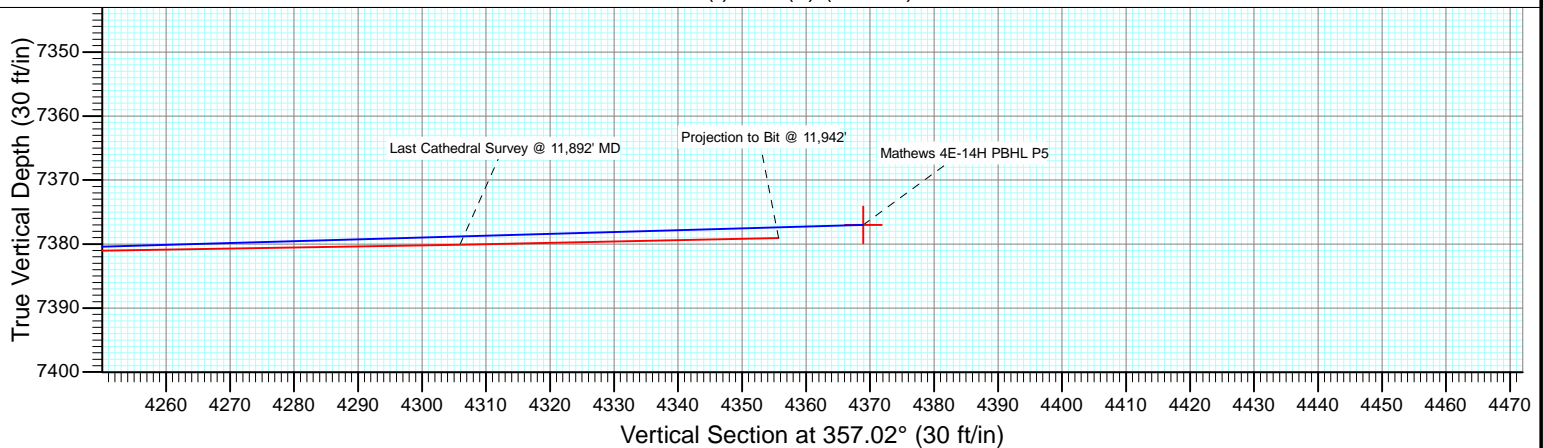
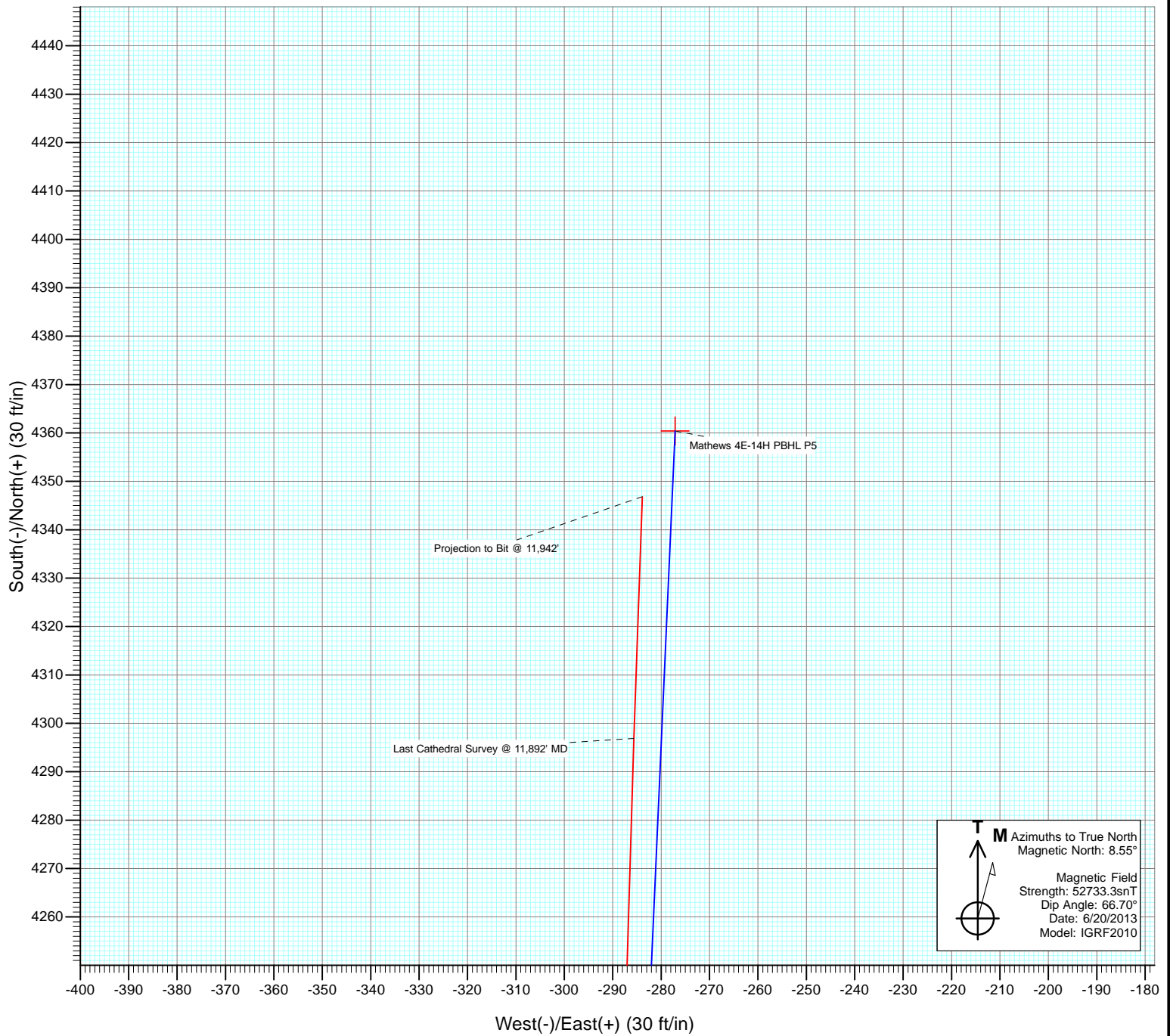




Project: DJ Wattenberg  
Site: S14 T1N-R66W (Mathews)  
Well: Mathews 4E-14H  
Wellbore: HZ  
Design: FINAL



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Mathews 4E-14H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Site:</b>	S14 T1N-R66W (Mathews)	<b>MD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Well:</b>	Mathews 4E-14H	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	HZ	<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		S14 T1N-R66W (Mathews)			
Site Position:		Northing:	1,260,084.79 ft	Latitude:	40.044810
From:	Lat/Long	Easting:	3,212,836.64 ft	Longitude:	-104.739800
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.49 °

Well	Mathews 4E-14H					
Well Position	+N/-S	0.0 ft	Northing:	1,260,265.51 ft	Latitude:	40.045290
	+E/-W	0.0 ft	Easting:	3,213,521.04 ft	Longitude:	-104.737350
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,104.0 ft

<b>Wellbore</b>	HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	6/20/2013	8.55	66.70	52,733

<b>Design</b>	HZ				
<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</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	357.02	

<b>Survey Program</b>	<b>Date</b>	7/2/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
170.0	11,942.0	Survey #1 (HZ)	Geolink 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		
170.0	0.40	134.20	170.0	-0.4	0.4	-0.4	0.24	0.24		
262.0	0.10	42.80	262.0	-0.6	0.7	-0.6	0.45	-0.33		
354.0	0.30	121.90	354.0	-0.6	1.0	-0.7	0.32	0.22		
446.0	0.90	208.50	446.0	-1.4	0.8	-1.5	1.01	0.65		
537.0	2.40	221.20	537.0	-3.5	-0.8	-3.4	1.69	1.65		
629.0	3.70	219.10	628.8	-7.2	-3.9	-7.0	1.42	1.41		
721.0	4.60	226.40	720.6	-12.1	-8.5	-11.6	1.13	0.98		
813.0	5.10	222.80	812.2	-17.6	-13.9	-16.9	0.64	0.54		
905.0	6.50	219.90	903.8	-24.6	-20.0	-23.5	1.55	1.52		
997.0	7.60	216.40	995.1	-33.5	-27.0	-32.1	1.28	1.20		
1,088.0	7.90	211.30	1,085.2	-43.7	-33.8	-41.9	0.82	0.33		
