



Well Name and Number:

Miller Federal 24A-31-691

Patterson 313  
Garfield County, Colorado

Directional Services Provided By:

Sharewell Energy Services, LP





December 28, 2010

**Troy Schindler**  
**VP Drilling**

**Bill Barrett Corporation**  
**1099 18<sup>th</sup> Street**  
**Suite 2300**  
**Denver, CO 80202**

Well Reference:           **Miller Federal 24A-31-691**  
  **Garfield County, Colorado**

Troy,

Enclosed you will find our End of Well Report for the above referenced well.

If you have any questions or comments, please do not hesitate to contact me at anytime.

Thank you very much for your confidence and this opportunity to serve **Bill Barrett Corporation**.

Sincerely,

*Stephen Williams*



Well Planning / Operations  
[swilliams@sharewell.com](mailto:swilliams@sharewell.com)  
(713) 983-9818 - Office  
(713) 851-4175 - Cell



**Bill Barrett Corporation**

## **Bill Barrett Corp.**

Garfield County, Colorado

Miller 10 Pad

Miller Federal 24A-31-691

Wellbore #1

Survey: Surveys

## **Standard Survey Report**

28 December, 2010

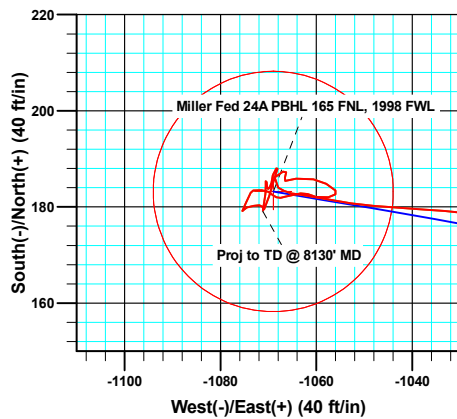
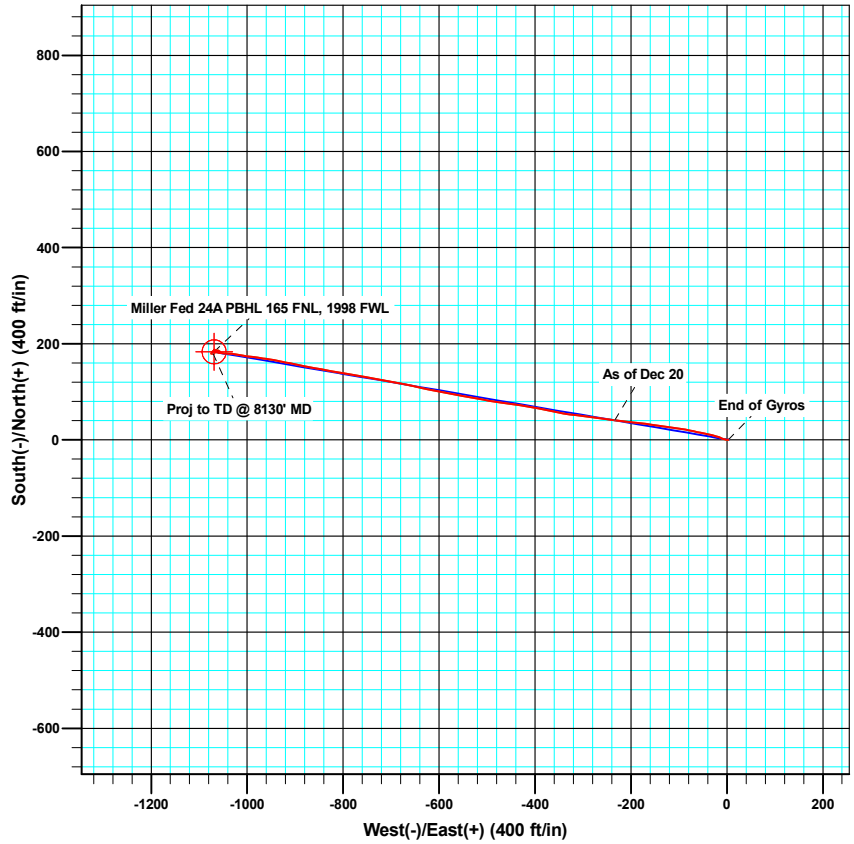
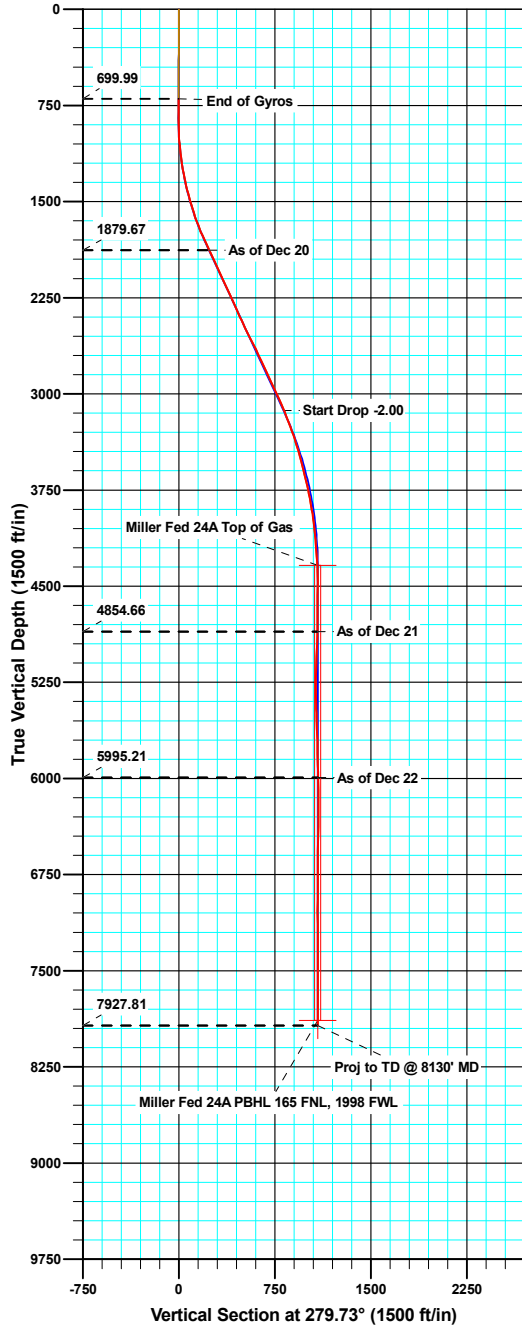




WELL DETAILS: Miller Federal 24A-31-691

Ground Level: 6262.00

North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
 +N/-S +E/-W Northing Easting Latitude Longitude  
 0.00 0.00 1605386.66 2408674.43 39° 28' 36.62 N 107° 35' 42.09 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	Vsect	Departure	Annotation
1879.67	1917.00	25.000	276.40	41.06	-234.32	237.89	242.17	As of Dec 20
4854.66	5056.00	0.300	49.80	185.44	-1066.49	1082.49	1097.56	As of Dec 21
5995.21	6197.00	0.300	226.80	183.47	-1073.18	1088.75	1130.08	As of Dec 22
7927.81	8130.00	1.800	187.80	179.15	-1071.18	1086.05	1166.88	Proj to TD @ 8130' MD



<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Miller Federal 24A-31-691
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6284.00ft
<b>Site:</b>	Miller 10 Pad	<b>MD Reference:</b>	KB @ 6284.00ft
<b>Well:</b>	Miller Federal 24A-31-691	<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		
<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		

<b>Site</b>	Miller 10 Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,605,362.13 usft	<b>Latitude:</b>	39° 28' 36.39 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,408,695.61 usft	<b>Longitude:</b>	107° 35' 41.81 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	1.10 ft	<b>Grid Convergence:</b>	-1.32 °

<b>Well</b>	Miller Federal 24A-31-691					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,605,386.66 usft	<b>Latitude:</b>	39° 28' 36.62 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,408,674.44 usft	<b>Longitude:</b>	107° 35' 42.09 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	6,262.00 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	279.73	

