

PROJECT DETAILS: Weld County, CO NAD 83

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Northern Zone
 System Datum: Mean Sea Level
 Local North: True

Project: Weld County, CO NAD 83
 Site: Anschutz-Williams 5-61-27 NWNW Pad
 Well: Anschutz-Williams 5-61-27-0108BNB
 Wellbore: OH
 Design: Plan 1



Azimuths to True North
 Magnetic North: 8.25°



Magnetic Field
 Strength: 52356.7nT
 Dip Angle: 67.07°
 Date: 7/24/2017
 Model: HDGM

Plan: Plan 1 (Anschutz-Williams 5-61-27-0108BNB/OH)

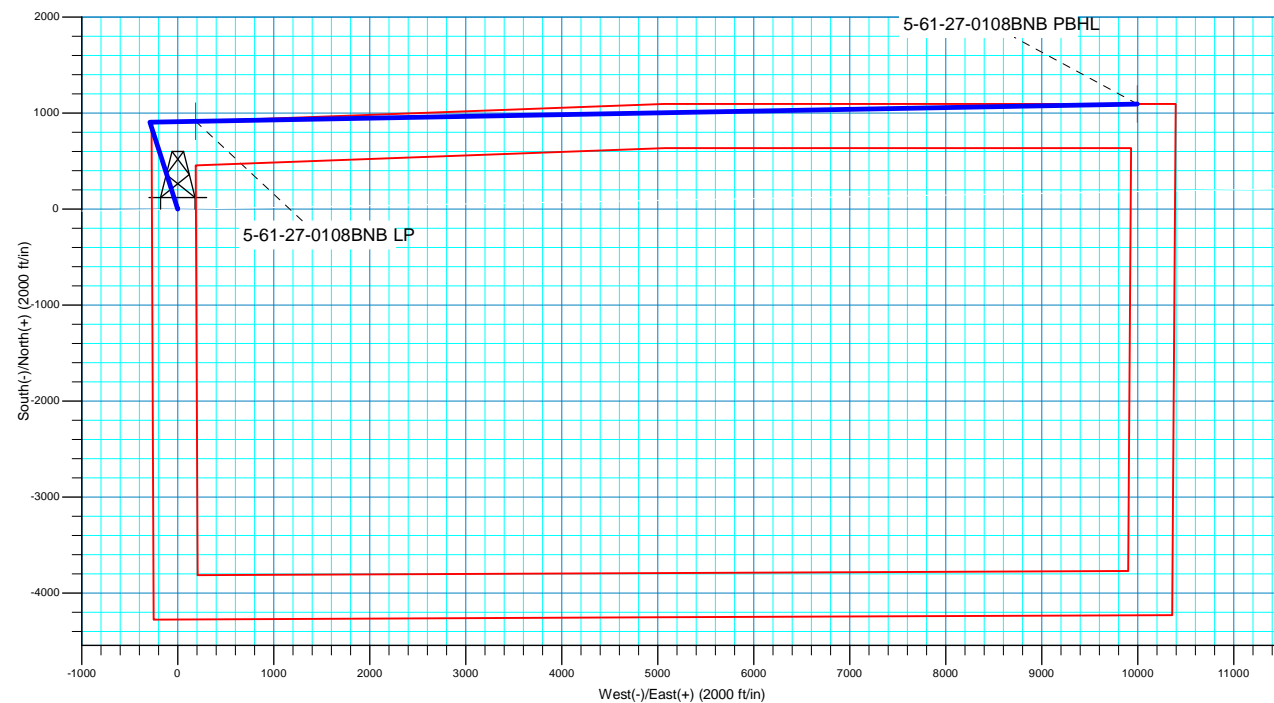
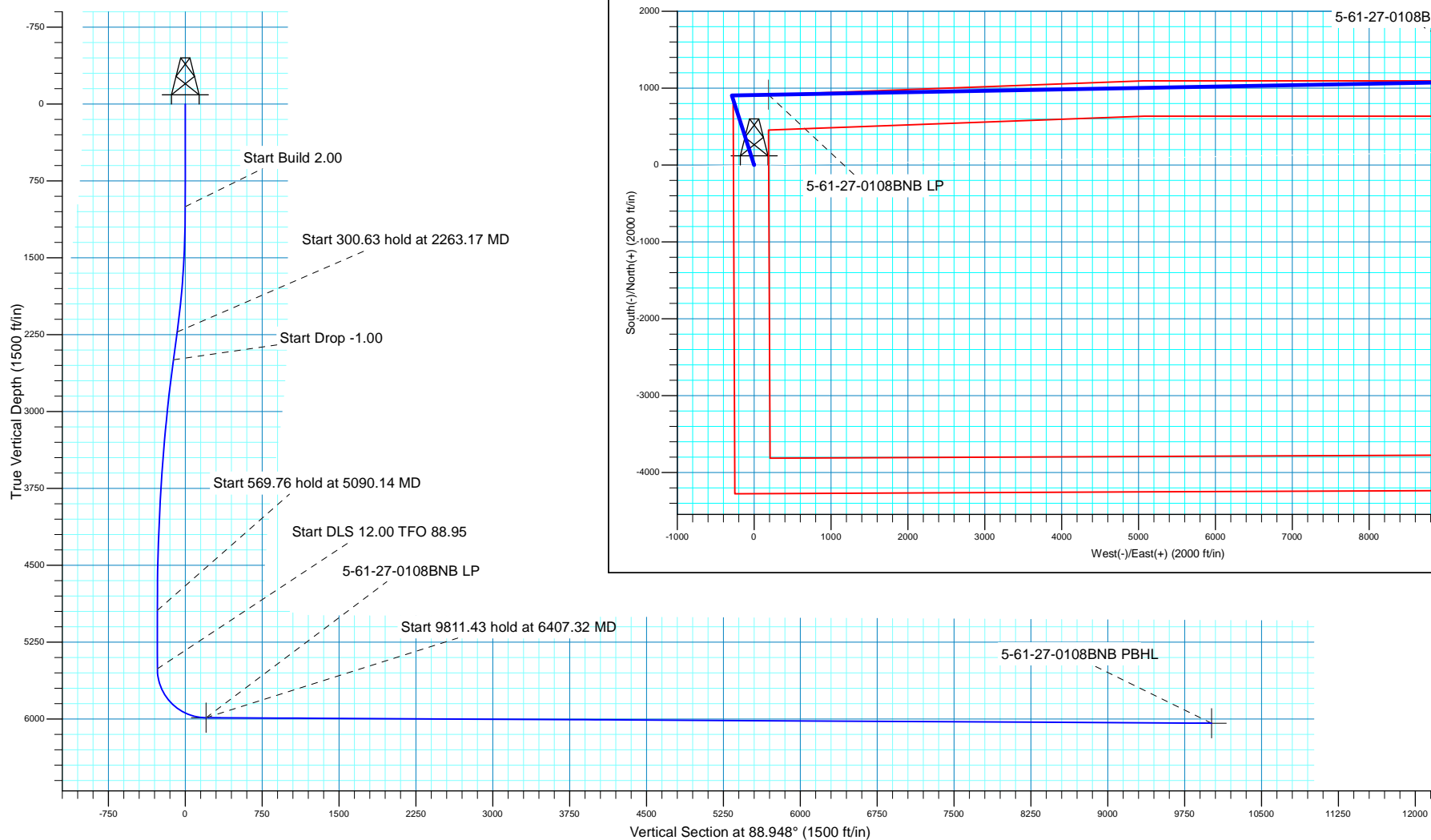
Created By: Seth Burstad Date: 7-24-2017

SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect |
|----------|-------|---------|---------|---------|---------|-------|--------|----------|
| 0.00 | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1000.00 | 0.00 | 0.000 | 1000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2263.17 | 25.26 | 342.296 | 2222.64 | 261.02 | -83.32 | 2.00 | 342.30 | -78.52 |
| 2563.80 | 25.26 | 342.296 | 2494.51 | 383.25 | -122.34 | 0.00 | 0.00 | -115.28 |
| 5090.14 | 0.00 | 0.000 | 4939.78 | 905.30 | -288.99 | 1.00 | 180.00 | -272.32 |
| 5659.90 | 0.00 | 0.000 | 5509.54 | 905.30 | -288.99 | 0.00 | 0.00 | -272.32 |
| 6407.32 | 89.69 | 88.948 | 5987.00 | 914.02 | 185.82 | 12.00 | 88.95 | 202.57 |
| 16218.75 | 89.69 | 88.948 | 6040.00 | 1094.20 | 9995.45 | 0.00 | 0.00 | 10013.86 |

WELL DETAILS: Anschutz-Williams 5-61-27-0108BNB

| | | 4622' & KB 20' @ 4642.00ft | | 4622.00 | | |
|-------|-------|----------------------------|------------|------------------|-------------------|--|
| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | |
| 0.00 | 0.00 | 1382600.98 | 3361173.68 | 40° 22' 35.018 N | 104° 12' 12.960 W | |





Bill Barrett Corporation

Bill Barrett Corp.

