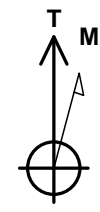
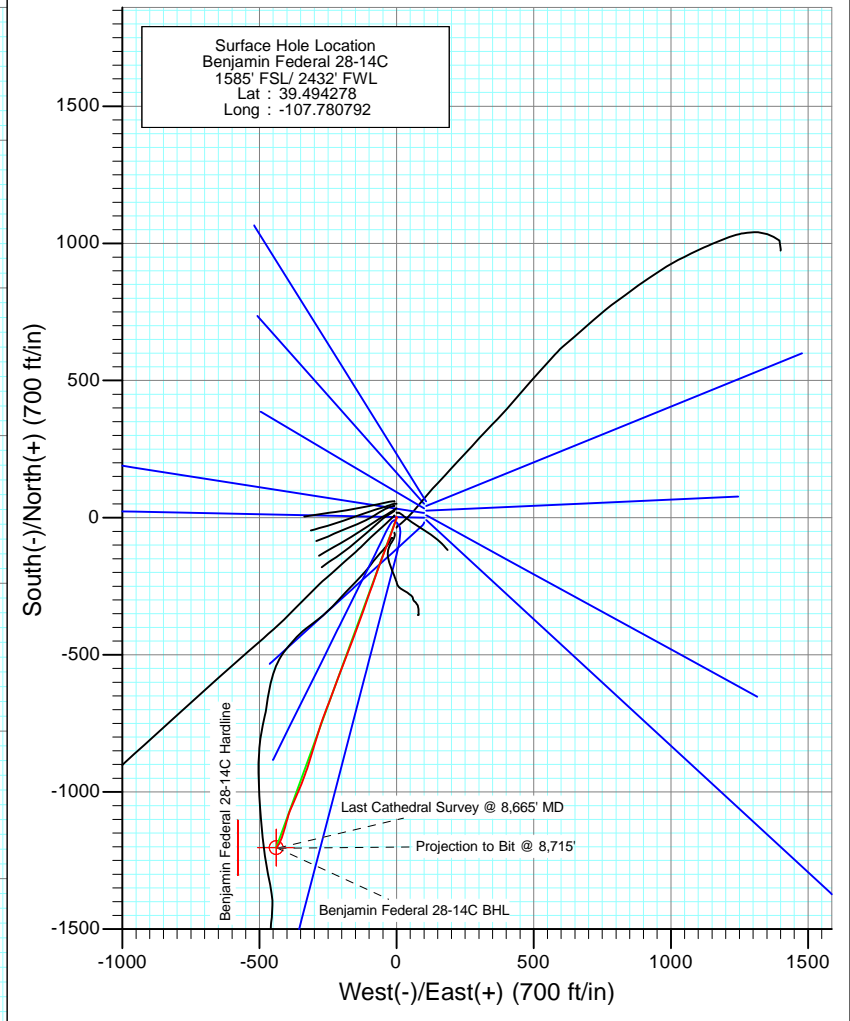




Project: Mamm Creek
 Site: K28NW Pad
 Well: Benjamin Federal 28-14C
 Wellbore: DD
 Design: FINAL



Azimuths to True North
 Magnetic North: 10.29°

Magnetic Field
 Strength: 52308.4snT
 Dip Angle: 65.79°
 Date: 2/24/2011
 Model: IGRF2010

