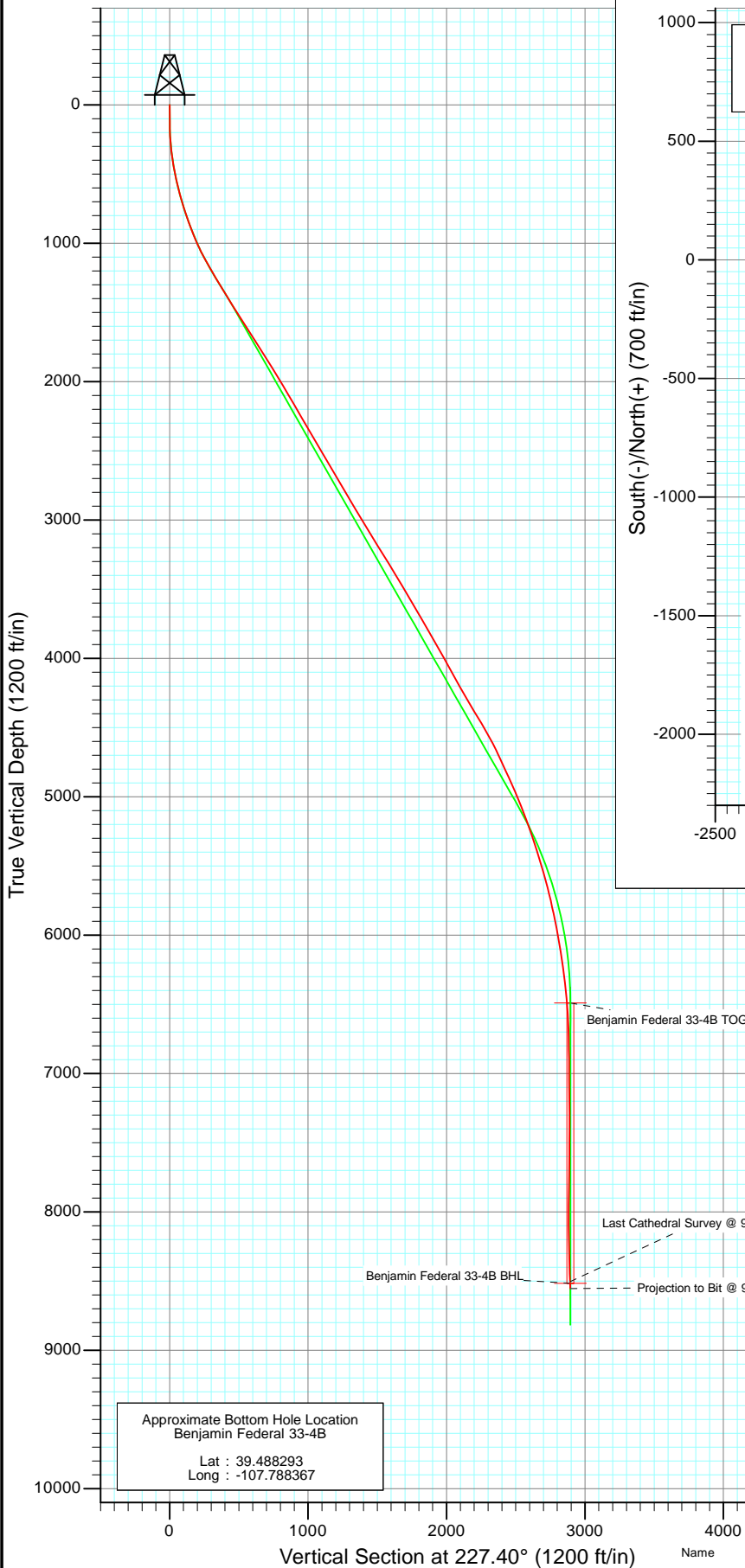
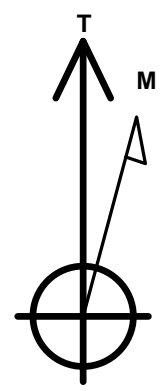
