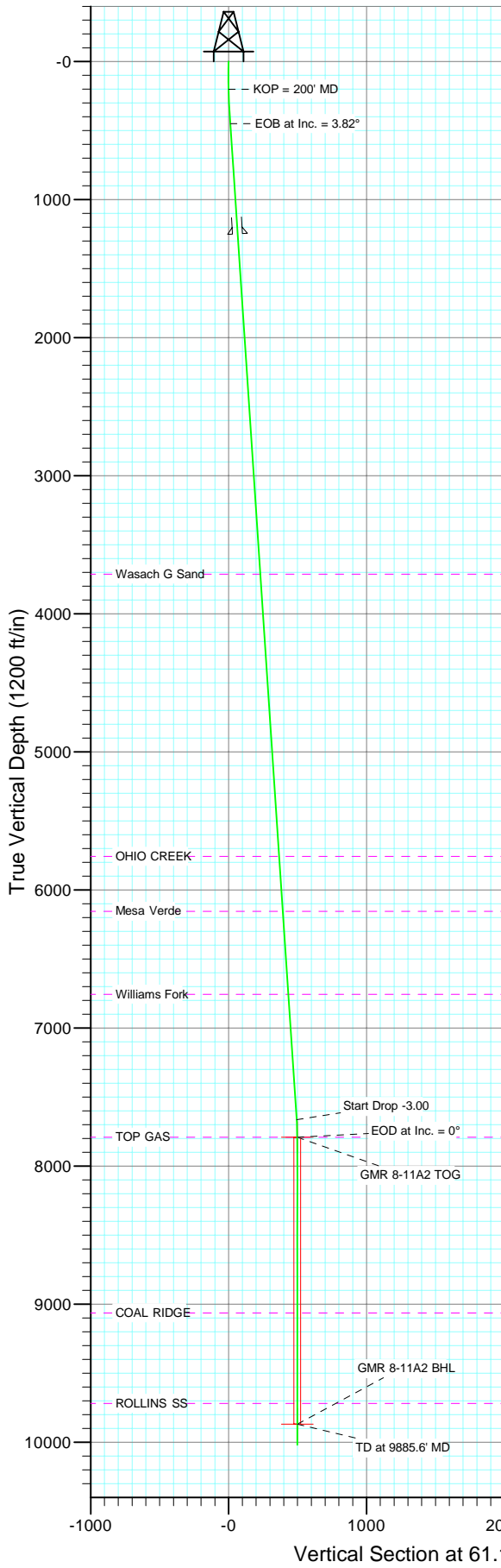
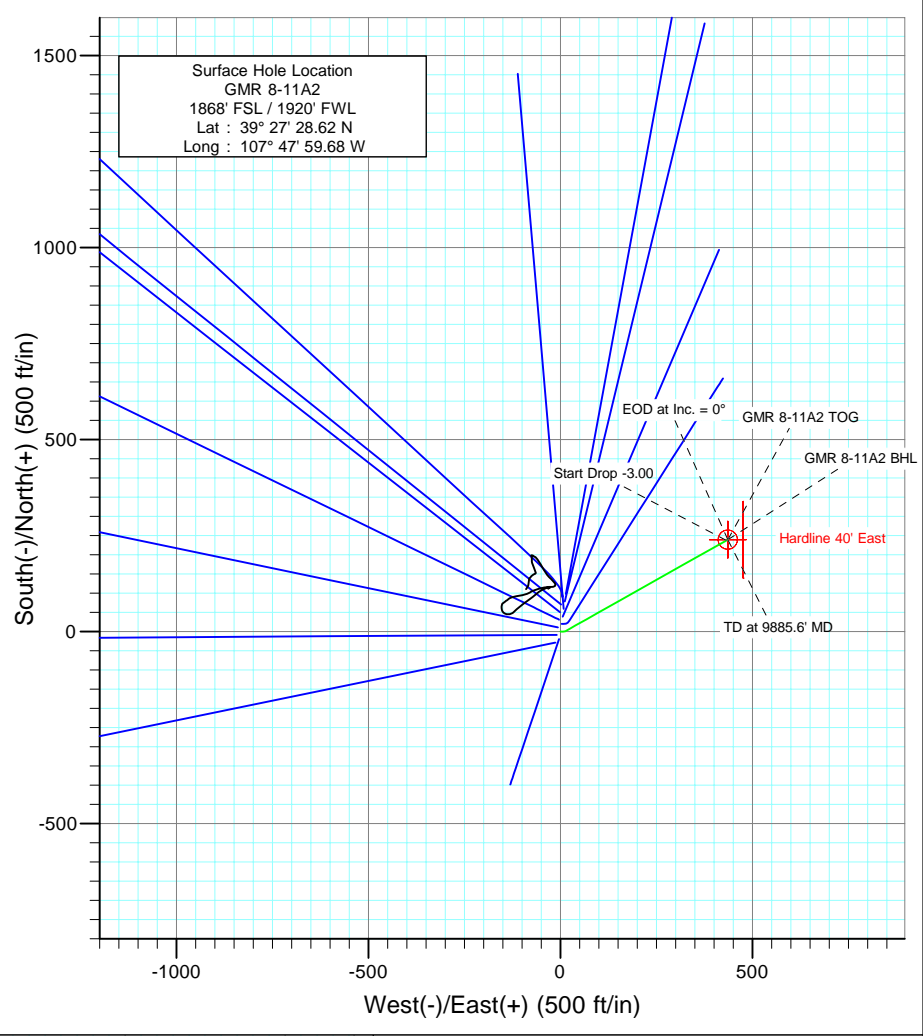




