

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

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

**Werner 34A-23-692**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**14 December, 2009**

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Werner 34A-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 34A-23-692	<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>	Werner Pad(s) SWSE-23-692			
<b>Site Position:</b>		<b>Northing:</b>	1,616,896.898 ft	<b>Latitude:</b> 39° 30' 28.134 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,399,006.620 ft	<b>Longitude:</b> 107° 37' 48.7956 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b> -1.34 °

<b>Well</b>	Werner 34A-23-692			
<b>Well Position</b>	+N/-S	-80.14 ft	<b>Northing:</b>	1,616,816.990 ft
	+E/-W	-9.03 ft	<b>Easting:</b>	2,398,995.715 ft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft
			<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	12/14/2009	10.44	65.84	52,483

<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	214.85

<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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,227.03	10.68	214.85	1,224.57	-32.55	-22.67	2.50	2.50	0.00	214.85	
4,942.16	10.68	214.85	4,875.39	-597.36	-415.94	0.00	0.00	0.00	0.00	
5,653.88	0.00	0.00	5,583.00	-651.62	-453.72	1.50	-1.50	0.00	180.00	
7,653.88	0.00	0.00	7,583.00	-651.62	-453.72	0.00	0.00	0.00	0.00	Werner 34A-23-692

# BBC

## Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well Werner 34A-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 34A-23-692	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
9 5/8"									
900.00	2.50	214.85	899.97	-1.79	-1.25	2.18	2.50	2.50	0.00
1,000.00	5.00	214.85	999.75	-7.16	-4.98	8.72	2.50	2.50	0.00
1,100.00	7.50	214.85	1,099.14	-16.09	-11.20	19.61	2.50	2.50	0.00
1,200.00	10.00	214.85	1,197.97	-28.57	-19.90	34.82	2.50	2.50	0.00
1,227.03	10.68	214.85	1,224.57	-32.55	-22.67	39.67	2.50	2.50	0.00
1,300.00	10.68	214.85	1,296.27	-43.65	-30.39	53.19	0.00	0.00	0.00
1,400.00	10.68	214.85	1,394.54	-58.85	-40.98	71.71	0.00	0.00	0.00
1,500.00	10.68	214.85	1,492.81	-74.05	-51.56	90.24	0.00	0.00	0.00
1,600.00	10.68	214.85	1,591.08	-89.26	-62.15	108.76	0.00	0.00	0.00
1,700.00	10.68	214.85	1,689.35	-104.46	-72.73	127.29	0.00	0.00	0.00
1,800.00	10.68	214.85	1,787.62	-119.66	-83.32	145.81	0.00	0.00	0.00
1,900.00	10.68	214.85	1,885.89	-134.86	-93.91	164.34	0.00	0.00	0.00
2,000.00	10.68	214.85	1,984.15	-150.07	-104.49	182.86	0.00	0.00	0.00
2,100.00	10.68	214.85	2,082.42	-165.27	-115.08	201.39	0.00	0.00	0.00
2,200.00	10.68	214.85	2,180.69	-180.47	-125.66	219.91	0.00	0.00	0.00
2,300.00	10.68	214.85	2,278.96	-195.68	-136.25	238.44	0.00	0.00	0.00
2,400.00	10.68	214.85	2,377.23	-210.88	-146.83	256.96	0.00	0.00	0.00
2,500.00	10.68	214.85	2,475.50	-226.08	-157.42	275.49	0.00	0.00	0.00
2,600.00	10.68	214.85	2,573.77	-241.28	-168.00	294.01	0.00	0.00	0.00
2,700.00	10.68	214.85	2,672.04	-256.49	-178.59	312.54	0.00	0.00	0.00
2,800.00	10.68	214.85	2,770.31	-271.69	-189.18	331.06	0.00	0.00	0.00
2,900.00	10.68	214.85	2,868.58	-286.89	-199.76	349.59	0.00	0.00	0.00
3,000.00	10.68	214.85	2,966.85	-302.10	-210.35	368.11	0.00	0.00	0.00
3,100.00	10.68	214.85	3,065.11	-317.30	-220.93	386.64	0.00	0.00	0.00
3,200.00	10.68	214.85	3,163.38	-332.50	-231.52	405.16	0.00	0.00	0.00
3,300.00	10.68	214.85	3,261.65	-347.70	-242.10	423.69	0.00	0.00	0.00
3,400.00	10.68	214.85	3,359.92	-362.91	-252.69	442.21	0.00	0.00	0.00
3,500.00	10.68	214.85	3,458.19	-378.11	-263.28	460.74	0.00	0.00	0.00
3,600.00	10.68	214.85	3,556.46	-393.31	-273.86	479.26	0.00	0.00	0.00
3,688.06	10.68	214.85	3,643.00	-406.70	-283.18	495.58	0.00	0.00	0.00
Mesaverde									
3,700.00	10.68	214.85	3,654.73	-408.51	-284.45	497.79	0.00	0.00	0.00
3,800.00	10.68	214.85	3,753.00	-423.72	-295.03	516.31	0.00	0.00	0.00
3,900.00	10.68	214.85	3,851.27	-438.92	-305.62	534.84	0.00	0.00	0.00
4,000.00	10.68	214.85	3,949.54	-454.12	-316.20	553.36	0.00	0.00	0.00
4,100.00	10.68	214.85	4,047.81	-469.33	-326.79	571.89	0.00	0.00	0.00
4,200.00	10.68	214.85	4,146.07	-484.53	-337.37	590.41	0.00	0.00	0.00
4,300.00	10.68	214.85	4,244.34	-499.73	-347.96	608.94	0.00	0.00	0.00
4,400.00	10.68	214.85	4,342.61	-514.93	-358.55	627.46	0.00	0.00	0.00
4,500.00	10.68	214.85	4,440.88	-530.14	-369.13	645.99	0.00	0.00	0.00
4,583.56	10.68	214.85	4,523.00	-542.84	-377.98	661.47	0.00	0.00	0.00
Price Coal									
4,600.00	10.68	214.85	4,539.15	-545.34	-379.72	664.51	0.00	0.00	0.00

