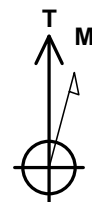
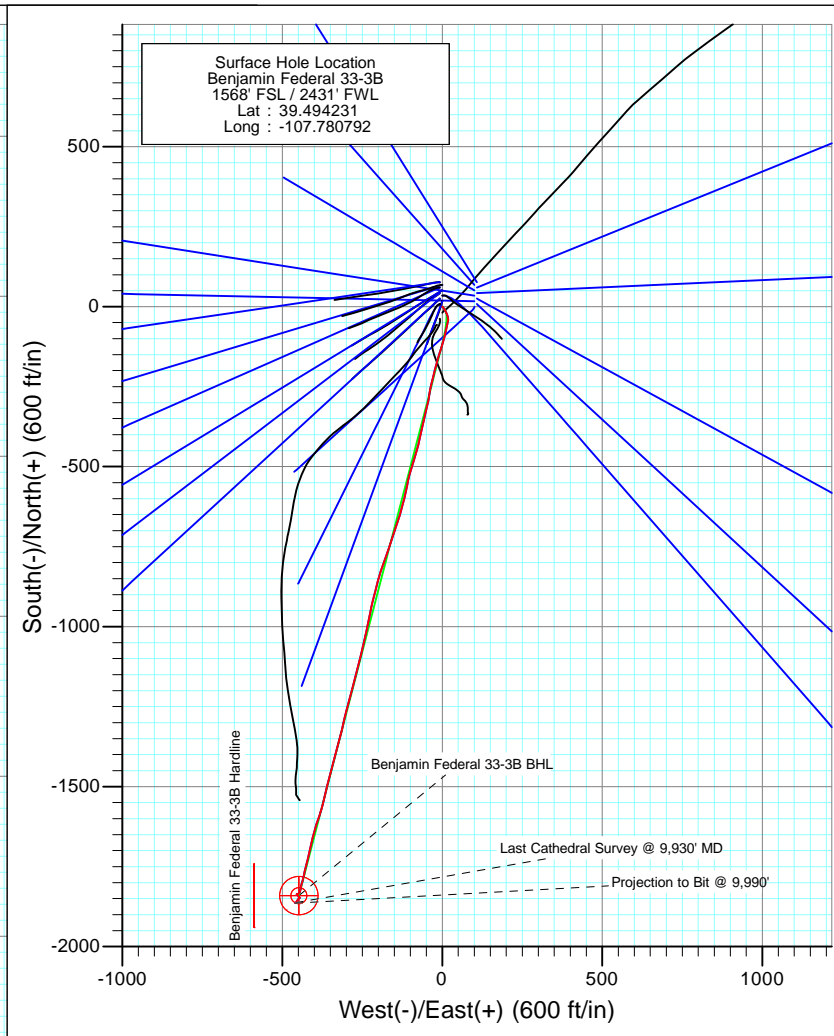
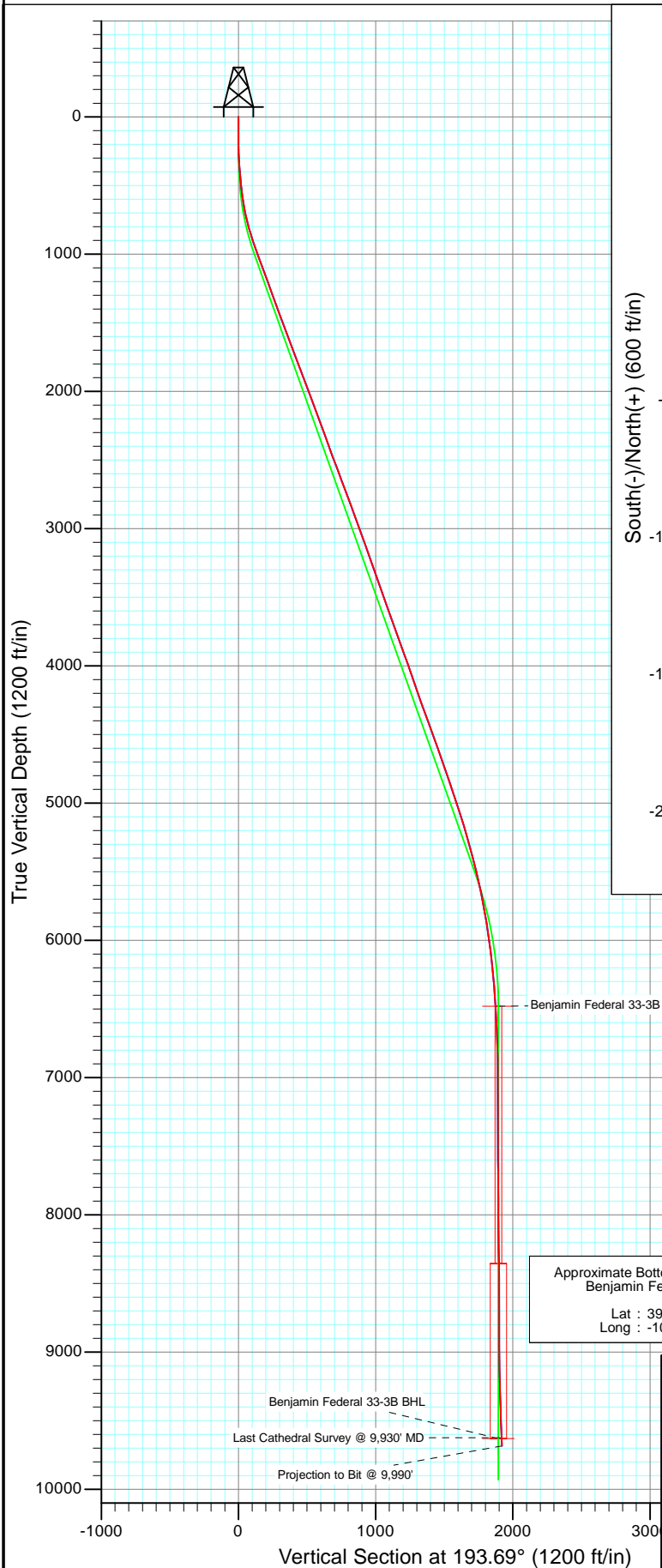




