

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

**Werner Pad(s) SWSE-23-692**

**Werner 34D-23-692**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**14 December, 2009**

**BBC**  
Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well Werner 34D-23-692
Company:	BILL BARRETT CORP	TVD Reference:	WELL @ 0.00ft (Original Well Elev)
Project:	GARFIELD COUNTY, COLORADO NAD 1983	MD Reference:	WELL @ 0.00ft (Original Well Elev)
Site:	Werner Pad(s) SWSE-23-692	North Reference:	True
Well:	Werner 34D-23-692	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

<b>Project</b>	GARFIELD COUNTY, COLORADO NAD 1983		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

<b>Site</b>	Werner Pad(s) SWSE-23-692		
Site Position:		Northing:	1,616,896.898 ft
From:	Lat/Long	Easting:	2,399,006.620 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	39° 30' 28.134 N
		Longitude:	107° 37' 48.7956 W
		Grid Convergence:	-1.34 °

<b>Well</b>	Werner 34D-23-692		
Well Position	+N/-S	-32.43 ft	Northing:
	+E/-W	-9.59 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	39° 30' 27.813 N
		Longitude:	107° 37' 48.9180 W
		Ground Level:	0.00 ft

<b>Wellbore</b>	Wellbore #1		
<b>Magnetics</b>	Model Name	Sample Date	Declination (°)
	BGGM2007	12/14/2009	10.44
			Dip Angle (°)
			65.84
			Field Strength (nT)
			52,483

<b>Design</b>	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction (°)
			300.97

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,152.37	7.56	300.97	1,151.50	10.25	-17.08	2.50	2.50	0.00	300.97	
4,848.50	7.56	300.97	4,815.51	260.48	-433.98	0.00	0.00	0.00	0.00	
5,352.46	0.00	0.00	5,318.00	277.57	-462.45	1.50	-1.50	0.00	180.00	
8,352.46	0.00	0.00	8,318.00	277.57	-462.45	0.00	0.00	0.00	0.00	Werner 34D-23-692

# BBC Planning Report

**Database:** Compass  
**Company:** BILL BARRETT CORP  
**Project:** GARFIELD COUNTY, COLORADO NAD 1983  
**Site:** Werner Pad(s) SWSE-23-692  
**Well:** Werner 34D-23-692  
**Wellbore:** Wellbore #1  
**Design:** Design #1

**Local Co-ordinate Reference:** Well Werner 34D-23-692  
**TVD Reference:** WELL @ 0.00ft (Original Well Elev)  
**MD Reference:** WELL @ 0.00ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

