

# **BILL BARRETT CORP**

**WELD COUNTY, COLORADO**

**Pappenheim 6-62-23 Pad**

**Pappenheim 6-62-23-64H**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**27 March, 2013**



**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 6-62-23-64H, 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 6-62-23-64H**

+N/-S +E/-W Northing Easting Latitude Longitude  
 0.0 0.0 1419851.91 3336085.10 40° 28' 46.596 N 104° 17' 30.552 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	1933.9	18.68	280.89	1917.5	28.5	-148.2	2.00	280.89	11.2	
4	5082.0	18.68	280.89	4899.7	219.0	-1138.2	0.00	0.00	85.9	
5	5704.6	0.00	0.00	5511.4	238.0	-1237.0	3.00	180.00	93.4	
6	5904.6	0.00	0.00	5711.4	238.0	-1237.0	0.00	0.00	93.4	
7	6908.0	90.30	179.35	6348.0	-401.9	-1229.7	9.00	179.35	709.2	64H LP
8	6908.4	90.30	179.34	6348.0	-402.3	-1229.7	1.50	-90.00	709.6	64H PBHL
9	10882.0	90.30	179.34	6327.2	-4375.6	-1184.1	0.00	0.00	4533.0	

**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**

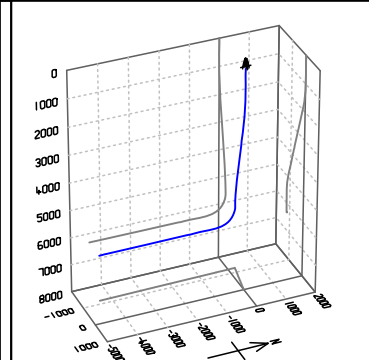
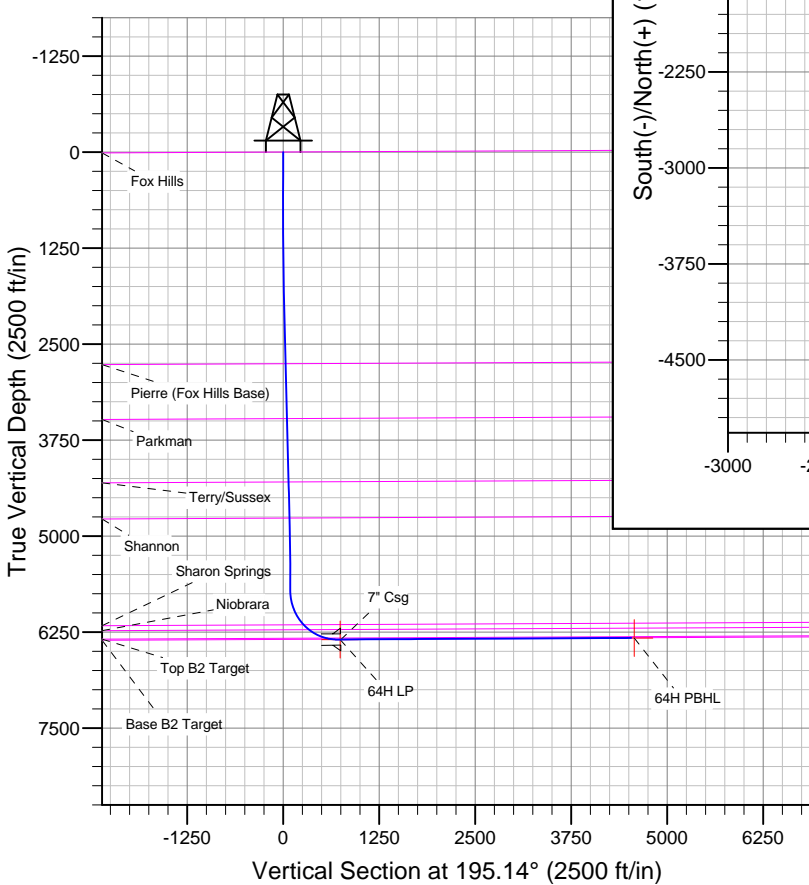
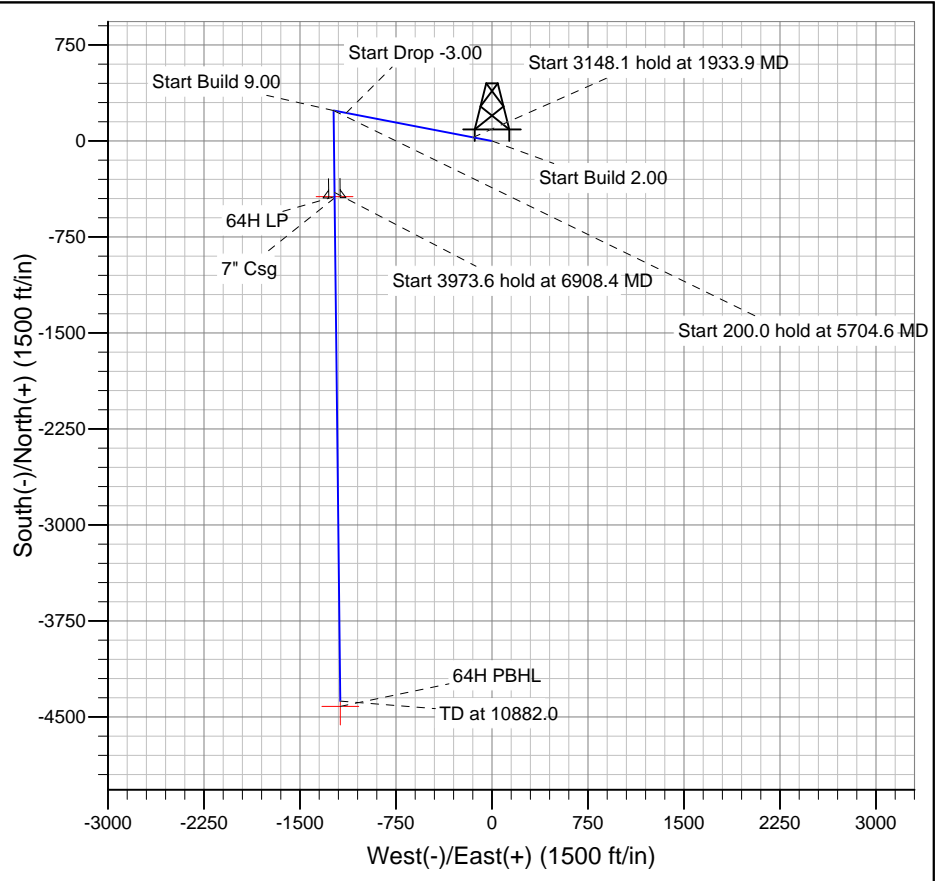
TVDPath	MDPath	Formation
2758.5	2821.7	Fox Hills
3473.7	3576.7	Pierre (Fox Hills Base)
4299.0	4447.9	Terry/Sussex
4769.2	4944.2	Shannon
6158.4	6400.1	Sharon Springs
6223.0	6498.8	Niobrara
6331.7	6760.3	Top B2 Target
6346.2	6857.0	Base B2 Target

**WELLBORE TARGET DETAILS**

Name	TVD	+N/-S	+E/-W	Shape
64H PBHL	6328.0	-4417.3	-1183.6	Point
64H LP	6348.0	-435.7	-1229.3	Point

**CASING DETAILS**

TVD	MD	Name	Size
6347.8	6950.0	7" Csg	7



**Magnetic Field Information:**

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 6-62-23-64H
<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 6-62-23-64H	<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		

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

<b>Well</b>	Pappenheim 6-62-23-64H					
<b>Well Position</b>	<b>+N-S</b>	0.3 ft	<b>Northing:</b>	1,419,851.91 ft	<b>Latitude:</b>	40° 28' 46.596 N
	<b>+E-W</b>	22.3 ft	<b>Easting:</b>	3,336,085.10 ft	<b>Longitude:</b>	104° 17' 30.552 W
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	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	195.14

