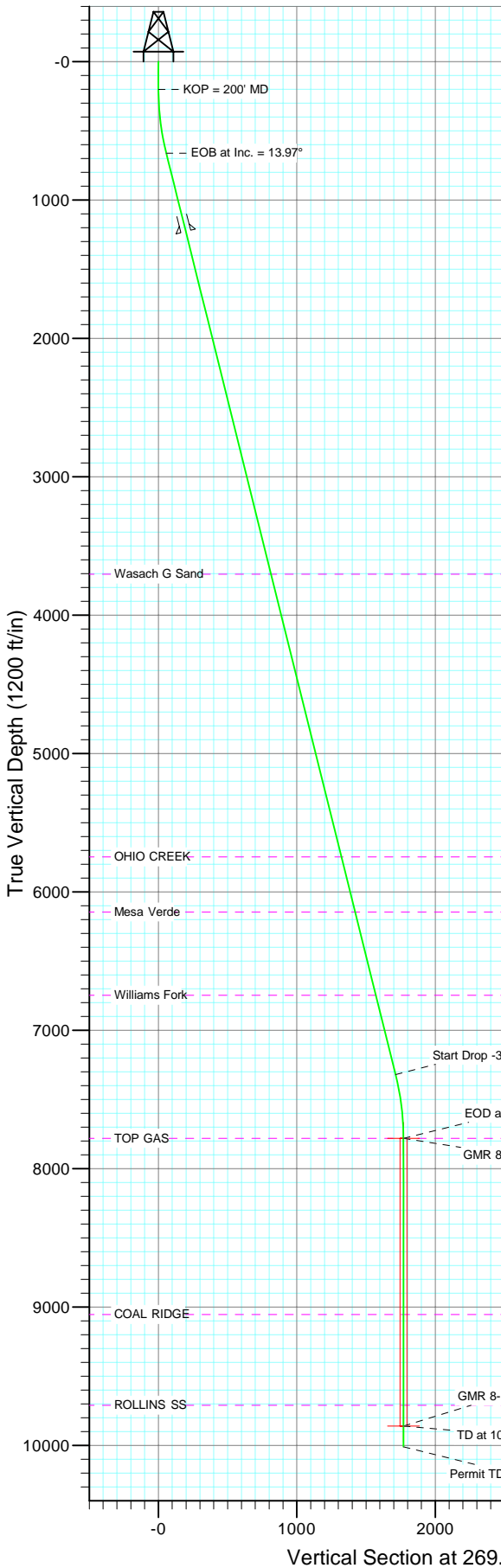
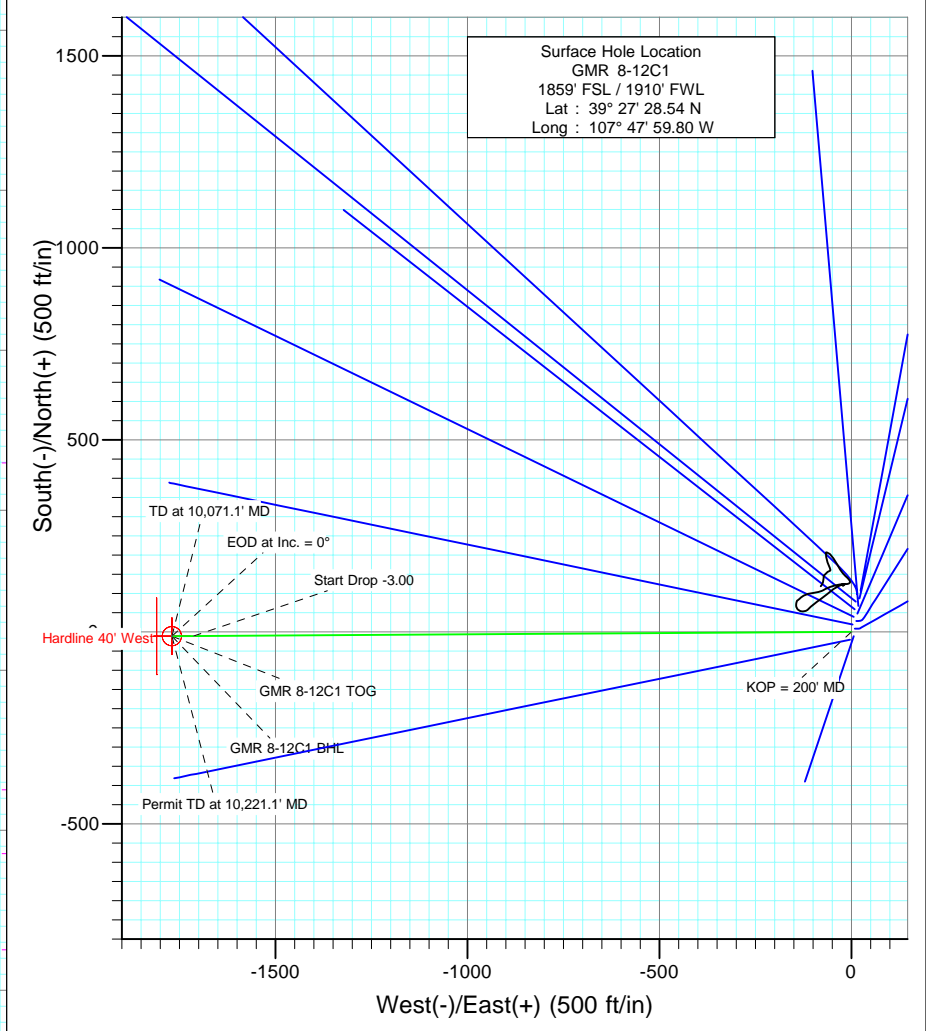




