

# **Bill Barrett Corp. (III)**

**Garfield County, Colorado [NAD83]**

**MDP Pad #10**

**GGU Federal 34B-20-691**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**28 November, 2011**

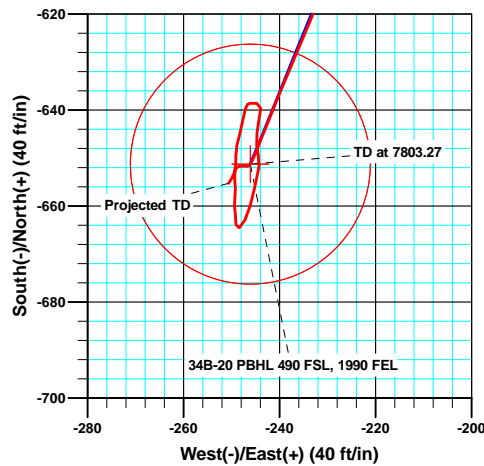
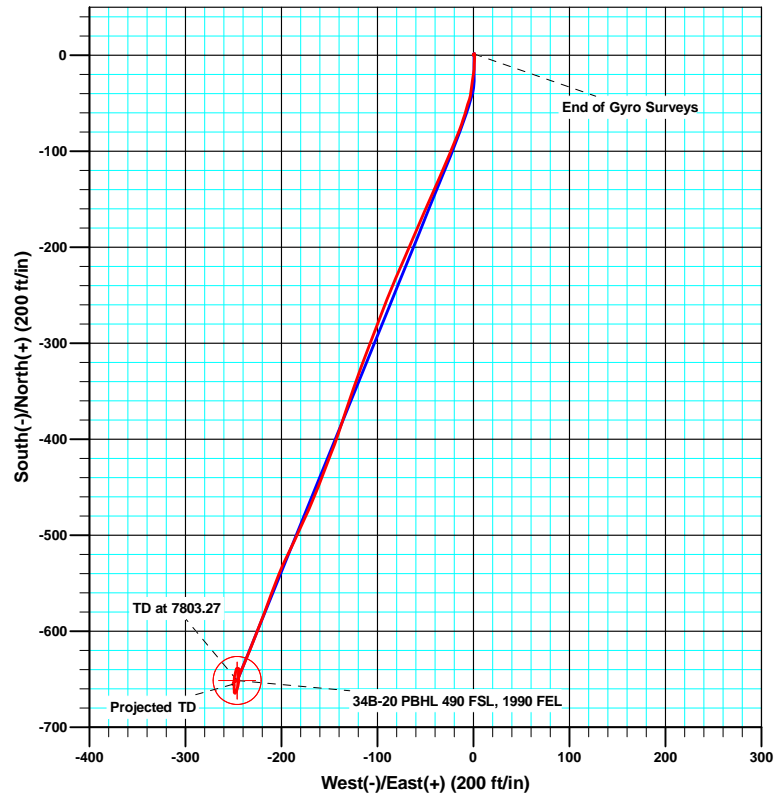
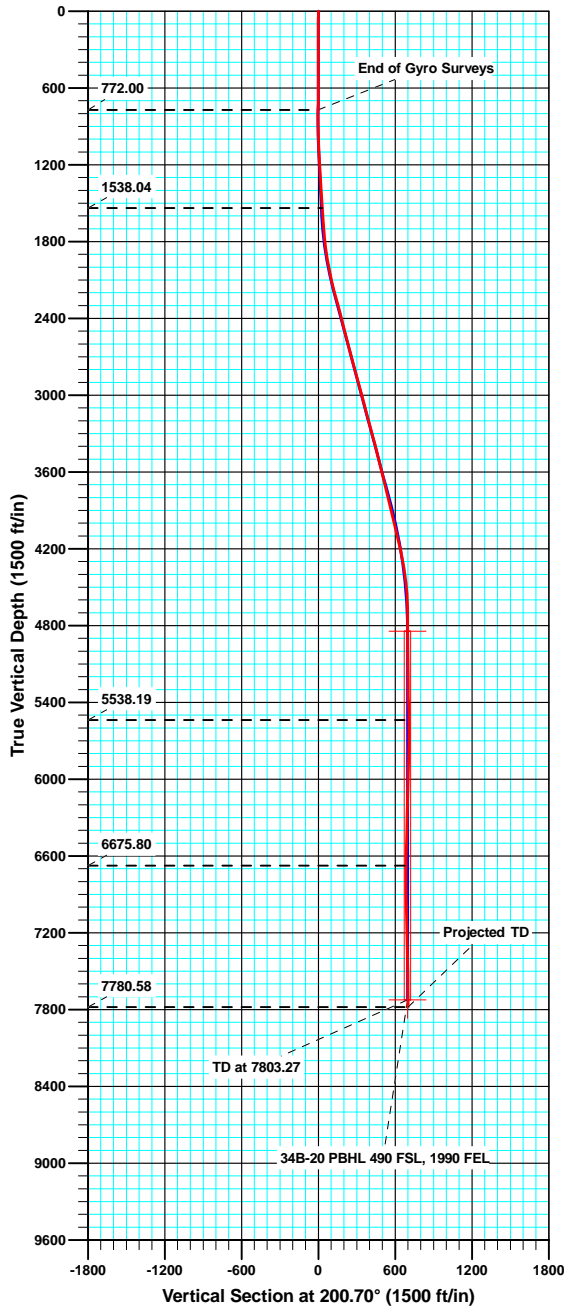


