

# **BILL BARRETT CORP**

**WELD COUNTY, COLORADO**

**Pappenheim 6-62-23 Pad**

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

**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 6-62-23-62H, 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 6-62-23-62H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1419852.55	3336132.38	40° 28' 46.596 N	104° 17' 29.940 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	1200.3	4.01	322.83	1200.1	5.6	-4.2	2.00	322.83	-5.4	
4	5311.5	4.01	322.83	5301.3	234.4	-177.8	0.00	0.00	-229.1	
5	5511.8	0.00	0.00	5501.4	240.0	-182.0	2.00	180.00	-234.5	
6	5711.8	0.00	0.00	5701.4	240.0	-182.0	0.00	0.00	-234.5	
7	6715.1	90.30	179.65	6338.0	-399.9	-178.1	9.00	179.65	405.0	62H LP
8	6722.0	90.30	179.65	6338.0	-406.8	-178.1	0.00	0.00	411.9	62H LP
9	6745.6	90.30	179.30	6337.9	-430.4	-177.9	1.50	-90.00	435.5	62H PBHL
10	10691.6	90.30	179.30	6317.2	-4376.1	-129.6	0.00	0.00	4378.0	

## 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

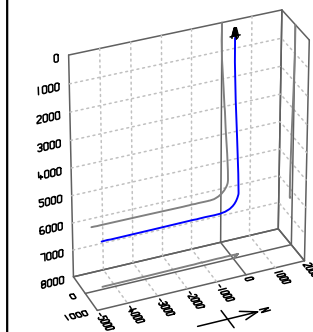
