

# **Bill Barrett Corp.**

**Garfield Co., CO (NAD83)**

**Scott 41C-36-692 Pad (Sec.30-T6S-R91W)**

**GGU 13B-30-691**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**07 May, 2012**



Project: Garfield Co., CO (NAD83)  
Site: Scott 41C-36-692 Pad (Sec.30-T6S-R91W)  
Well: GGU 13B-30-691  
Wellbore: Wellbore #1  
Design: Wellbore #1  
Latitude: 39° 29' 32.67 N  
Longitude: 107° 36' 19.29 W  
Ground Level: 5922.01  
WELL @ 5945.01ft



#### FORMATION TOP DETAILS

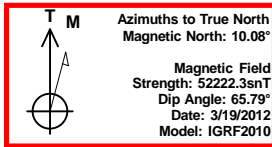
No formation data is available

#### PROJECT DETAILS: Garfield Co., CO (NAD83)

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Central Zone  
System Datum: Mean Sea Level

#### REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Site Scott 41C-36-692 Pad (Sec.30-T6S-R91W), True North  
Vertical (TVD) Reference: WELL @ 5945.01ft  
Section (VS) Reference: Slot - (0.72N, -39.79E)  
Measured Depth Reference: WELL @ 5945.01ft  
Calculation Method: Minimum Curvature