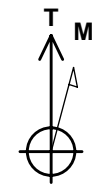
Project: Mamm Creek
 Site: NESW S8 T7S R93W (K8W Pad)
 Well: GMR 8-12C1
 Wellbore: DD
 Design: Plan #1



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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	665.6	13.97	269.64	661.0	-0.4	-56.5	3.00	269.64	56.5	
4	7527.5	13.97	269.64	7320.0	-10.7	-1712.9	0.00	0.00	1713.0	
5	7993.1	0.00	0.00	7781.0	-11.1	-1769.4	3.00	180.00	1769.5	GMR 8-12C1 TOG
6	10071.1	0.00	0.00	9859.0	-11.1	-1769.4	0.00	0.00	1769.5	GMR 8-12C1 BHL
7	10221.1	0.00	0.00	10009.0	-11.1	-1769.4	0.00	0.00	1769.5	



Bottom Hole Location
 GMR 8-12C1
 1840' FSL / 140' FWL
 Lat : 39° 27' 28.43"
 Long. : 107° 48' 22.36"



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	
3703.0	3800.3	Wasach G Sand	
5747.0	5906.6	OHIO CREEK	
6145.0	6316.7	Mesa Verde	
6746.0	6936.0	Williams Fork	
7781.0	7993.1	TOP GAS	
9054.0	9288.1	COAL RIDGE	
9709.0	9921.1	ROLLINS SS	

