

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Ione 2G-2H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site:</b>	NWNE S2-T2N-R66W (Ione)	<b>North Reference:</b>	True
<b>Well:</b>	Ione 2G-2H	<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		NWNE S2-T2N-R66W (Ione)			
Site Position:		Northing:	1,306,798.50 ft	Latitude:	40.173110
From:	Lat/Long	Easting:	3,209,901.52 ft	Longitude:	-104.748870
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.49 °

Well	Ione 2G-2H					
Well Position	+N/-S	0.0 ft	Northing:	1,306,798.95 ft	Latitude:	40.173110
	+E/-W	0.0 ft	Easting:	3,209,960.20 ft	Longitude:	-104.748660
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,046.0 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</b>
			(°)	(°)	(nT)
	IGRF200510	8/8/2012	8.64	66.84	52,916

<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	180.00

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
744.6	10.89	65.39	741.4	21.5	46.9	2.00	2.00	0.00	65.39	
6,778.2	10.89	65.39	6,666.2	496.4	1,083.5	0.00	0.00	0.00	0.00	
7,723.3	90.00	180.00	7,275.0	-74.8	1,190.0	10.00	8.37	12.13	114.22	
11,943.3	90.00	180.00	7,275.0	-4,294.8	1,190.0	0.00	0.00	0.00	0.00	Ione 2G-2H PBHL (46

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site:</b>	NWNE S2-T2N-R66W (lone)	<b>North Reference:</b>	True
<b>Well:</b>	lone 2G-2H	<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	KOP @ 200'
300.0	2.00	65.39	300.0	0.7	1.6	-0.7	2.00	2.00	
400.0	4.00	65.39	399.8	2.9	6.3	-2.9	2.00	2.00	
500.0	6.00	65.39	499.5	6.5	14.3	-6.5	2.00	2.00	
600.0	8.00	65.39	598.7	11.6	25.3	-11.6	2.00	2.00	
700.0	10.00	65.39	697.5	18.1	39.6	-18.1	2.00	2.00	
744.6	10.89	65.39	741.4	21.5	46.9	-21.5	2.00	2.00	EOB; Inc=10.89°
800.0	10.89	65.39	795.7	25.9	56.4	-25.9	0.00	0.00	
900.0	10.89	65.39	893.9	33.7	73.6	-33.7	0.00	0.00	
1,000.0	10.89	65.39	992.1	41.6	90.8	-41.6	0.00	0.00	
1,100.0	10.89	65.39	1,090.3	49.5	108.0	-49.5	0.00	0.00	
1,200.0	10.89	65.39	1,188.5	57.3	125.2	-57.3	0.00	0.00	
1,300.0	10.89	65.39	1,286.7	65.2	142.3	-65.2	0.00	0.00	
1,400.0	10.89	65.39	1,384.9	73.1	159.5	-73.1	0.00	0.00	
1,500.0	10.89	65.39	1,483.1	80.9	176.7	-80.9	0.00	0.00	
1,600.0	10.89	65.39	1,581.3	88.8	193.9	-88.8	0.00	0.00	
1,700.0	10.89	65.39	1,679.5	96.7	211.1	-96.7	0.00	0.00	
1,800.0	10.89	65.39	1,777.7	104.6	228.2	-104.6	0.00	0.00	
1,900.0	10.89	65.39	1,875.9	112.4	245.4	-112.4	0.00	0.00	
2,000.0	10.89	65.39	1,974.1	120.3	262.6	-120.3	0.00	0.00	
2,100.0	10.89	65.39	2,072.3	128.2	279.8	-128.2	0.00	0.00	
2,200.0	10.89	65.39	2,170.5	136.0	297.0	-136.0	0.00	0.00	
2,300.0	10.89	65.39	2,268.7	143.9	314.1	-143.9	0.00	0.00	
2,400.0	10.89	65.39	2,366.9	151.8	331.3	-151.8	0.00	0.00	
2,500.0	10.89	65.39	2,465.1	159.7	348.5	-159.7	0.00	0.00	
2,600.0	10.89	65.39	2,563.3	167.5	365.7	-167.5	0.00	0.00	
2,700.0	10.89	65.39	2,661.5	175.4	382.9	-175.4	0.00	0.00	
2,800.0	10.89	65.39	2,759.7	183.3	400.0	-183.3	0.00	0.00	
2,900.0	10.89	65.39	2,857.9	191.1	417.2	-191.1	0.00	0.00	
3,000.0	10.89	65.39	2,956.1	199.0	434.4	-199.0	0.00	0.00	
3,100.0	10.89	65.39	3,054.3	206.9	451.6	-206.9	0.00	0.00	
3,200.0	10.89	65.39	3,152.5	214.7	468.8	-214.7	0.00	0.00	
3,300.0	10.89	65.39	3,250.7	222.6	485.9	-222.6	0.00	0.00	
3,400.0	10.89	65.39	3,348.9	230.5	503.1	-230.5	0.00	0.00	
3,500.0	10.89	65.39	3,447.1	238.4	520.3	-238.4	0.00	0.00	
3,600.0	10.89	65.39	3,545.3	246.2	537.5	-246.2	0.00	0.00	
3,700.0	10.89	65.39	3,643.5	254.1	554.7	-254.1	0.00	0.00	
3,800.0	10.89	65.39	3,741.7	262.0	571.8	-262.0	0.00	0.00	
3,900.0	10.89	65.39	3,839.9	269.8	589.0	-269.8	0.00	0.00	
4,000.0	10.89	65.39	3,938.1	277.7	606.2	-277.7	0.00	0.00	
4,100.0	10.89	65.39	4,036.3	285.6	623.4	-285.6	0.00	0.00	
4,200.0	10.89	65.39	4,134.5	293.4	640.6	-293.4	0.00	0.00	
4,300.0	10.89	65.39	4,232.7	301.3	657.7	-301.3	0.00	0.00	
4,400.0	10.89	65.39	4,330.9	309.2	674.9	-309.2	0.00	0.00	
4,500.0	10.89	65.39	4,429.1	317.1	692.1	-317.1	0.00	0.00	
4,542.7	10.89	65.39	4,471.0	320.4	699.4	-320.4	0.00	0.00	Sussex
4,600.0	10.89	65.39	4,527.3	324.9	709.3	-324.9	0.00	0.00	
4,700.0	10.89	65.39	4,625.5	332.8	726.5	-332.8	0.00	0.00	
4,800.0	10.89	65.39	4,723.7	340.7	743.6	-340.7	0.00	0.00	
4,846.2	10.89	65.39	4,769.0	344.3	751.6	-344.3	0.00	0.00	Sussex Marker

