

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

**Garfield County, Colorado [NAD83]**

**Circle B Tract 5 Pad**

**CBS 41C-21-692**

**Wellbore #1**

**Design: Wellbore #1**

## **Standard Survey Report**

**09 January, 2012**



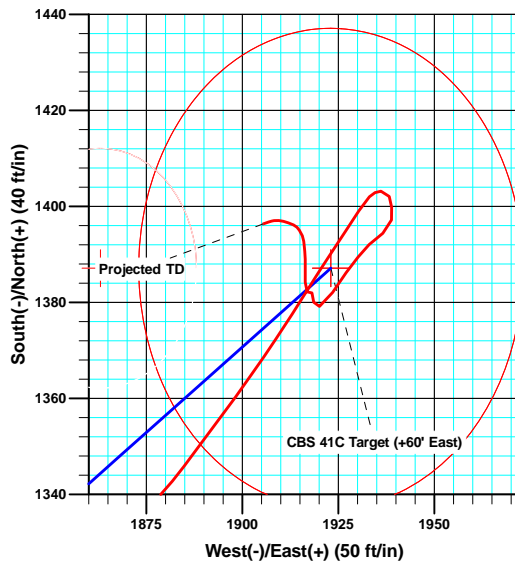
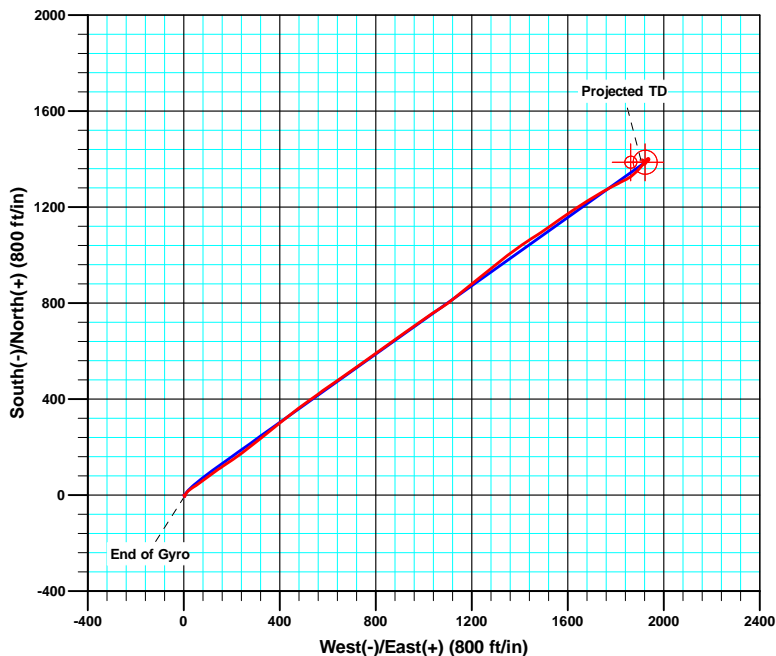
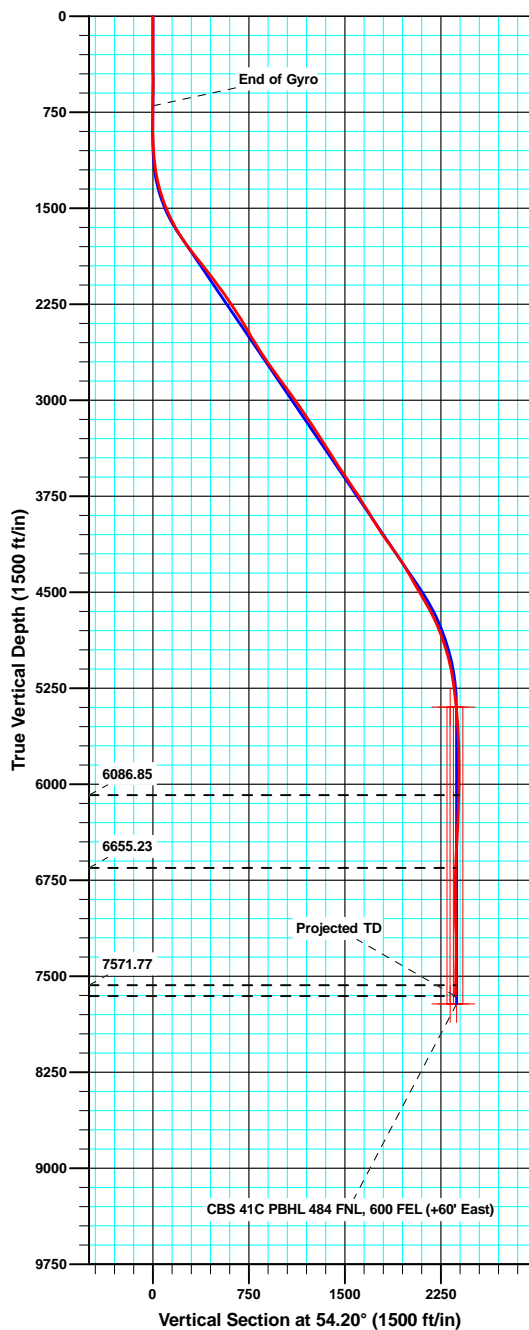
Bill Barrett Corporation