<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	
1,933.9	18.68	280.89	1,917.5	28.5	-148.2	2.00	2.00	0.00	280.89	
5,082.0	18.68	280.89	4,899.7	219.0	-1,138.2	0.00	0.00	0.00	0.00	
5,704.6	0.00	0.00	5,511.4	238.0	-1,237.0	3.00	-3.00	0.00	180.00	
5,904.6	0.00	0.00	5,711.4	238.0	-1,237.0	0.00	0.00	0.00	0.00	
6,908.0	90.30	179.35	6,348.0	-401.9	-1,229.7	9.00	9.00	0.00	179.35	64H LP
6,908.4	90.30	179.34	6,348.0	-402.3	-1,229.7	1.50	0.00	-1.50	-90.00	64H PBHL
10,882.0	90.30	179.34	6,327.2	-4,375.6	-1,184.1	0.00	0.00	0.00	0.00	

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-64H
<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 6-62-23-64H	<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	280.89	1,100.0	0.3	-1.7	0.1	2.00	2.00	0.00
1,200.0	4.00	280.89	1,199.8	1.3	-6.9	0.5	2.00	2.00	0.00
1,300.0	6.00	280.89	1,299.5	3.0	-15.4	1.2	2.00	2.00	0.00
1,400.0	8.00	280.89	1,398.7	5.3	-27.4	2.1	2.00	2.00	0.00
1,500.0	10.00	280.89	1,497.5	8.2	-42.7	3.2	2.00	2.00	0.00
1,600.0	12.00	280.89	1,595.6	11.8	-61.5	4.6	2.00	2.00	0.00
1,700.0	14.00	280.89	1,693.1	16.1	-83.6	6.3	2.00	2.00	0.00
1,800.0	16.00	280.89	1,789.6	21.0	-109.0	8.2	2.00	2.00	0.00
1,900.0	18.00	280.89	1,885.3	26.5	-137.7	10.4	2.00	2.00	0.00
1,933.9	18.68	280.89	1,917.5	28.5	-148.2	11.2	2.00	2.00	0.00
2,000.0	18.68	280.89	1,980.1	32.5	-168.9	12.8	0.00	0.00	0.00
2,100.0	18.68	280.89	2,074.8	38.6	-200.4	15.1	0.00	0.00	0.00
2,200.0	18.68	280.89	2,169.5	44.6	-231.8	17.5	0.00	0.00	0.00
2,300.0	18.68	280.89	2,264.3	50.7	-263.3	19.9	0.00	0.00	0.00
2,400.0	18.68	280.89	2,359.0	56.7	-294.7	22.3	0.00	0.00	0.00
2,500.0	18.68	280.89	2,453.7	62.8	-326.2	24.6	0.00	0.00	0.00
2,600.0	18.68	280.89	2,548.5	68.8	-357.6	27.0	0.00	0.00	0.00
2,700.0	18.68	280.89	2,643.2	74.9	-389.1	29.4	0.00	0.00	0.00
2,800.0	18.68	280.89	2,737.9	80.9	-420.5	31.8	0.00	0.00	0.00
2,821.7	18.68	280.89	2,758.5	82.2	-427.4	32.3	0.00	0.00	0.00
<b>Pierre (Fox Hills Base)</b>									
2,900.0	18.68	280.89	2,832.7	87.0	-452.0	34.1	0.00	0.00	0.00
3,000.0	18.68	280.89	2,927.4	93.0	-483.4	36.5	0.00	0.00	0.00
3,100.0	18.68	280.89	3,022.1	99.1	-514.9	38.9	0.00	0.00	0.00
3,200.0	18.68	280.89	3,116.9	105.1	-546.3	41.2	0.00	0.00	0.00
3,300.0	18.68	280.89	3,211.6	111.2	-577.8	43.6	0.00	0.00	0.00
3,400.0	18.68	280.89	3,306.3	117.2	-609.2	46.0	0.00	0.00	0.00
3,500.0	18.68	280.89	3,401.1	123.3	-640.7	48.4	0.00	0.00	0.00
3,576.7	18.68	280.89	3,473.7	127.9	-664.8	50.2	0.00	0.00	0.00
<b>Parkman</b>									
3,600.0	18.68	280.89	3,495.8	129.3	-672.1	50.7	0.00	0.00	0.00
3,700.0	18.68	280.89	3,590.5	135.4	-703.6	53.1	0.00	0.00	0.00
3,800.0	18.68	280.89	3,685.3	141.4	-735.0	55.5	0.00	0.00	0.00
3,900.0	18.68	280.89	3,780.0	147.5	-766.5	57.9	0.00	0.00	0.00
4,000.0	18.68	280.89	3,874.7	153.5	-797.9	60.2	0.00	0.00	0.00
4,100.0	18.68	280.89	3,969.5	159.6	-829.4	62.6	0.00	0.00	0.00
4,200.0	18.68	280.89	4,064.2	165.6	-860.8	65.0	0.00	0.00	0.00
4,300.0	18.68	280.89	4,158.9	171.7	-892.3	67.4	0.00	0.00	0.00
4,400.0	18.68	280.89	4,253.7	177.7	-923.7	69.7	0.00	0.00	0.00
4,447.9	18.68	280.89	4,299.0	180.6	-938.8	70.9	0.00	0.00	0.00
<b>Terry/Sussex</b>									
4,500.0	18.68	280.89	4,348.4	183.8	-955.2	72.1	0.00	0.00	0.00