Project: Mamm Creek  
 Site: NESW S8 T7S R93W (K8W Pad)  
 Well: GMR 8-11A2  
 Wellbore: DD  
 Design: Plan #1



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	6.4	
4	450.4	3.82	60.58	450.0	1.4	13.3	3.00	-131.80	12.4	
5	7680.4	3.82	60.58	7663.9	237.7	432.4	0.00	0.00	493.4	
6	7807.6	0.00	0.00	7791.0	239.8	436.1	3.00	180.00	497.7	GMR 8-11A2 TOG
7	9885.6	0.00	0.00	9869.0	239.8	436.1	0.00	0.00	497.7	GMR 8-11A2 BHL
8	10035.6	0.00	0.00	10019.0	239.8	436.1	0.00	0.00	497.7	



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	3720.7	Wasach G Sand	
5757.0	5769.2	OHIO CREEK	
6155.0	6168.1	Mesa Verde	
6756.0	6770.5	Williams Fork	
7791.0	7807.6	TOP GAS	
9084.0	9080.6	COAL RIDGE	
9719.0	9735.6	ROLLINS SS	

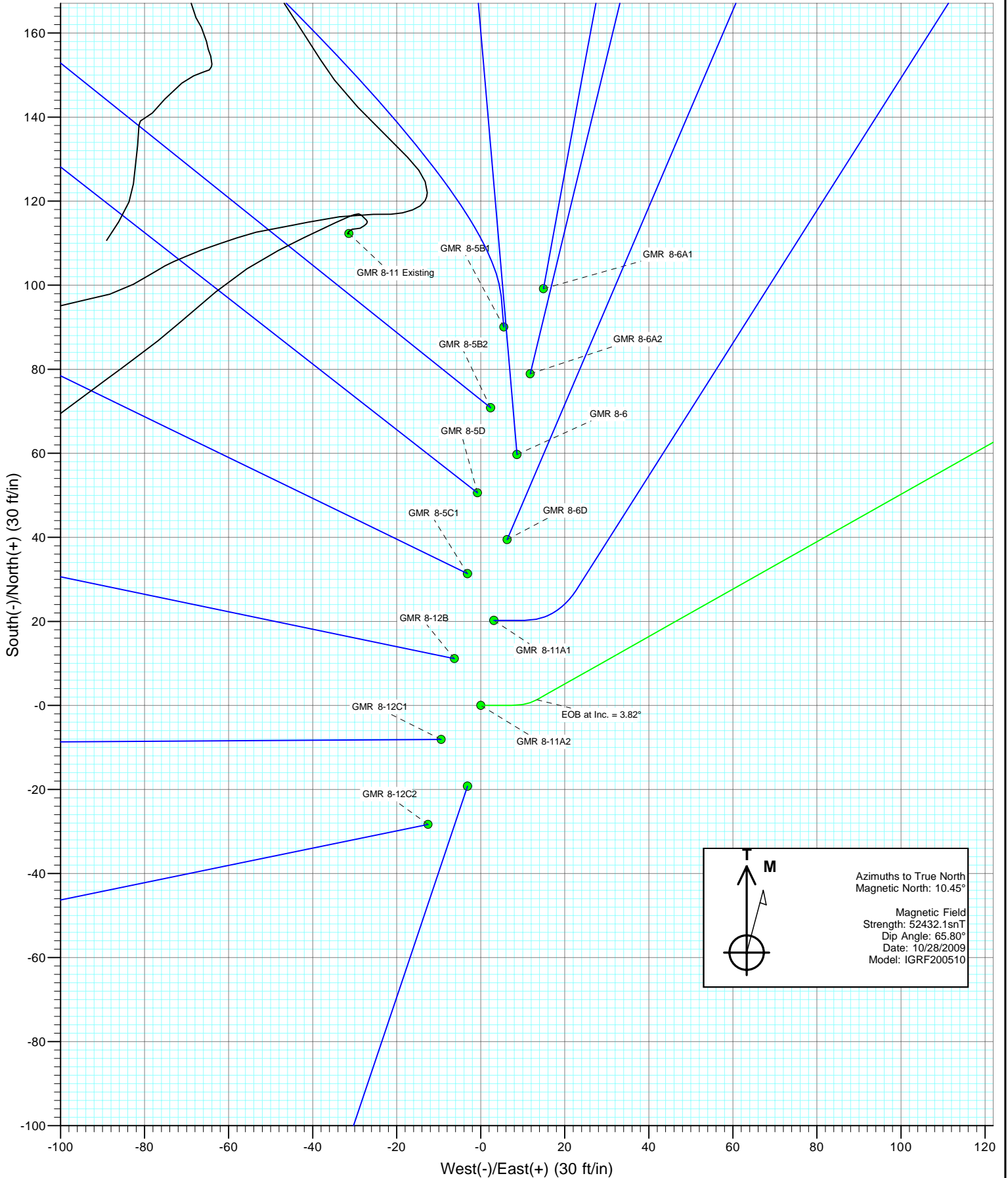
DESIGN DETAILS: Plan #1

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

Target	Azimuth	Origin	N/S	E/W	From TVD
GMR 8-11A2 BHL	61.19	Slot	0.0	0.0	0.0



Project: Mamm Creek  
Site: NESW S8 T7S R93W (K8W Pad)  
Well: GMR 8-11A2  
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 8-11A2
<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 8-11A2	<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° 27' 29.50 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,350,698.86 ft	<b>Longitude:</b>	107° 47' 59.56 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	in	<b>Grid Convergence:</b>	-1.45 °

<b>Well</b>	GMR 8-11A2					
<b>Well Position</b>	<b>+N/-S</b>	0.0 ft	<b>Northing:</b>	1,599,910.45 ft	<b>Latitude:</b>	39° 27' 28.62 N
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>	2,350,687.20 ft	<b>Longitude:</b>	107° 47' 59.68 W
<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	(°)	(°)	(nT)
			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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	61.19