**BBC**  
Planning Report

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

Local Co-ordinate Reference: Well Wemer 34A-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)	Bulld Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	10.68	214.85	4,637.42	-560.54	-390.30	683.04	0.00	0.00	0.00
4,800.00	10.68	214.85	4,735.69	-575.75	-400.89	701.57	0.00	0.00	0.00
4,900.00	10.68	214.85	4,833.96	-590.95	-411.47	720.09	0.00	0.00	0.00
4,942.16	10.68	214.85	4,875.39	-597.36	-415.94	727.90	0.00	0.00	0.00
5,000.00	9.81	214.85	4,932.31	-605.80	-421.81	738.18	1.50	-1.50	0.00
5,100.00	8.31	214.85	5,031.06	-618.72	-430.81	753.93	1.50	-1.50	0.00
5,200.00	6.81	214.85	5,130.19	-629.51	-438.33	767.08	1.50	-1.50	0.00
5,300.00	5.31	214.85	5,229.62	-638.17	-444.36	777.63	1.50	-1.50	0.00
5,400.00	3.81	214.85	5,329.30	-644.69	-448.90	785.58	1.50	-1.50	0.00
5,413.72	3.60	214.85	5,343.00	-645.42	-449.40	786.47	1.50	-1.50	0.00
<b>Top Gas</b>									
5,500.00	2.31	214.85	5,429.16	-649.07	-451.95	790.92	1.50	-1.50	0.00
5,600.00	0.81	214.85	5,529.12	-651.30	-453.50	793.64	1.50	-1.50	0.00
5,653.88	0.00	0.00	5,583.00	-651.62	-453.72	794.02	1.50	-1.50	0.00
5,700.00	0.00	0.00	5,629.12	-651.62	-453.72	794.02	0.00	0.00	0.00
5,800.00	0.00	0.00	5,729.12	-651.62	-453.72	794.02	0.00	0.00	0.00
5,900.00	0.00	0.00	5,829.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,000.00	0.00	0.00	5,929.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,100.00	0.00	0.00	6,029.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,200.00	0.00	0.00	6,129.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,300.00	0.00	0.00	6,229.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,400.00	0.00	0.00	6,329.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,500.00	0.00	0.00	6,429.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,600.00	0.00	0.00	6,529.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,700.00	0.00	0.00	6,629.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,800.00	0.00	0.00	6,729.12	-651.62	-453.72	794.02	0.00	0.00	0.00
6,900.00	0.00	0.00	6,829.12	-651.62	-453.72	794.02	0.00	0.00	0.00
7,000.00	0.00	0.00	6,929.12	-651.62	-453.72	794.02	0.00	0.00	0.00
7,100.00	0.00	0.00	7,029.12	-651.62	-453.72	794.02	0.00	0.00	0.00
7,200.00	0.00	0.00	7,129.12	-651.62	-453.72	794.02	0.00	0.00	0.00
7,300.00	0.00	0.00	7,229.12	-651.62	-453.72	794.02	0.00	0.00	0.00
7,353.88	0.00	0.00	7,283.00	-651.62	-453.72	794.02	0.00	0.00	0.00
<b>Rollins</b>									
7,400.00	0.00	0.00	7,329.12	-651.62	-453.72	794.02	0.00	0.00	0.00
7,500.00	0.00	0.00	7,429.12	-651.62	-453.72	794.02	0.00	0.00	0.00
7,600.00	0.00	0.00	7,529.12	-651.62	-453.72	794.02	0.00	0.00	0.00
7,653.88	0.00	0.00	7,583.00	-651.62	-453.72	794.02	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