## WELL DETAILS: GGU Federal 34B-20-691

North American Datum 1983 , US State Plane 1983 , Colorado Central Zone

+N/-S +E/-W Northing Easting Latitude Longitude  
0.00 0.00 1617053.29 2414647.53 39° 30' 33.26 N 107° 34' 29.33 W

GL@ 6472.01 MDP Pad #10



Azimuths to True North  
Magnetic North: 10.14°

Magnetic Field  
Strength: 52287.0snT  
Dip Angle: 65.82°  
Date: 8/30/2011  
Model: IGRF2010

### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSD	Departure	Annotation
772.00	772.00	0.120	12.46	1.49	0.66	-1.63	2.59	End of Gyro Surveys
1538.04	1539.00	3.300	188.50	-31.52	-1.73	30.10	37.07	As of Nov 21
5538.19	5617.00	1.200	169.30	-661.96	-249.20	707.31	717.68	As of Nov 22
6675.80	6755.00	1.500	5.70	-639.68	-243.92	684.60	747.21	As of Nov 23
7780.58	7860.00	0.400	210.40	-655.24	-250.64	701.54	768.93	Projected TD

# Sharewell

## Survey Report

<b>Company:</b>	Bill Barrett Corp. (III)	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 34B-20-691
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 6494.01ft (KB=22')
<b>Site:</b>	MDP Pad #10	<b>MD Reference:</b>	KB @ 6494.01ft (KB=22')
<b>Well:</b>	GGU Federal 34B-20-691	<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		

Site		MDP Pad #10			
Site Position:		Northing:	1,617,054.04 usft	Latitude:	39° 30' 33.26 N
From:	Lat/Long	Easting:	2,414,646.98 usft	Longitude:	107° 34' 29.34 W
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	-1.31 °

Well	GGU Federal 34B-20-691					
Well Position	+N/-S	0.00 ft	Northing:	1,617,053.28 usft	Latitude:	39° 30' 33.26 N
	+E/-W	0.00 ft	Easting:	2,414,647.53 usft	Longitude:	107° 34' 29.33 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,472.01 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	8/30/2011	10.14	65.82	52,287

