



Bill Barrett Corporation

Bill Barrett Corp.

Garfield Co., CO (NAD83)

Scott 41C-36-692 Pad (Sec.30-T6S-R91W)

GGU 24B-30-691

Wellbore #1

Design: Wellbore #1

Standard Survey Report

09 April, 2012





Project: Garfield Co., CO (NAD83)
Site: Scott 41C-36-692 Pad (Sec.30-T6S-R91W)
Well: GGU 24B-30-691
Wellbore: Wellbore #1
Design: Design #4
Latitude: 39° 29' 32.665 N
Longitude: 107° 36' 18.875 W
Ground Level: 5922.00
WELL @ 5945.00usft



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 GGU 24B-30-691, True North
Vertical (TVD) Reference: WELL @ 5945.00usft
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: WELL @ 5945.00usft
Calculation Method: Minimum Curvature

WELL DETAILS: GGU 24B-30-691

+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude	Slot
0.00	0.00	1611121.906	2405922.281	5922.00	39° 29' 32.665 N	107° 36' 18.875 W	

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

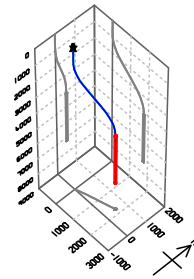
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GGU 24B-30-691 Tgt	4145.00	527.13	1757.60	1611608.166	2407691.622	39° 29' 37.874 N	107° 35' 56.454 W	Circle (Radius: 50.00)