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site:</b>	NWNE S2-T2N-R66W (lone)	<b>North Reference:</b>	True
<b>Well:</b>	lone 2G-2H	<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
4,900.0	10.89	65.39	4,821.9	348.5	760.8	-348.5	0.00	0.00	
5,000.0	10.89	65.39	4,920.1	356.4	778.0	-356.4	0.00	0.00	
5,100.0	10.89	65.39	5,018.3	364.3	795.2	-364.3	0.00	0.00	
5,200.0	10.89	65.39	5,116.5	372.2	812.4	-372.2	0.00	0.00	
5,241.3	10.89	65.39	5,157.0	375.4	819.5	-375.4	0.00	0.00	Shannon
5,300.0	10.89	65.39	5,214.6	380.0	829.5	-380.0	0.00	0.00	
5,400.0	10.89	65.39	5,312.8	387.9	846.7	-387.9	0.00	0.00	
5,500.0	10.89	65.39	5,411.0	395.8	863.9	-395.8	0.00	0.00	
5,600.0	10.89	65.39	5,509.2	403.6	881.1	-403.6	0.00	0.00	
5,700.0	10.89	65.39	5,607.4	411.5	898.3	-411.5	0.00	0.00	
5,800.0	10.89	65.39	5,705.6	419.4	915.4	-419.4	0.00	0.00	
5,900.0	10.89	65.39	5,803.8	427.2	932.6	-427.2	0.00	0.00	
6,000.0	10.89	65.39	5,902.0	435.1	949.8	-435.1	0.00	0.00	
6,100.0	10.89	65.39	6,000.2	443.0	967.0	-443.0	0.00	0.00	
6,200.0	10.89	65.39	6,098.4	450.9	984.2	-450.9	0.00	0.00	
6,300.0	10.89	65.39	6,196.6	458.7	1,001.3	-458.7	0.00	0.00	
6,400.0	10.89	65.39	6,294.8	466.6	1,018.5	-466.6	0.00	0.00	
6,500.0	10.89	65.39	6,393.0	474.5	1,035.7	-474.5	0.00	0.00	
6,600.0	10.89	65.39	6,491.2	482.3	1,052.9	-482.3	0.00	0.00	
6,606.9	10.89	65.39	6,498.0	482.9	1,054.1	-482.9	0.00	0.00	Teepee Buttes
6,700.0	10.89	65.39	6,589.4	490.2	1,070.1	-490.2	0.00	0.00	
6,778.2	10.89	65.39	6,666.2	496.4	1,083.5	-496.4	0.00	0.00	Start 10° build @ 6778' MD
6,800.0	10.19	76.70	6,687.6	497.7	1,087.3	-497.7	10.00	-3.21	
6,900.0	12.52	128.00	6,785.9	493.0	1,104.4	-493.0	10.00	2.33	
7,000.0	20.19	151.58	6,881.9	471.1	1,121.2	-471.1	10.00	7.67	
7,100.0	29.26	161.80	6,972.7	432.6	1,137.1	-432.6	10.00	9.07	
7,200.0	38.76	167.42	7,055.5	378.7	1,151.6	-378.7	10.00	9.50	
7,300.0	48.44	171.08	7,127.8	311.0	1,164.3	-311.0	10.00	9.68	
7,400.0	58.21	173.77	7,187.5	231.6	1,174.7	-231.6	10.00	9.76	
7,410.6	59.25	174.02	7,193.0	222.6	1,175.7	-222.6	10.00	9.79	Sharon Springs
7,434.9	61.63	174.58	7,205.0	201.6	1,177.8	-201.6	10.00	9.80	Niobrara
7,500.0	68.02	175.95	7,232.7	142.9	1,182.6	-142.9	10.00	9.82	
7,600.0	77.86	177.84	7,262.0	47.6	1,187.7	-47.6	10.00	9.84	
7,615.3	79.36	178.12	7,265.0	32.6	1,188.3	-32.6	10.00	9.84	B Chalk
7,700.0	87.70	179.60	7,274.5	-51.5	1,189.9	51.5	10.00	9.85	
7,723.3	90.00	180.00	7,275.0	-74.8	1,190.0	74.8	10.00	9.85	Landing Pt @ 7723' MD; 90°
7,800.0	90.00	180.00	7,275.0	-151.5	1,190.0	151.5	0.00	0.00	
7,900.0	90.00	180.00	7,275.0	-251.5	1,190.0	251.5	0.00	0.00	
8,000.0	90.00	180.00	7,275.0	-351.5	1,190.0	351.5	0.00	0.00	
8,100.0	90.00	180.00	7,275.0	-451.5	1,190.0	451.5	0.00	0.00	
8,200.0	90.00	180.00	7,275.0	-551.5	1,190.0	551.5	0.00	0.00	
8,300.0	90.00	180.00	7,275.0	-651.5	1,190.0	651.5	0.00	0.00	
8,400.0	90.00	180.00	7,275.0	-751.5	1,190.0	751.5	0.00	0.00	
8,500.0	90.00	180.00	7,275.0	-851.5	1,190.0	851.5	0.00	0.00	
8,600.0	90.00	180.00	7,275.0	-951.5	1,190.0	951.5	0.00	0.00	
8,700.0	90.00	180.00	7,275.0	-1,051.5	1,190.0	1,051.5	0.00	0.00	
8,800.0	90.00	180.00	7,275.0	-1,151.5	1,190.0	1,151.5	0.00	0.00	
8,900.0	90.00	180.00	7,275.0	-1,251.5	1,190.0	1,251.5	0.00	0.00	
9,000.0	90.00	180.00	7,275.0	-1,351.5	1,190.0	1,351.5	0.00	0.00	
9,100.0	90.00	180.00	7,275.0	-1,451.5	1,190.0	1,451.5	0.00	0.00	
9,200.0	90.00	180.00	7,275.0	-1,551.5	1,190.0	1,551.5	0.00	0.00	
9,300.0	90.00	180.00	7,275.0	-1,651.5	1,190.0	1,651.5	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site:</b>	NWNE S2-T2N-R66W (lone)	<b>North Reference:</b>	True
<b>Well:</b>	lone 2G-2H	<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
9,400.0	90.00	180.00	7,275.0	-1,751.5	1,190.0	1,751.5	0.00	0.00	
9,500.0	90.00	180.00	7,275.0	-1,851.5	1,190.0	1,851.5	0.00	0.00	
9,600.0	90.00	180.00	7,275.0	-1,951.5	1,190.0	1,951.5	0.00	0.00	
9,700.0	90.00	180.00	7,275.0	-2,051.5	1,190.0	2,051.5	0.00	0.00	
9,800.0	90.00	180.00	7,275.0	-2,151.5	1,190.0	2,151.5	0.00	0.00	
9,900.0	90.00	180.00	7,275.0	-2,251.5	1,190.0	2,251.5	0.00	0.00	
10,000.0	90.00	180.00	7,275.0	-2,351.5	1,190.0	2,351.5	0.00	0.00	
10,100.0	90.00	180.00	7,275.0	-2,451.5	1,190.0	2,451.5	0.00	0.00	
10,200.0	90.00	180.00	7,275.0	-2,551.5	1,190.0	2,551.5	0.00	0.00	
10,300.0	90.00	180.00	7,275.0	-2,651.5	1,190.0	2,651.5	0.00	0.00	
10,400.0	90.00	180.00	7,275.0	-2,751.5	1,190.0	2,751.5	0.00	0.00	
10,500.0	90.00	180.00	7,275.0	-2,851.5	1,190.0	2,851.5	0.00	0.00	
10,600.0	90.00	180.00	7,275.0	-2,951.5	1,190.0	2,951.5	0.00	0.00	
10,700.0	90.00	180.00	7,275.0	-3,051.5	1,190.0	3,051.5	0.00	0.00	
10,800.0	90.00	180.00	7,275.0	-3,151.5	1,190.0	3,151.5	0.00	0.00	
10,900.0	90.00	180.00	7,275.0	-3,251.5	1,190.0	3,251.5	0.00	0.00	
11,000.0	90.00	180.00	7,275.0	-3,351.5	1,190.0	3,351.5	0.00	0.00	
11,100.0	90.00	180.00	7,275.0	-3,451.5	1,190.0	3,451.5	0.00	0.00	
11,200.0	90.00	180.00	7,275.0	-3,551.5	1,190.0	3,551.5	0.00	0.00	
11,300.0	90.00	180.00	7,275.0	-3,651.5	1,190.0	3,651.5	0.00	0.00	
11,400.0	90.00	180.00	7,275.0	-3,751.5	1,190.0	3,751.5	0.00	0.00	
11,500.0	90.00	180.00	7,275.0	-3,851.5	1,190.0	3,851.5	0.00	0.00	
11,600.0	90.00	180.00	7,275.0	-3,951.5	1,190.0	3,951.5	0.00	0.00	
11,700.0	90.00	180.00	7,275.0	-4,051.5	1,190.0	4,051.5	0.00	0.00	
11,800.0	90.00	180.00	7,275.0	-4,151.5	1,190.0	4,151.5	0.00	0.00	
11,900.0	90.00	180.00	7,275.0	-4,251.5	1,190.0	4,251.5	0.00	0.00	
11,943.3	90.00	180.00	7,275.0	-4,294.8	1,190.0	4,294.8	0.00	0.00	TD at 11943.3 - lone 2G-2H PBHL (460' FSL, 2,

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
lone 2G-2H PBHL (460'	0.00	0.00	7,275.0	-4,294.8	1,190.0	1,302,514.37	3,211,186.56	40.161320	-104.744402
- plan hits target center									
- Point									
lone 2G-2H PBHL (460'	0.00	0.00	7,275.0	-4,294.8	1,090.0	1,302,513.52	3,211,086.57	40.161320	-104.744760
- plan misses target center by 100.0ft at 11943.3ft MD (7275.0 TVD, -4294.8 N, 1190.0 E)									
- Point									

# Cathedral Energy Services

## Planning Report

**Database:** USA EDM 5000 Multi Users DB  
**Company:** EnCana Oil & Gas (USA) Inc  
**Project:** DJ Wattenberg  
**Site:** NWNE S2-T2N-R66W (lone)  
**Well:** lone 2G-2H  
**Wellbore:** HZ  
**Design:** Plan #1

**Local Co-ordinate Reference:** Well lone 2G-2H  
**TVD Reference:** KB=13' @ 5059.0ft (Original Well Elev)  
**MD Reference:** KB=13' @ 5059.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,542.7	4,471.0	Sussex			
4,846.2	4,769.0	Sussex Marker			
5,241.3	5,157.0	Shannon			
6,606.9	6,498.0	Teepee Buttes			
7,410.6	7,193.0	Sharon Springs			
7,434.9	7,205.0	Niobrara			
7,615.3	7,265.0	B Chalk			

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
744.6	741.4	21.5	46.9	EOB; Inc=10.89°
6,778.2	6,666.2	496.4	1,083.5	Start 10° build @ 6778' MD
7,723.3	7,275.0	-74.8	1,190.0	Landing Pt @ 7723' MD; 90°
11,943.3	7,275.0	-4,294.8	1,190.0	TD at 11943.3

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

**DJ Wattenberg**

**NWNE S2-T2N-R66W (lone)**

**lone 2G-2H**

**HZ**

**Plan #1**

## **Anticollision Report**

**15 August, 2012**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	8/15/2012		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,943.3	Plan #1 (HZ)	MWD	Geolink MWD



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 Offset Well - Wellbore - Design	Reference Measured Depth	Offset Measured Depth	Distance		Separation Factor	Warning
	(ft)	(ft)	Between Centres (ft)	Between Ellipses (ft)		
NWNE S2-T2N-R66W (lone)						
lone #11-2 (Existing) - DD - Plan #1						Out of range
lone #12-2B (Existing) - DD - Plan #1						Out of range
lone #13 (Existing) - HZ - Plan #1						Out of range
lone #13-2 (Existing) - DD - Plan #1						Out of range
lone #21-2 (Existing) - DD - Plan #1	2,885.6	2,844.7	377.6	363.1	25.909	CC
lone #21-2 (Existing) - DD - Plan #1	2,900.0	2,858.9	377.6	363.0	25.770	ES
lone #21-2 (Existing) - DD - Plan #1	3,800.0	3,742.7	415.3	396.6	22.171	SF
lone #22-2 (Existing) - DD - Plan #1						Out of range
lone #23-2 (Existing) - DD - Plan #1						Out of range
lone #24-2 (Existing) - DD - Plan #1						Out of range
lone #3 (Existing) - DD - DD	0.0	0.0	58.7			
lone #3 (Existing) - DD - DD	600.0	596.4	88.5	86.9	57.031	SF
lone #3 (Existing) - DD - Plan #1	200.0	198.0	58.7	58.0	90.873	CC, ES
lone #3 (Existing) - DD - Plan #1	600.0	596.7	84.8	82.8	41.448	SF
lone #31-2 (Existing) - DD - Plan #1						Out of range
lone #32-2 (Existing) - DD - Plan #1						Out of range
lone #33-2 (Existing) - DD - Plan #1						Out of range
lone #34-2 (Existing) - DD - Plan #1						Out of range
lone #4 (Existing) - DD - Plan #1						Out of range
lone #42-2 - DD - Plan #1						Out of range
lone 1A-2H - HZ - Plan #1						Out of range
lone 1B-2H - HZ - Plan #1						Out of range
lone 1C-2H - HZ - Plan #1						Out of range
lone 1D-2H - HZ - Plan #1						Out of range
lone 1E-2H - HZ - Plan #1						Out of range
lone 1F-2H - HZ - Plan #1						Out of range
lone 2A-2H - HZ - Plan #1	200.0	200.0	58.7	58.0	89.901	CC, ES
lone 2A-2H - HZ - Plan #1	500.0	492.0	86.8	85.1	50.815	SF
lone 2B-2H - HZ - Plan #1	200.0	200.0	50.3	49.6	77.058	CC, ES
lone 2B-2H - HZ - Plan #1	500.0	497.8	66.1	64.4	38.847	SF
lone 2C-2H - HZ - Plan #1	200.0	200.0	39.1	38.5	59.934	CC, ES
lone 2C-2H - HZ - Plan #1	500.0	499.5	53.8	52.1	31.599	SF
lone 2D-2H - HZ - Plan #1	200.0	200.0	27.9	27.3	42.810	CC, ES
lone 2D-2H - HZ - Plan #1	500.0	499.5	42.7	41.0	25.116	SF
lone 2E-2H - HZ - Plan #1	200.0	200.0	19.6	18.9	29.967	CC, ES
lone 2E-2H - HZ - Plan #1	400.0	399.8	26.1	24.7	19.287	SF
lone 2F-2H - HZ - Plan #1	200.0	200.0	8.4	7.7	12.843	CC, ES
lone 2F-2H - HZ - Plan #1	11,943.3	12,112.0	416.7	283.7	3.133	SF
lone 41-2 - DD - DD						Out of range
lone 43-2 - Wellbore #1 - Wellbore #1						Out of range
lone 4-4-2 - Wellbore #1 - Plan #1	9,775.8	7,740.7	52.6	-23.1	0.695	Level 1, CC, ES, SF
lone 6-4-2 (Existing) - Existing - Existing						Out of range
lone 6-8-2 (Existing) - Existing - Existing						Out of range
lone 8-4-2 (Existing) - Existing - Existing						Out of range

