

BILL BARRETT CORP

Weld Cty, CO

Circle B 6-66-9 Pad

Circle B 6-66-9-0461BH

Wellbore #1

Plan: Design #1

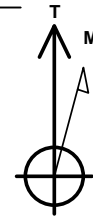
Standard Planning Report

17 October, 2013

BILL BARRETT CORP
Circle B 6-66-9-0461BH
Weld Cty, CO

Geodetic System: US State Plane 1983
Zone: Colorado Northern Zone
KB @ 4837.0usft (Original Well Elev)
Ground Level: 4814.0
Latitude: 40° 30' 33.372 N
Longitude: 104° 47' 5.892 W

Magnetic North is 8.61° East of True North (Magnetic Declination)



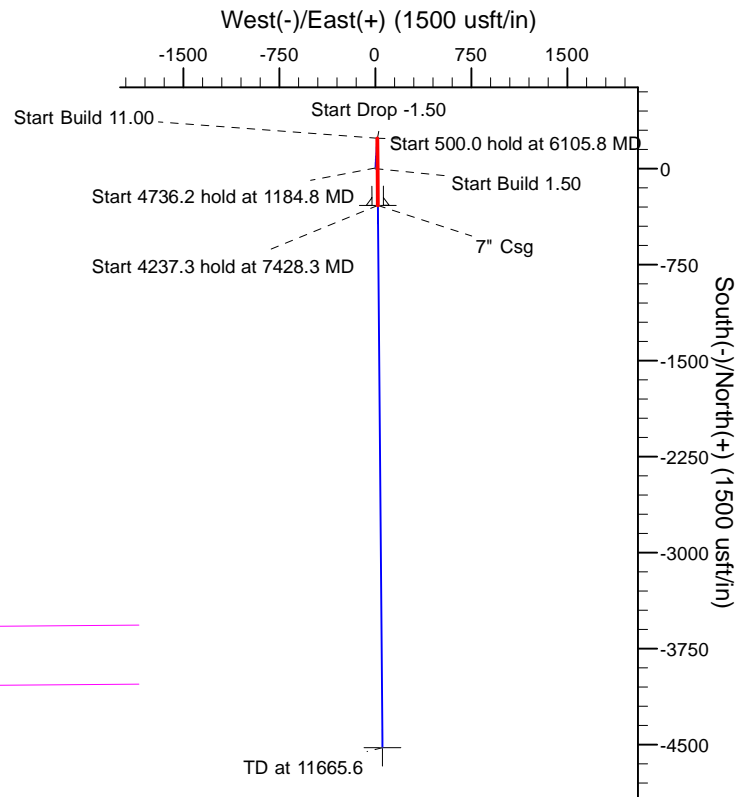
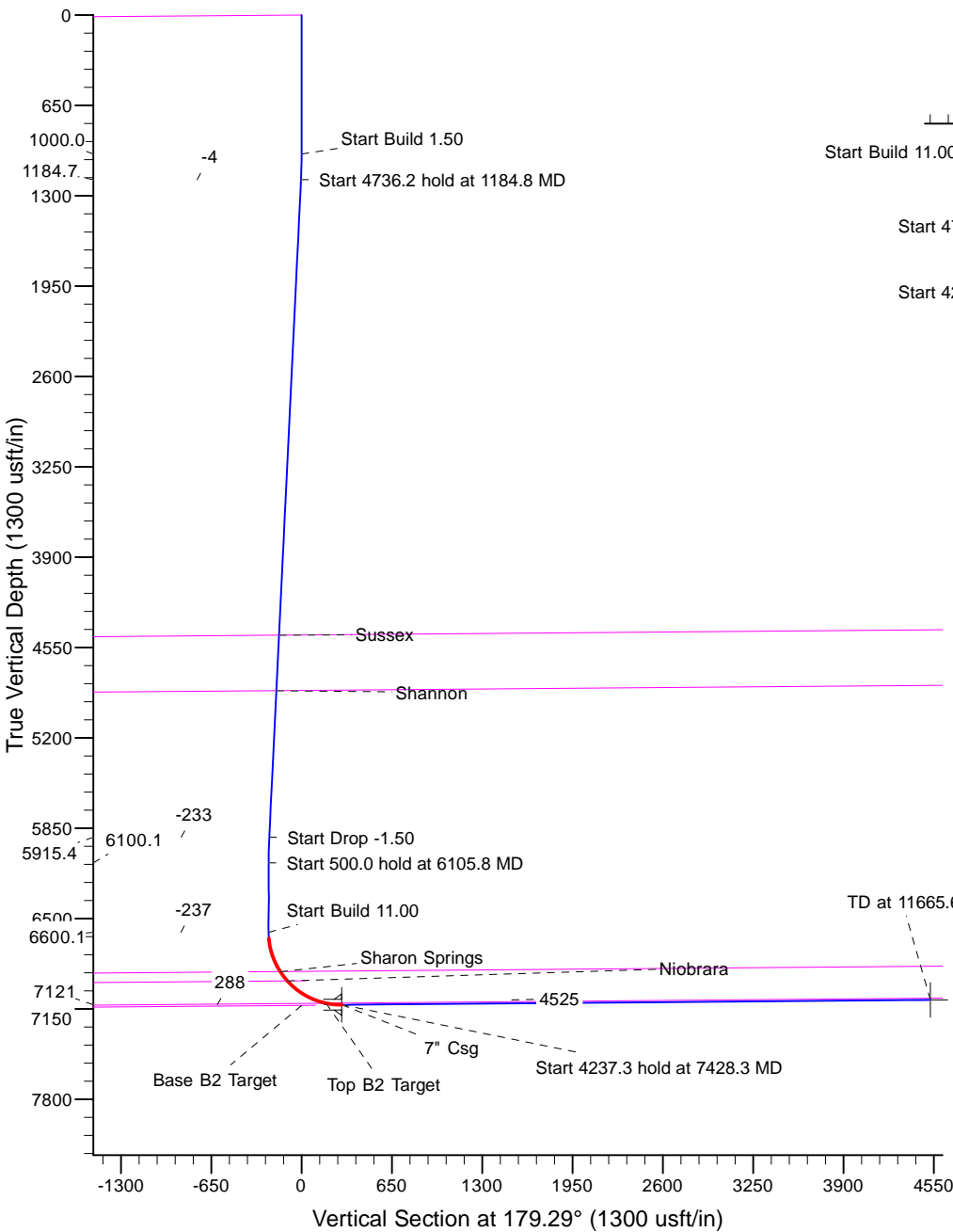
Azimuths to True North
Magnetic North: 8.62°

