



Bill Barrett Corporation

Bill Barrett Corp.

Garfield Co., CO (NAD83)

Epperly 23-692 Pad (Sec.23-T6S-R92W)

Epperly 23D-23-692

Wellbore #1

Design: Wellbore #1

Standard Survey Report

30 April, 2012





Project: Garfield Co., CO (NAD83)
 Site: Epperly 23-692 Pad (Sec.23-T6S-R92W)
 Well: Epperly 23D-23-692
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39° 30' 42.689 N
 Longitude: 107° 38' 26.174 W
 Ground Level: 5854.00
 WELL (copy) @ 5876.00usft



PROJECT DETAILS: Garfield Co., CO (NAD83)

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Central Zone
 System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Epperly 23D-23-692, True North
 Vertical (TVD) Reference: WELL (copy) @ 5876.00usft
 Section (VS) Reference: Slot - (0.00N, 0.00E)
 Measured Depth Reference: WELL (copy) @ 5876.00usft
 Calculation Method: Minimum Curvature

WELL DETAILS: Epperly 23D-23-692

Ground Level:	5854.00
+N/-S	0.00
+E/-W	0.00
Northing	1618437.964
Easting	2396112.530
Latitude	39° 30' 42.689 N
Longitude	107° 38' 26.174 W
Slot	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

