



## **Bill Barrett Corp.**

**Garfield County, Colorado**

**Miller 10 Pad**

**Miller Federal 23B-6-791**

**Wellbore #1**

**Survey: Surveys**

## **Standard Survey Report**

**12 January, 2011**



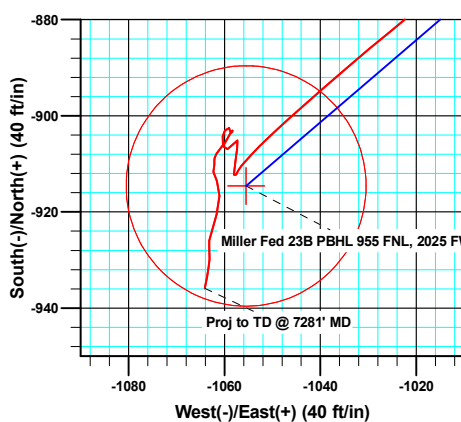
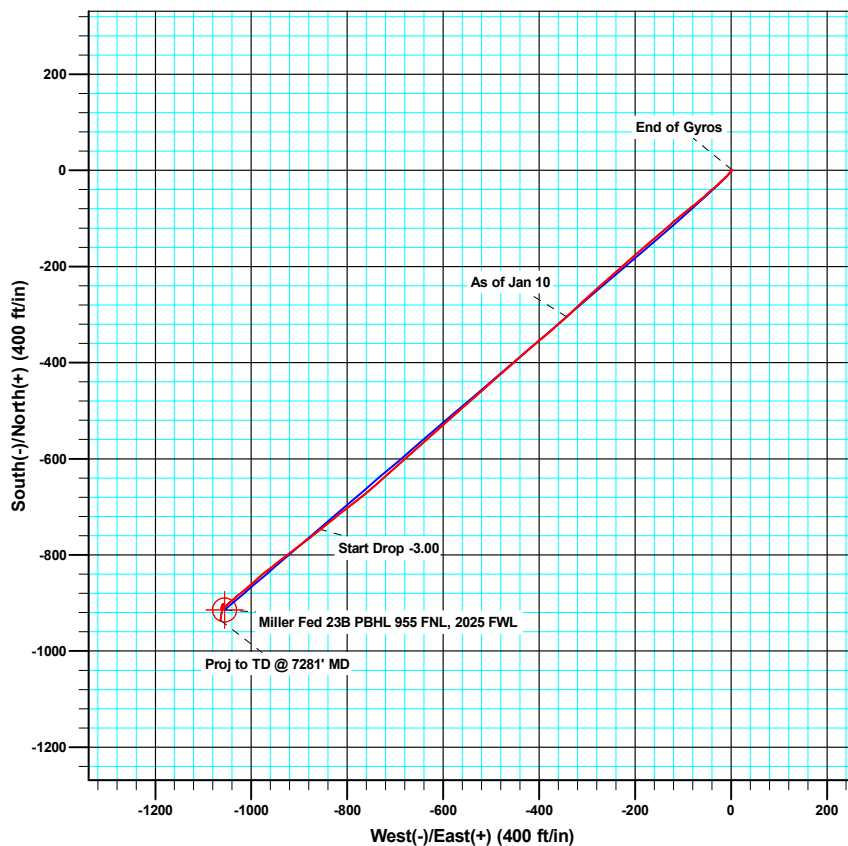
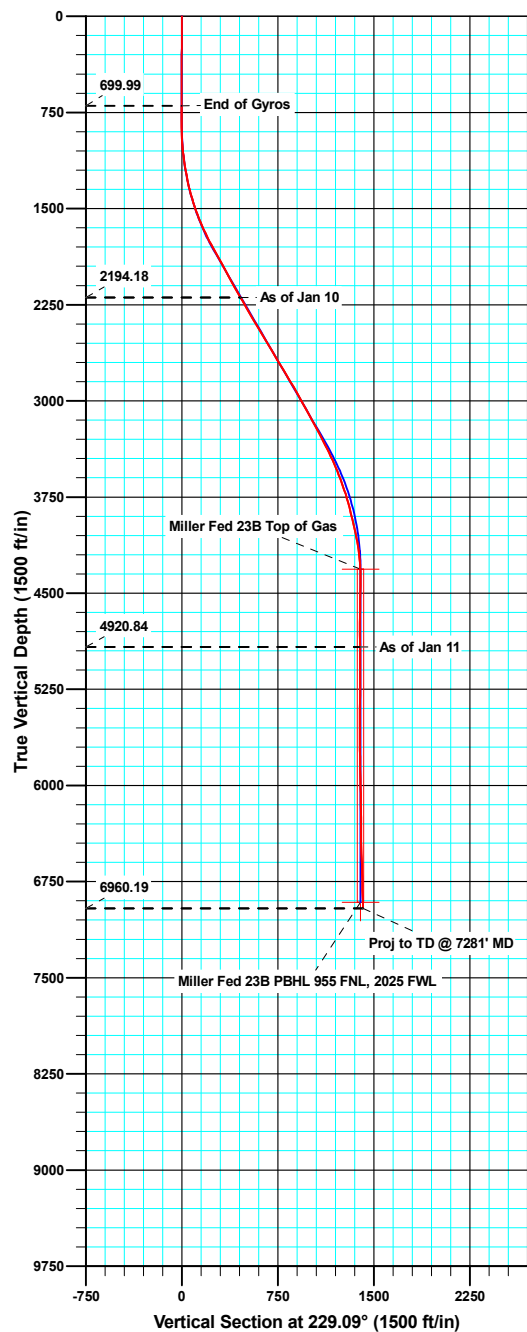


