

BILL BARRETT CORP

WELD COUNTY, COLORADO

Pappenheim 6-62-23 Pad

Pappenheim 6-62-23-60H

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 6-62-23-60H, 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 6-62-23-60H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1419853.16	3336176.89	40° 28' 46.596 N	104° 17' 29.364 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	1654.3	13.09	73.79	1648.6	20.8	71.4	2.00	73.79	-7.4	
4	4952.8	13.09	73.79	4861.5	229.2	788.6	0.00	0.00	-81.6	
5	5607.1	0.00	0.00	5510.1	250.0	860.0	2.00	180.00	-89.0	
6	5807.1	0.00	0.00	5710.1	250.0	860.0	0.00	0.00	-89.0	
7	6780.9	90.30	180.84	6328.0	-371.1	850.9	9.27	180.84	520.0	60H LP
8	6784.4	90.30	180.84	6328.0	-374.6	850.9	0.00	0.00	523.5	60H LP
9	6802.1	90.30	180.57	6327.9	-392.2	850.7	1.50	-90.00	540.8	60H PBHL
10	10782.0	90.30	180.57	6307.0	-4371.9	810.9	0.00	0.00	4446.5	60H PBHL

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

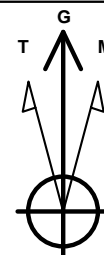
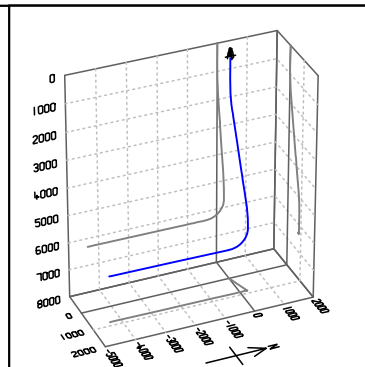
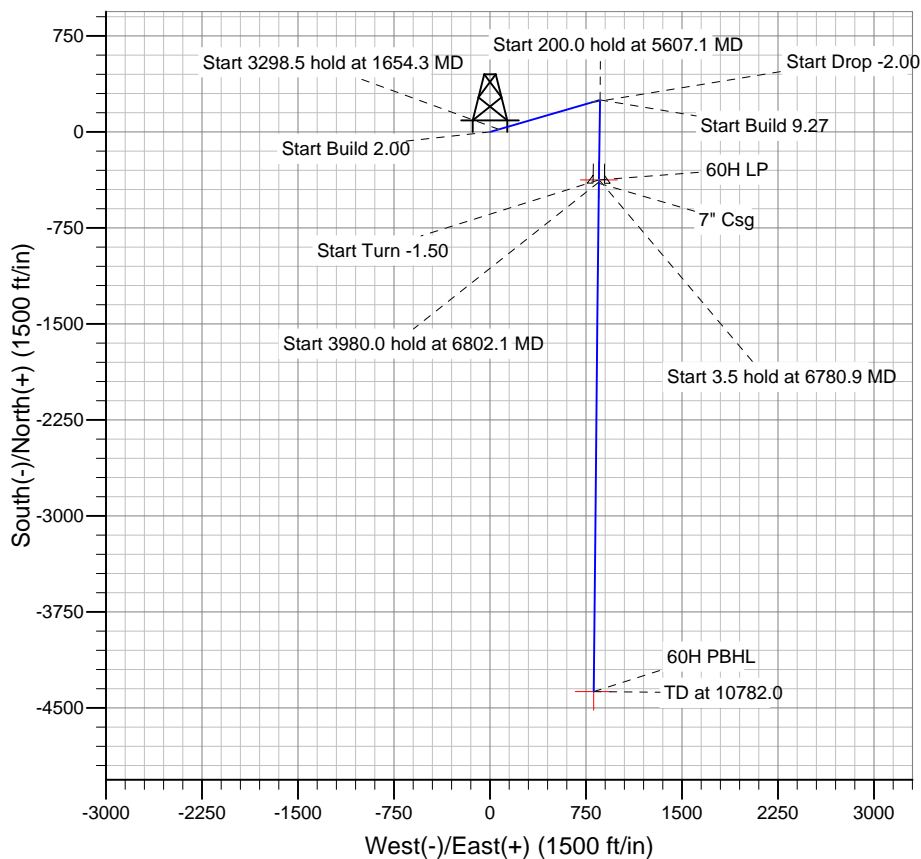
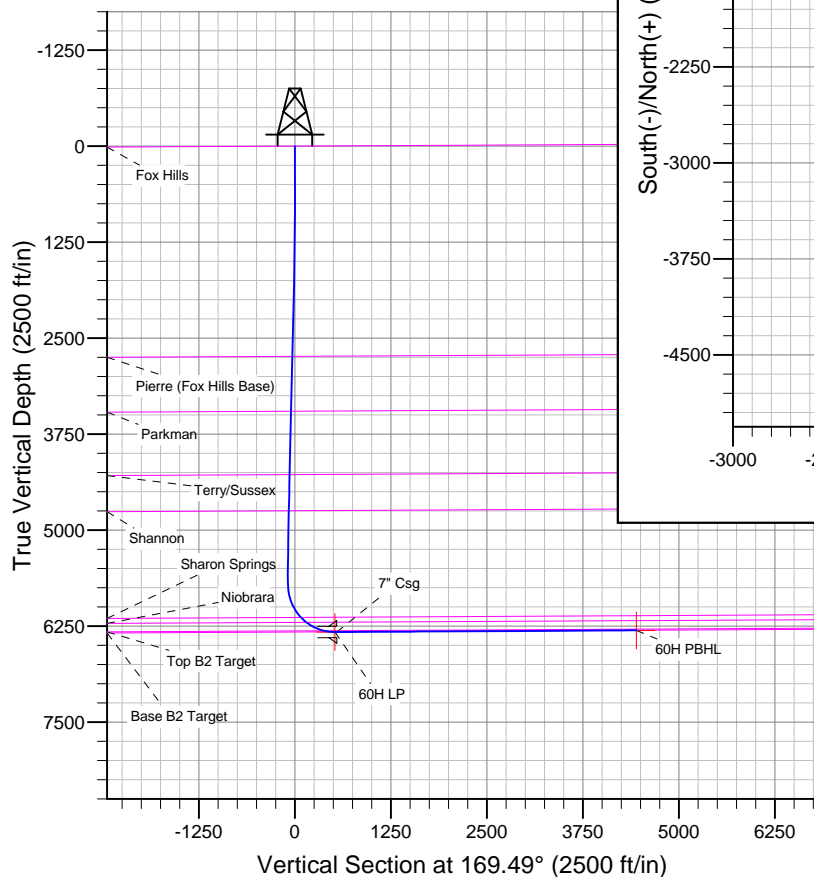
TVDPath	MDPath	Formation
2738.5	2773.2	Pierre (Fox Hills Base)
3453.7	3507.5	Parkman
4279.0	4354.8	Terry/Sussex
4749.2	4837.5	Shannon
6138.5	6280.4	Sharon Springs
6203.1	6377.8	Niobrara
6311.9	6636.1	Top B2 Target
6326.4	6732.6	Base B2 Target

CASING DETAILS

TVD	MD	Name	Size
6327.8	6810.0	7" Csg	7

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
60H PBHL	6308.0	-4371.9	810.9	Point
60H LP	6328.0	-374.6	850.9	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

Database:	Compass	Local Co-ordinate Reference:	Well Pappenheim 6-62-23-60H
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4718.0ft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB @ 4718.0ft (Original Well Elev)
Site:	Pappenheim 6-62-23 Pad	North Reference:	Grid
Well:	Pappenheim 6-62-23-60H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	WELD COUNTY, COLORADO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 6-62-23-60H				
Well Position	+N-S	1.5 ft	Northing:	1,419,853.16 ft	Latitude:	40° 28' 46.596 N
	+E-W	114.0 ft	Easting:	3,336,176.89 ft	Longitude:	104° 17' 29.364 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,698.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/27/2013	8.37	67.13	53,036