<b>Survey Program</b>	<b>Date</b>	12/28/10			
<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	
874.00	8,130.00	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	0.210	107.13	699.99	0.65	2.77	-2.62	0.00	0.00	0.00	
781.00	0.175	184.65	780.99	0.48	2.90	-2.78	0.30	-0.04	95.70	
<b>9 5/8"</b>										
874.00	0.400	220.70	873.99	0.09	2.68	-2.63	0.30	0.24	38.77	
966.00	2.700	273.80	965.95	-0.01	0.31	-0.31	2.70	2.50	57.72	
1,061.00	5.200	290.30	1,060.72	1.63	-5.96	6.15	2.86	2.63	17.37	
1,156.00	7.900	288.00	1,155.09	5.15	-16.21	16.85	2.85	2.84	-2.42	
1,251.00	9.800	286.00	1,248.96	9.39	-30.19	31.35	2.03	2.00	-2.11	
1,346.00	12.400	280.50	1,342.18	13.48	-48.00	49.59	2.95	2.74	-5.79	
1,442.00	14.900	283.10	1,435.46	18.16	-70.16	72.22	2.68	2.60	2.71	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Miller Federal 24A-31-691
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6284.00ft
<b>Site:</b>	Miller 10 Pad	<b>MD Reference:</b>	KB @ 6284.00ft
<b>Well:</b>	Miller Federal 24A-31-691	<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)	
1,537.00	16.700	278.20	1,526.87	22.87	-95.57	98.06	2.36	1.89	-5.16	
1,632.00	18.900	278.00	1,617.32	26.96	-124.32	127.09	2.32	2.32	-0.21	
1,727.00	22.100	278.40	1,706.29	31.71	-157.24	160.34	3.37	3.37	0.42	
1,822.00	24.700	276.50	1,793.47	36.57	-194.65	198.03	2.85	2.74	-2.00	
1,917.00	25.000	276.40	1,879.67	41.06	-234.32	237.89	0.32	0.32	-0.11	
2,012.00	25.000	278.00	1,965.77	46.09	-274.15	277.99	0.71	0.00	1.68	
2,107.00	25.200	276.50	2,051.80	51.17	-314.12	318.25	0.70	0.21	-1.58	
2,202.00	24.700	282.40	2,137.95	57.73	-353.61	358.28	2.67	-0.53	6.21	
2,297.00	24.900	280.40	2,224.19	65.60	-392.67	398.10	0.91	0.21	-2.11	
2,392.00	24.300	279.00	2,310.57	72.27	-431.64	437.65	0.88	-0.63	-1.47	
2,487.00	24.100	277.20	2,397.22	77.75	-470.19	476.57	0.80	-0.21	-1.89	
2,582.00	26.000	280.40	2,483.29	83.95	-509.92	516.77	2.46	2.00	3.37	
2,678.00	26.500	280.90	2,569.39	91.79	-551.65	559.23	0.57	0.52	0.52	
2,773.00	26.900	279.80	2,654.26	99.46	-593.64	601.91	0.67	0.42	-1.16	
2,868.00	25.000	283.30	2,739.68	107.74	-634.36	643.44	2.57	-2.00	3.68	
2,963.00	25.100	280.90	2,825.75	116.17	-673.68	683.62	1.07	0.11	-2.53	
3,058.00	25.300	280.80	2,911.70	123.78	-713.41	724.06	0.22	0.21	-0.11	
3,153.00	24.700	279.50	2,997.80	130.86	-752.92	764.21	0.86	-0.63	-1.37	
3,249.00	23.500	278.90	3,085.43	137.13	-791.62	803.41	1.28	-1.25	-0.63	
3,344.00	21.200	281.30	3,173.29	143.43	-827.18	839.52	2.60	-2.42	2.53	
3,439.00	20.300	279.50	3,262.13	149.51	-860.28	873.17	1.16	-0.95	-1.89	
3,534.00	18.300	282.30	3,351.79	155.41	-891.11	904.55	2.32	-2.11	2.95	
3,629.00	15.900	281.10	3,442.58	161.10	-918.45	932.47	2.55	-2.53	-1.26	
3,724.00	15.600	280.50	3,534.02	165.93	-943.78	958.25	0.36	-0.32	-0.63	
3,819.00	13.500	278.50	3,625.97	169.90	-967.31	982.11	2.27	-2.21	-2.11	
3,914.00	12.700	275.30	3,718.49	172.50	-988.68	1,003.61	1.14	-0.84	-3.37	
4,010.00	10.700	280.70	3,812.50	175.13	-1,007.94	1,023.04	2.37	-2.08	5.63	
4,105.00	9.100	279.30	3,906.08	177.98	-1,024.03	1,039.37	1.70	-1.68	-1.47	
4,200.00	7.000	272.60	4,000.14	179.46	-1,037.22	1,052.63	2.42	-2.21	-7.05	
4,295.00	6.200	275.50	4,094.51	180.21	-1,048.11	1,063.49	0.91	-0.84	3.05	
4,390.00	4.300	282.00	4,189.11	181.44	-1,056.70	1,072.17	2.09	-2.00	6.84	
4,485.00	3.800	276.30	4,283.87	182.53	-1,063.32	1,078.87	0.68	-0.53	-6.00	
4,580.00	2.300	306.40	4,378.74	184.01	-1,067.98	1,083.72	2.26	-1.58	31.68	
4,675.00	1.600	40.10	4,473.70	186.15	-1,068.66	1,084.75	3.04	-0.74	98.63	
4,771.00	1.000	77.70	4,569.68	187.36	-1,066.98	1,083.30	1.05	-0.63	39.17	
4,866.00	0.400	201.10	4,664.68	187.22	-1,066.29	1,082.59	1.33	-0.63	129.89	
4,961.00	1.000	189.60	4,759.67	186.10	-1,066.55	1,082.66	0.65	0.63	-12.11	
5,056.00	0.300	49.80	4,854.66	185.44	-1,066.49	1,082.49	1.31	-0.74	-147.16	
5,151.00	2.600	81.80	4,949.63	185.91	-1,064.17	1,080.28	2.47	2.42	33.68	
5,246.00	1.800	106.80	5,044.56	185.78	-1,060.61	1,076.75	1.30	-0.84	26.32	
5,341.00	1.600	112.70	5,139.52	184.84	-1,057.96	1,073.98	0.28	-0.21	6.21	
5,437.00	1.400	141.60	5,235.49	183.41	-1,055.99	1,071.80	0.81	-0.21	30.10	
5,532.00	0.900	283.00	5,330.48	182.66	-1,056.00	1,071.68	2.29	-0.53	148.84	

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Miller Federal 24A-31-691
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6284.00ft
<b>Site:</b>	Miller 10 Pad	<b>MD Reference:</b>	KB @ 6284.00ft
<b>Well:</b>	Miller Federal 24A-31-691	<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

