



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

SITE DETAILS: Sandborn 20-14H Briggsdale

Site Latitude: 40° 23' 41.168 N
Site Longitude: 104° 10' 2.230 W

Positional Uncertainty: 0.0
Convergence: 0.86
Local North: True

WELL DETAILS: Sandborn 20-14H

Ground Level: 4621.0

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|-------|-------|------------|------------|------------------|------------------|------|
| 0.0 | 0.0 | 1389444.15 | 3371189.32 | 40° 23' 41.168 N | 104° 10' 2.230 W | |

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|----------------------|--------|-------|---------|------------------|-------------------|----------------------------------|
| BTV 20-14H | 5000.0 | 322.0 | 290.0 | 40° 23' 44.350 N | 104° 9' 58.481 W | Point |
| Sandborn 20-14H PBHL | 6157.0 | 303.1 | -4413.8 | 40° 23' 44.160 N | 104° 10' 59.279 W | Rectangle (Sides: L200.0 W200.0) |

SECTION DETAILS

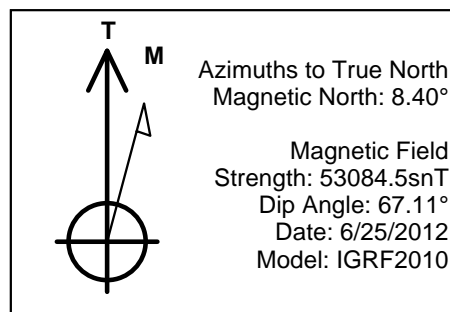
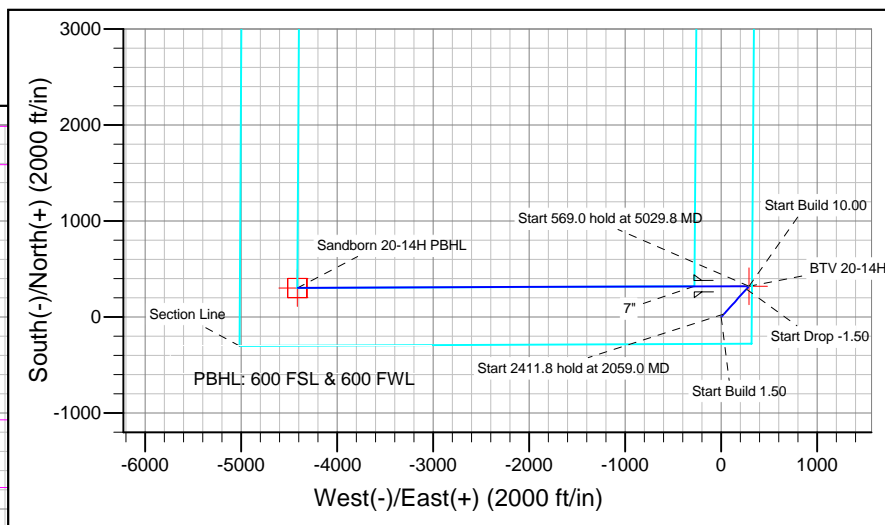
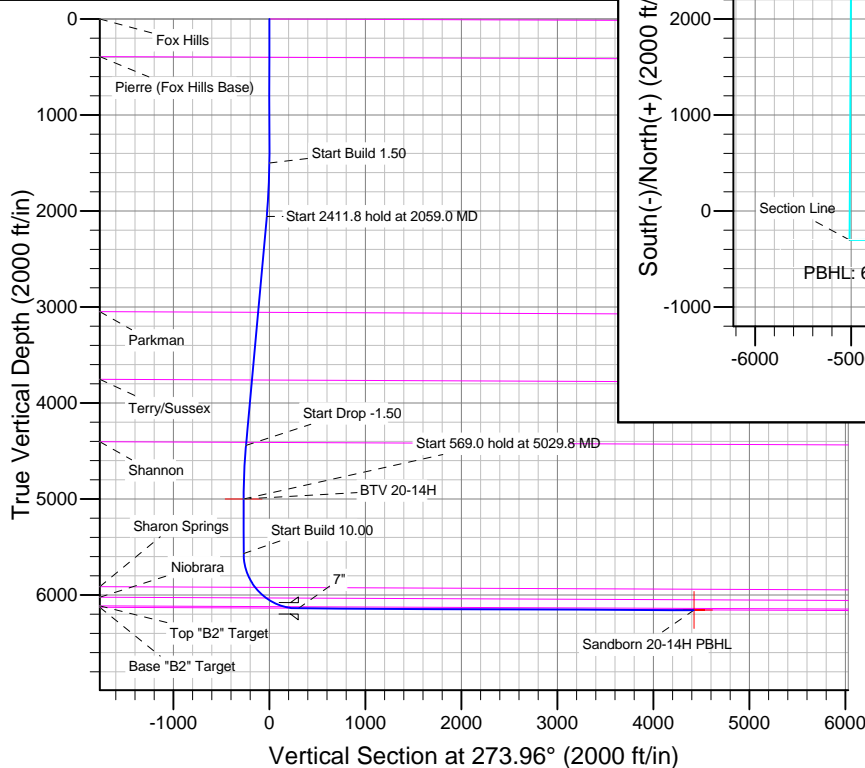
| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Target |
|-----|---------|-------|--------|--------|-------|---------|-------|--------|--------|----------------------|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 1500.0 | 0.00 | 0.00 | 1500.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 2059.0 | 8.38 | 42.01 | 2057.0 | 30.3 | 27.3 | 1.50 | 42.01 | -25.2 | |
| 4 | 4470.8 | 8.38 | 42.01 | 4443.0 | 291.7 | 262.7 | 0.00 | 0.00 | -241.9 | |
| 5 | 5029.8 | 0.00 | 0.00 | 5000.0 | 322.0 | 290.0 | 1.50 | 180.00 | -267.1 | BTV 20-14H |
| 6 | 5598.8 | 0.00 | 0.00 | 5569.0 | 322.0 | 290.0 | 0.00 | 0.00 | -267.1 | |
| 7 | 6496.4 | 89.76 | 269.80 | 6142.0 | 320.0 | -280.6 | 10.00 | 269.80 | 302.0 | |
| 8 | 10626.9 | 89.76 | 269.80 | 6159.3 | 305.6 | -4411.0 | 0.00 | 0.00 | 4421.6 | Sandborn 20-14H PBHL |

