

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

**MDP #13**

**Federal 32D-20-691**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**15 April, 2010**

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Federal 32D-20-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6453.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6453.00ft (Original Well Elev)
<b>Site:</b>	MDP #13	<b>North Reference:</b>	True
<b>Well:</b>	Federal 32D-20-691	<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 #13		
<b>Site Position:</b>		<b>Northing:</b>	1,618,522.157 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,414,645.051 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	39° 30' 47.770 N
		<b>Longitude:</b>	107° 34' 29.7900 W
		<b>Grid Convergence:</b>	-1.31 °

<b>Well</b>	Federal 32D-20-691		
<b>Well Position</b>	<b>+N/-S</b>	49.57 ft	<b>Northing:</b>
	<b>+E/-W</b>	-0.78 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			39° 30' 48.260 N
			<b>Longitude:</b>
			107° 34' 29.8000 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>
	BGGM2007	4/15/2010	10.37	65.85	52,404

<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	347.55

<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	
790.00	0.00	0.00	790.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,846.69	26.42	347.55	1,809.65	233.69	-51.60	2.50	2.50	0.00	347.55	
3,116.19	26.42	347.55	2,946.58	785.21	-173.39	0.00	0.00	0.00	0.00	
4,877.35	0.00	0.00	4,646.00	1,174.69	-259.39	1.50	-1.50	0.00	180.00	
7,877.35	0.00	0.00	7,646.00	1,174.69	-259.39	0.00	0.00	0.00	0.00	Federal 32D-20-69'

