

# **BILL BARRETT CORP**

**WELD COUNTY, COLORADO**

**Pappenheim 6-62-23 Pad**

**Pappenheim 6-62-23-61H**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**27 March, 2013**



Bill Barrett Corporation

## COMPANY DETAILS: BILL BARRETT CORP

Calculation Method: Minimum Curvature  
Error System: ISCWSA  
Scan Method: Closest Approach 3D  
Error Surface: Elliptical Conic  
Warning Method: Error Ratio

## REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Pappenheim 6-62-23-61H, Grid North  
Vertical (TVD) Reference: KB @ 4718.0ft (Original Well Elev)  
Section (VS) Reference: Slot - (0.0N, 0.0E)  
Measured Depth Reference: KB @ 4718.0ft (Original Well Elev)  
Calculation Method: Minimum Curvature

## WELL DETAILS: Pappenheim 6-62-23-61H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1419852.86	3336154.64	40° 28' 46.596 N	104° 17' 29.652 W

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1291.6	5.83	54.46	1291.1	8.6	12.1	2.00	54.46	-7.5	
4	5232.5	5.83	54.46	5211.6	241.4	337.9	0.00	0.00	-209.9	
5	5524.1	0.00	0.00	5502.7	250.0	350.0	2.00	180.00	-217.4	
6	5724.1	0.00	0.00	5702.7	250.0	350.0	0.00	0.00	-217.4	
7	6717.5	90.30	179.97	6333.0	-383.6	350.3	9.09	179.97	413.6	61H LP
8	6760.1	90.30	179.34	6332.8	-426.2	350.5	1.50	-90.00	456.1	61H PBHL
9	10712.3	90.30	179.34	6312.1	-4378.1	396.4	0.00	0.00	4396.0	

