

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

**Miller #5**

**GGU LINKENHOKER 23A-31-691**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**22 October, 2009**

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU LINKENHOKER 23A-31-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Site:</b>	Miller #5	<b>North Reference:</b>	True
<b>Well:</b>	GGU LINKENHOKER 23A-31-691	<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>	Miller #5		
<b>Site Position:</b>		<b>Northing:</b>	1,607,064.787 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,407,107.914 ft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	39° 28' 52.848 N
		<b>Longitude:</b>	107° 36' 2.5580 W
		<b>Grid Convergence:</b>	-1.32 °

<b>Well</b>	GGU LINKENHOKER 23A-31-691		
<b>Well Position</b>	<b>+N/-S</b>	-29.39 ft	<b>Northing:</b> 1,607,036.980 ft
	<b>+E/-W</b>	-68.15 ft	<b>Easting:</b> 2,407,039.102 ft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b> ft
			<b>Latitude:</b> 39° 28' 52.557 N
			<b>Longitude:</b> 107° 36' 3.4272 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	11/4/2008	10.49	65.88	52,581

<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	102.14

<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	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,197.23	11.18	102.14	1,194.40	-9.15	42.53	2.50	2.50	0.00	102.14	
3,788.35	11.18	102.14	3,736.34	-114.78	533.73	0.00	0.00	0.00	0.00	
4,533.73	0.00	0.00	4,477.00	-130.02	604.60	1.50	-1.50	0.00	180.00	
7,033.73	0.00	0.00	6,977.00	-130.02	604.60	0.00	0.00	0.00	0.00	TOG 23A-31-691