## 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
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
900.00	1.25	300.97	900.00	0.28	-0.47	0.55	2.50	2.50	0.00
1,000.00	3.75	300.97	999.89	2.53	-4.21	4.91	2.50	2.50	0.00
1,100.00	6.25	300.97	1,099.50	7.01	-11.68	13.62	2.50	2.50	0.00
1,152.37	7.56	300.97	1,151.50	10.25	-17.08	19.92	2.50	2.50	0.00
1,200.00	7.56	300.97	1,198.71	13.47	-22.45	26.18	0.00	0.00	0.00
1,300.00	7.56	300.97	1,297.84	20.24	-33.73	39.34	0.00	0.00	0.00
1,400.00	7.56	300.97	1,396.97	27.01	-45.01	52.49	0.00	0.00	0.00
1,500.00	7.56	300.97	1,496.10	33.78	-56.29	65.65	0.00	0.00	0.00
1,600.00	7.56	300.97	1,595.23	40.56	-67.57	78.80	0.00	0.00	0.00
1,700.00	7.56	300.97	1,694.36	47.33	-78.85	91.96	0.00	0.00	0.00
1,800.00	7.56	300.97	1,793.50	54.10	-90.13	105.11	0.00	0.00	0.00
1,900.00	7.56	300.97	1,892.63	60.87	-101.41	118.27	0.00	0.00	0.00
2,000.00	7.56	300.97	1,991.76	67.64	-112.69	131.43	0.00	0.00	0.00
2,100.00	7.56	300.97	2,090.89	74.41	-123.97	144.58	0.00	0.00	0.00
2,200.00	7.56	300.97	2,190.02	81.18	-135.24	157.74	0.00	0.00	0.00
2,300.00	7.56	300.97	2,289.15	87.95	-146.52	170.89	0.00	0.00	0.00
2,400.00	7.56	300.97	2,388.28	94.72	-157.80	184.05	0.00	0.00	0.00
2,500.00	7.56	300.97	2,487.41	101.49	-169.08	197.20	0.00	0.00	0.00
2,600.00	7.56	300.97	2,586.54	108.26	-180.36	210.36	0.00	0.00	0.00
2,700.00	7.56	300.97	2,685.67	115.03	-191.64	223.51	0.00	0.00	0.00
2,800.00	7.56	300.97	2,784.80	121.80	-202.92	236.67	0.00	0.00	0.00
2,900.00	7.56	300.97	2,883.94	128.57	-214.20	249.82	0.00	0.00	0.00
3,000.00	7.56	300.97	2,983.07	135.34	-225.48	262.98	0.00	0.00	0.00
3,100.00	7.56	300.97	3,082.20	142.11	-236.76	276.13	0.00	0.00	0.00
3,200.00	7.56	300.97	3,181.33	148.88	-248.04	289.29	0.00	0.00	0.00
3,300.00	7.56	300.97	3,280.46	155.65	-259.32	302.44	0.00	0.00	0.00
3,400.00	7.56	300.97	3,379.59	162.42	-270.60	315.60	0.00	0.00	0.00
3,500.00	7.56	300.97	3,478.72	169.19	-281.88	328.75	0.00	0.00	0.00
3,600.00	7.56	300.97	3,577.85	175.96	-293.16	341.91	0.00	0.00	0.00
3,695.98	7.56	300.97	3,673.00	182.45	-303.98	354.54	0.00	0.00	0.00
<b>Mesaverde</b>									
3,700.00	7.56	300.97	3,676.98	182.73	-304.44	355.06	0.00	0.00	0.00
3,800.00	7.56	300.97	3,776.11	189.50	-315.72	368.22	0.00	0.00	0.00
3,900.00	7.56	300.97	3,875.24	196.27	-327.00	381.38	0.00	0.00	0.00
4,000.00	7.56	300.97	3,974.38	203.04	-338.28	394.53	0.00	0.00	0.00
4,100.00	7.56	300.97	4,073.51	209.81	-349.55	407.69	0.00	0.00	0.00
4,200.00	7.56	300.97	4,172.64	216.58	-360.83	420.84	0.00	0.00	0.00
4,300.00	7.56	300.97	4,271.77	223.35	-372.11	434.00	0.00	0.00	0.00
4,400.00	7.56	300.97	4,370.90	230.12	-383.39	447.15	0.00	0.00	0.00
4,500.00	7.56	300.97	4,470.03	236.89	-394.67	460.31	0.00	0.00	0.00
4,583.70	7.56	300.97	4,553.00	242.55	-404.11	471.32	0.00	0.00	0.00
<b>Price Coal</b>									

# BBC

## Planning Report

Database: Compass  
 Company: BILL BARRETT CORP  
 Project: GARFIELD COUNTY, COLORADO NAD 1983  
 Site: Werner Pad(s) SWSE-23-692  
 Well: Werner 34D-23-692  
 Wellbore: Wellbore #1  
 Design: Design #1

Local Co-ordinate Reference: Well Werner 34D-23-692  
 TVD Reference: WELL @ 0.00ft (Original Well Elev)  
 MD Reference: WELL @ 0.00ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature

### 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)
4,600.00	7.56	300.97	4,569.16	243.66	-405.95	473.46	0.00	0.00	0.00
4,700.00	7.56	300.97	4,668.29	250.43	-417.23	486.62	0.00	0.00	0.00
4,800.00	7.56	300.97	4,767.42	257.20	-428.51	499.77	0.00	0.00	0.00
4,848.50	7.56	300.97	4,815.51	260.48	-433.98	506.15	0.00	0.00	0.00
4,900.00	6.79	300.97	4,866.60	263.79	-439.50	512.58	1.50	-1.50	0.00
5,000.00	5.29	300.97	4,966.04	269.20	-448.51	523.10	1.50	-1.50	0.00
5,100.00	3.79	300.97	5,065.72	273.27	-455.29	531.01	1.50	-1.50	0.00
5,200.00	2.29	300.97	5,165.58	276.00	-459.84	536.31	1.50	-1.50	0.00
5,300.00	0.79	300.97	5,265.54	277.38	-462.14	538.99	1.50	-1.50	0.00
5,352.46	0.00	0.00	5,318.00	277.57	-462.45	539.35	1.50	-1.50	0.00
5,400.00	0.00	0.00	5,365.54	277.57	-462.45	539.35	0.00	0.00	0.00
5,452.46	0.00	0.00	5,418.00	277.57	-462.45	539.35	0.00	0.00	0.00
<b>Top Gas</b>									
5,500.00	0.00	0.00	5,465.54	277.57	-462.45	539.35	0.00	0.00	0.00
5,600.00	0.00	0.00	5,565.54	277.57	-462.45	539.35	0.00	0.00	0.00
5,700.00	0.00	0.00	5,665.54	277.57	-462.45	539.35	0.00	0.00	0.00
5,800.00	0.00	0.00	5,765.54	277.57	-462.45	539.35	0.00	0.00	0.00
5,900.00	0.00	0.00	5,865.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,000.00	0.00	0.00	5,965.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,100.00	0.00	0.00	6,065.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,200.00	0.00	0.00	6,165.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,300.00	0.00	0.00	6,265.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,400.00	0.00	0.00	6,365.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,500.00	0.00	0.00	6,465.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,600.00	0.00	0.00	6,565.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,700.00	0.00	0.00	6,665.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,800.00	0.00	0.00	6,765.54	277.57	-462.45	539.35	0.00	0.00	0.00
6,900.00	0.00	0.00	6,865.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,000.00	0.00	0.00	6,965.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,100.00	0.00	0.00	7,065.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,200.00	0.00	0.00	7,165.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,300.00	0.00	0.00	7,265.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,357.46	0.00	0.00	7,323.00	277.57	-462.45	539.35	0.00	0.00	0.00
<b>Rollins</b>									
7,400.00	0.00	0.00	7,365.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,500.00	0.00	0.00	7,465.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,600.00	0.00	0.00	7,565.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,700.00	0.00	0.00	7,665.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,800.00	0.00	0.00	7,765.54	277.57	-462.45	539.35	0.00	0.00	0.00
7,900.00	0.00	0.00	7,865.54	277.57	-462.45	539.35	0.00	0.00	0.00
8,000.00	0.00	0.00	7,965.54	277.57	-462.45	539.35	0.00	0.00	0.00
8,052.46	0.00	0.00	8,018.00	277.57	-462.45	539.35	0.00	0.00	0.00
<b>CRCN</b>									
8,100.00	0.00	0.00	8,065.54	277.57	-462.45	539.35	0.00	0.00	0.00
8,200.00	0.00	0.00	8,165.54	277.57	-462.45	539.35	0.00	0.00	0.00
8,300.00	0.00	0.00	8,265.54	277.57	-462.45	539.35	0.00	0.00	0.00
8,352.46	0.00	0.00	8,318.00	277.57	-462.45	539.35	0.00	0.00	0.00

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Werner 34D-23-692
<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>	Werner Pad(s) SWSE-23-692	<b>North Reference:</b>	True
<b>Well:</b>	Werner 34D-23-692	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
850.00	850.00	9 5/8"	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,695.98	3,673.00	Mesaverde		0.00		
4,583.70	4,553.00	Price Coal		0.00		
5,452.46	5,418.00	Top Gas		0.00		
7,357.46	7,323.00	Rollins		0.00		
8,052.46	8,018.00	CRCN		0.00		

# WELL DETAILS: Werner 34D-23-692

Ground Level: 0.00  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1616864.706 2398996.263 39° 30' 27.8130 N 107° 37' 48.9180 W



