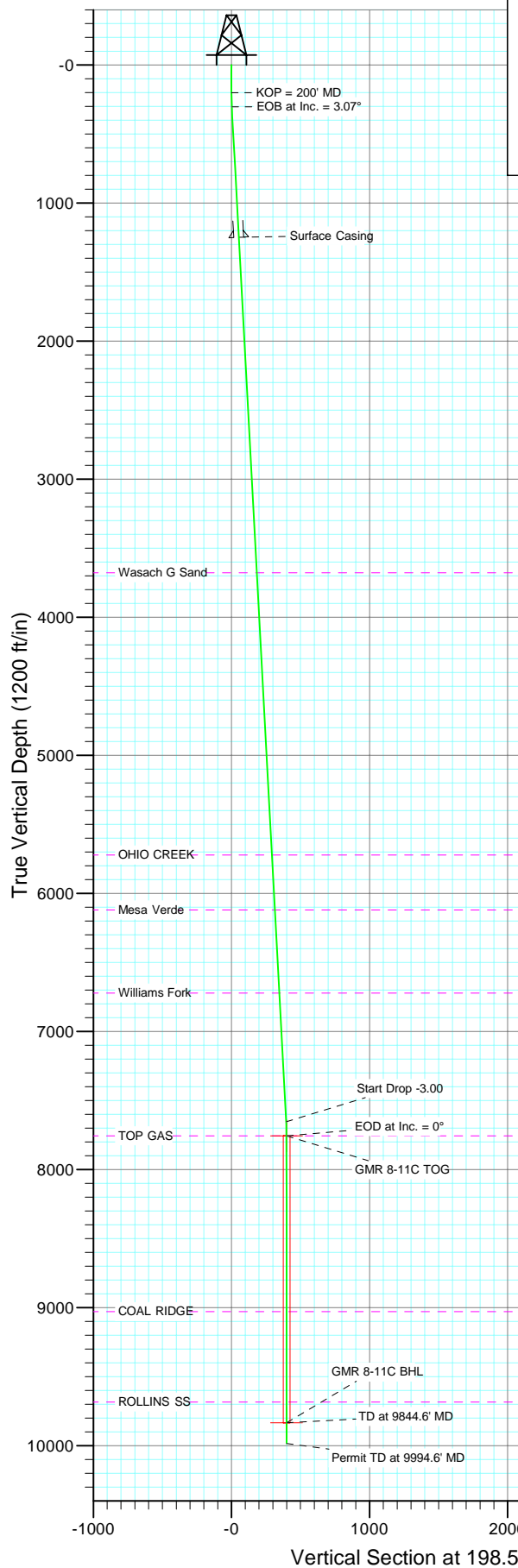
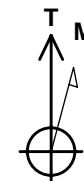
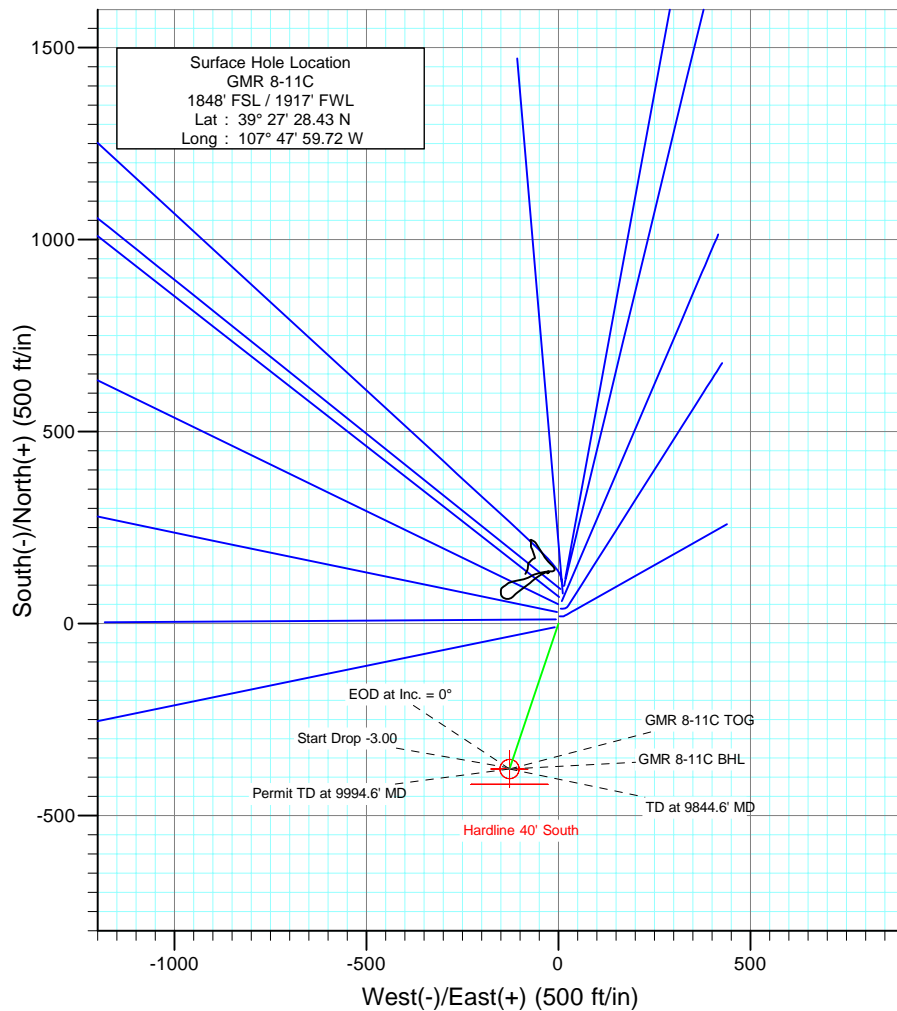




