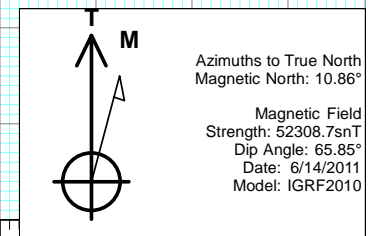
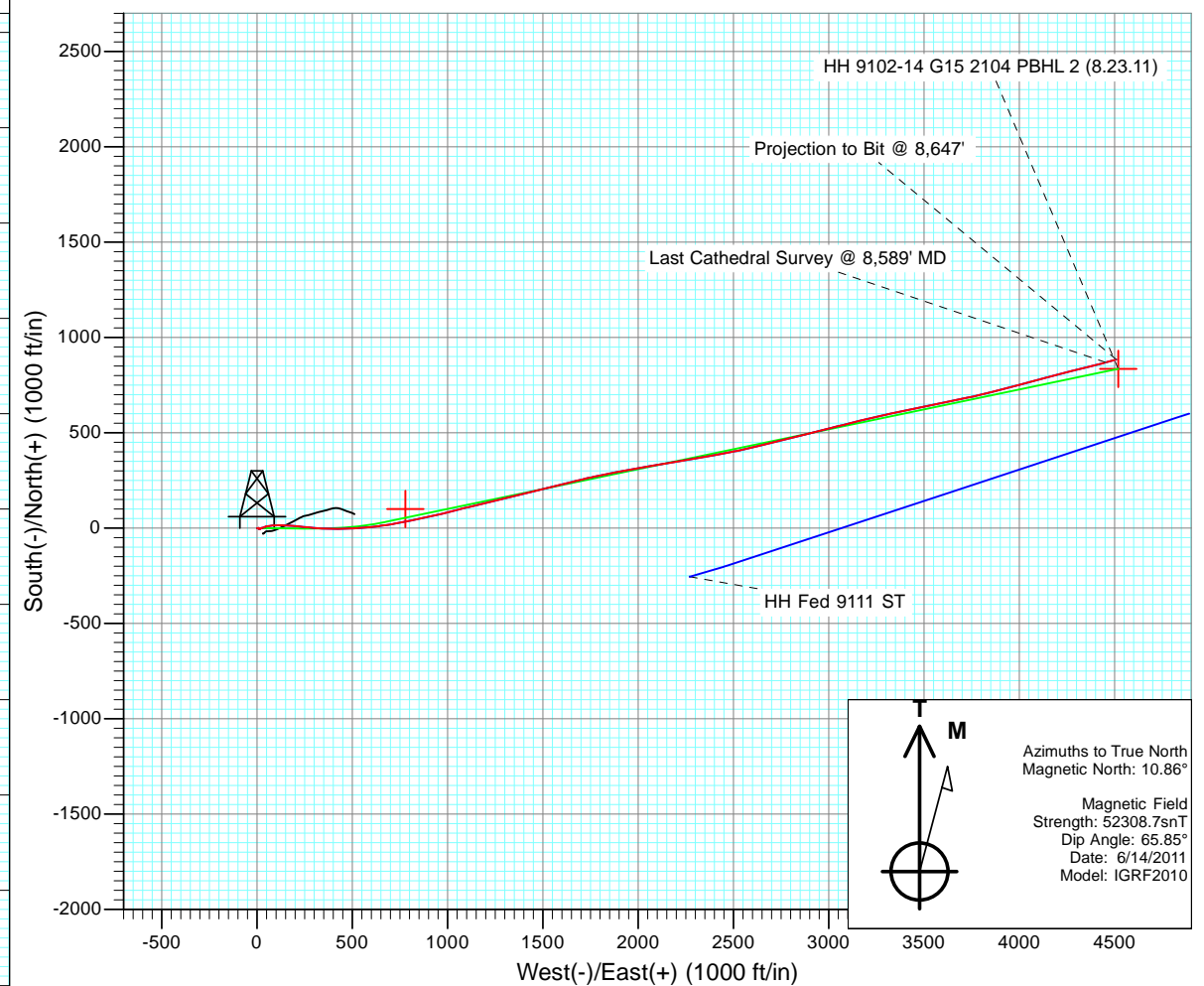
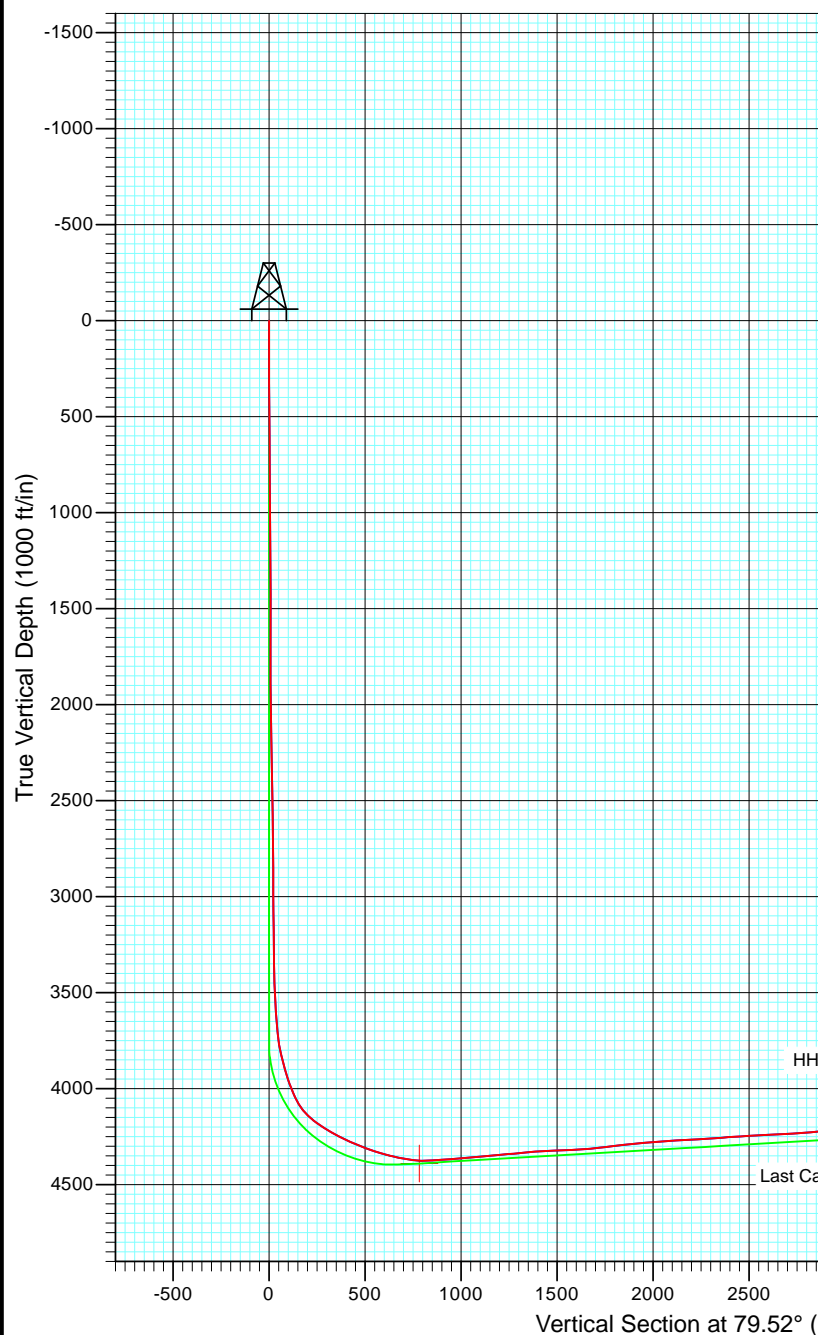




