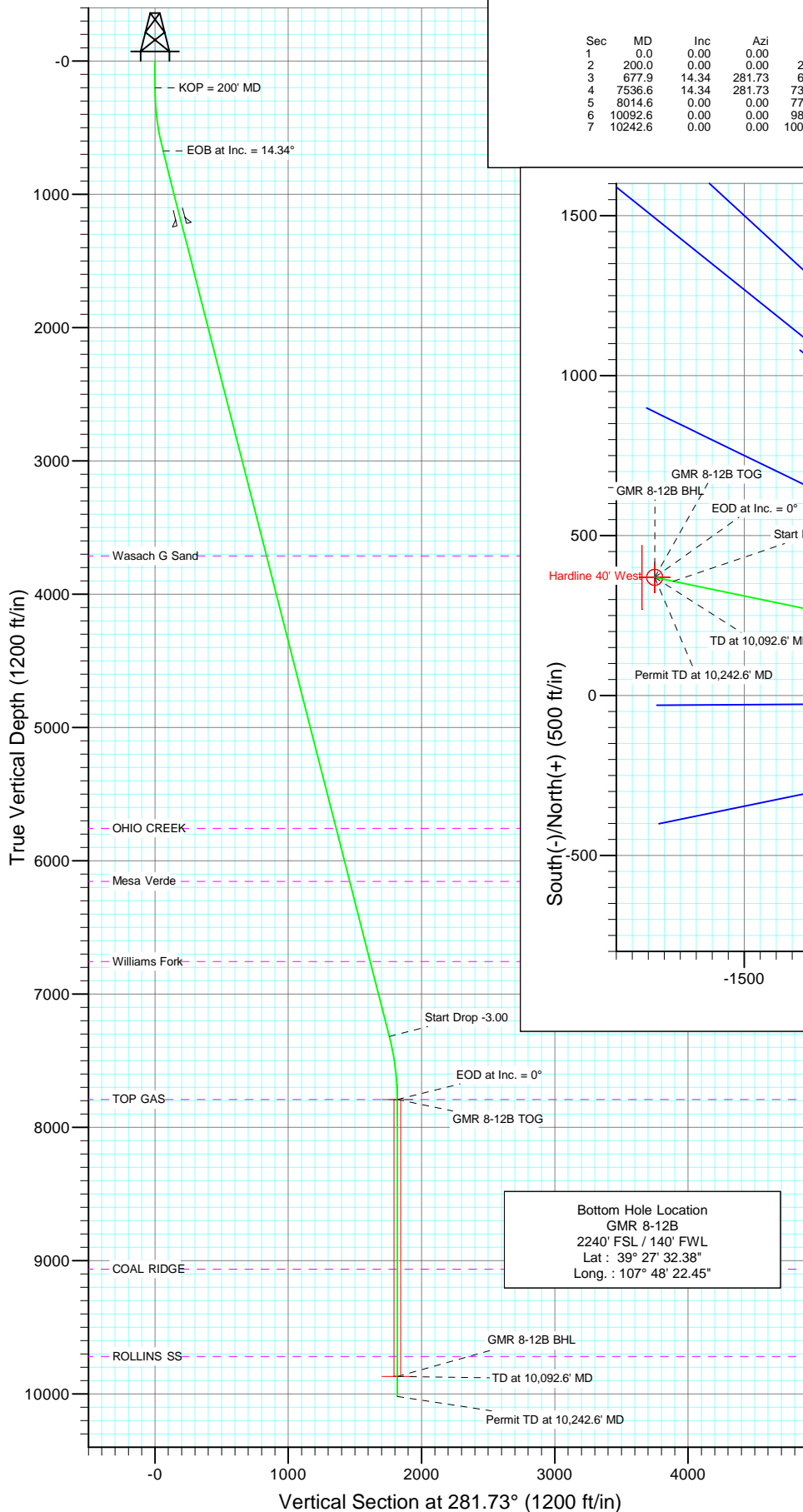


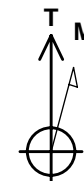
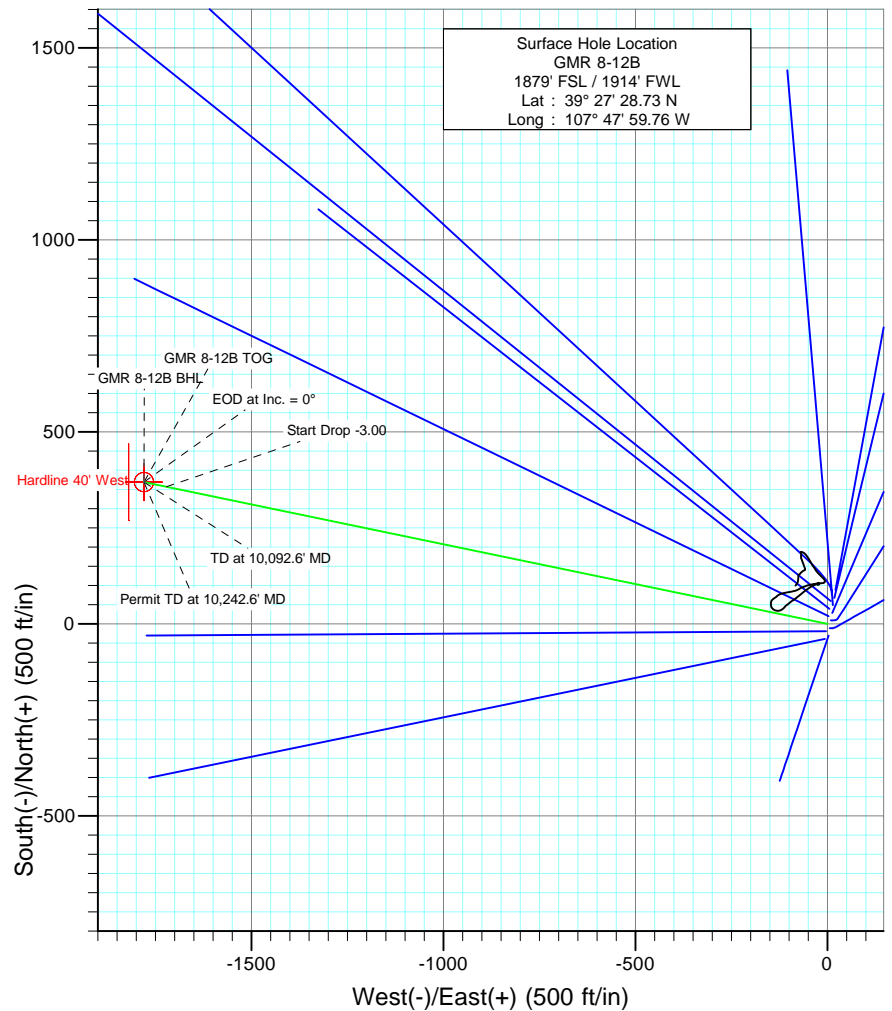


Project: Mamm Creek
Site: NESW S8 T7S R93W (K8W Pad)
Well: GMR 8-12B
Wellbore: DD
Design: Plan #1



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	677.9	14.34	281.73	673.0	12.1	-58.2	3.00	281.73	59.5	
4	7536.6	14.34	281.73	7318.0	357.3	-1721.3	0.00	0.00	1758.0	
5	8014.6	0.00	0.00	7791.0	369.4	-1779.6	3.00	180.00	1817.5	GMR 8-12B TOG
6	10092.6	0.00	0.00	9869.0	369.4	-1779.6	0.00	0.00	1817.5	GMR 8-12B BHL
7	10242.6	0.00	0.00	10019.0	369.4	-1779.6	0.00	0.00	1817.5	



