

# **BILL BARRETT CORP**

**GARFIELD COUNTY, COLORADO NAD 1983**

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

**Werner 31A-26-692**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**14 December, 2009**

# BBC Planning Report

**Database:** Compass  
**Company:** BILL BARRETT CORP  
**Project:** GARFIELD COUNTY, COLORADO NAD 1983  
**Site:** Wemer Pad(s) SWSE-23-692  
**Well:** Wemer 31A-26-692  
**Wellbore:** Wellbore #1  
**Design:** Design #1

**Local Co-ordinate Reference:** Well Wemer 31A-26-692  
**TVD Reference:** WELL @ 0.00ft (Original Well Elev)  
**MD Reference:** WELL @ 0.00ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

**Project** GARFIELD COUNTY, COLORADO NAD 1983

**Map System:** US State Plane 1983  
**Geo Datum:** North American Datum 1983  
**Map Zone:** Colorado Central Zone

**System Datum:** Mean Sea Level

**Site** Wemer 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>	<b>Lat/Long</b>	<b>Easting:</b>	<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 °

**Well** Wemer 31A-26-692

<b>Well Position</b>	+N/-S	-330.01 ft	<b>Northing:</b>	1,616,567.712 ft	<b>Latitude:</b>	39° 30' 24.872 N
	+E/-W	-31.32 ft	<b>Easting:</b>	2,398,967.572 ft	<b>Longitude:</b>	107° 37' 49.1952 W
<b>Position Uncertainty</b>	0.00 ft		<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	0.00 ft

**Wellbore** Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2007	12/14/2009	10.44	65.84	52,482

**Design** Design #1

**Audit Notes:**

**Version:** Phase: PROTOTYPE Tie On Depth: 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	193.89

**Plan Sections**

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	
1,974.14	29.35	193.89	1,923.45	-285.64	-70.64	2.50	2.50	0.00	193.89	
3,957.98	29.35	193.89	3,652.58	-1,229.67	-304.12	0.00	0.00	0.00	0.00	
5,914.88	0.00	0.00	5,525.00	-1,705.73	-421.85	1.50	-1.50	0.00	180.00	
7,914.88	0.00	0.00	7,525.00	-1,705.73	-421.85	0.00	0.00	0.00	0.00	Wemer 31A-26-692

# BBC Planning Report

Database: Compass  
Company: BILL BARRETT CORP  
Project: GARFIELD COUNTY, COLORADO NAD 1983  
Site: Werner Pad(s) SWSE-23-692  
Well: Werner 31A-26-692  
Wellbore: Wellbore #1  
Design: Design #1