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)
5,627.00	1.300	224.90	5,425.46	182.07	-1,057.49	1,073.05	1.18	0.42	-61.16
5,722.00	2.400	293.60	5,520.42	182.10	-1,060.07	1,075.60	2.40	1.16	72.32
5,817.00	1.700	267.30	5,615.36	182.83	-1,063.30	1,078.91	1.22	-0.74	-27.68
5,912.00	2.200	250.70	5,710.31	182.16	-1,066.43	1,081.88	0.79	0.53	-17.47
6,007.00	1.500	316.60	5,805.27	182.46	-1,069.01	1,084.47	2.21	-0.74	69.37
6,102.00	1.900	275.00	5,900.23	183.50	-1,071.43	1,087.03	1.33	0.42	-43.79
6,197.00	0.300	226.80	5,995.21	183.47	-1,073.18	1,088.75	1.80	-1.68	-50.74
6,292.00	0.600	222.00	6,090.20	182.93	-1,073.69	1,089.16	0.32	0.32	-5.05
6,387.00	2.200	202.20	6,185.17	180.87	-1,074.72	1,089.82	1.73	1.68	-20.84
6,482.00	0.000	165.90	6,280.15	179.18	-1,075.40	1,090.22	2.32	-2.32	0.00
6,578.00	1.400	50.10	6,376.14	179.94	-1,074.50	1,089.46	1.46	1.46	0.00
6,673.00	0.800	130.60	6,471.13	180.25	-1,073.11	1,088.14	1.57	-0.63	84.74
6,768.00	1.100	53.00	6,566.12	180.37	-1,071.88	1,086.94	1.28	0.32	-81.68
6,863.00	1.100	184.60	6,661.11	180.01	-1,071.22	1,086.24	2.11	0.00	138.53
6,958.00	0.700	44.80	6,756.10	179.51	-1,070.89	1,085.82	1.79	-0.42	-147.16
7,053.00	3.000	15.60	6,851.05	182.32	-1,069.81	1,085.23	2.54	2.42	-30.74
7,148.00	1.800	18.20	6,945.96	186.13	-1,068.68	1,084.76	1.27	-1.26	2.74
7,243.00	0.500	18.10	7,040.94	187.94	-1,068.08	1,084.48	1.37	-1.37	-0.11
7,338.00	0.600	235.30	7,135.94	188.05	-1,068.36	1,084.77	1.10	0.11	-150.32
7,433.00	1.500	196.10	7,230.93	186.57	-1,069.11	1,085.27	1.16	0.95	-41.26
7,528.00	0.400	169.20	7,325.91	185.05	-1,069.40	1,085.29	1.22	-1.16	-28.32
7,623.00	1.000	211.80	7,420.90	184.02	-1,069.77	1,085.48	0.80	0.63	44.84
7,719.00	1.300	356.80	7,516.90	184.40	-1,070.27	1,086.04	2.29	0.31	151.04
7,814.00	0.300	236.90	7,611.89	185.34	-1,070.54	1,086.47	1.55	-1.05	-126.21
7,909.00	0.900	165.30	7,706.88	184.48	-1,070.56	1,086.34	0.90	0.63	-75.37
8,004.00	1.300	192.80	7,801.87	182.71	-1,070.61	1,086.09	0.69	0.42	28.95
8,085.00	1.800	187.80	7,882.84	180.55	-1,070.99	1,086.10	0.64	0.62	-6.17
8,130.00	1.800	187.80	7,927.81	179.15	-1,071.18	1,086.05	0.00	0.00	0.00

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (ft)	Hole Diameter (ft)
781.00	780.99	9 5/8"	0.80	1.02

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates	Comment	
		+N/-S (ft)	+E/-W (ft)	
1,917.00	1,879.67	41.06	-234.32	As of Dec 20
5,056.00	4,854.66	185.44	-1,066.49	As of Dec 21
6,197.00	5,995.21	183.47	-1,073.18	As of Dec 22
8,130.00	7,927.81	179.15	-1,071.18	Proj to TD @ 8130' MD

<b>Company:</b>	Bill Barrett Corp.	<b>Local Co-ordinate Reference:</b>	Well Miller Federal 24A-31-691
<b>Project:</b>	Garfield County, Colorado	<b>TVD Reference:</b>	KB @ 6284.00ft
<b>Site:</b>	Miller 10 Pad	<b>MD Reference:</b>	KB @ 6284.00ft
<b>Well:</b>	Miller Federal 24A-31-691	<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

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



<b>SDI Job #:</b>	20101211	<b>Report Time:</b>	2400	1 of 5
<b>COMPANY:</b>	Bill Barrett	<b>API JOB #</b>		
<b>LOCATION:</b>	Silt	<b>WORK ORDER#</b>		
<b>RIG NAME:</b>	Patterson 313	<b>FIELD:</b>	Miller 10 Pad	
<b>STATE:</b>	Colorado	<b>Sec-Twn-Rng:</b>		
<b>COUNTY:</b>	Garfield	<b>AFE# &amp; District</b>		
<b>WELL NAME:</b>	Miller Federal 24A-31-691			

From Sunday, December 19, 2010 at 0000 to Sunday, December 19, 2010 at 2400

DRILLING SUMMARY				Drilling Parameters									
Start Depth	0.00	Rotary Hours	2.35	WOB	25	Pick UP	0	Slack Off	0	SPM			
End Depth	1011.00	Circulating Hours	0.00	RAB	0	SPP	1900	FlowRate	0 - 500	121			
Total Drilled:	220.00	Avg. Total ROP:	88.00	<b>Mud Data</b>									
Total Rotary Drilled:	193.00	Avg. Rotary ROP:	82.13	Type		PV	0	SOLID	0				
Total Drilled Sliding:	27.00	Avg. Slide ROP:	180.00	Weight	0	GAS	0	YP	0	BHT°	0		
Slide Hours:	0.15	Percent Rotary:	87.73	Viscosity	0	SAND	0	PH	0	Flow T°	0		
Below Rotary Hrs.	5.00	Percent Slide:	12.27	Chlorides	0	WL	0			Oil %	0		
PERSONNEL				Casing			BHA						
Lead Directional :	Bobby Wolf			Size	Lb/ft	Set Depth	BHA # 1:FXD56M 5x16, 6.5 Motor, Mule Shoe, Monel, Gap Sub, Monel, 10stds 4.5 HWDP,						
Second Directional :	Ricky Harris			Signature:									
MWD Operator1	Tim Perkins												
MWD Operator2													
Directional Company:	Sharewell												
Geologist:													
Company Man:	Robert Schultz												
Incl. In:	0.21	Azm. In:	107.13	Incl. Out:	2.7	Azm. Out:	273.8						

**GENERAL COMMENT**

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
19-Dec-10	19:00	20:30	1.50	0	0	TIH	P/U Tools
19-Dec-10	20:30	21:00	0.50	0	0	TIH	TIH
19-Dec-10	21:00	21:55	0.92	0	0	Drilling Cement	C/O Cmt f/745 t/791
19-Dec-10	21:55	22:30	0.58	791	827	Drilling	TIH
19-Dec-10	22:30	22:50	0.33	827	827	Other	F.I.T
19-Dec-10	22:50	23:21	0.52	827	919	Drilling	Drilling - (WOB:5;GPM :360;RPM:40)
19-Dec-10	23:21	23:26	0.08	919	919	Survey & Conn.	Survey & Conn.
19-Dec-10	23:26	23:35	0.15	919	946	Sliding	Survey & Conn.
19-Dec-10	23:35	23:55	0.33	946	1011	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
19-Dec-10	23:55	24:00	0.08	1011	1011	Survey & Conn.	Survey & Conn.



<b>SDI Job #:</b>	20101211	<b>Report Time:</b>	2400	2 of 5
<b>COMPANY:</b>	Bill Barrett	<b>API JOB #</b>		
<b>LOCATION:</b>	Silt	<b>WORK ORDER#</b>		
<b>RIG NAME:</b>	Patterson 313	<b>FIELD:</b>	Miller 10 Pad	
<b>STATE:</b>	Colorado	<b>Sec-Twn-Rng:</b>		
<b>COUNTY:</b>	Garfield	<b>AFE# &amp; District</b>		
<b>WELL NAME:</b>	Miller Federal 24A-31-691			

**From Monday, December 20, 2010 at 0000 to Monday, December 20, 2010 at 2400**

DRILLING SUMMARY				Drilling Parameters									
Start Depth	1011.00	Rotary Hours	15.00	WOB	25	Pick UP	110	Slack Off	95	SPM			
End Depth	4530.00	Circulating Hours	0.17	RAB	100	SPP	1900	FlowRate	500 - 500	121			
Total Drilled:	3519.00	Avg. Total ROP:	171.66	<b>Mud Data</b>									
Total Rotary Drilled:	3022.00	Avg. Rotary ROP:	201.47	Type	LSND/LSD			PV	24	SOLID	6		
Total Drilled Sliding:	497.00	Avg. Slide ROP:	90.36	Weight	9.4	GAS	0	YP	20	BHT°	0		
Slide Hours:	5.50	Percent Rotary:	85.88	Viscosity	55	SAND	0.25	PH	10.8	Flow T°	82		
Below Rotary Hrs.	24.00	Percent Slide:	14.12	Chlorides	700	WL	4.8			Oil %	0		
PERSONNEL				Casing				BHA					
Lead Directional :	Bobby Wolf			Size	Lb/ft	Set Depth		BHA # 1:FXD56M 5x16, 6.5 Motor, Mule Shoe, Monel, Gap Sub, Monel, 10stds 4.5 HWDP,					
Second Directional :	Ricky Harris			Signature:									
MWD Operator1	Tim Perkins												
MWD Operator2													
Directional Company:	Sharewell												
Geologist:													
Company Man:	Robert Schultz												
Incl. In:	2.7	Azm. In:	273.8	Incl. Out:	3.8	Azm. Out:	276.3						