Project: Mamm Creek
 Site: K28NW Pad
 Well: Benjamin Federal 33-3B
 Wellbore: DD
 Design: FINAL



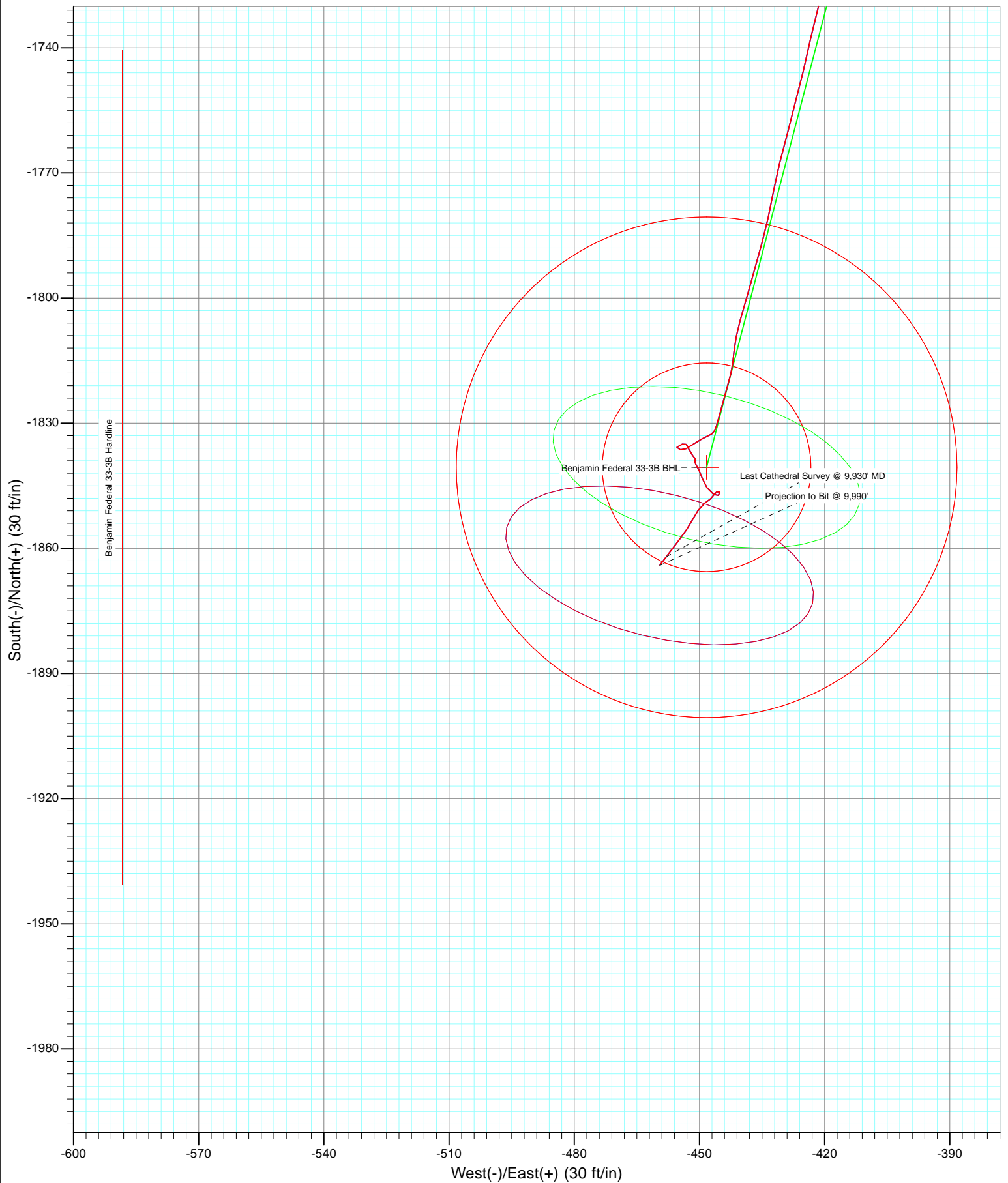
Azimuths to True North
 Magnetic North: 10.30°