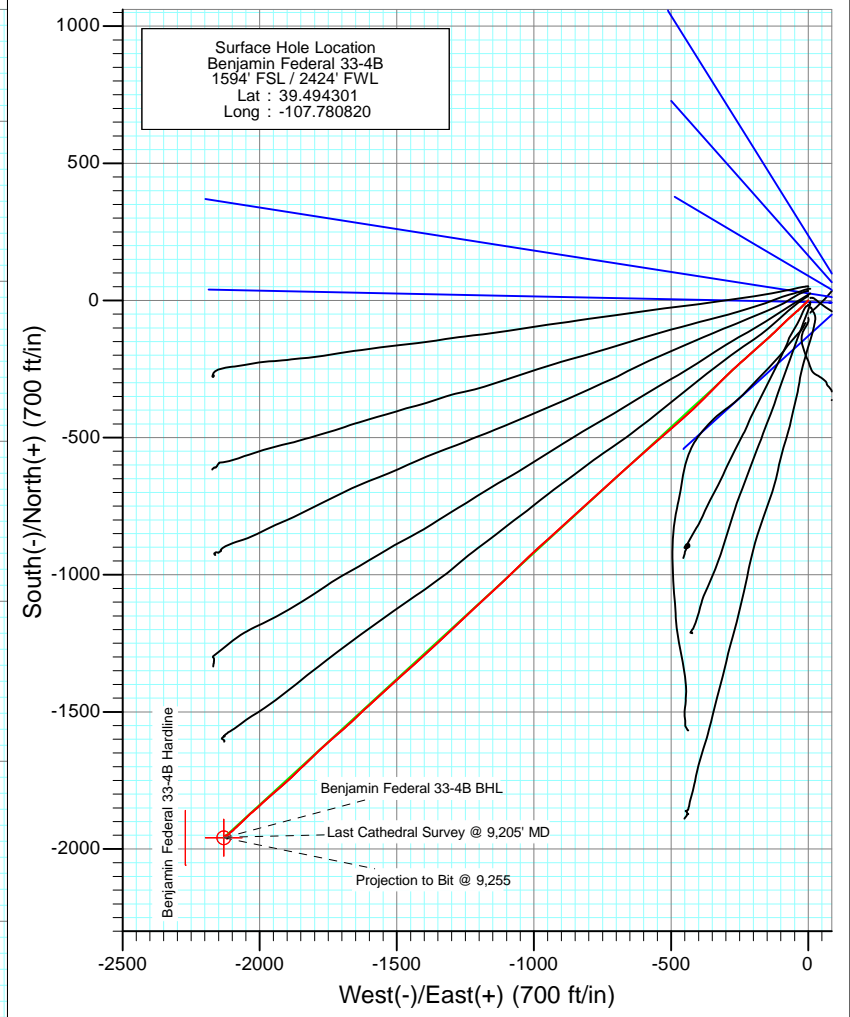




