

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

**Miller #5**

**GGU Miller 13A-31-691**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**22 October, 2009**

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU Miller 13A-31-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Site:</b>	Miller #5	<b>North Reference:</b>	True
<b>Well:</b>	GGU Miller 13A-31-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	GARFIELD COUNTY, COLORADO NAD 1983		
<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>	Miller #5		
<b>Site Position:</b>		<b>Northing:</b>	1,607,064.787 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,407,107.914 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	39° 28' 52.848 N
		<b>Longitude:</b>	107° 36' 2.5580 W
		<b>Grid Convergence:</b>	-1.32 °

<b>Well</b>	GGU Miller 13A-31-691		
<b>Well Position</b>	<b>+N/-S</b>	-73.46 ft	<b>Northing:</b>
	<b>+E/-W</b>	-114.16 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			39° 28' 52.122 N
			<b>Longitude:</b>
			107° 36' 4.0140 W
			<b>Ground Level:</b>
			0.00 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	11/4/2008	10.49	65.88	52,581

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	262.27

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,314.05	14.10	262.27	1,308.38	-9.29	-68.43	2.50	2.50	0.00	262.27	
3,363.82	14.10	262.27	3,296.37	-76.47	-563.29	0.00	0.00	0.00	0.00	
4,303.91	0.00	0.00	4,227.00	-91.95	-677.35	1.50	-1.50	0.00	180.00	
7,053.91	0.00	0.00	6,977.00	-91.95	-677.35	0.00	0.00	0.00	0.00	TOG 13A-31-691

