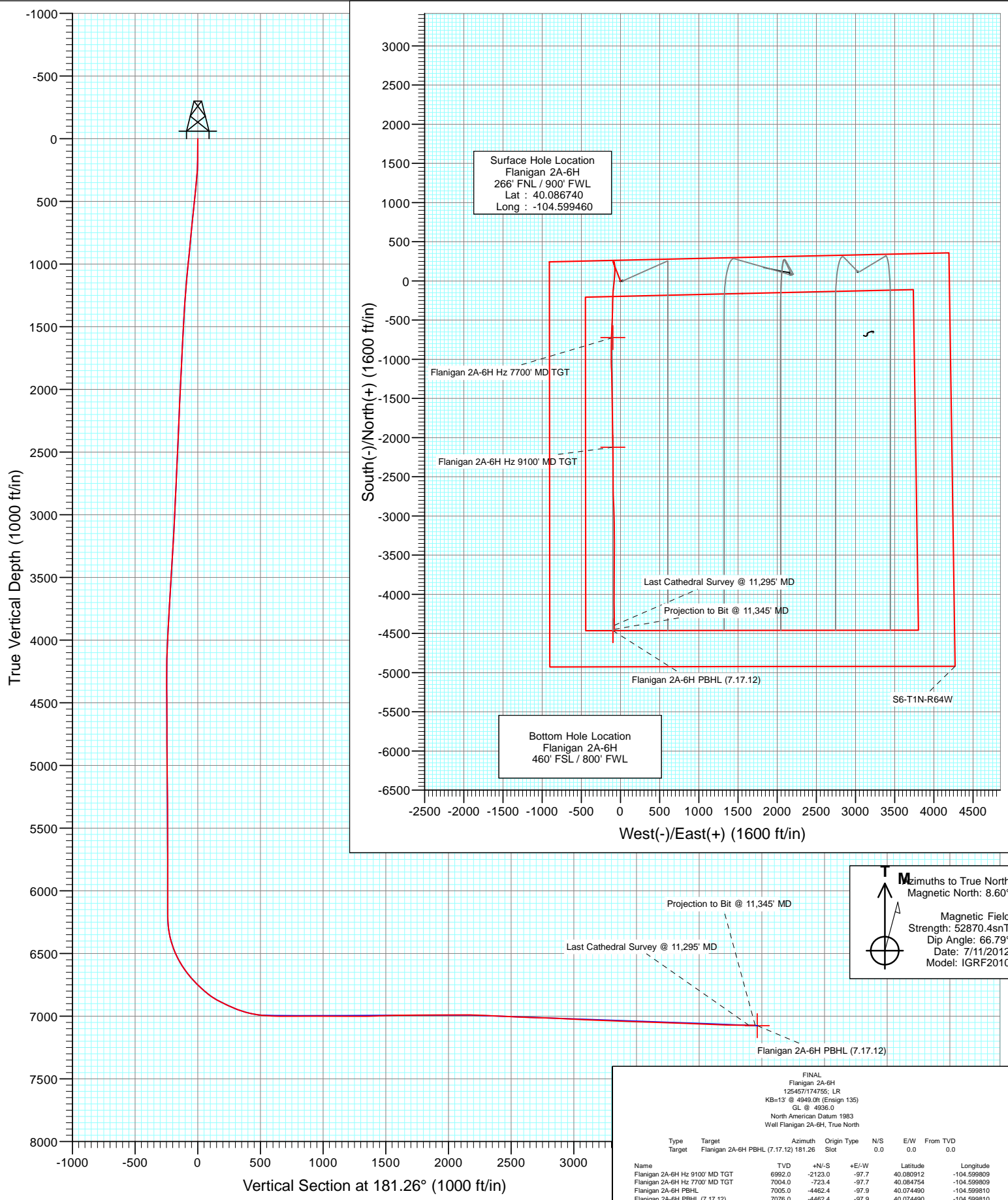


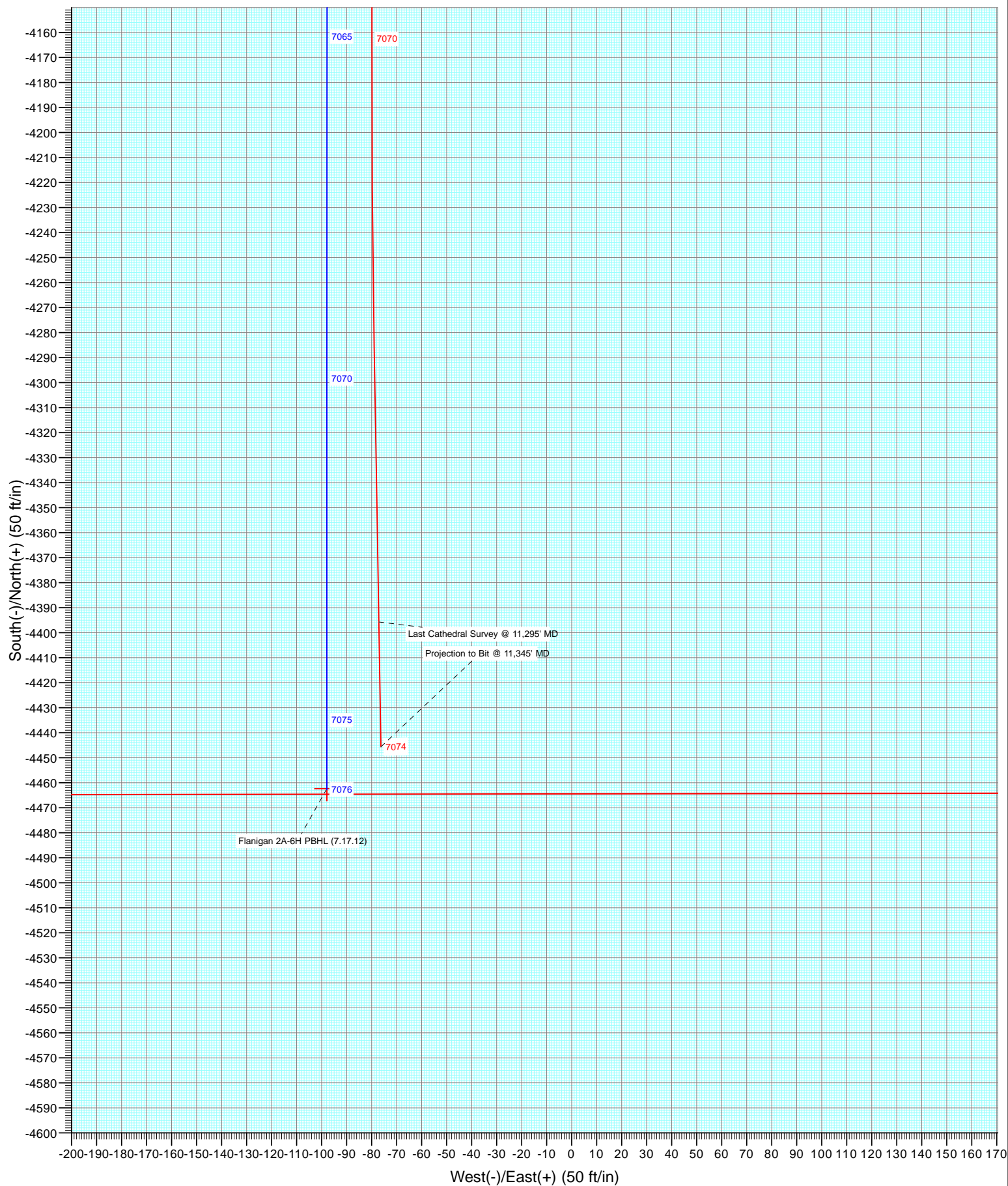


Project: DJ Wattenberg  
 Site: NWNE S6-T1N-R64W (Flanigan)  
 Well: Flanigan 2A-6H  
 Wellbore: Hz  
 Design: FINAL





Project: DJ Wattenberg  
Site: NWNE S6-T1N-R64W (Flanigan)  
Well: Flanigan 2A-6H  
Wellbore: Hz  
Design: FINAL



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Flanigan 2A-6H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Site:</b>	NWNE S6-T1N-R64W (Flanigan)	<b>MD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Well:</b>	Flanigan 2A-6H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<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 S6-T1N-R64W (Flanigan)			
Site Position:		Northing:	1,275,832.11 ft	Latitude:	40.086970
From:	Lat/Long	Easting:	3,254,152.25 ft	Longitude:	-104.591660
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.59 °

Well	Flanigan 2A-6H					
Well Position	+N/-S	0.0 ft	Northing:	1,275,726.06 ft	Latitude:	40.086740
	+E/-W	0.0 ft	Easting:	3,251,970.80 ft	Longitude:	-104.599460
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,936.0 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	7/11/2012	8.60	66.79	52,870

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	181.26	

<b>Survey Program</b>	<b>Date</b>	7/22/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
136.0	11,345.0	Survey #1 (Hz)	MWD	Geolink MWD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
136.0	0.30	8.50	136.0	0.4	0.1	-0.4	0.22	0.22		
228.0	2.60	340.10	228.0	2.6	-0.6	-2.5	2.54	2.50		
320.0	6.20	335.40	319.7	9.0	-3.4	-9.0	3.93	3.91		
412.0	6.40	336.00	411.1	18.2	-7.6	-18.1	0.23	0.22		
504.0	6.40	335.60	502.5	27.6	-11.8	-27.3	0.05	0.00		
596.0	6.20	335.20	594.0	36.8	-16.0	-36.4	0.22	-0.22		
688.0	6.30	336.60	685.4	45.9	-20.0	-45.5	0.20	0.11		
780.0	6.20	343.20	776.9	55.3	-23.5	-54.8	0.79	-0.11		
872.0	5.80	342.20	868.4	64.5	-26.3	-63.9	0.45	-0.43		
964.0	5.80	340.80	959.9	73.3	-29.3	-72.6	0.15	0.00		
1,001.0	5.60	341.30	996.7	76.8	-30.5	-76.1	0.56	-0.54		
