

Bill Barrett Corp.

Garfield County, Colorado [NAD83]

Kaufman 6 Pad

Kaufman 21C-24-692

Wellbore #1

Design: Wellbore #1

Standard Survey Report

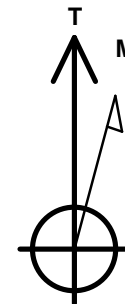
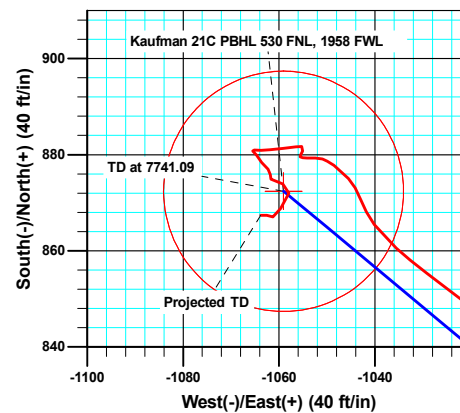
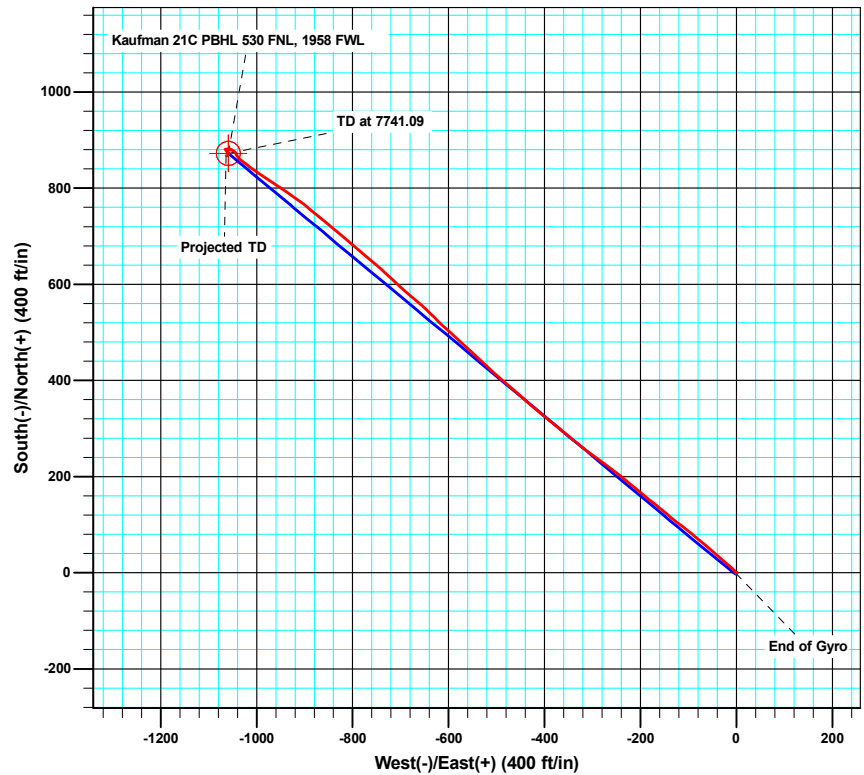
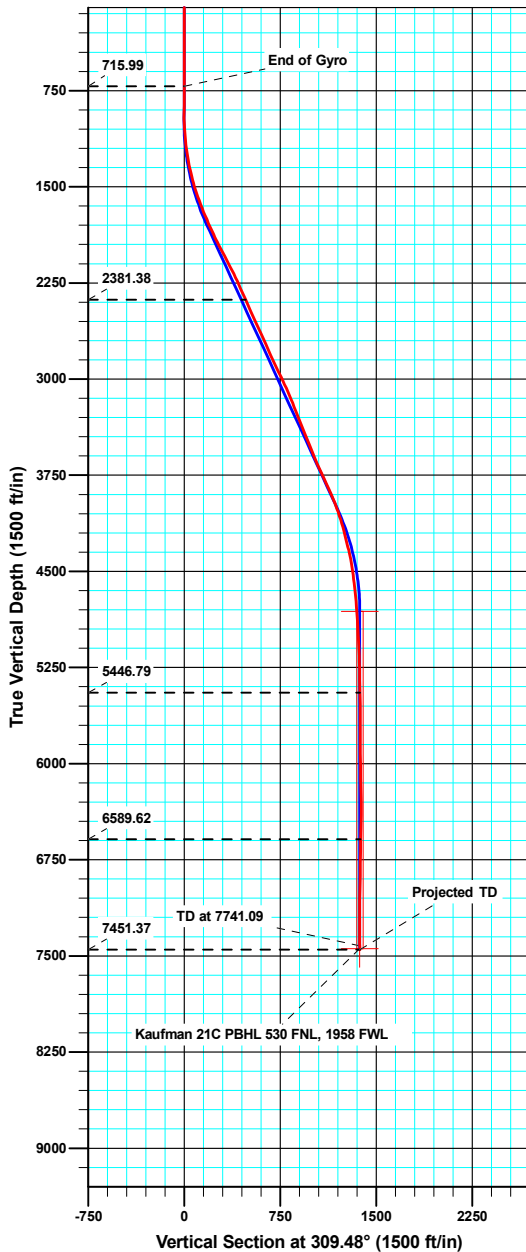
31 October, 2011