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
3713.0	3815.7	Wasach G Sand
5757.0	5925.4	OHIO CREEK
6155.0	6336.2	Mesa Verde
6756.0	6956.5	Williams Fork
7791.0	8014.6	TOP GAS
9084.0	9287.6	COAL RIDGE
9719.0	9942.6	ROLLINS SS

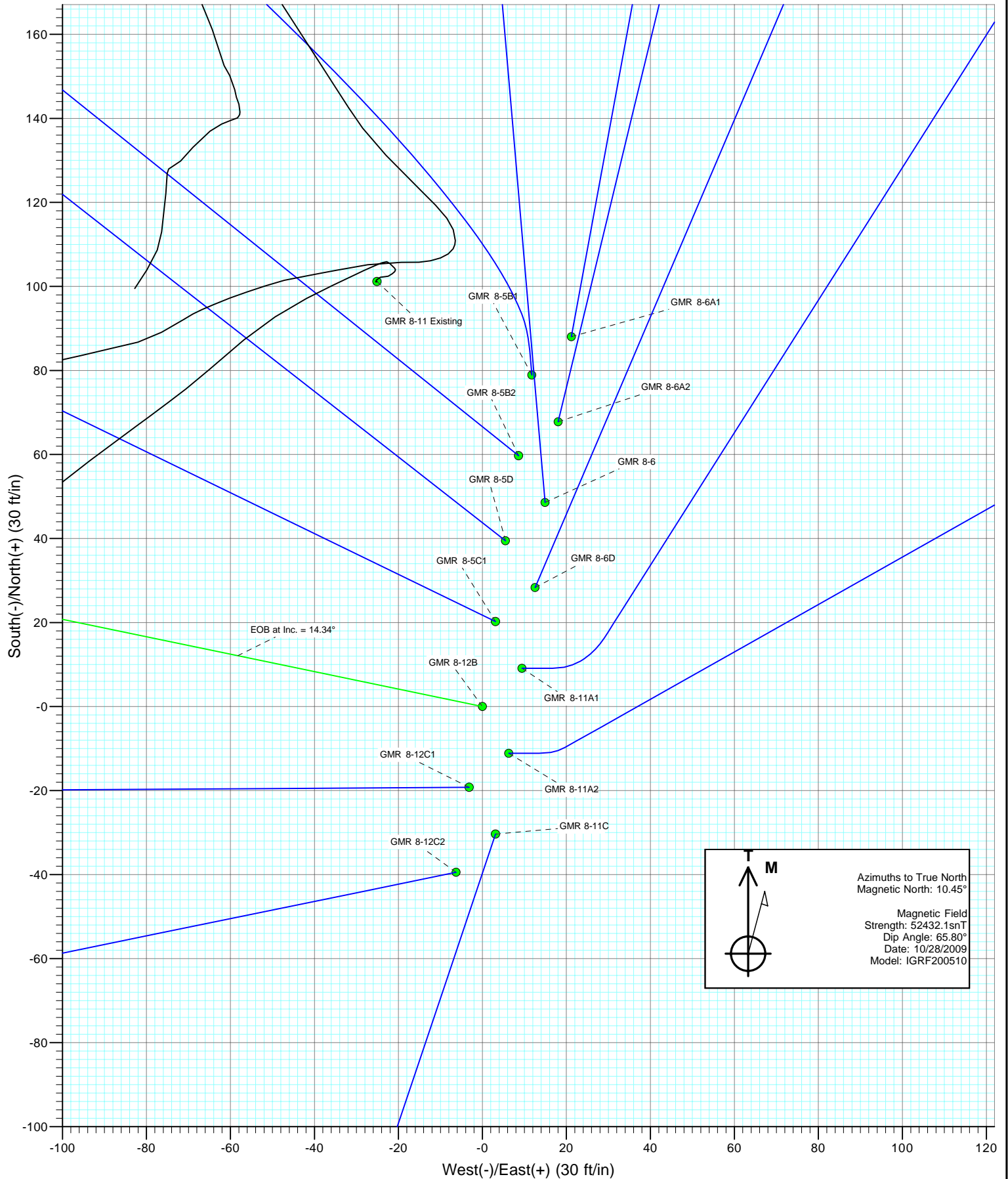
DESIGN DETAILS: Plan #1

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

Target	Azimuth	Origin	N/S	E/W	TVD
GMR 8-12B BHL	281.73	Slot	0.0	0.0	0.0



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



Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12B
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 8-12B	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 8-12B					
Well Position	+N/-S	0.0 ft	Northing:	1,599,921.74 ft	Latitude:	39° 27' 28.73 N
	+E/-W	0.0 ft	Easting:	2,350,681.21 ft	Longitude:	107° 47' 59.76 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) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	281.73	

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	
677.9	14.34	281.73	673.0	12.1	-58.2	3.00	3.00	0.00	281.73	
7,536.6	14.34	281.73	7,318.0	357.3	-1,721.3	0.00	0.00	0.00	0.00	
8,014.6	0.00	0.00	7,791.0	369.4	-1,779.6	3.00	-3.00	0.00	180.00	GMR 8-12B TOG
10,092.6	0.00	0.00	9,869.0	369.4	-1,779.6	0.00	0.00	0.00	0.00	GMR 8-12B BHL
10,242.6	0.00	0.00	10,019.0	369.4	-1,779.6	0.00	0.00	0.00	0.00	

Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12B
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 8-12B	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 8-12B 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	281.73	300.0	0.5	-2.6	2.6	3.00	3.00	
400.0	6.00	281.73	399.6	2.1	-10.2	10.5	3.00	3.00	
500.0	9.00	281.73	498.8	4.8	-23.0	23.5	3.00	3.00	
600.0	12.00	281.73	597.1	8.5	-40.9	41.7	3.00	3.00	
677.9	14.34	281.73	673.0	12.1	-58.2	59.5	3.00	3.00	EOB at Inc. = 14.34°
700.0	14.34	281.73	694.3	13.2	-63.6	65.0	0.00	0.00	
800.0	14.34	281.73	791.2	18.2	-87.8	89.7	0.00	0.00	
900.0	14.34	281.73	888.1	23.3	-112.1	114.5	0.00	0.00	
1,000.0	14.34	281.73	985.0	28.3	-136.3	139.2	0.00	0.00	
1,100.0	14.34	281.73	1,081.9	33.3	-160.6	164.0	0.00	0.00	
1,200.0	14.34	281.73	1,178.8	38.4	-184.8	188.8	0.00	0.00	
1,250.0	14.34	281.73	1,227.2	40.9	-197.0	201.2	0.00	0.00	Surface Casing
1,300.0	14.34	281.73	1,275.7	43.4	-209.1	213.5	0.00	0.00	
1,400.0	14.34	281.73	1,372.5	48.4	-233.3	238.3	0.00	0.00	
1,500.0	14.34	281.73	1,469.4	53.5	-257.6	263.1	0.00	0.00	
1,600.0	14.34	281.73	1,566.3	58.5	-281.8	287.8	0.00	0.00	
1,700.0	14.34	281.73	1,663.2	63.5	-306.1	312.6	0.00	0.00	
1,800.0	14.34	281.73	1,760.1	68.6	-330.3	337.4	0.00	0.00	
1,900.0	14.34	281.73	1,857.0	73.6	-354.6	362.1	0.00	0.00	
2,000.0	14.34	281.73	1,953.8	78.6	-378.8	386.9	0.00	0.00	
2,100.0	14.34	281.73	2,050.7	83.7	-403.1	411.7	0.00	0.00	
2,200.0	14.34	281.73	2,147.6	88.7	-427.3	436.4	0.00	0.00	
2,300.0	14.34	281.73	2,244.5	93.7	-451.6	461.2	0.00	0.00	
2,400.0	14.34	281.73	2,341.4	98.8	-475.8	486.0	0.00	0.00	
2,500.0	14.34	281.73	2,438.3	103.8	-500.1	510.7	0.00	0.00	
2,600.0	14.34	281.73	2,535.2	108.8	-524.3	535.5	0.00	0.00	
2,700.0	14.34	281.73	2,632.0	113.9	-548.6	560.2	0.00	0.00	
2,800.0	14.34	281.73	2,728.9	118.9	-572.8	585.0	0.00	0.00	
2,900.0	14.34	281.73	2,825.8	123.9	-597.1	609.8	0.00	0.00	
3,000.0	14.34	281.73	2,922.7	129.0	-621.3	634.5	0.00	0.00	
3,100.0	14.34	281.73	3,019.6	134.0	-645.5	659.3	0.00	0.00	
3,200.0	14.34	281.73	3,116.5	139.0	-669.8	684.1	0.00	0.00	
3,300.0	14.34	281.73	3,213.4	144.1	-694.0	708.8	0.00	0.00	
3,400.0	14.34	281.73	3,310.2	149.1	-718.3	733.6	0.00	0.00	
3,500.0	14.34	281.73	3,407.1	154.1	-742.5	758.4	0.00	0.00	
3,600.0	14.34	281.73	3,504.0	159.2	-766.8	783.1	0.00	0.00	
3,700.0	14.34	281.73	3,600.9	164.2	-791.0	807.9	0.00	0.00	
3,800.0	14.34	281.73	3,697.8	169.2	-815.3	832.7	0.00	0.00	
3,815.7	14.34	281.73	3,713.0	170.0	-819.1	836.5	0.00	0.00	Wasach G Sand
3,900.0	14.34	281.73	3,794.7	174.3	-839.5	857.4	0.00	0.00	
4,000.0	14.34	281.73	3,891.5	179.3	-863.8	882.2	0.00	0.00	
4,100.0	14.34	281.73	3,988.4	184.3	-888.0	907.0	0.00	0.00	
4,200.0	14.34	281.73	4,085.3	189.3	-912.3	931.7	0.00	0.00	
4,300.0	14.34	281.73	4,182.2	194.4	-936.5	956.5	0.00	0.00	
4,400.0	14.34	281.73	4,279.1	199.4	-960.8	981.2	0.00	0.00	
4,500.0	14.34	281.73	4,376.0	204.4	-985.0	1,006.0	0.00	0.00	
4,600.0	14.34	281.73	4,472.9	209.5	-1,009.3	1,030.8	0.00	0.00	
4,700.0	14.34	281.73	4,569.7	214.5	-1,033.5	1,055.5	0.00	0.00	
4,800.0	14.34	281.73	4,666.6	219.5	-1,057.8	1,080.3	0.00	0.00	

Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12B
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 8-12B	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	14.34	281.73	4,763.5	224.6	-1,082.0	1,105.1	0.00	0.00	
5,000.0	14.34	281.73	4,860.4	229.6	-1,106.3	1,129.8	0.00	0.00	
5,100.0	14.34	281.73	4,957.3	234.6	-1,130.5	1,154.6	0.00	0.00	
5,200.0	14.34	281.73	5,054.2	239.7	-1,154.7	1,179.4	0.00	0.00	
5,300.0	14.34	281.73	5,151.1	244.7	-1,179.0	1,204.1	0.00	0.00	
5,400.0	14.34	281.73	5,247.9	249.7	-1,203.2	1,228.9	0.00	0.00	
5,500.0	14.34	281.73	5,344.8	254.8	-1,227.5	1,253.7	0.00	0.00	
5,600.0	14.34	281.73	5,441.7	259.8	-1,251.7	1,278.4	0.00	0.00	
5,700.0	14.34	281.73	5,538.6	264.8	-1,276.0	1,303.2	0.00	0.00	
5,800.0	14.34	281.73	5,635.5	269.9	-1,300.2	1,327.9	0.00	0.00	
5,900.0	14.34	281.73	5,732.4	274.9	-1,324.5	1,352.7	0.00	0.00	
5,925.4	14.34	281.73	5,757.0	276.2	-1,330.7	1,359.0	0.00	0.00	OHIO CREEK
6,000.0	14.34	281.73	5,829.2	279.9	-1,348.7	1,377.5	0.00	0.00	
6,100.0	14.34	281.73	5,926.1	285.0	-1,373.0	1,402.2	0.00	0.00	
6,200.0	14.34	281.73	6,023.0	290.0	-1,397.2	1,427.0	0.00	0.00	
6,300.0	14.34	281.73	6,119.9	295.0	-1,421.5	1,451.8	0.00	0.00	
6,336.2	14.34	281.73	6,155.0	296.9	-1,430.3	1,460.7	0.00	0.00	Mesa Verde
6,400.0	14.34	281.73	6,216.8	300.1	-1,445.7	1,476.5	0.00	0.00	
6,500.0	14.34	281.73	6,313.7	305.1	-1,470.0	1,501.3	0.00	0.00	
6,600.0	14.34	281.73	6,410.6	310.1	-1,494.2	1,526.1	0.00	0.00	
6,700.0	14.34	281.73	6,507.4	315.2	-1,518.5	1,550.8	0.00	0.00	
6,800.0	14.34	281.73	6,604.3	320.2	-1,542.7	1,575.6	0.00	0.00	
6,900.0	14.34	281.73	6,701.2	325.2	-1,567.0	1,600.4	0.00	0.00	
6,956.5	14.34	281.73	6,756.0	328.1	-1,580.7	1,614.4	0.00	0.00	Williams Fork
7,000.0	14.34	281.73	6,798.1	330.3	-1,591.2	1,625.1	0.00	0.00	
