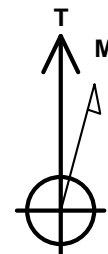
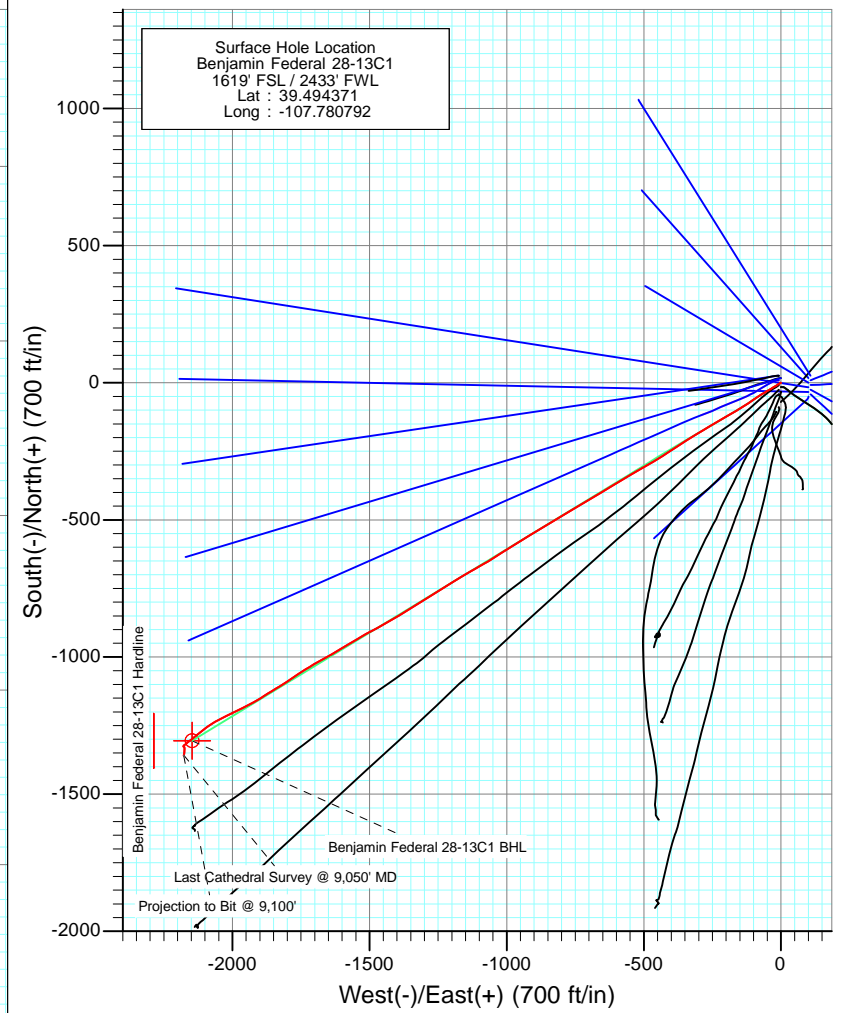
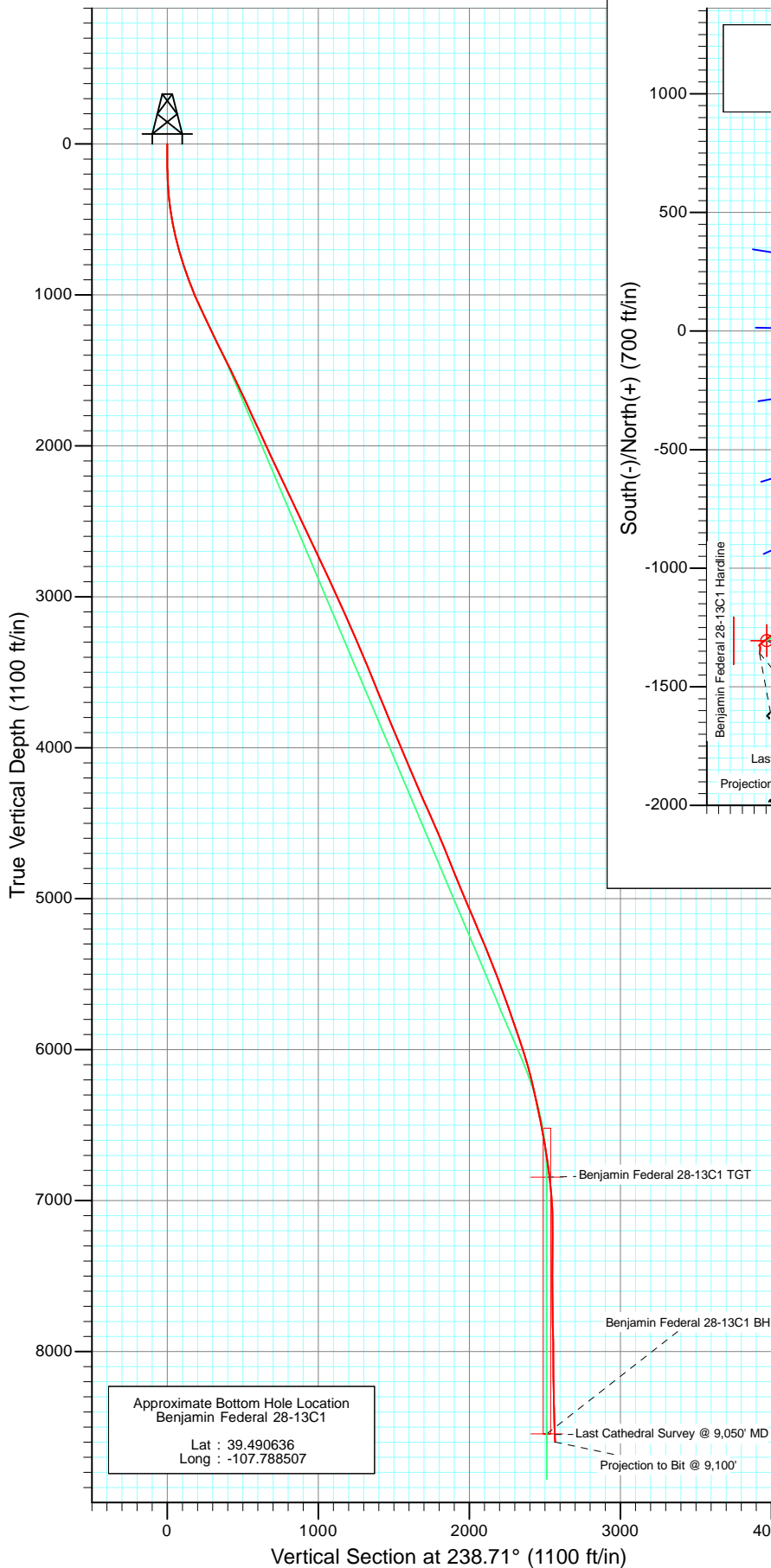




Project: Mamm Creek
 Site: K28NW Pad
 Well: Benjamin Federal 28-13C1
 Wellbore: DD
 Design: FINAL



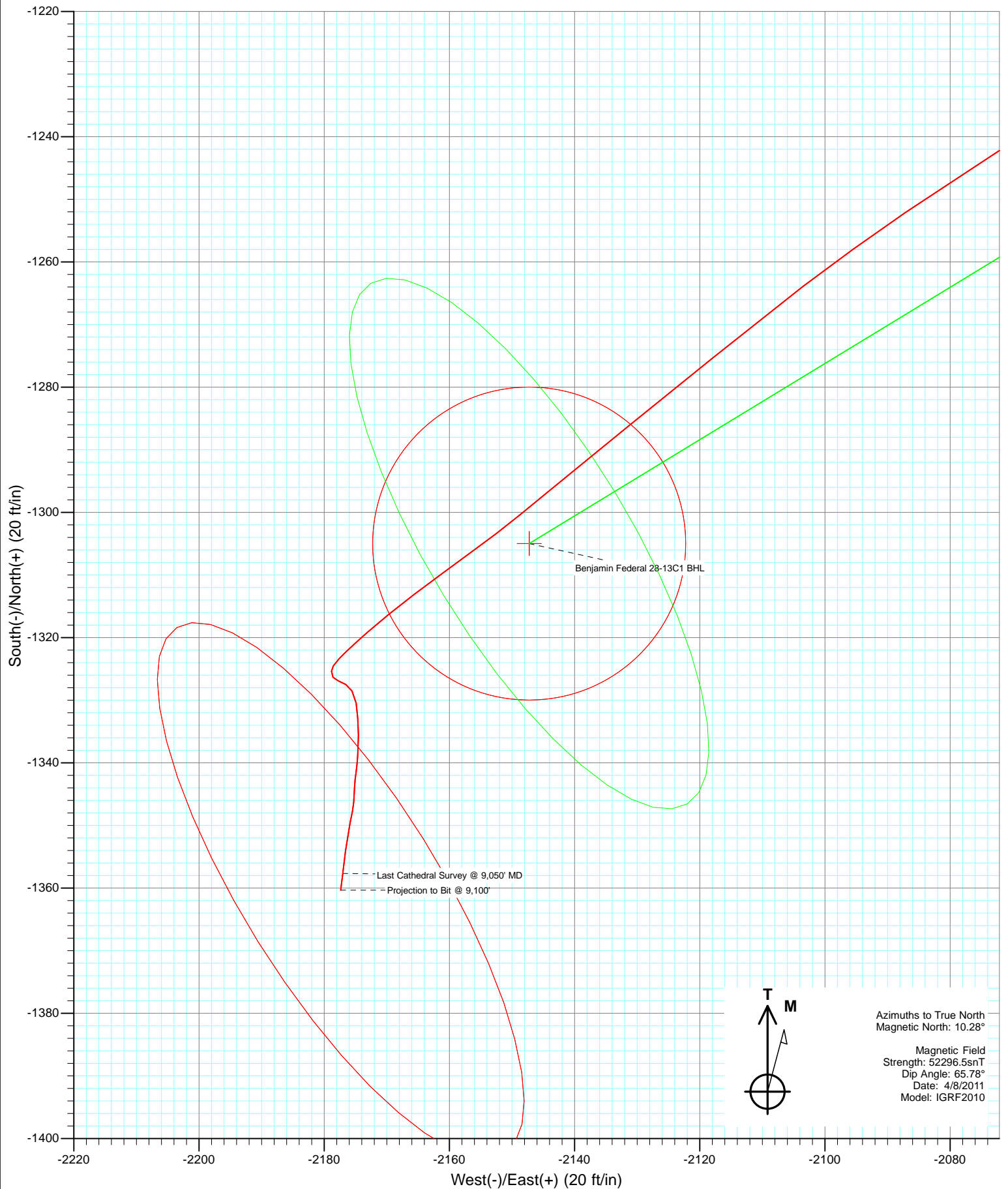
Azimuths to True North
 Magnetic North: 10.28°

Magnetic Field
 Strength: 52296.5nT
 Dip Angle: 65.78°
 Date: 4/8/2011
 Model: IGRF2010

DD Benjamin Federal 28-13C1 BHL = (350 FSL - 240 FWL) Job #115028 (SH), 115159 (MH): KR					
WELL @ 5965.0ft (Original Well Elev) North American Datum 1983 Well Benjamin Federal 28-13C1, True North					
Target Benjamin Federal 28-13C1 BHL	Azimuth 238.71	Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0
Name	TV	+N/-S	+E/-W	Latitude	Longitude
Benjamin Federal 28-13C1 TGT 6845.0					
Benjamin Federal 28-13C1 BHL 8545.0		-1305.0	-2147.2	39.490788	-107.788400

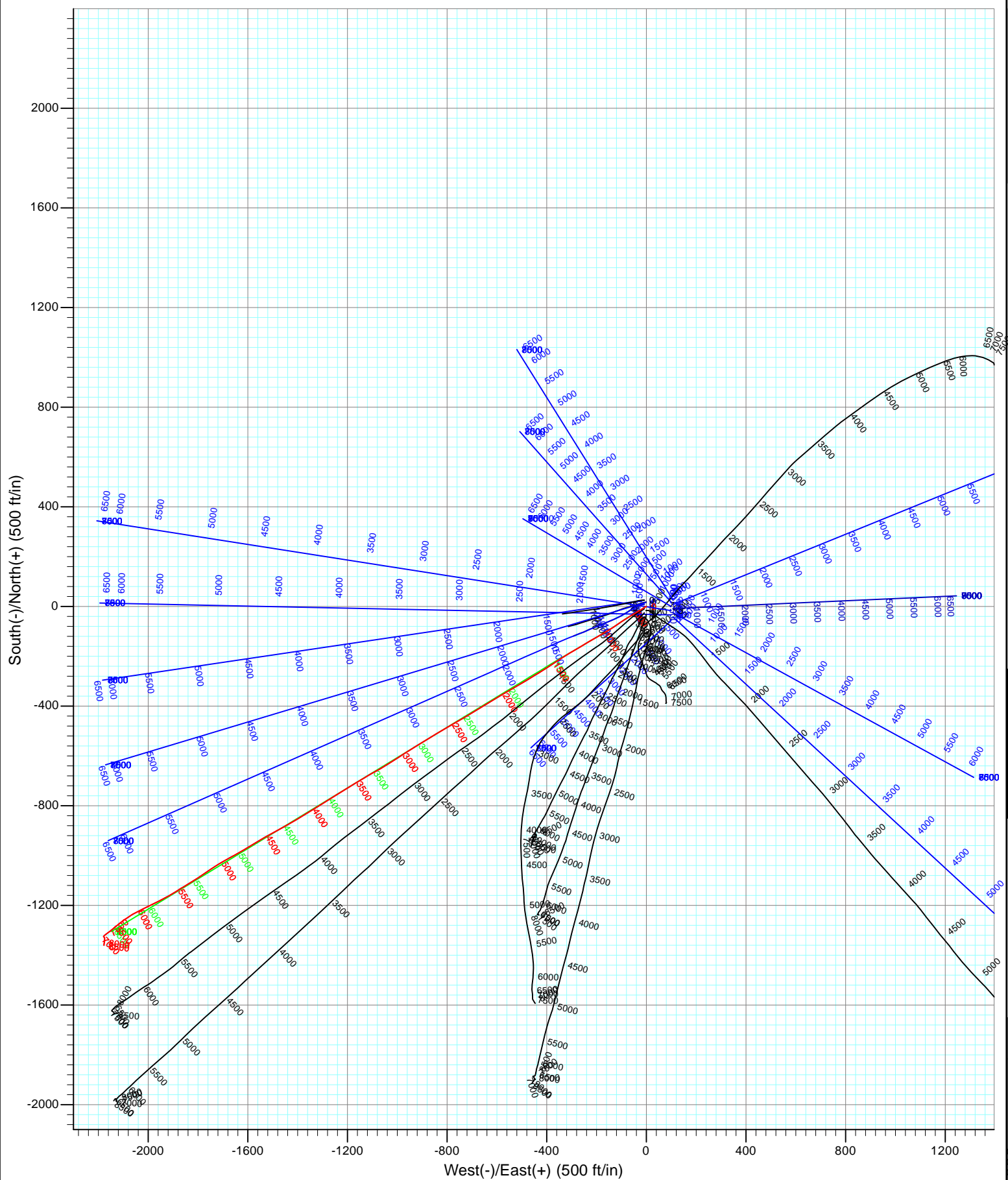


Project: Mamm Creek
Site: K28NW Pad
Well: Benjamin Federal 28-13C1
Wellbore: DD
Design: FINAL





Project: Mamm Creek
Site: K28NW Pad
Well: Benjamin Federal 28-13C1
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 28-13C1
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Original Well Elev)
Well:	Benjamin Federal 28-13C1	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 28-13C1					
