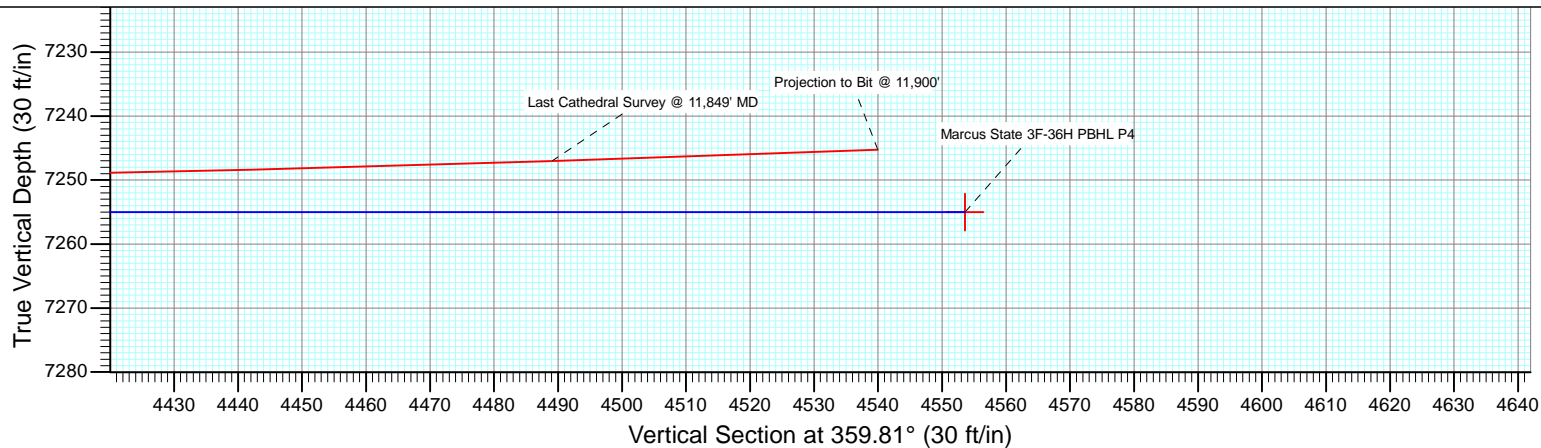
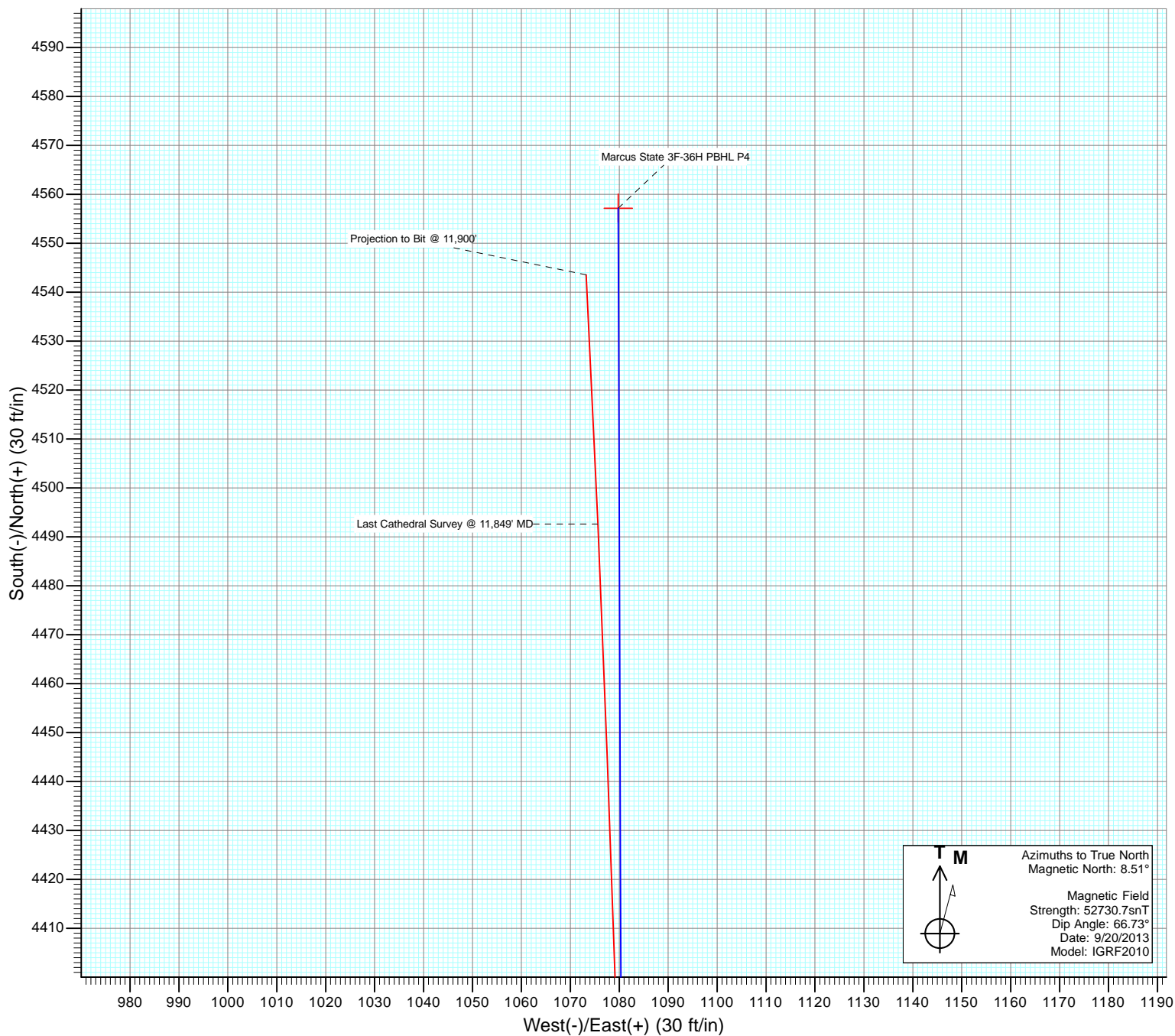




Project: DJ Wattenberg  
Site: S36 T2N-R66W (Marcus State)  
Well: Marcus State 3F-36H  
Wellbore: HZ  
Design: FINAL



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Marcus State 3F-36H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Site:</b>	S36 T2N-R66W (Marcus State)	<b>MD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Well:</b>	Marcus State 3F-36H	<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		S36 T2N-R66W (Marcus State)			
Site Position:		Northing:	1,275,942.66 ft	Latitude:	40.088280
From:	Lat/Long	Easting:	3,215,403.58 ft	Longitude:	-104.730140
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.50 °

Well	Marcus State 3F-36H					
Well Position	+N/-S	0.0 ft	Northing:	1,275,943.07 ft	Latitude:	40.088280
	+E/-W	0.0 ft	Easting:	3,215,453.94 ft	Longitude:	-104.729960
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,039.0 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	9/20/2013	8.51	66.73	52,731

Design	FINAL			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	359.81

<b>Survey Program</b>	<b>Date</b>	10/7/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
202.0	11,900.0	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	
202.0	0.00	187.40	202.0	0.0	0.0	0.0	0.00	0.00	
294.0	1.10	122.20	294.0	-0.5	0.7	-0.5	1.20	1.20	
386.0	2.20	120.30	386.0	-1.8	3.0	-1.8	1.20	1.20	
478.0	3.30	118.30	477.8	-4.0	6.9	-4.0	1.20	1.20	
570.0	4.30	113.40	569.6	-6.6	12.4	-6.6	1.14	1.09	
662.0	5.80	107.80	661.3	-9.4	20.0	-9.5	1.71	1.63	
755.0	6.90	109.30	753.7	-12.7	29.7	-12.8	1.20	1.18	
847.0	7.40	107.90	845.0	-16.3	40.6	-16.5	0.58	0.54	
938.0	8.00	108.50	935.2	-20.1	52.1	-20.3	0.67	0.66	
1,030.0	8.80	105.00	1,026.2	-24.0	65.0	-24.2	1.03	0.87	
1,122.0	8.20	102.30	1,117.2	-27.2	78.2	-27.5	0.78	-0.65	
1,179.0	7.80	105.30	1,173.6	-29.1	85.9	-29.4	1.01	-0.70	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Marcus State 3F-36H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Site:</b>	S36 T2N-R66W (Marcus State)	<b>MD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Well:</b>	Marcus State 3F-36H	<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
