

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

**MDP #21**

**GGU Federal 33B-19-691**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**29 December, 2011**

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 33B-19-691
<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 #21	<b>North Reference:</b>	True
<b>Well:</b>	GGU Federal 33B-19-691	<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>	MDP #21		
<b>Site Position:</b>		<b>Northing:</b>	1,617,563.978 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,407,991.814 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	39° 30' 36.792 N
		<b>Longitude:</b>	107° 35' 54.3804 W
		<b>Grid Convergence:</b>	-1.32 °

<b>Well</b>	GGU Federal 33B-19-691		
<b>Well Position</b>	<b>+N/-S</b>	150.41 ft	<b>Northing:</b>
	<b>+E/-W</b>	-659.93 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			39° 30' 38.279 N
			<b>Longitude:</b>
			107° 36' 2.8008 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	12/31/2009	10.34	65.88	52,533

<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	87.93

<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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,173.89	34.35	87.93	2,093.07	14.41	399.36	2.50	2.50	0.00	87.93	
3,386.07	34.35	87.93	3,093.89	39.07	1,082.83	0.00	0.00	0.00	0.00	
5,675.89	0.00	0.00	5,249.00	63.08	1,748.43	1.50	-1.50	0.00	180.00	
7,675.89	0.00	0.00	7,249.00	63.08	1,748.43	0.00	0.00	0.00	0.00	GGU Federal 33B-1

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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 #21	<b>North Reference:</b>	True
<b>Well:</b>	GGU Federal 33B-19-691	<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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	2.50	87.93	899.97	0.08	2.18	2.18	2.50	2.50	0.00	
1,000.00	5.00	87.93	999.75	0.31	8.72	8.72	2.50	2.50	0.00	
1,100.00	7.50	87.93	1,099.14	0.71	19.59	19.61	2.50	2.50	0.00	
1,200.00	10.00	87.93	1,197.97	1.26	34.80	34.82	2.50	2.50	0.00	
1,300.00	12.50	87.93	1,296.04	1.96	54.29	54.33	2.50	2.50	0.00	
1,400.00	15.00	87.93	1,393.17	2.82	78.04	78.09	2.50	2.50	0.00	
1,500.00	17.50	87.93	1,489.17	3.82	106.00	106.07	2.50	2.50	0.00	
1,600.00	20.00	87.93	1,583.85	4.98	138.12	138.21	2.50	2.50	0.00	
1,700.00	22.50	87.93	1,677.05	6.29	174.34	174.45	2.50	2.50	0.00	
1,800.00	25.00	87.93	1,768.57	7.74	214.59	214.73	2.50	2.50	0.00	
1,900.00	27.50	87.93	1,858.25	9.34	258.78	258.95	2.50	2.50	0.00	
2,000.00	30.00	87.93	1,945.92	11.07	306.85	307.05	2.50	2.50	0.00	
2,100.00	32.50	87.93	2,031.40	12.94	358.69	358.92	2.50	2.50	0.00	
2,173.89	34.35	87.93	2,093.07	14.41	399.36	399.62	2.50	2.50	0.00	
2,200.00	34.35	87.93	2,114.63	14.94	414.08	414.35	0.00	0.00	0.00	
2,300.00	34.35	87.93	2,197.19	16.97	470.46	470.77	0.00	0.00	0.00	
2,400.00	34.35	87.93	2,279.75	19.01	526.85	527.19	0.00	0.00	0.00	
2,500.00	34.35	87.93	2,362.32	21.04	583.23	583.61	0.00	0.00	0.00	
2,600.00	34.35	87.93	2,444.88	23.08	639.62	640.03	0.00	0.00	0.00	
2,700.00	34.35	87.93	2,527.44	25.11	696.00	696.45	0.00	0.00	0.00	
2,800.00	34.35	87.93	2,610.01	27.15	752.38	752.87	0.00	0.00	0.00	
2,900.00	34.35	87.93	2,692.57	29.18	808.77	809.29	0.00	0.00	0.00	
3,000.00	34.35	87.93	2,775.13	31.21	865.15	865.71	0.00	0.00	0.00	
3,100.00	34.35	87.93	2,857.70	33.25	921.54	922.14	0.00	0.00	0.00	
3,200.00	34.35	87.93	2,940.26	35.28	977.92	978.56	0.00	0.00	0.00	
3,300.00	34.35	87.93	3,022.82	37.32	1,034.30	1,034.98	0.00	0.00	0.00	
3,386.07	34.35	87.93	3,093.89	39.07	1,082.83	1,083.54	0.00	0.00	0.00	