## WELL DETAILS: CBS 41C-21-692

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

+N/-S +E/-W Northing Easting Latitude Longitude  
0.00 0.00 1619637.53 2387464.15 39° 30' 52.51 N 107° 40' 16.86 W

GL@ 5743.50



Azimuths to True North  
Magnetic North: 10.23°

Magnetic Field  
Strength: 52318.3snT  
Dip Angle: 65.82°  
Date: 4/26/2011  
Model: IGRF2010

### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
6086.85	6756.00	1.800	184.90	1397.19	1938.87	2389.85	2415.66	As of Jan 3
6655.23	7325.00	2.100	249.20	1379.18	1920.12	2364.11	2442.38	As of Jan 4
7571.77	8242.00	1.500	263.30	1396.93	1907.65	2364.38	2471.04	As of Jan 5
7655.74	8326.00	1.600	252.90	1396.32	1905.42	2362.21	2473.36	Projected TD

# Sharewell

## Survey Report

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well CBS 41C-21-692
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 5767.00ft
<b>Site:</b>	Circle B Tract 5 Pad	<b>MD Reference:</b>	KB @ 5767.00ft
<b>Well:</b>	CBS 41C-21-692	<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	Circle B Tract 5 Pad				
Site Position:		Northing:	1,619,626.42 usft	Latitude:	39° 30' 52.41 N
From:	Lat/Long	Easting:	2,387,502.83 usft	Longitude:	107° 40' 16.36 W
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	-1.37 °

Well	CBS 41C-21-692					
Well Position	+N/-S	0.00 ft	Northing:	1,619,637.53 usft	Latitude:	39° 30' 52.51 N
	+E/-W	0.00 ft	Easting:	2,387,464.15 usft	Longitude:	107° 40' 16.86 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,743.50 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	4/26/2011	10.23	65.82	52,318

<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	54.20	

<b>Survey Program</b>	<b>Date</b>	1/9/2012			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
100.00	699.00	Gyro (Wellbore #1)	Gyro	Gyro	
881.00	8,326.00	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	
100.00	0.540	117.36	100.00	-0.22	0.42	0.21	0.54	0.54	0.00	
200.00	0.710	129.12	199.99	-0.82	1.32	0.59	0.21	0.17	11.76	
300.00	0.560	140.97	299.99	-1.59	2.11	0.78	0.20	-0.15	11.85	
400.00	0.560	170.77	399.98	-2.46	2.49	0.58	0.29	0.00	29.80	
500.00	0.390	145.81	499.98	-3.22	2.76	0.36	0.26	-0.17	-24.96	
600.00	0.580	157.35	599.98	-3.97	3.15	0.23	0.21	0.19	11.54	
699.00	0.372	177.35	698.97	-4.75	3.36	-0.06	0.27	-0.21	20.20	
881.00	0.500	156.60	880.97	-6.07	3.70	-0.55	0.11	0.07	-11.40	
973.00	1.800	29.10	972.95	-5.18	4.56	0.67	2.33	1.41	-138.59	