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<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU LINKENHOKER 23A-31-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Site:</b>	Miller #5	<b>North Reference:</b>	True
<b>Well:</b>	GGU LINKENHOKER 23A-31-691	<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
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
800.00	1.25	102.14	800.00	-0.11	0.53	0.55	2.50	2.50	0.00
900.00	3.75	102.14	899.89	-1.03	4.80	4.91	2.50	2.50	0.00
1,000.00	6.25	102.14	999.50	-2.86	13.32	13.62	2.50	2.50	0.00
1,100.00	8.75	102.14	1,098.64	-5.61	26.08	26.67	2.50	2.50	0.00
1,197.23	11.18	102.14	1,194.40	-9.15	42.53	43.50	2.50	2.50	0.00
1,200.00	11.18	102.14	1,197.11	-9.26	43.05	44.04	0.00	0.00	0.00
1,300.00	11.18	102.14	1,295.22	-13.33	62.01	63.43	0.00	0.00	0.00
1,400.00	11.18	102.14	1,393.32	-17.41	80.97	82.82	0.00	0.00	0.00
1,500.00	11.18	102.14	1,491.42	-21.49	99.92	102.21	0.00	0.00	0.00
1,600.00	11.18	102.14	1,589.52	-25.56	118.88	121.60	0.00	0.00	0.00
1,700.00	11.18	102.14	1,687.62	-29.64	137.84	140.99	0.00	0.00	0.00
1,800.00	11.18	102.14	1,785.73	-33.72	156.79	160.38	0.00	0.00	0.00
1,900.00	11.18	102.14	1,883.83	-37.79	175.75	179.77	0.00	0.00	0.00
2,000.00	11.18	102.14	1,981.93	-41.87	194.71	199.16	0.00	0.00	0.00
2,100.00	11.18	102.14	2,080.03	-45.95	213.67	218.55	0.00	0.00	0.00
2,200.00	11.18	102.14	2,178.13	-50.02	232.62	237.94	0.00	0.00	0.00
2,300.00	11.18	102.14	2,276.24	-54.10	251.58	257.33	0.00	0.00	0.00
2,400.00	11.18	102.14	2,374.34	-58.18	270.54	276.72	0.00	0.00	0.00
2,500.00	11.18	102.14	2,472.44	-62.25	289.49	296.11	0.00	0.00	0.00
2,600.00	11.18	102.14	2,570.54	-66.33	308.45	315.50	0.00	0.00	0.00
2,700.00	11.18	102.14	2,668.64	-70.41	327.41	334.89	0.00	0.00	0.00
2,800.00	11.18	102.14	2,766.75	-74.48	346.37	354.28	0.00	0.00	0.00
2,900.00	11.18	102.14	2,864.85	-78.56	365.32	373.67	0.00	0.00	0.00
3,000.00	11.18	102.14	2,962.95	-82.64	384.28	393.06	0.00	0.00	0.00
3,100.00	11.18	102.14	3,061.05	-86.71	403.24	412.45	0.00	0.00	0.00
3,100.97	11.18	102.14	3,062.00	-86.75	403.42	412.64	0.00	0.00	0.00
Mesaverde									
3,200.00	11.18	102.14	3,159.16	-90.79	422.19	431.85	0.00	0.00	0.00
3,300.00	11.18	102.14	3,257.26	-94.87	441.15	451.24	0.00	0.00	0.00
3,400.00	11.18	102.14	3,355.36	-98.94	460.11	470.63	0.00	0.00	0.00
3,500.00	11.18	102.14	3,453.46	-103.02	479.06	490.02	0.00	0.00	0.00
3,600.00	11.18	102.14	3,551.56	-107.10	498.02	509.41	0.00	0.00	0.00
3,700.00	11.18	102.14	3,649.67	-111.17	516.98	528.80	0.00	0.00	0.00
3,788.35	11.18	102.14	3,736.34	-114.78	533.73	545.93	0.00	0.00	0.00
3,800.00	11.01	102.14	3,747.77	-115.25	535.92	548.17	1.50	-1.50	0.00
3,900.00	9.51	102.14	3,846.17	-118.99	553.33	565.97	1.50	-1.50	0.00
3,966.65	8.51	102.14	3,912.00	-121.18	563.53	576.41	1.50	-1.50	0.00
Price Coal									