1,180.0	8.10	210.80	1,176.4	-54.7	-40.4	-52.5	0.23	0.22		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Mathews 4E-14H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Site:</b>	S14 T1N-R66W (Mathews)	<b>MD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Well:</b>	Mathews 4E-14H	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	HZ	<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
1,272.0	6.90	209.20	1,267.6	-65.1	-46.4	-62.6	1.32	-1.30	
1,313.0	6.50	209.70	1,308.3	-69.2	-48.8	-66.6	0.99	-0.98	
1,379.0	6.50	210.10	1,373.9	-75.7	-52.5	-72.9	0.07	0.00	
1,471.0	6.40	209.20	1,465.3	-84.7	-57.6	-81.6	0.15	-0.11	
1,563.0	7.60	213.60	1,556.6	-94.2	-63.5	-90.8	1.43	1.30	
1,655.0	8.10	212.50	1,647.7	-104.8	-70.3	-101.0	0.57	0.54	
1,746.0	9.20	217.40	1,737.7	-115.9	-78.2	-111.7	1.45	1.21	
1,838.0	9.10	218.30	1,828.5	-127.5	-87.2	-122.8	0.19	-0.11	
1,930.0	8.70	210.10	1,919.4	-139.2	-95.2	-134.1	1.44	-0.43	
2,025.0	8.30	208.40	2,013.4	-151.5	-102.0	-146.0	0.50	-0.42	
2,120.0	8.40	210.20	2,107.4	-163.5	-108.8	-157.6	0.29	0.11	
2,214.0	7.70	215.90	2,200.4	-174.5	-115.9	-168.3	1.13	-0.74	
2,309.0	8.00	217.90	2,294.6	-184.9	-123.7	-178.2	0.43	0.32	
2,404.0	7.70	204.10	2,388.7	-195.9	-130.4	-188.9	2.00	-0.32	
2,499.0	7.20	209.60	2,482.9	-206.9	-135.9	-199.6	0.92	-0.53	
2,593.0	7.30	212.50	2,576.1	-217.1	-142.0	-209.4	0.40	0.11	
2,688.0	7.30	213.00	2,670.3	-227.2	-148.6	-219.2	0.07	0.00	
2,782.0	8.40	213.90	2,763.5	-237.9	-155.6	-229.5	1.18	1.17	
2,877.0	7.70	206.00	2,857.5	-249.4	-162.3	-240.6	1.38	-0.74	
2,971.0	6.90	196.20	2,950.8	-260.5	-166.6	-251.5	1.57	-0.85	
3,066.0	8.50	205.90	3,044.9	-272.3	-171.3	-263.0	2.16	1.68	
3,161.0	9.10	208.00	3,138.8	-285.2	-177.9	-275.6	0.72	0.63	
3,255.0	9.00	211.40	3,231.6	-298.1	-185.2	-288.1	0.58	-0.11	
3,350.0	8.70	219.80	3,325.5	-309.9	-193.7	-299.5	1.40	-0.32	
3,444.0	7.60	216.50	3,418.6	-320.4	-201.9	-309.5	1.27	-1.17	
3,539.0	7.10	217.60	3,512.8	-330.1	-209.2	-318.8	0.55	-0.53	
3,633.0	7.80	211.50	3,606.0	-340.2	-216.1	-328.5	1.12	0.74	
3,728.0	8.50	213.20	3,700.0	-351.5	-223.3	-339.4	0.78	0.74	
3,823.0	7.30	214.60	3,794.1	-362.4	-230.6	-349.9	1.28	-1.26	