Design	Design #1				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	169.49	

Plan Sections										
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	
1,654.3	13.09	73.79	1,648.6	20.8	71.4	2.00	2.00	0.00	73.79	
4,952.8	13.09	73.79	4,861.5	229.2	788.6	0.00	0.00	0.00	0.00	
5,607.1	0.00	0.00	5,510.1	250.0	860.0	2.00	-2.00	0.00	180.00	
5,807.1	0.00	0.00	5,710.1	250.0	860.0	0.00	0.00	0.00	0.00	
6,780.9	90.30	180.84	6,328.0	-371.1	850.9	9.27	9.27	0.00	180.84	60H LP
6,784.4	90.30	180.84	6,328.0	-374.6	850.9	0.00	0.00	0.00	0.00	60H LP
6,802.1	90.30	180.57	6,327.9	-392.2	850.7	1.50	0.00	-1.50	-90.00	60H PBHL
10,782.0	90.30	180.57	6,307.0	-4,371.9	810.9	0.00	0.00	0.00	0.00	60H PBHL

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Project:	WELD COUNTY, COLORADO	MD Reference:	KB @ 4718.0ft (Original Well Elev)
Site:	Pappenheim 6-62-23 Pad	North Reference:	Grid
Well:	Pappenheim 6-62-23-60H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	73.79	1,100.0	0.5	1.7	-0.2	2.00	2.00	0.00
1,200.0	4.00	73.79	1,199.8	1.9	6.7	-0.7	2.00	2.00	0.00
1,300.0	6.00	73.79	1,299.5	4.4	15.1	-1.6	2.00	2.00	0.00
1,400.0	8.00	73.79	1,398.7	7.8	26.8	-2.8	2.00	2.00	0.00
1,500.0	10.00	73.79	1,497.5	12.1	41.8	-4.3	2.00	2.00	0.00
1,600.0	12.00	73.79	1,595.6	17.5	60.1	-6.2	2.00	2.00	0.00
1,654.3	13.09	73.79	1,648.6	20.8	71.4	-7.4	2.00	2.00	0.00
1,700.0	13.09	73.79	1,693.1	23.7	81.4	-8.4	0.00	0.00	0.00
1,800.0	13.09	73.79	1,790.5	30.0	103.1	-10.7	0.00	0.00	0.00
1,900.0	13.09	73.79	1,887.9	36.3	124.9	-12.9	0.00	0.00	0.00
2,000.0	13.09	73.79	1,985.3	42.6	146.6	-15.2	0.00	0.00	0.00
2,100.0	13.09	73.79	2,082.8	48.9	168.3	-17.4	0.00	0.00	0.00
2,200.0	13.09	73.79	2,180.2	55.3	190.1	-19.7	0.00	0.00	0.00
2,300.0	13.09	73.79	2,277.6	61.6	211.8	-21.9	0.00	0.00	0.00
2,400.0	13.09	73.79	2,375.0	67.9	233.6	-24.2	0.00	0.00	0.00
2,500.0	13.09	73.79	2,472.4	74.2	255.3	-26.4	0.00	0.00	0.00
2,600.0	13.09	73.79	2,569.8	80.5	277.0	-28.7	0.00	0.00	0.00
2,700.0	13.09	73.79	2,667.2	86.9	298.8	-30.9	0.00	0.00	0.00
2,773.2	13.09	73.79	2,738.5	91.5	314.7	-32.6	0.00	0.00	0.00
Pierre (Fox Hills Base)									
2,800.0	13.09	73.79	2,764.6	93.2	320.5	-33.2	0.00	0.00	0.00
2,900.0	13.09	73.79	2,862.0	99.5	342.3	-35.4	0.00	0.00	0.00
3,000.0	13.09	73.79	2,959.4	105.8	364.0	-37.7	0.00	0.00	0.00
3,100.0	13.09	73.79	3,056.8	112.1	385.7	-39.9	0.00	0.00	0.00
3,200.0	13.09	73.79	3,154.2	118.5	407.5	-42.2	0.00	0.00	0.00
3,300.0	13.09	73.79	3,251.6	124.8	429.2	-44.4	0.00	0.00	0.00
3,400.0	13.09	73.79	3,349.0	131.1	451.0	-46.7	0.00	0.00	0.00
3,500.0	13.09	73.79	3,446.4	137.4	472.7	-48.9	0.00	0.00	0.00
3,507.5	13.09	73.79	3,453.7	137.9	474.4	-49.1	0.00	0.00	0.00
Parkman									
3,600.0	13.09	73.79	3,543.8	143.7	494.5	-51.2	0.00	0.00	0.00
3,700.0	13.09	73.79	3,641.2	150.1	516.2	-53.4	0.00	0.00	0.00
3,800.0	13.09	73.79	3,738.6	156.4	537.9	-55.7	0.00	0.00	0.00
3,900.0	13.09	73.79	3,836.0	162.7	559.7	-57.9	0.00	0.00	0.00
4,000.0	13.09	73.79	3,933.4	169.0	581.4	-60.2	0.00	0.00	0.00
4,100.0	13.09	73.79	4,030.8	175.3	603.2	-62.4	0.00	0.00	0.00
4,200.0	13.09	73.79	4,128.2	181.7	624.9	-64.6	0.00	0.00	0.00
4,300.0	13.09	73.79	4,225.6	188.0	646.6	-66.9	0.00	0.00	0.00
4,354.8	13.09	73.79	4,279.0	191.4	658.6	-68.1	0.00	0.00	0.00
Terry/Sussex									
4,400.0	13.09	73.79	4,323.0	194.3	668.4	-69.1	0.00	0.00	0.00
4,500.0	13.09	73.79	4,420.4	200.6	690.1	-71.4	0.00	0.00	0.00