1,087.0	5.80	342.10	1,082.3	84.9	-33.2	-84.1	0.25	0.23		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Flanigan 2A-6H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Site:</b>	NWNE S6-T1N-R64W (Flanigan)	<b>MD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Well:</b>	Flanigan 2A-6H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,179.0	5.70	334.10	1,173.9	93.4	-36.6	-92.6	0.88	-0.11	
1,271.0	4.70	336.80	1,265.5	101.0	-40.1	-100.1	1.12	-1.09	
1,363.0	3.90	343.70	1,357.2	107.5	-42.4	-106.5	1.03	-0.87	
1,455.0	3.30	333.20	1,449.0	112.8	-44.5	-111.8	0.97	-0.65	
1,550.0	3.10	344.40	1,543.9	117.7	-46.4	-116.7	0.69	-0.21	
1,645.0	3.10	343.90	1,638.8	122.7	-47.8	-121.6	0.03	0.00	
1,740.0	3.00	335.70	1,733.6	127.4	-49.6	-126.3	0.47	-0.11	
1,834.0	2.90	337.60	1,827.5	131.9	-51.5	-130.7	0.15	-0.11	
1,929.0	3.10	333.50	1,922.4	136.4	-53.6	-135.2	0.31	0.21	
2,024.0	2.90	338.50	2,017.2	140.9	-55.6	-139.7	0.35	-0.21	
2,119.0	3.20	337.50	2,112.1	145.6	-57.5	-144.3	0.32	0.32	
2,214.0	2.90	334.20	2,207.0	150.2	-59.5	-148.9	0.37	-0.32	
2,309.0	2.80	339.60	2,301.8	154.5	-61.4	-153.2	0.30	-0.11	
2,403.0	2.20	339.10	2,395.8	158.4	-62.8	-157.0	0.64	-0.64	
2,498.0	2.40	334.60	2,490.7	161.9	-64.3	-160.4	0.28	0.21	
2,593.0	3.20	336.10	2,585.6	166.1	-66.3	-164.6	0.85	0.84	
2,688.0	2.90	332.40	2,680.4	170.7	-68.5	-169.1	0.38	-0.32	
2,782.0	3.30	337.60	2,774.3	175.3	-70.6	-173.7	0.52	0.43	
2,877.0	2.60	337.70	2,869.2	179.8	-72.4	-178.2	0.74	-0.74	
2,972.0	2.90	343.70	2,964.1	184.1	-73.9	-182.4	0.44	0.32	
3,067.0	3.00	342.60	3,058.9	188.8	-75.4	-187.1	0.12	0.11	
3,162.0	3.30	339.60	3,153.8	193.7	-77.1	-192.0	0.36	0.32	
3,257.0	3.60	333.30	3,248.6	198.9	-79.3	-197.1	0.51	0.32	
3,351.0	3.80	330.80	3,342.4	204.3	-82.2	-202.4	0.27	0.21	
3,446.0	4.30	342.20	3,437.2	210.4	-84.8	-208.5	1.00	0.53	
3,541.0	3.70	342.90	3,532.0	216.7	-86.8	-214.8	0.63	-0.63	
3,635.0	3.50	340.90	3,625.8	222.4	-88.6	-220.4	0.25	-0.21	
3,730.0	3.30	346.30	3,720.6	227.8	-90.2	-225.7	0.40	-0.21	