Well Position	+N/-S	0.0 ft	Northing:	1,613,036.11 ft	Latitude:	39.494371
	+E/-W	0.0 ft	Easting:	2,356,416.95 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	4/8/2011	10.28	65.78	52,296

Design	DD				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	238.71	

Survey Program	Date	4/29/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
125.0	9,100.0	Survey #1 (DD)	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		
125.0	0.10	320.00	125.0	0.1	-0.1	0.0	0.08	0.08		
156.0	0.90	265.30	156.0	0.1	-0.3	0.2	2.73	2.58		
186.0	1.00	249.50	186.0	0.0	-0.8	0.7	0.93	0.33		
217.0	1.50	244.20	217.0	-0.3	-1.4	1.4	1.65	1.61		
247.0	2.90	239.60	247.0	-0.9	-2.4	2.5	4.70	4.67		
278.0	3.50	233.00	277.9	-1.8	-3.9	4.3	2.27	1.94		
309.0	4.60	238.20	308.8	-3.0	-5.7	6.4	3.74	3.55		
339.0	5.10	234.20	338.7	-4.5	-7.8	9.0	2.01	1.67		
370.0	6.10	235.10	369.6	-6.2	-10.3	12.0	3.24	3.23		
401.0	6.90	235.90	400.4	-8.2	-13.1	15.5	2.60	2.58		
432.0	8.30	239.20	431.1	-10.4	-16.6	19.6	4.73	4.52		
463.0	8.70	241.40	461.8	-12.7	-20.6	24.2	1.66	1.29		

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 28-13C1
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Original Well Elev)
Well:	Benjamin Federal 28-13C1	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
494.0	9.90	240.00	492.4	-15.1	-25.0	29.2	3.94	3.87	
524.0	10.40	238.30	521.9	-17.8	-29.5	34.5	1.94	1.67	
