



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site:</b>	S34-T2N-R66W (McConahay)	<b>North Reference:</b>	True
<b>Well:</b>	McConahay 1C-34H-H266	<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		S34-T2N-R66W (McConahay)			
Site Position:		Northing:	1,280,109.37 ft	Latitude:	40.099880
From:	Lat/Long	Easting:	3,208,491.04 ft	Longitude:	-104.754720
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.48 °

Well	McConahay 1C-34H-H266					
Well Position	+N/-S	0.0 ft	Northing:	1,279,413.85 ft	Latitude:	40.097990
	+E/-W	0.0 ft	Easting:	3,207,654.80 ft	Longitude:	-104.757730
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,062.0 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	7/16/2013	8.55	66.74	52,752

<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	260.00

<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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,313.3	10.13	105.40	1,308.0	-23.7	86.2	1.00	1.00	0.00	105.40	
6,943.0	10.13	105.40	6,849.9	-286.8	1,041.0	0.00	0.00	0.00	0.00	
7,934.5	90.00	260.00	7,512.0	-435.0	492.8	10.00	8.06	15.59	154.25	
12,224.5	90.00	260.00	7,512.0	-1,180.0	-3,732.1	0.00	0.00	0.00	0.00	McConahay 1C-34H-I

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<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site:</b>	S34-T2N-R66W (McConahay)	<b>North Reference:</b>	True
<b>Well:</b>	McConahay 1C-34H-H266	<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	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300'
400.0	1.00	105.40	400.0	-0.2	0.8	-0.8	1.00	1.00	
500.0	2.00	105.40	500.0	-0.9	3.4	-3.2	1.00	1.00	
600.0	3.00	105.40	599.9	-2.1	7.6	-7.1	1.00	1.00	
700.0	4.00	105.40	699.7	-3.7	13.5	-12.6	1.00	1.00	
800.0	5.00	105.40	799.4	-5.8	21.0	-19.7	1.00	1.00	
900.0	6.00	105.40	898.9	-8.3	30.3	-28.4	1.00	1.00	
1,000.0	7.00	105.40	998.3	-11.3	41.2	-38.6	1.00	1.00	
1,003.8	7.04	105.40	1,002.0	-11.5	41.6	-39.0	1.00	1.00	Fox Hills - BASE
1,100.0	8.00	105.40	1,097.4	-14.8	53.8	-50.4	1.00	1.00	
1,200.0	9.00	105.40	1,196.3	-18.7	68.0	-63.7	1.00	1.00	
1,300.0	10.00	105.40	1,294.9	-23.1	83.9	-78.6	1.00	1.00	
1,313.3	10.13	105.40	1,308.0	-23.7	86.2	-80.7	1.00	1.00	EOB; Inc=10.13°
1,400.0	10.13	105.40	1,393.4	-27.8	100.9	-94.5	0.00	0.00	
1,500.0	10.13	105.40	1,491.8	-32.5	117.8	-110.4	0.00	0.00	
1,600.0	10.13	105.40	1,590.3	-37.1	134.8	-126.3	0.00	0.00	
1,700.0	10.13	105.40	1,688.7	-41.8	151.7	-142.2	0.00	0.00	
1,800.0	10.13	105.40	1,787.1	-46.5	168.7	-158.1	0.00	0.00	
1,900.0	10.13	105.40	1,885.6	-51.2	185.7	-174.0	0.00	0.00	
2,000.0	10.13	105.40	1,984.0	-55.8	202.6	-189.9	0.00	0.00	
2,100.0	10.13	105.40	2,082.5	-60.5	219.6	-205.8	0.00	0.00	
2,200.0	10.13	105.40	2,180.9	-65.2	236.6	-221.6	0.00	0.00	
2,300.0	10.13	105.40	2,279.3	-69.8	253.5	-237.5	0.00	0.00	
2,400.0	10.13	105.40	2,377.8	-74.5	270.5	-253.4	0.00	0.00	
2,500.0	10.13	105.40	2,476.2	-79.2	287.4	-269.3	0.00	0.00	
2,600.0	10.13	105.40	2,574.7	-83.9	304.4	-285.2	0.00	0.00	
2,700.0	10.13	105.40	2,673.1	-88.5	321.4	-301.1	0.00	0.00	
2,800.0	10.13	105.40	2,771.5	-93.2	338.3	-317.0	0.00	0.00	
2,900.0	10.13	105.40	2,870.0	-97.9	355.3	-332.9	0.00	0.00	
3,000.0	10.13	105.40	2,968.4	-102.6	372.2	-348.8	0.00	0.00	
3,100.0	10.13	105.40	3,066.9	-107.2	389.2	-364.7	0.00	0.00	
3,200.0	10.13	105.40	3,165.3	-111.9	406.2	-380.6	0.00	0.00	
3,300.0	10.13	105.40	3,263.7	-116.6	423.1	-396.5	0.00	0.00	
3,400.0	10.13	105.40	3,362.2	-121.2	440.1	-412.4	0.00	0.00	
3,500.0	10.13	105.40	3,460.6	-125.9	457.1	-428.2	0.00	0.00	
3,600.0	10.13	105.40	3,559.1	-130.6	474.0	-444.1	0.00	0.00	
3,700.0	10.13	105.40	3,657.5	-135.3	491.0	-460.0	0.00	0.00	
3,800.0	10.13	105.40	3,755.9	-139.9	507.9	-475.9	0.00	0.00	
3,900.0	10.13	105.40	3,854.4	-144.6	524.9	-491.8	0.00	0.00	
4,000.0	10.13	105.40	3,952.8	-149.3	541.9	-507.7	0.00	0.00	
4,100.0	10.13	105.40	4,051.3	-154.0	558.8	-523.6	0.00	0.00	
4,200.0	10.13	105.40	4,149.7	-158.6	575.8	-539.5	0.00	0.00	
4,300.0	10.13	105.40	4,248.1	-163.3	592.7	-555.4	0.00	0.00	
4,400.0	10.13	105.40	4,346.6	-168.0	609.7	-571.3	0.00	0.00	
4,500.0	10.13	105.40	4,445.0	-172.6	626.7	-587.2	0.00	0.00	
4,600.0	10.13	105.40	4,543.5	-177.3	643.6	-603.1	0.00	0.00	
4,658.5	10.13	105.40	4,601.0	-180.1	653.5	-612.3	0.00	0.00	Sussex
4,700.0	10.13	105.40	4,641.9	-182.0	660.6	-618.9	0.00	0.00	
4,800.0	10.13	105.40	4,740.3	-186.7	677.5	-634.8	0.00	0.00	