Weld County, CO NAD 83

Anschutz-Willaims 5-61-27 NWNW Pad

Anschutz-Williams 5-61-27-0108BNB

OH

Plan: Plan 1

Standard Planning Report

24 July, 2017



Scientific Drilling

www.scientificdrilling.com



| | | | |
|------------------|------------------------------------|-------------------------------------|---|
| Database: | Casper District | Local Co-ordinate Reference: | Site Anschutz-Willaims 5-61-27 NWNW Pad |
| Company: | Bill Barrett Corp. | TVD Reference: | 4622' & KB 20' @ 4642.00ft |
| Project: | Weld County, CO NAD 83 | MD Reference: | 4622' & KB 20' @ 4642.00ft |
| Site: | Anschutz-Willaims 5-61-27 NWNW Pad | North Reference: | True |
| Well: | Anschutz-Willaims 5-61-27-0108BNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | Plan 1 | | |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| Project | Weld County, CO NAD 83 | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | |

| Site | | | | | | Anschutz-Willaims 5-61-27 NWNW Pad, Site Center : Anschutz-Willaims 5-61-27-0701BNB | | | | | |
|-----------------------|--|-----------|--|-------------------|--|---|--|-------------------|--|-------------------|--|
| Site Position: | | Northing: | | 1,382,601.00 usft | | Latitude: | | 40° 22' 35.018 N | | | |
| From: | | Lat/Long | | Easting: | | 3,361,173.68 usft | | Longitude: | | 104° 12' 12.960 W | |
| Position Uncertainty: | | 0.00 ft | | Slot Radius: | | 13.200 in | | Grid Convergence: | | 0.84 | |

| | | | | | | |
|----------------------|--|----------|---------------------|-------------------|---------------|-------------------|
| Well | Anschutz-Williams 5-61-27-0108BNB, 908' FNL 270' FWL Sec 27 T5N R61W | | | | | |
| Well Position | +N/-S | -0.01 ft | Northing: | 1,382,600.98 usft | Latitude: | 40° 22' 35.018 N |
| | +E/-W | 0.00 ft | Easting: | 3,361,173.68 usft | Longitude: | 104° 12' 12.960 W |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | 0.00 ft | Ground Level: | 4,622.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | HDGM | 7/24/2017 | 8.25 | 67.07 | 52,357 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| Design | Plan 1 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.00 | -0.01 | 0.00 | 88.948 |

| 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 |
| 0.00 | 0.00 | 0.000 | 0.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,000.00 | 0.00 | 0.000 | 1,000.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,263.17 | 25.26 | 342.296 | 2,222.64 | 261.01 | -83.32 | 2.00 | 2.00 | 0.00 | 342.30 | |
| 2,563.80 | 25.26 | 342.296 | 2,494.51 | 383.24 | -122.34 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,090.14 | 0.00 | 0.000 | 4,939.78 | 905.29 | -288.99 | 1.00 | -1.00 | 0.00 | 180.00 | |
| 5,659.90 | 0.00 | 0.000 | 5,509.54 | 905.29 | -288.99 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,407.32 | 89.69 | 88.948 | 5,987.00 | 914.01 | 185.82 | 12.00 | 12.00 | 11.90 | 88.95 | |
| 16,218.75 | 89.69 | 88.948 | 6,040.00 | 1,094.18 | 9,995.45 | 0.00 | 0.00 | 0.00 | 0.00 | 5-61-27-0108BNB PB |

