

# **Bill Barrett Corp.**

Garfield County, Colorado [NAD83]

CB-TG Land Pad

CB-TG Land 21D-20-692

Wellbore #1

Design: Wellbore #1

## **Standard Survey Report**

03 October, 2011



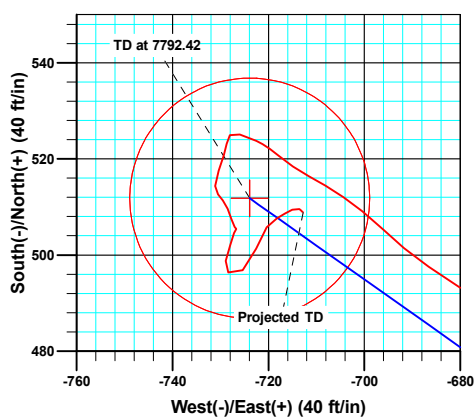
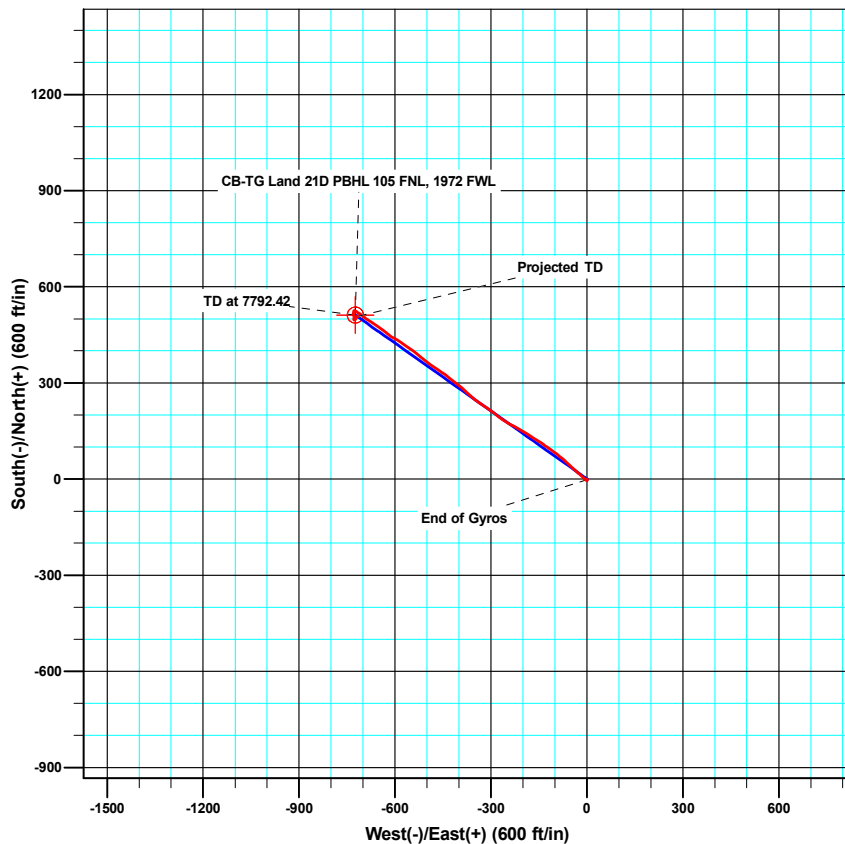
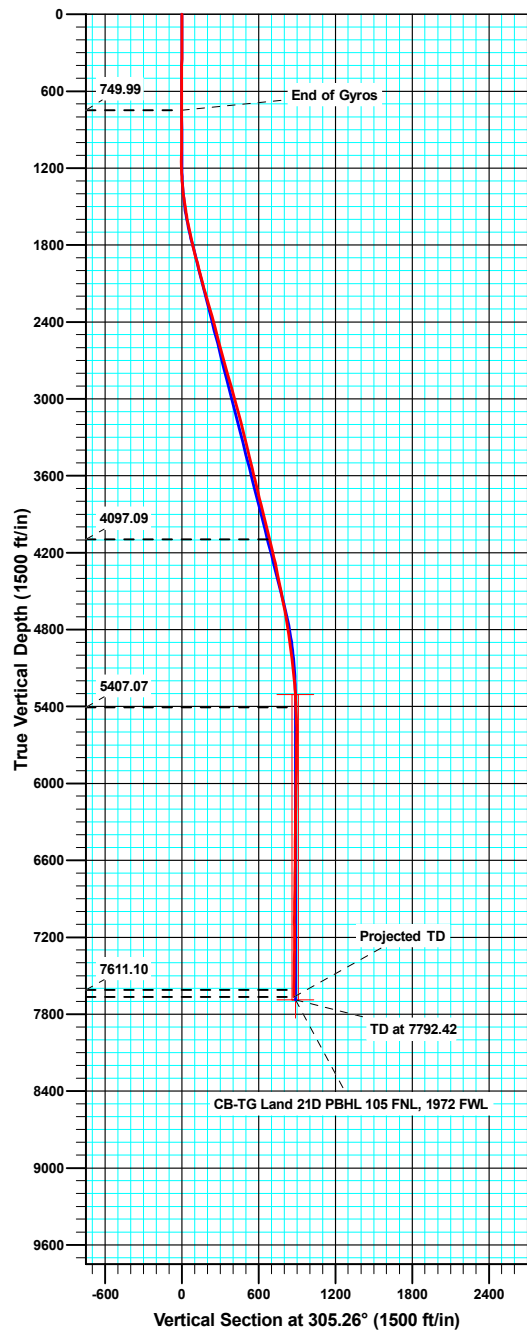
# WELL NAME: CB-TG Land 21D-20-692



