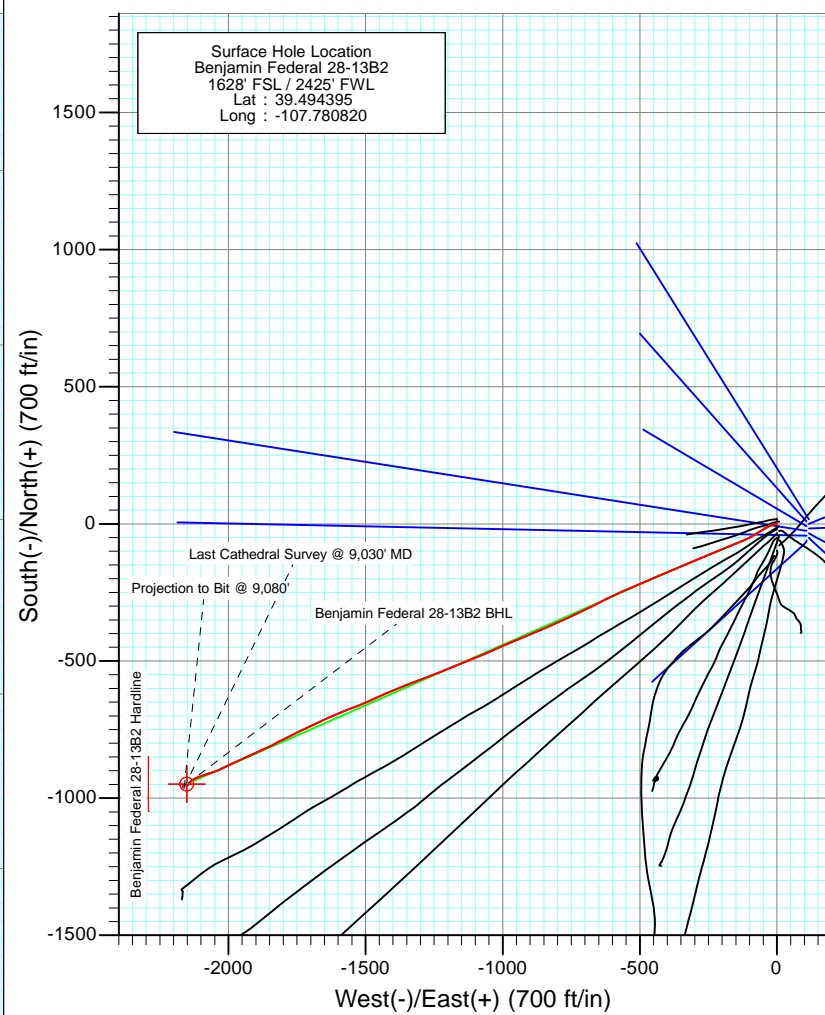
