2	17.3	10.8	165.75	-213.1	384.4	462.2	446.0	16.11	28.689		
4,200.0	4,090.8	4,182.5	4,150.5	17.8	11.1	165.70	-219.6	396.7	474.1	457.6	16.53	28.680		
4,300.0	4,187.6	4,281.8	4,248.9	18.3	11.4	165.66	-226.1	409.0	486.0	469.1	16.95	28.671		
4,400.0	4,284.5	4,381.1	4,347.2	18.7	11.7	165.62	-232.5	421.3	497.9	480.6	17.37	28.663		
4,500.0	4,381.3	4,480.4	4,445.5	19.2	12.0	165.58	-239.0	433.6	509.9	492.1	17.79	28.654		
4,600.0	4,478.2	4,579.6	4,543.8	19.7	12.3	165.55	-245.4	445.9	521.8	503.6	18.22	28.646		
4,700.0	4,575.0	4,678.9	4,642.1	20.2	12.6	165.51	-251.9	458.2	533.7	515.1	18.64	28.638		
4,800.0	4,671.9	4,778.2	4,740.4	20.7	12.9	165.48	-258.4	470.5	545.7	526.6	19.06	28.630		
4,900.0	4,768.7	4,877.5	4,838.7	21.1	13.2	165.45	-264.8	482.8	557.6	538.1	19.48	28.622		

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4G-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,000.0	4,865.6	4,976.8	4,937.0	21.6	13.5	165.42	-271.3	495.1	569.5	549.6	19.90	28.615		
5,100.0	4,962.4	5,076.1	5,035.3	22.1	13.8	165.39	-277.7	507.4	581.4	561.1	20.32	28.608		
5,200.0	5,059.3	5,175.4	5,133.6	22.6	14.1	165.36	-284.2	519.7	593.4	572.6	20.75	28.600		
5,300.0	5,156.1	5,271.7	5,229.0	23.1	14.4	165.34	-290.4	531.6	605.4	584.2	21.16	28.609		
5,400.0	5,253.0	5,362.3	5,318.9	23.5	14.6	165.37	-295.8	541.8	618.5	596.9	21.54	28.712		
5,435.0	5,286.8	5,393.9	5,350.3	23.7	14.7	165.40	-297.5	545.0	623.4	601.7	21.67	28.768		
5,500.0	5,350.0	5,452.6	5,408.7	24.0	14.9	165.49	-300.4	550.6	632.3	610.3	21.91	28.855		
5,600.0	5,447.8	5,543.0	5,498.6	24.4	15.1	165.61	-304.4	558.3	644.3	622.0	22.27	28.935		
5,700.0	5,546.2	5,633.4	5,588.8	24.7	15.3	165.72	-307.8	564.6	654.3	631.7	22.60	28.952		
5,800.0	5,645.2	5,723.9	5,679.1	25.0	15.4	165.79	-310.5	569.8	662.4	639.5	22.91	28.910		
5,900.0	5,744.6	5,814.4	5,769.5	25.2	15.6	165.85	-312.5	573.6	668.4	645.2	23.20	28.811		
6,000.0	5,844.4	5,904.9	5,859.9	25.3	15.7	165.89	-313.8	576.2	672.5	649.1	23.47	28.656		
6,100.0	5,944.3	6,000.0	5,955.0	25.4	15.8	165.91	-314.6	577.6	674.7	651.0	23.72	28.440		
6,155.7	6,000.0	6,046.0	6,001.0	25.5	15.9	-89.97	-314.6	577.7	675.0	651.1	23.85	28.306		
6,200.0	6,044.3	6,090.3	6,045.3	25.5	15.9	-89.97	-314.6	577.7	675.0	651.0	23.98	28.144		
6,300.0	6,144.3	6,190.3	6,145.3	25.6	16.1	-89.97	-314.6	577.7	675.0	650.7	24.29	27.783		
6,400.0	6,244.3	6,290.3	6,245.3	25.7	16.2	-89.97	-314.6	577.7	675.0	650.4	24.61	27.431		
6,500.0	6,344.3	6,390.3	6,345.3	25.7	16.3	-89.97	-314.6	577.7	675.0	650.1	24.92	27.086		
6,602.7	6,447.0	6,493.1	6,448.0	25.8	16.4	-89.97	-314.6	577.7	675.0	649.7	25.24	26.740		
6,650.0	6,494.2	6,540.3	6,495.2	25.8	16.4	-89.97	-312.7	577.7	675.0	649.6	25.33	26.646		
6,700.0	6,543.8	6,590.3	6,544.8	25.9	16.5	-89.97	-306.4	577.7	675.0	649.6	25.37	26.610		
6,750.0	6,592.7	6,640.2	6,593.6	25.8	16.4	-89.97	-295.8	577.7	675.0	649.6	25.34	26.632		
6,800.0	6,640.4	6,690.2	6,641.3	25.8	16.4	-89.97	-281.1	577.7	675.0	649.7	25.28	26.702		
6,850.0	6,686.7	6,740.2	6,687.6	25.8	16.4	-89.97	-262.2	577.7	675.0	649.8	25.18	26.809		
6,900.0	6,731.1	6,790.1	6,732.0	25.8	16.3	-89.97	-239.3	577.7	675.0	649.9	25.05	26.940		
6,950.0	6,773.4	6,840.1	6,774.3	25.7	16.3	-89.97	-212.7	577.7	675.0	650.0	24.93	27.079		
7,000.0	6,813.2	6,890.1	6,814.0	25.7	16.2	-89.98	-182.5	577.7	675.0	650.2	24.81	27.206		
7,050.0	6,850.2	6,940.1	6,851.1	25.7	16.2	-89.98	-148.9	577.7	675.0	650.3	24.72	27.301		
7,100.0	6,884.2	6,990.0	6,885.0	25.7	16.2	-89.98	-112.3	577.7	675.0	650.3	24.68	27.344		
7,150.0	6,914.8	7,040.0	6,915.6	25.7	16.2	-89.98	-72.8	577.7	675.0	650.3	24.71	27.314		
7,200.0	6,941.9	7,090.0	6,942.7	25.7	16.2	-89.98	-30.8	577.7	675.0	650.2	24.82	27.194		
7,250.0	6,965.2	7,140.0	6,966.0	25.7	16.3	-89.99	13.4	577.7	675.0	650.0	25.02	26.974		
7,300.0	6,984.5	7,190.0	6,985.4	25.8	16.4	-89.99	59.5	577.7	675.0	649.6	25.33	26.646		
7,350.0	6,999.8	7,240.0	7,000.7	25.9	16.6	-89.99	107.0	577.7	675.0	649.2	25.75	26.214		
7,400.0	7,010.8	7,290.0	7,011.7	26.0	16.8	-89.99	155.8	577.7	675.0	648.7	26.28	25.687		
7,450.0	7,017.6	7,340.0	7,018.5	26.2	17.0	-90.00	205.3	577.7	675.0	648.1	26.91	25.082		
7,502.7	7,020.0	7,392.7	7,021.0	26.3	17.3	-90.00	258.0	577.7	675.0	647.3	27.68	24.382		
7,600.0	7,020.0	7,490.0	7,021.0	26.8	18.0	-90.00	355.2	577.7	675.0	645.6	29.37	22.978		
7,700.0	7,020.0	7,590.0	7,021.0	27.3	18.8	-90.00	455.2	577.7	675.0	643.6	31.40	21.497		
7,800.0	7,020.0	7,690.0	7,021.0	27.9	19.8	-90.00	555.2	577.7	675.0	641.3	33.67	20.048		
7,900.0	7,020.0	7,790.0	7,021.0	28.7	20.8	-90.00	655.2	577.7	675.0	638.8	36.14	18.679		
8,000.0	7,020.0	7,890.0	7,021.0	29.5	22.0	-90.00	755.2	577.7	675.0	636.2	38.76	17.413		
8,100.0	7,020.0	7,990.0	7,021.0	30.4	23.2	-90.00	855.2	577.7	675.0	633.5	41.52	16.256		
8,200.0	7,020.0	8,090.0	7,021.0	31.4	24.5	-90.00	955.2	577.7	675.0	630.6	44.39	15.207		
8,300.0	7,020.0	8,190.0	7,021.0	32.4	25.8	-90.00	1,055.2	577.7	675.0	627.6	47.34	14.258		
8,400.0	7,020.0	8,290.0	7,021.0	33.5	27.2	-90.00	1,155.2	577.7	675.0	624.6	50.36	13.403		
8,500.0	7,020.0	8,390.0	7,021.0	34.7	28.7	-90.00	1,255.2	577.7	675.0	621.5	53.44	12.630		
8,600.0	7,020.0	8,490.0	7,021.0	35.9	30.1	-90.00	1,355.2	577.7	675.0	618.4	56.58	11.931		
8,700.0	7,020.0	8,590.0	7,021.0	37.1	31.6	-90.00	1,455.2	577.7	675.0	615.2	59.75	11.297		
8,800.0	7,020.0	8,690.0	7,021.0	38.4	33.1	-90.00	1,555.2	577.7	675.0	612.0	62.96	10.721		
8,900.0	7,020.0	8,790.0	7,021.0	39.8	34.7	-90.00	1,655.2	577.7	675.0	608.8	66.20	10.196		
9,000.0	7,020.0	8,890.0	7,021.0	41.1	36.2	-90.00	1,755.2	577.7	675.0	605.5	69.46	9.717		

