

BILL BARRETT CORP

WELD COUNTY, COLORADO

CVR 5-63-32-23H

CVR 5-63-32-23H

Wellbore #1

Plan: Design #1

Standard Planning Report

10 January, 2013



Bill Barrett Corporation

SITE DETAILS: CVR 5-63-32-23H
Wattenberg

Site Latitude: 40° 21' 18.684 N
Site Longitude: 104° 28' 7.140 W

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

Positional Uncertainty: 0.0
Convergence: 0.67
Local North: True

WELL DETAILS: CVR 5-63-32-23H

Ground Level: 4578.0
Easting 3287425.0440° 21' 18.684 N
Latitude 104° 28' 7.140 W
Longitude Slot

+N/-S +E/-W
0.0 0.0

Northing
1373907.82

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|----------------------|--------|--------|--------|------------------|------------------|-------|
| CVR 5-63-32-23H PBHL | 6370.0 | 1271.8 | 4575.9 | 40° 21' 31.248 N | 104° 27' 8.028 W | Point |
| CVR 5-63-32-23H LP | 6420.0 | 1278.7 | 256.4 | 40° 21' 31.320 N | 104° 28' 3.828 W | Point |

SECTION DETAILS

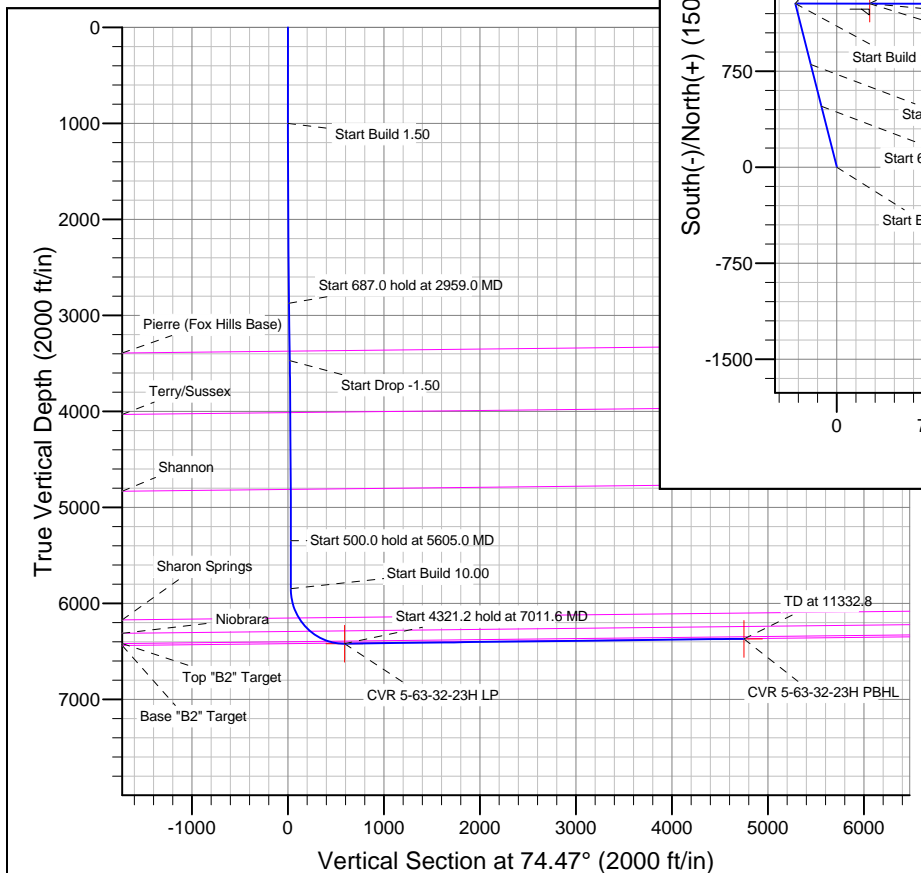
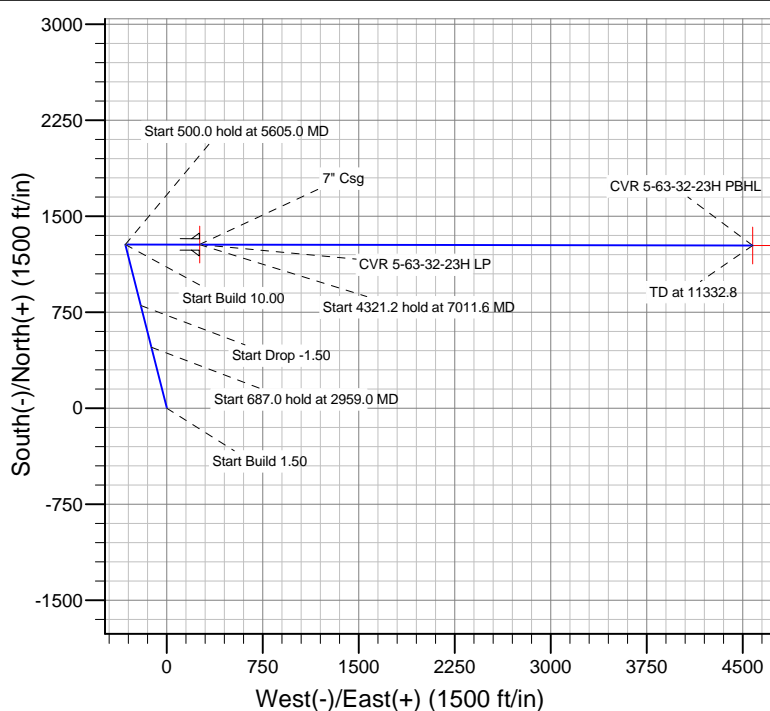
| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Target |
|-----|---------|-------|--------|--------|--------|--------|-------|--------|--------|----------------------|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 1000.0 | 0.00 | 0.00 | 1000.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 2959.0 | 29.38 | 345.77 | 2874.2 | 476.3 | -120.8 | 1.50 | 345.77 | 11.1 | |
| 4 | 3646.0 | 29.38 | 345.77 | 3472.9 | 803.1 | -203.7 | 0.00 | 0.00 | 18.8 | |
| 5 | 5605.0 | 0.00 | 0.00 | 5347.1 | 1279.4 | -324.5 | 1.50 | 180.00 | 29.9 | |
| 6 | 6105.0 | 0.00 | 0.00 | 5847.1 | 1279.4 | -324.5 | 0.00 | 0.00 | 29.9 | |
| 7 | 7011.6 | 90.66 | 90.09 | 6420.0 | 1278.5 | 255.0 | 10.00 | 90.09 | 588.1 | |
| 8 | 11332.8 | 90.66 | 90.09 | 6370.0 | 1271.8 | 4575.9 | 0.00 | 0.00 | 4749.4 | CVR 5-63-32-23H PBHL |

