

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

**MDP #11**

**GGU Federal #34A-20-691**

**GGU Federal #34A-20-691**

**Plan: Design #1**

## **Standard Planning Report**

**28 April, 2010**

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU Federal #34A-20-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 0.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 0.00ft (Original Well Elev)
<b>Site:</b>	MDP #11	<b>North Reference:</b>	Grid
<b>Well:</b>	GGU Federal #34A-20-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	GGU Federal #34A-20-691		
<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>	MDP #11		
<b>Site Position:</b>		<b>Northing:</b>	1,614,678.473 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,415,085.675 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	39° 30' 9.890 N
		<b>Longitude:</b>	107° 34' 23.0500 W
		<b>Grid Convergence:</b>	-1.31 °

<b>Well</b>	GGU Federal #34A-20-691		
<b>Well Position</b>	<b>+N/-S</b>	24.61 ft	<b>Northing:</b>
	<b>+E/-W</b>	-59.02 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			39° 30' 10.120 N
			<b>Longitude:</b>
			107° 34' 23.8100 W
			<b>Ground Level:</b>
			0.00 ft

<b>Wellbore</b>	GGU Federal #34A-20-691				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	12/31/2009	10.33	65.87	52,532

<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	335.03

<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	
837.70	0.00	0.00	837.70	0.00	0.00	0.00	0.00	0.00	0.00	
2,060.82	30.58	335.03	2,003.58	288.91	-134.56	2.50	2.50	0.00	335.03	
3,800.25	30.58	335.03	3,501.12	1,091.03	-508.16	0.00	0.00	0.00	0.00	
5,023.37	0.00	0.00	4,667.00	1,379.94	-642.72	2.50	-2.50	0.00	180.00	
7,723.37	0.00	0.00	7,367.00	1,379.94	-642.72	0.00	0.00	0.00	0.00	PBHL_GGU Feder