Project: Hell's Hole
Site: HH G-15 Pad
Well: HH 9102-14 G15 2104
Wellbore: HZ
Design: FINAL



HH 9102-14 G15 2104 PBHL 2 (8.23.11)

Last Cathedral Survey @ 8,589' MD

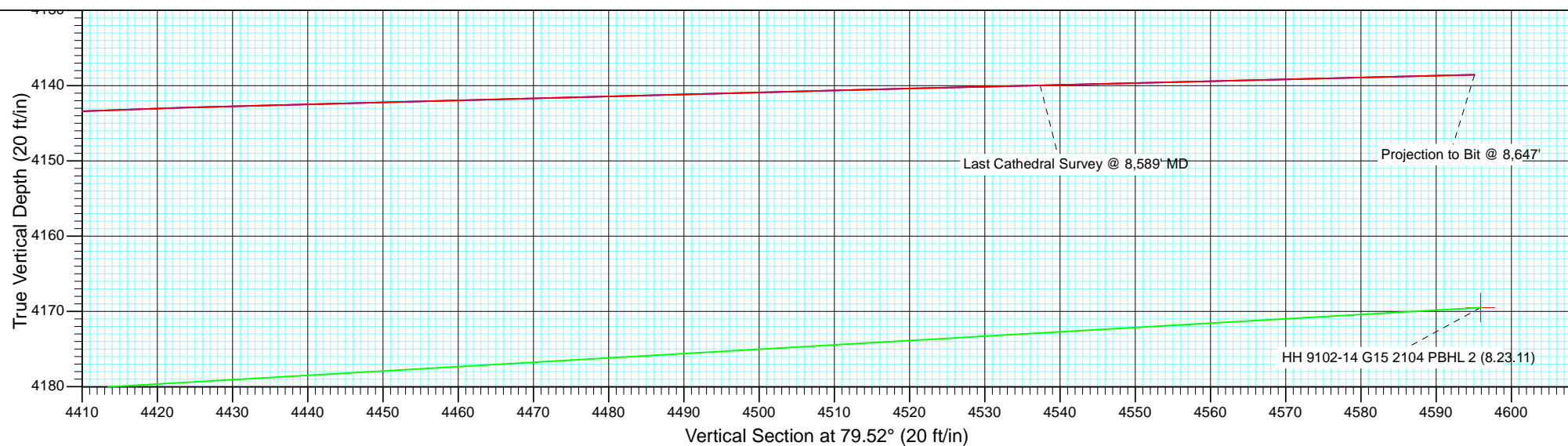
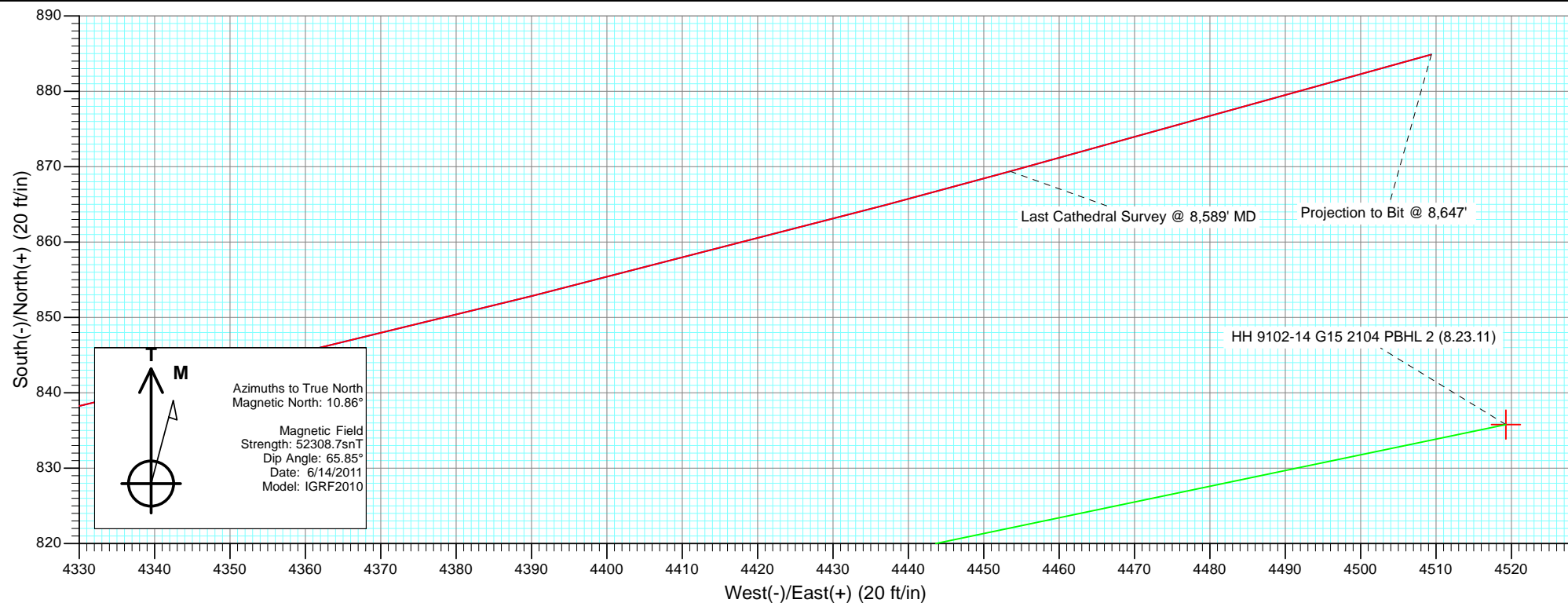
Projection to Bit @ 8,647'

HZ
HH 9102-14 G15 2104
115463/116955; SC
KBE @ 6981.0ft (Original Well Elev)
North American Datum 1983
Well HH 9102-14 G15 2104, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From	TVD
Target	HH 9102-14 G15 2104 PBHL 2 (8.23.11)	79.52	Slot	0.0	0.0	0.0	0.0
		TVD	+N/-S	+E/-W	Latitude	Longitude	
HH 9102-14 G15 2104 PBHL 3 (10.31.11)	62.2	835.7	4519.2	39° 52' 45.78 N	109° 1' 57.59 W		
HH 9102-14 G15 2104 PBHL 2 (8.23.11)	169.5	835.8	4519.3	39° 52' 45.78 N	109° 1' 57.59 W		
HH 9102-14 G15 2104 LP 2	4390.0	139.3	776.9	39° 52' 38.90 N	109° 2' 45.59 W		
Plan @ 4395.5 (HH 9102-14 G15 2104 HZ Plan #6)	4395.5	36.5	693.4	39° 52' 37.89 N	109° 2' 46.66 W		



Project: Hell's Hole
Site: HH G-15 Pad
Well: HH 9102-14 G15 2104
Wellbore: HZ
Design: FINAL



Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HH 9102-14 G15 2104
Project:	Hell's Hole	TVD Reference:	KBE @ 6981.0ft (Original Well Elev)
Site:	HH G-15 Pad	MD Reference:	KBE @ 6981.0ft (Original Well Elev)
Well:	HH 9102-14 G15 2104	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	Database:	USA EDM 5000 Multi Users DB

Project	Hell's Hole		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		HH G-15 Pad			
Site Position:		Northing:	1,763,803.92 ft	Latitude:	39° 52' 37.39 N
From:	Lat/Long	Easting:	2,004,246.08 ft	Longitude:	109° 2' 55.17 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-2.24 °