Project: Mamm Creek  
 Site: K28NW Pad  
 Well: Benjamin Federal 33-4B  
 Wellbore: DD  
 Design: FINAL



Approximate Bottom Hole Location  
 Benjamin Federal 33-4B  
 Lat : 39.488293  
 Long : -107.788367

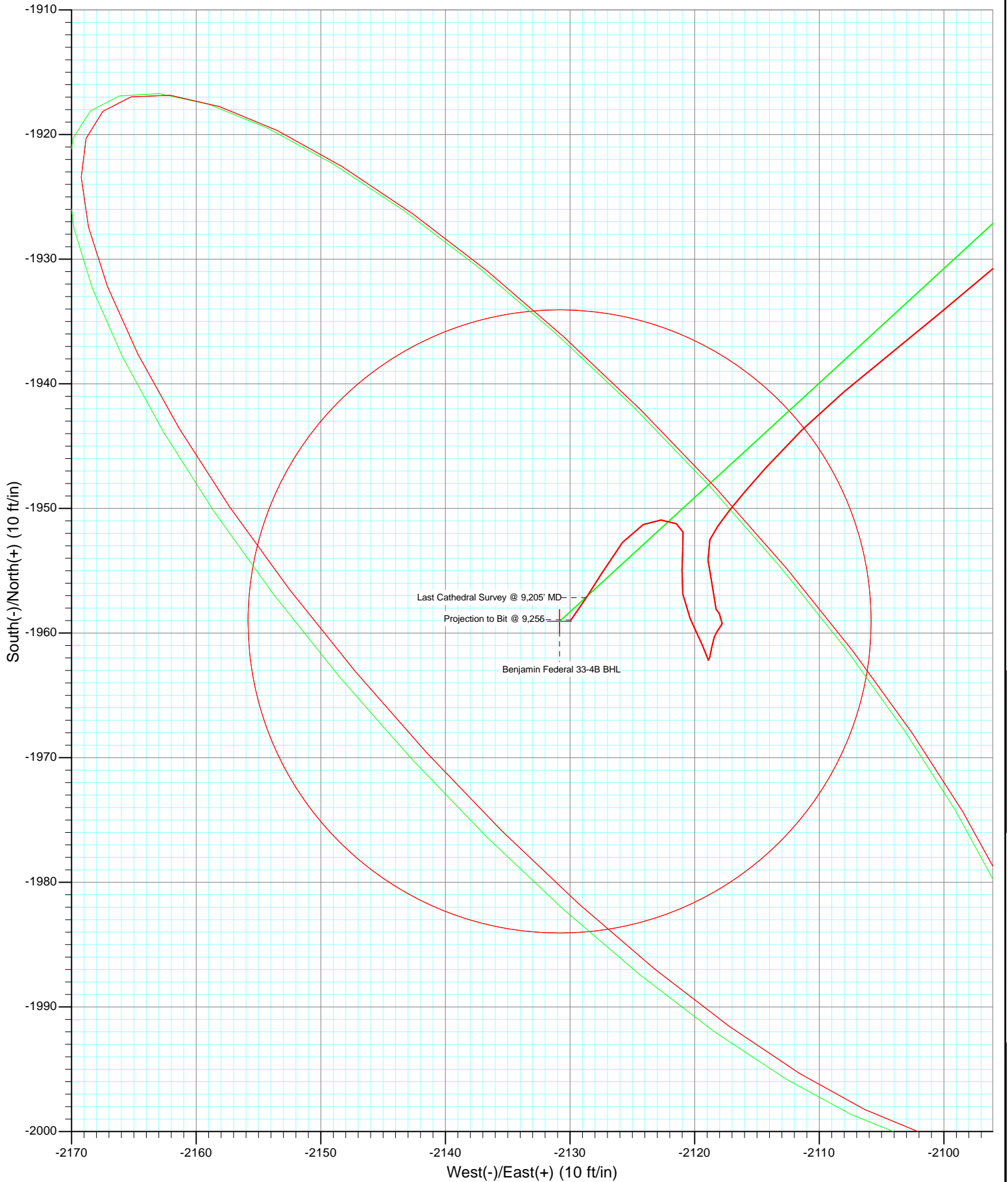


Azimuths to True North  
 Magnetic North: 10.29°  
 Magnetic Field  
 Strength: 52304.8snT  
 Dip Angle: 65.79°  
 Date: 3/9/2011  
 Model: IGRF2010

DD Benjamin Federal 33-4B BHL = (330 FNL - 240 FWL) Job #115041, 115121: KR					
WELL @ 5965.0ft (Nabors M15) North American Datum 1983 Well Benjamin Federal 33-4B, True North					
Target	Azimuth	Origin Type	N/S	E/W	From TVD
Benjamin Federal 33-4B BHL	227.40	Slot	0.0	0.0	0.0
	TVD	+N/-S	+E/-W	Latitude	Longitude
Benjamin Federal 33-4B BHL	8515.0	-1959.1	-2130.8	39.488922	-107.788370