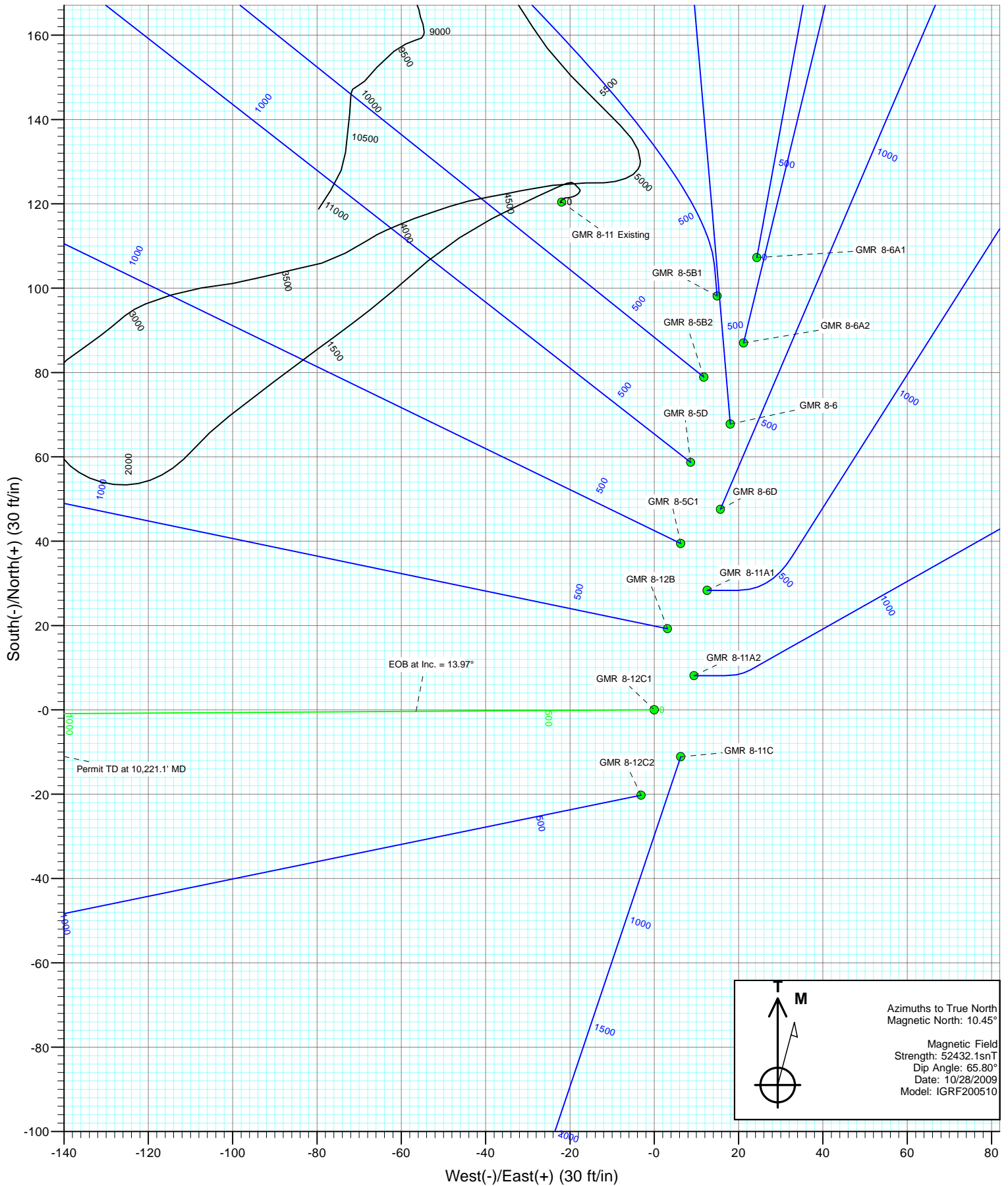
DESIGN DETAILS: Plan #1

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

Target	Azimuth	Origin	N/S	E/WFrom	TVD
GMR 8-12C1 BHL	269.64	Slot	0.0	0.0	0.0



Project: Mamm Creek
Site: NESW S8 T7S R93W (K8W Pad)
Well: GMR 8-12C1
Wellbore: DD
Design: Plan #1



Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12C1
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 7848.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 7848.0ft (Original Well Elev)
Site:	NESW S8 T7S R93W (K8W Pad)	North Reference:	True
Well:	GMR 8-12C1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #1		

