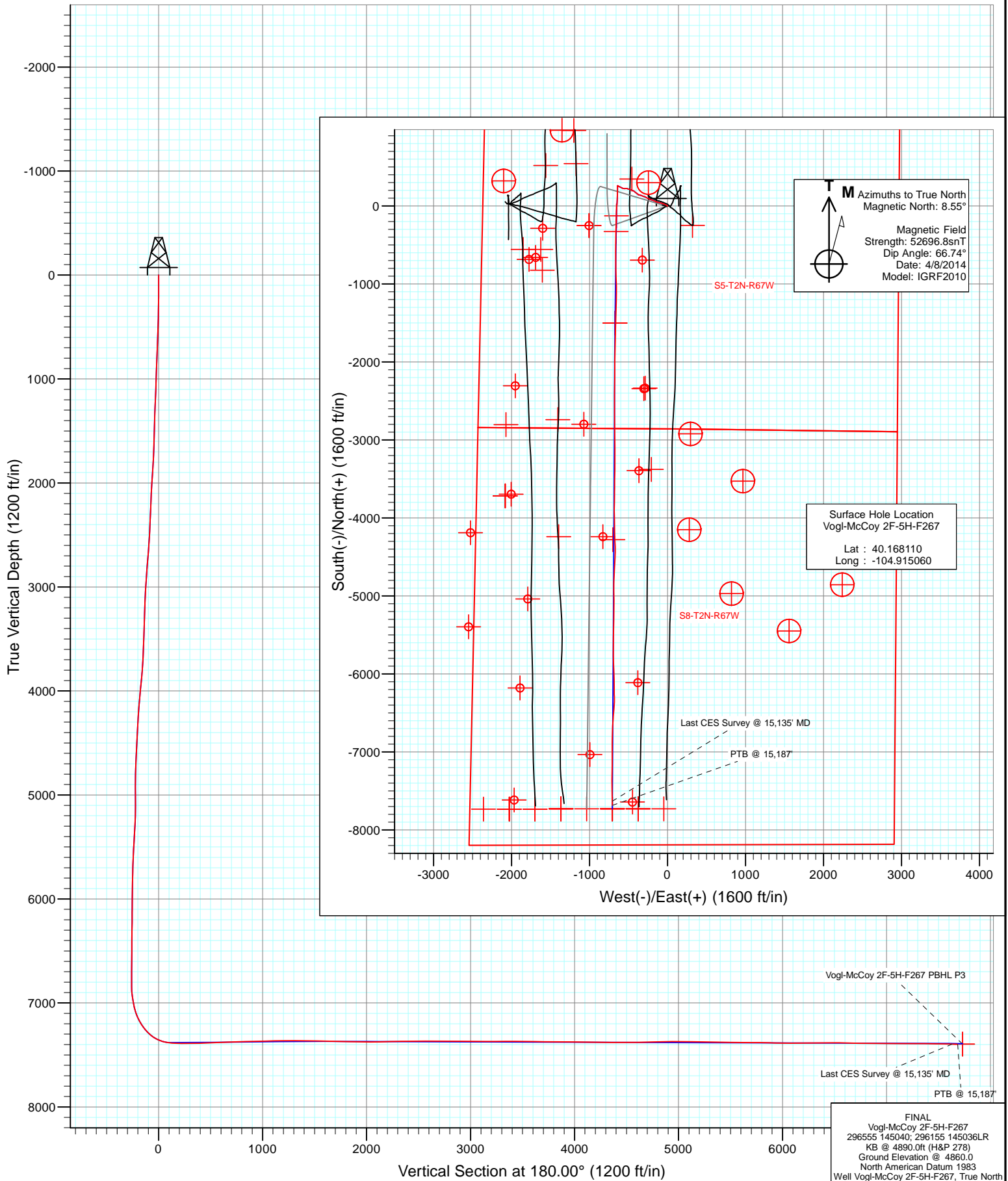


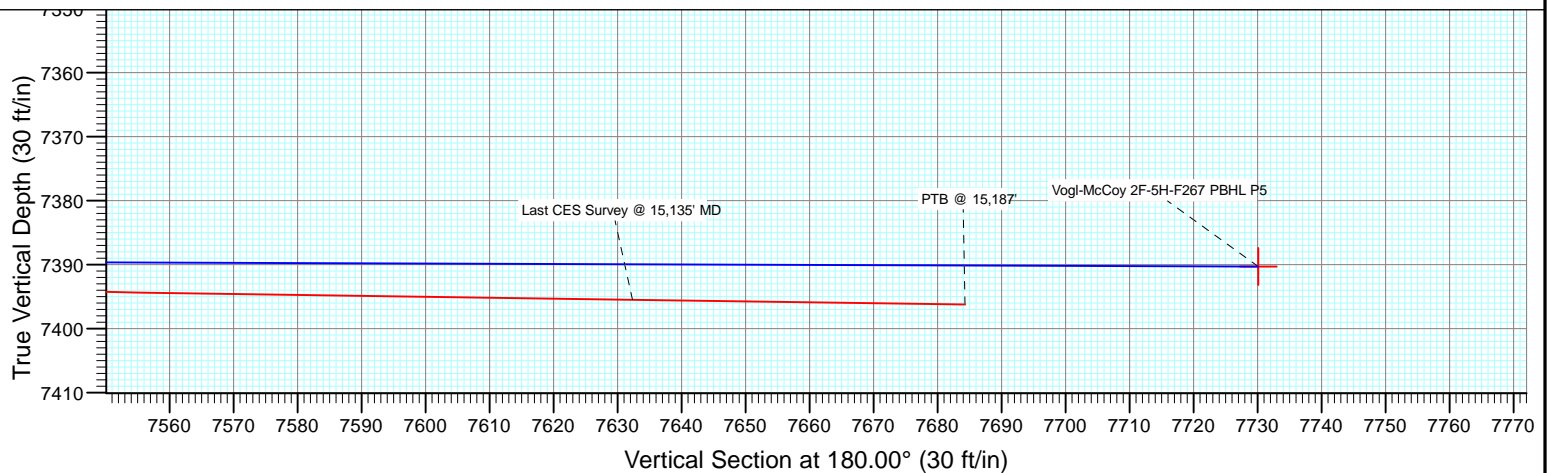
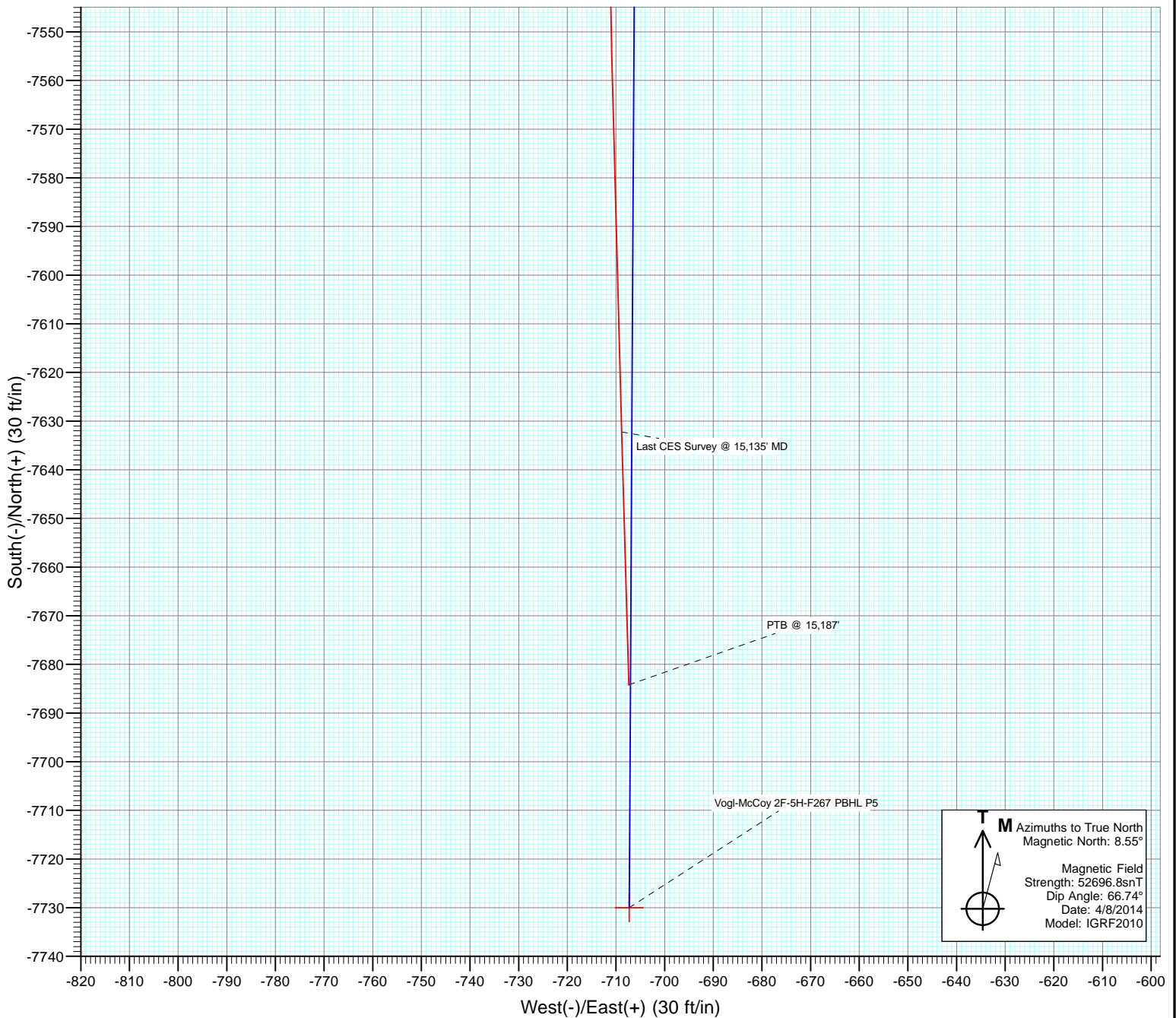


Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2F-5H-F267
Wellbore: Hz
Design: FINAL





Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2F-5H-F267
Wellbore: Hz
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	S5-T2N-R67W (Vogl-McCoy)			
Site Position:		Northing:	1,303,967.76 ft	Latitude: 40.166330
From:	Lat/Long	Easting:	3,161,787.74 ft	Longitude: -104.912110
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: 0.37 °

Well	Vogl-McCoy 2F-5H-F267			
Well Position	+N/-S	0.0 ft	Northing:	1,304,627.22 ft
	+E/-W	0.0 ft	Easting:	3,163,474.23 ft
Position Uncertainty	0.0 ft		Wellhead Elevation:	ft
			Ground Level:	4,860.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/8/2014	8.55	66.74	52,697

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	180.00

Survey Program	Date	5/2/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
173.0	15,187.0	SURVEYS (Hz)	Geolink MWD	Geolink MWD

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
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
173.0	0.50	278.60	173.0	0.1	-0.7	-0.1	0.29	0.29	
266.0	1.50	304.60	266.0	0.9	-2.1	-0.9	1.15	1.08	
327.0	1.70	309.40	327.0	1.9	-3.5	-1.9	0.39	0.33	
419.0	1.70	313.60	418.9	3.7	-5.5	-3.7	0.14	0.00	
511.0	2.90	301.00	510.8	5.8	-8.5	-5.8	1.41	1.30	
603.0	3.90	306.50	602.7	8.9	-13.0	-8.9	1.14	1.09	
695.0	4.60	309.20	694.4	13.1	-18.4	-13.1	0.79	0.76	
815.0	4.50	292.90	814.1	18.0	-26.5	-18.0	1.08	-0.08	
916.0	4.40	294.50	914.7	21.1	-33.7	-21.1	0.16	-0.10	
1,008.0	6.00	290.40	1,006.4	24.3	-41.4	-24.3	1.78	1.74	
1,100.0	7.80	287.80	1,097.7	27.8	-51.8	-27.8	1.99	1.96	
1,192.0	7.80	286.70	1,188.8	31.5	-63.8	-31.5	0.16	0.00	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
1,284.0	7.30	288.30	1,280.0	35.2	-75.3	-35.2	0.59	-0.54	
1,376.0	6.20	284.00	1,371.4	38.2	-85.7	-38.2	1.32	-1.20	
1,468.0	7.70	285.20	1,462.7	41.0	-96.4	-41.0	1.64	1.63	
1,560.0	6.80	279.30	1,554.0	43.5	-107.7	-43.5	1.27	-0.98	
1,651.0	8.10	283.90	1,644.2	45.9	-119.3	-45.9	1.57	1.43	
1,743.0	7.80	288.40	1,735.3	49.5	-131.5	-49.5	0.75	-0.33	
1,835.0	9.00	289.80	1,826.4	53.9	-144.2	-53.9	1.32	1.30	
1,927.0	8.70	298.10	1,917.3	59.6	-157.1	-59.6	1.42	-0.33	
2,019.0	8.20	293.20	2,008.3	65.4	-169.3	-65.4	0.95	-0.54	
2,111.0	7.80	288.40	2,099.4	70.0	-181.2	-70.0	0.85	-0.43	
2,203.0	8.00	286.50	2,190.5	73.8	-193.3	-73.8	0.36	0.22	
2,298.0	7.90	293.00	2,284.6	78.2	-205.6	-78.2	0.95	-0.11	
2,392.0	7.30	285.50	2,377.8	82.3	-217.3	-82.3	1.23	-0.64	
2,487.0	7.80	297.50	2,471.9	86.9	-228.9	-86.9	1.74	0.53	
2,582.0	7.40	291.60	2,566.1	92.2	-240.3	-92.2	0.92	-0.42	
2,677.0	10.10	300.40	2,660.0	98.6	-253.2	-98.6	3.16	2.84	
2,772.0	10.30	296.00	2,753.5	106.6	-268.0	-106.6	0.85	0.21	
2,867.0	9.80	293.80	2,847.0	113.6	-283.0	-113.6	0.66	-0.53	
2,962.0	9.20	292.60	2,940.7	119.7	-297.4	-119.7	0.67	-0.63	
3,056.0	9.30	290.10	3,033.5	125.2	-311.5	-125.2	0.44	0.11	
3,151.0	8.00	289.10	3,127.4	130.0	-324.9	-130.0	1.38	-1.37	
3,246.0	7.70	288.00	3,221.5	134.2	-337.2	-134.2	0.35	-0.32	
3,340.0	6.90	288.50	3,314.8	137.9	-348.6	-137.9	0.85	-0.85	
3,434.0	6.20	282.90	3,408.2	140.8	-358.9	-140.8	1.01	-0.74	
3,529.0	4.90	278.10	3,502.7	142.5	-367.9	-142.5	1.45	-1.37	
3,623.0	4.50	296.70	3,596.4	144.8	-375.2	-144.8	1.67	-0.43	
3,718.0	5.30	324.00	3,691.1	150.0	-381.1	-150.0	2.57	0.84	
3,813.0	6.20	308.30	3,785.6	156.7	-387.7	-156.7	1.90	0.95	
3,907.0	9.30	307.90	3,878.7	164.5	-397.7	-164.5	3.30	3.30	
4,001.0	9.60	304.10	3,971.5	173.6	-410.2	-173.6	0.74	0.32	
4,096.0	8.70	306.90	4,065.3	182.3	-422.5	-182.3	1.06	-0.95	
4,190.0	6.90	307.10	4,158.4	190.0	-432.6	-190.0	1.92	-1.91	
4,284.0	7.10	297.80	4,251.7	196.1	-442.3	-196.1	1.22	0.21	
4,379.0	9.30	289.40	4,345.7	201.4	-454.7	-201.4	2.63	2.32	
4,474.0	9.60	289.10	4,439.4	206.6	-469.4	-206.6	0.32	0.32	
4,568.0	8.90	290.10	4,532.2	211.6	-483.7	-211.6	0.76	-0.74	
4,662.0	7.50	288.90	4,625.2	216.1	-496.3	-216.1	1.50	-1.49	
4,757.0	6.20	290.50	4,719.6	219.9	-507.0	-219.9	1.38	-1.37	
4,851.0	7.40	280.50	4,812.9	222.8	-517.7	-222.8	1.79	1.28	
4,946.0	7.10	268.20	4,907.1	223.7	-529.6	-223.7	1.66	-0.32	
5,040.0	6.10	267.50	5,000.5	223.3	-540.4	-223.3	1.07	-1.06	
5,135.0	6.40	266.40	5,094.9	222.8	-550.7	-222.8	0.34	0.32	
5,229.0	8.20	278.60	5,188.2	223.5	-562.6	-223.5	2.52	1.91	
5,324.0	8.40	294.20	5,282.2	227.3	-575.6	-227.3	2.37	0.21	
5,418.0	7.10	294.50	5,375.3	232.5	-587.1	-232.5	1.38	-1.38	
5,513.0	7.60	298.10	5,469.6	237.9	-598.0	-237.9	0.72	0.53	
5,607.0	5.90	297.80	5,562.9	243.1	-607.8	-243.1	1.81	-1.81	
5,702.0	4.40	296.00	5,657.5	247.0	-615.4	-247.0	1.59	-1.58	
5,796.0	2.90	303.90	5,751.3	249.9	-620.6	-249.9	1.68	-1.60	
5,891.0	3.30	284.50	5,846.2	251.9	-625.2	-251.9	1.17	0.42	
5,986.0	2.90	285.00	5,941.1	253.2	-630.2	-253.2	0.42	-0.42	
6,080.0	2.40	284.80	6,035.0	254.3	-634.4	-254.3	0.53	-0.53	
6,175.0	0.20	254.20	6,129.9	254.8	-636.5	-254.8	2.35	-2.32	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