Bill Barrett Corporation

Ground Level: 5529.00

North American Datum 1983		US State Plane 1983		Colorado Central Zone	
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1620936.06	2382151.85	39.517801	-107.690285



Azimuths to True North  
Magnetic North: 10.24°

Magnetic Field  
Strength: 52322.7snT  
Dip Angle: 65.82°  
Date: 04/14/2011  
Model: IGRF2010

## ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
749.99	750.00	0.36	325.27	-1.77	1.01	-1.85	3.19	End of Gyros
4097.09	4183.00	13.30	304.80	406.82	-553.39	686.72	700.95	As of Jun 30
5407.07	5511.00	2.20	290.90	523.74	-722.46	892.27	907.03	As of Jul 1
7611.10	7716.00	0.80	136.60	509.38	-713.26	876.46	968.41	as of July 6
7665.10	7770.00	0.80	136.60	508.83	-712.74	875.72	969.17	Projected TD

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well CB-TG Land 21D-20-692
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 5546.00ft
<b>Site:</b>	CB-TG Land Pad	<b>MD Reference:</b>	KB @ 5546.00ft
<b>Well:</b>	CB-TG Land 21D-20-692	<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	CB-TG Land Pad				
Site Position:		Northing:	1,620,936.11 usft	Latitude:	39.517801
From:	Lat/Long	Easting:	2,382,151.86 usft	Longitude:	-107.690285
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	-1.38 °

Well	CB-TG Land 21D-20-692					
Well Position	+N/-S	0.00 ft	Northing:	1,620,936.05 usft	Latitude:	39.517801
	+E/-W	0.00 ft	Easting:	2,382,151.86 usft	Longitude:	-107.690285
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,529.00 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	04/14/11	10.24	65.82	52,323