7,100.0	14.34	281.73	6,895.0	335.3	-1,615.5	1,649.9	0.00	0.00	
7,200.0	14.34	281.73	6,991.9	340.3	-1,639.7	1,674.7	0.00	0.00	
7,300.0	14.34	281.73	7,088.8	345.4	-1,664.0	1,699.4	0.00	0.00	
7,400.0	14.34	281.73	7,185.6	350.4	-1,688.2	1,724.2	0.00	0.00	
7,500.0	14.34	281.73	7,282.5	355.4	-1,712.4	1,748.9	0.00	0.00	
7,536.6	14.34	281.73	7,318.0	357.3	-1,721.3	1,758.0	0.00	0.00	Start Drop -3.00
7,600.0	12.44	281.73	7,379.7	360.3	-1,735.7	1,772.7	3.00	-3.00	
7,700.0	9.44	281.73	7,477.8	364.1	-1,754.3	1,791.7	3.00	-3.00	
7,800.0	6.44	281.73	7,576.9	366.9	-1,767.8	1,805.5	3.00	-3.00	
7,900.0	3.44	281.73	7,676.5	368.7	-1,776.2	1,814.1	3.00	-3.00	
8,000.0	0.44	281.73	7,776.4	369.4	-1,779.5	1,817.5	3.00	-3.00	
8,014.6	0.00	0.00	7,791.0	369.4	-1,779.6	1,817.5	3.00	-3.00	EOD at Inc. = 0° - TOP GAS - GMR 8-12B TOC
8,100.0	0.00	0.00	7,876.4	369.4	-1,779.6	1,817.5	0.00	0.00	
8,200.0	0.00	0.00	7,976.4	369.4	-1,779.6	1,817.5	0.00	0.00	
8,300.0	0.00	0.00	8,076.4	369.4	-1,779.6	1,817.5	0.00	0.00	
8,400.0	0.00	0.00	8,176.4	369.4	-1,779.6	1,817.5	0.00	0.00	
8,500.0	0.00	0.00	8,276.4	369.4	-1,779.6	1,817.5	0.00	0.00	
8,600.0	0.00	0.00	8,376.4	369.4	-1,779.6	1,817.5	0.00	0.00	
8,700.0	0.00	0.00	8,476.4	369.4	-1,779.6	1,817.5	0.00	0.00	
8,800.0	0.00	0.00	8,576.4	369.4	-1,779.6	1,817.5	0.00	0.00	
8,900.0	0.00	0.00	8,676.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,000.0	0.00	0.00	8,776.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,100.0	0.00	0.00	8,876.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,200.0	0.00	0.00	8,976.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,287.6	0.00	0.00	9,064.0	369.4	-1,779.6	1,817.5	0.00	0.00	COAL RIDGE
9,300.0	0.00	0.00	9,076.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,400.0	0.00	0.00	9,176.4	369.4	-1,779.6	1,817.5	0.00	0.00	

Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12B
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 8-12B	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	9,276.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,600.0	0.00	0.00	9,376.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,700.0	0.00	0.00	9,476.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,800.0	0.00	0.00	9,576.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,900.0	0.00	0.00	9,676.4	369.4	-1,779.6	1,817.5	0.00	0.00	
9,942.6	0.00	0.00	9,719.0	369.4	-1,779.6	1,817.5	0.00	0.00	ROLLINS SS
10,000.0	0.00	0.00	9,776.4	369.4	-1,779.6	1,817.5	0.00	0.00	
10,092.6	0.00	0.00	9,869.0	369.4	-1,779.6	1,817.5	0.00	0.00	TD at 10,092.6' MD - GMR 8-12B BHL
10,100.0	0.00	0.00	9,876.4	369.4	-1,779.6	1,817.5	0.00	0.00	
10,200.0	0.00	0.00	9,976.4	369.4	-1,779.6	1,817.5	0.00	0.00	
10,242.6	0.00	0.00	10,019.0	369.4	-1,779.6	1,817.5	0.00	0.00	Permit TD at 10,242.6' 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 8-12B Hardline	0.00	0.00	-9,869.0	369.4	-1,779.6	1,600,336.03	2,348,911.54	39° 27' 32.38 N	107° 48' 22.45 W
- plan misses target center by 10035.0ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			-9,869.0	100.0	-40.0	1,600,437.01	2,348,874.09		
Point 2			-9,869.0	-100.0	-40.0	1,600,237.08	2,348,869.03		
GMR 8-12B BHL	0.00	0.00	9,869.0	369.4	-1,779.6	1,600,336.03	2,348,911.54	39° 27' 32.38 N	107° 48' 22.45 W
- plan hits target center									
- Circle (radius 25.0)									
GMR 8-12B TOG	0.00	0.00	7,791.0	369.4	-1,779.6	1,600,336.03	2,348,911.54	39° 27' 32.38 N	107° 48' 22.45 W
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,250.0	1,227.2	Surface Casing	5.500	6.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,815.7	3,713.0	Wasach G Sand			
5,925.4	5,757.0	OHIO CREEK			
6,336.2	6,155.0	Mesa Verde			
6,956.5	6,756.0	Williams Fork			
8,014.6	7,791.0	TOP GAS			
9,287.6	9,064.0	COAL RIDGE			
9,942.6	9,719.0	ROLLINS SS			

Planning Report

Database:	US EDM 2003.21 Multi User Db	Local Co-ordinate Reference:	Well GMR 8-12B
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 8-12B	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	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
677.9	673.0	12.1	-58.2	EOB at Inc. = 14.34°
7,536.6	7,318.0	357.3	-1,721.3	Start Drop -3.00
8,014.6	7,791.0	369.4	-1,779.6	EOD at Inc. = 0°
10,092.6	9,869.0	369.4	-1,779.6	TD at 10,092.6' MD
10,242.6	10,019.0	369.4	-1,779.6	Permit TD at 10,242.6' MD