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone #21-2 (Existing) - DD - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
1,200.0	1,188.5	1,189.5	1,189.5	3.3	2.0	50.37	-153.3	572.0	494.0	489.1	4.92	100.506		
1,300.0	1,286.7	1,287.7	1,287.7	3.7	2.2	52.08	-153.3	572.0	482.1	476.6	5.43	88.760		
1,400.0	1,384.9	1,385.9	1,385.9	4.1	2.4	53.87	-153.3	572.0	470.6	464.6	5.96	78.963		
1,500.0	1,483.1	1,484.1	1,484.1	4.4	2.6	55.75	-153.3	572.0	459.5	453.0	6.50	70.705		
1,600.0	1,581.3	1,582.3	1,582.3	4.8	2.7	57.72	-153.3	572.0	449.0	442.0	7.05	63.682		
1,700.0	1,679.5	1,680.5	1,680.5	5.2	2.9	59.78	-153.3	572.0	439.1	431.5	7.61	57.668		
1,800.0	1,777.7	1,778.7	1,778.7	5.6	3.1	61.92	-153.3	572.0	429.8	421.6	8.19	52.490		
1,900.0	1,875.9	1,876.9	1,876.9	5.9	3.2	64.16	-153.3	572.0	421.1	412.3	8.77	48.012		
2,000.0	1,974.1	1,975.1	1,975.1	6.3	3.4	66.48	-153.3	572.0	413.1	403.7	9.36	44.128		
2,100.0	2,072.3	2,073.3	2,073.3	6.7	3.6	68.89	-153.3	572.0	405.8	395.8	9.96	40.752		
2,200.0	2,170.5	2,171.5	2,171.5	7.1	3.8	71.38	-153.3	572.0	399.2	388.7	10.56	37.816		
2,300.0	2,268.7	2,269.7	2,269.7	7.4	3.9	73.95	-153.3	572.0	393.5	382.4	11.16	35.261		
2,400.0	2,366.9	2,367.9	2,367.9	7.8	4.1	76.58	-153.3	572.0	388.6	376.9	11.76	33.042		
2,500.0	2,465.1	2,466.1	2,466.1	8.2	4.3	79.27	-153.3	572.0	384.6	372.2	12.36	31.119		
2,600.0	2,563.3	2,564.3	2,564.3	8.6	4.4	82.01	-153.3	572.0	381.5	368.5	12.95	29.457		
2,700.0	2,661.5	2,662.5	2,662.5	8.9	4.6	84.79	-153.3	572.0	379.3	365.7	13.53	28.028		
2,800.0	2,759.7	2,760.7	2,760.7	9.3	4.8	87.59	-153.3	572.0	378.0	363.9	14.10	26.806		
2,885.6	2,843.7	2,844.7	2,844.7	9.6	4.9	90.00	-153.3	572.0	377.6	363.1	14.58	25.909 CC		
2,900.0	2,857.9	2,858.9	2,858.9	9.7	5.0	90.41	-153.3	572.0	377.6	363.0	14.65	25.770 ES		
3,000.0	2,956.1	2,957.1	2,957.1	10.1	5.1	93.22	-153.3	572.0	378.3	363.1	15.19	24.900		
3,100.0	3,054.3	3,055.3	3,055.3	10.4	5.3	96.02	-153.3	572.0	379.8	364.1	15.71	24.179		
3,200.0	3,152.5	3,153.5	3,153.5	10.8	5.5	98.78	-153.3	572.0	382.3	366.1	16.20	23.592		
3,300.0	3,250.7	3,251.7	3,251.7	11.2	5.6	101.51	-153.3	572.0	385.7	369.0	16.68	23.123		
3,400.0	3,348.9	3,349.9	3,349.9	11.6	5.8	104.19	-153.3	572.0	390.0	372.8	17.13	22.762		
3,500.0	3,447.1	3,448.1	3,448.1	12.0	6.0	106.80	-153.3	572.0	395.1	377.5	17.56	22.496		
3,600.0	3,545.3	3,546.3	3,546.3	12.3	6.2	109.34	-153.3	572.0	401.0	383.1	17.97	22.315		
3,700.0	3,643.5	3,644.5	3,644.5	12.7	6.3	111.81	-153.3	572.0	407.8	389.4	18.36	22.209		
3,800.0	3,741.7	3,742.7	3,742.7	13.1	6.5	114.20	-153.3	572.0	415.3	396.6	18.73	22.171 SF		
3,900.0	3,839.9	3,840.9	3,840.9	13.5	6.7	116.50	-153.3	572.0	423.5	404.4	19.08	22.192		
4,000.0	3,938.1	3,939.1	3,939.1	13.8	6.8	118.71	-153.3	572.0	432.4	413.0	19.42	22.265		
4,100.0	4,036.3	4,037.3	4,037.3	14.2	7.0	120.83	-153.3	572.0	441.9	422.2	19.74	22.383		
4,200.0	4,134.5	4,135.5	4,135.5	14.6	7.2	122.86	-153.3	572.0	452.0	432.0	20.05	22.542		
4,300.0	4,232.7	4,233.7	4,233.7	15.0	7.4	124.80	-153.3	572.0	462.7	442.3	20.35	22.735		
4,400.0	4,330.9	4,331.9	4,331.9	15.3	7.5	126.66	-153.3	572.0	473.8	453.2	20.64	22.958		
4,500.0	4,429.1	4,430.1	4,430.1	15.7	7.7	128.43	-153.3	572.0	485.5	464.6	20.92	23.206		
4,600.0	4,527.3	4,528.3	4,528.3	16.1	7.9	130.11	-153.3	572.0	497.6	476.4	21.19	23.477		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone #3 (Existing) - DD - DD													Offset Site Error:	0.0 ft
Survey Program: 100-Gyro													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	-89.96	0.0	-58.7	58.7					
100.0	100.0	97.1	97.1	0.2	0.1	-89.80	0.2	-59.4	59.4	59.2	0.22	264.378		
200.0	200.0	197.6	197.6	0.3	0.2	-89.27	0.8	-60.5	60.5	60.1	0.49	124.352		
300.0	300.0	297.8	297.8	0.5	0.2	-154.64	1.5	-61.0	62.6	61.9	0.75	83.598		
400.0	399.8	397.4	397.4	0.7	0.3	-156.33	1.7	-61.4	67.8	66.8	1.01	66.908		
500.0	499.5	497.0	497.0	0.9	0.4	-158.77	1.9	-62.1	76.5	75.2	1.28	59.728		
600.0	598.7	596.4	596.4	1.2	0.5	-160.99	2.7	-62.7	88.5	86.9	1.55	57.031 SF		
700.0	697.5	694.8	694.7	1.5	0.6	-163.24	3.5	-63.3	103.9	102.1	1.82	57.047		
800.0	795.7	793.1	793.0	1.9	0.7	-165.35	4.1	-64.0	122.4	120.3	2.09	58.580		
900.0	893.9	891.2	891.2	2.2	0.8	-166.89	5.0	-64.7	141.3	139.0	2.36	59.956		
1,000.0	992.1	989.6	989.6	2.6	0.9	-168.11	5.7	-65.4	160.2	157.6	2.62	61.084		
1,100.0	1,090.3	1,087.8	1,087.7	2.9	0.9	-169.04	6.6	-65.9	179.1	176.2	2.89	62.005		
1,200.0	1,188.5	1,187.4	1,187.4	3.3	1.0	-170.01	6.9	-66.0	197.7	194.5	3.15	62.730		
1,300.0	1,286.7	1,285.7	1,285.7	3.7	1.1	-170.89	7.0	-65.5	215.8	212.4	3.41	63.256		
1,400.0	1,384.9	1,382.7	1,382.6	4.1	1.2	-171.42	7.8	-65.5	234.3	230.7	3.67	63.780		
1,500.0	1,483.1	1,480.4	1,480.4	4.4	1.3	-171.91	8.3	-65.9	253.3	249.4	3.94	64.355		
1,600.0	1,581.3	1,578.8	1,578.7	4.8	1.4	-172.35	8.7	-66.4	272.3	268.1	4.20	64.862		
1,700.0	1,679.5	1,677.1	1,677.0	5.2	1.5	-172.70	9.4	-66.8	291.2	286.8	4.46	65.290		
1,800.0	1,777.7	1,775.1	1,775.0	5.6	1.5	-173.01	10.0	-67.1	310.1	305.4	4.72	65.677		
1,900.0	1,875.9	1,871.8	1,871.7	5.9	1.6	-173.29	10.5	-67.7	329.3	324.3	4.98	66.084		
2,000.0	1,974.1	1,970.2	1,970.1	6.3	1.7	-173.55	10.9	-68.6	348.8	343.5	5.25	66.494		
2,100.0	2,072.3	2,068.3	2,068.2	6.7	1.8	-173.76	11.4	-69.3	368.1	362.6	5.51	66.831		
2,200.0	2,170.5	2,165.4	2,165.3	7.1	1.9	-173.92	12.1	-70.2	387.5	381.8	5.77	67.170		
2,300.0	2,268.7	2,262.7	2,262.6	7.4	2.0	-174.07	12.7	-71.4	407.2	401.2	6.03	67.518		
2,400.0	2,366.9	2,360.3	2,360.2	7.8	2.1	-174.23	13.1	-72.6	427.1	420.8	6.29	67.864		
2,500.0	2,465.1	2,457.6	2,457.5	8.2	2.1	-174.37	13.4	-73.9	447.0	440.5	6.55	68.201		
2,600.0	2,563.3	2,556.2	2,556.1	8.6	2.2	-174.52	13.6	-75.3	467.1	460.2	6.82	68.518		
2,700.0	2,661.5	2,653.9	2,653.8	8.9	2.3	-174.62	14.1	-76.5	486.9	479.8	7.08	68.782		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone #3 (Existing) - DD - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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	-89.96	0.0	-58.7	58.7					
