



**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 Circle B 6-66-9-0461BH, True North  
Vertical (TVD) Reference: KB @ 4837.0ft (Original Well Elev)  
Section (VS) Reference: Slot - (0.0N, 0.0E)  
Measured Depth Reference: KB @ 4837.0ft (Original Well Elev)  
Calculation Method: Minimum Curvature

## WELL DETAILS: Circle B 6-66-9-0461BH

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1429174.35	3199006.39	40° 30' 33.408 N	104° 47' 3.480 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	1192.8	2.89	343.31	1192.7	4.7	-1.4	1.50	343.31	-4.6	
4	5913.5	2.89	343.31	5907.4	232.7	-69.8	0.00	0.00	-232.3	
5	6106.3	0.00	0.00	6100.1	237.4	-71.2	1.50	180.00	-236.9	
6	6606.3	0.00	0.00	6600.1	237.4	-71.2	0.00	0.00	-236.9	
7	7428.7	90.47	179.51	7121.0	-287.7	-66.7	11.00	179.51	288.2	CB 0461BH LP
8	11666.0	90.47	179.51	7086.2	-4524.7	-30.7	0.00	0.00	4524.8	CB 0461BH 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

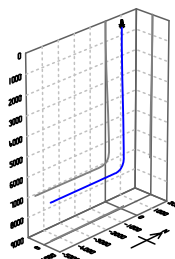
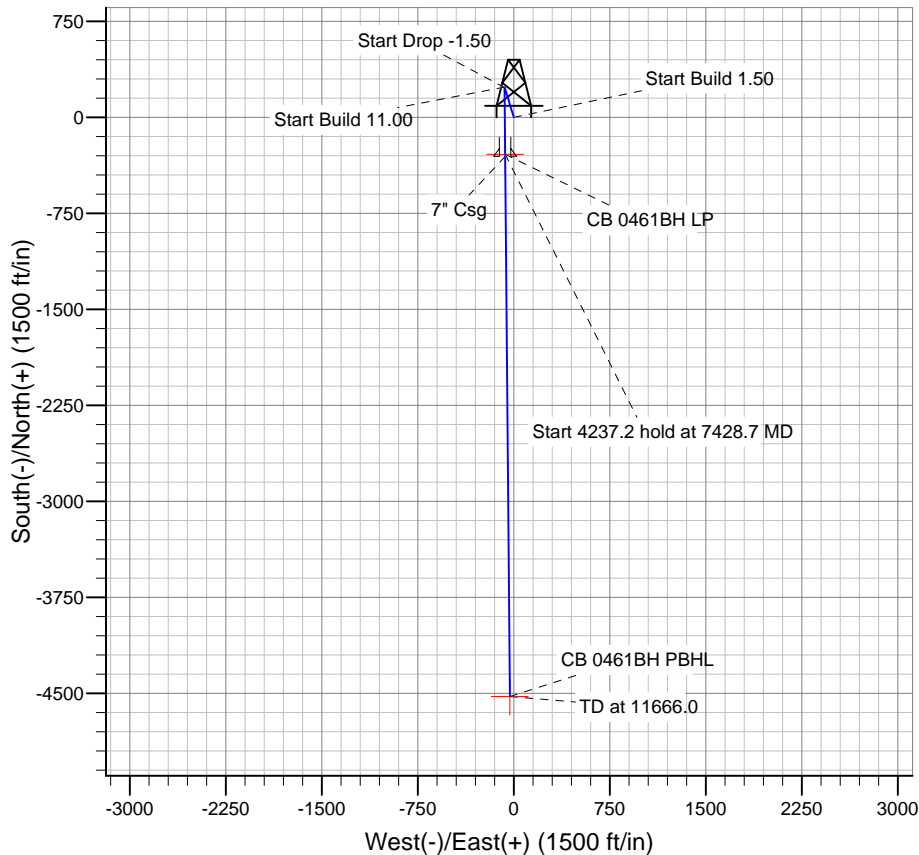
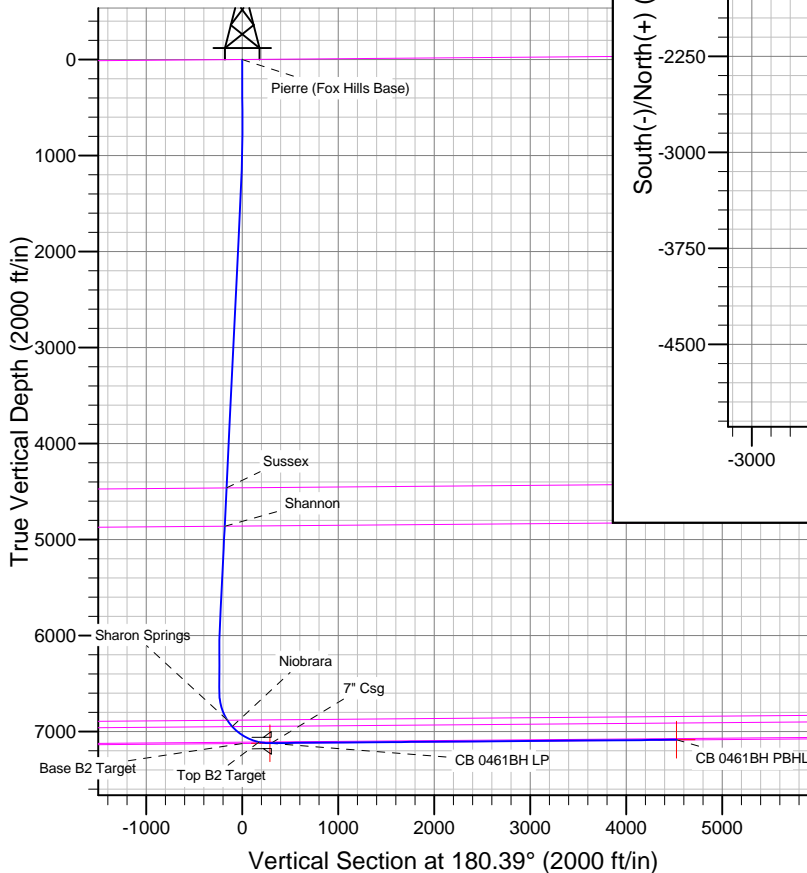
TVDPATH	MDPATH	FORMATION
4462.3	4466.6	Base B2 Target
4861.5	4866.3	Pierre (Fox Hills Base)
6882.3	6904.5	Sussex
6948.9	6988.4	Shannon
7109.6	7315.3	Sharon Springs
		Niobrara
		Top B2 Target