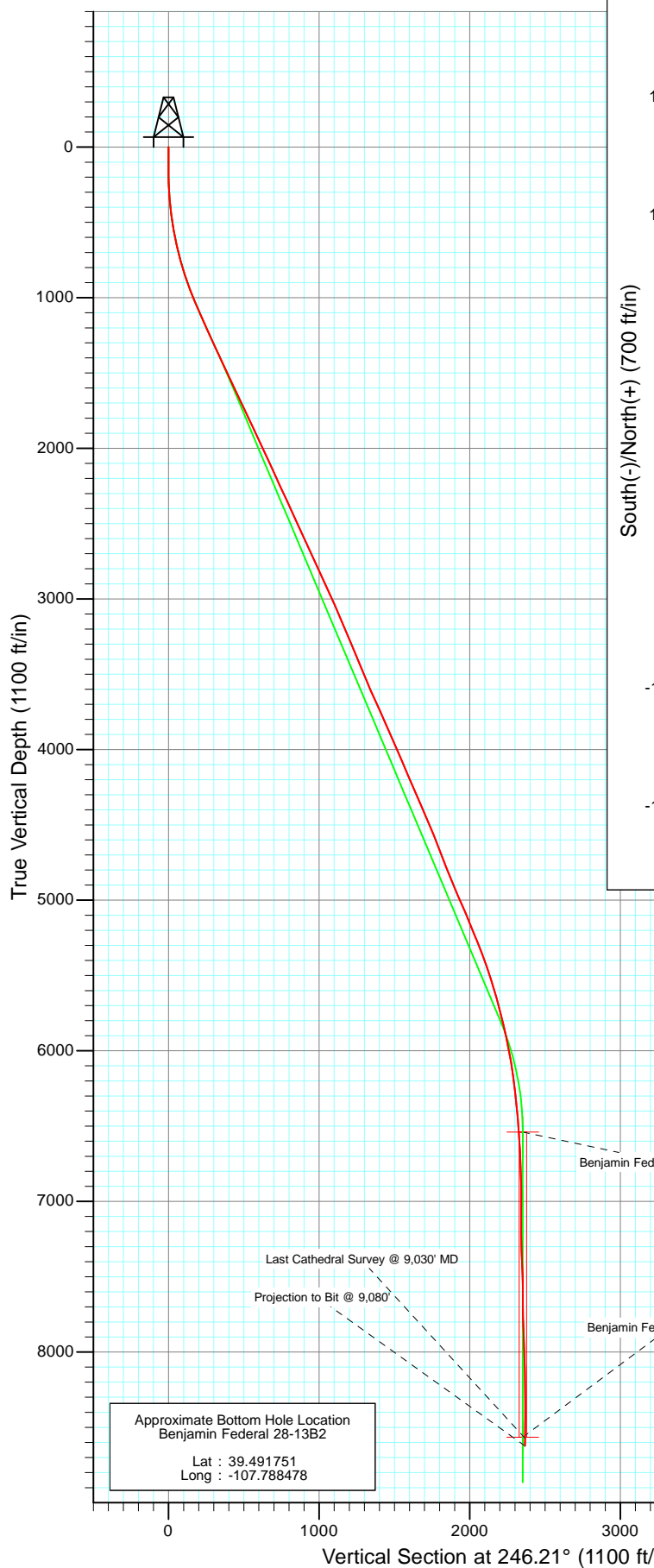




