



**Bill Barrett Corporation**

## **Bill Barrett Corp.**

Garfield County, Colorado

MDP 11 Pad

GGU Federal 42D-29-691

Wellbore #1

Survey: Surveys from Surface

## **Standard Survey Report**

10 January, 2011



<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 42D-29-691
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6126.90ft
<b>Site:</b>	MDP 11 Pad	<b>MD Reference:</b>	KB @ 6126.90ft
<b>Well:</b>	GGU Federal 42D-29-691	<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>	Compass VM

<b>Project</b>	Garfield County, Colorado		
<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>	MDP 11 Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,614,688.12 usft	<b>Latitude:</b>	39° 30' 9.99 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,415,090.26 usft	<b>Longitude:</b>	107° 34' 22.99 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	1.10 ft	<b>Grid Convergence:</b>	-1.31 °

<b>Well</b>	GGU Federal 42D-29-691					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,614,679.09 usft	<b>Latitude:</b>	39° 30' 9.90 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,415,086.38 usft	<b>Longitude:</b>	107° 34' 23.04 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	6,103.90 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	12/21/10	10.20	65.85	52,387

<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	0.00	0.00	110.12	

<b>Survey Program</b>	<b>Date</b>	01/10/11			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
50.00	732.00	Gyro Surveys (Wellbore #1)	MWD	MWD - Standard	
882.00	7,385.00	Surveys (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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.00	0.470	49.91	50.00	0.13	0.16	0.10	0.94	0.94	0.00	
100.00	0.240	108.46	100.00	0.23	0.41	0.31	0.80	-0.46	117.10	
150.00	0.260	353.14	150.00	0.31	0.50	0.36	0.85	0.04	-230.64	
200.00	0.390	11.87	200.00	0.59	0.52	0.29	0.33	0.26	37.46	
250.00	0.530	38.31	250.00	0.94	0.70	0.33	0.50	0.28	52.88	
300.00	0.440	45.40	299.99	1.25	0.98	0.49	0.22	-0.18	14.18	
350.00	0.640	72.94	349.99	1.47	1.38	0.79	0.64	0.40	55.08	
400.00	0.390	82.54	399.99	1.57	1.82	1.17	0.53	-0.50	19.20	
450.00	0.450	101.46	449.99	1.56	2.18	1.51	0.30	0.12	37.84	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 42D-29-691
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6126.90ft
<b>Site:</b>	MDP 11 Pad	<b>MD Reference:</b>	KB @ 6126.90ft
<b>Well:</b>	GGU Federal 42D-29-691	<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>	Compass VM