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4G-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
9,100.0	7,020.0	8,990.0	7,021.0	42.5	37.8	-90.00	1,855.2	577.7	675.0	602.2	72.75	9.278		
9,200.0	7,020.0	9,090.0	7,021.0	43.9	39.4	-90.00	1,955.2	577.7	675.0	598.9	76.06	8.874		
9,300.0	7,020.0	9,190.0	7,021.0	45.4	41.0	-90.00	2,055.2	577.7	675.0	595.6	79.39	8.503		
9,400.0	7,020.0	9,290.0	7,021.0	46.9	42.6	-90.00	2,155.2	577.7	675.0	592.3	82.73	8.159		
9,500.0	7,020.0	9,390.0	7,021.0	48.3	44.3	-90.00	2,255.2	577.7	675.0	588.9	86.08	7.841		
9,600.0	7,020.0	9,490.0	7,021.0	49.8	45.9	-90.00	2,355.2	577.7	675.0	585.5	89.45	7.546		
9,700.0	7,020.0	9,590.0	7,021.0	51.4	47.5	-90.00	2,455.2	577.7	675.0	582.2	92.82	7.272		
9,800.0	7,020.0	9,690.0	7,021.0	52.9	49.2	-90.00	2,555.2	577.7	675.0	578.8	96.21	7.016		
9,900.0	7,020.0	9,790.0	7,021.0	54.4	50.9	-90.00	2,655.2	577.7	675.0	575.4	99.60	6.777		
10,000.0	7,020.0	9,890.0	7,021.0	56.0	52.5	-90.00	2,755.2	577.7	675.0	572.0	103.00	6.553		
10,100.0	7,020.0	9,990.0	7,021.0	57.6	54.2	-90.00	2,855.2	577.7	675.0	568.6	106.41	6.343		
10,200.0	7,020.0	10,090.0	7,021.0	59.2	55.9	-90.00	2,955.2	577.7	675.0	565.2	109.83	6.146		
10,300.0	7,020.0	10,190.0	7,021.0	60.7	57.6	-90.00	3,055.2	577.7	675.0	561.7	113.25	5.960		
10,400.0	7,020.0	10,290.0	7,021.0	62.3	59.2	-90.00	3,155.2	577.7	675.0	558.3	116.67	5.785		
10,500.0	7,020.0	10,390.0	7,021.0	64.0	60.9	-90.00	3,255.2	577.7	675.0	554.9	120.10	5.620		
10,600.0	7,020.0	10,490.0	7,021.0	65.6	62.6	-90.00	3,355.2	577.7	675.0	551.5	123.54	5.464		
10,700.0	7,020.0	10,590.0	7,021.0	67.2	64.3	-90.00	3,455.2	577.7	675.0	548.0	126.98	5.316		
10,800.0	7,020.0	10,690.0	7,021.0	68.8	66.0	-90.00	3,555.2	577.7	675.0	544.6	130.42	5.176		
10,900.0	7,020.0	10,790.0	7,021.0	70.5	67.7	-90.00	3,655.2	577.7	675.0	541.1	133.86	5.042		
11,000.0	7,020.0	10,890.0	7,021.0	72.1	69.4	-90.00	3,755.2	577.7	675.0	537.7	137.31	4.916		
11,100.0	7,020.0	10,990.0	7,021.0	73.7	71.1	-90.00	3,855.2	577.7	675.0	534.2	140.76	4.795		
11,200.0	7,020.0	11,090.0	7,021.0	75.4	72.8	-90.00	3,955.2	577.7	675.0	530.8	144.22	4.680		
11,300.0	7,020.0	11,190.0	7,021.0	77.0	74.6	-90.00	4,055.2	577.7	675.0	527.3	147.68	4.571		
11,400.0	7,020.0	11,290.0	7,021.0	78.7	76.3	-90.00	4,155.2	577.7	675.0	523.9	151.14	4.466		
11,500.0	7,020.0	11,390.0	7,021.0	80.4	78.0	-90.00	4,255.2	577.7	675.0	520.4	154.60	4.366		
11,600.0	7,020.0	11,490.0	7,021.0	82.0	79.7	-90.00	4,355.2	577.7	675.0	516.9	158.06	4.270		
11,700.0	7,020.0	11,590.0	7,021.0	83.7	81.4	-90.00	4,455.2	577.7	675.0	513.5	161.53	4.179		
11,720.7	7,020.0	11,610.6	7,021.0	84.1	81.8	-90.00	4,475.9	577.7	675.0	512.8	162.24	4.160		
11,740.8	7,020.0	11,628.2	7,021.0	84.4	82.1	-90.00	4,493.4	577.7	675.0	512.1	162.90	4.144 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	1.0	1.0	0.0	0.0	-88.54	0.4	-14.8	14.8					
100.0	100.0	101.0	101.0	0.1	0.1	-88.54	0.4	-14.8	14.8	14.6	0.25	60.251	CC, ES	
200.0	200.0	201.0	201.0	0.3	0.3	-88.54	0.4	-14.8	14.8	14.2	0.60	24.913		
250.0	250.0	251.0	251.0	0.4	0.4	-88.54	0.4	-14.8	14.8	14.1	0.77	19.264		
300.0	300.0	301.0	301.0	0.5	0.5	167.70	0.4	-14.8	15.3	14.3	0.94	16.156		
400.0	399.9	401.1	401.1	0.7	0.6	169.77	0.3	-14.6	18.5	17.2	1.29	14.280		
500.0	499.7	501.3	501.3	0.9	0.8	171.50	-0.3	-13.0	23.7	22.0	1.64	14.414		
600.0	599.1	601.5	601.4	1.1	1.0	172.63	-1.6	-9.7	30.6	28.6	1.99	15.402		
700.0	698.2	701.7	701.5	1.4	1.2	173.32	-3.5	-4.8	39.4	37.0	2.33	16.861		
800.0	796.6	801.9	801.5	1.7	1.4	173.73	-6.0	1.8	49.9	47.2	2.68	18.606		
900.0	894.4	902.1	901.3	2.1	1.6	173.97	-9.2	10.0	62.1	59.1	3.02	20.538		
970.7	963.2	973.0	971.8	2.4	1.8	174.07	-11.8	16.8	71.8	68.6	3.27	21.984		
1,000.0	991.5	1,002.3	1,000.9	2.6	1.9	174.09	-13.0	19.8	76.0	72.6	3.37	22.527		
1,100.0	1,088.4	1,102.9	1,100.7	3.0	2.1	174.00	-17.4	31.3	89.0	85.3	3.73	23.838		
1,200.0	1,185.2	1,203.9	1,200.7	3.5	2.4	173.71	-22.5	44.4	100.3	96.2	4.10	24.471		
1,300.0	1,282.1	1,305.2	1,300.8	4.0	2.7	173.25	-28.2	59.3	110.0	105.5	4.47	24.581		
1,400.0	1,378.9	1,406.9	1,400.9	4.4	3.0	172.66	-34.6	75.9	117.9	113.0	4.86	24.278		
1,500.0	1,475.8	1,507.3	1,499.5	4.9	3.4	171.99	-41.3	93.5	124.5	119.3	5.24	23.745		
1,600.0	1,572.6	1,607.0	1,597.5	5.4	3.7	171.39	-48.1	111.1	131.1	125.4	5.64	23.255		
1,700.0	1,669.5	1,706.8	1,695.4	5.8	4.1	170.84	-54.9	128.6	137.7	131.6	6.03	22.812		
1,800.0	1,766.3	1,806.6	1,793.4	6.3	4.5	170.34	-61.7	146.2	144.3	137.8	6.44	22.410		
1,900.0	1,863.2	1,906.4	1,891.4	6.8	4.8	169.89	-68.4	163.8	150.9	144.0	6.84	22.043		
2,000.0	1,960.0	2,006.1	1,989.4	7.3	5.2	169.47	-75.2	181.3	157.5	150.2	7.25	21.706		
2,100.0	2,056.9	2,105.9	2,087.4	7.7	5.5	169.09	-82.0	198.9	164.1	156.4	7.67	21.397		
2,200.0	2,153.7	2,205.7	2,185.4	8.2	5.9	168.74	-88.7	216.5	170.7	162.6	8.09	21.111		
2,300.0	2,250.6	2,305.5	2,283.3	8.7	6.3	168.41	-95.5	234.1	177.3	168.8	8.51	20.847		
2,400.0	2,347.4	2,405.2	2,381.3	9.2	6.7	168.11	-102.3	251.6	184.0	175.0	8.93	20.603		
2,500.0	2,444.3	2,505.0	2,479.3	9.7	7.0	167.83	-109.1	269.2	190.6	181.3	9.35	20.375		
2,600.0	2,541.1	2,604.8	2,577.3	10.1	7.4	167.56	-115.8	286.8	197.3	187.5	9.78	20.163		
2,700.0	2,638.0	2,704.6	2,675.3	10.6	7.8	167.32	-122.6	304.4	203.9	193.7	10.21	19.965		
2,800.0	2,734.8	2,804.3	2,773.2	11.1	8.1	167.09	-129.4	321.9	210.6	199.9	10.64	19.780		
2,900.0	2,831.7	2,904.1	2,871.2	11.6	8.5	166.87	-136.1	339.5	217.2	206.1	11.08	19.607		
3,000.0	2,928.5	3,003.9	2,969.2	12.0	8.9	166.67	-142.9	357.1	223.9	212.3	11.51	19.444		
3,100.0	3,025.4	3,103.7	3,067.2	12.5	9.3	166.47	-149.7	374.6	230.5	218.6	11.95	19.291		
3,200.0	3,122.2	3,203.4	3,165.2	13.0	9.6	166.29	-156.4	392.2	237.2	224.8	12.39	19.146		
3,300.0	3,219.1	3,303.2	3,263.2	13.5	10.0	166.12	-163.2	409.8	243.8	231.0	12.83	19.010		
3,400.0	3,315.9	3,403.0	3,361.1	14.0	10.4	165.96	-170.0	427.4	250.5	237.2	13.27	18.881		
3,500.0	3,412.8	3,502.8	3,459.1	14.4	10.7	165.81	-176.8	444.9	257.2	243.5	13.71	18.759		
3,600.0	3,509.6	3,602.5	3,557.1	14.9	11.1	165.66	-183.5	462.5	263.9	249.7	14.15	18.644		
3,700.0	3,606.5	3,702.3	3,655.1	15.4	11.5	165.52	-190.3	480.1	270.5	255.9	14.60	18.534		
3,800.0	3,703.4	3,802.1	3,753.1	15.9	11.9	165.39	-197.1	497.7	277.2	262.2	15.04	18.430		
3,900.0	3,800.2	3,901.9	3,851.0	16.4	12.2	165.27	-203.8	515.2	283.9	268.4	15.49	18.332		
4,000.0	3,897.1	4,001.6	3,949.0	16.8	12.6	165.15	-210.6	532.8	290.6	274.6	15.93	18.237		
4,100.0	3,993.9	4,101.4	4,047.0	17.3	13.0	165.03	-217.4	550.4	297.2	280.8	16.38	18.147		
4,200.0	4,090.8	4,201.2	4,145.0	17.8	13.4	164.92	-224.1	567.9	303.9	287.1	16.83	18.062		
4,300.0	4,187.6	4,301.0	4,243.0	18.3	13.7	164.82	-230.9	585.5	310.6	293.3	17.27	17.980		
4,400.0	4,284.5	4,400.7	4,341.0	18.7	14.1	164.72	-237.7	603.1	317.3	299.5	17.72	17.902		
4,500.0	4,381.3	4,500.5	4,438.9	19.2	14.5	164.62	-244.5	620.7	323.9	305.8	18.17	17.827		
4,600.0	4,478.2	4,600.3	4,536.9	19.7	14.9	164.53	-251.2	638.2	330.6	312.0	18.62	17.755		
4,700.0	4,575.0	4,700.1	4,634.9	20.2	15.2	164.44	-258.0	655.8	337.3	318.2	19.07	17.686		
4,800.0	4,671.9	4,799.8	4,732.9	20.7	15.6	164.35	-264.8	673.4	344.0	324.5	19.52	17.620		
4,900.0	4,768.7	4,899.6	4,830.9	21.1	16.0	164.27	-271.5	690.9	350.7	330.7	19.97	17.557		