Project: Mamm Creek  
 Site: K28NW Pad  
 Well: Benjamin Federal 28-13B2  
 Wellbore: DD  
 Design: FINAL

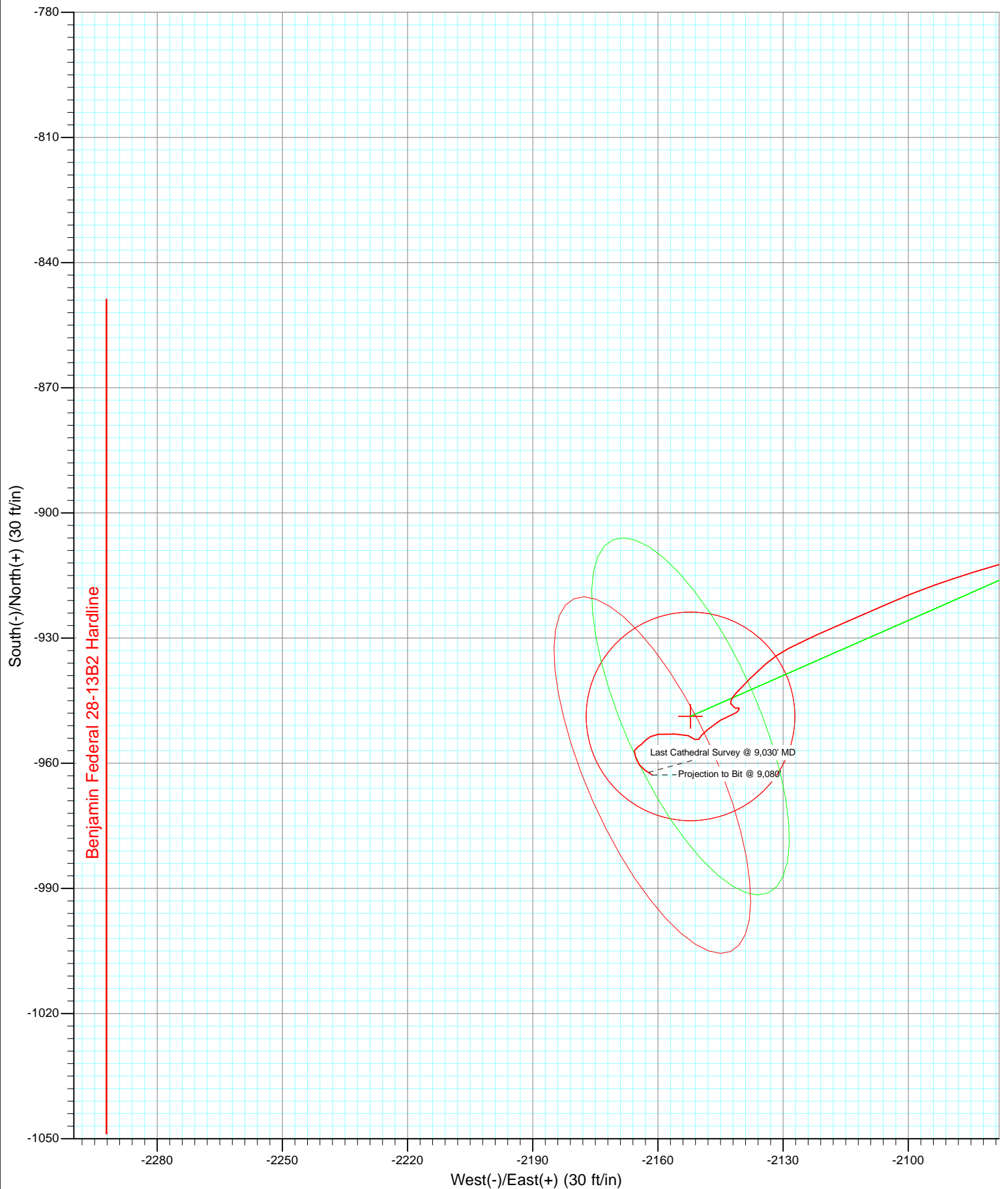


Azimuths to True North  
 Magnetic North: 10.28°  
 Magnetic Field  
 Strength: 52292.9snT  
 Dip Angle: 65.78°  
 Date: 4/21/2011  
 Model: IGRF2010

DD Benjamin Federal 28-13B2 Job #115023 (SH), 115174 (MH): KR					
WELL @ 5965.0ft (Original Well Elev) North American Datum 1983					
Well Benjamin Federal 28-13B2, True North					
Target Benjamin Federal 28-13B2 BHL	Azimuth 246.21	Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Benjamin Federal 28-13B2 BHL	8565.0	-948.7	-2152.2	39.491790	-107.788446