3,825.0	3.10	351.00	3,815.5	232.9	-91.3	-230.9	0.35	-0.21	
3,920.0	3.20	348.90	3,910.3	238.1	-92.2	-236.0	0.16	0.11	
4,015.0	2.50	346.30	4,005.2	242.7	-93.2	-240.6	0.75	-0.74	
4,110.0	2.40	344.60	4,100.1	246.6	-94.2	-244.5	0.13	-0.11	
4,204.0	1.10	354.10	4,194.1	249.4	-94.8	-247.3	1.41	-1.38	
4,299.0	0.60	346.80	4,289.1	250.8	-95.0	-248.7	0.54	-0.53	
4,394.0	1.00	182.60	4,384.1	250.5	-95.2	-248.3	1.67	0.42	
4,489.0	0.70	162.40	4,479.0	249.1	-95.1	-247.0	0.44	-0.32	
4,584.0	0.50	197.70	4,574.0	248.1	-95.0	-246.0	0.43	-0.21	
4,678.0	0.30	109.20	4,668.0	247.7	-94.9	-245.5	0.61	-0.21	
4,773.0	1.10	117.40	4,763.0	247.2	-93.9	-245.1	0.85	0.84	
4,868.0	1.20	58.20	4,858.0	247.3	-92.2	-245.2	1.20	0.11	
4,962.0	1.30	110.70	4,952.0	247.4	-90.4	-245.4	1.18	0.11	
5,057.0	1.00	163.00	5,047.0	246.2	-89.1	-244.2	1.10	-0.32	
5,152.0	1.50	87.10	5,141.9	245.5	-87.6	-243.5	1.67	0.53	
5,247.0	1.40	161.90	5,236.9	244.5	-86.0	-242.5	1.86	-0.11	
5,342.0	1.10	135.50	5,331.9	242.7	-85.0	-240.8	0.67	-0.32	
5,436.0	0.80	79.10	5,425.9	242.2	-83.7	-240.3	1.00	-0.32	
5,531.0	0.90	261.00	5,520.9	242.2	-83.8	-240.3	1.79	0.11	
5,626.0	0.20	263.80	5,615.9	242.1	-84.7	-240.2	0.74	-0.74	
5,721.0	0.20	169.30	5,710.9	241.9	-84.9	-240.0	0.31	0.00	
5,816.0	0.60	129.00	5,805.9	241.4	-84.5	-239.5	0.49	0.42	
5,911.0	0.10	229.90	5,900.9	241.1	-84.1	-239.2	0.66	-0.53	
6,006.0	0.70	78.80	5,995.9	241.1	-83.6	-239.2	0.83	0.63	
6,100.0	0.80	80.50	6,089.9	241.3	-82.4	-239.5	0.11	0.11	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Flanigan 2A-6H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Site:</b>	NWNE S6-T1N-R64W (Flanigan)	<b>MD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Well:</b>	Flanigan 2A-6H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

### Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
6,195.0	1.10	113.70	6,184.9	241.1	-80.9	-239.2	0.65	0.32	
6,258.0	2.40	157.50	6,247.8	239.6	-79.9	-237.8	2.82	2.06	
6,290.0	5.00	167.50	6,279.8	237.6	-79.3	-235.8	8.34	8.12	