**BBC**  
Planning Report

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<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 0.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 0.00ft (Original Well Elev)
<b>Site:</b>	MDP #11	<b>North Reference:</b>	Grid
<b>Well:</b>	GGU Federal #34A-20-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	GGU Federal #34A-20-691		
<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
737.70	0.00	0.00	737.70	0.00	0.00	0.00	0.00	0.00	0.00
Surface Casing									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
837.70	0.00	0.00	837.70	0.00	0.00	0.00	0.00	0.00	0.00
900.00	1.56	335.03	899.99	0.77	-0.36	0.85	2.50	2.50	0.00
1,000.00	4.06	335.03	999.86	5.21	-2.43	5.74	2.50	2.50	0.00
1,100.00	6.56	335.03	1,099.43	13.59	-6.33	14.99	2.50	2.50	0.00
1,200.00	9.06	335.03	1,198.49	25.91	-12.07	28.58	2.50	2.50	0.00
1,300.00	11.56	335.03	1,296.87	42.12	-19.62	46.47	2.50	2.50	0.00
1,400.00	14.06	335.03	1,394.38	62.22	-28.98	68.63	2.50	2.50	0.00
1,500.00	16.56	335.03	1,490.82	86.15	-40.12	95.03	2.50	2.50	0.00
1,600.00	19.06	335.03	1,586.02	113.87	-53.03	125.61	2.50	2.50	0.00
1,700.00	21.56	335.03	1,679.80	145.33	-67.69	160.31	2.50	2.50	0.00
1,800.00	24.06	335.03	1,771.97	180.46	-84.05	199.08	2.50	2.50	0.00
1,900.00	26.56	335.03	1,862.37	219.21	-102.10	241.82	2.50	2.50	0.00
2,000.00	29.06	335.03	1,950.81	261.49	-121.79	288.47	2.50	2.50	0.00
2,060.82	30.58	335.03	2,003.58	288.91	-134.56	318.71	2.50	2.50	0.00
2,100.00	30.58	335.03	2,037.31	306.98	-142.98	338.64	0.00	0.00	0.00
2,200.00	30.58	335.03	2,123.41	353.09	-164.46	389.51	0.00	0.00	0.00
2,300.00	30.58	335.03	2,209.50	399.20	-185.93	440.38	0.00	0.00	0.00
2,400.00	30.58	335.03	2,295.59	445.32	-207.41	491.25	0.00	0.00	0.00
2,500.00	30.58	335.03	2,381.69	491.43	-228.89	542.12	0.00	0.00	0.00
2,600.00	30.58	335.03	2,467.78	537.55	-250.37	592.99	0.00	0.00	0.00
2,700.00	30.58	335.03	2,553.87	583.66	-271.85	643.86	0.00	0.00	0.00
2,800.00	30.58	335.03	2,639.97	629.78	-293.33	694.74	0.00	0.00	0.00
2,900.00	30.58	335.03	2,726.06	675.89	-314.80	745.61	0.00	0.00	0.00
3,000.00	30.58	335.03	2,812.16	722.00	-336.28	796.48	0.00	0.00	0.00
3,100.00	30.58	335.03	2,898.25	768.12	-357.76	847.35	0.00	0.00	0.00
3,200.00	30.58	335.03	2,984.34	814.23	-379.24	898.22	0.00	0.00	0.00
3,300.00	30.58	335.03	3,070.44	860.35	-400.72	949.09	0.00	0.00	0.00
3,400.00	30.58	335.03	3,156.53	906.46	-422.19	999.96	0.00	0.00	0.00
3,500.00	30.58	335.03	3,242.62	952.58	-443.67	1,050.83	0.00	0.00	0.00
3,600.00	30.58	335.03	3,328.72	998.69	-465.15	1,101.70	0.00	0.00	0.00
3,700.00	30.58	335.03	3,414.81	1,044.81	-486.63	1,152.57	0.00	0.00	0.00
3,800.00	30.58	335.03	3,500.91	1,090.92	-508.11	1,203.44	0.00	0.00	0.00
3,800.25	30.58	335.03	3,501.12	1,091.03	-508.16	1,203.57	0.00	0.00	0.00
3,818.65	30.12	335.03	3,517.00	1,099.46	-512.09	1,212.87	2.50	-2.50	0.00
Mesaverde									
3,900.00	28.08	335.03	3,588.08	1,135.33	-528.79	1,252.43	2.50	-2.50	0.00
4,000.00	25.58	335.03	3,677.30	1,176.24	-547.85	1,297.57	2.50	-2.50	0.00
4,100.00	23.08	335.03	3,768.41	1,213.59	-565.24	1,338.77	2.50	-2.50	0.00
4,200.00	20.58	335.03	3,861.23	1,247.30	-580.95	1,375.96	2.50	-2.50	0.00
4,300.00	18.08	335.03	3,955.58	1,277.31	-594.92	1,409.07	2.50	-2.50	0.00
4,400.00	15.58	335.03	4,051.29	1,303.56	-607.15	1,438.02	2.50	-2.50	0.00