SECTION DETAILS

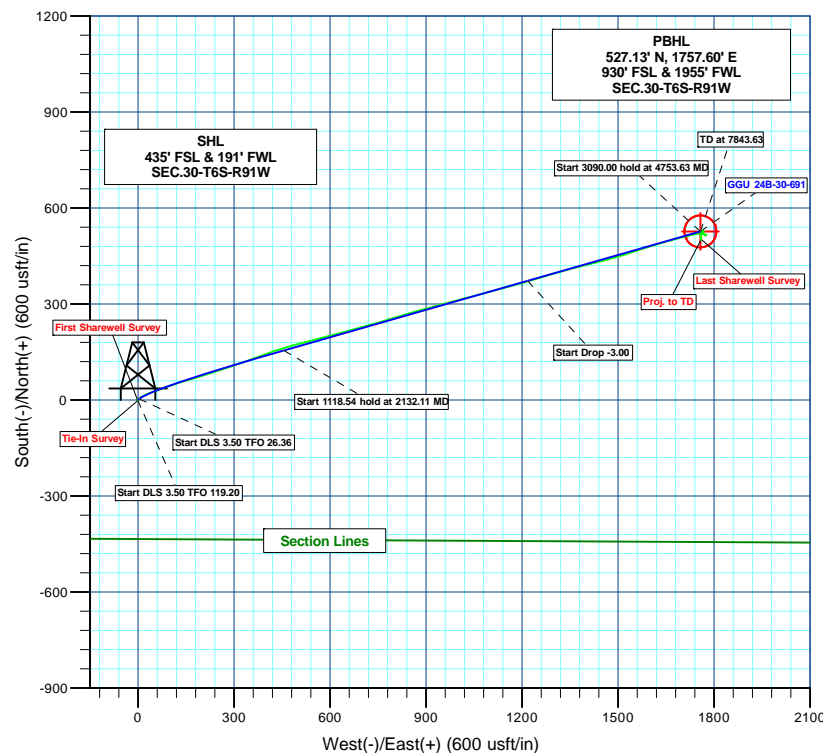
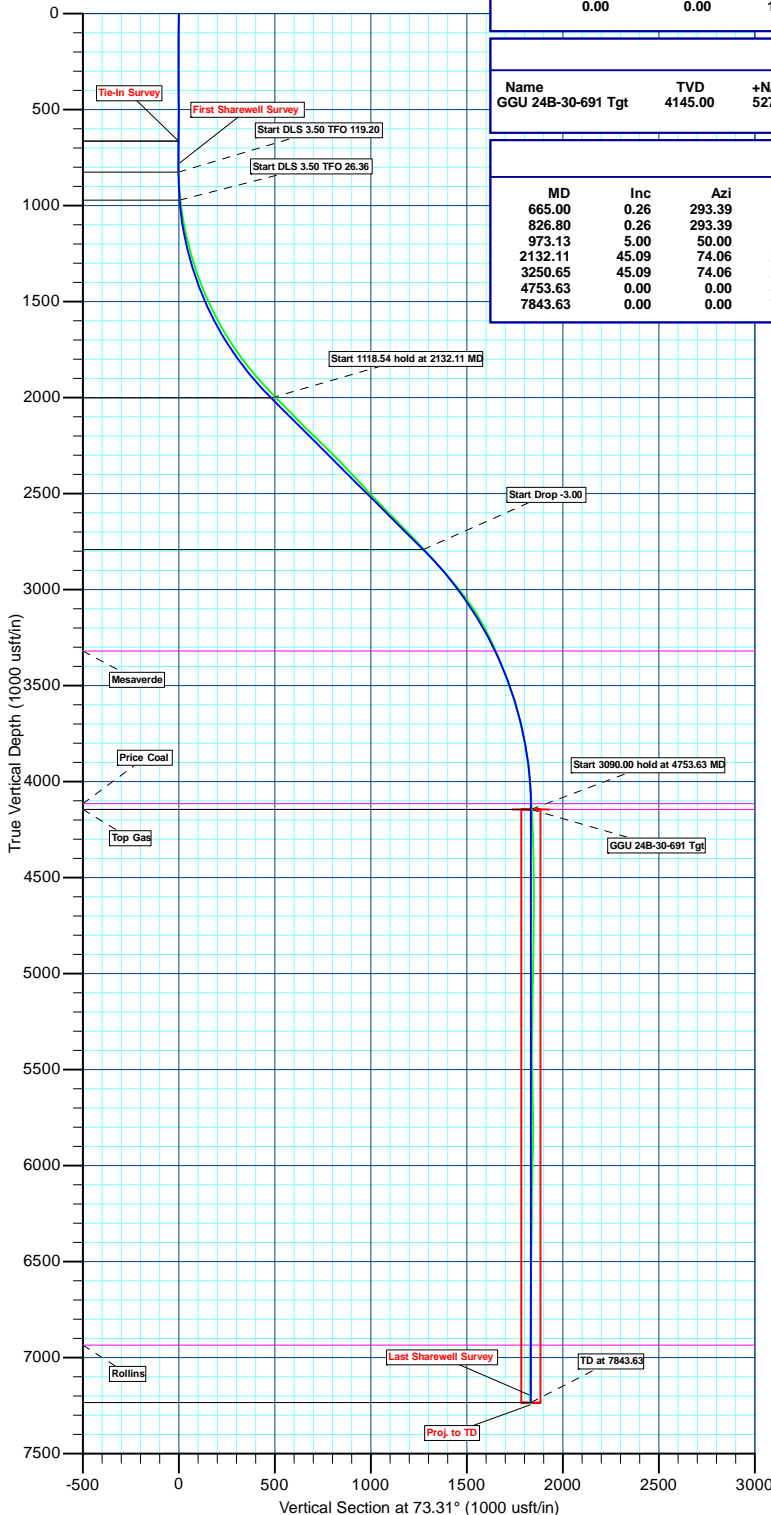
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Annotation
665.00	0.26	293.39	665.00	-0.78	-0.26	0.00	0.00	-0.48	Tie-In
826.80	0.26	293.39	826.80	-0.49	-0.94	0.00	0.00	-1.04	Start DLS 3.50 TFO 119.20
973.13	5.00	50.00	972.95	3.74	3.65	3.50	119.20	4.57	Start DLS 3.50 TFO 26.36
2132.11	45.09	74.06	2002.73	155.32	456.01	3.50	26.36	481.40	Start 1118.54 hold at 2132.11 MD
3250.65	45.09	74.06	2792.42	372.90	1217.70	0.00	0.00	1273.50	Start Drop -3.00
4753.63	0.00	0.00	4145.00	527.13	1757.60	3.00	180.00	1834.94	Start 3090.00 hold at 4753.63 MD
7843.63	0.00	0.00	7235.00	527.13	1757.60	0.00	0.00	1834.94	TD at 7843.63

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3320.00	3900.55	Mesaverde
4115.00	4723.63	Price Coal
4145.00	4753.63	Top Gas
6935.00	7543.63	Rollins



