



## **Bill Barrett Corp.**

Garfield County, Colorado [NAD83]

Kaufman 3 Pad

GGU Kaufman 12B-30-691

Wellbore #1

Plan: plan1 15mar11 smw

## **Standard Planning Report**

16 March, 2011

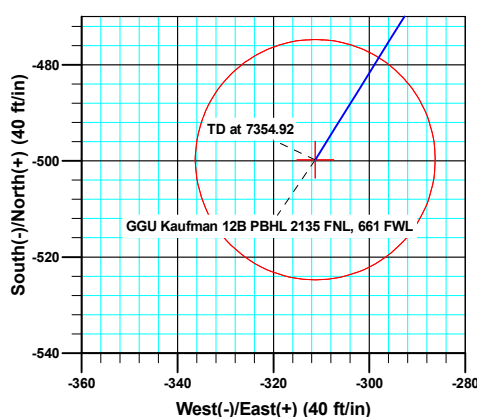
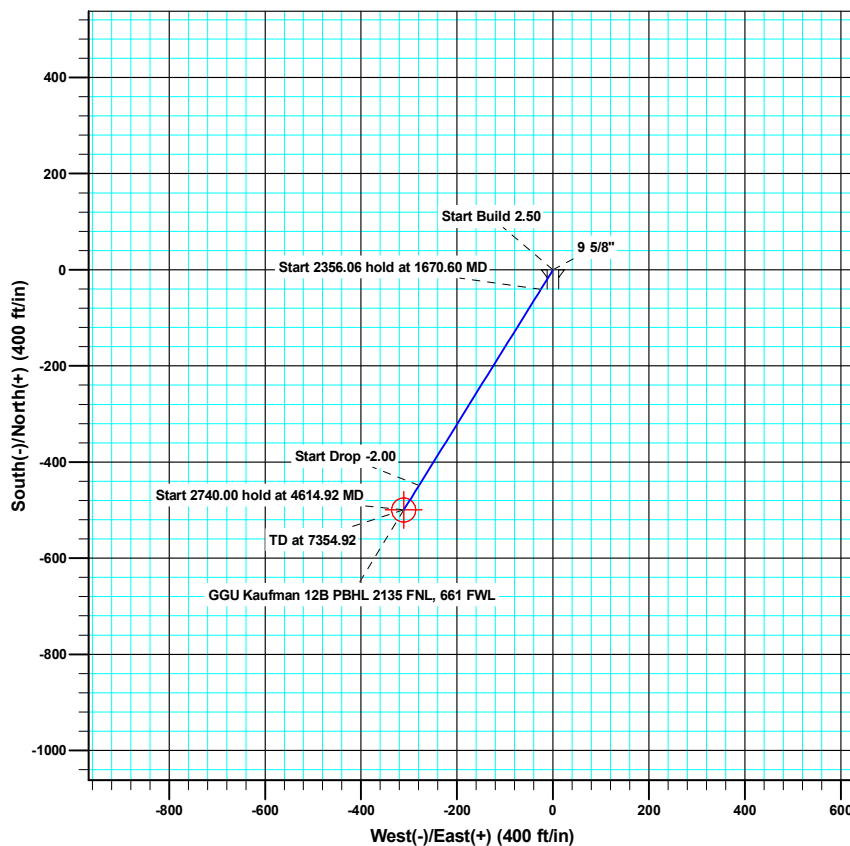
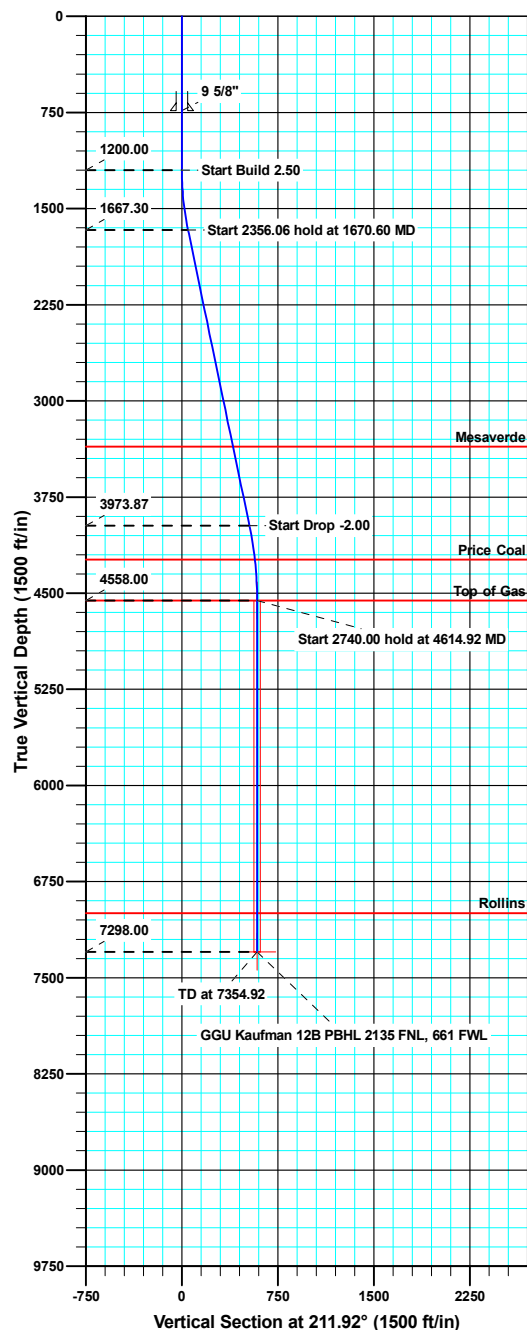