<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		200.70

<b>Survey Program</b>	<b>Date</b>	11/28/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
22.00	772.00	Survey #1 Gyro (Wellbore #1)	NS-GYRO-MS	North sensing gyrocompassing m/s	
898.00	7,860.00	MWD (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	
22.00	0.000	0.00	22.00	0.00	0.00	0.00	0.00	0.00	0.00	
72.00	0.300	75.98	72.00	0.03	0.13	-0.07	0.60	0.60	0.00	
122.00	0.140	332.59	122.00	0.12	0.23	-0.19	0.72	-0.32	-206.78	
172.00	0.170	347.32	172.00	0.24	0.18	-0.29	0.10	0.06	29.46	
222.00	0.180	0.42	222.00	0.40	0.17	-0.43	0.08	0.02	26.20	
272.00	0.130	29.54	272.00	0.52	0.19	-0.56	0.18	-0.10	58.24	
322.00	0.220	4.98	322.00	0.67	0.23	-0.71	0.23	0.18	-49.12	
372.00	0.120	37.19	372.00	0.81	0.27	-0.85	0.27	-0.20	64.42	
422.00	0.130	301.79	422.00	0.88	0.25	-0.91	0.37	0.02	-190.80	

# Sharewell

## Survey Report

<b>Company:</b>	Bill Barrett Corp. (III)	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 34B-20-691
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 6494.01ft (KB=22')
<b>Site:</b>	MDP Pad #10	<b>MD Reference:</b>	KB @ 6494.01ft (KB=22')
<b>Well:</b>	GGU Federal 34B-20-691	<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)
472.00	0.270	351.69	472.00	1.02	0.19	-1.02	0.42	0.28	99.80
522.00	0.280	93.24	522.00	1.13	0.29	-1.16	0.85	0.02	203.10
572.00	0.220	27.64	572.00	1.21	0.46	-1.30	0.55	-0.12	-131.20
622.00	0.250	80.78	622.00	1.31	0.61	-1.45	0.42	0.06	106.28
672.00	0.210	219.83	672.00	1.26	0.66	-1.41	0.86	-0.08	278.10
722.00	0.290	10.32	722.00	1.31	0.63	-1.45	0.97	0.16	300.98
772.00	0.120	12.46	772.00	1.49	0.66	-1.63	0.34	-0.34	4.28
898.00	0.400	62.00	898.00	1.83	1.08	-2.09	0.27	0.22	39.32
970.00	1.700	179.10	969.99	0.88	1.31	-1.28	2.66	1.81	162.64
1,065.00	3.300	182.40	1,064.89	-3.27	1.22	2.62	1.69	1.68	3.47
1,159.00	3.500	183.10	1,158.73	-8.83	0.95	7.93	0.22	0.21	0.74
1,254.00	3.400	183.90	1,253.55	-14.54	0.61	13.39	0.12	-0.11	0.84
1,349.00	3.400	189.30	1,348.39	-20.13	-0.04	18.85	0.34	0.00	5.68
1,444.00	3.600	188.00	1,443.21	-25.86	-0.91	24.52	0.23	0.21	-1.37