6,269.0	0.60	356.30	6,223.9	255.3	-636.7	-255.3	0.71	0.43	
6,364.0	0.70	339.60	6,318.9	256.3	-636.9	-256.3	0.22	0.11	
6,459.0	0.70	336.40	6,413.9	257.4	-637.3	-257.4	0.04	0.00	
6,554.0	0.70	318.80	6,508.9	258.3	-638.0	-258.3	0.23	0.00	
6,649.0	0.70	310.50	6,603.9	259.2	-638.8	-259.2	0.11	0.00	
6,744.0	0.50	300.20	6,698.9	259.7	-639.6	-259.7	0.24	-0.21	
6,838.0	0.70	304.00	6,792.9	260.3	-640.4	-260.3	0.22	0.21	
6,886.0	0.60	265.80	6,840.9	260.4	-640.9	-260.4	0.91	-0.21	
6,933.0	3.70	194.40	6,887.8	258.9	-641.5	-258.9	7.56	6.60	
6,980.0	9.50	185.70	6,934.5	253.6	-642.3	-253.6	12.49	12.34	
7,028.0	9.60	179.70	6,981.9	245.6	-642.7	-245.6	2.08	0.21	
7,059.0	10.20	174.00	7,012.4	240.3	-642.4	-240.3	3.70	1.94	
7,091.0	14.10	175.50	7,043.7	233.6	-641.8	-233.6	12.23	12.19	
7,123.0	16.80	179.10	7,074.5	225.1	-641.4	-225.1	8.95	8.44	
7,154.0	19.30	180.80	7,104.0	215.5	-641.4	-215.5	8.24	8.06	
7,186.0	22.80	179.40	7,133.8	204.0	-641.4	-204.0	11.05	10.94	
7,217.0	27.10	180.60	7,161.9	190.9	-641.4	-190.9	13.97	13.87	
7,249.0	31.10	184.30	7,189.9	175.4	-642.1	-175.4	13.70	12.50	
7,280.0	33.90	182.30	7,216.0	158.8	-643.0	-158.8	9.67	9.03	
7,312.0	36.80	179.60	7,242.2	140.3	-643.3	-140.3	10.29	9.06	
7,344.0	41.40	179.90	7,267.0	120.1	-643.3	-120.1	14.39	14.37	
7,375.0	46.20	182.00	7,289.3	98.6	-643.6	-98.6	16.18	15.48	
7,407.0	51.10	183.80	7,310.5	74.7	-644.9	-74.7	15.88	15.31	
7,438.0	56.40	184.50	7,328.8	49.8	-646.7	-49.8	17.20	17.10	
7,470.0	62.00	184.00	7,345.2	22.4	-648.7	-22.4	17.55	17.50	
7,501.0	67.40	183.20	7,358.4	-5.6	-650.5	5.6	17.57	17.42	
7,533.0	73.20	182.40	7,369.2	-35.7	-651.9	35.7	18.28	18.12	
7,564.0	79.20	181.90	7,376.6	-65.8	-653.1	65.8	19.42	19.35	
7,673.0	88.80	182.70	7,388.0	-173.9	-657.4	173.9	8.84	8.81	
7,768.0	90.20	181.40	7,388.8	-268.9	-660.8	268.9	2.01	1.47	
7,862.0	91.00	181.30	7,387.8	-362.8	-663.0	362.8	0.86	0.85	
7,957.0	92.40	180.80	7,385.0	-457.8	-664.8	457.8	1.56	1.47	
8,051.0	92.00	179.90	7,381.4	-551.7	-665.3	551.7	1.05	-0.43	
8,146.0	92.20	179.70	7,377.9	-646.6	-665.0	646.6	0.30	0.21	
8,240.0	91.70	179.00	7,374.7	-740.6	-663.9	740.6	0.91	-0.53	
8,335.0	91.70	177.90	7,371.9	-835.5	-661.4	835.5	1.16	0.00	
8,429.0	91.40	178.90	7,369.4	-929.4	-658.7	929.4	1.11	-0.32	
8,522.0	91.60	178.60	7,366.9	-1,022.4	-656.7	1,022.4	0.39	0.22	
8,614.0	91.30	180.30	7,364.6	-1,114.3	-655.8	1,114.3	1.88	-0.33	
8,707.0	90.00	181.00	7,363.5	-1,207.3	-656.9	1,207.3	1.59	-1.40	
8,799.0	90.10	181.70	7,363.5	-1,299.3	-659.1	1,299.3	0.77	0.11	
8,891.0	89.50	181.50	7,363.8	-1,391.3	-661.6	1,391.3	0.69	-0.65	
8,983.0	89.80	181.80	7,364.3	-1,483.2	-664.3	1,483.2	0.46	0.33	
9,075.0	88.30	181.30	7,365.9	-1,575.2	-666.8	1,575.2	1.72	-1.63	
9,167.0	88.30	181.80	7,368.6	-1,667.1	-669.2	1,667.1	0.54	0.00	
9,259.0	89.30	181.60	7,370.5	-1,759.0	-672.0	1,759.0	1.11	1.09	
9,351.0	89.20	181.30	7,371.7	-1,851.0	-674.3	1,851.0	0.34	-0.11	
9,443.0	88.80	179.80	7,373.3	-1,943.0	-675.2	1,943.0	1.69	-0.43	
9,535.0	89.80	179.80	7,374.5	-2,035.0	-674.9	2,035.0	1.09	1.09	
9,628.0	91.30	181.10	7,373.6	-2,128.0	-675.6	2,128.0	2.13	1.61	
9,719.0	91.20	181.30	7,371.6	-2,218.9	-677.5	2,218.9	0.25	-0.11	
9,811.0	91.10	180.80	7,369.7	-2,310.9	-679.2	2,310.9	0.55	-0.11	
9,903.0	91.20	180.30	7,367.9	-2,402.9	-680.1	2,402.9	0.55	0.11	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
9,995.0	90.40	179.80	7,366.6	-2,494.9	-680.1	2,494.9	1.03	-0.87	
10,087.0	90.00	180.10	7,366.3	-2,586.9	-680.1	2,586.9	0.54	-0.43	
10,179.0	89.80	179.30	7,366.4	-2,678.8	-679.6	2,678.8	0.90	-0.22	
10,271.0	90.10	178.70	7,366.5	-2,770.8	-678.0	2,770.8	0.73	0.33	
10,363.0	89.10	179.40	7,367.2	-2,862.8	-676.5	2,862.8	1.33	-1.09	
10,455.0	88.40	179.60	7,369.2	-2,954.8	-675.7	2,954.8	0.79	-0.76	
10,547.0	89.60	179.60	7,370.8	-3,046.8	-675.0	3,046.8	1.30	1.30	
10,641.0	90.40	178.90	7,370.8	-3,140.8	-673.8	3,140.8	1.13	0.85	
10,736.0	90.70	180.70	7,369.9	-3,235.8	-673.4	3,235.8	1.92	0.32	
10,831.0	90.80	181.70	7,368.6	-3,330.7	-675.4	3,330.7	1.06	0.11	
10,926.0	89.10	181.30	7,368.7	-3,425.7	-677.9	3,425.7	1.84	-1.79	
11,020.0	89.00	180.20	7,370.3	-3,519.7	-679.2	3,519.7	1.17	-0.11	
11,115.0	89.50	179.80	7,371.5	-3,614.7	-679.2	3,614.7	0.67	0.53	
11,210.0	89.50	181.20	7,372.3	-3,709.6	-680.0	3,709.6	1.47	0.00	
11,305.0	89.70	181.10	7,373.0	-3,804.6	-681.9	3,804.6	0.24	0.21	
11,400.0	89.50	180.30	7,373.7	-3,899.6	-683.1	3,899.6	0.87	-0.21	
11,495.0	89.20	178.50	7,374.7	-3,994.6	-682.1	3,994.6	1.92	-0.32	
11,589.0	88.90	179.00	7,376.3	-4,088.6	-680.0	4,088.6	0.62	-0.32	
11,683.0	89.10	178.80	7,377.9	-4,182.5	-678.2	4,182.5	0.30	0.21	
11,778.0	88.30	176.90	7,380.1	-4,277.4	-674.6	4,277.4	2.17	-0.84	
11,872.0	91.60	178.50	7,380.2	-4,371.3	-670.9	4,371.3	3.90	3.51	
11,967.0	90.10	182.00	7,378.8	-4,466.3	-671.3	4,466.3	4.01	-1.58	
12,062.0	90.70	183.60	7,378.1	-4,561.2	-675.9	4,561.2	1.80	0.63	
12,156.0	90.70	182.70	7,377.0	-4,655.1	-681.1	4,655.1	0.96	0.00	
12,250.0	92.00	182.60	7,374.7	-4,748.9	-685.4	4,748.9	1.39	1.38	