# Sharewell

## Survey Report

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well CBS 41C-21-692
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 5767.00ft
<b>Site:</b>	Circle B Tract 5 Pad	<b>MD Reference:</b>	KB @ 5767.00ft
<b>Well:</b>	CBS 41C-21-692	<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)
1,068.00	4.500	17.40	1,067.80	-0.32	6.40	5.01	2.91	2.84	-12.32
1,163.00	7.900	34.30	1,162.24	8.64	11.20	14.13	4.02	3.58	17.79
1,258.00	11.300	48.80	1,255.91	20.17	21.88	29.55	4.37	3.58	15.26
1,353.00	15.700	58.60	1,348.27	33.00	39.87	51.64	5.20	4.63	10.32
1,448.00	19.200	54.30	1,438.89	48.82	63.53	80.09	3.92	3.68	-4.53
1,543.00	23.500	52.90	1,527.35	69.37	91.34	114.66	4.56	4.53	-1.47
1,638.00	27.300	54.60	1,613.15	93.42	124.22	155.40	4.07	4.00	1.79
1,732.00	31.500	55.90	1,695.03	119.69	162.14	201.52	4.52	4.47	1.38
1,828.00	35.800	56.50	1,774.93	149.26	206.34	254.67	4.49	4.48	0.63
1,923.00	38.200	52.00	1,850.80	182.70	252.68	311.81	3.81	2.53	-4.74
2,018.00	38.800	50.90	1,925.15	219.55	298.92	370.87	0.96	0.63	-1.16
2,113.00	37.900	51.80	1,999.65	256.37	344.95	429.74	1.11	-0.95	0.95
2,208.00	36.600	51.80	2,075.27	291.93	390.14	487.19	1.37	-1.37	0.00
2,303.00	35.300	51.50	2,152.18	326.53	433.88	542.91	1.38	-1.37	-0.32
2,397.00	34.400	52.70	2,229.32	359.53	476.26	596.59	1.20	-0.96	1.28
2,492.00	33.000	54.30	2,308.35	390.89	518.62	649.29	1.74	-1.47	1.68
2,587.00	31.600	53.50	2,388.65	420.79	559.64	700.05	1.54	-1.47	-0.84
2,682.00	29.700	54.70	2,470.38	449.20	598.85	748.47	2.10	-2.00	1.26
2,777.00	32.300	54.90	2,551.80	477.40	638.83	797.39	2.74	2.74	0.21
2,872.00	32.600	55.90	2,631.97	506.34	680.79	848.36	0.65	0.32	1.05
2,966.00	34.500	55.00	2,710.30	535.81	723.57	900.29	2.09	2.02	-0.96
3,061.00	36.600	54.60	2,787.59	567.65	768.70	955.52	2.22	2.21	-0.42
3,156.00	36.100	54.50	2,864.11	600.31	814.57	1,011.82	0.53	-0.53	-0.11
3,251.00	35.600	54.20	2,941.11	632.74	859.78	1,067.46	0.56	-0.53	-0.32
3,346.00	35.300	54.00	3,018.50	665.04	904.41	1,122.56	0.34	-0.32	-0.21
3,440.00	34.500	55.30	3,095.59	696.16	948.27	1,176.34	1.16	-0.85	1.38
3,535.00	33.800	54.60	3,174.21	726.79	991.93	1,229.66	0.84	-0.74	-0.74
3,629.00	33.100	56.50	3,252.64	756.10	1,034.65	1,281.45	1.34	-0.74	2.02
3,724.00	31.500	57.30	3,332.94	783.83	1,077.17	1,332.16	1.74	-1.68	0.84
3,819.00	32.600	50.80	3,413.49	813.42	1,117.90	1,382.51	3.81	1.16	-6.84
3,914.00	33.000	51.20	3,493.34	845.81	1,157.89	1,433.89	0.48	0.42	0.42
4,009.00	34.100	52.00	3,572.51	878.41	1,199.04	1,486.33	1.25	1.16	0.84
4,104.00	34.600	51.10	3,650.95	911.75	1,241.02	1,539.88	0.75	0.53	-0.95
4,199.00	33.000	50.80	3,729.89	945.04	1,282.06	1,592.64	1.69	-1.68	-0.32
4,293.00	32.300	50.10	3,809.03	977.33	1,321.17	1,643.25	0.85	-0.74	-0.74
4,387.00	31.200	54.10	3,888.97	1,007.72	1,360.16	1,692.65	2.53	-1.17	4.26
4,482.00	31.200	56.60	3,970.24	1,035.69	1,400.64	1,741.84	1.36	0.00	2.63
4,577.00	34.500	56.60	4,050.03	1,064.06	1,443.65	1,793.32	3.47	3.47	0.00
4,668.00	36.400	55.10	4,124.16	1,093.69	1,487.32	1,846.07	2.30	2.09	-1.65
4,763.00	35.100	55.00	4,201.26	1,125.49	1,532.81	1,901.57	1.37	-1.37	-0.11
4,858.00	32.300	55.20	4,280.29	1,155.65	1,576.03	1,954.27	2.95	-2.95	0.21
4,953.00	29.500	55.40	4,361.80	1,183.42	1,616.14	2,003.04	2.95	-2.95	0.21
5,048.00	29.300	58.70	4,444.57	1,208.78	1,655.26	2,049.60	1.72	-0.21	3.47