3,918.0	6.60	207.40	3,888.4	-372.2	-236.6	-359.4	1.18	-0.74	
4,012.0	6.30	213.80	3,981.8	-381.3	-241.9	-368.2	0.83	-0.32	
4,107.0	6.40	208.90	4,076.2	-390.2	-247.4	-376.8	0.58	0.11	
4,202.0	5.50	211.90	4,170.7	-398.7	-252.3	-385.1	1.00	-0.95	
4,297.0	4.40	213.70	4,265.4	-405.6	-256.8	-391.7	1.17	-1.16	
4,392.0	2.90	232.00	4,360.2	-410.1	-260.7	-396.0	1.98	-1.58	
4,487.0	3.20	231.10	4,455.0	-413.3	-264.6	-399.0	0.32	0.32	
4,581.0	2.50	231.20	4,548.9	-416.2	-268.3	-401.7	0.74	-0.74	
4,676.0	1.10	245.30	4,643.9	-417.9	-270.7	-403.3	1.53	-1.47	
4,771.0	0.60	343.10	4,738.9	-417.8	-271.7	-403.1	1.39	-0.53	
4,866.0	0.40	269.40	4,833.9	-417.3	-272.2	-402.6	0.65	-0.21	
4,960.0	0.70	332.30	4,927.9	-416.8	-272.8	-402.1	0.67	0.32	
5,055.0	0.80	295.20	5,022.9	-416.0	-273.6	-401.2	0.51	0.11	
5,150.0	1.40	236.90	5,117.8	-416.4	-275.2	-401.5	1.26	0.63	
5,245.0	0.60	254.50	5,212.8	-417.1	-276.7	-402.2	0.89	-0.84	
5,340.0	0.30	347.50	5,307.8	-417.0	-277.2	-402.1	0.72	-0.32	
5,434.0	0.60	14.20	5,401.8	-416.3	-277.1	-401.3	0.38	0.32	
5,529.0	0.90	16.60	5,496.8	-415.1	-276.8	-400.2	0.32	0.32	
5,624.0	1.00	2.20	5,591.8	-413.6	-276.5	-398.6	0.27	0.11	
5,718.0	1.10	306.70	5,685.8	-412.2	-277.2	-397.2	1.04	0.11	
5,813.0	0.80	92.70	5,780.8	-411.7	-277.3	-396.7	1.91	-0.32	
5,907.0	1.40	139.90	5,874.8	-412.6	-275.9	-397.7	1.10	0.64	
6,002.0	1.10	136.70	5,969.7	-414.2	-274.5	-399.3	0.32	-0.32	
6,097.0	0.60	118.40	6,064.7	-415.1	-273.5	-400.3	0.59	-0.53	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Mathews 4E-14H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Site:</b>	S14 T1N-R66W (Mathews)	<b>MD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Well:</b>	Mathews 4E-14H	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	HZ	<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
6,192.0	0.40	58.50	6,159.7	-415.1	-272.7	-400.4	0.56	-0.21	
6,287.0	0.70	172.40	6,254.7	-415.5	-272.4	-400.8	0.99	0.32	
6,381.0	0.60	61.20	6,348.7	-415.9	-271.9	-401.2	1.14	-0.11	
6,476.0	1.30	24.40	6,443.7	-414.6	-271.0	-400.0	0.94	0.74	