Bill Barrett Corporation

WELL DETAILS: Miller Federal 23B-6-791

Ground Level: 6263.00

North American Datum 1983	US State Plane 1983	Colorado Central Zone			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1605362.13	2408695.61	39° 28' 36.39 N	107° 35' 41.81 W



Azimuths to True North  
Magnetic North: 10.26°

Magnetic Field  
Strength: 52408.2snT  
Dip Angle: 65.83°  
Date: 07/28/2010  
Model: IGRF200510

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	V/Sect	Departure	Annotation
2194.18	2292.00	29.100	226.50	-304.86	-342.82	458.73	461.90	As of Jan 10
4920.84	5241.00	0.800	230.70	-905.67	-1057.86	1392.56	1411.81	As of Jan 11
6960.19	7281.00	2.900	191.20	-935.87	-1064.05	1417.02	1460.07	Proj to TD @ 7281' MD

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Miller Federal 23B-6-791
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6285.00ft
<b>Site:</b>	Miller 10 Pad	<b>MD Reference:</b>	KB @ 6285.00ft
<b>Well:</b>	Miller Federal 23B-6-791	<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		
<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		Miller 10 Pad			
Site Position:		Northing:	1,605,362.13 usft	Latitude:	39° 28' 36.39 N
From:	Lat/Long	Easting:	2,408,695.61 usft	Longitude:	107° 35' 41.81 W
Position Uncertainty:	0.00 ft	Slot Radius:	1.10 ft	Grid Convergence:	-1.32 °

Well	Miller Federal 23B-6-791					
Well Position	+N/-S	0.00 ft	Northing:	1,605,362.13 usft	Latitude:	39° 28' 36.39 N
	+E/-W	0.00 ft	Easting:	2,408,695.61 usft	Longitude:	107° 35' 41.81 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,263.00 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>
	IGRF200510	07/28/10	10.26	65.83	52,408

