

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

**MDP #21**

**GGU Federal 22B-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 22B-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 22B-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 22B-19-691		
<b>Well Position</b>	<b>+N/-S</b>	169.72 ft	<b>Northing:</b>
	<b>+E/-W</b>	-705.36 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			39° 30' 38.469 N
			<b>Longitude:</b>
			107° 36' 3.3804 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	20.66

<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	
2,008.53	30.21	20.66	1,953.30	291.31	109.84	2.50	2.50	0.00	20.66	
3,139.74	30.21	20.66	2,930.84	823.95	310.66	0.00	0.00	0.00	0.00	
5,153.96	0.00	0.00	4,853.00	1,309.46	493.72	1.50	-1.50	0.00	180.00	
7,653.96	0.00	0.00	7,353.00	1,309.46	493.72	0.00	0.00	0.00	0.00	GGU Federal 22B-1

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<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 22B-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 22B-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	20.66	899.97	2.04	0.77	2.18	2.50	2.50	0.00	
1,000.00	5.00	20.66	999.75	8.16	3.08	8.72	2.50	2.50	0.00	
1,100.00	7.50	20.66	1,099.14	18.35	6.92	19.61	2.50	2.50	0.00	
1,200.00	10.00	20.66	1,197.97	32.58	12.28	34.82	2.50	2.50	0.00	
1,300.00	12.50	20.66	1,296.04	50.83	19.17	54.33	2.50	2.50	0.00	
1,400.00	15.00	20.66	1,393.17	73.07	27.55	78.09	2.50	2.50	0.00	
1,500.00	17.50	20.66	1,489.17	99.25	37.42	106.07	2.50	2.50	0.00	
1,600.00	20.00	20.66	1,583.85	129.33	48.76	138.21	2.50	2.50	0.00	
1,700.00	22.50	20.66	1,677.05	163.24	61.55	174.45	2.50	2.50	0.00	
1,800.00	25.00	20.66	1,768.57	200.92	75.76	214.73	2.50	2.50	0.00	
1,900.00	27.50	20.66	1,858.25	242.30	91.36	258.95	2.50	2.50	0.00	
2,000.00	30.00	20.66	1,945.92	287.30	108.33	307.05	2.50	2.50	0.00	
2,008.53	30.21	20.66	1,953.30	291.31	109.84	311.33	2.50	2.50	0.00	
2,100.00	30.21	20.66	2,032.34	334.38	126.07	357.35	0.00	0.00	0.00	
2,200.00	30.21	20.66	2,118.76	381.46	143.83	407.68	0.00	0.00	0.00	
2,300.00	30.21	20.66	2,205.17	428.55	161.58	458.00	0.00	0.00	0.00	
2,400.00	30.21	20.66	2,291.59	475.64	179.33	508.32	0.00	0.00	0.00	
2,500.00	30.21	20.66	2,378.00	522.72	197.09	558.64	0.00	0.00	0.00	
2,600.00	30.21	20.66	2,464.42	569.81	214.84	608.96	0.00	0.00	0.00	
2,700.00	30.21	20.66	2,550.83	616.89	232.60	659.29	0.00	0.00	0.00	
2,800.00	30.21	20.66	2,637.25	663.98	250.35	709.61	0.00	0.00	0.00	
2,900.00	30.21	20.66	2,723.67	711.07	268.10	759.93	0.00	0.00	0.00	
3,000.00	30.21	20.66	2,810.08	758.15	285.86	810.25	0.00	0.00	0.00	
3,100.00	30.21	20.66	2,896.50	805.24	303.61	860.58	0.00	0.00	0.00	
3,139.74	30.21	20.66	2,930.84	823.95	310.66	880.57	0.00	0.00	0.00	
3,200.00	29.31	20.66	2,983.15	851.94	321.22	910.48	1.50	-1.50	0.00	
3,300.00	27.81	20.66	3,070.98	896.67	338.08	958.29	1.50	-1.50	0.00	
3,400.00	26.31	20.66	3,160.03	939.24	354.13	1,003.78	1.50	-1.50	0.00	
3,500.00	24.81	20.66	3,250.24	979.61	369.35	1,046.92	1.50	-1.50	0.00	
3,600.00	23.31	20.66	3,341.55	1,017.75	383.74	1,087.69	1.50	-1.50	0.00	
3,700.00	21.81	20.66	3,433.90	1,053.65	397.27	1,126.05	1.50	-1.50	0.00	
3,800.00	20.31	20.66	3,527.22	1,087.27	409.95	1,161.99	1.50	-1.50	0.00	
3,900.00	18.81	20.66	3,621.44	1,118.59	421.76	1,195.46	1.50	-1.50	0.00	
4,000.00	17.31	20.66	3,716.51	1,147.60	432.69	1,226.46	1.50	-1.50	0.00	
4,100.00	15.81	20.66	3,812.36	1,174.27	442.75	1,254.96	1.50	-1.50	0.00	
4,200.00	14.31	20.66	3,908.93	1,198.58	451.91	1,280.94	1.50	-1.50	0.00	
4,300.00	12.81	20.66	4,006.14	1,220.52	460.19	1,304.39	1.50	-1.50	0.00	
4,400.00	11.31	20.66	4,103.93	1,240.06	467.56	1,325.28	1.50	-1.50	0.00	
4,500.00	9.81	20.66	4,202.23	1,257.21	474.02	1,343.61	1.50	-1.50	0.00	
4,600.00	8.31	20.66	4,300.98	1,271.94	479.58	1,359.35	1.50	-1.50	0.00	
4,700.00	6.81	20.66	4,400.11	1,284.25	484.22	1,372.51	1.50	-1.50	0.00	
4,800.00	5.31	20.66	4,499.55	1,294.13	487.94	1,383.06	1.50	-1.50	0.00	
4,900.00	3.81	20.66	4,599.23	1,301.57	490.75	1,391.01	1.50	-1.50	0.00	
5,000.00	2.31	20.66	4,699.08	1,306.56	492.63	1,396.35	1.50	-1.50	0.00	