6,570.0	1.00	270.70	6,537.7	-413.7	-271.4	-399.0	2.06	-0.32	
6,665.0	0.70	306.70	6,632.7	-413.3	-272.7	-398.6	0.63	-0.32	
6,759.0	0.90	4.40	6,726.7	-412.2	-273.1	-397.5	0.84	0.21	
6,854.0	1.60	2.70	6,821.7	-410.2	-273.0	-395.4	0.74	0.74	
6,918.0	3.40	346.10	6,885.6	-407.4	-273.4	-392.7	3.00	2.81	
6,949.0	7.40	351.10	6,916.5	-404.6	-273.9	-389.8	12.98	12.90	
6,981.0	12.20	357.90	6,948.0	-399.1	-274.3	-384.3	15.40	15.00	
7,012.0	15.50	359.40	6,978.1	-391.7	-274.5	-376.9	10.71	10.65	
7,044.0	18.90	359.00	7,008.6	-382.3	-274.6	-367.5	10.63	10.62	
7,075.0	22.40	359.10	7,037.6	-371.3	-274.8	-356.5	11.29	11.29	
7,107.0	25.20	359.10	7,066.9	-358.4	-275.0	-343.6	8.75	8.75	
7,138.0	27.70	358.50	7,094.7	-344.6	-275.3	-329.8	8.11	8.06	
7,170.0	30.50	358.40	7,122.6	-329.1	-275.7	-314.3	8.75	8.75	
7,201.0	34.60	359.30	7,148.8	-312.4	-276.1	-297.6	13.32	13.23	
7,233.0	39.50	359.30	7,174.3	-293.1	-276.3	-278.3	15.31	15.31	
7,264.0	43.10	359.00	7,197.6	-272.7	-276.6	-257.9	11.63	11.61	
7,296.0	46.30	357.80	7,220.3	-250.2	-277.2	-235.4	10.34	10.00	
7,328.0	48.70	358.40	7,241.9	-226.6	-278.0	-211.8	7.63	7.50	
7,359.0	51.30	358.80	7,261.9	-202.8	-278.6	-188.1	8.45	8.39	
7,391.0	54.40	359.20	7,281.2	-177.4	-279.0	-162.6	9.74	9.69	
7,423.0	58.90	359.20	7,298.8	-150.6	-279.4	-135.9	14.06	14.06	
7,454.0	62.70	359.60	7,313.9	-123.6	-279.7	-108.9	12.31	12.26	
7,485.0	64.90	359.80	7,327.6	-95.8	-279.8	-81.1	7.12	7.10	
7,517.0	67.70	359.80	7,340.4	-66.5	-279.9	-51.8	8.75	8.75	
7,549.0	70.50	358.20	7,351.9	-36.6	-280.5	-21.9	9.92	8.75	
7,580.0	73.70	357.10	7,361.4	-7.1	-281.7	7.6	10.86	10.32	
7,612.0	75.50	357.10	7,369.9	23.7	-283.2	38.4	5.62	5.62	
7,643.0	77.40	358.00	7,377.1	53.8	-284.5	68.5	6.75	6.13	
7,675.0	79.70	358.40	7,383.5	85.2	-285.5	99.9	7.29	7.19	
7,707.0	83.70	358.70	7,388.1	116.8	-286.3	131.5	12.53	12.50	
7,732.0	86.70	358.70	7,390.2	141.7	-286.9	156.4	12.00	12.00	
7,821.0	88.50	358.90	7,393.9	230.6	-288.7	245.3	2.03	2.02	
7,916.0	88.50	358.00	7,396.4	325.5	-291.3	340.2	0.95	0.00	
8,011.0	87.10	359.10	7,400.1	420.4	-293.7	435.1	1.87	-1.47	