WELL DETAILS: Kaufman 21C-24-692
 North American Datum 1983 US State Plane 1983 Colorado Central Zone
 +N/-S +E/-W Northing Easting Latitude Longitude
 0.00 0.00 1619795.37 2403584.12 39.516064 -107.614241

GL @ 5771.00ft (Original Well Elev)



Azimuths to True North
 Magnetic North: 10.29°

Magnetic Field
 Strength: 52446.1snT
 Dip Angle: 65.87°
 Date: 06/02/2010
 Model: IGRF200510

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
715.99	716.00	0.65	156.30	-1.10	-1.36	0.35	2.70	End of Gyro
2381.38	2477.00	24.10	309.50	302.39	-372.19	479.53	488.21	As of Oct 27
5446.79	5711.00	1.40	272.10	879.30	-1054.13	1372.70	1384.26	As of Oct 28
6589.62	6854.00	1.10	152.50	878.42	-1063.61	1379.45	1402.63	As of Oct 31
7451.37	7716.00	0.70	265.50	867.36	-1063.78	1372.55	1423.10	Projected TD

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Kaufman 21C-24-692
Project:	Garfield County, Colorado [NAD83]	TVD Reference:	GL @ 5771.00ft (Original Well Elev)
Site:	Kaufman 6 Pad	MD Reference:	GL @ 5771.00ft (Original Well Elev)
Well:	Kaufman 21C-24-692	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Compass VM

Project	Garfield County, Colorado [NAD83]		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	Kaufman 6 Pad				
Site Position:		Northing:	1,619,793.95 usft	Latitude:	39.516058
From:	Lat/Long	Easting:	2,403,552.20 usft	Longitude:	-107.614354
Position Uncertainty:	0.00 ft	Slot Radius:	0.00 ft	Grid Convergence:	-1.33 °

Well		Kaufman 21C-24-692				
Well Position	+N/-S	0.00 ft	Northing:	1,619,795.37 usft	Latitude:	39.516064
	+E/-W	0.00 ft	Easting:	2,403,584.12 usft	Longitude:	-107.614241
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,771.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	06/02/10	10.29	65.87	52,446

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	309.48	

Survey Program	Date	10/31/11			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	716.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard	
867.00	7,716.00	MWD (Wellbore #1)	MWD	MWD - Standard	

