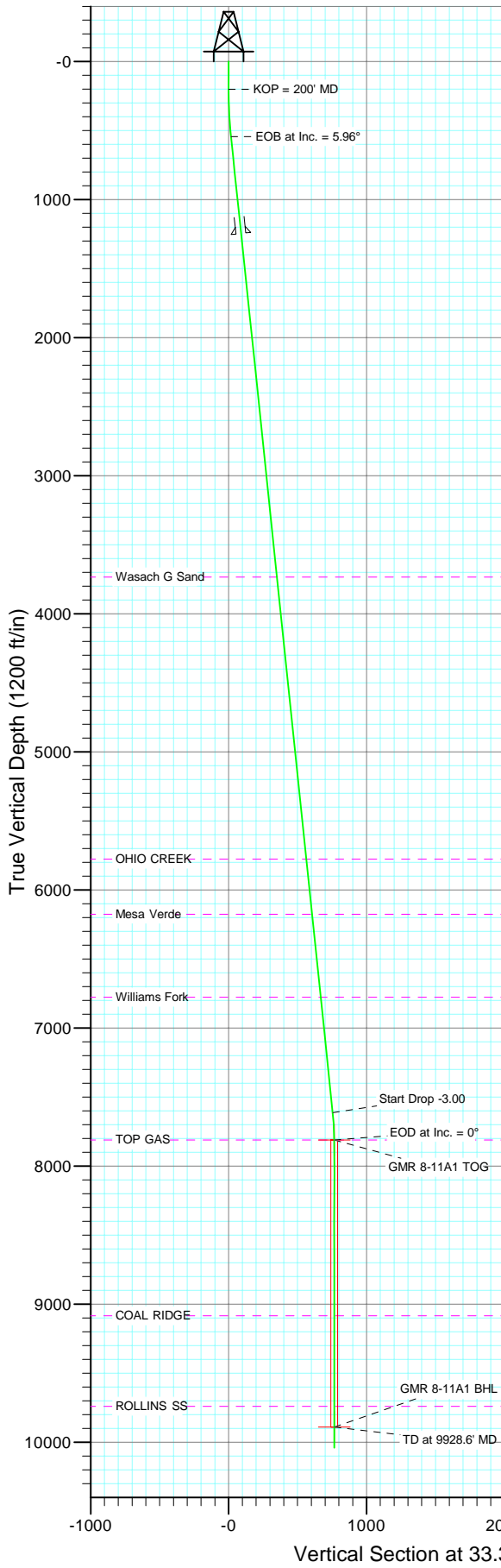
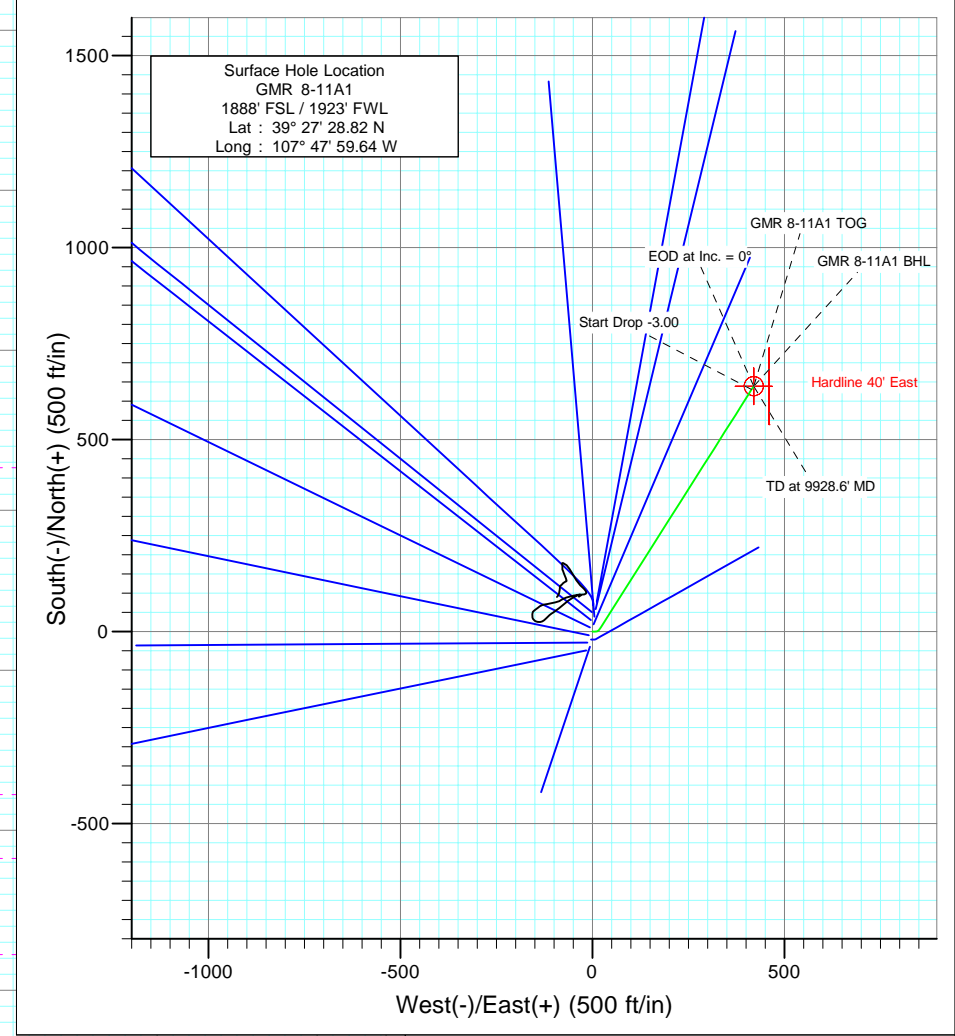