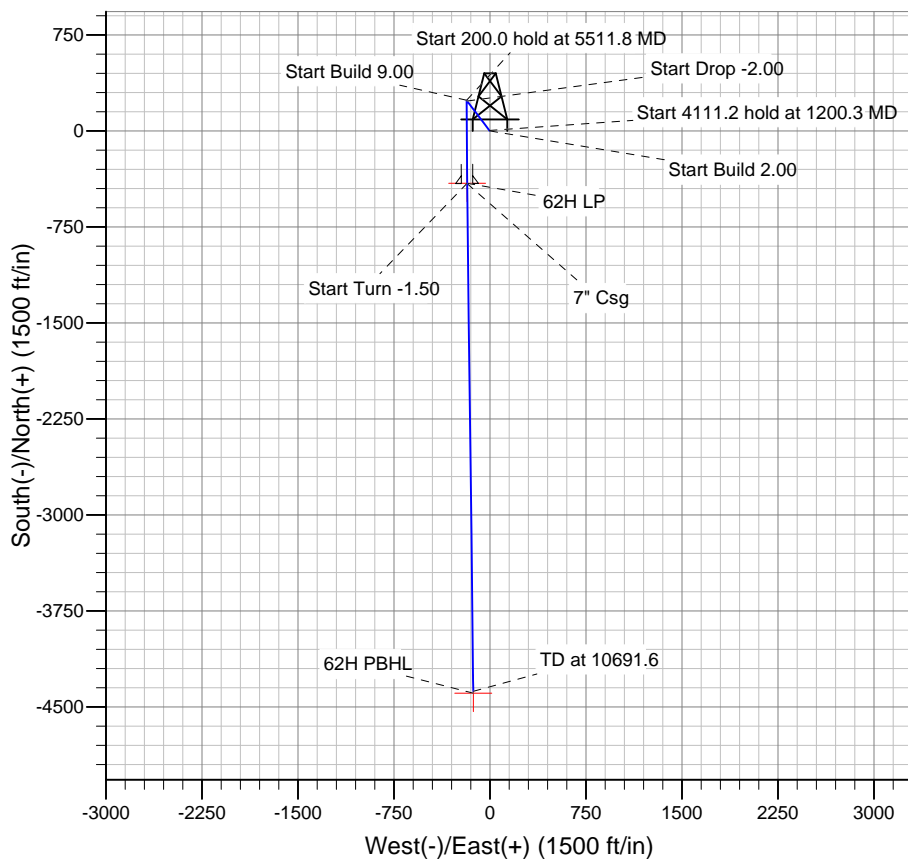
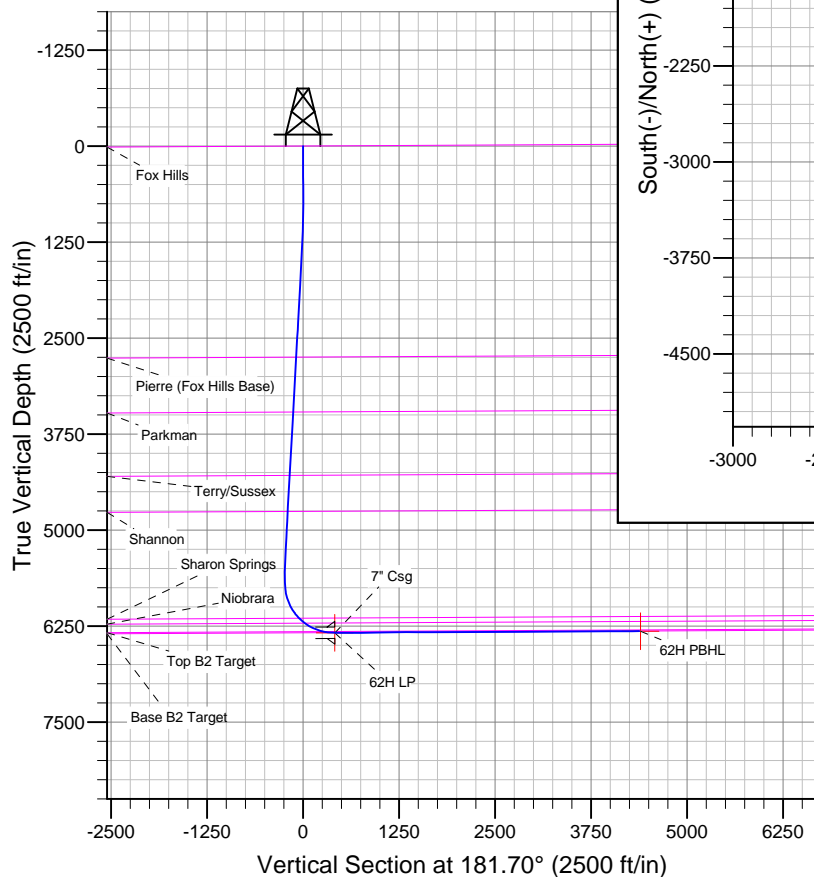
TVDPath	MDPath	Formation
2748.5	2752.4	Fox Hills
3463.7	3469.4	Pierre (Fox Hills Base)
4288.9	4296.7	Parkman
4759.1	4768.0	Terry/Sussex
6148.3	6207.2	Shannon
6212.9	6305.8	Sharon Springs
6321.7	6567.2	Niobrara
6336.2	6663.4	Top B2 Target
		Base B2 Target

## CASING DETAILS

TVD	MD	Name	Size
6338.0	6725.0	7" Csg	7

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
62H PBHL	6318.0	-4392.0	-129.4	Point
62H LP	6338.0	-406.8	-178.1	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 6-62-23-62H
<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 6-62-23-62H	<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:	3,336,062.84ft	Longitude:	104° 17' 30.840 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.78 °

Well		Pappenheim 6-62-23-62H				
Well Position	+N-S	0.9 ft	Northing:	1,419,852.55 ft	Latitude:	40° 28' 46.596 N
	+E-W	69.5 ft	Easting:	3,336,132.38 ft	Longitude:	104° 17' 29.940 W
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	181.70