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4H-20H-O264 - HZ - Plan #1													Offset Site Error: 0.0 ft			
Survey Program: 0-Geolink MWD															Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor				
5,000.0	4,865.6	4,998.8	4,928.3	21.6	16.4	164.19	-278.3	708.4	357.4	337.0	20.42	17.498				
5,100.0	4,962.4	5,093.0	5,021.0	22.1	16.7	164.18	-284.3	724.2	365.0	344.1	20.84	17.514				
5,200.0	5,059.3	5,187.0	5,113.7	22.6	17.0	164.26	-289.8	738.4	374.1	352.9	21.22	17.629				
5,300.0	5,156.1	5,280.7	5,206.4	23.1	17.3	164.42	-294.8	751.2	384.7	363.1	21.57	17.837				
5,400.0	5,253.0	5,374.1	5,299.0	23.5	17.5	164.65	-299.1	762.6	396.8	374.9	21.89	18.133				
5,435.0	5,286.8	5,406.6	5,331.3	23.7	17.6	164.75	-300.5	766.2	401.4	379.4	21.99	18.256				
5,500.0	5,350.0	5,467.1	5,391.4	24.0	17.8	164.98	-303.0	772.5	409.8	387.6	22.18	18.473				
5,600.0	5,447.8	5,560.2	5,484.0	24.4	18.0	165.26	-306.3	781.1	421.0	398.6	22.47	18.738				
5,700.0	5,546.2	5,653.3	5,576.8	24.7	18.2	165.49	-309.0	788.2	430.5	407.7	22.75	18.922				
5,800.0	5,645.2	5,746.4	5,669.7	25.0	18.3	165.67	-311.2	793.9	438.1	415.0	23.02	19.030				
5,900.0	5,744.6	5,839.6	5,762.8	25.2	18.5	165.80	-312.9	798.2	443.8	420.5	23.28	19.065				
6,000.0	5,844.4	5,932.7	5,855.9	25.3	18.6	165.88	-314.0	801.1	447.6	424.1	23.52	19.029				
6,100.0	5,944.3	6,025.9	5,949.0	25.4	18.7	165.93	-314.5	802.6	449.6	425.9	23.76	18.925				
6,155.7	6,000.0	6,077.9	6,001.0	25.5	18.7	-89.95	-314.6	802.8	449.9	426.0	23.89	18.837				
6,200.0	6,044.3	6,122.2	6,045.3	25.5	18.8	-89.95	-314.6	802.8	449.9	425.9	24.02	18.729				
6,300.0	6,144.3	6,222.2	6,145.3	25.6	18.9	-89.95	-314.6	802.8	449.9	425.6	24.33	18.489				
6,400.0	6,244.3	6,322.2	6,245.3	25.7	19.0	-89.95	-314.6	802.8	449.9	425.3	24.65	18.255				
6,500.0	6,344.3	6,422.2	6,345.3	25.7	19.1	-89.95	-314.6	802.8	449.9	425.0	24.96	18.025				
6,602.7	6,447.0	6,524.9	6,448.0	25.8	19.2	-89.95	-314.6	802.8	449.9	424.6	25.28	17.795				
6,623.5	6,467.8	6,545.6	6,468.8	25.8	19.2	-90.00	-314.6	802.8	449.9	424.6	25.35	17.749				
6,650.0	6,494.2	6,572.1	6,495.2	25.8	19.2	-90.20	-314.6	802.8	449.9	424.5	25.47	17.662				
6,700.0	6,543.8	6,621.7	6,544.8	25.9	19.3	-90.99	-314.6	802.8	450.0	424.2	25.79	17.445				
6,750.0	6,592.7	6,670.7	6,593.8	25.8	19.3	-92.27	-314.6	802.8	450.3	424.1	26.22	17.172				
6,800.0	6,640.4	6,721.4	6,644.4	25.8	19.4	-93.79	-311.9	802.8	451.0	424.3	26.64	16.931				
6,850.0	6,686.7	6,773.2	6,695.7	25.8	19.4	-95.28	-304.6	802.8	452.0	425.0	26.94	16.775				
6,900.0	6,731.1	6,826.3	6,747.3	25.8	19.4	-96.76	-292.3	802.8	453.3	426.1	27.13	16.708				
6,950.0	6,773.4	6,880.6	6,798.8	25.7	19.3	-98.19	-274.9	802.8	454.8	427.6	27.18	16.734				
7,000.0	6,813.2	6,936.4	6,849.6	25.7	19.3	-99.57	-252.0	802.8	456.6	429.5	27.10	16.849				
7,050.0	6,850.2	6,993.5	6,899.1	25.7	19.3	-100.88	-223.5	802.8	458.5	431.6	26.90	17.046				
7,100.0	6,884.2	7,052.1	6,946.6	25.7	19.2	-102.12	-189.3	802.8	460.6	434.0	26.61	17.310				
7,150.0	6,914.8	7,112.0	6,991.4	25.7	19.2	-103.26	-149.6	802.8	462.6	436.4	26.26	17.615				
7,200.0	6,941.9	7,173.3	7,032.7	25.7	19.2	-104.28	-104.3	802.8	464.6	438.7	25.93	17.921				
7,250.0	6,965.2	7,235.8	7,069.5	25.7	19.2	-105.19	-53.8	802.8	466.5	440.8	25.66	18.178				
7,300.0	6,984.5	7,299.5	7,101.2	25.8	19.2	-105.95	1.4	802.8	468.2	442.6	25.55	18.322				
7,350.0	6,999.8	7,364.1	7,126.8	25.9	19.3	-106.56	60.7	802.8	469.5	443.9	25.67	18.294				
7,400.0	7,010.8	7,429.6	7,145.8	26.0	19.5	-107.02	123.3	802.8	470.6	444.5	26.05	18.064				
7,450.0	7,017.6	7,495.5	7,157.7	26.2	19.8	-107.30	188.1	802.8	471.2	444.5	26.74	17.625				
7,502.7	7,020.0	7,565.4	7,162.0	26.3	20.1	-107.40	257.8	802.8	471.5	443.7	27.79	16.966				
7,600.0	7,020.0	7,662.8	7,162.0	26.8	20.7	-107.40	355.2	802.8	471.5	442.1	29.37	16.052				
7,700.0	7,020.0	7,762.8	7,162.0	27.3	21.4	-107.40	455.2	802.8	471.5	440.2	31.25	15.086				
7,800.0	7,020.0	7,862.8	7,162.0	27.9	22.2	-107.40	555.2	802.8	471.5	438.1	33.37	14.131				
7,900.0	7,020.0	7,962.8	7,162.0	28.7	23.2	-107.40	655.2	802.8	471.5	435.8	35.67	13.219				
8,000.0	7,020.0	8,062.8	7,162.0	29.5	24.2	-107.40	755.2	802.8	471.5	433.4	38.13	12.366				
8,100.0	7,020.0	8,162.8	7,162.0	30.4	25.3	-107.40	855.2	802.8	471.5	430.8	40.71	11.581				
8,200.0	7,020.0	8,262.8	7,162.0	31.4	26.5	-107.40	955.2	802.8	471.5	428.1	43.40	10.863				
8,300.0	7,020.0	8,362.8	7,162.0	32.4	27.8	-107.40	1,055.2	802.8	471.5	425.3	46.18	10.210				
8,400.0	7,020.0	8,462.8	7,162.0	33.5	29.1	-107.40	1,155.2	802.8	471.5	422.5	49.03	9.617				
8,500.0	7,020.0	8,562.8	7,162.0	34.7	30.4	-107.40	1,255.2	802.8	471.5	419.6	51.94	9.078				
8,600.0	7,020.0	8,662.8	7,162.0	35.9	31.8	-107.40	1,355.2	802.8	471.5	416.6	54.89	8.589				
8,700.0	7,020.0	8,762.8	7,162.0	37.1	33.2	-107.40	1,455.2	802.8	471.5	413.6	57.90	8.144				
8,800.0	7,020.0	8,862.8	7,162.0	38.4	34.7	-107.40	1,555.2	802.8	471.5	410.6	60.93	7.738				
8,900.0	7,020.0	8,962.8	7,162.0	39.8	36.1	-107.40	1,655.2	802.8	471.5	407.5	64.00	7.367				