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---------|--------|-------------------------|
| 400.0 | 400.0 | Fox Hills |
| 3056.5 | 3069.3 | Pierre (Fox Hills Base) |
| 3761.2 | 3781.6 | Parkman |
| 4410.9 | 4438.3 | Terry/Sussex |
| 5921.3 | 5978.2 | Shannon |
| 6031.8 | 6137.5 | Sharon Springs |
| 6122.6 | 6349.3 | Niobrara |
| 6137.9 | 6430.5 | Top "B2" Target |
| | | Base "B2" Target |

CASING DETAILS

| TVD | MD | Name | Size |
|--------|--------|------|------|
| 6142.0 | 6496.4 | 7" | 7 |



BILL BARRETT CORP

WELD COUNTY, COLORADO

Sandborn 20-14H

Sandborn 20-14H

Sandborn 20-14H

Plan: Design #1

Standard Planning Report

25 June, 2012

Bill Barrett Corp

Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|------------------------------------|
| Database: | Compass | Local Co-ordinate Reference: | Well Sandborn 20-14H |
| Company: | BILL BARRETT CORP | TVD Reference: | KB @ 4643.0ft (Original Well Elev) |
| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4643.0ft (Original Well Elev) |
| Site: | Sandborn 20-14H | North Reference: | True |
| Well: | Sandborn 20-14H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Sandborn 20-14H | | |
| 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 | Sandborn 20-14H | | | |
| Site Position: | | Northing: | 1,389,444.15 ft | Latitude: 40° 23' 41.168 N |
| From: | Lat/Long | Easting: | 3,371,189.32 ft | Longitude: 104° 10' 2.230 W |
| Position Uncertainty: | 0.0 ft | Slot Radius: | " | Grid Convergence: 0.86 ° |