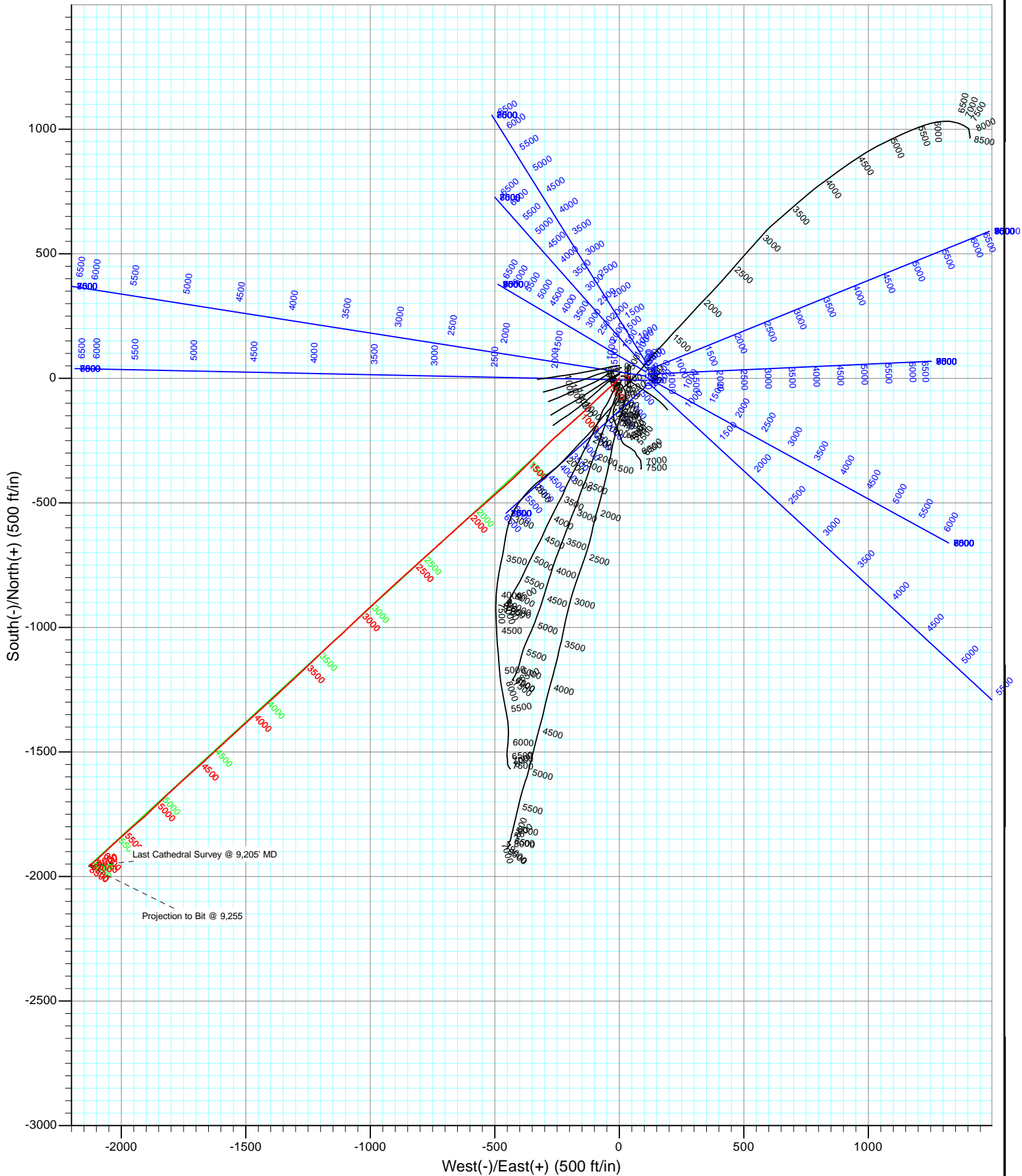


Project: Mamm Creek  
Site: K28NW Pad  
Well: Benjamin Federal 33-4B  
Wellbore: DD  
Design: FINAL





Project: Mamm Creek  
Site: K28NW Pad  
Well: Benjamin Federal 33-4B  
Wellbore: DD  
Design: FINAL



## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b> Well Benjamin Federal 33-4B
<b>Project:</b> Mamm Creek	<b>TVD Reference:</b> WELL @ 5965.0ft (Nabors M15)
<b>Site:</b> K28NW Pad	<b>MD Reference:</b> WELL @ 5965.0ft (Nabors M15)
<b>Well:</b> Benjamin Federal 33-4B	<b>North Reference:</b> True
<b>Wellbore:</b> DD	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> DD	<b>Database:</b> EDM 5000.1 US Multi Users DB