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Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well Pappenheim 6-62-23-60H
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4718.0ft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB @ 4718.0ft (Original Well Elev)
Site:	Pappenheim 6-62-23 Pad	North Reference:	Grid
Well:	Pappenheim 6-62-23-60H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	13.09	73.79	4,517.8	206.9	711.9	-73.6	0.00	0.00	0.00
4,700.0	13.09	73.79	4,615.2	213.3	733.6	-75.9	0.00	0.00	0.00
4,800.0	13.09	73.79	4,712.6	219.6	755.3	-78.1	0.00	0.00	0.00
4,837.5	13.09	73.79	4,749.2	221.9	763.5	-79.0	0.00	0.00	0.00
Shannon									
4,900.0	13.09	73.79	4,810.0	225.9	777.1	-80.4	0.00	0.00	0.00
4,952.8	13.09	73.79	4,861.5	229.2	788.6	-81.6	0.00	0.00	0.00
5,000.0	12.14	73.79	4,907.5	232.1	798.5	-82.6	2.00	-2.00	0.00
5,100.0	10.14	73.79	5,005.6	237.5	817.0	-84.5	2.00	-2.00	0.00
5,200.0	8.14	73.79	5,104.4	241.9	832.3	-86.1	2.00	-2.00	0.00
5,300.0	6.14	73.79	5,203.6	245.4	844.2	-87.3	2.00	-2.00	0.00
5,400.0	4.14	73.79	5,303.2	247.9	852.8	-88.2	2.00	-2.00	0.00
5,500.0	2.14	73.79	5,403.0	249.4	858.1	-88.8	2.00	-2.00	0.00
5,600.0	0.14	73.79	5,503.0	250.0	860.0	-89.0	2.00	-2.00	0.00
5,607.1	0.00	0.00	5,510.1	250.0	860.0	-89.0	2.00	-2.00	0.00
5,700.0	0.00	0.00	5,603.0	250.0	860.0	-89.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,703.0	250.0	860.0	-89.0	0.00	0.00	0.00
5,807.1	0.00	0.00	5,710.1	250.0	860.0	-89.0	0.00	0.00	0.00
5,900.0	8.61	180.84	5,802.6	243.0	859.9	-82.1	9.27	9.27	0.00
6,000.0	17.89	180.84	5,899.9	220.1	859.6	-59.7	9.27	9.27	0.00
6,100.0	27.16	180.84	5,992.2	181.9	859.0	-22.2	9.27	9.27	0.00
6,200.0	36.43	180.84	6,077.1	129.3	858.2	29.4	9.27	9.27	0.00
6,280.4	43.89	180.84	6,138.5	77.4	857.5	80.2	9.27	9.27	0.00
Sharon Springs									
6,300.0	45.70	180.84	6,152.4	63.6	857.3	93.8	9.27	9.27	0.00
6,377.8	52.92	180.84	6,203.1	4.7	856.4	151.6	9.27	9.27	0.00
Niobrara									
6,400.0	54.98	180.84	6,216.1	-13.3	856.2	169.2	9.27	9.27	0.00
6,500.0	64.25	180.84	6,266.6	-99.4	854.9	253.7	9.27	9.27	0.00
6,600.0	73.52	180.84	6,302.6	-192.6	853.5	345.0	9.27	9.27	0.00