Local Co-ordinate Reference: Well Werner 31A-26-692  
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)
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
<b>9 5/8"</b>									
900.00	2.50	193.89	899.97	-2.12	-0.52	2.18	2.50	2.50	0.00
1,000.00	5.00	193.89	999.75	-8.47	-2.09	8.72	2.50	2.50	0.00
1,100.00	7.50	193.89	1,099.14	-19.03	-4.71	19.61	2.50	2.50	0.00
1,200.00	10.00	193.89	1,197.97	-33.80	-8.36	34.82	2.50	2.50	0.00
1,300.00	12.50	193.89	1,296.04	-52.74	-13.04	54.33	2.50	2.50	0.00
1,400.00	15.00	193.89	1,393.17	-75.81	-18.75	78.09	2.50	2.50	0.00
1,500.00	17.50	193.89	1,489.17	-102.97	-25.47	106.07	2.50	2.50	0.00
1,600.00	20.00	193.89	1,583.85	-134.17	-33.18	138.21	2.50	2.50	0.00
1,700.00	22.50	193.89	1,677.05	-169.35	-41.88	174.45	2.50	2.50	0.00
1,800.00	25.00	193.89	1,768.57	-208.45	-51.55	214.73	2.50	2.50	0.00
1,900.00	27.50	193.89	1,858.25	-251.38	-62.17	258.95	2.50	2.50	0.00
1,974.14	29.35	193.89	1,923.45	-285.64	-70.64	294.24	2.50	2.50	0.00
2,000.00	29.35	193.89	1,945.99	-297.94	-73.69	306.92	0.00	0.00	0.00
2,100.00	29.35	193.89	2,033.15	-345.53	-85.45	355.94	0.00	0.00	0.00
2,200.00	29.35	193.89	2,120.31	-393.12	-97.22	404.96	0.00	0.00	0.00
2,300.00	29.35	193.89	2,207.47	-440.70	-108.99	453.98	0.00	0.00	0.00
2,400.00	29.35	193.89	2,294.63	-488.29	-120.76	503.00	0.00	0.00	0.00
2,500.00	29.35	193.89	2,381.79	-535.87	-132.53	552.02	0.00	0.00	0.00
2,600.00	29.35	193.89	2,468.95	-583.46	-144.30	601.04	0.00	0.00	0.00
2,700.00	29.35	193.89	2,556.12	-631.05	-156.07	650.06	0.00	0.00	0.00
2,800.00	29.35	193.89	2,643.28	-678.63	-167.84	699.08	0.00	0.00	0.00
2,900.00	29.35	193.89	2,730.44	-726.22	-179.60	748.10	0.00	0.00	0.00
3,000.00	29.35	193.89	2,817.60	-773.80	-191.37	797.12	0.00	0.00	0.00
3,100.00	29.35	193.89	2,904.76	-821.39	-203.14	846.14	0.00	0.00	0.00
3,200.00	29.35	193.89	2,991.92	-868.97	-214.91	895.16	0.00	0.00	0.00
3,300.00	29.35	193.89	3,079.08	-916.56	-226.68	944.18	0.00	0.00	0.00
3,400.00	29.35	193.89	3,166.24	-964.15	-238.45	993.20	0.00	0.00	0.00
3,500.00	29.35	193.89	3,253.41	-1,011.73	-250.22	1,042.22	0.00	0.00	0.00
3,600.00	29.35	193.89	3,340.57	-1,059.32	-261.99	1,091.23	0.00	0.00	0.00
3,700.00	29.35	193.89	3,427.73	-1,106.90	-273.75	1,140.25	0.00	0.00	0.00
3,800.00	29.35	193.89	3,514.89	-1,154.49	-285.52	1,189.27	0.00	0.00	0.00
3,900.00	29.35	193.89	3,602.05	-1,202.08	-297.29	1,238.29	0.00	0.00	0.00
3,937.80	29.35	193.89	3,635.00	-1,220.07	-301.74	1,256.82	0.00	0.00	0.00
<b>Mesaverde</b>									
3,957.98	29.35	193.89	3,652.58	-1,229.67	-304.12	1,266.71	0.00	0.00	0.00
4,000.00	28.72	193.89	3,689.32	-1,249.47	-309.01	1,287.11	1.50	-1.50	0.00
4,100.00	27.22	193.89	3,777.64	-1,295.00	-320.27	1,334.02	1.50	-1.50	0.00
4,200.00	25.72	193.89	3,867.15	-1,338.27	-330.98	1,378.59	1.50	-1.50	0.00
4,300.00	24.22	193.89	3,957.80	-1,379.26	-341.11	1,420.81	1.50	-1.50	0.00
4,400.00	22.72	193.89	4,049.52	-1,417.92	-350.67	1,460.64	1.50	-1.50	0.00
4,500.00	21.22	193.89	4,142.25	-1,454.24	-359.66	1,498.06	1.50	-1.50	0.00
4,600.00	19.72	193.89	4,235.93	-1,488.20	-368.05	1,533.03	1.50	-1.50	0.00
4,700.00	18.22	193.89	4,330.50	-1,519.76	-375.86	1,565.55	1.50	-1.50	0.00