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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				Total		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Separation Factor		
9,000.0	7,020.0	9,062.8	7,162.0	41.1	37.6	-107.40	1,755.2	802.8	471.5	404.4	67.10	7.027		
9,100.0	7,020.0	9,162.8	7,162.0	42.5	39.2	-107.40	1,855.2	802.8	471.5	401.3	70.22	6.715		
9,200.0	7,020.0	9,262.8	7,162.0	43.9	40.7	-107.40	1,955.2	802.8	471.5	398.1	73.36	6.427		
9,300.0	7,020.0	9,362.8	7,162.0	45.4	42.3	-107.40	2,055.2	802.8	471.5	395.0	76.51	6.162		
9,400.0	7,020.0	9,462.8	7,162.0	46.9	43.8	-107.40	2,155.2	802.8	471.5	391.8	79.69	5.917		
9,500.0	7,020.0	9,562.8	7,162.0	48.3	45.4	-107.40	2,255.2	802.8	471.5	388.6	82.87	5.689		
9,600.0	7,020.0	9,662.8	7,162.0	49.8	47.0	-107.40	2,355.2	802.8	471.5	385.4	86.07	5.478		
9,700.0	7,020.0	9,762.8	7,162.0	51.4	48.6	-107.40	2,455.2	802.8	471.5	382.2	89.28	5.281		
9,800.0	7,020.0	9,862.8	7,162.0	52.9	50.2	-107.40	2,555.2	802.8	471.5	379.0	92.50	5.097		
9,900.0	7,020.0	9,962.8	7,162.0	54.4	51.9	-107.40	2,655.2	802.8	471.5	375.8	95.73	4.925		
10,000.0	7,020.0	10,062.8	7,162.0	56.0	53.5	-107.40	2,755.2	802.8	471.5	372.5	98.97	4.764		
10,100.0	7,020.0	10,162.8	7,162.0	57.6	55.2	-107.40	2,855.2	802.8	471.5	369.3	102.21	4.613		
10,200.0	7,020.0	10,262.8	7,162.0	59.2	56.8	-107.40	2,955.2	802.8	471.5	366.0	105.46	4.471		
10,300.0	7,020.0	10,362.8	7,162.0	60.7	58.5	-107.40	3,055.2	802.8	471.5	362.8	108.72	4.337		
10,400.0	7,020.0	10,462.8	7,162.0	62.3	60.1	-107.40	3,155.2	802.8	471.5	359.5	111.98	4.210		
10,500.0	7,020.0	10,562.8	7,162.0	64.0	61.8	-107.40	3,255.2	802.8	471.5	356.2	115.25	4.091		
10,600.0	7,020.0	10,662.8	7,162.0	65.6	63.5	-107.40	3,355.2	802.8	471.5	353.0	118.52	3.978		
10,700.0	7,020.0	10,762.8	7,162.0	67.2	65.1	-107.40	3,455.2	802.8	471.5	349.7	121.80	3.871		
10,800.0	7,020.0	10,862.8	7,162.0	68.8	66.8	-107.40	3,555.2	802.8	471.5	346.4	125.08	3.770		
10,900.0	7,020.0	10,962.8	7,162.0	70.5	68.5	-107.40	3,655.2	802.8	471.5	343.1	128.36	3.673		
11,000.0	7,020.0	11,062.8	7,162.0	72.1	70.2	-107.40	3,755.2	802.8	471.5	339.8	131.65	3.581		
11,100.0	7,020.0	11,162.8	7,162.0	73.7	71.9	-107.40	3,855.2	802.8	471.5	336.5	134.94	3.494		
11,200.0	7,020.0	11,262.8	7,162.0	75.4	73.6	-107.40	3,955.2	802.8	471.5	333.3	138.23	3.411		
11,300.0	7,020.0	11,362.8	7,162.0	77.0	75.3	-107.40	4,055.2	802.8	471.5	330.0	141.53	3.331		
11,400.0	7,020.0	11,462.8	7,162.0	78.7	77.0	-107.40	4,155.2	802.8	471.5	326.7	144.83	3.256		
11,500.0	7,020.0	11,562.8	7,162.0	80.4	78.7	-107.40	4,255.2	802.8	471.5	323.4	148.13	3.183		
11,600.0	7,020.0	11,662.8	7,162.0	82.0	80.4	-107.40	4,355.2	802.8	471.5	320.1	151.43	3.114		
11,700.0	7,020.0	11,762.8	7,162.0	83.7	82.1	-107.40	4,455.2	802.8	471.5	316.8	154.73	3.047		
11,731.6	7,020.0	11,794.4	7,162.0	84.2	82.6	-107.40	4,486.8	802.8	471.5	315.7	155.78	3.027		
11,740.8	7,020.0	11,801.7	7,162.0	84.4	82.7	-107.40	4,494.2	802.8	471.5	315.4	156.05	3.021 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	1.0	1.0	0.0	0.0	-87.03	0.4	-7.3	7.3					
100.0	100.0	101.0	101.0	0.1	0.1	-87.03	0.4	-7.3	7.3	7.0	0.25	29.587		
200.0	200.0	201.0	201.0	0.3	0.3	-87.03	0.4	-7.3	7.3	6.7	0.60	12.234		
250.0	250.0	251.0	251.0	0.4	0.4	-87.03	0.4	-7.3	7.3	6.5	0.77	9.460	CC, ES	
300.0	300.0	301.0	301.0	0.5	0.5	169.48	0.4	-7.3	7.7	6.8	0.94	8.166		
400.0	399.9	401.3	401.3	0.7	0.7	170.85	-0.1	-5.6	9.4	8.1	1.29	7.274		
500.0	499.7	501.6	501.4	0.9	0.8	170.92	-1.7	-0.5	11.1	9.5	1.64	6.774		
600.0	599.1	602.0	601.5	1.1	1.1	170.21	-4.3	7.9	12.9	10.9	1.99	6.452		
700.0	698.2	702.5	701.1	1.4	1.3	168.99	-7.8	19.7	14.6	12.3	2.35	6.221		
800.0	796.6	803.0	800.4	1.7	1.6	167.44	-12.4	34.9	16.4	13.7	2.72	6.033		
900.0	894.4	903.5	899.1	2.1	2.0	165.67	-18.1	53.3	18.3	15.1	3.12	5.859		
970.7	963.2	974.5	968.3	2.4	2.3	164.46	-22.6	68.2	19.7	16.3	3.41	5.786		
1,000.0	991.5	1,003.8	996.8	2.6	2.4	164.19	-24.5	74.4	20.6	17.0	3.53	5.821		
1,100.0	1,088.4	1,103.7	1,094.3	3.0	2.8	163.42	-31.0	95.8	23.5	19.5	3.97	5.916		
1,200.0	1,185.2	1,203.7	1,191.7	3.5	3.2	162.81	-37.5	117.1	26.4	22.0	4.41	5.981		
1,300.0	1,282.1	1,303.6	1,289.2	4.0	3.6	162.33	-44.0	138.4	29.3	24.4	4.86	6.026		
1,400.0	1,378.9	1,403.6	1,386.6	4.4	4.1	161.93	-50.5	159.7	32.2	26.9	5.31	6.057		
1,500.0	1,475.8	1,503.6	1,484.1	4.9	4.5	161.59	-56.9	181.0	35.1	29.3	5.77	6.078		
1,600.0	1,572.6	1,603.5	1,581.5	5.4	4.9	161.31	-63.4	202.4	38.0	31.8	6.23	6.093		
1,700.0	1,669.5	1,703.5	1,678.9	5.8	5.3	161.07	-69.9	223.7	40.9	34.2	6.70	6.104		
1,800.0	1,766.3	1,803.4	1,776.4	6.3	5.8	160.86	-76.4	245.0	43.8	36.6	7.17	6.111		
1,900.0	1,863.2	1,903.4	1,873.8	6.8	6.2	160.68	-82.9	266.3	46.7	39.1	7.64	6.116		
2,000.0	1,960.0	2,003.3	1,971.3	7.3	6.6	160.52	-89.4	287.6	49.6	41.5	8.11	6.119		
2,100.0	2,056.9	2,103.3	2,068.7	7.7	7.1	160.37	-95.9	309.0	52.5	44.0	8.58	6.121		
2,200.0	2,153.7	2,203.3	2,166.1	8.2	7.5	160.25	-102.4	330.3	55.4	46.4	9.06	6.122		
2,300.0	2,250.6	2,303.2	2,263.6	8.7	7.9	160.13	-108.9	351.6	58.4	48.8	9.53	6.122		
2,400.0	2,347.4	2,403.2	2,361.0	9.2	8.4	160.02	-115.3	372.9	61.3	51.3	10.01	6.122		
2,500.0	2,444.3	2,503.1	2,458.5	9.7	8.8	159.93	-121.8	394.3	64.2	53.7	10.49	6.121		
2,600.0	2,541.1	2,603.1	2,555.9	10.1	9.2	159.84	-128.3	415.6	67.1	56.1	10.96	6.120		
2,700.0	2,638.0	2,703.0	2,653.4	10.6	9.7	159.76	-134.8	436.9	70.0	58.6	11.44	6.118		
2,800.0	2,734.8	2,803.0	2,750.8	11.1	10.1	159.69	-141.3	458.2	72.9	61.0	11.92	6.117		
2,900.0	2,831.7	2,903.0	2,848.2	11.6	10.5	159.62	-147.8	479.5	75.8	63.4	12.40	6.115		
3,000.0	2,928.5	3,002.9	2,945.7	12.0	11.0	159.56	-154.3	500.9	78.7	65.9	12.88	6.113		
3,100.0	3,025.4	3,102.9	3,043.1	12.5	11.4	159.50	-160.8	522.2	81.6	68.3	13.36	6.112		
3,200.0	3,122.2	3,202.8	3,140.6	13.0	11.8	159.45	-167.3	543.5	84.6	70.7	13.84	6.110		
3,300.0	3,219.1	3,302.8	3,238.0	13.5	12.3	159.39	-173.8	564.8	87.5	73.1	14.32	6.108		
3,400.0	3,315.9	3,402.7	3,335.4	14.0	12.7	159.35	-180.2	586.1	90.4	75.6	14.80	6.106		
3,500.0	3,412.8	3,502.7	3,432.9	14.4	13.1	159.30	-186.7	607.5	93.3	78.0	15.28	6.105		
3,600.0	3,509.6	3,602.7	3,530.3	14.9	13.6	159.26	-193.2	628.8	96.2	80.4	15.76	6.103		
3,700.0	3,606.5	3,702.6	3,627.8	15.4	14.0	159.22	-199.7	650.1	99.1	82.9	16.24	6.101		
3,800.0	3,703.4	3,802.6	3,725.2	15.9	14.4	159.18	-206.2	671.4	102.0	85.3	16.73	6.100		
3,900.0	3,800.2	3,902.5	3,822.6	16.4	14.9	159.15	-212.7	692.7	104.9	87.7	17.21	6.098		
4,000.0	3,897.1	4,002.5	3,920.1	16.8	15.3	159.12	-219.2	714.1	107.8	90.2	17.69	6.096		
4,100.0	3,993.9	4,102.4	4,017.5	17.3	15.7	159.08	-225.7	735.4	110.8	92.6	18.17	6.095		
4,200.0	4,090.8	4,202.4	4,115.0	17.8	16.2	159.05	-232.2	756.7	113.7	95.0	18.66	6.093		
4,300.0	4,187.6	4,302.4	4,212.4	18.3	16.6	159.03	-238.7	778.0	116.6	97.4	19.14	6.092		
4,400.0	4,284.5	4,402.3	4,309.9	18.7	17.0	159.00	-245.1	799.4	119.5	99.9	19.62	6.090		
4,500.0	4,381.3	4,502.3	4,407.3	19.2	17.5	158.97	-251.6	820.7	122.4	102.3	20.10	6.089		
4,600.0	4,478.2	4,602.2	4,504.7	19.7	17.9	158.95	-258.1	842.0	125.3	104.7	20.59	6.088		
4,700.0	4,575.0	4,702.2	4,602.2	20.2	18.3	158.93	-264.6	863.3	128.2	107.2	21.07	6.086		
4,800.0	4,671.9	4,802.2	4,699.6	20.7	18.8	158.90	-271.1	884.6	131.1	109.6	21.55	6.085		
4,900.0	4,768.7	4,900.0	4,795.1	21.1	19.2	158.97	-277.3	905.1	134.5	112.5	21.99	6.116		

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor				
5,000.0	4,865.6	4,998.2	4,891.3	21.6	19.5	159.30	-283.1	924.0	139.4	117.1	22.33	6.244				
5,100.0	4,962.4	5,095.8	4,987.2	22.1	19.9	159.86	-288.4	941.3	145.9	123.3	22.56	6.467				
5,200.0	5,059.3	5,193.1	5,083.1	22.6	20.2	160.61	-293.1	957.0	153.9	131.2	22.70	6.780				
5,300.0	5,156.1	5,290.1	5,179.0	23.1	20.5	161.50	-297.4	971.1	163.5	140.8	22.78	7.179				
5,400.0	5,253.0	5,386.8	5,274.7	23.5	20.8	162.47	-301.2	983.5	174.8	152.0	22.82	7.661				
5,435.0	5,286.8	5,420.4	5,308.2	23.7	20.9	162.83	-302.4	987.5	179.1	156.3	22.82	7.848				
5,500.0	5,350.0	5,483.1	5,370.4	24.0	21.0	163.48	-304.5	994.4	187.0	164.1	22.84	8.186				
5,600.0	5,447.8	5,579.4	5,466.2	24.4	21.2	164.28	-307.4	1,003.8	197.7	174.7	22.92	8.623				
5,700.0	5,546.2	5,675.8	5,562.2	24.7	21.4	164.88	-309.7	1,011.6	206.6	183.5	23.05	8.963				
5,800.0	5,645.2	5,772.1	5,658.4	25.0	21.6	165.33	-311.7	1,017.9	213.8	190.6	23.21	9.211				
5,900.0	5,744.6	5,868.5	5,754.6	25.2	21.7	165.65	-313.1	1,022.6	219.2	195.8	23.39	9.372				
6,000.0	5,844.4	5,964.9	5,850.9	25.3	21.8	165.86	-314.1	1,025.8	222.9	199.3	23.59	9.449				
6,100.0	5,944.3	6,061.2	5,947.3	25.4	21.9	165.97	-314.6	1,027.4	224.8	201.0	23.80	9.446				
6,155.7	6,000.0	6,115.0	6,001.0	25.5	22.0	-89.90	-314.6	1,027.6	225.1	201.2	23.92	9.410				
6,200.0	6,044.3	6,159.3	6,045.3	25.5	22.0	-89.90	-314.6	1,027.6	225.1	201.0	24.06	9.356				
6,300.0	6,144.3	6,259.3	6,145.3	25.6	22.1	-89.90	-314.6	1,027.6	225.1	200.7	24.37	9.236				
6,400.0	6,244.3	6,359.3	6,245.3	25.7	22.2	-89.90	-314.6	1,027.6	225.1	200.4	24.68	9.119				
6,500.0	6,344.3	6,459.3	6,345.3	25.7	22.3	-89.90	-314.6	1,027.6	225.1	200.1	25.00	9.004				
6,531.6	6,375.9	6,490.9	6,376.9	25.8	22.3	-89.80	-314.2	1,027.6	225.1	200.0	25.05	8.984				
6,602.7	6,447.0	6,561.1	6,446.8	25.8	22.3	-88.02	-307.2	1,027.6	225.2	200.5	24.68	9.127				
6,650.0	6,494.2	6,606.9	6,491.6	25.8	22.3	-86.14	-298.1	1,027.6	225.6	201.4	24.23	9.310				
6,700.0	6,543.8	6,654.6	6,537.5	25.9	22.3	-84.19	-284.8	1,027.6	226.3	202.4	23.84	9.492				
6,750.0	6,592.7	6,701.8	6,581.5	25.8	22.3	-82.31	-268.0	1,027.6	227.2	203.6	23.55	9.647				
6,800.0	6,640.4	6,750.0	6,624.9	25.8	22.2	-80.45	-247.1	1,027.6	228.3	204.9	23.37	9.768				
6,850.0	6,686.7	6,794.7	6,663.5	25.8	22.2	-78.79	-224.5	1,027.6	229.5	206.2	23.31	9.846				
6,900.0	6,731.1	6,840.4	6,701.0	25.8	22.2	-77.18	-198.4	1,027.6	230.9	207.6	23.35	9.889				
6,950.0	6,773.4	6,885.6	6,735.9	25.7	22.1	-75.67	-169.7	1,027.6	232.4	208.9	23.47	9.904				
7,000.0	6,813.2	6,930.5	6,768.3	25.7	22.1	-74.28	-138.6	1,027.6	233.9	210.3	23.63	9.899				
7,050.0	6,850.2	6,975.1	6,797.8	25.7	22.1	-73.02	-105.3	1,027.6	235.4	211.6	23.82	9.884				
7,100.0	6,884.2	7,019.3	6,824.6	25.7	22.1	-71.88	-70.0	1,027.6	236.9	212.9	24.02	9.864				
7,150.0	6,914.8	7,063.3	6,848.4	25.7	22.1	-70.87	-33.1	1,027.6	238.3	214.1	24.25	9.829				
7,200.0	6,941.9	7,107.0	6,869.1	25.7	22.2	-69.99	5.4	1,027.6	239.6	215.2	24.35	9.838				
7,250.0	6,965.2	7,150.0	6,886.7	25.7	22.2	-69.25	44.6	1,027.6	240.7	216.2	24.52	9.820				
7,300.0	6,984.5	7,193.9	6,901.4	25.8	22.3	-68.64	85.9	1,027.6	241.7	217.0	24.67	9.799				
7,350.0	6,999.8	7,237.1	6,912.9	25.9	22.4	-68.16	127.6	1,027.6	242.5	217.7	24.82	9.770				
7,400.0	7,010.8	7,280.2	6,921.1	26.0	22.6	-67.82	169.9	1,027.6	243.1	218.1	24.98	9.730				
7,450.0	7,017.6	7,323.3	6,926.2	26.2	22.7	-67.62	212.7	1,027.6	243.4	218.2	25.17	9.673				
7,502.7	7,020.0	7,369.0	6,928.0	26.3	22.9	-67.55	258.3	1,027.6	243.5	218.1	25.39	9.591				
7,529.6	7,020.0	7,395.5	6,928.0	26.5	23.0	-67.55	284.8	1,027.6	243.5	217.7	25.82	9.431				
7,600.0	7,020.0	7,465.9	6,928.0	26.8	23.4	-67.55	355.2	1,027.6	243.5	216.5	27.02	9.014				
7,700.0	7,020.0	7,565.9	6,928.0	27.3	24.0	-67.55	455.2	1,027.6	243.5	214.6	28.94	8.415				
7,800.0	7,020.0	7,665.9	6,928.0	27.9	24.8	-67.55	555.2	1,027.6	243.5	212.5	31.08	7.835				
7,900.0	7,020.0	7,765.9	6,928.0	28.7	25.6	-67.55	655.2	1,027.6	243.5	210.1	33.40	7.291				
8,000.0	7,020.0	7,865.9	6,928.0	29.5	26.5	-67.55	755.2	1,027.6	243.5	207.7	35.87	6.790				
8,100.0	7,020.0	7,965.9	6,928.0	30.4	27.5	-67.55	855.2	1,027.6	243.5	205.1	38.45	6.334				
8,200.0	7,020.0	8,065.9	6,928.0	31.4	28.6	-67.55	955.2	1,027.6	243.5	202.4	41.12	5.922				
8,300.0	7,020.0	8,165.9	6,928.0	32.4	29.8	-67.55	1,055.2	1,027.6	243.5	199.7	43.88	5.550				
8,400.0	7,020.0	8,265.9	6,928.0	33.5	31.0	-67.55	1,155.2	1,027.6	243.5	196.8	46.69	5.216				
8,500.0	7,020.0	8,365.9	6,928.0	34.7	32.2	-67.55	1,255.2	1,027.6	243.5	194.0	49.56	4.914				
8,600.0	7,020.0	8,465.9	6,928.0	35.9	33.5	-67.55	1,355.2	1,027.6	243.5	191.1	52.48	4.641				
8,700.0	7,020.0	8,565.9	6,928.0	37.1	34.9	-67.55	1,455.2	1,027.6	243.5	188.1	55.43	4.394				
8,800.0	7,020.0	8,665.9	6,928.0	38.4	36.3	-67.55	1,555.2	1,027.6	243.5	185.1	58.41	4.170				