**GENERAL COMMENT**

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
20-Dec-10	00:00	00:12	0.20	1011	1036	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	00:12	00:30	0.30	1036	1106	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	00:30	00:50	0.33	1106	1106	Survey & Conn.	Survey & Conn.
20-Dec-10	00:50	01:05	0.25	1106	1128	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	01:05	01:20	0.25	1128	1201	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	01:20	01:25	0.08	1201	1201	Survey & Conn.	Survey & Conn.
20-Dec-10	01:25	01:32	0.12	1201	1221	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	01:32	01:47	0.25	1221	1296	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	01:47	01:52	0.08	1296	1296	Survey & Conn.	Survey & Conn.
20-Dec-10	01:52	02:01	0.15	1296	1320	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	02:01	02:16	0.25	1320	1391	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	02:16	02:21	0.08	1391	1391	Survey & Conn.	Survey & Conn.
20-Dec-10	02:21	02:29	0.13	1391	1411	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	02:29	02:45	0.27	1411	1487	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	02:45	02:50	0.08	1487	1487	Survey & Conn.	Survey & Conn.
20-Dec-10	02:50	02:59	0.15	1487	1509	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	02:59	03:14	0.25	1509	1582	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
20-Dec-10	03:14	03:19	0.08	1582	1582	Survey & Conn.	Survey & Conn.
20-Dec-10	03:19	03:30	0.18	1582	1607	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	03:30	03:45	0.25	1607	1677	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	03:45	03:50	0.08	1677	1677	Survey & Conn.	Survey & Conn.
20-Dec-10	03:50	04:05	0.25	1677	1707	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	04:05	04:15	0.17	1707	1772	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	04:15	04:20	0.08	1772	1772	Survey & Conn.	Survey & Conn.
20-Dec-10	04:20	04:31	0.18	1772	1797	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	04:31	04:47	0.27	1797	1867	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	04:47	04:52	0.08	1867	1867	Survey & Conn.	Survey & Conn.
20-Dec-10	04:52	05:14	0.37	1867	1962	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	05:14	05:19	0.08	1962	1962	Survey & Conn.	Survey & Conn.
20-Dec-10	05:19	05:25	0.10	1962	1977	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	05:25	05:45	0.33	1977	2057	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	05:45	05:50	0.08	2057	2057	Survey & Conn.	Survey & Conn.
20-Dec-10	05:50	06:07	0.28	2057	2152	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	06:07	06:12	0.08	2152	2152	Survey & Conn.	Survey & Conn.
20-Dec-10	06:12	06:23	0.18	2152	2182	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	06:23	06:38	0.25	2182	2247	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	06:38	06:43	0.08	2247	2247	Survey & Conn.	Survey & Conn.
20-Dec-10	06:43	06:59	0.27	2247	2342	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	06:59	07:04	0.08	2342	2342	Survey & Conn.	Survey & Conn.
20-Dec-10	07:04	07:21	0.28	2342	2437	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	07:21	07:26	0.08	2437	2437	Survey & Conn.	Survey & Conn.
20-Dec-10	07:26	07:42	0.27	2437	2532	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	07:42	07:47	0.08	2532	2532	Survey & Conn.	Survey & Conn.
20-Dec-10	07:47	07:48	0.02	2532	2535	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	07:48	08:01	0.22	2535	2565	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	08:01	08:16	0.25	2565	2628	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	08:16	08:21	0.08	2628	2628	Survey & Conn.	Survey & Conn.
20-Dec-10	08:21	09:07	0.77	2628	2723	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	09:07	09:12	0.08	2723	2723	Survey & Conn.	Survey & Conn.
20-Dec-10	09:12	09:35	0.38	2723	2818	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	09:35	09:40	0.08	2818	2818	Survey & Conn.	Survey & Conn.
20-Dec-10	09:40	09:42	0.03	2818	2823	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	09:42	10:04	0.37	2823	2845	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	10:04	10:25	0.35	2845	2913	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	10:25	10:30	0.08	2913	2913	Survey & Conn.	Survey & Conn.
20-Dec-10	10:30	11:16	0.77	2913	3008	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	11:16	11:21	0.08	3008	3008	Survey & Conn.	Survey & Conn.
20-Dec-10	11:21	11:42	0.35	3008	3103	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	11:42	11:47	0.08	3103	3103	Survey & Conn.	Survey & Conn.
20-Dec-10	11:47	12:16	0.48	3103	3198	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	12:16	12:21	0.08	3198	3198	Survey & Conn.	Survey & Conn.
20-Dec-10	12:21	12:42	0.35	3198	3294	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	12:42	12:47	0.08	3294	3294	Survey & Conn.	Survey & Conn.
20-Dec-10	12:47	12:52	0.08	3294	3300	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	12:52	12:59	0.12	3300	3317	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
20-Dec-10	12:59	13:22	0.38	3317	3389	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	13:22	13:27	0.08	3389	3389	Survey & Conn.	Survey & Conn.
20-Dec-10	13:27	13:48	0.35	3389	3484	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	13:48	13:53	0.08	3484	3484	Survey & Conn.	Survey & Conn.
20-Dec-10	13:53	13:56	0.05	3484	3490	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	13:56	14:16	0.33	3490	3508	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	14:16	14:40	0.40	3508	3579	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	14:40	14:45	0.08	3579	3579	Survey & Conn.	Survey & Conn.
20-Dec-10	14:45	14:50	0.08	3579	3585	Drilling	Drilling - (WOB:5;GPM :500;RPM:40)
20-Dec-10	14:50	15:09	0.32	3585	3603	Sliding	Sliding - (WOB:5;GPM :500;TFO:0)
20-Dec-10	15:09	15:42	0.55	3603	3674	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	15:42	15:47	0.08	3674	3674	Survey & Conn.	Survey & Conn.
20-Dec-10	15:47	15:57	0.17	3674	3674	Rig Service-Inhole	Rig Service-Inhole
20-Dec-10	15:57	16:38	0.68	3674	3769	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	16:38	16:43	0.08	3769	3769	Survey & Conn.	Survey & Conn.
20-Dec-10	16:43	16:44	0.02	3769	3775	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	16:44	17:03	0.32	3775	3794	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
20-Dec-10	17:03	17:26	0.38	3794	3864	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	17:26	17:31	0.08	3864	3864	Survey & Conn.	Survey & Conn.
20-Dec-10	17:31	18:06	0.58	3864	3959	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	18:06	18:11	0.08	3959	3959	Survey & Conn.	Survey & Conn.
20-Dec-10	18:11	18:16	0.08	3959	3965	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	18:16	18:38	0.37	3965	3986	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
20-Dec-10	18:38	19:19	0.68	3986	4055	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	19:19	19:24	0.08	4055	4055	Survey & Conn.	Survey & Conn.
20-Dec-10	19:24	19:40	0.27	4055	4075	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
20-Dec-10	19:40	20:10	0.50	4075	4150	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	20:10	20:15	0.08	4150	4150	Survey & Conn.	Survey & Conn.
20-Dec-10	20:15	20:35	0.33	4150	4172	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
20-Dec-10	20:35	21:03	0.47	4172	4245	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	21:03	21:08	0.08	4245	4245	Survey & Conn.	Survey & Conn.
20-Dec-10	21:08	21:43	0.58	4245	4267	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
20-Dec-10	21:43	22:17	0.57	4267	4340	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	22:17	22:22	0.08	4340	4340	Survey & Conn.	Survey & Conn.
20-Dec-10	22:22	22:45	0.38	4340	4370	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
20-Dec-10	22:45	23:13	0.47	4370	4435	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	23:13	23:18	0.08	4435	4435	Survey & Conn.	Survey & Conn.
20-Dec-10	23:18	23:55	0.62	4435	4530	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
20-Dec-10	23:55	24:00	0.08	4530	4530	Survey & Conn.	Survey & Conn.