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<b>Site:</b>	S34-T2N-R66W (McConahay)	<b>North Reference:</b>	True
<b>Well:</b>	McConahay 1C-34H-H266	<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	10.13	105.40	4,838.8	-191.3	694.5	-650.7	0.00	0.00	
4,972.3	10.13	105.40	4,910.0	-194.7	706.8	-662.2	0.00	0.00	Sussex Marker
5,000.0	10.13	105.40	4,937.2	-196.0	711.5	-666.6	0.00	0.00	
5,100.0	10.13	105.40	5,035.7	-200.7	728.4	-682.5	0.00	0.00	
5,200.0	10.13	105.40	5,134.1	-205.4	745.4	-698.4	0.00	0.00	
5,300.0	10.13	105.40	5,232.5	-210.0	762.4	-714.3	0.00	0.00	
5,342.1	10.13	105.40	5,274.0	-212.0	769.5	-721.0	0.00	0.00	Shannon
5,400.0	10.13	105.40	5,331.0	-214.7	779.3	-730.2	0.00	0.00	
5,500.0	10.13	105.40	5,429.4	-219.4	796.3	-746.1	0.00	0.00	
5,600.0	10.13	105.40	5,527.9	-224.0	813.2	-762.0	0.00	0.00	
5,700.0	10.13	105.40	5,626.3	-228.7	830.2	-777.9	0.00	0.00	
5,800.0	10.13	105.40	5,724.7	-233.4	847.2	-793.8	0.00	0.00	
5,900.0	10.13	105.40	5,823.2	-238.1	864.1	-809.7	0.00	0.00	
6,000.0	10.13	105.40	5,921.6	-242.7	881.1	-825.5	0.00	0.00	
6,100.0	10.13	105.40	6,020.1	-247.4	898.0	-841.4	0.00	0.00	
6,200.0	10.13	105.40	6,118.5	-252.1	915.0	-857.3	0.00	0.00	
6,300.0	10.13	105.40	6,216.9	-256.8	932.0	-873.2	0.00	0.00	
6,400.0	10.13	105.40	6,315.4	-261.4	948.9	-889.1	0.00	0.00	
6,486.0	10.13	105.40	6,400.0	-265.4	963.5	-902.8	0.00	0.00	Teepee Buttes (*if present)
6,500.0	10.13	105.40	6,413.8	-266.1	965.9	-905.0	0.00	0.00	
6,600.0	10.13	105.40	6,512.3	-270.8	982.8	-920.9	0.00	0.00	
6,700.0	10.13	105.40	6,610.7	-275.5	999.8	-936.8	0.00	0.00	
6,800.0	10.13	105.40	6,709.1	-280.1	1,016.8	-952.7	0.00	0.00	
6,900.0	10.13	105.40	6,807.6	-284.8	1,033.7	-968.6	0.00	0.00	
6,943.0	10.13	105.40	6,849.9	-286.8	1,041.0	-975.4	0.00	0.00	Start build/turn @ 6943' MD
7,000.0	5.57	131.77	6,906.4	-290.0	1,047.9	-981.7	10.00	-8.00	
7,100.0	7.88	226.36	7,005.9	-298.0	1,046.6	-978.9	10.00	2.31	
7,200.0	17.11	245.58	7,103.5	-308.8	1,028.2	-958.9	10.00	9.23	
7,253.7	22.33	249.24	7,154.0	-315.7	1,011.5	-941.3	10.00	9.74	Sharon Springs
7,298.8	26.77	251.26	7,195.0	-322.0	993.8	-922.8	10.00	9.83	Niobrara
7,300.0	26.89	251.30	7,196.1	-322.2	993.3	-922.3	10.00	9.86	
7,397.6	36.54	254.06	7,279.0	-337.3	944.4	-871.4	10.00	9.89	B Chalk
7,400.0	36.78	254.11	7,281.0	-337.7	942.9	-870.0	10.00	9.92	
7,422.9	39.05	254.58	7,299.0	-341.4	929.4	-856.0	10.00	9.92	B Marl
7,482.1	44.93	255.59	7,343.0	-351.6	891.1	-816.6	10.00	9.93	C Chalk
7,500.0	46.71	255.86	7,355.5	-354.8	878.7	-803.7	10.00	9.94	
7,541.8	50.87	256.42	7,383.0	-362.3	848.2	-772.4	10.00	9.95	C Marl
7,600.0	56.66	257.11	7,417.4	-373.0	802.5	-725.5	10.00	9.95	
7,700.0	66.63	258.10	7,464.8	-391.9	716.6	-637.7	10.00	9.96	
7,757.6	72.37	258.60	7,485.0	-402.8	663.8	-583.8	10.00	9.97	Ft. Hayes
7,800.0	76.59	258.95	7,496.3	-410.7	623.8	-543.0	10.00	9.97	
7,858.6	82.44	259.42	7,507.0	-421.5	567.2	-485.4	10.00	9.97	Codell
7,900.0	86.56	259.74	7,511.0	-429.0	526.7	-444.2	10.00	9.97	
7,934.5	90.00	260.00	7,512.0	-435.0	492.8	-409.7	10.00	9.97	LP @ 7512' TVD; 90°
8,000.0	90.00	260.00	7,512.0	-446.4	428.2	-344.2	0.00	0.00	
8,100.0	90.00	260.00	7,512.0	-463.8	329.7	-244.2	0.00	0.00	
8,200.0	90.00	260.00	7,512.0	-481.1	231.3	-144.2	0.00	0.00	
8,300.0	90.00	260.00	7,512.0	-498.5	132.8	-44.2	0.00	0.00	
8,400.0	90.00	260.00	7,512.0	-515.9	34.3	55.8	0.00	0.00	
8,500.0	90.00	260.00	7,512.0	-533.2	-64.2	155.8	0.00	0.00	
8,600.0	90.00	260.00	7,512.0	-550.6	-162.7	255.8	0.00	0.00	
8,700.0	90.00	260.00	7,512.0	-568.0	-261.2	355.8	0.00	0.00	