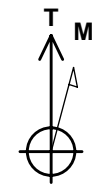
Project: Mamm Creek  
 Site: NESW S8 T7S R93W (K8W Pad)  
 Well: GMR 8-11A1  
 Wellbore: DD  
 Design: Plan #1



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	366.7	5.00	90.00	366.5	0.0	7.3	3.00	90.00	4.0	
4	544.7	5.96	32.37	543.8	7.8	20.0	3.00	-109.67	17.5	
5	7652.1	5.96	32.37	7612.8	630.7	414.9	0.00	0.00	755.0	
6	7850.6	0.00	0.00	7811.0	639.5	420.4	3.00	180.00	765.3	GMR 8-11A1 TOG
7	9928.6	0.00	0.00	9889.0	639.5	420.4	0.00	0.00	765.3	GMR 8-11A1 BHL
8	10078.6	0.00	0.00	10039.0	639.5	420.4	0.00	0.00	765.3	



Bottom Hole Location  
 GMR 8-11A1  
 2530' FSL / 2800' FEL  
 Lat : 39° 27' 35.14"  
 Long. : 107° 47' 54.28"



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	
3733.0	3751.2	Wasach G Sand	
5777.0	5806.3	OHIO CREEK	
6175.0	6206.5	Mesa Verde	
6776.0	6810.7	Williams Fork	
7811.0	7850.6	TOP GAS	
9084.0	9123.6	COAL RIDGE	
9739.0	9778.6	ROLLINS SS	

DESIGN DETAILS: Plan #1

Job # 95xxx: KR  
 KBE @ 7848.0ft (Nabors M15)

Target	Azimuth	Origin	N/S	E/W/From TVD
GMR 8-11A1 BHL	33.32	Slot	0.0	0.0 0.0



## Planning Report

<b>Database:</b> US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b> Well GMR 8-11A1
<b>Company:</b> EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b> KBE @ 7848.0ft (Nabors M15)
<b>Project:</b> Mamm Creek	<b>MD Reference:</b> KBE @ 7848.0ft (Nabors M15)
<b>Site:</b> NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b> True
<b>Well:</b> GMR 8-11A1	<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		