100.0	100.0	98.0	98.0	0.2	0.1	-89.96	0.0	-58.7	58.7	58.4	0.30	197.433		
200.0	200.0	198.0	198.0	0.3	0.3	-89.96	0.0	-58.7	58.7	58.0	0.65	90.873 CC, ES		
300.0	300.0	298.0	298.0	0.5	0.5	-156.03	0.0	-58.7	60.3	59.3	1.00	60.569		
400.0	399.8	397.8	397.8	0.7	0.7	-157.86	0.0	-58.7	65.1	63.7	1.35	48.371		
500.0	499.5	497.5	497.5	0.9	0.8	-160.38	0.0	-58.7	73.2	71.5	1.70	43.163		
600.0	598.7	596.7	596.7	1.2	1.0	-163.07	0.0	-58.7	84.8	82.8	2.05	41.448 SF		
700.0	697.5	695.5	695.5	1.5	1.2	-165.61	0.0	-58.7	99.9	97.5	2.39	41.755		
800.0	795.7	793.7	793.7	1.9	1.4	-167.81	0.0	-58.7	118.0	115.2	2.74	43.094		
900.0	893.9	891.9	891.9	2.2	1.5	-169.49	0.0	-58.7	136.5	133.4	3.08	44.264		
1,000.0	992.1	990.1	990.1	2.6	1.7	-170.76	0.0	-58.7	155.1	151.7	3.43	45.237		
1,100.0	1,090.3	1,088.3	1,088.3	2.9	1.9	-171.76	0.0	-58.7	173.8	170.1	3.77	46.055		
1,200.0	1,188.5	1,186.5	1,186.5	3.3	2.0	-172.56	0.0	-58.7	192.6	188.4	4.12	46.751		
1,300.0	1,286.7	1,284.7	1,284.7	3.7	2.2	-173.23	0.0	-58.7	211.3	206.9	4.46	47.348		
1,400.0	1,384.9	1,382.9	1,382.9	4.1	2.4	-173.78	0.0	-58.7	230.1	225.3	4.81	47.866		
1,500.0	1,483.1	1,481.1	1,481.1	4.4	2.6	-174.25	0.0	-58.7	248.9	243.7	5.15	48.319		
1,600.0	1,581.3	1,579.3	1,579.3	4.8	2.7	-174.66	0.0	-58.7	267.7	262.2	5.50	48.718		
1,700.0	1,679.5	1,677.5	1,677.5	5.2	2.9	-175.01	0.0	-58.7	286.5	280.7	5.84	49.072		
1,800.0	1,777.7	1,775.7	1,775.7	5.6	3.1	-175.32	0.0	-58.7	305.4	299.2	6.18	49.388		
1,900.0	1,875.9	1,873.9	1,873.9	5.9	3.2	-175.59	0.0	-58.7	324.2	317.7	6.53	49.671		
2,000.0	1,974.1	1,972.1	1,972.1	6.3	3.4	-175.83	0.0	-58.7	343.1	336.2	6.87	49.927		
2,100.0	2,072.3	2,070.3	2,070.3	6.7	3.6	-176.05	0.0	-58.7	361.9	354.7	7.22	50.160		
2,200.0	2,170.5	2,168.5	2,168.5	7.1	3.8	-176.25	0.0	-58.7	380.8	373.2	7.56	50.371		
2,300.0	2,268.7	2,266.7	2,266.7	7.4	3.9	-176.42	0.0	-58.7	399.6	391.7	7.90	50.564		
2,400.0	2,366.9	2,364.9	2,364.9	7.8	4.1	-176.59	0.0	-58.7	418.5	410.2	8.25	50.742		
2,500.0	2,465.1	2,463.1	2,463.1	8.2	4.3	-176.73	0.0	-58.7	437.3	428.8	8.59	50.905		
2,600.0	2,563.3	2,561.3	2,561.3	8.6	4.4	-176.87	0.0	-58.7	456.2	447.3	8.94	51.056		
2,700.0	2,661.5	2,659.5	2,659.5	8.9	4.6	-176.99	0.0	-58.7	475.1	465.8	9.28	51.196		
2,800.0	2,759.7	2,757.7	2,757.7	9.3	4.8	-177.11	0.0	-58.7	494.0	484.3	9.62	51.326		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone 2A-2H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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	-89.98	0.0	-58.7	58.7					
100.0	100.0	100.0	100.0	0.2	0.2	-89.98	0.0	-58.7	58.7	58.4	0.30	193.235		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-58.7	58.7	58.0	0.65	89.901 CC, ES		
300.0	300.0	298.1	298.1	0.5	0.5	-155.34	0.7	-60.2	61.8	60.8	1.00	61.853		
400.0	399.8	395.6	395.4	0.7	0.7	-155.27	2.9	-64.7	71.2	69.9	1.35	52.745		
500.0	499.5	492.0	491.5	0.9	0.9	-155.17	6.3	-72.1	86.8	85.1	1.71	50.815 SF		
600.0	598.7	586.7	585.5	1.2	1.2	-155.04	11.1	-82.3	108.4	106.3	2.08	52.242		
700.0	697.5	679.2	677.0	1.5	1.4	-154.88	17.0	-94.9	136.0	133.5	2.46	55.379		
800.0	795.7	772.8	769.2	1.9	1.8	-154.92	23.9	-109.6	168.2	165.3	2.85	58.966		
900.0	893.9	867.4	862.2	2.2	2.1	-155.06	31.0	-124.6	200.7	197.5	3.26	61.589		
1,000.0	992.1	961.9	955.3	2.6	2.4	-155.16	38.0	-139.6	233.3	229.6	3.67	63.566		
1,100.0	1,090.3	1,056.4	1,048.4	2.9	2.7	-155.24	45.0	-154.6	265.9	261.8	4.08	65.103		
1,200.0	1,188.5	1,151.0	1,141.5	3.3	3.0	-155.30	52.1	-169.5	298.5	294.0	4.50	66.331		
1,300.0	1,286.7	1,245.5	1,234.6	3.7	3.4	-155.34	59.1	-184.5	331.0	326.1	4.92	67.332		
1,400.0	1,384.9	1,340.1	1,327.7	4.1	3.7	-155.38	66.1	-199.5	363.6	358.3	5.33	68.162		
1,500.0	1,483.1	1,434.6	1,420.8	4.4	4.0	-155.42	73.2	-214.5	396.2	390.4	5.75	68.863		
1,600.0	1,581.3	1,529.2	1,513.8	4.8	4.4	-155.45	80.2	-229.4	428.8	422.6	6.17	69.460		
1,700.0	1,679.5	1,623.7	1,606.9	5.2	4.7	-155.47	87.2	-244.4	461.3	454.7	6.59	69.976		
1,800.0	1,777.7	1,718.3	1,700.0	5.6	5.0	-155.49	94.2	-259.4	493.9	486.9	7.01	70.426		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone 2B-2H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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	-89.96	0.0	-50.3	50.3					
100.0	100.0	100.0	100.0	0.2	0.2	-89.96	0.0	-50.3	50.3	0.30	165.630			
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-50.3	50.3	0.65	77.058 CC, ES			
300.0	300.0	300.0	300.0	0.5	0.5	-156.14	0.0	-50.3	51.9	1.00	51.783			
400.0	399.8	399.8	399.8	0.7	0.7	-158.24	0.0	-50.3	56.7	1.35	41.935			
500.0	499.5	497.8	497.8	0.9	0.8	-159.98	1.1	-51.6	66.1	1.70	38.847 SF			
600.0	598.7	594.8	594.7	1.2	1.0	-160.36	4.1	-55.5	81.3	2.06	39.487			
700.0	697.5	690.4	689.9	1.5	1.2	-159.91	9.1	-61.8	102.1	2.43	42.032			
800.0	795.7	785.6	784.5	1.9	1.5	-159.19	15.9	-70.4	127.7	2.82	45.331			
900.0	893.9	882.1	880.2	2.2	1.7	-158.67	23.0	-79.5	154.1	3.22	47.823			
1,000.0	992.1	978.5	976.0	2.6	1.9	-158.31	30.2	-88.5	180.4	3.63	49.690			
1,100.0	1,090.3	1,075.0	1,071.8	2.9	2.2	-158.04	37.3	-97.6	206.8	4.04	51.131			
1,200.0	1,188.5	1,171.4	1,167.5	3.3	2.4	-157.82	44.5	-106.7	233.1	4.46	52.273			
1,300.0	1,286.7	1,267.9	1,263.3	3.7	2.7	-157.66	51.7	-115.7	259.5	4.88	53.199			
1,400.0	1,384.9	1,364.4	1,359.1	4.1	2.9	-157.52	58.8	-124.8	285.8	5.30	53.962			
1,500.0	1,483.1	1,460.8	1,454.8	4.4	3.2	-157.40	66.0	-133.9	312.2	5.72	54.603			
1,600.0	1,581.3	1,557.3	1,550.6	4.8	3.5	-157.31	73.1	-142.9	338.6	6.14	55.147			
1,700.0	1,679.5	1,653.7	1,646.4	5.2	3.7	-157.23	80.3	-152.0	364.9	6.56	55.614			
1,800.0	1,777.7	1,750.2	1,742.1	5.6	4.0	-157.15	87.4	-161.0	391.3	6.98	56.020			
1,900.0	1,875.9	1,846.7	1,837.9	5.9	4.2	-157.09	94.6	-170.1	417.6	7.41	56.375			
2,000.0	1,974.1	1,943.1	1,933.7	6.3	4.5	-157.04	101.7	-179.2	444.0	7.83	56.689			
2,100.0	2,072.3	2,039.6	2,029.4	6.7	4.8	-156.99	108.9	-188.2	470.4	8.26	56.968			
2,200.0	2,170.5	2,136.1	2,125.2	7.1	5.0	-156.94	116.0	-197.3	496.7	8.68	57.218			