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-64H
<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 6-62-23-64H	<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	18.68	280.89	4,443.1	189.8	-986.6	74.5	0.00	0.00	0.00	
4,700.0	18.68	280.89	4,537.9	195.9	-1,018.1	76.9	0.00	0.00	0.00	
4,800.0	18.68	280.89	4,632.6	201.9	-1,049.5	79.2	0.00	0.00	0.00	
4,900.0	18.68	280.89	4,727.3	208.0	-1,081.0	81.6	0.00	0.00	0.00	
4,944.2	18.68	280.89	4,769.2	210.7	-1,094.9	82.7	0.00	0.00	0.00	
<b>Shannon</b>										
5,000.0	18.68	280.89	4,822.1	214.0	-1,112.4	84.0	0.00	0.00	0.00	
5,082.0	18.68	280.89	4,899.7	219.0	-1,138.2	85.9	0.00	0.00	0.00	
5,100.0	18.14	280.89	4,916.8	220.1	-1,143.8	86.4	3.00	-3.00	0.00	
5,200.0	15.14	280.89	5,012.6	225.5	-1,171.9	88.5	3.00	-3.00	0.00	
5,300.0	12.14	280.89	5,109.8	229.9	-1,195.1	90.2	3.00	-3.00	0.00	
5,400.0	9.14	280.89	5,208.1	233.4	-1,213.2	91.6	3.00	-3.00	0.00	
5,500.0	6.14	280.89	5,307.2	235.9	-1,226.2	92.6	3.00	-3.00	0.00	
5,600.0	3.14	280.89	5,406.8	237.5	-1,234.2	93.2	3.00	-3.00	0.00	
5,700.0	0.14	280.89	5,506.8	238.0	-1,237.0	93.4	3.00	-3.00	0.00	
5,704.6	0.00	0.00	5,511.4	238.0	-1,237.0	93.4	3.00	-3.00	0.00	
5,800.0	0.00	0.00	5,606.8	238.0	-1,237.0	93.4	0.00	0.00	0.00	
5,900.0	0.00	0.00	5,706.8	238.0	-1,237.0	93.4	0.00	0.00	0.00	
5,904.6	0.00	0.00	5,711.4	238.0	-1,237.0	93.4	0.00	0.00	0.00	
6,000.0	8.58	179.35	5,806.4	230.9	-1,236.9	100.3	9.00	9.00	0.00	
6,100.0	17.58	179.35	5,903.7	208.3	-1,236.7	122.0	9.00	9.00	0.00	
6,200.0	26.58	179.35	5,996.3	170.7	-1,236.2	158.1	9.00	9.00	0.00	
6,300.0	35.58	179.35	6,081.8	119.1	-1,235.6	207.8	9.00	9.00	0.00	
6,400.0	44.58	179.35	6,158.3	54.8	-1,234.9	269.7	9.00	9.00	0.00	