Well	HH 9102-14 G15 2104					
Well Position	+N/-S	0.0 ft	Northing:	1,763,819.19 ft	Latitude:	39° 52' 37.52 N
	+E/-W	0.0 ft	Easting:	2,004,216.55 ft	Longitude:	109° 2' 55.56 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,966.0 ft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/14/2011	10.87	65.85	52,309

Design	HZ				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	79.52	

Survey Program	Date	11/15/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
234.0	8,647.0	Survey #1 (HZ)	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		
234.0	0.10	134.00	234.0	-0.1	0.1	0.1	0.04	0.04		
326.0	0.60	116.60	326.0	-0.4	0.6	0.5	0.55	0.54		
418.0	0.70	119.30	418.0	-0.9	1.6	1.4	0.11	0.11		
509.0	0.90	112.20	509.0	-1.4	2.7	2.4	0.24	0.22		
600.0	0.20	100.80	600.0	-1.7	3.5	3.1	0.77	-0.77		
694.0	0.00	329.80	694.0	-1.8	3.7	3.3	0.21	-0.21		
785.0	0.30	66.50	785.0	-1.7	3.9	3.5	0.33	0.33		
883.0	0.70	49.00	883.0	-1.2	4.6	4.3	0.43	0.41		
975.0	0.70	44.50	975.0	-0.4	5.4	5.2	0.06	0.00		
1,066.0	1.00	49.10	1,066.0	0.5	6.4	6.4	0.34	0.33		
1,158.0	1.10	63.10	1,157.9	1.4	7.8	7.9	0.30	0.11		
1,250.0	0.40	201.50	1,249.9	1.5	8.5	8.6	1.55	-0.76		