6,322.0	8.60	171.40	6,311.5	233.9	-78.6	-232.1	11.34	11.25	
6,353.0	11.20	171.10	6,342.1	228.6	-77.8	-226.9	8.39	8.39	
6,385.0	13.60	172.20	6,373.3	221.8	-76.8	-220.1	7.54	7.50	
6,416.0	15.90	174.10	6,403.3	214.0	-75.9	-212.3	7.58	7.42	
6,448.0	18.20	175.00	6,433.9	204.7	-75.0	-203.0	7.23	7.19	
6,480.0	20.70	176.00	6,464.1	194.0	-74.2	-192.4	7.88	7.81	
6,511.0	23.30	177.80	6,492.8	182.4	-73.6	-180.8	8.66	8.39	
6,543.0	25.40	178.70	6,521.9	169.3	-73.2	-167.6	6.66	6.56	
6,574.0	27.70	179.10	6,549.7	155.4	-72.9	-153.8	7.44	7.42	
6,606.0	30.60	179.20	6,577.6	139.8	-72.7	-138.2	9.06	9.06	
6,638.0	33.60	179.90	6,604.7	122.8	-72.6	-121.2	9.45	9.37	
6,669.0	36.10	181.40	6,630.2	105.1	-72.8	-103.5	8.52	8.06	
6,701.0	38.10	183.30	6,655.7	85.8	-73.6	-84.2	7.20	6.25	
6,732.0	39.50	183.80	6,679.8	66.4	-74.8	-64.8	4.63	4.52	
6,764.0	41.50	185.00	6,704.2	45.7	-76.4	-44.0	6.71	6.25	
6,795.0	43.50	185.10	6,727.0	24.9	-78.2	-23.1	6.46	6.45	
6,827.0	45.50	185.60	6,749.9	2.5	-80.3	-0.8	6.35	6.25	
6,859.0	46.90	186.20	6,772.0	-20.4	-82.7	22.2	4.58	4.37	
6,890.0	48.00	185.60	6,793.0	-43.2	-85.0	45.0	3.82	3.55	
6,922.0	50.50	186.30	6,813.9	-67.3	-87.5	69.2	7.99	7.81	
6,953.0	53.30	186.40	6,833.0	-91.5	-90.2	93.5	9.04	9.03	
6,985.0	57.10	186.00	6,851.2	-117.6	-93.1	119.6	11.92	11.87	
7,016.0	59.80	184.40	6,867.5	-143.9	-95.5	146.0	9.76	8.71	
7,048.0	62.80	182.70	6,882.8	-171.9	-97.2	174.0	10.47	9.37	
7,080.0	64.70	181.70	6,897.0	-200.6	-98.3	202.7	6.57	5.94	
7,111.0	65.10	181.10	6,910.1	-228.7	-99.0	230.8	2.18	1.29	
7,143.0	65.50	181.10	6,923.5	-257.8	-99.5	259.9	1.25	1.25	
7,175.0	66.40	180.90	6,936.5	-287.0	-100.0	289.1	2.87	2.81	
7,206.0	69.00	180.90	6,948.3	-315.6	-100.5	317.8	8.39	8.39	
7,238.0	72.20	181.00	6,958.9	-345.8	-101.0	348.0	10.00	10.00	
7,269.0	74.70	181.50	6,967.8	-375.5	-101.6	377.7	8.21	8.06	
7,301.0	76.50	181.90	6,975.7	-406.5	-102.6	408.7	5.75	5.62	
7,333.0	78.20	181.70	6,982.7	-437.7	-103.5	439.9	5.35	5.31	
7,366.0	80.50	181.80	6,988.8	-470.1	-104.5	472.3	6.98	6.97	