6,400.1	44.58	179.35	6,158.4	54.7	-1,234.9	269.8	0.00	0.00	0.00	
<b>Sharon Springs</b>										
6,498.8	53.47	179.35	6,223.0	-19.7	-1,234.1	341.4	9.01	9.01	0.00	
<b>Niobrara</b>										
6,500.0	53.58	179.35	6,223.7	-20.7	-1,234.1	342.3	9.00	9.00	0.00	
6,600.0	62.58	179.35	6,276.5	-105.5	-1,233.1	423.9	9.00	9.00	0.00	
6,700.0	71.58	179.35	6,315.4	-197.5	-1,232.0	512.4	9.00	9.00	0.00	
6,760.3	77.01	179.35	6,331.7	-255.5	-1,231.4	568.3	9.00	9.00	0.00	
<b>Top B2 Target</b>										
6,800.0	80.58	179.35	6,339.4	-294.4	-1,230.9	605.7	9.00	9.00	0.00	
6,857.0	85.71	179.35	6,346.2	-351.0	-1,230.3	660.1	9.00	9.00	0.00	
<b>Base B2 Target</b>										
6,900.0	89.58	179.35	6,348.0	-393.9	-1,229.8	701.5	9.00	9.00	0.00	
6,908.0	90.30	179.35	6,348.0	-401.9	-1,229.7	709.2	9.00	9.00	0.00	
6,908.4	90.30	179.34	6,348.0	-402.3	-1,229.7	709.6	1.50	0.00	-1.50	
6,941.8	90.30	179.34	6,347.8	-435.7	-1,229.3	741.7	0.00	0.00	0.00	
<b>64H LP</b>										
6,950.0	90.30	179.34	6,347.8	-443.9	-1,229.2	749.6	0.00	0.00	0.00	
<b>7" Csg</b>										
7,000.0	90.30	179.34	6,347.5	-493.9	-1,228.7	797.7	0.00	0.00	0.00	
7,100.0	90.30	179.34	6,347.0	-593.9	-1,227.5	894.0	0.00	0.00	0.00	
7,200.0	90.30	179.34	6,346.5	-693.9	-1,226.4	990.2	0.00	0.00	0.00	
7,300.0	90.30	179.34	6,346.0	-793.9	-1,225.2	1,086.4	0.00	0.00	0.00	
7,400.0	90.30	179.34	6,345.4	-893.9	-1,224.1	1,182.6	0.00	0.00	0.00	
7,500.0	90.30	179.34	6,344.9	-993.9	-1,222.9	1,278.8	0.00	0.00	0.00	
7,600.0	90.30	179.34	6,344.4	-1,093.9	-1,221.8	1,375.1	0.00	0.00	0.00	
7,700.0	90.30	179.34	6,343.9	-1,193.9	-1,220.6	1,471.3	0.00	0.00	0.00	
7,800.0	90.30	179.34	6,343.3	-1,293.9	-1,219.5	1,567.5	0.00	0.00	0.00	
7,900.0	90.30	179.34	6,342.8	-1,393.9	-1,218.3	1,663.7	0.00	0.00	0.00	