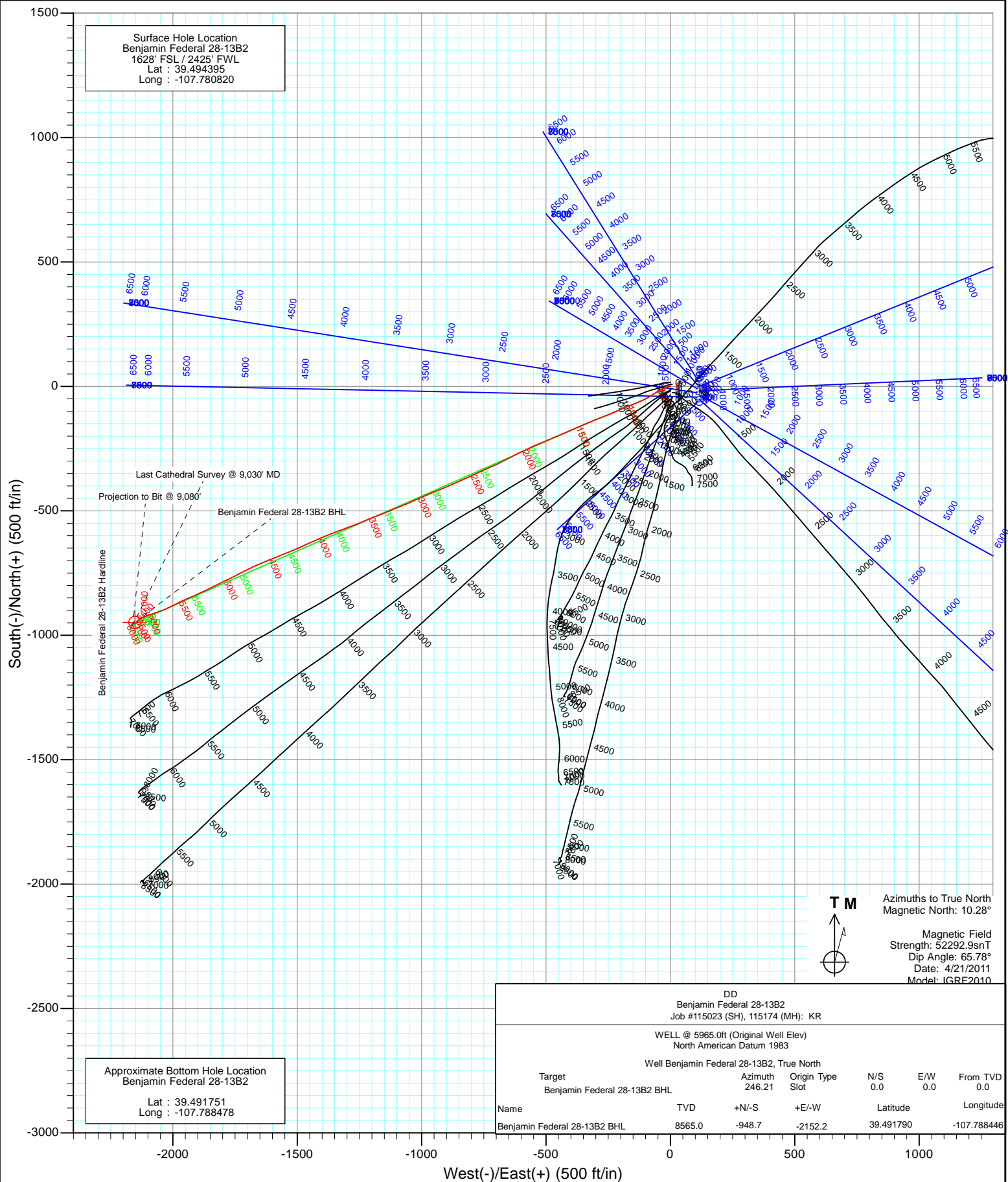


Project: Mamm Creek  
Site: K28NW Pad  
Well: Benjamin Federal 28-13B2  
Wellbore: DD  
Design: FINAL





Project: Mamm Creek  
Site: K28NW Pad  
Well: Benjamin Federal 28-13B2  
Wellbore: DD  
Design: FINAL



## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-13B2
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Well:</b>	Benjamin Federal 28-13B2	<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		

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 28-13B2					
Well Position	+N/-S	0.0 ft	Northing:	1,613,045.05 ft	Latitude:	39.494395
	+E/-W	0.0 ft	Easting:	2,356,409.18 ft	Longitude:	-107.780820
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	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	4/21/2011	10.28	65.78	52,293

<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	246.21	

<b>Survey Program</b>	<b>Date</b>	5/9/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
125.0	9,080.0	Survey #1 (DD)	MWD	Geolink MWD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
125.0	0.40	5.70	125.0	0.4	0.0	-0.2	0.32	0.32		
156.0	0.20	80.00	156.0	0.6	0.1	-0.3	1.28	-0.65		
186.0	0.90	262.40	186.0	0.5	-0.1	-0.1	3.67	2.33		
217.0	1.60	276.50	217.0	0.5	-0.7	0.5	2.45	2.26		
247.0	2.20	252.90	247.0	0.4	-1.7	1.4	3.25	2.00		
278.0	3.00	266.90	277.9	0.2	-3.1	2.7	3.28	2.58		
309.0	3.40	255.90	308.9	-0.1	-4.8	4.4	2.36	1.29		
339.0	4.40	257.10	338.8	-0.5	-6.8	6.4	3.34	3.33		
370.0	5.10	249.30	369.7	-1.3	-9.2	9.0	3.07	2.26		
401.0	6.10	252.90	400.6	-2.3	-12.1	12.0	3.42	3.23		
432.0	7.20	252.50	431.4	-3.3	-15.5	15.5	3.55	3.55		
463.0	8.00	252.70	462.1	-4.6	-19.4	19.6	2.58	2.58		