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

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

<b>Well</b> Benjamin Federal 33-4B				
<b>Well Position</b>	<b>+N/-S</b> 0.0 ft	<b>Northing:</b> 1,613,010.82 ft	<b>Latitude:</b> 39.494301	
	<b>+E/-W</b> 0.0 ft	<b>Easting:</b> 2,356,408.32 ft	<b>Longitude:</b> -107.780820	
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 5,943.0 ft	

<b>Wellbore</b> DD					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/9/2011	10.29	65.79	52,305

<b>Design</b> DD				
<b>Audit Notes:</b>				
<b>Version:</b> 1.0	<b>Phase:</b> ACTUAL	<b>Tie On Depth:</b> 0.0		
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	227.40

<b>Survey Program</b>		<b>Date</b> 3/28/2011
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>
124.0	9,255.0	Survey #1 (DD)
		<b>Tool Name</b> MWD
		<b>Description</b> Geolink MWD

<b>Survey</b>									
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	0.40	208.40	124.0	-0.4	-0.2	0.4	0.32	0.32	
155.0	0.50	230.30	155.0	-0.6	-0.4	0.6	0.64	0.32	
186.0	1.60	210.60	186.0	-1.0	-0.7	1.2	3.68	3.55	
216.0	2.50	220.90	216.0	-1.9	-1.3	2.2	3.23	3.00	
247.0	3.80	228.60	246.9	-3.1	-2.5	3.9	4.40	4.19	
277.0	5.50	224.60	276.8	-4.7	-4.3	6.4	5.77	5.67	
308.0	6.40	226.20	307.7	-7.0	-6.6	9.6	2.95	2.90	
339.0	7.30	225.00	338.4	-9.6	-9.2	13.3	2.94	2.90	
369.0	7.90	226.40	368.2	-12.4	-12.1	17.2	2.09	2.00	
400.0	8.50	224.80	398.9	-15.5	-15.2	21.7	2.07	1.94	
431.0	9.40	223.00	429.5	-18.9	-18.6	26.5	3.04	2.90	
462.0	9.80	226.30	460.0	-22.6	-22.2	31.6	2.19	1.29	