8,105.0	87.20	358.20	7,404.7	514.3	-295.9	529.0	0.96	0.11	
8,200.0	92.40	1.80	7,405.1	609.2	-295.9	623.8	6.66	5.47	
8,263.0	90.40	0.80	7,403.5	672.2	-294.5	686.6	3.55	-3.17	
8,327.0	89.90	2.10	7,403.4	736.2	-292.9	750.4	2.18	-0.78	
8,390.0	90.70	5.10	7,403.0	799.0	-288.9	813.0	4.93	1.27	
8,455.0	89.50	3.80	7,402.9	863.8	-283.9	877.4	2.72	-1.85	
8,518.0	89.20	2.40	7,403.6	926.7	-280.5	940.1	2.27	-0.48	
8,582.0	88.90	0.60	7,404.7	990.7	-278.8	1,003.9	2.85	-0.47	
8,645.0	88.10	359.70	7,406.3	1,053.7	-278.6	1,066.8	1.91	-1.27	
8,708.0	89.10	0.20	7,407.9	1,116.7	-278.7	1,129.7	1.77	1.59	
8,771.0	86.60	358.40	7,410.2	1,179.6	-279.5	1,192.6	4.89	-3.97	
8,834.0	86.70	358.30	7,413.9	1,242.5	-281.3	1,255.4	0.22	0.16	
8,898.0	89.40	0.20	7,416.1	1,306.4	-282.1	1,319.3	5.16	4.22	
8,961.0	88.90	0.60	7,417.0	1,369.4	-281.7	1,382.2	1.02	-0.79	
9,036.5	88.11	358.30	7,419.0	1,444.9	-282.4	1,457.6	3.23	-1.05	Mathews 4E-14H 9000' MD TGT

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Mathews 4E-14H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Site:</b>	S14 T1N-R66W (Mathews)	<b>MD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Well:</b>	Mathews 4E-14H	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	HZ	<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
9,056.0	87.90	357.70	7,419.7	1,464.4	-283.1	1,477.1	3.23	-1.05	
9,150.0	86.90	356.60	7,424.0	1,558.1	-287.7	1,571.0	1.58	-1.06	
9,245.0	86.20	356.30	7,429.7	1,652.8	-293.6	1,665.8	0.80	-0.74	
9,308.0	87.00	357.20	7,433.4	1,715.6	-297.2	1,728.7	1.91	1.27	
9,371.0	87.90	356.70	7,436.2	1,778.4	-300.5	1,791.7	1.63	1.43	
9,434.0	90.30	356.50	7,437.2	1,841.3	-304.3	1,854.6	3.82	3.81	
9,497.0	91.70	356.90	7,436.1	1,904.2	-307.9	1,917.6	2.31	2.22	
9,561.0	92.00	359.10	7,434.0	1,968.1	-310.1	1,981.6	3.47	0.47	
9,624.0	91.40	359.80	7,432.2	2,031.1	-310.7	2,044.5	1.46	-0.95	
9,687.0	90.90	0.30	7,430.9	2,094.1	-310.7	2,107.4	1.12	-0.79	
9,750.0	91.10	1.30	7,429.8	2,157.1	-309.8	2,170.2	1.62	0.32	
9,813.0	89.90	2.60	7,429.3	2,220.0	-307.6	2,233.0	2.81	-1.90	