<b>Site</b> NESW S8 T7S R93W (K8W Pad)					
<b>Site Position:</b>		<b>Northing:</b>	1,599,999.23 ft	<b>Latitude:</b>	39.458194
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,350,698.86 ft	<b>Longitude:</b>	-107.799878
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	-1.45 °

<b>Well</b> GMR 8-11A1					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,599,930.60 ft	<b>Latitude:</b> 39.458006
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,350,690.85 ft	<b>Longitude:</b> -107.799900
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b> 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</b>
	IGRF200510	10/28/2009	(°) 10.45	(°) 65.80	(nT) 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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	33.32	

<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	
366.7	5.00	90.00	366.5	0.0	7.3	3.00	3.00	0.00	90.00	
544.7	5.96	32.37	543.8	7.8	20.0	3.00	0.54	-32.37	-109.67	
7,652.1	5.96	32.37	7,612.8	630.7	414.9	0.00	0.00	0.00	0.00	
7,850.6	0.00	0.00	7,811.0	639.5	420.4	3.00	-3.00	0.00	180.00	GMR 8-11A1 TOG
9,928.6	0.00	0.00	9,889.0	639.5	420.4	0.00	0.00	0.00	0.00	GMR 8-11A1 BHL
10,078.6	0.00	0.00	10,039.0	639.5	420.4	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 8-11A1
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 7848.0ft (Nabors M15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 7848.0ft (Nabors M15)
<b>Site:</b>	NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b>	True
<b>Well:</b>	GMR 8-11A1	<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 8-11A1 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	90.00	300.0	0.0	2.6	1.4	3.00	3.00	
366.7	5.00	90.00	366.5	0.0	7.3	4.0	3.00	3.00	
400.0	4.76	78.57	399.7	0.3	10.1	5.8	3.00	-0.73	
500.0	5.24	44.05	499.3	4.4	17.3	13.2	3.00	0.49	
544.7	5.96	32.37	543.8	7.8	20.0	17.5	3.00	1.59	EOB at Inc. = 5.96°
600.0	5.96	32.37	598.8	12.7	23.1	23.2	0.00	0.00	
700.0	5.96	32.37	698.3	21.4	28.6	33.6	0.00	0.00	
800.0	5.96	32.37	797.7	30.2	34.2	44.0	0.00	0.00	
900.0	5.96	32.37	897.2	38.9	39.7	54.4	0.00	0.00	
1,000.0	5.96	32.37	996.6	47.7	45.3	64.7	0.00	0.00	
1,100.0	5.96	32.37	1,096.1	56.5	50.8	75.1	0.00	0.00	