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 33-4B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Nabors M15)
<b>Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Nabors M15)
<b>Well:</b>	Benjamin Federal 33-4B	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
493.0	10.50	226.10	490.6	-26.4	-26.1	37.1	2.26	2.26	
524.0	11.50	227.10	521.0	-30.4	-30.4	43.0	3.28	3.23	
554.0	13.20	231.20	550.3	-34.6	-35.3	49.4	6.37	5.67	
585.0	14.20	228.40	580.4	-39.4	-40.9	56.8	3.87	3.23	
616.0	14.50	228.70	610.4	-44.5	-46.7	64.4	1.00	0.97	
647.0	14.40	227.60	640.5	-49.6	-52.4	72.2	0.94	-0.32	
678.0	15.80	227.80	670.4	-55.1	-58.4	80.3	4.52	4.52	
708.0	17.10	229.40	699.2	-60.7	-64.8	88.7	4.59	4.33	
739.0	17.50	229.10	728.8	-66.7	-71.8	98.0	1.32	1.29	
770.0	17.60	224.80	758.3	-73.1	-78.6	107.3	4.19	0.32	
801.0	17.80	224.80	787.9	-79.8	-85.2	116.7	0.65	0.65	
832.0	19.00	228.50	817.3	-86.5	-92.3	126.5	5.40	3.87	
862.0	19.20	225.20	845.6	-93.2	-99.5	136.3	3.66	0.67	
893.0	20.20	225.40	874.8	-100.5	-106.9	146.7	3.23	3.23	
924.0	21.50	226.20	903.8	-108.2	-114.8	157.8	4.29	4.19	
955.0	21.80	226.60	932.6	-116.1	-123.1	169.2	1.08	0.97	
1,047.0	24.70	228.20	1,017.1	-140.7	-149.9	205.5	3.23	3.15	
1,139.0	28.10	228.40	1,099.5	-167.9	-180.4	246.4	3.70	3.70	
1,231.0	29.50	227.90	1,180.1	-197.4	-213.4	290.7	1.54	1.52	
1,323.0	31.40	229.00	1,259.4	-228.3	-248.3	337.3	2.15	2.07	
1,390.0	31.40	226.20	1,316.6	-251.9	-274.1	372.2	2.18	0.00	
1,540.0	32.10	224.60	1,444.2	-307.3	-330.3	451.1	0.73	0.47	
1,636.0	32.80	224.80	1,525.2	-343.9	-366.5	502.6	0.74	0.73	
1,731.0	32.80	226.20	1,605.0	-380.0	-403.2	554.0	0.80	0.00	
1,826.0	32.50	227.50	1,685.0	-415.0	-440.6	605.3	0.80	-0.32	
1,921.0	31.70	228.80	1,765.5	-448.7	-478.2	655.7	1.11	-0.84	
2,016.0	32.00	228.50	1,846.2	-481.8	-515.8	705.8	0.36	0.32	
2,111.0	31.20	229.30	1,927.1	-514.6	-553.3	755.6	0.95	-0.84	
2,206.0	31.10	229.00	2,008.4	-546.7	-590.5	804.7	0.19	-0.11	
2,301.0	30.90	228.70	2,089.8	-578.9	-627.4	853.6	0.27	-0.21	
2,396.0	30.60	227.40	2,171.5	-611.4	-663.5	902.2	0.77	-0.32	
2,492.0	29.70	227.10	2,254.5	-644.1	-698.9	950.4	0.95	-0.94	
2,587.0	30.80	228.40	2,336.6	-676.3	-734.3	998.3	1.35	1.16	
2,682.0	30.50	228.40	2,418.3	-708.4	-770.5	1,046.7	0.32	-0.32	
2,778.0	30.50	227.20	2,501.0	-741.1	-806.6	1,095.4	0.63	0.00	
2,873.0	30.00	227.80	2,583.1	-773.5	-841.9	1,143.3	0.62	-0.53	
2,968.0	29.80	227.60	2,665.4	-805.4	-876.9	1,190.6	0.24	-0.21	
3,063.0	30.10	227.80	2,747.7	-837.3	-912.0	1,238.1	0.33	0.32	
3,158.0	31.70	228.00	2,829.3	-870.0	-948.2	1,286.8	1.69	1.68	
3,253.0	30.70	227.60	2,910.5	-903.0	-984.7	1,336.1	1.07	-1.05	
3,348.0	30.50	226.30	2,992.3	-936.0	-1,020.0	1,384.4	0.73	-0.21	
3,443.0	31.20	226.10	3,073.8	-969.8	-1,055.2	1,433.1	0.74	0.74	
3,538.0	31.60	225.40	3,154.9	-1,004.3	-1,090.6	1,482.6	0.57	0.42	
3,634.0	32.30	228.80	3,236.4	-1,038.9	-1,127.8	1,533.4	2.01	0.73	
3,729.0	31.50	226.90	3,317.1	-1,072.5	-1,165.1	1,583.6	1.35	-0.84	
3,824.0	31.20	226.00	3,398.2	-1,106.6	-1,200.9	1,633.0	0.59	-0.32	
3,919.0	30.50	226.60	3,479.7	-1,140.2	-1,236.1	1,681.7	0.80	-0.74	
4,014.0	30.70	226.60	3,561.5	-1,173.5	-1,271.2	1,730.0	0.21	0.21	
4,109.0	30.10	227.70	3,643.4	-1,206.2	-1,306.5	1,778.1	0.86	-0.63	
4,204.0	30.00	225.20	3,725.7	-1,238.9	-1,340.9	1,825.7	1.32	-0.11	
4,299.0	30.00	228.40	3,808.0	-1,271.4	-1,375.6	1,873.1	1.68	0.00	
4,395.0	29.50	228.80	3,891.3	-1,302.9	-1,411.3	1,920.8	0.56	-0.52	
4,490.0	29.40	227.30	3,974.0	-1,334.2	-1,446.0	1,967.5	0.78	-0.11	