7,424.0	85.70	182.50	6,995.8	-527.6	-106.7	529.9	9.05	8.97	
7,487.0	87.50	183.00	6,999.5	-590.5	-109.7	592.7	2.96	2.86	
7,550.0	89.00	182.20	7,001.4	-653.4	-112.6	655.7	2.70	2.38	
7,614.0	90.20	182.20	7,001.9	-717.3	-115.0	719.7	1.87	1.87	
7,619.6	90.20	182.08	7,001.9	-722.9	-115.2	725.3	2.06	0.00	Flanigan 2A-6H Hz 7700' MD TGT
7,677.0	90.20	180.90	7,001.7	-780.3	-116.7	782.7	2.06	0.00	
7,740.0	90.20	180.70	7,001.5	-843.3	-117.6	845.7	0.32	0.00	
7,803.0	91.10	181.30	7,000.7	-906.3	-118.7	908.7	1.72	1.43	
7,867.0	89.70	179.20	7,000.3	-970.3	-119.0	972.6	3.94	-2.19	
7,930.0	89.60	178.90	7,000.7	-1,033.2	-117.9	1,035.6	0.50	-0.16	
7,993.0	89.90	178.00	7,001.0	-1,096.2	-116.2	1,098.5	1.51	0.48	
8,056.0	89.50	177.30	7,001.3	-1,159.2	-113.7	1,161.4	1.28	-0.63	
8,120.0	89.90	178.20	7,001.6	-1,223.1	-111.1	1,225.3	1.54	0.62	
8,183.0	89.80	178.50	7,001.8	-1,286.1	-109.3	1,288.2	0.50	-0.16	
8,246.0	91.40	178.70	7,001.1	-1,349.1	-107.8	1,351.1	2.56	2.54	
8,309.0	91.50	179.50	6,999.5	-1,412.0	-106.8	1,414.0	1.28	0.16	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Flanigan 2A-6H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Site:</b>	NWNE S6-T1N-R64W (Flanigan)	<b>MD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Well:</b>	Flanigan 2A-6H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
8,373.0	92.20	180.80	6,997.5	-1,476.0	-107.0	1,478.0	2.31	1.09	
8,436.0	92.50	180.00	6,994.9	-1,538.9	-107.4	1,540.9	1.36	0.48	
8,499.0	90.40	179.10	6,993.3	-1,601.9	-106.9	1,603.9	3.63	-3.33	
8,562.0	90.20	178.50	6,993.0	-1,664.9	-105.6	1,666.8	1.00	-0.32	
8,625.0	91.00	178.70	6,992.3	-1,727.9	-104.1	1,729.8	1.31	1.27	
8,688.0	90.70	178.80	6,991.4	-1,790.9	-102.7	1,792.7	0.50	-0.48	
8,752.0	89.70	179.40	6,991.1	-1,854.9	-101.7	1,856.6	1.82	-1.56	
8,815.0	89.40	179.20	6,991.6	-1,917.8	-100.9	1,919.6	0.57	-0.48	
8,878.0	90.40	178.60	6,991.7	-1,980.8	-99.7	1,982.5	1.85	1.59	
8,941.0	90.70	178.60	6,991.1	-2,043.8	-98.2	2,045.5	0.48	0.48	
9,005.0	90.10	178.60	6,990.7	-2,107.8	-96.6	2,109.4	0.94	-0.94	