Azimuths to True North
Magnetic North: 10.08°
Magnetic Field
Strength: 52222.3snT
Dip Angle: 65.79°
Date: 2012/03/19
Model: IGRF2010



Plan: Design #4 (GGU 24B-30-691/Wellbore #1)

Created By: Bret Wolford Date: 9:05, April 09 2012

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well GGU 24B-30-691
Project:	Garfield Co., CO (NAD83)	TVD Reference:	WELL @ 5945.00usft
Site:	Scott 41C-36-692 Pad (Sec.30-T6S-R91W)	MD Reference:	WELL @ 5945.00usft
Well:	GGU 24B-30-691	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	Scott 41C-36-692 Pad (Sec.30-T6S-R91W)				
Site Position:		Northing:	1,611,121.743 usft	Latitude:	39° 29' 32.665 N
From:	Lat/Long	Easting:	2,405,929.899 usft	Longitude:	107° 36' 18.778 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.33 °

Well	GGU 24B-30-691					
Well Position	+N/-S	0.00 usft	Northing:	1,611,121.906 usft	Latitude:	39° 29' 32.665 N
	+E/-W	0.00 usft	Easting:	2,405,922.281 usft	Longitude:	107° 36' 18.875 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,922.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2012/03/19	10.08	65.79	52,222

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	73.31	

Survey Program	Date	2012/04/09			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
123.00	665.00	Survey #1 (Wellbore #1)	MWD	MWD - Standard	
665.00	7,849.00	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	
123.00	0.13	221.44	123.00	-0.10	-0.09	-0.12	0.11	0.11	0.00	
223.00	0.17	268.79	223.00	-0.19	-0.32	-0.36	0.13	0.04	47.35	
323.00	0.14	25.32	323.00	-0.09	-0.41	-0.42	0.26	-0.03	116.53	
423.00	0.23	134.47	423.00	-0.12	-0.22	-0.24	0.31	0.09	109.15	
523.00	0.22	170.59	523.00	-0.45	-0.04	-0.17	0.14	-0.01	36.12	
623.00	0.20	221.35	623.00	-0.77	-0.13	-0.34	0.18	-0.02	50.76	
Tie-In Survey										
665.00	0.26	293.39	665.00	-0.78	-0.26	-0.48	0.65	0.14	171.52	
First Sharewell Survey										
784.00	0.30	275.30	784.00	-0.65	-0.82	-0.97	0.08	0.03	-15.20	
876.00	2.70	45.10	875.96	0.90	0.48	0.72	3.15	2.61	141.09	

