



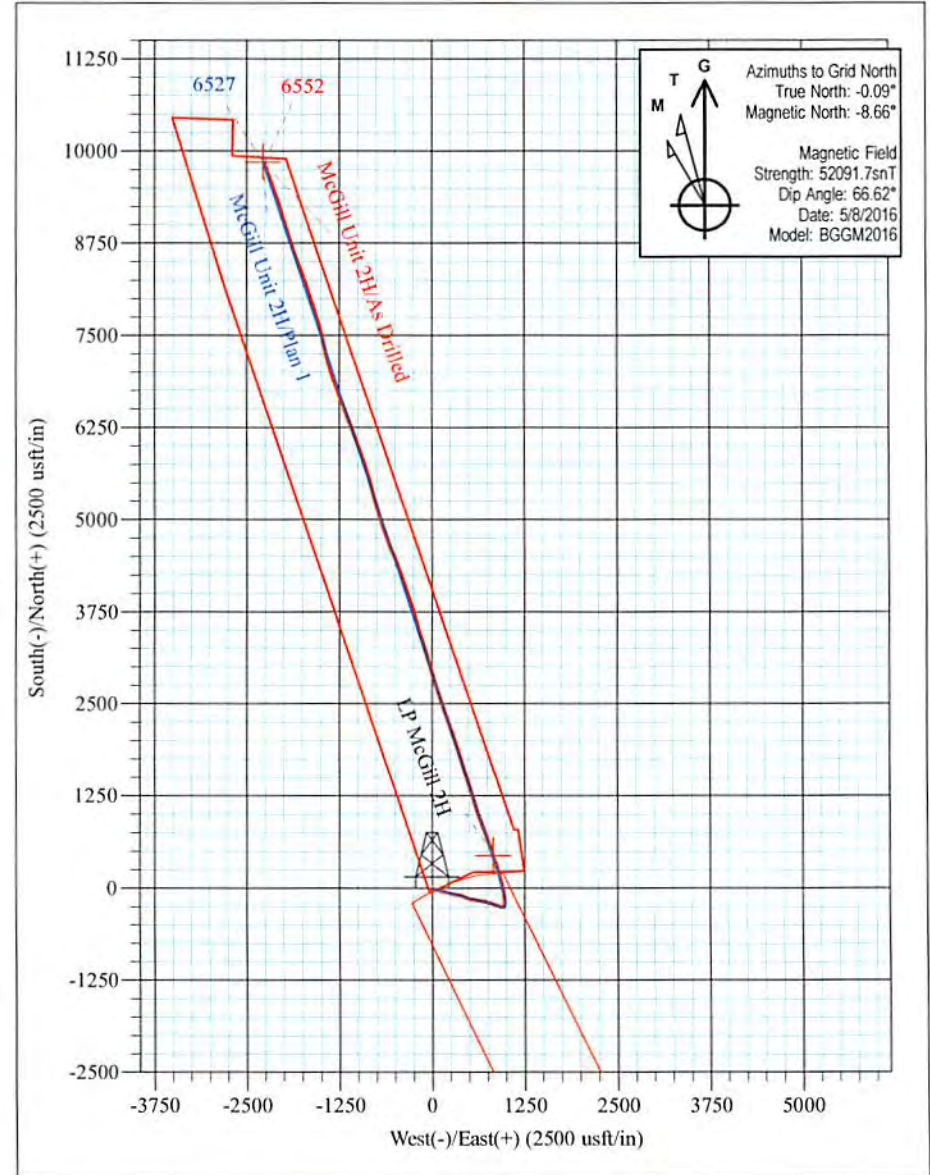
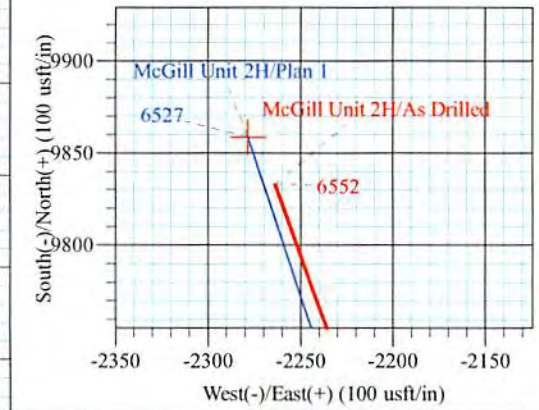
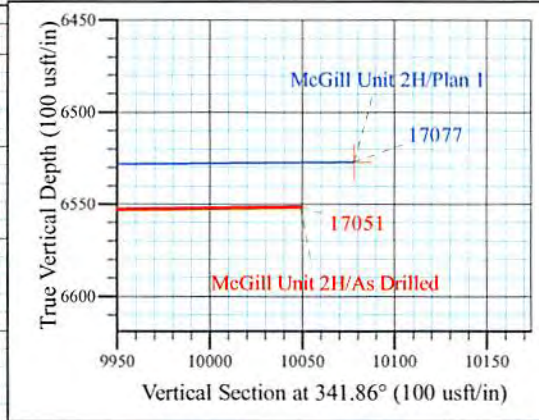
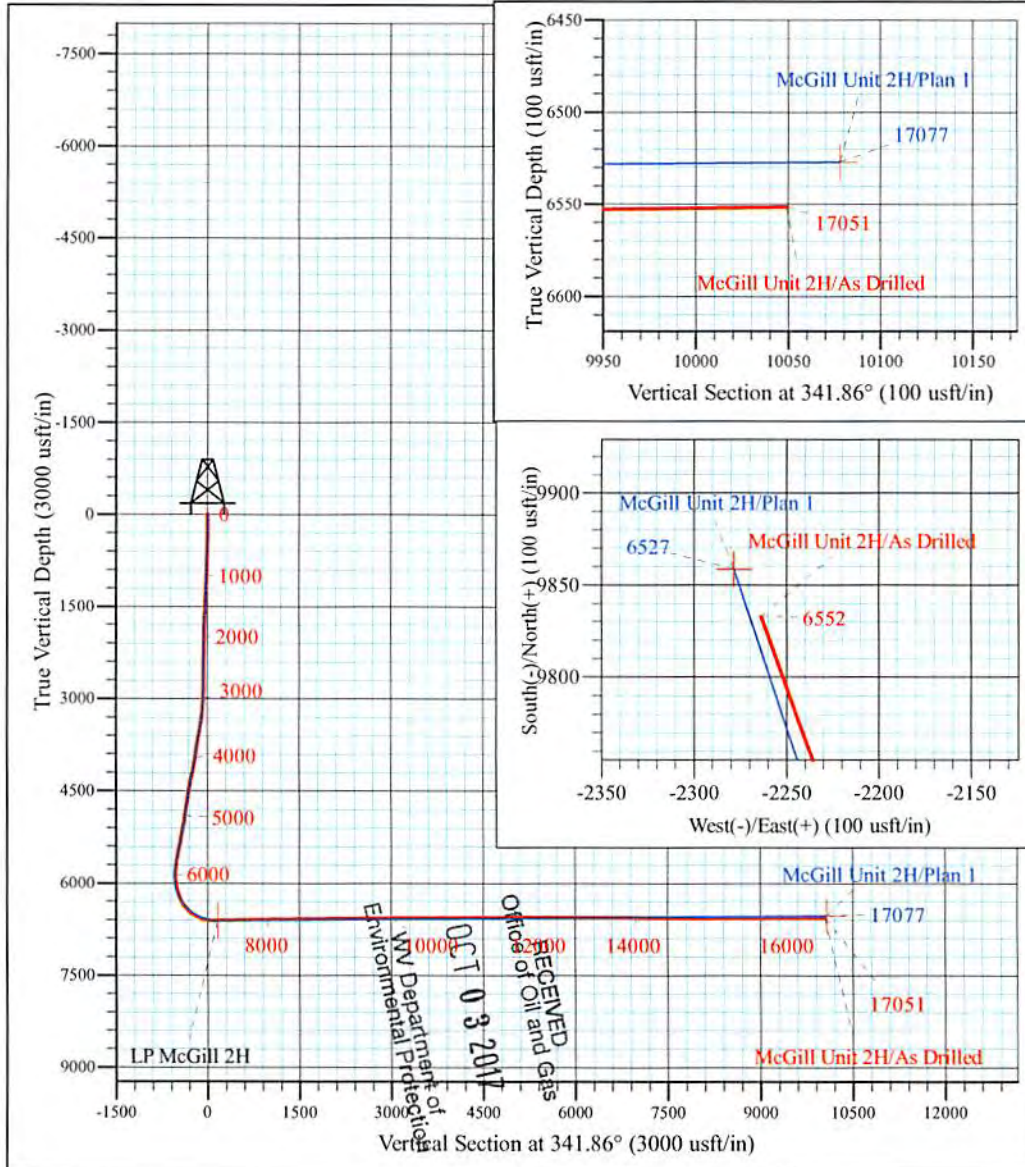
Vogt: Seaborn/Violet/Tulip/Marks
 McGill Unit 2H
 Plan 1
 PD 525: 1112' GL + 19' KB @ 1131.0usft
 Doddridge County WV

PROJECT DETAILS:
 Geodetic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Zone 17N (84 W to 78 W)
 System Datum: Mean Sea Level



WELL DETAILS: McGill Unit 2H

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|-------|-------|-------------|------------|------------------|------------------|
| 0.0 | 0.0 | 14262922.45 | 1679369.82 | 39° 16' 38.195 N | 80° 51' 44.462 W |



McGill Unit 2H
 Approx. BHL
 39° 18' 15.454 N 80° 52' 13.082W

Shane Rhodes
 10:42, May 31 2016
 Scientific Drilling International
 124 Vista Drive
 Charleroi, PA 15022



Scientific Drilling International

Survey Report - Geographic



| | | | |
|------------------|----------------------------------|-------------------------------------|--|
| Company: | Antero Resources | Local Co-ordinate Reference: | Well McGill Unit 2H |
| Project: | Doddridge County WV | TVD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Site: | Vogt: Seaborn/Violet/Tulip/Marks | MD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Well: | McGill Unit 2H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Antero NE |

| | | | |
|--------------------|--|----------------------|----------------|
| Project | Doddridge County WV, McClellan District | | |
| Map System: | Universal Transverse Mercator (US Survey Feet) | System Datum: | Mean Sea Level |
| Geo Datum: | NAD 1927 (NADCON CONUS) | | |
| Map Zone: | Zone 17N (84 W to 78 W) | | |

| | | | | | |
|------------------------------|--|---------------------|--------------------|--------------------------|------------------|
| Site | Vogt: Seaborn/Violet/Tulip/Marks, Site: Seaborn 2H | | | | |
| Site Position: | | Northing: | 14,262,941.51 usft | Latitude: | 39° 16' 38.384 N |
| From: | Map | Easting: | 1,679,373.00 usft | Longitude: | 80° 51' 44.422 W |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16 " | Grid Convergence: | 0.09 * |

| | | | | | | |
|-----------------------------|---------------------------|----------|----------------------------|--------------------|----------------------|------------------|
| Well | McGill Unit 2H, Marcellus | | | | | |
| Well Position | +N-S | 0.0 usft | Northing: | 14,262,922.45 usft | Latitude: | 39° 16' 38.195 N |
| | +E-W | 0.0 usft | Easting: | 1,679,369.82 usft | Longitude: | 80° 51' 44.462 W |
| Position Uncertainty | | 2.0 usft | Wellhead Elevation: | 1,125.0 usft | Ground Level: | 1,112.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| Wellbore | Original Wellpath | | | | |
| Magnetics | Model Name | Sample Date | Declination | Dip Angle | Field Strength |
| | BGGM2016 | 5/8/2016 | (°) | (°) | (nT) |
| | | | -8.57 | 66.62 | 52,092 |

| | | | | | |
|--------------------------|-------------------------|---------------|-------------|----------------------|-----|
| Design | As Drilled | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) | +N-S | +E-W | Direction | |
| | (usft) | (usft) | (usft) | (°) | |
| | 0.0 | 0.0 | 0.0 | 341.86 | |

| | | | | | |
|-----------------------|----------------|---|---------------------|--|--|
| Survey Program | Date 5/31/2016 | | | | |
| From | To | Survey (Wellbore) | Tool Name | Description | |
| (usft) | (usft) | | | | |
| 106.0 | 5,531.0 | Survey #4 - Final Def. Gyro (Original Wellp | Standard Keeper 104 | Standard Wireline Keeper ver 1.0.4 | |
| 5,569.0 | 17,051.0 | Survey #5 SDI MWD (Surcon Corrected) (| SDI MWD | Scientific Drilling Intl. MWD - Standard ver 1.0.4 | |