## CASING DETAILS

TVD	MD	Name	Size
7120.8	7445.0	7" Csg	7

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
CB 0461BH PBHL	7086.0	-4524.7	-30.6	Point
CB 0461BH LP	7121.0	-287.8	-66.7	Point



Azimuths to True North  
Magnetic North: 8.61°

Magnetic Field  
Strength: 52975.1snT  
Dip Angle: 67.07°  
Date: 6/17/2013  
Model: IGRF2010

# **BILL BARRETT CORP**

**WELD COUNTY, COLORADO**

**Circle B 6-66-9 Pad**

**Circle B 6-66-9-0461BH**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report**

**17 June, 2013**

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Circle B 6-66-9-0461BH
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Site:</b>	Circle B 6-66-9 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Circle B 6-66-9-0461BH	<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		Circle B 6-66-9 Pad				
Site Position:		Northing:	1,429,169.21 ft	Latitude:	40° 30' 33.372 N	
From:	Lat/Long	Easting:	3,198,820.12ft	Longitude:	104° 47' 5.892 W	
Position Uncertainty:		0.0 ft	Slot Radius:	"	Grid Convergence:	0.46 °

Well	Circle B 6-66-9-0461BH					
Well Position	+N-S	3.6 ft	Northing:	1,429,174.35 ft	Latitude:	40° 30' 33.408 N
	+E-W	186.3 ft	Easting:	3,199,006.39 ft	Longitude:	104° 47' 3.480 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,814.0 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	6/17/2013	8.61	67.07	52,975