<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	
1,200.3	4.01	322.83	1,200.1	5.6	-4.2	2.00	2.00	0.00	322.83	
5,311.5	4.01	322.83	5,301.3	234.4	-177.8	0.00	0.00	0.00	0.00	
5,511.8	0.00	0.00	5,501.4	240.0	-182.0	2.00	-2.00	0.00	180.00	
5,711.8	0.00	0.00	5,701.4	240.0	-182.0	0.00	0.00	0.00	0.00	
6,715.1	90.30	179.65	6,338.0	-399.9	-178.1	9.00	9.00	0.00	179.65	62H LP
6,722.0	90.30	179.65	6,338.0	-406.8	-178.1	0.00	0.00	0.00	0.00	62H LP
6,745.6	90.30	179.30	6,337.9	-430.4	-177.9	1.50	0.00	-1.50	-90.00	62H PBHL
10,691.6	90.30	179.30	6,317.2	-4,376.1	-129.6	0.00	0.00	0.00	0.00	

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## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-62H
<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 6-62-23-62H	<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	322.83	1,100.0	1.4	-1.1	-1.4	2.00	2.00	0.00
1,200.0	4.00	322.83	1,199.8	5.6	-4.2	-5.4	2.00	2.00	0.00
1,200.3	4.01	322.83	1,200.1	5.6	-4.2	-5.4	2.00	2.00	0.00
1,300.0	4.01	322.83	1,299.6	11.1	-8.4	-10.9	0.00	0.00	0.00
1,400.0	4.01	322.83	1,399.3	16.7	-12.7	-16.3	0.00	0.00	0.00
1,500.0	4.01	322.83	1,499.1	22.3	-16.9	-21.8	0.00	0.00	0.00
1,600.0	4.01	322.83	1,598.9	27.8	-21.1	-27.2	0.00	0.00	0.00
1,700.0	4.01	322.83	1,698.6	33.4	-25.3	-32.6	0.00	0.00	0.00
1,800.0	4.01	322.83	1,798.4	39.0	-29.5	-38.1	0.00	0.00	0.00
1,900.0	4.01	322.83	1,898.1	44.5	-33.8	-43.5	0.00	0.00	0.00
2,000.0	4.01	322.83	1,997.9	50.1	-38.0	-48.9	0.00	0.00	0.00
2,100.0	4.01	322.83	2,097.6	55.7	-42.2	-54.4	0.00	0.00	0.00
2,200.0	4.01	322.83	2,197.4	61.2	-46.4	-59.8	0.00	0.00	0.00
2,300.0	4.01	322.83	2,297.2	66.8	-50.7	-65.3	0.00	0.00	0.00
2,400.0	4.01	322.83	2,396.9	72.4	-54.9	-70.7	0.00	0.00	0.00
2,500.0	4.01	322.83	2,496.7	77.9	-59.1	-76.1	0.00	0.00	0.00
2,600.0	4.01	322.83	2,596.4	83.5	-63.3	-81.6	0.00	0.00	0.00
2,700.0	4.01	322.83	2,696.2	89.1	-67.5	-87.0	0.00	0.00	0.00
2,752.4	4.01	322.83	2,748.5	92.0	-69.7	-89.9	0.00	0.00	0.00
<b>Pierre (Fox Hills Base)</b>									
2,800.0	4.01	322.83	2,795.9	94.6	-71.8	-92.5	0.00	0.00	0.00
2,900.0	4.01	322.83	2,895.7	100.2	-76.0	-97.9	0.00	0.00	0.00
3,000.0	4.01	322.83	2,995.4	105.8	-80.2	-103.3	0.00	0.00	0.00
