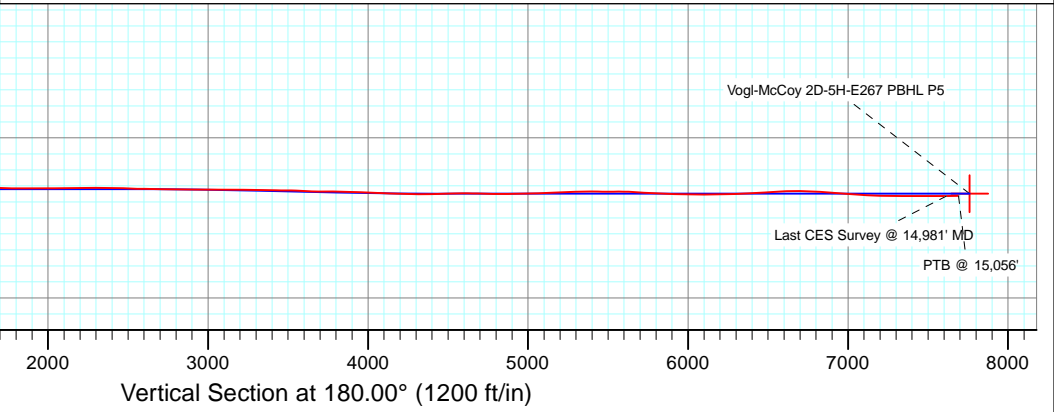
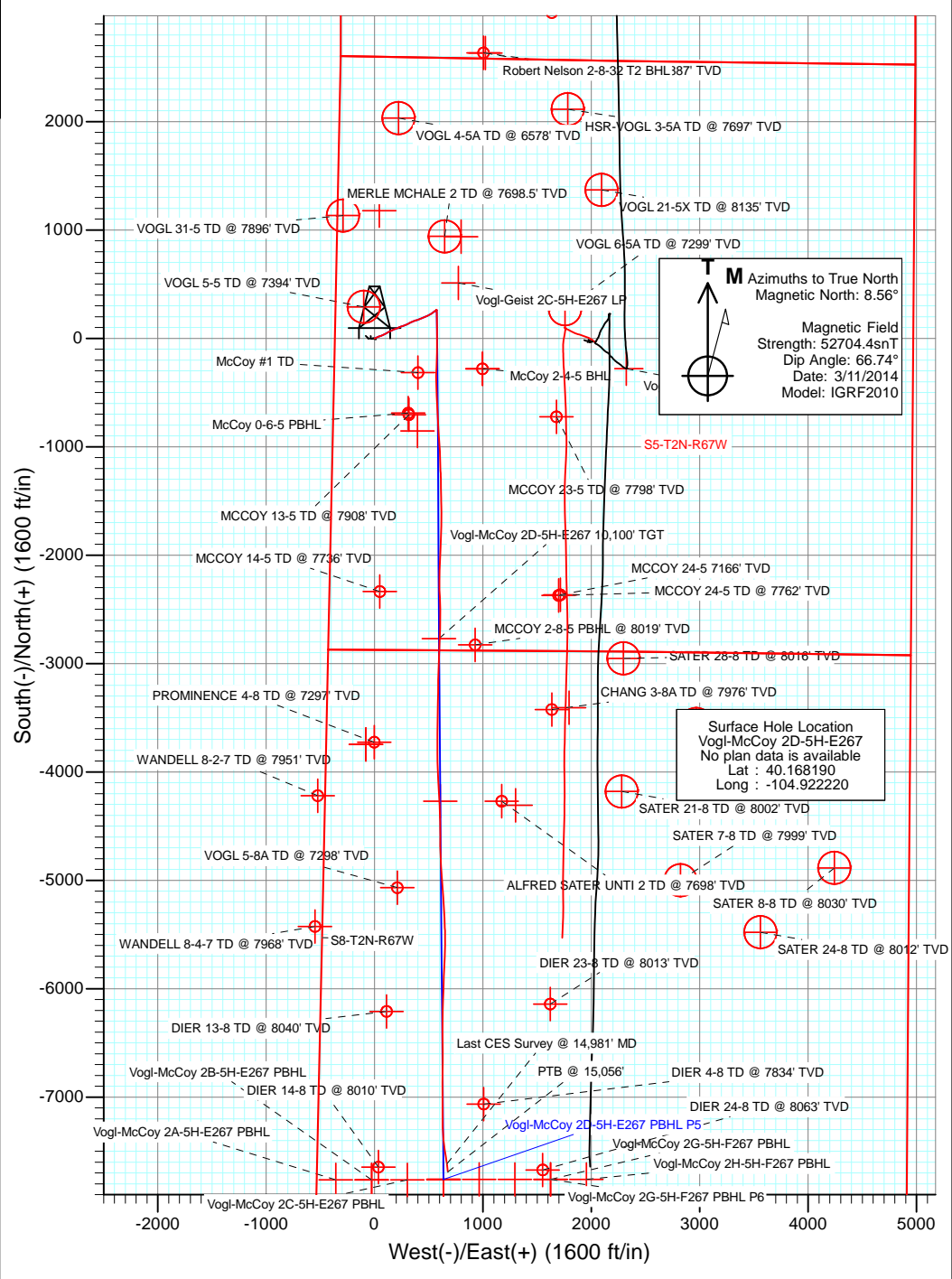
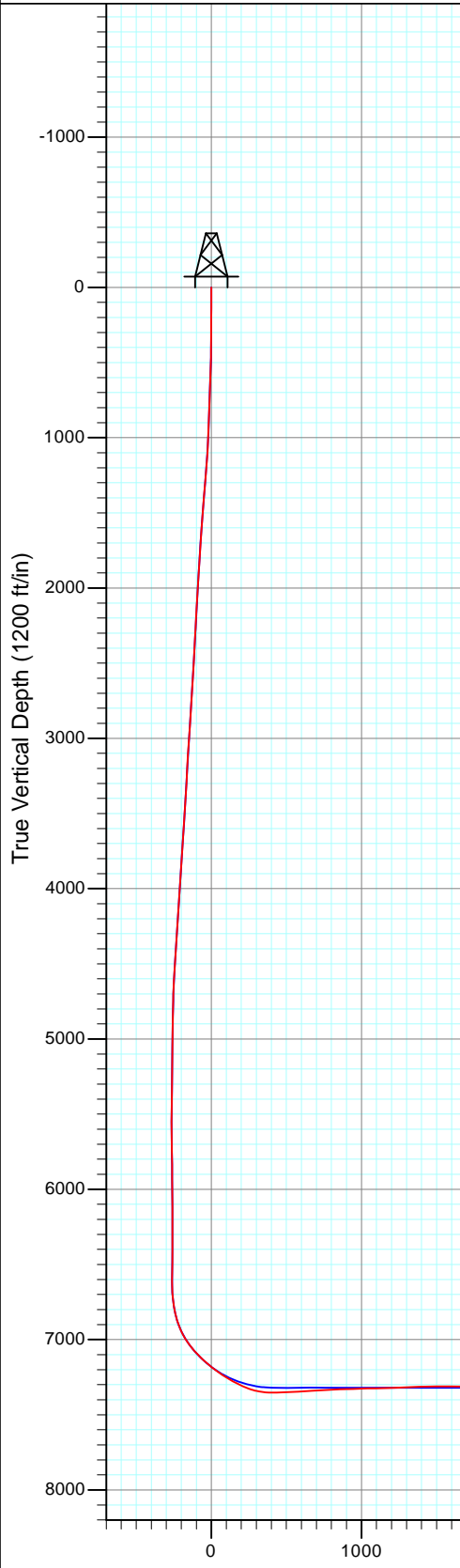




Project: DJ Wattenberg
 Site: S5-T2N-R67W (Vogl-McCoy)
 Well: Vogl-McCoy 2D-5H-E267
 Wellbore: Hz
 Design: FINAL