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---------|--------|-------------------------|
| 3376.2 | 3535.1 | Pierre (Fox Hills Base) |
| 4017.1 | 4246.5 | Terry/Sussex |
| 4817.7 | 5073.8 | Shannon |
| 6156.7 | 6432.1 | Sharon Springs |
| 6295.3 | 6619.6 | Niobrara |
| 6398.9 | 6849.0 | Top "B2" Target |
| 6417.8 | 6953.6 | Base "B2" Target |

CASING DETAILS

| TVD | MD | Name | Size |
|--------|--------|--------|------|
| 6420.0 | 7011.6 | 7" Csg | 7 |



Azimuths to True North
Magnetic North: 8.49°

Magnetic Field
Strength: 52975.6snT
Dip Angle: 67.01°
Date: 1/9/2013
Model: IGRF2010

Bill Barrett Corp

Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|------------------------------------|
| Database: | Compass | Local Co-ordinate Reference: | Well CVR 5-63-32-23H |
| Company: | BILL BARRETT CORP | TVD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Site: | CVR 5-63-32-23H | North Reference: | True |
| Well: | CVR 5-63-32-23H | 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 | | CVR 5-63-32-23H | | | |
| Site Position: | | Northing: | 1,373,907.82 ft | Latitude: | 40° 21' 18.684 N |
| From: | Lat/Long | Easting: | 3,287,425.04 ft | Longitude: | 104° 28' 7.140 W |
| Position Uncertainty: | 0.0 ft | Slot Radius: | " | Grid Convergence: | 0.67 ° |

| Well | CVR 5-63-32-23H | | | | | |
|----------------------|-----------------|--------|---------------------|-----------------|---------------|------------------|
| Well Position | +N/-S | 0.0 ft | Northing: | 1,373,907.82 ft | Latitude: | 40° 21' 18.684 N |
| | +E/-W | 0.0 ft | Easting: | 3,287,425.04 ft | Longitude: | 104° 28' 7.140 W |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 4,578.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 1/9/2013 | 8.49 | 67.01 | 52,976 |

| | | | | |
|--------------------------|----------------------------------|-----------------------|-----------------------|--------------------------|
| 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 | 74.47 |

| 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 | |
| 2,959.0 | 29.38 | 345.77 | 2,874.2 | 476.3 | -120.8 | 1.50 | 1.50 | 0.00 | 345.77 | |
| 3,646.0 | 29.38 | 345.77 | 3,472.9 | 803.1 | -203.7 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,605.0 | 0.00 | 0.00 | 5,347.1 | 1,279.4 | -324.5 | 1.50 | -1.50 | 0.00 | 180.00 | |
| 6,105.0 | 0.00 | 0.00 | 5,847.1 | 1,279.4 | -324.5 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,011.6 | 90.66 | 90.09 | 6,420.0 | 1,278.5 | 255.0 | 10.00 | 10.00 | 0.00 | 90.09 | |
| 11,332.8 | 90.66 | 90.09 | 6,370.0 | 1,271.8 | 4,575.9 | 0.00 | 0.00 | 0.00 | 0.00 | CVR 5-63-32-23H PB |