4,500.00	13.08	335.03	4,148.17	1,326.01	-617.60	1,462.78	2.50	-2.50	0.00

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<b>Site:</b>	MDP #11	<b>North Reference:</b>	Grid
<b>Well:</b>	GGU Federal #34A-20-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	GGU Federal #34A-20-691		
<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)
4,600.00	10.58	335.03	4,246.04	1,344.59	-626.26	1,483.29	2.50	-2.50	0.00
4,661.87	9.04	335.03	4,307.00	1,354.15	-630.71	1,493.83	2.50	-2.50	0.00
<b>Price Coal</b>									
4,700.00	8.08	335.03	4,344.70	1,359.30	-633.11	1,499.50	2.50	-2.50	0.00
4,800.00	5.58	335.03	4,443.98	1,370.08	-638.13	1,511.40	2.50	-2.50	0.00
4,900.00	3.08	335.03	4,543.69	1,376.93	-641.32	1,518.96	2.50	-2.50	0.00
4,983.37	1.00	335.03	4,627.00	1,379.63	-642.58	1,521.93	2.50	-2.50	0.00
<b>Top of Gas</b>									
5,000.00	0.58	335.03	4,643.63	1,379.83	-642.67	1,522.16	2.50	-2.50	0.00
5,023.37	0.00	0.00	4,667.00	1,379.94	-642.72	1,522.28	2.50	-2.50	0.00
5,100.00	0.00	0.00	4,743.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
5,200.00	0.00	0.00	4,843.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
5,300.00	0.00	0.00	4,943.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
5,400.00	0.00	0.00	5,043.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
5,500.00	0.00	0.00	5,143.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
5,600.00	0.00	0.00	5,243.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
5,700.00	0.00	0.00	5,343.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
5,800.00	0.00	0.00	5,443.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
5,900.00	0.00	0.00	5,543.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,000.00	0.00	0.00	5,643.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,100.00	0.00	0.00	5,743.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,200.00	0.00	0.00	5,843.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,300.00	0.00	0.00	5,943.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,400.00	0.00	0.00	6,043.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,500.00	0.00	0.00	6,143.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,600.00	0.00	0.00	6,243.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,700.00	0.00	0.00	6,343.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,800.00	0.00	0.00	6,443.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
6,900.00	0.00	0.00	6,543.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,000.00	0.00	0.00	6,643.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,100.00	0.00	0.00	6,743.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,200.00	0.00	0.00	6,843.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,300.00	0.00	0.00	6,943.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,400.00	0.00	0.00	7,043.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,423.37	0.00	0.00	7,067.00	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
<b>Rollins</b>									
7,500.00	0.00	0.00	7,143.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,600.00	0.00	0.00	7,243.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,700.00	0.00	0.00	7,343.63	1,379.94	-642.72	1,522.28	0.00	0.00	0.00
7,723.37	0.00	0.00	7,367.00	1,379.94	-642.72	1,522.28	0.00	0.00	0.00