## PROJECT DETAILS: WELD COUNTY, COLORADO

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Northern Zone

## FORMATION TOP DETAILS

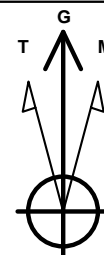
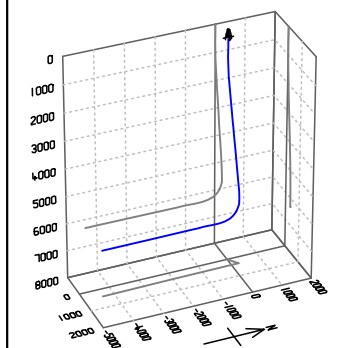
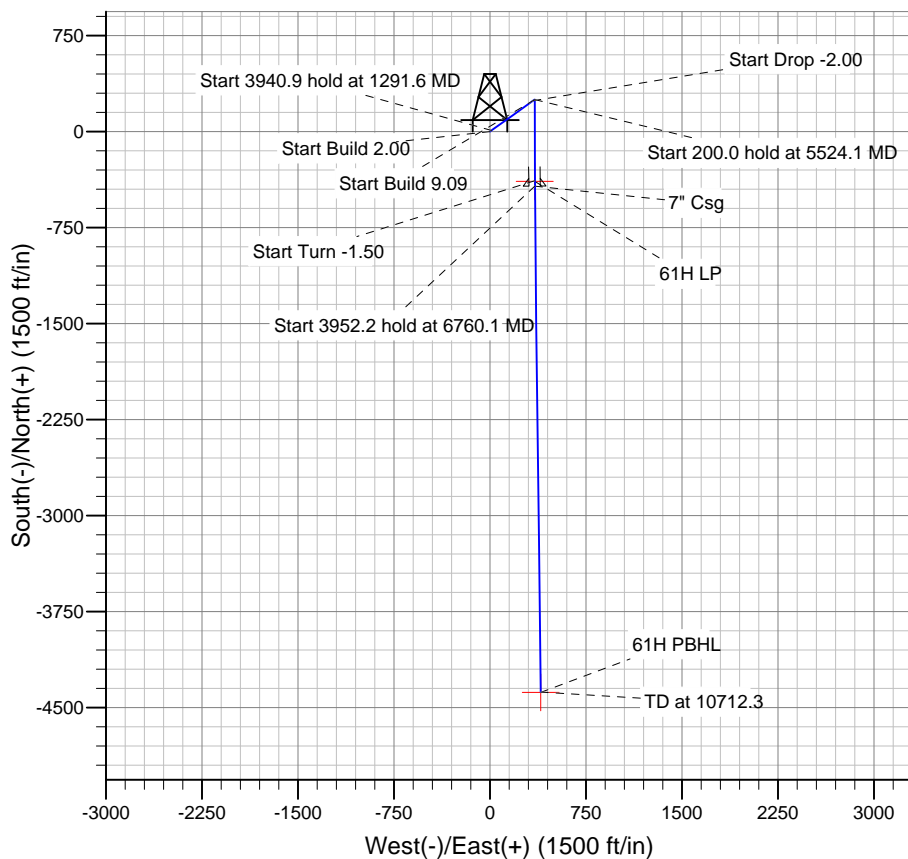
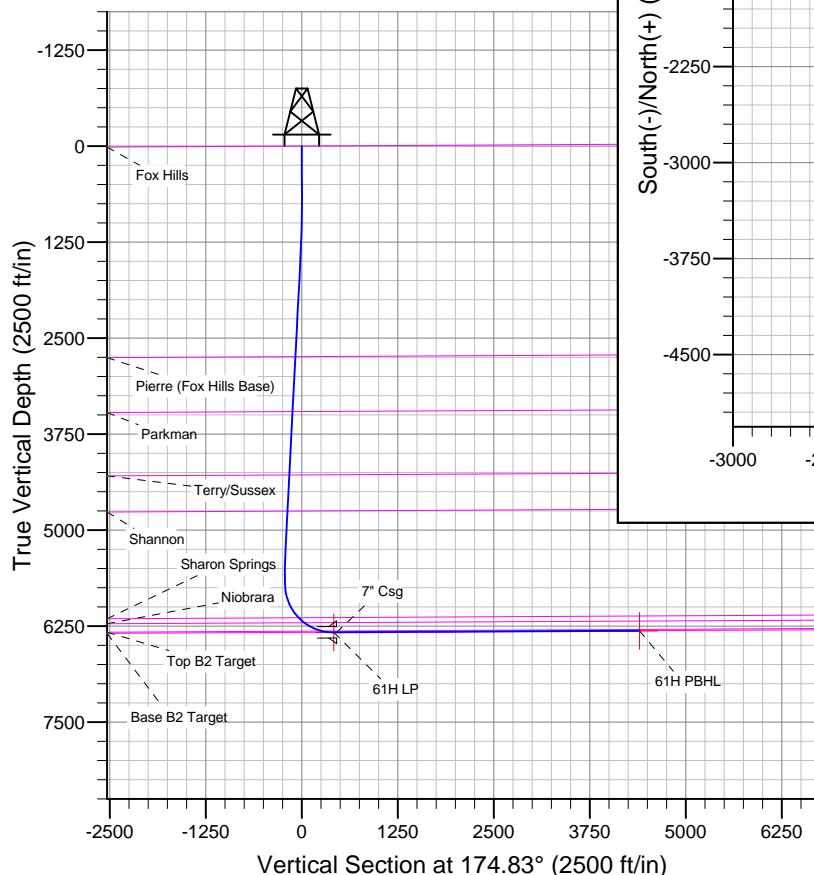
TVDPath	MDPath	Formation
2743.5	2751.5	Fox Hills
3458.7	3470.5	Pierre (Fox Hills Base)
4284.0	4300.0	Parkman
4754.1	4772.6	Terry/Sussex
6143.3	6212.0	Shannon
6208.0	6310.3	Sharon Springs
6316.7	6570.6	Niobrara
6331.2	6666.8	Top B2 Target
		Base B2 Target

## CASING DETAILS

TVD	MD	Name	Size
6332.8	6760.0	7" Csg	7

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
61H PBHL	6313.0	-4381.2	396.4	Point
61H LP	6333.0	-388.7	350.3	Point



Azimuths to Grid North  
True North: -0.78°  
Magnetic North: 7.59°

Magnetic Field  
Strength: 53035.6snT  
Dip Angle: 67.13°  
Date: 3/27/2013  
Model: IGRF2010