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<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
8,800.0	90.00	260.00	7,512.0	-585.3	-359.6	455.8	0.00	0.00	
8,900.0	90.00	260.00	7,512.0	-602.7	-458.1	555.8	0.00	0.00	
9,000.0	90.00	260.00	7,512.0	-620.1	-556.6	655.8	0.00	0.00	
9,100.0	90.00	260.00	7,512.0	-637.4	-655.1	755.8	0.00	0.00	
9,200.0	90.00	260.00	7,512.0	-654.8	-753.6	855.8	0.00	0.00	
9,300.0	90.00	260.00	7,512.0	-672.1	-852.0	955.8	0.00	0.00	
9,400.0	90.00	260.00	7,512.0	-689.5	-950.5	1,055.8	0.00	0.00	
9,500.0	90.00	260.00	7,512.0	-706.9	-1,049.0	1,155.8	0.00	0.00	
9,600.0	90.00	260.00	7,512.0	-724.2	-1,147.5	1,255.8	0.00	0.00	
9,700.0	90.00	260.00	7,512.0	-741.6	-1,246.0	1,355.8	0.00	0.00	
9,800.0	90.00	260.00	7,512.0	-759.0	-1,344.4	1,455.8	0.00	0.00	
9,900.0	90.00	260.00	7,512.0	-776.3	-1,442.9	1,555.8	0.00	0.00	
10,000.0	90.00	260.00	7,512.0	-793.7	-1,541.4	1,655.8	0.00	0.00	
10,100.0	90.00	260.00	7,512.0	-811.1	-1,639.9	1,755.8	0.00	0.00	
10,200.0	90.00	260.00	7,512.0	-828.4	-1,738.4	1,855.8	0.00	0.00	
10,300.0	90.00	260.00	7,512.0	-845.8	-1,836.8	1,955.8	0.00	0.00	
10,400.0	90.00	260.00	7,512.0	-863.2	-1,935.3	2,055.8	0.00	0.00	
10,500.0	90.00	260.00	7,512.0	-880.5	-2,033.8	2,155.8	0.00	0.00	
10,600.0	90.00	260.00	7,512.0	-897.9	-2,132.3	2,255.8	0.00	0.00	
10,700.0	90.00	260.00	7,512.0	-915.3	-2,230.8	2,355.8	0.00	0.00	
10,800.0	90.00	260.00	7,512.0	-932.6	-2,329.2	2,455.8	0.00	0.00	
10,900.0	90.00	260.00	7,512.0	-950.0	-2,427.7	2,555.8	0.00	0.00	
11,000.0	90.00	260.00	7,512.0	-967.3	-2,526.2	2,655.8	0.00	0.00	
11,100.0	90.00	260.00	7,512.0	-984.7	-2,624.7	2,755.8	0.00	0.00	
11,200.0	90.00	260.00	7,512.0	-1,002.1	-2,723.2	2,855.8	0.00	0.00	
11,300.0	90.00	260.00	7,512.0	-1,019.4	-2,821.7	2,955.8	0.00	0.00	
11,400.0	90.00	260.00	7,512.0	-1,036.8	-2,920.1	3,055.8	0.00	0.00	
11,500.0	90.00	260.00	7,512.0	-1,054.2	-3,018.6	3,155.8	0.00	0.00	
11,600.0	90.00	260.00	7,512.0	-1,071.5	-3,117.1	3,255.8	0.00	0.00	
11,700.0	90.00	260.00	7,512.0	-1,088.9	-3,215.6	3,355.8	0.00	0.00	
11,800.0	90.00	260.00	7,512.0	-1,106.3	-3,314.1	3,455.8	0.00	0.00	
11,900.0	90.00	260.00	7,512.0	-1,123.6	-3,412.5	3,555.8	0.00	0.00	
12,000.0	90.00	260.00	7,512.0	-1,141.0	-3,511.0	3,655.8	0.00	0.00	
12,100.0	90.00	260.00	7,512.0	-1,158.4	-3,609.5	3,755.8	0.00	0.00	
12,200.0	90.00	260.00	7,512.0	-1,175.7	-3,708.0	3,855.8	0.00	0.00	
12,224.5	90.00	260.00	7,512.0	-1,180.0	-3,732.1	3,880.3	0.00	0.00	TD at 12224.5 - McConahay 1C-34H-H266 PBH

