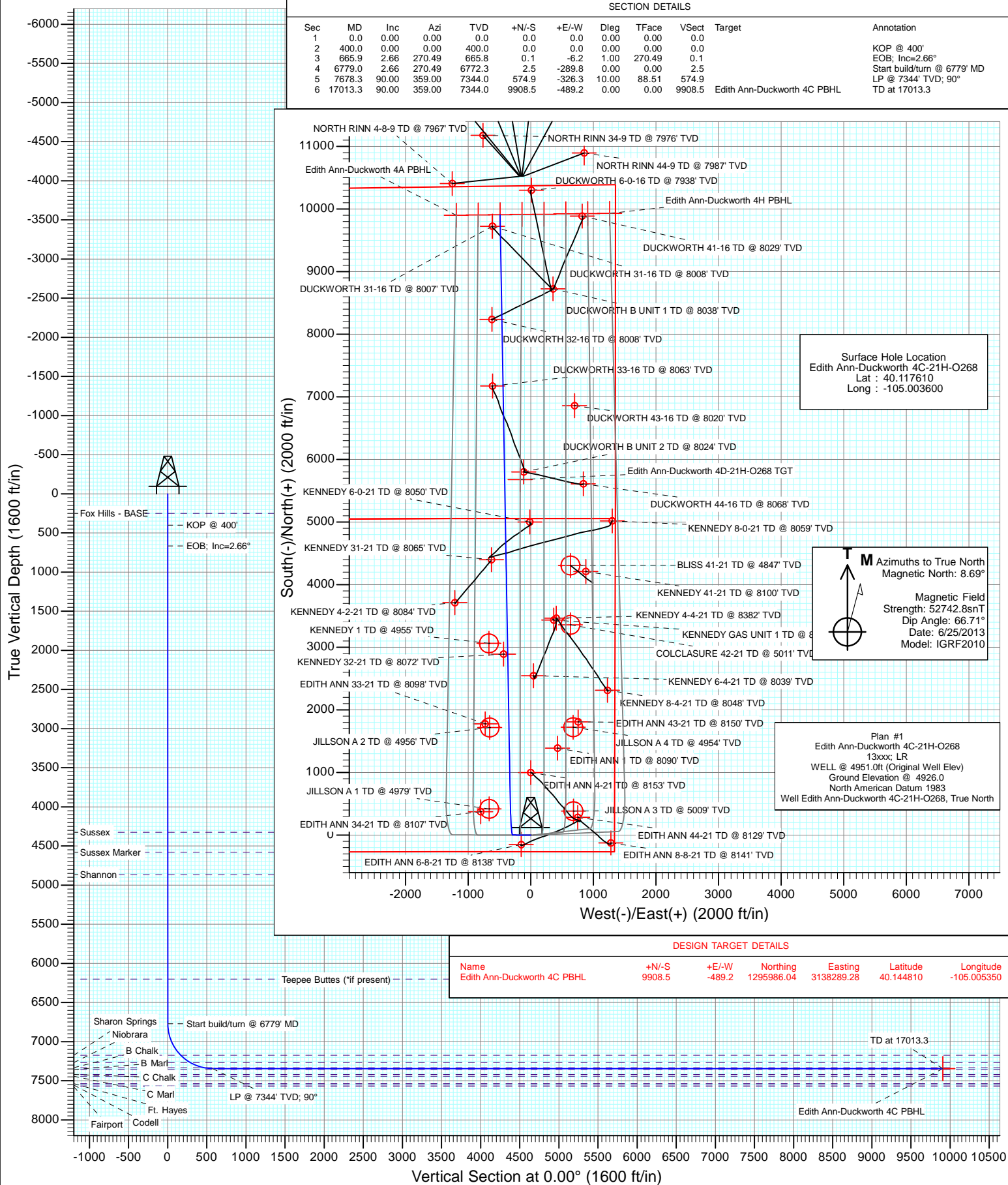




Project: DJ Wattenberg  
Site: S21-T2N-R68W (Edith Ann-Duckworth)  
Well: Edith Ann-Duckworth 4C-21H-O268  
Vellbore: Hz  
Design: Plan #1



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>North Reference:</b>	True
<b>Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

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

Site		S21-T2N-R68W (Edith Ann-Duckworth)			
Site Position:		Northing:	1,290,455.50 ft	Latitude:	40.129630
From:	Lat/Long	Easting:	3,138,171.93 ft	Longitude:	-105.005880
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.32 °

Well	Edith Ann-Duckworth 4C-21H-O268					
Well Position	+N/-S	0.0 ft	Northing:	1,286,080.48 ft	Latitude:	40.117610
	+E/-W	0.0 ft	Easting:	3,138,833.96 ft	Longitude:	-105.003600
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,926.0 ft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	6/25/2013	8.69	66.71	52,743

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	0.00

<b>Plan Sections</b>										
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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
665.9	2.66	270.49	665.8	0.1	-6.2	1.00	1.00	0.00	270.49	
6,779.0	2.66	270.49	6,772.3	2.5	-289.8	0.00	0.00	0.00	0.00	
7,678.3	90.00	359.00	7,344.0	574.9	-326.3	10.00	9.71	9.84	88.51	
17,013.3	90.00	359.00	7,344.0	9,908.5	-489.2	0.00	0.00	0.00	0.00	Edith Ann-Duckworth

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>North Reference:</b>	True
<b>Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

## 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	
251.0	0.00	0.00	251.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	270.49	500.0	0.0	-0.9	0.0	1.00	1.00	
600.0	2.00	270.49	600.0	0.0	-3.5	0.0	1.00	1.00	
665.9	2.66	270.49	665.8	0.1	-6.2	0.1	1.00	1.00	EOB; Inc=2.66°
700.0	2.66	270.49	699.9	0.1	-7.8	0.1	0.00	0.00	
800.0	2.66	270.49	799.8	0.1	-12.4	0.1	0.00	0.00	
900.0	2.66	270.49	899.7	0.1	-17.0	0.1	0.00	0.00	
1,000.0	2.66	270.49	999.5	0.2	-21.7	0.2	0.00	0.00	
1,100.0	2.66	270.49	1,099.4	0.2	-26.3	0.2	0.00	0.00	
1,200.0	2.66	270.49	1,199.3	0.3	-30.9	0.3	0.00	0.00	
1,300.0	2.66	270.49	1,299.2	0.3	-35.6	0.3	0.00	0.00	
1,400.0	2.66	270.49	1,399.1	0.3	-40.2	0.3	0.00	0.00	
1,500.0	2.66	270.49	1,499.0	0.4	-44.9	0.4	0.00	0.00	
1,600.0	2.66	270.49	1,598.9	0.4	-49.5	0.4	0.00	0.00	
1,700.0	2.66	270.49	1,698.8	0.5	-54.1	0.5	0.00	0.00	
1,800.0	2.66	270.49	1,798.7	0.5	-58.8	0.5	0.00	0.00	
1,900.0	2.66	270.49	1,898.6	0.5	-63.4	0.5	0.00	0.00	
2,000.0	2.66	270.49	1,998.5	0.6	-68.1	0.6	0.00	0.00	
2,100.0	2.66	270.49	2,098.4	0.6	-72.7	0.6	0.00	0.00	
2,200.0	2.66	270.49	2,198.3	0.7	-77.3	0.7	0.00	0.00	
2,300.0	2.66	270.49	2,298.1	0.7	-82.0	0.7	0.00	0.00	
2,400.0	2.66	270.49	2,398.0	0.7	-86.6	0.7	0.00	0.00	
2,500.0	2.66	270.49	2,497.9	0.8	-91.3	0.8	0.00	0.00	
2,600.0	2.66	270.49	2,597.8	0.8	-95.9	0.8	0.00	0.00	
2,700.0	2.66	270.49	2,697.7	0.9	-100.5	0.9	0.00	0.00	
2,800.0	2.66	270.49	2,797.6	0.9	-105.2	0.9	0.00	0.00	
2,900.0	2.66	270.49	2,897.5	0.9	-109.8	0.9	0.00	0.00	
3,000.0	2.66	270.49	2,997.4	1.0	-114.5	1.0	0.00	0.00	
3,100.0	2.66	270.49	3,097.3	1.0	-119.1	1.0	0.00	0.00	
3,200.0	2.66	270.49	3,197.2	1.1	-123.7	1.1	0.00	0.00	
3,300.0	2.66	270.49	3,297.1	1.1	-128.4	1.1	0.00	0.00	
3,400.0	2.66	270.49	3,397.0	1.1	-133.0	1.1	0.00	0.00	
3,500.0	2.66	270.49	3,496.9	1.2	-137.7	1.2	0.00	0.00	
3,600.0	2.66	270.49	3,596.7	1.2	-142.3	1.2	0.00	0.00	
3,700.0	2.66	270.49	3,696.6	1.3	-146.9	1.3	0.00	0.00	
3,800.0	2.66	270.49	3,796.5	1.3	-151.6	1.3	0.00	0.00	
3,900.0	2.66	270.49	3,896.4	1.3	-156.2	1.3	0.00	0.00	
4,000.0	2.66	270.49	3,996.3	1.4	-160.8	1.4	0.00	0.00	
4,100.0	2.66	270.49	4,096.2	1.4	-165.5	1.4	0.00	0.00	
4,200.0	2.66	270.49	4,196.1	1.4	-170.1	1.4	0.00	0.00	
4,300.0	2.66	270.49	4,296.0	1.5	-174.8	1.5	0.00	0.00	
4,329.0	2.66	270.49	4,325.0	1.5	-176.1	1.5	0.00	0.00	Sussex
4,400.0	2.66	270.49	4,395.9	1.5	-179.4	1.5	0.00	0.00	
4,500.0	2.66	270.49	4,495.8	1.6	-184.0	1.6	0.00	0.00	
4,586.3	2.66	270.49	4,582.0	1.6	-188.0	1.6	0.00	0.00	Sussex Marker
4,600.0	2.66	270.49	4,595.7	1.6	-188.7	1.6	0.00	0.00	
4,700.0	2.66	270.49	4,695.6	1.6	-193.3	1.6	0.00	0.00	

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>North Reference:</b>	True
<b>Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	2.66	270.49	4,795.5	1.7	-198.0	1.7	0.00	0.00	
4,871.6	2.66	270.49	4,867.0	1.7	-201.3	1.7	0.00	0.00	Shannon
4,900.0	2.66	270.49	4,895.3	1.7	-202.6	1.7	0.00	0.00	
5,000.0	2.66	270.49	4,995.2	1.8	-207.2	1.8	0.00	0.00	
5,100.0	2.66	270.49	5,095.1	1.8	-211.9	1.8	0.00	0.00	
5,200.0	2.66	270.49	5,195.0	1.8	-216.5	1.8	0.00	0.00	
5,300.0	2.66	270.49	5,294.9	1.9	-221.2	1.9	0.00	0.00	
5,400.0	2.66	270.49	5,394.8	1.9	-225.8	1.9	0.00	0.00	
5,500.0	2.66	270.49	5,494.7	2.0	-230.4	2.0	0.00	0.00	
5,600.0	2.66	270.49	5,594.6	2.0	-235.1	2.0	0.00	0.00	
5,700.0	2.66	270.49	5,694.5	2.0	-239.7	2.0	0.00	0.00	
5,800.0	2.66	270.49	5,794.4	2.1	-244.4	2.1	0.00	0.00	
5,900.0	2.66	270.49	5,894.3	2.1	-249.0	2.1	0.00	0.00	
6,000.0	2.66	270.49	5,994.2	2.2	-253.6	2.2	0.00	0.00	
6,100.0	2.66	270.49	6,094.1	2.2	-258.3	2.2	0.00	0.00	
6,200.0	2.66	270.49	6,193.9	2.2	-262.9	2.2	0.00	0.00	
6,206.1	2.66	270.49	6,200.0	2.2	-263.2	2.2	0.00	0.00	Teepee Buttes (*if present)
6,300.0	2.66	270.49	6,293.8	2.3	-267.6	2.3	0.00	0.00	
6,400.0	2.66	270.49	6,393.7	2.3	-272.2	2.3	0.00	0.00	
6,500.0	2.66	270.49	6,493.6	2.4	-276.8	2.4	0.00	0.00	
6,600.0	2.66	270.49	6,593.5	2.4	-281.5	2.4	0.00	0.00	
6,700.0	2.66	270.49	6,693.4	2.4	-286.1	2.4	0.00	0.00	
6,779.0	2.66	270.49	6,772.3	2.5	-289.8	2.5	0.00	0.00	Start build/turn @ 6779' MD
6,800.0	3.43	308.20	6,793.3	2.9	-290.8	2.9	10.00	3.67	
6,900.0	12.45	346.86	6,892.3	15.2	-295.6	15.2	10.00	9.02	
7,000.0	22.32	352.51	6,987.6	44.6	-300.5	44.6	10.00	9.87	
7,100.0	32.26	354.78	7,076.4	90.2	-305.4	90.2	10.00	9.95	
7,200.0	42.23	356.07	7,155.9	150.4	-310.2	150.4	10.00	9.97	
7,226.4	44.87	356.33	7,175.0	168.6	-311.4	168.6	10.00	9.98	Sharon Springs
7,300.0	52.21	356.94	7,223.7	223.6	-314.6	223.6	10.00	9.98	
7,379.7	60.17	357.47	7,268.0	289.7	-317.8	289.7	10.00	9.98	Niobrara
7,400.0	62.20	357.60	7,277.8	307.5	-318.6	307.5	10.00	9.99	
7,500.0	72.19	358.15	7,316.5	399.5	-322.0	399.5	10.00	9.99	
7,571.1	79.29	358.50	7,334.0	468.3	-324.0	468.3	10.00	9.99	B Chalk
7,600.0	82.17	358.63	7,338.7	496.8	-324.7	496.8	10.00	9.99	
7,678.3	90.00	359.00	7,344.0	574.9	-326.3	574.9	10.00	9.99	LP @ 7344' TVD; 90°
7,700.0	90.00	359.00	7,344.0	596.5	-326.7	596.5	0.00	0.00	
7,800.0	90.00	359.00	7,344.0	696.5	-328.4	696.5	0.00	0.00	
7,900.0	90.00	359.00	7,344.0	796.5	-330.2	796.5	0.00	0.00	
8,000.0	90.00	359.00	7,344.0	896.5	-331.9	896.5	0.00	0.00	
8,100.0	90.00	359.00	7,344.0	996.5	-333.7	996.5	0.00	0.00	
8,200.0	90.00	359.00	7,344.0	1,096.5	-335.4	1,096.5	0.00	0.00	
8,300.0	90.00	359.00	7,344.0	1,196.4	-337.2	1,196.4	0.00	0.00	
8,400.0	90.00	359.00	7,344.0	1,296.4	-338.9	1,296.4	0.00	0.00	
8,500.0	90.00	359.00	7,344.0	1,396.4	-340.7	1,396.4	0.00	0.00	
8,600.0	90.00	359.00	7,344.0	1,496.4	-342.4	1,496.4	0.00	0.00	
8,700.0	90.00	359.00	7,344.0	1,596.4	-344.1	1,596.4	0.00	0.00	
8,800.0	90.00	359.00	7,344.0	1,696.4	-345.9	1,696.4	0.00	0.00	
8,900.0	90.00	359.00	7,344.0	1,796.4	-347.6	1,796.4	0.00	0.00	
9,000.0	90.00	359.00	7,344.0	1,896.3	-349.4	1,896.3	0.00	0.00	
9,100.0	90.00	359.00	7,344.0	1,996.3	-351.1	1,996.3	0.00	0.00	
9,200.0	90.00	359.00	7,344.0	2,096.3	-352.9	2,096.3	0.00	0.00	