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 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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				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	7,020.0	8,765.9	6,928.0	39.8	37.7	-67.55	1,655.2	1,027.6	243.5	182.1	61.41	3.965		
9,000.0	7,020.0	8,865.9	6,928.0	41.1	39.1	-67.55	1,755.2	1,027.6	243.5	179.1	64.45	3.779		
9,100.0	7,020.0	8,965.9	6,928.0	42.5	40.6	-67.55	1,855.2	1,027.6	243.5	176.0	67.50	3.608		
9,200.0	7,020.0	9,065.9	6,928.0	43.9	42.1	-67.55	1,955.2	1,027.6	243.5	173.0	70.57	3.451		
9,300.0	7,020.0	9,165.9	6,928.0	45.4	43.6	-67.55	2,055.2	1,027.6	243.5	169.9	73.65	3.307		
9,400.0	7,020.0	9,265.9	6,928.0	46.9	45.1	-67.55	2,155.2	1,027.6	243.5	166.8	76.75	3.173		
9,500.0	7,020.0	9,365.9	6,928.0	48.3	46.6	-67.55	2,255.2	1,027.6	243.5	163.7	79.85	3.050		
9,600.0	7,020.0	9,465.9	6,928.0	49.8	48.2	-67.55	2,355.2	1,027.6	243.5	160.6	82.97	2.935		
9,700.0	7,020.0	9,565.9	6,928.0	51.4	49.8	-67.55	2,455.2	1,027.6	243.5	157.4	86.10	2.828		
9,800.0	7,020.0	9,665.9	6,928.0	52.9	51.3	-67.55	2,555.2	1,027.6	243.5	154.3	89.24	2.729		
9,900.0	7,020.0	9,765.9	6,928.0	54.4	52.9	-67.55	2,655.2	1,027.6	243.5	151.2	92.38	2.636		
10,000.0	7,020.0	9,865.9	6,928.0	56.0	54.5	-67.55	2,755.2	1,027.6	243.5	148.0	95.54	2.549		
10,100.0	7,020.0	9,965.9	6,928.0	57.6	56.1	-67.55	2,855.2	1,027.6	243.5	144.8	98.69	2.468		
10,200.0	7,020.0	10,065.9	6,928.0	59.2	57.8	-67.55	2,955.2	1,027.6	243.5	141.7	101.86	2.391		
10,300.0	7,020.0	10,165.9	6,928.0	60.7	59.4	-67.55	3,055.2	1,027.6	243.5	138.5	105.02	2.319		
10,400.0	7,020.0	10,265.9	6,928.0	62.3	61.0	-67.55	3,155.2	1,027.6	243.5	135.3	108.20	2.251		
10,500.0	7,020.0	10,365.9	6,928.0	64.0	62.7	-67.55	3,255.2	1,027.6	243.5	132.2	111.37	2.187		
10,600.0	7,020.0	10,465.9	6,928.0	65.6	64.3	-67.55	3,355.2	1,027.6	243.5	129.0	114.55	2.126		
10,700.0	7,020.0	10,565.9	6,928.0	67.2	66.0	-67.55	3,455.2	1,027.6	243.5	125.8	117.74	2.069		
10,800.0	7,020.0	10,665.9	6,928.0	68.8	67.6	-67.55	3,555.2	1,027.6	243.5	122.6	120.93	2.014		
10,900.0	7,020.0	10,765.9	6,928.0	70.5	69.3	-67.55	3,655.2	1,027.6	243.5	119.4	124.12	1.962		
11,000.0	7,020.0	10,865.9	6,928.0	72.1	71.0	-67.55	3,755.2	1,027.6	243.5	116.2	127.31	1.913		
11,100.0	7,020.0	10,965.9	6,928.0	73.7	72.6	-67.55	3,855.2	1,027.6	243.5	113.0	130.51	1.866		
11,200.0	7,020.0	11,065.9	6,928.0	75.4	74.3	-67.55	3,955.2	1,027.6	243.5	109.8	133.70	1.822		
11,300.0	7,020.0	11,165.9	6,928.0	77.0	76.0	-67.55	4,055.2	1,027.6	243.5	106.6	136.90	1.779		
11,400.0	7,020.0	11,265.9	6,928.0	78.7	77.7	-67.55	4,155.2	1,027.6	243.5	103.4	140.11	1.738		
11,500.0	7,020.0	11,365.9	6,928.0	80.4	79.3	-67.55	4,255.2	1,027.6	243.5	100.2	143.31	1.699		
11,600.0	7,020.0	11,465.9	6,928.0	82.0	81.0	-67.55	4,355.2	1,027.6	243.5	97.0	146.52	1.662		
11,700.0	7,020.0	11,565.9	6,928.0	83.7	82.7	-67.55	4,455.2	1,027.6	243.5	93.8	149.73	1.627		
11,721.2	7,020.0	11,587.1	6,928.0	84.1	83.1	-67.55	4,476.5	1,027.6	243.5	93.1	150.41	1.619		
11,740.8	7,020.0	11,605.6	6,928.0	84.4	83.4	-67.55	4,494.9	1,027.6	243.6	92.5	151.02	1.613 SF		