| | | | | |
|-----------------------------|-----------------|--------|----------------------------|-----------------|
| Well | Sandborn 20-14H | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,389,444.15 ft |
| | +E/-W | 0.0 ft | Easting: | 3,371,189.32 ft |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft |
| | | | Ground Level: | 4,621.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Sandborn 20-14H | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 6/25/2012 | 8.40 | 67.11 | 53,085 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| 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 | 273.96 |

| 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 | |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,059.0 | 8.38 | 42.01 | 2,057.0 | 30.3 | 27.3 | 1.50 | 1.50 | 0.00 | 42.01 | |
| 4,470.8 | 8.38 | 42.01 | 4,443.0 | 291.7 | 262.7 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,029.8 | 0.00 | 0.00 | 5,000.0 | 322.0 | 290.0 | 1.50 | -1.50 | 0.00 | 180.00 | BTV 20-14H |
| 5,598.8 | 0.00 | 0.00 | 5,569.0 | 322.0 | 290.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,496.4 | 89.76 | 269.80 | 6,142.0 | 320.0 | -280.6 | 10.00 | 10.00 | 0.00 | 269.80 | |
| 10,629.6 | 89.76 | 269.80 | 6,159.3 | 305.6 | -4,413.7 | 0.00 | 0.00 | 0.00 | 0.00 | Sandborn 20-14H PB |

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Planning Report

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| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4643.0ft (Original Well Elev) |
| Site: | Sandborn 20-14H | North Reference: | True |
| Well: | Sandborn 20-14H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Sandborn 20-14H | | |
| 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 |
| Pierre (Fox Hills Base) | | | | | | | | | |
| 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 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| Start Build 1.50 | | | | | | | | | |
| 1,600.0 | 1.50 | 42.01 | 1,600.0 | 1.0 | 0.9 | -0.8 | 1.50 | 1.50 | 0.00 |
| 1,700.0 | 3.00 | 42.01 | 1,699.9 | 3.9 | 3.5 | -3.2 | 1.50 | 1.50 | 0.00 |
| 1,800.0 | 4.50 | 42.01 | 1,799.7 | 8.7 | 7.9 | -7.3 | 1.50 | 1.50 | 0.00 |
| 1,900.0 | 6.00 | 42.01 | 1,899.3 | 15.5 | 14.0 | -12.9 | 1.50 | 1.50 | 0.00 |
| 2,000.0 | 7.50 | 42.01 | 1,998.6 | 24.3 | 21.9 | -20.1 | 1.50 | 1.50 | 0.00 |
| 2,059.0 | 8.38 | 42.01 | 2,057.0 | 30.3 | 27.3 | -25.2 | 1.50 | 1.50 | 0.00 |
| Start 2411.8 hold at 2059.0 MD | | | | | | | | | |
| 2,100.0 | 8.38 | 42.01 | 2,097.6 | 34.8 | 31.3 | -28.8 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 8.38 | 42.01 | 2,196.5 | 45.6 | 41.1 | -37.8 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 8.38 | 42.01 | 2,295.4 | 56.5 | 50.8 | -46.8 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 8.38 | 42.01 | 2,394.4 | 67.3 | 60.6 | -55.8 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 8.38 | 42.01 | 2,493.3 | 78.1 | 70.4 | -64.8 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 8.38 | 42.01 | 2,592.2 | 89.0 | 80.1 | -73.8 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 8.38 | 42.01 | 2,691.2 | 99.8 | 89.9 | -82.8 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 8.38 | 42.01 | 2,790.1 | 110.6 | 99.6 | -91.8 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 8.38 | 42.01 | 2,889.0 | 121.5 | 109.4 | -100.7 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 8.38 | 42.01 | 2,987.9 | 132.3 | 119.2 | -109.7 | 0.00 | 0.00 | 0.00 |
| 3,069.3 | 8.38 | 42.01 | 3,056.5 | 139.8 | 125.9 | -116.0 | 0.00 | 0.00 | 0.00 |
| Parkman | | | | | | | | | |
| 3,100.0 | 8.38 | 42.01 | 3,086.9 | 143.1 | 128.9 | -118.7 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 8.38 | 42.01 | 3,185.8 | 154.0 | 138.7 | -127.7 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 8.38 | 42.01 | 3,284.7 | 164.8 | 148.4 | -136.7 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 8.38 | 42.01 | 3,383.7 | 175.6 | 158.2 | -145.7 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 8.38 | 42.01 | 3,482.6 | 186.5 | 167.9 | -154.7 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 8.38 | 42.01 | 3,581.5 | 197.3 | 177.7 | -163.6 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 8.38 | 42.01 | 3,680.5 | 208.1 | 187.5 | -172.6 | 0.00 | 0.00 | 0.00 |
| 3,781.6 | 8.38 | 42.01 | 3,761.2 | 217.0 | 195.4 | -180.0 | 0.00 | 0.00 | 0.00 |
| Terry/Sussex | | | | | | | | | |
| 3,800.0 | 8.38 | 42.01 | 3,779.4 | 219.0 | 197.2 | -181.6 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 8.38 | 42.01 | 3,878.3 | 229.8 | 207.0 | -190.6 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 8.38 | 42.01 | 3,977.3 | 240.7 | 216.7 | -199.6 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 8.38 | 42.01 | 4,076.2 | 251.5 | 226.5 | -208.6 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 8.38 | 42.01 | 4,175.1 | 262.3 | 236.3 | -217.6 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 8.38 | 42.01 | 4,274.1 | 273.2 | 246.0 | -226.6 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 8.38 | 42.01 | 4,373.0 | 284.0 | 255.8 | -235.5 | 0.00 | 0.00 | 0.00 |
| 4,438.3 | 8.38 | 42.01 | 4,410.9 | 288.1 | 259.5 | -239.0 | 0.00 | 0.00 | 0.00 |