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HH 9102-14 G15 2104
Project:	Hell's Hole	TVD Reference:	KBE @ 6981.0ft (Original Well Elev)
Site:	HH G-15 Pad	MD Reference:	KBE @ 6981.0ft (Original Well Elev)
Well:	HH 9102-14 G15 2104	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
1,341.0	0.50	177.90	1,340.9	0.8	8.4	8.4	0.23	0.11	
1,433.0	0.40	193.20	1,432.9	0.1	8.3	8.2	0.17	-0.11	
1,524.0	0.40	165.70	1,523.9	-0.5	8.3	8.1	0.21	0.00	
1,616.0	0.60	162.30	1,615.9	-1.3	8.5	8.2	0.22	0.22	
1,707.0	0.40	155.70	1,706.9	-2.0	8.8	8.3	0.23	-0.22	
1,799.0	0.60	158.70	1,798.9	-2.8	9.1	8.5	0.22	0.22	
1,890.0	0.80	144.10	1,889.9	-3.7	9.7	8.8	0.29	0.22	
1,982.0	0.70	108.90	1,981.9	-4.4	10.6	9.6	0.50	-0.11	
2,073.0	0.80	104.20	2,072.9	-4.7	11.7	10.6	0.13	0.11	
2,165.0	1.50	91.40	2,164.9	-4.9	13.5	12.4	0.81	0.76	
2,256.0	1.20	76.00	2,255.9	-4.7	15.7	14.5	0.51	-0.33	
2,348.0	0.50	48.40	2,347.8	-4.2	16.9	15.8	0.86	-0.76	
2,439.0	0.70	26.50	2,438.8	-3.5	17.4	16.5	0.33	0.22	
2,531.0	0.90	45.80	2,530.8	-2.5	18.2	17.4	0.36	0.22	
2,623.0	1.50	43.50	2,622.8	-1.1	19.5	19.0	0.65	0.65	
2,714.0	1.80	52.70	2,713.8	0.6	21.5	21.3	0.44	0.33	
2,806.0	0.50	123.90	2,805.8	1.3	23.0	22.8	1.85	-1.41	
2,897.0	0.80	176.90	2,896.7	0.4	23.3	23.0	0.70	0.33	
2,989.0	1.00	167.20	2,988.7	-1.0	23.6	23.0	0.27	0.22	
3,081.0	0.50	27.80	3,080.7	-1.4	23.9	23.3	1.54	-0.54	
3,172.0	1.20	47.60	3,171.7	-0.4	24.8	24.3	0.82	0.77	
3,264.0	0.80	29.50	3,263.7	0.8	25.8	25.6	0.55	-0.43	
3,355.0	0.90	108.60	3,354.7	1.1	26.8	26.6	1.19	0.11	
3,447.0	2.00	70.80	3,446.7	1.4	29.0	28.8	1.52	1.20	
3,500.0	2.60	68.70	3,499.6	2.1	31.0	30.9	1.14	1.13	
3,590.0	3.90	66.40	3,589.5	4.1	35.7	35.9	1.45	1.44	
3,654.0	4.30	67.40	3,653.3	5.9	39.9	40.4	0.63	0.62	
3,686.0	4.30	65.80	3,685.2	6.9	42.1	42.7	0.37	0.00	
3,719.0	5.80	72.90	3,718.1	7.9	44.9	45.5	4.92	4.55	
3,751.0	8.30	77.70	3,749.9	8.8	48.7	49.5	8.02	7.81	
3,783.0	10.50	79.30	3,781.4	9.9	53.8	54.7	6.92	6.87	
3,815.0	12.30	81.50	3,812.8	10.9	60.0	61.0	5.79	5.62	
3,847.0	13.60	81.40	3,844.0	12.0	67.1	68.2	4.06	4.06	
3,879.0	15.20	82.30	3,875.0	13.1	75.0	76.1	5.05	5.00	
3,910.0	16.20	84.10	3,904.8	14.1	83.3	84.5	3.59	3.23	
3,942.0	17.80	87.10	3,935.4	14.8	92.7	93.8	5.70	5.00	
3,975.0	19.70	89.00	3,966.7	15.1	103.3	104.3	6.05	5.76	
4,007.0	22.00	91.10	3,996.6	15.1	114.6	115.5	7.56	7.19	
4,038.0	24.20	92.60	4,025.1	14.7	126.8	127.4	7.35	7.10	
4,071.0	26.40	91.40	4,054.9	14.2	140.9	141.1	6.85	6.67	
4,102.0	31.00	91.30	4,082.1	13.9	155.8	155.7	14.84	14.84	
4,131.0	37.90	92.60	4,106.0	13.3	172.2	171.7	23.93	23.79	
4,164.0	45.10	94.50	4,130.7	11.9	194.0	192.9	22.15	21.82	
4,196.0	49.10	96.50	4,152.5	9.7	217.3	215.4	13.31	12.50	
4,229.0	53.40	96.60	4,173.1	6.7	242.8	240.0	13.03	13.03	
4,261.0	57.70	95.20	4,191.2	4.0	269.1	265.3	13.91	13.44	
4,293.0	59.90	94.20	4,207.8	1.8	296.4	291.7	7.38	6.87	
4,325.0	60.20	94.20	4,223.8	-0.2	324.0	318.6	0.94	0.94	
4,356.0	61.20	93.40	4,238.9	-2.0	351.0	344.8	3.93	3.23	
4,389.0	63.50	91.60	4,254.3	-3.3	380.2	373.3	8.48	6.97	
4,421.0	66.10	89.90	4,267.9	-3.7	409.1	401.6	9.44	8.12	
4,453.0	66.60	89.00	4,280.7	-3.4	438.4	430.5	3.01	1.56	
4,486.0	67.50	88.30	4,293.6	-2.7	468.8	460.5	3.35	2.73	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HH 9102-14 G15 2104
Project:	Hell's Hole	TVD Reference:	KBE @ 6981.0ft (Original Well Elev)
Site:	HH G-15 Pad	MD Reference:	KBE @ 6981.0ft (Original Well Elev)
