



**Bill Barrett Corporation**

## **Bill Barrett Corp.**

Garfield County, Colorado [NAD83]

MDP 11 Pad

GGU Federal 31D-29-691

Wellbore #1

Survey: Surveys from Surface

## **Standard Survey Report**

07 March, 2011



<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 31D-29-691
<b>Project:</b>	Garfield County, Colorado [NAD83]	<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 31D-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 [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		

<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 31D-29-691					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,614,719.31 usft	<b>Latitude:</b>	39° 30' 10.28 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,415,016.46 usft	<b>Longitude:</b>	107° 34' 23.94 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</b>
	IGRF200510	12/21/10	(°)	(°)	(nT)
			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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	327.15	

<b>Survey Program</b>	<b>Date</b>	03/07/11			
<b>From</b>	<b>To</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
(ft)	(ft)				
50.00	680.00	Gyro Surveys (Wellbore #1)	MWD	MWD - Standard	
790.00	7,575.00	Surveys (Wellbore #1)	MWD	MWD - Standard	

<b>Survey</b>										
<b>Measured</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Vertical</b>	<b>Dogleg</b>	<b>Build</b>	<b>Turn</b>	
<b>Depth</b>	(°)	(°)	<b>Depth</b>	(ft)	(ft)	<b>Section</b>	<b>Rate</b>	<b>Rate</b>	<b>Rate</b>	
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)	
0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.00	0.210	38.53	50.00	0.07	0.06	0.03	0.42	0.42	0.00	
100.00	0.160	181.17	100.00	0.07	0.11	0.00	0.70	-0.10	285.28	
150.00	0.270	219.62	150.00	-0.09	0.04	-0.09	0.35	0.22	76.90	
200.00	0.140	239.47	200.00	-0.21	-0.09	-0.13	0.29	-0.26	39.70	
250.00	0.230	293.69	250.00	-0.20	-0.24	-0.04	0.37	0.18	108.44	
300.00	0.010	322.87	300.00	-0.16	-0.33	0.05	0.44	-0.44	58.36	
350.00	0.050	339.62	350.00	-0.13	-0.34	0.07	0.08	0.08	33.50	
400.00	0.070	323.24	400.00	-0.09	-0.37	0.13	0.05	0.04	-32.76	
450.00	0.220	318.58	450.00	0.01	-0.45	0.25	0.30	0.30	-9.32	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 31D-29-691
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<b>Site:</b>	MDP 11 Pad	<b>MD Reference:</b>	KB @ 6126.90ft
<b>Well:</b>	GGU Federal 31D-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	0.100	345.47	500.00	0.12	-0.52	0.39	0.28	-0.24	53.78
550.00	0.090	299.91	550.00	0.19	-0.57	0.46	0.15	-0.02	-91.12
600.00	0.020	305.64	600.00	0.21	-0.61	0.51	0.14	-0.14	11.46
650.00	0.240	302.66	650.00	0.27	-0.70	0.61	0.44	0.44	-5.96