#### WELL DETAILS: GGU 13B-30-691

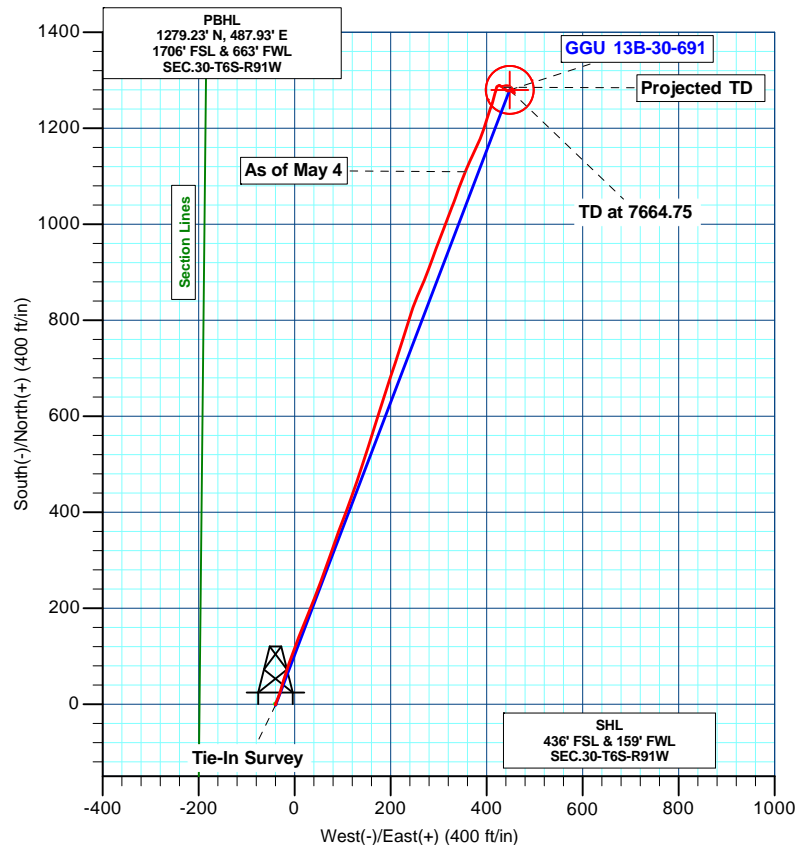
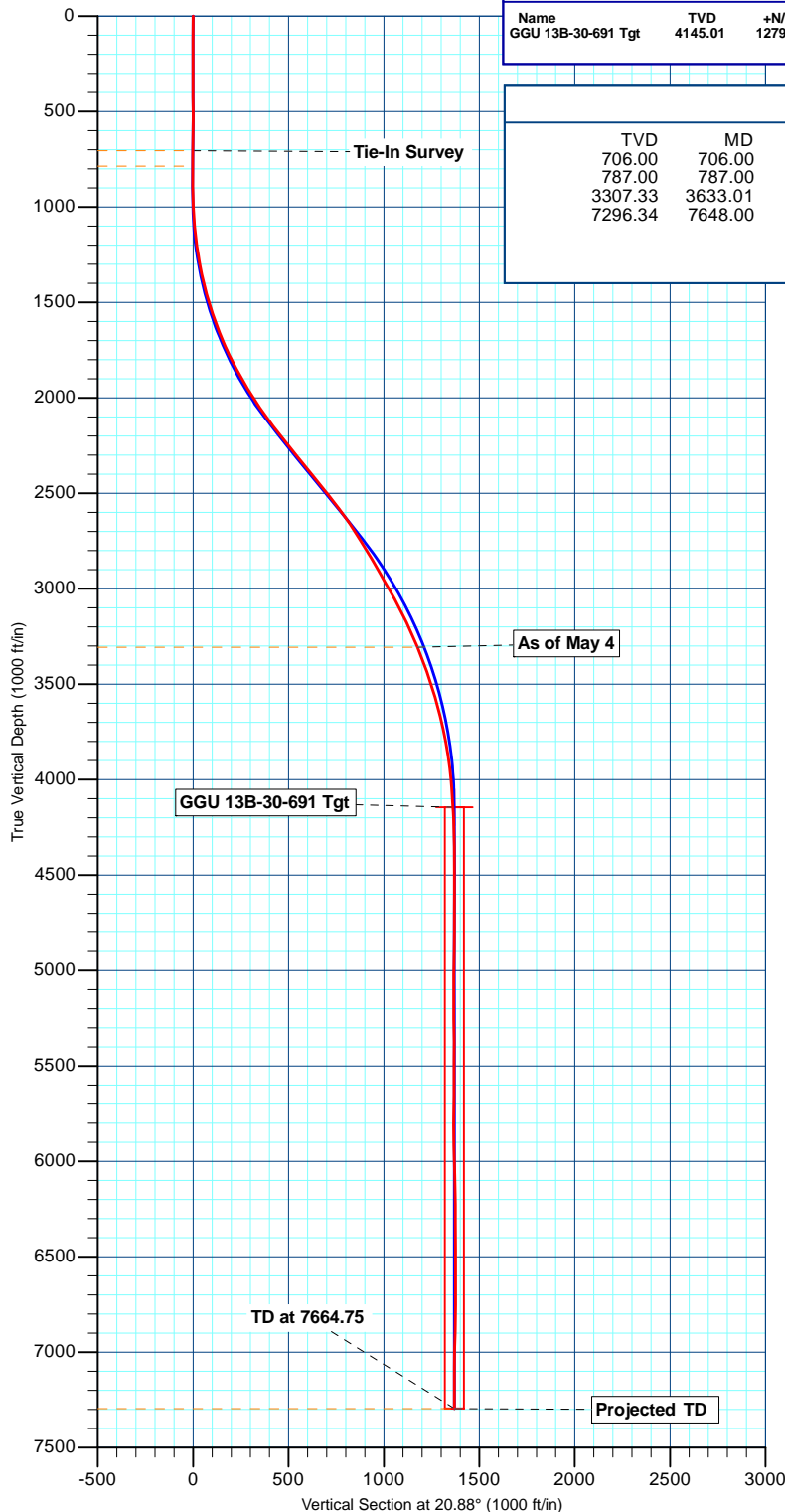
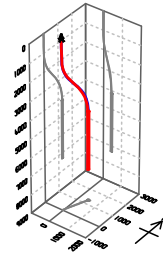
+N/-S	+E/-W	Northing	Easting	Ground Level: 5922.01	Latitude	Longitude	Slot
0.72	-39.79	1611123.38	2405890.13		39° 29' 32.67 N	107° 36' 19.29 W	

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GGU 13B-30-691 Tgt	4145.01	1279.94	448.14	1612390.96	2406407.57	39° 29' 45.32 N	107° 36' 13.06 W	Circle (Radius: 50.00)

#### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
706.00	706.00	0.500	197.44	-0.70	-39.51	-1.22	1.65	Tie-In Survey
787.00	787.00	0.300	269.40	-1.04	-39.83	-1.66	2.22	First Sharewell Survey
3307.33	3633.01	22.500	22.70	1109.43	355.53	1176.80	1182.60	As of May 4
7296.34	7648.00	1.100	132.10	1285.30	435.32	1369.56	1454.47	Projected TD