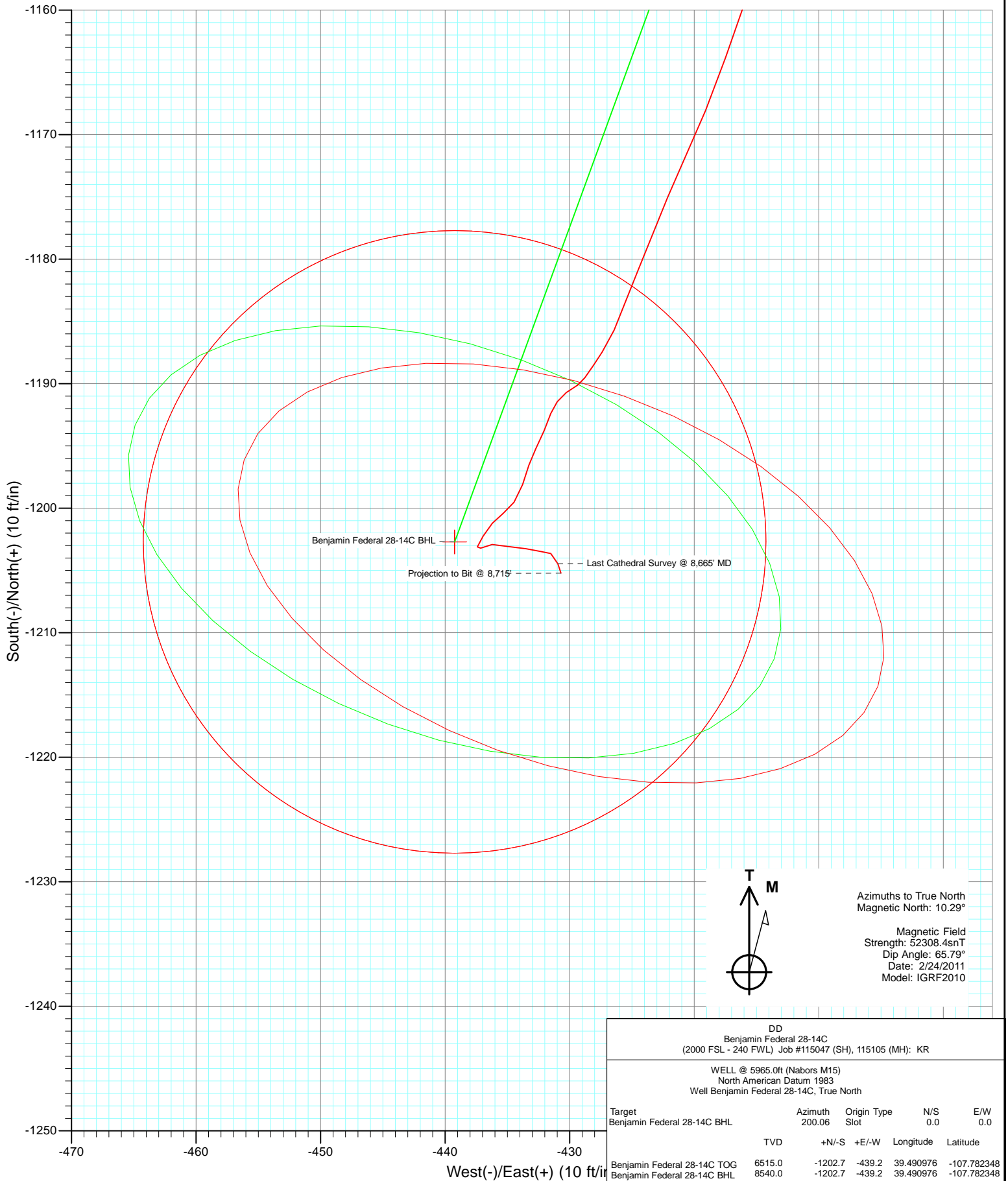
DD
 Benjamin Federal 28-14C
 (2000 FSL - 240 FWL) Job #115047 (SH), 115105 (MH): KR

WELL @ 5965.0ft (Nabors M15)
 North American Datum '83
 Well Benjamin Federal 28-14C, True North

Target	Asimuth	Origin Type	N/S	E/W	Latitude	Longitude
Benjamin Federal 28-14C BHL	200.06	Slot	0.0	0.0		
Benjamin Federal 28-14C TOG	6515.0	-N/-S	-1202.7	-439.2	39.490976	-107.782348
Benjamin Federal 28-14C BHL	8540.0	-N/-S	-1202.7	-439.2	39.490976	-107.782348