| | | | |
|------------------|------------------------------------|-------------------------------------|---|
| Database: | Casper District | Local Co-ordinate Reference: | Site Anschutz-Williams 5-61-27 NWNW Pad |
| Company: | Bill Barrett Corp. | TVD Reference: | 4622' & KB 20' @ 4642.00ft |
| Project: | Weld County, CO NAD 83 | MD Reference: | 4622' & KB 20' @ 4642.00ft |
| Site: | Anschutz-Williams 5-61-27 NWNW Pad | North Reference: | True |
| Well: | Anschutz-Williams 5-61-27-0108BNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | Plan 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) |
| 0.00 | 0.00 | 0.000 | 0.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.000 | 100.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.000 | 200.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.000 | 300.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.000 | 400.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 500.00 | 0.00 | 0.000 | 500.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.000 | 600.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.000 | 700.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.000 | 800.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.000 | 900.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 0.00 | 0.000 | 1,000.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start Build 2.00 | | | | | | | | | |
| 1,100.00 | 2.00 | 342.296 | 1,099.98 | 1.65 | -0.53 | -0.50 | 2.00 | 2.00 | 0.00 |
| 1,200.00 | 4.00 | 342.296 | 1,199.84 | 6.64 | -2.12 | -2.00 | 2.00 | 2.00 | 0.00 |
| 1,300.00 | 6.00 | 342.296 | 1,299.45 | 14.94 | -4.77 | -4.50 | 2.00 | 2.00 | 0.00 |
| 1,400.00 | 8.00 | 342.296 | 1,398.70 | 26.55 | -8.48 | -7.99 | 2.00 | 2.00 | 0.00 |
| 1,500.00 | 10.00 | 342.296 | 1,497.47 | 41.45 | -13.24 | -12.47 | 2.00 | 2.00 | 0.00 |
| 1,600.00 | 12.00 | 342.296 | 1,595.62 | 59.63 | -19.04 | -17.94 | 2.00 | 2.00 | 0.00 |
| 1,700.00 | 14.00 | 342.296 | 1,693.06 | 81.05 | -25.88 | -24.39 | 2.00 | 2.00 | 0.00 |
| 1,800.00 | 16.00 | 342.296 | 1,789.64 | 105.71 | -33.75 | -31.80 | 2.00 | 2.00 | 0.00 |
| 1,900.00 | 18.00 | 342.296 | 1,885.27 | 133.56 | -42.64 | -40.18 | 2.00 | 2.00 | 0.00 |
| 2,000.00 | 20.00 | 342.296 | 1,979.82 | 164.57 | -52.54 | -49.51 | 2.00 | 2.00 | 0.00 |
| 2,100.00 | 22.00 | 342.296 | 2,073.17 | 198.71 | -63.44 | -59.78 | 2.00 | 2.00 | 0.00 |
| 2,200.00 | 24.00 | 342.296 | 2,165.21 | 235.93 | -75.32 | -70.97 | 2.00 | 2.00 | 0.00 |
| 2,263.17 | 25.26 | 342.296 | 2,222.64 | 261.01 | -83.32 | -78.52 | 2.00 | 2.00 | 0.00 |
| Start 300.63 hold at 2263.17 MD | | | | | | | | | |
| 2,300.00 | 25.26 | 342.296 | 2,255.94 | 275.99 | -88.10 | -83.02 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 25.26 | 342.296 | 2,346.38 | 316.64 | -101.08 | -95.25 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 25.26 | 342.296 | 2,436.81 | 357.30 | -114.06 | -107.48 | 0.00 | 0.00 | 0.00 |
| 2,563.80 | 25.26 | 342.296 | 2,494.51 | 383.24 | -122.34 | -115.28 | 0.00 | 0.00 | 0.00 |
| Start Drop -1.00 | | | | | | | | | |
| 2,600.00 | 24.90 | 342.296 | 2,527.30 | 397.86 | -127.01 | -119.68 | 1.00 | -1.00 | 0.00 |
| 2,700.00 | 23.90 | 342.296 | 2,618.36 | 437.21 | -139.57 | -131.52 | 1.00 | -1.00 | 0.00 |
| 2,800.00 | 22.90 | 342.296 | 2,710.14 | 475.05 | -151.65 | -142.90 | 1.00 | -1.00 | 0.00 |
| 2,900.00 | 21.90 | 342.296 | 2,802.59 | 511.35 | -163.24 | -153.82 | 1.00 | -1.00 | 0.00 |
| 3,000.00 | 20.90 | 342.296 | 2,895.69 | 546.11 | -174.33 | -164.28 | 1.00 | -1.00 | 0.00 |
| 3,100.00 | 19.90 | 342.296 | 2,989.42 | 579.32 | -184.94 | -174.27 | 1.00 | -1.00 | 0.00 |
| 3,200.00 | 18.90 | 342.296 | 3,083.74 | 610.97 | -195.04 | -183.79 | 1.00 | -1.00 | 0.00 |
| 3,300.00 | 17.90 | 342.296 | 3,178.63 | 641.04 | -204.64 | -192.83 | 1.00 | -1.00 | 0.00 |
| 3,400.00 | 16.90 | 342.296 | 3,274.05 | 669.53 | -213.73 | -201.40 | 1.00 | -1.00 | 0.00 |
| 3,500.00 | 15.90 | 342.296 | 3,369.98 | 696.43 | -222.32 | -209.49 | 1.00 | -1.00 | 0.00 |
| 3,600.00 | 14.90 | 342.296 | 3,466.38 | 721.73 | -230.39 | -217.10 | 1.00 | -1.00 | 0.00 |
| 3,700.00 | 13.90 | 342.296 | 3,563.24 | 745.42 | -237.96 | -224.23 | 1.00 | -1.00 | 0.00 |
| 3,800.00 | 12.90 | 342.296 | 3,660.52 | 767.50 | -245.01 | -230.87 | 1.00 | -1.00 | 0.00 |
| 3,900.00 | 11.90 | 342.296 | 3,758.18 | 787.96 | -251.54 | -237.03 | 1.00 | -1.00 | 0.00 |
| 4,000.00 | 10.90 | 342.296 | 3,856.21 | 806.79 | -257.55 | -242.69 | 1.00 | -1.00 | 0.00 |
| 4,100.00 | 9.90 | 342.296 | 3,954.56 | 823.99 | -263.04 | -247.86 | 1.00 | -1.00 | 0.00 |
| 4,200.00 | 8.90 | 342.296 | 4,053.22 | 839.55 | -268.01 | -252.55 | 1.00 | -1.00 | 0.00 |
| 4,300.00 | 7.90 | 342.296 | 4,152.14 | 853.47 | -272.45 | -256.73 | 1.00 | -1.00 | 0.00 |
| 4,400.00 | 6.90 | 342.296 | 4,251.31 | 865.74 | -276.37 | -260.42 | 1.00 | -1.00 | 0.00 |
| 4,500.00 | 5.90 | 342.296 | 4,350.69 | 876.36 | -279.76 | -263.62 | 1.00 | -1.00 | 0.00 |
| 4,600.00 | 4.90 | 342.296 | 4,450.24 | 885.33 | -282.62 | -266.32 | 1.00 | -1.00 | 0.00 |
| 4,700.00 | 3.90 | 342.296 | 4,549.94 | 892.64 | -284.95 | -268.52 | 1.00 | -1.00 | 0.00 |