Well:	HH 9102-14 G15 2104	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
4,518.0	69.00	87.40	4,305.4	-1.6	498.5	489.9	5.37	4.69	
4,550.0	70.40	86.40	4,316.5	0.1	528.5	519.7	5.27	4.37	
4,581.0	72.30	85.40	4,326.5	2.2	557.8	548.9	6.85	6.13	
4,614.0	73.50	84.60	4,336.2	4.9	589.2	580.3	4.31	3.64	
4,645.0	74.60	83.20	4,344.7	8.1	618.8	610.0	5.61	3.55	
4,678.0	76.40	81.70	4,352.9	12.3	650.5	641.9	7.01	5.45	
4,709.0	78.40	81.10	4,359.7	16.8	680.4	672.1	6.72	6.45	
4,741.0	80.10	80.50	4,365.7	21.8	711.5	703.6	5.62	5.31	
4,773.0	82.40	79.40	4,370.5	27.4	742.6	735.2	7.95	7.19	
4,804.0	84.20	78.80	4,374.2	33.2	772.8	766.0	6.12	5.81	
4,836.0	87.80	78.40	4,376.4	39.5	804.1	797.9	11.32	11.25	
4,869.0	92.50	78.40	4,376.3	46.1	836.4	830.9	14.24	14.24	
4,900.0	94.80	79.60	4,374.3	52.0	866.8	861.8	8.36	7.42	
4,933.0	95.50	78.80	4,371.4	58.2	899.1	894.7	3.21	2.12	
4,965.0	94.30	76.30	4,368.6	65.1	930.2	926.5	8.64	-3.75	
4,996.0	93.20	74.50	4,366.6	72.9	960.1	957.4	6.79	-3.55	
5,028.0	93.70	74.70	4,364.7	81.3	990.9	989.2	1.68	1.56	
5,059.0	95.00	77.20	4,362.3	88.8	1,020.9	1,020.1	9.07	4.19	
5,092.0	94.80	75.80	4,359.5	96.5	1,052.9	1,052.9	4.27	-0.61	
5,124.0	95.10	76.70	4,356.8	104.1	1,083.9	1,084.7	2.95	0.94	
5,156.0	95.40	76.30	4,353.8	111.5	1,114.8	1,116.5	1.56	0.94	
5,188.0	95.70	75.90	4,350.7	119.2	1,145.8	1,148.3	1.56	0.94	
5,220.0	95.80	76.20	4,347.5	126.9	1,176.7	1,180.1	0.98	0.31	
5,251.0	94.90	77.30	4,344.6	133.9	1,206.7	1,210.9	4.57	-2.90	
5,284.0	94.80	76.80	4,341.8	141.3	1,238.8	1,243.8	1.54	-0.30	
5,315.0	95.10	76.50	4,339.2	148.4	1,268.8	1,274.6	1.37	0.97	
5,347.0	95.30	75.90	4,336.3	156.0	1,299.8	1,306.5	1.97	0.62	
5,379.0	94.90	76.00	4,333.4	163.8	1,330.7	1,338.3	1.29	-1.25	
5,412.0	94.00	77.60	4,330.9	171.3	1,362.7	1,371.1	5.55	-2.73	
5,444.0	94.10	77.50	4,328.6	178.2	1,393.9	1,403.0	0.44	0.31	
5,476.0	94.60	76.70	4,326.2	185.3	1,425.0	1,434.9	2.94	1.56	
5,509.0	93.60	75.20	4,323.8	193.3	1,456.9	1,467.8	5.45	-3.03	
5,541.0	91.60	74.70	4,322.4	201.6	1,487.8	1,499.6	6.44	-6.25	
5,573.0	91.60	74.60	4,321.5	210.0	1,518.6	1,531.5	0.31	0.00	
5,604.0	91.50	76.20	4,320.6	217.9	1,548.6	1,562.4	5.17	-0.32	
5,638.0	92.80	76.90	4,319.4	225.8	1,581.6	1,596.3	4.34	3.82	
5,669.0	94.40	77.00	4,317.4	232.7	1,611.8	1,627.2	5.17	5.16	
5,701.0	95.20	77.20	4,314.7	239.9	1,642.9	1,659.1	2.58	2.50	
5,733.0	96.00	76.00	4,311.6	247.2	1,673.8	1,690.9	4.49	2.50	
5,765.0	96.60	76.70	4,308.1	254.8	1,704.8	1,722.7	2.87	1.87	
5,797.0	97.50	76.50	4,304.2	262.1	1,735.6	1,754.4	2.88	2.81	
5,829.0	96.80	77.90	4,300.2	269.1	1,766.6	1,786.1	4.86	-2.19	
5,860.0	95.90	78.00	4,296.8	275.6	1,796.7	1,816.9	2.92	-2.90	
5,892.0	95.80	78.50	4,293.5	282.1	1,827.9	1,848.7	1.59	-0.31	
5,925.0	96.60	78.30	4,289.9	288.7	1,860.0	1,881.5	2.50	2.42	
5,957.0	95.90	79.30	4,286.5	294.8	1,891.2	1,913.3	3.80	-2.19	
5,989.0	94.20	79.60	4,283.6	300.7	1,922.6	1,945.2	5.39	-5.31	
6,021.0	93.50	80.20	4,281.5	306.3	1,954.0	1,977.1	2.88	-2.19	
6,053.0	94.60	80.00	4,279.2	311.8	1,985.5	2,009.0	3.49	3.44	
6,085.0	95.20	80.10	4,276.5	317.3	2,016.9	2,040.9	1.90	1.87	
6,117.0	94.70	79.90	4,273.7	322.8	2,048.3	2,072.8	1.68	-1.56	
6,149.0	93.40	80.30	4,271.5	328.3	2,079.7	2,104.7	4.25	-4.06	
6,182.0	93.60	80.40	4,269.5	333.8	2,112.2	2,137.7	0.68	0.61	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HH 9102-14 G15 2104
Project:	Hell's Hole	TVD Reference:	KBE @ 6981.0ft (Original Well Elev)