Project: Mamm Creek  
Site: NESW S8 T7S R93W (K8W Pad)  
Well: GMR 8-11C  
Wellbore: DD  
Design: Plan #1



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.2	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	302.2	3.07	198.56	302.1	-2.6	-0.9	3.00	198.56	2.7	
4	7664.5	3.07	198.56	7653.9	-375.8	-126.2	0.00	0.00	396.4	
5	7766.6	0.00	0.00	7756.0	-378.4	-127.1	3.00	180.00	399.2	GMR 8-11C TOG
6	9844.6	0.00	0.00	9834.0	-378.4	-127.1	0.00	0.00	399.2	GMR 8-11C BHL
7	9994.6	0.00	0.00	9984.0	-378.4	-127.1	0.00	0.00	399.2	



Azimuths to True North  
Magnetic North: 10.45°

Magnetic Field  
Strength: 52432.1snT  
Dip Angle: 65.80°  
Date: 10/28/2009  
Model: IGRF200510

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3678.0	3682.9	Wasach G Sand
5722.0	5729.8	OHIO CREEK
6120.0	6128.4	Mesa Verde
6721.0	6730.2	Williams Fork
7756.0	7766.6	TOP GAS
9029.0	9038.6	COAL RIDGE
9684.0	9694.6	ROLLINS SS