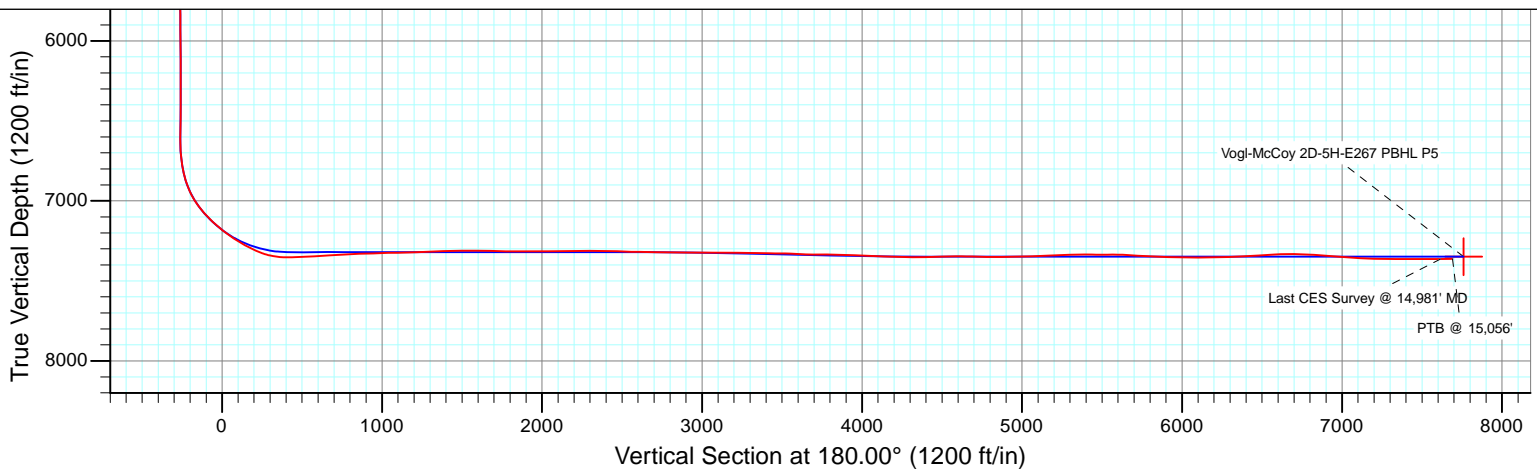
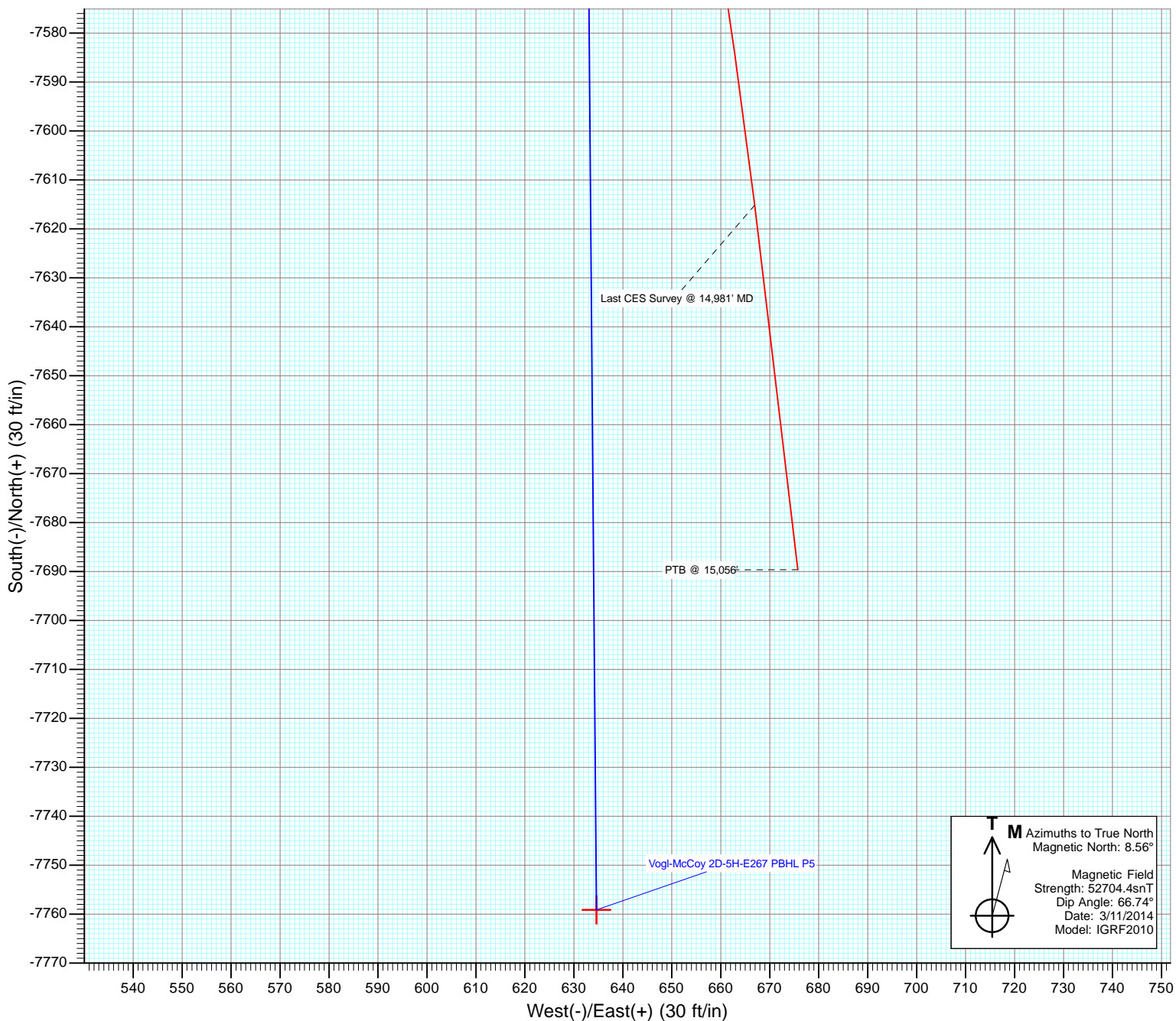


FINAL
 Vogl-McCoy 2D-5H-E267
 303555 145066; LR
 KB @ 4866.0ft (H&P 522)
 Ground Elevation @ 4836.0
 North American Datum 1983
 Well Vogl-McCoy 2D-5H-E267, True North





Project: DJ Wattenberg
Site: S5-T2N-R67W (Vogl-McCoy)
Well: Vogl-McCoy 2D-5H-E267
Wellbore: Hz
Design: FINAL



Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Vogl-McCoy 2D-5H-E267
Project: DJ Wattenberg	TVD Reference: KB @ 4866.0ft (H&P 522)
Site: S5-T2N-R67W (Vogl-McCoy)	MD Reference: KB @ 4866.0ft (H&P 522)
Well: Vogl-McCoy 2D-5H-E267	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 2D-5H-E267				
Well Position	+N/-S 0.0 ft	Northing: 1,304,643.22 ft	Latitude: 40.168190	
	+E/-W 0.0 ft	Easting: 3,161,473.12 ft	Longitude: -104.922220	
Position Uncertainty	0.0 ft	Wellhead Elevation: ft	Ground Level: 4,836.0 ft	

Wellbore Hz					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/11/2014	8.56	66.74	52,704

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 3/24/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
143.0	15,056.0	Survey #1 (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	
143.0	0.18	356.61	143.0	0.2	0.0	-0.2	0.13	0.13	
235.0	0.88	80.72	235.0	0.5	0.7	-0.5	0.96	0.76	
327.0	1.45	70.44	327.0	1.0	2.5	-1.0	0.66	0.62	
419.0	1.98	69.12	418.9	1.9	5.1	-1.9	0.58	0.58	
511.0	3.03	60.33	510.8	3.7	8.6	-3.7	1.21	1.14	
603.0	4.39	61.65	602.7	6.6	13.9	-6.6	1.48	1.48	
695.0	5.23	62.35	694.3	10.2	20.7	-10.2	0.92	0.91	
787.0	4.61	68.85	786.0	13.5	27.8	-13.5	0.91	-0.67	
818.0	4.97	68.85	816.9	14.4	30.3	-14.4	1.16	1.16	
912.0	5.20	69.60	910.5	17.4	38.0	-17.4	0.25	0.24	
1,004.0	9.20	73.10	1,001.8	21.0	49.0	-21.0	4.37	4.35	
1,096.0	10.00	72.50	1,092.5	25.5	63.6	-25.5	0.88	0.87	