<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	305.26	

<b>Survey Program</b>	<b>Date</b>	10/03/11			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
50.00	750.00	Gyro Surveys (Wellbore #1)	MWD	MWD - Standard	
869.00	7,770.00	MWD 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
50.00	0.30	215.21	50.00	-0.11	-0.08	0.00	0.60	0.60	0.00	
100.00	0.21	178.63	100.00	-0.31	-0.15	-0.05	0.36	-0.18	-73.16	
150.00	0.25	148.87	150.00	-0.49	-0.09	-0.21	0.25	0.08	-59.52	
200.00	0.40	102.77	200.00	-0.62	0.14	-0.47	0.58	0.30	-92.20	
250.00	0.41	114.17	250.00	-0.73	0.47	-0.81	0.16	0.02	22.80	
300.00	0.28	101.69	300.00	-0.83	0.75	-1.10	0.30	-0.26	-24.96	
350.00	0.36	137.26	350.00	-0.97	0.98	-1.36	0.42	0.16	71.14	
400.00	0.33	140.66	399.99	-1.20	1.18	-1.65	0.07	-0.06	6.80	
450.00	0.26	143.50	449.99	-1.40	1.34	-1.90	0.14	-0.14	5.68	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well CB-TG Land 21D-20-692
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 5546.00ft
<b>Site:</b>	CB-TG Land Pad	<b>MD Reference:</b>	KB @ 5546.00ft
<b>Well:</b>	CB-TG Land 21D-20-692	<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)
500.00	0.24	178.67	499.99	-1.60	1.41	-2.07	0.30	-0.04	70.34
550.00	0.22	217.92	549.99	-1.78	1.35	-2.13	0.31	-0.04	78.50
600.00	0.11	252.67	599.99	-1.87	1.24	-2.09	0.29	-0.22	69.50
650.00	0.06	259.79	649.99	-1.89	1.17	-2.05	0.10	-0.10	14.24
700.00	0.05	266.20	699.99	-1.89	1.13	-2.01	0.02	-0.02	12.82
750.00	0.36	325.27	749.99	-1.77	1.01	-1.85	0.67	0.62	118.14
869.00	0.50	211.00	868.99	-1.90	0.53	-1.53	0.61	0.12	-96.03
960.00	0.60	150.40	959.99	-2.66	0.56	-2.00	0.62	0.11	-66.59
1,055.00	0.70	190.10	1,054.98	-3.66	0.71	-2.69	0.48	0.11	41.79
1,150.00	1.10	190.50	1,149.97	-5.13	0.44	-3.32	0.42	0.42	0.42
1,244.00	2.30	308.70	1,243.94	-4.84	-1.20	-1.82	3.17	1.28	125.74
1,339.00	5.50	313.50	1,338.71	-0.51	-5.99	4.59	3.38	3.37	5.05
1,434.00	7.60	315.90	1,433.09	7.14	-13.66	15.28	2.23	2.21	2.53
1,529.00	8.70	308.30	1,527.13	16.10	-23.67	28.63	1.62	1.16	-8.00
1,623.00	12.20	312.40	1,619.56	27.21	-36.59	45.59	3.80	3.72	4.36
1,718.00	11.60	313.10	1,712.51	40.50	-50.98	65.01	0.65	-0.63	0.74
1,813.00	13.50	313.30	1,805.24	54.63	-66.02	85.45	2.00	2.00	0.21
1,908.00	15.80	308.10	1,897.15	70.22	-84.27	109.35	2.79	2.42	-5.47
2,003.00	14.60	306.40	1,988.82	85.31	-104.09	134.24	1.35	-1.26	-1.79
2,098.00	14.00	305.10	2,080.88	99.02	-123.13	157.70	0.72	-0.63	-1.37
2,193.00	16.30	303.80	2,172.57	113.05	-143.61	182.53	2.45	2.42	-1.37
2,287.00	15.90	302.80	2,262.89	127.36	-165.40	208.58	0.52	-0.43	-1.06
2,382.00	15.70	301.10	2,354.30	141.05	-187.34	234.40	0.53	-0.21	-1.79
2,477.00	15.20	299.20	2,445.87	153.76	-209.22	259.60	0.75	-0.53	-2.00
2,572.00	14.50	297.80	2,537.69	165.39	-230.61	283.78	0.83	-0.74	-1.47
2,667.00	15.70	301.90	2,629.41	177.73	-252.05	308.41	1.69	1.26	4.32
2,762.00	15.40	307.90	2,720.94	192.27	-272.91	333.84	1.72	-0.32	6.32
2,857.00	15.80	306.00	2,812.44	207.62	-293.33	359.37	0.68	0.42	-2.00
2,951.00	15.70	304.90	2,902.91	222.42	-314.11	384.89	0.33	-0.11	-1.17
3,046.00	15.60	303.50	2,994.39	236.82	-335.31	410.51	0.41	-0.11	-1.47
3,141.00	14.70	312.50	3,086.10	252.02	-354.85	435.24	2.65	-0.95	9.47
3,236.00	15.30	311.50	3,177.86	268.47	-373.12	459.65	0.69	0.63	-1.05
3,330.00	14.30	310.50	3,268.75	284.23	-391.24	483.54	1.10	-1.06	-1.06
3,425.00	13.70	309.00	3,360.92	298.92	-408.90	506.45	0.74	-0.63	-1.58
3,520.00	13.30	307.90	3,453.30	312.72	-426.27	528.60	0.50	-0.42	-1.16
3,615.00	14.10	306.50	3,545.59	326.31	-444.20	551.08	0.91	0.84	-1.47
3,710.00	12.50	302.30	3,638.05	338.69	-462.19	572.92	1.97	-1.68	-4.42
3,805.00	13.40	304.10	3,730.63	350.36	-479.99	594.19	1.04	0.95	1.89
3,899.00	15.00	308.50	3,821.76	364.04	-498.54	617.23	2.05	1.70	4.68
3,994.00	14.30	309.20	3,913.67	379.11	-517.25	641.21	0.76	-0.74	0.74
4,088.00	14.10	307.90	4,004.80	393.48	-535.28	664.23	0.40	-0.21	-1.38
4,183.00	13.30	304.80	4,097.09	406.82	-553.39	686.72	1.14	-0.84	-3.26
4,278.00	13.70	306.10	4,189.47	419.69	-571.45	708.89	0.53	0.42	1.37