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-13B2
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Well:</b>	Benjamin Federal 28-13B2	<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
494.0	8.90	244.60	492.8	-6.2	-23.7	24.2	4.81	2.90	
524.0	9.70	246.30	522.4	-8.2	-28.1	29.0	2.82	2.67	
555.0	10.10	242.20	552.9	-10.6	-32.9	34.3	2.61	1.29	
586.0	11.10	241.10	583.4	-13.3	-37.9	40.0	3.29	3.23	
678.0	13.20	239.40	673.3	-22.9	-54.7	59.3	2.32	2.28	
771.0	15.50	235.10	763.4	-35.4	-74.0	82.0	2.72	2.47	
863.0	18.20	244.30	851.5	-48.7	-97.0	108.4	4.12	2.93	
956.0	20.60	245.40	939.2	-61.8	-125.0	139.3	2.61	2.58	
1,048.0	23.00	249.60	1,024.6	-74.8	-156.6	173.4	3.11	2.61	
1,140.0	23.80	246.70	1,109.0	-88.4	-190.5	210.0	1.52	0.87	
1,231.0	24.50	245.50	1,192.1	-103.5	-224.5	247.2	0.94	0.77	
1,324.0	24.70	249.90	1,276.6	-118.2	-260.3	285.9	1.98	0.22	
1,386.0	24.50	247.90	1,333.0	-127.5	-284.4	311.6	1.38	-0.32	
1,449.0	25.00	247.80	1,390.2	-137.4	-308.8	338.0	0.80	0.79	
1,545.0	24.90	246.70	1,477.3	-153.1	-346.2	378.5	0.49	-0.10	
1,640.0	25.20	246.40	1,563.3	-169.1	-383.1	418.7	0.34	0.32	
1,736.0	25.60	246.50	1,650.0	-185.5	-420.8	459.9	0.42	0.42	
1,831.0	25.70	247.10	1,735.7	-201.7	-458.6	501.0	0.29	0.11	
1,927.0	25.10	247.30	1,822.4	-217.7	-496.6	542.2	0.63	-0.62	
2,022.0	25.30	247.20	1,908.4	-233.3	-533.9	582.6	0.22	0.21	
2,118.0	24.30	245.00	1,995.5	-249.6	-570.7	622.9	1.42	-1.04	
2,213.0	24.60	244.40	2,082.0	-266.4	-606.2	662.2	0.41	0.32	
2,309.0	25.40	241.80	2,169.0	-284.8	-642.4	702.7	1.42	0.83	
2,404.0	24.60	243.30	2,255.1	-303.3	-678.0	742.8	1.07	-0.84	
2,500.0	24.60	246.40	2,342.4	-320.3	-714.2	782.7	1.34	0.00	
2,595.0	24.70	245.70	2,428.7	-336.4	-750.4	822.3	0.32	0.11	
2,690.0	24.70	245.20	2,515.0	-352.9	-786.5	862.0	0.22	0.00	
2,786.0	24.80	245.50	2,602.2	-369.6	-823.0	902.2	0.17	0.10	
2,881.0	24.70	245.40	2,688.5	-386.1	-859.2	942.0	0.11	-0.11	
2,977.0	24.80	247.80	2,775.7	-402.1	-896.1	982.1	1.05	0.10	
3,072.0	24.70	247.70	2,861.9	-417.2	-932.9	1,021.9	0.11	-0.11	
3,167.0	24.70	247.10	2,948.3	-432.4	-969.5	1,061.6	0.26	0.00	
3,263.0	23.30	246.20	3,035.9	-447.9	-1,005.4	1,100.6	1.51	-1.46	
3,358.0	23.40	245.60	3,123.2	-463.3	-1,039.8	1,138.3	0.27	0.11	
3,453.0	23.00	248.30	3,210.5	-477.9	-1,074.2	1,175.7	1.20	-0.42	
3,549.0	22.90	247.80	3,298.9	-491.9	-1,108.9	1,213.1	0.23	-0.10	
3,644.0	22.10	247.30	3,386.7	-505.8	-1,142.5	1,249.5	0.87	-0.84	
3,740.0	22.90	249.80	3,475.4	-519.2	-1,176.7	1,286.2	1.30	0.83	
3,835.0	22.70	247.70	3,562.9	-532.5	-1,211.0	1,322.9	0.88	-0.21	
3,931.0	24.60	246.60	3,650.9	-547.5	-1,246.5	1,361.4	2.03	1.98	
4,026.0	24.60	250.00	3,737.2	-562.1	-1,283.2	1,400.9	1.49	0.00	
4,122.0	23.90	249.70	3,824.8	-575.7	-1,320.2	1,440.3	0.74	-0.73	
4,217.0	23.50	248.60	3,911.8	-589.3	-1,355.9	1,478.4	0.63	-0.42	
4,313.0	23.40	247.00	3,999.8	-603.7	-1,391.3	1,516.6	0.67	-0.10	
4,408.0	23.20	246.40	4,087.1	-618.6	-1,425.8	1,554.2	0.33	-0.21	
4,504.0	22.80	245.70	4,175.5	-633.8	-1,460.1	1,591.7	0.50	-0.42	
4,599.0	23.40	245.90	4,262.8	-649.1	-1,494.1	1,629.0	0.64	0.63	
4,694.0	23.90	247.80	4,349.9	-664.1	-1,529.1	1,667.1	0.96	0.53	
4,790.0	23.30	248.50	4,437.8	-678.4	-1,564.8	1,705.5	0.69	-0.62	
4,885.0	22.70	248.40	4,525.3	-692.0	-1,599.3	1,742.6	0.63	-0.63	
4,981.0	21.00	246.60	4,614.4	-705.7	-1,632.3	1,778.3	1.90	-1.77	
5,076.0	21.30	246.60	4,703.0	-719.3	-1,663.8	1,812.5	0.32	0.32	
5,172.0	21.40	243.50	4,792.4	-734.0	-1,695.5	1,847.5	1.18	0.10	