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## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU Miller 13A-31-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Site:</b>	Miller #5	<b>North Reference:</b>	True
<b>Well:</b>	GGU Miller 13A-31-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #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)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
800.00	1.25	262.27	800.00	-0.07	-0.54	0.55	2.50	2.50	0.00
900.00	3.75	262.27	899.89	-0.66	-4.86	4.91	2.50	2.50	0.00
1,000.00	6.25	262.27	999.50	-1.83	-13.50	13.62	2.50	2.50	0.00
1,100.00	8.75	262.27	1,098.64	-3.59	-26.43	26.67	2.50	2.50	0.00
1,200.00	11.25	262.27	1,197.11	-5.92	-43.64	44.04	2.50	2.50	0.00
1,300.00	13.75	262.27	1,294.74	-8.84	-65.08	65.68	2.50	2.50	0.00
1,314.05	14.10	262.27	1,308.38	-9.29	-68.43	69.06	2.50	2.50	0.00
1,400.00	14.10	262.27	1,391.73	-12.11	-89.18	90.00	0.00	0.00	0.00
1,500.00	14.10	262.27	1,488.72	-15.38	-113.33	114.36	0.00	0.00	0.00
1,600.00	14.10	262.27	1,585.71	-18.66	-137.47	138.73	0.00	0.00	0.00
1,700.00	14.10	262.27	1,682.69	-21.94	-161.61	163.09	0.00	0.00	0.00
1,800.00	14.10	262.27	1,779.68	-25.22	-185.75	187.46	0.00	0.00	0.00
1,900.00	14.10	262.27	1,876.67	-28.49	-209.89	211.82	0.00	0.00	0.00
2,000.00	14.10	262.27	1,973.65	-31.77	-234.04	236.18	0.00	0.00	0.00
2,100.00	14.10	262.27	2,070.64	-35.05	-258.18	260.55	0.00	0.00	0.00
2,200.00	14.10	262.27	2,167.63	-38.33	-282.32	284.91	0.00	0.00	0.00
2,300.00	14.10	262.27	2,264.61	-41.60	-306.46	309.27	0.00	0.00	0.00
2,400.00	14.10	262.27	2,361.60	-44.88	-330.61	333.64	0.00	0.00	0.00
2,500.00	14.10	262.27	2,458.59	-48.16	-354.75	358.00	0.00	0.00	0.00
2,600.00	14.10	262.27	2,555.57	-51.44	-378.89	382.37	0.00	0.00	0.00
2,700.00	14.10	262.27	2,652.56	-54.71	-403.03	406.73	0.00	0.00	0.00
2,800.00	14.10	262.27	2,749.55	-57.99	-427.18	431.09	0.00	0.00	0.00
2,900.00	14.10	262.27	2,846.53	-61.27	-451.32	455.46	0.00	0.00	0.00
3,000.00	14.10	262.27	2,943.52	-64.55	-475.46	479.82	0.00	0.00	0.00
3,100.00	14.10	262.27	3,040.51	-67.82	-499.60	504.18	0.00	0.00	0.00
3,132.47	14.10	262.27	3,072.00	-68.89	-507.44	512.10	0.00	0.00	0.00
Mesaverde									
3,200.00	14.10	262.27	3,137.49	-71.10	-523.74	528.55	0.00	0.00	0.00
3,300.00	14.10	262.27	3,234.48	-74.38	-547.89	552.91	0.00	0.00	0.00
3,363.82	14.10	262.27	3,296.37	-76.47	-563.29	568.46	0.00	0.00	0.00
3,400.00	13.56	262.27	3,331.51	-77.63	-571.86	577.11	1.50	-1.50	0.00
3,500.00	12.06	262.27	3,429.02	-80.61	-593.83	599.28	1.50	-1.50	0.00
3,600.00	10.56	262.27	3,527.07	-83.25	-613.26	618.89	1.50	-1.50	0.00
3,700.00	9.06	262.27	3,625.61	-85.54	-630.14	635.92	1.50	-1.50	0.00
3,800.00	7.56	262.27	3,724.55	-87.49	-644.46	650.37	1.50	-1.50	0.00
3,900.00	6.06	262.27	3,823.85	-89.08	-656.21	662.23	1.50	-1.50	0.00
3,953.41	5.26	262.27	3,877.00	-89.79	-661.43	667.49	1.50	-1.50	0.00
Price Coal									