9,907.0	89.30	3.40	7,429.9	2,313.9	-302.7	2,326.5	1.06	-0.64	
10,002.0	89.10	1.80	7,431.2	2,408.8	-298.4	2,421.0	1.70	-0.21	
10,065.0	90.10	0.60	7,431.7	2,471.8	-297.1	2,483.9	2.48	1.59	
10,128.0	90.70	0.80	7,431.2	2,534.7	-296.3	2,546.7	1.00	0.95	
10,191.0	92.10	1.10	7,429.7	2,597.7	-295.3	2,609.6	2.27	2.22	
10,238.1	90.61	359.38	7,428.6	2,644.8	-295.1	2,656.5	4.84	-3.17	Mathews 4E-14H 10,200' MD TGT
10,254.0	90.10	358.80	7,428.5	2,660.7	-295.3	2,672.5	4.84	-3.18	
10,317.0	90.50	358.20	7,428.2	2,723.7	-297.0	2,735.4	1.14	0.63	
10,380.0	91.40	357.60	7,427.1	2,786.6	-299.3	2,798.4	1.72	1.43	
10,475.0	93.10	359.50	7,423.4	2,881.5	-301.7	2,893.3	2.68	1.79	
10,569.0	93.40	0.30	7,418.1	2,975.4	-301.9	2,987.0	0.91	0.32	
10,664.0	92.90	0.10	7,412.8	3,070.2	-301.5	3,081.7	0.57	-0.53	
10,759.0	92.60	0.90	7,408.3	3,165.1	-300.7	3,176.5	0.90	-0.32	
10,854.0	90.40	359.50	7,405.8	3,260.1	-300.4	3,271.3	2.74	-2.32	
10,949.0	91.30	357.80	7,404.4	3,355.0	-302.6	3,366.2	2.02	0.95	
11,043.0	92.00	358.40	7,401.7	3,448.9	-305.7	3,460.2	0.98	0.74	
11,138.0	92.90	359.10	7,397.6	3,543.8	-307.8	3,555.0	1.20	0.95	
11,233.0	93.80	0.70	7,392.1	3,638.6	-308.0	3,649.7	1.93	0.95	
11,296.0	94.20	0.90	7,387.7	3,701.5	-307.1	3,712.4	0.71	0.63	
11,359.0	93.30	1.10	7,383.5	3,764.3	-306.0	3,775.2	1.46	-1.43	
11,422.0	90.00	3.20	7,381.7	3,827.3	-303.6	3,837.9	6.21	-5.24	
11,486.0	89.90	2.90	7,381.8	3,891.2	-300.2	3,901.5	0.49	-0.16	
11,549.0	89.70	2.80	7,382.0	3,954.1	-297.1	3,964.2	0.35	-0.32	
11,612.0	90.60	2.50	7,381.8	4,017.0	-294.2	4,026.9	1.51	1.43	
11,707.0	89.50	1.60	7,381.8	4,112.0	-290.8	4,121.5	1.50	-1.16	
11,801.0	90.70	1.40	7,381.6	4,205.9	-288.3	4,215.2	1.29	1.28	
11,892.0	91.20	2.00	7,380.1	4,296.9	-285.6	4,305.9	0.86	0.55	Last Cathedral Survey @ 11,892' MD
11,942.0	91.20	2.00	7,379.0	4,346.8	-283.9	4,355.7	0.00	0.00	Projection to Bit @ 11,942' - Mathews 4E-14H PI

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Mathews 4E-14H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Site:</b>	S14 T1N-R66W (Mathews)	<b>MD Reference:</b>	Well @ 5117.0ft (Ensign 135)