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.27	288.39	100.00	0.07	-0.22	0.22	0.27	0.27	0.00	
200.00	0.24	275.85	200.00	0.17	-0.66	0.61	0.06	-0.03	-12.54	
300.00	0.24	263.41	300.00	0.17	-1.07	0.93	0.05	0.00	-12.44	
400.00	0.14	235.94	400.00	0.07	-1.38	1.11	0.13	-0.10	-27.47	
500.00	0.15	199.11	500.00	-0.12	-1.53	1.10	0.09	0.01	-36.83	
600.00	0.23	173.53	600.00	-0.44	-1.55	0.91	0.11	0.08	-25.58	
700.00	0.39	160.72	699.99	-0.96	-1.41	0.48	0.17	0.16	-12.81	
716.00	0.65	156.30	715.99	-1.10	-1.36	0.35	1.64	1.63	-27.63	
867.00	1.10	84.80	866.98	-1.75	0.43	-1.44	0.72	0.30	-47.35	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Kaufman 21C-24-692
Project:	Garfield County, Colorado [NAD83]	TVD Reference:	GL @ 5771.00ft (Original Well Elev)
Site:	Kaufman 6 Pad	MD Reference:	GL @ 5771.00ft (Original Well Elev)
Well:	Kaufman 21C-24-692	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	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)
960.00	0.90	359.00	959.97	-0.94	1.31	-1.61	1.47	-0.22	-92.26
1,052.00	3.30	310.30	1,051.91	1.50	-0.72	1.51	3.03	2.61	-52.93
1,144.00	6.20	312.20	1,143.58	6.55	-6.43	9.12	3.16	3.15	2.07
1,240.00	8.50	312.10	1,238.79	14.79	-15.53	21.39	2.40	2.40	-0.10
1,335.00	11.40	310.40	1,332.35	25.58	-27.89	37.80	3.07	3.05	-1.79
1,430.00	14.20	310.50	1,424.98	39.24	-43.91	58.84	2.95	2.95	0.11
1,526.00	17.50	310.90	1,517.31	56.34	-63.78	85.05	3.44	3.44	0.42
1,621.00	20.30	309.10	1,607.18	76.09	-87.37	115.81	3.01	2.95	-1.89
1,717.00	22.50	307.60	1,696.56	97.80	-114.85	150.83	2.36	2.29	-1.56
1,812.00	24.60	310.30	1,783.65	121.69	-144.33	188.77	2.48	2.21	2.84
1,907.00	24.30	308.70	1,870.13	146.70	-174.67	228.09	0.77	-0.32	-1.68
2,002.00	27.60	309.80	1,955.54	173.01	-206.84	269.65	3.51	3.47	1.16
2,097.00	28.00	307.80	2,039.57	200.77	-241.37	313.95	1.07	0.42	-2.11
2,192.00	27.80	306.40	2,123.53	227.58	-276.82	358.36	0.72	-0.21	-1.47
2,287.00	25.80	307.00	2,208.32	253.17	-311.17	401.14	2.12	-2.11	0.63
2,382.00	23.80	309.60	2,294.56	277.84	-342.45	440.97	2.40	-2.11	2.74
2,477.00	24.10	309.50	2,381.38	302.39	-372.19	479.53	0.32	0.32	-0.11
2,572.00	24.90	309.40	2,467.83	327.42	-402.61	518.93	0.84	0.84	-0.11
2,667.00	24.80	311.00	2,554.03	353.19	-433.10	558.85	0.72	-0.11	1.68
2,762.00	23.90	311.00	2,640.58	378.89	-462.66	598.00	0.95	-0.95	0.00
2,857.00	24.60	310.60	2,727.20	404.38	-492.20	637.01	0.76	0.74	-0.42
2,952.00	24.40	313.30	2,813.65	430.71	-521.49	676.36	1.20	-0.21	2.84
3,047.00	24.80	312.70	2,900.02	457.68	-550.41	715.83	0.50	0.42	-0.63
3,142.00	26.50	311.90	2,985.66	485.34	-580.83	756.90	1.83	1.79	-0.84
3,237.00	24.30	313.50	3,071.47	512.96	-610.79	797.58	2.43	-2.32	1.68
3,332.00	22.30	314.60	3,158.72	539.07	-637.81	835.04	2.15	-2.11	1.16
3,427.00	21.00	310.00	3,247.02	562.67	-663.68	870.01	2.25	-1.37	-4.84
3,522.00	21.90	311.10	3,335.44	585.26	-690.08	904.75	1.04	0.95	1.16
3,617.00	22.70	314.10	3,423.34	609.66	-716.59	940.73	1.46	0.84	3.16
3,712.00	22.00	310.60	3,511.21	634.00	-743.27	976.79	1.58	-0.74	-3.68
3,808.00	22.00	310.10	3,600.22	657.29	-770.67	1,012.75	0.20	0.00	-0.52
3,903.00	24.90	310.50	3,687.36	681.74	-799.50	1,050.55	3.06	3.05	0.42
3,998.00	25.30	309.50	3,773.39	707.64	-830.37	1,090.84	0.61	0.42	-1.05
4,093.00	24.00	309.60	3,859.73	732.87	-860.92	1,130.46	1.37	-1.37	0.11
4,187.00	22.40	309.60	3,946.13	756.47	-889.45	1,167.49	1.70	-1.70	0.00
4,283.00	19.40	305.30	4,035.81	777.35	-916.57	1,201.70	3.51	-3.13	-4.48
4,378.00	16.80	303.80	4,126.10	794.11	-940.86	1,231.10	2.78	-2.74	-1.58
4,473.00	14.20	304.50	4,217.64	808.35	-961.87	1,256.37	2.74	-2.74	0.74
4,569.00	13.80	303.80	4,310.78	821.39	-981.09	1,279.50	0.45	-0.42	-0.73
4,664.00	10.70	303.90	4,403.61	832.61	-997.83	1,299.55	3.26	-3.26	0.11
4,759.00	8.60	305.70	4,497.26	841.68	-1,010.92	1,315.42	2.23	-2.21	1.89
4,854.00	6.60	307.50	4,591.42	849.15	-1,021.02	1,327.97	2.12	-2.11	1.89
4,949.00	5.80	307.20	4,685.86	855.37	-1,029.17	1,338.22	0.84	-0.84	-0.32