Magnetic Field
 Strength: 52315.8nT
 Dip Angle: 65.79°
 Date: 1/28/2011
 Model: IGRF2010

DD Benjamin Federal 33-3B BHL = (265 FNL - 1930 FWL) Job #115057 (SH): KR					
WELL @ 5965.0ft (Nabors M15) North American Datum 1983 Well Benjamin Federal 33-3B, True North					
Target Benjamin Federal 33-3B BHL	Azimuth 193.69	Origin Type Slot	N/S 0.0	E/W 0.0	
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Benjamin Federal 33-3B BHL	9630.0	-1840.6	-448.3	39.489178	-107.782380

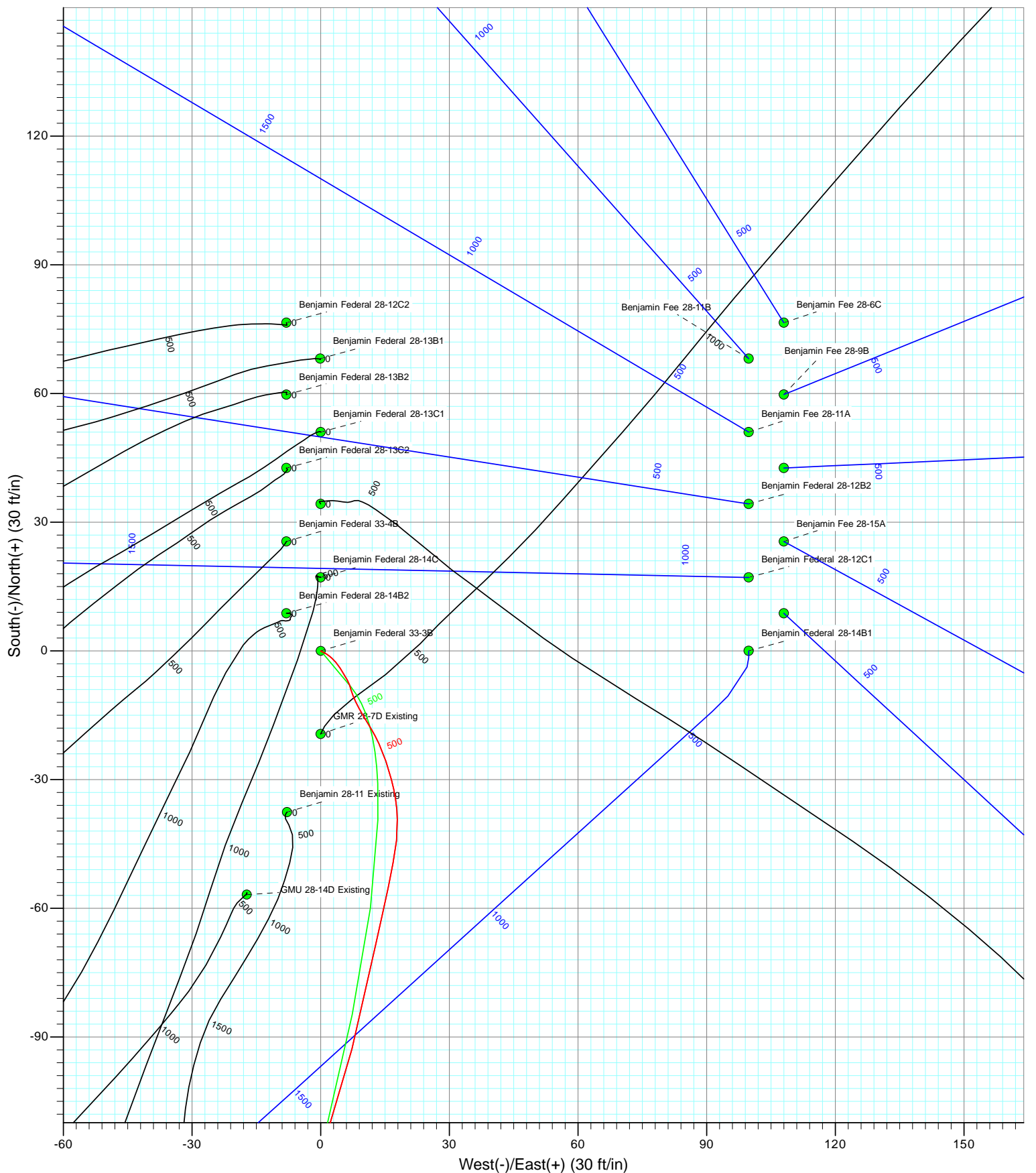


Project: Mamm Creek
Site: K28NW Pad
Well: Benjamin Federal 33-3B
Wellbore: DD
Design: FINAL





Project: Mamm Creek
Site: K28NW Pad
Well: Benjamin Federal 33-3B
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 33-3B
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Nabors M15)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Nabors M15)
Well:	Benjamin Federal 33-3B	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 33-3B				
Well Position	+N/-S	0.0 ft	Northing:	1,612,985.13 ft	Latitude:	39.494231
	+E/-W	0.0 ft	Easting:	2,356,415.67 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	1/28/2011	10.30	65.79	52,316

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	193.69	

Survey Program	Date	2/14/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
124.0	9,990.0	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		
124.0	0.10	146.50	124.0	-0.1	0.1	0.1	0.08	0.08		
155.0	0.80	112.50	155.0	-0.2	0.3	0.1	2.32	2.26		
186.0	1.40	115.90	186.0	-0.4	0.8	0.2	1.95	1.94		
216.0	2.00	123.00	216.0	-0.9	1.6	0.5	2.12	2.00		
247.0	2.50	132.80	247.0	-1.6	2.5	1.0	2.03	1.61		
277.0	4.00	140.50	276.9	-2.9	3.7	1.9	5.20	5.00		
308.0	4.10	149.20	307.8	-4.7	4.9	3.4	2.01	0.32		
339.0	5.10	149.90	338.7	-6.8	6.2	5.2	3.23	3.23		
369.0	5.30	166.20	368.6	-9.3	7.2	7.4	4.95	0.67		
400.0	5.80	151.60	399.5	-12.1	8.3	9.8	4.82	1.61		
431.0	6.60	151.40	430.3	-15.0	9.9	12.3	2.58	2.58		
462.0	7.00	147.60	461.1	-18.2	11.7	14.9	1.94	1.29		