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Design: Design #1

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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)
4,800.00	16.72	193.89	4,425.88	-1,548.90	-383.07	1,595.57	1.50	-1.50	0.00
4,851.19	15.96	193.89	4,475.00	-1,562.88	-386.52	1,609.97	1.50	-1.50	0.00
<b>Price Coal</b>									
4,900.00	15.22	193.89	4,522.02	-1,575.62	-389.67	1,623.09	1.50	-1.50	0.00
5,000.00	13.72	193.89	4,618.84	-1,599.88	-395.67	1,648.08	1.50	-1.50	0.00
5,100.00	12.22	193.89	4,716.29	-1,621.67	-401.06	1,670.53	1.50	-1.50	0.00
5,200.00	10.72	193.89	4,814.29	-1,640.98	-405.84	1,690.42	1.50	-1.50	0.00
5,300.00	9.22	193.89	4,912.77	-1,657.79	-410.00	1,707.74	1.50	-1.50	0.00
5,400.00	7.72	193.89	5,011.68	-1,672.09	-413.53	1,722.47	1.50	-1.50	0.00
5,500.00	6.22	193.89	5,110.93	-1,683.88	-416.45	1,734.61	1.50	-1.50	0.00
5,600.00	4.72	193.89	5,210.48	-1,693.14	-418.74	1,744.15	1.50	-1.50	0.00
5,664.70	3.75	193.89	5,275.00	-1,697.78	-419.89	1,748.93	1.50	-1.50	0.00
<b>Top Gas</b>									
5,700.00	3.22	193.89	5,310.23	-1,699.86	-420.40	1,751.08	1.50	-1.50	0.00
5,800.00	1.72	193.89	5,410.14	-1,704.05	-421.44	1,755.39	1.50	-1.50	0.00
5,900.00	0.22	193.89	5,510.12	-1,705.70	-421.85	1,757.09	1.50	-1.50	0.00
5,914.88	0.00	0.00	5,525.00	-1,705.73	-421.85	1,757.12	1.50	-1.50	0.00
6,000.00	0.00	0.00	5,610.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,100.00	0.00	0.00	5,710.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,200.00	0.00	0.00	5,810.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,300.00	0.00	0.00	5,910.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,400.00	0.00	0.00	6,010.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,500.00	0.00	0.00	6,110.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,600.00	0.00	0.00	6,210.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,700.00	0.00	0.00	6,310.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,800.00	0.00	0.00	6,410.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
6,900.00	0.00	0.00	6,510.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,000.00	0.00	0.00	6,610.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,100.00	0.00	0.00	6,710.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,200.00	0.00	0.00	6,810.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,300.00	0.00	0.00	6,910.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,400.00	0.00	0.00	7,010.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,500.00	0.00	0.00	7,110.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,600.00	0.00	0.00	7,210.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,614.88	0.00	0.00	7,225.00	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
<b>Rollins</b>									
7,700.00	0.00	0.00	7,310.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,800.00	0.00	0.00	7,410.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,900.00	0.00	0.00	7,510.12	-1,705.73	-421.85	1,757.12	0.00	0.00	0.00
7,914.88	0.00	0.00	7,525.00	-1,705.73	-421.85	1,757.12	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

**Database:** Compass  
**Company:** BILL BARRETT CORP  
**Project:** GARFIELD COUNTY, COLORADO NAD 1983  
**Site:** Werner Pad(s) SWSE-23-692  
**Well:** Werner 31A-26-692  
**Wellbore:** Wellbore #1  
**Design:** Design #1

**Local Co-ordinate Reference:** Well Werner 31A-26-692  
**TVD Reference:** WELL @ 0.00ft (Original Well Elev)  
**MD Reference:** WELL @ 0.00ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,937.80	3,635.00	Mesaverde		0.00	
4,851.19	4,475.00	Price Coal		0.00	
5,664.70	5,275.00	Top Gas		0.00	
7,614.88	7,225.00	Rollins		0.00	

## WELL DETAILS: Werner 31A-26-692

Ground Level: 0.00  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1616567.712 2398967.57239° 30' 24.87201" 37' 49.1952 W