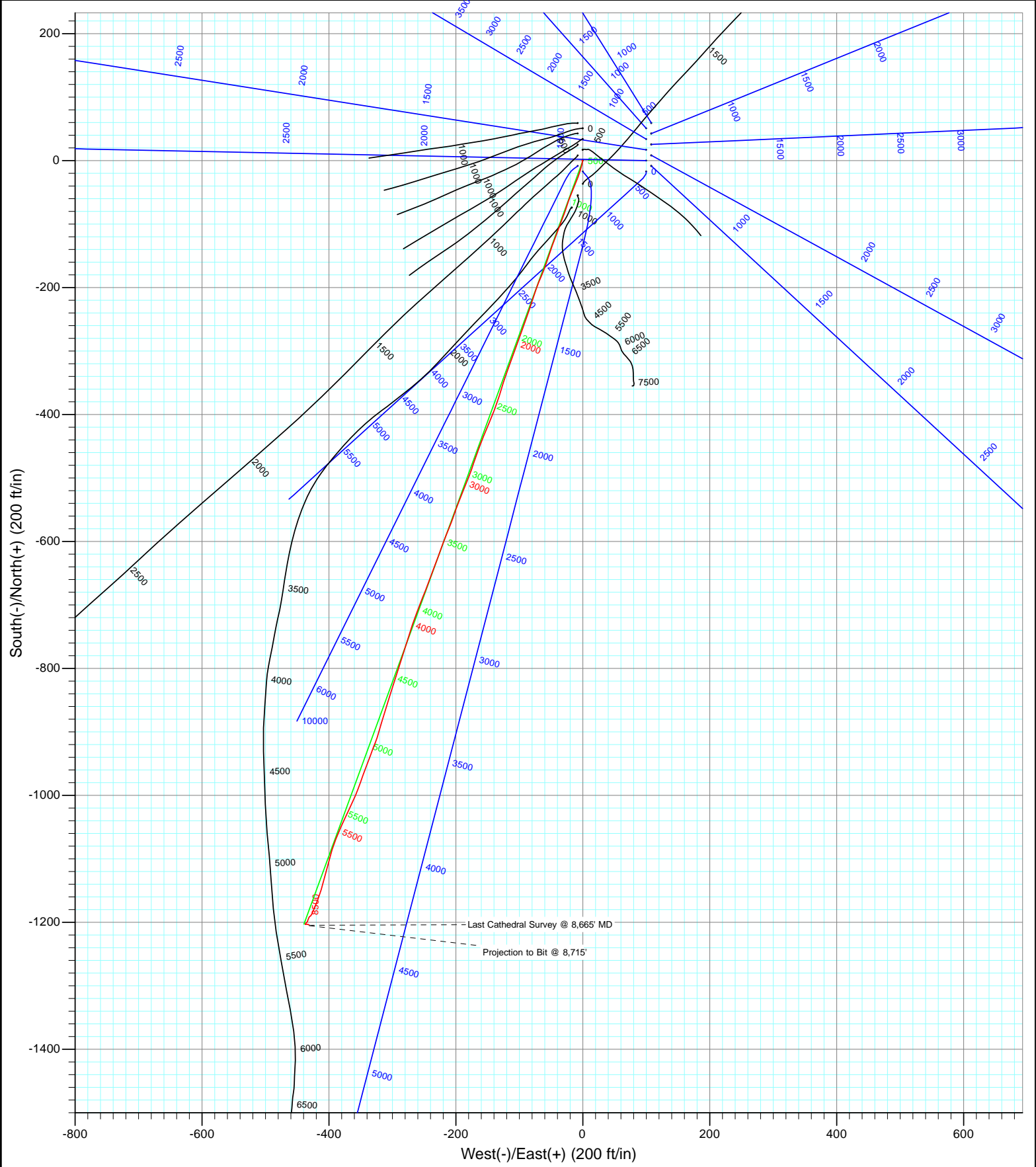


Project: Mamm Creek
 Site: K28NW Pad
 Well: Benjamin Federal 28-14C
 Wellbore: DD
 Design: FINAL