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 33-4B
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Nabors M15)
<b>Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Nabors M15)
<b>Well:</b>	Benjamin Federal 33-4B	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
4,585.0	29.30	227.40	4,056.8	-1,365.7	-1,480.3	2,014.0	0.12	-0.11	
4,681.0	28.50	227.40	4,140.9	-1,397.1	-1,514.4	2,060.4	0.83	-0.83	
4,776.0	29.60	227.30	4,223.9	-1,428.4	-1,548.4	2,106.6	1.16	1.16	
4,870.0	30.30	227.90	4,305.4	-1,460.0	-1,583.0	2,153.5	0.81	0.74	
4,965.0	31.20	226.90	4,387.0	-1,492.9	-1,618.8	2,202.1	1.09	0.95	
5,061.0	31.20	226.90	4,469.1	-1,526.9	-1,655.1	2,251.8	0.00	0.00	
5,156.0	28.60	228.60	4,551.5	-1,558.7	-1,690.1	2,299.1	2.88	-2.74	
5,252.0	27.40	229.00	4,636.2	-1,588.4	-1,724.0	2,344.2	1.27	-1.25	
5,347.0	24.80	227.70	4,721.6	-1,616.2	-1,755.2	2,386.0	2.80	-2.74	
5,442.0	23.90	227.20	4,808.1	-1,642.7	-1,784.1	2,425.1	0.97	-0.95	
5,538.0	24.20	226.20	4,895.8	-1,669.5	-1,812.6	2,464.3	0.53	0.31	
5,633.0	23.50	225.80	4,982.7	-1,696.2	-1,840.2	2,502.7	0.76	-0.74	
5,727.0	21.50	226.90	5,069.5	-1,721.0	-1,866.2	2,538.6	2.17	-2.13	
5,822.0	20.20	225.60	5,158.3	-1,744.4	-1,890.7	2,572.4	1.45	-1.37	
5,917.0	19.50	228.10	5,247.6	-1,766.4	-1,914.2	2,604.7	1.16	-0.74	
6,013.0	18.30	230.60	5,338.5	-1,786.7	-1,937.7	2,635.8	1.51	-1.25	
6,109.0	17.10	229.00	5,429.9	-1,805.5	-1,960.0	2,664.9	1.35	-1.25	
6,204.0	16.00	227.60	5,521.0	-1,823.5	-1,980.3	2,692.0	1.23	-1.16	
6,299.0	15.10	225.70	5,612.5	-1,841.0	-1,998.8	2,717.4	1.09	-0.95	
6,394.0	13.80	230.70	5,704.5	-1,856.8	-2,016.4	2,741.1	1.90	-1.37	
6,489.0	12.60	228.30	5,797.0	-1,870.9	-2,032.9	2,762.8	1.39	-1.26	
6,584.0	11.40	224.10	5,889.9	-1,884.5	-2,047.2	2,782.5	1.56	-1.26	
6,678.0	10.80	226.40	5,982.1	-1,897.3	-2,060.0	2,800.6	0.79	-0.64	
6,773.0	9.30	228.20	6,075.7	-1,908.5	-2,072.2	2,817.2	1.61	-1.58	
6,868.0	7.90	227.00	6,169.6	-1,918.1	-2,082.7	2,831.4	1.49	-1.47	
6,963.0	7.20	225.50	6,263.8	-1,926.7	-2,091.7	2,843.9	0.77	-0.74	
7,059.0	6.40	231.90	6,359.1	-1,934.2	-2,100.2	2,855.2	1.15	-0.83	
7,154.0	5.80	229.20	6,453.6	-1,940.6	-2,108.0	2,865.3	0.70	-0.63	
7,249.0	4.80	221.80	6,548.2	-1,946.7	-2,114.3	2,874.0	1.27	-1.05	
7,343.0	2.60	214.90	6,642.0	-1,951.4	-2,118.1	2,880.0	2.38	-2.34	
7,438.0	1.30	154.80	6,736.9	-1,954.2	-2,118.9	2,882.5	2.37	-1.37	
7,533.0	1.80	182.10	6,831.9	-1,956.6	-2,118.5	2,883.8	0.92	0.53	
7,598.0	0.90	147.70	6,896.9	-1,958.1	-2,118.3	2,884.6	1.81	-1.38	
7,629.0	0.70	138.20	6,927.9	-1,958.4	-2,118.0	2,884.7	0.77	-0.65	
7,724.0	0.50	202.20	7,022.9	-1,959.2	-2,117.8	2,885.1	0.69	-0.21	
7,819.0	0.40	226.00	7,117.9	-1,959.9	-2,118.2	2,885.8	0.22	-0.11	
7,915.0	1.30	190.60	7,213.8	-1,961.2	-2,118.6	2,887.0	1.04	0.94	
8,010.0	0.10	303.40	7,308.8	-1,962.2	-2,118.9	2,887.9	1.41	-1.26	
8,105.0	0.10	124.20	7,403.8	-1,962.2	-2,118.9	2,887.9	0.21	0.00	
8,200.0	1.60	336.50	7,498.8	-1,961.0	-2,119.4	2,887.4	1.77	1.58	
8,295.0	1.30	334.00	7,593.8	-1,958.8	-2,120.4	2,886.7	0.32	-0.32	
8,390.0	1.20	352.90	7,688.8	-1,956.9	-2,120.9	2,885.8	0.44	-0.11	
8,486.0	1.10	4.40	7,784.8	-1,955.0	-2,121.0	2,884.5	0.26	-0.10	
8,581.0	1.10	358.90	7,879.7	-1,953.1	-2,120.9	2,883.3	0.11	0.00	
8,676.0	0.40	6.50	7,974.7	-1,951.9	-2,120.9	2,882.4	0.74	-0.74	
8,771.0	0.80	300.20	8,069.7	-1,951.2	-2,121.5	2,882.3	0.78	0.42	
8,866.0	0.80	266.40	8,164.7	-1,950.9	-2,122.7	2,883.1	0.49	0.00	
8,961.0	1.00	247.70	8,259.7	-1,951.3	-2,124.1	2,884.3	0.37	0.21	
9,056.0	1.70	218.40	8,354.7	-1,952.7	-2,125.8	2,886.5	1.01	0.74	
9,150.0	2.10	210.10	8,448.6	-1,955.3	-2,127.5	2,889.5	0.52	0.43	
9,205.0	2.50	214.50	8,503.6	-1,957.2	-2,128.7	2,891.7	0.79	0.73	Last Cathedral Survey @ 9,205' MD
9,255.0	2.50	214.50	8,553.5	-1,959.0	-2,129.9	2,893.8	0.00	0.00	Projection to Bit @ 9,255