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>North Reference:</b>	True
<b>Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,300.0	90.00	359.00	7,344.0	2,196.3	-354.6	2,196.3	0.00	0.00	
9,400.0	90.00	359.00	7,344.0	2,296.3	-356.4	2,296.3	0.00	0.00	
9,500.0	90.00	359.00	7,344.0	2,396.3	-358.1	2,396.3	0.00	0.00	
9,600.0	90.00	359.00	7,344.0	2,496.2	-359.8	2,496.2	0.00	0.00	
9,700.0	90.00	359.00	7,344.0	2,596.2	-361.6	2,596.2	0.00	0.00	
9,800.0	90.00	359.00	7,344.0	2,696.2	-363.3	2,696.2	0.00	0.00	
9,900.0	90.00	359.00	7,344.0	2,796.2	-365.1	2,796.2	0.00	0.00	
10,000.0	90.00	359.00	7,344.0	2,896.2	-366.8	2,896.2	0.00	0.00	
10,100.0	90.00	359.00	7,344.0	2,996.2	-368.6	2,996.2	0.00	0.00	
10,200.0	90.00	359.00	7,344.0	3,096.2	-370.3	3,096.2	0.00	0.00	
10,300.0	90.00	359.00	7,344.0	3,196.1	-372.1	3,196.1	0.00	0.00	
10,400.0	90.00	359.00	7,344.0	3,296.1	-373.8	3,296.1	0.00	0.00	
10,500.0	90.00	359.00	7,344.0	3,396.1	-375.6	3,396.1	0.00	0.00	
10,600.0	90.00	359.00	7,344.0	3,496.1	-377.3	3,496.1	0.00	0.00	
10,700.0	90.00	359.00	7,344.0	3,596.1	-379.0	3,596.1	0.00	0.00	
10,800.0	90.00	359.00	7,344.0	3,696.1	-380.8	3,696.1	0.00	0.00	
10,900.0	90.00	359.00	7,344.0	3,796.0	-382.5	3,796.0	0.00	0.00	
11,000.0	90.00	359.00	7,344.0	3,896.0	-384.3	3,896.0	0.00	0.00	
11,100.0	90.00	359.00	7,344.0	3,996.0	-386.0	3,996.0	0.00	0.00	
11,200.0	90.00	359.00	7,344.0	4,096.0	-387.8	4,096.0	0.00	0.00	
11,300.0	90.00	359.00	7,344.0	4,196.0	-389.5	4,196.0	0.00	0.00	
11,400.0	90.00	359.00	7,344.0	4,296.0	-391.3	4,296.0	0.00	0.00	
11,500.0	90.00	359.00	7,344.0	4,396.0	-393.0	4,396.0	0.00	0.00	
11,600.0	90.00	359.00	7,344.0	4,495.9	-394.8	4,495.9	0.00	0.00	
11,700.0	90.00	359.00	7,344.0	4,595.9	-396.5	4,595.9	0.00	0.00	
11,800.0	90.00	359.00	7,344.0	4,695.9	-398.2	4,695.9	0.00	0.00	
11,900.0	90.00	359.00	7,344.0	4,795.9	-400.0	4,795.9	0.00	0.00	
12,000.0	90.00	359.00	7,344.0	4,895.9	-401.7	4,895.9	0.00	0.00	
12,100.0	90.00	359.00	7,344.0	4,995.9	-403.5	4,995.9	0.00	0.00	
12,200.0	90.00	359.00	7,344.0	5,095.8	-405.2	5,095.8	0.00	0.00	
12,300.0	90.00	359.00	7,344.0	5,195.8	-407.0	5,195.8	0.00	0.00	
12,400.0	90.00	359.00	7,344.0	5,295.8	-408.7	5,295.8	0.00	0.00	
12,500.0	90.00	359.00	7,344.0	5,395.8	-410.5	5,395.8	0.00	0.00	
12,600.0	90.00	359.00	7,344.0	5,495.8	-412.2	5,495.8	0.00	0.00	
12,700.0	90.00	359.00	7,344.0	5,595.8	-414.0	5,595.8	0.00	0.00	
12,800.0	90.00	359.00	7,344.0	5,695.8	-415.7	5,695.8	0.00	0.00	
12,900.0	90.00	359.00	7,344.0	5,795.7	-417.4	5,795.7	0.00	0.00	
13,000.0	90.00	359.00	7,344.0	5,895.7	-419.2	5,895.7	0.00	0.00	
13,100.0	90.00	359.00	7,344.0	5,995.7	-420.9	5,995.7	0.00	0.00	
13,200.0	90.00	359.00	7,344.0	6,095.7	-422.7	6,095.7	0.00	0.00	
13,300.0	90.00	359.00	7,344.0	6,195.7	-424.4	6,195.7	0.00	0.00	
13,400.0	90.00	359.00	7,344.0	6,295.7	-426.2	6,295.7	0.00	0.00	
13,500.0	90.00	359.00	7,344.0	6,395.7	-427.9	6,395.7	0.00	0.00	
13,600.0	90.00	359.00	7,344.0	6,495.6	-429.7	6,495.6	0.00	0.00	
13,700.0	90.00	359.00	7,344.0	6,595.6	-431.4	6,595.6	0.00	0.00	
13,800.0	90.00	359.00	7,344.0	6,695.6	-433.1	6,695.6	0.00	0.00	
13,900.0	90.00	359.00	7,344.0	6,795.6	-434.9	6,795.6	0.00	0.00	
14,000.0	90.00	359.00	7,344.0	6,895.6	-436.6	6,895.6	0.00	0.00	
14,100.0	90.00	359.00	7,344.0	6,995.6	-438.4	6,995.6	0.00	0.00	
14,200.0	90.00	359.00	7,344.0	7,095.5	-440.1	7,095.5	0.00	0.00	
14,300.0	90.00	359.00	7,344.0	7,195.5	-441.9	7,195.5	0.00	0.00	
14,400.0	90.00	359.00	7,344.0	7,295.5	-443.6	7,295.5	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>North Reference:</b>	True
<b>Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

### 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
14,500.0	90.00	359.00	7,344.0	7,395.5	-445.4	7,395.5	0.00	0.00	
14,600.0	90.00	359.00	7,344.0	7,495.5	-447.1	7,495.5	0.00	0.00	
14,700.0	90.00	359.00	7,344.0	7,595.5	-448.9	7,595.5	0.00	0.00	
14,800.0	90.00	359.00	7,344.0	7,695.5	-450.6	7,695.5	0.00	0.00	
14,900.0	90.00	359.00	7,344.0	7,795.4	-452.3	7,795.4	0.00	0.00	
15,000.0	90.00	359.00	7,344.0	7,895.4	-454.1	7,895.4	0.00	0.00	
15,100.0	90.00	359.00	7,344.0	7,995.4	-455.8	7,995.4	0.00	0.00	
15,200.0	90.00	359.00	7,344.0	8,095.4	-457.6	8,095.4	0.00	0.00	
15,300.0	90.00	359.00	7,344.0	8,195.4	-459.3	8,195.4	0.00	0.00	
15,400.0	90.00	359.00	7,344.0	8,295.4	-461.1	8,295.4	0.00	0.00	
15,500.0	90.00	359.00	7,344.0	8,395.3	-462.8	8,395.3	0.00	0.00	
15,600.0	90.00	359.00	7,344.0	8,495.3	-464.6	8,495.3	0.00	0.00	
15,700.0	90.00	359.00	7,344.0	8,595.3	-466.3	8,595.3	0.00	0.00	
15,800.0	90.00	359.00	7,344.0	8,695.3	-468.1	8,695.3	0.00	0.00	
15,900.0	90.00	359.00	7,344.0	8,795.3	-469.8	8,795.3	0.00	0.00	
16,000.0	90.00	359.00	7,344.0	8,895.3	-471.5	8,895.3	0.00	0.00	
16,100.0	90.00	359.00	7,344.0	8,995.3	-473.3	8,995.3	0.00	0.00	
16,200.0	90.00	359.00	7,344.0	9,095.2	-475.0	9,095.2	0.00	0.00	
16,300.0	90.00	359.00	7,344.0	9,195.2	-476.8	9,195.2	0.00	0.00	
16,400.0	90.00	359.00	7,344.0	9,295.2	-478.5	9,295.2	0.00	0.00	
16,500.0	90.00	359.00	7,344.0	9,395.2	-480.3	9,395.2	0.00	0.00	
16,600.0	90.00	359.00	7,344.0	9,495.2	-482.0	9,495.2	0.00	0.00	
16,700.0	90.00	359.00	7,344.0	9,595.2	-483.8	9,595.2	0.00	0.00	
16,800.0	90.00	359.00	7,344.0	9,695.1	-485.5	9,695.1	0.00	0.00	
16,900.0	90.00	359.00	7,344.0	9,795.1	-487.3	9,795.1	0.00	0.00	
17,000.0	90.00	359.00	7,344.0	9,895.1	-489.0	9,895.1	0.00	0.00	
17,013.3	90.00	359.00	7,344.0	9,908.5	-489.2	9,908.5	0.00	0.00	TD at 17013.3

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Edith Ann-Duckworth 4C	0.00	0.00	7,344.0	9,908.5	-489.2	1,295,986.04	3,138,289.28	40.144810	-105.005350
- hit/miss target									
- Shape									
- Point									

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>North Reference:</b>	True
<b>Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
251.0	251.0	Fox Hills - BASE				
4,329.0	4,325.0	Sussex				
4,586.3	4,582.0	Sussex Marker				
4,871.6	4,867.0	Shannon				
6,206.1	6,200.0	Teepee Buttes (*if present)				
7,226.4	7,175.0	Sharon Springs				
7,379.7	7,268.0	Niobrara				
7,571.1	7,334.0	B Chalk				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
400.0	400.0	0.0	0.0	KOP @ 400'	
665.9	665.8	0.1	-6.2	EOB; Inc=2.66°	
6,779.0	6,772.3	2.5	-289.8	Start build/turn @ 6779' MD	
7,678.3	7,344.0	574.9	-326.3	LP @ 7344' TVD; 90°	
17,013.3	7,344.0	9,908.5	-489.2	TD at 17013.3	

# **EnCana Oil & Gas (USA) Inc**

**DJ Wattenberg**

**S21-T2N-R68W (Edith Ann-Duckworth)**

**Edith Ann-Duckworth 4C-21H-O268**

**Hz**

**Plan #1**

## **Anticollision Report**

**26 June, 2013**



## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	Systematic Ellipse
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 500.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>		<b>Date</b>	6/26/2013		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.0	17,013.3	Plan #1 (Hz)	Geolink MWD	Geolink MWD	

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
S21-T2N-R68W (Edith Ann-Duckworth)						
BLISS 41-21 (EXISTING) - KPK WELL - SURVEYS						Out of range
COLCLASURE 42-21 (EXISTING) - KPK WELL - NO SU						Out of range
DUCKWORTH 31-16 (EXISTING) - ENCANA WELL - SU	16,828.9	7,499.8	128.4	-66.8	0.658	Level 1, CC, ES, SF
DUCKWORTH 32-16 (EXISTING) - ENCANA WELL - SU	15,339.5	7,411.5	158.4	-3.6	0.978	Level 1, CC, ES, SF
DUCKWORTH 33-16 (EXISTING) - ENCANA WELL - SU	14,280.3	7,469.5	170.4	15.1	1.097	Level 2, CC, ES, SF
DUCKWORTH 41-16 (EXISTING) - ENCANA WELL - SUR						Out of range
DUCKWORTH 43-16 (EXISTING) - ENCANA WELL - NO						Out of range
DUCKWORTH 44-16 (EXISTING) - ENCANA WELL - SU						Out of range
DUCKWORTH 6-0-16 (EXISTING) - ENCANA WELL - S						Out of range
DUCKWORTH B UNIT 1 (EXISTING) - ENCANA WELL -						Out of range
DUCKWORTH B UNIT 2 (EXISTING) - ENCANA WELL -	12,899.3	7,272.0	307.3	190.5	2.630	CC
DUCKWORTH B UNIT 2 (EXISTING) - ENCANA WELL -	12,900.0	7,272.0	307.3	190.5	2.630	ES, SF
EDITH ANN 1 (EXISTING) - ENCANA WELL - NO SURV						Out of range
EDITH ANN 33-21 (EXISTING) - ENCANA WELL - NO S	8,886.9	7,295.0	380.3	332.3	7.929	CC, ES
EDITH ANN 33-21 (EXISTING) - ENCANA WELL - NO S	8,900.0	7,295.0	380.5	332.4	7.899	SF
EDITH ANN 34-21 (EXISTING) - ENCANA WELL - NO S	7,488.5	7,269.9	477.1	449.4	17.248	CC, ES
EDITH ANN 34-21 (EXISTING) - ENCANA WELL - NO S	7,600.0	7,295.7	489.7	460.9	16.977	SF
EDITH ANN 4-21 (EXISTING) - ENCANA WELL - SURVE	8,094.3	7,464.4	345.3	303.6	8.275	CC
EDITH ANN 4-21 (EXISTING) - ENCANA WELL - SURVE	8,100.0	7,464.5	345.4	303.5	8.260	ES, SF
EDITH ANN 43-21 (EXISTING) - ENCANA WELL - NO S						Out of range
EDITH ANN 44-21 (EXISTING) - ENCANA WELL - NO S						Out of range
EDITH ANN 6-8-21 (EXISTING) - ENCANA WELL - SUR	4,555.5	4,681.2	176.7	149.9	6.599	CC
EDITH ANN 6-8-21 (EXISTING) - ENCANA WELL - SUR	4,800.0	4,926.0	177.8	149.4	6.265	ES
EDITH ANN 6-8-21 (EXISTING) - ENCANA WELL - SUR	5,700.0	5,826.1	185.6	154.5	5.956	SF
EDITH ANN 8-8-21 (EXISTING) - ENCANA WELL - SUR						Out of range
Edith Ann-Duckworth 4A-21H-O268 - Hz - Plan #1	200.0	199.0	19.6	19.0	32.140	CC, ES
Edith Ann-Duckworth 4A-21H-O268 - Hz - Plan #1	800.0	795.9	38.3	35.7	14.214	SF
Edith Ann-Duckworth 4B-21H-O268 - Hz - Plan #1	300.0	300.0	8.4	7.4	8.740	CC, ES
Edith Ann-Duckworth 4B-21H-O268 - Hz - Plan #1	17,013.3	17,282.7	414.0	115.2	1.385	Level 3, SF
Edith Ann-Duckworth 4D-21H-O268 - Hz - Plan #1	400.0	400.0	11.2	9.9	8.546	CC, ES
Edith Ann-Duckworth 4D-21H-O268 - Hz - Plan #1	17,013.3	17,230.0	414.0	115.2	1.386	Level 3, SF
Edith Ann-Duckworth 4E-21H-O268 - Hz - Plan #1	400.0	400.0	19.6	18.3	14.956	CC, ES
Edith Ann-Duckworth 4E-21H-O268 - Hz - Plan #1	600.0	600.0	23.1	21.1	11.497	SF
Edith Ann-Duckworth 4F-21H-O268 - Hz - Plan #1	366.3	367.3	30.8	29.6	25.782	CC
Edith Ann-Duckworth 4F-21H-O268 - Hz - Plan #1	400.0	401.0	30.8	29.5	23.471	ES
Edith Ann-Duckworth 4F-21H-O268 - Hz - Plan #1	600.0	600.0	37.8	35.8	18.819	SF
Edith Ann-Duckworth 4G-21H-O268 - Hz - Plan #1	266.3	267.3	42.0	41.1	49.696	CC
Edith Ann-Duckworth 4G-21H-O268 - Hz - Plan #1	300.0	301.0	42.0	41.0	43.623	ES
Edith Ann-Duckworth 4G-21H-O268 - Hz - Plan #1	600.0	598.3	53.3	51.3	26.596	SF
Edith Ann-Duckworth 4H-21H-O268 - Hz - Plan #1	166.3	167.3	50.3	49.8	101.682	CC
Edith Ann-Duckworth 4H-21H-O268 - Hz - Plan #1	200.0	201.0	50.3	49.7	82.175	ES
Edith Ann-Duckworth 4H-21H-O268 - Hz - Plan #1	600.0	596.6	67.7	65.7	33.857	SF
JILLSON A 1 (EXISTING) - FOUNDATION WELL - NO S						Out of range
JILLSON A 2 (EXISTING) - FOUNDATION WELL - NO S						Out of range
JILLSON A 3 (EXISTING) - FOUNDATION WELL - NO S						Out of range
JILLSON A 4 (EXISTING) - FOUNDATION WELL - NO S						Out of range
KENNEDY 1 (EXISTING) - MACEY & MERSHON WELL						Out of range
KENNEDY 31-21 (EXISTING) - ENCANA WELL - NO SU						Out of range
KENNEDY 32-21 (EXISTING) - ENCANA WELL - NO SU	9,996.3	7,285.0	66.1	-0.5	0.993	Level 1, CC, ES, SF
KENNEDY 41-21 (EXISTING) - ENCANA WELL - NO SU						Out of range
KENNEDY 4-2-21 (EXISTING) - ENCANA WELL - SURV						Out of range
KENNEDY 6-0-21 (EXISTING) - ENCANA WELL - SURV	12,082.2	7,388.9	389.7	283.8	3.680	CC, ES
KENNEDY 6-0-21 (EXISTING) - ENCANA WELL - SURV	12,100.0	7,389.4	390.1	283.9	3.673	SF

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

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	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						
S21-T2N-R68W (Edith Ann-Duckworth)						
KENNEDY 6-4-21 (EXISTING) - ENCANA WELL - SURV	9,632.1	7,423.2	409.2	340.8	5.983	CC, ES
KENNEDY 6-4-21 (EXISTING) - ENCANA WELL - SURV	9,700.0	7,424.1	414.8	345.3	5.964	SF
KENNEDY 8-0-21 (EXISTING) - ENCANA WELL - SURV						Out of range
KENNEDY 8-4-21 (EXISTING) - ENCANA WELL - SURV						Out of range
KENNEDY GAS UNIT 1 (EXISTING) - ENCANA WELL -						Out of range
NORTH RINN 33-9 (EXISTING) - ENCANA WELL - PLA						Out of range
NORTH RINN 34-9 (EXISTING) - ENCANA WELL - PLA						Out of range
NORTH RINN 43-9 (EXISTING) - ENCANA WELL - PLA						Out of range
NORTH RINN 44-9 (EXISTING) - ENCANA WELL - PLA						Out of range
NORTH RINN 4-4-9 (EXISTING) - ENCANA WELL - PLA						Out of range
NORTH RINN 4-6-9 (EXISTING) - ENCANA WELL - PLA						Out of range
NORTH RINN 4-8-9 (EXISTING) - ENCANA WELL - PLA						Out of range
NORTH RINN 6-6-9 (EXISTING) - ENCANA WELL - PLA						Out of range