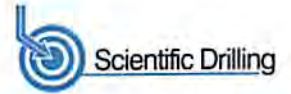
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| | | | | | | | | | | |
|-----------------|---|----------------|-----------------|-------------|-------------|-----------------|----------------|------------------|------------------|--|
| Survey | WV Department of Environmental Protection | | | | | | | | | |
| Measured | Inclination | Azimuth | Vertical | +N-S | +E-W | Map | Map | Latitude | Longitude | |
| Depth | (°) | (°) | Depth | (usft) | (usft) | Northing | Easting | | | |
| (usft) | | | (usft) | | | (usft) | (usft) | | | |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 14,262,922.45 | 1,679,369.82 | 39° 16' 38.195 N | 80° 51' 44.462 W | |
| 106.0 | 0.28 | 55.89 | 106.0 | 0.1 | 0.2 | 14,262,922.60 | 1,679,370.03 | 39° 16' 38.197 N | 80° 51' 44.460 W | |
| 131.0 | 0.22 | 67.97 | 131.0 | 0.2 | 0.3 | 14,262,922.65 | 1,679,370.13 | 39° 16' 38.197 N | 80° 51' 44.458 W | |
| 156.0 | 0.19 | 73.39 | 156.0 | 0.2 | 0.4 | 14,262,922.68 | 1,679,370.21 | 39° 16' 38.198 N | 80° 51' 44.457 W | |
| 181.0 | 0.18 | 89.30 | 181.0 | 0.2 | 0.5 | 14,262,922.69 | 1,679,370.29 | 39° 16' 38.198 N | 80° 51' 44.456 W | |
| 206.0 | 0.18 | 97.96 | 206.0 | 0.2 | 0.6 | 14,262,922.69 | 1,679,370.37 | 39° 16' 38.198 N | 80° 51' 44.455 W | |
| 231.0 | 0.15 | 89.81 | 231.0 | 0.2 | 0.6 | 14,262,922.68 | 1,679,370.44 | 39° 16' 38.198 N | 80° 51' 44.455 W | |
| 256.0 | 0.16 | 91.93 | 256.0 | 0.2 | 0.7 | 14,262,922.68 | 1,679,370.51 | 39° 16' 38.198 N | 80° 51' 44.454 W | |
| 281.0 | 0.11 | 89.83 | 281.0 | 0.2 | 0.7 | 14,262,922.68 | 1,679,370.56 | 39° 16' 38.198 N | 80° 51' 44.453 W | |
| 306.0 | 0.08 | 124.35 | 306.0 | 0.2 | 0.8 | 14,262,922.67 | 1,679,370.60 | 39° 16' 38.198 N | 80° 51' 44.452 W | |
| 331.0 | 0.12 | 150.30 | 331.0 | 0.2 | 0.8 | 14,262,922.64 | 1,679,370.63 | 39° 16' 38.197 N | 80° 51' 44.452 W | |



Scientific Drilling International

Survey Report - Geographic



Company: Antero Resources
 Project: Doddridge County WV
 Site: Vogt: Seaborn/Violet/Tulip/Marks
 Well: McGill Unit 2H
 Wellbore: Original Wellpath
 Design: As Drilled

Local Co-ordinate Reference: Well McGill Unit 2H
 TVD Reference: PD 525: 1112' GL + 19' KB @ 1131.0usft
 MD Reference: PD 525: 1112' GL + 19' KB @ 1131.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Antero NE

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WV Department of
Environmental Protection

Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|------------------|
| 356.0 | 0.13 | 169.55 | 356.0 | 0.1 | 0.8 | 14,262,922.59 | 1,679,370.65 | 39° 16' 38.197 N | 80° 51' 44.452 W |
| 381.0 | 0.21 | 157.85 | 381.0 | 0.1 | 0.9 | 14,262,922.51 | 1,679,370.67 | 39° 16' 38.196 N | 80° 51' 44.452 W |
| 406.0 | 0.23 | 150.84 | 406.0 | 0.0 | 0.9 | 14,262,922.43 | 1,679,370.71 | 39° 16' 38.195 N | 80° 51' 44.451 W |
| 431.0 | 0.30 | 145.26 | 431.0 | -0.1 | 1.0 | 14,262,922.33 | 1,679,370.77 | 39° 16' 38.194 N | 80° 51' 44.450 W |
| 456.0 | 0.37 | 143.99 | 456.0 | -0.2 | 1.0 | 14,262,922.21 | 1,679,370.86 | 39° 16' 38.193 N | 80° 51' 44.449 W |
| 481.0 | 0.83 | 137.66 | 481.0 | -0.4 | 1.2 | 14,262,922.01 | 1,679,371.03 | 39° 16' 38.191 N | 80° 51' 44.447 W |
| 506.0 | 1.10 | 134.86 | 506.0 | -0.7 | 1.5 | 14,262,921.71 | 1,679,371.32 | 39° 16' 38.188 N | 80° 51' 44.443 W |
| 531.0 | 1.37 | 133.46 | 531.0 | -1.1 | 1.9 | 14,262,921.33 | 1,679,371.71 | 39° 16' 38.184 N | 80° 51' 44.438 W |
| 556.0 | 1.78 | 128.94 | 556.0 | -1.6 | 2.4 | 14,262,920.89 | 1,679,372.23 | 39° 16' 38.180 N | 80° 51' 44.432 W |
| 581.0 | 1.79 | 130.08 | 581.0 | -2.1 | 3.0 | 14,262,920.39 | 1,679,372.83 | 39° 16' 38.175 N | 80° 51' 44.424 W |
| 606.0 | 2.16 | 125.76 | 605.9 | -2.6 | 3.7 | 14,262,919.86 | 1,679,373.51 | 39° 16' 38.170 N | 80° 51' 44.416 W |
| 631.0 | 2.35 | 122.59 | 630.9 | -3.1 | 4.5 | 14,262,919.31 | 1,679,374.32 | 39° 16' 38.164 N | 80° 51' 44.405 W |
| 656.0 | 2.41 | 120.39 | 655.9 | -3.7 | 5.4 | 14,262,918.77 | 1,679,375.21 | 39° 16' 38.159 N | 80° 51' 44.394 W |
| 681.0 | 2.95 | 113.91 | 680.9 | -4.2 | 6.4 | 14,262,918.24 | 1,679,376.25 | 39° 16' 38.154 N | 80° 51' 44.381 W |
| 706.0 | 3.07 | 112.91 | 705.8 | -4.7 | 7.6 | 14,262,917.72 | 1,679,377.45 | 39° 16' 38.149 N | 80° 51' 44.365 W |
| 731.0 | 3.63 | 109.13 | 730.8 | -5.2 | 9.0 | 14,262,917.20 | 1,679,378.82 | 39° 16' 38.143 N | 80° 51' 44.348 W |
| 756.0 | 4.01 | 107.40 | 755.7 | -5.8 | 10.6 | 14,262,916.68 | 1,679,380.40 | 39° 16' 38.138 N | 80° 51' 44.328 W |
| 781.0 | 4.18 | 104.35 | 780.7 | -6.3 | 12.3 | 14,262,916.19 | 1,679,382.12 | 39° 16' 38.133 N | 80° 51' 44.306 W |
| 806.0 | 4.57 | 98.68 | 805.6 | -6.6 | 14.2 | 14,262,915.82 | 1,679,383.98 | 39° 16' 38.130 N | 80° 51' 44.282 W |
| 831.0 | 4.63 | 98.01 | 830.5 | -6.9 | 16.2 | 14,262,915.53 | 1,679,385.97 | 39° 16' 38.127 N | 80° 51' 44.257 W |
| 856.0 | 4.60 | 98.34 | 855.4 | -7.2 | 18.1 | 14,262,915.24 | 1,679,387.96 | 39° 16' 38.124 N | 80° 51' 44.232 W |
| 881.0 | 4.59 | 96.84 | 880.4 | -7.5 | 20.1 | 14,262,914.98 | 1,679,389.94 | 39° 16' 38.121 N | 80° 51' 44.207 W |
| 906.0 | 4.64 | 96.34 | 905.3 | -7.7 | 22.1 | 14,262,914.75 | 1,679,391.94 | 39° 16' 38.119 N | 80° 51' 44.181 W |
| 931.0 | 4.51 | 95.39 | 930.2 | -7.9 | 24.1 | 14,262,914.54 | 1,679,393.93 | 39° 16' 38.117 N | 80° 51' 44.156 W |
| 956.0 | 4.56 | 95.23 | 955.1 | -8.1 | 26.1 | 14,262,914.36 | 1,679,395.89 | 39° 16' 38.115 N | 80° 51' 44.131 W |
| 981.0 | 4.66 | 94.98 | 980.0 | -8.3 | 28.1 | 14,262,914.18 | 1,679,397.90 | 39° 16' 38.113 N | 80° 51' 44.105 W |
| 1,006.0 | 4.70 | 94.32 | 1,005.0 | -8.4 | 30.1 | 14,262,914.01 | 1,679,399.93 | 39° 16' 38.112 N | 80° 51' 44.080 W |
| 1,031.0 | 4.71 | 94.65 | 1,029.9 | -8.6 | 32.2 | 14,262,913.85 | 1,679,401.97 | 39° 16' 38.110 N | 80° 51' 44.054 W |
| 1,056.0 | 4.82 | 96.19 | 1,054.8 | -8.8 | 34.2 | 14,262,913.66 | 1,679,404.04 | 39° 16' 38.108 N | 80° 51' 44.027 W |
| 1,081.0 | 4.74 | 95.25 | 1,079.7 | -9.0 | 36.3 | 14,262,913.45 | 1,679,406.11 | 39° 16' 38.106 N | 80° 51' 44.001 W |
| 1,106.0 | 4.78 | 97.61 | 1,104.6 | -9.2 | 38.4 | 14,262,913.22 | 1,679,408.17 | 39° 16' 38.104 N | 80° 51' 43.975 W |
| 1,131.0 | 4.66 | 100.03 | 1,129.5 | -9.5 | 40.4 | 14,262,912.90 | 1,679,410.21 | 39° 16' 38.100 N | 80° 51' 43.949 W |
| 1,156.0 | 4.60 | 102.01 | 1,154.5 | -9.9 | 42.4 | 14,262,912.52 | 1,679,412.19 | 39° 16' 38.097 N | 80° 51' 43.924 W |
| 1,181.0 | 4.69 | 103.97 | 1,179.4 | -10.4 | 44.3 | 14,262,912.06 | 1,679,414.16 | 39° 16' 38.092 N | 80° 51' 43.899 W |
| 1,206.0 | 4.63 | 103.63 | 1,204.3 | -10.9 | 46.3 | 14,262,911.58 | 1,679,416.13 | 39° 16' 38.087 N | 80° 51' 43.873 W |
| 1,231.0 | 4.62 | 103.11 | 1,229.2 | -11.3 | 48.3 | 14,262,911.11 | 1,679,418.09 | 39° 16' 38.083 N | 80° 51' 43.849 W |
| 1,256.0 | 4.82 | 102.55 | 1,254.1 | -11.8 | 50.3 | 14,262,910.65 | 1,679,420.10 | 39° 16' 38.078 N | 80° 51' 43.823 W |
| 1,281.0 | 4.70 | 101.98 | 1,279.0 | -12.2 | 52.3 | 14,262,910.21 | 1,679,422.13 | 39° 16' 38.074 N | 80° 51' 43.797 W |
| 1,306.0 | 4.83 | 102.40 | 1,304.0 | -12.7 | 54.3 | 14,262,909.77 | 1,679,424.16 | 39° 16' 38.069 N | 80° 51' 43.771 W |
| 1,331.0 | 4.91 | 102.08 | 1,328.9 | -13.1 | 56.4 | 14,262,909.33 | 1,679,426.23 | 39° 16' 38.065 N | 80° 51' 43.745 W |
| 1,356.0 | 4.91 | 102.05 | 1,353.8 | -13.6 | 58.5 | 14,262,908.88 | 1,679,428.32 | 39° 16' 38.060 N | 80° 51' 43.718 W |
| 1,381.0 | 5.02 | 102.19 | 1,378.7 | -14.0 | 60.6 | 14,262,908.42 | 1,679,430.44 | 39° 16' 38.056 N | 80° 51' 43.692 W |
| 1,406.0 | 4.96 | 101.40 | 1,403.6 | -14.5 | 62.8 | 14,262,907.98 | 1,679,432.57 | 39° 16' 38.051 N | 80° 51' 43.664 W |
| 1,431.0 | 5.02 | 101.59 | 1,428.5 | -14.9 | 64.9 | 14,262,907.55 | 1,679,434.70 | 39° 16' 38.047 N | 80° 51' 43.637 W |
| 1,456.0 | 5.03 | 100.93 | 1,453.4 | -15.3 | 67.0 | 14,262,907.12 | 1,679,436.84 | 39° 16' 38.043 N | 80° 51' 43.610 W |
| 1,481.0 | 5.13 | 101.66 | 1,478.3 | -15.8 | 69.2 | 14,262,906.68 | 1,679,439.02 | 39° 16' 38.038 N | 80° 51' 43.582 W |
| 1,506.0 | 5.19 | 101.27 | 1,503.2 | -16.2 | 71.4 | 14,262,906.24 | 1,679,441.22 | 39° 16' 38.034 N | 80° 51' 43.554 W |
| 1,531.0 | 5.00 | 102.10 | 1,528.1 | -16.7 | 73.6 | 14,262,905.79 | 1,679,443.39 | 39° 16' 38.030 N | 80° 51' 43.527 W |
| 1,556.0 | 4.92 | 104.55 | 1,553.0 | -17.2 | 75.7 | 14,262,905.29 | 1,679,445.50 | 39° 16' 38.025 N | 80° 51' 43.500 W |
| 1,581.0 | 4.92 | 105.06 | 1,577.9 | -17.7 | 77.8 | 14,262,904.74 | 1,679,447.57 | 39° 16' 38.019 N | 80° 51' 43.474 W |
| 1,606.0 | 4.83 | 104.00 | 1,602.8 | -18.2 | 79.8 | 14,262,904.21 | 1,679,449.63 | 39° 16' 38.014 N | 80° 51' 43.447 W |
| 1,631.0 | 4.75 | 104.86 | 1,627.7 | -18.8 | 81.8 | 14,262,903.69 | 1,679,451.65 | 39° 16' 38.009 N | 80° 51' 43.422 W |
| 1,656.0 | 4.69 | 106.30 | 1,652.6 | -19.3 | 83.8 | 14,262,903.14 | 1,679,453.63 | 39° 16' 38.003 N | 80° 51' 43.397 W |
| 1,681.0 | 4.17 | 106.13 | 1,677.6 | -19.9 | 85.7 | 14,262,902.60 | 1,679,455.48 | 39° 16' 37.998 N | 80° 51' 43.373 W |
| 1,706.0 | 4.13 | 104.20 | 1,702.5 | -20.3 | 87.4 | 14,262,902.12 | 1,679,457.23 | 39° 16' 37.993 N | 80° 51' 43.351 W |