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<b>Site:</b>	CB-TG Land Pad	<b>MD Reference:</b>	KB @ 5546.00ft
<b>Well:</b>	CB-TG Land 21D-20-692	<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)
4,373.00	12.00	301.50	4,282.09	431.48	-588.96	730.00	2.09	-1.79	-4.84
4,468.00	11.10	299.20	4,375.16	441.10	-605.36	748.94	1.06	-0.95	-2.42
4,563.00	12.10	308.00	4,468.23	451.69	-621.19	767.99	2.14	1.05	9.26
4,658.00	10.90	308.10	4,561.32	463.36	-636.11	786.90	1.26	-1.26	0.11
4,753.00	9.90	305.30	4,654.76	473.62	-649.84	804.04	1.18	-1.05	-2.95
4,847.00	9.20	302.40	4,747.46	482.32	-662.78	819.63	0.90	-0.74	-3.09
4,942.00	8.50	301.60	4,841.33	490.07	-675.18	834.22	0.75	-0.74	-0.84
5,037.00	8.10	305.10	4,935.33	497.60	-686.63	847.92	0.68	-0.42	3.68
5,131.00	7.10	313.90	5,028.51	505.43	-696.24	860.28	1.63	-1.06	9.36
5,226.00	5.60	303.60	5,122.92	512.07	-704.33	870.72	1.98	-1.58	-10.84
5,321.00	4.70	297.90	5,217.54	516.46	-711.63	879.22	1.09	-0.95	-6.00
5,416.00	4.50	310.20	5,312.24	520.68	-717.91	886.79	1.06	-0.21	12.95
5,511.00	2.20	290.90	5,407.07	523.74	-722.46	892.27	2.66	-2.42	-20.32
5,606.00	2.30	290.40	5,502.00	525.05	-725.96	895.88	0.11	0.11	-0.53
5,700.00	1.00	199.80	5,595.97	524.94	-728.00	897.48	2.68	-1.38	-96.38
5,796.00	1.30	200.00	5,691.95	523.13	-728.66	896.97	0.31	0.31	0.21
5,891.00	1.70	191.30	5,786.92	520.73	-729.30	896.12	0.48	0.42	-9.16
5,985.00	2.40	203.50	5,880.86	517.56	-730.36	895.15	0.87	0.74	12.98
6,081.00	1.60	178.20	5,976.80	514.38	-731.12	893.93	1.22	-0.83	-26.35
6,176.00	0.90	125.10	6,071.78	512.62	-730.47	892.39	1.35	-0.74	-55.89
6,270.00	1.10	154.40	6,165.76	511.39	-729.47	890.86	0.58	0.21	31.17
6,365.00	1.30	145.30	6,260.74	509.68	-728.47	889.05	0.29	0.21	-9.58
6,460.00	1.60	171.50	6,355.71	507.48	-727.66	887.12	0.76	0.32	27.58
6,555.00	0.70	129.00	6,450.70	505.80	-727.01	885.63	1.24	-0.95	-44.74
6,650.00	0.10	275.10	6,545.69	505.44	-726.64	885.12	0.83	-0.63	153.79
6,744.00	1.20	208.20	6,639.69	504.58	-727.19	885.07	1.24	1.17	-71.17
6,839.00	2.00	189.50	6,734.65	502.07	-727.93	884.23	0.99	0.84	-19.68
6,934.00	2.10	203.30	6,829.59	498.84	-728.89	883.14	0.53	0.11	14.53
7,029.00	1.80	125.30	6,924.55	496.38	-728.36	881.29	2.59	-0.32	-82.11
7,124.00	2.70	52.90	7,019.49	496.87	-725.36	879.12	2.90	0.95	-76.21
7,218.00	4.00	19.00	7,113.34	501.30	-722.53	879.37	2.46	1.38	-36.06
7,313.00	2.10	38.60	7,208.20	505.80	-720.36	880.20	2.25	-2.00	20.63
7,408.00	1.40	64.00	7,303.16	507.66	-718.23	879.54	1.08	-0.74	26.74
7,502.00	1.00	54.80	7,397.14	508.64	-716.53	878.71	0.47	-0.43	-9.79
7,597.00	1.10	68.80	7,492.12	509.45	-715.00	877.93	0.29	0.11	14.74
7,691.00	0.80	108.60	7,586.11	509.57	-713.54	876.80	0.75	-0.32	42.34
7,716.00	0.80	136.60	7,611.10	509.38	-713.26	876.46	1.55	0.00	112.00
7,770.00	0.80	136.60	7,665.10	508.83	-712.74	875.72	0.00	0.00	0.00

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well CB-TG Land 21D-20-692
<b>Project:</b>	Garfield County, Colorado [NAD83]	<b>TVD Reference:</b>	KB @ 5546.00ft
<b>Site:</b>	CB-TG Land Pad	<b>MD Reference:</b>	KB @ 5546.00ft
<b>Well:</b>	CB-TG Land 21D-20-692	<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

#### Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
750.00	749.99	-1.77	1.01	End of Gyros
4,183.00	4,097.09	406.82	-553.39	As of Jun 30
5,511.00	5,407.07	523.74	-722.46	As of Jul 1
7,716.00	7,611.10	509.38	-713.26	as of July 6
7,770.00	7,665.10	508.83	-712.74	Projected TD

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