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 33-3B
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Nabors M15)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Nabors M15)
Well:	Benjamin Federal 33-3B	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
493.0	7.80	155.90	491.8	-21.7	13.6	17.9	4.30	2.58	
524.0	8.30	161.40	522.5	-25.8	15.2	21.4	2.96	1.61	
554.0	8.60	164.60	552.2	-30.0	16.5	25.2	1.86	1.00	
585.0	9.00	171.50	582.8	-34.6	17.4	29.5	3.64	1.29	
616.0	8.70	178.30	613.4	-39.3	17.9	34.0	3.51	-0.97	
647.0	9.50	185.90	644.1	-44.2	17.7	38.8	4.65	2.58	
678.0	10.40	191.60	674.6	-49.5	16.9	44.1	4.30	2.90	
708.0	11.70	190.40	704.0	-55.2	15.8	49.9	4.40	4.33	
739.0	12.70	194.00	734.3	-61.6	14.4	56.4	4.05	3.23	
770.0	14.10	191.50	764.5	-68.6	12.8	63.6	4.89	4.52	
862.0	17.30	193.90	853.0	-92.8	7.3	88.5	3.55	3.48	
955.0	19.50	198.50	941.3	-121.0	-1.0	117.8	2.83	2.37	
1,047.0	20.00	195.60	1,027.9	-150.7	-10.1	148.8	1.20	0.54	
1,139.0	21.20	196.10	1,114.0	-181.8	-18.9	181.1	1.32	1.30	
1,231.0	19.30	194.50	1,200.3	-212.5	-27.3	213.0	2.15	-2.07	
1,323.0	19.60	192.90	1,287.1	-242.3	-34.6	243.6	0.66	0.33	
1,415.0	19.70	188.00	1,373.7	-272.7	-40.2	274.5	1.79	0.11	
1,517.0	21.20	192.70	1,469.3	-307.7	-46.6	310.0	2.18	1.47	
1,728.0	21.00	193.60	1,666.1	-381.7	-63.9	386.0	0.18	-0.09	
1,824.0	20.80	192.20	1,755.8	-415.1	-71.6	420.2	0.56	-0.21	
1,919.0	20.60	195.20	1,844.7	-447.7	-79.5	453.8	1.14	-0.21	
2,014.0	20.40	196.70	1,933.7	-479.7	-88.7	487.0	0.59	-0.21	
2,109.0	20.00	197.20	2,022.8	-511.0	-98.2	519.8	0.46	-0.42	
2,203.0	20.50	193.60	2,111.0	-542.4	-106.8	552.3	1.43	0.53	
2,297.0	20.00	191.90	2,199.2	-574.1	-114.0	584.8	0.82	-0.53	
2,392.0	20.50	193.00	2,288.3	-606.2	-121.1	617.7	0.66	0.53	
2,488.0	19.70	195.90	2,378.5	-638.2	-129.3	650.7	1.33	-0.83	
2,583.0	20.70	195.70	2,467.7	-669.7	-138.3	683.4	1.06	1.05	
2,679.0	20.70	200.10	2,557.5	-702.0	-148.7	717.3	1.62	0.00	
2,774.0	20.30	199.60	2,646.4	-733.3	-160.0	750.3	0.46	-0.42	
2,869.0	21.10	199.60	2,735.3	-764.9	-171.3	783.7	0.84	0.84	
2,964.0	20.40	199.90	2,824.1	-796.6	-182.6	817.2	0.75	-0.74	
3,059.0	19.90	197.00	2,913.3	-827.6	-193.0	849.8	1.18	-0.53	
3,154.0	20.20	194.70	3,002.6	-859.0	-201.9	882.3	0.89	0.32	
3,250.0	19.80	194.40	3,092.8	-890.8	-210.1	915.2	0.43	-0.42	
3,345.0	19.20	193.60	3,182.3	-921.5	-217.8	946.9	0.69	-0.63	
3,438.0	20.00	191.60	3,269.9	-952.0	-224.6	978.1	1.12	0.86	