1,539.00	3.300	188.50	1,538.04	-31.52	-1.73	30.10	0.32	-0.32	0.53
1,635.00	4.400	184.80	1,633.82	-37.92	-2.45	36.34	1.17	1.15	-3.85
1,730.00	5.300	198.80	1,728.48	-45.71	-4.17	44.23	1.56	0.95	14.74
1,824.00	6.400	196.50	1,821.99	-54.84	-7.05	53.80	1.20	1.17	-2.45
1,919.00	8.800	197.50	1,916.15	-66.85	-10.74	66.33	2.53	2.53	1.05
2,014.00	11.100	201.70	2,009.72	-82.28	-16.31	82.74	2.54	2.42	4.42
2,109.00	13.000	202.90	2,102.62	-100.62	-23.85	102.56	2.02	2.00	1.26
2,204.00	15.300	203.10	2,194.73	-122.00	-32.93	125.76	2.42	2.42	0.21
2,299.00	14.900	204.00	2,286.45	-144.68	-42.81	150.48	0.49	-0.42	0.95
2,393.00	14.600	203.50	2,377.35	-166.59	-52.45	174.38	0.35	-0.32	-0.53
2,488.00	14.400	203.70	2,469.33	-188.39	-61.97	198.13	0.22	-0.21	0.21
2,583.00	14.400	203.10	2,561.34	-210.07	-71.36	221.73	0.16	0.00	-0.63
2,678.00	14.300	203.20	2,653.38	-231.72	-80.61	245.25	0.11	-0.11	0.11
2,772.00	14.400	201.90	2,744.44	-253.23	-89.55	268.54	0.36	0.11	-1.38
2,867.00	15.700	200.50	2,836.18	-276.23	-98.45	293.20	1.42	1.37	-1.47
2,962.00	15.600	201.10	2,927.66	-300.19	-107.55	318.83	0.20	-0.11	0.63
3,057.00	15.200	200.20	3,019.25	-323.80	-116.45	344.06	0.49	-0.42	-0.95
3,152.00	15.100	199.50	3,110.95	-347.15	-124.88	368.88	0.22	-0.11	-0.74
3,247.00	14.900	198.10	3,202.71	-370.42	-132.81	393.45	0.44	-0.21	-1.47
3,342.00	15.100	198.50	3,294.48	-393.77	-140.53	418.02	0.24	0.21	0.42
3,437.00	14.300	202.20	3,386.37	-416.36	-148.89	442.11	1.30	-0.84	3.89
3,531.00	13.700	200.20	3,477.58	-437.56	-157.12	464.85	0.82	-0.64	-2.13
3,627.00	14.000	202.60	3,570.79	-458.95	-165.51	487.82	0.68	0.31	2.50
3,721.00	13.400	203.90	3,662.11	-479.41	-174.29	510.06	0.72	-0.64	1.38
3,817.00	14.100	205.20	3,755.36	-500.16	-183.78	532.83	0.80	0.73	1.35
3,912.00	13.500	206.50	3,847.62	-520.55	-193.65	555.40	0.71	-0.63	1.37
4,005.00	13.600	201.30	3,938.03	-540.45	-202.47	577.13	1.31	0.11	-5.59
4,099.00	13.800	201.20	4,029.36	-561.20	-210.54	599.39	0.21	0.21	-0.11
4,194.00	13.200	199.40	4,121.73	-582.00	-218.24	621.57	0.77	-0.63	-1.89