680.00	0.290	278.27	680.00	0.32	-0.83	0.72	0.41	0.17	-81.30
740.70	0.147	107.38	740.70	0.32	-0.91	0.76	0.72	-0.24	-281.54
<b>9 5/8"</b>									
790.00	0.500	103.10	790.00	0.25	-0.64	0.56	0.72	0.72	-8.67
882.00	1.600	349.40	881.99	1.42	-0.49	1.46	2.02	1.20	-123.59
974.00	4.200	328.50	973.86	5.56	-2.48	6.01	3.01	2.83	-22.72
1,066.00	6.400	330.20	1,065.46	12.88	-6.79	14.50	2.40	2.39	1.85
1,158.00	8.500	334.60	1,156.68	23.47	-12.26	26.37	2.36	2.28	4.78
1,251.00	10.600	334.90	1,248.39	37.43	-18.83	41.66	2.26	2.26	0.32
1,346.00	13.900	332.20	1,341.21	55.44	-27.87	61.69	3.52	3.47	-2.84
1,442.00	16.500	328.20	1,433.85	77.23	-40.43	86.81	2.92	2.71	-4.17
1,537.00	19.900	330.20	1,524.08	102.73	-55.58	116.45	3.64	3.58	2.11
1,633.00	22.300	329.30	1,613.64	132.58	-73.00	150.97	2.52	2.50	-0.94
1,728.00	22.100	328.40	1,701.60	163.30	-91.57	186.85	0.42	-0.21	-0.95
1,823.00	21.700	325.80	1,789.75	193.04	-110.80	222.28	1.10	-0.42	-2.74
1,919.00	22.000	328.10	1,878.85	222.99	-130.28	258.00	0.94	0.31	2.40
2,014.00	21.900	327.70	1,966.96	253.07	-149.15	293.51	0.19	-0.11	-0.42
2,109.00	21.000	326.30	2,055.38	282.21	-168.06	328.25	1.09	-0.95	-1.47
2,205.00	22.900	326.40	2,144.42	312.08	-187.94	364.13	1.98	1.98	0.10
2,300.00	22.700	325.30	2,232.00	342.55	-208.61	400.93	0.50	-0.21	-1.16
2,396.00	22.300	326.00	2,320.69	372.87	-229.34	437.65	0.50	-0.42	0.73
2,491.00	23.300	328.90	2,408.27	403.91	-249.12	474.45	1.58	1.05	3.05
2,586.00	22.900	328.00	2,495.65	435.67	-268.62	511.72	0.56	-0.42	-0.95
2,682.00	22.800	327.40	2,584.12	467.18	-288.54	548.99	0.26	-0.10	-0.63
2,777.00	23.000	328.10	2,671.63	498.44	-308.27	585.96	0.36	0.21	0.74
2,872.00	23.200	329.60	2,759.02	530.34	-327.54	623.21	0.65	0.21	1.58
2,968.00	22.100	327.70	2,847.61	561.92	-346.76	660.16	1.38	-1.15	-1.98
3,063.00	22.100	325.00	2,935.63	591.66	-366.56	695.89	1.07	0.00	-2.84
3,158.00	20.700	324.80	3,024.08	620.02	-386.49	730.53	1.48	-1.47	-0.21
3,254.00	20.400	325.80	3,113.97	647.72	-405.68	764.20	0.48	-0.31	1.04
3,349.00	20.700	324.50	3,202.93	675.09	-424.73	797.53	0.57	0.32	-1.37
3,444.00	21.800	329.40	3,291.47	703.94	-443.47	831.93	2.20	1.16	5.16
3,540.00	22.100	323.60	3,380.53	733.82	-463.26	867.77	2.28	0.31	-6.04
3,635.00	19.000	325.30	3,469.47	760.93	-482.67	901.07	3.32	-3.26	1.79
3,730.00	17.800	325.00	3,559.61	785.54	-499.81	931.04	1.27	-1.26	-0.32
3,825.00	17.100	328.00	3,650.24	809.28	-515.54	959.52	1.20	-0.74	3.16
3,921.00	19.200	331.40	3,741.46	835.11	-530.57	989.38	2.45	2.19	3.54
4,016.00	19.200	330.70	3,831.18	862.45	-545.70	1,020.55	0.24	0.00	-0.74
4,111.00	17.500	330.40	3,921.34	888.49	-560.40	1,050.40	1.79	-1.79	-0.32