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									
McConahay 1C-34H-H2I	0.00	0.00	7,512.0	-1,180.0	-3,732.1	1,278,202.68	3,203,932.75	40.094750	-104.771070
- plan hits target center									
- Point									

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site:</b>	S34-T2N-R66W (McConahay)	<b>North Reference:</b>	True
<b>Well:</b>	McConahay 1C-34H-H266	<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 (°)	
1,003.8	1,002.0	Fox Hills - BASE				
4,658.5	4,601.0	Sussex				
4,972.3	4,910.0	Sussex Marker				
5,342.1	5,274.0	Shannon				
6,486.0	6,400.0	Teepee Buttes (*if present)				
7,253.7	7,154.0	Sharon Springs				
7,298.8	7,195.0	Niobrara				
7,397.6	7,279.0	B Chalk				
7,422.9	7,299.0	B Marl				
7,482.1	7,343.0	C Chalk				
7,541.8	7,383.0	C Marl				
7,757.6	7,485.0	Ft. Hayes				
7,858.6	7,507.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.0	300.0	0.0	0.0	KOP @ 300'	
1,313.3	1,308.0	-23.7	86.2	EOB; Inc=10.13°	
6,943.0	6,849.9	-286.8	1,041.0	Start build/turn @ 6943' MD	
7,934.5	7,512.0	-435.0	492.8	LP @ 7512' TVD; 90°	
12,224.5	7,512.0	-1,180.0	-3,732.1	TD at 12224.5	

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

**DJ Wattenberg**

**S34-T2N-R66W (McConahay)**

**McConahay 1C-34H-H266**

**Hz**

**Plan #1**

## **Anticollision Report**

**16 July, 2013**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Reference Site:</b>	S34-T2N-R66W (McConahay)	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	McConahay 1C-34H-H266	<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		

Survey Tool Program		Date	7/16/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,224.5	Plan #1 (Hz)	Geolink MWD	Geolink MWD	