Site:	HH G-15 Pad	MD Reference:	KBE @ 6981.0ft (Original Well Elev)
Well:	HH 9102-14 G15 2104	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
6,213.0	93.30	80.40	4,267.6	339.0	2,142.7	2,168.6	0.97	-0.97	
6,278.0	93.00	79.80	4,264.0	350.1	2,206.6	2,233.5	1.03	-0.46	
6,342.0	93.60	81.00	4,260.3	360.8	2,269.6	2,297.4	2.09	0.94	
6,405.0	94.10	80.70	4,256.1	370.8	2,331.7	2,360.2	0.92	0.79	
6,436.0	93.80	80.30	4,254.0	375.9	2,362.2	2,391.1	1.61	-0.97	
6,468.0	94.00	79.90	4,251.8	381.4	2,393.6	2,423.1	1.39	0.62	
6,501.0	94.10	79.30	4,249.5	387.3	2,426.0	2,456.0	1.84	0.30	
6,533.0	94.00	79.20	4,247.2	393.3	2,457.4	2,487.9	0.44	-0.31	
6,565.0	93.60	79.60	4,245.1	399.1	2,488.8	2,519.8	1.77	-1.25	
6,598.0	93.90	78.10	4,242.9	405.5	2,521.1	2,552.8	4.63	0.91	
6,630.0	92.10	77.50	4,241.2	412.3	2,552.3	2,584.7	5.93	-5.62	
6,662.0	91.20	75.50	4,240.3	419.7	2,583.4	2,616.6	6.85	-2.81	
6,695.0	91.50	76.60	4,239.5	427.7	2,615.4	2,649.6	3.45	0.91	
6,726.0	92.90	77.40	4,238.4	434.7	2,645.6	2,680.5	5.20	4.52	
6,758.0	94.20	76.50	4,236.4	441.9	2,676.7	2,712.4	4.94	4.06	
6,791.0	94.50	76.80	4,233.9	449.5	2,708.7	2,745.3	1.28	0.91	
6,822.0	94.60	76.20	4,231.4	456.7	2,738.8	2,776.1	1.96	0.32	
6,853.0	95.10	75.30	4,228.8	464.3	2,768.7	2,807.0	3.31	1.61	
6,885.0	94.70	75.40	4,226.1	472.3	2,799.6	2,838.8	1.29	-1.25	
6,917.0	94.30	76.00	4,223.6	480.2	2,830.5	2,870.6	2.25	-1.25	
6,948.0	94.20	76.60	4,221.3	487.5	2,860.5	2,901.5	1.96	-0.32	
6,980.0	94.30	75.80	4,218.9	495.2	2,891.5	2,933.3	2.51	0.31	
7,012.0	93.90	77.10	4,216.6	502.6	2,922.5	2,965.2	4.24	-1.25	
7,045.0	92.50	76.10	4,214.8	510.3	2,954.6	2,998.1	5.21	-4.24	
7,077.0	90.60	74.90	4,213.9	518.3	2,985.5	3,030.0	7.02	-5.94	
7,108.0	91.90	75.40	4,213.2	526.2	3,015.5	3,060.9	4.49	4.19	
7,140.0	93.30	76.40	4,211.8	534.0	3,046.5	3,092.8	5.37	4.37	
7,171.0	93.60	75.80	4,209.9	541.4	3,076.5	3,123.7	2.16	0.97	
7,203.0	94.30	76.40	4,207.7	549.1	3,107.5	3,155.6	2.88	2.19	
7,235.0	93.70	75.80	4,205.5	556.8	3,138.5	3,187.4	2.65	-1.87	
7,267.0	94.00	76.30	4,203.3	564.5	3,169.5	3,219.3	1.82	0.94	
7,298.0	94.40	76.30	4,201.0	571.8	3,199.5	3,250.2	1.29	1.29	
7,329.0	95.00	76.80	4,198.5	579.0	3,229.6	3,281.0	2.52	1.94	
7,361.0	95.50	77.10	4,195.6	586.2	3,260.6	3,312.9	1.82	1.56	
7,393.0	95.70	76.70	4,192.4	593.4	3,291.6	3,344.7	1.39	0.62	
7,425.0	95.60	77.10	4,189.3	600.6	3,322.7	3,376.5	1.28	-0.31	
7,457.0	95.60	77.80	4,186.2	607.5	3,353.7	3,408.3	2.18	0.00	
7,488.0	94.40	78.10	4,183.5	614.0	3,383.9	3,439.2	3.99	-3.87	
7,520.0	94.00	78.90	4,181.1	620.3	3,415.2	3,471.1	2.79	-1.25	
7,552.0	94.20	79.00	4,178.8	626.5	3,446.5	3,503.0	0.70	0.62	
7,584.0	93.90	79.00	4,176.6	632.6	3,477.9	3,534.9	0.94	-0.94	
7,616.0	92.60	78.40	4,174.8	638.8	3,509.2	3,566.9	4.47	-4.06	
7,647.0	91.30	78.20	4,173.7	645.1	3,539.5	3,597.8	4.24	-4.19	
7,680.0	91.90	77.80	4,172.8	652.0	3,571.8	3,630.8	2.18	1.82	
7,712.0	93.40	78.30	4,171.3	658.6	3,603.1	3,662.8	4.94	4.69	
7,743.0	93.60	78.30	4,169.4	664.9	3,633.4	3,693.7	0.65	0.65	
7,775.0	93.30	78.60	4,167.5	671.2	3,664.7	3,725.6	1.32	-0.94	
7,807.0	93.30	78.70	4,165.6	677.5	3,696.0	3,757.6	0.31	0.00	
7,839.0	93.20	77.80	4,163.8	684.0	3,727.3	3,789.5	2.83	-0.31	
7,871.0	92.40	77.30	4,162.3	690.9	3,758.5	3,821.5	2.95	-2.50	
7,902.0	92.00	76.60	4,161.1	697.9	3,788.7	3,852.4	2.60	-1.29	
7,934.0	92.00	76.30	4,160.0	705.4	3,819.8	3,884.3	0.94	0.00	
7,967.0	92.50	75.10	4,158.7	713.6	3,851.7	3,917.2	3.94	1.52	