9,020.2	89.98	178.99	6,990.7	-2,123.0	-96.3	2,124.6	2.66	-0.79	Flanigan 2A-6H Hz 9100' MD TGT
9,068.0	89.60	180.20	6,990.9	-2,170.8	-95.9	2,172.4	2.66	-0.79	
9,131.0	88.10	180.40	6,992.1	-2,233.8	-96.3	2,235.3	2.40	-2.38	
9,194.0	87.30	179.90	6,994.7	-2,296.7	-96.4	2,298.3	1.50	-1.27	
9,258.0	86.60	179.30	6,998.1	-2,360.6	-96.0	2,362.2	1.44	-1.09	
9,321.0	87.00	178.50	7,001.6	-2,423.5	-94.8	2,425.0	1.42	0.63	
9,384.0	87.90	179.30	7,004.4	-2,486.4	-93.6	2,487.9	1.91	1.43	
9,447.0	87.40	179.10	7,007.0	-2,549.4	-92.7	2,550.8	0.85	-0.79	
9,510.0	87.50	179.80	7,009.8	-2,612.3	-92.1	2,613.7	1.12	0.16	
9,574.0	88.20	180.10	7,012.2	-2,676.3	-92.0	2,677.6	1.19	1.09	
9,637.0	89.00	179.50	7,013.7	-2,739.2	-91.8	2,740.6	1.59	1.27	
9,700.0	87.40	177.90	7,015.7	-2,802.2	-90.4	2,803.5	3.59	-2.54	
9,763.0	87.60	177.10	7,018.4	-2,865.1	-87.6	2,866.3	1.31	0.32	
9,827.0	87.20	177.40	7,021.3	-2,928.9	-84.6	2,930.1	0.78	-0.62	
9,890.0	86.80	177.40	7,024.6	-2,991.8	-81.7	2,992.9	0.63	-0.63	
9,953.0	87.40	177.90	7,027.8	-3,054.7	-79.1	3,055.7	1.24	0.95	
10,016.0	88.10	178.70	7,030.3	-3,117.6	-77.3	3,118.5	1.69	1.11	
10,080.0	87.90	179.10	7,032.5	-3,181.5	-76.0	3,182.4	0.70	-0.31	
10,143.0	87.60	180.20	7,035.0	-3,244.5	-75.7	3,245.4	1.81	-0.48	
10,206.0	87.10	181.40	7,037.9	-3,307.4	-76.5	3,308.3	2.06	-0.79	
10,269.0	87.70	180.70	7,040.8	-3,370.3	-77.7	3,371.2	1.46	0.95	
10,332.0	87.70	180.90	7,043.3	-3,433.3	-78.6	3,434.2	0.32	0.00	
10,395.0	88.30	180.50	7,045.5	-3,496.2	-79.3	3,497.1	1.14	0.95	
10,459.0	87.60	180.10	7,047.8	-3,560.2	-79.7	3,561.1	1.26	-1.09	
10,522.0	87.60	180.10	7,050.4	-3,623.1	-79.8	3,624.0	0.00	0.00	
10,585.0	89.10	180.40	7,052.2	-3,686.1	-80.1	3,687.0	2.43	2.38	
10,648.0	89.50	180.20	7,053.0	-3,749.1	-80.4	3,750.0	0.71	0.63	
10,711.0	88.40	180.30	7,054.2	-3,812.1	-80.7	3,812.9	1.75	-1.75	
10,774.0	87.80	180.00	7,056.2	-3,875.0	-80.8	3,875.9	1.06	-0.95	
10,838.0	87.00	179.60	7,059.2	-3,939.0	-80.6	3,939.8	1.40	-1.25	
10,901.0	87.30	179.90	7,062.3	-4,001.9	-80.3	4,002.7	0.67	0.48	