# Sharewell

## Survey Report

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<b>Site:</b>	MDP Pad #10	<b>MD Reference:</b>	KB @ 6494.01ft (KB=22')
<b>Well:</b>	GGU Federal 34B-20-691	<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)	
4,289.00	12.600	201.70	4,214.33	-601.86	-225.67	642.77	0.83	-0.63	2.42	
4,384.00	10.000	202.50	4,307.49	-619.11	-232.66	661.38	2.74	-2.74	0.84	
4,479.00	8.200	203.00	4,401.29	-632.96	-238.46	676.39	1.90	-1.89	0.53	
4,574.00	5.700	201.50	4,495.58	-643.59	-242.84	687.88	2.64	-2.63	-1.58	
4,669.00	2.500	203.40	4,590.32	-649.88	-245.39	694.67	3.37	-3.37	2.00	
4,763.00	0.600	278.30	4,684.29	-651.69	-246.69	696.82	2.57	-2.02	79.68	
4,858.00	0.500	265.80	4,779.29	-651.65	-247.60	697.11	0.16	-0.11	-13.16	
4,953.00	0.600	264.00	4,874.28	-651.74	-248.51	697.50	0.11	0.11	-1.89	
5,048.00	0.500	197.90	4,969.28	-652.18	-249.13	698.14	0.64	-0.11	-69.58	
5,143.00	0.900	184.10	5,064.27	-653.32	-249.31	699.27	0.45	0.42	-14.53	
5,238.00	1.000	176.10	5,159.26	-654.89	-249.31	700.74	0.17	0.11	-8.42	
5,333.00	0.700	174.20	5,254.25	-656.30	-249.19	702.01	0.32	-0.32	-2.00	
5,427.00	1.200	188.20	5,348.24	-657.84	-249.27	703.49	0.58	0.53	14.89	
5,522.00	1.300	179.10	5,443.21	-659.90	-249.40	705.46	0.23	0.11	-9.58	
5,617.00	1.200	169.30	5,538.19	-661.96	-249.20	707.31	0.25	-0.11	-10.32	
5,712.00	1.100	181.90	5,633.17	-663.85	-249.04	709.02	0.29	-0.11	13.26	
5,807.00	0.900	69.90	5,728.16	-664.50	-248.37	709.40	1.75	-0.21	-117.89	
5,901.00	1.800	20.20	5,822.14	-662.86	-247.17	707.44	1.49	0.96	-52.87	
5,996.00	1.800	20.30	5,917.09	-660.06	-246.14	704.46	0.00	0.00	0.11	
6,091.00	2.200	8.60	6,012.03	-656.86	-245.35	701.18	0.60	0.42	-12.32	
6,185.00	1.400	18.50	6,105.99	-653.99	-244.71	698.27	0.91	-0.85	10.53	
6,280.00	1.400	4.20	6,200.96	-651.73	-244.26	696.00	0.37	0.00	-15.05	
6,375.00	1.300	345.90	6,295.93	-649.53	-244.44	694.00	0.46	-0.11	-19.26	
6,470.00	1.500	358.60	6,390.91	-647.24	-244.73	691.96	0.39	0.21	13.37	
6,565.00	1.500	4.80	6,485.87	-644.76	-244.66	689.61	0.17	0.00	6.53	
6,660.00	1.600	11.10	6,580.84	-642.22	-244.30	687.11	0.21	0.11	6.63	
6,755.00	1.500	5.70	6,675.80	-639.68	-243.92	684.60	0.19	-0.11	-5.68	
6,850.00	1.100	260.00	6,770.79	-638.60	-244.69	683.87	2.20	-0.42	-111.26	
6,945.00	0.700	286.10	6,865.78	-638.60	-246.15	684.38	0.59	-0.42	27.47	
7,040.00	1.800	196.70	6,960.76	-639.87	-247.13	685.91	2.03	1.16	-94.11	
7,135.00	1.500	188.00	7,055.72	-642.53	-247.74	688.62	0.41	-0.32	-9.16	
7,230.00	1.700	196.80	7,150.68	-645.11	-248.32	691.23	0.33	0.21	9.26	
7,325.00	1.100	189.60	7,245.65	-647.35	-248.88	693.54	0.66	-0.63	-7.58	
7,420.00	1.400	181.30	7,340.63	-649.41	-249.05	695.52	0.37	0.32	-8.74	
7,515.00	1.100	184.10	7,435.61	-651.48	-249.15	697.49	0.32	-0.32	2.95	
7,609.00	0.800	198.10	7,529.60	-653.01	-249.41	699.01	0.40	-0.32	14.89	
7,704.00	0.700	206.90	7,624.59	-654.16	-249.88	700.25	0.16	-0.11	9.26	
7,799.00	0.400	224.80	7,719.58	-654.91	-250.38	701.13	0.36	-0.32	18.84	
7,860.00	0.400	210.40	7,780.58	-655.24	-250.64	701.54	0.16	0.00	-23.61	

**Sharewell**  
Survey Report

<b>Company:</b>	Bill Barrett Corp. (III)	<b>Local Co-ordinate Reference:</b>	Well GGU Federal 34B-20-691
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 6494.01ft (KB=22')
<b>Site:</b>	MDP Pad #10	<b>MD Reference:</b>	KB @ 6494.01ft (KB=22')
<b>Well:</b>	GGU Federal 34B-20-691	<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

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
772.00	772.00	1.49	0.66	End of Gyro Surveys
1,539.00	1,538.04	-31.52	-1.73	As of Nov 21
5,617.00	5,538.19	-661.96	-249.20	As of Nov 22
6,755.00	6,675.80	-639.68	-243.92	As of Nov 23
7,860.00	7,780.58	-655.24	-250.64	Projected TD

Checked By: _____	Approved By: _____	Date: _____
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