# Sharewell

## Survey Report

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<b>Site:</b>	Circle B Tract 5 Pad	<b>MD Reference:</b>	KB @ 5767.00ft
<b>Well:</b>	CBS 41C-21-692	<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)
5,143.00	30.700	57.30	4,526.84	1,233.96	1,695.53	2,097.00	1.65	1.47	-1.47
5,238.00	30.700	59.90	4,608.53	1,259.22	1,736.92	2,145.34	1.40	0.00	2.74
5,333.00	26.100	62.90	4,692.08	1,280.92	1,776.53	2,190.16	5.07	-4.84	3.16
5,428.00	23.000	62.20	4,778.48	1,299.10	1,811.55	2,229.20	3.28	-3.26	-0.74
5,522.00	19.300	63.20	4,866.13	1,314.67	1,841.68	2,262.74	3.95	-3.94	1.06
5,615.00	17.100	53.30	4,954.49	1,329.78	1,866.36	2,291.60	4.07	-2.37	-10.65
5,710.00	12.900	43.20	5,046.25	1,345.87	1,884.83	2,315.99	5.19	-4.42	-10.63
5,805.00	11.000	42.40	5,139.19	1,360.29	1,898.21	2,335.28	2.01	-2.00	-0.84
5,900.00	8.500	39.50	5,232.81	1,372.40	1,908.78	2,350.94	2.68	-2.63	-3.05
5,995.00	6.600	37.90	5,326.98	1,382.13	1,916.60	2,362.98	2.01	-2.00	-1.68
6,090.00	4.800	39.70	5,421.51	1,389.50	1,922.50	2,372.06	1.90	-1.89	1.89
6,185.00	3.700	39.20	5,516.25	1,394.93	1,926.97	2,378.87	1.16	-1.16	-0.53
6,281.00	2.700	39.00	5,612.10	1,399.09	1,930.36	2,384.05	1.04	-1.04	-0.21
6,376.00	2.200	49.50	5,707.01	1,402.01	1,933.15	2,388.02	0.71	-0.53	11.05
6,471.00	1.900	90.10	5,801.95	1,403.19	1,936.11	2,391.12	1.53	-0.32	42.74
6,566.00	1.500	152.10	5,896.92	1,402.09	1,938.27	2,392.22	1.88	-0.42	65.26
6,661.00	1.400	176.30	5,991.89	1,399.83	1,938.93	2,391.43	0.65	-0.11	25.47
6,756.00	1.800	184.90	6,086.85	1,397.19	1,938.87	2,389.85	0.49	0.42	9.05
6,851.00	3.000	238.80	6,181.78	1,394.41	1,936.62	2,386.39	2.55	1.26	56.74
6,946.00	2.200	233.50	6,276.68	1,392.04	1,933.03	2,382.09	0.88	-0.84	-5.58
7,040.00	2.500	223.30	6,370.60	1,389.48	1,930.17	2,378.28	0.55	0.32	-10.85
7,135.00	3.000	224.20	6,465.49	1,386.19	1,927.02	2,373.79	0.53	0.53	0.95
7,230.00	3.500	217.50	6,560.34	1,382.10	1,923.52	2,368.57	0.66	0.53	-7.05
7,325.00	2.100	249.20	6,655.23	1,379.18	1,920.12	2,364.11	2.14	-1.47	33.37
7,420.00	1.800	4.50	6,750.20	1,380.05	1,918.61	2,363.39	3.47	-0.32	121.37