3,100.0	4.01	322.83	3,095.2	111.3	-84.4	-108.8	0.00	0.00	0.00
3,200.0	4.01	322.83	3,195.0	116.9	-88.6	-114.2	0.00	0.00	0.00
3,300.0	4.01	322.83	3,294.7	122.5	-92.9	-119.7	0.00	0.00	0.00
3,400.0	4.01	322.83	3,394.5	128.0	-97.1	-125.1	0.00	0.00	0.00
3,469.4	4.01	322.83	3,463.7	131.9	-100.0	-128.9	0.00	0.00	0.00
<b>Parkman</b>									
3,500.0	4.01	322.83	3,494.2	133.6	-101.3	-130.5	0.00	0.00	0.00
3,600.0	4.01	322.83	3,594.0	139.2	-105.5	-136.0	0.00	0.00	0.00
3,700.0	4.01	322.83	3,693.7	144.7	-109.7	-141.4	0.00	0.00	0.00
3,800.0	4.01	322.83	3,793.5	150.3	-114.0	-146.8	0.00	0.00	0.00
3,900.0	4.01	322.83	3,893.2	155.9	-118.2	-152.3	0.00	0.00	0.00
4,000.0	4.01	322.83	3,993.0	161.4	-122.4	-157.7	0.00	0.00	0.00
4,100.0	4.01	322.83	4,092.8	167.0	-126.6	-163.2	0.00	0.00	0.00
4,200.0	4.01	322.83	4,192.5	172.6	-130.9	-168.6	0.00	0.00	0.00
4,296.7	4.01	322.83	4,288.9	177.9	-134.9	-173.9	0.00	0.00	0.00
<b>Terry/Sussex</b>									
4,300.0	4.01	322.83	4,292.3	178.1	-135.1	-174.0	0.00	0.00	0.00
4,400.0	4.01	322.83	4,392.0	183.7	-139.3	-179.5	0.00	0.00	0.00
4,500.0	4.01	322.83	4,491.8	189.3	-143.5	-184.9	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-62H
<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 6-62-23-62H	<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)
4,600.0	4.01	322.83	4,591.5	194.8	-147.7	-190.4	0.00	0.00	0.00
4,700.0	4.01	322.83	4,691.3	200.4	-152.0	-195.8	0.00	0.00	0.00
4,768.0	4.01	322.83	4,759.1	204.2	-154.8	-199.5	0.00	0.00	0.00
<b>Shannon</b>									
4,800.0	4.01	322.83	4,791.0	206.0	-156.2	-201.2	0.00	0.00	0.00
4,900.0	4.01	322.83	4,890.8	211.5	-160.4	-206.7	0.00	0.00	0.00
5,000.0	4.01	322.83	4,990.6	217.1	-164.6	-212.1	0.00	0.00	0.00
5,100.0	4.01	322.83	5,090.3	222.7	-168.8	-217.6	0.00	0.00	0.00
5,200.0	4.01	322.83	5,190.1	228.2	-173.1	-223.0	0.00	0.00	0.00
5,300.0	4.01	322.83	5,289.8	233.8	-177.3	-228.4	0.00	0.00	0.00
5,311.5	4.01	322.83	5,301.3	234.4	-177.8	-229.1	0.00	0.00	0.00
5,400.0	2.24	322.83	5,389.7	238.3	-180.7	-232.8	2.00	-2.00	0.00
5,500.0	0.24	322.83	5,489.6	240.0	-182.0	-234.5	2.00	-2.00	0.00
5,511.8	0.00	0.00	5,501.4	240.0	-182.0	-234.5	2.00	-2.00	0.00
5,600.0	0.00	0.00	5,589.6	240.0	-182.0	-234.5	0.00	0.00	0.00
5,700.0	0.00	0.00	5,689.6	240.0	-182.0	-234.5	0.00	0.00	0.00