Scientific Drilling International

Survey Report - Geographic



Company: Antero Resources
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Site: Vogt/ Seaborn/Violet/Tulip/Marks
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Design: As Drilled

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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Antero NE

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OCT 03 2017

WV Department of
Environmental Protection

Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|------------------|
| 1,731.0 | 4.11 | 105.68 | 1,727.4 | -20.8 | 89.1 | 14,262,901.66 | 1,679,458.96 | 39° 16' 37.989 N | 80° 51' 43.329 W |
| 1,756.0 | 4.15 | 105.25 | 1,752.4 | -21.3 | 90.9 | 14,262,901.18 | 1,679,460.70 | 39° 16' 37.984 N | 80° 51' 43.307 W |
| 1,781.0 | 4.11 | 104.36 | 1,777.3 | -21.7 | 92.6 | 14,262,900.72 | 1,679,462.44 | 39° 16' 37.979 N | 80° 51' 43.285 W |
| 1,806.0 | 4.19 | 104.89 | 1,802.2 | -22.2 | 94.4 | 14,262,900.26 | 1,679,464.19 | 39° 16' 37.975 N | 80° 51' 43.262 W |
| 1,831.0 | 4.24 | 104.46 | 1,827.2 | -22.7 | 96.2 | 14,262,899.80 | 1,679,465.97 | 39° 16' 37.970 N | 80° 51' 43.240 W |
| 1,856.0 | 3.90 | 101.37 | 1,852.1 | -23.1 | 97.9 | 14,262,899.40 | 1,679,467.70 | 39° 16' 37.966 N | 80° 51' 43.218 W |
| 1,881.0 | 3.27 | 96.49 | 1,877.1 | -23.3 | 99.4 | 14,262,899.15 | 1,679,469.24 | 39° 16' 37.964 N | 80° 51' 43.198 W |
| 1,906.0 | 3.27 | 94.84 | 1,902.0 | -23.4 | 100.8 | 14,262,899.01 | 1,679,470.66 | 39° 16' 37.962 N | 80° 51' 43.180 W |
| 1,931.0 | 3.10 | 95.32 | 1,927.0 | -23.6 | 102.2 | 14,262,898.89 | 1,679,472.04 | 39° 16' 37.961 N | 80° 51' 43.162 W |
| 1,956.0 | 2.98 | 95.56 | 1,951.9 | -23.7 | 103.5 | 14,262,898.76 | 1,679,473.36 | 39° 16' 37.960 N | 80° 51' 43.146 W |
| 1,981.0 | 2.53 | 98.47 | 1,976.9 | -23.8 | 104.7 | 14,262,898.62 | 1,679,474.55 | 39° 16' 37.958 N | 80° 51' 43.130 W |
| 2,006.0 | 2.31 | 100.91 | 2,001.9 | -24.0 | 105.8 | 14,262,898.44 | 1,679,475.59 | 39° 16' 37.956 N | 80° 51' 43.117 W |
| 2,031.0 | 2.11 | 104.72 | 2,026.9 | -24.2 | 106.7 | 14,262,898.23 | 1,679,476.53 | 39° 16' 37.954 N | 80° 51' 43.105 W |
| 2,056.0 | 2.18 | 105.33 | 2,051.9 | -24.5 | 107.6 | 14,262,897.99 | 1,679,477.44 | 39° 16' 37.952 N | 80° 51' 43.094 W |
| 2,081.0 | 1.95 | 107.24 | 2,076.8 | -24.7 | 108.5 | 14,262,897.74 | 1,679,478.30 | 39° 16' 37.949 N | 80° 51' 43.083 W |
| 2,106.0 | 2.06 | 108.01 | 2,101.8 | -25.0 | 109.3 | 14,262,897.47 | 1,679,479.14 | 39° 16' 37.947 N | 80° 51' 43.072 W |
| 2,131.0 | 2.08 | 107.02 | 2,126.8 | -25.3 | 110.2 | 14,262,897.20 | 1,679,480.00 | 39° 16' 37.944 N | 80° 51' 43.061 W |
| 2,156.0 | 2.25 | 112.25 | 2,151.8 | -25.6 | 111.1 | 14,262,896.88 | 1,679,480.88 | 39° 16' 37.941 N | 80° 51' 43.050 W |
| 2,181.0 | 2.03 | 110.78 | 2,176.8 | -25.9 | 111.9 | 14,262,896.54 | 1,679,481.75 | 39° 16' 37.938 N | 80° 51' 43.039 W |
| 2,206.0 | 2.08 | 114.35 | 2,201.8 | -26.3 | 112.8 | 14,262,896.19 | 1,679,482.58 | 39° 16' 37.934 N | 80° 51' 43.028 W |
| 2,231.0 | 1.95 | 111.09 | 2,226.7 | -26.6 | 113.6 | 14,262,895.85 | 1,679,483.39 | 39° 16' 37.931 N | 80° 51' 43.018 W |
| 2,256.0 | 1.68 | 116.51 | 2,251.7 | -26.9 | 114.3 | 14,262,895.54 | 1,679,484.12 | 39° 16' 37.928 N | 80° 51' 43.009 W |
| 2,281.0 | 1.59 | 115.27 | 2,276.7 | -27.2 | 114.9 | 14,262,895.22 | 1,679,484.76 | 39° 16' 37.924 N | 80° 51' 43.001 W |
| 2,306.0 | 1.66 | 110.36 | 2,301.7 | -27.5 | 115.6 | 14,262,894.95 | 1,679,485.41 | 39° 16' 37.922 N | 80° 51' 42.992 W |
| 2,331.0 | 1.28 | 105.43 | 2,326.7 | -27.7 | 116.2 | 14,262,894.75 | 1,679,486.02 | 39° 16' 37.920 N | 80° 51' 42.985 W |
| 2,356.0 | 1.45 | 108.06 | 2,351.7 | -27.9 | 116.8 | 14,262,894.58 | 1,679,486.59 | 39° 16' 37.918 N | 80° 51' 42.977 W |
| 2,381.0 | 1.31 | 110.12 | 2,376.7 | -28.1 | 117.3 | 14,262,894.38 | 1,679,487.16 | 39° 16' 37.916 N | 80° 51' 42.970 W |
| 2,406.0 | 1.13 | 106.31 | 2,401.7 | -28.2 | 117.8 | 14,262,894.21 | 1,679,487.66 | 39° 16' 37.914 N | 80° 51' 42.964 W |
| 2,431.0 | 0.96 | 103.01 | 2,426.7 | -28.4 | 118.3 | 14,262,894.10 | 1,679,488.10 | 39° 16' 37.913 N | 80° 51' 42.958 W |
| 2,456.0 | 0.68 | 99.86 | 2,451.7 | -28.4 | 118.6 | 14,262,894.03 | 1,679,488.45 | 39° 16' 37.913 N | 80° 51' 42.954 W |
| 2,481.0 | 0.76 | 98.77 | 2,476.7 | -28.5 | 118.9 | 14,262,893.97 | 1,679,488.76 | 39° 16' 37.912 N | 80° 51' 42.950 W |
| 2,506.0 | 0.69 | 99.61 | 2,501.7 | -28.5 | 119.3 | 14,262,893.92 | 1,679,489.08 | 39° 16' 37.912 N | 80° 51' 42.946 W |
| 2,531.0 | 0.56 | 98.55 | 2,526.7 | -28.6 | 119.5 | 14,262,893.88 | 1,679,489.34 | 39° 16' 37.911 N | 80° 51' 42.942 W |
| 2,556.0 | 0.45 | 96.94 | 2,551.7 | -28.6 | 119.7 | 14,262,893.85 | 1,679,489.56 | 39° 16' 37.911 N | 80° 51' 42.940 W |
| 2,581.0 | 0.41 | 94.30 | 2,576.7 | -28.6 | 119.9 | 14,262,893.83 | 1,679,489.75 | 39° 16' 37.911 N | 80° 51' 42.937 W |
| 2,606.0 | 0.44 | 104.64 | 2,601.7 | -28.6 | 120.1 | 14,262,893.80 | 1,679,489.93 | 39° 16' 37.910 N | 80° 51' 42.935 W |
| 2,631.0 | 0.49 | 100.21 | 2,626.7 | -28.7 | 120.3 | 14,262,893.76 | 1,679,490.13 | 39° 16' 37.910 N | 80° 51' 42.932 W |
| 2,656.0 | 0.64 | 109.74 | 2,651.7 | -28.8 | 120.6 | 14,262,893.69 | 1,679,490.37 | 39° 16' 37.909 N | 80° 51' 42.929 W |
| 2,681.0 | 0.94 | 111.54 | 2,676.7 | -28.9 | 120.9 | 14,262,893.57 | 1,679,490.69 | 39° 16' 37.908 N | 80° 51' 42.925 W |
| 2,706.0 | 1.27 | 110.83 | 2,701.7 | -29.1 | 121.3 | 14,262,893.40 | 1,679,491.14 | 39° 16' 37.906 N | 80° 51' 42.920 W |
| 2,731.0 | 1.52 | 110.08 | 2,726.7 | -29.3 | 121.9 | 14,262,893.18 | 1,679,491.71 | 39° 16' 37.904 N | 80° 51' 42.912 W |
| 2,756.0 | 1.82 | 111.49 | 2,751.6 | -29.5 | 122.6 | 14,262,892.92 | 1,679,492.39 | 39° 16' 37.902 N | 80° 51' 42.904 W |
| 2,781.0 | 1.95 | 108.98 | 2,776.6 | -29.8 | 123.3 | 14,262,892.64 | 1,679,493.16 | 39° 16' 37.899 N | 80° 51' 42.894 W |
| 2,806.0 | 2.15 | 107.54 | 2,801.6 | -30.1 | 124.2 | 14,262,892.36 | 1,679,494.01 | 39° 16' 37.896 N | 80° 51' 42.883 W |
| 2,831.0 | 2.41 | 106.79 | 2,826.6 | -30.4 | 125.1 | 14,262,892.07 | 1,679,494.96 | 39° 16' 37.893 N | 80° 51' 42.871 W |
| 2,856.0 | 2.79 | 105.11 | 2,851.6 | -30.7 | 126.2 | 14,262,891.76 | 1,679,496.05 | 39° 16' 37.890 N | 80° 51' 42.857 W |
| 2,881.0 | 3.22 | 105.45 | 2,876.5 | -31.0 | 127.5 | 14,262,891.41 | 1,679,497.32 | 39° 16' 37.887 N | 80° 51' 42.841 W |
| 2,906.0 | 3.45 | 103.47 | 2,901.5 | -31.4 | 128.9 | 14,262,891.05 | 1,679,498.72 | 39° 16' 37.883 N | 80° 51' 42.823 W |
| 2,931.0 | 3.85 | 101.99 | 2,926.4 | -31.8 | 130.5 | 14,262,890.70 | 1,679,500.28 | 39° 16' 37.880 N | 80° 51' 42.803 W |
| 2,956.0 | 4.40 | 100.48 | 2,951.4 | -32.1 | 132.2 | 14,262,890.35 | 1,679,502.04 | 39° 16' 37.876 N | 80° 51' 42.781 W |
| 2,981.0 | 4.80 | 99.86 | 2,976.3 | -32.5 | 134.2 | 14,262,890.00 | 1,679,504.01 | 39° 16' 37.873 N | 80° 51' 42.756 W |
| 3,006.0 | 5.11 | 99.92 | 3,001.2 | -32.8 | 136.3 | 14,262,889.63 | 1,679,506.14 | 39° 16' 37.869 N | 80° 51' 42.729 W |
| 3,031.0 | 5.48 | 101.01 | 3,026.1 | -33.2 | 138.6 | 14,262,889.21 | 1,679,508.41 | 39° 16' 37.865 N | 80° 51' 42.700 W |
| 3,056.0 | 5.70 | 101.40 | 3,051.0 | -33.7 | 141.0 | 14,262,888.73 | 1,679,510.80 | 39° 16' 37.860 N | 80° 51' 42.670 W |
| 3,081.0 | 6.31 | 103.46 | 3,075.8 | -34.3 | 143.5 | 14,262,888.17 | 1,679,513.35 | 39° 16' 37.854 N | 80° 51' 42.637 W |