| | | | |
|------------------|------------------------------------|-------------------------------------|---|
| Database: | Casper District | Local Co-ordinate Reference: | Site Anschutz-Williams 5-61-27 NWNW Pad |
| Company: | Bill Barrett Corp. | TVD Reference: | 4622' & KB 20' @ 4642.00ft |
| Project: | Weld County, CO NAD 83 | MD Reference: | 4622' & KB 20' @ 4642.00ft |
| Site: | Anschutz-Williams 5-61-27 NWNW Pad | North Reference: | True |
| Well: | Anschutz-Williams 5-61-27-0108BNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | Plan 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) |
| 4,800.00 | 2.90 | 342.296 | 4,649.77 | 898.29 | -286.76 | -270.22 | 1.00 | -1.00 | 0.00 |
| 4,900.00 | 1.90 | 342.296 | 4,749.68 | 902.28 | -288.03 | -271.42 | 1.00 | -1.00 | 0.00 |
| 5,000.00 | 0.90 | 342.296 | 4,849.65 | 904.61 | -288.77 | -272.12 | 1.00 | -1.00 | 0.00 |
| 5,090.14 | 0.00 | 0.000 | 4,939.78 | 905.29 | -288.99 | -272.32 | 1.00 | -1.00 | 0.00 |
| Start 569.76 hold at 5090.14 MD | | | | | | | | | |
| 5,100.00 | 0.00 | 0.000 | 4,949.64 | 905.29 | -288.99 | -272.32 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 0.00 | 0.000 | 5,049.64 | 905.29 | -288.99 | -272.32 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 0.00 | 0.000 | 5,149.64 | 905.29 | -288.99 | -272.32 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 0.00 | 0.000 | 5,249.64 | 905.29 | -288.99 | -272.32 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 0.00 | 0.000 | 5,349.64 | 905.29 | -288.99 | -272.32 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 0.00 | 0.000 | 5,449.64 | 905.29 | -288.99 | -272.32 | 0.00 | 0.00 | 0.00 |
| 5,659.90 | 0.00 | 0.000 | 5,509.54 | 905.29 | -288.99 | -272.32 | 0.00 | 0.00 | 0.00 |
| Start DLS 12.00 TFO 88.95 | | | | | | | | | |
| 5,700.00 | 4.81 | 88.948 | 5,549.60 | 905.32 | -287.31 | -270.64 | 12.00 | 12.00 | 0.00 |
| 5,800.00 | 16.81 | 88.948 | 5,647.64 | 905.66 | -268.59 | -251.91 | 12.00 | 12.00 | 0.00 |
| 5,900.00 | 28.81 | 88.948 | 5,739.65 | 906.37 | -229.89 | -213.21 | 12.00 | 12.00 | 0.00 |
| 6,000.00 | 40.81 | 88.948 | 5,821.60 | 907.42 | -172.92 | -156.23 | 12.00 | 12.00 | 0.00 |
| 6,100.00 | 52.81 | 88.948 | 5,889.92 | 908.76 | -100.15 | -83.45 | 12.00 | 12.00 | 0.00 |
| 6,200.00 | 64.81 | 88.948 | 5,941.61 | 910.32 | -14.77 | 1.94 | 12.00 | 12.00 | 0.00 |
| 6,300.00 | 76.81 | 88.948 | 5,974.41 | 912.06 | 79.48 | 96.22 | 12.00 | 12.00 | 0.00 |
| 6,400.00 | 88.81 | 88.948 | 5,986.90 | 913.87 | 178.50 | 195.25 | 12.00 | 12.00 | 0.00 |
| 6,407.32 | 89.69 | 88.948 | 5,987.00 | 914.01 | 185.82 | 202.57 | 12.00 | 12.00 | 0.00 |
| Start 9811.43 hold at 6407.32 MD | | | | | | | | | |
| 6,500.00 | 89.69 | 88.948 | 5,987.50 | 915.71 | 278.48 | 295.25 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 89.69 | 88.948 | 5,988.04 | 917.55 | 378.46 | 395.24 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 89.69 | 88.948 | 5,988.58 | 919.38 | 478.44 | 495.24 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 89.69 | 88.948 | 5,989.12 | 921.22 | 578.43 | 595.24 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 89.69 | 88.948 | 5,989.66 | 923.06 | 678.41 | 695.24 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 89.69 | 88.948 | 5,990.20 | 924.89 | 778.39 | 795.24 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 89.69 | 88.948 | 5,990.74 | 926.73 | 878.37 | 895.24 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 89.69 | 88.948 | 5,991.28 | 928.56 | 978.35 | 995.24 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 89.69 | 88.948 | 5,991.82 | 930.40 | 1,078.33 | 1,095.23 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 89.69 | 88.948 | 5,992.36 | 932.24 | 1,178.32 | 1,195.23 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 89.69 | 88.948 | 5,992.90 | 934.07 | 1,278.30 | 1,295.23 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 89.69 | 88.948 | 5,993.44 | 935.91 | 1,378.28 | 1,395.23 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 89.69 | 88.948 | 5,993.98 | 937.75 | 1,478.26 | 1,495.23 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 89.69 | 88.948 | 5,994.52 | 939.58 | 1,578.24 | 1,595.23 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 89.69 | 88.948 | 5,995.06 | 941.42 | 1,678.22 | 1,695.23 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 89.69 | 88.948 | 5,995.60 | 943.26 | 1,778.21 | 1,795.22 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 89.69 | 88.948 | 5,996.14 | 945.09 | 1,878.19 | 1,895.22 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 89.69 | 88.948 | 5,996.68 | 946.93 | 1,978.17 | 1,995.22 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 89.69 | 88.948 | 5,997.22 | 948.76 | 2,078.15 | 2,095.22 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 89.69 | 88.948 | 5,997.76 | 950.60 | 2,178.13 | 2,195.22 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 89.69 | 88.948 | 5,998.30 | 952.44 | 2,278.11 | 2,295.22 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 