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Vogl-McCoy 2D-5H-E267
Project: DJ Wattenberg	TD Reference: KB @ 4866.0ft (H&P 522)
Site: S5-T2N-R67W (Vogl-McCoy)	MD Reference: KB @ 4866.0ft (H&P 522)
Well: Vogl-McCoy 2D-5H-E267	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
1,188.0	10.20	61.40	1,183.1	31.8	78.4	-31.8	2.12	0.22	
1,280.0	10.50	61.20	1,273.6	39.7	92.9	-39.7	0.33	0.33	
1,372.0	8.60	64.80	1,364.3	46.7	106.5	-46.7	2.16	-2.07	
1,464.0	9.40	58.00	1,455.2	53.6	119.1	-53.6	1.45	0.87	
1,556.0	8.60	62.90	1,546.0	60.7	131.6	-60.7	1.20	-0.87	
1,648.0	9.00	65.50	1,636.9	66.9	144.2	-66.9	0.61	0.43	
1,739.0	8.20	60.40	1,726.9	73.0	156.4	-73.0	1.21	-0.88	
1,831.0	9.50	69.50	1,817.8	78.9	169.2	-78.9	2.07	1.41	
1,923.0	9.10	65.50	1,908.6	84.6	182.9	-84.6	0.83	-0.43	
2,015.0	9.30	72.10	1,999.4	89.9	196.6	-89.9	1.17	0.22	
2,107.0	9.10	65.70	2,090.3	95.2	210.3	-95.2	1.13	-0.22	
2,199.0	7.70	62.70	2,181.3	101.0	222.4	-101.0	1.59	-1.52	
2,291.0	6.40	69.60	2,272.6	105.6	232.7	-105.6	1.68	-1.41	
2,383.0	10.00	72.50	2,363.6	109.8	245.1	-109.8	3.94	3.91	
2,478.0	9.10	70.10	2,457.3	114.8	260.1	-114.8	1.04	-0.95	
2,572.0	9.20	69.30	2,550.1	120.0	274.1	-120.0	0.17	0.11	
2,666.0	8.90	68.00	2,642.9	125.4	287.9	-125.4	0.39	-0.32	
2,760.0	8.50	64.10	2,735.8	131.2	300.8	-131.2	0.76	-0.43	
2,854.0	7.30	63.40	2,829.0	136.9	312.4	-136.9	1.28	-1.28	
2,948.0	9.30	63.50	2,922.0	142.9	324.6	-142.9	2.13	2.13	
3,043.0	8.70	63.00	3,015.8	149.6	337.8	-149.6	0.64	-0.63	
3,137.0	8.70	65.00	3,108.7	155.9	350.6	-155.9	0.32	0.00	
3,232.0	9.60	73.80	3,202.5	161.1	364.7	-161.1	1.75	0.95	
3,326.0	9.10	70.10	3,295.3	165.8	379.3	-165.8	0.83	-0.53	
3,421.0	10.50	71.30	3,388.9	171.1	394.5	-171.1	1.49	1.47	
3,516.0	10.20	70.40	3,482.3	176.7	410.7	-176.7	0.36	-0.32	
3,610.0	9.80	67.50	3,574.9	182.6	425.9	-182.6	0.68	-0.43	
3,705.0	8.90	64.50	3,668.6	188.9	440.0	-188.9	1.08	-0.95	
3,800.0	10.10	68.60	3,762.3	195.1	454.4	-195.1	1.45	1.26	
3,894.0	9.80	68.70	3,854.9	201.0	469.5	-201.0	0.32	-0.32	
3,989.0	9.30	64.70	3,948.6	207.2	484.0	-207.2	0.87	-0.53	
4,083.0	8.20	66.50	4,041.5	213.1	497.0	-213.1	1.21	-1.17	
4,178.0	7.10	58.10	4,135.7	218.9	508.2	-218.9	1.65	-1.16	
4,273.0	7.00	56.50	4,229.9	225.2	518.0	-225.2	0.23	-0.11	
4,367.0	6.30	55.20	4,323.3	231.3	527.0	-231.3	0.76	-0.74	
4,462.0	6.20	52.40	4,417.7	237.4	535.4	-237.4	0.34	-0.11	
4,556.0	6.10	52.30	4,511.2	243.6	543.3	-243.6	0.11	-0.11	
4,651.0	5.50	56.10	4,605.7	249.2	551.1	-249.2	0.75	-0.63	
4,746.0	4.70	80.00	4,700.4	252.4	558.7	-252.4	2.37	-0.84	
4,840.0	2.30	46.30	4,794.2	254.4	563.9	-254.4	3.26	-2.55	
4,935.0	2.20	33.50	4,889.1	257.2	566.3	-257.2	0.54	-0.11	
5,029.0	0.50	71.30	4,983.1	258.9	567.6	-258.9	1.95	-1.81	
5,124.0	0.40	60.80	5,078.1	259.2	568.3	-259.2	0.14	-0.11	
5,219.0	0.70	38.70	5,173.1	259.8	569.0	-259.8	0.38	0.32	
5,313.0	1.00	25.80	5,267.1	261.0	569.7	-261.0	0.38	0.32	
5,408.0	1.00	8.10	5,362.0	262.5	570.2	-262.5	0.32	0.00	
5,503.0	1.10	19.10	5,457.0	264.2	570.6	-264.2	0.24	0.11	
5,597.0	0.70	172.40	5,551.0	264.5	571.0	-264.5	1.87	-0.43	
5,692.0	0.80	197.50	5,646.0	263.3	570.8	-263.3	0.36	0.11	
5,786.0	0.50	224.20	5,740.0	262.4	570.3	-262.4	0.45	-0.32	
5,881.0	0.60	185.10	5,835.0	261.6	570.0	-261.6	0.40	0.11	
5,975.0	0.30	203.40	5,929.0	260.9	569.9	-260.9	0.35	-0.32	
6,070.0	0.50	150.00	6,024.0	260.3	570.0	-260.3	0.42	0.21	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2D-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4866.0ft (H&P 522)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4866.0ft (H&P 522)
Well:	Vogl-McCoy 2D-5H-E267	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
6,165.0	0.60	146.80	6,119.0	259.5	570.5	-259.5	0.11	0.11	
6,259.0	0.20	106.60	6,213.0	259.0	570.9	-259.0	0.50	-0.43	
6,354.0	0.40	77.50	6,308.0	259.1	571.4	-259.1	0.26	0.21	
6,449.0	0.40	344.30	6,403.0	259.4	571.6	-259.4	0.61	0.00	
6,543.0	0.50	30.00	6,497.0	260.1	571.7	-260.1	0.38	0.11	
6,638.0	0.50	341.80	6,592.0	260.9	571.8	-260.9	0.43	0.00	
6,685.0	0.30	344.40	6,639.0	261.2	571.7	-261.2	0.43	-0.43	
6,732.0	3.20	171.30	6,686.0	260.0	571.9	-260.0	7.44	6.17	
6,779.0	6.80	169.90	6,732.8	256.0	572.6	-256.0	7.66	7.66	
6,827.0	9.50	173.70	6,780.3	249.2	573.5	-249.2	5.73	5.62	
6,874.0	13.50	177.60	6,826.3	239.9	574.1	-239.9	8.67	8.51	
6,921.0	17.30	174.90	6,871.6	227.4	575.0	-227.4	8.23	8.09	
6,968.0	21.90	176.80	6,915.9	211.7	576.1	-211.7	9.88	9.79	
7,016.0	26.70	180.20	6,959.6	192.0	576.6	-192.0	10.41	10.00	
7,063.0	32.70	182.60	7,000.5	168.7	576.0	-168.7	13.01	12.77	
7,111.0	36.40	182.00	7,040.0	141.5	574.9	-141.5	7.74	7.71	
7,158.0	41.50	179.30	7,076.5	112.0	574.6	-112.0	11.43	10.85	
7,205.0	44.70	177.10	7,110.8	79.9	575.6	-79.9	7.52	6.81	
7,252.0	48.00	179.20	7,143.3	45.9	576.7	-45.9	7.73	7.02	
7,300.0	51.60	179.60	7,174.3	9.3	577.1	-9.3	7.53	7.50	
7,347.0	53.40	180.60	7,202.9	-28.0	577.0	28.0	4.19	3.83	
7,394.0	56.40	182.10	7,229.9	-66.4	576.1	66.4	6.90	6.38	
7,440.0	58.10	180.70	7,254.8	-105.1	575.1	105.1	4.50	3.70	
7,556.0	65.20	181.00	7,309.8	-207.1	573.6	207.1	6.12	6.12	
7,603.0	71.20	183.30	7,327.3	-250.7	572.0	250.7	13.55	12.77	
7,651.0	77.10	182.60	7,340.4	-296.8	569.6	296.8	12.37	12.29	
7,698.0	82.50	179.90	7,348.7	-343.0	568.6	343.0	12.80	11.49	
7,745.0	88.50	178.80	7,352.4	-389.9	569.1	389.9	12.98	12.77	