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-61H
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4718.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4718.0ft (Original Well Elev)
<b>Site:</b>	Pappenheim 6-62-23 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Pappenheim 6-62-23-61H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	WELD 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 Northern Zone		

Site		Pappenheim 6-62-23 Pad				
Site Position:		Northing:	1,419,851.61 ft	Latitude:	40° 28' 46.596 N	
From:	Lat/Long	Easting:	3,336,062.84 ft	Longitude:	104° 17' 30.840 W	
Position Uncertainty:		0.0 ft	Slot Radius:	"	Grid Convergence:	0.78 °

Well							Pappenheim 6-62-23-61H						
Well Position		+N-S	1.2 ft	Northing:		1,419,852.86 ft		Latitude:		40° 28' 46.596 N			
		+E-W	91.8 ft									Easting:	
Position Uncertainty		0.0 ft	Wellhead Elevation:		ft		Ground Level:		4,698.0 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>
	IGRF2010	3/27/2013	8.37	67.13	53,036

<b>Design</b>	Design #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	174.83	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,291.6	5.83	54.46	1,291.1	8.6	12.1	2.00	2.00	0.00	54.46	
5,232.5	5.83	54.46	5,211.6	241.4	337.9	0.00	0.00	0.00	0.00	
5,524.1	0.00	0.00	5,502.7	250.0	350.0	2.00	-2.00	0.00	180.00	
5,724.1	0.00	0.00	5,702.7	250.0	350.0	0.00	0.00	0.00	0.00	
6,717.5	90.30	179.97	6,333.0	-383.6	350.3	9.09	9.09	0.00	179.97	61H LP
6,760.1	90.30	179.34	6,332.8	-426.2	350.5	1.50	0.00	-1.50	-90.00	61H PBHL
10,712.3	90.30	179.34	6,312.1	-4,378.1	396.4	0.00	0.00	0.00	0.00	