<b>Well:</b>	Mathews 4E-14H	<b>North Reference:</b>	True
<b>Wellbore:</b>	HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	HZ	<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									
Mathews 4E-14H PBHL	0.00	0.00	7,411.0	4,356.8	-215.5	1,264,620.26	3,213,268.04	40.057250	-104.738120
- actual wellpath misses target center by 76.1ft at 11942.0ft MD (7379.0 TVD, 4346.8 N, -283.9 E)									
- Point									
Mathews 4E-14H 9000' I	0.00	0.00	7,423.0	1,444.7	-287.2	1,261,707.66	3,213,221.47	40.049256	-104.738376
- actual wellpath misses target center by 6.2ft at 9036.6ft MD (7419.0 TVD, 1445.0 N, -282.4 E)									
- Point									
Mathews 4E-14H PBHL	0.00	0.00	7,377.0	4,360.4	-277.1	1,264,623.37	3,213,206.43	40.057260	-104.738340
- actual wellpath misses target center by 15.3ft at 11942.0ft MD (7379.0 TVD, 4346.8 N, -283.9 E)									
- Point									
Mathews 4E-14H 10,200'	0.00	0.00	7,423.0	2,644.7	-293.4	1,262,907.54	3,213,204.86	40.052550	-104.738398
- actual wellpath misses target center by 5.8ft at 10238.1ft MD (7428.6 TVD, 2644.8 N, -295.1 E)									
- Point									
Mathews 4E-14H PBHL	0.00	0.00	7,411.0	7,023.3	-209.9	1,267,286.72	3,213,250.73	40.064570	-104.738100
- actual wellpath misses target center by 2677.7ft at 11942.0ft MD (7379.0 TVD, 4346.8 N, -283.9 E)									
- Point									
Mathews 4E-14H FPP	0.00	0.00	7,411.0	-10.9	-229.6	1,260,252.63	3,213,291.57	40.045260	-104.738170
- actual wellpath misses target center by 71.7ft at 7587.0ft MD (7363.3 TVD, -0.4 N, -282.0 E)									
- Point									
Mathews 4E-14H PBHL	0.00	0.00	7,411.0	4,360.4	-277.1	1,264,623.37	3,213,206.43	40.057260	-104.738340
- actual wellpath misses target center by 35.4ft at 11942.0ft MD (7379.0 TVD, 4346.8 N, -283.9 E)									
- Point									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
11,892.0	7,380.1	4,296.9	-285.6	Last Cathedral Survey @ 11,892' MD
11,942.0	7,379.0	4,346.8	-283.9	Projection to Bit @ 11,942'

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