

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

**MDP #11**

**GGU Federal #41C-29-691**

**GGU Federal #41C-29-691**

**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 #41C-29-691
<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 #41C-29-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	GGU Federal #41C-29-691		
<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 #41C-29-691		
<b>Well Position</b>	<b>+N/-S</b>	6.39 ft	<b>Northing:</b>
	<b>+E/-W</b>	-14.75 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			39° 30' 9.950 N
			<b>Longitude:</b>
			107° 34' 23.2400 W
			<b>Ground Level:</b>
			0.00 ft

<b>Wellbore</b>	GGU Federal #41C-29-691				
<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	40.79

<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	
1,509.88	16.80	40.79	1,500.28	74.10	63.94	2.50	2.50	0.00	40.79	
4,188.39	16.80	40.79	4,064.42	660.38	569.83	0.00	0.00	0.00	0.00	
4,860.57	0.00	0.00	4,727.00	734.47	633.77	2.50	-2.50	0.00	180.00	
7,510.57	0.00	0.00	7,377.00	734.47	633.77	0.00	0.00	0.00	0.00	PBHL_GGU Federal

**BBC**  
Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU Federal #41C-29-691
<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 #41C-29-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	GGU Federal #41C-29-691		
<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	40.79	899.99	0.64	0.55	0.85	2.50	2.50	0.00
1,000.00	4.06	40.79	999.86	4.35	3.75	5.74	2.50	2.50	0.00
1,100.00	6.56	40.79	1,099.43	11.35	9.80	14.99	2.50	2.50	0.00
1,200.00	9.06	40.79	1,198.49	21.64	18.67	28.58	2.50	2.50	0.00
1,300.00	11.56	40.79	1,296.87	35.18	30.36	46.47	2.50	2.50	0.00
1,400.00	14.06	40.79	1,394.38	51.96	44.84	68.63	2.50	2.50	0.00
1,500.00	16.56	40.79	1,490.82	71.95	62.08	95.03	2.50	2.50	0.00
1,509.88	16.80	40.79	1,500.28	74.10	63.94	97.87	2.50	2.50	0.00
1,600.00	16.80	40.79	1,586.56	93.82	80.96	123.92	0.00	0.00	0.00
1,700.00	16.80	40.79	1,682.29	115.71	99.85	152.83	0.00	0.00	0.00
1,800.00	16.80	40.79	1,778.02	137.60	118.73	181.74	0.00	0.00	0.00
1,900.00	16.80	40.79	1,873.75	159.49	137.62	210.65	0.00	0.00	0.00
2,000.00	16.80	40.79	1,969.47	181.38	156.51	239.57	0.00	0.00	0.00
2,100.00	16.80	40.79	2,065.20	203.26	175.39	268.48	0.00	0.00	0.00
2,200.00	16.80	40.79	2,160.93	225.15	194.28	297.39	0.00	0.00	0.00
2,300.00	16.80	40.79	2,256.66	247.04	213.17	326.30	0.00	0.00	0.00
2,400.00	16.80	40.79	2,352.39	268.93	232.06	355.21	0.00	0.00	0.00
2,500.00	16.80	40.79	2,448.12	290.82	250.94	384.12	0.00	0.00	0.00
2,600.00	16.80	40.79	2,543.85	312.70	269.83	413.03	0.00	0.00	0.00
2,700.00	16.80	40.79	2,639.58	334.59	288.72	441.94	0.00	0.00	0.00
2,800.00	16.80	40.79	2,735.31	356.48	307.60	470.85	0.00	0.00	0.00
2,900.00	16.80	40.79	2,831.04	378.37	326.49	499.76	0.00	0.00	0.00
3,000.00	16.80	40.79	2,926.77	400.26	345.38	528.67	0.00	0.00	0.00
3,100.00	16.80	40.79	3,022.50	422.15	364.27	557.58	0.00	0.00	0.00
3,200.00	16.80	40.79	3,118.23	444.03	383.15	586.49	0.00	0.00	0.00
3,300.00	16.80	40.79	3,213.96	465.92	402.04	615.40	0.00	0.00	0.00
3,400.00	16.80	40.79	3,309.69	487.81	420.93	644.31	0.00	0.00	0.00
3,500.00	16.80	40.79	3,405.42	509.70	439.81	673.22	0.00	0.00	0.00
3,600.00	16.80	40.79	3,501.15	531.59	458.70	702.13	0.00	0.00	0.00
3,600.89	16.80	40.79	3,502.00	531.78	458.87	702.39	0.00	0.00	0.00
Mesaverde									
3,700.00	16.80	40.79	3,596.88	553.48	477.59	731.05	0.00	0.00	0.00
3,800.00	16.80	40.79	3,692.61	575.36	496.48	759.96	0.00	0.00	0.00
3,900.00	16.80	40.79	3,788.34	597.25	515.36	788.87	0.00	0.00	0.00
4,000.00	16.80	40.79	3,884.07	619.14	534.25	817.78	0.00	0.00	0.00
4,100.00	16.80	40.79	3,979.80	641.03	553.14	846.69	0.00	0.00	0.00
4,188.39	16.80	40.79	4,064.42	660.38	569.83	872.24	0.00	0.00	0.00
4,200.00	16.51	40.79	4,075.54	662.90	572.01	875.57	2.50	-2.50	0.00
4,300.00	14.01	40.79	4,172.00	682.83	589.20	901.90	2.50	-2.50	0.00
4,400.00	11.51	40.79	4,269.52	699.55	603.64	923.99	2.50	-2.50	0.00
4,428.01	10.81	40.79	4,297.00	703.66	607.18	929.41	2.50	-2.50	0.00