Magnetic Field
Strength: 52975.0snT
Dip Angle: 67.07°
Date: 6/17/2013
Model: IGRF2010

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0
1184.8	2.77	3.61	1184.7	4.5	0.3	1.50	3.61	-4.5
5921.0	2.77	3.61	5915.4	233.0	14.7	0.00	0.00	-232.8
6105.8	0.00	0.00	6100.1	237.5	15.0	1.50	180.00	-237.3
6605.8	0.00	0.00	6600.1	237.5	15.0	0.00	0.00	-237.3
7428.3	90.47	179.51	7120.9	-287.7	19.5	11.00	179.51	287.9
11665.6	90.47	179.51	7086.0	-4524.7	55.7	0.00	0.00	4525.0

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4462.3	4466.2	Sussex
4861.5	4865.9	Shannon
6882.3	6904.0	Sharon Springs
6948.8	6987.9	Niobrara
7109.5	7314.7	Top B2 Target



Plan: Design #1 (Circle B 6-66-9-0461BH/Wellbore #1)

Created By: Mike Kirby Date: 14:06, October 17 2013
Checked: Date:
Reviewed: Date:
Approved: x Date: x

Planning Report

Database:	Rocky Mountain R5000 Database	Local Co-ordinate Reference:	Well Circle B 6-66-9-0461BH
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4837.0usft (Original Well Elev)
Project:	Weld Cty, CO	MD Reference:	KB @ 4837.0usft (Original Well Elev)
Site:	Circle B 6-66-9 Pad	North Reference:	True
Well:	Circle B 6-66-9-0461BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Weld Cty, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Circle B 6-66-9 Pad			
Site Position:		Northing:	1,429,169.21 usft	Latitude:	40° 30' 33.372 N
From:	Lat/Long	Easting:	3,198,820.12 usft	Longitude:	104° 47' 5.892 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46 °