10,964.0	87.10	179.70	7,065.4	-4,064.8	-80.1	4,065.6	0.45	-0.32	
11,027.0	87.40	179.90	7,068.4	-4,127.7	-79.9	4,128.5	0.57	0.48	
11,059.0	87.30	180.00	7,069.9	-4,159.7	-79.9	4,160.5	0.44	-0.31	
11,122.0	89.00	179.80	7,071.9	-4,222.7	-79.7	4,223.4	2.72	2.70	
11,185.0	89.50	178.80	7,072.7	-4,285.7	-79.0	4,286.4	1.77	0.79	
11,249.0	89.90	179.20	7,073.1	-4,349.7	-77.9	4,350.3	0.88	0.62	
11,295.0	89.40	179.00	7,073.3	-4,395.7	-77.1	4,396.3	1.17	-1.09	Last Cathedral Survey @ 11,295' MD
11,345.0	89.40	179.00	7,073.9	-4,445.6	-76.3	4,446.2	0.00	0.00	Projection to Bit @ 11,345' MD - Flanigan 2A-6H

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Flanigan 2A-6H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Site:</b>	NWNE S6-T1N-R64W (Flanigan)	<b>MD Reference:</b>	KB=13' @ 4949.0ft (Ensign 135)
<b>Well:</b>	Flanigan 2A-6H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Flanigan 2A-6H PBHL (7	0.00	0.00	7,076.0	-4,462.4	-97.9	1,271,262.90	3,251,918.18	40.074490	-104.599810
- actual wellpath misses target center by 27.5ft at 11345.0ft MD (7073.9 TVD, -4445.6 N, -76.3 E)									
- Point									
Flanigan 2A-6H Hz 910C	0.00	0.00	6,992.0	-2,123.0	-97.7	1,273,602.14	3,251,894.70	40.080912	-104.599809
- actual wellpath misses target center by 1.9ft at 9020.2ft MD (6990.7 TVD, -2123.0 N, -96.3 E)									
- Point									
Flanigan 2A-6H Hz 770C	0.00	0.00	7,004.0	-723.4	-97.7	1,275,001.71	3,251,880.49	40.084754	-104.599809
- actual wellpath misses target center by 17.7ft at 7619.4ft MD (7001.9 TVD, -722.7 N, -115.2 E)									
- Point									
Flanigan 2A-6H PBHL	0.00	0.00	7,005.0	-4,462.4	-97.9	1,271,262.90	3,251,918.18	40.074490	-104.599810
- actual wellpath misses target center by 74.1ft at 11345.0ft MD (7073.9 TVD, -4445.6 N, -76.3 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment	
11,295.0	7,073.3	-4,395.7	-77.1	Last Cathedral Survey @ 11,295' MD	
11,345.0	7,073.9	-4,445.6	-76.3	Projection to Bit @ 11,345' MD	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_