4,000.00	4.56	262.27	3,923.41	-90.33	-665.38	671.48	1.50	-1.50	0.00
4,100.00	3.06	262.27	4,023.19	-91.22	-671.96	678.12	1.50	-1.50	0.00
4,128.84	2.63	262.27	4,052.00	-91.41	-673.38	679.55	1.50	-1.50	0.00
Top Gas									
4,200.00	1.56	262.27	4,123.11	-91.76	-675.95	682.15	1.50	-1.50	0.00

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<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Site:</b>	Miller #5	<b>North Reference:</b>	True
<b>Well:</b>	GGU Miller 13A-31-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #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)	Turn Rate (°/100ft)
4,300.00	0.06	262.27	4,223.09	-91.95	-677.35	683.56	1.50	-1.50	0.00
4,303.91	0.00	0.00	4,227.00	-91.95	-677.35	683.56	1.50	-1.50	0.00
4,400.00	0.00	0.00	4,323.09	-91.95	-677.35	683.56	0.00	0.00	0.00
4,500.00	0.00	0.00	4,423.09	-91.95	-677.35	683.56	0.00	0.00	0.00
4,600.00	0.00	0.00	4,523.09	-91.95	-677.35	683.56	0.00	0.00	0.00
4,700.00	0.00	0.00	4,623.09	-91.95	-677.35	683.56	0.00	0.00	0.00
4,800.00	0.00	0.00	4,723.09	-91.95	-677.35	683.56	0.00	0.00	0.00
4,900.00	0.00	0.00	4,823.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,000.00	0.00	0.00	4,923.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,100.00	0.00	0.00	5,023.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,200.00	0.00	0.00	5,123.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,300.00	0.00	0.00	5,223.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,400.00	0.00	0.00	5,323.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,500.00	0.00	0.00	5,423.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,600.00	0.00	0.00	5,523.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,700.00	0.00	0.00	5,623.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,800.00	0.00	0.00	5,723.09	-91.95	-677.35	683.56	0.00	0.00	0.00
5,900.00	0.00	0.00	5,823.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,000.00	0.00	0.00	5,923.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,100.00	0.00	0.00	6,023.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,200.00	0.00	0.00	6,123.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,300.00	0.00	0.00	6,223.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,400.00	0.00	0.00	6,323.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,500.00	0.00	0.00	6,423.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,600.00	0.00	0.00	6,523.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,700.00	0.00	0.00	6,623.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,753.91	0.00	0.00	6,677.00	-91.95	-677.35	683.56	0.00	0.00	0.00
<b>Rollins</b>									
6,800.00	0.00	0.00	6,723.09	-91.95	-677.35	683.56	0.00	0.00	0.00
6,900.00	0.00	0.00	6,823.09	-91.95	-677.35	683.56	0.00	0.00	0.00
7,000.00	0.00	0.00	6,923.09	-91.95	-677.35	683.56	0.00	0.00	0.00
7,053.91	0.00	0.00	6,977.00	-91.95	-677.35	683.56	0.00	0.00	0.00
<b>TD</b>									