Bill Barrett Corp

Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|------------------------------------|
| Database: | Compass | Local Co-ordinate Reference: | Well CVR 5-63-32-23H |
| Company: | BILL BARRETT CORP | TVD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Site: | CVR 5-63-32-23H | North Reference: | True |
| Well: | CVR 5-63-32-23H | 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 |
| Start Build 1.50 | | | | | | | | | |
| 1,100.0 | 1.50 | 345.77 | 1,100.0 | 1.3 | -0.3 | 0.0 | 1.50 | 1.50 | 0.00 |
| 1,200.0 | 3.00 | 345.77 | 1,199.9 | 5.1 | -1.3 | 0.1 | 1.50 | 1.50 | 0.00 |
| 1,300.0 | 4.50 | 345.77 | 1,299.7 | 11.4 | -2.9 | 0.3 | 1.50 | 1.50 | 0.00 |
| 1,400.0 | 6.00 | 345.77 | 1,399.3 | 20.3 | -5.1 | 0.5 | 1.50 | 1.50 | 0.00 |
| 1,500.0 | 7.50 | 345.77 | 1,498.6 | 31.7 | -8.0 | 0.7 | 1.50 | 1.50 | 0.00 |
| 1,600.0 | 9.00 | 345.77 | 1,597.5 | 45.6 | -11.6 | 1.1 | 1.50 | 1.50 | 0.00 |
| 1,700.0 | 10.50 | 345.77 | 1,696.1 | 62.0 | -15.7 | 1.4 | 1.50 | 1.50 | 0.00 |
| 1,800.0 | 12.00 | 345.77 | 1,794.2 | 80.9 | -20.5 | 1.9 | 1.50 | 1.50 | 0.00 |
| 1,900.0 | 13.50 | 345.77 | 1,891.7 | 102.3 | -25.9 | 2.4 | 1.50 | 1.50 | 0.00 |
| 2,000.0 | 15.00 | 345.77 | 1,988.6 | 126.2 | -32.0 | 2.9 | 1.50 | 1.50 | 0.00 |
| 2,100.0 | 16.50 | 345.77 | 2,084.9 | 152.5 | -38.7 | 3.6 | 1.50 | 1.50 | 0.00 |
| 2,200.0 | 18.00 | 345.77 | 2,180.4 | 181.2 | -46.0 | 4.2 | 1.50 | 1.50 | 0.00 |
| 2,300.0 | 19.50 | 345.77 | 2,275.0 | 212.4 | -53.9 | 5.0 | 1.50 | 1.50 | 0.00 |
| 2,400.0 | 21.00 | 345.77 | 2,368.9 | 245.9 | -62.4 | 5.8 | 1.50 | 1.50 | 0.00 |
| 2,500.0 | 22.50 | 345.77 | 2,461.7 | 281.8 | -71.5 | 6.6 | 1.50 | 1.50 | 0.00 |
| 2,600.0 | 24.00 | 345.77 | 2,553.6 | 320.1 | -81.2 | 7.5 | 1.50 | 1.50 | 0.00 |
| 2,700.0 | 25.50 | 345.77 | 2,644.4 | 360.7 | -91.5 | 8.4 | 1.50 | 1.50 | 0.00 |
| 2,800.0 | 27.00 | 345.77 | 2,734.1 | 403.5 | -102.4 | 9.4 | 1.50 | 1.50 | 0.00 |
| 2,900.0 | 28.50 | 345.77 | 2,822.6 | 448.7 | -113.8 | 10.5 | 1.50 | 1.50 | 0.00 |
| 2,959.0 | 29.38 | 345.77 | 2,874.2 | 476.3 | -120.8 | 11.1 | 1.50 | 1.50 | 0.00 |
| Start 687.0 hold at 2959.0 MD | | | | | | | | | |
| 3,000.0 | 29.38 | 345.77 | 2,910.0 | 495.8 | -125.8 | 11.6 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 29.38 | 345.77 | 2,997.1 | 543.4 | -137.8 | 12.7 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 29.38 | 345.77 | 3,084.2 | 591.0 | -149.9 | 13.8 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 29.38 | 345.77 | 3,171.4 | 638.5 | -162.0 | 14.9 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 29.38 | 345.77 | 3,258.5 | 686.1 | -174.0 | 16.0 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 29.38 | 345.77 | 3,345.6 | 733.7 | -186.1 | 17.2 | 0.00 | 0.00 | 0.00 |
| 3,535.6 | 29.38 | 345.77 | 3,376.7 | 750.6 | -190.4 | 17.6 | 0.00 | 0.00 | 0.00 |
| Pierre (Fox Hills Base) | | | | | | | | | |
| 3,600.0 | 29.38 | 345.77 | 3,432.8 | 781.2 | -198.2 | 18.3 | 0.00 | 0.00 | 0.00 |
| 3,646.0 | 29.38 | 345.77 | 3,472.9 | 803.1 | -203.7 | 18.8 | 0.00 | 0.00 | 0.00 |
| Start Drop -1.50 | | | | | | | | | |
| 3,700.0 | 28.57 | 345.77 | 3,520.1 | 828.5 | -210.1 | 19.4 | 1.50 | -1.50 | 0.00 |
| 3,800.0 | 27.07 | 345.77 | 3,608.5 | 873.7 | -221.6 | 20.4 | 1.50 | -1.50 | 0.00 |
| 3,900.0 | 25.57 | 345.77 | 3,698.2 | 916.7 | -232.5 | 21.4 | 1.50 | -1.50 | 0.00 |
| 4,000.0 | 24.07 | 345.77 | 3,788.9 | 957.4 | -242.9 | 22.4 | 1.50 | -1.50 | 0.00 |
| 4,100.0 | 22.57 | 345.77 | 3,880.7 | 995.8 | -252.6 | 23.3 | 1.50 | -1.50 | 0.00 |
| 4,200.0 | 21.07 | 345.77 | 3,973.6 | 1,031.8 | -261.7 | 24.1 | 1.50 | -1.50 | 0.00 |
| 4,247.2 | 20.37 | 345.77 | 4,017.7 | 1,048.0 | -265.8 | 24.5 | 1.50 | -1.50 | 0.00 |
| Terry/Sussex | | | | | | | | | |
| 4,300.0 | 19.57 | 345.77 | 4,067.3 | 1,065.5 | -270.3 | 24.9 | 1.50 | -1.50 | 0.00 |
| 4,400.0 | 18.07 | 345.77 | 4,162.0 | 1,096.7 | -278.2 | 25.6 | 1.50 | -1.50 | 0.00 |