555.0	11.50	239.30	552.3	-20.9	-34.5	40.3	3.60	3.55	
586.0	12.30	238.50	582.7	-24.2	-40.0	46.7	2.63	2.58	
617.0	13.40	239.80	612.9	-27.7	-45.9	53.6	3.67	3.55	
648.0	14.20	241.00	643.0	-31.4	-52.4	61.0	2.74	2.58	
678.0	14.90	235.70	672.0	-35.3	-58.8	68.6	5.01	2.33	
709.0	16.00	239.30	701.9	-39.7	-65.7	76.8	4.71	3.55	
740.0	16.70	239.20	731.7	-44.2	-73.2	85.5	2.26	2.26	
771.0	16.80	236.70	761.3	-48.9	-80.8	94.5	2.35	0.32	
802.0	17.60	236.40	791.0	-54.0	-88.4	103.6	2.60	2.58	
832.0	19.10	236.00	819.4	-59.2	-96.3	113.1	5.02	5.00	
863.0	19.60	236.10	848.7	-65.0	-104.8	123.3	1.62	1.61	
894.0	19.60	235.10	877.9	-70.9	-113.4	133.7	1.08	0.00	
925.0	20.50	236.50	907.0	-76.8	-122.2	144.3	3.29	2.90	
956.0	20.70	238.40	936.0	-82.7	-131.4	155.2	2.25	0.65	
986.0	21.90	236.70	964.0	-88.5	-140.6	166.1	4.50	4.00	
1,048.0	23.70	240.10	1,021.1	-101.1	-161.0	190.1	3.60	2.90	
1,140.0	25.10	240.10	1,104.9	-120.1	-194.0	228.1	1.52	1.52	
1,231.0	25.40	239.40	1,187.2	-139.6	-227.5	266.9	0.47	0.33	
1,324.0	25.60	238.60	1,271.2	-160.2	-261.8	307.0	0.43	0.22	
1,380.0	25.80	240.20	1,321.6	-172.6	-282.7	331.2	1.29	0.36	
1,446.0	26.30	238.70	1,380.9	-187.3	-307.7	360.2	1.25	0.76	
1,541.0	26.80	236.80	1,465.9	-210.0	-343.6	402.7	1.04	0.53	
1,637.0	26.00	237.20	1,551.9	-233.2	-379.4	445.3	0.85	-0.83	
1,732.0	25.00	236.80	1,637.6	-255.5	-413.7	486.2	1.07	-1.05	