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HH 9102-14 G15 2104
Project:	Hell's Hole	TVD Reference:	KBE @ 6981.0ft (Original Well Elev)
Site:	HH G-15 Pad	MD Reference:	KBE @ 6981.0ft (Original Well Elev)
Well:	HH 9102-14 G15 2104	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	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
7,998.0	91.20	75.10	4,157.7	721.5	3,881.6	3,948.1	4.19	-4.19	
8,030.0	91.30	75.80	4,157.0	729.6	3,912.6	3,980.0	2.21	0.31	
8,062.0	91.70	76.70	4,156.1	737.2	3,943.7	4,012.0	3.08	1.25	
8,094.0	92.30	76.90	4,155.0	744.5	3,974.8	4,043.9	1.98	1.87	
8,127.0	92.30	75.20	4,153.7	752.4	4,006.8	4,076.8	5.15	0.00	
8,158.0	91.40	75.20	4,152.7	760.3	4,036.8	4,107.7	2.90	-2.90	
8,190.0	92.30	74.50	4,151.7	768.7	4,067.6	4,139.6	3.56	2.81	
8,222.0	91.70	74.00	4,150.5	777.4	4,098.4	4,171.5	2.44	-1.87	
8,254.0	91.80	74.20	4,149.6	786.1	4,129.2	4,203.3	0.70	0.31	
8,285.0	91.80	75.60	4,148.6	794.2	4,159.1	4,234.2	4.51	0.00	
8,316.0	91.50	75.20	4,147.7	802.0	4,189.1	4,265.1	1.61	-0.97	
8,347.0	92.00	74.60	4,146.8	810.1	4,219.0	4,296.0	2.52	1.61	
8,380.0	91.30	75.70	4,145.8	818.5	4,250.9	4,328.9	3.95	-2.12	
8,411.0	91.50	75.80	4,145.0	826.2	4,280.9	4,359.8	0.72	0.65	
8,443.0	92.20	76.20	4,144.0	833.9	4,312.0	4,391.7	2.52	2.19	
8,475.0	91.70	76.70	4,142.9	841.4	4,343.1	4,423.6	2.21	-1.56	
8,572.0	91.30	75.20	4,140.4	864.9	4,437.1	4,520.4	1.60	-0.41	
8,589.0	91.40	74.50	4,140.0	869.4	4,453.5	4,537.4	4.16	0.59	Last Cathedral Survey @ 8,589' MD
8,647.0	91.40	74.50	4,138.6	884.9	4,509.4	4,595.1	0.00	0.00	Projection to Bit @ 8,647'