5,711.8	0.00	0.00	5,701.4	240.0	-182.0	-234.5	0.00	0.00	0.00
5,800.0	7.94	179.65	5,789.3	233.9	-182.0	-228.4	9.00	9.00	0.00
5,900.0	16.94	179.65	5,886.9	212.4	-181.8	-206.9	9.00	9.00	0.00
6,000.0	25.94	179.65	5,979.9	175.9	-181.6	-170.4	9.00	9.00	0.00
6,100.0	34.94	179.65	6,066.0	125.2	-181.3	-119.8	9.00	9.00	0.00
6,200.0	43.94	179.65	6,143.2	61.8	-180.9	-56.4	9.00	9.00	0.00
6,207.2	44.59	179.65	6,148.3	56.8	-180.9	-51.4	9.00	9.00	0.00
<b>Sharon Springs</b>									
6,300.0	52.94	179.65	6,209.4	-13.0	-180.5	18.3	9.00	9.00	0.00
6,305.8	53.46	179.65	6,212.9	-17.6	-180.4	23.0	9.00	9.00	0.00
<b>Niobrara</b>									
6,400.0	61.94	179.65	6,263.2	-97.2	-180.0	102.4	9.00	9.00	0.00
6,500.0	70.94	179.65	6,303.1	-188.7	-179.4	194.0	9.00	9.00	0.00
6,567.2	76.99	179.65	6,321.7	-253.3	-179.0	258.5	9.00	9.00	0.00
<b>Top B2 Target</b>									
6,600.0	79.94	179.65	6,328.2	-285.4	-178.8	290.6	9.00	9.00	0.00
6,663.4	85.65	179.65	6,336.2	-348.3	-178.4	353.5	9.00	9.00	0.00
<b>Base B2 Target</b>									
6,700.0	88.94	179.65	6,337.9	-384.8	-178.2	389.9	9.00	9.00	0.00
6,715.1	90.30	179.65	6,338.0	-399.9	-178.1	405.0	9.00	9.00	0.00
6,722.0	90.30	179.65	6,338.0	-406.8	-178.1	411.9	0.00	0.00	0.00
<b>62H LP</b>									
6,725.0	90.30	179.61	6,338.0	-409.8	-178.1	414.9	1.50	0.00	-1.50
<b>7" Csg</b>									
6,745.6	90.30	179.30	6,337.9	-430.4	-177.9	435.5	1.50	0.00	-1.50
6,800.0	90.30	179.30	6,337.6	-484.8	-177.2	489.9	0.00	0.00	0.00
6,900.0	90.30	179.30	6,337.0	-584.8	-176.0	589.8	0.00	0.00	0.00
7,000.0	90.30	179.30	6,336.5	-684.8	-174.7	689.7	0.00	0.00	0.00
7,100.0	90.30	179.30	6,336.0	-784.8	-173.5	789.6	0.00	0.00	0.00
7,200.0	90.30	179.30	6,335.5	-884.8	-172.3	889.5	0.00	0.00	0.00
7,300.0	90.30	179.30	6,334.9	-984.8	-171.1	989.4	0.00	0.00	0.00
7,400.0	90.30	179.30	6,334.4	-1,084.8	-169.9	1,089.3	0.00	0.00	0.00
7,500.0	90.30	179.30	6,333.9	-1,184.8	-168.6	1,189.2	0.00	0.00	0.00
7,600.0	90.30	179.30	6,333.4	-1,284.8	-167.4	1,289.2	0.00	0.00	0.00
7,700.0	90.30	179.30	6,332.9	-1,384.8	-166.2	1,389.1	0.00	0.00	0.00
7,800.0	90.30	179.30	6,332.3	-1,484.7	-165.0	1,489.0	0.00	0.00	0.00
7,900.0	90.30	179.30	6,331.8	-1,584.7	-163.7	1,588.9	0.00	0.00	0.00