Project: Mamm Creek
Site: K28NW Pad
Well: Benjamin Federal 28-14C
Wellbore: DD
Design: FINAL



Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Benjamin Federal 28-14C
Project: Mamm Creek	TVD Reference: WELL @ 5965.0ft (Nabors M15)
Site: K28NW Pad	MD Reference: WELL @ 5965.0ft (Nabors M15)
Well: Benjamin Federal 28-14C	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: EDM 5000.1 US Multi Users DB

Project Mamm Creek		
Map System: US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum: North American Datum 1983		
Map Zone: Colorado Central Zone		

Site K28NW Pad				
Site Position:	Northing:	1,613,160.16 ft	Latitude:	39.494711
From: Lat/Long	Easting:	2,356,412.22 ft	Longitude:	-107.780819
Position Uncertainty: 0.0 ft	Slot Radius: 13.200 in		Grid Convergence:	-1.44 °

Well Benjamin Federal 28-14C				
Well Position	+N/-S 0.0 ft	Northing: 1,613,002.24 ft	Latitude: 39.494278	
	+E/-W 0.0 ft	Easting: 2,356,416.10 ft	Longitude: -107.780792	
Position Uncertainty	0.0 ft	Wellhead Elevation: ft	Ground Level: 5,943.0 ft	

Wellbore DD					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/24/2011	10.29	65.79	52,308