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - DUCKWORTH 31-16 (EXISTING) - ENCANA WELL - SURVE													Offset Site Error: 0.0 ft
Survey Program: 716-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
16,400.0	7,344.0	7,484.0	7,266.8	165.4	28.1	-83.71	9,721.2	-614.6	447.5	260.7	186.74	2.396	
16,500.0	7,344.0	7,488.3	7,271.1	167.1	28.1	-85.59	9,721.4	-614.5	352.9	163.9	189.02	1.867	
16,600.0	7,344.0	7,491.6	7,274.4	168.9	28.1	-87.07	9,721.5	-614.5	262.3	71.3	191.06	1.373	Level 3
16,700.0	7,344.0	7,495.1	7,277.9	170.6	28.1	-88.61	9,721.6	-614.5	181.9	-11.1	192.98	0.943	Level 1
16,800.0	7,344.0	7,498.7	7,281.5	172.4	28.2	-90.22	9,721.8	-614.4	131.6	-63.1	194.77	0.676	Level 1
16,828.9	7,344.0	7,499.8	7,282.6	172.9	28.2	-90.70	9,721.8	-614.4	128.4	-66.8	195.26	0.658	Level 1, CC, ES, SF
16,900.0	7,344.0	7,502.5	7,285.3	174.1	28.2	-91.91	9,721.9	-614.4	146.8	-49.6	196.40	0.747	Level 1
17,000.0	7,344.0	7,506.4	7,289.2	175.9	28.2	-93.67	9,722.1	-614.3	213.8	16.0	197.85	1.081	Level 2
17,013.3	7,344.0	7,507.0	7,289.8	176.1	28.2	-93.91	9,722.1	-614.3	224.6	26.6	198.03	1.134	Level 2

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		S21-T2N-R68W (Edith Ann-Duckworth) - DUCKWORTH 32-16 (EXISTING) - ENCANA WELL - SURVE										Offset Site Error:		0.0 ft
Survey Program: 717-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		
14,900.0	7,344.0	7,409.2	7,278.1	139.2	23.1	-88.93	8,232.1	-618.3	467.2	312.9	154.27	3.028		
15,000.0	7,344.0	7,409.7	7,278.6	140.9	23.1	-89.12	8,232.1	-618.3	374.6	218.6	156.02	2.401		
15,100.0	7,344.0	7,410.3	7,279.1	142.7	23.1	-89.30	8,232.1	-618.3	287.1	129.4	157.77	1.820		
15,200.0	7,344.0	7,410.8	7,279.6	144.4	23.1	-89.49	8,232.1	-618.3	211.1	51.5	159.52	1.323	Level 3	
15,300.0	7,344.0	7,411.3	7,280.1	146.2	23.1	-89.68	8,232.1	-618.3	163.2	1.9	161.27	1.012	Level 2	
15,339.5	7,344.0	7,411.5	7,280.3	146.9	23.1	-89.75	8,232.1	-618.3	158.4	-3.6	161.96	0.978	Level 1, CC, ES, SF	
15,400.0	7,344.0	7,411.8	7,280.6	147.9	23.1	-89.86	8,232.1	-618.3	169.5	6.5	163.02	1.040	Level 2	
15,500.0	7,344.0	7,412.3	7,281.2	149.7	23.1	-90.05	8,232.2	-618.4	225.4	60.7	164.77	1.368	Level 3	
15,600.0	7,344.0	7,412.9	7,281.7	151.4	23.1	-90.24	8,232.2	-618.4	304.8	138.3	166.51	1.831		
15,700.0	7,344.0	7,413.4	7,282.2	153.1	23.1	-90.43	8,232.2	-618.4	393.7	225.4	168.26	2.340		
15,800.0	7,344.0	7,413.9	7,282.7	154.9	23.1	-90.63	8,232.2	-618.4	486.9	316.9	170.00	2.864		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - DUCKWORTH 33-16 (EXISTING) - ENCANA WELL - SURVE													Offset Site Error:	0.0 ft
Survey Program: 60-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
13,900.0	7,344.0	7,471.2	7,291.2	121.7	28.5	-90.41	7,172.9	-612.0	416.7	268.0	148.71	2.802		
14,000.0	7,344.0	7,470.8	7,290.8	123.5	28.5	-90.26	7,172.9	-611.9	328.1	177.6	150.45	2.180		
14,100.0	7,344.0	7,470.3	7,290.3	125.2	28.5	-90.11	7,172.9	-611.9	248.1	95.9	152.20	1.630		
14,200.0	7,344.0	7,469.9	7,289.9	127.0	28.5	-89.96	7,172.9	-611.9	188.4	34.5	153.95	1.224	Level 2	
14,280.3	7,344.0	7,469.5	7,289.5	128.4	28.5	-89.84	7,172.9	-611.9	170.4	15.1	155.35	1.097	Level 2, CC, ES, SF	
14,300.0	7,344.0	7,469.4	7,289.4	128.7	28.5	-89.81	7,172.9	-611.9	171.6	15.9	155.69	1.102	Level 2	
14,400.0	7,344.0	7,469.0	7,289.0	130.4	28.5	-89.66	7,172.9	-611.9	208.3	50.8	157.44	1.323	Level 3	
14,500.0	7,344.0	7,468.5	7,288.5	132.2	28.5	-89.50	7,172.9	-611.9	278.1	118.9	159.18	1.747		
14,600.0	7,344.0	7,468.0	7,288.0	133.9	28.5	-89.34	7,172.9	-611.9	362.3	201.4	160.93	2.251		
14,700.0	7,344.0	7,467.5	7,287.6	135.7	28.5	-89.18	7,172.9	-611.9	453.0	290.3	162.67	2.785		

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design											S21-T2N-R68W (Edith Ann-Duckworth) - DUCKWORTH B UNIT 2 (EXISTING) - ENCANA WELL - NO S			Offset Site Error:		0.0 ft
Survey Program:											8024-Geolink MWD			Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance									
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)						
12,600.0	7,344.0	7,272.0	7,272.0	99.1	12.7	90.00	5,800.4	-110.2	429.0	317.4	111.63	3.843				
12,700.0	7,344.0	7,272.0	7,272.0	100.8	12.7	90.00	5,800.4	-110.2	366.3	252.9	113.37	3.231				
12,800.0	7,344.0	7,272.0	7,272.0	102.6	12.7	90.00	5,800.4	-110.2	323.0	207.9	115.11	2.806				
12,899.3	7,344.0	7,272.0	7,272.0	104.3	12.7	90.00	5,800.4	-110.2	307.3	190.5	116.84	2.630	CC			
12,900.0	7,344.0	7,272.0	7,272.0	104.3	12.7	90.00	5,800.4	-110.2	307.3	190.5	116.85	2.630	ES, SF			
13,000.0	7,344.0	7,272.0	7,272.0	106.0	12.7	90.00	5,800.4	-110.2	323.4	204.8	118.59	2.727				
13,100.0	7,344.0	7,272.0	7,272.0	107.8	12.7	90.00	5,800.4	-110.2	367.0	246.7	120.34	3.050				
13,200.0	7,344.0	7,272.0	7,272.0	109.5	12.7	90.00	5,800.4	-110.2	429.9	307.8	122.08	3.522				

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													S21-T2N-R68W (Edith Ann-Duckworth) - EDITH ANN 33-21 (EXISTING) - ENCANA WELL - NO SURVE		Offset Site Error:		0.0 ft
Survey Program:													8098-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					
8,600.0	7,344.0	7,295.0	7,295.0	31.1	12.7	-90.00	1,776.6	-727.7	476.4	433.1	43.29	11.004	7.929 CC, ES				
8,700.0	7,344.0	7,295.0	7,295.0	32.7	12.7	-90.00	1,776.6	-727.7	423.8	378.8	44.91	9.436					
8,800.0	7,344.0	7,295.0	7,295.0	34.3	12.7	-90.00	1,776.6	-727.7	390.1	343.6	46.54	8.383					
8,886.9	7,344.0	7,295.0	7,295.0	35.7	12.7	-90.00	1,776.6	-727.7	380.3	332.3	47.96	7.929					
8,900.0	7,344.0	7,295.0	7,295.0	35.9	12.7	-90.00	1,776.6	-727.7	380.5	332.4	48.18	7.899					
9,000.0	7,344.0	7,295.0	7,295.0	37.5	12.7	-90.00	1,776.6	-727.7	396.8	346.9	49.83	7.963					
9,100.0	7,344.0	7,295.0	7,295.0	39.2	12.7	-90.00	1,776.6	-727.7	435.9	384.5	51.49	8.467					
9,200.0	7,344.0	7,295.0	7,295.0	40.8	12.7	-90.00	1,776.6	-727.7	492.6	439.5	53.16	9.267					



## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S21-T2N-R68W (Edith Ann-Duckworth) - EDITH ANN 34-21 (EXISTING) - ENCANA WELL - NO SURVE													<b>Offset Site Error:</b>	0.0 ft
Survey Program: 8107-Geolink MWD													<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
7,400.0	7,277.8	7,234.8	7,234.8	15.2	12.6	-85.23	372.7	-798.4	484.3	457.6	26.70	18.139		
7,488.5	7,312.9	7,269.9	7,269.9	15.9	12.7	-90.00	372.7	-798.4	477.1	449.4	27.66	17.248	CC, ES	
7,500.0	7,316.5	7,273.5	7,273.5	16.0	12.7	-90.42	372.7	-798.4	477.2	449.5	27.77	17.184		
7,600.0	7,338.7	7,295.7	7,295.7	17.0	12.7	-91.85	372.7	-798.4	489.7	460.9	28.85	16.977	SF	

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - EDITH ANN 4-21 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error: 0.0 ft
Survey Program: 140-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis		
7,800.0	7,344.0	7,462.4	7,340.6	19.4	23.2	90.56	996.8	11.7	453.7	416.2	37.58	12.073	
7,900.0	7,344.0	7,463.1	7,341.3	20.7	23.2	90.67	996.8	11.7	396.2	357.3	38.94	10.176	
8,000.0	7,344.0	7,463.8	7,341.9	22.0	23.2	90.79	996.8	11.7	358.0	317.6	40.35	8.871	
8,094.3	7,344.0	7,464.4	7,342.6	23.4	23.2	90.90	996.8	11.6	345.3	303.6	41.73	8.275 CC	
8,100.0	7,344.0	7,464.5	7,342.6	23.5	23.2	90.90	996.8	11.6	345.4	303.5	41.81	8.260 ES, SF	
8,200.0	7,344.0	7,465.1	7,343.3	24.9	23.2	91.02	996.9	11.6	361.1	317.8	43.31	8.338	
8,300.0	7,344.0	7,465.8	7,344.0	26.4	23.2	91.13	996.9	11.6	401.9	357.1	44.84	8.963	
8,400.0	7,344.0	7,466.5	7,344.7	27.9	23.2	91.25	996.9	11.6	461.1	414.7	46.40	9.939	

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - EDITH ANN 6-8-21 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 80-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)						
2,900.0	2,897.5	3,091.2	3,033.1	5.4	10.0	175.51	34.0	355.6	487.8	476.6	11.19	43.589		
3,000.0	2,997.4	3,188.2	3,125.4	5.6	10.5	176.75	22.7	327.9	462.9	451.3	11.69	39.610		
3,100.0	3,097.3	3,281.3	3,214.1	5.8	11.1	178.02	12.1	301.7	438.8	426.6	12.19	35.988		
3,200.0	3,197.2	3,379.4	3,307.7	6.0	11.6	179.50	1.2	274.6	415.3	402.5	12.74	32.590		
3,300.0	3,297.1	3,478.3	3,402.0	6.2	12.2	-178.98	-8.9	246.4	391.2	377.9	13.30	29.415		
3,400.0	3,397.0	3,580.1	3,499.1	6.3	12.7	-177.49	-17.4	216.6	366.7	352.8	13.88	26.411		
3,500.0	3,496.9	3,676.0	3,590.1	6.5	13.3	-175.75	-26.1	187.8	341.6	327.1	14.51	23.543		
3,600.0	3,596.7	3,771.6	3,680.8	6.7	13.9	-173.61	-35.6	159.2	317.1	301.8	15.23	20.819		
3,700.0	3,696.6	3,866.7	3,770.9	6.9	14.4	-170.83	-46.6	131.1	293.5	277.4	16.09	18.243		
3,800.0	3,796.5	3,965.8	3,864.6	7.1	15.0	-167.41	-58.1	100.9	269.9	252.8	17.10	15.788		
3,900.0	3,896.4	4,061.0	3,954.5	7.3	15.6	-163.35	-69.8	71.7	247.4	229.2	18.26	13.553		
4,000.0	3,996.3	4,158.9	4,046.5	7.5	16.3	-158.02	-83.0	40.8	225.9	206.2	19.69	11.472		
4,100.0	4,096.2	4,252.1	4,133.8	7.7	16.8	-151.86	-95.8	10.9	206.2	185.0	21.24	9.708		
4,200.0	4,196.1	4,341.9	4,219.1	7.9	17.3	-145.87	-106.5	-14.9	191.4	168.7	22.69	8.436		
4,300.0	4,296.0	4,432.4	4,306.4	8.1	17.8	-140.04	-116.8	-36.7	182.6	158.6	24.00	7.609		
4,400.0	4,395.9	4,528.2	4,399.6	8.3	18.2	-134.44	-127.1	-55.8	178.7	153.5	25.19	7.094		
4,500.0	4,495.8	4,626.6	4,495.8	8.5	18.6	-128.93	-137.0	-74.2	177.0	150.7	26.26	6.738		
4,555.5	4,551.2	4,681.2	4,549.3	8.6	18.8	-126.04	-142.2	-84.0	176.7	149.9	26.78	6.599 CC		
4,600.0	4,595.7	4,725.0	4,592.3	8.7	18.9	-123.88	-146.1	-91.4	176.9	149.7	27.16	6.513		
4,700.0	4,695.6	4,826.3	4,692.2	8.8	19.2	-119.85	-152.9	-106.4	177.4	149.5	27.84	6.371		
4,800.0	4,795.5	4,926.0	4,791.0	9.0	19.5	-116.92	-157.5	-118.8	177.8	149.4	28.38	6.265 ES		
4,900.0	4,895.3	5,025.1	4,889.5	9.2	19.7	-114.59	-161.7	-129.4	179.1	150.2	28.85	6.206		
5,000.0	4,995.2	5,125.6	4,989.5	9.4	19.9	-113.18	-164.6	-137.6	180.4	151.1	29.25	6.168		
5,100.0	5,095.1	5,226.5	5,090.2	9.6	20.1	-112.68	-166.2	-143.4	181.4	151.8	29.59	6.130		
5,200.0	5,195.0	5,325.3	5,189.1	9.8	20.2	-112.77	-166.8	-147.4	182.3	152.4	29.91	6.095		
5,300.0	5,294.9	5,426.9	5,290.6	10.0	20.3	-113.36	-167.0	-149.9	183.3	153.1	30.21	6.068		
5,400.0	5,394.8	5,527.0	5,390.6	10.2	20.4	-114.32	-166.2	-151.6	183.7	153.3	30.48	6.029		
5,500.0	5,494.7	5,626.6	5,490.3	10.4	20.5	-115.59	-165.0	-152.2	184.4	153.7	30.72	6.002		
5,600.0	5,594.6	5,727.1	5,590.8	10.6	20.6	-117.03	-163.5	-152.4	185.0	154.1	30.95	5.977		
5,700.0	5,694.5	5,826.1	5,689.7	10.8	20.7	-118.51	-161.8	-152.5	185.6	154.5	31.17	5.956 SF		
5,800.0	5,794.4	5,923.8	5,787.4	11.0	20.7	-119.85	-161.2	-152.4	187.4	156.0	31.39	5.970		
5,900.0	5,894.3	6,023.0	5,886.7	11.2	20.8	-121.06	-161.5	-152.2	190.1	158.5	31.61	6.013		
6,000.0	5,994.2	6,122.7	5,986.4	11.3	20.9	-122.15	-162.0	-152.2	193.0	161.2	31.84	6.062		
6,100.0	6,094.1	6,223.4	6,087.0	11.5	21.0	-123.21	-162.5	-152.3	195.8	163.8	32.06	6.108		
6,200.0	6,193.9	6,323.9	6,187.5	11.7	21.1	-124.31	-162.5	-152.4	198.3	166.1	32.27	6.146		
6,300.0	6,293.8	6,423.7	6,287.3	11.9	21.2	-125.36	-162.4	-152.7	200.8	168.3	32.48	6.183		
6,400.0	6,393.7	6,523.5	6,387.1	12.1	21.3	-126.34	-162.5	-153.0	203.4	170.7	32.70	6.221		
6,500.0	6,493.6	6,623.2	6,486.8	12.3	21.4	-127.28	-162.7	-153.3	206.2	173.2	32.91	6.264		
6,600.0	6,593.5	6,723.1	6,586.7	12.5	21.5	-128.26	-162.8	-153.4	209.0	175.9	33.10	6.314		
6,700.0	6,693.4	6,823.1	6,686.8	12.7	21.6	-129.39	-162.4	-152.9	211.9	178.6	33.28	6.367		
6,800.0	6,793.3	6,923.8	6,787.4	12.9	21.7	-128.16	-161.9	-152.7	214.9	181.5	33.45	6.426		
6,900.0	6,892.3	7,023.4	6,887.0	13.1	21.8	153.75	-161.4	-153.1	227.0	193.7	33.26	6.824		
7,000.0	6,987.6	7,118.9	6,982.5	13.3	21.9	150.10	-160.9	-153.5	252.7	220.2	32.54	7.767		
7,100.0	7,076.4	7,208.2	7,071.8	13.6	22.0	150.17	-160.3	-153.7	292.9	261.7	31.19	9.391		
7,200.0	7,155.9	7,288.7	7,152.3	14.0	22.0	150.64	-159.7	-154.0	347.3	318.0	29.27	11.863		
7,300.0	7,223.7	7,357.4	7,221.0	14.5	22.1	150.08	-159.1	-154.3	414.9	387.8	27.11	15.307		
7,400.0	7,277.8	7,411.3	7,274.9	15.2	22.2	147.19	-158.7	-154.5	494.2	468.8	25.34	19.498		