3,400.00	34.14	87.93	3,105.40	39.35	1,090.67	1,091.38	1.50	-1.50	0.00	
3,500.00	32.64	87.93	3,188.89	41.33	1,145.66	1,146.41	1.50	-1.50	0.00	
3,600.00	31.14	87.93	3,273.80	43.24	1,198.45	1,199.23	1.50	-1.50	0.00	
3,700.00	29.64	87.93	3,360.06	45.06	1,249.00	1,249.81	1.50	-1.50	0.00	
3,800.00	28.14	87.93	3,447.61	46.80	1,297.28	1,298.12	1.50	-1.50	0.00	
3,900.00	26.64	87.93	3,536.40	48.46	1,343.25	1,344.12	1.50	-1.50	0.00	
4,000.00	25.14	87.93	3,626.36	50.04	1,386.88	1,387.78	1.50	-1.50	0.00	
4,100.00	23.64	87.93	3,717.44	51.53	1,428.15	1,429.08	1.50	-1.50	0.00	
4,200.00	22.14	87.93	3,809.56	52.93	1,467.01	1,467.97	1.50	-1.50	0.00	
4,300.00	20.64	87.93	3,902.67	54.24	1,503.46	1,504.44	1.50	-1.50	0.00	
4,400.00	19.14	87.93	3,996.70	55.47	1,537.45	1,538.45	1.50	-1.50	0.00	
4,500.00	17.64	87.93	4,091.60	56.61	1,568.98	1,570.00	1.50	-1.50	0.00	
4,600.00	16.14	87.93	4,187.28	57.66	1,598.01	1,599.05	1.50	-1.50	0.00	
4,700.00	14.64	87.93	4,283.69	58.61	1,624.53	1,625.58	1.50	-1.50	0.00	
4,800.00	13.14	87.93	4,380.77	59.48	1,648.51	1,649.59	1.50	-1.50	0.00	
4,900.00	11.64	87.93	4,478.44	60.25	1,669.95	1,671.04	1.50	-1.50	0.00	
5,000.00	10.14	87.93	4,576.63	60.93	1,688.83	1,689.93	1.50	-1.50	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 #21	<b>North Reference:</b>	True
<b>Well:</b>	GGU Federal 33B-19-691	<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)
5,100.00	8.64	87.93	4,675.29	61.52	1,705.13	1,706.24	1.50	-1.50	0.00
5,200.00	7.14	87.93	4,774.34	62.01	1,718.84	1,719.96	1.50	-1.50	0.00
5,300.00	5.64	87.93	4,873.72	62.42	1,729.96	1,731.09	1.50	-1.50	0.00
5,400.00	4.14	87.93	4,973.35	62.72	1,738.48	1,739.61	1.50	-1.50	0.00
5,500.00	2.64	87.93	5,073.17	62.94	1,744.39	1,745.52	1.50	-1.50	0.00
5,600.00	1.14	87.93	5,173.12	63.06	1,747.68	1,748.82	1.50	-1.50	0.00
5,675.89	0.00	0.00	5,249.00	63.08	1,748.43	1,749.57	1.50	-1.50	0.00
5,700.00	0.00	0.00	5,273.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
5,800.00	0.00	0.00	5,373.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
5,900.00	0.00	0.00	5,473.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,000.00	0.00	0.00	5,573.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,100.00	0.00	0.00	5,673.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,200.00	0.00	0.00	5,773.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,300.00	0.00	0.00	5,873.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,400.00	0.00	0.00	5,973.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,500.00	0.00	0.00	6,073.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,600.00	0.00	0.00	6,173.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,700.00	0.00	0.00	6,273.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,800.00	0.00	0.00	6,373.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
6,900.00	0.00	0.00	6,473.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
7,000.00	0.00	0.00	6,573.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
7,100.00	0.00	0.00	6,673.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
7,200.00	0.00	0.00	6,773.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
7,300.00	0.00	0.00	6,873.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
7,400.00	0.00	0.00	6,973.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
7,500.00	0.00	0.00	7,073.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
7,600.00	0.00	0.00	7,173.11	63.08	1,748.43	1,749.57	0.00	0.00	0.00
7,675.89	0.00	0.00	7,249.00	63.08	1,748.43	1,749.57	0.00	0.00	0.00