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-13B2
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Well:</b>	Benjamin Federal 28-13B2	<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
5,267.0	22.80	242.20	4,880.4	-750.3	-1,727.2	1,883.2	1.56	1.47	
5,363.0	23.60	244.40	4,968.7	-767.3	-1,761.0	1,920.9	1.23	0.83	
5,458.0	23.60	244.00	5,055.7	-783.9	-1,795.3	1,958.9	0.17	0.00	
5,553.0	21.80	242.60	5,143.3	-800.3	-1,828.0	1,995.5	1.98	-1.89	
5,649.0	22.70	244.30	5,232.2	-816.6	-1,860.6	2,031.8	1.15	0.94	
5,744.0	21.80	245.50	5,320.1	-831.8	-1,893.1	2,067.8	1.06	-0.95	
5,839.0	19.60	247.70	5,409.0	-845.2	-1,923.9	2,101.4	2.46	-2.32	
5,935.0	18.10	245.20	5,499.8	-857.5	-1,952.4	2,132.4	1.77	-1.56	
6,031.0	16.30	243.30	5,591.5	-869.9	-1,977.9	2,160.8	1.96	-1.87	
6,126.0	15.40	242.80	5,682.9	-881.6	-2,001.1	2,186.7	0.96	-0.95	
6,221.0	14.20	245.40	5,774.8	-892.2	-2,022.9	2,210.9	1.44	-1.26	
6,315.0	12.40	249.60	5,866.3	-900.5	-2,042.8	2,232.5	2.17	-1.91	
6,411.0	11.30	251.40	5,960.2	-907.1	-2,061.4	2,252.2	1.21	-1.15	
6,506.0	10.50	254.20	6,053.5	-912.5	-2,078.5	2,270.0	1.01	-0.84	
6,602.0	8.30	250.10	6,148.2	-917.2	-2,093.5	2,285.6	2.39	-2.29	
6,697.0	6.70	246.00	6,242.4	-921.8	-2,105.0	2,298.0	1.77	-1.68	
6,793.0	5.60	246.80	6,337.8	-925.9	-2,114.4	2,308.3	1.15	-1.15	
6,888.0	4.60	246.10	6,432.5	-929.3	-2,122.2	2,316.7	1.05	-1.05	
6,983.0	4.20	241.70	6,527.2	-932.5	-2,128.7	2,324.0	0.55	-0.42	
7,079.0	3.60	229.60	6,622.9	-936.1	-2,134.1	2,330.4	1.06	-0.62	
7,174.0	3.00	223.60	6,717.8	-939.8	-2,138.1	2,335.5	0.73	-0.63	
7,270.0	2.50	223.80	6,813.7	-943.2	-2,141.3	2,339.8	0.52	-0.52	
7,366.0	1.30	170.80	6,909.6	-945.7	-2,142.5	2,342.0	2.09	-1.25	
7,461.0	1.10	88.30	7,004.6	-946.8	-2,141.5	2,341.4	1.67	-0.21	
7,556.0	0.00	37.90	7,099.6	-946.8	-2,140.5	2,340.6	1.16	-1.16	
7,652.0	0.70	197.70	7,195.6	-947.3	-2,140.7	2,341.0	0.73	0.73	
7,745.0	1.80	250.30	7,288.6	-948.4	-2,142.3	2,342.8	1.59	1.18	
7,842.0	1.90	238.90	7,385.5	-949.7	-2,145.1	2,345.9	0.39	0.10	
7,938.0	2.70	229.70	7,481.5	-952.0	-2,148.2	2,349.6	0.92	0.83	
8,033.0	1.10	203.10	7,576.4	-954.3	-2,150.2	2,352.5	1.88	-1.68	
8,129.0	1.20	325.00	7,672.4	-954.3	-2,151.2	2,353.3	2.10	0.10	
8,224.0	1.20	275.90	7,767.4	-953.4	-2,152.7	2,354.4	1.05	0.00	
8,319.0	2.50	277.80	7,862.3	-953.0	-2,155.8	2,357.0	1.37	1.37	
8,414.0	2.60	261.00	7,957.2	-953.0	-2,160.0	2,360.9	0.79	0.11	
8,510.0	1.80	219.40	8,053.2	-954.6	-2,163.1	2,364.3	1.80	-0.83	
8,605.0	1.00	246.80	8,148.1	-956.0	-2,164.8	2,366.5	1.08	-0.84	
8,701.0	0.80	189.40	8,244.1	-957.0	-2,165.6	2,367.7	0.92	-0.21	
8,796.0	1.30	155.40	8,339.1	-958.7	-2,165.3	2,368.0	0.82	0.53	
8,892.0	1.00	149.80	8,435.1	-960.4	-2,164.4	2,367.9	0.33	-0.31	
8,987.0	1.30	121.60	8,530.1	-961.7	-2,163.1	2,367.2	0.66	0.32	
9,030.0	1.30	124.70	8,573.1	-962.2	-2,162.3	2,366.7	0.16	0.00	Last Cathedral Survey @ 9,030' MD Projection to Bit @ 9,080'
9,080.0	1.30	124.70	8,623.1	-962.8	-2,161.3	2,366.1	0.00	0.00	