7,792.0	92.20	178.40	7,352.1	-436.8	570.3	436.8	7.92	7.87	
7,840.0	92.30	178.20	7,350.2	-484.8	571.7	484.8	0.47	0.21	
7,935.0	92.80	177.70	7,346.0	-579.6	575.1	579.6	0.74	0.53	
8,027.0	93.70	177.00	7,340.8	-671.4	579.3	671.4	1.24	0.98	
8,119.0	92.70	177.00	7,335.6	-763.1	584.1	763.1	1.09	-1.09	
8,211.0	93.00	175.70	7,331.1	-854.8	590.0	854.8	1.45	0.33	
8,303.0	91.30	176.30	7,327.6	-946.5	596.4	946.5	1.96	-1.85	
8,395.0	91.80	177.70	7,325.1	-1,038.3	601.2	1,038.3	1.62	0.54	
8,487.0	91.70	177.70	7,322.3	-1,130.2	604.9	1,130.2	0.11	-0.11	
8,578.0	90.30	177.70	7,320.7	-1,221.1	608.6	1,221.1	1.54	-1.54	
8,670.0	93.40	179.00	7,317.7	-1,313.0	611.2	1,313.0	3.65	3.37	
8,762.0	92.50	179.20	7,313.0	-1,404.9	612.6	1,404.9	1.00	-0.98	
8,854.0	89.70	177.80	7,311.2	-1,496.8	615.1	1,496.8	3.40	-3.04	
8,946.0	89.60	179.70	7,311.8	-1,588.8	617.1	1,588.8	2.07	-0.11	
9,038.0	89.10	181.40	7,312.9	-1,680.8	616.2	1,680.8	1.93	-0.54	
9,130.0	88.80	181.70	7,314.5	-1,772.8	613.7	1,772.8	0.46	-0.33	
9,222.0	90.20	180.80	7,315.3	-1,864.7	611.7	1,864.7	1.81	1.52	
9,314.0	90.40	182.90	7,314.9	-1,956.7	608.7	1,956.7	2.29	0.22	
9,405.0	90.20	183.10	7,314.4	-2,047.5	604.0	2,047.5	0.31	-0.22	
9,497.0	90.50	181.80	7,313.8	-2,139.5	600.0	2,139.5	1.45	0.33	
9,589.0	90.40	179.80	7,313.1	-2,231.4	598.7	2,231.4	2.18	-0.11	
9,681.0	90.60	179.70	7,312.3	-2,323.4	599.1	2,323.4	0.24	0.22	
9,773.0	87.80	176.40	7,313.6	-2,415.4	602.3	2,415.4	4.70	-3.04	
9,868.0	88.20	178.80	7,316.9	-2,510.2	606.2	2,510.2	2.56	0.42	
9,963.0	89.60	181.50	7,318.7	-2,605.2	606.0	2,605.2	3.20	1.47	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2D-5H-E267
Project:	DJ Wattenberg	TD Reference:	KB @ 4866.0ft (H&P 522)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4866.0ft (H&P 522)
Well:	Vogl-McCoy 2D-5H-E267	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
10,057.0	89.10	180.30	7,319.8	-2,699.2	604.5	2,699.2	1.38	-0.53	
10,152.0	89.60	183.80	7,320.9	-2,794.1	601.1	2,794.1	3.72	0.53	
10,247.0	88.60	183.20	7,322.4	-2,888.9	595.3	2,888.9	1.23	-1.05	
10,341.0	89.10	181.90	7,324.2	-2,982.8	591.1	2,982.8	1.48	0.53	
10,436.0	90.30	181.30	7,324.7	-3,077.7	588.5	3,077.7	1.41	1.26	
10,530.0	90.50	180.40	7,324.1	-3,171.7	587.1	3,171.7	0.98	0.21	
10,625.0	89.70	181.10	7,323.9	-3,266.7	585.8	3,266.7	1.12	-0.84	
10,720.0	87.80	181.40	7,326.0	-3,361.7	583.8	3,361.7	2.02	-2.00	
10,814.0	90.00	181.10	7,327.8	-3,455.6	581.7	3,455.6	2.36	2.34	
10,909.0	87.40	180.60	7,330.0	-3,550.6	580.3	3,550.6	2.79	-2.74	
11,003.0	88.10	180.40	7,333.6	-3,644.5	579.5	3,644.5	0.77	0.74	
11,098.0	89.40	180.40	7,335.7	-3,739.5	578.8	3,739.5	1.37	1.37	
11,193.0	89.80	179.50	7,336.4	-3,834.5	578.9	3,834.5	1.04	0.42	
11,287.0	87.30	177.70	7,338.8	-3,928.4	581.2	3,928.4	3.28	-2.66	
11,382.0	87.80	177.90	7,342.8	-4,023.2	584.9	4,023.2	0.57	0.53	
11,477.0	88.10	177.80	7,346.2	-4,118.1	588.4	4,118.1	0.33	0.32	
11,571.0	88.10	175.60	7,349.3	-4,211.9	593.8	4,211.9	2.34	0.00	
11,666.0	90.00	177.60	7,350.9	-4,306.7	599.5	4,306.7	2.90	2.00	
11,760.0	90.40	178.00	7,350.6	-4,400.6	603.1	4,400.6	0.60	0.43	
11,854.0	91.90	179.50	7,348.7	-4,494.6	605.1	4,494.6	2.26	1.60	
11,949.0	90.50	179.90	7,346.7	-4,589.6	605.6	4,589.6	1.53	-1.47	
12,044.0	88.50	178.50	7,347.5	-4,684.5	606.9	4,684.5	2.57	-2.11	
12,138.0	89.30	178.00	7,349.3	-4,778.5	609.8	4,778.5	1.00	0.85	
12,233.0	90.50	178.00	7,349.5	-4,873.4	613.1	4,873.4	1.26	1.26	
12,327.0	90.60	175.50	7,348.6	-4,967.3	618.5	4,967.3	2.66	0.11	
12,422.0	91.80	175.20	7,346.6	-5,061.9	626.2	5,061.9	1.30	1.26	
12,516.0	93.00	176.30	7,342.7	-5,155.6	633.1	5,155.6	1.73	1.28	
12,611.0	92.40	175.90	7,338.2	-5,250.3	639.6	5,250.3	0.76	-0.63	
12,705.0	91.10	177.80	7,335.3	-5,344.1	644.7	5,344.1	2.45	-1.38	
12,800.0	88.50	177.80	7,335.7	-5,439.0	648.4	5,439.0	2.74	-2.74	
12,895.0	90.90	179.80	7,336.2	-5,533.9	650.4	5,533.9	3.29	2.53	
12,989.0	88.10	180.70	7,337.0	-5,627.9	650.0	5,627.9	3.13	-2.98	
13,084.0	86.20	182.90	7,341.7	-5,722.8	647.0	5,722.8	3.06	-2.00	
13,178.0	87.20	182.80	7,347.1	-5,816.5	642.3	5,816.5	1.07	1.06	
13,273.0	88.20	182.10	7,350.9	-5,911.3	638.3	5,911.3	1.28	1.05	
13,367.0	89.30	182.10	7,353.0	-6,005.2	634.8	6,005.2	1.17	1.17	
13,462.0	90.90	181.70	7,352.8	-6,100.2	631.7	6,100.2	1.74	1.68	
13,556.0	90.20	181.20	7,351.9	-6,194.1	629.3	6,194.1	0.92	-0.74	
13,651.0	91.60	180.60	7,350.4	-6,289.1	627.8	6,289.1	1.60	1.47	
13,746.0	92.90	180.20	7,346.7	-6,384.0	627.1	6,384.0	1.43	1.37	
13,840.0	94.10	178.90	7,340.9	-6,477.9	627.9	6,477.9	1.88	1.28	
13,935.0	93.10	179.90	7,335.0	-6,572.7	628.9	6,572.7	1.49	-1.05	
14,036.0	90.70	180.60	7,331.6	-6,673.6	628.4	6,673.6	2.48	-2.38	
14,131.0	86.20	180.80	7,334.2	-6,768.5	627.3	6,768.5	4.74	-4.74	
14,225.0	86.10	180.60	7,340.5	-6,862.3	626.1	6,862.3	0.24	-0.11	
14,320.0	85.60	180.30	7,347.4	-6,957.1	625.4	6,957.1	0.61	-0.53	
14,414.0	86.70	179.40	7,353.7	-7,050.9	625.6	7,050.9	1.51	1.17	
14,509.0	87.00	179.70	7,358.9	-7,145.7	626.4	7,145.7	0.45	0.32	
14,604.0	89.30	178.50	7,362.0	-7,240.7	627.8	7,240.7	2.73	2.42	
14,698.0	89.80	177.40	7,362.7	-7,334.6	631.2	7,334.6	1.29	0.53	
14,792.0	89.90	172.60	7,363.0	-7,428.2	639.4	7,428.2	5.11	0.11	
14,887.0	89.80	170.50	7,363.2	-7,522.2	653.4	7,522.2	2.21	-0.11	
14,981.0	90.60	172.90	7,362.9	-7,615.1	666.9	7,615.1	2.69	0.85	Last CES Survey @ 14,981' MD