<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	229.09	

<b>Survey Program</b>	<b>Date</b>	01/12/11			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
50.00	700.00	Gyro Surveys (Wellbore #1)	MWD	MWD - Standard	
869.00	7,281.00	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>	
700.00	0.060	146.60	699.99	0.88	2.06	-2.13	0.00	0.00	0.00	
869.00	0.200	108.10	868.99	0.71	2.39	-2.27	0.09	0.08	-22.78	
960.00	3.600	217.80	959.93	-1.59	0.79	0.45	4.04	3.74	120.55	
1,055.00	6.200	223.70	1,054.58	-7.66	-4.58	8.48	2.78	2.74	6.21	
1,150.00	8.600	225.70	1,148.78	-16.33	-13.21	20.68	2.54	2.53	2.11	
1,245.00	10.500	227.30	1,242.46	-27.16	-24.66	36.43	2.02	2.00	1.68	
1,340.00	13.400	229.30	1,335.39	-40.21	-39.37	56.09	3.08	3.05	2.11	
1,436.00	16.800	228.60	1,428.06	-56.65	-58.22	81.09	3.55	3.54	-0.73	
1,531.00	20.500	231.30	1,518.06	-76.14	-81.51	111.46	4.00	3.89	2.84	
1,626.00	22.700	230.40	1,606.39	-98.22	-108.61	146.41	2.34	2.32	-0.95	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Miller Federal 23B-6-791
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6285.00ft
<b>Site:</b>	Miller 10 Pad	<b>MD Reference:</b>	KB @ 6285.00ft
<b>Well:</b>	Miller Federal 23B-6-791	<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)
1,721.00	25.100	229.30	1,693.23	-123.05	-138.02	184.89	2.57	2.53	-1.16
1,816.00	28.800	228.60	1,777.90	-151.33	-170.47	227.94	3.91	3.89	-0.74
1,911.00	28.700	229.10	1,861.19	-181.40	-204.88	273.63	0.27	-0.11	0.53
2,007.00	28.800	229.20	1,945.36	-211.60	-239.81	319.80	0.12	0.10	0.10
2,102.00	29.300	228.10	2,028.41	-242.08	-274.43	365.93	0.77	0.53	-1.16
2,197.00	29.300	227.60	2,111.25	-273.28	-308.90	412.41	0.26	0.00	-0.53
2,292.00	29.100	226.50	2,194.18	-304.86	-342.82	458.73	0.60	-0.21	-1.16
2,387.00	30.300	230.20	2,276.71	-336.10	-378.00	505.77	2.31	1.26	3.89
2,482.00	30.300	230.00	2,358.73	-366.85	-414.77	553.69	0.11	0.00	-0.21
2,577.00	30.800	228.60	2,440.54	-398.34	-451.37	601.98	0.92	0.53	-1.47
2,672.00	31.100	228.30	2,522.02	-430.74	-487.93	650.83	0.36	0.32	-0.32
2,768.00	31.300	228.90	2,604.13	-463.63	-525.24	700.56	0.39	0.21	0.63
2,863.00	30.800	228.40	2,685.52	-496.00	-562.02	749.56	0.59	-0.53	-0.53
2,958.00	31.000	228.20	2,767.04	-528.45	-598.45	798.34	0.24	0.21	-0.21
3,053.00	31.100	228.10	2,848.42	-561.14	-634.94	847.33	0.12	0.11	-0.11
3,148.00	29.700	228.60	2,930.36	-593.10	-670.86	895.40	1.50	-1.47	0.53
3,243.00	28.900	229.00	3,013.21	-623.72	-705.84	941.89	0.87	-0.84	0.42
3,338.00	28.200	227.70	3,096.66	-653.89	-739.77	987.29	0.99	-0.74	-1.37
3,433.00	28.800	232.80	3,180.16	-682.83	-774.60	1,032.57	2.64	0.63	5.37
3,528.00	28.000	231.30	3,263.72	-710.61	-810.23	1,077.69	1.13	-0.84	-1.58
3,623.00	27.400	230.50	3,347.83	-738.46	-844.51	1,121.82	0.74	-0.63	-0.84
3,719.00	25.300	233.00	3,433.86	-764.86	-877.94	1,164.38	2.47	-2.19	2.60
3,814.00	22.900	232.90	3,520.57	-788.23	-908.90	1,203.08	2.53	-2.53	-0.11
3,909.00	20.700	232.00	3,608.77	-809.72	-936.87	1,238.29	2.34	-2.32	-0.95
4,004.00	18.300	232.80	3,698.32	-829.08	-961.99	1,269.95	2.54	-2.53	0.84
4,099.00	15.900	228.20	3,789.11	-846.77	-983.57	1,297.85	2.90	-2.53	-4.84
4,194.00	14.300	229.40	3,880.83	-863.08	-1,002.18	1,322.60	1.72	-1.68	1.26
4,289.00	13.100	230.80	3,973.13	-877.52	-1,019.43	1,345.09	1.31	-1.26	1.47
4,385.00	10.800	229.50	4,067.04	-890.24	-1,034.71	1,364.96	2.41	-2.40	-1.35
4,480.00	8.100	228.20	4,160.74	-900.48	-1,046.47	1,380.56	2.85	-2.84	-1.37
4,575.00	4.900	223.10	4,255.12	-907.91	-1,054.23	1,391.29	3.42	-3.37	-5.37
4,670.00	1.800	201.30	4,349.95	-912.26	-1,057.55	1,396.64	3.47	-3.26	-22.95
4,765.00	1.700	2.30	4,444.93	-912.24	-1,058.03	1,397.00	3.63	-0.11	169.47
4,860.00	1.800	11.60	4,539.89	-909.37	-1,057.67	1,394.85	0.32	0.11	9.79
4,955.00	1.200	0.10	4,634.86	-906.92	-1,057.37	1,393.01	0.70	-0.63	-12.11
5,050.00	0.600	7.40	4,729.85	-905.43	-1,057.31	1,391.99	0.64	-0.63	7.68
5,146.00	0.200	198.80	4,825.84	-905.09	-1,057.30	1,391.76	0.83	-0.42	-175.63
5,241.00	0.800	230.70	4,920.84	-905.67	-1,057.86	1,392.57	0.67	0.63	33.58
5,336.00	1.600	229.20	5,015.82	-906.95	-1,059.38	1,394.55	0.84	0.84	-1.58
5,431.00	1.800	3.10	5,110.80	-906.33	-1,060.30	1,394.84	3.29	0.21	140.95
5,526.00	0.700	349.70	5,205.78	-904.27	-1,060.33	1,393.51	1.19	-1.16	-14.11
5,621.00	1.000	41.40	5,300.77	-903.08	-1,059.88	1,392.39	0.83	0.32	54.42
5,716.00	0.400	99.70	5,395.76	-902.51	-1,059.01	1,391.36	0.91	-0.63	61.37