WELL DETAILS: GGU Kaufman 12B-30-691

Ground Level: 5835.00

North American Datum 1983	US State Plane 1983	Colorado Central Zone			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1614303.24	2406742.87	39° 30' 4.29 N	107° 36' 9.35 W



Azimuths to True North  
Magnetic North: 10.18°

Magnetic Field  
Strength: 52362.1nT  
Dip Angle: 65.84°  
Date: 03/15/2011  
Model: IGRF200510

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	0.000	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	
1670.60	11.765	211.92	1667.30	-40.87	-25.45	2.50	211.92	48.15	
4026.67	11.765	211.92	3973.87	-448.64	-279.43	0.00	0.00	528.55	
4614.92	0.000	0.00	4558.00	-499.73	-311.25	2.00	180.00	588.73	GGU Kaufman 12B Top of Gas
7354.92	0.000	0.00	7298.00	-499.73	-311.25	0.00	0.00	588.73	GGU Kaufman 12B PBHL 2135 FNL, 661 FWL

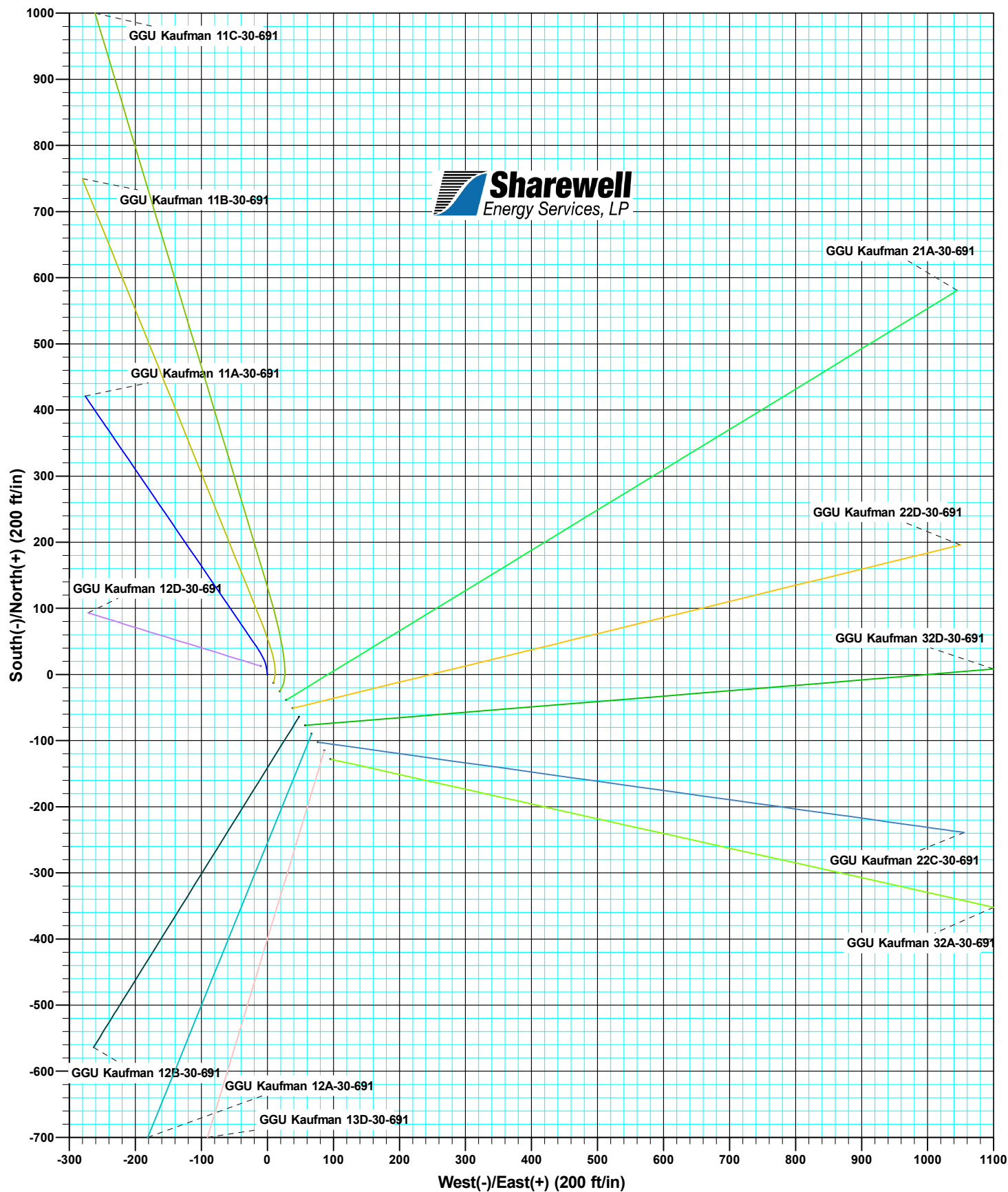


Bill Barrett Corporation

WELL DETAILS: Kaufman 3 Pad

Ground Level: 5835.00

North American Datum 1983		US State Plane 1983		Colorado Central Zone	
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1614368.45	2406696.39	39° 30' 4.92 N	107° 36' 9.96 W



<b>Database:</b>	Compass VM	<b>Local Co-ordinate Reference:</b>	Well GGU Kaufman 12B-30-691
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	KB @ 5858.00ft
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>MD Reference:</b>	KB @ 5858.00ft
<b>Site:</b>	Kaufman 3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GGU Kaufman 12B-30-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	plan1 15mar11 smw		

<b>Project</b>	Garfield County, Colorado [NAD83]		