# Sharewell

## Survey Report

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Site Scott 41C-36-692 Pad (Sec.30-T6S-R91W)
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>TVD Reference:</b>	WELL @ 5945.01ft
<b>Site:</b>	Scott 41C-36-692 Pad (Sec.30-T6S-R91W)	<b>MD Reference:</b>	WELL @ 5945.01ft
<b>Well:</b>	GGU 13B-30-691	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	CompassVM

<b>Project</b>	Garfield Co., CO (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		Scott 41C-36-692 Pad (Sec.30-T6S-R91W)			
Site Position:		Northing:	1,611,121.74 usft	Latitude:	39° 29' 32.67 N
From:	Lat/Long	Easting:	2,405,929.90 usft	Longitude:	107° 36' 18.78 W
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	-1.33 °

Well	GGU 13B-30-691					
Well Position	+N/-S	0.72 ft	Northing:	1,611,123.38 usft	Latitude:	39° 29' 32.67 N
	+E/-W	-39.79 ft	Easting:	2,405,890.14 usft	Longitude:	107° 36' 19.29 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,922.01 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>
	IGRF2010	3/19/2012	10.08	65.79	52,222

<b>Design</b>	Wellbore #1				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	0.72	-39.79	20.88	

<b>Survey Program</b>	<b>Date</b>	5/7/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
123.00	706.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard	
706.00	7,648.00	Survey #2 (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</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>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>	
0.00	0.000	0.00	0.00	0.72	-39.79	0.00	0.00	0.00	0.00	
123.00	0.120	175.09	123.00	0.59	-39.78	-0.12	0.10	0.10	0.00	
223.00	0.140	167.78	223.00	0.36	-39.75	-0.31	0.03	0.02	-7.31	
323.00	0.160	147.61	323.00	0.13	-39.65	-0.50	0.06	0.02	-20.17	
423.00	0.050	42.82	423.00	0.04	-39.54	-0.54	0.18	-0.11	-104.79	
523.00	0.090	160.10	523.00	0.00	-39.49	-0.56	0.12	0.04	117.28	
623.00	0.180	168.66	623.00	-0.23	-39.43	-0.75	0.09	0.09	8.56	
706.00	0.500	197.44	706.00	-0.70	-39.51	-1.22	0.43	0.39	34.67	
787.00	0.300	269.40	787.00	-1.04	-39.83	-1.66	0.61	-0.25	88.84	
882.00	0.400	296.40	882.00	-0.90	-40.37	-1.71	0.20	0.11	28.42	

# Sharewell

## Survey Report

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Site Scott 41C-36-692 Pad (Sec.30-T6S-R91W)
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>TVD Reference:</b>	WELL @ 5945.01ft
<b>Site:</b>	Scott 41C-36-692 Pad (Sec.30-T6S-R91W)	<b>MD Reference:</b>	WELL @ 5945.01ft
<b>Well:</b>	GGU 13B-30-691	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	CompassVM