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well GGU 24B-30-691
Project:	Garfield Co., CO (NAD83)	TVD Reference:	WELL @ 5945.00usft
Site:	Scott 41C-36-692 Pad (Sec.30-T6S-R91W)	MD Reference:	WELL @ 5945.00usft
Well:	GGU 24B-30-691	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)
967.00	7.50	50.00	966.58	6.24	6.55	8.06	5.29	5.27	5.38
1,062.00	9.50	60.40	1,060.53	14.10	18.12	21.40	2.65	2.11	10.95
1,158.00	12.40	70.70	1,154.79	21.42	34.74	39.43	3.63	3.02	10.73
1,253.00	15.40	70.60	1,246.99	28.98	56.27	62.22	3.16	3.16	-0.11
1,348.00	18.40	69.50	1,337.88	38.43	82.21	89.79	3.18	3.16	-1.16
1,443.00	21.80	71.90	1,427.08	49.16	113.03	122.39	3.68	3.58	2.53
1,538.00	25.40	73.90	1,514.12	60.29	149.39	160.41	3.88	3.79	2.11
1,633.00	28.50	72.60	1,598.80	72.72	190.60	203.46	3.32	3.26	-1.37
1,728.00	31.80	72.20	1,680.93	87.16	236.08	251.16	3.48	3.47	-0.42
1,823.00	34.60	71.20	1,760.42	103.51	285.45	303.15	3.00	2.95	-1.05
1,918.00	38.10	70.50	1,836.92	121.99	338.63	359.40	3.71	3.68	-0.74
2,013.00	42.00	69.80	1,909.63	142.75	396.11	420.42	4.13	4.11	-0.74
2,109.00	44.60	73.80	1,979.50	163.25	458.64	486.21	3.94	2.71	4.17
2,204.00	44.20	74.90	2,047.38	181.19	522.64	552.66	0.91	-0.42	1.16
2,299.00	43.60	76.00	2,115.83	197.74	586.40	618.49	1.02	-0.63	1.16
2,394.00	46.30	74.20	2,183.06	215.02	651.24	685.56	3.14	2.84	-1.89
2,489.00	46.10	74.90	2,248.82	233.28	717.33	754.11	0.57	-0.21	0.74
2,584.00	44.10	73.70	2,315.87	251.48	782.11	821.38	2.29	-2.11	-1.26
2,679.00	43.70	73.40	2,384.32	270.13	845.28	887.26	0.47	-0.42	-0.32
2,774.00	42.50	75.10	2,453.69	287.76	907.75	952.15	1.76	-1.26	1.79
2,869.00	43.50	75.20	2,523.17	304.37	970.37	1,016.91	1.06	1.05	0.11
2,964.00	45.00	74.90	2,591.22	321.47	1,034.42	1,083.17	1.59	1.58	-0.32
3,060.00	44.10	75.60	2,659.63	338.62	1,099.54	1,150.47	1.07	-0.94	0.73
3,155.00	44.00	74.60	2,727.91	355.60	1,163.37	1,216.49	0.74	-0.11	-1.05
3,250.00	43.20	73.20	2,796.71	373.76	1,226.32	1,282.00	1.32	-0.84	-1.47
3,345.00	41.80	73.60	2,866.75	392.10	1,287.82	1,346.18	1.50	-1.47	0.42
3,440.00	41.00	75.30	2,938.01	408.95	1,348.34	1,408.98	1.45	-0.84	1.79
3,535.00	37.90	75.90	3,011.36	423.97	1,406.79	1,469.29	3.29	-3.26	0.63
3,630.00	34.50	75.30	3,088.01	437.91	1,461.13	1,525.34	3.60	-3.58	-0.63
3,725.00	29.60	73.50	3,168.50	451.41	1,509.68	1,575.73	5.25	-5.16	-1.89
3,820.00	26.40	71.00	3,252.38	464.95	1,552.16	1,620.30	3.59	-3.37	-2.63
3,915.00	21.70	73.70	3,339.11	476.76	1,589.01	1,658.99	5.08	-4.95	2.84
4,011.00	20.30	72.60	3,428.73	486.72	1,621.94	1,693.39	1.51	-1.46	-1.15
4,106.00	20.00	74.40	3,517.92	496.02	1,653.31	1,726.11	0.73	-0.32	1.89
4,201.00	16.90	75.00	3,608.02	503.97	1,682.30	1,756.17	3.27	-3.26	0.63
4,296.00	12.90	75.70	3,699.81	510.16	1,705.93	1,780.57	4.21	-4.21	0.74
4,391.00	11.20	76.10	3,792.71	515.00	1,725.16	1,800.39	1.79	-1.79	0.42
4,486.00	8.10	77.90	3,886.36	518.62	1,740.66	1,816.28	3.28	-3.26	1.89
4,581.00	5.40	88.70	3,980.69	520.12	1,751.68	1,827.26	3.13	-2.84	11.37
4,676.00	4.00	88.50	4,075.37	520.31	1,759.46	1,834.77	1.47	-1.47	-0.21
4,771.00	3.10	107.90	4,170.19	519.61	1,765.22	1,840.08	1.57	-0.95	20.42
4,866.00	3.60	120.90	4,265.03	517.29	1,770.22	1,844.21	0.95	0.53	13.68
4,962.00	1.60	119.80	4,360.93	515.07	1,773.97	1,847.16	2.08	-2.08	-1.15
5,057.00	1.10	14.90	4,455.91	515.30	1,775.36	1,848.55	2.28	-0.53	-110.42
5,152.00	1.10	20.70	4,550.89	517.03	1,775.91	1,849.58	0.12	0.00	6.11
5,247.00	0.80	278.90	4,645.89	517.98	1,775.58	1,849.54	1.56	-0.32	-107.16
5,342.00	0.60	183.00	4,740.88	517.59	1,774.90	1,848.77	1.10	-0.21	-100.95
5,437.00	1.80	178.70	4,835.86	515.60	1,774.91	1,848.21	1.27	1.26	-4.53
5,532.00	1.80	292.80	4,930.83	514.69	1,773.56	1,846.66	3.18	0.00	120.11
5,627.00	1.80	315.90	5,025.79	516.34	1,771.15	1,844.82	0.76	0.00	24.32
5,722.00	1.20	323.80	5,120.76	518.21	1,769.53	1,843.81	0.67	-0.63	8.32
5,817.00	1.70	299.90	5,215.73	519.72	1,767.72	1,842.51	0.82	0.53	-25.16
5,913.00	1.40	300.30	5,311.69	521.02	1,765.47	1,840.73	0.31	-0.31	0.42
6,008.00	0.40	225.90	5,406.68	521.37	1,764.23	1,839.64	1.42	-1.05	-78.32