Bill Barrett Corp

Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|------------------------------------|
| Database: | Compass | Local Co-ordinate Reference: | Well CVR 5-63-32-23H |
| Company: | BILL BARRETT CORP | TVD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Site: | CVR 5-63-32-23H | North Reference: | True |
| Well: | CVR 5-63-32-23H | 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) |
| 4,500.0 | 16.57 | 345.77 | 4,257.4 | 1,125.6 | -285.5 | 26.3 | 1.50 | -1.50 | 0.00 |
| 4,600.0 | 15.07 | 345.77 | 4,353.7 | 1,152.0 | -292.2 | 26.9 | 1.50 | -1.50 | 0.00 |
| 4,700.0 | 13.57 | 345.77 | 4,450.5 | 1,176.0 | -298.3 | 27.5 | 1.50 | -1.50 | 0.00 |
| 4,800.0 | 12.07 | 345.77 | 4,548.0 | 1,197.5 | -303.8 | 28.0 | 1.50 | -1.50 | 0.00 |
| 4,900.0 | 10.57 | 345.77 | 4,646.1 | 1,216.6 | -308.6 | 28.4 | 1.50 | -1.50 | 0.00 |
| 5,000.0 | 9.07 | 345.77 | 4,744.6 | 1,233.1 | -312.8 | 28.8 | 1.50 | -1.50 | 0.00 |
| 5,074.6 | 7.96 | 345.77 | 4,818.4 | 1,243.8 | -315.5 | 29.1 | 1.50 | -1.50 | 0.00 |
| Shannon | | | | | | | | | |
| 5,100.0 | 7.57 | 345.77 | 4,843.6 | 1,247.1 | -316.4 | 29.2 | 1.50 | -1.50 | 0.00 |
| 5,200.0 | 6.07 | 345.77 | 4,942.9 | 1,258.6 | -319.3 | 29.4 | 1.50 | -1.50 | 0.00 |
| 5,300.0 | 4.57 | 345.77 | 5,042.4 | 1,267.6 | -321.6 | 29.6 | 1.50 | -1.50 | 0.00 |
| 5,400.0 | 3.07 | 345.77 | 5,142.2 | 1,274.1 | -323.2 | 29.8 | 1.50 | -1.50 | 0.00 |
| 5,500.0 | 1.57 | 345.77 | 5,242.1 | 1,278.0 | -324.2 | 29.9 | 1.50 | -1.50 | 0.00 |
| 5,600.0 | 0.07 | 345.77 | 5,342.1 | 1,279.4 | -324.5 | 29.9 | 1.50 | -1.50 | 0.00 |
| 5,605.0 | 0.00 | 0.00 | 5,347.1 | 1,279.4 | -324.5 | 29.9 | 1.50 | -1.50 | 0.00 |
| Start 500.0 hold at 5605.0 MD | | | | | | | | | |
| 5,700.0 | 0.00 | 0.00 | 5,442.1 | 1,279.4 | -324.5 | 29.9 | 0.00 | 0.00 | 0.00 |
| 5,800.0 | 0.00 | 0.00 | 5,542.1 | 1,279.4 | -324.5 | 29.9 | 0.00 | 0.00 | 0.00 |
| 5,900.0 | 0.00 | 0.00 | 5,642.1 | 1,279.4 | -324.5 | 29.9 | 0.00 | 0.00 | 0.00 |
| 6,000.0 | 0.00 | 0.00 | 5,742.1 | 1,279.4 | -324.5 | 29.9 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 0.00 | 0.00 | 5,842.1 | 1,279.4 | -324.5 | 29.9 | 0.00 | 0.00 | 0.00 |
| 6,105.0 | 0.00 | 0.00 | 5,847.1 | 1,279.4 | -324.5 | 29.9 | 0.00 | 0.00 | 0.00 |
| Start Build 10.00 | | | | | | | | | |
| 6,200.0 | 9.50 | 90.09 | 5,941.7 | 1,279.4 | -316.7 | 37.5 | 10.00 | 10.00 | 0.00 |
| 6,300.0 | 19.50 | 90.09 | 6,038.4 | 1,279.4 | -291.7 | 61.6 | 10.00 | 10.00 | 0.00 |