6,636.1	76.87	180.84	6,311.9	-227.5	853.0	379.3	9.27	9.27	0.00
Top B2 Target									
6,700.0	82.80	180.84	6,323.1	-290.4	852.1	440.9	9.27	9.27	0.00
6,732.6	85.82	180.84	6,326.4	-322.8	851.6	472.7	9.27	9.27	0.00
Base B2 Target									
6,780.9	90.30	180.84	6,328.0	-371.1	850.9	520.0	9.27	9.27	0.00
6,784.4	90.30	180.84	6,328.0	-374.6	850.9	523.5	0.00	0.00	0.00
60H LP									
6,800.0	90.30	180.60	6,327.9	-390.1	850.7	538.7	1.50	0.00	-1.50
6,802.1	90.30	180.57	6,327.9	-392.2	850.7	540.8	1.50	0.00	-1.50
6,810.0	90.30	180.57	6,327.8	-400.1	850.6	548.5	0.00	0.00	0.00
7" Csg									
6,900.0	90.30	180.57	6,327.4	-490.1	849.7	636.9	0.00	0.00	0.00
7,000.0	90.30	180.57	6,326.8	-590.1	848.7	735.0	0.00	0.00	0.00
7,100.0	90.30	180.57	6,326.3	-690.1	847.7	833.1	0.00	0.00	0.00
7,200.0	90.30	180.57	6,325.8	-790.1	846.7	931.3	0.00	0.00	0.00
7,300.0	90.30	180.57	6,325.3	-890.1	845.7	1,029.4	0.00	0.00	0.00
7,400.0	90.30	180.57	6,324.7	-990.1	844.7	1,127.5	0.00	0.00	0.00
7,500.0	90.30	180.57	6,324.2	-1,090.1	843.7	1,225.7	0.00	0.00	0.00
7,600.0	90.30	180.57	6,323.7	-1,190.1	842.7	1,323.8	0.00	0.00	0.00
7,700.0	90.30	180.57	6,323.2	-1,290.1	841.7	1,421.9	0.00	0.00	0.00
7,800.0	90.30	180.57	6,322.7	-1,390.1	840.7	1,520.1	0.00	0.00	0.00
7,900.0	90.30	180.57	6,322.1	-1,490.1	839.7	1,618.2	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	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	180.57	6,321.6	-1,590.1	838.7	1,716.3	0.00	0.00	0.00
8,100.0	90.30	180.57	6,321.1	-1,690.1	837.7	1,814.5	0.00	0.00	0.00
8,200.0	90.30	180.57	6,320.6	-1,790.0	836.7	1,912.6	0.00	0.00	0.00
8,300.0	90.30	180.57	6,320.0	-1,890.0	835.7	2,010.7	0.00	0.00	0.00
8,400.0	90.30	180.57	6,319.5	-1,990.0	834.7	2,108.9	0.00	0.00	0.00
8,500.0	90.30	180.57	6,319.0	-2,090.0	833.7	2,207.0	0.00	0.00	0.00
8,600.0	90.30	180.57	6,318.5	-2,190.0	832.7	2,305.2	0.00	0.00	0.00
8,700.0	90.30	180.57	6,317.9	-2,290.0	831.7	2,403.3	0.00	0.00	0.00
8,800.0	90.30	180.57	6,317.4	-2,390.0	830.7	2,501.4	0.00	0.00	0.00
8,900.0	90.30	180.57	6,316.9	-2,490.0	829.7	2,599.6	0.00	0.00	0.00
9,000.0	90.30	180.57	6,316.4	-2,590.0	828.7	2,697.7	0.00	0.00	0.00