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Ione 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (Ione)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Ione 2G-2H	<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 NWNE S2-T2N-R66W (Ione) - Ione 2C-2H - HZ - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-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	0.0	0.0	0.0	0.0	-89.96	0.0	-39.1	39.1					
100.0	100.0	100.0	100.0	0.2	0.2	-89.96	0.0	-39.1	39.1	38.8	0.30	128.823		
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-39.1	39.1	38.5	0.65	59.934	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-156.36	0.0	-39.1	40.7	39.7	1.00	40.630		
400.0	399.8	399.8	399.8	0.7	0.7	-158.97	0.0	-39.1	45.6	44.2	1.35	33.690		
500.0	499.5	499.5	499.5	0.9	0.8	-162.25	0.0	-39.1	53.8	52.1	1.70	31.599	SF	
600.0	598.7	598.7	598.7	1.2	1.0	-165.44	0.0	-39.1	65.5	63.5	2.05	31.962		
700.0	697.5	697.5	697.5	1.5	1.2	-168.17	0.0	-39.1	80.7	78.4	2.39	33.752		
800.0	795.7	795.7	795.7	1.9	1.4	-170.34	0.0	-39.1	99.0	96.3	2.74	36.193		
900.0	893.9	893.9	893.9	2.2	1.5	-171.89	0.0	-39.1	117.7	114.6	3.08	38.202		
1,000.0	992.1	992.1	992.1	2.6	1.7	-173.01	0.0	-39.1	136.4	133.0	3.42	39.830		
1,100.0	1,090.3	1,090.3	1,090.3	2.9	1.9	-173.85	0.0	-39.1	155.2	151.4	3.77	41.173		
1,200.0	1,188.5	1,188.5	1,188.5	3.3	2.1	-174.52	0.0	-39.1	174.0	169.9	4.11	42.298		
1,300.0	1,286.7	1,286.0	1,286.0	3.7	2.2	-174.67	1.2	-39.7	193.0	188.5	4.46	43.276		
1,400.0	1,384.9	1,383.1	1,383.0	4.1	2.4	-173.89	5.2	-41.8	212.4	207.6	4.82	44.114		
1,500.0	1,483.1	1,479.7	1,479.3	4.4	2.6	-172.44	12.2	-45.3	232.4	227.2	5.19	44.792		
1,600.0	1,581.3	1,577.2	1,576.3	4.8	2.8	-170.77	20.9	-49.7	252.9	247.4	5.58	45.305		
1,700.0	1,679.5	1,674.9	1,673.4	5.2	3.0	-169.34	29.6	-54.2	273.6	267.6	5.99	45.699		
1,800.0	1,777.7	1,772.5	1,770.6	5.6	3.2	-168.12	38.4	-58.6	294.5	288.1	6.40	46.006		
1,900.0	1,875.9	1,870.1	1,867.7	5.9	3.4	-167.05	47.1	-63.0	315.4	308.6	6.82	46.246		
2,000.0	1,974.1	1,967.7	1,964.8	6.3	3.6	-166.12	55.8	-67.5	336.4	329.2	7.25	46.436		
2,100.0	2,072.3	2,065.4	2,062.0	6.7	3.8	-165.30	64.6	-71.9	357.6	349.9	7.67	46.589		
2,200.0	2,170.5	2,163.0	2,159.1	7.1	4.0	-164.57	73.3	-76.4	378.7	370.6	8.11	46.713		
2,300.0	2,268.7	2,260.6	2,256.2	7.4	4.3	-163.92	82.1	-80.8	399.9	391.4	8.54	46.815		
2,400.0	2,366.9	2,358.2	2,353.4	7.8	4.5	-163.33	90.8	-85.2	421.2	412.2	8.98	46.899		
2,500.0	2,465.1	2,455.9	2,450.5	8.2	4.7	-162.80	99.5	-89.7	442.5	433.1	9.42	46.969		
2,600.0	2,563.3	2,553.5	2,547.6	8.6	5.0	-162.32	108.3	-94.1	463.9	454.0	9.86	47.028		
2,700.0	2,661.5	2,651.1	2,644.8	8.9	5.2	-161.88	117.0	-98.5	485.2	474.9	10.31	47.078		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone 2D-2H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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	-89.98	0.0	-27.9	27.9					
100.0	100.0	100.0	100.0	0.2	0.2	-89.98	0.0	-27.9	27.9	27.6	0.30	92.017		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-27.9	27.9	27.3	0.65	42.810 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-156.77	0.0	-27.9	29.5	28.5	1.00	29.479		
400.0	399.8	399.8	399.8	0.7	0.7	-160.17	0.0	-27.9	34.4	33.1	1.35	25.454		
500.0	499.5	499.5	499.5	0.9	0.8	-164.10	0.0	-27.9	42.7	41.0	1.70	25.116 SF		
600.0	598.7	598.7	598.7	1.2	1.0	-167.55	0.0	-27.9	54.5	52.5	2.05	26.655		
700.0	697.5	697.5	697.5	1.5	1.2	-170.26	0.0	-27.9	69.9	67.5	2.39	29.279		
800.0	795.7	795.7	795.7	1.9	1.4	-172.28	0.0	-27.9	88.3	85.5	2.73	32.337		
900.0	893.9	895.3	895.3	2.2	1.5	-172.86	1.6	-27.8	106.4	103.3	3.08	34.550		
1,000.0	992.1	995.3	995.2	2.6	1.7	-171.76	6.6	-27.4	123.3	119.8	3.44	35.788		
1,100.0	1,090.3	1,094.5	1,094.1	2.9	1.9	-169.86	14.4	-26.7	139.3	135.4	3.83	36.392		
1,200.0	1,188.5	1,193.1	1,192.4	3.3	2.1	-168.28	22.3	-26.1	155.3	151.1	4.22	36.808		
1,300.0	1,286.7	1,291.8	1,290.7	3.7	2.3	-167.00	30.2	-25.4	171.4	166.8	4.62	37.105		
1,400.0	1,384.9	1,390.4	1,389.0	4.1	2.5	-165.94	38.1	-24.7	187.6	182.6	5.03	37.318		
1,500.0	1,483.1	1,489.0	1,487.3	4.4	2.7	-165.05	46.0	-24.1	203.8	198.4	5.44	37.472		
1,600.0	1,581.3	1,587.7	1,585.6	4.8	2.9	-164.29	54.0	-23.4	220.1	214.2	5.86	37.583		
1,700.0	1,679.5	1,686.3	1,683.9	5.2	3.1	-163.63	61.9	-22.7	236.4	230.1	6.28	37.663		
1,800.0	1,777.7	1,784.9	1,782.2	5.6	3.3	-163.06	69.8	-22.1	252.8	246.1	6.70	37.721		
1,900.0	1,875.9	1,883.5	1,880.5	5.9	3.6	-162.56	77.7	-21.4	269.1	262.0	7.13	37.762		
2,000.0	1,974.1	1,982.2	1,978.8	6.3	3.8	-162.12	85.6	-20.7	285.5	277.9	7.55	37.791		
2,100.0	2,072.3	2,080.8	2,077.1	6.7	4.0	-161.72	93.5	-20.1	301.9	293.9	7.98	37.810		
2,200.0	2,170.5	2,179.4	2,175.4	7.1	4.2	-161.37	101.4	-19.4	318.3	309.9	8.42	37.823		
2,300.0	2,268.7	2,278.0	2,273.7	7.4	4.4	-161.05	109.4	-18.7	334.7	325.9	8.85	37.830		
2,400.0	2,366.9	2,376.7	2,372.0	7.8	4.6	-160.76	117.3	-18.1	351.1	341.9	9.28	37.833		
2,500.0	2,465.1	2,475.3	2,470.4	8.2	4.9	-160.49	125.2	-17.4	367.6	357.9	9.72	37.833		
2,600.0	2,563.3	2,573.9	2,568.7	8.6	5.1	-160.25	133.1	-16.7	384.0	373.9	10.15	37.831		
2,700.0	2,661.5	2,672.5	2,667.0	8.9	5.3	-160.03	141.0	-16.1	400.5	389.9	10.59	37.827		
2,800.0	2,759.7	2,771.2	2,765.3	9.3	5.5	-159.83	148.9	-15.4	416.9	405.9	11.02	37.821		
2,900.0	2,857.9	2,869.8	2,863.6	9.7	5.7	-159.64	156.9	-14.7	433.4	421.9	11.46	37.815		
3,000.0	2,956.1	2,968.4	2,961.9	10.1	5.9	-159.46	164.8	-14.1	449.8	437.9	11.90	37.807		
3,100.0	3,054.3	3,067.1	3,060.2	10.4	6.2	-159.30	172.7	-13.4	466.3	454.0	12.34	37.800		
3,200.0	3,152.5	3,165.7	3,158.5	10.8	6.4	-159.15	180.6	-12.8	482.8	470.0	12.77	37.791		
3,300.0	3,250.7	3,264.3	3,256.8	11.2	6.6	-159.01	188.5	-12.1	499.2	486.0	13.21	37.783		