1,828.0	24.40	239.10	1,724.8	-276.8	-447.7	526.3	1.18	-0.62	
1,923.0	25.00	239.40	1,811.1	-297.1	-481.8	566.0	0.65	0.63	
2,019.0	25.30	239.30	1,898.0	-317.9	-516.9	606.8	0.32	0.31	
2,114.0	24.70	240.10	1,984.1	-338.2	-551.6	647.0	0.72	-0.63	
2,210.0	25.40	239.10	2,071.1	-358.7	-586.6	687.6	0.85	0.73	
2,305.0	25.40	238.90	2,156.9	-379.7	-621.5	728.4	0.09	0.00	
2,400.0	24.90	239.00	2,242.9	-400.5	-656.1	768.7	0.53	-0.53	
2,496.0	25.00	237.50	2,330.0	-421.8	-690.6	809.2	0.67	0.10	
2,591.0	25.60	239.90	2,415.9	-442.9	-725.3	849.8	1.25	0.63	
2,686.0	25.60	240.20	2,501.5	-463.4	-760.8	890.8	0.14	0.00	
2,782.0	25.40	239.90	2,588.2	-484.0	-796.6	932.2	0.25	-0.21	
2,877.0	25.00	239.20	2,674.1	-504.5	-831.5	972.6	0.53	-0.42	
2,973.0	24.60	239.00	2,761.3	-525.2	-866.1	1,012.9	0.43	-0.42	
3,068.0	25.20	237.70	2,847.5	-546.2	-900.1	1,052.9	0.85	0.63	
3,164.0	25.20	238.20	2,934.3	-567.9	-934.7	1,093.7	0.22	0.00	
3,259.0	24.70	236.90	3,020.5	-589.4	-968.6	1,133.8	0.78	-0.53	
3,354.0	24.00	238.40	3,107.0	-610.4	-1,001.6	1,173.0	0.98	-0.74	
3,450.0	23.80	237.40	3,194.8	-631.0	-1,034.6	1,211.8	0.47	-0.21	
3,545.0	23.50	239.40	3,281.8	-651.0	-1,067.0	1,250.0	0.90	-0.32	
3,640.0	22.80	241.50	3,369.1	-669.4	-1,099.5	1,287.3	1.14	-0.74	
3,736.0	22.30	239.10	3,457.8	-687.7	-1,131.5	1,324.1	1.09	-0.52	