Cathedral Energy Services

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Vogl-McCoy 2D-5H-E267
Project: DJ Wattenberg	TVD Reference: KB @ 4866.0ft (H&P 522)
Site: S5-T2N-R67W (Vogl-McCoy)	MD Reference: KB @ 4866.0ft (H&P 522)
Well: Vogl-McCoy 2D-5H-E267	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
15,056.0	90.79	173.61	7,362.0	-7,689.6	675.7	7,689.6	0.98	0.25	PTB @ 15,056'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Vogl-McCoy 2D-5H-E26' - hit/miss target - Shape	0.00	0.00	7,349.0	-7,759.1	634.6	1,296,888.40	3,162,158.24	40.146890	-104.919950
- actual wellpath misses target center by 81.8ft at 15056.0ft MD (7362.0 TVD, -7689.6 N, 675.7 E)									
- Point									
Vogl-McCoy 2D-5H-E26' - hit/miss target - Shape	0.00	0.00	7,349.0	-4,268.8	606.4	1,300,378.45	3,162,107.36	40.156471	-104.920050
- actual wellpath misses target center by 9.0ft at 11628.6ft MD (7350.7 TVD, -4269.3 N, 597.6 E)									
- Point									
Vogl-McCoy 2D-5H-E26' - hit/miss target - Shape	0.00	0.00	7,380.6	-7,759.1	634.6	1,296,888.40	3,162,158.24	40.146890	-104.919950
- actual wellpath misses target center by 82.9ft at 15056.0ft MD (7362.0 TVD, -7689.6 N, 675.7 E)									
- Point									
Vogl-McCoy 2D-5H-E26' - hit/miss target - Shape	0.00	0.00	7,320.0	-2,768.9	594.3	1,301,878.27	3,162,085.49	40.160589	-104.920094
- actual wellpath misses target center by 8.3ft at 10127.1ft MD (7320.7 TVD, -2769.2 N, 602.6 E)									
- Point									
Vogl-McCoy 2D-5H-E26' - hit/miss target - Shape	0.00	0.00	7,311.0	-7,759.1	634.6	1,296,888.40	3,162,158.24	40.146890	-104.919950
- actual wellpath misses target center by 95.5ft at 15056.0ft MD (7362.0 TVD, -7689.6 N, 675.7 E)									
- Point									
Vogl-McCoy 2D-5H-E26' - hit/miss target - Shape	0.00	0.00	7,338.0	-7,759.1	634.6	1,296,888.40	3,162,158.24	40.146890	-104.919950
- actual wellpath misses target center by 84.3ft at 15056.0ft MD (7362.0 TVD, -7689.6 N, 675.7 E)									
- Point									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
14,981.0	7,362.9	-7,615.1	666.9	Last CES Survey @ 14,981' MD
15,056.0	7,362.0	-7,689.6	675.7	PTB @ 15,056'

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S5-T2N-R67W (Vogl-McCoy)

Vogl-McCoy 2D-5H-E267

Hz

Design: FINAL

Survey Report - Geographic

24 March, 2014

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Vogl-McCoy 2D-5H-E267
Project: DJ Wattenberg	TVD Reference: KB @ 4866.0ft (H&P 522)
Site: S5-T2N-R67W (Vogl-McCoy)	MD Reference: KB @ 4866.0ft (H&P 522)
Well: Vogl-McCoy 2D-5H-E267	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: -104.922110		
Position Uncertainty: 0.0 ft	Slot Radius: 13.200 in	Grid Convergence: 0.37 °		

Well Vogl-McCoy 2D-5H-E267				
Well Position	+N/-S 0.0 ft	Northing: 1,304,643.22 ft	Latitude: 40.168190	
	+E/-W 0.0 ft	Easting: 3,161,473.12 ft	Longitude: -104.922220	
Position Uncertainty	0.0 ft	Wellhead Elevation: ft	Ground Level: 4,836.0 ft	

Wellbore Hz					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/11/2014	8.56	66.74	52,704