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						
S34-T2N-R66W (McConahay)						
CONNER 11-34 (EXISTING) - MACEY & MERSHON WE						Out of range
CONNER 21-34 (EXISTING) - FOUNDATION WELL - NO						Out of range
CONNER 22-34 (EXISTING) - ENCANA WELL - GYRO	10,641.9	7,450.6	401.9	327.1	5.373	CC, ES
CONNER 22-34 (EXISTING) - ENCANA WELL - GYRO	10,700.0	7,450.6	406.0	329.9	5.330	SF
CONNER 23-34 (EXISTING) - ENCANA WELL - NO SUR						Out of range
CONNER 24-34 (EXISTING) - FOUNDATION WELL - NO						Out of range
CONNER D&H 2 (EXISTING) - MARINER WELL - NO SU						Out of range
DARLENNE 1 (EXISTING) - ENCANA WELL - NO SURV						Out of range
ERICA 1 (EXISTING) - GREAT WESTERN WELL - NO S						Out of range
MCCONAHAY 1 (EXISTING) - ENCANA WELL - GYRO	8,941.8	7,499.7	470.1	434.2	13.084	CC, ES
MCCONAHAY 1 (EXISTING) - ENCANA WELL - GYRO	9,100.0	7,499.7	496.0	456.7	12.642	SF
McConahay 1A-34H - Hz - Hz						Out of range
McConahay 1B-34H-H266 - Hz - Plan #1	200.0	200.0	10.9	10.3	17.890	CC, ES
McConahay 1B-34H-H266 - Hz - Plan #1	400.0	399.6	14.0	12.7	10.680	SF
McConahay 1D-34H-H266 - Hz - Plan #1	166.3	167.3	10.9	10.4	22.074	CC
McConahay 1D-34H-H266 - Hz - Plan #1	200.0	201.0	10.9	10.3	17.839	ES
McConahay 1D-34H-H266 - Hz - Plan #1	600.0	600.0	19.5	17.5	9.584	SF
MCCONAHAY 31-34 (EXISTING) - ENCANA WELL - GYR						Out of range
MCCONAHAY 31-34 (EXISTING) MRP - MACHII-ROSS W						Out of range
MCCONAHAY 33-34 (EXISTING) - FOUNDATION WELL						Out of range
MCCONAHAY 41-34 (EXISTING) - ENCANA WELL - GYR						Out of range
MCCONAHAY 43-34 (EXISTING) - ENCANA WELL - NO						Out of range
MCCONAHAY 44-34 (EXISTING) - ENCANA WELL - NO						Out of range
McConahay 4A-34H-P266 - Hz - Plan #2						Out of range
McConahay 4B-34H-P266 - Hz - Plan #3						Out of range
McConahay 4C-34H-P266 - Hz - Plan #2						Out of range
MCCONAHAY 6-4-34 (EXISTING) - ENCANA WELL - SU						Out of range
RANCHERO 1 (EXISTING) - ENCANA WELL - NO SURV						Out of range
RANCHERO 12-34 (EXISTING) - MACHII-ROSS WELL -						Out of range
RANCHERO 32-34 (EXISTING) - ENCANA WELL - GYRO	9,288.2	7,482.0	295.8	252.6	6.844	CC
RANCHERO 32-34 (EXISTING) - ENCANA WELL - GYRO	9,300.0	7,482.0	296.1	252.6	6.809	ES, SF
SEYMOUR 34-34 (EXISTING) - ENCANA WELL - NO SU						Out of range



# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Reference Site:</b>	S34-T2N-R66W (McConahay)	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	McConahay 1C-34H-H266	<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> S34-T2N-R66W (McConahay) - CONNER 22-34 (EXISTING) - ENCANA WELL - GYRO													<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b> 100-Gyro													<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Total	Separation	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor	
10,400.0	7,512.0	7,450.3	7,449.2	62.9	6.5	89.74		-509.4	-2,243.3	469.1	400.0	69.03	6.794	
10,500.0	7,512.0	7,450.4	7,449.3	65.3	6.5	89.76		-509.4	-2,243.3	426.2	354.8	71.41	5.968	
10,600.0	7,512.0	7,450.5	7,449.4	67.6	6.5	89.78		-509.4	-2,243.3	404.0	330.3	73.79	5.476	
10,641.9	7,512.0	7,450.6	7,449.5	68.6	6.5	89.78		-509.4	-2,243.3	401.9	327.1	74.79	5.373 CC, ES	
10,700.0	7,512.0	7,450.6	7,449.6	70.0	6.5	89.80		-509.4	-2,243.3	406.0	329.9	76.18	5.330 SF	
10,800.0	7,512.0	7,450.8	7,449.7	72.4	6.5	89.81		-509.4	-2,243.3	431.9	353.3	78.57	5.497	
10,900.0	7,512.0	7,450.9	7,449.8	74.8	6.5	89.83		-509.4	-2,243.3	477.6	396.7	80.96	5.899	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Reference Site:</b>	S34-T2N-R66W (McConahay)	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	McConahay 1C-34H-H266	<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													S34-T2N-R66W (McConahay) - MCCONAHAY 1 (EXISTING) - ENCANA WELL - GYRO		Offset Site Error:		0.0 ft	
Survey Program:													200-Gyro		Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning				
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Centre +E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor						
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)								
8,800.0	7,512.0	7,499.7	7,498.8	27.2	6.5	90.10	-147.0	-580.9	491.0	457.9	33.09	14.841						
8,900.0	7,512.0	7,499.7	7,498.8	29.2	6.5	90.10	-147.0	-580.9	471.9	436.9	35.07	13.457						
8,941.8	7,512.0	7,499.7	7,498.8	30.0	6.5	90.10	-147.0	-580.9	470.1	434.2	35.93	13.084 CC, ES						
9,000.0	7,512.0	7,499.7	7,498.8	31.2	6.5	90.10	-147.0	-580.9	473.7	436.5	37.12	12.759						
9,100.0	7,512.0	7,499.7	7,498.8	33.3	6.5	90.10	-147.0	-580.9	496.0	456.7	39.23	12.642 SF						