1,288.0	8.70	106.90	1,281.5	-33.4	100.9	-33.8	0.85	0.83	
1,380.0	9.10	106.90	1,372.4	-37.6	114.6	-38.0	0.43	0.43	
1,472.0	10.20	107.30	1,463.1	-42.1	129.3	-42.5	1.20	1.20	
1,564.0	10.70	103.60	1,553.6	-46.5	145.4	-47.0	0.91	0.54	
1,655.0	10.40	101.90	1,643.0	-50.2	161.6	-50.8	0.48	-0.33	
1,747.0	11.00	100.30	1,733.4	-53.5	178.4	-54.1	0.73	0.65	
1,839.0	10.90	102.80	1,823.7	-57.0	195.5	-57.7	0.53	-0.11	
1,931.0	10.70	107.50	1,914.1	-61.5	212.1	-62.2	0.98	-0.22	
2,026.0	10.70	102.90	2,007.5	-66.1	229.1	-66.9	0.90	0.00	
2,121.0	10.40	101.90	2,100.9	-69.9	246.1	-70.7	0.37	-0.32	
2,216.0	10.20	107.70	2,194.3	-74.2	262.5	-75.1	1.11	-0.21	
2,311.0	9.80	105.20	2,287.9	-78.9	278.4	-79.8	0.62	-0.42	
2,405.0	9.20	101.50	2,380.6	-82.5	293.4	-83.4	0.91	-0.64	
2,500.0	9.20	104.20	2,474.4	-85.8	308.2	-86.9	0.45	0.00	
2,595.0	9.30	111.40	2,568.1	-90.5	322.8	-91.6	1.22	0.11	
2,690.0	10.80	106.90	2,661.7	-95.9	338.4	-97.0	1.78	1.58	
2,784.0	9.90	101.80	2,754.2	-100.1	354.8	-101.3	1.37	-0.96	
2,879.0	9.80	103.40	2,847.8	-103.6	370.6	-104.9	0.31	-0.11	
2,974.0	9.80	107.90	2,941.4	-108.0	386.2	-109.3	0.81	0.00	
3,069.0	9.00	104.10	3,035.1	-112.3	401.1	-113.6	1.07	-0.84	
3,163.0	9.00	109.60	3,127.9	-116.6	415.1	-117.9	0.91	0.00	
3,258.0	8.80	112.60	3,221.8	-121.8	428.8	-123.3	0.53	-0.21	
3,353.0	9.50	106.30	3,315.6	-126.8	443.1	-128.3	1.29	0.74	
3,448.0	9.40	110.30	3,409.3	-131.7	457.9	-133.2	0.70	-0.11	
3,542.0	10.10	112.70	3,501.9	-137.6	472.7	-139.1	0.86	0.74	
3,637.0	8.80	105.10	3,595.7	-142.7	487.4	-144.3	1.89	-1.37	
3,732.0	8.90	105.30	3,689.5	-146.5	501.5	-148.2	0.11	0.11	
3,827.0	9.10	103.60	3,783.4	-150.2	515.9	-151.9	0.35	0.21	
3,922.0	10.50	104.00	3,877.0	-154.1	531.6	-155.8	1.48	1.47	
4,016.0	10.10	101.20	3,969.5	-157.8	548.0	-159.6	0.68	-0.43	
4,111.0	11.00	98.40	4,062.9	-160.7	565.1	-162.6	1.09	0.95	
4,206.0	10.20	101.80	4,156.2	-163.7	582.3	-165.7	1.07	-0.84	
4,301.0	10.90	103.30	4,249.6	-167.5	599.3	-169.5	0.79	0.74	
4,395.0	11.30	106.90	4,341.9	-172.2	616.7	-174.3	0.85	0.43	
4,490.0	9.90	100.10	4,435.2	-176.4	633.7	-178.5	1.97	-1.47	