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	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 8-12C1					
Well Position	+N/-S	0.0 ft	Northing:	1,599,902.60 ft	Latitude:	39° 27' 28.54 N
	+E/-W	0.0 ft	Easting:	2,350,677.59 ft	Longitude:	107° 47' 59.80 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,826.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	10/28/2009	10.45	65.80	52,432

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	269.64

Plan Sections										
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	
665.6	13.97	269.64	661.0	-0.4	-56.5	3.00	3.00	0.00	269.64	
7,527.5	13.97	269.64	7,320.0	-10.7	-1,712.9	0.00	0.00	0.00	0.00	
7,993.1	0.00	0.00	7,781.0	-11.1	-1,769.4	3.00	-3.00	0.00	180.00	GMR 8-12C1 TOG
10,071.1	0.00	0.00	9,859.0	-11.1	-1,769.4	0.00	0.00	0.00	0.00	GMR 8-12C1 BHL
10,221.1	0.00	0.00	10,009.0	-11.1	-1,769.4	0.00	0.00	0.00	0.00	

Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12C1
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 7848.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 7848.0ft (Original Well Elev)
Site:	NESW S8 T7S R93W (K8W Pad)	North Reference:	True
Well:	GMR 8-12C1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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 8-12C1 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	269.64	300.0	0.0	-2.6	2.6	3.00	3.00	
400.0	6.00	269.64	399.6	-0.1	-10.5	10.5	3.00	3.00	
500.0	9.00	269.64	498.8	-0.1	-23.5	23.5	3.00	3.00	
600.0	12.00	269.64	597.1	-0.3	-41.7	41.7	3.00	3.00	
665.6	13.97	269.64	661.0	-0.4	-56.5	56.5	3.00	3.00	EOB at Inc. = 13.97°
700.0	13.97	269.64	694.4	-0.4	-64.8	64.8	0.00	0.00	
800.0	13.97	269.64	791.4	-0.6	-88.9	88.9	0.00	0.00	
900.0	13.97	269.64	888.5	-0.7	-113.1	113.1	0.00	0.00	
1,000.0	13.97	269.64	985.5	-0.9	-137.2	137.2	0.00	0.00	
1,100.0	13.97	269.64	1,082.6	-1.0	-161.3	161.3	0.00	0.00	
1,200.0	13.97	269.64	1,179.6	-1.2	-185.5	185.5	0.00	0.00	
1,250.0	13.97	269.64	1,228.1	-1.2	-197.5	197.6	0.00	0.00	Surface Casing
1,300.0	13.97	269.64	1,276.6	-1.3	-209.6	209.6	0.00	0.00	