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Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	89.90	0.0	7.6	7.6					
100.0	100.0	100.0	100.0	0.1	0.1	89.90	0.0	7.6	7.6	7.3	0.24	30.903		
200.0	200.0	200.0	200.0	0.3	0.3	89.90	0.0	7.6	7.6	7.0	0.59	12.725 CC, ES		
250.0	250.0	249.9	249.9	0.4	0.4	90.56	-0.1	8.0	8.0	7.2	0.77	10.368		
300.0	300.0	299.7	299.7	0.5	0.5	-12.52	-0.4	9.2	8.8	7.9	0.94	9.376		
400.0	399.9	399.4	399.2	0.7	0.7	-11.46	-1.4	14.3	10.6	9.3	1.29	8.181		
500.0	499.7	499.0	498.4	0.9	0.9	-11.27	-3.3	22.8	12.3	10.7	1.64	7.496		
600.0	599.1	598.5	597.2	1.1	1.2	-11.63	-5.8	34.6	14.0	12.0	1.99	7.046		
700.0	698.2	698.0	695.5	1.4	1.5	-12.35	-9.0	49.8	15.8	13.4	2.35	6.718		
800.0	796.6	797.4	793.1	1.7	1.9	-13.32	-13.0	68.2	17.6	14.8	2.72	6.455		
900.0	894.4	896.7	889.9	2.1	2.3	-14.47	-17.7	90.0	19.3	16.2	3.11	6.222		
970.7	963.2	967.0	957.9	2.4	2.6	-15.36	-21.4	107.3	20.6	17.2	3.40	6.064		
1,000.0	991.5	996.0	985.8	2.6	2.8	-15.65	-23.0	115.0	21.3	17.7	3.52	6.040		
1,100.0	1,088.4	1,095.6	1,081.2	3.0	3.3	-15.47	-29.0	142.9	25.3	21.4	3.93	6.440		
1,200.0	1,185.2	1,195.5	1,176.8	3.5	3.8	-15.15	-35.1	171.3	29.7	25.4	4.33	6.865		
1,300.0	1,282.1	1,295.4	1,272.4	4.0	4.4	-14.92	-41.2	199.7	34.2	29.4	4.73	7.216		
1,400.0	1,378.9	1,395.3	1,368.0	4.4	4.9	-14.74	-47.2	228.1	38.6	33.5	5.14	7.511		
1,500.0	1,475.8	1,495.2	1,463.6	4.9	5.5	-14.60	-53.3	256.5	43.0	37.5	5.54	7.763		
1,600.0	1,572.6	1,595.1	1,559.1	5.4	6.0	-14.48	-59.4	284.9	47.5	41.5	5.95	7.979		
1,700.0	1,669.5	1,695.0	1,654.7	5.8	6.6	-14.39	-65.5	313.3	51.9	45.5	6.35	8.168		
1,800.0	1,766.3	1,794.9	1,750.3	6.3	7.1	-14.31	-71.6	341.7	56.3	49.6	6.76	8.333		
1,900.0	1,863.2	1,894.8	1,845.9	6.8	7.7	-14.24	-77.7	370.1	60.8	53.6	7.17	8.480		
2,000.0	1,960.0	1,994.7	1,941.5	7.3	8.2	-14.18	-83.7	398.5	65.2	57.6	7.57	8.610		
2,100.0	2,056.9	2,094.6	2,037.1	7.7	8.8	-14.12	-89.8	426.9	69.7	61.7	7.98	8.728		
2,200.0	2,153.7	2,194.5	2,132.7	8.2	9.3	-14.08	-95.9	455.3	74.1	65.7	8.39	8.833		
2,300.0	2,250.6	2,294.4	2,228.3	8.7	9.9	-14.04	-102.0	483.7	78.5	69.7	8.80	8.929		
2,400.0	2,347.4	2,394.3	2,323.8	9.2	10.4	-14.00	-108.1	512.1	83.0	73.8	9.20	9.016		
2,500.0	2,444.3	2,494.2	2,419.4	9.7	11.0	-13.97	-114.2	540.5	87.4	77.8	9.61	9.096		
2,600.0	2,541.1	2,594.1	2,515.0	10.1	11.5	-13.94	-120.3	568.9	91.8	81.8	10.02	9.169		
2,700.0	2,638.0	2,694.0	2,610.6	10.6	12.1	-13.91	-126.3	597.3	96.3	85.9	10.43	9.236		
2,800.0	2,734.8	2,793.9	2,706.2	11.1	12.6	-13.89	-132.4	625.7	100.7	89.9	10.83	9.298		
2,900.0	2,831.7	2,893.8	2,801.8	11.6	13.2	-13.87	-138.5	654.1	105.2	93.9	11.24	9.356		
3,000.0	2,928.5	2,993.7	2,897.4	12.0	13.7	-13.85	-144.6	682.5	109.6	98.0	11.65	9.409		
3,100.0	3,025.4	3,093.6	2,992.9	12.5	14.3	-13.83	-150.7	710.8	114.0	102.0	12.06	9.459		
3,200.0	3,122.2	3,193.5	3,088.5	13.0	14.8	-13.81	-156.8	739.2	118.5	106.0	12.46	9.506		
3,300.0	3,219.1	3,293.4	3,184.1	13.5	15.4	-13.79	-162.8	767.6	122.9	110.0	12.87	9.549		
3,400.0	3,315.9	3,393.3	3,279.7	14.0	16.0	-13.78	-168.9	796.0	127.4	114.1	13.28	9.590		
3,500.0	3,412.8	3,493.2	3,375.3	14.4	16.5	-13.76	-175.0	824.4	131.8	118.1	13.69	9.629		
3,600.0	3,509.6	3,593.1	3,470.9	14.9	17.1	-13.75	-181.1	852.8	136.2	122.1	14.10	9.665		
3,700.0	3,606.5	3,693.0	3,566.5	15.4	17.6	-13.74	-187.2	881.2	140.7	126.2	14.50	9.699		
3,800.0	3,703.4	3,792.9	3,662.1	15.9	18.2	-13.73	-193.3	909.6	145.1	130.2	14.91	9.732		
3,900.0	3,800.2	3,892.8	3,757.6	16.4	18.7	-13.72	-199.3	938.0	149.5	134.2	15.32	9.762		
4,000.0	3,897.1	3,992.7	3,853.2	16.8	19.3	-13.70	-205.4	966.4	154.0	138.3	15.73	9.791		
4,100.0	3,993.9	4,092.6	3,948.8	17.3	19.8	-13.70	-211.5	994.8	158.4	142.3	16.14	9.818		
4,200.0	4,090.8	4,192.5	4,044.4	17.8	20.4	-13.69	-217.6	1,023.2	162.9	146.3	16.54	9.845		
4,300.0	4,187.6	4,292.4	4,140.0	18.3	20.9	-13.68	-223.7	1,051.6	167.3	150.4	16.95	9.869		
4,400.0	4,284.5	4,392.3	4,235.6	18.7	21.5	-13.67	-229.8	1,080.0	171.7	154.4	17.36	9.893		
4,500.0	4,381.3	4,492.2	4,331.2	19.2	22.1	-13.66	-235.9	1,108.4	176.2	158.4	17.77	9.916		
4,600.0	4,478.2	4,592.1	4,426.8	19.7	22.6	-13.65	-241.9	1,136.8	180.6	162.4	18.18	9.937		
4,700.0	4,575.0	4,692.0	4,522.3	20.2	23.2	-13.65	-248.0	1,165.2	185.1	166.5	18.58	9.958		
4,800.0	4,671.9	4,791.9	4,617.9	20.7	23.7	-13.64	-254.1	1,193.6	189.5	170.5	18.99	9.978		
4,900.0	4,768.7	4,891.8	4,713.5	21.1	24.3	-13.63	-260.2	1,222.0	193.9	174.5	19.40	9.996		

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



Anticollision Report

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Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,000.0	4,865.6	4,991.7	4,809.1	21.6	24.8	-13.63	-266.3	1,250.4	198.4	178.6	19.81	10.015		
5,100.0	4,962.4	5,091.6	4,904.7	22.1	25.4	-13.62	-272.4	1,278.8	202.8	182.6	20.22	10.032		
5,200.0	5,059.3	5,191.5	5,000.3	22.6	25.9	-13.62	-278.4	1,307.2	207.3	186.6	20.63	10.049		
5,300.0	5,156.1	5,291.5	5,095.9	23.1	26.5	-13.61	-284.5	1,335.6	211.7	190.7	21.03	10.065		
5,400.0	5,253.0	5,393.4	5,193.4	23.5	27.0	-13.61	-290.7	1,364.4	216.0	194.6	21.45	10.072		
5,435.0	5,286.8	5,431.1	5,229.7	23.7	27.2	-13.64	-292.9	1,374.6	217.0	195.4	21.61	10.044		
5,500.0	5,350.0	5,501.4	5,297.6	24.0	27.6	-13.73	-296.7	1,392.2	218.4	196.5	21.90	9.970		
5,600.0	5,447.8	5,609.4	5,402.8	24.4	28.0	-13.84	-301.8	1,416.2	220.3	197.9	22.33	9.863		
5,700.0	5,546.2	5,717.6	5,509.0	24.7	28.4	-13.93	-306.1	1,436.3	221.8	199.1	22.72	9.762		
5,800.0	5,645.2	5,825.8	5,616.0	25.0	28.7	-14.00	-309.6	1,452.5	223.1	200.0	23.08	9.665		
5,900.0	5,744.6	5,934.1	5,723.5	25.2	28.9	-14.06	-312.2	1,464.7	224.0	200.6	23.41	9.572		
6,000.0	5,844.4	6,042.4	5,831.5	25.3	29.1	-14.10	-313.9	1,472.9	224.7	201.0	23.70	9.482		
6,100.0	5,944.3	6,150.7	5,939.7	25.4	29.2	-14.12	-314.9	1,477.1	225.0	201.1	23.95	9.394		
6,155.7	6,000.0	6,211.0	6,000.0	25.5	29.2	90.00	-315.0	1,477.8	225.1	201.0	24.08	9.345		
6,200.0	6,044.3	6,255.3	6,044.3	25.5	29.3	90.00	-315.0	1,477.8	225.1	200.8	24.22	9.292		
6,300.0	6,144.3	6,355.3	6,144.3	25.6	29.3	90.00	-315.0	1,477.8	225.1	200.5	24.53	9.174		
6,400.0	6,244.3	6,455.3	6,244.3	25.7	29.4	90.00	-315.0	1,477.8	225.1	200.2	24.85	9.058		
6,500.0	6,344.3	6,555.3	6,344.3	25.7	29.5	90.00	-315.0	1,477.8	225.1	199.9	25.16	8.945		
6,602.7	6,447.0	6,658.1	6,447.0	25.8	29.5	90.00	-315.0	1,477.8	225.1	199.6	25.48	8.831		
6,613.1	6,457.4	6,668.4	6,457.4	25.8	29.5	90.02	-315.0	1,477.8	225.1	199.6	25.50	8.825		
6,650.0	6,494.2	6,705.3	6,494.2	25.8	29.6	90.49	-315.0	1,477.8	225.1	199.6	25.42	8.854		
6,700.0	6,543.8	6,754.8	6,543.8	25.9	29.6	92.06	-315.0	1,477.8	225.2	200.2	24.97	9.019		
6,750.0	6,592.7	6,803.9	6,592.8	25.8	29.6	94.63	-315.0	1,477.8	225.8	201.5	24.31	9.291		
6,800.0	6,640.4	6,854.5	6,643.4	25.8	29.7	97.62	-312.3	1,477.8	227.2	203.4	23.74	9.568		
6,850.0	6,686.7	6,906.4	6,694.8	25.8	29.7	100.56	-305.0	1,477.8	229.2	205.7	23.45	9.771		
6,900.0	6,731.1	6,959.5	6,746.4	25.8	29.7	103.41	-292.7	1,477.8	231.7	208.3	23.41	9.898		
6,950.0	6,773.4	7,013.9	6,797.9	25.7	29.6	106.13	-275.2	1,477.8	234.8	211.2	23.55	9.968		
7,000.0	6,813.2	7,069.7	6,848.8	25.7	29.6	108.70	-252.2	1,477.8	238.2	214.4	23.79	10.011		
7,050.0	6,850.2	7,126.9	6,898.3	25.7	29.6	111.09	-223.7	1,477.8	241.9	217.9	24.06	10.055		
7,100.0	6,884.2	7,185.5	6,945.8	25.7	29.5	113.29	-189.5	1,477.8	245.8	221.5	24.28	10.120		
7,150.0	6,914.8	7,245.5	6,990.6	25.7	29.5	115.27	-149.7	1,477.8	249.6	225.2	24.43	10.218		
7,200.0	6,941.9	7,306.8	7,031.9	25.7	29.5	117.02	-104.4	1,477.8	253.3	228.8	24.48	10.346		
7,250.0	6,965.2	7,369.3	7,068.7	25.7	29.5	118.53	-53.8	1,477.8	256.7	232.2	24.46	10.495		
7,300.0	6,984.5	7,433.0	7,100.3	25.8	29.5	119.78	1.4	1,477.8	259.7	235.3	24.34	10.671		
7,350.0	6,999.8	7,497.7	7,126.0	25.9	29.6	120.76	60.7	1,477.8	262.2	238.0	24.20	10.835		
7,400.0	7,010.8	7,563.1	7,145.0	26.0	29.7	121.47	123.3	1,477.8	264.0	239.9	24.08	10.965		
7,450.0	7,017.6	7,629.1	7,156.7	26.2	29.9	121.91	188.2	1,477.8	265.2	241.1	24.01	11.043		
7,502.7	7,020.0	7,699.0	7,161.0	26.3	30.1	122.07	258.0	1,477.8	265.6	241.5	24.04	11.048		
7,600.0	7,020.0	7,796.3	7,161.0	26.8	30.4	122.07	355.2	1,477.8	265.6	240.0	25.54	10.400		
7,700.0	7,020.0	7,896.3	7,161.0	27.3	30.9	122.07	455.2	1,477.8	265.6	238.3	27.31	9.724		
7,800.0	7,020.0	7,996.3	7,161.0	27.9	31.5	122.07	555.2	1,477.8	265.6	236.3	29.28	9.069		
7,900.0	7,020.0	8,096.3	7,161.0	28.7	32.1	122.07	655.2	1,477.8	265.6	234.2	31.42	8.454		
8,000.0	7,020.0	8,196.3	7,161.0	29.5	32.8	122.07	755.2	1,477.8	265.6	231.9	33.68	7.887		
8,100.0	7,020.0	8,296.3	7,161.0	30.4	33.6	122.07	855.2	1,477.8	265.6	229.5	36.04	7.369		
8,200.0	7,020.0	8,396.3	7,161.0	31.4	34.5	122.07	955.2	1,477.8	265.6	227.1	38.49	6.900		
8,300.0	7,020.0	8,496.3	7,161.0	32.4	35.4	122.07	1,055.2	1,477.8	265.6	224.6	41.01	6.476		
8,400.0	7,020.0	8,596.3	7,161.0	33.5	36.4	122.07	1,155.2	1,477.8	265.6	222.0	43.59	6.093		
8,500.0	7,020.0	8,696.3	7,161.0	34.7	37.5	122.07	1,255.2	1,477.8	265.6	219.4	46.22	5.746		
8,600.0	7,020.0	8,796.3	7,161.0	35.9	38.6	122.07	1,355.2	1,477.8	265.6	216.7	48.88	5.433		
8,700.0	7,020.0	8,896.3	7,161.0	37.1	39.8	122.07	1,455.2	1,477.8	265.6	214.0	51.59	5.148		
8,800.0	7,020.0	8,996.3	7,161.0	38.4	41.0	122.07	1,555.2	1,477.8	265.6	211.3	54.32	4.890		
8,900.0	7,020.0	9,096.3	7,161.0	39.8	42.2	122.07	1,655.2	1,477.8	265.6	208.5	57.07	4.653		