3,831.0	22.20	238.90	3,545.7	-706.2	-1,162.3	1,360.0	0.13	-0.11	
3,927.0	22.30	238.10	3,634.6	-725.2	-1,193.3	1,396.4	0.33	0.10	
4,022.0	22.10	237.80	3,722.5	-744.2	-1,223.8	1,432.3	0.24	-0.21	
4,117.0	22.30	237.90	3,810.5	-763.3	-1,254.1	1,468.2	0.21	0.21	
4,212.0	23.30	238.80	3,898.1	-782.6	-1,285.5	1,505.0	1.11	1.05	
4,307.0	22.80	238.90	3,985.5	-801.9	-1,317.3	1,542.2	0.53	-0.53	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 28-13C1
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Original Well Elev)
Well:	Benjamin Federal 28-13C1	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
4,402.0	22.50	236.30	4,073.2	-821.5	-1,348.2	1,578.8	1.10	-0.32	
4,497.0	23.00	238.60	4,160.8	-841.2	-1,379.2	1,615.5	1.07	0.53	
4,593.0	23.30	239.40	4,249.0	-860.7	-1,411.5	1,653.2	0.45	0.31	
4,688.0	23.80	242.10	4,336.1	-879.2	-1,444.6	1,691.1	1.25	0.53	
4,784.0	23.80	241.30	4,424.0	-897.6	-1,478.7	1,729.8	0.34	0.00	
4,879.0	23.90	241.30	4,510.9	-916.0	-1,512.4	1,768.2	0.11	0.11	
4,974.0	22.90	239.10	4,598.1	-934.7	-1,545.2	1,805.9	1.40	-1.05	
5,070.0	22.40	238.90	4,686.6	-953.8	-1,576.9	1,842.9	0.53	-0.52	
5,165.0	21.40	238.90	4,774.8	-972.1	-1,607.2	1,878.3	1.05	-1.05	
5,261.0	22.00	240.80	4,864.0	-989.9	-1,637.9	1,913.8	0.96	0.62	
5,356.0	22.90	241.20	4,951.8	-1,007.5	-1,669.6	1,950.0	0.96	0.95	
5,452.0	22.90	239.90	5,040.2	-1,025.9	-1,702.2	1,987.4	0.53	0.00	