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	
366.7	5.00	90.00	366.5	0.0	7.3	3.00	3.00	0.00	90.00	
450.4	3.82	60.58	450.0	1.4	13.3	3.00	-1.41	-35.12	-131.80	
7,680.4	3.82	60.58	7,663.9	237.7	432.4	0.00	0.00	0.00	0.00	
7,807.6	0.00	0.00	7,791.0	239.8	436.1	3.00	-3.00	0.00	180.00	GMR 8-11A2 TOG
9,885.6	0.00	0.00	9,869.0	239.8	436.1	0.00	0.00	0.00	0.00	GMR 8-11A2 BHL
10,035.6	0.00	0.00	10,019.0	239.8	436.1	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 8-11A2
<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 8-11A2	<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 8-11A2 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	2.3	3.00	3.00	
366.7	5.00	90.00	366.5	0.0	7.3	6.4	3.00	3.00	
400.0	4.40	80.23	399.7	0.2	10.0	8.8	3.00	-1.81	
450.4	3.82	60.59	449.9	1.4	13.3	12.4	3.00	-1.15	EOB at Inc. = 3.82°
500.0	3.82	60.58	499.4	3.0	16.2	15.7	0.00	0.00	
600.0	3.82	60.58	599.2	6.3	22.0	22.3	0.00	0.00	
700.0	3.82	60.58	699.0	9.5	27.8	29.0	0.00	0.00	
800.0	3.82	60.58	798.8	12.8	33.6	35.6	0.00	0.00	
900.0	3.82	60.58	898.6	16.1	39.4	42.3	0.00	0.00	
1,000.0	3.82	60.58	998.3	19.3	45.2	48.9	0.00	0.00	
1,100.0	3.82	60.58	1,098.1	22.6	51.0	55.6	0.00	0.00	
1,200.0	3.82	60.58	1,197.9	25.9	56.8	62.2	0.00	0.00	
1,250.0	3.82	60.58	1,247.8	27.5	59.7	65.6	0.00	0.00	Surface Casing
1,300.0	3.82	60.58	1,297.7	29.1	62.6	68.9	0.00	0.00	
1,400.0	3.82	60.58	1,397.4	32.4	68.4	75.5	0.00	0.00	
1,500.0	3.82	60.58	1,497.2	35.7	74.2	82.2	0.00	0.00	
1,600.0	3.82	60.58	1,597.0	38.9	80.0	88.8	0.00	0.00	
1,700.0	3.82	60.58	1,696.8	42.2	85.8	95.5	0.00	0.00	
1,800.0	3.82	60.58	1,796.6	45.5	91.6	102.2	0.00	0.00	
1,900.0	3.82	60.58	1,896.3	48.8	97.4	108.8	0.00	0.00	
2,000.0	3.82	60.58	1,996.1	52.0	103.2	115.5	0.00	0.00	
2,100.0	3.82	60.58	2,095.9	55.3	109.0	122.1	0.00	0.00	
2,200.0	3.82	60.58	2,195.7	58.6	114.7	128.8	0.00	0.00	
2,300.0	3.82	60.58	2,295.5	61.8	120.5	135.4	0.00	0.00	
2,400.0	3.82	60.58	2,395.2	65.1	126.3	142.1	0.00	0.00	
2,500.0	3.82	60.58	2,495.0	68.4	132.1	148.7	0.00	0.00	
2,600.0	3.82	60.58	2,594.8	71.6	137.9	155.4	0.00	0.00	
2,700.0	3.82	60.58	2,694.6	74.9	143.7	162.0	0.00	0.00	
2,800.0	3.82	60.58	2,794.3	78.2	149.5	168.7	0.00	0.00	
2,900.0	3.82	60.58	2,894.1	81.4	155.3	175.3	0.00	0.00	
3,000.0	3.82	60.58	2,993.9	84.7	161.1	182.0	0.00	0.00	
3,100.0	3.82	60.58	3,093.7	88.0	166.9	188.7	0.00	0.00	
3,200.0	3.82	60.58	3,193.5	91.3	172.7	195.3	0.00	0.00	
3,300.0	3.82	60.58	3,293.2	94.5	178.5	202.0	0.00	0.00	
3,400.0	3.82	60.58	3,393.0	97.8	184.3	208.6	0.00	0.00	
3,500.0	3.82	60.58	3,492.8	101.1	190.1	215.3	0.00	0.00	
3,600.0	3.82	60.58	3,592.6	104.3	195.9	221.9	0.00	0.00	
3,700.0	3.82	60.58	3,692.3	107.6	201.7	228.6	0.00	0.00	
3,720.7	3.82	60.58	3,713.0	108.3	202.9	230.0	0.00	0.00	Wasach G Sand
3,800.0	3.82	60.58	3,792.1	110.9	207.5	235.2	0.00	0.00	
3,900.0	3.82	60.58	3,891.9	114.1	213.3	241.9	0.00	0.00	
4,000.0	3.82	60.58	3,991.7	117.4	219.1	248.5	0.00	0.00	
4,100.0	3.82	60.58	4,091.5	120.7	224.9	255.2	0.00	0.00	
4,200.0	3.82	60.58	4,191.2	123.9	230.7	261.8	0.00	0.00	
4,300.0	3.82	60.58	4,291.0	127.2	236.5	268.5	0.00	0.00	
4,400.0	3.82	60.58	4,390.8	130.5	242.3	275.2	0.00	0.00	
4,500.0	3.82	60.58	4,490.6	133.8	248.1	281.8	0.00	0.00	
4,600.0	3.82	60.58	4,590.4	137.0	253.9	288.5	0.00	0.00	
4,700.0	3.82	60.58	4,690.1	140.3	259.6	295.1	0.00	0.00	

Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11A2
<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 8-11A2	<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	3.82	60.58	4,789.9	143.6	265.4	301.8	0.00	0.00	
4,900.0	3.82	60.58	4,889.7	146.8	271.2	308.4	0.00	0.00	
5,000.0	3.82	60.58	4,989.5	150.1	277.0	315.1	0.00	0.00	
5,100.0	3.82	60.58	5,089.2	153.4	282.8	321.7	0.00	0.00	
5,200.0	3.82	60.58	5,189.0	156.6	288.6	328.4	0.00	0.00	
5,300.0	3.82	60.58	5,288.8	159.9	294.4	335.0	0.00	0.00	
5,400.0	3.82	60.58	5,388.6	163.2	300.2	341.7	0.00	0.00	
5,500.0	3.82	60.58	5,488.4	166.4	306.0	348.3	0.00	0.00	
5,600.0	3.82	60.58	5,588.1	169.7	311.8	355.0	0.00	0.00	
5,700.0	3.82	60.58	5,687.9	173.0	317.6	361.7	0.00	0.00	
5,769.2	3.82	60.58	5,757.0	175.2	321.6	366.3	0.00	0.00	OHIO CREEK
5,800.0	3.82	60.58	5,787.7	176.3	323.4	368.3	0.00	0.00	
5,900.0	3.82	60.58	5,887.5	179.5	329.2	375.0	0.00	0.00	
6,000.0	3.82	60.58	5,987.2	182.8	335.0	381.6	0.00	0.00	
6,100.0	3.82	60.58	6,087.0	186.1	340.8	388.3	0.00	0.00	
6,168.1	3.82	60.58	6,155.0	188.3	344.7	392.8	0.00	0.00	Mesa Verde
6,200.0	3.82	60.58	6,186.8	189.3	346.6	394.9	0.00	0.00	
6,300.0	3.82	60.58	6,286.6	192.6	352.4	401.6	0.00	0.00	
6,400.0	3.82	60.58	6,386.4	195.9	358.2	408.2	0.00	0.00	
6,500.0	3.82	60.58	6,486.1	199.1	364.0	414.9	0.00	0.00	
6,600.0	3.82	60.58	6,585.9	202.4	369.8	421.5	0.00	0.00	
6,700.0	3.82	60.58	6,685.7	205.7	375.6	428.2	0.00	0.00	
6,770.5	3.82	60.58	6,756.0	208.0	379.6	432.9	0.00	0.00	Williams Fork
6,800.0	3.82	60.58	6,785.5	208.9	381.4	434.8	0.00	0.00	
6,900.0	3.82	60.58	6,885.3	212.2	387.2	441.5	0.00	0.00	
7,000.0	3.82	60.58	6,985.0	215.5	393.0	448.2	0.00	0.00	
7,100.0	3.82	60.58	7,084.8	218.7	398.7	454.8	0.00	0.00	
7,200.0	3.82	60.58	7,184.6	222.0	404.5	461.5	0.00	0.00	
7,300.0	3.82	60.58	7,284.4	225.3	410.3	468.1	0.00	0.00	
7,400.0	3.82	60.58	7,384.1	228.6	416.1	474.8	0.00	0.00	
7,500.0	3.82	60.58	7,483.9	231.8	421.9	481.4	0.00	0.00	
7,600.0	3.82	60.58	7,583.7	235.1	427.7	488.1	0.00	0.00	
7,680.4	3.82	60.58	7,663.9	237.7	432.4	493.4	0.00	0.00	Start Drop -3.00
7,700.0	3.23	60.58	7,683.5	238.3	433.4	494.6	3.00	-3.00	
7,800.0	0.23	60.58	7,783.4	239.8	436.1	497.6	3.00	-3.00	
7,807.6	0.00	0.00	7,791.0	239.8	436.1	497.7	3.00	-3.00	EOD at Inc. = 0° - TOP GAS - GMR 8-11A2 TO
7,900.0	0.00	0.00	7,883.4	239.8	436.1	497.7	0.00	0.00	
8,000.0	0.00	0.00	7,983.4	239.8	436.1	497.7	0.00	0.00	
8,100.0	0.00	0.00	8,083.4	239.8	436.1	497.7	0.00	0.00	
8,200.0	0.00	0.00	8,183.4	239.8	436.1	497.7	0.00	0.00	
8,300.0	0.00	0.00	8,283.4	239.8	436.1	497.7	0.00	0.00	
8,400.0	0.00	0.00	8,383.4	239.8	436.1	497.7	0.00	0.00	
8,500.0	0.00	0.00	8,483.4	239.8	436.1	497.7	0.00	0.00	
8,600.0	0.00	0.00	8,583.4	239.8	436.1	497.7	0.00	0.00	
8,700.0	0.00	0.00	8,683.4	239.8	436.1	497.7	0.00	0.00	
8,800.0	0.00	0.00	8,783.4	239.8	436.1	497.7	0.00	0.00	
8,900.0	0.00	0.00	8,883.4	239.8	436.1	497.7	0.00	0.00	
9,000.0	0.00	0.00	8,983.4	239.8	436.1	497.7	0.00	0.00	
9,080.6	0.00	0.00	9,064.0	239.8	436.1	497.7	0.00	0.00	COAL RIDGE
9,100.0	0.00	0.00	9,083.4	239.8	436.1	497.7	0.00	0.00	
9,200.0	0.00	0.00	9,183.4	239.8	436.1	497.7	0.00	0.00	
9,300.0	0.00	0.00	9,283.4	239.8	436.1	497.7	0.00	0.00	