<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		

Site	Kaufman 3 Pad				
Site Position:		Northing:	1,614,368.45 usft	Latitude:	39° 30' 4.92 N
From:	Lat/Long	Easting:	2,406,696.40 usft	Longitude:	107° 36' 9.96 W
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	-1.33 °

Well	GGU Kaufman 12B-30-691					
Well Position	+N/-S	-64.12 ft	Northing:	1,614,303.24 usft	Latitude:	39° 30' 4.29 N
	+E/-W	47.97 ft	Easting:	2,406,742.87 usft	Longitude:	107° 36' 9.35 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,835.00 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	03/15/11	10.18	65.84	52,362

<b>Design</b>	plan1 15mar11 smw			
<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	211.92

<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	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.000	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,670.60	11.765	211.92	1,667.30	-40.87	-25.45	2.50	2.50	0.00	211.92	
4,026.67	11.765	211.92	3,973.87	-448.64	-279.43	0.00	0.00	0.00	0.00	
4,614.92	0.000	0.00	4,558.00	-499.73	-311.25	2.00	-2.00	0.00	180.00	GGU Kaufman 12B Ti
7,354.92	0.000	0.00	7,298.00	-499.73	-311.25	0.00	0.00	0.00	0.00	GGU Kaufman 12B P

<b>Database:</b>	Compass VM	<b>Local Co-ordinate Reference:</b>	Well GGU Kaufman 12B-30-691
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	KB @ 5858.00ft
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>MD Reference:</b>	KB @ 5858.00ft
<b>Site:</b>	Kaufman 3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GGU Kaufman 12B-30-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	plan1 15mar11 smw		