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)
500.00	0.360	90.23	499.99	1.52	2.53	1.85	0.24	-0.18	-22.46
550.00	0.230	93.08	549.99	1.51	2.79	2.10	0.26	-0.26	5.70
600.00	0.400	117.66	599.99	1.43	3.04	2.36	0.43	0.34	49.16
650.00	0.490	107.72	649.98	1.28	3.40	2.75	0.24	0.18	-19.88
700.00	0.540	96.78	699.98	1.19	3.84	3.19	0.22	0.10	-21.88
732.00	0.510	80.26	731.98	1.19	4.13	3.46	0.48	-0.09	-51.63
804.30	0.179	33.39	804.28	1.34	4.51	3.77	0.57	-0.46	-64.83
<b>9 5/8"</b>									
882.00	0.400	303.00	881.98	1.59	4.35	3.53	0.57	0.28	-116.33
974.00	2.500	118.10	973.95	0.82	5.85	5.21	3.15	2.28	190.33
1,066.00	4.900	113.20	1,065.76	-1.67	11.23	11.12	2.63	2.61	-5.33
1,158.00	7.500	111.60	1,157.21	-5.43	20.42	21.05	2.83	2.83	-1.74
1,250.00	9.300	110.60	1,248.22	-10.26	32.97	34.48	1.96	1.96	-1.09
1,346.00	10.100	110.60	1,342.85	-15.95	48.11	50.66	0.83	0.83	0.00
1,441.00	10.700	112.20	1,436.28	-22.21	64.07	67.80	0.70	0.63	1.68
1,536.00	11.600	103.00	1,529.50	-27.69	81.54	86.09	2.10	0.95	-9.68
1,631.00	11.900	104.30	1,622.51	-32.26	100.34	105.32	0.42	0.32	1.37
1,727.00	12.000	107.30	1,716.43	-37.67	119.46	125.13	0.66	0.10	3.13
1,822.00	12.500	109.30	1,809.27	-44.01	138.59	145.27	0.69	0.53	2.11
1,917.00	11.600	105.40	1,902.17	-49.94	157.51	165.07	1.28	-0.95	-4.11
2,012.00	11.500	107.70	1,995.25	-55.36	175.74	184.05	0.50	-0.11	2.42
2,108.00	11.200	108.90	2,089.37	-61.29	193.67	202.94	0.40	-0.31	1.25
2,203.00	11.300	110.20	2,182.55	-67.49	211.14	221.47	0.29	0.11	1.37
2,299.00	11.400	109.60	2,276.67	-73.92	228.90	240.36	0.16	0.10	-0.63
2,394.00	11.500	108.80	2,369.78	-80.12	246.71	259.22	0.20	0.11	-0.84
2,490.00	11.500	108.90	2,463.85	-86.31	264.82	278.35	0.02	0.00	0.10
2,585.00	11.700	109.90	2,556.91	-92.65	282.84	297.45	0.30	0.21	1.05
2,680.00	12.000	109.90	2,649.89	-99.29	301.18	316.96	0.32	0.32	0.00
2,776.00	12.300	109.70	2,743.74	-106.14	320.19	337.16	0.32	0.31	-0.21
2,871.00	12.800	108.80	2,836.47	-112.94	339.68	357.80	0.57	0.53	-0.95
2,967.00	13.200	106.50	2,930.01	-119.48	360.26	379.37	0.68	0.42	-2.40
3,062.00	12.900	112.50	3,022.56	-126.62	380.46	400.80	1.46	-0.32	6.32
3,157.00	11.700	112.40	3,115.37	-134.35	399.16	421.02	1.26	-1.26	-0.11
3,253.00	11.800	117.80	3,209.37	-142.63	416.84	440.47	1.15	0.10	5.63
3,348.00	11.600	110.00	3,302.40	-150.43	434.41	459.65	1.68	-0.21	-8.21
3,443.00	11.300	108.90	3,395.51	-156.71	452.19	478.51	0.39	-0.32	-1.16
3,539.00	11.300	110.30	3,489.65	-163.02	469.91	497.31	0.29	0.00	1.46
3,634.00	11.100	108.90	3,582.84	-169.21	487.29	515.76	0.36	-0.21	-1.47
3,729.00	11.100	107.60	3,676.06	-174.94	504.66	534.04	0.26	0.00	-1.37
3,824.00	9.800	111.80	3,769.48	-180.71	520.89	551.26	1.59	-1.37	4.42
3,920.00	7.700	116.90	3,864.36	-186.65	534.21	565.82	2.33	-2.19	5.31
4,015.00	7.100	118.70	3,958.57	-192.35	545.04	577.94	0.68	-0.63	1.89
4,110.00	6.500	116.00	4,052.90	-197.53	555.02	589.10	0.72	-0.63	-2.84

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<b>Site:</b>	MDP 11 Pad	<b>MD Reference:</b>	KB @ 6126.90ft
<b>Well:</b>	GGU Federal 42D-29-691	<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>	Compass VM