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Federal 32D-20-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6453.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6453.00ft (Original Well Elev)
<b>Site:</b>	MDP #13	<b>North Reference:</b>	True
<b>Well:</b>	Federal 32D-20-691	<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
790.00	0.00	0.00	790.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
800.00	0.25	347.55	800.00	0.02	0.00	0.02	2.50	2.50	0.00
900.00	2.75	347.55	899.96	2.58	-0.57	2.64	2.50	2.50	0.00
1,000.00	5.25	347.55	999.71	9.39	-2.07	9.61	2.50	2.50	0.00
1,100.00	7.75	347.55	1,099.06	20.44	-4.51	20.93	2.50	2.50	0.00
1,200.00	10.25	347.55	1,197.82	35.72	-7.89	36.58	2.50	2.50	0.00
1,300.00	12.75	347.55	1,295.80	55.18	-12.19	56.51	2.50	2.50	0.00
1,400.00	15.25	347.55	1,392.82	78.80	-17.40	80.70	2.50	2.50	0.00
1,500.00	17.75	347.55	1,488.70	106.53	-23.52	109.10	2.50	2.50	0.00
1,600.00	20.25	347.55	1,583.24	138.32	-30.54	141.65	2.50	2.50	0.00
1,700.00	22.75	347.55	1,676.28	174.11	-38.45	178.30	2.50	2.50	0.00
1,800.00	25.25	347.55	1,767.62	213.82	-47.22	218.97	2.50	2.50	0.00
1,846.69	26.42	347.55	1,809.65	233.69	-51.60	239.32	2.50	2.50	0.00
1,900.00	26.42	347.55	1,857.39	256.85	-56.72	263.04	0.00	0.00	0.00
2,000.00	26.42	347.55	1,946.95	300.29	-66.31	307.53	0.00	0.00	0.00
2,100.00	26.42	347.55	2,036.51	343.74	-75.90	352.02	0.00	0.00	0.00
2,200.00	26.42	347.55	2,126.06	387.18	-85.50	396.51	0.00	0.00	0.00
2,300.00	26.42	347.55	2,215.62	430.62	-95.09	441.00	0.00	0.00	0.00
2,400.00	26.42	347.55	2,305.18	474.07	-104.68	485.49	0.00	0.00	0.00
2,500.00	26.42	347.55	2,394.74	517.51	-114.28	529.98	0.00	0.00	0.00
2,600.00	26.42	347.55	2,484.29	560.96	-123.87	574.47	0.00	0.00	0.00
2,700.00	26.42	347.55	2,573.85	604.40	-133.46	618.96	0.00	0.00	0.00
2,800.00	26.42	347.55	2,663.41	647.84	-143.05	663.45	0.00	0.00	0.00
2,900.00	26.42	347.55	2,752.97	691.29	-152.65	707.94	0.00	0.00	0.00
3,000.00	26.42	347.55	2,842.53	734.73	-162.24	752.43	0.00	0.00	0.00
3,100.00	26.42	347.55	2,932.08	778.18	-171.83	796.92	0.00	0.00	0.00
3,116.19	26.42	347.55	2,946.58	785.21	-173.39	804.13	0.00	0.00	0.00
3,200.00	25.16	347.55	3,022.04	820.81	-181.25	840.59	1.50	-1.50	0.00
3,300.00	23.66	347.55	3,113.10	861.17	-190.16	881.91	1.50	-1.50	0.00
3,400.00	22.16	347.55	3,205.21	899.18	-198.55	920.84	1.50	-1.50	0.00
3,500.00	20.66	347.55	3,298.31	934.82	-206.42	957.34	1.50	-1.50	0.00
3,600.00	19.16	347.55	3,392.33	968.07	-213.77	991.40	1.50	-1.50	0.00
3,700.00	17.66	347.55	3,487.21	998.91	-220.58	1,022.98	1.50	-1.50	0.00
3,800.00	16.16	347.55	3,582.88	1,027.32	-226.85	1,052.06	1.50	-1.50	0.00
3,900.00	14.66	347.55	3,679.28	1,053.26	-232.58	1,078.64	1.50	-1.50	0.00
4,000.00	13.16	347.55	3,776.35	1,076.74	-237.76	1,102.67	1.50	-1.50	0.00
4,020.17	12.86	347.55	3,796.00	1,081.17	-238.74	1,107.21	1.50	-1.50	0.00
Mesaverde									
4,100.00	11.66	347.55	3,874.01	1,097.72	-242.40	1,124.16	1.50	-1.50	0.00
4,200.00	10.16	347.55	3,972.20	1,116.20	-246.48	1,143.09	1.50	-1.50	0.00
4,300.00	8.66	347.55	4,070.85	1,132.17	-250.00	1,159.44	1.50	-1.50	0.00
4,400.00	7.16	347.55	4,169.89	1,145.60	-252.97	1,173.20	1.50	-1.50	0.00
4,500.00	5.66	347.55	4,269.27	1,156.51	-255.38	1,184.37	1.50	-1.50	0.00