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 3/24/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
143.0	15,056.0	Survey #1 (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	1,304,643.22	3,161,473.12	40.168190	-104.922220	
143.0	0.18	356.61	143.0	0.2	0.0	1,304,643.45	3,161,473.11	40.168191	-104.922220	
235.0	0.88	80.72	235.0	0.5	0.7	1,304,643.71	3,161,473.79	40.168191	-104.922218	
327.0	1.45	70.44	327.0	1.0	2.5	1,304,644.22	3,161,475.58	40.168193	-104.922211	
419.0	1.98	69.12	418.9	1.9	5.1	1,304,645.20	3,161,478.16	40.168195	-104.922202	
511.0	3.03	60.33	510.8	3.7	8.6	1,304,646.99	3,161,481.74	40.168200	-104.922189	
603.0	4.39	61.65	602.7	6.6	13.9	1,304,649.90	3,161,486.94	40.168208	-104.922171	
695.0	5.23	62.35	694.3	10.2	20.7	1,304,653.56	3,161,493.73	40.168218	-104.922146	
787.0	4.61	68.85	786.0	13.5	27.8	1,304,656.89	3,161,500.87	40.168227	-104.922121	
818.0	4.97	68.85	816.9	14.4	30.3	1,304,657.84	3,161,503.28	40.168229	-104.922112	
912.0	5.20	69.60	910.5	17.4	38.0	1,304,660.84	3,161,511.05	40.168238	-104.922084	
1,004.0	9.20	73.10	1,001.8	21.0	49.0	1,304,664.51	3,161,521.97	40.168247	-104.922045	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2D-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4866.0ft (H&P 522)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4866.0ft (H&P 522)
Well:	Vogl-McCoy 2D-5H-E267	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	
1,096.0	10.00	72.50	1,092.5	25.5	63.6	1,304,669.14	3,161,536.60	40.168260	-104.921993	
1,188.0	10.20	61.40	1,183.1	31.8	78.4	1,304,675.54	3,161,551.33	40.168277	-104.921940	
1,280.0	10.50	61.20	1,273.6	39.7	92.9	1,304,683.57	3,161,565.77	40.168299	-104.921888	
1,372.0	8.60	64.80	1,364.3	46.7	106.5	1,304,690.63	3,161,579.30	40.168318	-104.921839	
1,464.0	9.40	58.00	1,455.2	53.6	119.1	1,304,697.62	3,161,591.85	40.168337	-104.921794	
1,556.0	8.60	62.90	1,546.0	60.7	131.6	1,304,704.82	3,161,604.30	40.168357	-104.921749	
1,648.0	9.00	65.50	1,636.9	66.9	144.2	1,304,711.02	3,161,616.93	40.168373	-104.921704	
1,739.0	8.20	60.40	1,726.9	73.0	156.4	1,304,717.25	3,161,629.01	40.168390	-104.921661	
1,831.0	9.50	69.50	1,817.8	78.9	169.2	1,304,723.24	3,161,641.79	40.168407	-104.921615	
1,923.0	9.10	65.50	1,908.6	84.6	182.9	1,304,729.00	3,161,655.48	40.168422	-104.921566	
2,015.0	9.30	72.10	1,999.4	89.9	196.6	1,304,734.39	3,161,669.14	40.168437	-104.921517	
2,107.0	9.10	65.70	2,090.3	95.2	210.3	1,304,739.76	3,161,682.81	40.168451	-104.921468	
2,199.0	7.70	62.70	2,181.3	101.0	222.4	1,304,745.66	3,161,694.88	40.168467	-104.921424	
2,291.0	6.40	69.60	2,272.6	105.6	232.7	1,304,750.34	3,161,705.14	40.168480	-104.921388	
2,383.0	10.00	72.50	2,363.6	109.8	245.1	1,304,754.61	3,161,717.54	40.168491	-104.921343	
2,478.0	9.10	70.10	2,457.3	114.8	260.1	1,304,759.75	3,161,732.43	40.168505	-104.921290	
2,572.0	9.20	69.30	2,550.1	120.0	274.1	1,304,765.03	3,161,746.42	40.168519	-104.921239	
2,666.0	8.90	68.00	2,642.9	125.4	287.9	1,304,770.50	3,161,760.15	40.168534	-104.921190	
2,760.0	8.50	64.10	2,735.8	131.2	300.8	1,304,776.34	3,161,773.11	40.168550	-104.921144	
2,854.0	7.30	63.40	2,829.0	136.9	312.4	1,304,782.12	3,161,784.66	40.168566	-104.921102	
2,948.0	9.30	63.50	2,922.0	142.9	324.6	1,304,788.27	3,161,796.76	40.168582	-104.921059	
3,043.0	8.70	63.00	3,015.8	149.6	337.8	1,304,795.04	3,161,809.99	40.168601	-104.921011	
3,137.0	8.70	65.00	3,108.7	155.9	350.6	1,304,801.35	3,161,822.72	40.168618	-104.920966	
3,232.0	9.60	73.80	3,202.5	161.1	364.7	1,304,806.69	3,161,836.81	40.168632	-104.920915	
3,326.0	9.10	70.10	3,295.3	165.8	379.3	1,304,811.50	3,161,851.29	40.168645	-104.920863	
3,421.0	10.50	71.30	3,388.9	171.1	394.5	1,304,816.94	3,161,866.52	40.168660	-104.920809	
3,516.0	10.20	70.40	3,482.3	176.7	410.7	1,304,822.64	3,161,882.61	40.168675	-104.920751	
3,610.0	9.80	67.50	3,574.9	182.6	425.9	1,304,828.59	3,161,897.80	40.168691	-104.920696	
3,705.0	8.90	64.50	3,668.6	188.9	440.0	1,304,834.94	3,161,911.87	40.168708	-104.920646	
3,800.0	10.10	68.60	3,762.3	195.1	454.4	1,304,841.24	3,161,926.21	40.168725	-104.920594	
3,894.0	9.80	68.70	3,854.9	201.0	469.5	1,304,847.25	3,161,941.30	40.168742	-104.920540	
3,989.0	9.30	64.70	3,948.6	207.2	484.0	1,304,853.56	3,161,955.73	40.168759	-104.920488	
4,083.0	8.20	66.50	4,041.5	213.1	497.0	1,304,859.57	3,161,968.71	40.168775	-104.920442	
4,178.0	7.10	58.10	4,135.7	218.9	508.2	1,304,865.44	3,161,979.87	40.168791	-104.920402	
4,273.0	7.00	56.50	4,229.9	225.2	518.0	1,304,871.80	3,161,989.64	40.168808	-104.920367	
4,367.0	6.30	55.20	4,323.3	231.3	527.0	1,304,877.97	3,161,998.61	40.168825	-104.920334	
4,462.0	6.20	52.40	4,417.7	237.4	535.4	1,304,884.13	3,162,006.92	40.168842	-104.920305	
4,556.0	6.10	52.30	4,511.2	243.6	543.3	1,304,890.33	3,162,014.85	40.168859	-104.920276	
4,651.0	5.50	56.10	4,605.7	249.2	551.1	1,304,896.01	3,162,022.59	40.168874	-104.920248	
4,746.0	4.70	80.00	4,700.4	252.4	558.7	1,304,899.27	3,162,030.18	40.168883	-104.920221	
4,840.0	2.30	46.30	4,794.2	254.4	563.9	1,304,901.28	3,162,035.32	40.168888	-104.920203	
4,935.0	2.20	33.50	4,889.1	257.2	566.3	1,304,904.13	3,162,037.69	40.168896	-104.920194	
5,029.0	0.50	71.30	4,983.1	258.9	567.6	1,304,905.77	3,162,039.06	40.168900	-104.920189	
5,124.0	0.40	60.80	5,078.1	259.2	568.3	1,304,906.07	3,162,039.74	40.168901	-104.920187	
5,219.0	0.70	38.70	5,173.1	259.8	569.0	1,304,906.69	3,162,040.39	40.168903	-104.920184	
5,313.0	1.00	25.80	5,267.1	261.0	569.7	1,304,907.88	3,162,041.10	40.168906	-104.920182	
5,408.0	1.00	8.10	5,362.0	262.5	570.2	1,304,909.45	3,162,041.57	40.168911	-104.920180	
5,503.0	1.10	19.10	5,457.0	264.2	570.6	1,304,911.14	3,162,041.97	40.168915	-104.920179	
5,597.0	0.70	172.40	5,551.0	264.5	571.0	1,304,911.43	3,162,042.34	40.168916	-104.920177	
5,692.0	0.80	197.50	5,646.0	263.3	570.8	1,304,910.22	3,162,042.22	40.168913	-104.920178	