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone 2E-2H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-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	100.0	100.0	0.2	0.2	-89.95	0.0	-19.6	19.6	19.3	0.30	64.412		
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-19.6	19.6	18.9	0.65	29.967 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-157.30	0.0	-19.6	21.2	20.2	1.00	21.117		
400.0	399.8	399.8	399.8	0.7	0.7	-161.71	0.0	-19.6	26.1	24.7	1.35	19.287 SF		
500.0	499.5	499.5	499.5	0.9	0.8	-166.22	0.0	-19.6	34.5	32.8	1.70	20.276		
600.0	598.7	598.7	598.7	1.2	1.0	-169.77	0.0	-19.6	46.4	44.3	2.04	22.699		
700.0	697.5	699.2	699.1	1.5	1.2	-171.38	1.4	-18.5	60.5	58.1	2.39	25.316		
800.0	795.7	800.1	799.9	1.9	1.4	-171.12	5.6	-15.3	74.7	71.9	2.75	27.205		
900.0	893.9	901.5	900.9	2.2	1.6	-169.56	12.6	-9.9	86.5	83.3	3.12	27.689		
1,000.0	992.1	1,000.9	999.8	2.6	1.8	-167.81	20.7	-3.7	97.1	93.6	3.51	27.650		
1,100.0	1,090.3	1,100.3	1,098.7	2.9	2.0	-166.40	28.9	2.5	107.7	103.8	3.91	27.565		
1,200.0	1,188.5	1,199.7	1,197.5	3.3	2.3	-165.25	37.0	8.8	118.5	114.2	4.32	27.455		
1,300.0	1,286.7	1,299.1	1,296.4	3.7	2.5	-164.29	45.1	15.0	129.3	124.5	4.73	27.332		
1,400.0	1,384.9	1,398.5	1,395.3	4.1	2.7	-163.48	53.3	21.3	140.1	134.9	5.15	27.206		
1,500.0	1,483.1	1,497.9	1,494.1	4.4	3.0	-162.79	61.4	27.5	150.9	145.3	5.57	27.081		
1,600.0	1,581.3	1,597.3	1,593.0	4.8	3.2	-162.19	69.5	33.7	161.7	155.7	6.00	26.960		
1,700.0	1,679.5	1,696.7	1,691.9	5.2	3.4	-161.66	77.7	40.0	172.6	166.2	6.43	26.844		
1,800.0	1,777.7	1,796.1	1,790.7	5.6	3.7	-161.20	85.8	46.2	183.5	176.6	6.86	26.735		
1,900.0	1,875.9	1,895.5	1,889.6	5.9	3.9	-160.78	94.0	52.4	194.4	187.1	7.30	26.632		
2,000.0	1,974.1	1,994.9	1,988.5	6.3	4.2	-160.42	102.1	58.7	205.3	197.5	7.74	26.535		
2,100.0	2,072.3	2,094.2	2,087.3	6.7	4.4	-160.09	110.2	64.9	216.2	208.0	8.17	26.444		
2,200.0	2,170.5	2,193.6	2,186.2	7.1	4.7	-159.79	118.4	71.1	227.1	218.5	8.61	26.359		
2,300.0	2,268.7	2,293.0	2,285.1	7.4	4.9	-159.51	126.5	77.4	238.0	228.9	9.06	26.279		
2,400.0	2,366.9	2,392.4	2,383.9	7.8	5.2	-159.27	134.6	83.6	248.9	239.4	9.50	26.205		
2,500.0	2,465.1	2,491.8	2,482.8	8.2	5.4	-159.04	142.8	89.8	259.8	249.9	9.94	26.135		
2,600.0	2,563.3	2,591.2	2,581.7	8.6	5.6	-158.83	150.9	96.1	270.7	260.4	10.39	26.069		
2,700.0	2,661.5	2,690.6	2,680.5	8.9	5.9	-158.64	159.1	102.3	281.7	270.8	10.83	26.007		
2,800.0	2,759.7	2,790.0	2,779.4	9.3	6.1	-158.46	167.2	108.5	292.6	281.3	11.28	25.949		
2,900.0	2,857.9	2,889.4	2,878.3	9.7	6.4	-158.29	175.3	114.8	303.5	291.8	11.72	25.894		
3,000.0	2,956.1	2,988.8	2,977.1	10.1	6.6	-158.14	183.5	121.0	314.5	302.3	12.17	25.842		
3,100.0	3,054.3	3,088.2	3,076.0	10.4	6.9	-158.00	191.6	127.2	325.4	312.8	12.62	25.793		
3,200.0	3,152.5	3,187.6	3,174.9	10.8	7.1	-157.86	199.7	133.5	336.4	323.3	13.06	25.747		
3,300.0	3,250.7	3,287.0	3,273.7	11.2	7.4	-157.74	207.9	139.7	347.3	333.8	13.51	25.703		
3,400.0	3,348.9	3,386.4	3,372.6	11.6	7.6	-157.62	216.0	145.9	358.3	344.3	13.96	25.662		
3,500.0	3,447.1	3,485.8	3,471.5	12.0	7.9	-157.51	224.1	152.2	369.2	354.8	14.41	25.622		
3,600.0	3,545.3	3,585.2	3,570.3	12.3	8.1	-157.40	232.3	158.4	380.1	365.3	14.86	25.585		
3,700.0	3,643.5	3,684.6	3,669.2	12.7	8.4	-157.30	240.4	164.7	391.1	375.8	15.31	25.549		
3,800.0	3,741.7	3,784.0	3,768.1	13.1	8.6	-157.21	248.6	170.9	402.0	386.3	15.76	25.516		
3,900.0	3,839.9	3,883.4	3,866.9	13.5	8.9	-157.12	256.7	177.1	413.0	396.8	16.21	25.483		
4,000.0	3,938.1	3,982.8	3,965.8	13.8	9.1	-157.04	264.8	183.4	424.0	407.3	16.66	25.452		
4,100.0	4,036.3	4,082.2	4,064.7	14.2	9.4	-156.96	273.0	189.6	434.9	417.8	17.11	25.423		
4,200.0	4,134.5	4,181.6	4,163.5	14.6	9.6	-156.88	281.1	195.8	445.9	428.3	17.56	25.395		
4,300.0	4,232.7	4,281.0	4,262.4	15.0	9.9	-156.81	289.2	202.1	456.8	438.8	18.01	25.368		
4,400.0	4,330.9	4,380.4	4,361.3	15.3	10.1	-156.74	297.4	208.3	467.8	449.3	18.46	25.342		
4,500.0	4,429.1	4,479.8	4,460.1	15.7	10.4	-156.68	305.5	214.5	478.7	459.8	18.91	25.317		
4,600.0	4,527.3	4,579.2	4,559.0	16.1	10.6	-156.61	313.6	220.8	489.7	470.3	19.36	25.294		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone 2F-2H - HZ - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-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	0.2	0.2	-89.94	0.0	-8.4	8.4	8.1	0.30	27.605		
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.7	0.65	12.843	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-159.50	0.0	-8.4	10.0	9.0	1.00	9.977		
400.0	399.8	399.8	399.8	0.7	0.7	-166.49	0.0	-8.4	15.0	13.7	1.35	11.116		
500.0	499.5	500.2	500.2	0.9	0.9	-170.16	0.9	-6.9	21.9	20.2	1.70	12.899		
600.0	598.7	600.8	600.6	1.2	1.0	-171.15	3.8	-2.4	28.9	26.9	2.05	14.131		
700.0	697.5	701.7	701.1	1.5	1.3	-171.00	8.5	5.0	36.0	33.6	2.40	15.015		
800.0	795.7	802.8	801.4	1.9	1.5	-170.17	15.1	15.5	42.7	39.9	2.77	15.441		
900.0	893.9	902.8	900.4	2.2	1.8	-168.85	22.8	27.7	47.7	44.5	3.14	15.167		
1,000.0	992.1	1,002.7	999.3	2.6	2.1	-167.77	30.5	39.8	52.6	49.1	3.53	14.921		
1,100.0	1,090.3	1,102.5	1,098.1	2.9	2.3	-166.88	38.2	52.0	57.6	53.7	3.92	14.704		
1,200.0	1,188.5	1,202.4	1,196.9	3.3	2.6	-166.13	45.9	64.2	62.6	58.3	4.31	14.511		
1,300.0	1,286.7	1,302.3	1,295.7	3.7	2.9	-165.49	53.6	76.4	67.6	62.9	4.71	14.339		
1,400.0	1,384.9	1,402.2	1,394.6	4.1	3.2	-164.94	61.3	88.5	72.6	67.5	5.12	14.185		
1,500.0	1,483.1	1,502.0	1,493.4	4.4	3.5	-164.46	69.0	100.7	77.6	72.1	5.53	14.046		
1,600.0	1,581.3	1,601.9	1,592.2	4.8	3.8	-164.04	76.7	112.9	82.6	76.7	5.94	13.921		
1,700.0	1,679.5	1,701.8	1,691.1	5.2	4.1	-163.66	84.4	125.0	87.7	81.3	6.35	13.807		
1,800.0	1,777.7	1,801.7	1,789.9	5.6	4.4	-163.33	92.1	137.2	92.7	85.9	6.76	13.704		
1,900.0	1,875.9	1,901.5	1,888.7	5.9	4.7	-163.03	99.8	149.4	97.7	90.5	7.18	13.610		
2,000.0	1,974.1	2,001.4	1,987.6	6.3	5.0	-162.76	107.5	161.5	102.7	95.2	7.60	13.524		
2,100.0	2,072.3	2,101.3	2,086.4	6.7	5.3	-162.52	115.2	173.7	107.8	99.8	8.02	13.445		
2,200.0	2,170.5	2,201.1	2,185.2	7.1	5.6	-162.30	122.8	185.9	112.8	104.4	8.44	13.372		
2,300.0	2,268.7	2,301.0	2,284.0	7.4	6.0	-162.09	130.5	198.1	117.9	109.0	8.86	13.305		
2,400.0	2,366.9	2,400.9	2,382.9	7.8	6.3	-161.91	138.2	210.2	122.9	113.6	9.28	13.243		
2,500.0	2,465.1	2,500.8	2,481.7	8.2	6.6	-161.73	145.9	222.4	127.9	118.2	9.70	13.185		
2,600.0	2,563.3	2,600.6	2,580.5	8.6	6.9	-161.57	153.6	234.6	133.0	122.8	10.13	13.131		
2,700.0	2,661.5	2,700.5	2,679.4	8.9	7.2	-161.43	161.3	246.7	138.0	127.5	10.55	13.081		
2,800.0	2,759.7	2,800.4	2,778.2	9.3	7.5	-161.29	169.0	258.9	143.0	132.1	10.97	13.034		
2,900.0	2,857.9	2,900.2	2,877.0	9.7	7.8	-161.16	176.7	271.1	148.1	136.7	11.40	12.991		
3,000.0	2,956.1	3,000.1	2,975.8	10.1	8.1	-161.04	184.4	283.3	153.1	141.3	11.83	12.949		