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<b>Site:</b>	Miller 10 Pad	<b>MD Reference:</b>	KB @ 6285.00ft
<b>Well:</b>	Miller Federal 23B-6-791	<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)
5,811.00	0.900	187.00	5,490.76	-903.31	-1,058.77	1,391.71	1.02	0.53	91.89
5,906.00	0.900	32.50	5,585.75	-903.42	-1,058.46	1,391.54	1.85	0.00	-162.63
6,001.00	0.400	223.60	5,680.75	-903.03	-1,058.29	1,391.16	1.36	-0.53	-177.79
6,097.00	1.800	208.70	5,776.73	-904.59	-1,059.24	1,392.91	1.48	1.46	-15.52
6,192.00	0.800	232.00	5,871.70	-906.31	-1,060.48	1,394.97	1.17	-1.05	24.53
6,287.00	1.500	209.60	5,966.68	-907.80	-1,061.62	1,396.80	0.86	0.74	-23.58
6,382.00	0.500	155.50	6,061.67	-909.26	-1,062.06	1,398.09	1.34	-1.05	-56.95
6,477.00	0.700	202.50	6,156.66	-910.17	-1,062.11	1,398.73	0.54	0.21	49.47
6,572.00	1.100	176.90	6,251.65	-911.62	-1,062.29	1,399.81	0.59	0.42	-26.95
6,667.00	1.500	146.60	6,346.63	-913.57	-1,061.55	1,400.53	0.82	0.42	-31.89
6,762.00	2.500	184.40	6,441.57	-916.67	-1,061.03	1,402.16	1.69	1.05	39.79
6,857.00	2.200	193.20	6,536.49	-920.51	-1,061.60	1,405.11	0.49	-0.32	9.26
6,952.00	2.500	198.90	6,631.41	-924.25	-1,062.69	1,408.38	0.40	0.32	6.00
7,047.00	1.300	171.00	6,726.36	-927.27	-1,063.19	1,410.74	1.56	-1.26	-29.37
7,142.00	1.800	182.40	6,821.33	-929.83	-1,063.09	1,412.33	0.62	0.53	12.00
7,236.00	2.900	191.20	6,915.25	-933.64	-1,063.61	1,415.22	1.23	1.17	9.36
7,281.00	2.900	191.20	6,960.19	-935.87	-1,064.05	1,417.02	0.00	0.00	0.00

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,292.00	2,194.18	-304.86	-342.82	As of Jan 10
5,241.00	4,920.84	-905.67	-1,057.86	As of Jan 11
7,281.00	6,960.19	-935.87	-1,064.05	Proj to TD @ 7281' MD

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