7,514.00	0.900	308.40	6,844.17	1,381.98	1,918.15	2,364.14	1.59	-0.96	-59.68
7,609.00	0.800	250.10	6,939.17	1,382.22	1,916.94	2,363.30	0.88	-0.11	-61.37
7,704.00	2.700	2.60	7,034.13	1,384.23	1,916.42	2,364.06	3.26	2.00	118.42
7,799.00	3.100	357.30	7,129.01	1,389.03	1,916.40	2,366.85	0.51	0.42	-5.58
7,831.00	2.700	354.60	7,160.97	1,390.65	1,916.29	2,367.70	1.32	-1.25	-8.44
7,863.00	2.400	352.90	7,192.94	1,392.06	1,916.14	2,368.41	0.97	-0.94	-5.31
7,894.00	1.800	344.10	7,223.92	1,393.17	1,915.92	2,368.88	2.19	-1.94	-28.39
7,926.00	1.900	329.10	7,255.90	1,394.11	1,915.51	2,369.10	1.54	0.31	-46.88
7,958.00	1.900	321.10	7,287.88	1,394.98	1,914.91	2,369.12	0.83	0.00	-25.00
7,989.00	1.800	308.00	7,318.87	1,395.68	1,914.20	2,368.95	1.40	-0.32	-42.26
8,021.00	1.700	288.20	7,350.85	1,396.14	1,913.35	2,368.53	1.91	-0.31	-61.88
8,052.00	1.500	290.20	7,381.84	1,396.42	1,912.54	2,368.04	0.67	-0.65	6.45
8,083.00	1.500	283.80	7,412.83	1,396.66	1,911.76	2,367.55	0.54	0.00	-20.65
8,115.00	1.600	282.30	7,444.82	1,396.85	1,910.92	2,366.98	0.34	0.31	-4.69
8,147.00	1.500	278.40	7,476.81	1,397.01	1,910.07	2,366.38	0.45	-0.31	-12.19
8,178.00	1.400	273.20	7,507.80	1,397.09	1,909.29	2,365.79	0.53	-0.32	-16.77
8,210.00	1.500	261.10	7,539.79	1,397.05	1,908.48	2,365.12	1.00	0.31	-37.81
8,242.00	1.500	263.30	7,571.77	1,396.93	1,907.65	2,364.38	0.18	0.00	6.88

**Sharewell**  
Survey Report

<b>Company:</b>	Bill Barrett Corp. (II)	<b>Local Co-ordinate Reference:</b>	Well CBS 41C-21-692
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 5767.00ft
<b>Site:</b>	Circle B Tract 5 Pad	<b>MD Reference:</b>	KB @ 5767.00ft
<b>Well:</b>	CBS 41C-21-692	<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)	
8,273.00	1.600	252.90	7,602.76	1,396.76	1,906.84	2,363.61	0.96	0.32	-33.55	
8,326.00	1.600	252.90	7,655.74	1,396.32	1,905.42	2,362.21	0.00	0.00	0.00	

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
6,756.00	6,086.85	1,397.19	1,938.87	As of Jan 3	
7,325.00	6,655.23	1,379.18	1,920.12	As of Jan 4	
8,242.00	7,571.77	1,396.93	1,907.65	As of Jan 5	
8,326.00	7,655.74	1,396.32	1,905.42	Projected TD	

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