5,547.0	23.30	236.50	5,127.6	-1,045.5	-1,733.8	2,024.6	1.47	0.42	
5,644.0	23.30	236.90	5,216.7	-1,066.6	-1,765.9	2,063.0	0.16	0.00	
5,740.0	22.40	235.80	5,305.2	-1,087.2	-1,796.9	2,100.2	1.04	-0.94	
5,835.0	21.70	238.10	5,393.2	-1,106.7	-1,826.8	2,135.9	1.17	-0.74	
5,931.0	20.40	239.60	5,482.8	-1,124.5	-1,856.3	2,170.3	1.47	-1.35	
6,026.0	21.00	237.20	5,571.7	-1,142.1	-1,884.9	2,203.9	1.09	0.63	
6,122.0	18.90	239.10	5,661.9	-1,159.4	-1,912.7	2,236.7	2.29	-2.19	
6,217.0	19.60	244.20	5,751.6	-1,174.3	-1,940.2	2,267.9	1.92	0.74	
6,313.0	20.00	241.10	5,841.9	-1,189.2	-1,969.1	2,300.3	1.17	0.42	
6,408.0	18.60	245.60	5,931.6	-1,203.3	-1,997.1	2,331.6	2.15	-1.47	
6,504.0	17.30	244.60	6,022.9	-1,215.8	-2,024.0	2,361.0	1.39	-1.35	
6,599.0	15.90	241.50	6,114.0	-1,228.0	-2,048.2	2,388.1	1.74	-1.47	
6,695.0	13.50	237.60	6,206.8	-1,240.3	-2,069.2	2,412.4	2.70	-2.50	
6,790.0	12.60	235.70	6,299.4	-1,252.1	-2,087.1	2,433.8	1.05	-0.95	
6,886.0	11.60	232.60	6,393.2	-1,263.9	-2,103.4	2,453.9	1.24	-1.04	
6,981.0	10.80	230.60	6,486.4	-1,275.3	-2,117.9	2,472.2	0.94	-0.84	
7,076.0	10.30	231.50	6,579.8	-1,286.2	-2,131.4	2,489.4	0.55	-0.53	
7,172.0	10.00	230.00	6,674.3	-1,296.9	-2,144.5	2,506.2	0.42	-0.31	
7,267.0	7.80	234.00	6,768.2	-1,306.0	-2,156.1	2,520.8	2.40	-2.32	
7,362.0	6.60	232.90	6,862.4	-1,313.1	-2,165.6	2,532.6	1.27	-1.26	