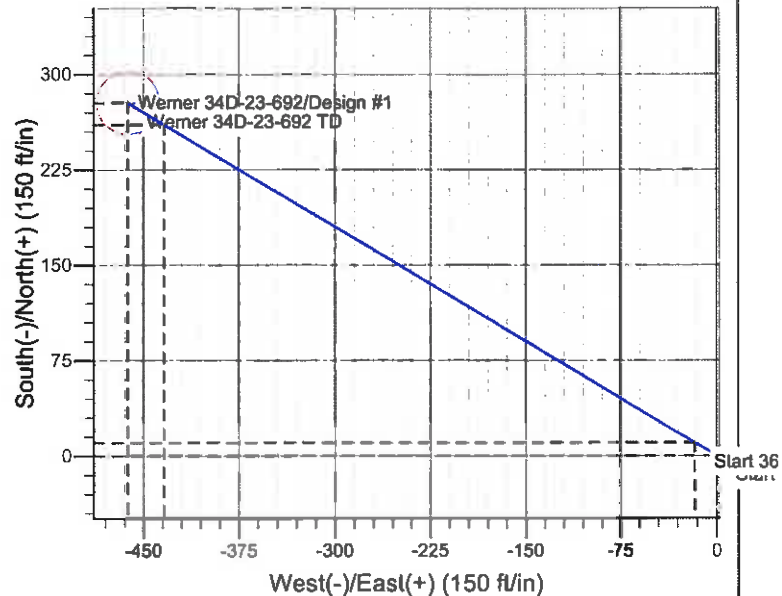
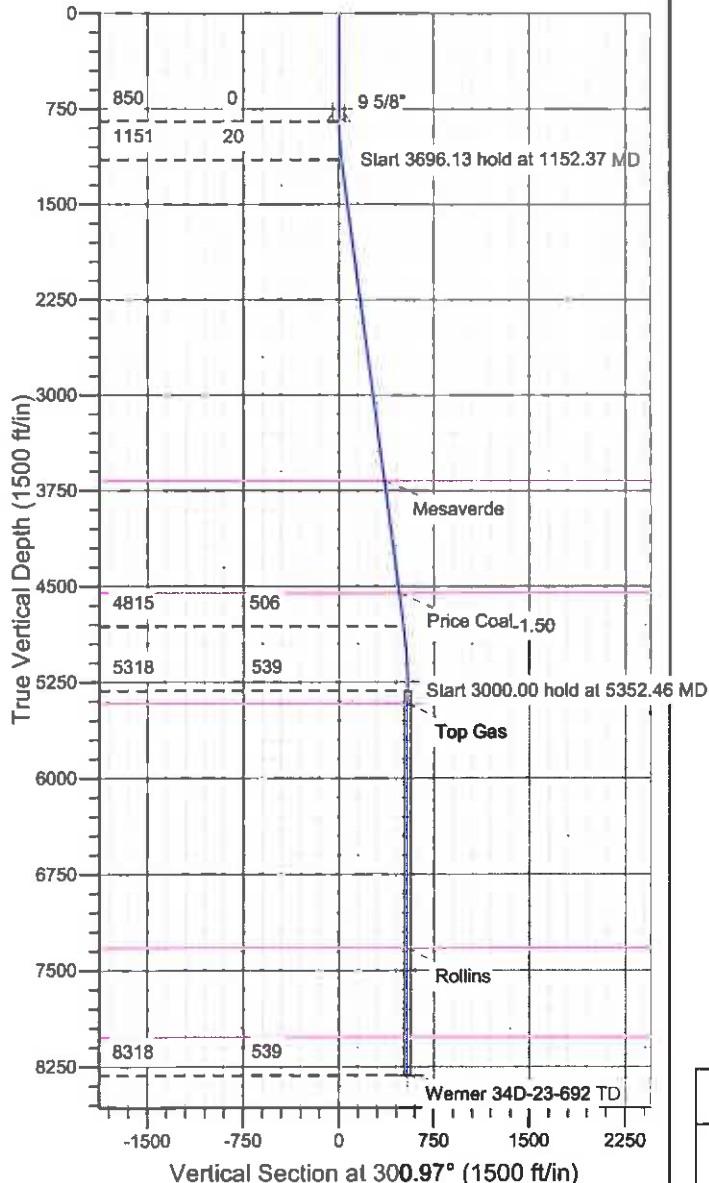
Azimuths to True North  
 Magnetic North: 10.46°  
 Magnetic Field  
 Strength: 52482.7nT  
 Dip Angle: 65.84°  
 Date: 12/14/2009  
 Model: BGGM2007

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	
3152.37	7.56	300.97	1151.50	10.25	-17.08	2.50	300.97	19.92	
4848.50	7.56	300.97	4815.51	260.48	-433.98	0.00	0.00	506.15	
5352.46	0.00	0.00	5318.00	277.57	-462.45	1.50	180.00	539.35	
8352.46	0.00	0.00	8318.00	277.57	-462.45	0.00	0.00	539.35	Werner 34D-23-692 TD

## WELLBORE TARGET DETAILS

Name TVD +N/-S +E/-W Shape  
 Werner 34D-23-692 TD 277.57 -462.45 Circle (Radius: 25.00)



## CASING DETAILS

TVD MD Name Size  
 850.00 850.00 9 5/8" 9-5/8

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3673.00	3695.98	Mesaverde
4553.00	4583.70	Price Coal
5418.00	5452.46	Top Gas
7323.00	7357.46	Rollins
8018.00	8052.46	CRCN

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Werner 34D-23-692, 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