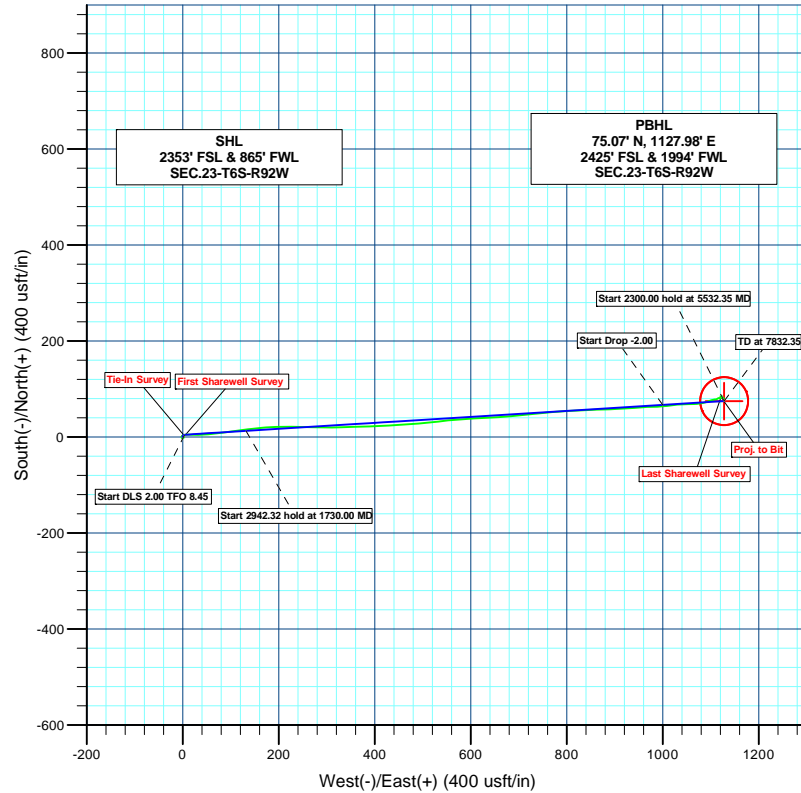
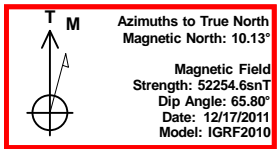
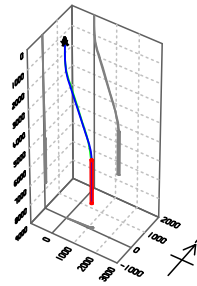
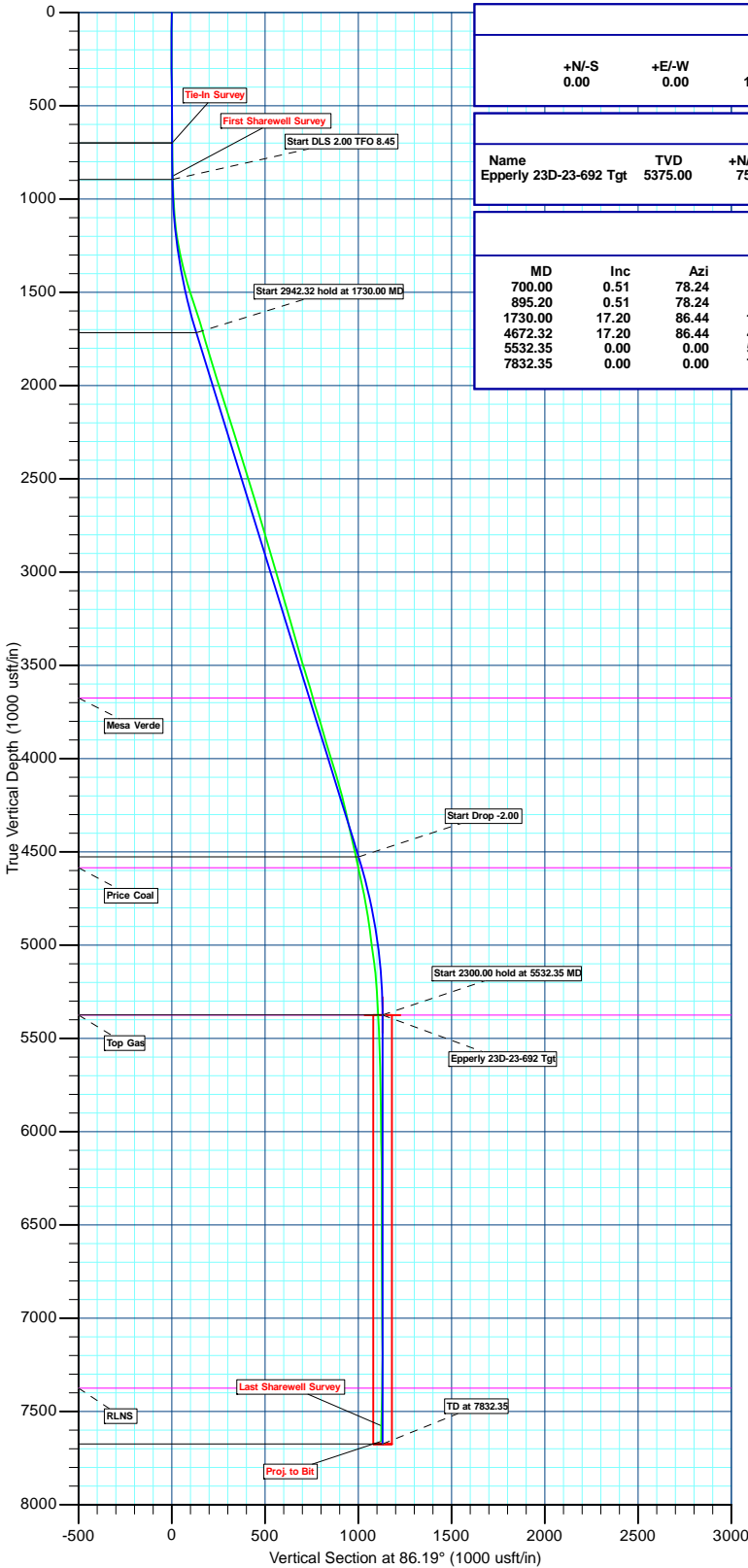
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Epperly 23D-23-692 Tgt	5375.00	75.07	1127.98	1618486.434	2397241.965	39° 30' 43.430 N	107° 38' 11.782 W	Circle (Radius: 50.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
700.00	0.51	78.24	699.97	4.33	2.24	0.00	0.00	2.52	Tie Into MSEW Survey
895.20	0.51	78.24	895.17	4.69	3.94	0.00	0.00	4.24	Start DLS 2.00 TFO 8.45
1730.00	17.20	86.44	1717.10	13.16	131.68	2.00	8.45	132.26	Start 2942.32 hold at 1730.00 MD
4672.32	17.20	86.44	4527.83	67.12	1000.10	0.00	0.00	1002.35	Start Drop -2.00
5532.35	0.00	0.00	5375.00	75.07	1127.98	2.00	180.00	1130.48	Start 2300.00 hold at 5532.35 MD
7832.35	0.00	0.00	7675.00	75.07	1127.98	0.00	0.00	1130.48	TD at 7832.35