4,000.00	8.01	102.14	3,945.00	-122.19	568.21	581.20	1.50	-1.50	0.00
4,100.00	6.51	102.14	4,044.20	-124.85	580.56	593.83	1.50	-1.50	0.00
4,200.00	5.01	102.14	4,143.69	-126.95	590.36	603.86	1.50	-1.50	0.00
4,208.34	4.88	102.14	4,152.00	-127.11	591.06	604.57	1.50	-1.50	0.00
Top Gas									

# BBC

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<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Site:</b>	Miller #5	<b>North Reference:</b>	True
<b>Well:</b>	GGU LINKENHOKER 23A-31-691	<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)
4,300.00	3.51	102.14	4,243.41	-128.51	597.62	611.28	1.50	-1.50	0.00
4,400.00	2.01	102.14	4,343.29	-129.53	602.32	616.09	1.50	-1.50	0.00
4,500.00	0.51	102.14	4,443.27	-129.99	604.46	618.28	1.50	-1.50	0.00
4,533.73	0.00	0.00	4,477.00	-130.02	604.60	618.43	1.50	-1.50	0.00
4,600.00	0.00	0.00	4,543.27	-130.02	604.60	618.43	0.00	0.00	0.00
4,700.00	0.00	0.00	4,643.27	-130.02	604.60	618.43	0.00	0.00	0.00
4,800.00	0.00	0.00	4,743.27	-130.02	604.60	618.43	0.00	0.00	0.00
4,900.00	0.00	0.00	4,843.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,000.00	0.00	0.00	4,943.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,100.00	0.00	0.00	5,043.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,200.00	0.00	0.00	5,143.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,300.00	0.00	0.00	5,243.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,400.00	0.00	0.00	5,343.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,500.00	0.00	0.00	5,443.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,600.00	0.00	0.00	5,543.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,700.00	0.00	0.00	5,643.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,800.00	0.00	0.00	5,743.27	-130.02	604.60	618.43	0.00	0.00	0.00
5,900.00	0.00	0.00	5,843.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,000.00	0.00	0.00	5,943.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,100.00	0.00	0.00	6,043.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,200.00	0.00	0.00	6,143.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,300.00	0.00	0.00	6,243.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,400.00	0.00	0.00	6,343.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,500.00	0.00	0.00	6,443.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,600.00	0.00	0.00	6,543.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,700.00	0.00	0.00	6,643.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,733.73	0.00	0.00	6,677.00	-130.02	604.60	618.43	0.00	0.00	0.00
<b>Rollins</b>									
6,800.00	0.00	0.00	6,743.27	-130.02	604.60	618.43	0.00	0.00	0.00
6,900.00	0.00	0.00	6,843.27	-130.02	604.60	618.43	0.00	0.00	0.00
7,000.00	0.00	0.00	6,943.27	-130.02	604.60	618.43	0.00	0.00	0.00
7,033.73	0.00	0.00	6,977.00	-130.02	604.60	618.43	0.00	0.00	0.00
<b>TD</b>									