Azimuths to True North  
 Magnetic North: 10.44°

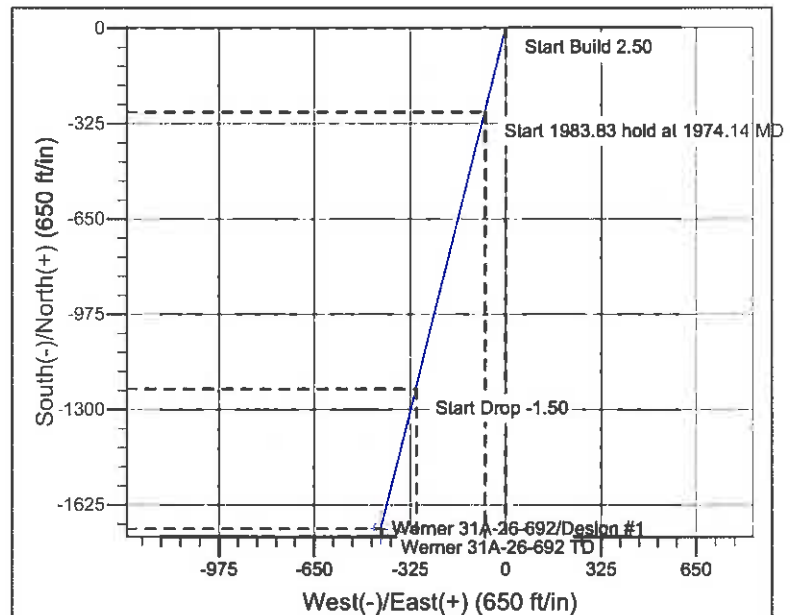
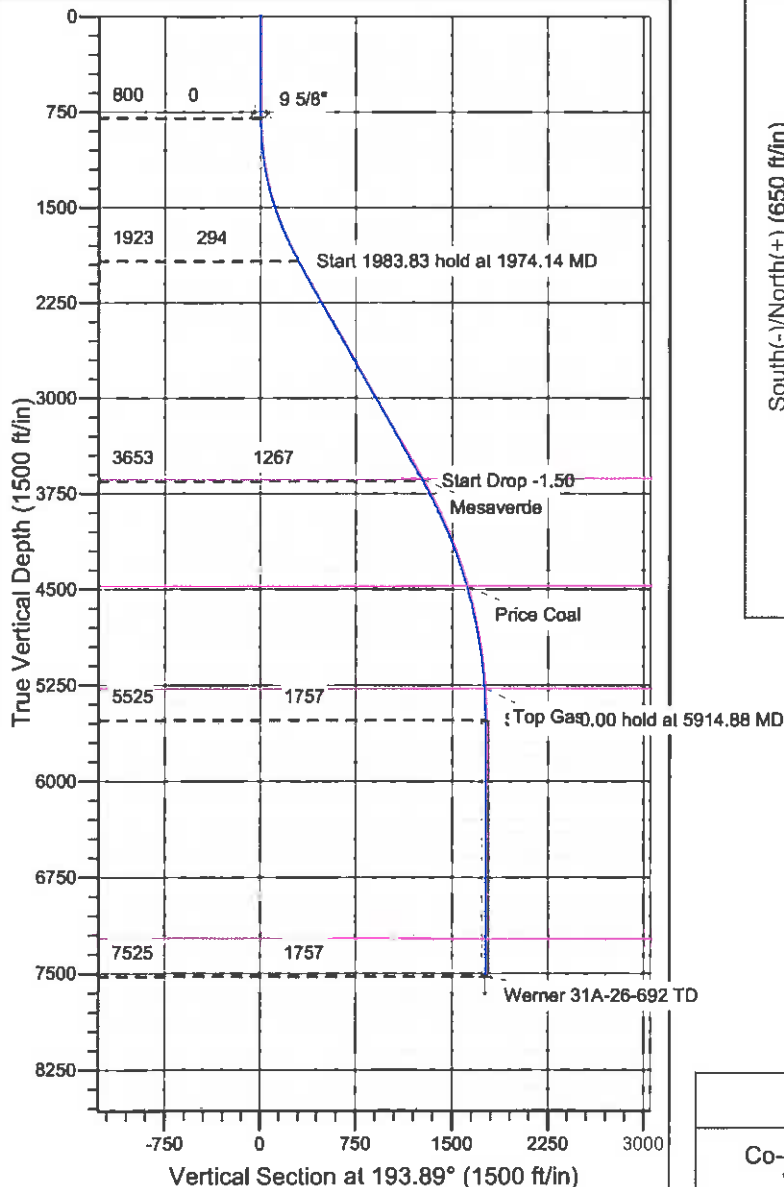
Magnetic Field  
 Strength: 52482.2 nT  
 Dip Angle: 65.84°  
 Date: 12/14/2009  
 Model: BGGM2007

## 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	
2800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	
31974.14	29.35	193.89	1923.45	-285.64	-70.64	2.50	193.89	294.24	
4957.98	29.35	193.89	3652.58	-1229.67	-304.12	0.00	0.00	1266.71	
55914.88	0.00	0.00	5525.00	-1705.73	-421.85	1.50	180.00	1757.12	
7914.88	0.00	0.00	7525.00	-1705.73	-421.85	0.00	0.00	1757.12	Werner 31A-26-692 TD

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
Werner 31A-26-692 TD	-1705.73	-421.85	-421.85	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
3635.00	3937.80	Mesaverde
4475.00	4851.19	Price Coal
5275.00	5664.70	Top Gas
7225.00	7614.88	Rollins

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Werner 31A-26-692, 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