Company:	Bill Barrett Corp.	Local Co-ordinate Reference:	Well GGU 24B-30-691
Project:	Garfield Co., CO (NAD83)	TVD Reference:	WELL @ 5945.00usft
Site:	Scott 41C-36-692 Pad (Sec.30-T6S-R91W)	MD Reference:	WELL @ 5945.00usft
Well:	GGU 24B-30-691	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)	
6,103.00	1.90	13.00	5,501.66	522.68	1,764.35	1,840.13	2.36	1.58	154.84	
6,198.00	2.20	40.10	5,596.61	525.61	1,765.87	1,842.43	1.06	0.32	28.53	
6,293.00	0.80	25.00	5,691.57	527.60	1,767.33	1,844.40	1.52	-1.47	-15.89	
6,388.00	1.50	127.90	5,786.56	527.44	1,768.59	1,845.56	1.95	0.74	108.32	
6,483.00	2.00	310.10	5,881.54	527.74	1,768.30	1,845.37	3.68	0.53	-187.16	
6,578.00	2.10	261.00	5,976.49	528.54	1,765.32	1,842.74	1.80	0.11	-51.68	
6,673.00	1.10	210.70	6,071.45	527.48	1,763.13	1,840.34	1.72	-1.05	-52.95	
6,768.00	0.90	141.70	6,166.44	526.11	1,763.13	1,839.95	1.20	-0.21	-72.63	
6,864.00	1.10	212.90	6,262.43	524.75	1,763.09	1,839.52	1.22	0.21	74.17	
6,959.00	1.50	210.60	6,357.41	522.91	1,761.97	1,837.92	0.42	0.42	-2.42	
7,054.00	1.40	206.40	6,452.38	520.80	1,760.82	1,836.21	0.15	-0.11	-4.42	
7,149.00	1.90	180.80	6,547.34	518.19	1,760.28	1,834.94	0.92	0.53	-26.95	
7,244.00	0.50	307.60	6,642.32	516.87	1,759.93	1,834.23	2.35	-1.47	133.47	
7,339.00	0.50	127.30	6,737.32	516.87	1,759.93	1,834.23	1.05	0.00	189.16	
7,434.00	2.10	196.50	6,832.30	514.95	1,759.77	1,833.52	2.08	1.68	72.84	
7,529.00	3.50	184.40	6,927.18	510.39	1,759.05	1,831.52	1.59	1.47	-12.74	
7,624.00	1.50	156.60	7,022.09	506.35	1,759.32	1,830.62	2.40	-2.11	-29.26	
7,719.00	1.20	169.00	7,117.06	504.24	1,760.00	1,830.67	0.44	-0.32	13.05	
Last Sharewell Survey										
7,799.00	1.70	191.30	7,197.04	502.25	1,759.93	1,830.03	0.93	0.62	27.87	
Proj. to TD										
7,849.00	1.70	191.30	7,247.02	500.80	1,759.64	1,829.33	0.00	0.00	0.00	

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
665.00	665.00	-0.78	-0.26	Tie-In Survey
784.00	784.00	-0.65	-0.82	First Sharewell Survey
7,799.00	7,197.04	502.25	1,759.93	Last Sharewell Survey
7,849.00	7,247.02	500.80	1,759.64	Proj. to TD

Checked By: _____	Approved By: _____	Date: _____
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