<b>SDI Job #:</b>	20101211	<b>Report Time:</b>	2400	3 of 5
<b>COMPANY:</b>	Bill Barrett	<b>API JOB #</b>		
<b>LOCATION:</b>	Silt	<b>WORK ORDER#</b>		
<b>RIG NAME:</b>	Patterson 313	<b>FIELD:</b>	Miller 10 Pad	
<b>STATE:</b>	Colorado	<b>Sec-Twn-Rng:</b>		
<b>COUNTY:</b>	Garfield	<b>AFE# &amp; District</b>		
<b>WELL NAME:</b>	Miller Federal 24A-31-691			

**From Tuesday, December 21, 2010 at 0000 to Tuesday, December 21, 2010 at 2400**

DRILLING SUMMARY				Drilling Parameters									
Start Depth	4530.00	Rotary Hours	13.25	WOB	25	Pick UP	195	Slack Off	145	SPM			
End Depth	6102.00	Circulating Hours	0.20	RAB	175	SPP	2374	FlowRate	500 - 500	121			
Total Drilled:	1572.00	Avg. Total ROP:	94.04	<b>Mud Data</b>									
Total Rotary Drilled:	1376.00	Avg. Rotary ROP:	103.85	Type	LSND/LSD			PV	22	SOLID	7		
Total Drilled Sliding:	196.00	Avg. Slide ROP:	56.54	Weight	9.8	GAS	0	YP	12	BHT°	0		
Slide Hours:	3.47	Percent Rotary:	87.53	Viscosity	46	SAND	0.25	PH	9.5	Flow T°	90		
Below Rotary Hrs.	24.00	Percent Slide:	12.47	Chlorides	800	WL	5.6			Oil %	0		
PERSONNEL				Casing				BHA					
Lead Directional :	Bobby Wolf			Size	Lb/ft	Set Depth	BHA # 2:DSR516-F1 5x16, 6.5 Motor, Mule Shoe, Monel, Gap Sub, Monel, 10stds 4.5 HWDP,						
Second Directional :	Ricky Harris			Signature:									
MWD Operator1	Tim Perkins												
MWD Operator2													
Directional Company:	Sharewell												
Geologist:													
Company Man:	Robert Schultz												
Incl. In:	3.8	Azm. In:	276.3	Incl. Out:	1.9	Azm. Out:	275						

**GENERAL COMMENT**

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
21-Dec-10	00:00	00:34	0.57	4530	4566	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
21-Dec-10	00:34	01:03	0.48	4566	4625	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	01:03	01:08	0.08	4625	4625	Survey & Conn.	Survey & Conn.
21-Dec-10	01:08	01:41	0.55	4625	4666	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
21-Dec-10	01:41	02:04	0.38	4666	4720	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	02:04	02:09	0.08	4720	4720	Survey & Conn.	Survey & Conn.
21-Dec-10	02:09	02:43	0.57	4720	4816	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	02:43	02:48	0.08	4816	4816	Survey & Conn.	Survey & Conn.
21-Dec-10	02:48	03:24	0.60	4816	4911	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	03:24	03:29	0.08	4911	4911	Survey & Conn.	Survey & Conn.
21-Dec-10	03:29	04:04	0.58	4911	5006	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	04:04	04:09	0.08	5006	5006	Survey & Conn.	Survey & Conn.
21-Dec-10	04:09	04:40	0.52	5006	5036	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
21-Dec-10	04:40	05:10	0.50	5036	5101	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	05:10	05:15	0.08	5101	5101	Survey & Conn.	Survey & Conn.
21-Dec-10	05:15	07:54	2.65	5101	5101	POOH	POOH
21-Dec-10	07:54	08:10	0.27	5101	5101	Change BHA	Change Bit

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
21-Dec-10	08:10	10:55	2.75	5101	5101	TIH	TIH
21-Dec-10	10:55	11:03	0.13	5101	5110	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	11:03	11:22	0.32	5110	5130	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
21-Dec-10	11:22	11:49	0.45	5130	5196	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	11:49	11:54	0.08	5196	5196	Survey & Conn.	Survey & Conn.
21-Dec-10	11:54	12:54	1.00	5196	5291	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	12:54	12:59	0.08	5291	5291	Survey & Conn.	Survey & Conn.
21-Dec-10	12:59	13:51	0.87	5291	5386	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	13:51	13:56	0.08	5386	5386	Survey & Conn.	Survey & Conn.
21-Dec-10	13:56	15:03	1.12	5386	5482	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	15:03	15:08	0.08	5482	5482	Survey & Conn.	Survey & Conn.
21-Dec-10	15:08	15:12	0.07	5482	5487	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	15:12	15:38	0.43	5487	5510	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
21-Dec-10	15:38	16:28	0.83	5510	5577	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	16:28	16:33	0.08	5577	5577	Survey & Conn.	Survey & Conn.
21-Dec-10	16:33	16:45	0.20	5577	5577	Rig Service-Inhole	Rig Service-Inhole
21-Dec-10	16:45	18:06	1.35	5577	5672	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	18:06	18:11	0.08	5672	5672	Survey & Conn.	Survey & Conn.
21-Dec-10	18:11	18:47	0.60	5672	5693	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
21-Dec-10	18:47	19:27	0.67	5693	5767	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	19:27	19:32	0.08	5767	5767	Survey & Conn.	Survey & Conn.
21-Dec-10	19:32	20:35	1.05	5767	5862	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	20:35	20:40	0.08	5862	5862	Survey & Conn.	Survey & Conn.
21-Dec-10	20:40	21:30	0.83	5862	5957	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	21:30	21:35	0.08	5957	5957	Survey & Conn.	Survey & Conn.
21-Dec-10	21:35	22:04	0.48	5957	5982	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
21-Dec-10	22:04	22:53	0.82	5982	6052	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	22:53	22:58	0.08	6052	6052	Survey & Conn.	Survey & Conn.
21-Dec-10	22:58	23:55	0.95	6052	6102	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
21-Dec-10	23:55	24:00	0.08	6102	6102	Survey & Conn.	Survey & Conn.



<b>SDI Job #:</b>	20101211	<b>Report Time:</b>	2400	4 of 5
<b>COMPANY:</b>	Bill Barrett	<b>API JOB #</b>		
<b>LOCATION:</b>	Silt	<b>WORK ORDER#</b>		
<b>RIG NAME:</b>	Patterson 313	<b>FIELD:</b>	Miller 10 Pad	
<b>STATE:</b>	Colorado	<b>Sec-Twn-Rng:</b>		
<b>COUNTY:</b>	Garfield	<b>AFE# &amp; District</b>		
<b>WELL NAME:</b>	Miller Federal 24A-31-691			

From Wednesday, December 22, 2010 at 0000 to Wednesday, December 22, 2010 at 2400

DRILLING SUMMARY				Drilling Parameters									
Start Depth	6102.00	Rotary Hours	13.97	WOB	30	Pick UP	270	Slack Off	210	SPM			
End Depth	7678.00	Circulating Hours	0.17	RAB	230	SPP	2467	FlowRate	500 - 500	121			
Total Drilled:	1576.00	Avg. Total ROP:	93.25	<b>Mud Data</b>									
Total Rotary Drilled:	1387.00	Avg. Rotary ROP:	99.31	Type	LSND/LSD			PV	25	SOLID	7		
Total Drilled Sliding:	189.00	Avg. Slide ROP:	64.43	Weight	9.8	GAS	0	YP	20	BHT°	0		
Slide Hours:	2.93	Percent Rotary:	88.01	Viscosity	50	SAND	0.75	PH	9.6	Flow T°	91		
Below Rotary Hrs.	24.00	Percent Slide:	11.99	Chlorides	800	WL	5.6			Oil %	0		
PERSONNEL				Casing				BHA					
Lead Directional :	Bobby Wolf			Size	Lb/ft	Set Depth		BHA # 3:Q505FX 5x16, 6.5 Motor, Mule Shoe, Monel, Gap Sub, Monel, 10stds 4.5 HWDP,					
Second Directional :	Ricky Harris			Signature:									
MWD Operator1	Tim Perkins												
MWD Operator2													
Directional Company:	Sharewell												
Geologist:													
Company Man:	Robert Schultz												
Incl. In:	1.9	Azm. In:	275	Incl. Out:	1	Azm. Out:	211.8						