Planning Report

<b>Database:</b>	US EDM 2003.21 Multi User Db	<b>Local Co-ordinate Reference:</b>	Well GMR 8-11A2
<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 8-11A2	<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	9,383.4	239.8	436.1	497.7	0.00	0.00	
9,500.0	0.00	0.00	9,483.4	239.8	436.1	497.7	0.00	0.00	
9,600.0	0.00	0.00	9,583.4	239.8	436.1	497.7	0.00	0.00	
9,700.0	0.00	0.00	9,683.4	239.8	436.1	497.7	0.00	0.00	
9,735.6	0.00	0.00	9,719.0	239.8	436.1	497.7	0.00	0.00	ROLLINS SS
9,800.0	0.00	0.00	9,783.4	239.8	436.1	497.7	0.00	0.00	
9,885.6	0.00	0.00	9,869.0	239.8	436.1	497.7	0.00	0.00	TD at 9885.6' MD - GMR 8-11A2 BHL
9,900.0	0.00	0.00	9,883.4	239.8	436.1	497.7	0.00	0.00	
10,000.0	0.00	0.00	9,983.4	239.8	436.1	497.7	0.00	0.00	
10,035.6	0.00	0.00	10,019.0	239.8	436.1	497.7	0.00	0.00	

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 8-11A2 BHL - plan hits target center - Circle (radius 25.0)	0.00	0.00	9,869.0	239.8	436.1	1,600,139.14	2,351,129.21	39° 27' 30.99 N	107° 47' 54.12 W	
GMR 8-11A2 TOG - plan hits target center - Point	0.00	0.00	7,791.0	239.8	436.1	1,600,139.14	2,351,129.21	39° 27' 30.99 N	107° 47' 54.12 W	
GMR 8-11A2 Hardline - plan misses target center by 9881.5ft at 0.0ft MD (0.0 TVD, 0.0 N, 0.0 E) - Polygon	0.00	0.00	-9,869.0	239.8	436.1	1,600,139.14	2,351,129.21	39° 27' 30.99 N	107° 47' 54.12 W	
Point 1			-9,869.0	100.0	40.0	1,600,238.09	2,351,171.73			
Point 2			-9,869.0	-100.0	40.0	1,600,038.16	2,351,166.66			

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,250.0	1,247.8	Surface Casing	5.500	6.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,720.7	3,713.0	Wasach G Sand			
5,769.2	5,757.0	OHIO CREEK			
6,168.1	6,155.0	Mesa Verde			
6,770.5	6,756.0	Williams Fork			
7,807.6	7,791.0	TOP GAS			
9,080.6	9,064.0	COAL RIDGE			
9,735.6	9,719.0	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 8-11A2 <b>Wellbore:</b> DD <b>Design:</b> Plan #1	<b>Local Co-ordinate Reference:</b> Well GMR 8-11A2 <b>TVD Reference:</b> KBE @ 7848.0ft (Original Well Elev) <b>MD Reference:</b> KBE @ 7848.0ft (Original Well Elev) <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
450.4	450.0	0.0	7.3	EOB at Inc. = 3.82°
7,680.4	7,663.9	1.4	13.3	Start Drop -3.00
7,807.6	7,791.0	237.7	432.4	EOD at Inc. = 0°
9,885.6	9,869.0	239.8	436.1	TD at 9885.6' MD
10,035.6	10,019.0	239.8	436.1	Permit TD at 10,035.6' MD