## Survey Report

<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b> Well Benjamin Federal 33-4B
<b>Project:</b> Mamm Creek	<b>TVD Reference:</b> WELL @ 5965.0ft (Nabors M15)
<b>Site:</b> K28NW Pad	<b>MD Reference:</b> WELL @ 5965.0ft (Nabors M15)
<b>Well:</b> Benjamin Federal 33-4B	<b>North Reference:</b> True
<b>Wellbore:</b> DD	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> DD	<b>Database:</b> 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 33-4B	0.00	0.00	8,515.0	-1,959.1	-2,130.8	1,611,105.86	2,354,228.97	39.488922	-107.788370
- survey misses target center by 11.8ft at 9205.0ft MD (8503.6 TVD, -1957.2 N, -2128.7 E)									
- Circle (radius 25.0)									
Benjamin Federal 33-4B	0.00	0.00	6,490.0	-1,959.1	-2,130.8	1,611,105.86	2,354,228.97	39.488922	-107.788370
- survey misses target center by 25.6ft at 7193.0ft MD (6492.4 TVD, -1943.2 N, -2110.8 E)									
- Point									
Benjamin Federal 33-4B	0.00	0.00	-8,515.0	-1,959.1	-2,130.8	1,611,105.86	2,354,228.97	39.488922	-107.788370
- survey misses target center by 8993.5ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			-8,515.0	100.0	-140.0	1,611,209.34	2,354,091.53		
Point 2			-8,515.0	-100.0	-140.0	1,611,009.40	2,354,086.51		

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)		
9,205.0	8,503.6	-1,957.2	-2,128.7	Last Cathedral Survey @ 9,205' MD	
9,255.0	8,553.5	-1,959.0	-2,129.9	Projection to Bit @ 9,255	

Checked By: _____	Approved By: _____	Date: _____
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