4,600.00	4.16	347.55	4,368.90	1,164.86	-257.22	1,192.93	1.50	-1.50	0.00

# BBC

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<b>Well:</b>	Federal 32D-20-691	<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)
4,700.00	2.66	347.55	4,468.72	1,170.67	-258.50	1,198.87	1.50	-1.50	0.00
4,800.00	1.16	347.55	4,568.66	1,173.93	-259.22	1,202.21	1.50	-1.50	0.00
4,857.35	0.30	347.55	4,626.00	1,174.64	-259.38	1,202.94	1.50	-1.50	0.00
<b>Top Gas</b>									
4,872.35	0.07	347.55	4,641.00	1,174.69	-259.39	1,202.99	1.50	-1.50	0.00
<b>Price Coal</b>									
4,877.35	0.00	0.00	4,646.00	1,174.69	-259.39	1,202.99	1.50	-1.50	0.00
4,900.00	0.00	0.00	4,668.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,000.00	0.00	0.00	4,768.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,100.00	0.00	0.00	4,868.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,200.00	0.00	0.00	4,968.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,300.00	0.00	0.00	5,068.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,400.00	0.00	0.00	5,168.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,500.00	0.00	0.00	5,268.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,600.00	0.00	0.00	5,368.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,700.00	0.00	0.00	5,468.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,800.00	0.00	0.00	5,568.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
5,900.00	0.00	0.00	5,668.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,000.00	0.00	0.00	5,768.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,100.00	0.00	0.00	5,868.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,200.00	0.00	0.00	5,968.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,300.00	0.00	0.00	6,068.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,400.00	0.00	0.00	6,168.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,500.00	0.00	0.00	6,268.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,600.00	0.00	0.00	6,368.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,700.00	0.00	0.00	6,468.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,800.00	0.00	0.00	6,568.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
6,900.00	0.00	0.00	6,668.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,000.00	0.00	0.00	6,768.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,100.00	0.00	0.00	6,868.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,200.00	0.00	0.00	6,968.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,300.00	0.00	0.00	7,068.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,400.00	0.00	0.00	7,168.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,500.00	0.00	0.00	7,268.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,577.35	0.00	0.00	7,346.00	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
<b>Rollins</b>									
7,600.00	0.00	0.00	7,368.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,700.00	0.00	0.00	7,468.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,800.00	0.00	0.00	7,568.65	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
7,877.35	0.00	0.00	7,646.00	1,174.69	-259.39	1,202.99	0.00	0.00	0.00
<b>TD</b>									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (")	Hole Diameter (")
790.00	790.00	9 5/8"		9-5/8	12-1/4