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Design:	Wellbore #1	Database:	Compass VM

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5,044.00	4.10	311.40	4,780.51	860.52	-1,035.55	1,346.41	1.83	-1.79	4.42	
5,140.00	4.00	324.10	4,876.27	865.50	-1,040.08	1,353.08	0.94	-0.10	13.23	
5,235.00	3.30	338.80	4,971.08	870.74	-1,043.02	1,358.67	1.22	-0.74	15.47	
5,330.00	2.80	320.30	5,065.95	875.07	-1,045.49	1,363.33	1.16	-0.53	-19.47	
5,425.00	2.20	302.50	5,160.86	877.84	-1,048.51	1,367.42	1.03	-0.63	-18.74	
5,521.00	1.10	286.90	5,256.81	879.09	-1,050.94	1,370.10	1.23	-1.15	-16.25	
5,616.00	0.70	265.10	5,351.80	879.31	-1,052.39	1,371.36	0.55	-0.42	-22.95	
5,711.00	1.40	272.10	5,446.79	879.30	-1,054.13	1,372.70	0.75	0.74	7.37	
5,806.00	0.50	311.20	5,541.77	879.62	-1,055.60	1,374.03	1.12	-0.95	41.16	
5,901.00	0.50	80.30	5,636.77	879.96	-1,055.51	1,374.18	0.95	0.00	135.89	
5,996.00	0.90	359.30	5,731.77	880.78	-1,055.11	1,374.39	1.01	0.42	-85.26	
6,091.00	0.30	318.50	5,826.76	881.71	-1,055.28	1,375.11	0.74	-0.63	-42.95	
6,187.00	1.30	256.30	5,922.75	881.64	-1,056.50	1,376.01	1.24	1.04	-64.79	
6,282.00	2.00	268.40	6,017.71	881.34	-1,059.21	1,377.91	0.82	0.74	12.74	
6,377.00	1.20	257.30	6,112.67	881.07	-1,061.84	1,379.77	0.90	-0.84	-11.68	
6,473.00	1.10	276.70	6,208.66	880.96	-1,063.73	1,381.16	0.42	-0.10	20.21	
6,568.00	0.60	262.30	6,303.64	881.00	-1,065.13	1,382.26	0.57	-0.53	-15.16	
6,663.00	0.20	138.40	6,398.64	880.81	-1,065.51	1,382.44	0.77	-0.42	-130.42	
6,759.00	1.20	136.70	6,494.63	879.95	-1,064.71	1,381.28	1.04	1.04	-1.77	
6,854.00	1.10	152.50	6,589.62	878.42	-1,063.61	1,379.45	0.35	-0.11	16.63	
6,949.00	1.30	124.80	6,684.60	876.99	-1,062.30	1,377.54	0.64	0.21	-29.16	
7,045.00	0.80	218.90	6,780.58	875.85	-1,061.83	1,376.44	1.64	-0.52	98.02	
7,140.00	0.80	124.50	6,875.58	874.96	-1,061.70	1,375.78	1.24	0.00	-99.37	
7,235.00	2.50	109.80	6,970.54	873.88	-1,059.20	1,373.17	1.83	1.79	-15.47	
7,331.00	1.60	210.90	7,066.50	872.02	-1,057.92	1,370.99	3.35	-0.94	105.31	
7,426.00	2.80	207.10	7,161.43	868.82	-1,059.66	1,370.30	1.27	1.26	-4.00	
7,521.00	0.80	301.40	7,256.39	867.10	-1,061.28	1,370.46	3.13	-2.11	99.26	
7,617.00	0.80	269.10	7,352.38	867.44	-1,062.53	1,371.63	0.46	0.00	-33.65	
7,669.00	0.70	265.50	7,404.37	867.41	-1,063.21	1,372.14	0.21	-0.19	-6.92	
7,716.00	0.70	265.50	7,451.37	867.36	-1,063.78	1,372.55	0.00	0.00	0.00	

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
716.00	715.99	-1.10	-1.36	End of Gyro	
2,477.00	2,381.38	302.39	-372.19	As of Oct 27	
5,711.00	5,446.79	879.30	-1,054.13	As of Oct 28	
6,854.00	6,589.62	878.42	-1,063.61	As of Oct 31	
7,716.00	7,451.37	867.36	-1,063.78	Projected TD	

Checked By: _____ Approved By: _____ Date: _____