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Planning Report

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|------------------|-----------------------|-------------------------------------|------------------------------------|
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| Company: | BILL BARRETT CORP | TVD Reference: | KB @ 4643.0ft (Original Well Elev) |
| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4643.0ft (Original Well Elev) |
| Site: | Sandborn 20-14H | North Reference: | True |
| Well: | Sandborn 20-14H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Sandborn 20-14H | | |
| 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) |
| Shannon | | | | | | | | | |
| 4,470.8 | 8.38 | 42.01 | 4,443.0 | 291.7 | 262.7 | -241.9 | 0.00 | 0.00 | 0.00 |
| Start Drop -1.50 | | | | | | | | | |
| 4,500.0 | 7.95 | 42.01 | 4,471.9 | 294.7 | 265.5 | -244.5 | 1.50 | -1.50 | 0.00 |
| 4,600.0 | 6.45 | 42.01 | 4,571.1 | 304.1 | 273.8 | -252.2 | 1.50 | -1.50 | 0.00 |
| 4,700.0 | 4.95 | 42.01 | 4,670.6 | 311.4 | 280.5 | -258.3 | 1.50 | -1.50 | 0.00 |
| 4,800.0 | 3.45 | 42.01 | 4,770.4 | 316.9 | 285.4 | -262.8 | 1.50 | -1.50 | 0.00 |
| 4,900.0 | 1.95 | 42.01 | 4,870.3 | 320.4 | 288.5 | -265.7 | 1.50 | -1.50 | 0.00 |
| 5,000.0 | 0.45 | 42.01 | 4,970.2 | 321.9 | 289.9 | -267.0 | 1.50 | -1.50 | 0.00 |
| 5,029.8 | 0.00 | 0.00 | 5,000.0 | 322.0 | 290.0 | -267.1 | 1.50 | -1.50 | 0.00 |
| Start 569.0 hold at 5029.8 MD | | | | | | | | | |
| 5,100.0 | 0.00 | 0.00 | 5,070.2 | 322.0 | 290.0 | -267.1 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 0.00 | 0.00 | 5,170.2 | 322.0 | 290.0 | -267.1 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 0.00 | 0.00 | 5,270.2 | 322.0 | 290.0 | -267.1 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 0.00 | 0.00 | 5,370.2 | 322.0 | 290.0 | -267.1 | 0.00 | 0.00 | 0.00 |
| 5,500.0 | 0.00 | 0.00 | 5,470.2 | 322.0 | 290.0 | -267.1 | 0.00 | 0.00 | 0.00 |
| 5,598.8 | 0.00 | 0.00 | 5,569.0 | 322.0 | 290.0 | -267.1 | 0.00 | 0.00 | 0.00 |
| Start Build 10.00 | | | | | | | | | |
| 5,600.0 | 0.12 | 269.80 | 5,570.2 | 322.0 | 290.0 | -267.1 | 10.00 | 10.00 | 0.00 |
| 5,700.0 | 10.12 | 269.80 | 5,669.7 | 322.0 | 281.1 | -258.2 | 10.00 | 10.00 | 0.00 |
| 5,800.0 | 20.12 | 269.80 | 5,766.1 | 321.9 | 255.0 | -232.2 | 10.00 | 10.00 | 0.00 |
| 5,900.0 | 30.12 | 269.80 | 5,856.5 | 321.7 | 212.6 | -189.9 | 10.00 | 10.00 | 0.00 |
| 5,978.2 | 37.94 | 269.80 | 5,921.3 | 321.6 | 168.9 | -146.3 | 10.00 | 10.00 | 0.00 |
| Sharon Springs | | | | | | | | | |