**GENERAL COMMENT**

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
22-Dec-10	00:00	00:25	0.42	6102	6122	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
22-Dec-10	00:25	03:03	2.63	6122	6242	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	03:03	03:08	0.08	6242	6242	Survey & Conn.	Survey & Conn.
22-Dec-10	03:08	04:40	1.53	6242	6271	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	04:40	07:28	2.80	6271	6271	POOH	POOH
22-Dec-10	07:28	07:40	0.20	6271	6271	Change BHA	Change Bit
22-Dec-10	07:40	10:15	2.58	6271	6271	TIH	TIH
22-Dec-10	10:15	10:41	0.43	6271	6337	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	10:41	10:46	0.08	6337	6337	Survey & Conn.	Survey & Conn.
22-Dec-10	10:46	11:24	0.63	6337	6432	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	11:24	11:29	0.08	6432	6432	Survey & Conn.	Survey & Conn.
22-Dec-10	11:29	11:32	0.05	6432	6435	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	11:32	12:02	0.50	6435	6458	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
22-Dec-10	12:02	12:25	0.38	6458	6527	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	12:25	12:30	0.08	6527	6527	Survey & Conn.	Survey & Conn.
22-Dec-10	12:30	12:33	0.05	6527	6532	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	12:33	12:52	0.32	6532	6552	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
22-Dec-10	12:52	13:18	0.43	6552	6623	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	13:18	13:23	0.08	6623	6623	Survey & Conn.	Survey & Conn.
22-Dec-10	13:23	14:02	0.65	6623	6718	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	14:02	14:08	0.10	6718	6718	Survey & Conn.	Survey & Conn.
22-Dec-10	14:08	14:10	0.03	6718	6725	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	14:10	14:25	0.25	6725	6750	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
22-Dec-10	14:25	15:11	0.77	6750	6813	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	15:11	15:16	0.08	6813	6813	Survey & Conn.	Survey & Conn.
22-Dec-10	15:16	15:50	0.57	6813	6908	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	15:50	15:55	0.08	6908	6908	Survey & Conn.	Survey & Conn.
22-Dec-10	15:55	15:58	0.05	6908	6912	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	15:58	16:28	0.50	6912	6948	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
22-Dec-10	16:28	16:44	0.27	6948	7003	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	16:44	16:49	0.08	7003	7003	Survey & Conn.	Survey & Conn.
22-Dec-10	16:49	16:59	0.17	7003	7003	Rig Service-Inhole	Rig Service-Inhole
22-Dec-10	16:59	17:04	0.08	7003	7005	Drilling	Drilling - (WOB:25;GPM :500;RPM:40)
22-Dec-10	17:04	17:28	0.40	7005	7035	Sliding	Sliding - (WOB:25;GPM :500;TFO:0)
22-Dec-10	17:28	17:56	0.47	7035	7098	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
22-Dec-10	17:56	18:01	0.08	7098	7098	Survey & Conn.	Survey & Conn.
22-Dec-10	18:01	18:43	0.70	7098	7193	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
22-Dec-10	18:43	18:48	0.08	7193	7193	Survey & Conn.	Survey & Conn.
22-Dec-10	18:48	19:20	0.53	7193	7288	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
22-Dec-10	19:20	19:25	0.08	7288	7288	Survey & Conn.	Survey & Conn.
22-Dec-10	19:25	19:55	0.50	7288	7383	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
22-Dec-10	19:55	20:00	0.08	7383	7383	Survey & Conn.	Survey & Conn.
22-Dec-10	20:00	21:45	1.75	7383	7478	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
22-Dec-10	21:45	21:50	0.08	7478	7478	Survey & Conn.	Survey & Conn.
22-Dec-10	21:50	22:02	0.20	7478	7497	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
22-Dec-10	22:02	22:20	0.30	7497	7522	Sliding	Sliding - (WOB:30;GPM :500;TFO:0)
22-Dec-10	22:20	22:40	0.33	7522	7573	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
22-Dec-10	22:40	22:45	0.08	7573	7573	Survey & Conn.	Survey & Conn.
22-Dec-10	22:45	23:40	0.92	7573	7668	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
22-Dec-10	23:40	23:45	0.08	7668	7668	Survey & Conn.	Survey & Conn.
22-Dec-10	23:45	24:00	0.25	7668	7678	Sliding	Sliding - (WOB:30;GPM :500;TFO:0)



<b>SDI Job #:</b>	20101211	<b>Report Time:</b>	2400	5 of 5
<b>COMPANY:</b>	Bill Barrett	<b>API JOB #</b>		
<b>LOCATION:</b>	Silt	<b>WORK ORDER#</b>		
<b>RIG NAME:</b>	Patterson 313	<b>FIELD:</b>	Miller 10 Pad	
<b>STATE:</b>	Colorado	<b>Sec-Twn-Rng:</b>		
<b>COUNTY:</b>	Garfield	<b>AFE# &amp; District</b>		
<b>WELL NAME:</b>	Miller Federal 24A-31-691			

**From Thursday, December 23, 2010 at 0000 to Thursday, December 23, 2010 at 2400**

DRILLING SUMMARY				Drilling Parameters							
Start Depth	7678.00	Rotary Hours	4.65	WOB	30	Pick UP	315	Slack Off	196	SPM	
End Depth	8130.00	Circulating Hours	2.07	RAB	290	SPP	2467	FlowRate	500 - 500	121	
Total Drilled:	452.00	Avg. Total ROP:	87.77	<b>Mud Data</b>							
Total Rotary Drilled:	427.00	Avg. Rotary ROP:	91.83	Type	LSND/LSD		PV	25	SOLID	7	
Total Drilled Sliding:	25.00	Avg. Slide ROP:	50.00	Weight	9.8	GAS	0	YP	20	BHT°	0
Slide Hours:	0.50	Percent Rotary:	94.47	Viscosity	50	SAND	0.75	PH	9.6	Flow T°	91
Below Rotary Hrs.	12.75	Percent Slide:	5.53	Chlorides	800	WL	5.6		Oil %	0	

PERSONNEL				Casing			BHA				
Lead Directional :	Bobby Wolf			Size	Lb/ft	Set Depth	BHA # 3:Q505FX 5x16, 6.5 Motor, Mule Shoe, Monel, Gap Sub, Monel, 10stds 4.5 HWDP,				
Second Directional :	Ricky Harris			Signature:							
MWD Operator1	Tim Perkins										
MWD Operator2											
Directional Company:	Sharewell										
Geologist:											
Company Man:	Robert Schultz			Incl. In:	1	Azm. In:	211.8	Incl. Out:	0	Azm. Out:	0

**GENERAL COMMENT**

Date	Start Time	End Time	Hours	Start Depth	End Depth	Activity Code	COMMENT
23-Dec-10	00:00	00:30	0.50	7678	7703	Sliding	Sliding - (WOB:30;GPM :500;TFO:0)
23-Dec-10	00:30	01:05	0.58	7703	7764	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
23-Dec-10	01:05	01:10	0.08	7764	7764	Survey & Conn.	Survey & Conn.
23-Dec-10	01:10	02:00	0.83	7764	7859	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
23-Dec-10	02:00	02:05	0.08	7859	7859	Survey & Conn.	Survey & Conn.
23-Dec-10	02:05	03:10	1.08	7859	7954	Drilling	Drilling - (WOB:30;GPM :500;RPM:40)
23-Dec-10	03:10	03:15	0.08	7954	7954	Survey & Conn.	Survey & Conn.
23-Dec-10	03:15	04:35	1.33	7954	8049	Drilling	Drilling - (WOB:30; :500;RPM:40)
23-Dec-10	04:35	04:40	0.08	8049	8049	Survey & Conn.	Survey & Conn.
23-Dec-10	04:40	06:52	2.20	8049	8049	Rig repair	Rig repair - Change Saver Sub
23-Dec-10	06:52	07:41	0.82	8049	8130	Drilling	Drilling - (WOB:30; :500;RPM:40)
23-Dec-10	07:41	07:45	0.07	8130	8130	MWD Survey	MWD Survey
23-Dec-10	07:45	09:45	2.00	8130	8130	Circulating	Circulating
23-Dec-10	09:45	12:45	3.00	8130	8130	POOH	POOH / Lay Down MWD