89.69 | 88.948 | 5,998.84 | 954.27 | 2,378.10 | 2,395.22 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 89.69 | 88.948 | 5,999.38 | 956.11 | 2,478.08 | 2,495.21 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 89.69 | 88.948 | 5,999.92 | 957.95 | 2,578.06 | 2,595.21 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 89.69 | 88.948 | 6,000.46 | 959.78 | 2,678.04 | 2,695.21 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 89.69 | 88.948 | 6,001.00 | 961.62 | 2,778.02 | 2,795.21 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 89.69 | 88.948 | 6,001.54 | 963.46 | 2,878.00 | 2,895.21 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 89.69 | 88.948 | 6,002.08 | 965.29 | 2,977.99 | 2,995.21 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 89.69 | 88.948 | 6,002.62 | 967.13 | 3,077.97 | 3,095.21 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 89.69 | 88.948 | 6,003.16 | 968.96 | 3,177.95 | 3,195.20 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|------------------------------------|-------------------------------------|---|
| Database: | Casper District | Local Co-ordinate Reference: | Site Anschutz-Williams 5-61-27 NWNW Pad |
| Company: | Bill Barrett Corp. | TVD Reference: | 4622' & KB 20' @ 4642.00ft |
| Project: | Weld County, CO NAD 83 | MD Reference: | 4622' & KB 20' @ 4642.00ft |
| Site: | Anschutz-Williams 5-61-27 NWNW Pad | North Reference: | True |
| Well: | Anschutz-Williams 5-61-27-0108BNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | Plan 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) |
| 9,500.00 | 89.69 | 88.948 | 6,003.70 | 970.80 | 3,277.93 | 3,295.20 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 89.69 | 88.948 | 6,004.25 | 972.64 | 3,377.91 | 3,395.20 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 89.69 | 88.948 | 6,004.79 | 974.47 | 3,477.89 | 3,495.20 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 89.69 | 88.948 | 6,005.33 | 976.31 | 3,577.88 | 3,595.20 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 89.69 | 88.948 | 6,005.87 | 978.15 | 3,677.86 | 3,695.20 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 89.69 | 88.948 | 6,006.41 | 979.98 | 3,777.84 | 3,795.20 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 89.69 | 88.948 | 6,006.95 | 981.82 | 3,877.82 | 3,895.19 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 89.69 | 88.948 | 6,007.49 | 983.66 | 3,977.80 | 3,995.19 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 89.69 | 88.948 | 6,008.03 | 985.49 | 4,077.78 | 4,095.19 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 89.69 | 88.948 | 6,008.57 | 987.33 | 4,177.77 | 4,195.19 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 89.69 | 88.948 | 6,009.11 | 989.16 | 4,277.75 | 4,295.19 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 89.69 | 88.948 | 6,009.65 | 991.00 | 4,377.73 | 4,395.19 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 89.69 | 88.948 | 6,010.19 | 992.84 | 4,477.71 | 4,495.18 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 89.69 | 88.948 | 6,010.73 | 994.67 | 4,577.69 | 4,595.18 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 89.69 | 88.948 | 6,011.27 | 996.51 | 4,677.67 | 4,695.18 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 89.69 | 88.948 | 6,011.81 | 998.35 | 4,777.66 | 4,795.18 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 89.69 | 88.948 | 6,012.35 | 1,000.18 | 4,877.64 | 4,895.18 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 89.69 | 88.948 | 6,012.89 | 1,002.02 | 4,977.62 | 4,995.18 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 89.69 | 88.948 | 6,013.43 | 1,003.86 | 5,077.60 | 5,095.18 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 89.69 | 88.948 | 6,013.97 | 1,005.69 | 5,177.58 | 5,195.17 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 89.69 | 88.948 | 6,014.51 | 1,007.53 | 5,277.56 | 5,295.17 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 89.69 | 88.948 | 6,015.05 | 1,009.36 | 5,377.55 | 5,395.17 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 89.69 | 88.948 | 6,015.59 | 1,011.20 | 5,477.53 | 5,495.17 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 89.69 | 88.948 | 6,016.13 | 1,013.04 | 5,577.51 | 5,595.17 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 89.69 | 88.948 | 6,016.67 | 1,014.87 | 5,677.49 | 5,695.17 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 89.69 | 88.948 | 6,017.21 | 1,016.71 | 5,777.47 | 5,795.17 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 89.69 | 88.948 | 6,017.75 | 1,018.55 | 5,877.45 | 5,895.16 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 89.69 | 88.948 | 6,018.29 | 1,020.38 | 5,977.44 | 5,995.16 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 89.69 | 88.948 | 6,018.83 | 1,022.22 | 6,077.42 | 6,095.16 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 89.69 | 88.948 | 6,019.37 | 1,024.06 | 6,177.40 | 6,195.16 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 89.69 | 88.948 | 