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)
970.00	1.700	31.50	969.98	0.35	-39.97	-0.40	2.02	1.48	108.07
1,066.00	4.200	22.40	1,065.85	4.82	-37.88	4.51	2.64	2.60	-9.48
1,161.00	7.000	21.60	1,160.39	13.42	-34.43	13.78	2.95	2.95	-0.84
1,256.00	9.300	18.80	1,254.42	26.07	-29.82	27.24	2.46	2.42	-2.95
1,351.00	12.300	14.90	1,347.73	43.12	-24.74	44.98	3.25	3.16	-4.11
1,446.00	14.100	16.60	1,440.22	63.99	-18.84	66.59	1.94	1.89	1.79
1,541.00	18.400	19.70	1,531.40	89.21	-10.47	93.13	4.62	4.53	3.26
1,636.00	19.900	21.20	1,621.14	118.40	0.43	124.29	1.66	1.58	1.58
1,731.00	23.200	21.30	1,709.49	150.91	13.08	159.18	3.47	3.47	0.11
1,826.00	26.700	22.40	1,795.61	188.09	28.01	199.24	3.72	3.68	1.16
1,921.00	29.200	20.90	1,879.52	229.48	44.42	243.75	2.73	2.63	-1.58
2,017.00	31.400	20.10	1,962.41	274.85	61.37	292.18	2.33	2.29	-0.83
2,112.00	33.600	19.00	2,042.52	322.95	78.43	343.21	2.40	2.32	-1.16
2,207.00	36.900	20.90	2,120.10	374.46	97.17	398.02	3.66	3.47	2.00
2,302.00	38.700	19.80	2,195.16	429.05	117.41	456.24	2.02	1.89	-1.16
2,397.00	38.200	18.20	2,269.56	484.90	136.64	515.27	1.17	-0.53	-1.68
2,492.01	39.600	17.60	2,343.49	541.67	154.97	574.85	1.53	1.47	-0.63
2,587.01	38.900	17.10	2,417.06	599.04	172.90	634.84	0.81	-0.74	-0.53
2,682.01	38.800	18.80	2,491.05	655.73	191.26	694.35	1.13	-0.11	1.79
2,777.01	37.200	17.80	2,565.91	711.25	209.63	752.78	1.80	-1.68	-1.05
2,872.01	35.100	17.60	2,642.61	764.64	226.67	808.73	2.21	-2.21	-0.21
2,968.01	31.700	17.40	2,722.75	815.03	242.57	861.47	3.54	-3.54	-0.21
3,063.01	32.400	24.70	2,803.30	861.99	260.67	911.80	4.14	0.74	7.68
3,158.01	28.700	19.50	2,885.11	906.64	278.93	960.03	4.78	-3.89	-5.47
3,253.01	30.500	21.00	2,967.71	950.65	295.19	1,006.94	2.05	1.89	1.58
3,348.01	27.700	20.80	3,050.71	993.81	311.67	1,053.14	2.95	-2.95	-0.21
3,443.01	27.500	21.20	3,134.90	1,034.90	327.44	1,097.15	0.29	-0.21	0.42
3,538.01	24.600	19.40	3,220.24	1,074.01	341.95	1,138.86	3.16	-3.05	-1.89
3,633.01	22.500	22.70	3,307.33	1,109.43	355.53	1,176.80	2.61	-2.21	3.47
3,728.00	19.200	24.80	3,396.09	1,140.39	369.10	1,210.56	3.56	-3.47	2.21
3,823.00	18.900	25.00	3,485.89	1,168.51	382.16	1,241.50	0.32	-0.32	0.21
3,919.00	16.500	17.70	3,577.35	1,195.60	392.87	1,270.62	3.40	-2.50	-7.60
4,014.00	13.000	17.90	3,669.20	1,218.63	400.26	1,294.77	3.68	-3.68	0.21
4,109.00	12.000	19.70	3,761.95	1,238.09	406.88	1,315.32	1.13	-1.05	1.89
4,204.00	9.900	15.60	3,855.22	1,255.26	412.40	1,333.32	2.36	-2.21	-4.32
4,299.00	6.600	15.80	3,949.22	1,268.38	416.09	1,346.90	3.47	-3.47	0.21
4,394.00	3.900	17.70	4,043.81	1,276.71	418.55	1,355.56	2.85	-2.84	2.00
4,489.00	3.900	10.10	4,138.59	1,282.97	420.10	1,361.96	0.54	0.00	-8.00
4,584.00	1.800	56.60	4,233.48	1,286.98	421.92	1,366.35	3.12	-2.21	48.95
4,679.00	1.000	47.10	4,328.45	1,288.36	423.77	1,368.30	0.87	-0.84	-10.00
4,774.00	1.700	74.60	4,423.43	1,289.30	425.73	1,369.88	0.98	0.74	28.95
4,870.00	1.100	144.60	4,519.40	1,288.93	427.64	1,370.21	1.75	-0.63	72.92
4,965.00	1.700	115.30	4,614.37	1,287.58	429.44	1,369.60	0.96	0.63	-30.84