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Reference Site:</b>	S34-T2N-R66W (McConahay)	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	McConahay 1C-34H-H266	<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 S34-T2N-R66W (McConahay) - McConahay 1B-34H-H266 - Hz - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.00	10.9	0.0	10.9				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	10.9	0.0	10.9	10.7	0.26	41.743	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	10.9	0.0	10.9	10.3	0.61	17.890	CC, ES
300.0	300.0	299.8	299.8	0.5	0.5	2.58	11.6	0.5	11.6	10.7	0.96	12.120	
400.0	400.0	399.6	399.6	0.7	0.7	-100.24	13.7	2.1	14.0	12.7	1.31	10.680	SF
500.0	500.0	499.3	499.2	0.8	0.8	-101.08	17.2	4.7	18.2	16.5	1.67	10.893	
600.0	599.9	598.8	598.5	1.0	1.0	-103.36	22.0	8.4	24.1	22.1	2.04	11.863	
700.0	699.7	698.1	697.5	1.2	1.3	-105.88	28.2	13.0	32.0	29.6	2.42	13.219	
800.0	799.4	797.1	796.0	1.4	1.5	-108.14	35.8	18.7	41.7	38.9	2.83	14.767	
900.0	898.9	895.8	894.1	1.7	1.7	-110.04	44.6	25.4	53.4	50.1	3.26	16.388	
1,000.0	998.3	994.7	992.2	1.9	2.0	-111.87	54.5	32.8	66.7	62.9	3.72	17.937	
1,100.0	1,097.4	1,093.7	1,090.4	2.2	2.3	-114.16	64.4	40.3	80.7	76.5	4.20	19.221	
1,200.0	1,196.3	1,192.5	1,188.4	2.5	2.5	-116.68	74.4	47.8	95.6	90.9	4.70	20.329	
1,300.0	1,294.9	1,291.1	1,286.2	2.8	2.8	-119.27	84.3	55.3	111.5	106.3	5.23	21.330	
1,400.0	1,393.4	1,389.6	1,383.9	3.1	3.1	-121.72	94.2	62.7	128.1	122.4	5.76	22.254	
1,500.0	1,491.8	1,488.0	1,481.6	3.5	3.3	-123.63	104.1	70.2	144.9	138.7	6.29	23.046	
1,600.0	1,590.3	1,586.5	1,579.3	3.8	3.6	-125.13	113.9	77.6	161.9	155.1	6.82	23.732	
1,700.0	1,688.7	1,685.0	1,677.0	4.1	3.9	-126.36	123.8	85.1	178.9	171.6	7.35	24.328	
1,800.0	1,787.1	1,783.5	1,774.7	4.5	4.2	-127.37	133.7	92.5	196.0	188.1	7.89	24.852	
1,900.0	1,885.6	1,881.9	1,872.4	4.8	4.4	-128.21	143.6	100.0	213.2	204.8	8.42	25.314	
2,000.0	1,984.0	1,980.4	1,970.1	5.2	4.7	-128.93	153.5	107.5	230.4	221.4	8.96	25.725	
2,100.0	2,082.5	2,078.9	2,067.8	5.5	5.0	-129.56	163.4	114.9	247.6	238.1	9.49	26.093	
2,200.0	2,180.9	2,177.3	2,165.5	5.9	5.2	-130.10	173.3	122.4	264.8	254.8	10.02	26.423	
2,300.0	2,279.3	2,275.8	2,263.2	6.2	5.5	-130.57	183.2	129.8	282.1	271.5	10.56	26.721	
2,400.0	2,377.8	2,374.3	2,360.9	6.6	5.8	-130.99	193.1	137.3	299.4	288.3	11.09	26.992	
2,500.0	2,476.2	2,472.8	2,458.5	6.9	6.1	-131.36	202.9	144.7	316.7	305.0	11.63	27.239	
2,600.0	2,574.7	2,571.2	2,556.2	7.3	6.3	-131.70	212.8	152.2	334.0	321.8	12.16	27.465	
2,700.0	2,673.1	2,669.7	2,653.9	7.6	6.6	-132.00	222.7	159.6	351.3	338.6	12.69	27.673	
2,800.0	2,771.5	2,768.2	2,751.6	8.0	6.9	-132.27	232.6	167.1	368.6	355.4	13.23	27.864	
2,900.0	2,870.0	2,866.7	2,849.3	8.3	7.2	-132.52	242.5	174.5	386.0	372.2	13.76	28.041	
3,000.0	2,968.4	2,965.1	2,947.0	8.7	7.4	-132.75	252.4	182.0	403.3	389.0	14.30	28.205	
3,100.0	3,066.9	3,063.6	3,044.7	9.0	7.7	-132.96	262.3	189.4	420.6	405.8	14.83	28.357	
3,200.0	3,165.3	3,162.1	3,142.4	9.4	8.0	-133.15	272.2	196.9	438.0	422.6	15.37	28.499	
3,300.0	3,263.7	3,260.6	3,240.1	9.8	8.3	-133.33	282.1	204.3	455.3	439.4	15.90	28.632	
3,400.0	3,362.2	3,359.0	3,337.8	10.1	8.6	-133.49	292.0	211.8	472.7	456.3	16.44	28.756	
3,500.0	3,460.6	3,457.5	3,435.5	10.5	8.8	-133.65	301.8	219.2	490.1	473.1	16.97	28.872	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Reference Site:</b>	S34-T2N-R66W (McConahay)	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	McConahay 1C-34H-H266	<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 S34-T2N-R66W (McConahay) - McConahay 1D-34H-H266 - Hz - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor	