# Well Information

**BHA #** 1



SDI Job #: 20101211  
 COMPANY: Bill Barrett  
 LOCATION: Silt  
 RIG NAME: Patterson 313  
 STATE: Colorado  
 COUNTY: Garfield  
 WELL NAME: Miller Federal 24A-31-691

FIELD: Miller 10 Pad  
 Sec-Twn-Rng:  
 PO #/ DISTRICT  
 Lead DD: Bobby Wolf  
 Co. Man: Robert Schultz  
 BHA TYPE: Steerable Assembly

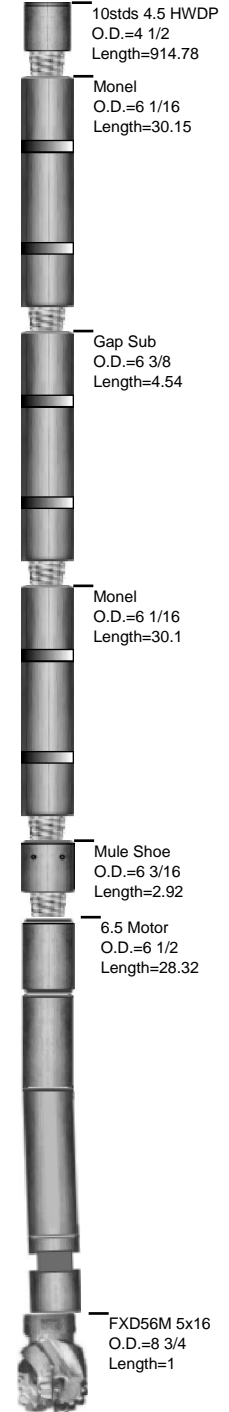
## BHA Summary Information

<b>TIME IN - OUT</b>		<b>Rotary Hours</b>	20.47	<b>Start Depth</b>	.00	<b>RPM</b>	<b>Flow Rate</b>
<b>Start Time</b>	<b>End Time</b>	<b>Circ Hrs Tot/Only</b>	27.92 / .17	<b>End Depth</b>	5101.00	<b>Range</b>	
19-Dec-10 @ 19:00	21-Dec-10 @ 08:10	<b>Slide Hours</b>	7.28	<b>Percent Rotary:</b>	85.36	40 -40	360 -500
		<b>Below Rotary Hrs.</b>	37.17	<b>Percent Slide:</b>	14.64		
<b>Total Drilled:</b>		4310.00	<b>Avg. Total ROP:</b>	155.32	<b>Incl.</b>	<b>Azimuth</b>	
<b>Total Rotary Drilled:</b>		3679.00	<b>Avg. Rotary ROP:</b>	179.76	<b>IN</b>	<b>OUT</b>	<b>IN</b> <b>OUT</b>
<b>Total Drilled Sliding:</b>		631.00	<b>Avg. Slide ROP:</b>	86.64	.0	.0	.00 .00
<b>SPP</b>	600 -1900	<b>Weights</b>	<b>SO</b> 0-95	<b>PU</b> 0-110	<b>RAB</b> 0-100	<b>Reason POOH</b>	PR

Bit Data				Motor Data				Mud Data			
FXD56M 5x16				6.5mtr,9:10lobe,3.7stg,0.17rev,1.76ako				Type LSND/LSD			
<b>Type Bit</b>		PDC		Model: 65		Pad OD		WT 9.8		GAS 0 Solids 7	
TFA 0.981				MFG. Spidle		6 3/4		Vis 46		SAND 0.25 T° 90	
<b>JETS</b>		16	16	16	16	Bend ° 1.76		Stator/Rotor 9:10		PV 22 PH 9.5 Chlor 800	
		0	0	0	0	Bit to Bend 6.47		Motor Diff 350		YP 12 WL 5.6 Oil % 0	
<b>Bit Coding</b>		IADC#		Rev/GAL 0.17				<b>BHT°</b>		0	
<b>IR</b>	<b>OR</b>	<b>DL</b>	<b>Loc</b>	<b>BS</b>	<b>G</b>	<b>ODL</b>	<b>NB Stab</b>	<b>Pumps</b>		<b>PUMP1</b> <b>PUMP1</b>	
1	1	WT	A	X	0		0	<b>NAME</b>			
<b>Bit Drop:</b>		234 PSI @ 500 GPM		<b>Sensor Offsets</b>				<b>Model</b>			
<b>Comments</b>		<b>Sensor</b>	45	<b>Sonic</b>	0	<b>Type</b>		<b>Liner</b>		.00 .00	
		<b>Gamma</b>	0	<b>DNCS</b>	791	<b>Stroke</b>		<b>Stroke</b>		.00 .00	
		<b>Restiv</b>	0	<b>GYRO</b>	0	<b>Efficiency</b>		<b>Efficiency</b>		.00 .00	

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	FXD56M 5x16	11617104		8 3/4	1.00	1.00	4 1/2 REGP
2	6.5 Motor	FT65040		6 1/2	28.32	29.32	4 1/2 XHB
3	Mule Shoe	xxxxxx	2 7/8	6 3/16	2.92	32.24	4 1/2 XHB
4	Monel	xxxxxx	3 3/8	6 1/16	30.10	62.34	4 1/2 XHB
5	Gap Sub	65017SW3002E	3 1/4	6 3/8	4.54	66.88	4 1/2 XHB
6	Monel	xxxxxxx	3 3/8	6 1/16	30.15	97.03	4 1/2 XHB
7	10stds 4.5 HWDP	RIG	2 7/8	4 1/2	914.78	1011.81	4 1/2 XHB



# Well Information

**BHA #** 2



**SDI Job #:** 20101211  
**COMPANY:** Bill Barrett  
**LOCATION:** Silt  
**RIG NAME:** Patterson 313  
**STATE:** Colorado  
**COUNTY:** Garfield  
**WELL NAME:** Miller Federal 24A-31-691

**FIELD:** Miller 10 Pad  
**Sec-Twn-Rng:**  
**PO #/ DISTRICT**  
**Lead DD:** Bobby Wolf  
**Co. Man:** Robert Schultz  
**BHA TYPE:** Steerable Assembly

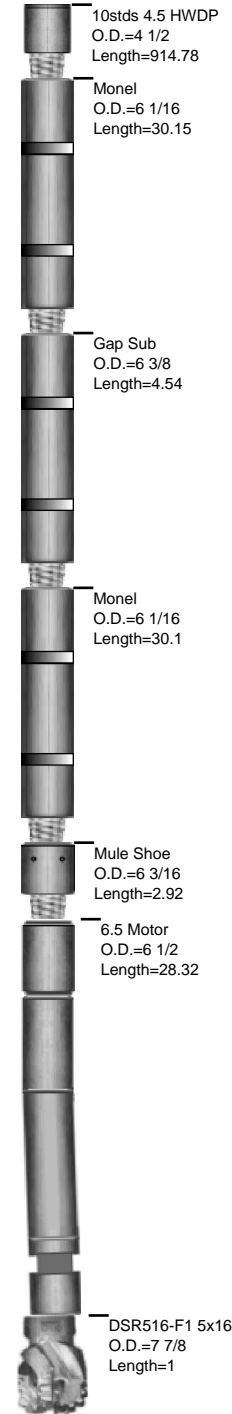
## BHA Summary Information

<b>TIME IN - OUT</b>		<b>Rotary Hours</b>	14.30	<b>Start Depth</b>	5101.00	<b>RPM</b>	<b>Flow Rate</b>
<b>Start Time</b>	<b>End Time</b>	<b>Circ Hrs Tot/Only</b>	16.75 / .20	<b>End Depth</b>	6271.00	<b>Range</b>	
21-Dec-10 @ 08:10	22-Dec-10 @ 07:40	<b>Slide Hours</b>	2.25	<b>Percent Rotary:</b>	90.68	40 -40	500 -500
		<b>Below Rotary Hrs.</b>	23.50	<b>Percent Slide:</b>	9.32		
<b>Total Drilled:</b>		1170.00	<b>Avg. Total ROP:</b>	70.69	<b>Incl.</b>	<b>Azimuth</b>	
<b>Total Rotary Drilled:</b>		1061.00	<b>Avg. Rotary ROP:</b>	74.20	<b>IN</b>	<b>OUT</b>	<b>IN</b> <b>OUT</b>
<b>Total Drilled Sliding:</b>		109.00	<b>Avg. Slide ROP:</b>	48.44	.0	.0	.00 .00
<b>SPP</b>	2374 -2374	<b>Weights</b>	<b>SO</b> 145 -145	<b>PU</b> 195 -195	<b>RAB</b> 175 -175	<b>Reason POOH</b>	