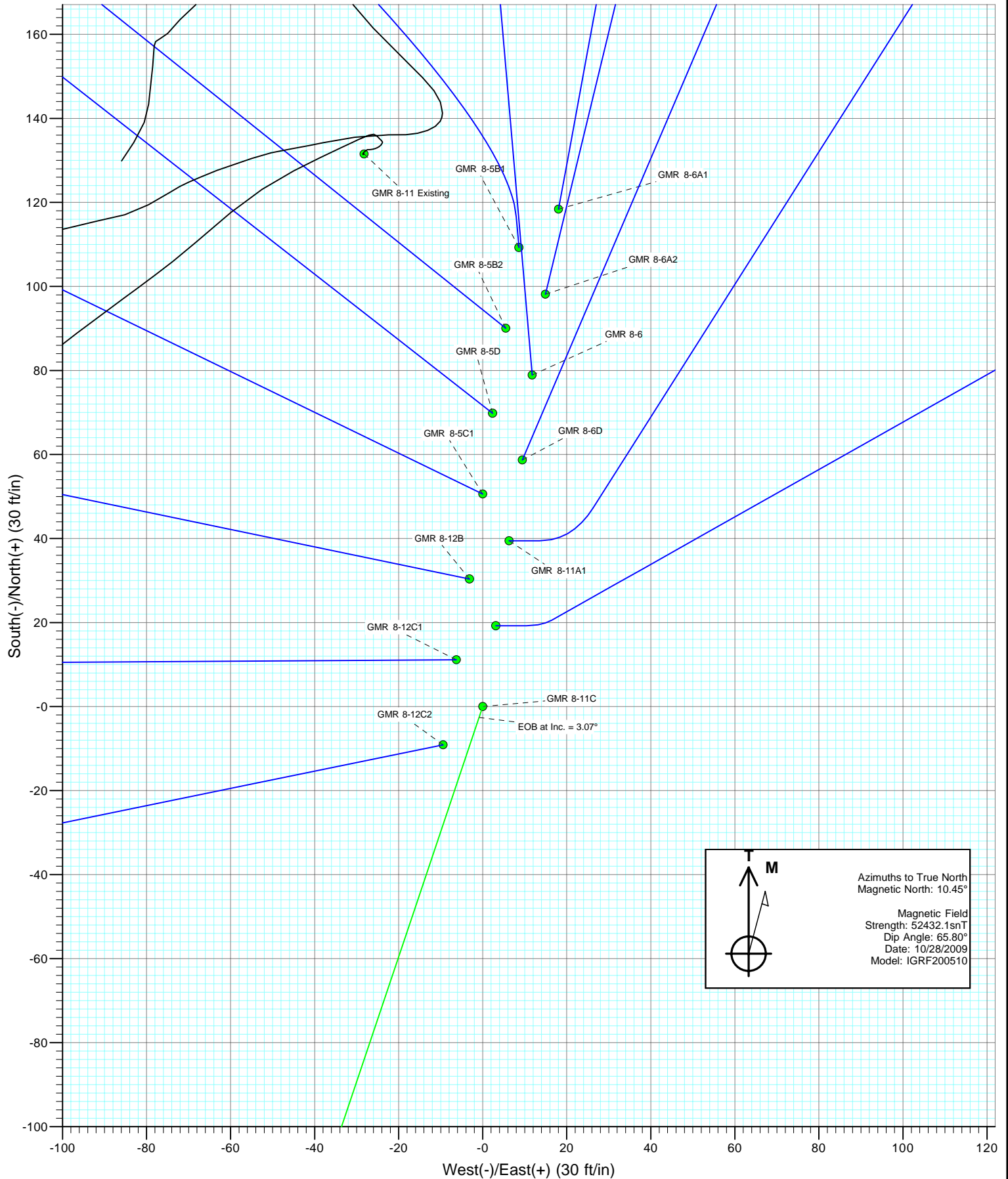
#### DESIGN DETAILS: Plan #1

Job #95xxx: KR  
KBE @ 7848.0ft (Original Well Elev)

Target	Azimuth	Origin	N/S	E/W	TVD
GMR 8-11C BHL	198.56	Slot	0.0	0.0	0.0



Project: Mamm Creek  
Site: NESW S8 T7S R93W (K8W Pad)  
Well: GMR 8-11C  
Wellbore: DD  
Design: Plan #1



## Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11C
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Site:</b>	NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b>	True
<b>Well:</b>	GMR 8-11C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