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
800.00	800.00	9 5/8"	9-5/8	12-1/4

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,756.08	3,409.00	Mesaverde		0.00	
4,632.98	4,219.00	Price Coal		0.00	
4,777.63	4,359.00	Top Gas		0.00	
7,375.89	6,949.00	Rollins		0.00	
7,675.89	7,249.00	TD		0.00	

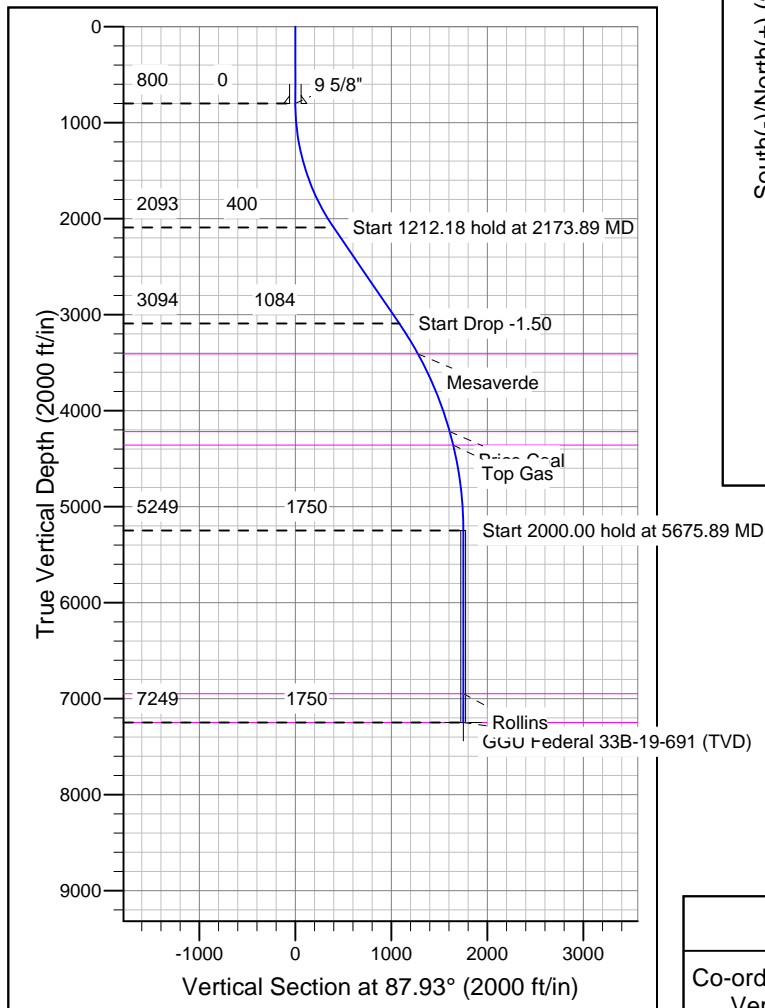
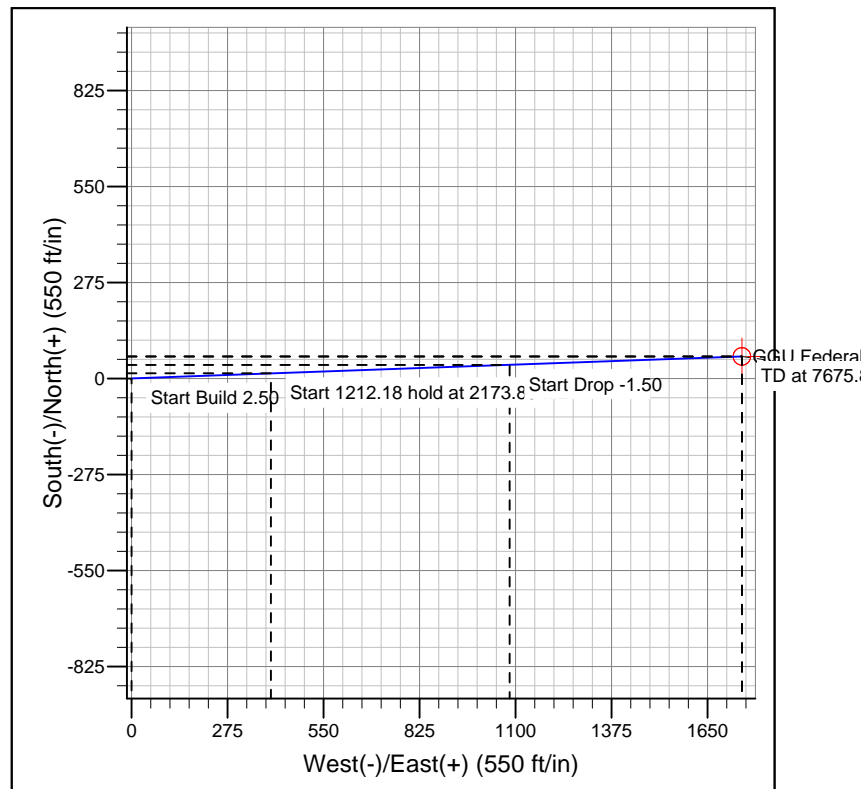
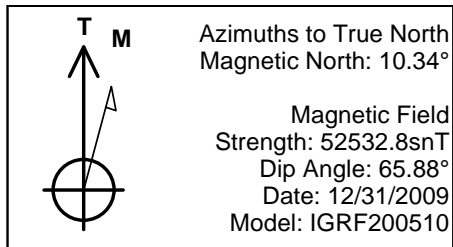
# WELL DETAILS: GGU Federal 33B-19-691

Ground Level: 0.00

+N/-S      +E/-W      Northing      Easting      Latitude      Longitude      Slot  
0.00      0.00      1617729.612      2407335.535      39° 30' 38.279 N      107° 36' 2.8008 W

## 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	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	
3	2173.89	34.35	87.93	2093.07	14.41	399.36	2.50	87.93	399.62	
4	3386.07	34.35	87.93	3093.89	39.07	1082.83	0.00	0.00	1083.54	
5	5675.89	0.00	0.00	5249.00	63.08	1748.43	1.50	180.00	1749.57	
6	7675.89	0.00	0.00	7249.00	63.08	1748.43	0.00	0.00	1749.57	GGU Federal 33B-19-691 (TVD)



## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3409.00	3756.08	Mesaverde
4219.00	4632.98	Price Coal
4359.00	4777.63	Top Gas
6949.00	7375.89	Rollins
7249.00	7675.89	TD

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well GGU Federal 33B-19-691, True 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