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
750.00	750.00	9 5/8"	9-5/8	12-1/4

# BBC

## Planning Report

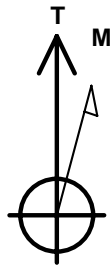
<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well GGU LINKENHOKER 23A-31-691
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Project:</b>	GARFIELD COUNTY, COLORADO NAD 1983	<b>MD Reference:</b>	WELL @ 6035.00ft (Original Well Elev)
<b>Site:</b>	Miller #5	<b>North Reference:</b>	True
<b>Well:</b>	GGU LINKENHOKER 23A-31-691	<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 (°)	
3,100.97	3,062.00	Mesaverde		0.00		
3,966.65	3,912.00	Price Coal		0.00		
4,208.34	4,152.00	Top Gas		0.00		
6,733.73	6,677.00	Rollins		0.00		
7,033.73	6,977.00	TD		0.00		

## WELL DETAILS: GGU LINKENHOKER 23A-31-691

Ground Level: 0.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1607036.980	2407039.102	29° 28' 52.5571N	107° 36' 3.4272 W	



Azimuths to True North  
Magnetic North: 10.49°

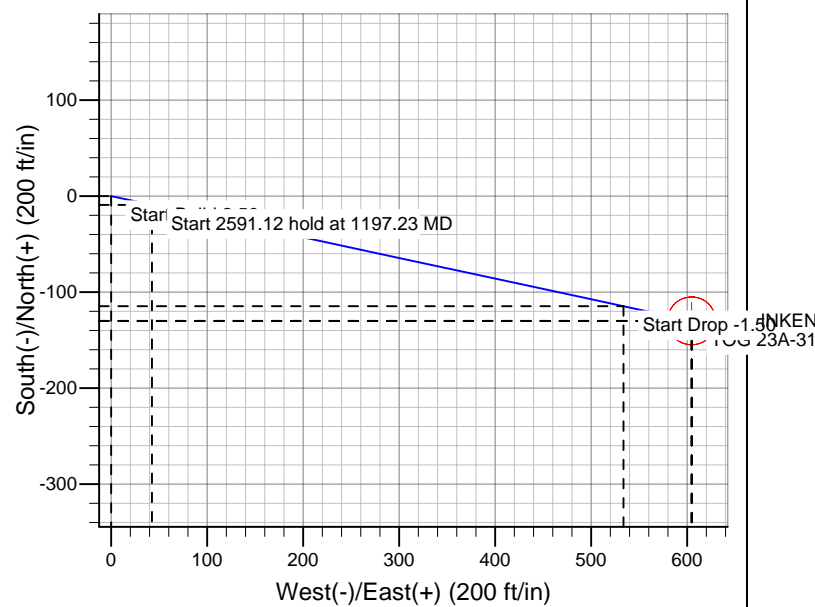
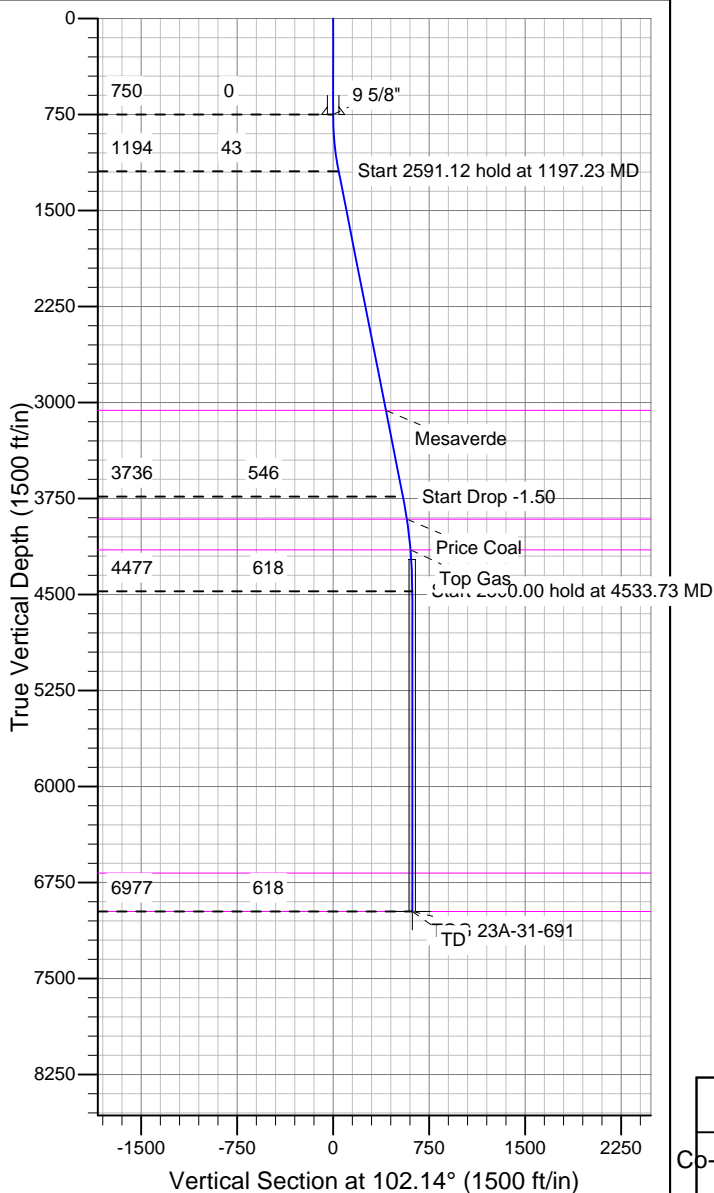
Magnetic Field  
Strength: 52581.4snT  
Dip Angle: 65.88°  
Date: 11/4/2008  
Model: IGRF200510

## 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	750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	
3	1197.23	11.18	102.14	1194.40	-9.15	42.53	2.50	102.14	43.50	
4	1788.35	11.18	102.14	1736.34	-114.78	533.73	0.00	0.00	545.93	
5	2533.73	0.00	0.00	2477.00	-130.02	604.60	1.50	180.00	618.43	
6	3033.73	0.00	0.00	2977.00	-130.02	604.60	0.00	0.00	618.43	TOG 23A-31-691

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
TOG 23A-31-691	6977.00	-130.02	604.60	Circle (Radius: 25.00)



## CASING DETAILS

TVD	MD	Name	Size
750.00	750.00	9 5/8"	9-5/8

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3062.00	3100.97	Mesaverde
3912.00	3966.65	Price Coal
4152.00	4208.34	Top Gas
6677.00	6733.73	Rollins
6977.00	7033.73	TD

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well GGU LINKENHOKER 23A-31-691, True North

Vertical (TVD) Reference: WELL @ 6035.00ft (Original Well Elev)

Section (VS) Reference: Slot - (0.00N, 0.00E)

Measured Depth Reference: WELL @ 6035.00ft (Original Well Elev)

Calculation Method: Minimum Curvature