# BBC

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Werner 34A-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 34A-23-692	<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 (°)	
3,688.06	3,643.00	Mesaverde		0.00		
4,583.56	4,523.00	Price Coal		0.00		
5,413.72	5,343.00	Top Gas		0.00		
7,353.88	7,283.00	Rollins		0.00		

# WELL DETAILS: Werner 34A-23-692

Ground Level: 0.00  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1616816.990 2398995.715 39° 30' 27.3420 N 107° 37' 48.9108 W



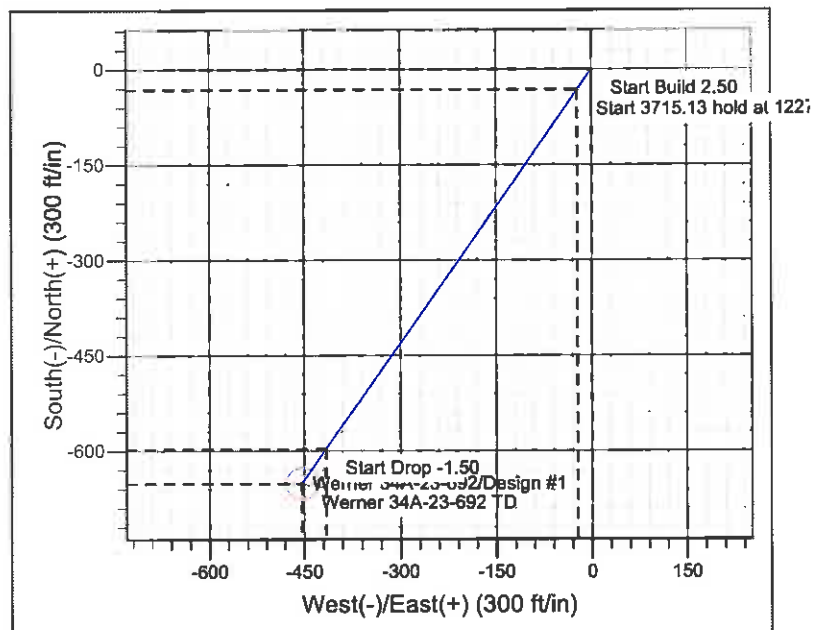
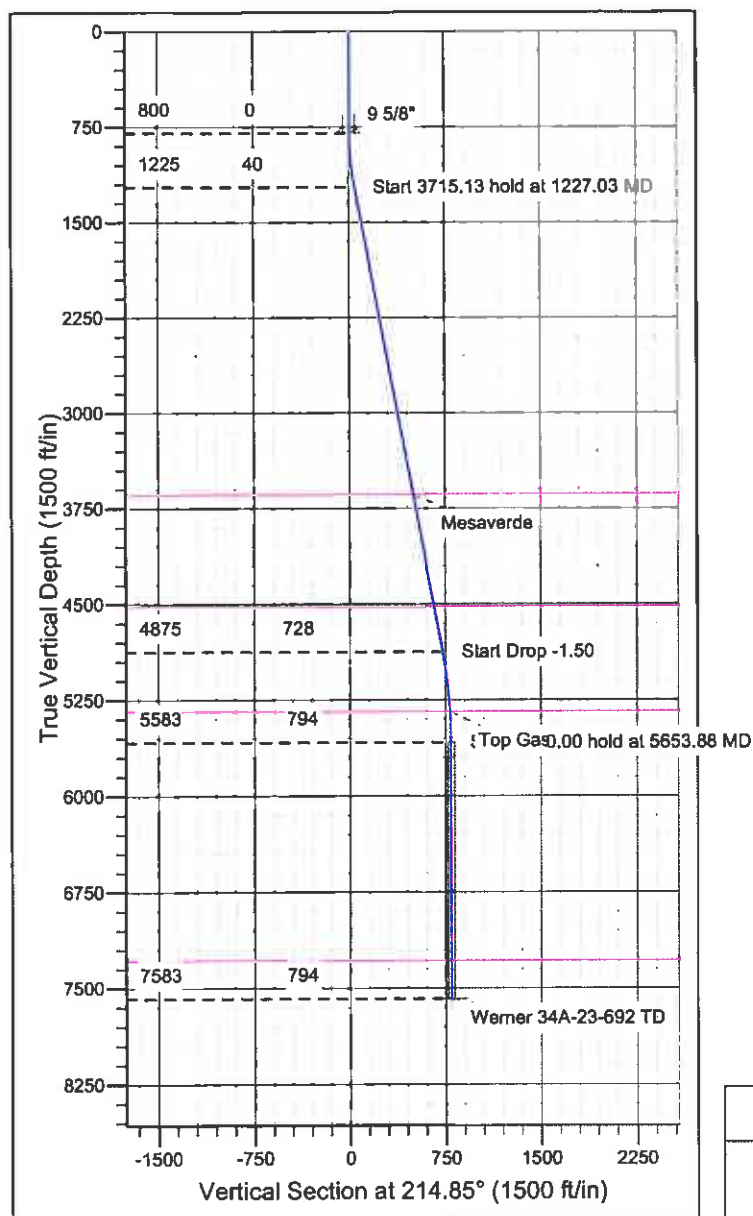
Azimuths to True North  
 Magnetic North: 10.44°  
 Magnetic Field  
 Strength: 52482.6snT  
 Dip Angle: 65.84°  
 Date: 12/14/2009  
 Model: BGGM2007

## 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	
2 800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	
3 1227.03	10.68	214.85	1224.57	-32.55	-22.67	2.50	214.85	39.67	
4 1942.16	10.68	214.85	4875.39	-597.36	-415.94	0.00	0.00	727.90	
5 5653.88	0.00	0.00	5583.00	-651.62	-453.72	1.50	180.00	794.02	
6 7653.88	0.00	0.00	7583.00	-651.62	-453.72	0.00	0.00	794.02	Werner 34A-23-692 TD

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Werner 34A-23-692 TD	7583.00	-651.62	-453.72	Circle (Radius: 25.00)



## CASING DETAILS

TVD	MD	Name	Size
800.00	800.00	9 5/8"	9-5/8

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3643.00	3688.06	Mesaverde
4523.00	4583.56	Price Coal
5343.00	5413.72	Top Gas
7283.00	7353.88	Rollins

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Werner 34A-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