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

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4A-21H-O268 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-19.6	19.6					
100.0	100.0	99.0	99.0	0.1	0.1	-89.95	0.0	-19.6	19.6	19.3	0.26	75.154		
200.0	200.0	199.0	199.0	0.3	0.3	-89.95	0.0	-19.6	19.6	19.0	0.61	32.140 CC, ES		
300.0	300.0	298.7	298.6	0.5	0.5	-89.95	0.0	-20.4	20.4	19.5	0.96	21.313		
400.0	400.0	398.2	398.2	0.7	0.7	-89.94	0.0	-23.0	23.0	21.7	1.31	17.543		
500.0	500.0	497.8	497.6	0.8	0.8	-0.43	0.0	-27.3	26.5	24.8	1.65	16.006		
600.0	600.0	597.2	596.9	1.0	1.0	-0.45	0.0	-33.3	29.9	27.9	2.00	14.946		
700.0	699.9	696.6	696.0	1.2	1.3	-0.49	0.1	-41.1	33.5	31.1	2.35	14.239		
800.0	799.8	795.9	794.8	1.4	1.5	-0.52	0.1	-50.5	38.3	35.7	2.70	14.214 SF		
900.0	899.7	894.9	893.2	1.6	1.7	-0.53	0.1	-61.7	45.0	41.9	3.05	14.764		
1,000.0	999.5	993.7	991.2	1.8	2.0	-0.53	0.1	-74.5	53.3	49.9	3.39	15.711		
1,100.0	1,099.4	1,092.2	1,088.6	1.9	2.3	-0.53	0.2	-88.9	63.4	59.6	3.74	16.943		
1,200.0	1,199.3	1,190.3	1,185.4	2.1	2.6	-0.53	0.2	-105.0	75.1	71.0	4.09	18.386		
1,300.0	1,299.2	1,288.0	1,281.5	2.3	3.0	-0.52	0.2	-122.6	88.6	84.1	4.43	19.990		
1,400.0	1,399.1	1,385.8	1,377.4	2.5	3.3	-0.51	0.3	-141.8	103.6	98.9	4.78	21.697		
1,500.0	1,499.0	1,484.6	1,474.2	2.7	3.7	-0.51	0.3	-161.5	119.1	114.0	5.12	23.244		
1,600.0	1,598.9	1,583.4	1,571.0	2.9	4.1	-0.50	0.4	-181.3	134.5	129.1	5.47	24.595		
1,700.0	1,698.8	1,682.2	1,667.8	3.1	4.4	-0.50	0.4	-201.1	150.0	144.2	5.82	25.784		
1,800.0	1,798.7	1,781.0	1,764.6	3.3	4.8	-0.50	0.5	-220.9	165.4	159.3	6.16	26.840		
1,900.0	1,898.6	1,879.8	1,861.4	3.5	5.2	-0.49	0.5	-240.7	180.9	174.4	6.51	27.784		
2,000.0	1,998.5	1,978.6	1,958.2	3.7	5.6	-0.49	0.6	-260.4	196.3	189.5	6.86	28.632		
2,100.0	2,098.4	2,077.4	2,055.0	3.9	6.0	-0.49	0.6	-280.2	211.8	204.6	7.20	29.399		
2,200.0	2,198.3	2,176.2	2,151.8	4.0	6.4	-0.49	0.6	-300.0	227.3	219.7	7.55	30.096		
2,300.0	2,298.1	2,275.0	2,248.6	4.2	6.8	-0.49	0.7	-319.8	242.7	234.8	7.90	30.731		
2,400.0	2,398.0	2,373.8	2,345.4	4.4	7.1	-0.49	0.7	-339.6	258.2	249.9	8.24	31.313		
2,500.0	2,497.9	2,472.6	2,442.2	4.6	7.5	-0.49	0.8	-359.3	273.6	265.0	8.59	31.848		
2,600.0	2,597.8	2,571.4	2,539.0	4.8	7.9	-0.48	0.8	-379.1	289.1	280.1	8.94	32.342		
2,700.0	2,697.7	2,670.2	2,635.8	5.0	8.3	-0.48	0.9	-398.9	304.5	295.2	9.28	32.799		
2,800.0	2,797.6	2,769.0	2,732.6	5.2	8.7	-0.48	0.9	-418.7	320.0	310.3	9.63	33.223		
2,900.0	2,897.5	2,867.8	2,829.4	5.4	9.1	-0.48	0.9	-438.4	335.4	325.4	9.98	33.617		
3,000.0	2,997.4	2,966.6	2,926.2	5.6	9.5	-0.48	1.0	-458.2	350.9	340.5	10.32	33.985		
3,100.0	3,097.3	3,065.4	3,022.9	5.8	9.9	-0.48	1.0	-478.0	366.3	355.7	10.67	34.330		
3,200.0	3,197.2	3,164.2	3,119.7	6.0	10.2	-0.48	1.1	-497.8	381.8	370.8	11.02	34.652		
3,300.0	3,297.1	3,263.0	3,216.5	6.2	10.6	-0.48	1.1	-517.6	397.2	385.9	11.36	34.955		
3,400.0	3,397.0	3,361.8	3,313.3	6.3	11.0	-0.48	1.2	-537.3	412.7	401.0	11.71	35.240		
3,500.0	3,496.9	3,460.6	3,410.1	6.5	11.4	-0.48	1.2	-557.1	428.1	416.1	12.06	35.509		
3,600.0	3,596.7	3,559.4	3,506.9	6.7	11.8	-0.48	1.3	-576.9	443.6	431.2	12.40	35.762		
3,700.0	3,696.6	3,658.2	3,603.7	6.9	12.2	-0.48	1.3	-596.7	459.0	446.3	12.75	36.002		
3,800.0	3,796.5	3,757.0	3,700.5	7.1	12.6	-0.48	1.3	-616.5	474.5	461.4	13.10	36.230		
3,900.0	3,896.4	3,855.8	3,797.3	7.3	13.0	-0.48	1.4	-636.2	489.9	476.5	13.44	36.445		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4B-21H-O268 - 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	-89.94	0.0	-8.4	8.4					
100.0	100.0	100.0	100.0	0.1	0.1	-89.94	0.0	-8.4	8.4	8.1	0.26	32.048		
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.8	0.61	13.735		
300.0	300.0	300.0	300.0	0.5	0.5	-89.94	0.0	-8.4	8.4	7.4	0.96	8.740	CC, ES	
400.0	400.0	399.8	399.8	0.7	0.7	-89.94	0.0	-9.3	9.3	8.0	1.31	7.073		
500.0	500.0	499.7	499.6	0.8	0.8	-0.45	0.0	-11.9	11.0	9.3	1.66	6.638		
600.0	600.0	599.4	599.3	1.0	1.0	-0.52	0.0	-16.2	12.7	10.7	2.01	6.352		
700.0	699.9	699.2	698.9	1.2	1.2	-0.61	0.0	-22.3	14.6	12.2	2.35	6.191		
800.0	799.8	798.8	798.2	1.4	1.4	-0.67	0.0	-30.1	17.8	15.1	2.70	6.574		
900.0	899.7	898.4	897.3	1.6	1.7	-0.68	0.1	-39.6	22.7	19.7	3.05	7.440		
1,000.0	999.5	997.7	996.0	1.8	1.9	-0.68	0.1	-50.8	29.4	26.0	3.40	8.638		
1,100.0	1,099.4	1,097.0	1,094.5	1.9	2.2	-0.66	0.1	-63.6	37.6	33.9	3.75	10.040		
1,200.0	1,199.3	1,196.7	1,193.2	2.1	2.4	-0.64	0.1	-76.8	46.2	42.1	4.10	11.280		
1,300.0	1,299.2	1,296.3	1,292.0	2.3	2.7	-0.63	0.2	-89.9	54.8	50.3	4.45	12.326		
1,400.0	1,399.1	1,395.9	1,390.8	2.5	3.0	-0.63	0.2	-103.0	63.4	58.6	4.79	13.220		
1,500.0	1,499.0	1,495.5	1,489.5	2.7	3.3	-0.62	0.2	-116.2	72.0	66.8	5.14	13.993		
1,600.0	1,598.9	1,595.2	1,588.3	2.9	3.5	-0.62	0.2	-129.3	80.5	75.1	5.49	14.668		
1,700.0	1,698.8	1,694.8	1,687.0	3.1	3.8	-0.62	0.3	-142.5	89.1	83.3	5.84	15.262		
1,800.0	1,798.7	1,794.4	1,785.8	3.3	4.1	-0.61	0.3	-155.6	97.7	91.5	6.19	15.789		
1,900.0	1,898.6	1,894.1	1,884.6	3.5	4.4	-0.61	0.3	-168.8	106.3	99.8	6.54	16.261		
2,000.0	1,998.5	1,993.7	1,983.3	3.7	4.7	-0.61	0.3	-181.9	114.9	108.0	6.89	16.684		
2,100.0	2,098.4	2,093.3	2,082.1	3.9	5.0	-0.61	0.4	-195.1	123.5	116.2	7.23	17.067		
2,200.0	2,198.3	2,193.0	2,180.8	4.0	5.2	-0.61	0.4	-208.2	132.0	124.5	7.58	17.414		
2,300.0	2,298.1	2,292.6	2,279.6	4.2	5.5	-0.60	0.4	-221.4	140.6	132.7	7.93	17.731		
2,400.0	2,398.0	2,392.2	2,378.3	4.4	5.8	-0.60	0.4	-234.5	149.2	140.9	8.28	18.022		
2,500.0	2,497.9	2,491.9	2,477.1	4.6	6.1	-0.60	0.5	-247.7	157.8	149.2	8.63	18.289		
2,600.0	2,597.8	2,591.5	2,575.9	4.8	6.4	-0.60	0.5	-260.8	166.4	157.4	8.98	18.535		
2,700.0	2,697.7	2,691.1	2,674.6	5.0	6.7	-0.60	0.5	-274.0	175.0	165.6	9.32	18.763		
2,800.0	2,797.6	2,790.7	2,773.4	5.2	7.0	-0.60	0.5	-287.1	183.5	173.9	9.67	18.974		
2,900.0	2,897.5	2,890.4	2,872.1	5.4	7.2	-0.60	0.6	-300.3	192.1	182.1	10.02	19.171		
3,000.0	2,997.4	2,990.0	2,970.9	5.6	7.5	-0.60	0.6	-313.4	200.7	190.3	10.37	19.354		
3,100.0	3,097.3	3,089.6	3,069.7	5.8	7.8	-0.60	0.6	-326.5	209.3	198.6	10.72	19.526		
3,200.0	3,197.2	3,189.3	3,168.4	6.0	8.1	-0.60	0.6	-339.7	217.9	206.8	11.07	19.686		
3,300.0	3,297.1	3,288.9	3,267.2	6.2	8.4	-0.60	0.7	-352.8	226.4	215.0	11.42	19.837		
3,400.0	3,397.0	3,388.5	3,365.9	6.3	8.7	-0.60	0.7	-366.0	235.0	223.3	11.76	19.979		
3,500.0	3,496.9	3,488.2	3,464.7	6.5	9.0	-0.60	0.7	-379.1	243.6	231.5	12.11	20.113		
3,600.0	3,596.7	3,587.8	3,563.5	6.7	9.3	-0.60	0.7	-392.3	252.2	239.7	12.46	20.240		
3,700.0	3,696.6	3,687.4	3,662.2	6.9	9.6	-0.60	0.7	-405.4	260.8	248.0	12.81	20.359		
3,800.0	3,796.5	3,787.1	3,761.0	7.1	9.8	-0.60	0.8	-418.6	269.4	256.2	13.16	20.472		
3,900.0	3,896.4	3,886.7	3,859.7	7.3	10.1	-0.60	0.8	-431.7	277.9	264.4	13.51	20.579		
4,000.0	3,996.3	3,986.3	3,958.5	7.5	10.4	-0.59	0.8	-444.9	286.5	272.7	13.85	20.681		
4,100.0	4,096.2	4,086.0	4,057.3	7.7	10.7	-0.59	0.8	-458.0	295.1	280.9	14.20	20.778		
4,200.0	4,196.1	4,185.6	4,156.0	7.9	11.0	-0.59	0.9	-471.2	303.7	289.1	14.55	20.871		
4,300.0	4,296.0	4,285.2	4,254.8	8.1	11.3	-0.59	0.9	-484.3	312.3	297.4	14.90	20.959		
4,400.0	4,395.9	4,384.8	4,353.5	8.3	11.6	-0.59	0.9	-497.5	320.9	305.6	15.25	21.043		
4,500.0	4,495.8	4,484.5	4,452.3	8.5	11.9	-0.59	0.9	-510.6	329.4	313.8	15.60	21.123		
4,600.0	4,595.7	4,584.1	4,551.1	8.7	12.1	-0.59	1.0	-523.8	338.0	322.1	15.95	21.199		
4,700.0	4,695.6	4,683.7	4,649.8	8.8	12.4	-0.59	1.0	-536.9	346.6	330.3	16.29	21.273		
4,800.0	4,795.5	4,783.4	4,748.6	9.0	12.7	-0.59	1.0	-550.0	355.2	338.5	16.64	21.343		
4,900.0	4,895.3	4,883.0	4,847.3	9.2	13.0	-0.59	1.0	-563.2	363.8	346.8	16.99	21.411		
5,000.0	4,995.2	4,982.6	4,946.1	9.4	13.3	-0.59	1.1	-576.3	372.4	355.0	17.34	21.475		
5,100.0	5,095.1	5,082.3	5,044.9	9.6	13.6	-0.59	1.1	-589.5	380.9	363.3	17.69	21.538		