4,585.0	9.30	107.50	4,528.9	-180.1	649.1	-182.3	1.44	-0.63	
4,679.0	8.90	110.00	4,621.7	-184.9	663.1	-187.1	0.60	-0.43	
4,774.0	8.80	110.10	4,715.6	-189.9	676.9	-192.1	0.11	-0.11	
4,869.0	9.50	109.40	4,809.4	-195.0	691.1	-197.3	0.75	0.74	
4,964.0	9.80	107.10	4,903.1	-200.0	706.2	-202.3	0.51	0.32	
5,058.0	8.50	103.50	4,995.9	-204.0	720.6	-206.4	1.51	-1.38	
5,153.0	8.20	106.20	5,089.9	-207.5	733.9	-209.9	0.52	-0.32	
5,248.0	8.90	104.80	5,183.8	-211.3	747.6	-213.7	0.77	0.74	
5,343.0	9.40	101.80	5,277.6	-214.7	762.3	-217.3	0.73	0.53	
5,437.0	10.30	106.90	5,370.2	-218.7	777.8	-221.3	1.33	0.96	
5,532.0	9.20	105.20	5,463.8	-223.2	793.3	-225.8	1.20	-1.16	
5,626.0	9.50	109.80	5,556.6	-227.8	807.8	-230.5	0.86	0.32	
5,721.0	8.20	104.20	5,650.5	-232.1	821.8	-234.8	1.64	-1.37	
5,815.0	8.40	107.80	5,743.5	-235.9	834.8	-238.6	0.59	0.21	
5,910.0	8.30	112.20	5,837.5	-240.6	847.7	-243.4	0.68	-0.11	
6,005.0	9.10	115.20	5,931.4	-246.4	860.9	-249.2	0.97	0.84	
6,099.0	9.50	106.20	6,024.1	-251.7	875.1	-254.6	1.60	0.43	
6,194.0	9.60	109.60	6,117.8	-256.5	890.1	-259.5	0.60	0.11	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Marcus State 3F-36H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Site:</b>	S36 T2N-R66W (Marcus State)	<b>MD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Well:</b>	Marcus State 3F-36H	<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
6,288.0	10.00	106.30	6,210.5	-261.5	905.3	-264.5	0.73	0.43	
6,383.0	9.60	99.10	6,304.1	-265.0	921.0	-268.1	1.36	-0.42	
6,478.0	8.30	101.90	6,397.9	-267.7	935.6	-270.8	1.44	-1.37	
6,573.0	9.50	107.10	6,491.8	-271.4	949.8	-274.6	1.52	1.26	
6,667.0	6.90	102.60	6,584.8	-274.9	962.7	-278.1	2.85	-2.77	
6,699.0	6.20	102.70	6,616.6	-275.7	966.2	-278.9	2.19	-2.19	
6,730.0	6.50	80.50	6,647.4	-275.8	969.6	-279.0	7.93	0.97	
6,762.0	8.80	60.10	6,679.1	-274.3	973.5	-277.5	11.02	7.19	
6,793.0	11.40	56.70	6,709.6	-271.4	978.1	-274.7	8.60	8.39	
6,825.0	13.40	51.80	6,740.9	-267.4	983.7	-270.6	7.06	6.25	
6,857.0	15.60	41.60	6,771.9	-261.9	989.5	-265.2	10.51	6.87	
6,888.0	18.70	31.80	6,801.5	-254.5	994.9	-257.8	13.64	10.00	
6,920.0	21.50	26.90	6,831.6	-244.9	1,000.2	-248.3	10.20	8.75	