3,533.0	19.40	191.00	3,359.4	-983.4	-230.9	1,010.1	0.67	-0.63	
3,628.0	18.70	192.00	3,449.2	-1,013.7	-237.1	1,041.1	0.81	-0.74	
3,724.0	20.00	194.50	3,539.8	-1,044.7	-244.4	1,072.9	1.61	1.35	
3,818.0	19.60	191.50	3,628.2	-1,075.7	-251.5	1,104.7	1.16	-0.43	
3,913.0	20.10	194.10	3,717.6	-1,107.2	-258.7	1,136.9	1.07	0.53	
4,008.0	19.60	195.00	3,806.9	-1,138.4	-266.8	1,169.2	0.62	-0.53	
4,103.0	19.50	194.60	3,896.4	-1,169.1	-274.9	1,201.0	0.18	-0.11	
4,198.0	20.30	195.40	3,985.8	-1,200.3	-283.3	1,233.3	0.89	0.84	
4,293.0	19.30	195.70	4,075.2	-1,231.4	-291.9	1,265.5	1.06	-1.05	
4,388.0	18.70	193.80	4,165.0	-1,261.3	-299.8	1,296.4	0.91	-0.63	
4,483.0	19.30	192.30	4,254.8	-1,291.4	-306.8	1,327.3	0.81	0.63	
4,578.0	20.40	192.90	4,344.2	-1,322.9	-313.8	1,359.5	1.18	1.16	
4,673.0	20.20	196.20	4,433.3	-1,354.8	-322.1	1,392.5	1.22	-0.21	
4,768.0	19.50	195.10	4,522.6	-1,385.8	-330.8	1,424.7	0.84	-0.74	
4,863.0	19.80	193.60	4,612.1	-1,416.8	-338.7	1,456.7	0.62	0.32	
4,958.0	18.80	196.30	4,701.7	-1,447.1	-346.8	1,488.1	1.41	-1.05	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 33-3B
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Nabors M15)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Nabors M15)
Well:	Benjamin Federal 33-3B	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
5,053.0	18.90	192.80	4,791.7	-1,476.8	-354.5	1,518.7	1.19	0.11	
5,065.0	18.60	193.00	4,803.0	-1,480.5	-355.3	1,522.6	2.56	-2.50	
5,159.0	19.00	194.00	4,892.0	-1,510.0	-362.4	1,552.9	0.55	0.43	
5,254.0	18.80	193.20	4,981.9	-1,539.9	-369.7	1,583.6	0.34	-0.21	
5,350.0	18.10	196.60	5,072.9	-1,569.3	-377.4	1,614.0	1.34	-0.73	
5,444.0	16.30	199.90	5,162.7	-1,595.7	-386.1	1,641.7	2.18	-1.91	
5,539.0	16.00	196.00	5,254.0	-1,620.8	-394.3	1,668.0	1.18	-0.32	
5,634.0	15.40	195.20	5,345.4	-1,645.5	-401.2	1,693.7	0.67	-0.63	
5,728.0	14.40	194.60	5,436.3	-1,668.9	-407.4	1,717.9	1.08	-1.06	
5,822.0	13.10	194.30	5,527.6	-1,690.5	-413.0	1,740.2	1.39	-1.38	
5,917.0	11.60	190.00	5,620.4	-1,710.4	-417.3	1,760.5	1.85	-1.58	
6,013.0	11.10	193.90	5,714.5	-1,728.9	-421.2	1,779.4	0.95	-0.52	
6,108.0	9.90	192.50	5,807.9	-1,745.7	-425.1	1,796.7	1.29	-1.26	
6,202.0	9.10	196.10	5,900.6	-1,760.7	-429.0	1,812.2	1.06	-0.85	
6,297.0	8.00	190.50	5,994.6	-1,774.5	-432.2	1,826.3	1.45	-1.16	
6,392.0	6.80	195.20	6,088.8	-1,786.4	-434.9	1,838.6	1.41	-1.26	