Scientific Drilling International
Survey Report - Geographic



| | | | |
|------------------|----------------------------------|-------------------------------------|--|
| Company: | Antero Resources | Local Co-ordinate Reference: | Well McGill Unit 2H |
| Project: | Doddridge County WV | TVD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Site: | Vogt: Seaborn/Violet/Tulip/Marks | MD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Well: | McGill Unit 2H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Antero NE |

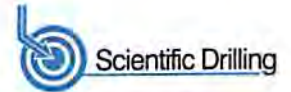
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| Survey | | | | | | | | | | WV Department of Environmental Protection |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|------------------|------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude | |
| 3,106.0 | 6.80 | 103.62 | 3,100.7 | -35.0 | 146.3 | 14,262,887.50 | 1,679,516.13 | 39° 16' 37.848 N | 80° 51' 42.602 W | |
| 3,131.0 | 7.43 | 103.56 | 3,125.5 | -35.7 | 149.3 | 14,262,886.77 | 1,679,519.14 | 39° 16' 37.840 N | 80° 51' 42.564 W | |
| 3,156.0 | 7.94 | 103.35 | 3,150.3 | -36.5 | 152.6 | 14,262,885.99 | 1,679,522.39 | 39° 16' 37.833 N | 80° 51' 42.522 W | |
| 3,181.0 | 8.38 | 103.38 | 3,175.0 | -37.3 | 156.0 | 14,262,885.17 | 1,679,525.84 | 39° 16' 37.824 N | 80° 51' 42.478 W | |
| 3,206.0 | 9.23 | 103.69 | 3,199.7 | -38.2 | 159.7 | 14,262,884.28 | 1,679,529.56 | 39° 16' 37.816 N | 80° 51' 42.431 W | |
| 3,231.0 | 9.94 | 103.97 | 3,224.4 | -39.2 | 163.8 | 14,262,883.28 | 1,679,533.60 | 39° 16' 37.806 N | 80° 51' 42.380 W | |
| 3,256.0 | 10.92 | 105.17 | 3,248.9 | -40.3 | 168.2 | 14,262,882.14 | 1,679,537.98 | 39° 16' 37.794 N | 80° 51' 42.324 W | |
| 3,281.0 | 12.12 | 106.36 | 3,273.4 | -41.7 | 173.0 | 14,262,880.78 | 1,679,542.79 | 39° 16' 37.781 N | 80° 51' 42.263 W | |
| 3,306.0 | 13.39 | 107.42 | 3,297.8 | -43.3 | 178.3 | 14,262,879.18 | 1,679,548.07 | 39° 16' 37.765 N | 80° 51' 42.196 W | |
| 3,331.0 | 14.66 | 108.07 | 3,322.1 | -45.1 | 184.0 | 14,262,877.33 | 1,679,553.84 | 39° 16' 37.747 N | 80° 51' 42.122 W | |
| 3,356.0 | 15.17 | 107.99 | 3,346.2 | -47.1 | 190.1 | 14,262,875.34 | 1,679,559.95 | 39° 16' 37.727 N | 80° 51' 42.045 W | |
| 3,381.0 | 15.71 | 107.53 | 3,370.3 | -49.1 | 196.5 | 14,262,873.31 | 1,679,566.29 | 39° 16' 37.707 N | 80° 51' 41.964 W | |
| 3,406.0 | 16.86 | 106.81 | 3,394.3 | -51.2 | 203.2 | 14,262,871.24 | 1,679,572.99 | 39° 16' 37.686 N | 80° 51' 41.879 W | |
| 3,431.0 | 17.10 | 106.60 | 3,418.2 | -53.3 | 210.2 | 14,262,869.14 | 1,679,579.98 | 39° 16' 37.665 N | 80° 51' 41.790 W | |
| 3,456.0 | 18.06 | 105.80 | 3,442.1 | -55.4 | 217.4 | 14,262,867.04 | 1,679,587.23 | 39° 16' 37.644 N | 80° 51' 41.698 W | |
| 3,481.0 | 18.75 | 105.26 | 3,465.8 | -57.5 | 225.0 | 14,262,864.92 | 1,679,594.84 | 39° 16' 37.623 N | 80° 51' 41.601 W | |
| 3,506.0 | 19.18 | 104.91 | 3,489.4 | -59.6 | 232.9 | 14,262,862.81 | 1,679,602.68 | 39° 16' 37.602 N | 80° 51' 41.501 W | |
| 3,531.0 | 19.39 | 104.58 | 3,513.0 | -61.7 | 240.9 | 14,262,860.71 | 1,679,610.67 | 39° 16' 37.581 N | 80° 51' 41.400 W | |
| 3,556.0 | 19.52 | 104.29 | 3,536.6 | -63.8 | 248.9 | 14,262,858.63 | 1,679,618.73 | 39° 16' 37.561 N | 80° 51' 41.297 W | |
| 3,581.0 | 19.35 | 103.64 | 3,560.2 | -65.8 | 257.0 | 14,262,856.62 | 1,679,626.81 | 39° 16' 37.541 N | 80° 51' 41.194 W | |
| 3,606.0 | 19.32 | 102.69 | 3,583.8 | -67.7 | 265.0 | 14,262,854.74 | 1,679,634.87 | 39° 16' 37.522 N | 80° 51' 41.092 W | |
| 3,631.0 | 19.31 | 102.12 | 3,607.4 | -69.5 | 273.1 | 14,262,852.96 | 1,679,642.94 | 39° 16' 37.504 N | 80° 51' 40.989 W | |
| 3,656.0 | 19.08 | 101.71 | 3,631.0 | -71.2 | 281.2 | 14,262,851.27 | 1,679,650.98 | 39° 16' 37.487 N | 80° 51' 40.887 W | |
| 3,681.0 | 18.85 | 100.92 | 3,654.6 | -72.8 | 289.1 | 14,262,849.67 | 1,679,658.95 | 39° 16' 37.471 N | 80° 51' 40.786 W | |
| 3,706.0 | 18.48 | 100.68 | 3,678.3 | -74.3 | 297.0 | 14,262,848.17 | 1,679,666.81 | 39° 16' 37.456 N | 80° 51' 40.686 W | |
| 3,731.0 | 18.38 | 100.58 | 3,702.0 | -75.7 | 304.8 | 14,262,846.71 | 1,679,674.58 | 39° 16' 37.442 N | 80° 51' 40.587 W | |
| 3,756.0 | 18.14 | 100.57 | 3,725.8 | -77.2 | 312.5 | 14,262,845.28 | 1,679,682.28 | 39° 16' 37.428 N | 80° 51' 40.489 W | |
| 3,781.0 | 17.59 | 101.05 | 3,749.6 | -78.6 | 320.0 | 14,262,843.84 | 1,679,689.81 | 39° 16' 37.413 N | 80° 51' 40.393 W | |
| 3,806.0 | 17.19 | 101.01 | 3,773.4 | -80.0 | 327.3 | 14,262,842.41 | 1,679,697.14 | 39° 16' 37.399 N | 80° 51' 40.300 W | |
| 3,831.0 | 16.93 | 100.95 | 3,797.3 | -81.4 | 334.5 | 14,262,841.01 | 1,679,704.34 | 39° 16' 37.385 N | 80° 51' 40.208 W | |
| 3,856.0 | 16.64 | 100.95 | 3,821.2 | -82.8 | 341.6 | 14,262,839.64 | 1,679,711.43 | 39° 16' 37.371 N | 80° 51' 40.118 W | |
| 3,881.0 | 16.21 | 100.88 | 3,845.2 | -84.1 | 348.6 | 14,262,838.30 | 1,679,718.37 | 39° 16' 37.358 N | 80° 51' 40.030 W | |
| 3,906.0 | 16.10 | 101.73 | 3,869.2 | -85.5 | 355.4 | 14,262,836.94 | 1,679,725.19 | 39° 16' 37.345 N | 80° 51' 39.943 W | |
| 3,931.0 | 15.70 | 102.60 | 3,893.3 | -87.0 | 362.1 | 14,262,835.50 | 1,679,731.89 | 39° 16' 37.330 N | 80° 51' 39.858 W | |
| 3,956.0 | 15.56 | 103.63 | 3,917.4 | -88.5 | 368.6 | 14,262,833.97 | 1,679,738.45 | 39° 16' 37.315 N | 80° 51' 39.775 W | |
| 3,981.0 | 15.46 | 105.11 | 3,941.4 | -90.1 | 375.1 | 14,262,832.31 | 1,679,744.92 | 39° 16' 37.298 N | 80° 51' 39.692 W | |
| 4,006.0 | 15.40 | 106.14 | 3,965.5 | -91.9 | 381.5 | 14,262,830.52 | 1,679,751.33 | 39° 16' 37.281 N | 80° 51' 39.611 W | |
| 4,031.0 | 15.70 | 107.21 | 3,989.6 | -93.9 | 387.9 | 14,262,828.59 | 1,679,757.75 | 39° 16' 37.262 N | 80° 51' 39.529 W | |
| 4,056.0 | 15.41 | 107.34 | 4,013.7 | -95.8 | 394.3 | 14,262,826.60 | 1,679,764.15 | 39° 16' 37.242 N | 80° 51' 39.448 W | |
| 4,081.0 | 16.56 | 109.37 | 4,037.7 | -98.0 | 400.9 | 14,262,824.43 | 1,679,770.68 | 39° 16' 37.220 N | 80° 51' 39.365 W | |
| 4,106.0 | 17.18 | 111.30 | 4,061.7 | -100.5 | 407.7 | 14,262,822.91 | 1,679,777.48 | 39° 16' 37.195 N | 80° 51' 39.278 W | |
| 4,131.0 | 17.34 | 112.59 | 4,085.5 | -103.3 | 414.5 | 14,262,819.14 | 1,679,784.36 | 39° 16' 37.168 N | 80° 51' 39.191 W | |
| 4,156.0 | 17.56 | 112.90 | 4,109.4 | -106.2 | 421.5 | 14,262,816.24 | 1,679,791.28 | 39° 16' 37.139 N | 80° 51' 39.103 W | |
| 4,181.0 | 17.69 | 112.85 | 4,133.2 | -109.2 | 428.4 | 14,262,813.30 | 1,679,798.25 | 39° 16' 37.110 N | 80° 51' 39.014 W | |
| 4,206.0 | 17.85 | 112.73 | 4,157.0 | -112.1 | 435.5 | 14,262,810.34 | 1,679,805.29 | 39° 16' 37.080 N | 80° 51' 38.925 W | |
| 4,231.0 | 17.88 | 112.73 | 4,180.8 | -115.1 | 442.5 | 14,262,807.38 | 1,679,812.36 | 39° 16' 37.051 N | 80° 51' 38.835 W | |
| 4,256.0 | 18.10 | 112.61 | 4,204.6 | -118.0 | 449.7 | 14,262,804.40 | 1,679,819.49 | 39° 16' 37.021 N | 80° 51' 38.744 W | |
| 4,281.0 | 18.46 | 111.56 | 4,228.3 | -121.0 | 456.9 | 14,262,801.45 | 1,679,826.75 | 39° 16' 36.992 N | 80° 51' 38.652 W | |
| 4,306.0 | 18.62 | 111.46 | 4,252.0 | -123.9 | 464.3 | 14,262,798.54 | 1,679,834.15 | 39° 16' 36.963 N | 80° 51' 38.558 W | |
| 4,331.0 | 19.14 | 110.93 | 4,275.7 | -126.8 | 471.9 | 14,262,795.61 | 1,679,841.69 | 39° 16' 36.934 N | 80° 51' 38.462 W | |
| 4,356.0 | 19.12 | 109.66 | 4,299.3 | -129.7 | 479.6 | 14,262,792.77 | 1,679,849.37 | 39° 16' 36.906 N | 80° 51' 38.364 W | |
| 4,381.0 | 19.18 | 108.78 | 4,322.9 | -132.4 | 487.3 | 14,262,790.07 | 1,679,857.12 | 39° 16' 36.879 N | 80° 51' 38.266 W | |
| 4,406.0 | 19.21 | 106.92 | 4,346.5 | -134.9 | 495.1 | 14,262,787.55 | 1,679,864.94 | 39° 16' 36.854 N | 80° 51' 38.166 W | |
| 4,431.0 | 19.03 | 105.29 | 4,370.2 | -137.2 | 503.0 | 14,262,785.28 | 1,679,872.81 | 39° 16' 36.832 N | 80° 51' 38.066 W | |
| 4,456.0 | 19.23 | 104.01 | 4,393.8 | -139.2 | 510.9 | 14,262,783.21 | 1,679,880.73 | 39° 16' 36.811 N | 80° 51' 37.966 W | |