7,457.0	5.10	228.60	6,956.9	-1,319.2	-2,173.2	2,542.2	1.64	-1.58	
7,553.0	2.20	223.20	7,052.7	-1,323.4	-2,177.6	2,548.2	3.04	-3.02	
7,648.0	0.80	175.00	7,147.7	-1,325.4	-2,178.8	2,550.2	1.86	-1.47	
7,744.0	0.40	152.20	7,243.7	-1,326.3	-2,178.6	2,550.6	0.48	-0.42	
7,839.0	0.90	112.10	7,338.7	-1,326.9	-2,177.7	2,550.1	0.68	0.53	
7,934.0	0.70	119.30	7,433.7	-1,327.5	-2,176.5	2,549.4	0.24	-0.21	
8,029.0	1.10	147.20	7,528.6	-1,328.5	-2,175.5	2,549.1	0.61	0.42	
8,125.0	1.40	172.60	7,624.6	-1,330.5	-2,174.9	2,549.6	0.65	0.31	
8,220.0	1.50	174.90	7,719.6	-1,332.8	-2,174.6	2,550.6	0.12	0.11	
8,315.0	1.80	179.10	7,814.6	-1,335.6	-2,174.5	2,551.9	0.34	0.32	
8,410.0	2.20	184.90	7,909.5	-1,338.9	-2,174.6	2,553.7	0.47	0.42	
8,505.0	0.90	188.10	8,004.5	-1,341.4	-2,174.9	2,555.3	1.37	-1.37	
8,600.0	0.60	185.70	8,099.4	-1,342.7	-2,175.1	2,556.0	0.32	-0.32	
8,696.0	1.10	182.70	8,195.4	-1,344.1	-2,175.1	2,556.8	0.52	0.52	
8,791.0	1.50	184.00	8,290.4	-1,346.2	-2,175.3	2,558.1	0.42	0.42	
8,886.0	2.60	193.20	8,385.4	-1,349.6	-2,175.9	2,560.3	1.20	1.16	
8,981.0	2.90	185.70	8,480.2	-1,354.1	-2,176.6	2,563.3	0.49	0.32	
9,050.0	3.10	187.50	8,549.1	-1,357.7	-2,177.0	2,565.5	0.32	0.29	Last Cathedral Survey @ 9,050' MD
9,100.0	3.10	187.50	8,599.1	-1,360.3	-2,177.4	2,567.2	0.00	0.00	Projection to Bit @ 9,100'