12,345.0	90.90	181.50	7,372.3	-4,843.8	-688.8	4,843.8	1.64	-1.16	
12,439.0	90.40	179.70	7,371.3	-4,937.8	-689.8	4,937.8	1.99	-0.53	
12,534.0	89.00	179.10	7,371.8	-5,032.8	-688.8	5,032.8	1.60	-1.47	
12,628.0	89.50	179.90	7,373.0	-5,126.8	-688.0	5,126.8	1.00	0.53	
12,722.0	88.60	180.10	7,374.6	-5,220.8	-688.0	5,220.8	0.98	-0.96	
12,817.0	88.90	181.40	7,376.6	-5,315.8	-689.2	5,315.8	1.40	0.32	
12,912.0	90.00	181.30	7,377.5	-5,410.7	-691.5	5,410.7	1.16	1.16	
13,006.0	88.40	180.80	7,378.8	-5,504.7	-693.2	5,504.7	1.78	-1.70	
13,101.0	89.60	181.00	7,380.5	-5,599.7	-694.7	5,599.7	1.28	1.26	
13,195.0	90.00	179.80	7,380.8	-5,693.6	-695.4	5,693.6	1.35	0.43	
13,289.0	89.60	178.70	7,381.2	-5,787.6	-694.1	5,787.6	1.25	-0.43	
13,384.0	87.90	177.80	7,383.2	-5,882.6	-691.2	5,882.6	2.02	-1.79	
13,479.0	89.20	177.70	7,385.6	-5,977.5	-687.5	5,977.5	1.37	1.37	
13,573.0	90.20	178.70	7,386.1	-6,071.4	-684.5	6,071.4	1.50	1.06	
13,668.0	90.90	179.80	7,385.2	-6,166.4	-683.3	6,166.4	1.37	0.74	
13,764.0	89.50	179.40	7,384.9	-6,262.4	-682.6	6,262.4	1.52	-1.46	
13,796.0	90.30	178.90	7,384.9	-6,294.4	-682.2	6,294.4	2.95	2.50	
13,827.0	90.50	179.50	7,384.7	-6,325.4	-681.7	6,325.4	2.04	0.65	
13,859.0	91.00	180.60	7,384.3	-6,357.4	-681.7	6,357.4	3.78	1.56	
13,890.0	91.00	182.90	7,383.8	-6,388.4	-682.7	6,388.4	7.42	0.00	
13,922.0	90.00	184.80	7,383.5	-6,420.3	-684.8	6,420.3	6.71	-3.12	
13,953.0	89.80	185.10	7,383.5	-6,451.2	-687.5	6,451.2	1.16	-0.65	
13,985.0	90.20	184.80	7,383.5	-6,483.0	-690.3	6,483.0	1.56	1.25	
14,016.0	89.80	184.70	7,383.5	-6,513.9	-692.8	6,513.9	1.33	-1.29	
14,048.0	89.60	184.80	7,383.7	-6,545.8	-695.5	6,545.8	0.70	-0.62	
14,110.0	89.00	183.50	7,384.5	-6,607.7	-700.0	6,607.7	2.31	-0.97	
14,205.0	88.10	182.70	7,386.9	-6,702.5	-705.1	6,702.5	1.27	-0.95	
14,300.0	90.10	181.10	7,388.4	-6,797.4	-708.3	6,797.4	2.70	2.11	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	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
14,395.0	89.20	179.30	7,388.9	-6,892.4	-708.6	6,892.4	2.12	-0.95	
14,490.0	90.00	180.20	7,389.6	-6,987.4	-708.2	6,987.4	1.27	0.84	
14,585.0	89.00	180.50	7,390.4	-7,082.4	-708.8	7,082.4	1.10	-1.05	
14,679.0	90.00	181.20	7,391.3	-7,176.4	-710.2	7,176.4	1.30	1.06	
14,774.0	90.90	181.60	7,390.5	-7,271.4	-712.5	7,271.4	1.04	0.95	
14,869.0	89.10	179.80	7,390.5	-7,366.4	-713.6	7,366.4	2.68	-1.89	
14,964.0	88.60	179.10	7,392.4	-7,461.3	-712.7	7,461.3	0.91	-0.53	
15,058.0	89.10	178.60	7,394.3	-7,555.3	-710.8	7,555.3	0.75	0.53	
15,135.0	89.20	178.40	7,395.4	-7,632.2	-708.8	7,632.2	0.29	0.13	Last CES Survey @ 15,135' MD PTB @ 15,187'
15,187.0	89.20	178.40	7,396.2	-7,684.2	-707.4	7,684.2	0.00	0.00	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	Latitude Longitude
Vogl-McCoy 2F-5H-F267		0.00	0.00	7,390.2	-7,730.0	-707.3	1,296,892.72	3,162,817.97	40.146890 -104.917590
- actual wellpath misses target center by 46.2ft at 15187.0ft MD (7396.2 TVD, -7684.2 N, -707.4 E)									
- Point									
Vogl-McCoy 2F-5H-F267		0.00	0.00	7,368.8	-1,501.3	-674.1	1,303,121.55	3,162,810.02	40.163989 -104.917472
- actual wellpath misses target center by 10.3ft at 9001.4ft MD (7364.5 TVD, -1501.6 N, -664.8 E)									
- Point									
Vogl-McCoy 2F-5H-F267		0.00	0.00	7,365.0	-328.3	-659.8	1,304,294.58	3,162,816.61	40.167209 -104.917421
- actual wellpath misses target center by 23.5ft at 7827.6ft MD (7388.3 TVD, -328.5 N, -662.2 E)									
- Point									
Vogl-McCoy 2F-5H-F267		0.00	0.00	7,395.5	-7,730.0	-707.3	1,296,892.72	3,162,817.97	40.146890 -104.917590
- actual wellpath misses target center by 45.8ft at 15187.0ft MD (7396.2 TVD, -7684.2 N, -707.4 E)									
- Point									
Vogl-McCoy 2F-5H-F267		0.00	0.00	7,382.0	-7,730.0	-707.3	1,296,892.72	3,162,817.97	40.146890 -104.917590
- actual wellpath misses target center by 47.9ft at 15187.0ft MD (7396.2 TVD, -7684.2 N, -707.4 E)									
- Point									
Vogl-McCoy 2F-5H-F267		0.00	0.00	7,368.8	-1,501.3	-674.1	1,303,121.55	3,162,810.02	40.163989 -104.917472
- actual wellpath misses target center by 10.3ft at 9001.4ft MD (7364.5 TVD, -1501.6 N, -664.8 E)									
- Point									
Vogl-McCoy 2F-5H-F267		0.00	0.00	7,382.2	-126.4	-654.5	1,304,496.48	3,162,820.55	40.167763 -104.917402
- actual wellpath misses target center by 3.1ft at 7625.0ft MD (7385.2 TVD, -126.1 N, -655.3 E)									
- Point									
Interp @ 7382.0 (Vogl-M		0.00	0.00	7,382.0	-4,278.2	-700.0	1,300,344.51	3,162,802.46	40.156366 -104.917564
- actual wellpath misses target center by 25.4ft at 11777.8ft MD (7380.1 TVD, -4277.3 N, -674.6 E)									
- Point									
Vogl-McCoy 2F-5H-F267		0.00	0.00	7,395.5	-7,730.0	-707.3	1,296,892.72	3,162,817.97	40.146890 -104.917590
- actual wellpath misses target center by 45.8ft at 15187.0ft MD (7396.2 TVD, -7684.2 N, -707.4 E)									
- Point									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,532.0	7,368.8	TL2		0.20	180.00
7,596.3	7,382.2	TL		-0.20	180.00