Scientific Drilling International

Survey Report - Geographic



| | | | |
|------------------|----------------------------------|-------------------------------------|--|
| Company: | Antero Resources | Local Co-ordinate Reference: | Well McGill Unit 2H |
| Project: | Doddridge County WV | TVD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Site: | Vogt: Seaborn/Violet/Tulip/Marks | MD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Well: | McGill Unit 2H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Antero NE |

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Survey

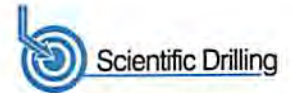
WV Department of
Environmental Protection

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|------------------|------------------|
| 4,481.0 | 18.93 | 102.69 | 4,417.4 | -141.1 | 518.9 | 14,262,781.32 | 1,679,888.68 | 39° 16' 36.792 N | 80° 51' 37.865 W |
| 4,506.0 | 19.02 | 101.44 | 4,441.1 | -142.8 | 526.8 | 14,262,779.62 | 1,679,896.63 | 39° 16' 36.775 N | 80° 51' 37.763 W |
| 4,531.0 | 19.12 | 100.81 | 4,464.7 | -144.4 | 534.8 | 14,262,778.05 | 1,679,904.65 | 39° 16' 36.760 N | 80° 51' 37.662 W |
| 4,556.0 | 19.42 | 99.94 | 4,488.3 | -145.9 | 542.9 | 14,262,776.56 | 1,679,912.76 | 39° 16' 36.745 N | 80° 51' 37.558 W |
| 4,581.0 | 19.49 | 99.33 | 4,511.9 | -147.3 | 551.2 | 14,262,775.17 | 1,679,920.97 | 39° 16' 36.731 N | 80° 51' 37.454 W |
| 4,606.0 | 19.63 | 99.37 | 4,535.4 | -148.6 | 559.4 | 14,262,768.81 | 1,679,929.23 | 39° 16' 36.717 N | 80° 51' 37.349 W |
| 4,631.0 | 19.42 | 98.77 | 4,559.0 | -150.0 | 567.7 | 14,262,772.49 | 1,679,937.48 | 39° 16' 36.704 N | 80° 51' 37.244 W |
| 4,656.0 | 19.95 | 99.10 | 4,582.5 | -151.3 | 576.0 | 14,262,771.18 | 1,679,945.80 | 39° 16' 36.691 N | 80° 51' 37.138 W |
| 4,681.0 | 19.96 | 99.06 | 4,606.0 | -152.6 | 584.4 | 14,262,769.84 | 1,679,954.22 | 39° 16' 36.678 N | 80° 51' 37.031 W |
| 4,706.0 | 19.79 | 99.57 | 4,629.5 | -154.0 | 592.8 | 14,262,768.46 | 1,679,962.61 | 39° 16' 36.664 N | 80° 51' 36.924 W |
| 4,731.0 | 20.29 | 101.09 | 4,653.0 | -155.5 | 601.2 | 14,262,766.93 | 1,679,971.04 | 39° 16' 36.649 N | 80° 51' 36.817 W |
| 4,756.0 | 19.82 | 101.35 | 4,676.5 | -157.2 | 609.6 | 14,262,765.26 | 1,679,979.45 | 39° 16' 36.632 N | 80° 51' 36.710 W |
| 4,781.0 | 20.00 | 101.26 | 4,700.0 | -158.9 | 618.0 | 14,262,763.59 | 1,679,987.80 | 39° 16' 36.615 N | 80° 51' 36.604 W |
| 4,806.0 | 19.58 | 100.52 | 4,723.5 | -160.5 | 626.3 | 14,262,761.99 | 1,679,996.11 | 39° 16' 36.599 N | 80° 51' 36.498 W |
| 4,831.0 | 19.59 | 99.71 | 4,747.1 | -161.9 | 634.5 | 14,262,760.52 | 1,680,004.36 | 39° 16' 36.585 N | 80° 51' 36.393 W |
| 4,856.0 | 19.20 | 98.58 | 4,770.7 | -163.3 | 642.7 | 14,262,759.20 | 1,680,012.55 | 39° 16' 36.571 N | 80° 51' 36.289 W |
| 4,881.0 | 19.06 | 97.93 | 4,794.3 | -164.4 | 650.8 | 14,262,758.02 | 1,680,020.66 | 39° 16' 36.560 N | 80° 51' 36.186 W |
| 4,906.0 | 18.43 | 98.15 | 4,817.9 | -165.6 | 658.8 | 14,262,756.90 | 1,680,028.62 | 39° 16' 36.548 N | 80° 51' 36.085 W |
| 4,931.0 | 18.15 | 98.63 | 4,841.7 | -166.7 | 666.6 | 14,262,755.75 | 1,680,036.38 | 39° 16' 36.537 N | 80° 51' 35.986 W |
| 4,956.0 | 17.73 | 98.67 | 4,865.5 | -167.9 | 674.2 | 14,262,754.59 | 1,680,043.99 | 39° 16' 36.525 N | 80° 51' 35.889 W |
| 4,981.0 | 17.00 | 99.62 | 4,889.3 | -169.0 | 681.5 | 14,262,753.41 | 1,680,051.36 | 39° 16' 36.514 N | 80° 51' 35.796 W |
| 5,006.0 | 16.61 | 99.53 | 4,913.3 | -170.2 | 688.7 | 14,262,752.21 | 1,680,058.48 | 39° 16' 36.502 N | 80° 51' 35.705 W |
| 5,031.0 | 16.09 | 101.36 | 4,937.3 | -171.5 | 695.6 | 14,262,750.93 | 1,680,065.40 | 39° 16' 36.489 N | 80° 51' 35.617 W |
| 5,056.0 | 15.83 | 101.88 | 4,961.3 | -172.9 | 702.3 | 14,262,749.55 | 1,680,072.14 | 39° 16' 36.475 N | 80° 51' 35.531 W |
| 5,081.0 | 16.20 | 102.64 | 4,985.3 | -174.4 | 709.1 | 14,262,748.08 | 1,680,078.88 | 39° 16' 36.461 N | 80° 51' 35.446 W |
| 5,106.0 | 16.68 | 104.86 | 5,009.3 | -176.0 | 715.9 | 14,262,746.40 | 1,680,085.75 | 39° 16' 36.444 N | 80° 51' 35.358 W |
| 5,131.0 | 17.72 | 106.75 | 5,033.2 | -178.1 | 723.0 | 14,262,744.38 | 1,680,092.86 | 39° 16' 36.424 N | 80° 51' 35.268 W |
| 5,156.0 | 18.28 | 108.22 | 5,057.0 | -180.4 | 730.4 | 14,262,742.06 | 1,680,100.23 | 39° 16' 36.401 N | 80° 51' 35.174 W |
| 5,181.0 | 18.68 | 108.64 | 5,080.7 | -182.9 | 737.9 | 14,262,739.56 | 1,680,107.74 | 39° 16' 36.376 N | 80° 51' 35.079 W |
| 5,206.0 | 18.65 | 107.91 | 5,104.3 | -185.4 | 745.5 | 14,262,737.05 | 1,680,115.34 | 39° 16' 36.351 N | 80° 51' 34.982 W |
| 5,231.0 | 18.27 | 106.52 | 5,128.1 | -187.7 | 753.1 | 14,262,734.70 | 1,680,122.90 | 39° 16' 36.328 N | 80° 51' 34.886 W |
| 5,256.0 | 17.91 | 105.41 | 5,151.8 | -189.9 | 760.5 | 14,262,732.57 | 1,680,130.37 | 39° 16' 36.306 N | 80° 51' 34.791 W |
| 5,281.0 | 18.28 | 105.40 | 5,175.6 | -191.9 | 768.0 | 14,262,730.51 | 1,680,137.85 | 39° 16' 36.286 N | 80° 51' 34.696 W |
| 5,306.0 | 18.25 | 105.42 | 5,199.3 | -194.0 | 775.6 | 14,262,728.42 | 1,680,145.40 | 39° 16' 36.265 N | 80° 51' 34.600 W |
| 5,331.0 | 18.25 | 106.32 | 5,223.1 | -196.2 | 783.1 | 14,262,726.28 | 1,680,152.94 | 39° 16' 36.244 N | 80° 51' 34.504 W |
| 5,356.0 | 18.19 | 108.15 | 5,246.8 | -198.5 | 790.6 | 14,262,723.97 | 1,680,160.40 | 39° 16' 36.221 N | 80° 51' 34.409 W |
| 5,381.0 | 18.50 | 109.40 | 5,270.5 | -201.0 | 798.0 | 14,262,721.43 | 1,680,167.85 | 39° 16' 36.196 N | 80° 51' 34.314 W |
| 5,406.0 | 18.52 | 110.11 | 5,294.3 | -203.7 | 805.5 | 14,262,718.75 | 1,680,175.32 | 39° 16' 36.169 N | 80° 51' 34.219 W |
| 5,431.0 | 17.92 | 110.40 | 5,318.0 | -206.4 | 812.8 | 14,262,716.05 | 1,680,182.65 | 39° 16' 36.142 N | 80° 51' 34.126 W |
| 5,456.0 | 17.59 | 110.37 | 5,341.8 | -209.1 | 820.0 | 14,262,713.39 | 1,680,189.80 | 39° 16' 36.116 N | 80° 51' 34.035 W |
| 5,481.0 | 17.50 | 111.21 | 5,365.6 | -211.7 | 827.0 | 14,262,710.72 | 1,680,196.84 | 39° 16' 36.089 N | 80° 51' 33.946 W |
| 5,506.0 | 17.58 | 112.06 | 5,389.5 | -214.5 | 834.0 | 14,262,707.94 | 1,680,203.85 | 39° 16' 36.062 N | 80° 51' 33.857 W |
| 5,531.0 | 17.61 | 112.46 | 5,413.3 | -217.4 | 841.0 | 14,262,705.07 | 1,680,210.84 | 39° 16' 36.033 N | 80° 51' 33.768 W |
| 5,569.0 | 17.68 | 112.86 | 5,449.5 | -221.8 | 851.7 | 14,262,700.64 | 1,680,221.47 | 39° 16' 35.989 N | 80° 51' 33.633 W |
| First SDI MWD @ 5569 | | | | | | | | | |
| 5,614.0 | 17.86 | 109.43 | 5,492.4 | -226.8 | 864.5 | 14,262,695.69 | 1,680,234.28 | 39° 16' 35.940 N | 80° 51' 33.470 W |
| 5,659.0 | 17.49 | 106.34 | 5,535.3 | -231.0 | 877.5 | 14,262,691.49 | 1,680,247.27 | 39° 16' 35.898 N | 80° 51' 33.305 W |
| 5,704.0 | 16.59 | 104.06 | 5,578.3 | -234.4 | 890.2 | 14,262,688.02 | 1,680,260.00 | 39° 16' 35.864 N | 80° 51' 33.143 W |
| 5,748.0 | 15.47 | 102.46 | 5,620.6 | -237.2 | 902.0 | 14,262,685.23 | 1,680,271.82 | 39° 16' 35.836 N | 80° 51' 32.992 W |
| 5,793.0 | 14.34 | 107.32 | 5,664.1 | -240.2 | 913.2 | 14,262,682.28 | 1,680,283.00 | 39° 16' 35.807 N | 80° 51' 32.850 W |
| 5,838.0 | 13.54 | 107.93 | 5,707.7 | -243.5 | 923.5 | 14,262,679.00 | 1,680,293.33 | 39° 16' 35.774 N | 80° 51' 32.719 W |
| 5,883.0 | 13.75 | 104.56 | 5,751.5 | -246.4 | 933.7 | 14,262,676.03 | 1,680,303.52 | 39° 16' 35.745 N | 80° 51' 32.589 W |
| 5,928.0 | 13.10 | 94.50 | 5,795.3 | -248.2 | 944.0 | 14,262,674.29 | 1,680,313.78 | 39° 16' 35.727 N | 80° 51' 32.459 W |
| 5,973.0 | 12.06 | 81.37 | 5,839.2 | -247.9 | 953.7 | 14,262,674.59 | 1,680,323.52 | 39° 16' 35.730 N | 80° 51' 32.335 W |
| 6,017.0 | 11.52 | 67.49 | 5,882.3 | -245.5 | 962.3 | 14,262,676.96 | 1,680,332.12 | 39° 16' 35.753 N | 80° 51' 32.225 W |