# BBC

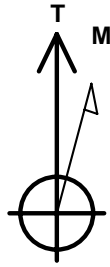
## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Federal 32D-20-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6453.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6453.00ft (Original Well Elev)
<b>Site:</b>	MDP #13	<b>North Reference:</b>	True
<b>Well:</b>	Federal 32D-20-691	<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 (°)	
4,020.17	3,796.00	Mesaverde		0.00		
4,857.35	4,626.00	Top Gas		0.00		
4,872.35	4,641.00	Price Coal		0.00		
7,577.35	7,346.00	Rollins		0.00		
7,877.35	7,646.00	TD		0.00		

## WELL DETAILS: Federal 32D-20-691

Ground Level: 0.00  
 +N/-S+E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1618571.731 2414645.497 30' 48.267" N 104' 29.8000 W



Azimuths to True North  
 Magnetic North: 10.37°

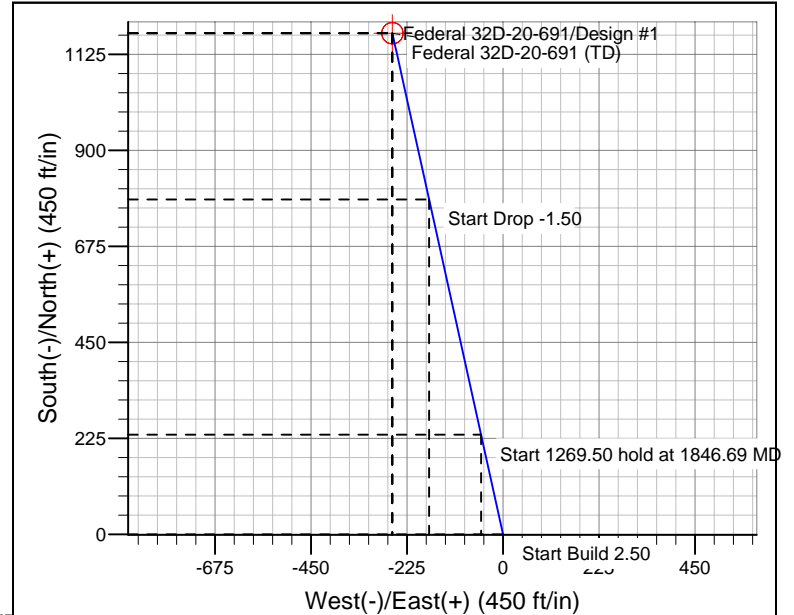
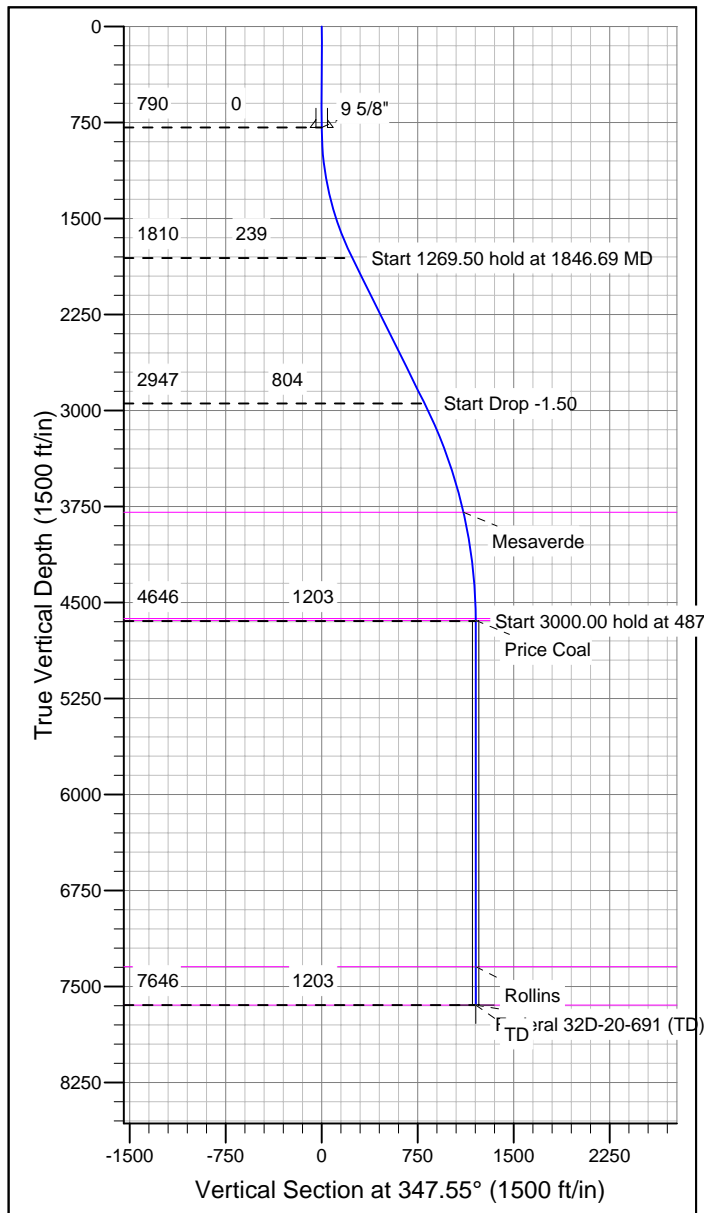
Magnetic Field  
 Strength: 52404.1snT  
 Dip Angle: 65.85°  
 Date: 4/15/2010  
 Model: BGGM2007

## 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	790.00	0.00	0.00	790.00	0.00	0.00	0.00	0.00	0.00	
3	1846.69	26.42	347.55	1809.65	233.69	-51.60	2.50	347.55	239.32	
4	3116.19	26.42	347.55	2946.58	785.21	-173.39	0.00	0.00	804.13	
5	4877.35	0.00	0.00	4646.00	1174.69	-259.39	1.50	180.00	202.99	
6	7677.35	0.00	0.00	7646.00	1174.69	-259.39	0.00	0.00	202.99	Federal 32D-20-691 (TD)

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Federal 32D-20-691 (TD)	7646.00	1174.69	-259.39	Circle (Radius: 25.00)



## CASING DETAILS

TVD	MD	Name	Size
790.00	790.00	9 5/8"	9-5/8

## FORMATION TOP DETAILS

TVD	MD	Formation
3796.00	4020.17	Mesaverde
4626.00	4857.35	Top Gas
4641.00	4872.35	Price Coal
7346.00	7577.35	Rollins
7646.00	7877.35	TD

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Federal 32D-20-691, True North  
 Vertical (TVD) Reference: WELL @ 6453.00ft (Original Well Elev)  
 Section (VS) Reference: Slot - (0.00N, 0.00E)  
 Measured Depth Reference: WELL @ 6453.00ft (Original Well Elev)  
 Calculation Method: Minimum Curvature