6,019.91 | 1,025.89 | 6,277.38 | 6,295.16 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 89.69 | 88.948 | 6,020.45 | 1,027.73 | 6,377.36 | 6,395.16 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 89.69 | 88.948 | 6,020.99 | 1,029.56 | 6,477.34 | 6,495.16 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 89.69 | 88.948 | 6,021.53 | 1,031.40 | 6,577.33 | 6,595.15 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 89.69 | 88.948 | 6,022.07 | 1,033.24 | 6,677.31 | 6,695.15 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 89.69 | 88.948 | 6,022.61 | 1,035.07 | 6,777.29 | 6,795.15 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 89.69 | 88.948 | 6,023.15 | 1,036.91 | 6,877.27 | 6,895.15 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 89.69 | 88.948 | 6,023.69 | 1,038.75 | 6,977.25 | 6,995.15 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 89.69 | 88.948 | 6,024.23 | 1,040.58 | 7,077.23 | 7,095.15 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 89.69 | 88.948 | 6,024.77 | 1,042.42 | 7,177.22 | 7,195.15 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 89.69 | 88.948 | 6,025.31 | 1,044.26 | 7,277.20 | 7,295.14 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 89.69 | 88.948 | 6,025.85 | 1,046.09 | 7,377.18 | 7,395.14 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 89.69 | 88.948 | 6,026.39 | 1,047.93 | 7,477.16 | 7,495.14 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 89.69 | 88.948 | 6,026.93 | 1,049.76 | 7,577.14 | 7,595.14 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 89.69 | 88.948 | 6,027.47 | 1,051.60 | 7,677.12 | 7,695.14 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 89.69 | 88.948 | 6,028.01 | 1,053.44 | 7,777.11 | 7,795.14 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 89.69 | 88.948 | 6,028.55 | 1,055.27 | 7,877.09 | 7,895.14 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 89.69 | 88.948 | 6,029.09 | 1,057.11 | 7,977.07 | 7,995.13 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 89.69 | 88.948 | 6,029.63 | 1,058.95 | 8,077.05 | 8,095.13 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 89.69 | 88.948 | 6,030.18 | 1,060.78 | 8,177.03 | 8,195.13 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 89.69 | 88.948 | 6,030.72 | 1,062.62 | 8,277.01 | 8,295.13 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 89.69 | 88.948 | 6,031.26 | 1,064.46 | 8,377.00 | 8,395.13 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 89.69 | 88.948 | 6,031.80 | 1,066.29 | 8,476.98 | 8,495.13 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 89.69 | 88.948 | 6,032.34 | 1,068.13 | 8,576.96 | 8,595.13 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|------------------------------------|-------------------------------------|---|
| Database: | Casper District | Local Co-ordinate Reference: | Site Anschutz-Williams 5-61-27 NWNW Pad |
| Company: | Bill Barrett Corp. | TVD Reference: | 4622' & KB 20' @ 4642.00ft |
| Project: | Weld County, CO NAD 83 | MD Reference: | 4622' & KB 20' @ 4642.00ft |
| Site: | Anschutz-Williams 5-61-27 NWNW Pad | North Reference: | True |
| Well: | Anschutz-Williams 5-61-27-0108BNB | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | Plan 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) |
| 14,900.00 | 89.69 | 88.948 | 6,032.88 | 1,069.96 | 8,676.94 | 8,695.12 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 89.69 | 88.948 | 6,033.42 | 1,071.80 | 8,776.92 | 8,795.12 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 89.69 | 88.948 | 6,033.96 | 1,073.64 | 8,876.90 | 8,895.12 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 89.69 | 88.948 | 6,034.50 | 1,075.47 | 8,976.89 | 8,995.12 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 89.69 | 88.948 | 6,035.04 | 1,077.31 | 9,076.87 | 9,095.12 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 89.69 | 88.948 | 6,035.58 | 1,079.15 | 9,176.85 | 9,195.12 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 89.69 | 88.948 | 6,036.12 | 1,080.98 | 9,276.83 | 9,295.11 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 89.69 | 88.948 | 6,036.66 | 1,082.82 | 9,376.81 | 9,395.11 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 89.69 | 88.948 | 6,037.20 | 1,084.66 | 9,476.80 | 9,495.11 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 89.69 | 88.948 | 6,037.74 | 1,086.49 | 9,576.78 | 9,595.11 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 89.69 | 88.948 | 6,038.28 | 1,088.33 | 9,676.76 | 9,695.11 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 89.69 | 88.948 | 6,038.82 | 1,090.16 | 9,776.74 | 9,795.11 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 89.69 | 88.948 | 6,039.36 | 1,092.00 | 9,876.72 | 9,895.11 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 89.69 | 88.948 | 6,039.90 | 1,093.84 | 9,976.70 | 9,995.10 | 0.00 | 0.00 | 0.00 |
| 16,218.75 | 89.69 | 88.948 | 6,040.00 | 1,094.18 | 9,995.45 | 10,013.86 | 0.00 | 0.00 | 0.00 |
| TD at 16218.75 | | | | | | | | | |