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3675.00	3779.56	Mesa Verde
4585.00	4731.98	Price Coal
5375.00	5532.35	Top Gas
7375.00	7532.35	RLNS



Plan: Design #1 (Epperly 23D-23-692/Wellbore #1)
 Created By: Bret Wolford Date: 9:54, April 30 2012

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Epperly 23D-23-692
Project:	Garfield Co., CO (NAD83)	TVD Reference:	WELL @ 5876.00usft
Site:	Epperly 23-692 Pad (Sec.23-T6S-R92W)	MD Reference:	WELL @ 5876.00usft
Well:	Epperly 23D-23-692	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Garfield Co., CO (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	Epperly 23-692 Pad (Sec.23-T6S-R92W)				
Site Position:		Northing:	1,618,438.205 usft	Latitude:	39° 30' 42.689 N
From:	Lat/Long	Easting:	2,396,102.658 usft	Longitude:	107° 38' 26.300 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"	Grid Convergence:	-1.35 °

Well	Epperly 23D-23-692					
Well Position	+N/-S	0.00 usft	Northing:	1,618,437.964 usft	Latitude:	39° 30' 42.689 N
	+E/-W	0.00 usft	Easting:	2,396,112.530 usft	Longitude:	107° 38' 26.174 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,854.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/12/17	10.13	65.80	52,255