6,488.0	6.00	195.70	6,184.2	-1,796.7	-437.8	1,849.3	0.84	-0.83	
6,582.0	5.10	196.00	6,277.7	-1,805.4	-440.3	1,858.3	0.96	-0.96	
6,678.0	3.90	184.70	6,373.5	-1,812.8	-441.7	1,865.8	1.55	-1.25	
6,773.0	2.80	193.40	6,468.3	-1,818.3	-442.5	1,871.3	1.27	-1.16	
6,868.0	3.50	197.10	6,563.1	-1,823.3	-443.9	1,876.6	0.77	0.74	
6,964.0	3.60	193.30	6,659.0	-1,829.0	-445.4	1,882.5	0.27	0.10	
7,059.0	1.40	235.40	6,753.9	-1,832.6	-447.1	1,886.3	2.87	-2.32	
7,155.0	1.90	248.90	6,849.8	-1,833.8	-449.5	1,888.1	0.66	0.52	
7,250.0	1.70	227.00	6,944.8	-1,835.4	-452.0	1,890.2	0.75	-0.21	
7,345.0	1.80	269.10	7,039.7	-1,836.4	-454.6	1,891.8	1.33	0.11	
7,440.0	1.10	48.00	7,134.7	-1,835.8	-455.4	1,891.4	2.87	-0.74	
7,535.0	0.70	75.40	7,229.7	-1,835.0	-454.1	1,890.4	0.61	-0.42	
7,630.0	0.50	119.20	7,324.7	-1,835.1	-453.2	1,890.2	0.51	-0.21	
7,725.0	0.20	222.70	7,419.7	-1,835.4	-453.0	1,890.4	0.61	-0.32	
7,818.0	0.40	136.30	7,512.7	-1,835.7	-452.8	1,890.8	0.47	0.22	
7,914.0	0.80	154.50	7,608.7	-1,836.6	-452.3	1,891.5	0.46	0.42	
8,009.0	0.80	142.20	7,703.7	-1,837.7	-451.6	1,892.4	0.18	0.00	
8,104.0	0.70	142.40	7,798.7	-1,838.7	-450.9	1,893.2	0.11	-0.11	
8,200.0	0.50	308.70	7,894.7	-1,838.9	-450.8	1,893.4	1.24	-0.21	
8,295.0	0.20	191.20	7,989.7	-1,838.8	-451.2	1,893.3	0.65	-0.32	
8,390.0	1.10	157.50	8,084.7	-1,839.8	-450.9	1,894.2	0.99	0.95	
8,485.0	1.00	145.40	8,179.7	-1,841.3	-450.1	1,895.5	0.26	-0.11	
8,579.0	1.60	166.70	8,273.6	-1,843.3	-449.3	1,897.3	0.81	0.64	
8,674.0	1.50	138.10	8,368.6	-1,845.5	-448.2	1,899.1	0.81	-0.11	
8,769.0	1.20	131.10	8,463.6	-1,847.1	-446.6	1,900.3	0.36	-0.32	
8,864.0	0.70	39.20	8,558.6	-1,847.3	-445.5	1,900.2	1.48	-0.53	
8,959.0	0.40	358.80	8,653.6	-1,846.5	-445.1	1,899.4	0.50	-0.32	
9,148.0	0.60	231.00	8,842.6	-1,846.5	-445.9	1,899.5	0.48	0.11	
9,243.0	0.70	213.30	8,937.6	-1,847.3	-446.6	1,900.5	0.23	0.11	
9,339.0	0.70	227.50	9,033.5	-1,848.1	-447.3	1,901.5	0.18	0.00	
9,433.0	1.30	236.40	9,127.5	-1,849.1	-448.7	1,902.8	0.66	0.64	
9,528.0	1.80	213.80	9,222.5	-1,851.0	-450.4	1,905.0	0.82	0.53	
9,623.0	1.50	205.80	9,317.5	-1,853.3	-451.8	1,907.6	0.40	-0.32	
9,719.0	1.70	216.20	9,413.4	-1,855.6	-453.1	1,910.1	0.37	0.21	
9,813.0	2.20	216.40	9,507.4	-1,858.2	-455.0	1,913.1	0.53	0.53	
9,930.0	2.50	217.70	9,624.3	-1,862.0	-457.9	1,917.5	0.26	0.26	Last Cathedral Survey @ 9,930' MD
9,990.0	2.50	217.70	9,684.2	-1,864.1	-459.5	1,919.9	0.00	0.00	Projection to Bit @ 9,990'