| 6,000.0 | 40.12 | 269.80 | 5,938.2 | 321.5 | 155.2 | -132.6 | 10.00 | 10.00 | 0.00 |
| 6,100.0 | 50.12 | 269.80 | 6,008.7 | 321.3 | 84.4 | -62.0 | 10.00 | 10.00 | 0.00 |
| 6,137.5 | 53.87 | 269.80 | 6,031.8 | 321.2 | 54.9 | -32.6 | 10.00 | 10.00 | 0.00 |
| Niobrara | | | | | | | | | |
| 6,200.0 | 60.12 | 269.80 | 6,065.8 | 321.0 | 2.5 | 19.7 | 10.00 | 10.00 | 0.00 |
| 6,300.0 | 70.12 | 269.80 | 6,107.8 | 320.7 | -88.2 | 110.1 | 10.00 | 10.00 | 0.00 |
| 6,349.3 | 75.05 | 269.80 | 6,122.6 | 320.5 | -135.1 | 156.9 | 10.00 | 10.00 | 0.00 |
| Top "B2" Target | | | | | | | | | |
| 6,400.0 | 80.12 | 269.80 | 6,133.5 | 320.3 | -184.7 | 206.4 | 10.00 | 10.00 | 0.00 |
| 6,430.5 | 83.17 | 269.80 | 6,137.9 | 320.2 | -214.8 | 236.4 | 10.00 | 10.00 | 0.00 |
| Base "B2" Target | | | | | | | | | |
| 6,496.4 | 89.76 | 269.80 | 6,142.0 | 320.0 | -280.6 | 302.0 | 10.00 | 10.00 | 0.00 |
| 7" Csg | | | | | | | | | |
| 6,500.0 | 89.76 | 269.80 | 6,142.0 | 320.0 | -284.2 | 305.6 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 89.76 | 269.80 | 6,142.4 | 319.6 | -384.2 | 405.3 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 89.76 | 269.80 | 6,142.8 | 319.3 | -484.2 | 505.1 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 89.76 | 269.80 | 6,143.2 | 318.9 | -584.2 | 604.8 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 89.76 | 269.80 | 6,143.6 | 318.6 | -684.2 | 704.6 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 89.76 | 269.80 | 6,144.1 | 318.3 | -784.2 | 804.3 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 89.76 | 269.80 | 6,144.5 | 317.9 | -884.2 | 904.0 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 89.76 | 269.80 | 6,144.9 | 317.6 | -984.2 | 1,003.8 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 89.76 | 269.80 | 6,145.3 | 317.2 | -1,084.2 | 1,103.5 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 89.76 | 269.80 | 6,145.7 | 316.9 | -1,184.2 | 1,203.2 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 89.76 | 269.80 | 6,146.2 | 316.5 | -1,284.2 | 1,303.0 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 89.76 | 269.80 | 6,146.6 | 316.2 | -1,384.2 | 1,402.7 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 89.76 | 269.80 | 6,147.0 | 315.8 | -1,484.2 | 1,502.4 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 89.76 | 269.80 | 6,147.4 | 315.5 | -1,584.2 | 1,602.2 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 89.76 | 269.80 | 6,147.8 | 315.1 | -1,684.2 | 1,701.9 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 89.76 | 269.80 | 6,148.3 | 314.8 | -1,784.2 | 1,801.6 | 0.00 | 0.00 | 0.00 |