Scientific Drilling International

Survey Report - Geographic



| | | | |
|------------------|----------------------------------|-------------------------------------|--|
| Company: | Antero Resources | Local Co-ordinate Reference: | Well McGill Unit 2H |
| Project: | Doddridge County WV | TVD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Site: | Vogt: Seaborn/Violet/Tulip/Marks | MD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Well: | McGill Unit 2H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Antero NE |

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| Survey | | | | | | | | | | WV Department of Environmental Protection |
|-------------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|------------------|---|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude | |
| 6,062.0 | 11.55 | 48.24 | 5,926.4 | -240.8 | 969.8 | 14,262,681.69 | 1,680,339.64 | 39° 16' 35.800 N | 80° 51' 32.130 W | |
| 6,107.0 | 11.56 | 34.14 | 5,970.5 | -234.0 | 975.7 | 14,262,688.42 | 1,680,345.53 | 39° 16' 35.867 N | 80° 51' 32.055 W | |
| 6,152.0 | 11.97 | 21.61 | 6,014.5 | -226.0 | 980.0 | 14,262,696.49 | 1,680,349.78 | 39° 16' 35.946 N | 80° 51' 32.000 W | |
| 6,197.0 | 13.14 | 11.97 | 6,058.5 | -216.6 | 982.7 | 14,262,705.84 | 1,680,352.56 | 39° 16' 36.039 N | 80° 51' 31.965 W | |
| 6,242.0 | 14.72 | 5.05 | 6,102.1 | -205.9 | 984.3 | 14,262,716.54 | 1,680,354.12 | 39° 16' 36.144 N | 80° 51' 31.945 W | |
| 6,286.0 | 17.07 | 359.76 | 6,144.4 | -193.9 | 984.8 | 14,262,728.56 | 1,680,354.59 | 39° 16' 36.263 N | 80° 51' 31.939 W | |
| 6,331.0 | 20.26 | 356.14 | 6,187.1 | -179.5 | 984.2 | 14,262,742.95 | 1,680,354.03 | 39° 16' 36.406 N | 80° 51' 31.945 W | |
| 6,376.0 | 23.18 | 355.18 | 6,228.9 | -162.9 | 983.0 | 14,262,759.55 | 1,680,352.77 | 39° 16' 36.570 N | 80° 51' 31.961 W | |
| 6,421.0 | 26.32 | 354.64 | 6,269.7 | -144.1 | 981.3 | 14,262,778.31 | 1,680,351.09 | 39° 16' 36.755 N | 80° 51' 31.982 W | |
| 6,466.0 | 28.85 | 352.99 | 6,309.6 | -123.4 | 979.0 | 14,262,799.02 | 1,680,348.83 | 39° 16' 36.960 N | 80° 51' 32.010 W | |
| 6,511.0 | 32.32 | 349.97 | 6,348.4 | -100.8 | 975.6 | 14,262,821.65 | 1,680,345.41 | 39° 16' 37.184 N | 80° 51' 32.054 W | |
| 6,556.0 | 37.43 | 351.50 | 6,385.3 | -75.4 | 971.5 | 14,262,847.04 | 1,680,341.29 | 39° 16' 37.435 N | 80° 51' 32.105 W | |
| 6,589.0 | 42.73 | 349.48 | 6,410.5 | -54.5 | 967.9 | 14,262,867.98 | 1,680,337.76 | 39° 16' 37.642 N | 80° 51' 32.150 W | |
| Middlesex @ 6589 | | | | | | | | | | |
| 6,601.0 | 44.66 | 348.85 | 6,419.2 | -46.3 | 966.4 | 14,262,876.12 | 1,680,336.20 | 39° 16' 37.723 N | 80° 51' 32.170 W | |
| 6,646.0 | 50.15 | 344.96 | 6,449.6 | -14.1 | 958.8 | 14,262,908.35 | 1,680,328.66 | 39° 16' 38.041 N | 80° 51' 32.265 W | |
| 6,691.0 | 53.08 | 345.09 | 6,477.6 | 20.0 | 949.7 | 14,262,942.43 | 1,680,319.54 | 39° 16' 38.378 N | 80° 51' 32.380 W | |
| 6,736.0 | 56.49 | 346.01 | 6,503.5 | 55.6 | 940.6 | 14,262,978.02 | 1,680,310.38 | 39° 16' 38.731 N | 80° 51' 32.496 W | |
| 6,779.0 | 61.17 | 346.22 | 6,525.8 | 91.3 | 931.7 | 14,263,013.73 | 1,680,301.55 | 39° 16' 39.084 N | 80° 51' 32.608 W | |
| Burket @ 6779 | | | | | | | | | | |
| 6,780.0 | 61.28 | 346.22 | 6,526.3 | 92.1 | 931.5 | 14,263,014.58 | 1,680,301.34 | 39° 16' 39.092 N | 80° 51' 32.610 W | |
| 6,825.0 | 66.57 | 344.96 | 6,546.0 | 131.3 | 921.5 | 14,263,053.71 | 1,680,291.28 | 39° 16' 39.479 N | 80° 51' 32.738 W | |
| 6,846.0 | 68.51 | 345.16 | 6,554.0 | 150.0 | 916.5 | 14,263,072.46 | 1,680,286.28 | 39° 16' 39.665 N | 80° 51' 32.801 W | |
| Tully @ 6846 | | | | | | | | | | |
| 6,870.0 | 70.72 | 345.39 | 6,562.4 | 171.8 | 910.7 | 14,263,094.22 | 1,680,280.56 | 39° 16' 39.880 N | 80° 51' 32.873 W | |
| 6,915.0 | 72.49 | 344.43 | 6,576.6 | 213.0 | 899.6 | 14,263,135.44 | 1,680,269.44 | 39° 16' 40.288 N | 80° 51' 33.014 W | |
| 6,941.0 | 74.16 | 343.26 | 6,584.1 | 236.9 | 892.7 | 14,263,159.37 | 1,680,262.51 | 39° 16' 40.524 N | 80° 51' 33.101 W | |
| Marcellus @ 6941 | | | | | | | | | | |
| 6,960.0 | 75.39 | 342.41 | 6,589.1 | 254.4 | 887.3 | 14,263,176.88 | 1,680,257.10 | 39° 16' 40.698 N | 80° 51' 33.170 W | |
| 7,005.0 | 79.76 | 342.27 | 6,598.7 | 296.3 | 874.0 | 14,263,218.75 | 1,680,243.77 | 39° 16' 41.112 N | 80° 51' 33.339 W | |
| 7,049.0 | 85.79 | 341.10 | 6,604.3 | 337.7 | 860.2 | 14,263,260.17 | 1,680,230.06 | 39° 16' 41.522 N | 80° 51' 33.512 W | |
| 7,094.0 | 90.29 | 341.13 | 6,605.8 | 380.3 | 845.7 | 14,263,302.71 | 1,680,215.50 | 39° 16' 41.942 N | 80° 51' 33.697 W | |
| 7,139.0 | 90.56 | 340.64 | 6,605.5 | 422.8 | 831.0 | 14,263,345.22 | 1,680,200.77 | 39° 16' 42.363 N | 80° 51' 33.883 W | |
| 7,184.0 | 91.10 | 340.98 | 6,604.8 | 465.3 | 816.2 | 14,263,387.72 | 1,680,185.98 | 39° 16' 42.783 N | 80° 51' 34.071 W | |
| 7,274.0 | 92.18 | 341.41 | 6,602.2 | 550.4 | 787.2 | 14,263,472.88 | 1,680,156.98 | 39° 16' 43.626 N | 80° 51' 34.438 W | |
| 7,363.0 | 91.87 | 340.33 | 6,599.1 | 634.5 | 758.0 | 14,263,556.91 | 1,680,127.83 | 39° 16' 44.457 N | 80° 51' 34.807 W | |
| 7,453.0 | 91.54 | 340.06 | 6,596.4 | 719.1 | 727.5 | 14,263,641.55 | 1,680,097.35 | 39° 16' 45.295 N | 80° 51' 35.193 W | |
| 7,543.0 | 90.50 | 339.86 | 6,594.8 | 803.6 | 696.7 | 14,263,726.09 | 1,680,066.51 | 39° 16' 46.131 N | 80° 51' 35.584 W | |
| 7,632.0 | 90.47 | 339.78 | 6,594.1 | 887.2 | 666.0 | 14,263,809.62 | 1,680,035.81 | 39° 16' 46.957 N | 80° 51' 35.973 W | |
| 7,722.0 | 90.57 | 340.64 | 6,593.2 | 971.8 | 635.5 | 14,263,894.30 | 1,680,005.34 | 39° 16' 47.795 N | 80° 51' 36.359 W | |
| 7,812.0 | 89.96 | 340.98 | 6,592.8 | 1,056.8 | 605.9 | 14,263,979.30 | 1,679,975.76 | 39° 16' 48.636 N | 80° 51' 36.733 W | |
| 7,901.0 | 89.89 | 342.18 | 6,593.0 | 1,141.3 | 577.8 | 14,264,063.74 | 1,679,947.64 | 39° 16' 49.471 N | 80° 51' 37.089 W | |
| 7,991.0 | 91.37 | 342.91 | 6,592.0 | 1,227.1 | 550.8 | 14,264,149.58 | 1,679,920.65 | 39° 16' 50.321 N | 80° 51' 37.431 W | |
| 8,081.0 | 91.94 | 342.88 | 6,589.4 | 1,313.1 | 524.4 | 14,264,235.57 | 1,679,894.19 | 39° 16' 51.171 N | 80° 51' 37.766 W | |
| 8,170.0 | 90.87 | 342.87 | 6,587.2 | 1,398.1 | 498.2 | 14,264,320.59 | 1,679,867.99 | 39° 16' 52.012 N | 80° 51' 38.098 W | |
| 8,260.0 | 90.73 | 343.56 | 6,585.9 | 1,484.3 | 472.2 | 14,264,406.75 | 1,679,842.00 | 39° 16' 52.865 N | 80° 51' 38.427 W | |
| 8,350.0 | 90.36 | 342.62 | 6,585.1 | 1,570.4 | 446.0 | 14,264,492.85 | 1,679,815.82 | 39° 16' 53.716 N | 80° 51' 38.758 W | |
| 8,439.0 | 90.43 | 342.77 | 6,584.5 | 1,655.4 | 419.5 | 14,264,577.82 | 1,679,789.35 | 39° 16' 54.557 N | 80° 51' 39.093 W | |
| 8,529.0 | 90.23 | 342.13 | 6,583.9 | 1,741.2 | 392.4 | 14,264,663.63 | 1,679,762.21 | 39° 16' 55.406 N | 80° 51' 39.437 W | |
| 8,619.0 | 90.67 | 342.71 | 6,583.2 | 1,827.0 | 365.2 | 14,264,749.43 | 1,679,735.03 | 39° 16' 56.254 N | 80° 51' 39.781 W | |
| 8,708.0 | 91.11 | 341.99 | 6,581.8 | 1,911.8 | 338.2 | 14,264,834.22 | 1,679,708.05 | 39° 16' 57.093 N | 80° 51' 40.122 W | |
| 8,798.0 | 91.48 | 341.50 | 6,579.8 | 1,997.2 | 310.0 | 14,264,919.67 | 1,679,679.86 | 39° 16' 57.939 N | 80° 51' 40.479 W | |
| 8,888.0 | 90.26 | 340.17 | 6,578.4 | 2,082.2 | 280.5 | 14,265,004.67 | 1,679,650.32 | 39° 16' 58.780 N | 80° 51' 40.853 W | |
| 8,977.0 | 90.33 | 340.94 | 6,578.0 | 2,166.1 | 250.9 | 14,265,088.59 | 1,679,620.69 | 39° 16' 59.610 N | 80° 51' 41.229 W | |