6,951.0	24.10	24.90	6,860.1	-234.1	1,005.4	-237.5	8.75	8.39	
6,983.0	26.50	22.60	6,889.1	-221.6	1,010.9	-225.0	8.10	7.50	
7,014.0	28.50	20.80	6,916.6	-208.3	1,016.2	-211.7	6.99	6.45	
7,046.0	30.50	19.20	6,944.4	-193.5	1,021.6	-196.9	6.72	6.25	
7,077.0	33.00	17.70	6,970.8	-178.0	1,026.8	-181.4	8.46	8.06	
7,109.0	35.80	15.80	6,997.2	-160.7	1,032.0	-164.1	9.37	8.75	
7,141.0	39.30	14.20	7,022.5	-141.9	1,037.0	-145.3	11.35	10.94	
7,172.0	41.80	13.00	7,046.1	-122.3	1,041.7	-125.7	8.45	8.06	
7,204.0	44.70	12.00	7,069.4	-100.9	1,046.5	-104.4	9.31	9.06	
7,235.0	47.60	10.90	7,090.9	-79.0	1,050.9	-82.5	9.70	9.36	
7,267.0	50.40	9.80	7,111.9	-55.2	1,055.2	-58.7	9.13	8.75	
7,299.0	52.90	8.50	7,131.7	-30.5	1,059.2	-34.0	8.44	7.81	
7,330.0	56.40	6.90	7,149.6	-5.4	1,062.6	-8.9	12.05	11.29	
7,362.0	60.10	5.50	7,166.5	21.6	1,065.5	18.1	12.15	11.56	
7,393.0	63.30	4.70	7,181.2	48.8	1,068.0	45.3	10.57	10.32	
7,425.0	65.80	4.10	7,194.9	77.6	1,070.2	74.1	7.99	7.81	
7,457.0	68.90	3.80	7,207.2	107.1	1,072.2	103.5	9.73	9.69	
7,488.0	72.70	3.50	7,217.4	136.3	1,074.1	132.7	12.29	12.26	
7,520.0	75.80	3.10	7,226.1	167.0	1,075.8	163.5	9.76	9.69	
7,551.0	78.40	2.90	7,233.0	197.2	1,077.4	193.6	8.41	8.39	
7,583.0	82.00	2.20	7,238.5	228.7	1,078.8	225.1	11.45	11.25	
7,598.0	84.20	1.70	7,240.3	243.6	1,079.3	240.0	15.04	14.67	
7,636.0	86.70	1.20	7,243.3	281.5	1,080.3	277.9	6.71	6.58	
7,730.0	90.90	359.90	7,245.3	375.4	1,081.2	371.8	4.68	4.47	
7,825.0	91.10	0.60	7,243.6	470.4	1,081.6	466.8	0.77	0.21	
7,920.0	90.50	1.50	7,242.3	565.4	1,083.3	561.8	1.14	-0.63	
8,014.0	89.70	1.10	7,242.1	659.3	1,085.5	655.7	0.95	-0.85	
8,109.0	90.30	0.90	7,242.1	754.3	1,087.1	750.7	0.67	0.63	
8,203.0	89.40	1.10	7,242.4	848.3	1,088.8	844.7	0.98	-0.96	
8,298.0	88.90	359.80	7,243.8	943.3	1,089.5	939.7	1.47	-0.53	
8,393.0	90.80	359.50	7,244.0	1,038.3	1,088.9	1,034.7	2.02	2.00	
8,488.0	86.90	359.40	7,245.9	1,133.3	1,088.0	1,129.6	4.11	-4.11	
8,582.0	88.00	359.70	7,250.1	1,227.2	1,087.3	1,223.5	1.21	1.17	
8,677.0	90.60	1.30	7,251.3	1,322.1	1,088.1	1,318.5	3.21	2.74	
8,772.0	91.00	1.60	7,250.0	1,417.1	1,090.5	1,413.5	0.53	0.42	
8,867.0	90.40	1.00	7,248.8	1,512.1	1,092.7	1,508.4	0.89	-0.63	