5,786.0	0.50	224.20	5,740.0	262.4	570.3	1,304,909.29	3,162,041.75	40.168910	-104.920179	
5,881.0	0.60	185.10	5,835.0	261.6	570.0	1,304,908.50	3,162,041.42	40.168908	-104.920181	
5,975.0	0.30	203.40	5,929.0	260.9	569.9	1,304,907.78	3,162,041.28	40.168906	-104.920181	
6,070.0	0.50	150.00	6,024.0	260.3	570.0	1,304,907.20	3,162,041.39	40.168904	-104.920181	
6,165.0	0.60	146.80	6,119.0	259.5	570.5	1,304,906.42	3,162,041.88	40.168902	-104.920179	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2D-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4866.0ft (H&P 522)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4866.0ft (H&P 522)
Well:	Vogl-McCoy 2D-5H-E267	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	
6,259.0	0.20	106.60	6,213.0	259.0	570.9	1,304,905.97	3,162,042.31	40.168901	-104.920177	
6,354.0	0.40	77.50	6,308.0	259.1	571.4	1,304,906.00	3,162,042.79	40.168901	-104.920176	
6,449.0	0.40	344.30	6,403.0	259.4	571.6	1,304,906.39	3,162,043.02	40.168902	-104.920175	
6,543.0	0.50	30.00	6,497.0	260.1	571.7	1,304,907.06	3,162,043.13	40.168904	-104.920174	
6,638.0	0.50	341.80	6,592.0	260.9	571.8	1,304,907.81	3,162,043.21	40.168906	-104.920174	
6,685.0	0.30	344.40	6,639.0	261.2	571.7	1,304,908.13	3,162,043.11	40.168907	-104.920175	
6,732.0	3.20	171.30	6,686.0	260.0	571.9	1,304,906.95	3,162,043.28	40.168904	-104.920174	
6,779.0	6.80	169.90	6,732.8	256.0	572.6	1,304,902.92	3,162,043.99	40.168893	-104.920171	
6,827.0	9.50	173.70	6,780.3	249.2	573.5	1,304,896.19	3,162,044.97	40.168874	-104.920168	
6,874.0	13.50	177.60	6,826.3	239.9	574.1	1,304,886.85	3,162,045.69	40.168848	-104.920166	
6,921.0	17.30	174.90	6,871.6	227.4	575.0	1,304,874.41	3,162,046.62	40.168814	-104.920163	
6,968.0	21.90	176.80	6,915.9	211.7	576.1	1,304,858.70	3,162,047.83	40.168771	-104.920159	
7,016.0	26.70	180.20	6,959.6	192.0	576.6	1,304,838.96	3,162,048.42	40.168717	-104.920157	
7,063.0	32.70	182.60	7,000.5	168.7	576.0	1,304,815.70	3,162,047.96	40.168653	-104.920159	
7,111.0	36.40	182.00	7,040.0	141.5	574.9	1,304,788.50	3,162,047.05	40.168578	-104.920163	
7,158.0	41.50	179.30	7,076.5	112.0	574.6	1,304,758.97	3,162,046.95	40.168497	-104.920164	
7,205.0	44.70	177.10	7,110.8	79.9	575.6	1,304,726.88	3,162,048.19	40.168409	-104.920161	
7,252.0	48.00	179.20	7,143.3	45.9	576.7	1,304,692.91	3,162,049.49	40.168316	-104.920157	
7,300.0	51.60	179.60	7,174.3	9.3	577.1	1,304,656.26	3,162,050.11	40.168215	-104.920155	
7,347.0	53.40	180.60	7,202.9	-28.0	577.0	1,304,618.97	3,162,050.28	40.168113	-104.920156	
7,394.0	56.40	182.10	7,229.9	-66.4	576.1	1,304,580.53	3,162,049.62	40.168007	-104.920159	
7,440.0	58.10	180.70	7,254.8	-105.1	575.1	1,304,541.85	3,162,048.93	40.167901	-104.920162	
7,556.0	65.20	181.00	7,309.8	-207.1	573.6	1,304,439.84	3,162,048.07	40.167621	-104.920168	
7,603.0	71.20	183.30	7,327.3	-250.7	572.0	1,304,396.24	3,162,046.70	40.167502	-104.920174	
7,651.0	77.10	182.60	7,340.4	-296.8	569.6	1,304,350.13	3,162,044.63	40.167375	-104.920182	
7,698.0	82.50	179.90	7,348.7	-343.0	568.6	1,304,303.90	3,162,043.93	40.167248	-104.920186	
7,745.0	88.50	178.80	7,352.4	-389.9	569.1	1,304,257.08	3,162,044.77	40.167120	-104.920184	
7,792.0	92.20	178.40	7,352.1	-436.8	570.3	1,304,210.11	3,162,046.22	40.166991	-104.920180	
7,840.0	92.30	178.20	7,350.2	-484.8	571.7	1,304,162.18	3,162,047.96	40.166859	-104.920175	
7,935.0	92.80	177.70	7,346.0	-579.6	575.1	1,304,067.36	3,162,051.97	40.166599	-104.920162	
8,027.0	93.70	177.00	7,340.8	-671.4	579.3	1,303,975.64	3,162,056.82	40.166347	-104.920147	
8,119.0	92.70	177.00	7,335.6	-763.1	584.1	1,303,883.94	3,162,062.22	40.166095	-104.920130	
8,211.0	93.00	175.70	7,331.1	-854.8	590.0	1,303,792.28	3,162,068.67	40.165843	-104.920109	
8,303.0	91.30	176.30	7,327.6	-946.5	596.4	1,303,700.62	3,162,075.68	40.165592	-104.920086	
8,395.0	91.80	177.70	7,325.1	-1,038.3	601.2	1,303,608.81	3,162,081.09	40.165339	-104.920069	
8,487.0	91.70	177.70	7,322.3	-1,130.2	604.9	1,303,516.96	3,162,085.38	40.165087	-104.920056	
8,578.0	90.30	177.70	7,320.7	-1,221.1	608.6	1,303,426.07	3,162,089.62	40.164838	-104.920043	
8,670.0	93.40	179.00	7,317.7	-1,313.0	611.2	1,303,334.19	3,162,092.87	40.164585	-104.920033	
8,762.0	92.50	179.20	7,313.0	-1,404.9	612.6	1,303,242.34	3,162,094.91	40.164333	-104.920028	
8,854.0	89.70	177.80	7,311.2	-1,496.8	615.1	1,303,150.41	3,162,097.92	40.164081	-104.920020	
8,946.0	89.60	179.70	7,311.8	-1,588.8	617.1	1,303,058.46	3,162,100.52	40.163828	-104.920012	
9,038.0	89.10	181.40	7,312.9	-1,680.8	616.2	1,302,966.47	3,162,100.24	40.163576	-104.920016	
9,130.0	88.80	181.70	7,314.5	-1,772.8	613.7	1,302,874.50	3,162,098.35	40.163323	-104.920024	
9,222.0	90.20	180.80	7,315.3	-1,864.7	611.7	1,302,782.52	3,162,096.94	40.163071	-104.920032	
9,314.0	90.40	182.90	7,314.9	-1,956.7	608.7	1,302,690.56	3,162,094.57	40.162819	-104.920042	
9,405.0	90.20	183.10	7,314.4	-2,047.5	604.0	1,302,599.65	3,162,090.40	40.162569	-104.920059	
9,497.0	90.50	181.80	7,313.8	-2,139.5	600.0	1,302,507.72	3,162,087.07	40.162317	-104.920073	
9,589.0	90.40	179.80	7,313.1	-2,231.4	598.7	1,302,415.73	3,162,086.38	40.162064	-104.920078	
9,681.0	90.60	179.70	7,312.3	-2,323.4	599.1	1,302,323.74	3,162,087.38	40.161812	-104.920077	
9,773.0	87.80	176.40	7,313.6	-2,415.4	602.3	1,302,231.84	3,162,091.11	40.161559	-104.920065	
9,868.0	88.20	178.80	7,316.9	-2,510.2	606.2	1,302,137.02	3,162,095.70	40.161299	-104.920051	
9,963.0	89.60	181.50	7,318.7	-2,605.2	606.0	1,302,042.05	3,162,096.07	40.161038	-104.920052	
10,057.0	89.10	180.30	7,319.8	-2,699.2	604.5	1,301,948.06	3,162,095.21	40.160780	-104.920057	
10,152.0	89.60	183.80	7,320.9	-2,794.1	601.1	1,301,853.12	3,162,092.43	40.160520	-104.920070	
10,247.0	88.60	183.20	7,322.4	-2,888.9	595.3	1,301,758.28	3,162,087.25	40.160260	-104.920090	