# Sharewell

## Survey Report

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Site Scott 41C-36-692 Pad (Sec.30-T6S-R91W)
<b>Project:</b>	Garfield Co., CO (NAD83)	<b>TVD Reference:</b>	WELL @ 5945.01ft
<b>Site:</b>	Scott 41C-36-692 Pad (Sec.30-T6S-R91W)	<b>MD Reference:</b>	WELL @ 5945.01ft
<b>Well:</b>	GGU 13B-30-691	<b>North Reference:</b>	True
<b>Wellbore:</b>	Wellbore #1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Wellbore #1	<b>Database:</b>	CompassVM

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)
5,060.00	1.500	114.80	4,709.34	1,286.46	431.85	1,369.40	0.21	-0.21	-0.53
5,155.00	1.800	109.20	4,804.30	1,285.45	434.38	1,369.36	0.36	0.32	-5.89
5,250.00	1.800	137.30	4,899.25	1,283.86	436.81	1,368.74	0.92	0.00	29.58
5,345.00	1.600	144.70	4,994.21	1,281.68	438.58	1,367.34	0.31	-0.21	7.79
5,440.00	1.800	148.00	5,089.17	1,279.33	440.14	1,365.70	0.23	0.21	3.47
5,535.00	2.700	96.60	5,184.10	1,277.81	443.15	1,365.35	2.22	0.95	-54.11
5,630.00	1.700	57.30	5,279.04	1,278.31	446.56	1,367.04	1.85	-1.05	-41.37
5,725.00	1.300	112.60	5,374.01	1,278.66	448.74	1,368.14	1.51	-0.42	58.21
5,821.00	1.600	128.80	5,469.98	1,277.40	450.79	1,367.70	0.53	0.31	16.88
5,916.00	1.200	100.30	5,564.95	1,276.39	452.81	1,367.47	0.83	-0.42	-30.00
6,011.00	1.100	145.30	5,659.93	1,275.47	454.30	1,367.14	0.93	-0.11	47.37
6,106.00	2.000	126.50	5,754.90	1,273.73	456.16	1,366.18	1.08	0.95	-19.79
6,201.00	0.500	16.80	5,849.88	1,273.14	457.61	1,366.14	2.34	-1.58	-115.47
6,296.00	2.100	345.80	5,944.85	1,275.22	457.30	1,367.98	1.78	1.68	-32.63
6,391.00	2.400	328.40	6,039.78	1,278.61	455.83	1,370.62	0.78	0.32	-18.32
6,486.00	2.100	321.60	6,134.71	1,281.66	453.71	1,372.72	0.42	-0.32	-7.16
6,581.00	1.100	327.70	6,229.67	1,283.80	452.14	1,374.15	1.07	-1.05	6.42
6,676.00	1.200	287.30	6,324.65	1,284.87	450.70	1,374.64	0.84	0.11	-42.53
6,772.00	1.500	311.70	6,420.63	1,286.00	448.81	1,375.02	0.67	0.31	25.42
6,867.00	0.900	311.20	6,515.60	1,287.32	447.32	1,375.72	0.63	-0.63	-0.53
6,962.00	1.100	296.30	6,610.59	1,288.21	445.94	1,376.07	0.34	0.21	-15.68
7,057.00	0.900	268.70	6,705.58	1,288.60	444.37	1,375.87	0.54	-0.21	-29.05
7,152.00	1.800	273.00	6,800.55	1,288.66	442.14	1,375.13	0.95	0.95	4.53
7,247.00	2.300	264.80	6,895.49	1,288.57	438.75	1,373.84	0.61	0.53	-8.63
7,342.00	2.900	231.40	6,990.40	1,286.90	434.97	1,370.93	1.68	0.63	-35.16
7,437.00	0.400	25.10	7,085.36	1,285.70	433.23	1,369.19	3.44	-2.63	161.79
7,532.00	0.600	65.90	7,180.36	1,286.20	433.83	1,369.87	0.42	0.21	42.95
7,601.00	1.100	132.10	7,249.35	1,285.90	434.65	1,369.89	1.48	0.72	95.94
7,648.00	1.100	132.10	7,296.34	1,285.30	435.32	1,369.56	0.00	0.00	0.00

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
706.00	706.00	-0.70	-39.51	Tie-In Survey
787.00	787.00	-1.04	-39.83	First Sharewell Survey
3,633.01	3,307.33	1,109.43	355.53	As of May 4
7,648.00	7,296.34	1,285.30	435.32	Projected TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_