<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	180.39

<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	
1,192.8	2.89	343.31	1,192.7	4.7	-1.4	1.50	1.50	0.00	343.31	
5,913.5	2.89	343.31	5,907.4	232.7	-69.8	0.00	0.00	0.00	0.00	
6,106.3	0.00	0.00	6,100.1	237.4	-71.2	1.50	-1.50	0.00	180.00	
6,606.3	0.00	0.00	6,600.1	237.4	-71.2	0.00	0.00	0.00	0.00	
7,428.7	90.47	179.51	7,121.0	-287.7	-66.7	11.00	11.00	0.00	179.51	CB 0461BH LP
11,666.0	90.47	179.51	7,086.2	-4,524.7	-30.7	0.00	0.00	0.00	0.00	CB 0461BH PBHL

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Circle B 6-66-9-0461BH
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Site:</b>	Circle B 6-66-9 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Circle B 6-66-9-0461BH	<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	1.50	343.31	1,100.0	1.3	-0.4	-1.3	1.50	1.50	0.00
1,192.8	2.89	343.31	1,192.7	4.7	-1.4	-4.6	1.50	1.50	0.00
1,200.0	2.89	343.31	1,199.9	5.0	-1.5	-5.0	0.00	0.00	0.00
1,300.0	2.89	343.31	1,299.8	9.8	-3.0	-9.8	0.00	0.00	0.00
1,400.0	2.89	343.31	1,399.7	14.7	-4.4	-14.6	0.00	0.00	0.00
1,500.0	2.89	343.31	1,499.5	19.5	-5.8	-19.5	0.00	0.00	0.00
1,600.0	2.89	343.31	1,599.4	24.3	-7.3	-24.3	0.00	0.00	0.00
1,700.0	2.89	343.31	1,699.3	29.2	-8.7	-29.1	0.00	0.00	0.00
1,800.0	2.89	343.31	1,799.1	34.0	-10.2	-33.9	0.00	0.00	0.00
1,900.0	2.89	343.31	1,899.0	38.8	-11.6	-38.7	0.00	0.00	0.00
2,000.0	2.89	343.31	1,998.9	43.7	-13.1	-43.6	0.00	0.00	0.00
2,100.0	2.89	343.31	2,098.8	48.5	-14.5	-48.4	0.00	0.00	0.00
2,200.0	2.89	343.31	2,198.6	53.3	-16.0	-53.2	0.00	0.00	0.00
2,300.0	2.89	343.31	2,298.5	58.2	-17.4	-58.0	0.00	0.00	0.00
2,400.0	2.89	343.31	2,398.4	63.0	-18.9	-62.9	0.00	0.00	0.00
2,500.0	2.89	343.31	2,498.3	67.8	-20.3	-67.7	0.00	0.00	0.00
2,600.0	2.89	343.31	2,598.1	72.6	-21.8	-72.5	0.00	0.00	0.00
2,700.0	2.89	343.31	2,698.0	77.5	-23.2	-77.3	0.00	0.00	0.00
2,800.0	2.89	343.31	2,797.9	82.3	-24.7	-82.1	0.00	0.00	0.00
2,900.0	2.89	343.31	2,897.7	87.1	-26.1	-87.0	0.00	0.00	0.00
3,000.0	2.89	343.31	2,997.6	92.0	-27.6	-91.8	0.00	0.00	0.00
3,100.0	2.89	343.31	3,097.5	96.8	-29.0	-96.6	0.00	0.00	0.00
3,200.0	2.89	343.31	3,197.4	101.6	-30.5	-101.4	0.00	0.00	0.00
3,300.0	2.89	343.31	3,297.2	106.5	-31.9	-106.3	0.00	0.00	0.00
3,400.0	2.89	343.31	3,397.1	111.3	-33.4	-111.1	0.00	0.00	0.00
3,500.0	2.89	343.31	3,497.0	116.1	-34.8	-115.9	0.00	0.00	0.00
3,600.0	2.89	343.31	3,596.9	121.0	-36.3	-120.7	0.00	0.00	0.00
3,700.0	2.89	343.31	3,696.7	125.8	-37.7	-125.5	0.00	0.00	0.00
3,800.0	2.89	343.31	3,796.6	130.6	-39.2	-130.4	0.00	0.00	0.00
3,900.0	2.89	343.31	3,896.5	135.5	-40.6	-135.2	0.00	0.00	0.00
4,000.0	2.89	343.31	3,996.3	140.3	-42.1	-140.0	0.00	0.00	0.00
4,100.0	2.89	343.31	4,096.2	145.1	-43.5	-144.8	0.00	0.00	0.00
4,200.0	2.89	343.31	4,196.1	150.0	-45.0	-149.6	0.00	0.00	0.00
4,300.0	2.89	343.31	4,296.0	154.8	-46.4	-154.5	0.00	0.00	0.00
4,400.0	2.89	343.31	4,395.8	159.6	-47.9	-159.3	0.00	0.00	0.00
4,466.6	2.89	343.31	4,462.3	162.8	-48.8	-162.5	0.00	0.00	0.00
<b>Sussex</b>									
4,500.0	2.89	343.31	4,495.7	164.4	-49.3	-164.1	0.00	0.00	0.00
4,600.0	2.89	343.31	4,595.6	169.3	-50.8	-168.9	0.00	0.00	0.00
4,700.0	2.89	343.31	4,695.5	174.1	-52.2	-173.8	0.00	0.00	0.00
4,800.0	2.89	343.31	4,795.3	178.9	-53.7	-178.6	0.00	0.00	0.00
4,866.3	2.89	343.31	4,861.5	182.1	-54.6	-181.8	0.00	0.00	0.00
<b>Shannon</b>									