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-20H-O264	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4K-20H-O264 - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
9,000.0	7,020.0	9,196.3	7,161.0	41.1	43.5	122.07	1,755.2	1,477.8	265.6	205.7	59.85	4.438		
9,100.0	7,020.0	9,296.3	7,161.0	42.5	44.8	122.07	1,855.2	1,477.8	265.6	202.9	62.65	4.239		
9,200.0	7,020.0	9,396.3	7,161.0	43.9	46.1	122.07	1,955.2	1,477.8	265.6	200.1	65.46	4.057		
9,300.0	7,020.0	9,496.3	7,161.0	45.4	47.5	122.07	2,055.2	1,477.8	265.6	197.3	68.29	3.889		
9,400.0	7,020.0	9,596.3	7,161.0	46.9	48.9	122.07	2,155.2	1,477.8	265.6	194.5	71.12	3.734		
9,500.0	7,020.0	9,696.3	7,161.0	48.3	50.3	122.07	2,255.2	1,477.8	265.6	191.6	73.97	3.590		
9,600.0	7,020.0	9,796.3	7,161.0	49.8	51.8	122.07	2,355.2	1,477.8	265.6	188.8	76.83	3.457		
9,700.0	7,020.0	9,896.3	7,161.0	51.4	53.2	122.07	2,455.2	1,477.8	265.6	185.9	79.70	3.332		
9,800.0	7,020.0	9,996.3	7,161.0	52.9	54.7	122.07	2,555.2	1,477.8	265.6	183.0	82.58	3.216		
9,900.0	7,020.0	10,096.3	7,161.0	54.4	56.2	122.07	2,655.2	1,477.8	265.6	180.1	85.46	3.108		
10,000.0	7,020.0	10,196.3	7,161.0	56.0	57.7	122.06	2,755.2	1,477.8	265.6	177.2	88.35	3.006		
10,100.0	7,020.0	10,296.3	7,161.0	57.6	59.2	122.06	2,855.2	1,477.8	265.6	174.3	91.25	2.911		
10,200.0	7,020.0	10,396.3	7,161.0	59.2	60.8	122.06	2,955.2	1,477.8	265.6	171.4	94.15	2.821		
10,300.0	7,020.0	10,496.3	7,161.0	60.7	62.3	122.06	3,055.2	1,477.8	265.6	168.5	97.06	2.736		
10,400.0	7,020.0	10,596.3	7,161.0	62.3	63.9	122.06	3,155.2	1,477.8	265.6	165.6	99.97	2.657		
10,500.0	7,020.0	10,696.3	7,161.0	64.0	65.5	122.06	3,255.2	1,477.8	265.6	162.7	102.88	2.582		
10,600.0	7,020.0	10,796.3	7,161.0	65.6	67.0	122.06	3,355.2	1,477.8	265.6	159.8	105.80	2.510		
10,700.0	7,020.0	10,896.3	7,161.0	67.2	68.6	122.06	3,455.2	1,477.8	265.6	156.9	108.72	2.443		
10,800.0	7,020.0	10,996.3	7,161.0	68.8	70.2	122.06	3,555.2	1,477.8	265.6	154.0	111.65	2.379		
10,900.0	7,020.0	11,096.3	7,161.0	70.5	71.8	122.06	3,655.2	1,477.8	265.6	151.0	114.57	2.318		
11,000.0	7,020.0	11,196.3	7,161.0	72.1	73.4	122.06	3,755.2	1,477.8	265.6	148.1	117.50	2.260		
11,100.0	7,020.0	11,296.3	7,161.0	73.7	75.1	122.06	3,855.2	1,477.8	265.6	145.2	120.44	2.205		
11,200.0	7,020.0	11,396.3	7,161.0	75.4	76.7	122.06	3,955.2	1,477.8	265.6	142.2	123.37	2.153		
11,300.0	7,020.0	11,496.3	7,161.0	77.0	78.3	122.06	4,055.2	1,477.8	265.6	139.3	126.31	2.103		
11,400.0	7,020.0	11,596.3	7,161.0	78.7	79.9	122.06	4,155.2	1,477.8	265.6	136.4	129.25	2.055		
11,500.0	7,020.0	11,696.3	7,161.0	80.4	81.6	122.06	4,255.2	1,477.8	265.6	133.4	132.19	2.009		
11,600.0	7,020.0	11,796.3	7,161.0	82.0	83.2	122.06	4,355.2	1,477.8	265.6	130.5	135.13	1.966		
11,700.0	7,020.0	11,896.3	7,161.0	83.7	84.9	122.06	4,455.2	1,477.8	265.6	127.5	138.08	1.924		
11,740.8	7,020.0	11,937.1	7,161.0	84.4	85.5	122.06	4,496.0	1,477.8	265.6	126.3	139.28	1.907 SF		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	3.54	1,302.3	80.5	1,306.3					
100.0	100.0	38.0	38.0	0.1	0.1	3.54	1,302.3	80.5	1,304.8	1,304.6	0.19	6,914.873		
200.0	200.0	138.0	138.0	0.3	0.2	3.54	1,302.3	80.5	1,304.8	1,304.3	0.54	2,426.371		
250.0	250.0	188.0	188.0	0.4	0.3	3.54	1,302.3	80.5	1,304.8	1,304.1	0.71	1,831.839		
300.0	300.0	238.0	238.0	0.5	0.4	-100.59	1,302.3	80.5	1,304.9	1,304.0	0.89	1,471.031		
400.0	399.9	337.9	337.9	0.7	0.6	-100.73	1,302.3	80.5	1,305.5	1,304.3	1.24	1,049.303		
500.0	499.7	437.7	437.7	0.9	0.8	-101.00	1,302.3	80.5	1,306.8	1,305.2	1.62	805.271		
600.0	599.1	537.1	537.1	1.1	0.9	-101.41	1,302.3	80.5	1,308.9	1,306.9	2.04	643.155		
700.0	698.2	636.2	636.2	1.4	1.1	-101.95	1,302.3	80.5	1,311.7	1,309.2	2.49	526.794		
800.0	796.6	734.6	734.6	1.7	1.3	-102.60	1,302.3	80.5	1,315.5	1,312.5	2.99	439.420		
900.0	894.4	832.4	832.4	2.1	1.5	-103.37	1,302.3	80.5	1,320.3	1,316.7	3.55	371.959		
970.7	963.2	901.2	901.2	2.4	1.6	-103.98	1,302.3	80.5	1,324.3	1,320.4	3.97	333.552		
1,000.0	991.5	929.5	929.5	2.6	1.6	-104.27	1,302.3	80.5	1,326.2	1,322.0	4.15	319.889		
1,100.0	1,088.4	1,026.4	1,026.4	3.0	1.8	-105.28	1,302.3	80.5	1,332.7	1,328.0	4.75	280.673		
1,200.0	1,185.2	1,123.2	1,123.2	3.5	2.0	-106.28	1,302.3	80.5	1,339.7	1,334.3	5.35	250.266		
1,300.0	1,282.1	1,220.1	1,220.1	4.0	2.1	-107.27	1,302.3	80.5	1,347.1	1,341.1	5.96	226.115		
1,400.0	1,378.9	1,316.9	1,316.9	4.4	2.3	-108.24	1,302.3	80.5	1,354.9	1,348.3	6.56	206.539		
1,500.0	1,475.8	1,413.8	1,413.8	4.9	2.5	-109.21	1,302.3	80.5	1,363.1	1,355.9	7.16	190.393		
1,600.0	1,572.6	1,510.6	1,510.6	5.4	2.6	-110.16	1,302.3	80.5	1,371.7	1,364.0	7.76	176.880		
1,700.0	1,669.5	1,607.5	1,607.5	5.8	2.8	-111.11	1,302.3	80.5	1,380.8	1,372.4	8.35	165.428		
1,800.0	1,766.3	1,704.3	1,704.3	6.3	3.0	-112.04	1,302.3	80.5	1,390.2	1,381.2	8.93	155.618		
1,900.0	1,863.2	1,801.2	1,801.2	6.8	3.1	-112.96	1,302.3	80.5	1,400.0	1,390.4	9.51	147.135		
2,000.0	1,960.0	1,898.0	1,898.0	7.3	3.3	-113.86	1,302.3	80.5	1,410.1	1,400.0	10.09	139.739		
2,100.0	2,056.9	1,994.9	1,994.9	7.7	3.5	-114.76	1,302.3	80.5	1,420.6	1,410.0	10.66	133.246		
2,200.0	2,153.7	2,091.7	2,091.7	8.2	3.7	-115.64	1,302.3	80.5	1,431.5	1,420.3	11.23	127.510		
2,300.0	2,250.6	2,188.6	2,188.6	8.7	3.8	-116.51	1,302.3	80.5	1,442.7	1,431.0	11.79	122.412		
2,400.0	2,347.4	2,285.4	2,285.4	9.2	4.0	-117.37	1,302.3	80.5	1,454.3	1,442.0	12.34	117.861		
2,500.0	2,444.3	2,382.3	2,382.3	9.7	4.2	-118.21	1,302.3	80.5	1,466.2	1,453.3	12.89	113.779		
2,600.0	2,541.1	2,479.1	2,479.1	10.1	4.3	-119.04	1,302.3	80.5	1,478.4	1,465.0	13.43	110.102		
2,700.0	2,638.0	2,576.0	2,576.0	10.6	4.5	-119.86	1,302.3	80.5	1,491.0	1,477.0	13.96	106.779		
2,800.0	2,734.8	2,672.8	2,672.8	11.1	4.7	-120.66	1,302.3	80.5	1,503.8	1,489.3	14.49	103.766		
2,900.0	2,831.7	2,769.7	2,769.7	11.6	4.8	-121.45	1,302.3	80.5	1,517.0	1,501.9	15.02	101.026		
3,000.0	2,928.5	2,866.5	2,866.5	12.0	5.0	-122.23	1,302.3	80.5	1,530.4	1,514.9	15.53	98.527		
3,100.0	3,025.4	2,963.4	2,963.4	12.5	5.2	-122.99	1,302.3	80.5	1,544.1	1,528.1	16.04	96.242		
7,600.0	7,020.0	6,958.0	6,958.0	26.8	12.1	-90.00	1,302.3	80.5	1,507.0	1,480.1	26.91	56.002		
7,700.0	7,020.0	6,958.0	6,958.0	27.3	12.1	-90.00	1,302.3	80.5	1,446.2	1,418.3	27.92	51.801		
7,800.0	7,020.0	6,958.0	6,958.0	27.9	12.1	-90.00	1,302.3	80.5	1,390.0	1,361.0	29.05	47.849		
7,900.0	7,020.0	6,958.0	6,958.0	28.7	12.1	-90.00	1,302.3	80.5	1,338.9	1,308.6	30.28	44.217		
8,000.0	7,020.0	6,958.0	6,958.0	29.5	12.1	-90.00	1,302.3	80.5	1,293.5	1,262.0	31.59	40.946		
8,100.0	7,020.0	6,958.0	6,958.0	30.4	12.1	-90.00	1,302.3	80.5	1,254.5	1,221.6	32.97	38.052		
8,200.0	7,020.0	6,958.0	6,958.0	31.4	12.1	-90.00	1,302.3	80.5	1,222.5	1,188.1	34.40	35.539		
8,300.0	7,020.0	6,958.0	6,958.0	32.4	12.1	-90.00	1,302.3	80.5	1,197.9	1,162.0	35.87	33.395		
8,400.0	7,020.0	6,958.0	6,958.0	33.5	12.1	-90.00	1,302.3	80.5	1,181.4	1,144.0	37.38	31.603		
8,500.0	7,020.0	6,958.0	6,958.0	34.7	12.1	-90.00	1,302.3	80.5	1,173.1	1,134.2	38.92	30.142		
8,547.1	7,020.0	6,958.0	6,958.0	35.2	12.1	-90.00	1,302.3	80.5	1,172.2	1,132.5	39.66	29.558 CC, ES		
8,600.0	7,020.0	6,958.0	6,958.0	35.9	12.1	-90.00	1,302.3	80.5	1,173.4	1,132.9	40.48	28.983		
8,700.0	7,020.0	6,958.0	6,958.0	37.1	12.1	-90.00	1,302.3	80.5	1,182.1	1,140.0	42.07	28.099		
8,800.0	7,020.0	6,958.0	6,958.0	38.4	12.1	-90.00	1,302.3	80.5	1,199.1	1,155.5	43.67	27.458		
8,900.0	7,020.0	6,958.0	6,958.0	39.8	12.1	-90.00	1,302.3	80.5	1,224.1	1,178.8	45.29	27.029		
9,000.0	7,020.0	6,958.0	6,958.0	41.1	12.1	-90.00	1,302.3	80.5	1,256.6	1,209.7	46.92	26.781		
9,100.0	7,020.0	6,958.0	6,958.0	42.5	12.1	-90.00	1,302.3	80.5	1,296.0	1,247.5	48.56	26.686 SF		
9,200.0	7,020.0	6,958.0	6,958.0	43.9	12.1	-90.00	1,302.3	80.5	1,341.7	1,291.5	50.22	26.718		