1,200.0	5.96	32.37	1,195.6	65.2	56.4	85.5	0.00	0.00	
1,250.0	5.96	32.37	1,245.3	69.6	59.2	90.7	0.00	0.00	Surface Casing
1,300.0	5.96	32.37	1,295.0	74.0	61.9	95.9	0.00	0.00	
1,400.0	5.96	32.37	1,394.5	82.8	67.5	106.2	0.00	0.00	
1,500.0	5.96	32.37	1,493.9	91.5	73.1	116.6	0.00	0.00	
1,600.0	5.96	32.37	1,593.4	100.3	78.6	127.0	0.00	0.00	
1,700.0	5.96	32.37	1,692.9	109.1	84.2	137.4	0.00	0.00	
1,800.0	5.96	32.37	1,792.3	117.8	89.7	147.7	0.00	0.00	
1,900.0	5.96	32.37	1,891.8	126.6	95.3	158.1	0.00	0.00	
2,000.0	5.96	32.37	1,991.2	135.4	100.8	168.5	0.00	0.00	
2,100.0	5.96	32.37	2,090.7	144.1	106.4	178.9	0.00	0.00	
2,200.0	5.96	32.37	2,190.2	152.9	111.9	189.3	0.00	0.00	
2,300.0	5.96	32.37	2,289.6	161.7	117.5	199.6	0.00	0.00	
2,400.0	5.96	32.37	2,389.1	170.4	123.1	210.0	0.00	0.00	
2,500.0	5.96	32.37	2,488.5	179.2	128.6	220.4	0.00	0.00	
2,600.0	5.96	32.37	2,588.0	187.9	134.2	230.8	0.00	0.00	
2,700.0	5.96	32.37	2,687.5	196.7	139.7	241.1	0.00	0.00	
2,800.0	5.96	32.37	2,786.9	205.5	145.3	251.5	0.00	0.00	
2,900.0	5.96	32.37	2,886.4	214.2	150.8	261.9	0.00	0.00	
3,000.0	5.96	32.37	2,985.8	223.0	156.4	272.3	0.00	0.00	
3,100.0	5.96	32.37	3,085.3	231.8	162.0	282.6	0.00	0.00	
3,200.0	5.96	32.37	3,184.8	240.5	167.5	293.0	0.00	0.00	
3,300.0	5.96	32.37	3,284.2	249.3	173.1	303.4	0.00	0.00	
3,400.0	5.96	32.37	3,383.7	258.1	178.6	313.8	0.00	0.00	
3,500.0	5.96	32.37	3,483.1	266.8	184.2	324.1	0.00	0.00	
3,600.0	5.96	32.37	3,582.6	275.6	189.7	334.5	0.00	0.00	
3,700.0	5.96	32.37	3,682.1	284.4	195.3	344.9	0.00	0.00	
3,751.2	5.96	32.37	3,733.0	288.8	198.1	350.2	0.00	0.00	Wasach G Sand
3,800.0	5.96	32.37	3,781.5	293.1	200.8	355.3	0.00	0.00	
3,900.0	5.96	32.37	3,881.0	301.9	206.4	365.6	0.00	0.00	
4,000.0	5.96	32.37	3,980.4	310.7	212.0	376.0	0.00	0.00	
4,100.0	5.96	32.37	4,079.9	319.4	217.5	386.4	0.00	0.00	
4,200.0	5.96	32.37	4,179.4	328.2	223.1	396.8	0.00	0.00	
4,300.0	5.96	32.37	4,278.8	336.9	228.6	407.1	0.00	0.00	
4,400.0	5.96	32.37	4,378.3	345.7	234.2	417.5	0.00	0.00	
4,500.0	5.96	32.37	4,477.7	354.5	239.7	427.9	0.00	0.00	
4,600.0	5.96	32.37	4,577.2	363.2	245.3	438.3	0.00	0.00	
4,700.0	5.96	32.37	4,676.7	372.0	250.8	448.6	0.00	0.00	

Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11A1
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 7848.0ft (Nabors M15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 7848.0ft (Nabors M15)
<b>Site:</b>	NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b>	True
<b>Well:</b>	GMR 8-11A1	<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
4,800.0	5.96	32.37	4,776.1	380.8	256.4	459.0	0.00	0.00	
4,900.0	5.96	32.37	4,875.6	389.5	262.0	469.4	0.00	0.00	
5,000.0	5.96	32.37	4,975.0	398.3	267.5	479.8	0.00	0.00	
5,100.0	5.96	32.37	5,074.5	407.1	273.1	490.2	0.00	0.00	
5,200.0	5.96	32.37	5,174.0	415.8	278.6	500.5	0.00	0.00	
5,300.0	5.96	32.37	5,273.4	424.6	284.2	510.9	0.00	0.00	
5,400.0	5.96	32.37	5,372.9	433.4	289.7	521.3	0.00	0.00	
5,500.0	5.96	32.37	5,472.3	442.1	295.3	531.7	0.00	0.00	
5,600.0	5.96	32.37	5,571.8	450.9	300.8	542.0	0.00	0.00	
5,700.0	5.96	32.37	5,671.3	459.7	306.4	552.4	0.00	0.00	
5,800.0	5.96	32.37	5,770.7	468.4	312.0	562.8	0.00	0.00	
5,806.3	5.96	32.37	5,777.0	469.0	312.3	563.4	0.00	0.00	OHIO CREEK
5,900.0	5.96	32.37	5,870.2	477.2	317.5	573.2	0.00	0.00	
6,000.0	5.96	32.37	5,969.6	485.9	323.1	583.5	0.00	0.00	
6,100.0	5.96	32.37	6,069.1	494.7	328.6	593.9	0.00	0.00	
6,200.0	5.96	32.37	6,168.6	503.5	334.2	604.3	0.00	0.00	
6,206.5	5.96	32.37	6,175.0	504.0	334.5	605.0	0.00	0.00	Mesa Verde
6,300.0	5.96	32.37	6,268.0	512.2	339.7	614.7	0.00	0.00	
6,400.0	5.96	32.37	6,367.5	521.0	345.3	625.0	0.00	0.00	
6,500.0	5.96	32.37	6,466.9	529.8	350.9	635.4	0.00	0.00	
6,600.0	5.96	32.37	6,566.4	538.5	356.4	645.8	0.00	0.00	
6,700.0	5.96	32.37	6,665.9	547.3	362.0	656.2	0.00	0.00	
6,800.0	5.96	32.37	6,765.3	556.1	367.5	666.5	0.00	0.00	
6,810.7	5.96	32.37	6,776.0	557.0	368.1	667.7	0.00	0.00	Williams Fork
6,900.0	5.96	32.37	6,864.8	564.8	373.1	676.9	0.00	0.00	
7,000.0	5.96	32.37	6,964.2	573.6	378.6	687.3	0.00	0.00	
7,100.0	5.96	32.37	7,063.7	582.4	384.2	697.7	0.00	0.00	
7,200.0	5.96	32.37	7,163.2	591.1	389.7	708.0	0.00	0.00	
7,300.0	5.96	32.37	7,262.6	599.9	395.3	718.4	0.00	0.00	
7,400.0	5.96	32.37	7,362.1	608.7	400.9	728.8	0.00	0.00	
7,500.0	5.96	32.37	7,461.5	617.4	406.4	739.2	0.00	0.00	
7,600.0	5.96	32.37	7,561.0	626.2	412.0	749.5	0.00	0.00	
7,652.1	5.96	32.37	7,612.8	630.7	414.9	755.0	0.00	0.00	Start Drop -3.00
7,700.0	4.52	32.37	7,660.5	634.4	417.2	759.3	3.00	-3.00	
7,800.0	1.52	32.37	7,760.4	638.9	420.0	764.6	3.00	-3.00	
7,850.6	0.00	0.00	7,811.0	639.5	420.4	765.3	3.00	-3.00	EOD at Inc. = 0° - TOP GAS - GMR 8-11A1 TO
7,900.0	0.00	0.00	7,860.4	639.5	420.4	765.3	0.00	0.00	
8,000.0	0.00	0.00	7,960.4	639.5	420.4	765.3	0.00	0.00	
8,100.0	0.00	0.00	8,060.4	639.5	420.4	765.3	0.00	0.00	
8,200.0	0.00	0.00	8,160.4	639.5	420.4	765.3	0.00	0.00	
8,300.0	0.00	0.00	8,260.4	639.5	420.4	765.3	0.00	0.00	
8,400.0	0.00	0.00	8,360.4	639.5	420.4	765.3	0.00	0.00	
8,500.0	0.00	0.00	8,460.4	639.5	420.4	765.3	0.00	0.00	
8,600.0	0.00	0.00	8,560.4	639.5	420.4	765.3	0.00	0.00	
8,700.0	0.00	0.00	8,660.4	639.5	420.4	765.3	0.00	0.00	
8,800.0	0.00	0.00	8,760.4	639.5	420.4	765.3	0.00	0.00	
8,900.0	0.00	0.00	8,860.4	639.5	420.4	765.3	0.00	0.00	
9,000.0	0.00	0.00	8,960.4	639.5	420.4	765.3	0.00	0.00	
9,100.0	0.00	0.00	9,060.4	639.5	420.4	765.3	0.00	0.00	
9,123.6	0.00	0.00	9,084.0	639.5	420.4	765.3	0.00	0.00	COAL RIDGE
9,200.0	0.00	0.00	9,160.4	639.5	420.4	765.3	0.00	0.00	
9,300.0	0.00	0.00	9,260.4	639.5	420.4	765.3	0.00	0.00	

Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11A1
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KBE @ 7848.0ft (Nabors M15)
<b>Project:</b>	Mamm Creek	<b>MD Reference:</b>	KBE @ 7848.0ft (Nabors M15)
<b>Site:</b>	NESW S8 T7S R93W (K8W Pad)	<b>North Reference:</b>	True
<b>Well:</b>	GMR 8-11A1	<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
9,400.0	0.00	0.00	9,360.4	639.5	420.4	765.3	0.00	0.00	
9,500.0	0.00	0.00	9,460.4	639.5	420.4	765.3	0.00	0.00	
9,600.0	0.00	0.00	9,560.4	639.5	420.4	765.3	0.00	0.00	
9,700.0	0.00	0.00	9,660.4	639.5	420.4	765.3	0.00	0.00	
9,778.6	0.00	0.00	9,739.0	639.5	420.4	765.3	0.00	0.00	ROLLINS SS
9,800.0	0.00	0.00	9,760.4	639.5	420.4	765.3	0.00	0.00	
9,900.0	0.00	0.00	9,860.4	639.5	420.4	765.3	0.00	0.00	
9,928.6	0.00	0.00	9,889.0	639.5	420.4	765.3	0.00	0.00	TD at 9928.6' MD - GMR 8-11A1 BHL
10,000.0	0.00	0.00	9,960.4	639.5	420.4	765.3	0.00	0.00	
10,078.6	0.00	0.00	10,039.0	639.5	420.4	765.3	0.00	0.00	Permit TD at 10,078.6' 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 8-11A1 TOG - plan hits target center - Point	0.00	0.00	7,811.0	639.5	420.4	1,600,559.21	2,351,127.28	39.459761	-107.798411
GMR 8-11A1 BHL - plan hits target center - Circle (radius 25.0)	0.00	0.00	9,889.0	639.5	420.4	1,600,559.21	2,351,127.28	39.459761	-107.798411
GMR 8-11A1 Hardline - plan misses target center by 9918.6ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Polygon	0.00	0.00	-9,889.0	639.5	420.4	1,600,559.21	2,351,127.28	39.459761	-107.798411
Point 1			-9,889.0	100.0	40.0	1,600,658.16	2,351,169.80		
Point 2			-9,889.0	-100.0	40.0	1,600,458.23	2,351,164.74		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,250.0	1,245.3	Surface Casing	5.500	6.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,751.2	3,733.0	Wasach G Sand			
5,806.3	5,777.0	OHIO CREEK			
6,206.5	6,175.0	Mesa Verde			
6,810.7	6,776.0	Williams Fork			
7,850.6	7,811.0	TOP GAS			
9,123.6	9,084.0	COAL RIDGE			
9,778.6	9,739.0	ROLLINS SS			

## Planning Report

<b>Database:</b> US EDM 2003.21 Multi User Db <b>Company:</b> EnCana Oil & Gas (USA) Inc <b>Project:</b> Mamm Creek <b>Site:</b> NESW S8 T7S R93W (K8W Pad) <b>Well:</b> GMR 8-11A1 <b>Wellbore:</b> DD <b>Design:</b> Plan #1	<b>Local Co-ordinate Reference:</b> Well GMR 8-11A1 <b>TVD Reference:</b> KBE @ 7848.0ft (Nabors M15) <b>MD Reference:</b> KBE @ 7848.0ft (Nabors M15) <b>North Reference:</b> True <b>Survey Calculation Method:</b> 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
544.7	543.8	0.0	7.3	EOB at Inc. = 5.96°
7,652.1	7,612.8	7.8	20.0	Start Drop -3.00
7,850.6	7,811.0	630.7	414.9	EOD at Inc. = 0°
9,928.6	9,889.0	639.5	420.4	TD at 9928.6' MD
10,078.6	10,039.0	639.5	420.4	Permit TD at 10,078.6' MD