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	86.19	

Survey Program	Date	2012/04/30			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	700.00	Survey #1 (Wellbore #1)	NS-GYRO-MS	North sensing gyrocompassing m/s	
700.00	7,809.00	Survey #2 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.59	312.69	100.00	0.35	-0.38	-0.35	0.59	0.59	0.00	
200.00	0.54	2.67	199.99	1.17	-0.73	-0.66	0.48	-0.05	49.98	
300.00	0.45	36.87	299.99	1.95	-0.48	-0.35	0.30	-0.09	34.20	
400.00	0.54	45.71	399.99	2.60	0.10	0.27	0.12	0.09	8.84	
500.00	0.59	44.33	499.98	3.29	0.79	1.01	0.05	0.05	-1.38	
600.00	0.50	48.31	599.98	3.95	1.48	1.74	0.10	-0.09	3.98	
Tie-In Survey										
700.00	0.51	78.24	699.97	4.33	2.24	2.52	0.26	0.01	29.93	
First Sharewell Survey										
878.00	1.70	80.90	877.94	4.91	5.62	5.94	0.67	0.67	1.49	
970.00	1.80	85.80	969.89	5.23	8.41	8.74	0.20	0.11	5.33	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Epperly 23D-23-692
Project:	Garfield Co., CO (NAD83)	TVD Reference:	WELL @ 5876.00usft
Site:	Epperly 23-692 Pad (Sec.23-T6S-R92W)	MD Reference:	WELL @ 5876.00usft
Well:	Epperly 23D-23-692	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,062.00	3.90	89.40	1,061.78	5.37	12.98	13.31	2.29	2.28	3.91	
1,154.00	6.80	94.50	1,153.37	4.98	21.54	21.82	3.19	3.15	5.54	
1,249.00	10.40	88.10	1,247.28	4.82	35.72	35.96	3.92	3.79	-6.74	
1,344.00	13.20	84.70	1,340.27	6.11	55.10	55.38	3.04	2.95	-3.58	
1,439.00	15.40	83.20	1,432.32	8.60	78.43	78.82	2.35	2.32	-1.58	
1,534.00	18.10	82.20	1,523.28	12.10	105.58	106.15	2.86	2.84	-1.05	
1,630.00	18.50	82.70	1,614.43	16.06	135.46	136.23	0.45	0.42	0.52	
1,725.00	16.20	84.30	1,705.10	19.29	163.60	164.52	2.47	-2.42	1.68	
1,820.00	16.10	86.70	1,796.35	21.37	189.94	190.94	0.71	-0.11	2.53	
1,915.00	17.60	91.80	1,887.27	21.67	217.45	218.40	2.22	1.58	5.37	
2,011.00	17.60	91.10	1,978.78	20.94	246.46	247.31	0.22	0.00	-0.73	
2,106.00	17.20	90.30	2,069.43	20.59	274.87	275.63	0.49	-0.42	-0.84	
2,201.00	17.50	91.20	2,160.11	20.22	303.20	303.87	0.42	0.32	0.95	
2,296.00	17.80	87.40	2,250.64	20.58	331.98	332.62	1.25	0.32	-4.00	
2,391.00	17.60	88.00	2,341.14	21.74	360.84	361.49	0.28	-0.21	0.63	
2,486.00	17.10	89.50	2,431.82	22.36	389.16	389.79	0.71	-0.53	1.58	
2,582.00	17.00	85.70	2,523.61	23.53	417.27	417.91	1.17	-0.10	-3.96	
2,677.00	17.00	85.60	2,614.45	25.64	444.97	445.69	0.03	0.00	-0.11	
2,772.00	16.50	88.30	2,705.42	27.11	472.30	473.06	0.97	-0.53	2.84	
2,867.00	16.30	83.60	2,796.56	28.99	499.03	499.86	1.41	-0.21	-4.95	
2,963.00	16.50	83.90	2,888.66	31.94	525.98	526.94	0.23	0.21	0.31	
3,058.00	16.60	83.90	2,979.72	34.82	552.88	553.98	0.11	0.11	0.00	
3,153.00	16.30	86.00	3,070.83	37.19	579.68	580.87	0.70	-0.32	2.21	
3,249.00	16.20	86.90	3,163.00	38.86	606.49	607.73	0.28	-0.10	0.94	
3,344.00	16.10	86.80	3,254.25	40.31	632.87	634.15	0.11	-0.11	-0.11	
3,439.00	15.00	86.80	3,345.77	41.73	658.30	659.62	1.16	-1.16	0.00	
3,535.00	16.60	84.20	3,438.14	43.81	684.35	685.75	1.82	1.67	-2.71	
3,630.00	17.60	85.10	3,528.94	46.41	712.16	713.67	1.09	1.05	0.95	
3,725.00	16.10	82.70	3,619.86	49.31	739.54	741.18	1.74	-1.58	-2.53	
3,821.00	16.30	85.40	3,712.05	52.08	766.17	767.94	0.81	0.21	2.81	
3,916.00	17.40	87.30	3,802.97	53.82	793.65	795.47	1.29	1.16	2.00	
4,011.00	15.70	86.70	3,894.03	55.23	820.67	822.53	1.80	-1.79	-0.63	
4,106.00	17.80	87.10	3,985.00	56.70	848.01	849.90	2.21	2.21	0.42	
4,202.00	16.60	88.20	4,076.70	57.87	876.37	878.28	1.30	-1.25	1.15	