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

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4B-21H-O268 - 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)				
5,200.0	5,195.0	5,181.9	5,143.6	9.8	13.9	-0.59	1.1	-602.6	389.5	371.5	18.04	21.597		
5,300.0	5,294.9	5,281.5	5,242.4	10.0	14.2	-0.59	1.1	-615.8	398.1	379.7	18.38	21.655		
5,400.0	5,394.8	5,381.2	5,341.1	10.2	14.5	-0.59	1.2	-628.9	406.7	388.0	18.73	21.710		
5,500.0	5,494.7	5,480.8	5,439.9	10.4	14.7	-0.59	1.2	-642.1	415.3	396.2	19.08	21.764		
5,600.0	5,594.6	5,580.4	5,538.7	10.6	15.0	-0.59	1.2	-655.2	423.9	404.4	19.43	21.815		
5,700.0	5,694.5	5,680.0	5,637.4	10.8	15.3	-0.59	1.2	-668.4	432.4	412.7	19.78	21.865		
5,800.0	5,794.4	5,779.7	5,736.2	11.0	15.6	-0.59	1.3	-681.5	441.0	420.9	20.13	21.913		
5,900.0	5,894.3	5,879.3	5,834.9	11.2	15.9	-0.59	1.3	-694.7	449.6	429.1	20.47	21.959		
6,000.0	5,994.2	5,978.9	5,933.7	11.3	16.2	-0.59	1.3	-707.8	458.2	437.4	20.82	22.004		
6,100.0	6,094.1	6,078.6	6,032.5	11.5	16.5	-0.59	1.3	-721.0	466.8	445.6	21.17	22.047		
6,200.0	6,193.9	6,178.2	6,131.2	11.7	16.8	-0.59	1.4	-734.1	475.4	453.8	21.52	22.089		
6,300.0	6,293.8	6,277.8	6,230.0	11.9	17.1	-0.59	1.4	-747.3	483.9	462.1	21.87	22.129		
6,400.0	6,393.7	6,377.5	6,328.7	12.1	17.4	-0.59	1.4	-760.4	492.5	470.3	22.22	22.169		
13,300.0	7,344.0	13,577.3	7,566.0	111.3	112.2	-116.44	6,199.6	-871.0	498.7	298.6	200.11	2.492		
13,400.0	7,344.0	13,677.3	7,566.0	113.0	113.9	-116.57	6,299.5	-870.1	496.4	293.4	203.01	2.445		
13,500.0	7,344.0	13,777.2	7,566.0	114.8	115.7	-116.71	6,399.5	-869.3	494.1	288.2	205.90	2.400		
13,600.0	7,344.0	13,877.2	7,566.0	116.5	117.4	-116.85	6,499.5	-868.4	491.7	282.9	208.78	2.355		
13,700.0	7,344.0	13,977.2	7,566.0	118.2	119.1	-116.98	6,599.4	-867.5	489.4	277.7	211.65	2.312		
13,800.0	7,344.0	14,077.1	7,566.0	120.0	120.8	-117.12	6,699.4	-866.7	487.1	272.6	214.50	2.271		
13,900.0	7,344.0	14,177.1	7,566.0	121.7	122.6	-117.27	6,799.3	-865.8	484.7	267.4	217.35	2.230		
14,000.0	7,344.0	14,277.1	7,566.0	123.5	124.3	-117.41	6,899.3	-864.9	482.4	262.2	220.18	2.191		
14,100.0	7,344.0	14,377.0	7,566.0	125.2	126.0	-117.55	6,999.3	-864.0	480.1	257.1	223.01	2.153		
14,200.0	7,344.0	14,477.0	7,566.0	127.0	127.8	-117.70	7,099.2	-863.2	477.8	251.9	225.82	2.116		
14,300.0	7,344.0	14,577.0	7,566.0	128.7	129.5	-117.84	7,199.2	-862.3	475.4	246.8	228.62	2.080		
14,400.0	7,344.0	14,676.9	7,566.0	130.4	131.2	-117.99	7,299.2	-861.4	473.1	241.7	231.41	2.045		
14,500.0	7,344.0	14,776.9	7,566.0	132.2	133.0	-118.14	7,399.1	-860.5	470.8	236.6	234.18	2.010		
14,600.0	7,344.0	14,876.9	7,566.0	133.9	134.7	-118.29	7,499.1	-859.7	468.5	231.6	236.95	1.977		
14,700.0	7,344.0	14,976.8	7,566.0	135.7	136.4	-118.44	7,599.0	-858.8	466.2	226.5	239.70	1.945		
14,800.0	7,344.0	15,076.8	7,566.0	137.4	138.2	-118.60	7,699.0	-857.9	463.9	221.5	242.43	1.914		
14,900.0	7,344.0	15,176.8	7,566.0	139.2	139.9	-118.75	7,799.0	-857.1	461.6	216.5	245.16	1.883		
15,000.0	7,344.0	15,276.7	7,566.0	140.9	141.6	-118.91	7,898.9	-856.2	459.3	211.5	247.86	1.853		
15,100.0	7,344.0	15,376.7	7,566.0	142.7	143.4	-119.07	7,998.9	-855.3	457.0	206.5	250.56	1.824		
15,200.0	7,344.0	15,476.7	7,566.0	144.4	145.1	-119.23	8,098.9	-854.4	454.7	201.5	253.24	1.796		
15,300.0	7,344.0	15,576.6	7,566.0	146.2	146.8	-119.39	8,198.8	-853.6	452.5	196.6	255.90	1.768		
15,400.0	7,344.0	15,676.6	7,566.0	147.9	148.6	-119.56	8,298.8	-852.7	450.2	191.6	258.55	1.741		
15,500.0	7,344.0	15,776.5	7,566.0	149.7	150.3	-119.72	8,398.7	-851.8	447.9	186.7	261.19	1.715		
15,600.0	7,344.0	15,876.5	7,566.0	151.4	152.0	-119.89	8,498.7	-850.9	445.6	181.8	263.81	1.689		
15,700.0	7,344.0	15,976.5	7,566.0	153.1	153.8	-120.06	8,598.7	-850.1	443.4	177.0	266.41	1.664		
15,800.0	7,344.0	16,076.4	7,566.0	154.9	155.5	-120.23	8,698.6	-849.2	441.1	172.1	268.99	1.640		
15,900.0	7,344.0	16,176.4	7,566.0	156.6	157.3	-120.40	8,798.6	-848.3	438.8	167.3	271.56	1.616		
16,000.0	7,344.0	16,276.4	7,566.0	158.4	159.0	-120.57	8,898.6	-847.5	436.6	162.5	274.11	1.593		
16,100.0	7,344.0	16,376.3	7,566.0	160.1	160.7	-120.75	8,998.5	-846.6	434.3	157.7	276.64	1.570		
16,200.0	7,344.0	16,476.3	7,566.0	161.9	162.5	-120.92	9,098.5	-845.7	432.1	152.9	279.16	1.548		
16,300.0	7,344.0	16,576.3	7,566.0	163.6	164.2	-121.10	9,198.4	-844.8	429.8	148.2	281.65	1.526		
16,400.0	7,344.0	16,676.2	7,566.0	165.4	166.0	-121.29	9,298.4	-844.0	427.6	143.5	284.13	1.505		
16,500.0	7,344.0	16,776.2	7,566.0	167.1	167.7	-121.47	9,398.4	-843.1	425.4	138.8	286.59	1.484 Level 3		
16,600.0	7,344.0	16,876.2	7,566.0	168.9	169.4	-121.65	9,498.3	-842.2	423.1	134.1	289.03	1.464 Level 3		
16,700.0	7,344.0	16,976.1	7,566.0	170.6	171.2	-121.84	9,598.3	-841.4	420.9	129.5	291.44	1.444 Level 3		
16,800.0	7,344.0	17,076.1	7,566.0	172.4	172.9	-122.03	9,698.2	-840.5	418.7	124.8	293.84	1.425 Level 3		
16,900.0	7,344.0	17,176.1	7,566.0	174.1	174.7	-122.22	9,798.2	-839.6	416.5	120.3	296.22	1.406 Level 3		
17,000.0	7,344.0	17,276.0	7,566.0	175.9	176.4	-122.41	9,898.2	-838.7	414.3	115.7	298.57	1.387 Level 3		
17,013.3	7,344.0	17,282.7	7,566.0	176.1	176.5	-122.43	9,904.8	-838.7	414.0	115.2	298.82	1.385 Level 3, SF		

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

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4D-21H-O268 - 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 (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.04	0.0	11.2	11.2	10.9	0.26	42.731		
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.6	0.61	18.313		
300.0	300.0	300.0	300.0	0.5	0.5	90.04	0.0	11.2	11.2	10.2	0.96	11.654		
400.0	400.0	400.0	400.0	0.7	0.7	90.04	0.0	11.2	11.2	9.9	1.31	8.546 CC, ES		
500.0	500.0	500.0	500.0	0.8	0.8	179.59	0.0	11.2	12.1	10.4	1.66	7.274		
600.0	600.0	600.2	600.2	1.0	1.0	179.67	0.0	10.3	13.8	11.8	2.01	6.878		
700.0	699.9	700.2	700.2	1.2	1.2	179.77	0.0	8.2	16.0	13.6	2.36	6.775		
800.0	799.8	800.2	800.2	1.4	1.4	179.85	0.0	6.0	18.4	15.7	2.70	6.819		
900.0	899.7	900.2	900.1	1.6	1.5	179.91	0.0	3.9	20.9	17.9	3.05	6.854		
1,000.0	999.5	1,000.1	1,000.0	1.8	1.7	179.96	0.0	1.7	23.4	20.0	3.40	6.881		
1,100.0	1,099.4	1,100.1	1,100.0	1.9	1.9	-180.00	0.0	-0.4	25.9	22.1	3.75	6.904		
1,200.0	1,199.3	1,200.1	1,199.9	2.1	2.1	-179.97	0.0	-2.6	28.4	24.3	4.10	6.922		
1,300.0	1,299.2	1,300.1	1,299.9	2.3	2.2	-179.94	0.0	-4.7	30.9	26.4	4.45	6.938		
1,400.0	1,399.1	1,400.0	1,399.8	2.5	2.4	-179.92	0.0	-6.9	33.4	28.6	4.80	6.951		
1,500.0	1,499.0	1,500.0	1,499.8	2.7	2.6	-179.90	0.0	-9.0	35.8	30.7	5.15	6.963		
1,600.0	1,598.9	1,600.0	1,599.7	2.9	2.8	-179.88	0.0	-11.2	38.3	32.8	5.50	6.973		
1,700.0	1,698.8	1,699.9	1,699.7	3.1	3.0	-179.86	0.0	-13.3	40.8	35.0	5.85	6.982		
1,800.0	1,798.7	1,799.9	1,799.6	3.3	3.1	-179.85	0.0	-15.5	43.3	37.1	6.20	6.990		
1,900.0	1,898.6	1,899.9	1,899.6	3.5	3.3	-179.84	0.0	-17.6	45.8	39.2	6.54	6.997		
2,000.0	1,998.5	1,999.8	1,999.5	3.7	3.5	-179.83	0.0	-19.8	48.3	41.4	6.89	7.003		
2,100.0	2,098.4	2,099.8	2,099.5	3.9	3.7	-179.82	0.0	-22.0	50.8	43.5	7.24	7.009		
2,200.0	2,198.3	2,199.8	2,199.4	4.0	3.8	-179.81	0.0	-24.1	53.2	45.7	7.59	7.014		
2,300.0	2,298.1	2,299.7	2,299.3	4.2	4.0	-179.80	0.0	-26.3	55.7	47.8	7.94	7.019		
2,400.0	2,398.0	2,399.7	2,399.3	4.4	4.2	-179.79	0.0	-28.4	58.2	49.9	8.29	7.023		
2,500.0	2,497.9	2,499.7	2,499.2	4.6	4.4	-179.79	0.0	-30.6	60.7	52.1	8.64	7.027		
2,600.0	2,597.8	2,599.7	2,599.2	4.8	4.6	-179.78	0.0	-32.7	63.2	54.2	8.99	7.031		
2,700.0	2,697.7	2,699.6	2,699.1	5.0	4.7	-179.77	0.0	-34.9	65.7	56.3	9.34	7.034		
2,800.0	2,797.6	2,799.6	2,799.1	5.2	4.9	-179.77	0.0	-37.0	68.2	58.5	9.69	7.038		
2,900.0	2,897.5	2,899.6	2,899.0	5.4	5.1	-179.76	0.0	-39.2	70.6	60.6	10.03	7.041		
3,000.0	2,997.4	2,999.5	2,999.0	5.6	5.3	-179.76	0.0	-41.3	73.1	62.8	10.38	7.043		
3,100.0	3,097.3	3,099.5	3,098.9	5.8	5.5	-179.76	0.0	-43.5	75.6	64.9	10.73	7.046		
3,200.0	3,197.2	3,199.5	3,198.9	6.0	5.6	-179.75	0.0	-45.7	78.1	67.0	11.08	7.048		
3,300.0	3,297.1	3,299.4	3,298.8	6.2	5.8	-179.75	0.1	-47.8	80.6	69.2	11.43	7.051		
3,400.0	3,397.0	3,399.4	3,398.8	6.3	6.0	-179.74	0.1	-50.0	83.1	71.3	11.78	7.053		
3,500.0	3,496.9	3,499.4	3,498.7	6.5	6.2	-179.74	0.1	-52.1	85.6	73.4	12.13	7.055		
3,600.0	3,596.7	3,599.3	3,598.6	6.7	6.3	-179.74	0.1	-54.3	88.1	75.6	12.48	7.057		
3,700.0	3,696.6	3,699.3	3,698.6	6.9	6.5	-179.73	0.1	-56.4	90.5	77.7	12.83	7.058		
3,800.0	3,796.5	3,799.3	3,798.5	7.1	6.7	-179.73	0.1	-58.6	93.0	79.8	13.18	7.060		
3,900.0	3,896.4	3,899.3	3,898.5	7.3	6.9	-179.73	0.1	-60.7	95.5	82.0	13.52	7.062		
4,000.0	3,996.3	3,999.2	3,998.4	7.5	7.1	-179.73	0.1	-62.9	98.0	84.1	13.87	7.063		
4,100.0	4,096.2	4,099.2	4,098.4	7.7	7.2	-179.72	0.1	-65.0	100.5	86.3	14.22	7.065		
4,200.0	4,196.1	4,199.2	4,198.3	7.9	7.4	-179.72	0.1	-67.2	103.0	88.4	14.57	7.066		
4,300.0	4,296.0	4,299.1	4,298.3	8.1	7.6	-179.72	0.1	-69.3	105.5	90.5	14.92	7.067		
4,400.0	4,395.9	4,399.1	4,398.2	8.3	7.8	-179.72	0.1	-71.5	107.9	92.7	15.27	7.069		
4,500.0	4,495.8	4,499.1	4,498.2	8.5	8.0	-179.71	0.1	-73.7	110.4	94.8	15.62	7.070		
4,600.0	4,595.7	4,599.0	4,598.1	8.7	8.1	-179.71	0.1	-75.8	112.9	96.9	15.97	7.071		
4,700.0	4,695.6	4,699.0	4,698.0	8.8	8.3	-179.71	0.1	-78.0	115.4	99.1	16.32	7.072		
4,800.0	4,795.5	4,799.0	4,798.0	9.0	8.5	-179.71	0.1	-80.1	117.9	101.2	16.67	7.073		
4,900.0	4,895.3	4,898.9	4,897.9	9.2	8.7	-179.71	0.1	-82.3	120.4	103.4	17.02	7.074		
5,000.0	4,995.2	4,998.9	4,997.9	9.4	8.8	-179.71	0.1	-84.4	122.9	105.5	17.36	7.075		
5,100.0	5,095.1	5,098.9	5,097.8	9.6	9.0	-179.70	0.1	-86.6	125.3	107.6	17.71	7.076		