Well	Circle B 6-66-9-0461BH					
Well Position	+N/-S	3.6 usft	Northing:	1,429,173.65 usft	Latitude:	40° 30' 33.408 N
	+E/-W	100.1 usft	Easting:	3,198,920.19 usft	Longitude:	104° 47' 4.596 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	4,814.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/17/2013	8.61	67.07	52,975

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.29

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	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	
1,184.8	2.77	3.61	1,184.7	4.5	0.3	1.50	1.50	0.00	3.61	
5,921.0	2.77	3.61	5,915.4	233.0	14.7	0.00	0.00	0.00	0.00	
6,105.8	0.00	0.00	6,100.1	237.5	15.0	1.50	-1.50	0.00	180.00	
6,605.8	0.00	0.00	6,600.1	237.5	15.0	0.00	0.00	0.00	0.00	
7,428.3	90.47	179.51	7,120.9	-287.7	19.5	11.00	11.00	0.00	179.51	
11,665.6	90.47	179.51	7,086.0	-4,524.7	55.7	0.00	0.00	0.00	0.00	CB 0461BH PBHL (cc

Planning Report

Database:	Rocky Mountain R5000 Database	Local Co-ordinate Reference:	Well Circle B 6-66-9-0461BH
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4837.0usft (Original Well Elev)
Project:	Weld Cty, CO	MD Reference:	KB @ 4837.0usft (Original Well Elev)
Site:	Circle B 6-66-9 Pad	North Reference:	True
Well:	Circle B 6-66-9-0461BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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	3.61	1,100.0	1.3	0.1	-1.3	1.50	1.50	0.00
1,184.8	2.77	3.61	1,184.7	4.5	0.3	-4.5	1.50	1.50	0.00
1,200.0	2.77	3.61	1,199.9	5.2	0.3	-5.2	0.00	0.00	0.00
1,300.0	2.77	3.61	1,299.8	10.0	0.6	-10.0	0.00	0.00	0.00
1,400.0	2.77	3.61	1,399.7	14.8	0.9	-14.8	0.00	0.00	0.00
1,500.0	2.77	3.61	1,499.6	19.7	1.2	-19.7	0.00	0.00	0.00
1,600.0	2.77	3.61	1,599.4	24.5	1.5	-24.5	0.00	0.00	0.00
1,700.0	2.77	3.61	1,699.3	29.3	1.9	-29.3	0.00	0.00	0.00
1,800.0	2.77	3.61	1,799.2	34.2	2.2	-34.1	0.00	0.00	0.00
1,900.0	2.77	3.61	1,899.1	39.0	2.5	-38.9	0.00	0.00	0.00
2,000.0	2.77	3.61	1,999.0	43.8	2.8	-43.8	0.00	0.00	0.00
2,100.0	2.77	3.61	2,098.9	48.6	3.1	-48.6	0.00	0.00	0.00
2,200.0	2.77	3.61	2,198.7	53.5	3.4	-53.4	0.00	0.00	0.00
2,300.0	2.77	3.61	2,298.6	58.3	3.7	-58.2	0.00	0.00	0.00
2,400.0	2.77	3.61	2,398.5	63.1	4.0	-63.1	0.00	0.00	0.00
2,500.0	2.77	3.61	2,498.4	67.9	4.3	-67.9	0.00	0.00	0.00
2,600.0	2.77	3.61	2,598.3	72.8	4.6	-72.7	0.00	0.00	0.00
2,700.0	2.77	3.61	2,698.2	77.6	4.9	-77.5	0.00	0.00	0.00
2,800.0	2.77	3.61	2,798.0	82.4	5.2	-82.3	0.00	0.00	0.00
2,900.0	2.77	3.61	2,897.9	87.2	5.5	-87.2	0.00	0.00	0.00
3,000.0	2.77	3.61	2,997.8	92.1	5.8	-92.0	0.00	0.00	0.00
3,100.0	2.77	3.61	3,097.7	96.9	6.1	-96.8	0.00	0.00	0.00
3,200.0	2.77	3.61	3,197.6	101.7	6.4	-101.6	0.00	0.00	0.00
3,300.0	2.77	3.61	3,297.5	106.5	6.7	-106.5	0.00	0.00	0.00
3,400.0	2.77	3.61	3,397.3	111.4	7.0	-111.3	0.00	0.00	0.00
3,500.0	2.77	3.61	3,497.2	116.2	7.3	-116.1	0.00	0.00	0.00
3,600.0	2.77	3.61	3,597.1	121.0	7.6	-120.9	0.00	0.00	0.00
3,700.0	2.77	3.61	3,697.0	125.9	7.9	-125.7	0.00	0.00	0.00
3,800.0	2.77	3.61	3,796.9	130.7	8.3	-130.6	0.00	0.00	0.00
3,900.0	2.77	3.61	3,896.8	135.5	8.6	-135.4	0.00	0.00	0.00
4,000.0	2.77	3.61	3,996.6	140.3	8.9	-140.2	0.00	0.00	0.00
4,100.0	2.77	3.61	4,096.5	145.2	9.2	-145.0	0.00	0.00	0.00
4,200.0	2.77	3.61	4,196.4	150.0	9.5	-149.9	0.00	0.00	0.00
4,300.0	2.77	3.61	4,296.3	154.8	9.8	-154.7	0.00	0.00	0.00
4,400.0	2.77	3.61	4,396.2	159.6	10.1	-159.5	0.00	0.00	0.00
4,466.2	2.77	3.61	4,462.3	162.8	10.3	-162.7	0.00	0.00	0.00
Sussex									
4,500.0	2.77	3.61	4,496.0	164.5	10.4	-164.3	0.00	0.00	0.00
4,600.0	2.77	3.61	4,595.9	169.3	10.7	-169.1	0.00	0.00	0.00
4,700.0	2.77	3.61	4,695.8	174.1	11.0	-174.0	0.00	0.00	0.00
4,800.0	2.77	3.61	4,795.7	178.9	11.3	-178.8	0.00	0.00	0.00
4,865.9	2.77	3.61	4,861.5	182.1	11.5	-182.0	0.00	0.00	0.00
Shannon									