| 6,400.0 | 29.50 | 90.09 | 6,129.2 | 1,279.3 | -250.3 | 101.5 | 10.00 | 10.00 | 0.00 |
| 6,432.8 | 32.78 | 90.09 | 6,157.3 | 1,279.3 | -233.3 | 117.8 | 10.00 | 10.00 | 0.00 |
| Sharon Springs | | | | | | | | | |
| 6,500.0 | 39.50 | 90.09 | 6,211.5 | 1,279.2 | -193.7 | 155.9 | 10.00 | 10.00 | 0.00 |
| 6,600.0 | 49.50 | 90.09 | 6,282.8 | 1,279.1 | -123.7 | 223.4 | 10.00 | 10.00 | 0.00 |
| 6,620.1 | 51.51 | 90.09 | 6,295.5 | 1,279.1 | -108.2 | 238.3 | 10.00 | 10.00 | 0.00 |
| Niobrara | | | | | | | | | |
| 6,700.0 | 59.50 | 90.09 | 6,340.8 | 1,279.0 | -42.4 | 301.7 | 10.00 | 10.00 | 0.00 |
| 6,800.0 | 69.50 | 90.09 | 6,383.8 | 1,278.9 | 47.8 | 388.5 | 10.00 | 10.00 | 0.00 |
| 6,848.2 | 74.32 | 90.09 | 6,398.7 | 1,278.8 | 93.5 | 432.5 | 10.00 | 10.00 | 0.00 |
| Top "B2" Target | | | | | | | | | |
| 6,900.0 | 79.50 | 90.09 | 6,410.5 | 1,278.7 | 144.0 | 481.2 | 10.00 | 10.00 | 0.00 |
| 6,949.2 | 84.42 | 90.09 | 6,417.3 | 1,278.6 | 192.7 | 528.0 | 10.00 | 10.00 | 0.00 |
| Base "B2" Target | | | | | | | | | |
| 7,000.0 | 89.50 | 90.09 | 6,420.0 | 1,278.6 | 243.4 | 576.9 | 10.00 | 10.00 | 0.00 |
| 7,011.6 | 90.66 | 90.09 | 6,420.0 | 1,278.5 | 255.0 | 588.1 | 10.00 | 10.00 | 0.00 |
| Start 4321.2 hold at 7011.6 MD - 7" Csg | | | | | | | | | |
| 7,100.0 | 90.66 | 90.09 | 6,419.0 | 1,278.4 | 343.4 | 673.2 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 90.66 | 90.09 | 6,417.8 | 1,278.2 | 443.4 | 769.5 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 90.66 | 90.09 | 6,416.7 | 1,278.1 | 543.4 | 865.8 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 90.66 | 90.09 | 6,415.5 | 1,277.9 | 643.4 | 962.1 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 90.66 | 90.09 | 6,414.4 | 1,277.8 | 743.4 | 1,058.4 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 90.66 | 90.09 | 6,413.2 | 1,277.6 | 843.4 | 1,154.7 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 90.66 | 90.09 | 6,412.0 | 1,277.5 | 943.4 | 1,251.0 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 90.66 | 90.09 | 6,410.9 | 1,277.3 | 1,043.4 | 1,347.3 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 90.66 | 90.09 | 6,409.7 | 1,277.2 | 1,143.3 | 1,443.6 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 90.66 | 90.09 | 6,408.6 | 1,277.0 | 1,243.3 | 1,539.9 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 90.66 | 90.09 | 6,407.4 | 1,276.8 | 1,343.3 | 1,636.2 | 0.00 | 0.00 | 0.00 |