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Benjamin Federal 33-3B
Project:	Mamm Creek	TVD Reference:	WELL @ 5965.0ft (Nabors M15)
Site:	K28NW Pad	MD Reference:	WELL @ 5965.0ft (Nabors M15)
Well:	Benjamin Federal 33-3B	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 33-3B	0.00	0.00	9,630.0	-1,840.6	-448.3	1,611,156.39	2,355,921.33	39.489178	-107.782380
- survey misses target center by 24.2ft at 9930.0ft MD (9624.3 TVD, -1862.0 N, -457.9 E)									
- Circle (radius 60.0)									
Benjamin Federal 33-3B	0.00	0.00	6,480.0	-1,840.6	-448.3	1,611,156.39	2,355,921.33	39.489178	-107.782380
- survey misses target center by 22.4ft at 6786.0ft MD (6481.2 TVD, -1818.9 N, -442.7 E)									
- Circle (radius 25.0)									
Benjamin Federal 33-3B	0.00	0.00	-9,630.0	-1,840.6	-448.3	1,611,156.39	2,355,921.33	39.489178	-107.782380
- survey misses target center by 9814.6ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			-9,630.0	100.0	-140.0	1,611,259.87	2,355,783.89		
Point 2			-9,630.0	-100.0	-140.0	1,611,059.93	2,355,778.87		

Survey Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	Comment	
9,930.0	9,624.3	-1,862.0	-457.9	Last Cathedral Survey @ 9,930' MD	
9,990.0	9,684.2	-1,864.1	-459.5	Projection to Bit @ 9,990'	

Checked By: _____ Approved By: _____ Date: _____