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 28-13C1
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Original Well Elev)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Original Well Elev)
Well:	Benjamin Federal 28-13C1	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Benjamin Federal 28-13	0.00	0.00	6,845.0	-1,305.0	-2,147.2	1,611,785.45	2,354,237.63	39.490788	-107.788400
- survey misses target center by 18.0ft at 7342.3ft MD (6842.8 TVD, -1311.7 N, -2163.8 E)									
- Point									
Benjamin Federal 28-13	0.00	0.00	-8,545.0	-1,305.0	-2,147.2	1,611,785.45	2,354,237.63	39.490788	-107.788400
- survey misses target center by 8906.8ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			-8,545.0	100.0	-140.0	1,611,888.93	2,354,100.18		
Point 2			-8,545.0	-100.0	-140.0	1,611,689.00	2,354,095.16		
Benjamin Federal 28-13	0.00	0.00	8,545.0	-1,305.0	-2,147.2	1,611,785.45	2,354,237.63	39.490788	-107.788400
- survey misses target center by 60.2ft at 9042.9ft MD (8542.1 TVD, -1357.3 N, -2177.0 E)									
- Circle (radius 25.0)									

Survey Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment
	9,050.0	8,549.1	-1,357.7	-2,177.0	Last Cathedral Survey @ 9,050' MD
	9,100.0	8,599.1	-1,360.3	-2,177.4	Projection to Bit @ 9,100'

Checked By: _____	Approved By: _____	Date: _____
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