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## Planning Report

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<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Site:</b>	Circle B 6-66-9 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Circle B 6-66-9-0461BH	<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)
4,900.0	2.89	343.31	4,895.2	183.8	-55.1	-183.4	0.00	0.00	0.00
5,000.0	2.89	343.31	4,995.1	188.6	-56.6	-188.2	0.00	0.00	0.00
5,100.0	2.89	343.31	5,094.9	193.4	-58.0	-193.0	0.00	0.00	0.00
5,200.0	2.89	343.31	5,194.8	198.3	-59.5	-197.9	0.00	0.00	0.00
5,300.0	2.89	343.31	5,294.7	203.1	-60.9	-202.7	0.00	0.00	0.00
5,400.0	2.89	343.31	5,394.6	207.9	-62.4	-207.5	0.00	0.00	0.00
5,500.0	2.89	343.31	5,494.4	212.8	-63.8	-212.3	0.00	0.00	0.00
5,600.0	2.89	343.31	5,594.3	217.6	-65.3	-217.1	0.00	0.00	0.00
5,700.0	2.89	343.31	5,694.2	222.4	-66.7	-222.0	0.00	0.00	0.00
5,800.0	2.89	343.31	5,794.1	227.3	-68.2	-226.8	0.00	0.00	0.00
5,900.0	2.89	343.31	5,893.9	232.1	-69.6	-231.6	0.00	0.00	0.00
5,913.5	2.89	343.31	5,907.4	232.7	-69.8	-232.3	0.00	0.00	0.00
6,000.0	1.59	343.31	5,993.8	236.0	-70.8	-235.5	1.50	-1.50	0.00
6,100.0	0.09	343.31	6,093.8	237.4	-71.2	-236.9	1.50	-1.50	0.00
6,106.3	0.00	0.00	6,100.1	237.4	-71.2	-236.9	1.50	-1.50	0.00
6,200.0	0.00	0.00	6,193.8	237.4	-71.2	-236.9	0.00	0.00	0.00
6,300.0	0.00	0.00	6,293.8	237.4	-71.2	-236.9	0.00	0.00	0.00
6,400.0	0.00	0.00	6,393.8	237.4	-71.2	-236.9	0.00	0.00	0.00
6,500.0	0.00	0.00	6,493.8	237.4	-71.2	-236.9	0.00	0.00	0.00
6,600.0	0.00	0.00	6,593.8	237.4	-71.2	-236.9	0.00	0.00	0.00
6,606.3	0.00	0.00	6,600.1	237.4	-71.2	-236.9	0.00	0.00	0.00
6,700.0	10.31	179.51	6,693.3	229.0	-71.1	-228.5	11.00	11.00	0.00
6,800.0	21.31	179.51	6,789.4	201.8	-70.9	-201.3	11.00	11.00	0.00
6,900.0	32.31	179.51	6,878.5	156.8	-70.5	-156.3	11.00	11.00	0.00
6,904.5	32.80	179.51	6,882.3	154.4	-70.5	-153.9	11.00	11.00	0.00
<b>Sharon Springs</b>									
6,988.4	42.03	179.51	6,948.9	103.4	-70.1	-102.9	11.00	11.00	0.00
<b>Niobrara</b>									
7,000.0	43.31	179.51	6,957.4	95.5	-70.0	-95.1	11.00	11.00	0.00
7,100.0	54.31	179.51	7,023.1	20.4	-69.4	-19.9	11.00	11.00	0.00
7,200.0	65.31	179.51	7,073.4	-65.9	-68.6	66.4	11.00	11.00	0.00
7,300.0	76.31	179.51	7,106.2	-160.2	-67.8	160.6	11.00	11.00	0.00
7,315.3	77.99	179.51	7,109.6	-175.1	-67.7	175.5	11.00	11.00	0.00
<b>Top B2 Target</b>									
7,400.0	87.31	179.51	7,120.4	-259.0	-67.0	259.5	11.00	11.00	0.00
7,428.7	90.47	179.51	7,121.0	-287.7	-66.7	288.2	11.00	11.00	0.00
7,428.8	90.47	179.51	7,121.0	-287.8	-66.7	288.2	0.00	0.00	0.00
<b>CB 0461BH LP</b>									
7,445.0	90.47	179.51	7,120.8	-304.0	-66.6	304.4	0.00	0.00	0.00
<b>7" Csg</b>									
7,500.0	90.47	179.51	7,120.4	-359.0	-66.1	359.4	0.00	0.00	0.00
7,600.0	90.47	179.51	7,119.5	-459.0	-65.3	459.4	0.00	0.00	0.00
7,700.0	90.47	179.51	7,118.7	-559.0	-64.4	559.4	0.00	0.00	0.00
7,800.0	90.47	179.51	7,117.9	-659.0	-63.6	659.4	0.00	0.00	0.00
7,900.0	90.47	179.51	7,117.1	-759.0	-62.7	759.4	0.00	0.00	0.00
8,000.0	90.47	179.51	7,116.3	-859.0	-61.9	859.4	0.00	0.00	0.00
8,100.0	90.47	179.51	7,115.4	-958.9	-61.0	959.3	0.00	0.00	0.00
8,200.0	90.47	179.51	7,114.6	-1,058.9	-60.2	1,059.3	0.00	0.00	0.00
8,300.0	90.47	179.51	7,113.8	-1,158.9	-59.3	1,159.3	0.00	0.00	0.00
8,400.0	90.47	179.51	7,113.0	-1,258.9	-58.5	1,259.3	0.00	0.00	0.00
8,500.0	90.47	179.51	7,112.2	-1,358.9	-57.6	1,359.3	0.00	0.00	0.00
8,600.0	90.47	179.51	7,111.3	-1,458.9	-56.8	1,459.3	0.00	0.00	0.00
8,700.0	90.47	179.51	7,110.5	-1,558.9	-55.9	1,559.3	0.00	0.00	0.00

# Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Circle B 6-66-9-0461BH
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Site:</b>	Circle B 6-66-9 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Circle B 6-66-9-0461BH	<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)
8,800.0	90.47	179.51	7,109.7	-1,658.9	-55.1	1,659.2	0.00	0.00	0.00
8,900.0	90.47	179.51	7,108.9	-1,758.9	-54.2	1,759.2	0.00	0.00	0.00
9,000.0	90.47	179.51	7,108.1	-1,858.9	-53.4	1,859.2	0.00	0.00	0.00
9,100.0	90.47	179.51	7,107.2	-1,958.9	-52.5	1,959.2	0.00	0.00	0.00
9,200.0	90.47	179.51	7,106.4	-2,058.9	-51.7	2,059.2	0.00	0.00	0.00
9,300.0	90.47	179.51	7,105.6	-2,158.9	-50.8	2,159.2	0.00	0.00	0.00
9,400.0	90.47	179.51	7,104.8	-2,258.9	-50.0	2,259.1	0.00	0.00	0.00
9,500.0	90.47	179.51	7,104.0	-2,358.9	-49.1	2,359.1	0.00	0.00	0.00
9,600.0	90.47	179.51	7,103.1	-2,458.8	-48.3	2,459.1	0.00	0.00	0.00
9,700.0	90.47	179.51	7,102.3	-2,558.8	-47.4	2,559.1	0.00	0.00	0.00
9,800.0	90.47	179.51	7,101.5	-2,658.8	-46.6	2,659.1	0.00	0.00	0.00
9,900.0	90.47	179.51	7,100.7	-2,758.8	-45.7	2,759.1	0.00	0.00	0.00
10,000.0	90.47	179.51	7,099.9	-2,858.8	-44.9	2,859.1	0.00	0.00	0.00
10,100.0	90.47	179.51	7,099.0	-2,958.8	-44.0	2,959.0	0.00	0.00	0.00
10,200.0	90.47	179.51	7,098.2	-3,058.8	-43.2	3,059.0	0.00	0.00	0.00
10,300.0	90.47	179.51	7,097.4	-3,158.8	-42.3	3,159.0	0.00	0.00	0.00
10,400.0	90.47	179.51	7,096.6	-3,258.8	-41.5	3,259.0	0.00	0.00	0.00
10,500.0	90.47	179.51	7,095.8	-3,358.8	-40.6	3,359.0	0.00	0.00	0.00
10,600.0	90.47	179.51	7,094.9	-3,458.8	-39.8	3,459.0	0.00	0.00	0.00
10,700.0	90.47	179.51	7,094.1	-3,558.8	-38.9	3,559.0	0.00	0.00	0.00
10,800.0	90.47	179.51	7,093.3	-3,658.8	-38.1	3,658.9	0.00	0.00	0.00
10,900.0	90.47	179.51	7,092.5	-3,758.8	-37.2	3,758.9	0.00	0.00	0.00
11,000.0	90.47	179.51	7,091.7	-3,858.7	-36.4	3,858.9	0.00	0.00	0.00
11,100.0	90.47	179.51	7,090.8	-3,958.7	-35.5	3,958.9	0.00	0.00	0.00
11,200.0	90.47	179.51	7,090.0	-4,058.7	-34.7	4,058.9	0.00	0.00	0.00
11,300.0	90.47	179.51	7,089.2	-4,158.7	-33.8	4,158.9	0.00	0.00	0.00
11,400.0	90.47	179.51	7,088.4	-4,258.7	-33.0	4,258.8	0.00	0.00	0.00
11,500.0	90.47	179.51	7,087.6	-4,358.7	-32.1	4,358.8	0.00	0.00	0.00
11,600.0	90.47	179.51	7,086.7	-4,458.7	-31.3	4,458.8	0.00	0.00	0.00
11,666.0	90.47	179.51	7,086.2	-4,524.7	-30.7	4,524.8	0.00	0.00	0.00
CB 0461BH PBHL									

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,445.0	7,120.8	7" Csg	7	8-3/4

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	0.0	Pierre (Fox Hills Base)		-0.47	179.51
4,466.6	4,461.0	Sussex		-0.47	179.51
4,866.3	4,860.0	Shannon		-0.47	179.51
6,904.5	6,881.0	Sharon Springs		-0.47	179.51
6,988.4	6,948.0	Niobrara		-0.47	179.51
7,315.3	7,111.0	Top B2 Target		-0.47	179.51
	7,126.0	Base B2 Target		-0.47	179.51

**Bill Barrett Corp**  
Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well Circle B 6-66-9-0461BH
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO	<b>MD Reference:</b>	KB @ 4837.0ft (Original Well Elev)
<b>Site:</b>	Circle B 6-66-9 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Circle B 6-66-9-0461BH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		