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<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 #41C-29-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	GGU Federal #41C-29-691		
<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)
<b>Price Coal</b>									
4,500.00	9.01	40.79	4,367.91	713.04	615.28	941.80	2.50	-2.50	0.00
4,600.00	6.51	40.79	4,466.99	723.27	624.10	955.31	2.50	-2.50	0.00
4,700.00	4.01	40.79	4,566.56	730.22	630.10	964.49	2.50	-2.50	0.00
4,800.00	1.51	40.79	4,666.44	733.87	633.25	969.31	2.50	-2.50	0.00
4,860.57	0.00	0.00	4,727.00	734.47	633.77	970.11	2.50	-2.50	0.00
<b>Top of Gas</b>									
4,900.00	0.00	0.00	4,766.43	734.47	633.77	970.11	0.00	0.00	0.00
5,000.00	0.00	0.00	4,866.43	734.47	633.77	970.11	0.00	0.00	0.00
5,100.00	0.00	0.00	4,966.43	734.47	633.77	970.11	0.00	0.00	0.00
5,200.00	0.00	0.00	5,066.43	734.47	633.77	970.11	0.00	0.00	0.00
5,300.00	0.00	0.00	5,166.43	734.47	633.77	970.11	0.00	0.00	0.00
5,400.00	0.00	0.00	5,266.43	734.47	633.77	970.11	0.00	0.00	0.00
5,500.00	0.00	0.00	5,366.43	734.47	633.77	970.11	0.00	0.00	0.00
5,600.00	0.00	0.00	5,466.43	734.47	633.77	970.11	0.00	0.00	0.00
5,700.00	0.00	0.00	5,566.43	734.47	633.77	970.11	0.00	0.00	0.00
5,800.00	0.00	0.00	5,666.43	734.47	633.77	970.11	0.00	0.00	0.00
5,900.00	0.00	0.00	5,766.43	734.47	633.77	970.11	0.00	0.00	0.00
6,000.00	0.00	0.00	5,866.43	734.47	633.77	970.11	0.00	0.00	0.00
6,100.00	0.00	0.00	5,966.43	734.47	633.77	970.11	0.00	0.00	0.00
6,200.00	0.00	0.00	6,066.43	734.47	633.77	970.11	0.00	0.00	0.00
6,300.00	0.00	0.00	6,166.43	734.47	633.77	970.11	0.00	0.00	0.00
6,400.00	0.00	0.00	6,266.43	734.47	633.77	970.11	0.00	0.00	0.00
6,500.00	0.00	0.00	6,366.43	734.47	633.77	970.11	0.00	0.00	0.00
6,600.00	0.00	0.00	6,466.43	734.47	633.77	970.11	0.00	0.00	0.00
6,700.00	0.00	0.00	6,566.43	734.47	633.77	970.11	0.00	0.00	0.00
6,800.00	0.00	0.00	6,666.43	734.47	633.77	970.11	0.00	0.00	0.00
6,900.00	0.00	0.00	6,766.43	734.47	633.77	970.11	0.00	0.00	0.00
7,000.00	0.00	0.00	6,866.43	734.47	633.77	970.11	0.00	0.00	0.00
7,100.00	0.00	0.00	6,966.43	734.47	633.77	970.11	0.00	0.00	0.00
7,200.00	0.00	0.00	7,066.43	734.47	633.77	970.11	0.00	0.00	0.00
7,210.57	0.00	0.00	7,077.00	734.47	633.77	970.11	0.00	0.00	0.00
<b>Rollins</b>									
7,300.00	0.00	0.00	7,166.43	734.47	633.77	970.11	0.00	0.00	0.00
7,400.00	0.00	0.00	7,266.43	734.47	633.77	970.11	0.00	0.00	0.00
7,500.00	0.00	0.00	7,366.43	734.47	633.77	970.11	0.00	0.00	0.00
7,510.57	0.00	0.00	7,377.00	734.47	633.77	970.11	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 #41C-29-691
<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 #41C-29-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	GGU Federal #41C-29-691		
<b>Design:</b>	Design #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,600.89	3,502.00	Mesaverde		0.00		
4,428.01	4,297.00	Price Coal		0.00		
4,860.57	4,727.00	Top of Gas		0.00		
7,210.57	7,077.00	Rollins		0.00		