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-64H
<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 6-62-23-64H	<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	179.34	6,342.3	-1,493.9	-1,217.2	1,759.9	0.00	0.00	0.00	
8,100.0	90.30	179.34	6,341.8	-1,593.8	-1,216.0	1,856.2	0.00	0.00	0.00	
8,200.0	90.30	179.34	6,341.2	-1,693.8	-1,214.9	1,952.4	0.00	0.00	0.00	
8,300.0	90.30	179.34	6,340.7	-1,793.8	-1,213.7	2,048.6	0.00	0.00	0.00	
8,400.0	90.30	179.34	6,340.2	-1,893.8	-1,212.6	2,144.8	0.00	0.00	0.00	
8,500.0	90.30	179.34	6,339.7	-1,993.8	-1,211.4	2,241.0	0.00	0.00	0.00	
8,600.0	90.30	179.34	6,339.2	-2,093.8	-1,210.3	2,337.3	0.00	0.00	0.00	
8,700.0	90.30	179.34	6,338.6	-2,193.8	-1,209.2	2,433.5	0.00	0.00	0.00	
8,800.0	90.30	179.34	6,338.1	-2,293.8	-1,208.0	2,529.7	0.00	0.00	0.00	
8,900.0	90.30	179.34	6,337.6	-2,393.8	-1,206.9	2,625.9	0.00	0.00	0.00	
9,000.0	90.30	179.34	6,337.1	-2,493.8	-1,205.7	2,722.1	0.00	0.00	0.00	
9,100.0	90.30	179.34	6,336.5	-2,593.8	-1,204.6	2,818.4	0.00	0.00	0.00	
9,200.0	90.30	179.34	6,336.0	-2,693.8	-1,203.4	2,914.6	0.00	0.00	0.00	
9,300.0	90.30	179.34	6,335.5	-2,793.8	-1,202.3	3,010.8	0.00	0.00	0.00	
9,400.0	90.30	179.34	6,335.0	-2,893.7	-1,201.1	3,107.0	0.00	0.00	0.00	
9,500.0	90.30	179.34	6,334.4	-2,993.7	-1,200.0	3,203.2	0.00	0.00	0.00	
9,600.0	90.30	179.34	6,333.9	-3,093.7	-1,198.8	3,299.5	0.00	0.00	0.00	
9,700.0	90.30	179.34	6,333.4	-3,193.7	-1,197.7	3,395.7	0.00	0.00	0.00	
9,800.0	90.30	179.34	6,332.9	-3,293.7	-1,196.5	3,491.9	0.00	0.00	0.00	
9,900.0	90.30	179.34	6,332.3	-3,393.7	-1,195.4	3,588.1	0.00	0.00	0.00	
10,000.0	90.30	179.34	6,331.8	-3,493.7	-1,194.2	3,684.3	0.00	0.00	0.00	
10,100.0	90.30	179.34	6,331.3	-3,593.7	-1,193.1	3,780.6	0.00	0.00	0.00	
10,200.0	90.30	179.34	6,330.8	-3,693.7	-1,191.9	3,876.8	0.00	0.00	0.00	
10,300.0	90.30	179.34	6,330.3	-3,793.7	-1,190.8	3,973.0	0.00	0.00	0.00	
10,400.0	90.30	179.34	6,329.7	-3,893.7	-1,189.6	4,069.2	0.00	0.00	0.00	
10,500.0	90.30	179.34	6,329.2	-3,993.7	-1,188.5	4,165.5	0.00	0.00	0.00	
10,600.0	90.30	179.34	6,328.7	-4,093.6	-1,187.3	4,261.7	0.00	0.00	0.00	
10,700.0	90.30	179.34	6,328.2	-4,193.6	-1,186.2	4,357.9	0.00	0.00	0.00	
10,800.0	90.30	179.34	6,327.6	-4,293.6	-1,185.0	4,454.1	0.00	0.00	0.00	
10,882.0	90.30	179.34	6,327.2	-4,375.6	-1,184.1	4,533.0	0.00	0.00	0.00	
<b>64H PBHL</b>										

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,950.0	6,347.8	7" Csg	7	8-3/4

**Bill Barrett Corp**  
 Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Pappenheim 6-62-23-64H
<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 6-62-23-64H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

**Formations**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	0.0	Fox Hills		-0.30	179.34
2,821.7	2,758.0	Pierre (Fox Hills Base)		-0.30	179.34
3,576.7	3,473.0	Parkman		-0.30	179.34
4,447.9	4,298.0	Terry/Sussex		-0.30	179.34
4,944.2	4,768.0	Shannon		-0.30	179.34
6,400.1	6,158.0	Sharon Springs		-0.30	179.34
6,498.8	6,223.0	Niobrara		-0.30	179.34
6,760.3	6,333.0	Top B2 Target		-0.30	179.34
6,857.0	6,348.0	Base B2 Target		-0.30	179.34