Bill Barrett Corp

Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|------------------------------------|
| Database: | Compass | Local Co-ordinate Reference: | Well CVR 5-63-32-23H |
| Company: | BILL BARRETT CORP | TVD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Site: | CVR 5-63-32-23H | North Reference: | True |
| Well: | CVR 5-63-32-23H | 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) |
| 8,200.0 | 90.66 | 90.09 | 6,406.3 | 1,276.7 | 1,443.3 | 1,732.5 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 90.66 | 90.09 | 6,405.1 | 1,276.5 | 1,543.3 | 1,828.8 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 90.66 | 90.09 | 6,403.9 | 1,276.4 | 1,643.3 | 1,925.1 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 90.66 | 90.09 | 6,402.8 | 1,276.2 | 1,743.3 | 2,021.4 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 90.66 | 90.09 | 6,401.6 | 1,276.1 | 1,843.3 | 2,117.7 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 90.66 | 90.09 | 6,400.5 | 1,275.9 | 1,943.3 | 2,214.0 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 90.66 | 90.09 | 6,399.3 | 1,275.8 | 2,043.3 | 2,310.3 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 90.66 | 90.09 | 6,398.2 | 1,275.6 | 2,143.3 | 2,406.6 | 0.00 | 0.00 | 0.00 |
| 9,000.0 | 90.66 | 90.09 | 6,397.0 | 1,275.4 | 2,243.3 | 2,502.9 | 0.00 | 0.00 | 0.00 |
| 9,100.0 | 90.66 | 90.09 | 6,395.8 | 1,275.3 | 2,343.3 | 2,599.2 | 0.00 | 0.00 | 0.00 |
| 9,200.0 | 90.66 | 90.09 | 6,394.7 | 1,275.1 | 2,443.3 | 2,695.5 | 0.00 | 0.00 | 0.00 |
| 9,300.0 | 90.66 | 90.09 | 6,393.5 | 1,275.0 | 2,543.3 | 2,791.8 | 0.00 | 0.00 | 0.00 |
| 9,400.0 | 90.66 | 90.09 | 6,392.4 | 1,274.8 | 2,643.2 | 2,888.1 | 0.00 | 0.00 | 0.00 |
| 9,500.0 | 90.66 | 90.09 | 6,391.2 | 1,274.7 | 2,743.2 | 2,984.4 | 0.00 | 0.00 | 0.00 |
| 9,600.0 | 90.66 | 90.09 | 6,390.1 | 1,274.5 | 2,843.2 | 3,080.7 | 0.00 | 0.00 | 0.00 |
| 9,700.0 | 90.66 | 90.09 | 6,388.9 | 1,274.4 | 2,943.2 | 3,177.0 | 0.00 | 0.00 | 0.00 |
| 9,800.0 | 90.66 | 90.09 | 6,387.7 | 1,274.2 | 3,043.2 | 3,273.3 | 0.00 | 0.00 | 0.00 |
| 9,900.0 | 90.66 | 90.09 | 6,386.6 | 1,274.0 | 3,143.2 | 3,369.6 | 0.00 | 0.00 | 0.00 |
| 10,000.0 | 90.66 | 90.09 | 6,385.4 | 1,273.9 | 3,243.2 | 3,465.9 | 0.00 | 0.00 | 0.00 |
| 10,100.0 | 90.66 | 90.09 | 6,384.3 | 1,273.7 | 3,343.2 | 3,562.2 | 0.00 | 0.00 | 0.00 |
| 10,200.0 | 90.66 | 90.09 | 6,383.1 | 1,273.6 | 3,443.2 | 3,658.5 | 0.00 | 0.00 | 0.00 |
| 10,300.0 | 90.66 | 90.09 | 6,382.0 | 1,273.4 | 3,543.2 | 3,754.8 | 0.00 | 0.00 | 0.00 |
| 10,400.0 | 90.66 | 90.09 | 6,380.8 | 1,273.3 | 3,643.2 | 3,851.1 | 0.00 | 0.00 | 0.00 |
| 10,500.0 | 90.66 | 90.09 | 6,379.6 | 1,273.1 | 3,743.2 | 3,947.4 | 0.00 | 0.00 | 0.00 |
| 10,600.0 | 90.66 | 90.09 | 6,378.5 | 1,273.0 | 3,843.2 | 4,043.7 | 0.00 | 0.00 | 0.00 |
| 10,700.0 | 90.66 | 90.09 | 6,377.3 | 1,272.8 | 3,943.2 | 4,140.0 | 0.00 | 0.00 | 0.00 |
| 10,800.0 | 90.66 | 90.09 | 6,376.2 | 1,272.6 | 4,043.2 | 4,236.3 | 0.00 | 0.00 | 0.00 |
| 10,900.0 | 90.66 | 90.09 | 6,375.0 | 1,272.5 | 4,143.1 | 4,332.6 | 0.00 | 0.00 | 0.00 |
| 11,000.0 | 90.66 | 90.09 | 6,373.9 | 1,272.3 | 4,243.1 | 4,428.9 | 0.00 | 0.00 | 0.00 |
| 11,100.0 | 90.66 | 90.09 | 6,372.7 | 1,272.2 | 4,343.1 | 4,525.2 | 0.00 | 0.00 | 0.00 |
| 11,200.0 | 90.66 | 90.09 | 6,371.5 | 1,272.0 | 4,443.1 | 4,621.5 | 0.00 | 0.00 | 0.00 |
| 11,300.0 | 90.66 | 90.09 | 6,370.4 | 1,271.9 | 4,543.1 | 4,717.8 | 0.00 | 0.00 | 0.00 |
| 11,332.8 | 90.66 | 90.09 | 6,370.0 | 1,271.8 | 4,575.9 | 4,749.4 | 0.00 | 0.00 | 0.00 |
| TD at 11332.8 | | | | | | | | | |