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
737.70	737.70	Surface Casing	9-5/8	12-1/4

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU Federal #34A-20-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 0.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 0.00ft (Original Well Elev)
<b>Site:</b>	MDP #11	<b>North Reference:</b>	Grid
<b>Well:</b>	GGU Federal #34A-20-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	GGU Federal #34A-20-691		
<b>Design:</b>	Design #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,818.65	3,517.00	Mesaverde		0.00		
4,661.87	4,307.00	Price Coal		0.00		
4,983.37	4,627.00	Top of Gas		0.00		
7,423.37	7,067.00	Rollins		0.00		

## WELL DETAILS: GGU Federal #34A-20-691

Ground Level: 0.00  
 +N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1614703.084 2415026.639 30° 10' 12" N 104° 23.8100 W



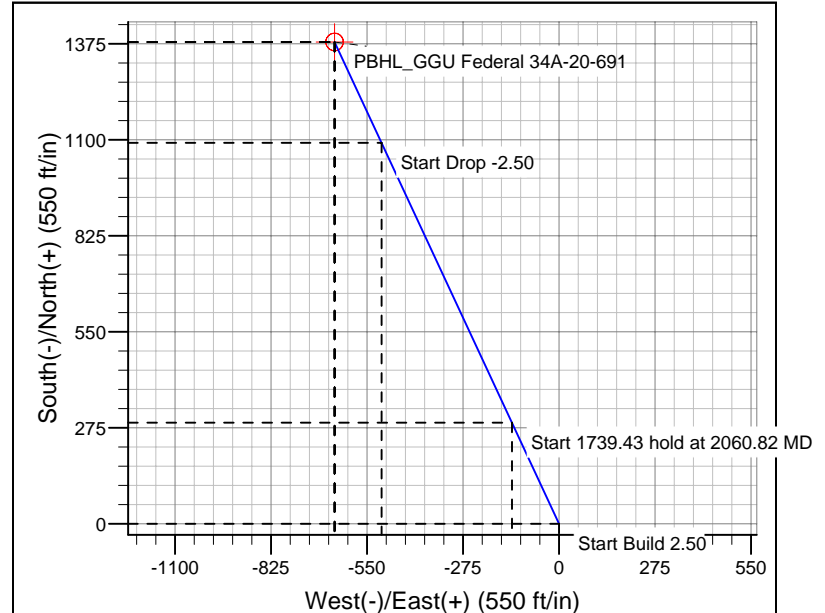
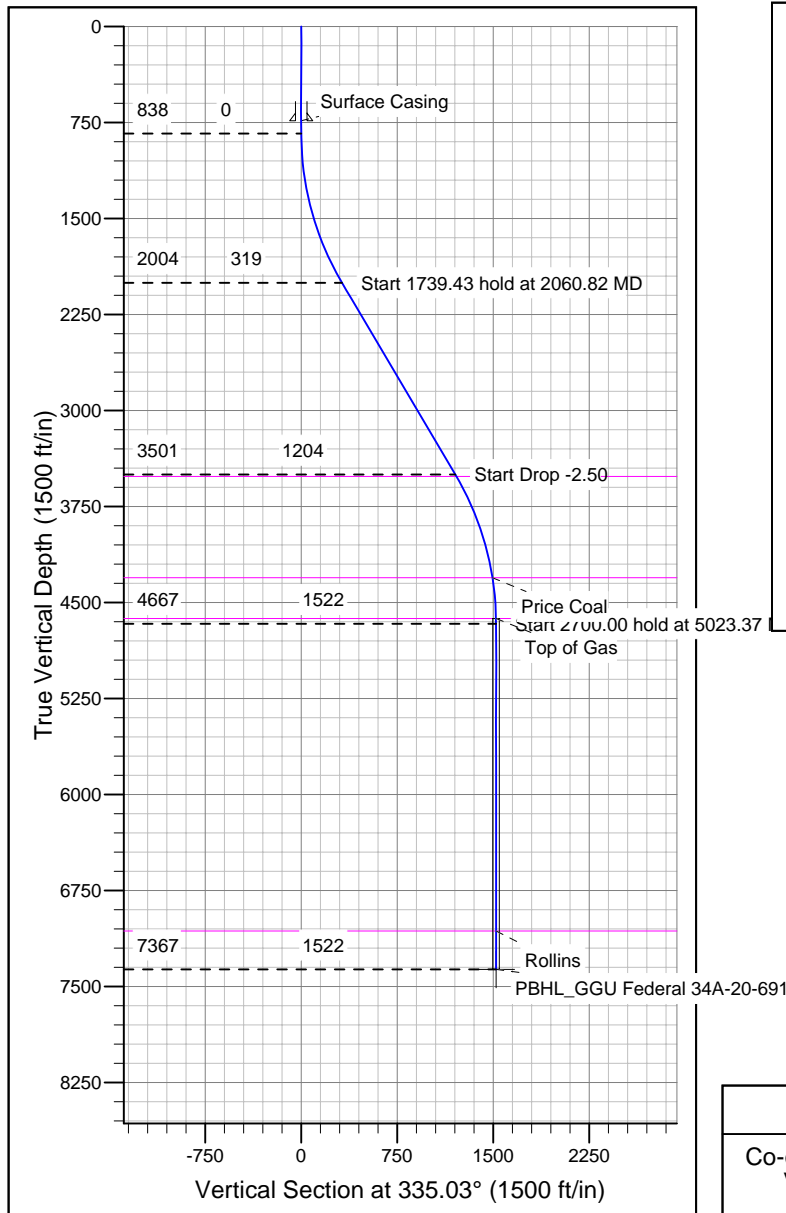
Azimuths to Grid North  
 True North: 1.31°  
 Magnetic North: 11.64°  
 Magnetic Field  
 Strength: 52532.1snT  
 Dip Angle: 65.87°  
 Date: 12/31/2009  
 Model: IGRF200510

## 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	37.70	0.00	0.00	837.70	0.00	0.00	0.00	0.00	0.00	
3	60.82	30.58	335.03	2003.58	288.91	-134.56	2.50	335.03	318.71	
4	00.25	30.58	335.03	3501.12	1091.03	-508.16	0.00	0.00	203.57	
5	23.37	0.00	0.00	4667.00	1379.94	-642.72	2.50	180.00	522.28	
6	23.37	0.00	0.00	7367.00	1379.94	-642.72	0.00	0.00	522.28	PBHL_GGU Federal 34A-20-691

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
PBHL_GGU Federal 34A-20-691	7367.00	1379.94	-642.72	Circle (Radius: 25.00)



## CASING DETAILS

TVD	MD	Name	Size
737.70	37.70	Surface Casing	9-5/8

## FORMATION TOP DETAILS

TVD	MD	Formation
3517.00	318.65	Mesaverde
4307.00	4661.87	Price Coal
4627.00	4983.37	Top of Gas
7067.00	7423.37	Rollins

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well GGU Federal #34A-20-691, Grid North  
 Vertical (TVD) Reference: WELL @ 0.00ft (Original Well Elev)  
 Section (VS) Reference: Slot - (0.00N, 0.00E)  
 Measured Depth Reference: WELL @ 0.00ft (Original Well Elev)  
 Calculation Method: Minimum Curvature