9,100.0	90.30	180.57	6,315.8	-2,690.0	827.7	2,795.8	0.00	0.00	0.00
9,200.0	90.30	180.57	6,315.3	-2,790.0	826.7	2,894.0	0.00	0.00	0.00
9,300.0	90.30	180.57	6,314.8	-2,890.0	825.7	2,992.1	0.00	0.00	0.00
9,400.0	90.30	180.57	6,314.3	-2,990.0	824.7	3,090.2	0.00	0.00	0.00
9,500.0	90.30	180.57	6,313.8	-3,090.0	823.7	3,188.4	0.00	0.00	0.00
9,600.0	90.30	180.57	6,313.2	-3,190.0	822.7	3,286.5	0.00	0.00	0.00
9,700.0	90.30	180.57	6,312.7	-3,290.0	821.7	3,384.6	0.00	0.00	0.00
9,800.0	90.30	180.57	6,312.2	-3,389.9	820.7	3,482.8	0.00	0.00	0.00
9,900.0	90.30	180.57	6,311.7	-3,489.9	819.7	3,580.9	0.00	0.00	0.00
10,000.0	90.30	180.57	6,311.1	-3,589.9	818.7	3,679.0	0.00	0.00	0.00
10,100.0	90.30	180.57	6,310.6	-3,689.9	817.7	3,777.2	0.00	0.00	0.00
10,200.0	90.30	180.57	6,310.1	-3,789.9	816.7	3,875.3	0.00	0.00	0.00
10,300.0	90.30	180.57	6,309.6	-3,889.9	815.7	3,973.4	0.00	0.00	0.00
10,400.0	90.30	180.57	6,309.0	-3,989.9	814.7	4,071.6	0.00	0.00	0.00
10,500.0	90.30	180.57	6,308.5	-4,089.9	813.7	4,169.7	0.00	0.00	0.00
10,600.0	90.30	180.57	6,308.0	-4,189.9	812.7	4,267.8	0.00	0.00	0.00
10,700.0	90.30	180.57	6,307.5	-4,289.9	811.7	4,366.0	0.00	0.00	0.00
10,782.0	90.30	180.57	6,307.0	-4,371.9	810.9	4,446.5	0.00	0.00	0.00
60H PBHL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,810.0	6,327.8	7" Csg	7	8-3/4

Bill Barrett Corp

Planning Report

Database:	Compass	Local Co-ordinate Reference:	Well Pappenheim 6-62-23-60H
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4718.0ft (Original Well Elev)
Project:	WELD COUNTY, COLORADO	MD Reference:	KB @ 4718.0ft (Original Well Elev)
Site:	Pappenheim 6-62-23 Pad	North Reference:	Grid
Well:	Pappenheim 6-62-23-60H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
	0.0	Fox Hills		-0.30	180.57	
2,773.2	2,738.0	Pierre (Fox Hills Base)		-0.30	180.57	
3,507.5	3,453.0	Parkman		-0.30	180.57	
4,354.8	4,278.0	Terry/Sussex		-0.30	180.57	
4,837.5	4,748.0	Shannon		-0.30	180.57	
6,280.4	6,138.0	Sharon Springs		-0.30	180.57	
6,377.8	6,203.0	Niobrara		-0.30	180.57	
6,636.1	6,313.0	Top B2 Target		-0.30	180.57	
6,732.6	6,328.0	Base B2 Target		-0.30	180.57	