Bit Data				Motor Data				Mud Data						
REED	DSR516-F1 5x16			6.5mtr,9:10lobe,3.7stg,0.17rev,1.76ako				Type	LSND/LSD					
<b>Type Bit</b>		PDC		Model: 65	Pad OD			WT	9.8	GAS	0	Solids	7	
TFA	0.981			MFG. Spidle	6 3/4			Vis	50	SAND	0.75	T °	91	
<b>JETS</b>		16	16	Bend °	1.76	Stator/Rotor	9:10	PV	25	PH	9.6	Chlor	800	
	0	0	0	Bit to Bend	6.47	Motor Diff	300	YP	20	WL	5.6	Oil %	0	
<b>Bit Coding</b>		IADC#		Rev/GAL	0.17			<b>BHT°</b>		0				
IR	OR	DL	Loc	BS	G	ODL	NB Stab	<b>Pumps</b>		<b>PUMP1</b>		<b>PUMP1</b>		
2	2	WT					Rotor Jet	NAME						
<b>Bit Drop:</b>		234 PSI @ 500 GPM		Sensor Offsets				Model						
<b>Comments</b>		Sensor	45	Sonic	0		Type							
		Gamma	0		DN	5101		Liner		.00		.00		
		Restiv	0		GYRO	0		Stroke		.00		.00		
								Efficiency		.00		.00		

## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	DSR516-F1 5x16	123399		7 7/8	1.00	1.00	4 1/2 REGP
2	6.5 Motor	FT65040		6 1/2	28.32	29.32	4 1/2 XHB
3	Mule Shoe	xxxxxx	2 7/8	6 3/16	2.92	32.24	4 1/2 XHB
4	Monel	xxxxxx	3 3/8	6 1/16	30.10	62.34	4 1/2 XHB
5	Gap Sub	65017SW3002E	3 1/4	6 3/8	4.54	66.88	4 1/2 XHB
6	Monel	xxxxxxx	3 3/8	6 1/16	30.15	97.03	4 1/2 XHB
7	10stds 4.5 HWDP	RIG	2 7/8	4 1/2	914.78	1011.81	4 1/2 XHB



# Well Information

**BHA #** 3



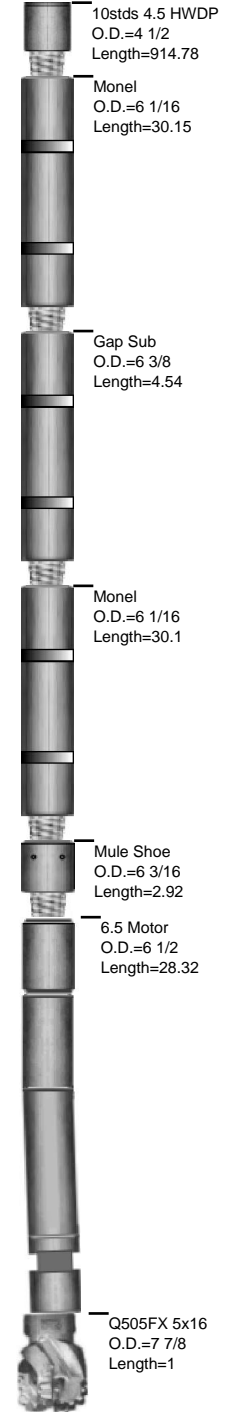
**SDI Job #:** 20101211  
**COMPANY:** Bill Barrett  
**LOCATION:** Silt  
**RIG NAME:** Patterson 313  
**STATE:** Colorado  
**COUNTY:** Garfield  
**WELL NAME:** Miller Federal 24A-31-691

**FIELD:** Miller 10 Pad  
**Sec-Twn-Rng:**  
**PO #/ DISTRICT**  
**Lead DD:** Bobby Wolf  
**Co. Man:** Robert Schultz  
**BHA TYPE:** Steerable Assembly

## BHA Summary Information

<b>TIME IN - OUT</b>		<b>Rotary Hours</b>	14.45	<b>Start Depth</b>	6271.00	<b>RPM</b>	<b>Flow Rate</b>
<b>Start Time</b>	<b>End Time</b>	<b>Circ Hrs Tot/Only</b>	19.70 / 2.23	<b>End Depth</b>	8130.00	<b>Range</b>	
22-Dec-10 @ 07:40	23-Dec-10 @ 12:45	<b>Slide Hours</b>	3.02	<b>Percent Rotary:</b>	89.56	40 -40	500 -500
		<b>Below Rotary Hrs.</b>	29.08	<b>Percent Slide:</b>	10.44		
<b>Total Drilled:</b>		1859.00	<b>Avg. Total ROP:</b>	106.43	<b>Incl.</b>	<b>Azimuth</b>	
<b>Total Rotary Drilled:</b>		1665.00	<b>Avg. Rotary ROP:</b>	115.22	<b>IN</b>	<b>OUT</b>	<b>IN</b> <b>OUT</b>
<b>Total Drilled Sliding:</b>		194.00	<b>Avg. Slide ROP:</b>	64.31	.0	.0	.00 .00
<b>SPP</b>	2467 -2467	<b>Weights</b>	<b>SO</b> 196 -210	<b>PU</b> 270 -315	<b>RAB</b> 230 -290	<b>Reason POOH</b>	

Bit Data				Motor Data				Mud Data			
BAKER		Q505FX 5x16		6.5mtr,9:10lobe,3.7stg,0.17rev,1.76ako				Type		LSND/LSD	
<b>Type Bit</b>		PDC		Model: 65		Pad OD		WT 9.8		GAS 0 Solids 7	
TFA		0.981		MFG. Spidle		6 3/4		Vis 50		SAND 0.75 T° 91	
<b>JETS</b>		16	16	16	16	Bend ° 1.76		Stator/Rotor 9:10		PV 25 PH 9.6 Chlor 800	
		0	0	0	0	Bit to Bend 6.47		Motor Diff 300		YP 20 WL 5.6 Oil % 0	
<b>Bit Coding</b>		IADC#		Rev/GAL 0.17		NB Stab 0		Pumps		PUMP1 PUMP1	
IR	OR	DL	Loc	BS	G	ODL	Rotor Jet 0	NAME		Type	
0	0						Sensor Offsets	Liner		.00 .00	
<b>Bit Drop:</b>		234 PSI @ 500 GPM		Sensor		45	Sonic	Stroke		.00 .00	
				Gamma		0	DNCS	Efficiency		.00 .00	
				Restiv		0	GYRO				



## BHA Detail

#	Description	Serial #	I.D.	O.D.	Length	Sum	Top Conn
1	Q505FX 5x16	7023653		7 7/8	1.00	1.00	4 1/2 REGP
2	6.5 Motor	FT65040		6 1/2	28.32	29.32	4 1/2 XHB
3	Mule Shoe	xxxxxx	2 7/8	6 3/16	2.92	32.24	4 1/2 XHB
4	Monel	xxxxxx	3 3/8	6 1/16	30.10	62.34	4 1/2 XHB
5	Gap Sub	65017SW3002E	3 1/4	6 3/8	4.54	66.88	4 1/2 XHB
6	Monel	xxxxxxx	3 3/8	6 1/16	30.15	97.03	4 1/2 XHB
7	10stds 4.5 HWDP	RIG	2 7/8	4 1/2	914.78	1011.81	4 1/2 XHB