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<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4718.0ft (Original Well Elev)
<b>Site:</b>	Pappenheim 6-62-23 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Pappenheim 6-62-23-61H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	2.00	54.46	1,100.0	1.0	1.4	-0.9	2.00	2.00	0.00
1,200.0	4.00	54.46	1,199.8	4.1	5.7	-3.5	2.00	2.00	0.00
1,291.6	5.83	54.46	1,291.1	8.6	12.1	-7.5	2.00	2.00	0.00
1,300.0	5.83	54.46	1,299.5	9.1	12.8	-7.9	0.00	0.00	0.00
1,400.0	5.83	54.46	1,398.9	15.0	21.0	-13.1	0.00	0.00	0.00
1,500.0	5.83	54.46	1,498.4	20.9	29.3	-18.2	0.00	0.00	0.00
1,600.0	5.83	54.46	1,597.9	26.8	37.6	-23.3	0.00	0.00	0.00
1,700.0	5.83	54.46	1,697.4	32.7	45.8	-28.5	0.00	0.00	0.00
1,800.0	5.83	54.46	1,796.9	38.6	54.1	-33.6	0.00	0.00	0.00
1,900.0	5.83	54.46	1,896.3	44.6	62.4	-38.7	0.00	0.00	0.00
2,000.0	5.83	54.46	1,995.8	50.5	70.6	-43.9	0.00	0.00	0.00
2,100.0	5.83	54.46	2,095.3	56.4	78.9	-49.0	0.00	0.00	0.00
2,200.0	5.83	54.46	2,194.8	62.3	87.2	-54.2	0.00	0.00	0.00
2,300.0	5.83	54.46	2,294.3	68.2	95.4	-59.3	0.00	0.00	0.00
2,400.0	5.83	54.46	2,393.8	74.1	103.7	-64.4	0.00	0.00	0.00
2,500.0	5.83	54.46	2,493.2	80.0	112.0	-69.6	0.00	0.00	0.00
2,600.0	5.83	54.46	2,592.7	85.9	120.3	-74.7	0.00	0.00	0.00
2,700.0	5.83	54.46	2,692.2	91.8	128.5	-79.8	0.00	0.00	0.00
2,751.5	5.83	54.46	2,743.5	94.8	132.8	-82.5	0.00	0.00	0.00
<b>Pierre (Fox Hills Base)</b>									
2,800.0	5.83	54.46	2,791.7	97.7	136.8	-85.0	0.00	0.00	0.00
2,900.0	5.83	54.46	2,891.2	103.6	145.1	-90.1	0.00	0.00	0.00
3,000.0	5.83	54.46	2,990.7	109.5	153.3	-95.3	0.00	0.00	0.00
3,100.0	5.83	54.46	3,090.1	115.4	161.6	-100.4	0.00	0.00	0.00
3,200.0	5.83	54.46	3,189.6	121.3	169.9	-105.5	0.00	0.00	0.00
3,300.0	5.83	54.46	3,289.1	127.2	178.1	-110.7	0.00	0.00	0.00
3,400.0	5.83	54.46	3,388.6	133.1	186.4	-115.8	0.00	0.00	0.00
3,470.5	5.83	54.46	3,458.7	137.3	192.2	-119.4	0.00	0.00	0.00
<b>Parkman</b>									
3,500.0	5.83	54.46	3,488.1	139.1	194.7	-120.9	0.00	0.00	0.00
3,600.0	5.83	54.46	3,587.5	145.0	202.9	-126.1	0.00	0.00	0.00
3,700.0	5.83	54.46	3,687.0	150.9	211.2	-131.2	0.00	0.00	0.00
3,800.0	5.83	54.46	3,786.5	156.8	219.5	-136.3	0.00	0.00	0.00
3,900.0	5.83	54.46	3,886.0	162.7	227.8	-141.5	0.00	0.00	0.00
4,000.0	5.83	54.46	3,985.5	168.6	236.0	-146.6	0.00	0.00	0.00
4,100.0	5.83	54.46	4,085.0	174.5	244.3	-151.8	0.00	0.00	0.00
4,200.0	5.83	54.46	4,184.4	180.4	252.6	-156.9	0.00	0.00	0.00
4,300.0	5.83	54.46	4,284.0	186.3	260.8	-162.0	0.00	0.00	0.00
<b>Terry/Sussex</b>									
4,400.0	5.83	54.46	4,383.4	192.2	269.1	-167.2	0.00	0.00	0.00
4,500.0	5.83	54.46	4,482.9	198.1	277.4	-172.3	0.00	0.00	0.00
4,600.0	5.83	54.46	4,582.4	204.0	285.6	-177.4	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-61H
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4718.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4718.0ft (Original Well Elev)
<b>Site:</b>	Pappenheim 6-62-23 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Pappenheim 6-62-23-61H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