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



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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		
9,300.0	7,020.0	6,958.0	6,958.0	45.4	12.1	-90.00	1,302.3	80.5	1,393.1	1,341.3	51.88	26.854		
9,400.0	7,020.0	6,958.0	6,958.0	46.9	12.1	-90.00	1,302.3	80.5	1,449.6	1,396.1	53.55	27.071		
9,500.0	7,020.0	6,958.0	6,958.0	48.3	12.1	-90.00	1,302.3	80.5	1,510.6	1,455.4	55.22	27.355		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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		
10,200.0	7,020.0	6,927.0	6,927.0	59.2	12.1	-90.00	3,912.4	69.9	1,521.6	1,454.5	67.04	22.697		
10,300.0	7,020.0	6,927.0	6,927.0	60.7	12.1	-90.00	3,912.4	69.9	1,460.7	1,392.0	68.75	21.248		
10,400.0	7,020.0	6,927.0	6,927.0	62.3	12.1	-90.00	3,912.4	69.9	1,404.4	1,333.9	70.46	19.932		
10,500.0	7,020.0	6,927.0	6,927.0	64.0	12.1	-90.00	3,912.4	69.9	1,353.1	1,280.9	72.17	18.748		
10,600.0	7,020.0	6,927.0	6,927.0	65.6	12.1	-90.00	3,912.4	69.9	1,307.4	1,233.6	73.89	17.694		
10,700.0	7,020.0	6,927.0	6,927.0	67.2	12.1	-90.00	3,912.4	69.9	1,268.1	1,192.5	75.61	16.771		
10,800.0	7,020.0	6,927.0	6,927.0	68.8	12.1	-90.00	3,912.4	69.9	1,235.5	1,158.2	77.33	15.977		
10,900.0	7,020.0	6,927.0	6,927.0	70.5	12.1	-90.00	3,912.4	69.9	1,210.4	1,131.4	79.05	15.311		
11,000.0	7,020.0	6,927.0	6,927.0	72.1	12.1	-90.00	3,912.4	69.9	1,193.2	1,112.4	80.78	14.771		
11,100.0	7,020.0	6,927.0	6,927.0	73.7	12.1	-90.00	3,912.4	69.9	1,184.2	1,101.7	82.50	14.353		
11,157.2	7,020.0	6,927.0	6,927.0	74.7	12.1	-90.00	3,912.4	69.9	1,182.8	1,099.3	83.49	14.167 CC, ES		
11,200.0	7,020.0	6,927.0	6,927.0	75.4	12.1	-90.00	3,912.4	69.9	1,183.6	1,099.3	84.23	14.052		
11,300.0	7,020.0	6,927.0	6,927.0	77.0	12.1	-90.00	3,912.4	69.9	1,191.4	1,105.4	85.96	13.860		
11,400.0	7,020.0	6,927.0	6,927.0	78.7	12.1	-90.00	3,912.4	69.9	1,207.5	1,119.8	87.69	13.770 SF		
11,500.0	7,020.0	6,927.0	6,927.0	80.4	12.1	-90.00	3,912.4	69.9	1,231.5	1,142.1	89.42	13.772		
11,600.0	7,020.0	6,927.0	6,927.0	82.0	12.1	-90.00	3,912.4	69.9	1,263.0	1,171.8	91.15	13.856		
11,700.0	7,020.0	6,927.0	6,927.0	83.7	12.1	-90.00	3,912.4	69.9	1,301.4	1,208.5	92.88	14.011		
11,740.8	7,020.0	6,927.0	6,927.0	84.4	12.1	-90.00	3,912.4	69.9	1,318.9	1,225.4	93.59	14.093		



Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Dale 4J-20H-O264
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Dale 4J-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	
8,700.0	7,020.0	6,952.0	6,952.0	37.1	12.1	-90.00	1,675.3	-274.9	1,543.4	1,501.3	42.06	36.696	
8,800.0	7,020.0	6,952.0	6,952.0	38.4	12.1	-90.00	1,675.3	-274.9	1,532.3	1,488.7	43.66	35.095	
8,900.0	7,020.0	6,952.0	6,952.0	39.8	12.1	-90.00	1,675.3	-274.9	1,527.7	1,482.4	45.28	33.740	
8,920.1	7,020.0	6,952.0	6,952.0	40.0	12.1	-90.00	1,675.3	-274.9	1,527.6	1,482.0	45.61	33.494 CC, ES	
9,000.0	7,020.0	6,952.0	6,952.0	41.1	12.1	-90.00	1,675.3	-274.9	1,529.7	1,482.8	46.91	32.608	
9,100.0	7,020.0	6,952.0	6,952.0	42.5	12.1	-90.00	1,675.3	-274.9	1,538.2	1,489.6	48.55	31.679 SF	



Anticollision Report

Company: EnCana Oil & Gas (USA) Inc
Project: DJ Wattenberg
Reference Site: S20-T2N-R64W (Dale)
Site Error: 0.0ft
Reference Well: Dale 4J-20H-O264
Well Error: 0.0ft
Reference Wellbore: HZ
Reference Design: Plan #1

Local Co-ordinate Reference: Well Dale 4J-20H-O264
TVD Reference: WELL @ 4987.0ft (Original Well Elev)
MD Reference: WELL @ 4987.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4987.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

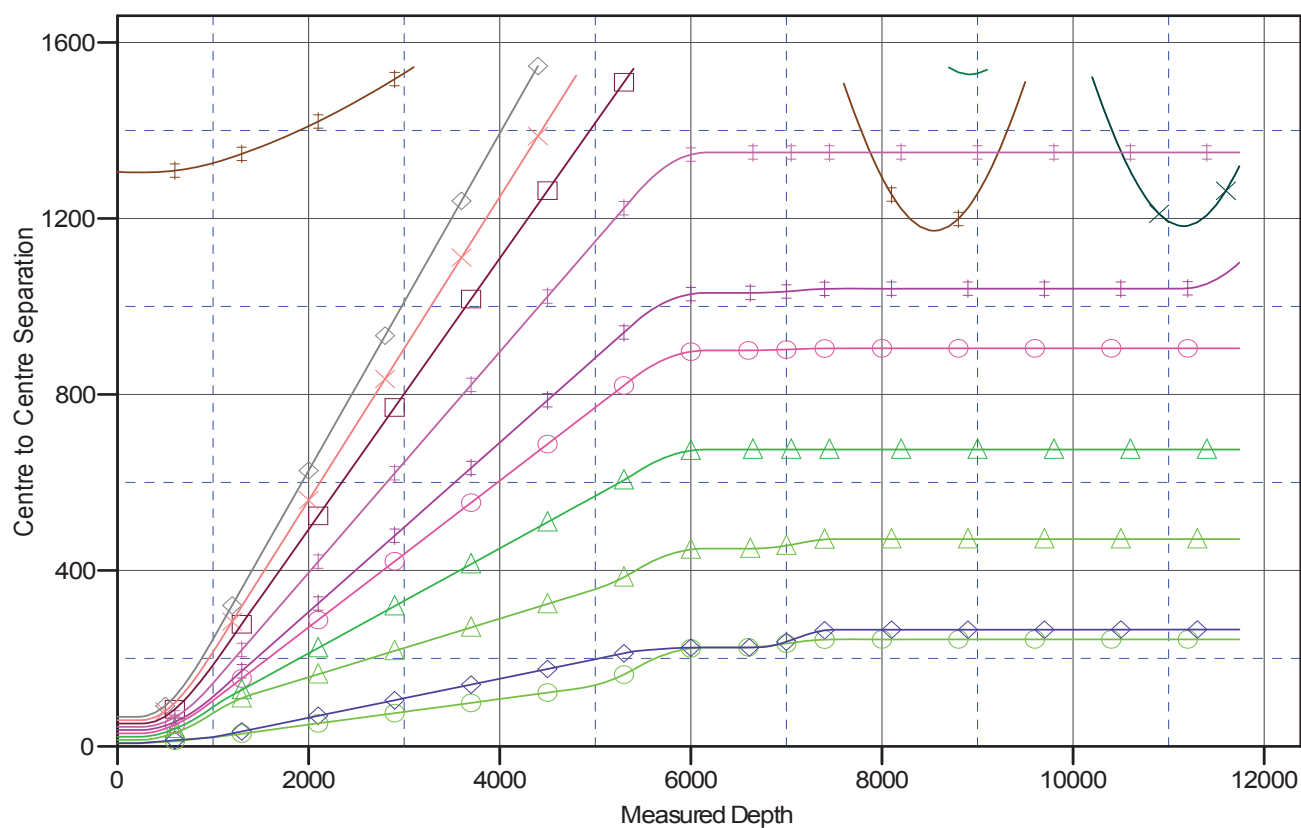
Central Meridian is -105.500000 °

Coordinates are relative to: Dale 4J-20H-O264

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

Ladder Plot



LEGEND

264, HZ, Plan#1 V0
TING), EXISTING, NEBRASKA WELL V0
264, HZ, Plan#1 V0
(EXISTING), EXISTING, NOBLE WELL V0
264, HZ, Plan#1 V0

— Dale 4I-20H-O264, HZ, Plan#1 V0
— Dale 4B-20H-O264, HZ, Plan#1 V0
— Dale 4H-20H-O264, HZ, Plan#1 V0
— Dale 4K-20H-O264, HZ, Plan#1 V0
— Dale 4F-20H-O264, HZ, Plan#1 V0

— DALE 'E' UNIT 1 (EXISTING), EXISTING
— Dale 4G-20H-O264, HZ, Plan#1 V0
— Dale 4D-20H-O264, HZ, Plan#1 V0