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



# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4D-21H-O268 - 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)				
5,200.0	5,195.0	5,198.8	5,197.8		9.8	9.2	-179.70	0.1	-88.7	127.8	109.8	18.06	7.077	
5,300.0	5,294.9	5,298.8	5,297.7	10.0	9.4	-179.70		0.1	-90.9	130.3	111.9	18.41	7.078	
5,400.0	5,394.8	5,398.8	5,397.7	10.2	9.6	-179.70		0.1	-93.0	132.8	114.0	18.76	7.079	
5,500.0	5,494.7	5,498.8	5,497.6	10.4	9.7	-179.70		0.1	-95.2	135.3	116.2	19.11	7.079	
5,600.0	5,594.6	5,598.7	5,597.6	10.6	9.9	-179.70		0.1	-97.3	137.8	118.3	19.46	7.080	
5,700.0	5,694.5	5,698.7	5,697.5	10.8	10.1	-179.70		0.1	-99.5	140.3	120.4	19.81	7.081	
5,800.0	5,794.4	5,798.7	5,797.5	11.0	10.3	-179.70		0.1	-101.7	142.7	122.6	20.16	7.082	
5,900.0	5,894.3	5,898.6	5,897.4	11.2	10.4	-179.69		0.1	-103.8	145.2	124.7	20.51	7.082	
6,000.0	5,994.2	5,998.6	5,997.3	11.3	10.6	-179.69		0.1	-106.0	147.7	126.9	20.85	7.083	
6,100.0	6,094.1	6,098.6	6,097.3	11.5	10.8	-179.69		0.1	-108.1	150.2	129.0	21.20	7.084	
6,200.0	6,193.9	6,198.5	6,197.2	11.7	11.0	-179.69		0.1	-110.3	152.7	131.1	21.55	7.084	
6,300.0	6,293.8	6,298.5	6,297.2	11.9	11.2	-179.69		0.1	-112.4	155.2	133.3	21.90	7.085	
6,400.0	6,393.7	6,398.5	6,397.1	12.1	11.3	-179.69		0.1	-114.6	157.7	135.4	22.25	7.086	
6,500.0	6,493.6	6,498.4	6,497.1	12.3	11.5	-179.69		0.1	-116.7	160.1	137.5	22.60	7.086	
6,600.0	6,593.5	6,598.4	6,597.0	12.5	11.7	-179.69		0.1	-118.9	162.6	139.7	22.95	7.087	
6,700.0	6,693.4	6,698.4	6,697.0	12.7	11.9	-179.69		0.1	-121.0	165.1	141.8	23.30	7.087	
6,800.0	6,793.3	6,798.3	6,796.9	12.9	12.1	142.73		0.1	-123.2	167.6	144.0	23.65	7.088	
6,900.0	6,892.3	6,897.4	6,895.9	13.1	12.2	108.06		0.1	-125.3	170.9	147.0	23.99	7.126	
7,000.0	6,987.6	6,992.8	6,991.3	13.3	12.4	110.84		0.1	-127.4	178.8	154.5	24.26	7.369	
7,100.0	7,076.4	7,096.8	7,094.7	13.6	12.6	118.61		9.2	-129.6	194.4	170.1	24.29	8.005	
7,200.0	7,155.9	7,209.8	7,203.2	14.0	12.8	125.72		40.0	-132.0	214.9	190.9	23.96	8.970	
7,300.0	7,223.7	7,333.3	7,312.3	14.5	13.2	131.48		97.3	-134.3	237.3	213.9	23.41	10.137	
7,400.0	7,277.8	7,468.4	7,414.7	15.2	13.7	135.78		185.1	-136.5	258.6	235.6	22.97	11.257	
7,500.0	7,316.5	7,615.3	7,499.2	16.0	14.7	138.61		304.7	-138.3	275.9	252.8	23.08	11.954	
7,600.0	7,338.7	7,771.6	7,552.8	17.0	16.1	139.96		450.9	-139.5	286.8	262.7	24.15	11.875	
7,700.0	7,344.0	7,918.1	7,566.0	18.2	17.7	139.91		596.5	-139.8	290.2	264.0	26.17	11.088	
7,800.0	7,344.0	8,018.1	7,566.0	19.4	19.0	139.65		696.5	-139.8	291.3	263.5	27.88	10.448	
7,900.0	7,344.0	8,118.1	7,566.0	20.7	20.3	139.39		796.5	-139.8	292.5	262.8	29.70	9.848	
8,000.0	7,344.0	8,218.1	7,566.0	22.0	21.7	139.13		896.5	-139.8	293.6	262.0	31.60	9.290	
8,100.0	7,344.0	8,318.0	7,566.0	23.5	23.1	138.87		996.5	-139.8	294.8	261.2	33.59	8.775	
8,200.0	7,344.0	8,418.0	7,566.0	24.9	24.6	138.62		1,096.5	-139.8	295.9	260.3	35.65	8.300	
8,300.0	7,344.0	8,518.0	7,566.0	26.4	26.1	138.36		1,196.4	-139.8	297.1	259.3	37.77	7.865	
8,400.0	7,344.0	8,618.0	7,566.0	27.9	27.6	138.11		1,296.4	-139.8	298.2	258.3	39.95	7.465	
8,500.0	7,344.0	8,718.0	7,566.0	29.5	29.2	137.86		1,396.4	-139.8	299.4	257.2	42.18	7.098	
8,600.0	7,344.0	8,818.0	7,566.0	31.1	30.8	137.62		1,496.4	-139.8	300.6	256.1	44.46	6.760	
8,700.0	7,344.0	8,918.0	7,566.0	32.7	32.4	137.37		1,596.4	-139.8	301.7	255.0	46.78	6.450	
8,800.0	7,344.0	9,017.9	7,566.0	34.3	34.0	137.13		1,696.4	-139.8	302.9	253.8	49.14	6.164	
8,900.0	7,344.0	9,117.9	7,566.0	35.9	35.6	136.89		1,796.4	-139.8	304.1	252.6	51.54	5.901	
9,000.0	7,344.0	9,217.9	7,566.0	37.5	37.3	136.65		1,896.3	-139.8	305.3	251.3	53.97	5.657	
9,100.0	7,344.0	9,317.9	7,566.0	39.2	38.9	136.41		1,996.3	-139.8	306.5	250.1	56.44	5.431	
9,200.0	7,344.0	9,417.9	7,566.0	40.8	40.6	136.18		2,096.3	-139.8	307.7	248.8	58.93	5.222	
9,300.0	7,344.0	9,517.9	7,566.0	42.5	42.2	135.94		2,196.3	-139.8	308.9	247.5	61.46	5.027	
9,400.0	7,344.0	9,617.8	7,566.0	44.1	43.9	135.71		2,296.3	-139.8	310.1	246.1	64.01	4.846	
9,500.0	7,344.0	9,717.8	7,566.0	45.8	45.6	135.48		2,396.3	-139.8	311.4	244.8	66.58	4.676	
9,600.0	7,344.0	9,817.8	7,566.0	47.5	47.3	135.25		2,496.2	-139.8	312.6	243.4	69.19	4.518	
9,700.0	7,344.0	9,917.8	7,566.0	49.2	49.0	135.03		2,596.2	-139.8	313.8	242.0	71.81	4.370	
9,800.0	7,344.0	10,017.8	7,566.0	50.9	50.7	134.80		2,696.2	-139.8	315.1	240.6	74.46	4.231	
9,900.0	7,344.0	10,117.8	7,566.0	52.6	52.4	134.58		2,796.2	-139.8	316.3	239.2	77.13	4.101	
10,000.0	7,344.0	10,217.8	7,566.0	54.3	54.1	134.36		2,896.2	-139.8	317.5	237.7	79.83	3.978	
10,100.0	7,344.0	10,317.7	7,566.0	56.0	55.8	134.14		2,996.2	-139.8	318.8	236.3	82.54	3.862	
10,200.0	7,344.0	10,417.7	7,566.0	57.7	57.5	133.92		3,096.2	-139.8	320.1	234.8	85.27	3.753	
10,300.0	7,344.0	10,517.7	7,566.0	59.4	59.2	133.71		3,196.1	-139.8	321.3	233.3	88.02	3.650	

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

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4D-21H-O268 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,400.0	7,344.0	10,617.7	7,566.0	61.1	60.9	133.49	3,296.1	-139.8	322.6	231.8	90.79	3.553		
10,500.0	7,344.0	10,717.7	7,566.0	62.8	62.6	133.28	3,396.1	-139.8	323.8	230.3	93.58	3.461		
10,600.0	7,344.0	10,817.7	7,566.0	64.5	64.3	133.07	3,496.1	-139.8	325.1	228.7	96.38	3.373		
10,700.0	7,344.0	10,917.7	7,566.0	66.2	66.0	132.86	3,596.1	-139.8	326.4	227.2	99.20	3.290		
10,800.0	7,344.0	11,017.6	7,566.0	67.9	67.8	132.65	3,696.1	-139.8	327.7	225.6	102.04	3.211		
10,900.0	7,344.0	11,117.6	7,566.0	69.7	69.5	132.45	3,796.0	-139.8	329.0	224.1	104.90	3.136		
11,000.0	7,344.0	11,217.6	7,566.0	71.4	71.2	132.24	3,896.0	-139.8	330.3	222.5	107.76	3.065		
11,100.0	7,344.0	11,317.6	7,566.0	73.1	72.9	132.04	3,996.0	-139.8	331.5	220.9	110.65	2.996		
11,200.0	7,344.0	11,417.6	7,566.0	74.8	74.7	131.84	4,096.0	-139.8	332.8	219.3	113.55	2.931		
11,300.0	7,344.0	11,517.6	7,566.0	76.6	76.4	131.64	4,196.0	-139.8	334.1	217.7	116.46	2.869		
11,400.0	7,344.0	11,617.5	7,566.0	78.3	78.1	131.44	4,296.0	-139.8	335.5	216.1	119.39	2.810		
11,500.0	7,344.0	11,717.5	7,566.0	80.0	79.8	131.24	4,396.0	-139.8	336.8	214.4	122.33	2.753		
11,600.0	7,344.0	11,817.5	7,566.0	81.7	81.6	131.05	4,495.9	-139.8	338.1	212.8	125.28	2.699		
11,700.0	7,344.0	11,917.5	7,566.0	83.5	83.3	130.86	4,595.9	-139.8	339.4	211.1	128.25	2.646		
11,800.0	7,344.0	12,017.5	7,566.0	85.2	85.0	130.66	4,695.9	-139.8	340.7	209.5	131.23	2.596		
11,900.0	7,344.0	12,117.5	7,566.0	86.9	86.8	130.47	4,795.9	-139.8	342.0	207.8	134.22	2.548		
12,000.0	7,344.0	12,217.5	7,566.0	88.7	88.5	130.28	4,895.9	-139.8	343.4	206.1	137.22	2.502		
12,100.0	7,344.0	12,317.4	7,566.0	90.4	90.2	130.10	4,995.9	-139.8	344.7	204.5	140.24	2.458		
12,200.0	7,344.0	12,417.4	7,566.0	92.1	92.0	129.91	5,095.8	-139.8	346.0	202.8	143.27	2.415		
12,300.0	7,344.0	12,517.4	7,566.0	93.9	93.7	129.73	5,195.8	-139.8	347.4	201.1	146.31	2.374		
12,400.0	7,344.0	12,617.4	7,566.0	95.6	95.5	129.54	5,295.8	-139.8	348.7	199.4	149.35	2.335		
12,500.0	7,344.0	12,717.4	7,566.0	97.4	97.2	129.36	5,395.8	-139.8	350.1	197.7	152.42	2.297		
12,600.0	7,344.0	12,817.4	7,566.0	99.1	98.9	129.18	5,495.8	-139.8	351.4	195.9	155.49	2.260		
12,700.0	7,344.0	12,917.3	7,566.0	100.8	100.7	129.00	5,595.8	-139.8	352.8	194.2	158.57	2.225		
12,800.0	7,344.0	13,017.3	7,566.0	102.6	102.4	128.82	5,695.8	-139.8	354.1	192.5	161.66	2.191		
12,900.0	7,344.0	13,117.3	7,566.0	104.3	104.2	128.65	5,795.7	-139.8	355.5	190.7	164.76	2.158		
13,000.0	7,344.0	13,217.3	7,566.0	106.0	105.9	128.47	5,895.7	-139.8	356.9	189.0	167.87	2.126		
13,100.0	7,344.0	13,317.3	7,566.0	107.8	107.6	128.30	5,995.7	-139.8	358.2	187.2	170.99	2.095		
13,200.0	7,344.0	13,417.3	7,566.0	109.5	109.4	128.13	6,095.7	-139.8	359.6	185.5	174.12	2.065		
13,300.0	7,344.0	13,517.3	7,566.0	111.3	111.1	127.96	6,195.7	-139.8	361.0	183.7	177.26	2.036		
13,400.0	7,344.0	13,617.2	7,566.0	113.0	112.9	127.79	6,295.7	-139.8	362.4	182.0	180.40	2.009		
13,500.0	7,344.0	13,717.2	7,566.0	114.8	114.6	127.62	6,395.7	-139.8	363.7	180.2	183.56	1.982		
13,600.0	7,344.0	13,817.2	7,566.0	116.5	116.3	127.45	6,495.6	-139.8	365.1	178.4	186.72	1.955		
13,700.0	7,344.0	13,917.2	7,566.0	118.2	118.1	127.28	6,595.6	-139.8	366.5	176.6	189.90	1.930		
13,800.0	7,344.0	14,017.2	7,566.0	120.0	119.8	127.12	6,695.6	-139.8	367.9	174.8	193.08	1.905		
13,900.0	7,344.0	14,117.2	7,566.0	121.7	121.6	126.96	6,795.6	-139.8	369.3	173.0	196.27	1.882		
14,000.0	7,344.0	14,217.1	7,566.0	123.5	123.3	126.79	6,895.6	-139.8	370.7	171.2	199.46	1.858		
14,100.0	7,344.0	14,317.1	7,566.0	125.2	125.1	126.63	6,995.6	-139.8	372.1	169.4	202.67	1.836		
14,200.0	7,344.0	14,417.1	7,566.0	127.0	126.8	126.47	7,095.5	-139.8	373.5	167.6	205.88	1.814		
14,300.0	7,344.0	14,517.1	7,566.0	128.7	128.6	126.32	7,195.5	-139.8	374.9	165.8	209.10	1.793		
14,400.0	7,344.0	14,617.1	7,566.0	130.4	130.3	126.16	7,295.5	-139.8	376.3	164.0	212.32	1.772		
14,500.0	7,344.0	14,717.1	7,566.0	132.2	132.0	126.00	7,395.5	-139.8	377.7	162.2	215.56	1.752		
14,600.0	7,344.0	14,817.1	7,566.0	133.9	133.8	125.85	7,495.5	-139.8	379.1	160.3	218.80	1.733		
14,700.0	7,344.0	14,917.0	7,566.0	135.7	135.5	125.69	7,595.5	-139.8	380.5	158.5	222.04	1.714		
14,800.0	7,344.0	15,017.0	7,566.0	137.4	137.3	125.54	7,695.5	-139.8	382.0	156.7	225.30	1.695		
14,900.0	7,344.0	15,117.0	7,566.0	139.2	139.0	125.39	7,795.4	-139.8	383.4	154.8	228.56	1.677		
15,000.0	7,344.0	15,217.0	7,566.0	140.9	140.8	125.24	7,895.4	-139.8	384.8	153.0	231.82	1.660		
15,100.0	7,344.0	15,317.0	7,566.0	142.7	142.5	125.09	7,995.4	-139.8	386.2	151.1	235.10	1.643		
15,200.0	7,344.0	15,417.0	7,566.0	144.4	144.3	124.94	8,095.4	-139.8	387.7	149.3	238.37	1.626		
15,300.0	7,344.0	15,517.0	7,566.0	146.2	146.0	124.79	8,195.4	-139.8	389.1	147.4	241.66	1.610		
15,400.0	7,344.0	15,616.9	7,566.0	147.9	147.8	124.65	8,295.4	-139.8	390.5	145.6	244.95	1.594		
15,500.0	7,344.0	15,716.9	7,566.0	149.7	149.5	124.50	8,395.3	-139.8	392.0	143.7	248.25	1.579		

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

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4D-21H-O268 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
15,600.0	7,344.0	15,816.9	7,566.0	151.4	151.3	124.36	8,495.3	-139.8	393.4	141.9	251.55	1.564		
15,700.0	7,344.0	15,916.9	7,566.0	153.1	153.0	124.22	8,595.3	-139.8	394.8	140.0	254.86	1.549		
15,800.0	7,344.0	16,016.9	7,566.0	154.9	154.7	124.07	8,695.3	-139.8	396.3	138.1	258.17	1.535		
15,900.0	7,344.0	16,116.9	7,566.0	156.6	156.5	123.93	8,795.3	-139.8	397.7	136.3	261.49	1.521		
16,000.0	7,344.0	16,216.8	7,566.0	158.4	158.2	123.79	8,895.3	-139.8	399.2	134.4	264.81	1.507		
16,100.0	7,344.0	16,316.8	7,566.0	160.1	160.0	123.65	8,995.3	-139.8	400.6	132.5	268.14	1.494	Level 3	
16,200.0	7,344.0	16,416.8	7,566.0	161.9	161.7	123.52	9,095.2	-139.8	402.1	130.6	271.47	1.481	Level 3	
16,300.0	7,344.0	16,516.8	7,566.0	163.6	163.5	123.38	9,195.2	-139.8	403.6	128.7	274.81	1.468	Level 3	
16,400.0	7,344.0	16,616.8	7,566.0	165.4	165.2	123.24	9,295.2	-139.8	405.0	126.9	278.15	1.456	Level 3	
16,500.0	7,344.0	16,716.8	7,566.0	167.1	167.0	123.11	9,395.2	-139.8	406.5	125.0	281.50	1.444	Level 3	
16,600.0	7,344.0	16,816.8	7,566.0	168.9	168.7	122.97	9,495.2	-139.8	407.9	123.1	284.85	1.432	Level 3	
16,700.0	7,344.0	16,916.7	7,566.0	170.6	170.5	122.84	9,595.2	-139.8	409.4	121.2	288.21	1.420	Level 3	
16,800.0	7,344.0	17,016.7	7,566.0	172.4	172.2	122.71	9,695.1	-139.8	410.9	119.3	291.57	1.409	Level 3	
16,900.0	7,344.0	17,116.7	7,566.0	174.1	174.0	122.58	9,795.1	-139.8	412.3	117.4	294.94	1.398	Level 3	
17,000.0	7,344.0	17,216.7	7,566.0	175.9	175.7	122.45	9,895.1	-139.8	413.8	115.5	298.31	1.387	Level 3	
17,013.3	7,344.0	17,230.0	7,566.0	176.1	176.0	122.43	9,908.5	-139.8	414.0	115.2	298.75	1.386	Level 3, SF	