0.0	0.0	1.0	1.0	0.0	0.0	-180.00	-10.9	0.0	10.9				
100.0	100.0	101.0	101.0	0.1	0.1	-180.00	-10.9	0.0	10.9	10.7	0.26	41.467	
166.3	166.3	167.3	167.3	0.2	0.2	-180.00	-10.9	0.0	10.9	10.4	0.50	22.074 CC	
200.0	200.0	201.0	201.0	0.3	0.3	180.00	-10.9	0.0	10.9	10.3	0.61	17.839 ES	
300.0	300.0	300.8	300.8	0.5	0.5	177.15	-11.6	0.6	11.6	10.7	0.96	12.073	
400.0	400.0	400.6	400.6	0.7	0.7	68.39	-13.6	2.3	13.4	12.1	1.31	10.242	
500.0	500.0	500.4	500.3	0.8	0.8	68.23	-16.9	5.1	16.1	14.4	1.67	9.636	
600.0	599.9	600.0	599.7	1.0	1.0	69.98	-21.5	9.1	19.5	17.5	2.04	9.584 SF	
700.0	699.7	699.7	699.1	1.2	1.3	72.62	-27.5	14.2	23.8	21.4	2.43	9.819	
800.0	799.4	799.2	798.1	1.4	1.5	75.53	-34.7	20.4	29.0	26.1	2.84	10.208	
900.0	898.9	898.6	896.9	1.7	1.7	78.34	-43.2	27.7	35.1	31.8	3.29	10.674	
1,000.0	998.3	997.9	995.3	1.9	2.0	80.92	-53.0	36.1	42.2	38.4	3.78	11.166	
1,100.0	1,097.4	1,097.0	1,093.3	2.2	2.3	83.21	-64.1	45.6	50.2	45.9	4.31	11.655	
1,200.0	1,196.3	1,196.0	1,191.0	2.5	2.6	85.21	-76.5	56.2	59.2	54.4	4.89	12.121	
1,300.0	1,294.9	1,294.8	1,288.1	2.8	3.0	86.95	-90.1	67.9	69.3	63.7	5.52	12.554	
1,400.0	1,393.4	1,393.4	1,384.8	3.1	3.4	88.09	-104.9	80.7	80.3	74.1	6.18	13.003	
1,500.0	1,491.8	1,491.8	1,480.9	3.5	3.8	88.09	-121.0	94.4	92.3	85.5	6.84	13.490	
1,600.0	1,590.3	1,590.0	1,576.4	3.8	4.2	87.35	-138.2	109.3	105.3	97.8	7.52	14.009	
1,700.0	1,688.7	1,687.8	1,671.1	4.1	4.6	86.11	-156.7	125.1	119.4	111.2	8.20	14.566	
1,800.0	1,787.1	1,785.3	1,765.1	4.5	5.1	84.57	-176.3	141.9	134.5	125.7	8.87	15.162	
1,900.0	1,885.6	1,883.6	1,859.7	4.8	5.6	83.00	-196.9	159.6	150.5	140.9	9.54	15.772	
2,000.0	1,984.0	1,982.3	1,954.5	5.2	6.1	81.72	-217.6	177.3	166.5	156.3	10.21	16.313	
2,100.0	2,082.5	2,080.9	2,049.3	5.5	6.6	80.67	-238.2	195.1	182.7	171.8	10.88	16.794	
2,200.0	2,180.9	2,179.6	2,144.1	5.9	7.1	79.78	-258.9	212.8	198.8	187.3	11.54	17.223	
2,300.0	2,279.3	2,278.2	2,238.9	6.2	7.6	79.03	-279.6	230.6	215.0	202.8	12.21	17.608	
2,400.0	2,377.8	2,376.8	2,333.7	6.6	8.1	78.39	-300.3	248.3	231.3	218.4	12.88	17.955	
2,500.0	2,476.2	2,475.5	2,428.5	6.9	8.6	77.83	-320.9	266.1	247.5	234.0	13.55	18.269	
2,600.0	2,574.7	2,574.1	2,523.3	7.3	9.1	77.34	-341.6	283.8	263.8	249.6	14.22	18.555	
2,700.0	2,673.1	2,672.8	2,618.1	7.6	9.6	76.90	-362.3	301.6	280.1	265.2	14.89	18.816	
2,800.0	2,771.5	2,771.4	2,712.9	8.0	10.1	76.51	-383.0	319.3	296.5	280.9	15.56	19.055	
2,900.0	2,870.0	2,870.0	2,807.7	8.3	10.6	76.17	-403.7	337.0	312.8	296.6	16.23	19.275	
3,000.0	2,968.4	2,968.7	2,902.5	8.7	11.1	75.86	-424.3	354.8	329.1	312.2	16.90	19.477	
3,100.0	3,066.9	3,067.3	2,997.3	9.0	11.6	75.57	-445.0	372.5	345.5	327.9	17.57	19.665	
3,200.0	3,165.3	3,166.0	3,092.1	9.4	12.1	75.32	-465.7	390.3	361.8	343.6	18.24	19.839	
3,300.0	3,263.7	3,264.6	3,186.9	9.8	12.7	75.08	-486.4	408.0	378.2	359.3	18.91	20.000	
3,400.0	3,362.2	3,363.3	3,281.7	10.1	13.2	74.87	-507.0	425.8	394.6	375.0	19.58	20.151	
3,500.0	3,460.6	3,461.9	3,376.5	10.5	13.7	74.67	-527.7	443.5	410.9	390.7	20.25	20.292	
3,600.0	3,559.1	3,560.5	3,471.3	10.8	14.2	74.49	-548.4	461.3	427.3	406.4	20.92	20.424	
3,700.0	3,657.5	3,659.2	3,566.1	11.2	14.7	74.32	-569.1	479.0	443.7	422.1	21.59	20.548	
3,800.0	3,755.9	3,757.8	3,660.9	11.5	15.2	74.16	-589.7	496.8	460.1	437.8	22.26	20.664	
3,900.0	3,854.4	3,856.5	3,755.7	11.9	15.7	74.01	-610.4	514.5	476.5	453.5	22.94	20.774	
4,000.0	3,952.8	3,955.1	3,850.5	12.2	16.2	73.88	-631.1	532.2	492.9	469.2	23.61	20.877	