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
15,135.0	7,395.4	-7,632.2	-708.8	Last CES Survey @ 15,135' MD
15,187.0	7,396.2	-7,684.2	-707.4	PTB @ 15,187'

Checked By: _____	Approved By: _____	Date: _____
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EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S5-T2N-R67W (Vogl-McCoy)

Vogl-McCoy 2F-5H-F267

Hz

Design: FINAL

Survey Report - Geographic

02 May, 2014

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	S5-T2N-R67W (Vogl-McCoy)				
Site Position:		Northing:	1,303,967.76 ft	Latitude:	40.166330
From:	Lat/Long	Easting:	3,161,787.74 ft	Longitude:	-104.921110
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.37 °

Well	Vogl-McCoy 2F-5H-F267					
Well Position	+N/-S	0.0 ft	Northing:	1,304,627.22 ft	Latitude:	40.168110
	+E/-W	0.0 ft	Easting:	3,163,474.23 ft	Longitude:	-104.915060
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,860.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/8/2014	8.55	66.74	52,697

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	180.00	

Survey Program	Date	5/2/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
173.0	15,187.0	SURVEYS (Hz)	Geolink MWD	Geolink MWD	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,304,627.22	3,163,474.23	40.168110	-104.915060	
173.0	0.50	278.60	173.0	0.1	-0.7	1,304,627.33	3,163,473.48	40.168110	-104.915063	
266.0	1.50	304.60	266.0	0.9	-2.1	1,304,628.07	3,163,472.07	40.168112	-104.915068	
327.0	1.70	309.40	327.0	1.9	-3.5	1,304,629.09	3,163,470.71	40.168115	-104.915073	
419.0	1.70	313.60	418.9	3.7	-5.5	1,304,630.89	3,163,468.65	40.168120	-104.915080	
511.0	2.90	301.00	510.8	5.8	-8.5	1,304,633.01	3,163,465.66	40.168126	-104.915091	
603.0	3.90	306.50	602.7	8.9	-13.0	1,304,636.04	3,163,461.13	40.168134	-104.915107	
695.0	4.60	309.20	694.4	13.1	-18.4	1,304,640.19	3,163,455.72	40.168146	-104.915126	
815.0	4.50	292.90	814.1	18.0	-26.5	1,304,645.01	3,163,447.63	40.168159	-104.915155	
916.0	4.40	294.50	914.7	21.1	-33.7	1,304,648.11	3,163,440.43	40.168168	-104.915181	
1,008.0	6.00	290.40	1,006.4	24.3	-41.4	1,304,651.20	3,163,432.69	40.168177	-104.915208	
1,100.0	7.80	287.80	1,097.7	27.8	-51.8	1,304,654.72	3,163,422.22	40.168186	-104.915246	