3,100.0	3,054.3	3,100.0	3,074.7	10.4	8.4	-160.93	192.1	295.4	158.2	145.9	12.25	12.911		
3,200.0	3,152.5	3,199.9	3,173.5	10.8	8.7	-160.83	199.8	307.6	163.2	150.5	12.68	12.874		
3,300.0	3,250.7	3,299.7	3,272.3	11.2	9.0	-160.73	207.5	319.8	168.3	155.2	13.10	12.840		
3,400.0	3,348.9	3,399.6	3,371.2	11.6	9.3	-160.64	215.2	331.9	173.3	159.8	13.53	12.807		
3,500.0	3,447.1	3,499.5	3,470.0	12.0	9.6	-160.55	222.9	344.1	178.4	164.4	13.96	12.777		
3,600.0	3,545.3	3,599.4	3,568.8	12.3	9.9	-160.47	230.6	356.3	183.4	169.0	14.39	12.748		
3,700.0	3,643.5	3,699.2	3,667.6	12.7	10.2	-160.39	238.3	368.4	188.4	173.6	14.82	12.720		
3,800.0	3,741.7	3,799.1	3,766.5	13.1	10.5	-160.31	246.0	380.6	193.5	178.3	15.24	12.694		
3,900.0	3,839.9	3,899.0	3,865.3	13.5	10.8	-160.24	253.7	392.8	198.5	182.9	15.67	12.669		
4,000.0	3,938.1	3,998.8	3,964.1	13.8	11.2	-160.18	261.4	405.0	203.6	187.5	16.10	12.645		
4,100.0	4,036.3	4,098.7	4,063.0	14.2	11.5	-160.11	269.1	417.1	208.6	192.1	16.53	12.623		
4,200.0	4,134.5	4,198.6	4,161.8	14.6	11.8	-160.05	276.7	429.3	213.7	196.7	16.96	12.601		
4,300.0	4,232.7	4,298.5	4,260.6	15.0	12.1	-159.99	284.4	441.5	218.7	201.3	17.39	12.580		
4,400.0	4,330.9	4,398.3	4,359.4	15.3	12.4	-159.94	292.1	453.6	223.8	206.0	17.82	12.560		
4,500.0	4,429.1	4,498.2	4,458.3	15.7	12.7	-159.89	299.8	465.8	228.8	210.6	18.25	12.542		
4,600.0	4,527.3	4,598.1	4,557.1	16.1	13.0	-159.84	307.5	478.0	233.9	215.2	18.68	12.523		
4,700.0	4,625.5	4,697.9	4,655.9	16.5	13.3	-159.79	315.2	490.1	238.9	219.8	19.10	12.506		
4,800.0	4,723.7	4,797.8	4,754.8	16.9	13.6	-159.74	322.9	502.3	244.0	224.4	19.53	12.489		
4,900.0	4,821.9	4,897.7	4,853.6	17.2	13.9	-159.70	330.6	514.5	249.0	229.1	19.96	12.473		
5,000.0	4,920.1	4,997.6	4,952.4	17.6	14.2	-159.65	338.3	526.7	254.1	233.7	20.39	12.458		
5,100.0	5,018.3	5,097.4	5,051.2	18.0	14.5	-159.61	346.0	538.8	259.1	238.3	20.82	12.443		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone 2F-2H - HZ - Plan #1													Offset Site Error:	0.0 ft
Survey Program: O-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,116.5	5,197.3	5,150.1	18.4	14.8	-159.57	353.7	551.0	264.2	242.9	21.25	12.429		
5,300.0	5,214.6	5,297.2	5,248.9	18.7	15.1	-159.54	361.4	563.2	269.2	247.5	21.68	12.415		
5,400.0	5,312.8	5,397.1	5,347.7	19.1	15.4	-159.50	369.1	575.3	274.3	252.2	22.12	12.402		
5,500.0	5,411.0	5,496.9	5,446.6	19.5	15.8	-159.46	376.8	587.5	279.3	256.8	22.55	12.389		
5,600.0	5,509.2	5,596.8	5,545.4	19.9	16.1	-159.43	384.5	599.7	284.4	261.4	22.98	12.377		
5,700.0	5,607.4	5,696.7	5,644.2	20.2	16.4	-159.40	392.2	611.8	289.4	266.0	23.41	12.365		
5,800.0	5,705.6	5,796.5	5,743.0	20.6	16.7	-159.36	399.9	624.0	294.5	270.6	23.84	12.354		
5,900.0	5,803.8	5,896.4	5,841.9	21.0	17.0	-159.33	407.6	636.2	299.5	275.3	24.27	12.342		
6,000.0	5,902.0	5,996.3	5,940.7	21.4	17.3	-159.30	415.3	648.4	304.6	279.9	24.70	12.332		
6,100.0	6,000.2	6,096.2	6,039.5	21.8	17.6	-159.28	423.0	660.5	309.6	284.5	25.13	12.321		
6,200.0	6,098.4	6,196.0	6,138.4	22.1	17.9	-159.25	430.6	672.7	314.7	289.1	25.56	12.311		
6,300.0	6,196.6	6,295.9	6,237.2	22.5	18.2	-159.22	438.3	684.9	319.7	293.7	25.99	12.301		
6,400.0	6,294.8	6,395.8	6,336.0	22.9	18.5	-159.20	446.0	697.0	324.8	298.4	26.42	12.292		
6,500.0	6,393.0	6,495.6	6,434.8	23.3	18.8	-159.17	453.7	709.2	329.8	303.0	26.85	12.283		
6,600.0	6,491.2	6,595.5	6,533.7	23.6	19.1	-159.15	461.4	721.4	334.9	307.6	27.28	12.274		
6,700.0	6,589.4	6,695.4	6,632.5	24.0	19.4	-159.12	469.1	733.5	339.9	312.2	27.71	12.265		
6,800.0	6,687.6	6,795.3	6,731.3	24.4	19.7	-170.27	476.8	745.7	345.0	316.8	28.13	12.264		
6,900.0	6,785.9	6,894.2	6,829.3	24.7	20.1	140.90	484.4	757.8	349.5	320.6	28.92	12.084		
7,000.0	6,881.9	6,990.8	6,924.9	24.8	20.3	122.10	490.8	769.6	354.9	324.6	30.21	11.744		
7,100.0	6,972.7	7,091.8	7,024.8	24.9	20.5	117.06	483.4	781.8	362.6	331.6	31.08	11.668		
7,200.0	7,055.5	7,199.4	7,127.9	24.9	20.5	116.46	456.3	794.6	372.5	341.3	31.15	11.960		
7,300.0	7,127.8	7,314.6	7,230.7	24.9	20.5	117.52	406.3	807.2	383.6	353.3	30.34	12.643		
7,400.0	7,187.5	7,438.1	7,327.5	24.8	20.3	119.17	330.9	819.1	394.8	366.0	28.84	13.690		
7,500.0	7,232.7	7,570.0	7,410.7	24.9	20.2	120.83	229.3	829.4	404.9	377.8	27.08	14.949		
7,600.0	7,262.0	7,709.6	7,471.1	24.9	20.1	122.16	104.2	836.8	412.4	386.6	25.78	15.998		
7,700.0	7,274.5	7,854.4	7,500.3	25.1	20.3	122.92	-37.3	840.4	416.3	390.6	25.69	16.205		
7,800.0	7,275.0	7,968.7	7,502.0	25.3	20.6	123.01	-151.5	840.6	416.7	390.1	26.55	15.696		
7,900.0	7,275.0	8,068.7	7,502.0	25.6	21.1	123.01	-251.5	840.6	416.7	389.0	27.62	15.088		
8,000.0	7,275.0	8,168.7	7,502.0	26.1	21.6	123.01	-351.5	840.6	416.7	387.7	28.95	14.393		
8,100.0	7,275.0	8,268.7	7,502.0	26.7	22.3	123.01	-451.5	840.6	416.7	386.2	30.51	13.656		
8,200.0	7,275.0	8,368.7	7,502.0	27.3	23.1	123.01	-551.5	840.6	416.7	384.4	32.27	12.913		
8,300.0	7,275.0	8,468.7	7,502.0	28.1	24.1	123.01	-651.5	840.6	416.7	382.5	34.19	12.188		
8,400.0	7,275.0	8,568.7	7,502.0	28.9	25.1	123.01	-751.5	840.6	416.7	380.4	36.25	11.495		
8,500.0	7,275.0	8,668.7	7,502.0	29.9	26.1	123.01	-851.5	840.6	416.7	378.2	38.42	10.844		
8,600.0	7,275.0	8,768.7	7,502.0	30.9	27.3	123.01	-951.5	840.6	416.7	376.0	40.69	10.239		
8,700.0	7,275.0	8,868.7	7,502.0	31.9	28.5	123.01	-1,051.5	840.6	416.7	373.6	43.05	9.679		
8,800.0	7,275.0	8,968.7	7,502.0	33.1	29.8	123.01	-1,151.5	840.6	416.7	371.2	45.48	9.162		
8,900.0	7,275.0	9,068.7	7,502.0	34.3	31.1	123.01	-1,251.5	840.6	416.7	368.7	47.96	8.688		
9,000.0	7,275.0	9,168.7	7,502.0	35.5	32.4	123.01	-1,351.5	840.6	416.7	366.2	50.49	8.252		
9,100.0	7,275.0	9,268.7	7,502.0	36.8	33.8	123.01	-1,451.5	840.6	416.7	363.6	53.07	7.851		
9,200.0	7,275.0	9,368.7	7,502.0	38.1	35.3	123.01	-1,551.5	840.6	416.7	361.0	55.68	7.483		
9,300.0	7,275.0	9,468.7	7,502.0	39.4	36.7	123.01	-1,651.5	840.6	416.7	358.3	58.33	7.143		
9,400.0	7,275.0	9,568.7	7,502.0	40.8	38.2	123.01	-1,751.5	840.6	416.7	355.7	61.00	6.830		
9,500.0	7,275.0	9,668.7	7,502.0	42.2	39.7	123.01	-1,851.5	840.6	416.7	353.0	63.70	6.541		
9,600.0	7,275.0	9,768.7	7,502.0	43.6	41.2	123.01	-1,951.5	840.6	416.7	350.2	66.42	6.273		
9,700.0	7,275.0	9,868.7	7,502.0	45.1	42.8	123.01	-2,051.5	840.6	416.7	347.5	69.16	6.025		
9,800.0	7,275.0	9,968.7	7,502.0	46.6	44.3	123.01	-2,151.5	840.6	416.7	344.8	71.91	5.794		
9,900.0	7,275.0	10,068.7	7,502.0	48.1	45.9	123.01	-2,251.5	840.6	416.7	342.0	74.68	5.579		
10,000.0	7,275.0	10,168.7	7,502.0	49.6	47.5	123.01	-2,351.5	840.6	416.7	339.2	77.47	5.379		
10,100.0	7,275.0	10,268.7	7,502.0	51.1	49.1	123.01	-2,451.5	840.6	416.7	336.4	80.26	5.191		
10,200.0	7,275.0	10,368.7	7,502.0	52.6	50.7	123.01	-2,551.5	840.6	416.7	333.6	83.07	5.016		
10,300.0	7,275.0	10,468.7	7,502.0	54.2	52.3	123.01	-2,651.5	840.6	416.7	330.8	85.88	4.852		