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Reference Site:</b>	S34-T2N-R66W (McConahay)	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	McConahay 1C-34H-H266	<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> S34-T2N-R66W (McConahay) - RANCHERO 32-34 (EXISTING) - ENCANA WELL - GYROS													Offset Site Error:	0.0 ft
Survey Program: 200-Gyro													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
8,900.0	7,512.0	7,482.0	7,480.1	29.2	6.5	86.53	-379.3	-891.6	488.0	453.0	34.99	13.948		
9,000.0	7,512.0	7,482.0	7,480.1	31.2	6.5	86.53	-379.3	-891.6	413.0	375.9	37.04	11.149		
9,100.0	7,512.0	7,482.0	7,480.1	33.3	6.5	86.53	-379.3	-891.6	350.6	311.5	39.15	8.956		
9,200.0	7,512.0	7,482.0	7,480.1	35.5	6.5	86.53	-379.3	-891.6	308.7	267.4	41.30	7.475		
9,288.2	7,512.0	7,482.0	7,480.1	37.4	6.5	86.53	-379.3	-891.6	295.8	252.6	43.23	6.844 CC		
9,300.0	7,512.0	7,482.0	7,480.1	37.6	6.5	86.53	-379.3	-891.6	296.1	252.6	43.48	6.809 ES, SF		
9,400.0	7,512.0	7,482.0	7,480.1	39.8	6.5	86.53	-379.3	-891.6	316.3	270.6	45.70	6.920		
9,500.0	7,512.0	7,482.0	7,480.1	42.1	6.5	86.53	-379.3	-891.6	363.9	315.9	47.95	7.589		
9,600.0	7,512.0	7,482.0	7,480.1	44.3	6.5	86.53	-379.3	-891.6	429.8	379.6	50.22	8.560		

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well McConahay 1C-34H-H266
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Reference Site:</b>	S34-T2N-R66W (McConahay)	<b>MD Reference:</b>	WELL @ 5087.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	McConahay 1C-34H-H266	<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 @ 5087.0ft (Original Well Elev)  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °

Coordinates are relative to: McConahay 1C-34H-H266  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.48°