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Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|------------------------------------|
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| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4643.0ft (Original Well Elev) |
| Site: | Sandborn 20-14H | North Reference: | True |
| Well: | Sandborn 20-14H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Sandborn 20-14H | | |
| 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) | |
| 8,100.0 | 89.76 | 269.80 | 6,148.7 | 314.4 | -1,884.2 | 1,901.4 | 0.00 | 0.00 | 0.00 | |
| 8,200.0 | 89.76 | 269.80 | 6,149.1 | 314.1 | -1,984.2 | 2,001.1 | 0.00 | 0.00 | 0.00 | |
| 8,300.0 | 89.76 | 269.80 | 6,149.5 | 313.7 | -2,084.2 | 2,100.9 | 0.00 | 0.00 | 0.00 | |
| 8,400.0 | 89.76 | 269.80 | 6,149.9 | 313.4 | -2,184.2 | 2,200.6 | 0.00 | 0.00 | 0.00 | |
| 8,500.0 | 89.76 | 269.80 | 6,150.3 | 313.0 | -2,284.2 | 2,300.3 | 0.00 | 0.00 | 0.00 | |
| 8,600.0 | 89.76 | 269.80 | 6,150.8 | 312.7 | -2,384.2 | 2,400.1 | 0.00 | 0.00 | 0.00 | |
| 8,700.0 | 89.76 | 269.80 | 6,151.2 | 312.3 | -2,484.2 | 2,499.8 | 0.00 | 0.00 | 0.00 | |
| 8,800.0 | 89.76 | 269.80 | 6,151.6 | 312.0 | -2,584.2 | 2,599.5 | 0.00 | 0.00 | 0.00 | |
| 8,900.0 | 89.76 | 269.80 | 6,152.0 | 311.6 | -2,684.2 | 2,699.3 | 0.00 | 0.00 | 0.00 | |
| 9,000.0 | 89.76 | 269.80 | 6,152.4 | 311.3 | -2,784.2 | 2,799.0 | 0.00 | 0.00 | 0.00 | |
| 9,100.0 | 89.76 | 269.80 | 6,152.9 | 310.9 | -2,884.2 | 2,898.7 | 0.00 | 0.00 | 0.00 | |
| 9,200.0 | 89.76 | 269.80 | 6,153.3 | 310.6 | -2,984.1 | 2,998.5 | 0.00 | 0.00 | 0.00 | |
| 9,300.0 | 89.76 | 269.80 | 6,153.7 | 310.2 | -3,084.1 | 3,098.2 | 0.00 | 0.00 | 0.00 | |
| 9,400.0 | 89.76 | 269.80 | 6,154.1 | 309.9 | -3,184.1 | 3,197.9 | 0.00 | 0.00 | 0.00 | |
| 9,500.0 | 89.76 | 269.80 | 6,154.5 | 309.5 | -3,284.1 | 3,297.7 | 0.00 | 0.00 | 0.00 | |
| 9,600.0 | 89.76 | 269.80 | 6,155.0 | 309.2 | -3,384.1 | 3,397.4 | 0.00 | 0.00 | 0.00 | |
| 9,700.0 | 89.76 | 269.80 | 6,155.4 | 308.8 | -3,484.1 | 3,497.2 | 0.00 | 0.00 | 0.00 | |
| 9,800.0 | 89.76 | 269.80 | 6,155.8 | 308.5 | -3,584.1 | 3,596.9 | 0.00 | 0.00 | 0.00 | |
| 9,900.0 | 89.76 | 269.80 | 6,156.2 | 308.1 | -3,684.1 | 3,696.6 | 0.00 | 0.00 | 0.00 | |
| 10,000.0 | 89.76 | 269.80 | 6,156.6 | 307.8 | -3,784.1 | 3,796.4 | 0.00 | 0.00 | 0.00 | |
| 10,100.0 | 89.76 | 269.80 | 6,157.0 | 307.4 | -3,884.1 | 3,896.1 | 0.00 | 0.00 | 0.00 | |
| 10,200.0 | 89.76 | 269.80 | 6,157.5 | 307.1 | -3,984.1 | 3,995.8 | 0.00 | 0.00 | 0.00 | |
| 10,300.0 | 89.76 | 269.80 | 6,157.9 | 306.7 | -4,084.1 | 4,095.6 | 0.00 | 0.00 | 0.00 | |
| 10,400.0 | 89.76 | 269.80 | 6,158.3 | 306.4 | -4,184.1 | 4,195.3 | 0.00 | 0.00 | 0.00 | |
| 10,500.0 | 89.76 | 269.80 | 6,158.7 | 306.0 | -4,284.1 | 4,295.0 | 0.00 | 0.00 | 0.00 | |
| 10,600.0 | 89.76 | 269.80 | 6,159.1 | 305.7 | -4,384.1 | 4,394.8 | 0.00 | 0.00 | 0.00 | |
| 10,629.6 | 89.76 | 269.80 | 6,159.3 | 305.6 | -4,413.7 | 4,424.2 | 0.00 | 0.00 | 0.00 | |