| Design Targets | | | | | | | | | |
|---|---------------|--------------|----------|------------|------------|-----------------|----------------|------------------|-------------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| 5-61-27-0108BNB LP | 0.00 | 0.000 | 5,987.00 | 914.02 | 185.82 | 1,383,517.63 | 3,361,346.12 | 40° 22' 44.051 N | 104° 12' 10.559 W |
| - plan misses target center by 0.01ft at 6407.33ft MD (5987.00 TVD, 914.01 N, 185.82 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| 5-61-27-0108BNB PBHL | 0.00 | 0.000 | 6,040.00 | 1,094.18 | 9,995.45 | 1,383,841.18 | 3,371,152.05 | 40° 22' 45.811 N | 104° 10' 3.799 W |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

| Plan Annotations | | | | |
|---------------------|---------------------|-------------------|------------|----------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 1,000.00 | 1,000.00 | -0.01 | 0.00 | Start Build 2.00 |
| 2,263.17 | 2,222.64 | 261.01 | -83.32 | Start 300.63 hold at 2263.17 MD |
| 2,563.80 | 2,494.51 | 383.24 | -122.34 | Start Drop -1.00 |
| 5,090.14 | 4,939.78 | 905.29 | -288.99 | Start 569.76 hold at 5090.14 MD |
| 5,659.90 | 5,509.54 | 905.29 | -288.99 | Start DLS 12.00 TFO 88.95 |
| 6,407.32 | 5,987.00 | 914.01 | 185.82 | Start 9811.43 hold at 6407.32 MD |
| 16,218.75 | 6,040.00 | 1,094.18 | 9,995.45 | TD at 16218.75 |