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
1,192.0	7.80	286.70	1,188.8	31.5	-63.8	1,304,658.34	3,163,410.27	40.168197	-104.915288
1,284.0	7.30	288.30	1,280.0	35.2	-75.3	1,304,661.90	3,163,398.72	40.168207	-104.915330
1,376.0	6.20	284.00	1,371.4	38.2	-85.7	1,304,664.86	3,163,388.33	40.168215	-104.915367
1,468.0	7.70	285.20	1,462.7	41.0	-96.4	1,304,667.61	3,163,377.54	40.168223	-104.915405
1,560.0	6.80	279.30	1,554.0	43.5	-107.7	1,304,670.03	3,163,366.20	40.168229	-104.915446
1,651.0	8.10	283.90	1,644.2	45.9	-119.3	1,304,672.37	3,163,354.64	40.168236	-104.915487
1,743.0	7.80	288.40	1,735.3	49.5	-131.5	1,304,675.81	3,163,342.40	40.168246	-104.915531
1,835.0	9.00	289.80	1,826.4	53.9	-144.2	1,304,680.14	3,163,329.68	40.168258	-104.915576
1,927.0	8.70	298.10	1,917.3	59.6	-157.1	1,304,685.77	3,163,316.73	40.168274	-104.915622
2,019.0	8.20	293.20	2,008.3	65.4	-169.3	1,304,691.55	3,163,304.53	40.168290	-104.915666
2,111.0	7.80	288.40	2,099.4	70.0	-181.2	1,304,696.03	3,163,292.54	40.168302	-104.915709
2,203.0	8.00	286.50	2,190.5	73.8	-193.3	1,304,699.74	3,163,280.46	40.168313	-104.915752
2,298.0	7.90	293.00	2,284.6	78.2	-205.6	1,304,704.08	3,163,268.08	40.168325	-104.915796
2,392.0	7.30	285.50	2,377.8	82.3	-217.3	1,304,708.13	3,163,256.35	40.168336	-104.915838
2,487.0	7.80	297.50	2,471.9	86.9	-228.9	1,304,712.64	3,163,244.79	40.168349	-104.915879
2,582.0	7.40	291.60	2,566.1	92.2	-240.3	1,304,717.79	3,163,233.34	40.168363	-104.915920
2,677.0	10.10	300.40	2,660.0	98.6	-253.2	1,304,724.18	3,163,220.43	40.168381	-104.915966
2,772.0	10.30	296.00	2,753.5	106.6	-268.0	1,304,732.02	3,163,205.56	40.168403	-104.916019
2,867.0	9.80	293.80	2,847.0	113.6	-283.0	1,304,738.90	3,163,190.48	40.168422	-104.916073
2,962.0	9.20	292.60	2,940.7	119.7	-297.4	1,304,744.99	3,163,176.03	40.168439	-104.916124
3,056.0	9.30	290.10	3,033.5	125.2	-311.5	1,304,750.39	3,163,161.92	40.168454	-104.916175
3,151.0	8.00	289.10	3,127.4	130.0	-324.9	1,304,755.11	3,163,148.44	40.168467	-104.916223
3,246.0	7.70	288.00	3,221.5	134.2	-337.2	1,304,759.16	3,163,136.11	40.168478	-104.916267
3,340.0	6.90	288.50	3,314.8	137.9	-348.6	1,304,762.82	3,163,124.74	40.168489	-104.916308
3,434.0	6.20	282.90	3,408.2	140.8	-358.9	1,304,765.68	3,163,114.42	40.168497	-104.916344
3,529.0	4.90	278.10	3,502.7	142.5	-367.9	1,304,767.33	3,163,105.39	40.168501	-104.916377
3,623.0	4.50	296.70	3,596.4	144.8	-375.2	1,304,769.51	3,163,098.11	40.168507	-104.916403
3,718.0	5.30	324.00	3,691.1	150.0	-381.1	1,304,774.69	3,163,092.16	40.168522	-104.916424
3,813.0	6.20	308.30	3,785.6	156.7	-387.7	1,304,781.38	3,163,085.51	40.168540	-104.916448
3,907.0	9.30	307.90	3,878.7	164.5	-397.7	1,304,789.13	3,163,075.48	40.168562	-104.916483
4,001.0	9.60	304.10	3,971.5	173.6	-410.2	1,304,798.10	3,163,062.94	40.168586	-104.916528
4,096.0	8.70	306.90	4,065.3	182.3	-422.5	1,304,806.78	3,163,050.58	40.168611	-104.916572
4,190.0	6.90	307.10	4,158.4	190.0	-432.6	1,304,814.39	3,163,040.34	40.168632	-104.916608
4,284.0	7.10	297.80	4,251.7	196.1	-442.3	1,304,820.44	3,163,030.65	40.168648	-104.916643
4,379.0	9.30	289.40	4,345.7	201.4	-454.7	1,304,825.64	3,163,018.18	40.168663	-104.916687
4,474.0	9.60	289.10	4,439.4	206.6	-469.4	1,304,830.69	3,163,003.42	40.168677	-104.916740
4,568.0	8.90	290.10	4,532.2	211.6	-483.7	1,304,835.66	3,162,989.16	40.168691	-104.916791
4,662.0	7.50	288.90	4,625.2	216.1	-496.3	1,304,840.06	3,162,976.49	40.168703	-104.916836
4,757.0	6.20	290.50	4,719.6	219.9	-507.0	1,304,843.80	3,162,965.80	40.168714	-104.916874
4,851.0	7.40	280.50	4,812.9	222.8	-517.7	1,304,846.61	3,162,955.07	40.168722	-104.916913
4,946.0	7.10	268.20	4,907.1	223.7	-529.6	1,304,847.46	3,162,943.18	40.168724	-104.916955
5,040.0	6.10	267.50	5,000.5	223.3	-540.4	1,304,846.99	3,162,932.39	40.168723	-104.916994
5,135.0	6.40	266.40	5,094.9	222.8	-550.7	1,304,846.37	3,162,922.06	40.168722	-104.917031
5,229.0	8.20	278.60	5,188.2	223.5	-562.6	1,304,846.96	3,162,910.20	40.168723	-104.917073
5,324.0	8.40	294.20	5,282.2	227.3	-575.6	1,304,850.73	3,162,897.15	40.168734	-104.917120
5,418.0	7.10	294.50	5,375.3	232.5	-587.1	1,304,855.88	3,162,885.56	40.168748	-104.917161
5,513.0	7.60	298.10	5,469.6	237.9	-598.0	1,304,861.20	3,162,874.64	40.168763	-104.917200
5,607.0	5.90	297.80	5,562.9	243.1	-607.8	1,304,866.32	3,162,864.85	40.168777	-104.917235
5,702.0	4.40	296.00	5,657.5	247.0	-615.4	1,304,870.14	3,162,857.23	40.168788	-104.917262
5,796.0	2.90	303.90	5,751.3	249.9	-620.6	1,304,873.02	3,162,852.00	40.168796	-104.917281
5,891.0	3.30	284.50	5,846.2	251.9	-625.2	1,304,875.01	3,162,847.34	40.168802	-104.917298
5,986.0	2.90	285.00	5,941.1	253.2	-630.2	1,304,876.29	3,162,842.37	40.168805	-104.917315
6,080.0	2.40	284.80	6,035.0	254.3	-634.4	1,304,877.38	3,162,838.16	40.168808	-104.917330
6,175.0	0.20	254.20	6,129.9	254.8	-636.5	1,304,877.83	3,162,836.07	40.168809	-104.917338
6,269.0	0.60	356.30	6,223.9	255.3	-636.7	1,304,878.27	3,162,835.88	40.168811	-104.917338