Scientific Drilling International

Survey Report - Geographic



Company: Antero Resources
Project: Doddridge County WV
Site: Vogt: Seaborn/Violet/Tulip/Marks
Well: McGill Unit 2H
Wellbore: Original Wellpath
Design: As Drilled

Local Co-ordinate Reference: Well McGill Unit 2H
TVD Reference: PD 525: 1112' GL + 19' KB @ 1131.0usft
MD Reference: PD 525: 1112' GL + 19' KB @ 1131.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Antero NE

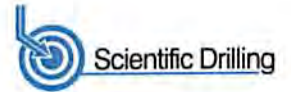
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Office of Oil and Gas

OCT 03 2017

Survey

WV Department of
Environmental Protection

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|------------------|
| 9,067.0 | 90.40 | 341.18 | 6,577.4 | 2,251.3 | 221.7 | 14,265,173.72 | 1,679,591.48 | 39° 17' 0.452 N | 80° 51' 41.599 W |
| 9,157.0 | 90.26 | 341.73 | 6,576.9 | 2,336.6 | 193.0 | 14,265,259.04 | 1,679,562.86 | 39° 17' 1.296 N | 80° 51' 41.961 W |
| 9,246.0 | 90.09 | 340.92 | 6,576.6 | 2,420.9 | 164.5 | 14,265,343.36 | 1,679,534.36 | 39° 17' 2.130 N | 80° 51' 42.322 W |
| 9,336.0 | 90.16 | 340.98 | 6,576.4 | 2,506.0 | 135.2 | 14,265,428.43 | 1,679,504.99 | 39° 17' 2.972 N | 80° 51' 42.694 W |
| 9,426.0 | 90.03 | 339.57 | 6,576.3 | 2,590.7 | 104.8 | 14,265,513.14 | 1,679,474.61 | 39° 17' 3.810 N | 80° 51' 43.079 W |
| 9,516.0 | 90.03 | 340.19 | 6,576.2 | 2,675.2 | 73.8 | 14,265,597.65 | 1,679,443.65 | 39° 17' 4.646 N | 80° 51' 43.471 W |
| 9,605.0 | 91.00 | 343.70 | 6,575.4 | 2,759.8 | 46.3 | 14,265,682.25 | 1,679,416.07 | 39° 17' 5.483 N | 80° 51' 43.820 W |
| 9,695.0 | 91.07 | 344.21 | 6,573.8 | 2,846.3 | 21.4 | 14,265,768.73 | 1,679,391.20 | 39° 17' 6.338 N | 80° 51' 44.135 W |
| 9,785.0 | 90.93 | 345.02 | 6,572.2 | 2,933.0 | -2.5 | 14,265,855.49 | 1,679,367.33 | 39° 17' 7.196 N | 80° 51' 44.437 W |
| 9,875.0 | 90.23 | 343.15 | 6,571.3 | 3,019.6 | -27.2 | 14,265,942.03 | 1,679,342.65 | 39° 17' 8.053 N | 80° 51' 44.750 W |
| 9,964.0 | 90.80 | 344.03 | 6,570.5 | 3,105.0 | -52.3 | 14,266,027.40 | 1,679,317.51 | 39° 17' 8.897 N | 80° 51' 45.068 W |
| 10,054.0 | 90.83 | 342.58 | 6,569.2 | 3,191.1 | -78.2 | 14,266,113.60 | 1,679,291.66 | 39° 17' 9.750 N | 80° 51' 45.395 W |
| 10,144.0 | 90.30 | 342.40 | 6,568.4 | 3,277.0 | -105.2 | 14,266,199.42 | 1,679,264.58 | 39° 17' 10.599 N | 80° 51' 45.738 W |
| 10,234.0 | 90.33 | 342.07 | 6,567.9 | 3,362.7 | -132.7 | 14,266,285.13 | 1,679,237.12 | 39° 17' 11.447 N | 80° 51' 46.086 W |
| 10,323.0 | 90.43 | 342.90 | 6,567.3 | 3,447.6 | -159.5 | 14,266,370.00 | 1,679,210.34 | 39° 17' 12.286 N | 80° 51' 46.425 W |
| 10,413.0 | 90.60 | 343.51 | 6,566.5 | 3,533.7 | -185.5 | 14,266,456.16 | 1,679,184.33 | 39° 17' 13.138 N | 80° 51' 46.754 W |
| 10,503.0 | 90.26 | 343.57 | 6,565.8 | 3,620.0 | -211.0 | 14,266,542.47 | 1,679,158.83 | 39° 17' 13.992 N | 80° 51' 47.077 W |
| 10,592.0 | 90.03 | 343.21 | 6,565.6 | 3,705.3 | -236.4 | 14,266,627.75 | 1,679,133.39 | 39° 17' 14.836 N | 80° 51' 47.399 W |
| 10,682.0 | 89.72 | 341.09 | 6,565.8 | 3,791.0 | -264.0 | 14,266,713.42 | 1,679,105.81 | 39° 17' 15.683 N | 80° 51' 47.748 W |
| 10,772.0 | 90.09 | 341.23 | 6,565.9 | 3,876.1 | -293.1 | 14,266,798.59 | 1,679,076.74 | 39° 17' 16.526 N | 80° 51' 48.116 W |
| 10,862.0 | 90.73 | 342.37 | 6,565.3 | 3,961.6 | -321.2 | 14,266,884.09 | 1,679,048.63 | 39° 17' 17.372 N | 80° 51' 48.472 W |
| 10,951.0 | 90.60 | 341.76 | 6,564.2 | 4,046.3 | -348.6 | 14,266,968.76 | 1,679,021.23 | 39° 17' 18.209 N | 80° 51' 48.819 W |
| 11,041.0 | 90.03 | 339.94 | 6,563.7 | 4,131.3 | -378.1 | 14,267,053.77 | 1,678,991.71 | 39° 17' 19.050 N | 80° 51' 49.193 W |
| 11,131.0 | 90.33 | 340.84 | 6,563.5 | 4,216.1 | -408.3 | 14,267,138.55 | 1,678,961.50 | 39° 17' 19.889 N | 80° 51' 49.576 W |
| 11,221.0 | 90.50 | 340.75 | 6,562.8 | 4,301.1 | -437.9 | 14,267,223.54 | 1,678,931.90 | 39° 17' 20.730 N | 80° 51' 49.951 W |
| 11,310.0 | 90.53 | 340.13 | 6,562.0 | 4,384.9 | -467.7 | 14,267,307.40 | 1,678,902.10 | 39° 17' 21.559 N | 80° 51' 50.329 W |
| 11,400.0 | 90.60 | 339.08 | 6,561.1 | 4,469.3 | -499.1 | 14,267,391.75 | 1,678,870.74 | 39° 17' 22.394 N | 80° 51' 50.726 W |
| 11,490.0 | 90.19 | 336.78 | 6,560.5 | 4,552.7 | -532.9 | 14,267,475.15 | 1,678,836.93 | 39° 17' 23.219 N | 80° 51' 51.155 W |
| 11,580.0 | 89.82 | 338.15 | 6,560.5 | 4,635.8 | -567.4 | 14,267,558.28 | 1,678,802.44 | 39° 17' 24.041 N | 80° 51' 51.592 W |
| 11,669.0 | 90.46 | 340.47 | 6,560.3 | 4,719.1 | -598.8 | 14,267,641.53 | 1,678,770.99 | 39° 17' 24.865 N | 80° 51' 51.990 W |
| 11,759.0 | 90.76 | 342.20 | 6,559.3 | 4,804.3 | -627.6 | 14,267,726.79 | 1,678,742.19 | 39° 17' 25.709 N | 80° 51' 52.355 W |
| 11,849.0 | 91.20 | 342.13 | 6,557.8 | 4,890.0 | -655.2 | 14,267,812.45 | 1,678,714.63 | 39° 17' 26.556 N | 80° 51' 52.704 W |
| 11,939.0 | 91.07 | 341.73 | 6,556.0 | 4,975.5 | -683.1 | 14,267,897.99 | 1,678,686.72 | 39° 17' 27.402 N | 80° 51' 53.058 W |
| 12,028.0 | 89.69 | 342.33 | 6,555.4 | 5,060.2 | -710.5 | 14,267,982.65 | 1,678,659.27 | 39° 17' 28.240 N | 80° 51' 53.405 W |
| 12,118.0 | 90.03 | 343.31 | 6,555.6 | 5,146.2 | -737.1 | 14,268,068.63 | 1,678,632.68 | 39° 17' 29.090 N | 80° 51' 53.742 W |
| 12,208.0 | 90.19 | 343.82 | 6,555.4 | 5,232.5 | -762.6 | 14,268,154.95 | 1,678,607.22 | 39° 17' 29.944 N | 80° 51' 54.064 W |
| 12,297.0 | 90.26 | 344.72 | 6,555.1 | 5,318.2 | -786.7 | 14,268,240.62 | 1,678,583.09 | 39° 17' 30.791 N | 80° 51' 54.370 W |
| 12,387.0 | 89.99 | 344.44 | 6,554.9 | 5,404.9 | -810.7 | 14,268,327.38 | 1,678,559.16 | 39° 17' 31.650 N | 80° 51' 54.673 W |
| 12,477.0 | 90.09 | 344.45 | 6,554.8 | 5,491.6 | -834.8 | 14,268,414.08 | 1,678,535.03 | 39° 17' 32.507 N | 80° 51' 54.978 W |
| 12,567.0 | 89.76 | 343.42 | 6,555.0 | 5,578.1 | -859.7 | 14,268,500.57 | 1,678,510.12 | 39° 17' 33.363 N | 80° 51' 55.293 W |
| 12,657.0 | 90.26 | 342.14 | 6,554.9 | 5,664.1 | -886.3 | 14,268,586.53 | 1,678,483.48 | 39° 17' 34.213 N | 80° 51' 55.631 W |
| 12,746.0 | 89.99 | 341.84 | 6,554.7 | 5,748.7 | -913.9 | 14,268,671.17 | 1,678,455.96 | 39° 17' 35.050 N | 80° 51' 55.979 W |
| 12,836.0 | 89.39 | 341.74 | 6,555.2 | 5,834.2 | -942.0 | 14,268,756.66 | 1,678,427.84 | 39° 17' 35.896 N | 80° 51' 56.335 W |
| 12,926.0 | 89.82 | 341.03 | 6,555.8 | 5,919.5 | -970.7 | 14,268,841.95 | 1,678,399.11 | 39° 17' 36.740 N | 80° 51' 56.699 W |
| 13,016.0 | 90.56 | 340.84 | 6,555.6 | 6,004.6 | -1,000.1 | 14,268,927.01 | 1,678,369.71 | 39° 17' 37.581 N | 80° 51' 57.072 W |
| 13,105.0 | 90.36 | 340.27 | 6,554.8 | 6,088.5 | -1,029.7 | 14,269,010.93 | 1,678,340.08 | 39° 17' 38.412 N | 80° 51' 57.447 W |
| 13,195.0 | 90.29 | 339.60 | 6,554.3 | 6,173.0 | -1,060.6 | 14,269,095.47 | 1,678,309.21 | 39° 17' 39.248 N | 80° 51' 57.839 W |
| 13,285.0 | 90.16 | 339.48 | 6,554.0 | 6,257.3 | -1,092.1 | 14,269,179.79 | 1,678,277.75 | 39° 17' 40.082 N | 80° 51' 58.237 W |
| 13,374.0 | 90.53 | 339.45 | 6,553.4 | 6,340.7 | -1,123.3 | 14,269,263.13 | 1,678,246.53 | 39° 17' 40.907 N | 80° 51' 58.633 W |
| 13,464.0 | 90.63 | 339.26 | 6,552.5 | 6,424.9 | -1,155.0 | 14,269,347.35 | 1,678,214.80 | 39° 17' 41.740 N | 80° 51' 59.035 W |
| 13,554.0 | 90.63 | 339.56 | 6,551.5 | 6,509.1 | -1,186.7 | 14,269,431.59 | 1,678,183.15 | 39° 17' 42.573 N | 80° 51' 59.436 W |
| 13,643.0 | 90.53 | 340.02 | 6,550.6 | 6,592.7 | -1,217.4 | 14,269,515.11 | 1,678,152.40 | 39° 17' 43.400 N | 80° 51' 59.826 W |
| 13,733.0 | 89.89 | 339.75 | 6,550.3 | 6,677.2 | -1,248.4 | 14,269,599.62 | 1,678,121.45 | 39° 17' 44.236 N | 80° 52' 0.218 W |
| 13,823.0 | 89.49 | 339.65 | 6,550.8 | 6,761.6 | -1,279.6 | 14,269,684.03 | 1,678,090.23 | 39° 17' 45.071 N | 80° 52' 0.614 W |
| 13,913.0 | 88.45 | 339.22 | 6,552.4 | 6,845.8 | -1,311.2 | 14,269,768.28 | 1,678,058.62 | 39° 17' 45.904 N | 80° 52' 1.015 W |