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)	
4,206.00	5.800	115.20	4,148.35	-201.98	564.29	599.33	0.73	-0.73	-0.83	
4,301.00	5.300	115.50	4,242.90	-205.91	572.60	608.48	0.53	-0.53	0.32	
4,396.00	5.000	118.50	4,337.52	-209.77	580.19	616.95	0.42	-0.32	3.16	
4,492.00	4.700	116.50	4,433.18	-213.53	587.39	624.99	0.36	-0.31	-2.08	
4,587.00	4.800	110.00	4,527.85	-216.62	594.61	632.84	0.58	0.11	-6.84	
4,683.00	3.000	112.20	4,623.62	-218.94	600.71	639.36	1.88	-1.88	2.29	
4,778.00	1.800	111.70	4,718.54	-220.44	604.40	643.34	1.26	-1.26	-0.53	
4,873.00	1.400	106.10	4,813.50	-221.31	606.90	645.99	0.45	-0.42	-5.89	
4,968.00	1.500	122.20	4,908.47	-222.29	609.07	648.36	0.44	0.11	16.95	
5,064.00	1.500	122.50	5,004.44	-223.64	611.19	650.82	0.01	0.00	0.31	
5,159.00	1.300	119.00	5,099.41	-224.83	613.18	653.10	0.23	-0.21	-3.68	
5,255.00	1.500	104.50	5,195.38	-225.67	615.35	655.42	0.42	0.21	-15.10	
5,350.00	1.600	107.00	5,290.35	-226.37	617.82	657.99	0.13	0.11	2.63	
5,445.00	0.600	119.60	5,385.33	-227.00	619.52	659.80	1.08	-1.05	13.26	
5,541.00	0.300	135.40	5,481.33	-227.43	620.14	660.52	0.34	-0.31	16.46	
5,637.00	1.100	164.20	5,577.32	-228.50	620.56	661.29	0.88	0.83	30.00	
5,731.00	1.100	160.00	5,671.30	-230.21	621.12	662.40	0.09	0.00	-4.47	
5,827.00	0.000	265.70	5,767.30	-231.08	621.43	663.00	1.15	-1.15	0.00	
5,922.00	0.400	240.70	5,862.29	-231.24	621.14	662.78	0.42	0.42	0.00	
6,018.00	0.600	261.00	5,958.29	-231.48	620.35	662.12	0.28	0.21	21.15	
6,113.00	1.100	267.30	6,053.28	-231.60	618.95	660.85	0.53	0.53	6.63	
6,208.00	0.600	273.40	6,148.27	-231.62	617.54	659.53	0.53	-0.53	6.42	
6,304.00	0.500	286.80	6,244.26	-231.47	616.64	658.63	0.17	-0.10	13.96	
6,399.00	0.700	280.00	6,339.26	-231.25	615.67	657.65	0.22	0.21	-7.16	
6,495.00	0.600	258.80	6,435.25	-231.24	614.60	656.64	0.27	-0.10	-22.08	
6,590.00	0.400	264.90	6,530.25	-231.37	613.79	655.92	0.22	-0.21	6.42	
6,685.00	0.600	249.90	6,625.25	-231.57	612.99	655.24	0.25	0.21	-15.79	
6,781.00	0.500	273.30	6,721.24	-231.72	612.10	654.45	0.25	-0.10	24.38	
6,876.00	1.100	279.40	6,816.23	-231.54	610.78	653.16	0.64	0.63	6.42	
6,971.00	1.800	273.60	6,911.20	-231.30	608.40	650.83	0.75	0.74	-6.11	
7,066.00	2.000	281.30	7,006.15	-230.88	605.28	647.76	0.34	0.21	8.11	
7,162.00	2.300	1.70	7,102.10	-228.63	603.69	645.50	2.90	0.31	83.75	
7,257.00	2.000	15.30	7,197.03	-225.12	604.19	644.76	0.62	-0.32	14.32	
7,340.00	1.400	18.40	7,280.00	-222.77	604.89	644.61	0.73	-0.72	3.73	
7,385.00	1.400	18.40	7,324.98	-221.72	605.24	644.57	0.00	0.00	0.00	

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (ft)	Hole Diameter (ft)
804.30	804.28	9 5/8"	0.80	1.02

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 42D-29-691
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6126.90ft
<b>Site:</b>	MDP 11 Pad	<b>MD Reference:</b>	KB @ 6126.90ft
<b>Well:</b>	GGU Federal 42D-29-691	<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>	Compass VM

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
732.00	731.98	1.19	4.13	End of Gyros

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