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
6,364.0	0.70	339.60	6,318.9	256.3	-636.9	1,304,879.31	3,162,835.64	40.168814	-104.917339
6,459.0	0.70	336.40	6,413.9	257.4	-637.3	1,304,880.38	3,162,835.20	40.168816	-104.917341
6,554.0	0.70	318.80	6,508.9	258.3	-638.0	1,304,881.35	3,162,834.58	40.168819	-104.917343
6,649.0	0.70	310.50	6,603.9	259.2	-638.8	1,304,882.15	3,162,833.75	40.168821	-104.917346
6,744.0	0.50	300.20	6,698.9	259.7	-639.6	1,304,882.73	3,162,832.94	40.168823	-104.917349
6,838.0	0.70	304.00	6,792.9	260.3	-640.4	1,304,883.26	3,162,832.11	40.168824	-104.917352
6,886.0	0.60	265.80	6,840.9	260.4	-640.9	1,304,883.40	3,162,831.62	40.168825	-104.917354
6,933.0	3.70	194.40	6,887.8	258.9	-641.5	1,304,881.91	3,162,831.00	40.168821	-104.917356
6,980.0	9.50	185.70	6,934.5	253.6	-642.3	1,304,876.57	3,162,830.27	40.168806	-104.917359
7,028.0	9.60	179.70	6,981.9	245.6	-642.7	1,304,868.62	3,162,829.95	40.168784	-104.917360
7,059.0	10.20	174.00	7,012.4	240.3	-642.4	1,304,863.31	3,162,830.29	40.168770	-104.917359
7,091.0	14.10	175.50	7,043.7	233.6	-641.8	1,304,856.61	3,162,830.94	40.168751	-104.917357
7,123.0	16.80	179.10	7,074.5	225.1	-641.4	1,304,848.10	3,162,831.37	40.168728	-104.917355
7,154.0	19.30	180.80	7,104.0	215.5	-641.4	1,304,838.50	3,162,831.43	40.168702	-104.917355
7,186.0	22.80	179.40	7,133.8	204.0	-641.4	1,304,827.00	3,162,831.50	40.168670	-104.917355
7,217.0	27.10	180.60	7,161.9	190.9	-641.4	1,304,813.93	3,162,831.58	40.168634	-104.917355
7,249.0	31.10	184.30	7,189.9	175.4	-642.1	1,304,798.39	3,162,830.98	40.168591	-104.917358
7,280.0	33.90	182.30	7,216.0	158.8	-643.0	1,304,781.76	3,162,830.14	40.168546	-104.917361
7,312.0	36.80	179.60	7,242.2	140.3	-643.3	1,304,763.24	3,162,829.97	40.168495	-104.917362
7,344.0	41.40	179.90	7,267.0	120.1	-643.3	1,304,743.07	3,162,830.19	40.168440	-104.917362
7,375.0	46.20	182.00	7,289.3	98.6	-643.6	1,304,721.62	3,162,829.96	40.168381	-104.917363
7,407.0	51.10	183.80	7,310.5	74.7	-644.9	1,304,697.63	3,162,828.89	40.168315	-104.917368
7,438.0	56.40	184.50	7,328.8	49.8	-646.7	1,304,672.71	3,162,827.24	40.168247	-104.917374
7,470.0	62.00	184.00	7,345.2	22.4	-648.7	1,304,645.30	3,162,825.39	40.168171	-104.917382
7,501.0	67.40	183.20	7,358.4	-5.6	-650.5	1,304,617.32	3,162,823.82	40.168095	-104.917388
7,533.0	73.20	182.40	7,369.2	-35.7	-651.9	1,304,587.24	3,162,822.55	40.168012	-104.917393
7,564.0	79.20	181.90	7,376.6	-65.8	-653.1	1,304,557.16	3,162,821.62	40.167929	-104.917397
7,673.0	88.80	182.70	7,388.0	-173.9	-657.4	1,304,448.95	3,162,817.98	40.167632	-104.917413
7,768.0	90.20	181.40	7,388.8	-268.9	-660.8	1,304,353.99	3,162,815.21	40.167372	-104.917425
7,862.0	91.00	181.30	7,387.8	-362.8	-663.0	1,304,260.01	3,162,813.62	40.167114	-104.917433
7,957.0	92.40	180.80	7,385.0	-457.8	-664.8	1,304,165.06	3,162,812.50	40.166853	-104.917439
8,051.0	92.00	179.90	7,381.4	-551.7	-665.3	1,304,071.13	3,162,812.55	40.166595	-104.917441
8,146.0	92.20	179.70	7,377.9	-646.6	-665.0	1,303,976.20	3,162,813.51	40.166335	-104.917440
8,240.0	91.70	179.00	7,374.7	-740.6	-663.9	1,303,882.27	3,162,815.19	40.166077	-104.917436
8,335.0	91.70	177.90	7,371.9	-835.5	-661.4	1,303,787.37	3,162,818.39	40.165816	-104.917427
8,429.0	91.40	178.90	7,369.4	-929.4	-658.7	1,303,693.46	3,162,821.63	40.165559	-104.917417
8,522.0	91.60	178.60	7,366.9	-1,022.4	-656.7	1,303,600.53	3,162,824.27	40.165303	-104.917410
8,614.0	91.30	180.30	7,364.6	-1,114.3	-655.8	1,303,508.58	3,162,825.76	40.165051	-104.917407
8,707.0	90.00	181.00	7,363.5	-1,207.3	-656.9	1,303,415.59	3,162,825.32	40.164796	-104.917411
8,799.0	90.10	181.70	7,363.5	-1,299.3	-659.1	1,303,323.60	3,162,823.76	40.164543	-104.917418
8,891.0	89.50	181.50	7,363.8	-1,391.3	-661.6	1,303,231.62	3,162,821.80	40.164291	-104.917428
8,983.0	89.80	181.80	7,364.3	-1,483.2	-664.3	1,303,139.65	3,162,819.75	40.164038	-104.917437
9,075.0	88.30	181.30	7,365.9	-1,575.2	-666.8	1,303,047.68	3,162,817.87	40.163786	-104.917446
9,167.0	88.30	181.80	7,368.6	-1,667.1	-669.2	1,302,955.74	3,162,815.99	40.163534	-104.917455
9,259.0	89.30	181.60	7,370.5	-1,759.0	-672.0	1,302,863.79	3,162,813.87	40.163281	-104.917465
9,351.0	89.20	181.30	7,371.7	-1,851.0	-674.3	1,302,771.81	3,162,812.15	40.163029	-104.917473
9,443.0	88.80	179.80	7,373.3	-1,943.0	-675.2	1,302,679.83	3,162,811.87	40.162776	-104.917476
9,535.0	89.80	179.80	7,374.5	-2,035.0	-674.9	1,302,587.84	3,162,812.80	40.162524	-104.917475
9,628.0	91.30	181.10	7,373.6	-2,128.0	-675.6	1,302,494.85	3,162,812.68	40.162268	-104.917478
9,719.0	91.20	181.30	7,371.6	-2,218.9	-677.5	1,302,403.88	3,162,811.38	40.162019	-104.917484
9,811.0	91.10	180.80	7,369.7	-2,310.9	-679.2	1,302,311.91	3,162,810.30	40.161766	-104.917490
9,903.0	91.20	180.30	7,367.9	-2,402.9	-680.1	1,302,219.93	3,162,810.02	40.161514	-104.917494
9,995.0	90.40	179.80	7,366.6	-2,494.9	-680.1	1,302,127.94	3,162,810.55	40.161261	-104.917494
10,087.0	90.00	180.10	7,366.3	-2,586.9	-680.1	1,302,035.94	3,162,811.24	40.161009	-104.917493
10,179.0	89.80	179.30	7,366.4	-2,678.8	-679.6	1,301,943.95	3,162,812.33	40.160756	-104.917492