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Benjamin Federal 28-13B2
<b>Project:</b>	Mamm Creek	<b>TVD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Site:</b>	K28NW Pad	<b>MD Reference:</b>	WELL @ 5965.0ft (Original Well Elev)
<b>Well:</b>	Benjamin Federal 28-13B2	<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									
- 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	6,540.0	-948.7	-2,152.2	1,612,150.63	2,354,233.84	39.491790	-107.788446
- survey misses target center by 27.6ft at 6997.7ft MD (6541.9 TVD, -933.0 N, -2129.6 E)									
- Point									
Benjamin Federal 28-13	0.00	0.00	-8,565.0	-948.7	-2,152.2	1,612,150.63	2,354,233.84	39.491790	-107.788446
- survey misses target center by 8882.1ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			-8,565.0	100.0	-140.0	1,612,254.11	2,354,096.40		
Point 2			-8,565.0	-100.0	-140.0	1,612,054.18	2,354,091.38		
Benjamin Federal 28-13	0.00	0.00	8,565.0	-948.7	-2,152.2	1,612,150.63	2,354,233.84	39.491790	-107.788446
- survey misses target center by 16.8ft at 9022.0ft MD (8565.0 TVD, -962.1 N, -2162.4 E)									
- Circle (radius 25.0)									

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
9,030.0	8,573.1	-962.2	-2,162.3	Last Cathedral Survey @ 9,030' MD
9,080.0	8,623.1	-962.8	-2,161.3	Projection to Bit @ 9,080'

Checked By: _____	Approved By: _____	Date: _____
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