Planning Report

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Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4837.0usft (Original Well Elev)
Project:	Weld Cty, CO	MD Reference:	KB @ 4837.0usft (Original Well Elev)
Site:	Circle B 6-66-9 Pad	North Reference:	True
Well:	Circle B 6-66-9-0461BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.0	2.77	3.61	4,895.6	183.8	11.6	-183.6	0.00	0.00	0.00
5,000.0	2.77	3.61	4,995.5	188.6	11.9	-188.4	0.00	0.00	0.00
5,100.0	2.77	3.61	5,095.3	193.4	12.2	-193.3	0.00	0.00	0.00
5,200.0	2.77	3.61	5,195.2	198.2	12.5	-198.1	0.00	0.00	0.00
5,300.0	2.77	3.61	5,295.1	203.1	12.8	-202.9	0.00	0.00	0.00
5,400.0	2.77	3.61	5,395.0	207.9	13.1	-207.7	0.00	0.00	0.00
5,500.0	2.77	3.61	5,494.9	212.7	13.4	-212.5	0.00	0.00	0.00
5,600.0	2.77	3.61	5,594.8	217.5	13.7	-217.4	0.00	0.00	0.00
5,700.0	2.77	3.61	5,694.6	222.4	14.0	-222.2	0.00	0.00	0.00
5,800.0	2.77	3.61	5,794.5	227.2	14.3	-227.0	0.00	0.00	0.00
5,900.0	2.77	3.61	5,894.4	232.0	14.7	-231.8	0.00	0.00	0.00
5,921.0	2.77	3.61	5,915.4	233.0	14.7	-232.8	0.00	0.00	0.00
6,000.0	1.59	3.61	5,994.3	236.0	14.9	-235.8	1.50	-1.50	0.00
6,100.0	0.09	3.61	6,094.3	237.5	15.0	-237.3	1.50	-1.50	0.00
6,105.8	0.00	0.00	6,100.1	237.5	15.0	-237.3	1.50	-1.50	0.00
6,200.0	0.00	0.00	6,194.3	237.5	15.0	-237.3	0.00	0.00	0.00
6,300.0	0.00	0.00	6,294.3	237.5	15.0	-237.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,394.3	237.5	15.0	-237.3	0.00	0.00	0.00
6,500.0	0.00	0.00	6,494.3	237.5	15.0	-237.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,594.3	237.5	15.0	-237.3	0.00	0.00	0.00
6,605.8	0.00	0.00	6,600.1	237.5	15.0	-237.3	0.00	0.00	0.00
6,700.0	10.37	179.51	6,693.8	229.0	15.1	-228.8	11.00	11.00	0.00
6,800.0	21.37	179.51	6,789.8	201.7	15.3	-201.5	11.00	11.00	0.00
6,900.0	32.37	179.51	6,878.9	156.6	15.7	-156.4	11.00	11.00	0.00
6,904.0	32.80	179.51	6,882.3	154.5	15.7	-154.3	11.00	11.00	0.00
Sharon Springs									
6,987.9	42.03	179.51	6,948.8	103.5	16.1	-103.3	11.00	11.00	0.00
Niobrara									
7,000.0	43.37	179.51	6,957.7	95.3	16.2	-95.1	11.00	11.00	0.00
7,100.0	54.37	179.51	7,023.4	20.1	16.9	-19.9	11.00	11.00	0.00
7,200.0	65.37	179.51	7,073.5	-66.2	17.6	66.5	11.00	11.00	0.00
7,300.0	76.37	179.51	7,106.3	-160.6	18.4	160.8	11.00	11.00	0.00
7,314.7	77.99	179.51	7,109.5	-174.9	18.5	175.2	11.00	11.00	0.00
Top B2 Target									
7,400.0	87.37	179.51	7,120.4	-259.4	19.2	259.6	11.00	11.00	0.00
7,428.3	90.47	179.51	7,120.9	-287.7	19.5	287.9	10.98	10.98	0.00
7" Csg									
7,500.0	90.47	179.51	7,120.3	-359.4	20.1	359.6	0.00	0.00	0.00
7,600.0	90.47	179.51	7,119.5	-459.4	21.0	459.6	0.00	0.00	0.00
7,700.0	90.47	179.51	7,118.7	-559.4	21.8	559.6	0.00	0.00	0.00
7,800.0	90.47	179.51	7,117.9	-659.4	22.7	659.6	0.00	0.00	0.00
7,900.0	90.47	179.51	7,117.0	-759.4	23.5	759.6	0.00	0.00	0.00
8,000.0	90.47	179.51	7,116.2	-859.4	24.4	859.6	0.00	0.00	0.00
8,100.0	90.47	179.51	7,115.4	-959.4	25.2	959.6	0.00	0.00	0.00
8,200.0	90.47	179.51	7,114.6	-1,059.3	26.1	1,059.6	0.00	0.00	0.00
8,300.0	90.47	179.51	7,113.7	-1,159.3	26.9	1,159.6	0.00	0.00	0.00
8,400.0	90.47	179.51	7,112.9	-1,259.3	27.8	1,259.6	0.00	0.00	0.00
8,500.0	90.47	179.51	7,112.1	-1,359.3	28.7	1,359.6	0.00	0.00	0.00
8,600.0	90.47	179.51	7,111.3	-1,459.3	29.5	1,459.6	0.00	0.00	0.00
8,700.0	90.47	179.51	7,110.4	-1,559.3	30.4	1,559.6	0.00	0.00	0.00
8,800.0	90.47	179.51	7,109.6	-1,659.3	31.2	1,659.6	0.00	0.00	0.00
8,900.0	90.47	179.51	7,108.8	-1,759.3	32.1	1,759.6	0.00	0.00	0.00
9,000.0	90.47	179.51	7,108.0	-1,859.3	32.9	1,859.6	0.00	0.00	0.00