| Casing Points | | | | | |
|---------------------|---------------------|------|---------------------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 6,496.4 | 6,142.0 | 7" | 7 | 7 | |

| Formations | | | | | |
|---------------------|---------------------|-------------------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| | 0.0 | Fox Hills | | 0.24 | 269.80 |
| 400.0 | 400.0 | Pierre (Fox Hills Base) | | 0.24 | 269.80 |
| 3,069.3 | 3,057.0 | Parkman | | 0.24 | 269.80 |
| 3,781.6 | 3,762.0 | Terry/Sussex | | 0.24 | 269.80 |
| 4,438.3 | 4,412.0 | Shannon | | 0.24 | 269.80 |
| 5,978.2 | 5,922.0 | Sharon Springs | | 0.24 | 269.80 |
| 6,137.5 | 6,032.0 | Niobrara | | 0.24 | 269.80 |
| 6,349.3 | 6,122.0 | Top "B2" Target | | 0.24 | 269.80 |
| 6,430.5 | 6,137.0 | Base "B2" Target | | 0.24 | 269.80 |

Bill Barrett Corp

Planning Report

| | | | |
|------------------|-----------------------|-------------------------------------|------------------------------------|
| Database: | Compass | Local Co-ordinate Reference: | Well Sandborn 20-14H |
| Company: | BILL BARRETT CORP | TVD Reference: | KB @ 4643.0ft (Original Well Elev) |
| Project: | WELD COUNTY, COLORADO | MD Reference: | KB @ 4643.0ft (Original Well Elev) |
| Site: | Sandborn 20-14H | North Reference: | True |
| Well: | Sandborn 20-14H | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Sandborn 20-14H | | |
| Design: | Design #1 | | |

| Plan Annotations | | | | | |
|---------------------------|---------------------------|-------------------|---------------|--------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment | |
| | | +N/-S (ft) | +E/-W (ft) | | |
| 1,500.0 | 1,500.0 | 0.0 | 0.0 | Start Build 1.50 | |
| 2,059.0 | 2,057.0 | 30.3 | 27.3 | Start 2411.8 hold at 2059.0 MD | |
| 4,470.8 | 4,443.0 | 291.7 | 262.7 | Start Drop -1.50 | |
| 5,029.8 | 5,000.0 | 322.0 | 290.0 | Start 569.0 hold at 5029.8 MD | |
| 5,598.8 | 5,569.0 | 322.0 | 290.0 | Start Build 10.00 | |
| 6,496.4 | 6,142.0 | 320.0 | -280.6 | 7" Csg | |
| 10,629.6 | 6,159.3 | 305.6 | -4,413.7 | TD at 10629.6 | |