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)
1,200.00	0.000	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.50</b>									
1,300.00	2.500	211.92	1,299.97	-1.85	-1.15	2.18	2.50	2.50	0.00
1,400.00	5.000	211.92	1,399.75	-7.40	-4.61	8.72	2.50	2.50	0.00
1,500.00	7.500	211.92	1,499.14	-16.64	-10.37	19.61	2.50	2.50	0.00
1,600.00	10.000	211.92	1,597.97	-29.55	-18.41	34.82	2.50	2.50	0.00
1,670.60	11.765	211.92	1,667.30	-40.87	-25.45	48.15	2.50	2.50	0.00
<b>Start 2356.06 hold at 1670.60 MD</b>									
1,700.00	11.765	211.92	1,696.08	-45.96	-28.62	54.14	0.00	0.00	0.00
1,800.00	11.765	211.92	1,793.98	-63.26	-39.40	74.53	0.00	0.00	0.00
1,900.00	11.765	211.92	1,891.88	-80.57	-50.18	94.92	0.00	0.00	0.00
2,000.00	11.765	211.92	1,989.78	-97.88	-60.96	115.31	0.00	0.00	0.00
2,100.00	11.765	211.92	2,087.68	-115.19	-71.74	135.70	0.00	0.00	0.00
2,200.00	11.765	211.92	2,185.58	-132.49	-82.52	156.09	0.00	0.00	0.00
2,300.00	11.765	211.92	2,283.48	-149.80	-93.30	176.48	0.00	0.00	0.00
2,400.00	11.765	211.92	2,381.38	-167.11	-104.08	196.87	0.00	0.00	0.00
2,500.00	11.765	211.92	2,479.28	-184.42	-114.86	217.26	0.00	0.00	0.00
2,600.00	11.765	211.92	2,577.17	-201.72	-125.64	237.65	0.00	0.00	0.00
2,700.00	11.765	211.92	2,675.07	-219.03	-136.42	258.04	0.00	0.00	0.00
2,800.00	11.765	211.92	2,772.97	-236.34	-147.20	278.43	0.00	0.00	0.00
2,900.00	11.765	211.92	2,870.87	-253.65	-157.98	298.82	0.00	0.00	0.00
3,000.00	11.765	211.92	2,968.77	-270.95	-168.76	319.21	0.00	0.00	0.00
3,100.00	11.765	211.92	3,066.67	-288.26	-179.54	339.60	0.00	0.00	0.00
3,200.00	11.765	211.92	3,164.57	-305.57	-190.32	359.99	0.00	0.00	0.00
3,300.00	11.765	211.92	3,262.47	-322.87	-201.10	380.38	0.00	0.00	0.00
3,397.58	11.765	211.92	3,358.00	-339.76	-211.62	400.28	0.00	0.00	0.00
<b>Mesaverde</b>									
3,400.00	11.765	211.92	3,360.37	-340.18	-211.88	400.77	0.00	0.00	0.00
3,500.00	11.765	211.92	3,458.27	-357.49	-222.66	421.16	0.00	0.00	0.00
3,600.00	11.765	211.92	3,556.17	-374.80	-233.44	441.55	0.00	0.00	0.00
3,700.00	11.765	211.92	3,654.07	-392.10	-244.22	461.94	0.00	0.00	0.00
3,800.00	11.765	211.92	3,751.97	-409.41	-255.00	482.33	0.00	0.00	0.00
3,900.00	11.765	211.92	3,849.86	-426.72	-265.78	502.72	0.00	0.00	0.00
4,000.00	11.765	211.92	3,947.76	-444.03	-276.56	523.11	0.00	0.00	0.00
4,026.67	11.765	211.92	3,973.87	-448.64	-279.43	528.55	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
4,100.00	10.298	211.92	4,045.85	-460.55	-286.85	542.58	2.00	-2.00	0.00
4,200.00	8.298	211.92	4,144.53	-474.27	-295.39	558.74	2.00	-2.00	0.00
4,294.25	6.413	211.92	4,238.00	-484.51	-301.77	570.80	2.00	-2.00	0.00
<b>Price Coal</b>									
4,300.00	6.298	211.92	4,243.71	-485.05	-302.11	571.44	2.00	-2.00	0.00
4,400.00	4.298	211.92	4,343.28	-492.89	-306.99	580.67	2.00	-2.00	0.00
4,500.00	2.298	211.92	4,443.11	-497.77	-310.03	586.43	2.00	-2.00	0.00
4,600.00	0.298	211.92	4,543.08	-499.69	-311.23	588.69	2.00	-2.00	0.00
4,614.92	0.000	0.00	4,558.00	-499.73	-311.25	588.73	2.00	-2.00	0.00
<b>Start 2740.00 hold at 4614.92 MD - Top of Gas - GGU Kaufman 12B Top of Gas</b>									
4,700.00	0.000	0.00	4,643.08	-499.73	-311.25	588.73	0.00	0.00	0.00
4,800.00	0.000	0.00	4,743.08	-499.73	-311.25	588.73	0.00	0.00	0.00
4,900.00	0.000	0.00	4,843.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,000.00	0.000	0.00	4,943.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,100.00	0.000	0.00	5,043.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,200.00	0.000	0.00	5,143.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,300.00	0.000	0.00	5,243.08	-499.73	-311.25	588.73	0.00	0.00	0.00