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4E-21H-O268 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6					
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	19.6	19.6	19.3	0.26	74.778		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.61	32.048		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	0.96	20.394		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	19.6	19.6	18.3	1.31	14.956 CC, ES		
500.0	500.0	500.0	500.0	0.8	0.8	179.58	0.0	19.6	20.4	18.8	1.66	12.335		
600.0	600.0	600.0	600.0	1.0	1.0	179.63	0.0	19.6	23.1	21.1	2.01	11.497 SF		
700.0	699.9	699.9	699.9	1.2	1.2	179.69	0.0	19.6	27.3	25.0	2.35	11.606		
800.0	799.8	799.8	799.8	1.4	1.4	179.73	0.0	19.6	32.0	29.3	2.70	11.824		
900.0	899.7	899.7	899.7	1.6	1.5	179.77	0.0	19.6	36.6	33.6	3.05	11.993		
1,000.0	999.5	999.5	999.5	1.8	1.7	179.79	0.0	19.6	41.2	37.8	3.40	12.127		
1,100.0	1,099.4	1,099.4	1,099.4	1.9	1.9	179.81	0.0	19.6	45.9	42.1	3.75	12.236		
1,200.0	1,199.3	1,199.3	1,199.3	2.1	2.0	179.83	0.0	19.6	50.5	46.4	4.10	12.327		
1,300.0	1,299.2	1,299.2	1,299.2	2.3	2.2	179.84	0.0	19.6	55.2	50.7	4.45	12.403		
1,400.0	1,399.1	1,399.1	1,399.1	2.5	2.4	179.86	0.0	19.6	59.8	55.0	4.80	12.468		
1,500.0	1,499.0	1,499.0	1,499.0	2.7	2.6	179.87	0.0	19.6	64.4	59.3	5.15	12.525		
1,600.0	1,598.9	1,598.9	1,598.9	2.9	2.7	179.88	0.0	19.6	69.1	63.6	5.49	12.574		
1,700.0	1,698.8	1,698.8	1,698.8	3.1	2.9	179.88	0.0	19.6	73.7	67.9	5.84	12.618		
1,800.0	1,798.7	1,798.7	1,798.7	3.3	3.1	179.89	0.0	19.6	78.4	72.2	6.19	12.656		
1,900.0	1,898.6	1,898.6	1,898.6	3.5	3.3	179.90	0.0	19.6	83.0	76.5	6.54	12.690		
2,000.0	1,998.5	1,998.5	1,998.5	3.7	3.4	179.90	0.0	19.6	87.6	80.8	6.89	12.721		
2,100.0	2,098.4	2,098.4	2,098.4	3.9	3.6	179.91	0.0	19.6	92.3	85.0	7.24	12.749		
2,200.0	2,198.3	2,198.3	2,198.3	4.0	3.8	179.91	0.0	19.6	96.9	89.3	7.59	12.775		
2,300.0	2,298.1	2,298.1	2,298.1	4.2	4.0	179.92	0.0	19.6	101.6	93.6	7.94	12.798		
2,400.0	2,398.0	2,398.0	2,398.0	4.4	4.1	179.92	0.0	19.6	106.2	97.9	8.28	12.819		
2,500.0	2,497.9	2,497.9	2,497.9	4.6	4.3	179.92	0.0	19.6	110.8	102.2	8.63	12.838		
2,600.0	2,597.8	2,597.8	2,597.8	4.8	4.5	179.93	0.0	19.6	115.5	106.5	8.98	12.856		
2,700.0	2,697.7	2,697.7	2,697.7	5.0	4.7	179.93	0.0	19.6	120.1	110.8	9.33	12.873		
2,800.0	2,797.6	2,797.6	2,797.6	5.2	4.8	179.93	0.0	19.6	124.8	115.1	9.68	12.888		
2,900.0	2,897.5	2,897.5	2,897.5	5.4	5.0	179.93	0.0	19.6	129.4	119.4	10.03	12.903		
3,000.0	2,997.4	2,997.4	2,997.4	5.6	5.2	179.94	0.0	19.6	134.0	123.7	10.38	12.916		
3,100.0	3,097.3	3,097.3	3,097.3	5.8	5.4	179.94	0.0	19.6	138.7	127.9	10.73	12.929		
3,200.0	3,197.2	3,197.2	3,197.2	6.0	5.5	179.94	0.0	19.6	143.3	132.2	11.07	12.940		
3,300.0	3,297.1	3,297.1	3,297.1	6.2	5.7	179.94	0.0	19.6	148.0	136.5	11.42	12.951		
3,400.0	3,397.0	3,397.0	3,397.0	6.3	5.9	179.94	0.0	19.6	152.6	140.8	11.77	12.962		
3,500.0	3,496.9	3,496.9	3,496.9	6.5	6.1	179.95	0.0	19.6	157.2	145.1	12.12	12.972		
3,600.0	3,596.7	3,596.7	3,596.7	6.7	6.2	179.95	0.0	19.6	161.9	149.4	12.47	12.981		
3,700.0	3,696.6	3,696.6	3,696.6	6.9	6.4	179.95	0.0	19.6	166.5	153.7	12.82	12.989		
3,800.0	3,796.5	3,796.5	3,796.5	7.1	6.6	179.95	0.0	19.6	171.2	158.0	13.17	12.998		
3,900.0	3,896.4	3,896.4	3,896.4	7.3	6.8	179.95	0.0	19.6	175.8	162.3	13.52	13.006		
4,000.0	3,996.3	3,996.3	3,996.3	7.5	6.9	179.95	0.0	19.6	180.4	166.6	13.87	13.013		
4,100.0	4,096.2	4,096.2	4,096.2	7.7	7.1	179.95	0.0	19.6	185.1	170.9	14.21	13.020		
4,200.0	4,196.1	4,196.1	4,196.1	7.9	7.3	179.95	0.0	19.6	189.7	175.1	14.56	13.027		
4,300.0	4,296.0	4,296.0	4,296.0	8.1	7.5	179.96	0.0	19.6	194.3	179.4	14.91	13.033		
4,400.0	4,395.9	4,395.9	4,395.9	8.3	7.6	179.96	0.0	19.6	199.0	183.7	15.26	13.039		
4,500.0	4,495.8	4,495.8	4,495.8	8.5	7.8	179.96	0.0	19.6	203.6	188.0	15.61	13.045		
4,600.0	4,595.7	4,595.7	4,595.7	8.7	8.0	179.96	0.0	20.3	209.0	193.1	15.95	13.104		
4,700.0	4,695.6	4,695.6	4,695.6	8.8	8.1	179.95	0.0	22.7	216.1	199.8	16.29	13.264		
4,800.0	4,795.5	4,795.5	4,795.5	9.0	8.3	179.95	0.0	26.6	224.9	208.2	16.64	13.518		
4,900.0	4,895.3	4,895.3	4,895.3	9.2	8.5	179.94	0.0	32.2	235.3	218.3	16.98	13.860		
5,000.0	4,995.2	4,995.2	4,995.2	9.4	8.7	179.93	0.0	39.2	247.1	229.8	17.32	14.264		
5,100.0	5,095.1	5,095.1	5,095.1	9.6	8.8	179.92	-0.1	46.4	259.0	241.3	17.67	14.659		

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

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4E-21H-O268 - 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)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning			
5,200.0	5,195.0	5,176.3	5,175.2	9.8	9.0	179.92	-0.1	53.7	270.9	252.9	18.02	15.038				
5,300.0	5,294.9	5,275.6	5,274.3	10.0	9.2	179.91	-0.1	60.9	282.8	264.5	18.36	15.403				
5,400.0	5,394.8	5,374.9	5,373.3	10.2	9.4	179.90	-0.1	68.2	294.8	276.1	18.71	15.754				
5,500.0	5,494.7	5,474.2	5,472.3	10.4	9.6	179.90	-0.1	75.4	306.7	287.6	19.06	16.092				
5,600.0	5,594.6	5,573.4	5,571.3	10.6	9.8	179.89	-0.1	82.7	318.6	299.2	19.41	16.419				
5,700.0	5,694.5	5,672.7	5,670.3	10.8	9.9	179.89	-0.1	89.9	330.5	310.8	19.75	16.733				
5,800.0	5,794.4	5,772.0	5,769.4	11.0	10.1	179.88	-0.1	97.2	342.5	322.4	20.10	17.037				
5,900.0	5,894.3	5,871.3	5,868.4	11.2	10.3	179.88	-0.1	104.4	354.4	333.9	20.45	17.331				
6,000.0	5,994.2	5,970.6	5,967.4	11.3	10.5	179.87	-0.1	111.7	366.3	345.5	20.79	17.615				
6,100.0	6,094.1	6,069.9	6,066.4	11.5	10.7	179.87	-0.2	118.9	378.2	357.1	21.14	17.889				
6,200.0	6,193.9	6,169.2	6,165.5	11.7	10.9	179.87	-0.2	126.2	390.1	368.7	21.49	18.155				
6,300.0	6,293.8	6,268.5	6,264.5	11.9	11.1	179.86	-0.2	133.4	402.1	380.2	21.84	18.412				
6,400.0	6,393.7	6,367.7	6,363.5	12.1	11.3	179.86	-0.2	140.7	414.0	391.8	22.18	18.661				
6,500.0	6,493.6	6,467.0	6,462.5	12.3	11.5	179.86	-0.2	147.9	425.9	403.4	22.53	18.903				
6,600.0	6,593.5	6,566.3	6,561.5	12.5	11.7	179.85	-0.2	155.2	437.8	414.9	22.88	19.137				
6,700.0	6,693.4	6,665.6	6,660.6	12.7	11.9	179.85	-0.2	162.4	449.7	426.5	23.23	19.364				
6,800.0	6,793.3	6,764.9	6,759.6	12.9	12.1	141.98	-0.2	169.7	461.7	438.1	23.57	19.585				
6,900.0	6,892.3	6,864.9	6,859.0	13.1	12.3	103.05	6.4	177.0	473.8	449.9	23.93	19.801				
7,000.0	6,987.6	6,966.2	6,957.0	13.3	12.5	97.13	30.4	184.1	485.8	461.5	24.33	19.967				
7,100.0	7,076.4	7,068.6	7,050.2	13.6	12.8	94.59	71.9	191.0	497.4	472.5	24.86	20.011				