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<b>Well:</b>	GGU Federal 31D-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)	
4,207.00	14.900	331.20	4,013.52	911.86	-573.48	1,077.13	2.72	-2.71	0.83	
4,302.00	14.100	330.40	4,105.50	932.63	-585.08	1,100.86	0.87	-0.84	-0.84	
4,397.00	12.800	327.00	4,197.89	951.52	-596.52	1,122.94	1.60	-1.37	-3.58	
4,493.00	12.000	329.20	4,291.65	969.01	-607.43	1,143.55	0.97	-0.83	2.29	
4,588.00	9.800	325.60	4,384.93	984.16	-617.05	1,161.50	2.42	-2.32	-3.79	
4,684.00	9.100	324.20	4,479.63	997.06	-626.11	1,177.25	0.77	-0.73	-1.46	
4,779.00	7.500	319.00	4,573.63	1,007.84	-634.57	1,190.89	1.86	-1.68	-5.47	
4,874.00	5.300	319.20	4,668.04	1,015.84	-641.51	1,201.38	2.32	-2.32	0.21	
4,970.00	2.500	329.90	4,763.81	1,021.01	-645.45	1,207.86	3.00	-2.92	11.15	
5,065.00	1.800	333.60	4,858.74	1,024.14	-647.16	1,211.41	0.75	-0.74	3.89	
5,161.00	0.800	2.60	4,954.71	1,026.16	-647.80	1,213.46	1.22	-1.04	30.21	
5,256.00	1.100	8.30	5,049.70	1,027.72	-647.63	1,214.68	0.33	0.32	6.00	
5,351.00	0.600	51.20	5,144.69	1,028.93	-647.12	1,215.42	0.82	-0.53	45.16	
5,447.00	0.800	265.70	5,240.69	1,029.20	-647.39	1,215.80	1.39	0.21	-151.56	
5,542.00	1.300	237.80	5,335.67	1,028.57	-648.97	1,216.12	0.74	0.53	-29.37	
5,637.00	1.100	236.90	5,430.65	1,027.50	-650.64	1,216.13	0.21	-0.21	-0.95	
5,733.00	1.300	217.80	5,526.63	1,026.14	-652.08	1,215.77	0.46	0.21	-19.90	
5,828.00	1.300	227.00	5,621.61	1,024.55	-653.53	1,215.22	0.22	0.00	9.68	
5,923.00	1.300	200.20	5,716.58	1,022.81	-654.69	1,214.38	0.63	0.00	-28.21	
6,019.00	0.800	15.20	5,812.58	1,022.43	-654.89	1,214.18	2.19	-0.52	182.29	
6,114.00	0.300	40.90	5,907.57	1,023.26	-654.55	1,214.69	0.57	-0.53	27.05	
6,209.00	0.300	205.30	6,002.57	1,023.22	-654.50	1,214.63	0.63	0.00	173.05	
6,305.00	1.200	161.10	6,098.56	1,022.04	-654.28	1,213.52	1.05	0.94	-46.04	
6,400.00	1.100	148.30	6,193.54	1,020.33	-653.48	1,211.64	0.29	-0.11	-13.47	
6,495.00	1.200	196.80	6,288.53	1,018.60	-653.29	1,210.09	1.00	0.11	51.05	
6,591.00	1.000	218.60	6,384.51	1,016.98	-654.10	1,209.17	0.48	-0.21	22.71	
6,686.00	1.300	248.40	6,479.49	1,015.94	-655.62	1,209.12	0.69	0.32	31.37	
6,782.00	1.800	248.40	6,575.45	1,014.98	-658.03	1,209.62	0.52	0.52	0.00	
6,877.00	1.200	320.50	6,670.43	1,015.20	-660.05	1,210.90	1.93	-0.63	75.89	
6,972.00	1.300	322.20	6,765.41	1,016.82	-661.35	1,212.96	0.11	0.11	1.79	
7,068.00	1.500	311.80	6,861.38	1,018.52	-662.95	1,215.26	0.34	0.21	-10.83	
7,163.00	1.900	315.30	6,956.34	1,020.46	-664.98	1,218.00	0.43	0.42	3.68	
7,258.00	0.800	351.50	7,051.31	1,022.24	-666.19	1,220.15	1.41	-1.16	38.11	
7,353.00	1.300	349.50	7,146.29	1,023.96	-666.48	1,221.75	0.53	0.53	-2.11	
7,449.00	0.800	344.20	7,242.28	1,025.67	-666.87	1,223.40	0.53	-0.52	-5.52	
7,528.00	1.000	302.30	7,321.27	1,026.57	-667.60	1,224.55	0.85	0.25	-53.04	
7,575.00	1.000	302.30	7,368.26	1,027.01	-668.29	1,225.29	0.00	0.00	0.00	

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<b>Site:</b>	MDP 11 Pad	<b>MD Reference:</b>	KB @ 6126.90ft
<b>Well:</b>	GGU Federal 31D-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

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (ft)	Hole Diameter (ft)
740.70	740.70	9 5/8"		0.80	1.02

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
680.00	680.00	0.32	-0.83	End of Gyros	

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