<b>Database:</b>	Compass VM	<b>Local Co-ordinate Reference:</b>	Well GGU Kaufman 12B-30-691
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	KB @ 5858.00ft
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>MD Reference:</b>	KB @ 5858.00ft
<b>Site:</b>	Kaufman 3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GGU Kaufman 12B-30-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	plan1 15mar11 smw		

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)
5,400.00	0.000	0.00	5,343.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,500.00	0.000	0.00	5,443.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,600.00	0.000	0.00	5,543.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,700.00	0.000	0.00	5,643.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,800.00	0.000	0.00	5,743.08	-499.73	-311.25	588.73	0.00	0.00	0.00
5,900.00	0.000	0.00	5,843.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,000.00	0.000	0.00	5,943.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,100.00	0.000	0.00	6,043.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,200.00	0.000	0.00	6,143.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,300.00	0.000	0.00	6,243.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,400.00	0.000	0.00	6,343.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,500.00	0.000	0.00	6,443.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,600.00	0.000	0.00	6,543.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,700.00	0.000	0.00	6,643.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,800.00	0.000	0.00	6,743.08	-499.73	-311.25	588.73	0.00	0.00	0.00
6,900.00	0.000	0.00	6,843.08	-499.73	-311.25	588.73	0.00	0.00	0.00
7,000.00	0.000	0.00	6,943.08	-499.73	-311.25	588.73	0.00	0.00	0.00
7,054.92	0.000	0.00	6,998.00	-499.73	-311.25	588.73	0.00	0.00	0.00
<b>Rollins</b>									
7,100.00	0.000	0.00	7,043.08	-499.73	-311.25	588.73	0.00	0.00	0.00
7,200.00	0.000	0.00	7,143.08	-499.73	-311.25	588.73	0.00	0.00	0.00
7,300.00	0.000	0.00	7,243.08	-499.73	-311.25	588.73	0.00	0.00	0.00
7,354.92	0.000	0.00	7,298.00	-499.73	-311.25	588.73	0.00	0.00	0.00
<b>TD at 7354.92 - GGU Kaufman 12B PBHL 2135 FNL, 661 FWL</b>									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
GGU Kaufman 12B Top - plan hits target center - Circle (radius 25.00)	0.000	0.00	4,558.00	-499.73	-311.25	1,613,810.85	2,406,420.14	39° 29' 59.35 N	107° 36' 13.32 W
GGU Kaufman 12B PBH- - plan hits target center - Point	0.000	0.00	7,298.00	-499.73	-311.25	1,613,810.85	2,406,420.14	39° 29' 59.35 N	107° 36' 13.32 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (ft)	Hole Diameter (ft)	
736.00	736.00	9 5/8"	0.80	1.02	

<b>Database:</b>	Compass VM	<b>Local Co-ordinate Reference:</b>	Well GGU Kaufman 12B-30-691
<b>Company:</b>	Bill Barrett Corp.	<b>TVD Reference:</b>	KB @ 5858.00ft
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>MD Reference:</b>	KB @ 5858.00ft
<b>Site:</b>	Kaufman 3 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GGU Kaufman 12B-30-691	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	plan1 15mar11 smw		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,397.58	3,358.00	Mesaverde		0.00	
4,294.25	4,238.00	Price Coal		0.00	
4,614.92	4,558.00	Top of Gas		0.00	
7,054.92	6,998.00	Rollins		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,200.00	1,200.00	0.00	0.00	Start Build 2.50
1,670.60	1,667.30	-40.87	-25.45	Start 2356.06 hold at 1670.60 MD
4,026.67	3,973.87	-448.64	-279.43	Start Drop -2.00
4,614.92	4,558.00	-499.73	-311.25	Start 2740.00 hold at 4614.92 MD
7,354.92	7,298.00	-499.73	-311.25	TD at 7354.92