Planned 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)
4,700.0	5.83	54.46	4,681.9	209.9	293.9	-182.6	0.00	0.00	0.00
4,772.6	5.83	54.46	4,754.1	214.2	299.9	-186.3	0.00	0.00	0.00
<b>Shannon</b>									
4,800.0	5.83	54.46	4,781.3	215.8	302.2	-187.7	0.00	0.00	0.00
4,900.0	5.83	54.46	4,880.8	221.7	310.4	-192.8	0.00	0.00	0.00
5,000.0	5.83	54.46	4,980.3	227.6	318.7	-198.0	0.00	0.00	0.00
5,100.0	5.83	54.46	5,079.8	233.6	327.0	-203.1	0.00	0.00	0.00
5,200.0	5.83	54.46	5,179.3	239.5	335.2	-208.3	0.00	0.00	0.00
5,232.5	5.83	54.46	5,211.6	241.4	337.9	-209.9	0.00	0.00	0.00
5,300.0	4.48	54.46	5,278.8	244.9	342.9	-213.0	2.00	-2.00	0.00
5,400.0	2.48	54.46	5,378.6	248.4	347.8	-216.1	2.00	-2.00	0.00
5,500.0	0.48	54.46	5,478.6	249.9	349.9	-217.4	2.00	-2.00	0.00
5,524.1	0.00	0.00	5,502.7	250.0	350.0	-217.4	2.00	-2.00	0.00
5,600.0	0.00	0.00	5,578.6	250.0	350.0	-217.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,678.6	250.0	350.0	-217.4	0.00	0.00	0.00
5,724.1	0.00	0.00	5,702.7	250.0	350.0	-217.4	0.00	0.00	0.00
5,800.0	6.90	179.97	5,778.4	245.4	350.0	-212.9	9.09	9.09	0.00
5,900.0	15.99	179.97	5,876.3	225.6	350.0	-193.1	9.09	9.09	0.00
6,000.0	25.08	179.97	5,969.9	190.6	350.0	-158.2	9.09	9.09	0.00
6,100.0	34.17	179.97	6,056.7	141.2	350.0	-109.1	9.09	9.09	0.00
6,200.0	43.26	179.97	6,134.7	78.7	350.1	-46.8	9.09	9.09	0.00
6,212.0	44.35	179.97	6,143.3	70.4	350.1	-38.5	9.09	9.09	0.00
<b>Sharon Springs</b>									
6,300.0	52.35	179.97	6,201.7	4.7	350.1	26.9	9.09	9.09	0.00
6,310.3	53.28	179.97	6,208.0	-3.5	350.1	35.0	9.09	9.09	0.00
<b>Niobrara</b>									
6,400.0	61.44	179.97	6,256.3	-79.0	350.1	110.2	9.09	9.09	0.00
6,500.0	70.53	179.97	6,297.0	-170.2	350.2	201.1	9.09	9.09	0.00
6,570.6	76.95	179.97	6,316.7	-238.0	350.2	268.6	9.09	9.09	0.00
<b>Top B2 Target</b>									
6,600.0	79.62	179.97	6,322.7	-266.7	350.2	297.2	9.09	9.09	0.00
6,666.8	85.69	179.97	6,331.2	-333.0	350.3	363.2	9.09	9.09	0.00
<b>Base B2 Target</b>									
6,700.0	88.71	179.97	6,332.9	-366.1	350.3	396.2	9.09	9.09	0.00
6,717.5	90.30	179.97	6,333.0	-383.6	350.3	413.6	9.09	9.09	0.00
6,722.6	90.30	179.90	6,333.0	-388.7	350.3	418.7	1.50	0.00	-1.50
<b>61H LP</b>									
6,760.0	90.30	179.34	6,332.8	-426.1	350.5	456.0	1.50	0.00	-1.50
<b>7" Csg</b>									
6,760.1	90.30	179.34	6,332.8	-426.2	350.5	456.1	1.50	0.00	-1.50
6,800.0	90.30	179.34	6,332.6	-466.1	351.0	495.9	0.00	0.00	0.00
6,900.0	90.30	179.34	6,332.1	-566.1	352.2	595.5	0.00	0.00	0.00
7,000.0	90.30	179.34	6,331.5	-666.1	353.3	695.2	0.00	0.00	0.00
7,100.0	90.30	179.34	6,331.0	-766.1	354.5	794.9	0.00	0.00	0.00
7,200.0	90.30	179.34	6,330.5	-866.1	355.6	894.6	0.00	0.00	0.00
7,300.0	90.30	179.34	6,330.0	-966.1	356.8	994.3	0.00	0.00	0.00
7,400.0	90.30	179.34	6,329.4	-1,066.1	358.0	1,094.0	0.00	0.00	0.00
7,500.0	90.30	179.34	6,328.9	-1,166.0	359.1	1,193.7	0.00	0.00	0.00
7,600.0	90.30	179.34	6,328.4	-1,266.0	360.3	1,293.4	0.00	0.00	0.00
7,700.0	90.30	179.34	6,327.9	-1,366.0	361.4	1,393.1	0.00	0.00	0.00
7,800.0	90.30	179.34	6,327.3	-1,466.0	362.6	1,492.7	0.00	0.00	0.00
7,900.0	90.30	179.34	6,326.8	-1,566.0	363.8	1,592.4	0.00	0.00	0.00
8,000.0	90.30	179.34	6,326.3	-1,666.0	364.9	1,692.1	0.00	0.00	0.00

# Bill Barrett Corp

## Planning Report

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<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4718.0ft (Original Well Elev)
<b>Site:</b>	Pappenheim 6-62-23 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Pappenheim 6-62-23-61H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