## WELL DETAILS: GGU Federal #41C-29-691

Ground Level: 0.00  
 +N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1614684.864 2415070.929 39° 30' 9.957"N 104° 23.2400 W



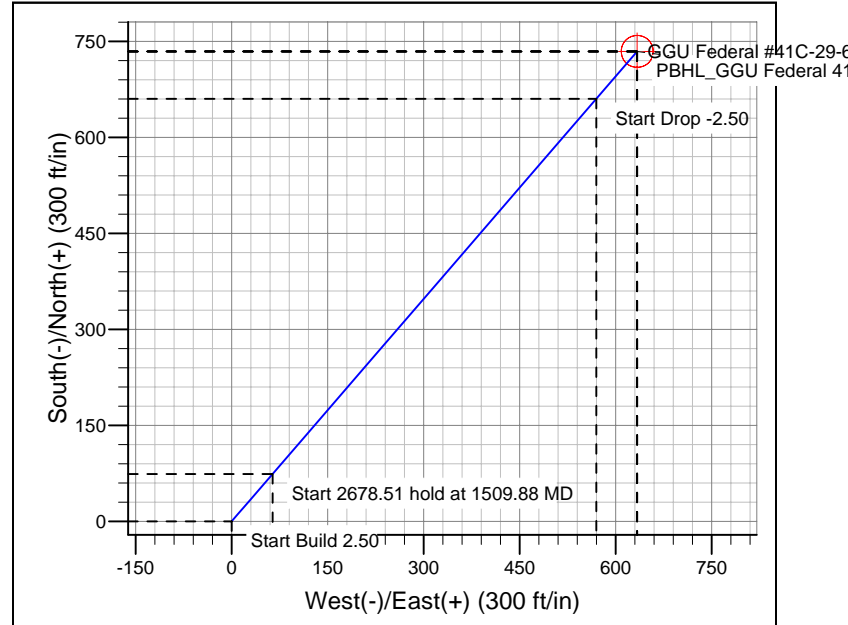
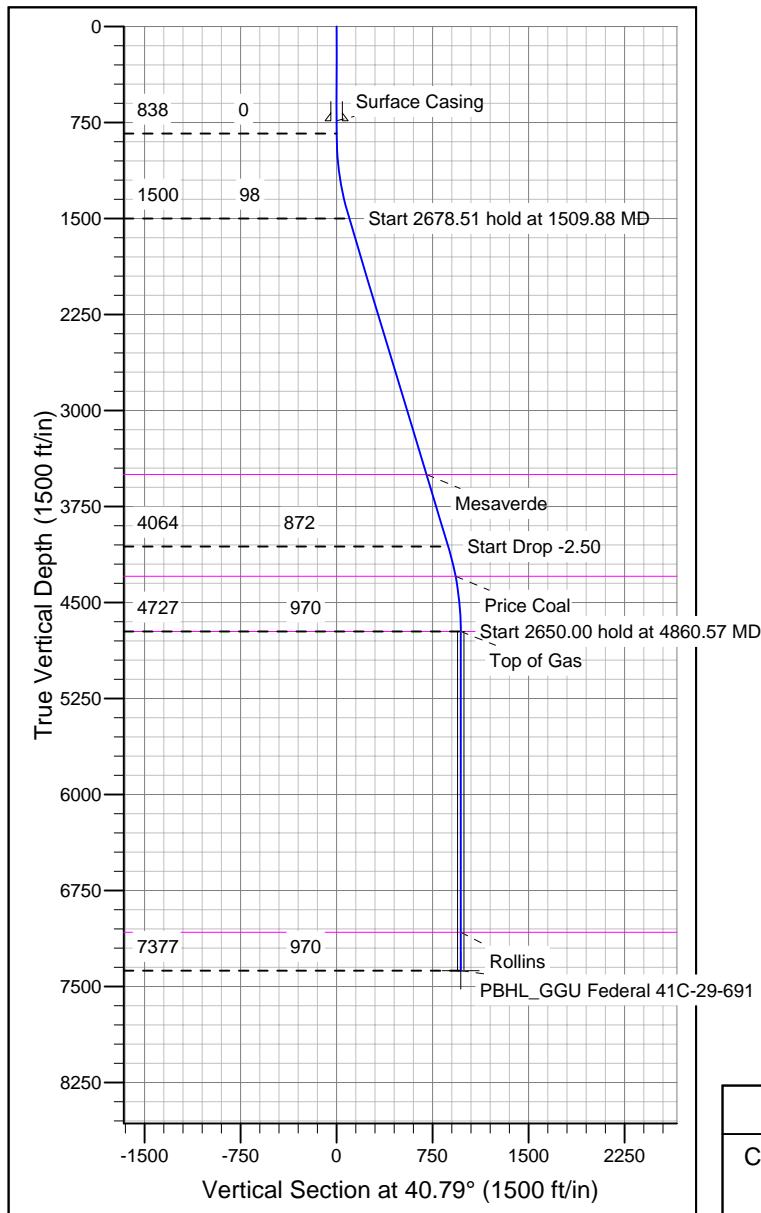
Azimuths to Grid North  
 True North: 1.31°  
 Magnetic North: 11.64°  
 Magnetic Field  
 Strength: 52532.1snT  
 Dip Angle: 65.87°  
 Date: 12/31/2009  
 Model: IGRF200510

## 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	509.88	16.80	40.79	1500.28	74.10	63.94	2.50	40.79	97.87	
4	188.39	16.80	40.79	4064.42	660.38	569.83	0.00	0.00	872.24	
5	60.57	0.00	0.00	4727.00	734.47	633.77	2.50	180.00	970.11	
6	10.57	0.00	0.00	737.00	734.47	633.77	0.00	0.00	970.11	PBHL_GGU Federal 41C-29-691

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
PBHL_GGU Federal 41C-29-691	737.00	74.10	63.94	Circle (Radius: 25.00)



## CASING DETAILS

TVD	MD	Name	Size
737.00	37.70	Surface Casing	9-5/8

## FORMATION TOP DETAILS

TVD	MD	Formation
3502.00	3600.89	Mesaverde
4297.00	4428.01	Price Coal
4727.00	4860.57	Top of Gas
7077.00	7210.57	Rollins

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well GGU Federal #41C-29-691, 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