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<b>Well:</b>	GGU Federal 22B-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	0.81	20.66	4,799.04	1,309.11	493.59	1,399.07	1.50	-1.50	0.00	
5,153.96	0.00	0.00	4,853.00	1,309.46	493.72	1,399.45	1.50	-1.50	0.00	
5,200.00	0.00	0.00	4,899.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
5,300.00	0.00	0.00	4,999.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,099.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,199.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,299.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,399.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,499.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,599.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,699.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,100.00	0.00	0.00	5,799.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,200.00	0.00	0.00	5,899.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,300.00	0.00	0.00	5,999.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,099.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,199.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,299.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,399.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,499.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,599.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,699.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,799.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,899.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
7,300.00	0.00	0.00	6,999.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,099.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,199.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,299.04	1,309.46	493.72	1,399.45	0.00	0.00	0.00	
7,653.96	0.00	0.00	7,353.00	1,309.46	493.72	1,399.45	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 (°)	
3,724.85	3,457.00	Mesaverde		0.00		
4,560.58	4,262.00	Price Coal		0.00		
4,762.27	4,462.00	Top Gas		0.00		
7,307.96	7,007.00	Rollins		0.00		
7,607.96	7,307.00	TD		0.00		

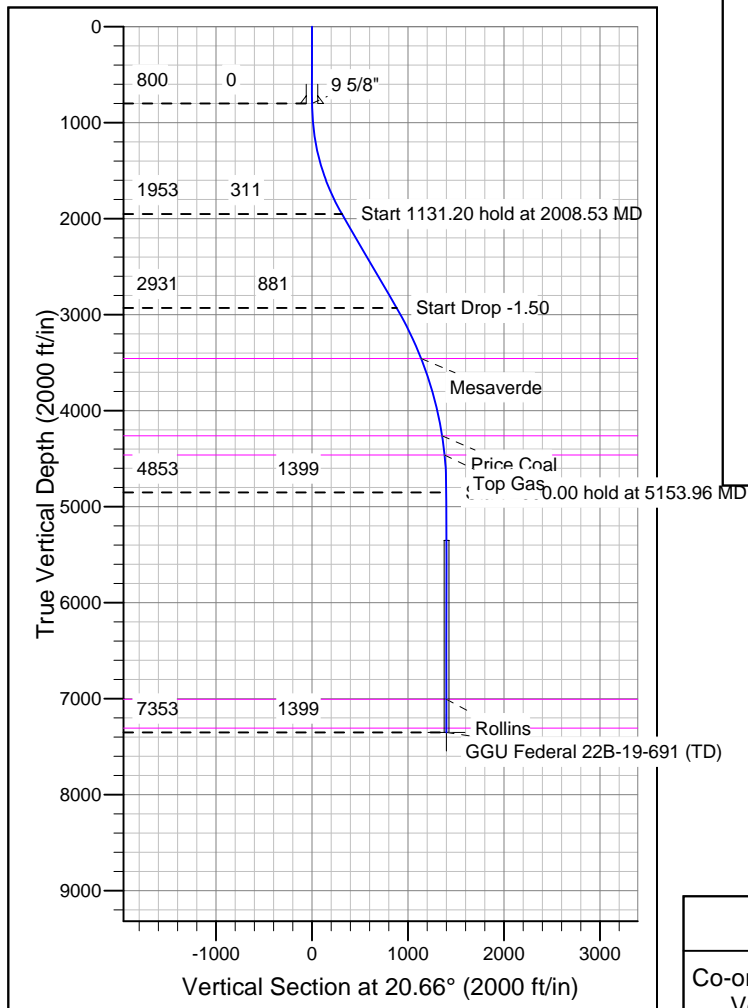
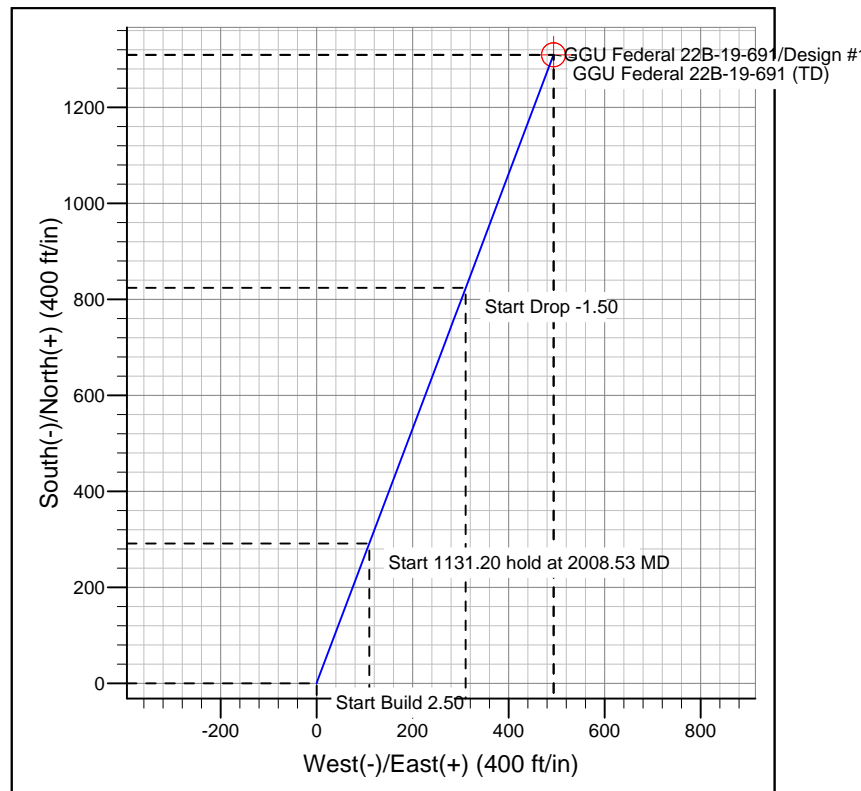
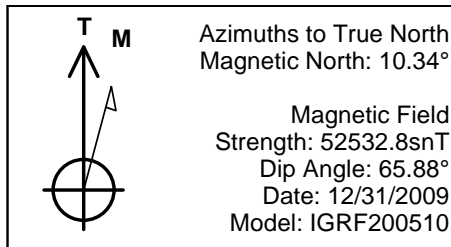
# WELL DETAILS: GGU Federal 22B-19-691

Ground Level: 0.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1617749.962	2407290.569	39° 30' 38.469 N	107° 36' 3.3804 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	2008.53	30.21	20.66	1953.30	291.31	109.84	2.50	20.66	311.33	
4	3139.74	30.21	20.66	2930.84	823.95	310.66	0.00	0.00	880.57	
5	5153.96	0.00	0.00	4853.00	1309.46	493.72	1.50	180.00	1399.45	
6	7653.96	0.00	0.00	7353.00	1309.46	493.72	0.00	0.00	1399.45	GGU Federal 22B-19-691 (TD)



## FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
3457.00	3724.85	Mesaverde
4262.00	4560.58	Price Coal
4462.00	4762.27	Top Gas
7007.00	7307.96	Rollins
7307.00	7607.96	TD

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well GGU Federal 22B-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