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-62H
<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 6-62-23-62H	<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)
8,000.0	90.30	179.30	6,331.3	-1,684.7	-162.5	1,688.8	0.00	0.00	0.00
8,100.0	90.30	179.30	6,330.8	-1,784.7	-161.3	1,788.7	0.00	0.00	0.00
8,200.0	90.30	179.30	6,330.2	-1,884.7	-160.1	1,888.6	0.00	0.00	0.00
8,300.0	90.30	179.30	6,329.7	-1,984.7	-158.8	1,988.5	0.00	0.00	0.00
8,400.0	90.30	179.30	6,329.2	-2,084.7	-157.6	2,088.4	0.00	0.00	0.00
8,500.0	90.30	179.30	6,328.7	-2,184.7	-156.4	2,188.4	0.00	0.00	0.00
8,600.0	90.30	179.30	6,328.1	-2,284.7	-155.2	2,288.3	0.00	0.00	0.00
8,700.0	90.30	179.30	6,327.6	-2,384.7	-153.9	2,388.2	0.00	0.00	0.00
8,800.0	90.30	179.30	6,327.1	-2,484.7	-152.7	2,488.1	0.00	0.00	0.00
8,900.0	90.30	179.30	6,326.6	-2,584.6	-151.5	2,588.0	0.00	0.00	0.00
9,000.0	90.30	179.30	6,326.0	-2,684.6	-150.3	2,687.9	0.00	0.00	0.00
9,100.0	90.30	179.30	6,325.5	-2,784.6	-149.0	2,787.8	0.00	0.00	0.00
9,200.0	90.30	179.30	6,325.0	-2,884.6	-147.8	2,887.7	0.00	0.00	0.00
9,300.0	90.30	179.30	6,324.5	-2,984.6	-146.6	2,987.6	0.00	0.00	0.00
9,400.0	90.30	179.30	6,324.0	-3,084.6	-145.4	3,087.6	0.00	0.00	0.00
9,500.0	90.30	179.30	6,323.4	-3,184.6	-144.1	3,187.5	0.00	0.00	0.00
9,600.0	90.30	179.30	6,322.9	-3,284.6	-142.9	3,287.4	0.00	0.00	0.00
9,700.0	90.30	179.30	6,322.4	-3,384.6	-141.7	3,387.3	0.00	0.00	0.00
9,800.0	90.30	179.30	6,321.9	-3,484.6	-140.5	3,487.2	0.00	0.00	0.00
9,900.0	90.30	179.30	6,321.3	-3,584.6	-139.2	3,587.1	0.00	0.00	0.00
10,000.0	90.30	179.30	6,320.8	-3,684.5	-138.0	3,687.0	0.00	0.00	0.00
10,100.0	90.30	179.30	6,320.3	-3,784.5	-136.8	3,786.9	0.00	0.00	0.00
10,200.0	90.30	179.30	6,319.8	-3,884.5	-135.6	3,886.8	0.00	0.00	0.00
10,300.0	90.30	179.30	6,319.2	-3,984.5	-134.4	3,986.8	0.00	0.00	0.00
10,400.0	90.30	179.30	6,318.7	-4,084.5	-133.1	4,086.7	0.00	0.00	0.00
10,500.0	90.30	179.30	6,318.2	-4,184.5	-131.9	4,186.6	0.00	0.00	0.00
10,600.0	90.30	179.30	6,317.7	-4,284.5	-130.7	4,286.5	0.00	0.00	0.00
10,691.6	90.30	179.30	6,317.2	-4,376.1	-129.6	4,378.0	0.00	0.00	0.00
62H PBHL									

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,725.0	6,338.0	7" Csg	7	8-3/4

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	0.0	Fox Hills		-0.30	179.30
2,752.4	2,748.0	Pierre (Fox Hills Base)		-0.30	179.30
3,469.4	3,463.0	Parkman		-0.30	179.30
4,296.7	4,288.0	Terry/Sussex		-0.30	179.30
4,768.0	4,758.0	Shannon		-0.30	179.30
6,207.2	6,148.0	Sharon Springs		-0.30	179.30
6,305.8	6,213.0	Niobrara		-0.30	179.30
6,567.2	6,323.0	Top B2 Target		-0.30	179.30
6,663.4	6,338.0	Base B2 Target		-0.30	179.30

**Bill Barrett Corp**  
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