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4F-21H-O268 - 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		Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
							+N/-S (ft)	+E/-W (ft)						
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	30.8	30.8					
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	30.8	30.8	30.5	0.26	116.731		
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	30.8	30.8	30.2	0.61	50.218		
300.0	300.0	301.0	301.0	0.5	0.5	90.05	0.0	30.8	30.8	29.8	0.96	31.990		
366.3	366.3	367.3	367.3	0.6	0.6	90.05	0.0	30.8	30.8	29.6	1.19	25.782 CC		
400.0	400.0	401.0	401.0	0.7	0.7	90.05	0.0	30.8	30.8	29.5	1.31	23.471 ES		
500.0	500.0	500.4	500.4	0.8	0.8	179.57	0.0	31.6	32.5	30.9	1.66	19.607		
600.0	600.0	600.0	600.0	1.0	1.0	179.60	0.0	34.3	37.8	35.8	2.01	18.819 SF		
700.0	699.9	698.6	698.5	1.2	1.2	179.64	0.0	38.5	46.4	44.0	2.35	19.709		
800.0	799.8	797.1	796.8	1.4	1.4	179.67	-0.1	44.5	57.0	54.3	2.70	21.143		
900.0	899.7	896.0	895.4	1.6	1.6	179.68	-0.1	51.9	69.1	66.1	3.04	22.710		
1,000.0	999.5	995.2	994.3	1.8	1.8	179.70	-0.1	59.5	81.4	78.0	3.39	23.995		
1,100.0	1,099.4	1,094.5	1,093.3	1.9	2.0	179.71	-0.1	67.0	93.6	89.9	3.74	25.041		
1,200.0	1,199.3	1,193.7	1,192.3	2.1	2.2	179.71	-0.1	74.6	105.9	101.8	4.09	25.909		
1,300.0	1,299.2	1,293.0	1,291.2	2.3	2.4	179.72	-0.1	82.2	118.1	113.7	4.43	26.642		
1,400.0	1,399.1	1,392.2	1,390.2	2.5	2.6	179.72	-0.1	89.7	130.4	125.6	4.78	27.268		
1,500.0	1,499.0	1,491.5	1,489.1	2.7	2.8	179.73	-0.1	97.3	142.6	137.5	5.13	27.809		
1,600.0	1,598.9	1,590.7	1,588.1	2.9	3.1	179.73	-0.2	104.9	154.8	149.4	5.47	28.282		
1,700.0	1,698.8	1,690.0	1,687.1	3.1	3.3	179.73	-0.2	112.4	167.1	161.3	5.82	28.698		
1,800.0	1,798.7	1,789.2	1,786.0	3.3	3.5	179.73	-0.2	120.0	179.3	173.1	6.17	29.068		
1,900.0	1,898.6	1,888.5	1,885.0	3.5	3.7	179.73	-0.2	127.6	191.6	185.0	6.52	29.398		
2,000.0	1,998.5	1,987.7	1,983.9	3.7	3.9	179.74	-0.2	135.1	203.8	196.9	6.86	29.695		
2,100.0	2,098.4	2,087.0	2,082.9	3.9	4.1	179.74	-0.2	142.7	216.0	208.8	7.21	29.963		
2,200.0	2,198.3	2,186.2	2,181.8	4.0	4.3	179.74	-0.2	150.3	228.3	220.7	7.56	30.207		
2,300.0	2,298.1	2,285.4	2,280.8	4.2	4.6	179.74	-0.3	157.8	240.5	232.6	7.90	30.429		
2,400.0	2,398.0	2,384.7	2,379.8	4.4	4.8	179.74	-0.3	165.4	252.8	244.5	8.25	30.633		
2,500.0	2,497.9	2,483.9	2,478.7	4.6	5.0	179.74	-0.3	173.0	265.0	256.4	8.60	30.820		
2,600.0	2,597.8	2,583.2	2,577.7	4.8	5.2	179.74	-0.3	180.5	277.2	268.3	8.95	30.993		
2,700.0	2,697.7	2,682.4	2,676.6	5.0	5.4	179.74	-0.3	188.1	289.5	280.2	9.29	31.152		
2,800.0	2,797.6	2,781.7	2,775.6	5.2	5.6	179.74	-0.3	195.7	301.7	292.1	9.64	31.301		
2,900.0	2,897.5	2,880.9	2,874.6	5.4	5.9	179.75	-0.3	203.2	314.0	304.0	9.99	31.439		
3,000.0	2,997.4	2,980.2	2,973.5	5.6	6.1	179.75	-0.4	210.8	326.2	315.9	10.33	31.567		
3,100.0	3,097.3	3,079.4	3,072.5	5.8	6.3	179.75	-0.4	218.4	338.5	327.8	10.68	31.688		
3,200.0	3,197.2	3,178.7	3,171.4	6.0	6.5	179.75	-0.4	225.9	350.7	339.7	11.03	31.800		
3,300.0	3,297.1	3,277.9	3,270.4	6.2	6.7	179.75	-0.4	233.5	362.9	351.6	11.37	31.906		
3,400.0	3,397.0	3,377.2	3,369.4	6.3	6.9	179.75	-0.4	241.1	375.2	363.5	11.72	32.006		
3,500.0	3,496.9	3,476.4	3,468.3	6.5	7.2	179.75	-0.4	248.6	387.4	375.3	12.07	32.100		
3,600.0	3,596.7	3,575.7	3,567.3	6.7	7.4	179.75	-0.4	256.2	399.7	387.2	12.42	32.188		
3,700.0	3,696.6	3,674.9	3,666.2	6.9	7.6	179.75	-0.5	263.8	411.9	399.1	12.76	32.272		
3,800.0	3,796.5	3,774.2	3,765.2	7.1	7.8	179.75	-0.5	271.3	424.1	411.0	13.11	32.352		
3,900.0	3,896.4	3,873.4	3,864.2	7.3	8.0	179.75	-0.5	278.9	436.4	422.9	13.46	32.427		
4,000.0	3,996.3	3,972.7	3,963.1	7.5	8.3	179.75	-0.5	286.5	448.6	434.8	13.80	32.498		
4,100.0	4,096.2	4,071.9	4,062.1	7.7	8.5	179.75	-0.5	294.0	460.9	446.7	14.15	32.566		
4,200.0	4,196.1	4,171.2	4,161.0	7.9	8.7	179.75	-0.5	301.6	473.1	458.6	14.50	32.631		
4,300.0	4,296.0	4,270.4	4,260.0	8.1	8.9	179.75	-0.5	309.2	485.3	470.5	14.85	32.693		
4,400.0	4,395.9	4,369.7	4,359.0	8.3	9.1	179.75	-0.6	316.7	497.6	482.4	15.19	32.752		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4G-21H-O268 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	42.0	42.0					
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	42.0	42.0	41.7	0.26	159.178		
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	42.0	42.0	41.3	0.61	68.478		
266.3	266.3	267.3	267.3	0.4	0.4	90.05	0.0	42.0	42.0	41.1	0.84	49.696 CC		
300.0	300.0	301.0	301.0	0.5	0.5	90.05	0.0	42.0	42.0	41.0	0.96	43.623 ES		
400.0	400.0	400.0	400.0	0.7	0.7	90.05	0.0	42.8	42.8	41.5	1.31	32.706		
500.0	500.0	499.4	499.4	0.8	0.8	179.56	0.0	45.4	46.3	44.7	1.66	27.958		
600.0	600.0	598.3	598.2	1.0	1.0	179.58	0.0	49.7	53.3	51.3	2.00	26.596 SF		
700.0	699.9	696.8	696.5	1.2	1.2	179.60	0.0	55.7	63.6	61.2	2.35	27.075		
800.0	799.8	794.8	794.2	1.4	1.4	179.62	0.0	63.3	76.0	73.3	2.69	28.205		
900.0	899.7	892.4	891.4	1.6	1.6	179.63	0.0	72.5	90.1	87.0	3.04	29.645		
1,000.0	999.5	989.5	987.8	1.8	1.9	179.64	0.0	83.4	105.8	102.4	3.38	31.298		
1,100.0	1,099.4	1,087.0	1,084.5	1.9	2.1	179.64	-0.1	95.7	123.1	119.4	3.72	33.044		
1,200.0	1,199.3	1,185.4	1,182.2	2.1	2.4	179.64	-0.1	108.5	140.6	136.5	4.07	34.542		
1,300.0	1,299.2	1,283.9	1,279.8	2.3	2.7	179.64	-0.1	121.2	158.1	153.7	4.42	35.807		
1,400.0	1,399.1	1,382.3	1,377.4	2.5	2.9	179.64	-0.1	133.9	175.6	170.8	4.76	36.888		
1,500.0	1,499.0	1,480.8	1,475.1	2.7	3.2	179.64	-0.1	146.6	193.1	188.0	5.11	37.823		
1,600.0	1,598.9	1,579.3	1,572.7	2.9	3.5	179.64	-0.1	159.3	210.6	205.2	5.45	38.640		
1,700.0	1,698.8	1,677.7	1,670.3	3.1	3.7	179.65	-0.1	172.1	228.1	222.3	5.80	39.360		
1,800.0	1,798.7	1,776.2	1,767.9	3.3	4.0	179.65	-0.1	184.8	245.6	239.5	6.14	39.999		
1,900.0	1,898.6	1,874.6	1,865.6	3.5	4.3	179.65	-0.1	197.5	263.1	256.7	6.49	40.570		
2,000.0	1,998.5	1,973.1	1,963.2	3.7	4.6	179.65	-0.1	210.2	280.7	273.8	6.83	41.084		
2,100.0	2,098.4	2,071.5	2,060.8	3.9	4.9	179.65	-0.1	223.0	298.2	291.0	7.18	41.548		
2,200.0	2,198.3	2,170.0	2,158.5	4.0	5.1	179.65	-0.1	235.7	315.7	308.1	7.52	41.970		
2,300.0	2,298.1	2,268.4	2,256.1	4.2	5.4	179.65	-0.1	248.4	333.2	325.3	7.87	42.354		
2,400.0	2,398.0	2,366.9	2,353.7	4.4	5.7	179.65	-0.1	261.1	350.7	342.5	8.21	42.707		
2,500.0	2,497.9	2,465.4	2,451.4	4.6	6.0	179.65	-0.1	273.8	368.2	359.6	8.56	43.031		
2,600.0	2,597.8	2,563.8	2,549.0	4.8	6.3	179.65	-0.1	286.6	385.7	376.8	8.90	43.329		
2,700.0	2,697.7	2,662.3	2,646.6	5.0	6.5	179.65	-0.1	299.3	403.2	394.0	9.25	43.606		
2,800.0	2,797.6	2,760.7	2,744.2	5.2	6.8	179.65	-0.1	312.0	420.7	411.1	9.59	43.863		
2,900.0	2,897.5	2,859.2	2,841.9	5.4	7.1	179.65	-0.1	324.7	438.2	428.3	9.94	44.102		
3,000.0	2,997.4	2,957.6	2,939.5	5.6	7.4	179.65	-0.1	337.5	455.7	445.4	10.28	44.324		
3,100.0	3,097.3	3,056.1	3,037.1	5.8	7.7	179.65	-0.1	350.2	473.2	462.6	10.63	44.533		
3,200.0	3,197.2	3,154.5	3,134.8	6.0	7.9	179.65	-0.1	362.9	490.7	479.8	10.97	44.728		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - Edith Ann-Duckworth 4H-21H-O268 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	1.0	1.0	0.0	0.0	90.05	0.0	50.3	50.3					
100.0	100.0	101.0	101.0	0.1	0.1	90.05	0.0	50.3	50.3	50.1	0.26	191.014		
166.3	166.3	167.3	167.3	0.2	0.2	90.05	0.0	50.3	50.3	49.8	0.50	101.682 CC		
200.0	200.0	201.0	201.0	0.3	0.3	90.05	0.0	50.3	50.3	49.7	0.61	82.175 ES		
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	51.2	51.2	50.3	0.96	53.308		
400.0	400.0	399.2	399.1	0.7	0.7	90.05	0.0	53.8	53.8	52.5	1.31	40.975		
500.0	500.0	498.1	497.9	0.8	0.8	179.56	0.0	58.1	59.0	57.4	1.65	35.689		
600.0	600.0	596.6	596.3	1.0	1.0	179.58	0.0	64.1	67.7	65.7	2.00	33.857 SF		
700.0	699.9	694.6	694.0	1.2	1.3	179.60	-0.1	71.7	79.7	77.4	2.34	34.007		
800.0	799.8	792.1	791.1	1.4	1.5	179.61	-0.1	80.9	93.8	91.1	2.69	34.891		
900.0	899.7	889.2	887.5	1.6	1.7	179.62	-0.1	91.7	109.6	106.5	3.03	36.140		
1,000.0	999.5	985.6	983.2	1.8	2.0	179.63	-0.1	104.1	127.0	123.6	3.37	37.642		
1,100.0	1,099.4	1,081.5	1,078.1	1.9	2.3	179.63	-0.1	118.0	146.1	142.3	3.71	39.324		
1,200.0	1,199.3	1,176.8	1,172.0	2.1	2.6	179.63	-0.1	133.4	166.8	162.7	4.05	41.140		
1,300.0	1,299.2	1,273.7	1,267.5	2.3	2.9	179.63	-0.1	150.2	188.6	184.2	4.40	42.914		
1,400.0	1,399.1	1,371.2	1,363.6	2.5	3.2	179.63	-0.1	167.1	210.5	205.8	4.74	44.431		
1,500.0	1,499.0	1,468.8	1,459.6	2.7	3.6	179.63	-0.1	184.1	232.5	227.4	5.08	45.745		
1,600.0	1,598.9	1,566.4	1,555.7	2.9	3.9	179.63	-0.1	201.0	254.4	249.0	5.42	46.892		
1,700.0	1,698.8	1,663.9	1,651.8	3.1	4.2	179.63	-0.1	218.0	276.3	270.5	5.77	47.903		
1,800.0	1,798.7	1,761.5	1,747.9	3.3	4.6	179.63	-0.1	234.9	298.2	292.1	6.11	48.802		
1,900.0	1,898.6	1,859.1	1,844.0	3.5	4.9	179.63	-0.1	251.8	320.1	313.7	6.45	49.604		
2,000.0	1,998.5	1,956.6	1,940.1	3.7	5.2	179.63	-0.2	268.8	342.0	335.2	6.80	50.326		
2,100.0	2,098.4	2,054.2	2,036.2	3.9	5.6	179.63	-0.2	285.7	364.0	356.8	7.14	50.979		
2,200.0	2,198.3	2,151.8	2,132.2	4.0	5.9	179.63	-0.2	302.7	385.9	378.4	7.48	51.572		
2,300.0	2,298.1	2,249.3	2,228.3	4.2	6.3	179.63	-0.2	319.6	407.8	400.0	7.83	52.113		
2,400.0	2,398.0	2,346.9	2,324.4	4.4	6.6	179.63	-0.2	336.6	429.7	421.5	8.17	52.609		
2,500.0	2,497.9	2,444.5	2,420.5	4.6	6.9	179.63	-0.2	353.5	451.6	443.1	8.51	53.065		
2,600.0	2,597.8	2,542.0	2,516.6	4.8	7.3	179.63	-0.2	370.4	473.5	464.7	8.85	53.485		
2,700.0	2,697.7	2,639.6	2,612.7	5.0	7.6	179.64	-0.2	387.4	495.4	486.3	9.20	53.874		



## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - KENNEDY 32-21 (EXISTING) - ENCANA WELL - NO SURVE													Offset Site Error:	0.0 ft
Survey Program: 8072-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		
9,600.0	7,344.0	7,285.0	7,285.0	47.5	12.7	-90.00	2,891.3	-432.9	401.8	341.9	59.88	6.710		
9,700.0	7,344.0	7,285.0	7,285.0	49.2	12.7	-90.00	2,891.3	-432.9	303.6	242.0	61.57	4.930		
9,800.0	7,344.0	7,285.0	7,285.0	50.9	12.7	-90.00	2,891.3	-432.9	207.1	143.8	63.27	3.273		
9,900.0	7,344.0	7,285.0	7,285.0	52.6	12.7	-90.00	2,891.3	-432.9	116.8	51.8	64.98	1.798		
9,996.3	7,344.0	7,285.0	7,285.0	54.2	12.7	-90.00	2,891.3	-432.9	66.1	-0.5	66.62	0.993 Level 1, CC, ES, SF		
10,000.0	7,344.0	7,285.0	7,285.0	54.3	12.7	-90.00	2,891.3	-432.9	66.2	-0.5	66.68	0.993 Level 1		
10,100.0	7,344.0	7,285.0	7,285.0	56.0	12.7	-90.00	2,891.3	-432.9	123.0	54.6	68.39	1.799		
10,200.0	7,344.0	7,285.0	7,285.0	57.7	12.7	-90.00	2,891.3	-432.9	214.2	144.1	70.11	3.055		
10,300.0	7,344.0	7,285.0	7,285.0	59.4	12.7	-90.00	2,891.3	-432.9	310.8	239.0	71.82	4.328		
10,400.0	7,344.0	7,285.0	7,285.0	61.1	12.7	-90.00	2,891.3	-432.9	409.1	335.6	73.54	5.563		

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

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - KENNEDY 6-0-21 (EXISTING) - ENCANA WELL - SURVEYS													Offset Site Error: 0.0 ft
Survey Program: 108-Geolink MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
11,800.0	7,344.0	7,381.2	7,283.0	85.2	19.7	88.78	4,984.6	-13.6	481.0	380.1	100.97	4.764	
11,900.0	7,344.0	7,383.9	7,285.6	86.9	19.7	89.17	4,984.7	-13.6	430.1	327.4	102.71	4.188	
12,000.0	7,344.0	7,386.6	7,288.4	88.7	19.7	89.57	4,984.8	-13.6	398.2	293.8	104.46	3.812	
12,082.2	7,344.0	7,388.9	7,290.7	90.1	19.7	89.91	4,984.9	-13.6	389.7	283.8	105.89	3.680 CC, ES	
12,100.0	7,344.0	7,389.4	7,291.2	90.4	19.7	89.98	4,984.9	-13.6	390.1	283.9	106.20	3.673 SF	
12,200.0	7,344.0	7,392.3	7,294.1	92.1	19.7	90.41	4,985.0	-13.6	407.1	299.1	107.94	3.771	
12,300.0	7,344.0	7,395.3	7,297.0	93.9	19.7	90.84	4,985.0	-13.6	446.4	336.7	109.67	4.070	

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S21-T2N-R68W (Edith Ann-Duckworth) - KENNEDY 6-4-21 (EXISTING) - ENCANA WELL - SURVEYS												Offset Site Error:	0.0 ft
Survey Program: 71-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
9,400.0	7,344.0	7,420.0	7,284.5	44.1	21.7	90.07	2,535.5	48.8	470.5	406.0	64.48	7.297	
9,500.0	7,344.0	7,421.4	7,285.9	45.8	21.7	90.26	2,535.5	48.8	430.0	363.9	66.16	6.499	
9,600.0	7,344.0	7,422.7	7,287.3	47.5	21.7	90.46	2,535.5	48.7	410.5	342.6	67.86	6.049	
9,632.1	7,344.0	7,423.2	7,287.7	48.0	21.7	90.52	2,535.5	48.7	409.2	340.8	68.40	5.983 CC, ES	
9,700.0	7,344.0	7,424.1	7,288.6	49.2	21.7	90.65	2,535.5	48.7	414.8	345.3	69.55	5.964 SF	
9,800.0	7,344.0	7,425.5	7,290.0	50.9	21.7	90.84	2,535.6	48.7	442.3	371.1	71.25	6.207	
9,900.0	7,344.0	7,426.8	7,291.3	52.6	21.7	91.03	2,535.6	48.7	489.1	416.1	72.96	6.704	

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Edith Ann-Duckworth 4C-21H-O268
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Reference Site:</b>	S21-T2N-R68W (Edith Ann-Duckworth)	<b>MD Reference:</b>	WELL @ 4951.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Edith Ann-Duckworth 4C-21H-O268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4951.0ft (Original Well Elev)

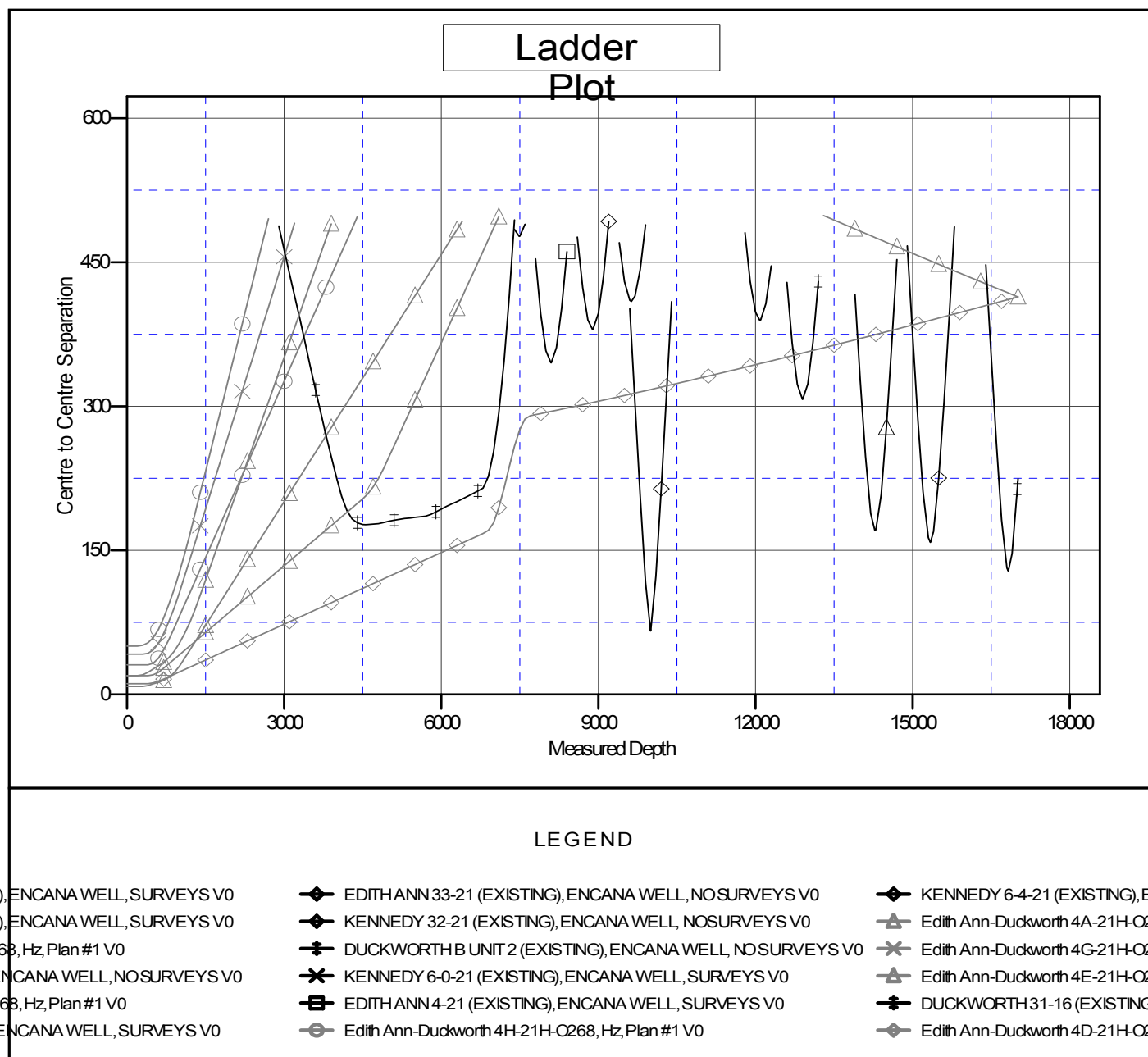
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Edith Ann-Duckworth 4C-21H-O268

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.32°



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