4,297.00	15.10	87.80	4,168.09	58.78	902.30	904.21	1.58	-1.58	-0.42	
4,391.00	13.30	86.20	4,259.21	59.96	925.33	927.27	1.96	-1.91	-1.70	
4,487.00	12.10	85.00	4,352.86	61.57	946.37	948.37	1.28	-1.25	-1.25	
4,582.00	13.40	88.00	4,445.52	62.82	967.29	969.33	1.54	1.37	3.16	
4,678.00	12.60	87.90	4,539.06	63.60	988.87	990.91	0.83	-0.83	-0.10	
4,773.00	12.20	83.20	4,631.84	65.16	1,009.19	1,011.29	1.14	-0.42	-4.95	
4,868.00	11.10	84.40	4,724.88	67.24	1,028.26	1,030.46	1.19	-1.16	1.26	
4,964.00	9.20	87.40	4,819.38	68.49	1,045.13	1,047.37	2.05	-1.98	3.12	
5,059.00	7.20	90.30	4,913.40	68.81	1,058.67	1,060.90	2.15	-2.11	3.05	
5,154.00	8.30	83.50	5,007.54	69.55	1,071.44	1,073.69	1.51	1.16	-7.16	
5,249.00	7.60	79.40	5,101.62	71.49	1,084.42	1,086.78	0.95	-0.74	-4.32	
5,345.00	4.10	66.50	5,197.11	74.02	1,093.81	1,096.32	3.87	-3.65	-13.44	
5,440.00	3.30	69.60	5,291.91	76.33	1,099.49	1,102.13	0.87	-0.84	3.26	
5,535.00	3.10	78.20	5,386.77	77.81	1,104.57	1,107.30	0.55	-0.21	9.05	
5,630.00	2.80	87.70	5,481.64	78.43	1,109.40	1,112.16	0.60	-0.32	10.00	
5,726.00	1.80	52.80	5,577.57	79.43	1,112.95	1,115.76	1.75	-1.04	-36.35	
5,821.00	1.30	64.50	5,672.53	80.80	1,115.11	1,118.01	0.62	-0.53	12.32	
5,916.00	0.90	74.30	5,767.51	81.46	1,116.80	1,119.74	0.46	-0.42	10.32	
6,012.00	0.70	96.30	5,863.50	81.60	1,118.11	1,121.06	0.38	-0.21	22.92	
6,107.00	0.80	136.90	5,958.50	81.06	1,119.14	1,122.05	0.56	0.11	42.74	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well Epperly 23D-23-692
Project:	Garfield Co., CO (NAD83)	TVD Reference:	WELL @ 5876.00usft
Site:	Epperly 23-692 Pad (Sec.23-T6S-R92W)	MD Reference:	WELL @ 5876.00usft
Well:	Epperly 23D-23-692	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,202.00	1.60	40.50	6,053.48	81.58	1,120.45	1,123.40	1.97	0.84	-101.47
6,297.00	1.40	41.40	6,148.45	83.46	1,122.08	1,125.15	0.21	-0.21	0.95
6,393.00	0.60	23.20	6,244.43	84.80	1,123.05	1,126.21	0.89	-0.83	-18.96
6,488.00	0.20	346.60	6,339.43	85.42	1,123.21	1,126.41	0.48	-0.42	-38.53
6,583.00	0.50	169.10	6,434.43	85.17	1,123.25	1,126.43	0.74	0.32	-186.84
6,679.00	0.90	165.30	6,530.42	84.03	1,123.52	1,126.62	0.42	0.42	-3.96
6,774.00	0.30	51.60	6,625.42	83.47	1,123.91	1,126.97	1.11	-0.63	-119.68
6,869.00	0.40	144.30	6,720.42	83.35	1,124.30	1,127.35	0.54	0.11	97.58
6,964.00	0.60	155.60	6,815.42	82.63	1,124.69	1,127.70	0.23	0.21	11.89
7,059.00	0.50	143.80	6,910.41	81.84	1,125.14	1,128.10	0.16	-0.11	-12.42
7,154.00	0.60	129.40	7,005.41	81.19	1,125.77	1,128.68	0.18	0.11	-15.16
7,250.00	0.80	124.40	7,101.40	80.49	1,126.72	1,129.57	0.22	0.21	-5.21
7,345.00	0.10	313.20	7,196.40	80.18	1,127.20	1,130.04	0.95	-0.74	-180.21
7,440.00	1.10	318.40	7,291.39	80.91	1,126.54	1,129.42	1.05	1.05	5.47
7,535.00	1.40	313.10	7,386.37	82.39	1,125.08	1,128.07	0.34	0.32	-5.58
7,631.00	1.20	305.30	7,482.34	83.77	1,123.41	1,126.49	0.28	-0.21	-8.12
Last Sharewell Survey									
7,726.00	1.00	283.30	7,577.33	84.54	1,121.79	1,124.93	0.49	-0.21	-23.16
Proj. to Bit									
7,809.00	1.00	283.30	7,660.31	84.87	1,120.38	1,123.54	0.00	0.00	0.00

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
795.20	795.16	9 5/8" Csg.	9-5/8	12-1/4

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
700.00	699.97	4.33	2.24	Tie-In Survey
878.00	877.94	4.91	5.62	First Sharewell Survey
7,726.00	7,577.33	84.54	1,121.79	Last Sharewell Survey
7,809.00	7,660.31	84.87	1,120.38	Proj. to Bit

Checked By: _____ Approved By: _____ Date: _____