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

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Ione 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (Ione)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Ione 2G-2H	<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 NWNE S2-T2N-R66W (lone) - lone 2F-2H - HZ - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-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	7,275.0	10,568.7	7,502.0	55.8	53.9	123.01	-2,751.5	840.6	416.7	328.0	88.71	4.697		
10,500.0	7,275.0	10,668.7	7,502.0	57.3	55.5	123.01	-2,851.5	840.6	416.7	325.1	91.54	4.552		
10,600.0	7,275.0	10,768.7	7,502.0	58.9	57.2	123.01	-2,951.5	840.6	416.7	322.3	94.38	4.415		
10,700.0	7,275.0	10,868.7	7,502.0	60.5	58.8	123.01	-3,051.5	840.6	416.7	319.4	97.22	4.286		
10,800.0	7,275.0	10,968.7	7,502.0	62.1	60.5	123.01	-3,151.5	840.6	416.7	316.6	100.08	4.164		
10,900.0	7,275.0	11,068.7	7,502.0	63.7	62.1	123.01	-3,251.5	840.6	416.7	313.7	102.93	4.048		
11,000.0	7,275.0	11,168.7	7,502.0	65.4	63.8	123.01	-3,351.5	840.6	416.7	310.9	105.79	3.938		
11,100.0	7,275.0	11,268.7	7,502.0	67.0	65.5	123.01	-3,451.5	840.6	416.7	308.0	108.66	3.835		
11,200.0	7,275.0	11,368.7	7,502.0	68.6	67.1	123.01	-3,551.5	840.6	416.7	305.1	111.53	3.736		
11,300.0	7,275.0	11,468.7	7,502.0	70.2	68.8	123.01	-3,651.5	840.6	416.7	302.3	114.41	3.642		
11,400.0	7,275.0	11,568.7	7,502.0	71.9	70.5	123.01	-3,751.5	840.6	416.7	299.4	117.29	3.553		
11,500.0	7,275.0	11,668.7	7,502.0	73.5	72.2	123.01	-3,851.5	840.6	416.7	296.5	120.17	3.467		
11,600.0	7,275.0	11,768.7	7,502.0	75.2	73.8	123.01	-3,951.5	840.6	416.7	293.6	123.06	3.386		
11,700.0	7,275.0	11,868.7	7,502.0	76.9	75.5	123.01	-4,051.5	840.6	416.7	290.7	125.94	3.308		
11,800.0	7,275.0	11,968.7	7,502.0	78.5	77.2	123.01	-4,151.5	840.6	416.7	287.8	128.83	3.234		
11,900.0	7,275.0	12,068.7	7,502.0	80.2	78.9	123.01	-4,251.5	840.6	416.7	284.9	131.73	3.163		
11,943.3	7,275.0	12,112.0	7,502.0	80.9	79.7	123.01	-4,294.8	840.6	416.7	283.7	132.98	3.133 SF		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Ione 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (Ione)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Ione 2G-2H	<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 NWNE S2-T2N-R66W (Ione) - Ione 4-4-2 - Wellbore #1 - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
9,300.0	7,275.0	7,740.7	7,276.0	39.4	43.8	90.00	-2,127.3	1,137.4	478.7	410.8	67.92	7.048		
9,400.0	7,275.0	7,740.7	7,276.0	40.8	43.8	90.00	-2,127.3	1,137.4	379.5	309.9	69.54	5.457		
9,500.0	7,275.0	7,740.7	7,276.0	42.2	43.8	90.00	-2,127.3	1,137.4	280.8	209.6	71.17	3.945		
9,600.0	7,275.0	7,740.7	7,276.0	43.6	43.8	90.00	-2,127.3	1,137.4	183.5	110.7	72.81	2.521		
9,700.0	7,275.0	7,740.7	7,276.0	45.1	43.8	90.00	-2,127.3	1,137.4	92.3	17.8	74.46	1.239 Level 2		
9,775.8	7,275.0	7,740.7	7,276.0	46.2	43.8	90.00	-2,127.3	1,137.4	52.6	-23.1	75.72	0.695 Level 1, CC, ES, SF		
9,800.0	7,275.0	7,740.7	7,276.0	46.6	43.8	90.00	-2,127.3	1,137.4	57.9	-18.2	76.12	0.761 Level 1		
9,900.0	7,275.0	7,740.7	7,276.0	48.1	43.8	90.00	-2,127.3	1,137.4	134.9	57.1	77.79	1.734		
10,000.0	7,275.0	7,740.7	7,276.0	49.6	43.8	90.00	-2,127.3	1,137.4	230.3	150.8	79.46	2.898		
10,100.0	7,275.0	7,740.7	7,276.0	51.1	43.8	90.00	-2,127.3	1,137.4	328.4	247.3	81.14	4.048		
10,200.0	7,275.0	7,740.7	7,276.0	52.6	43.8	90.00	-2,127.3	1,137.4	427.5	344.6	82.83	5.161		

# Cathedral Energy Services

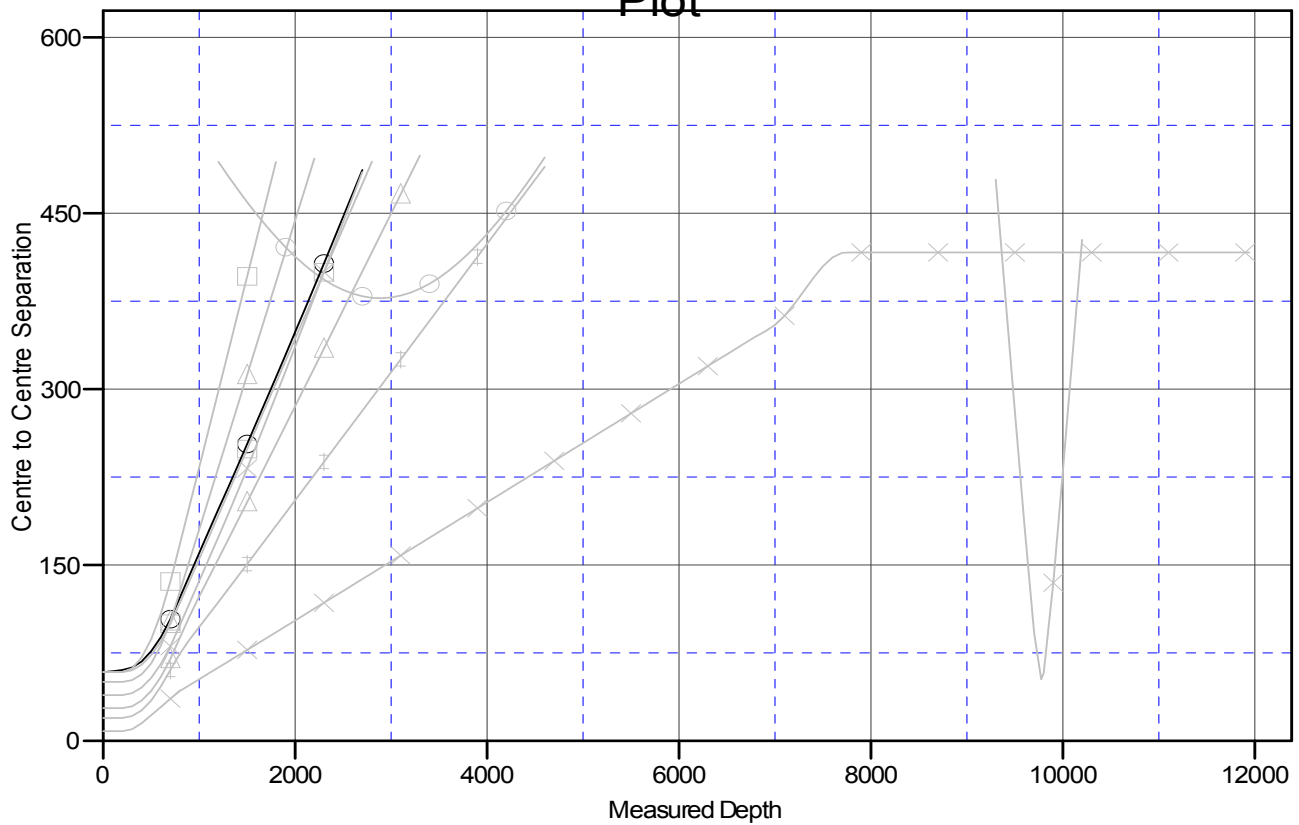
## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well lone 2G-2H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Reference Site:</b>	NWNE S2-T2N-R66W (lone)	<b>MD Reference:</b>	KB=13' @ 5059.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	lone 2G-2H	<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 KB=13' @ 5059.0ft (Original Well Elev)  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: lone 2G-2H  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.49°

### Ladder Plot



### LEGEND

- lone #21-2 (Existing), DD, Plan #1 V0
- lone #3 (Existing), DD, DD V0
- lone #3 (Existing), DD, Plan #1 V0
- lone 2A-2H, HZ, Plan #1 V0
- lone 2B-2H, HZ, Plan #1 V0
- lone 2C-2H, HZ, Plan #1 V0
- lone 2D-2H, HZ, Plan #1 V0
- lone 2E-2H, HZ, Plan #1 V0
- lone 2F-2H, HZ, Plan #1 V0
- lone 4-4-2, Wellbore #1, Plan #1 V0