### Planned 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)
8,100.0	90.30	179.34	6,325.8	-1,766.0	366.1	1,791.8	0.00	0.00	0.00
8,200.0	90.30	179.34	6,325.2	-1,866.0	367.2	1,891.5	0.00	0.00	0.00
8,300.0	90.30	179.34	6,324.7	-1,966.0	368.4	1,991.2	0.00	0.00	0.00
8,400.0	90.30	179.34	6,324.2	-2,066.0	369.6	2,090.9	0.00	0.00	0.00
8,500.0	90.30	179.34	6,323.7	-2,166.0	370.7	2,190.6	0.00	0.00	0.00
8,600.0	90.30	179.34	6,323.2	-2,266.0	371.9	2,290.3	0.00	0.00	0.00
8,700.0	90.30	179.34	6,322.6	-2,366.0	373.0	2,389.9	0.00	0.00	0.00
8,800.0	90.30	179.34	6,322.1	-2,465.9	374.2	2,489.6	0.00	0.00	0.00
8,900.0	90.30	179.34	6,321.6	-2,565.9	375.4	2,589.3	0.00	0.00	0.00
9,000.0	90.30	179.34	6,321.1	-2,665.9	376.5	2,689.0	0.00	0.00	0.00
9,100.0	90.30	179.34	6,320.5	-2,765.9	377.7	2,788.7	0.00	0.00	0.00
9,200.0	90.30	179.34	6,320.0	-2,865.9	378.8	2,888.4	0.00	0.00	0.00
9,300.0	90.30	179.34	6,319.5	-2,965.9	380.0	2,988.1	0.00	0.00	0.00
9,400.0	90.30	179.34	6,319.0	-3,065.9	381.1	3,087.8	0.00	0.00	0.00
9,500.0	90.30	179.34	6,318.4	-3,165.9	382.3	3,187.5	0.00	0.00	0.00
9,600.0	90.30	179.34	6,317.9	-3,265.9	383.5	3,287.2	0.00	0.00	0.00
9,700.0	90.30	179.34	6,317.4	-3,365.9	384.6	3,386.8	0.00	0.00	0.00
9,800.0	90.30	179.34	6,316.9	-3,465.9	385.8	3,486.5	0.00	0.00	0.00
9,900.0	90.30	179.34	6,316.3	-3,565.9	386.9	3,586.2	0.00	0.00	0.00
10,000.0	90.30	179.34	6,315.8	-3,665.8	388.1	3,685.9	0.00	0.00	0.00
10,100.0	90.30	179.34	6,315.3	-3,765.8	389.3	3,785.6	0.00	0.00	0.00
10,200.0	90.30	179.34	6,314.8	-3,865.8	390.4	3,885.3	0.00	0.00	0.00
10,300.0	90.30	179.34	6,314.3	-3,965.8	391.6	3,985.0	0.00	0.00	0.00
10,400.0	90.30	179.34	6,313.7	-4,065.8	392.7	4,084.7	0.00	0.00	0.00
10,500.0	90.30	179.34	6,313.2	-4,165.8	393.9	4,184.4	0.00	0.00	0.00
10,600.0	90.30	179.34	6,312.7	-4,265.8	395.1	4,284.0	0.00	0.00	0.00
10,700.0	90.30	179.34	6,312.2	-4,365.8	396.2	4,383.7	0.00	0.00	0.00
10,712.3	90.30	179.34	6,312.1	-4,378.1	396.4	4,396.0	0.00	0.00	0.00

61H PBHL

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,760.0	6,332.8	7" Csg	7	8-3/4

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	0.0	Fox Hills		-0.30	179.34
2,751.5	2,743.0	Pierre (Fox Hills Base)		-0.30	179.34
3,470.5	3,458.0	Parkman		-0.30	179.34
4,300.0	4,283.0	Terry/Sussex		-0.30	179.34
4,772.6	4,753.0	Shannon		-0.30	179.34
6,212.0	6,143.0	Sharon Springs		-0.30	179.34
6,310.3	6,208.0	Niobrara		-0.30	179.34
6,570.6	6,318.0	Top B2 Target		-0.30	179.34
6,666.8	6,333.0	Base B2 Target		-0.30	179.34

**Bill Barrett Corp**  
Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-61H
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4718.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4718.0ft (Original Well Elev)
<b>Site:</b>	Pappenheim 6-62-23 Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Pappenheim 6-62-23-61H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		