Design DD				
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	200.06

Survey Program		Date 3/22/2011
From (ft)	To (ft)	Survey (Wellbore)
124.0	1,324.0	Survey #1 (DD)
1,445.0	8,715.0	Survey #2 (DD)
		Tool Name
		MWD
		MWD
		Description
		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	
124.0	0.10	353.20	124.0	0.1	0.0	-0.1	0.08	0.08	
155.0	0.10	253.10	155.0	0.1	0.0	-0.1	0.49	0.00	
186.0	0.10	236.10	186.0	0.1	-0.1	-0.1	0.10	0.00	
216.0	0.50	257.50	216.0	0.1	-0.2	0.0	1.36	1.33	
247.0	0.10	2.40	247.0	0.1	-0.4	0.1	1.72	-1.29	
277.0	0.60	312.50	277.0	0.2	-0.5	0.0	1.80	1.67	
308.0	0.70	255.30	308.0	0.3	-0.8	0.0	2.03	0.32	
339.0	0.40	221.10	339.0	0.1	-1.0	0.2	1.39	-0.97	
369.0	0.20	280.30	369.0	0.1	-1.2	0.3	1.15	-0.67	
400.0	0.60	30.00	400.0	0.2	-1.1	0.2	2.24	1.29	
431.0	0.50	22.30	431.0	0.5	-1.0	-0.1	0.40	-0.32	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 28-14C
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Nabors M15)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Nabors M15)
Well:	Benjamin Federal 28-14C	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US 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
462.0	0.20	154.30	462.0	0.5	-0.9	-0.2	2.10	-0.97	
493.0	0.20	180.20	493.0	0.4	-0.9	-0.1	0.29	0.00	
524.0	0.70	151.00	524.0	0.2	-0.8	0.1	1.72	1.61	
554.0	1.80	173.20	554.0	-0.4	-0.7	0.6	3.94	3.67	
585.0	2.90	184.40	585.0	-1.7	-0.7	1.8	3.83	3.55	
616.0	3.70	188.10	615.9	-3.4	-0.9	3.5	2.67	2.58	
647.0	4.50	191.60	646.8	-5.6	-1.3	5.7	2.70	2.58	
678.0	5.40	194.30	677.7	-8.2	-1.9	8.4	3.00	2.90	
770.0	9.00	200.00	769.0	-19.2	-5.4	19.9	3.98	3.91	
862.0	11.30	200.60	859.5	-34.4	-11.0	36.1	2.50	2.50	
955.0	13.10	203.10	950.4	-52.6	-18.4	55.7	2.02	1.94	
1,047.0	13.80	197.00	1,039.9	-72.7	-25.7	77.1	1.72	0.76	
1,139.0	13.50	201.50	1,129.3	-93.2	-32.8	98.8	1.20	-0.33	
1,231.0	14.10	200.50	1,218.7	-113.7	-40.7	120.7	0.70	0.65	
1,324.0	13.10	199.90	1,309.0	-134.2	-48.2	142.6	1.09	-1.08	Last Cathedral Survey @ 1324' MD
1,445.0	13.30	197.70	1,426.8	-160.3	-57.1	170.2	0.45	0.17	
1,541.0	13.70	204.40	1,520.2	-181.2	-65.2	192.6	1.68	0.42	
1,636.0	14.30	199.30	1,612.4	-202.5	-73.7	215.5	1.44	0.63	
1,731.0	15.20	197.20	1,704.2	-225.5	-81.3	239.7	1.10	0.95	
1,826.0	13.70	200.70	1,796.2	-247.9	-88.9	263.4	1.83	-1.58	
1,921.0	14.20	199.40	1,888.4	-269.4	-96.8	286.3	0.62	0.53	
2,016.0	13.20	200.20	1,980.7	-290.6	-104.4	308.8	1.07	-1.05	
2,111.0	12.60	199.00	2,073.3	-310.6	-111.5	330.0	0.69	-0.63	
2,206.0	12.30	200.60	2,166.1	-329.9	-118.4	350.5	0.48	-0.32	
2,301.0	12.80	197.30	2,258.8	-349.4	-125.1	371.1	0.92	0.53	
2,396.0	14.20	197.30	2,351.2	-370.6	-131.7	393.3	1.47	1.47	
2,492.0	13.90	200.90	2,444.3	-392.6	-139.3	416.6	0.96	-0.31	
2,587.0	14.00	202.90	2,536.5	-413.8	-147.9	439.4	0.52	0.11	
2,682.0	13.10	202.70	2,628.9	-434.3	-156.5	461.7	0.95	-0.95	
2,777.0	14.00	199.80	2,721.2	-455.1	-164.6	483.9	1.19	0.95	
2,872.0	13.40	198.10	2,813.5	-476.4	-171.9	506.4	0.76	-0.63	
2,967.0	14.00	201.60	2,905.8	-497.5	-179.5	528.9	1.08	0.63	
3,062.0	13.50	201.60	2,998.1	-518.5	-187.8	551.5	0.53	-0.53	
3,157.0	13.80	201.80	3,090.4	-539.3	-196.1	573.9	0.32	0.32	
3,252.0	13.00	198.30	3,182.9	-560.0	-203.7	595.9	1.20	-0.84	
3,347.0	13.20	203.20	3,275.4	-580.1	-211.3	617.4	1.19	0.21	
3,442.0	14.00	200.50	3,367.7	-600.8	-219.6	639.7	1.07	0.84	
3,538.0	14.50	199.60	3,460.8	-623.0	-227.7	663.4	0.57	0.52	
3,633.0	14.40	201.20	3,552.8	-645.3	-236.0	687.1	0.43	-0.11	
3,728.0	14.10	200.00	3,644.8	-667.1	-244.2	710.4	0.44	-0.32	
3,823.0	13.10	202.20	3,737.2	-688.0	-252.2	732.8	1.18	-1.05	