8,962.0	89.70	0.00	7,248.7	1,607.1	1,093.5	1,603.4	1.28	-0.74	
9,056.0	90.30	359.40	7,248.7	1,701.1	1,093.0	1,697.4	0.90	0.64	
9,151.0	91.90	358.50	7,246.9	1,796.0	1,091.3	1,792.4	1.93	1.68	
9,214.0	90.80	357.80	7,245.4	1,859.0	1,089.2	1,855.3	2.07	-1.75	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Marcus State 3F-36H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Site:</b>	S36 T2N-R66W (Marcus State)	<b>MD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Well:</b>	Marcus State 3F-36H	<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
9,277.0	88.30	357.60	7,245.9	1,921.9	1,086.7	1,918.3	3.98	-3.97	
9,340.0	88.50	358.00	7,247.7	1,984.8	1,084.3	1,981.2	0.71	0.32	
9,404.0	88.80	358.40	7,249.2	2,048.8	1,082.3	2,045.2	0.78	0.47	
9,467.0	89.50	358.60	7,250.1	2,111.8	1,080.6	2,108.2	1.16	1.11	
9,530.0	90.20	359.20	7,250.3	2,174.7	1,079.4	2,171.2	1.46	1.11	
9,625.0	91.40	0.50	7,248.9	2,269.7	1,079.2	2,266.1	1.86	1.26	
9,719.0	88.60	359.90	7,248.9	2,363.7	1,079.5	2,360.1	3.05	-2.98	
9,814.0	91.50	359.70	7,248.9	2,458.7	1,079.2	2,455.1	3.06	3.05	
9,909.0	90.00	359.00	7,247.6	2,553.7	1,078.1	2,550.1	1.74	-1.58	
10,004.0	89.90	359.70	7,247.7	2,648.7	1,077.0	2,645.1	0.74	-0.11	
10,099.0	90.20	1.50	7,247.6	2,743.7	1,078.0	2,740.1	1.92	0.32	
10,193.0	90.20	2.50	7,247.3	2,837.6	1,081.3	2,834.0	1.06	0.00	
10,288.0	90.00	1.00	7,247.1	2,932.6	1,084.2	2,929.0	1.59	-0.21	
10,383.0	90.00	1.40	7,247.1	3,027.5	1,086.2	3,023.9	0.42	0.00	
10,477.0	90.10	1.60	7,247.0	3,121.5	1,088.6	3,117.9	0.24	0.11	
10,572.0	90.20	0.80	7,246.8	3,216.5	1,090.6	3,212.9	0.85	0.11	
10,667.0	90.50	2.00	7,246.2	3,311.5	1,093.0	3,307.8	1.30	0.32	
10,762.0	89.30	1.60	7,246.4	3,406.4	1,095.9	3,402.8	1.33	-1.26	
10,856.0	90.40	1.60	7,246.6	3,500.4	1,098.6	3,496.7	1.17	1.17	
10,951.0	89.00	1.10	7,247.1	3,595.3	1,100.8	3,591.7	1.56	-1.47	
11,045.0	91.40	0.70	7,246.8	3,689.3	1,102.3	3,685.7	2.59	2.55	
11,140.0	90.70	359.60	7,245.0	3,784.3	1,102.5	3,780.6	1.37	-0.74	
11,234.0	88.30	359.00	7,245.9	3,878.3	1,101.4	3,874.6	2.63	-2.55	
11,329.0	88.70	358.10	7,248.4	3,973.2	1,099.0	3,969.6	1.04	0.42	
11,424.0	89.10	357.60	7,250.2	4,068.1	1,095.4	4,064.5	0.67	0.42	