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
10,271.0	90.10	178.70	7,366.5	-2,770.8	-678.0	1,301,851.98	3,162,814.54	40.160504	-104.917486
10,363.0	89.10	179.40	7,367.2	-2,862.8	-676.5	1,301,760.00	3,162,816.67	40.160251	-104.917481
10,455.0	88.40	179.60	7,369.2	-2,954.8	-675.7	1,301,668.04	3,162,818.08	40.159999	-104.917478
10,547.0	89.60	179.60	7,370.8	-3,046.8	-675.0	1,301,576.06	3,162,819.33	40.159746	-104.917475
10,641.0	90.40	178.90	7,370.8	-3,140.8	-673.8	1,301,482.08	3,162,821.18	40.159488	-104.917471
10,736.0	90.70	180.70	7,369.9	-3,235.8	-673.4	1,301,387.09	3,162,822.14	40.159227	-104.917470
10,831.0	90.80	181.70	7,368.6	-3,330.7	-675.4	1,301,292.11	3,162,820.77	40.158967	-104.917477
10,926.0	89.10	181.30	7,368.7	-3,425.7	-677.9	1,301,197.14	3,162,818.91	40.158706	-104.917486
11,020.0	89.00	180.20	7,370.3	-3,519.7	-679.2	1,301,103.15	3,162,818.30	40.158448	-104.917490
11,115.0	89.50	179.80	7,371.5	-3,614.7	-679.2	1,301,008.16	3,162,818.93	40.158187	-104.917490
11,210.0	89.50	181.20	7,372.3	-3,709.6	-680.0	1,300,913.17	3,162,818.73	40.157926	-104.917493
11,305.0	89.70	181.10	7,373.0	-3,804.6	-681.9	1,300,818.18	3,162,817.45	40.157666	-104.917500
11,400.0	89.50	180.30	7,373.7	-3,899.6	-683.1	1,300,723.18	3,162,816.91	40.157405	-104.917504
11,495.0	89.20	178.50	7,374.7	-3,994.6	-682.1	1,300,628.21	3,162,818.53	40.157144	-104.917500
11,589.0	88.90	179.00	7,376.3	-4,088.6	-680.0	1,300,534.26	3,162,821.20	40.156886	-104.917493
11,683.0	89.10	178.80	7,377.9	-4,182.5	-678.2	1,300,440.31	3,162,823.63	40.156628	-104.917487
11,778.0	88.30	176.90	7,380.1	-4,277.4	-674.6	1,300,345.43	3,162,827.82	40.156368	-104.917474
11,872.0	91.60	178.50	7,380.2	-4,371.3	-670.9	1,300,251.55	3,162,832.21	40.156110	-104.917460
11,967.0	90.10	182.00	7,378.8	-4,466.3	-671.3	1,300,156.57	3,162,832.42	40.155849	-104.917462
12,062.0	90.70	183.60	7,378.1	-4,561.2	-675.9	1,300,061.67	3,162,828.41	40.155589	-104.917478
12,156.0	90.70	182.70	7,377.0	-4,655.1	-681.1	1,299,967.76	3,162,823.86	40.155331	-104.917497
12,250.0	92.00	182.60	7,374.7	-4,748.9	-685.4	1,299,873.86	3,162,820.13	40.155073	-104.917512
12,345.0	90.90	181.50	7,372.3	-4,843.8	-688.8	1,299,778.93	3,162,817.36	40.154813	-104.917525
12,439.0	90.40	179.70	7,371.3	-4,937.8	-689.8	1,299,684.95	3,162,817.00	40.154555	-104.917528
12,534.0	89.00	179.10	7,371.8	-5,032.8	-688.8	1,299,589.96	3,162,818.62	40.154294	-104.917525
12,628.0	89.50	179.90	7,373.0	-5,126.8	-688.0	1,299,495.98	3,162,820.06	40.154036	-104.917522
12,722.0	88.60	180.10	7,374.6	-5,220.8	-688.0	1,299,402.00	3,162,820.68	40.153778	-104.917522
12,817.0	88.90	181.40	7,376.6	-5,315.8	-689.2	1,299,307.03	3,162,820.06	40.153517	-104.917526
12,912.0	90.00	181.30	7,377.5	-5,410.7	-691.5	1,299,212.04	3,162,818.45	40.153257	-104.917534
13,006.0	88.40	180.80	7,378.8	-5,504.7	-693.2	1,299,118.09	3,162,817.35	40.152999	-104.917540
13,101.0	89.60	181.00	7,380.5	-5,599.7	-694.7	1,299,023.11	3,162,816.48	40.152738	-104.917546
13,195.0	90.00	179.80	7,380.8	-5,693.6	-695.4	1,298,929.11	3,162,816.45	40.152480	-104.917548
13,289.0	89.60	178.70	7,381.2	-5,787.6	-694.1	1,298,835.13	3,162,818.30	40.152222	-104.917543
13,384.0	87.90	177.80	7,383.2	-5,882.6	-691.2	1,298,740.22	3,162,821.82	40.151962	-104.917533
13,479.0	89.20	177.70	7,385.6	-5,977.5	-687.5	1,298,645.33	3,162,826.18	40.151701	-104.917520
13,573.0	90.20	178.70	7,386.1	-6,071.4	-684.5	1,298,551.40	3,162,829.75	40.151443	-104.917509
13,668.0	90.90	179.80	7,385.2	-6,166.4	-683.3	1,298,456.43	3,162,831.62	40.151182	-104.917505
13,764.0	89.50	179.40	7,384.9	-6,262.4	-682.6	1,298,360.47	3,162,832.93	40.150919	-104.917502
13,796.0	90.30	178.90	7,384.9	-6,294.4	-682.2	1,298,328.47	3,162,833.61	40.150831	-104.917501
13,827.0	90.50	179.50	7,384.7	-6,325.4	-681.7	1,298,297.48	3,162,834.25	40.150746	-104.917499
13,859.0	91.00	180.60	7,384.3	-6,357.4	-681.7	1,298,265.48	3,162,834.43	40.150658	-104.917499
13,890.0	91.00	182.90	7,383.8	-6,388.4	-682.7	1,298,234.50	3,162,833.69	40.150573	-104.917503
13,922.0	90.00	184.80	7,383.5	-6,420.3	-684.8	1,298,202.56	3,162,831.75	40.150485	-104.917510
13,953.0	89.80	185.10	7,383.5	-6,451.2	-687.5	1,298,171.66	3,162,829.28	40.150401	-104.917520
13,985.0	90.20	184.80	7,383.5	-6,483.0	-690.3	1,298,139.76	3,162,826.73	40.150313	-104.917530
14,016.0	89.80	184.70	7,383.5	-6,513.9	-692.8	1,298,108.85	3,162,824.37	40.150228	-104.917539
14,048.0	89.60	184.80	7,383.7	-6,545.8	-695.5	1,298,076.95	3,162,821.93	40.150141	-104.917548
14,110.0	89.00	183.50	7,384.5	-6,607.7	-700.0	1,298,015.09	3,162,817.85	40.149971	-104.917564
14,205.0	88.10	182.70	7,386.9	-6,702.5	-705.1	1,297,920.23	3,162,813.34	40.149711	-104.917583
14,300.0	90.10	181.10	7,388.4	-6,797.4	-708.3	1,297,825.28	3,162,810.82	40.149450	-104.917594
14,395.0	89.20	179.30	7,388.9	-6,892.4	-708.6	1,297,730.29	3,162,811.11	40.149189	-104.917595
14,490.0	90.00	180.20	7,389.6	-6,987.4	-708.2	1,297,635.30	3,162,812.15	40.148929	-104.917594
14,585.0	89.00	180.50	7,390.4	-7,082.4	-708.8	1,297,540.30	3,162,812.20	40.148668	-104.917596
14,679.0	90.00	181.20	7,391.3	-7,176.4	-710.2	1,297,446.31	3,162,811.42	40.148410	-104.917601
14,774.0	90.90	181.60	7,390.5	-7,271.4	-712.5	1,297,351.30	3,162,809.73	40.148149	-104.917609

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2F-5H-F267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4890.0ft (H&P 278)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4890.0ft (H&P 278)
Well:	Vogl-McCoy 2F-5H-F267	North Reference:	True
Wellbore:	Hz	Survey Calculation Method:	Minimum Curvature
Design:	FINAL	Database:	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
14,869.0	89.10	179.80	7,390.5	-7,366.4	-713.6	1,297,256.31	3,162,809.19	40.147888	-104.917613
14,964.0	88.60	179.10	7,392.4	-7,461.3	-712.7	1,297,161.34	3,162,810.73	40.147628	-104.917610
15,058.0	89.10	178.60	7,394.3	-7,555.3	-710.8	1,297,067.39	3,162,813.24	40.147370	-104.917603
15,135.0	89.20	178.40	7,395.4	-7,632.2	-708.8	1,296,990.47	3,162,815.76	40.147158	-104.917596
Last CES Survey @ 15,135' MD									
15,187.0	89.20	178.40	7,396.2	-7,684.2	-707.4	1,296,938.51	3,162,817.56	40.147016	-104.917591
PTB @ 15,187'									

Design 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									
Vogl-McCoy 2F-5H-F267	0.00	0.00	7,390.2	-7,730.0	-707.3	1,296,892.72	3,162,817.97	40.146890	-104.917590
- actual wellpath misses target center by 46.2ft at 15187.0ft MD (7396.2 TVD, -7684.2 N, -707.4 E)									
- Point									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,532.0	7,368.9	TL2		0.20	180.00
7,596.3	7,381.9	TL		-0.20	180.00

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
15,135.0	7,395.4	-7,632.2	-708.8	Last CES Survey @ 15,135' MD
15,187.0	7,396.2	-7,684.2	-707.4	PTB @ 15,187'

Checked By: _____ Approved By: _____ Date: _____