| Targets | | | | | | | | | |
|---|---------------|--------------|----------|------------|------------|---------------|--------------|------------------|------------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| CVR 5-63-32-23H LP | 0.00 | 0.00 | 6,420.0 | 1,278.7 | 256.4 | 1,375,189.39 | 3,287,666.53 | 40° 21' 31.320 N | 104° 28' 3.828 W |
| - plan misses by 0.1ft at 7013.0ft MD (6420.0 TVD, 1278.5 N, 256.4 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| CVR 5-63-32-23H PBHL | 0.00 | 0.00 | 6,370.0 | 1,271.8 | 4,575.9 | 1,375,232.76 | 3,291,985.86 | 40° 21' 31.248 N | 104° 27' 8.028 W |
| - plan hits target | | | | | | | | | |
| - Point | | | | | | | | | |

Bill Barrett Corp

Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|------------------------------------|
| Database: | Compass | Local Co-ordinate Reference: | Well CVR 5-63-32-23H |
| Company: | BILL BARRETT CORP | TVD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4602.0ft (Original Well Elev) |
| Site: | CVR 5-63-32-23H | North Reference: | True |
| Well: | CVR 5-63-32-23H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 | | |

| Formations | | | | | | |
|---------------------|---------------------|-------------------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 3,535.6 | 3,374.0 | Pierre (Fox Hills Base) | | -0.80 | 90.09 | |
| 4,247.2 | 4,014.0 | Terry/Sussex | | -0.80 | 90.09 | |
| 5,074.6 | 4,814.0 | Shannon | | -0.80 | 90.09 | |
| 6,432.8 | 6,154.0 | Sharon Springs | | -0.80 | 90.09 | |
| 6,620.1 | 6,294.0 | Niobrara | | -0.80 | 90.09 | |
| 6,848.2 | 6,400.0 | Top "B2" Target | | -0.80 | 90.09 | |
| 6,949.2 | 6,420.0 | Base "B2" Target | | -0.80 | 90.09 | |

| Plan Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|--------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | | |
| | | +N/-S (ft) | +E/-W (ft) | Comment | |
| 1,000.0 | 1,000.0 | 0.0 | 0.0 | Start Build 1.50 | |
| 2,959.0 | 2,874.2 | 476.3 | -120.8 | Start 687.0 hold at 2959.0 MD | |
| 3,646.0 | 3,472.9 | 803.1 | -203.7 | Start Drop -1.50 | |
| 5,605.0 | 5,347.1 | 1,279.4 | -324.5 | Start 500.0 hold at 5605.0 MD | |
| 6,105.0 | 5,847.1 | 1,279.4 | -324.5 | Start Build 10.00 | |
| 7,011.6 | 6,420.0 | 1,278.5 | 255.0 | Start 4321.2 hold at 7011.6 MD | |
| 11,332.8 | 6,370.0 | 1,271.8 | 4,575.9 | TD at 11332.8 | |