11,519.0	90.10	356.50	7,250.8	4,163.0	1,090.5	4,159.4	1.56	1.05	
11,614.0	89.70	356.90	7,251.0	4,257.9	1,085.1	4,254.2	0.60	-0.42	
11,708.0	91.10	357.90	7,250.3	4,351.7	1,080.8	4,348.1	1.83	1.49	
11,802.0	91.30	358.10	7,248.4	4,445.7	1,077.5	4,442.1	0.30	0.21	
11,849.0	92.00	357.30	7,247.0	4,492.6	1,075.6	4,489.0	2.26	1.49	Last Cathedral Survey @ 11,849' MD Projection to Bit @ 11,900'
11,900.0	92.00	357.30	7,245.2	4,543.5	1,073.2	4,539.9	0.00	0.00	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Marcus State 3F-36H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Site:</b>	S36 T2N-R66W (Marcus State)	<b>MD Reference:</b>	KBE @ 5052.0ft (Ensign 135)
<b>Well:</b>	Marcus State 3F-36H	<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									
Marcus State 3F-36H PE	0.00	0.00	7,250.0	4,557.2	1,079.8	1,280,509.45	3,216,494.12	40.100790	-104.726100
- actual wellpath misses target center by 15.9ft at 11900.0ft MD (7245.2 TVD, 4543.5 N, 1073.2 E)									
- Point									
Marcus State 3F-36H 1C	0.00	0.00	7,255.0	2,643.7	1,086.2	1,278,596.15	3,216,517.13	40.095537	-104.726077
- actual wellpath misses target center by 11.7ft at 9999.0ft MD (7247.7 TVD, 2643.6 N, 1077.0 E)									
- Point									
Marcus State 3F-36H PE	0.00	0.00	7,334.0	4,557.2	1,079.8	1,280,509.45	3,216,494.12	40.100790	-104.726100
- actual wellpath misses target center by 90.0ft at 11900.0ft MD (7245.2 TVD, 4543.5 N, 1073.2 E)									
- Point									
Marcus State 3F-36H 89	0.00	0.00	7,245.0	1,543.8	1,089.9	1,277,496.23	3,216,530.36	40.092518	-104.726064
- actual wellpath misses target center by 4.9ft at 8898.7ft MD (7248.6 TVD, 1543.7 N, 1093.1 E)									
- Point									
Marcus State 3F-36H PE	0.00	0.00	7,255.0	4,557.2	1,079.8	1,280,509.45	3,216,494.12	40.100790	-104.726100
- actual wellpath misses target center by 18.0ft at 11900.0ft MD (7245.2 TVD, 4543.5 N, 1073.2 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)	Comment	
11,849.0	7,247.0	4,492.6	1,075.6	Last Cathedral Survey @ 11,849' MD	
11,900.0	7,245.2	4,543.5	1,073.2	Projection to Bit @ 11,900'	

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