<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		NESW S8 T7S R93W (K8W Pad)			
Site Position:		Northing:	1,599,999.23 ft	Latitude:	39° 27' 29.50 N
From:	Lat/Long	Easting:	2,350,698.86 ft	Longitude:	107° 47' 59.56 W
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:	-1.45 °

Well	GMR 8-11C					
Well Position	+N/-S	0.0 ft	Northing:	1,599,891.32 ft	Latitude:	39° 27' 28.43 N
	+E/-W	0.0 ft	Easting:	2,350,683.58 ft	Longitude:	107° 47' 59.72 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,826.0 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>
	IGRF200510	10/28/2009	10.45	65.80	52,432

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN		<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	198.56	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
302.2	3.07	198.56	302.1	-2.6	-0.9	3.00	3.00	0.00	198.56	
7,664.5	3.07	198.56	7,653.9	-375.8	-126.2	0.00	0.00	0.00	0.00	
7,766.6	0.00	0.00	7,756.0	-378.4	-127.1	3.00	-3.00	0.00	180.00	GMR 8-11C TOG
9,844.6	0.00	0.00	9,834.0	-378.4	-127.1	0.00	0.00	0.00	0.00	GMR 8-11C BHL
9,994.6	0.00	0.00	9,984.0	-378.4	-127.1	0.00	0.00	0.00	0.00	

# Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11C
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Site:</b>	NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b>	True
<b>Well:</b>	GMR 8-11C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	GMR 8-11C Hardline
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP = 200' MD
300.0	3.00	198.56	300.0	-2.5	-0.8	2.6	3.00	3.00	
302.2	3.07	198.56	302.1	-2.6	-0.9	2.7	3.00	3.00	EOB at Inc. = 3.07°
400.0	3.07	198.56	399.8	-7.5	-2.5	8.0	0.00	0.00	
500.0	3.07	198.56	499.7	-12.6	-4.2	13.3	0.00	0.00	
600.0	3.07	198.56	599.5	-17.7	-5.9	18.7	0.00	0.00	
700.0	3.07	198.56	699.4	-22.8	-7.6	24.0	0.00	0.00	
800.0	3.07	198.56	799.2	-27.8	-9.3	29.4	0.00	0.00	
900.0	3.07	198.56	899.1	-32.9	-11.0	34.7	0.00	0.00	
1,000.0	3.07	198.56	999.0	-38.0	-12.7	40.0	0.00	0.00	
1,100.0	3.07	198.56	1,098.8	-43.0	-14.5	45.4	0.00	0.00	
1,200.0	3.07	198.56	1,198.7	-48.1	-16.2	50.7	0.00	0.00	
1,250.0	3.07	198.56	1,248.6	-50.6	-17.0	53.4	0.00	0.00	Surface Casing
1,300.0	3.07	198.56	1,298.5	-53.2	-17.9	56.1	0.00	0.00	
1,400.0	3.07	198.56	1,398.4	-58.2	-19.6	61.4	0.00	0.00	
1,500.0	3.07	198.56	1,498.2	-63.3	-21.3	66.8	0.00	0.00	
1,600.0	3.07	198.56	1,598.1	-68.4	-23.0	72.1	0.00	0.00	
1,700.0	3.07	198.56	1,698.0	-73.4	-24.7	77.5	0.00	0.00	
1,800.0	3.07	198.56	1,797.8	-78.5	-26.4	82.8	0.00	0.00	
1,900.0	3.07	198.56	1,897.7	-83.6	-28.1	88.2	0.00	0.00	
2,000.0	3.07	198.56	1,997.5	-88.7	-29.8	93.5	0.00	0.00	
2,100.0	3.07	198.56	2,097.4	-93.7	-31.5	98.9	0.00	0.00	
2,200.0	3.07	198.56	2,197.2	-98.8	-33.2	104.2	0.00	0.00	
2,300.0	3.07	198.56	2,297.1	-103.9	-34.9	109.6	0.00	0.00	
2,400.0	3.07	198.56	2,396.9	-108.9	-36.6	114.9	0.00	0.00	
2,500.0	3.07	198.56	2,496.8	-114.0	-38.3	120.3	0.00	0.00	
2,600.0	3.07	198.56	2,596.7	-119.1	-40.0	125.6	0.00	0.00	
2,700.0	3.07	198.56	2,696.5	-124.1	-41.7	131.0	0.00	0.00	
2,800.0	3.07	198.56	2,796.4	-129.2	-43.4	136.3	0.00	0.00	
2,900.0	3.07	198.56	2,896.2	-134.3	-45.1	141.6	0.00	0.00	
3,000.0	3.07	198.56	2,996.1	-139.3	-46.8	147.0	0.00	0.00	
3,100.0	3.07	198.56	3,095.9	-144.4	-48.5	152.3	0.00	0.00	
3,200.0	3.07	198.56	3,195.8	-149.5	-50.2	157.7	0.00	0.00	
3,300.0	3.07	198.56	3,295.7	-154.6	-51.9	163.0	0.00	0.00	
3,400.0	3.07	198.56	3,395.5	-159.6	-53.6	168.4	0.00	0.00	
3,500.0	3.07	198.56	3,495.4	-164.7	-55.3	173.7	0.00	0.00	
3,600.0	3.07	198.56	3,595.2	-169.8	-57.0	179.1	0.00	0.00	
3,682.9	3.07	198.56	3,678.0	-174.0	-58.4	183.5	0.00	0.00	Wasach G Sand
3,700.0	3.07	198.56	3,695.1	-174.8	-58.7	184.4	0.00	0.00	
3,800.0	3.07	198.56	3,794.9	-179.9	-60.4	189.8	0.00	0.00	
3,900.0	3.07	198.56	3,894.8	-185.0	-62.1	195.1	0.00	0.00	
4,000.0	3.07	198.56	3,994.7	-190.0	-63.8	200.5	0.00	0.00	
4,100.0	3.07	198.56	4,094.5	-195.1	-65.5	205.8	0.00	0.00	
4,200.0	3.07	198.56	4,194.4	-200.2	-67.2	211.2	0.00	0.00	
4,300.0	3.07	198.56	4,294.2	-205.2	-68.9	216.5	0.00	0.00	
4,400.0	3.07	198.56	4,394.1	-210.3	-70.6	221.9	0.00	0.00	
4,500.0	3.07	198.56	4,493.9	-215.4	-72.3	227.2	0.00	0.00	
4,600.0	3.07	198.56	4,593.8	-220.5	-74.0	232.6	0.00	0.00	
4,700.0	3.07	198.56	4,693.7	-225.5	-75.7	237.9	0.00	0.00	
4,800.0	3.07	198.56	4,793.5	-230.6	-77.4	243.2	0.00	0.00	

# Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11C
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Site:</b>	NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b>	True
<b>Well:</b>	GMR 8-11C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	3.07	198.56	4,893.4	-235.7	-79.1	248.6	0.00	0.00	
5,000.0	3.07	198.56	4,993.2	-240.7	-80.8	253.9	0.00	0.00	
5,100.0	3.07	198.56	5,093.1	-245.8	-82.5	259.3	0.00	0.00	
5,200.0	3.07	198.56	5,192.9	-250.9	-84.2	264.6	0.00	0.00	
5,300.0	3.07	198.56	5,292.8	-255.9	-85.9	270.0	0.00	0.00	
5,400.0	3.07	198.56	5,392.7	-261.0	-87.6	275.3	0.00	0.00	
5,500.0	3.07	198.56	5,492.5	-266.1	-89.3	280.7	0.00	0.00	
5,600.0	3.07	198.56	5,592.4	-271.1	-91.0	286.0	0.00	0.00	
5,700.0	3.07	198.56	5,692.2	-276.2	-92.8	291.4	0.00	0.00	
5,729.8	3.07	198.56	5,722.0	-277.7	-93.3	293.0	0.00	0.00	OHIO CREEK
5,800.0	3.07	198.56	5,792.1	-281.3	-94.5	296.7	0.00	0.00	
5,900.0	3.07	198.56	5,891.9	-286.4	-96.2	302.1	0.00	0.00	
6,000.0	3.07	198.56	5,991.8	-291.4	-97.9	307.4	0.00	0.00	
6,100.0	3.07	198.56	6,091.7	-296.5	-99.6	312.8	0.00	0.00	
6,128.4	3.07	198.56	6,120.0	-297.9	-100.0	314.3	0.00	0.00	Mesa Verde
6,200.0	3.07	198.56	6,191.5	-301.6	-101.3	318.1	0.00	0.00	
6,300.0	3.07	198.56	6,291.4	-306.6	-103.0	323.5	0.00	0.00	
6,400.0	3.07	198.56	6,391.2	-311.7	-104.7	328.8	0.00	0.00	
6,500.0	3.07	198.56	6,491.1	-316.8	-106.4	334.2	0.00	0.00	
6,600.0	3.07	198.56	6,590.9	-321.8	-108.1	339.5	0.00	0.00	
6,700.0	3.07	198.56	6,690.8	-326.9	-109.8	344.8	0.00	0.00	
6,730.2	3.07	198.56	6,721.0	-328.4	-110.3	346.5	0.00	0.00	Williams Fork
6,800.0	3.07	198.56	6,790.7	-332.0	-111.5	350.2	0.00	0.00	
6,900.0	3.07	198.56	6,890.5	-337.0	-113.2	355.5	0.00	0.00	
7,000.0	3.07	198.56	6,990.4	-342.1	-114.9	360.9	0.00	0.00	
7,100.0	3.07	198.56	7,090.2	-347.2	-116.6	366.2	0.00	0.00	
7,200.0	3.07	198.56	7,190.1	-352.3	-118.3	371.6	0.00	0.00	
7,300.0	3.07	198.56	7,289.9	-357.3	-120.0	376.9	0.00	0.00	
7,400.0	3.07	198.56	7,389.8	-362.4	-121.7	382.3	0.00	0.00	
7,500.0	3.07	198.56	7,489.7	-367.5	-123.4	387.6	0.00	0.00	
7,600.0	3.07	198.56	7,589.5	-372.5	-125.1	393.0	0.00	0.00	
7,664.5	3.07	198.56	7,653.9	-375.8	-126.2	396.4	0.00	0.00	Start Drop -3.00
7,700.0	2.00	198.56	7,689.4	-377.3	-126.7	398.0	3.00	-3.00	
7,766.6	0.00	0.00	7,756.0	-378.4	-127.1	399.2	3.00	-3.00	EOD at Inc. = 0° - TOP GAS - GMR 8-11C TOC
7,800.0	0.00	0.00	7,789.4	-378.4	-127.1	399.2	0.00	0.00	
7,900.0	0.00	0.00	7,889.4	-378.4	-127.1	399.2	0.00	0.00	
8,000.0	0.00	0.00	7,989.4	-378.4	-127.1	399.2	0.00	0.00	
8,100.0	0.00	0.00	8,089.4	-378.4	-127.1	399.2	0.00	0.00	
8,200.0	0.00	0.00	8,189.4	-378.4	-127.1	399.2	0.00	0.00	
8,300.0	0.00	0.00	8,289.4	-378.4	-127.1	399.2	0.00	0.00	
8,400.0	0.00	0.00	8,389.4	-378.4	-127.1	399.2	0.00	0.00	
8,500.0	0.00	0.00	8,489.4	-378.4	-127.1	399.2	0.00	0.00	
8,600.0	0.00	0.00	8,589.4	-378.4	-127.1	399.2	0.00	0.00	
8,700.0	0.00	0.00	8,689.4	-378.4	-127.1	399.2	0.00	0.00	
8,800.0	0.00	0.00	8,789.4	-378.4	-127.1	399.2	0.00	0.00	
8,900.0	0.00	0.00	8,889.4	-378.4	-127.1	399.2	0.00	0.00	
9,000.0	0.00	0.00	8,989.4	-378.4	-127.1	399.2	0.00	0.00	
9,039.6	0.00	0.00	9,029.0	-378.4	-127.1	399.2	0.00	0.00	COAL RIDGE
9,100.0	0.00	0.00	9,089.4	-378.4	-127.1	399.2	0.00	0.00	
9,200.0	0.00	0.00	9,189.4	-378.4	-127.1	399.2	0.00	0.00	
9,300.0	0.00	0.00	9,289.4	-378.4	-127.1	399.2	0.00	0.00	
9,400.0	0.00	0.00	9,389.4	-378.4	-127.1	399.2	0.00	0.00	

# Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11C
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Site:</b>	NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b>	True
<b>Well:</b>	GMR 8-11C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,500.0	0.00	0.00	9,489.4	-378.4	-127.1	399.2	0.00	0.00	
9,600.0	0.00	0.00	9,589.4	-378.4	-127.1	399.2	0.00	0.00	
9,694.6	0.00	0.00	9,684.0	-378.4	-127.1	399.2	0.00	0.00	ROLLINS SS
9,700.0	0.00	0.00	9,689.4	-378.4	-127.1	399.2	0.00	0.00	
9,800.0	0.00	0.00	9,789.4	-378.4	-127.1	399.2	0.00	0.00	
9,844.6	0.00	0.00	9,834.0	-378.4	-127.1	399.2	0.00	0.00	TD at 9844.6' MD - GMR 8-11C BHL
9,900.0	0.00	0.00	9,889.4	-378.4	-127.1	399.2	0.00	0.00	
9,994.6	0.00	0.00	9,984.0	-378.4	-127.1	399.2	0.00	0.00	Permit TD at 9994.6' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
GMR 8-11C Hardline	0.00	0.00	-9,834.0	-378.4	-127.1	1,599,516.26	2,350,546.98	39° 27' 24.69 N	107° 48' 1.34 W
- plan misses target center by 9842.1ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			-9,834.0	-40.0	100.0	1,599,473.74	2,350,645.93		
Point 2			-9,834.0	-40.0	-100.0	1,599,478.81	2,350,446.00		
GMR 8-11C BHL	0.00	0.00	9,834.0	-378.4	-127.1	1,599,516.26	2,350,546.98	39° 27' 24.69 N	107° 48' 1.34 W
- plan hits target center									
- Circle (radius 25.0)									
GMR 8-11C TOG	0.00	0.00	7,756.0	-378.4	-127.1	1,599,516.26	2,350,546.98	39° 27' 24.69 N	107° 48' 1.34 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,250.0	1,248.6	Surface Casing	5.500	6.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,682.9	3,678.0	Wasach G Sand				
5,729.8	5,722.0	OHIO CREEK				
6,128.4	6,120.0	Mesa Verde				
6,730.2	6,721.0	Williams Fork				
7,766.6	7,756.0	TOP GAS				
9,039.6	9,029.0	COAL RIDGE				
9,694.6	9,684.0	ROLLINS SS				

## Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11C
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 7848.0ft (Original Well Elev)
<b>Site:</b>	NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b>	True
<b>Well:</b>	GMR 8-11C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DD		
<b>Design:</b>	Plan #1		

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP = 200' MD
302.2	302.1	-2.6	-0.9	EOB at Inc. = 3.07°
7,664.5	7,653.9	-375.8	-126.2	Start Drop -3.00
7,766.6	7,756.0	-378.4	-127.1	EOD at Inc. = 0°
9,844.6	9,834.0	-378.4	-127.1	TD at 9844.6' MD
9,994.6	9,984.0	-378.4	-127.1	Permit TD at 9994.6' MD