Cathedral Energy Services

Survey Report - Geographic

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Vogl-McCoy 2D-5H-E267
Project:	DJ Wattenberg	TVD Reference:	KB @ 4866.0ft (H&P 522)
Site:	S5-T2N-R67W (Vogl-McCoy)	MD Reference:	KB @ 4866.0ft (H&P 522)
Well:	Vogl-McCoy 2D-5H-E267	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	
10,341.0	89.10	181.90	7,324.2	-2,982.8	591.1	1,301,664.37	3,162,083.68	40.160002	-104.920105	
10,436.0	90.30	181.30	7,324.7	-3,077.7	588.5	1,301,569.39	3,162,081.65	40.159741	-104.920115	
10,530.0	90.50	180.40	7,324.1	-3,171.7	587.1	1,301,475.40	3,162,080.86	40.159483	-104.920120	
10,625.0	89.70	181.10	7,323.9	-3,266.7	585.8	1,301,380.40	3,162,080.24	40.159222	-104.920124	
10,720.0	87.80	181.40	7,326.0	-3,361.7	583.8	1,301,285.44	3,162,078.79	40.158962	-104.920132	
10,814.0	90.00	181.10	7,327.8	-3,455.6	581.7	1,301,191.47	3,162,077.35	40.158704	-104.920139	
10,909.0	87.40	180.60	7,330.0	-3,550.6	580.3	1,301,096.51	3,162,076.56	40.158443	-104.920144	
11,003.0	88.10	180.40	7,333.6	-3,644.5	579.5	1,301,002.58	3,162,076.35	40.158185	-104.920147	
11,098.0	89.40	180.40	7,335.7	-3,739.5	578.8	1,300,907.61	3,162,076.31	40.157925	-104.920149	
11,193.0	89.80	179.50	7,336.4	-3,834.5	578.9	1,300,812.61	3,162,077.01	40.157664	-104.920149	
11,287.0	87.30	177.70	7,338.8	-3,928.4	581.2	1,300,718.70	3,162,079.92	40.157406	-104.920141	
11,382.0	87.80	177.90	7,342.8	-4,023.2	584.9	1,300,623.88	3,162,084.18	40.157146	-104.920128	
11,477.0	88.10	177.80	7,346.2	-4,118.1	588.4	1,300,529.04	3,162,088.36	40.156885	-104.920115	
11,571.0	88.10	175.60	7,349.3	-4,211.9	593.8	1,300,435.29	3,162,094.38	40.156628	-104.920096	
11,666.0	90.00	177.60	7,350.9	-4,306.7	599.5	1,300,340.51	3,162,100.63	40.156367	-104.920076	
11,760.0	90.40	178.00	7,350.6	-4,400.6	603.1	1,300,246.61	3,162,104.85	40.156110	-104.920063	
11,854.0	91.90	179.50	7,348.7	-4,494.6	605.1	1,300,152.67	3,162,107.51	40.155852	-104.920055	
11,949.0	90.50	179.90	7,346.7	-4,589.6	605.6	1,300,057.70	3,162,108.62	40.155591	-104.920054	
12,044.0	88.50	178.50	7,347.5	-4,684.5	606.9	1,299,962.73	3,162,110.57	40.155330	-104.920049	
12,138.0	89.30	178.00	7,349.3	-4,778.5	609.8	1,299,868.82	3,162,114.05	40.155072	-104.920039	
12,233.0	90.50	178.00	7,349.5	-4,873.4	613.1	1,299,773.90	3,162,117.99	40.154812	-104.920027	
12,327.0	90.60	175.50	7,348.6	-4,967.3	618.5	1,299,680.10	3,162,123.93	40.154554	-104.920008	
12,422.0	91.80	175.20	7,346.6	-5,061.9	626.2	1,299,585.49	3,162,132.24	40.154294	-104.919980	
12,516.0	93.00	176.30	7,342.7	-5,155.6	633.1	1,299,491.88	3,162,139.81	40.154037	-104.919955	
12,611.0	92.40	175.90	7,338.2	-5,250.3	639.6	1,299,397.25	3,162,146.88	40.153777	-104.919932	
12,705.0	91.10	177.80	7,335.3	-5,344.1	644.7	1,299,303.48	3,162,152.66	40.153520	-104.919914	
12,800.0	88.50	177.80	7,335.7	-5,439.0	648.4	1,299,208.58	3,162,156.92	40.153259	-104.919901	
12,895.0	90.90	179.80	7,336.2	-5,533.9	650.4	1,299,113.63	3,162,159.53	40.152998	-104.919894	
12,989.0	88.10	180.70	7,337.0	-5,627.9	650.0	1,299,019.64	3,162,159.73	40.152740	-104.919895	
13,084.0	86.20	182.90	7,341.7	-5,722.8	647.0	1,298,924.80	3,162,157.37	40.152480	-104.919906	
13,178.0	87.20	182.80	7,347.1	-5,816.5	642.3	1,298,831.04	3,162,153.32	40.152223	-104.919922	
13,273.0	88.20	182.10	7,350.9	-5,911.3	638.3	1,298,736.19	3,162,149.88	40.151963	-104.919937	
13,367.0	89.30	182.10	7,353.0	-6,005.2	634.8	1,298,642.25	3,162,147.04	40.151705	-104.919949	
13,462.0	90.90	181.70	7,352.8	-6,100.2	631.7	1,298,547.29	3,162,144.51	40.151444	-104.919961	
13,556.0	90.20	181.20	7,351.9	-6,194.1	629.3	1,298,453.31	3,162,142.75	40.151186	-104.919969	
13,651.0	91.60	180.60	7,350.4	-6,289.1	627.8	1,298,358.33	3,162,141.87	40.150925	-104.919974	
13,746.0	92.90	180.20	7,346.7	-6,384.0	627.1	1,298,263.40	3,162,141.83	40.150665	-104.919977	
13,840.0	94.10	178.90	7,340.9	-6,477.9	627.9	1,298,169.59	3,162,143.18	40.150407	-104.919974	
13,935.0	93.10	179.90	7,335.0	-6,572.7	628.9	1,298,074.80	3,162,144.79	40.150147	-104.919971	
14,036.0	90.70	180.60	7,331.6	-6,673.6	628.4	1,297,973.86	3,162,145.00	40.149870	-104.919972	
14,131.0	86.20	180.80	7,334.2	-6,768.5	627.3	1,297,878.92	3,162,144.46	40.149609	-104.919976	
14,225.0	86.10	180.60	7,340.5	-6,862.3	626.1	1,297,785.11	3,162,143.93	40.149352	-104.919980	
14,320.0	85.60	180.30	7,347.4	-6,957.1	625.4	1,297,690.36	3,162,143.80	40.149092	-104.919983	
14,414.0	86.70	179.40	7,353.7	-7,050.9	625.6	1,297,596.57	3,162,144.66	40.148834	-104.919982	
14,509.0	87.00	179.70	7,358.9	-7,145.7	626.4	1,297,501.73	3,162,146.02	40.148574	-104.919980	
14,604.0	89.30	178.50	7,362.0	-7,240.7	627.8	1,297,406.81	3,162,148.13	40.148313	-104.919974	
14,698.0	89.80	177.40	7,362.7	-7,334.6	631.2	1,297,312.90	3,162,152.11	40.148055	-104.919962	
14,792.0	89.90	172.60	7,363.0	-7,428.2	639.4	1,297,219.34	3,162,160.91	40.147798	-104.919933	
14,887.0	89.80	170.50	7,363.2	-7,522.2	653.4	1,297,125.47	3,162,175.48	40.147541	-104.919883	
14,981.0	90.60	172.90	7,362.9	-7,615.1	666.9	1,297,032.58	3,162,189.65	40.147285	-104.919835	
Last CES Survey @ 14,981' MD										
15,056.0	90.79	173.61	7,362.0	-7,689.6	675.7	1,296,958.16	3,162,198.94	40.147081	-104.919803	
PTB @ 15,056'										

Cathedral Energy Services

Survey Report - Geographic

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Vogl-McCoy 2D-5H-E267
Project: DJ Wattenberg	TVD Reference: KB @ 4866.0ft (H&P 522)
Site: S5-T2N-R67W (Vogl-McCoy)	MD Reference: KB @ 4866.0ft (H&P 522)
Well: Vogl-McCoy 2D-5H-E267	North Reference: True
Wellbore: Hz	Survey Calculation Method: Minimum Curvature
Design: FINAL	Database: USA EDM 5000 Multi Users DB

Design 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									
Vogl-McCoy 2D-5H-E26'	0.00	0.00	7,349.0	-7,759.1	634.6	1,296,888.40	3,162,158.24	40.146890	-104.919950
- actual wellpath misses target center by 81.8ft at 15056.0ft MD (7362.0 TVD, -7689.6 N, 675.7 E)									
- Point									

Design Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
		(ft)	(ft)		
14,981.0	7,362.9	-7,615.1	666.9	Last CES Survey @ 14,981' MD	
15,056.0	7,362.0	-7,689.6	675.7	PTB @ 15,056'	

Checked By: _____ Approved By: _____ Date: _____