Planning Report

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Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4837.0usft (Original Well Elev)
Project:	Weld Cty, CO	MD Reference:	KB @ 4837.0usft (Original Well Elev)
Site:	Circle B 6-66-9 Pad	North Reference:	True
Well:	Circle B 6-66-9-0461BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,100.0	90.47	179.51	7,107.1	-1,959.3	33.8	1,959.5	0.00	0.00	0.00	
9,200.0	90.47	179.51	7,106.3	-2,059.3	34.6	2,059.5	0.00	0.00	0.00	
9,300.0	90.47	179.51	7,105.5	-2,159.3	35.5	2,159.5	0.00	0.00	0.00	
9,400.0	90.47	179.51	7,104.7	-2,259.3	36.4	2,259.5	0.00	0.00	0.00	
9,500.0	90.47	179.51	7,103.8	-2,359.3	37.2	2,359.5	0.00	0.00	0.00	
9,600.0	90.47	179.51	7,103.0	-2,459.2	38.1	2,459.5	0.00	0.00	0.00	
9,700.0	90.47	179.51	7,102.2	-2,559.2	38.9	2,559.5	0.00	0.00	0.00	
9,800.0	90.47	179.51	7,101.4	-2,659.2	39.8	2,659.5	0.00	0.00	0.00	
9,900.0	90.47	179.51	7,100.5	-2,759.2	40.6	2,759.5	0.00	0.00	0.00	
10,000.0	90.47	179.51	7,099.7	-2,859.2	41.5	2,859.5	0.00	0.00	0.00	
10,100.0	90.47	179.51	7,098.9	-2,959.2	42.3	2,959.5	0.00	0.00	0.00	
10,200.0	90.47	179.51	7,098.1	-3,059.2	43.2	3,059.5	0.00	0.00	0.00	
10,300.0	90.47	179.51	7,097.2	-3,159.2	44.0	3,159.5	0.00	0.00	0.00	
10,400.0	90.47	179.51	7,096.4	-3,259.2	44.9	3,259.5	0.00	0.00	0.00	
10,500.0	90.47	179.51	7,095.6	-3,359.2	45.8	3,359.5	0.00	0.00	0.00	
10,600.0	90.47	179.51	7,094.8	-3,459.2	46.6	3,459.5	0.00	0.00	0.00	
10,700.0	90.47	179.51	7,093.9	-3,559.2	47.5	3,559.5	0.00	0.00	0.00	
10,800.0	90.47	179.51	7,093.1	-3,659.2	48.3	3,659.5	0.00	0.00	0.00	
10,900.0	90.47	179.51	7,092.3	-3,759.2	49.2	3,759.5	0.00	0.00	0.00	
11,000.0	90.47	179.51	7,091.5	-3,859.1	50.0	3,859.5	0.00	0.00	0.00	
11,100.0	90.47	179.51	7,090.6	-3,959.1	50.9	3,959.5	0.00	0.00	0.00	
11,200.0	90.47	179.51	7,089.8	-4,059.1	51.7	4,059.5	0.00	0.00	0.00	
11,300.0	90.47	179.51	7,089.0	-4,159.1	52.6	4,159.5	0.00	0.00	0.00	
11,400.0	90.47	179.51	7,088.2	-4,259.1	53.5	4,259.5	0.00	0.00	0.00	
11,500.0	90.47	179.51	7,087.3	-4,359.1	54.3	4,359.4	0.00	0.00	0.00	
11,600.0	90.47	179.51	7,086.5	-4,459.1	55.2	4,459.4	0.00	0.00	0.00	
11,665.6	90.47	179.51	7,086.0	-4,524.7	55.7	4,525.0	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
CB 0461BH PBHL (copy - hit/miss target - Shape - Point	0.00	358.35	7,086.0	-4,524.7	55.7	1,424,649.58	3,199,012.39	40° 29' 48.696 N		104° 47' 3.875 W
CB 0461BH LP (copy) (c - plan misses target center by 0.1usft at 7428.3usft MD (7120.9 TVD, -287.7 N, 19.5 E) - Point	0.00	358.35	7,121.0	-287.7	19.5	1,428,886.12	3,198,941.98	40° 30' 30.565 N		104° 47' 4.344 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")
7,428.3	7,120.9	7" Csg		7	8-3/4

Planning Report

Database:	Rocky Mountain R5000 Database	Local Co-ordinate Reference:	Well Circle B 6-66-9-0461BH
Company:	BILL BARRETT CORP	TVD Reference:	KB @ 4837.0usft (Original Well Elev)
Project:	Weld Cty, CO	MD Reference:	KB @ 4837.0usft (Original Well Elev)
Site:	Circle B 6-66-9 Pad	North Reference:	True
Well:	Circle B 6-66-9-0461BH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,466.2	4,462.3	Sussex		-0.47	179.51	
4,865.9	4,861.5	Shannon		-0.47	179.51	
6,904.0	6,882.3	Sharon Springs		-0.47	179.51	
6,987.9	6,948.8	Niobrara		-0.47	179.51	
7,314.7	7,109.5	Top B2 Target		-0.47	179.51	