3,918.0	14.50	201.10	3,829.4	-709.1	-260.6	755.4	1.50	1.47	
4,012.0	14.20	198.20	3,920.5	-731.0	-268.4	778.7	0.83	-0.32	
4,108.0	13.80	197.40	4,013.6	-753.1	-275.5	801.9	0.46	-0.42	
4,204.0	13.90	197.80	4,106.9	-775.0	-282.5	824.9	0.14	0.10	
4,299.0	13.40	198.10	4,199.2	-796.3	-289.4	847.3	0.53	-0.53	
4,395.0	13.10	196.80	4,292.6	-817.3	-296.0	869.3	0.44	-0.31	
4,490.0	13.50	198.40	4,385.1	-838.1	-302.6	891.1	0.57	0.42	
4,585.0	13.20	197.10	4,477.5	-859.0	-309.3	913.0	0.45	-0.32	
4,680.0	11.40	196.30	4,570.3	-878.4	-315.1	933.2	1.90	-1.89	
4,775.0	11.10	195.00	4,663.5	-896.3	-320.1	951.7	0.41	-0.32	
4,871.0	12.70	201.50	4,757.4	-915.0	-326.4	971.4	2.17	1.67	
4,966.0	14.20	200.00	4,849.8	-935.7	-334.2	993.5	1.62	1.58	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 28-14C
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Nabors M15)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Nabors M15)
Well:	Benjamin Federal 28-14C	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US 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
5,062.0	13.60	201.40	4,943.0	-957.2	-342.3	1,016.6	0.72	-0.62	
5,157.0	14.40	198.70	5,035.2	-978.8	-350.2	1,039.6	1.09	0.84	
5,252.0	13.10	202.90	5,127.5	-999.9	-358.2	1,062.1	1.72	-1.37	
5,347.0	13.70	205.80	5,219.9	-1,020.0	-367.2	1,084.1	0.95	0.63	
5,443.0	13.70	204.70	5,313.1	-1,040.6	-376.9	1,106.7	0.27	0.00	
5,538.0	12.40	202.60	5,405.7	-1,060.2	-385.6	1,128.1	1.46	-1.37	
5,633.0	10.50	199.50	5,498.8	-1,077.8	-392.4	1,147.0	2.10	-2.00	
5,727.0	9.60	195.00	5,591.4	-1,093.4	-397.3	1,163.3	1.27	-0.96	
5,823.0	8.90	196.30	5,686.1	-1,108.3	-401.4	1,178.7	0.76	-0.73	
5,918.0	8.60	193.10	5,780.0	-1,122.2	-405.1	1,193.1	0.60	-0.32	
6,013.0	7.60	194.20	5,874.1	-1,135.3	-408.2	1,206.4	1.07	-1.05	
6,108.0	8.00	199.00	5,968.2	-1,147.6	-411.9	1,219.3	0.80	0.42	
6,203.0	6.50	198.50	6,062.4	-1,158.9	-415.8	1,231.3	1.58	-1.58	
6,299.0	5.10	201.60	6,157.9	-1,168.1	-419.1	1,241.0	1.49	-1.46	
6,393.0	4.20	206.00	6,251.6	-1,175.0	-422.1	1,248.6	1.03	-0.96	
6,488.0	3.40	197.20	6,346.4	-1,180.9	-424.5	1,254.8	1.04	-0.84	
6,583.0	2.90	207.30	6,441.3	-1,185.7	-426.4	1,260.0	0.78	-0.53	
6,677.0	1.10	218.20	6,535.2	-1,188.5	-428.1	1,263.2	1.95	-1.91	
6,772.0	0.40	206.00	6,630.2	-1,189.5	-428.8	1,264.4	0.75	-0.74	
6,867.0	0.60	236.00	6,725.2	-1,190.1	-429.3	1,265.2	0.34	0.21	
6,963.0	0.70	237.10	6,821.2	-1,190.7	-430.3	1,266.0	0.10	0.10	
7,058.0	0.60	210.40	6,916.2	-1,191.4	-431.0	1,267.0	0.33	-0.11	
7,152.0	0.70	207.30	7,010.2	-1,192.4	-431.5	1,268.1	0.11	0.11	
7,247.0	1.10	197.60	7,105.2	-1,193.8	-432.0	1,269.5	0.45	0.42	
7,341.0	0.90	213.40	7,199.1	-1,195.2	-432.7	1,271.2	0.36	-0.21	
7,437.0	0.80	190.50	7,295.1	-1,196.5	-433.3	1,272.6	0.37	-0.10	
7,532.0	1.20	202.80	7,390.1	-1,198.1	-433.8	1,274.2	0.48	0.42	
7,627.0	0.70	211.30	7,485.1	-1,199.5	-434.5	1,275.8	0.55	-0.53	
7,722.0	0.80	236.00	7,580.1	-1,200.4	-435.3	1,276.9	0.35	0.11	
7,817.0	0.70	217.10	7,675.1	-1,201.2	-436.2	1,278.0	0.28	-0.11	
7,913.0	0.80	214.50	7,771.1	-1,202.2	-436.9	1,279.2	0.11	0.10	
8,008.0	0.40	195.70	7,866.1	-1,203.1	-437.4	1,280.1	0.46	-0.42	
8,103.0	0.50	58.40	7,961.1	-1,203.2	-437.1	1,280.2	0.88	0.11	
8,198.0	0.70	82.60	8,056.1	-1,202.9	-436.2	1,279.6	0.34	0.21	
8,388.0	1.00	107.30	8,246.0	-1,203.3	-433.5	1,278.9	0.25	0.16	
8,482.0	0.50	86.60	8,340.0	-1,203.5	-432.3	1,278.7	0.60	-0.53	
8,577.0	0.50	117.10	8,435.0	-1,203.6	-431.5	1,278.6	0.28	0.00	
8,665.0	0.90	161.30	8,523.0	-1,204.5	-430.9	1,279.2	0.73	0.45	Last Cathedral Survey @ 8,665' MD
8,715.0	0.90	161.30	8,573.0	-1,205.2	-430.7	1,279.8	0.00	0.00	Projection to Bit @ 8,715'