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
750.00	750.00	9 5/8"	9-5/8	12-1/4

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU Miller 13A-31-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Site:</b>	Miller #5	<b>North Reference:</b>	True
<b>Well:</b>	GGU Miller 13A-31-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,132.47	3,072.00	Mesaverde		0.00		
3,953.41	3,877.00	Price Coal		0.00		
4,128.84	4,052.00	Top Gas		0.00		
6,753.91	6,677.00	Rollins		0.00		
7,053.91	6,977.00	TD		0.00		

## WELL DETAILS: GGU Miller 13A-31-691

Ground Level: 0.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1606993.983	2406992.087	29° 28' 52.1221N	107° 36' 4.0140 W	



Azimuths to True North  
Magnetic North: 10.49°

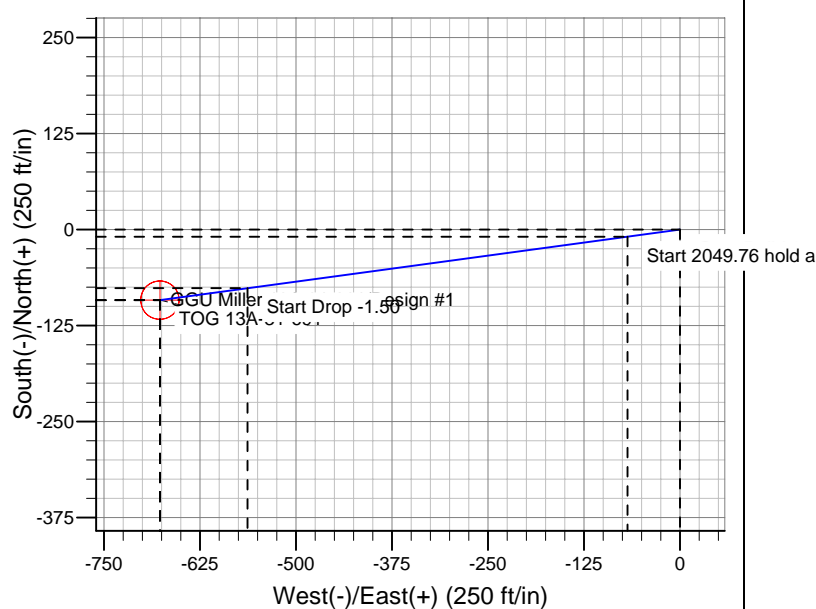
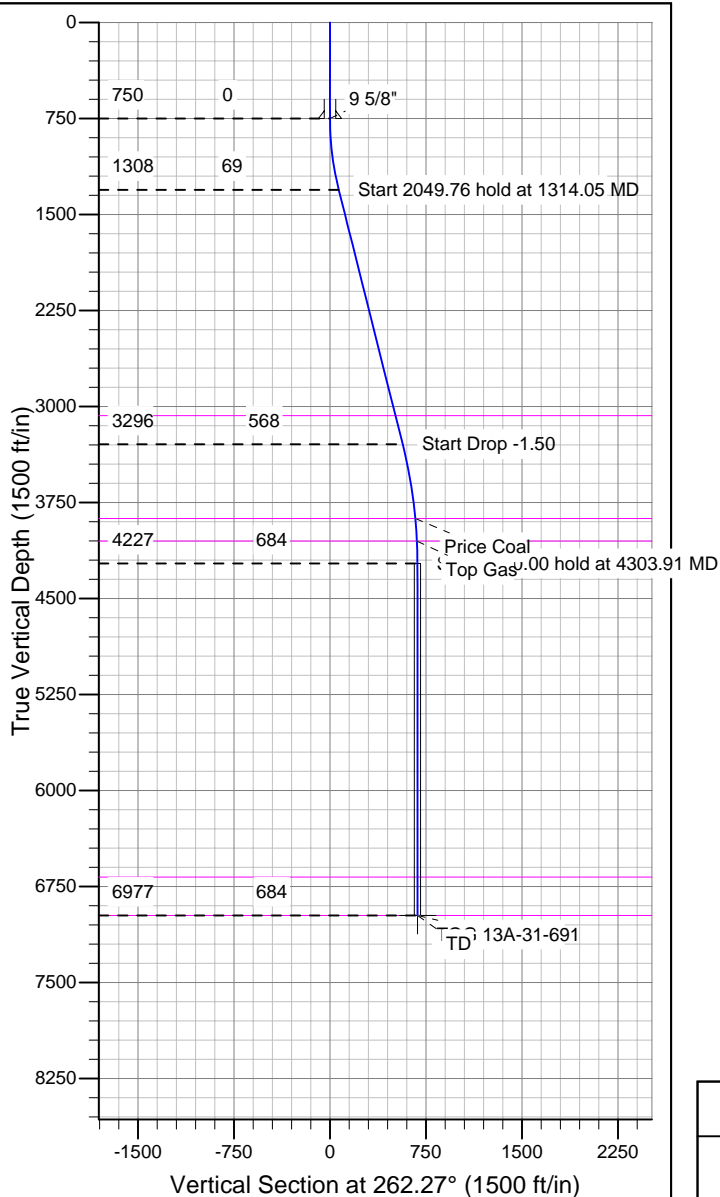
Magnetic Field  
Strength: 52581.3nT  
Dip Angle: 65.88°  
Date: 11/4/2008  
Model: IGRF200510

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	
3	1314.05	14.10	262.27	1308.38	-9.29	-68.43	2.50	262.27	69.06	
4	1363.82	14.10	262.27	3296.37	-76.47	-563.29	0.00	0.00	568.46	
5	1303.91	0.00	0.00	4227.00	-91.95	-677.35	1.50	180.00	683.56	
6	7053.91	0.00	0.00	6977.00	-91.95	-677.35	0.00	0.00	683.56	TOG 13A-31-691

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
TOG 13A-31-691	6977.00	-91.95	-677.35	Circle (Radius: 25.00)



## CASING DETAILS

TVD	MD	Name	Size
750.00	750.00	9 5/8"	9-5/8

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3072.00	3132.47	Mesaverde
3877.00	3953.41	Price Coal
4052.00	4128.84	Top Gas
6677.00	6753.91	Rollins
6977.00	7053.91	TD

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well GGU Miller 13A-31-691, True North  
Vertical (TVD) Reference: WELL @ 6035.00ft (Original Well Elev)  
Section (VS) Reference: Slot - (0.00N, 0.00E)  
Measured Depth Reference: WELL @ 6035.00ft (Original Well Elev)  
Calculation Method: Minimum Curvature