1,400.0	13.97	269.64	1,373.7	-1.5	-233.8	233.8	0.00	0.00	
1,500.0	13.97	269.64	1,470.7	-1.6	-257.9	257.9	0.00	0.00	
1,600.0	13.97	269.64	1,567.8	-1.8	-282.0	282.0	0.00	0.00	
1,700.0	13.97	269.64	1,664.8	-1.9	-306.2	306.2	0.00	0.00	
1,800.0	13.97	269.64	1,761.9	-2.1	-330.3	330.3	0.00	0.00	
1,900.0	13.97	269.64	1,858.9	-2.2	-354.5	354.5	0.00	0.00	
2,000.0	13.97	269.64	1,955.9	-2.4	-378.6	378.6	0.00	0.00	
2,100.0	13.97	269.64	2,053.0	-2.5	-402.7	402.7	0.00	0.00	
2,200.0	13.97	269.64	2,150.0	-2.7	-426.9	426.9	0.00	0.00	
2,300.0	13.97	269.64	2,247.1	-2.8	-451.0	451.0	0.00	0.00	
2,400.0	13.97	269.64	2,344.1	-3.0	-475.2	475.2	0.00	0.00	
2,500.0	13.97	269.64	2,441.1	-3.1	-499.3	499.3	0.00	0.00	
2,600.0	13.97	269.64	2,538.2	-3.3	-523.4	523.4	0.00	0.00	
2,700.0	13.97	269.64	2,635.2	-3.4	-547.6	547.6	0.00	0.00	
2,800.0	13.97	269.64	2,732.3	-3.6	-571.7	571.7	0.00	0.00	
2,900.0	13.97	269.64	2,829.3	-3.7	-595.9	595.9	0.00	0.00	
3,000.0	13.97	269.64	2,926.4	-3.9	-620.0	620.0	0.00	0.00	
3,100.0	13.97	269.64	3,023.4	-4.0	-644.1	644.1	0.00	0.00	
3,200.0	13.97	269.64	3,120.4	-4.2	-668.3	668.3	0.00	0.00	
3,300.0	13.97	269.64	3,217.5	-4.3	-692.4	692.4	0.00	0.00	
3,400.0	13.97	269.64	3,314.5	-4.5	-716.6	716.6	0.00	0.00	
3,500.0	13.97	269.64	3,411.6	-4.6	-740.7	740.7	0.00	0.00	
3,600.0	13.97	269.64	3,508.6	-4.8	-764.8	764.9	0.00	0.00	
3,700.0	13.97	269.64	3,605.7	-4.9	-789.0	789.0	0.00	0.00	
3,800.0	13.97	269.64	3,702.7	-5.1	-813.1	813.1	0.00	0.00	
3,800.3	13.97	269.64	3,703.0	-5.1	-813.2	813.2	0.00	0.00	Wasach G Sand
3,900.0	13.97	269.64	3,799.7	-5.2	-837.3	837.3	0.00	0.00	
4,000.0	13.97	269.64	3,896.8	-5.4	-861.4	861.4	0.00	0.00	
4,100.0	13.97	269.64	3,993.8	-5.5	-885.5	885.6	0.00	0.00	
4,200.0	13.97	269.64	4,090.9	-5.7	-909.7	909.7	0.00	0.00	
4,300.0	13.97	269.64	4,187.9	-5.8	-933.8	933.8	0.00	0.00	
4,400.0	13.97	269.64	4,285.0	-6.0	-958.0	958.0	0.00	0.00	
4,500.0	13.97	269.64	4,382.0	-6.1	-982.1	982.1	0.00	0.00	
4,600.0	13.97	269.64	4,479.0	-6.3	-1,006.2	1,006.3	0.00	0.00	
4,700.0	13.97	269.64	4,576.1	-6.4	-1,030.4	1,030.4	0.00	0.00	
4,800.0	13.97	269.64	4,673.1	-6.6	-1,054.5	1,054.5	0.00	0.00	

Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12C1
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 7848.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 7848.0ft (Original Well Elev)
Site:	NESW S8 T7S R93W (K8W Pad)	North Reference:	True
Well:	GMR 8-12C1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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	13.97	269.64	4,770.2	-6.7	-1,078.7	1,078.7	0.00	0.00	
5,000.0	13.97	269.64	4,867.2	-6.9	-1,102.8	1,102.8	0.00	0.00	
5,100.0	13.97	269.64	4,964.3	-7.0	-1,126.9	1,127.0	0.00	0.00	
5,200.0	13.97	269.64	5,061.3	-7.2	-1,151.1	1,151.1	0.00	0.00	
5,300.0	13.97	269.64	5,158.3	-7.3	-1,175.2	1,175.2	0.00	0.00	
5,400.0	13.97	269.64	5,255.4	-7.5	-1,199.4	1,199.4	0.00	0.00	
5,500.0	13.97	269.64	5,352.4	-7.6	-1,223.5	1,223.5	0.00	0.00	
5,600.0	13.97	269.64	5,449.5	-7.8	-1,247.6	1,247.7	0.00	0.00	
5,700.0	13.97	269.64	5,546.5	-7.9	-1,271.8	1,271.8	0.00	0.00	
5,800.0	13.97	269.64	5,643.5	-8.1	-1,295.9	1,295.9	0.00	0.00	
5,900.0	13.97	269.64	5,740.6	-8.3	-1,320.1	1,320.1	0.00	0.00	
5,906.6	13.97	269.64	5,747.0	-8.3	-1,321.7	1,321.7	0.00	0.00	OHIO CREEK
6,000.0	13.97	269.64	5,837.6	-8.4	-1,344.2	1,344.2	0.00	0.00	
6,100.0	13.97	269.64	5,934.7	-8.6	-1,368.3	1,368.4	0.00	0.00	
6,200.0	13.97	269.64	6,031.7	-8.7	-1,392.5	1,392.5	0.00	0.00	
6,300.0	13.97	269.64	6,128.8	-8.9	-1,416.6	1,416.6	0.00	0.00	
6,316.7	13.97	269.64	6,145.0	-8.9	-1,420.7	1,420.7	0.00	0.00	Mesa Verde
6,400.0	13.97	269.64	6,225.8	-9.0	-1,440.8	1,440.8	0.00	0.00	
6,500.0	13.97	269.64	6,322.8	-9.2	-1,464.9	1,464.9	0.00	0.00	
6,600.0	13.97	269.64	6,419.9	-9.3	-1,489.0	1,489.1	0.00	0.00	
6,700.0	13.97	269.64	6,516.9	-9.5	-1,513.2	1,513.2	0.00	0.00	
6,800.0	13.97	269.64	6,614.0	-9.6	-1,537.3	1,537.3	0.00	0.00	
6,900.0	13.97	269.64	6,711.0	-9.8	-1,561.5	1,561.5	0.00	0.00	
6,936.0	13.97	269.64	6,746.0	-9.8	-1,570.2	1,570.2	0.00	0.00	Williams Fork
7,000.0	13.97	269.64	6,808.1	-9.9	-1,585.6	1,585.6	0.00	0.00	
7,100.0	13.97	269.64	6,905.1	-10.1	-1,609.7	1,609.8	0.00	0.00	
7,200.0	13.97	269.64	7,002.1	-10.2	-1,633.9	1,633.9	0.00	0.00	
7,300.0	13.97	269.64	7,099.2	-10.4	-1,658.0	1,658.0	0.00	0.00	
7,400.0	13.97	269.64	7,196.2	-10.5	-1,682.2	1,682.2	0.00	0.00	
7,500.0	13.97	269.64	7,293.3	-10.7	-1,706.3	1,706.3	0.00	0.00	
7,527.5	13.97	269.64	7,320.0	-10.7	-1,712.9	1,713.0	0.00	0.00	Start Drop -3.00
7,600.0	11.79	269.64	7,390.6	-10.8	-1,729.1	1,729.1	3.00	-3.00	
7,700.0	8.79	269.64	7,489.0	-10.9	-1,747.0	1,747.0	3.00	-3.00	
7,800.0	5.79	269.64	7,588.2	-11.0	-1,759.7	1,759.7	3.00	-3.00	
7,900.0	2.79	269.64	7,687.9	-11.0	-1,767.1	1,767.2	3.00	-3.00	
7,993.1	0.00	0.00	7,781.0	-11.1	-1,769.4	1,769.5	3.00	-3.00	EOD at Inc. = 0° - TOP GAS - GMR 8-12C1 TO
8,000.0	0.00	0.00	7,787.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,100.0	0.00	0.00	7,887.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,200.0	0.00	0.00	7,987.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,300.0	0.00	0.00	8,087.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,400.0	0.00	0.00	8,187.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,500.0	0.00	0.00	8,287.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,600.0	0.00	0.00	8,387.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,700.0	0.00	0.00	8,487.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,800.0	0.00	0.00	8,587.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
8,900.0	0.00	0.00	8,687.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,000.0	0.00	0.00	8,787.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,100.0	0.00	0.00	8,887.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,200.0	0.00	0.00	8,987.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,266.1	0.00	0.00	9,054.0	-11.1	-1,769.4	1,769.5	0.00	0.00	COAL RIDGE
9,300.0	0.00	0.00	9,087.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,400.0	0.00	0.00	9,187.9	-11.1	-1,769.4	1,769.5	0.00	0.00	

Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12C1
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 7848.0ft (Original Well Elev)
Project:	Mamm Creek	MD Reference:	KBE @ 7848.0ft (Original Well Elev)
Site:	NESW S8 T7S R93W (K8W Pad)	North Reference:	True
Well:	GMR 8-12C1	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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	9,287.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,600.0	0.00	0.00	9,387.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,700.0	0.00	0.00	9,487.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,800.0	0.00	0.00	9,587.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,900.0	0.00	0.00	9,687.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
9,921.1	0.00	0.00	9,709.0	-11.1	-1,769.4	1,769.5	0.00	0.00	ROLLINS SS
10,000.0	0.00	0.00	9,787.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
10,071.1	0.00	0.00	9,859.0	-11.1	-1,769.4	1,769.5	0.00	0.00	TD at 10,071.1' MD - GMR 8-12C1 BHL
10,100.0	0.00	0.00	9,887.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
10,200.0	0.00	0.00	9,987.9	-11.1	-1,769.4	1,769.5	0.00	0.00	
10,221.1	0.00	0.00	10,009.0	-11.1	-1,769.4	1,769.5	0.00	0.00	Permit TD at 10,221.1' MD

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
GMR 8-12C1 BHL - plan hits target center - Circle (radius 25.0)	0.00	0.00	9,859.0	-11.1	-1,769.4	1,599,936.34	2,348,908.46	39° 27' 28.43 N	107° 48' 22.36 W
GMR 8-12C1 TOG - plan hits target center - Point	0.00	0.00	7,781.0	-11.1	-1,769.4	1,599,936.34	2,348,908.46	39° 27' 28.43 N	107° 48' 22.36 W
GMR 8-12C1 Hardline - plan misses target center by 10016.5ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Polygon	0.00	0.00	-9,859.0	-11.1	-1,769.4	1,599,936.34	2,348,908.46	39° 27' 28.43 N	107° 48' 22.36 W
Point 1			-9,859.0	100.0	-40.0	1,600,037.32	2,348,871.00		
Point 2			-9,859.0	-100.0	-40.0	1,599,837.38	2,348,865.94		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,250.0	1,228.1	Surface Casing	5.500	6.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,800.3	3,703.0	Wasach G Sand			
5,906.6	5,747.0	OHIO CREEK			
6,316.7	6,145.0	Mesa Verde			
6,936.0	6,746.0	Williams Fork			
7,993.1	7,781.0	TOP GAS			
9,266.1	9,054.0	COAL RIDGE			
9,921.1	9,709.0	ROLLINS SS			

Planning Report

Database: US EDM 2003.21 Multi User Db Company: EnCana Oil & Gas (USA) Inc Project: Mamm Creek Site: NESW S8 T7S R93W (K8W Pad) Well: GMR 8-12C1 Wellbore: DD Design: Plan #1	Local Co-ordinate Reference: Well GMR 8-12C1 TVD Reference: KBE @ 7848.0ft (Original Well Elev) MD Reference: KBE @ 7848.0ft (Original Well Elev) North Reference: True Survey Calculation Method: Minimum Curvature
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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
665.6	661.0	-0.4	-56.5	EOB at Inc. = 13.97°
7,527.5	7,320.0	-10.7	-1,712.9	Start Drop -3.00
7,993.1	7,781.0	-11.1	-1,769.4	EOD at Inc. = 0°
10,071.1	9,859.0	-11.1	-1,769.4	TD at 10,071.1' MD
10,221.1	10,009.0	-11.1	-1,769.4	Permit TD at 10,221.1' MD