Survey Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well Benjamin Federal 28-14C
Project: Mamm Creek	TVD Reference: WELL @ 5965.0ft (Nabors M15)
Site: K28NW Pad	MD Reference: WELL @ 5965.0ft (Nabors M15)
Well: Benjamin Federal 28-14C	North Reference: True
Wellbore: DD	Survey Calculation Method: Minimum Curvature
Design: DD	Database: EDM 5000.1 US 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									
Benjamin Federal 28-14 - actual wellpath misses target center by 18.5ft at 6657.4ft MD (6515.6 TVD, -1188.2 N, -427.8 E) - Point	0.00	0.00	6,515.0	-1,202.7	-439.2	1,611,810.94	2,355,946.81	39.490976	-107.782348
Benjamin Federal 28-14 - actual wellpath misses target center by 8635.5ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Polygon	0.00	0.00	-8,540.0	-1,202.7	-439.2	1,611,810.94	2,355,946.81	39.490976	-107.782348
Point 1			-8,540.0	100.0	-140.0	1,611,914.43	2,355,809.37		
Point 2			-8,540.0	-100.0	-140.0	1,611,714.49	2,355,804.35		
Benjamin Federal 28-14 - actual wellpath misses target center by 19.0ft at 8665.0ft MD (8523.0 TVD, -1204.5 N, -430.9 E) - Circle (radius 25.0)	0.00	0.00	8,540.0	-1,202.7	-439.2	1,611,810.94	2,355,946.81	39.490976	-107.782348

Design Annotations					
	Measured	Vertical	Local Coordinates		Comment
	Depth	Depth	+N/-S	+E/-W	
	(ft)	(ft)	(ft)	(ft)	
	1,324.0	1,309.0	-134.2	-48.2	Last Cathedral Survey @ 1324' MD
	8,665.0	8,523.0	-1,204.5	-430.9	Last Cathedral Survey @ 8,665' MD
	8,715.0	8,573.0	-1,205.2	-430.7	Projection to Bit @ 8,715'

Checked By: _____ Approved By: _____ Date: _____