Cathedral Energy Services

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well HH 9102-14 G15 2104
Project:	Hell's Hole	TVD Reference:	KBE @ 6981.0ft (Original Well Elev)
Site:	HH G-15 Pad	MD Reference:	KBE @ 6981.0ft (Original Well Elev)
Well:	HH 9102-14 G15 2104	North Reference:	True
Wellbore:	HZ	Survey Calculation Method:	Minimum Curvature
Design:	HZ	Database:	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									
HH 9101-14 G15 2104 I	0.00	357.76	4,390.0	139.3	776.9	1,763,928.06	2,004,998.31	39° 52' 38.90 N	109° 2' 45.59 W
- survey misses target center by 104.2ft at 4830.0ft MD (4376.1 TVD, 38.3 N, 798.3 E)									
- Point									
HH 9102-14 G15 2104 I	0.00	357.77	4,062.2	835.7	4,519.2	1,764,477.74	2,008,764.97	39° 52' 45.78 N	109° 1' 57.59 W
- survey misses target center by 91.4ft at 8645.2ft MD (4138.6 TVD, 884.4 N, 4507.7 E)									
- Point									
HH 9102-14 G15 2104 I	0.00	357.77	4,169.5	835.8	4,519.3	1,764,477.86	2,008,765.01	39° 52' 45.78 N	109° 1' 57.59 W
- survey misses target center by 58.7ft at 8642.6ft MD (4138.7 TVD, 883.7 N, 4505.2 E)									
- Point									
Plan @ 4395.5 (HH 91C	0.00	0.00	4,395.5	36.5	693.4	1,763,828.61	2,004,910.84	39° 52' 37.89 N	109° 2' 46.66 W
- survey misses target center by 36.6ft at 4731.4ft MD (4364.0 TVD, 20.3 N, 702.1 E)									
- Point									
HH 9102-14 G15 2104 I	0.00	357.76	4,390.0	100.5	778.4	1,763,889.23	2,004,998.31	39° 52' 38.52 N	109° 2' 45.57 W
- survey misses target center by 66.5ft at 4823.9ft MD (4375.8 TVD, 37.1 N, 792.2 E)									
- Point									
HH 9102-14 G15 2104 I	0.00	357.77	4,143.0	924.1	4,968.4	1,764,548.52	2,009,217.21	39° 52' 46.65 N	109° 1' 51.83 W
- survey misses target center by 460.7ft at 8647.0ft MD (4138.6 TVD, 884.9 N, 4509.4 E)									
- Point									
HH 9102-14 G15 2104 I	0.00	357.77	4,093.2	835.7	4,519.2	1,764,477.74	2,008,764.97	39° 52' 45.78 N	109° 1' 57.59 W
- survey misses target center by 67.6ft at 8644.4ft MD (4138.6 TVD, 884.2 N, 4506.9 E)									
- Point									

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
8,589.0	4,140.0	869.4	4,453.5	Last Cathedral Survey @ 8,589' MD
8,647.0	4,138.6	884.9	4,509.4	Projection to Bit @ 8,647'

Checked By: _____ Approved By: _____ Date: _____