| | | | |
|------------------|----------------------------------|-------------------------------------|--|
| Company: | Antero Resources | Local Co-ordinate Reference: | Well McGill Unit 2H |
| Project: | Doddridge County WV | TVD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Site: | Vogt: Seaborn/Violet/Tulip/Marks | MD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Well: | McGill Unit 2H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Antero NE |

| Survey | | | | | | | | | |
|--|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
| 14,002.0 | 88.21 | 341.15 | 6,555.0 | 6,929.5 | -1,341.3 | 14,269,851.97 | 1,678,028.47 | 39° 17' 46.732 N | 80° 52' 1.397 W |
| 14,092.0 | 88.81 | 343.06 | 6,557.3 | 7,015.1 | -1,369.0 | 14,269,937.58 | 1,678,000.82 | 39° 17' 47.579 N | 80° 52' 1.747 W |
| 14,182.0 | 88.88 | 345.07 | 6,559.2 | 7,101.6 | -1,393.7 | 14,270,024.10 | 1,677,976.12 | 39° 17' 48.435 N | 80° 52' 2.060 W |
| 14,271.0 | 89.55 | 345.86 | 6,560.4 | 7,187.8 | -1,416.0 | 14,270,110.24 | 1,677,953.79 | 39° 17' 49.287 N | 80° 52' 2.342 W |
| 14,361.0 | 89.66 | 345.07 | 6,561.0 | 7,274.9 | -1,438.6 | 14,270,197.36 | 1,677,931.20 | 39° 17' 50.149 N | 80° 52' 2.628 W |
| 14,451.0 | 89.69 | 345.49 | 6,561.5 | 7,362.0 | -1,461.5 | 14,270,284.40 | 1,677,908.33 | 39° 17' 51.010 N | 80° 52' 2.917 W |
| 14,540.0 | 90.73 | 348.83 | 6,561.2 | 7,448.7 | -1,481.3 | 14,270,371.16 | 1,677,888.56 | 39° 17' 51.868 N | 80° 52' 3.167 W |
| 14,630.0 | 90.33 | 346.28 | 6,560.3 | 7,536.6 | -1,500.7 | 14,270,459.04 | 1,677,869.16 | 39° 17' 52.737 N | 80° 52' 3.412 W |
| 14,720.0 | 90.33 | 343.79 | 6,559.8 | 7,623.5 | -1,523.9 | 14,270,545.98 | 1,677,845.92 | 39° 17' 53.597 N | 80° 52' 3.707 W |
| 14,809.0 | 90.73 | 344.63 | 6,559.0 | 7,709.2 | -1,548.1 | 14,270,631.61 | 1,677,821.71 | 39° 17' 54.444 N | 80° 52' 4.013 W |
| 14,899.0 | 89.89 | 343.34 | 6,558.5 | 7,795.7 | -1,572.9 | 14,270,718.12 | 1,677,796.88 | 39° 17' 55.300 N | 80° 52' 4.327 W |
| 14,989.0 | 89.29 | 341.49 | 6,559.2 | 7,881.5 | -1,600.1 | 14,270,803.91 | 1,677,769.69 | 39° 17' 56.148 N | 80° 52' 4.672 W |
| 15,079.0 | 89.82 | 340.95 | 6,559.9 | 7,966.7 | -1,629.1 | 14,270,889.11 | 1,677,740.72 | 39° 17' 56.991 N | 80° 52' 5.039 W |
| 15,168.0 | 90.77 | 342.66 | 6,559.4 | 8,051.2 | -1,656.9 | 14,270,973.66 | 1,677,712.93 | 39° 17' 57.827 N | 80° 52' 5.391 W |
| 15,258.0 | 90.26 | 341.59 | 6,558.6 | 8,136.9 | -1,684.5 | 14,271,059.31 | 1,677,685.30 | 39° 17' 58.675 N | 80° 52' 5.741 W |
| 15,348.0 | 90.19 | 340.50 | 6,558.2 | 8,222.0 | -1,713.7 | 14,271,144.42 | 1,677,656.07 | 39° 17' 59.517 N | 80° 52' 6.111 W |
| 15,437.0 | 89.72 | 339.02 | 6,558.3 | 8,305.5 | -1,744.5 | 14,271,227.93 | 1,677,625.28 | 39° 18' 0.343 N | 80° 52' 6.502 W |
| 15,527.0 | 89.59 | 338.80 | 6,558.9 | 8,389.4 | -1,776.9 | 14,271,311.90 | 1,677,592.90 | 39° 18' 1.174 N | 80° 52' 6.912 W |
| 15,616.0 | 89.42 | 339.30 | 6,559.6 | 8,472.6 | -1,808.7 | 14,271,395.01 | 1,677,561.08 | 39° 18' 1.996 N | 80° 52' 7.316 W |
| 15,706.0 | 89.45 | 339.12 | 6,560.5 | 8,556.7 | -1,840.7 | 14,271,479.14 | 1,677,529.13 | 39° 18' 2.828 N | 80° 52' 7.721 W |
| 15,796.0 | 89.99 | 340.85 | 6,561.0 | 8,641.3 | -1,871.5 | 14,271,563.70 | 1,677,498.33 | 39° 18' 3.665 N | 80° 52' 8.111 W |
| 15,885.0 | 90.63 | 343.07 | 6,560.5 | 8,725.9 | -1,899.0 | 14,271,648.32 | 1,677,470.77 | 39° 18' 4.502 N | 80° 52' 8.460 W |
| 15,975.0 | 90.70 | 343.27 | 6,559.4 | 8,812.0 | -1,925.1 | 14,271,734.46 | 1,677,444.72 | 39° 18' 5.354 N | 80° 52' 8.790 W |
| 16,065.0 | 90.67 | 342.53 | 6,558.3 | 8,898.0 | -1,951.6 | 14,271,820.48 | 1,677,418.25 | 39° 18' 6.205 N | 80° 52' 9.125 W |
| 16,155.0 | 90.63 | 342.66 | 6,557.3 | 8,983.9 | -1,978.5 | 14,271,906.35 | 1,677,391.33 | 39° 18' 7.054 N | 80° 52' 9.466 W |
| 16,244.0 | 90.80 | 343.31 | 6,558.2 | 9,069.0 | -2,004.5 | 14,271,991.45 | 1,677,365.29 | 39° 18' 7.896 N | 80° 52' 9.796 W |
| 16,334.0 | 90.20 | 342.57 | 6,555.4 | 9,155.0 | -2,030.9 | 14,272,077.48 | 1,677,338.89 | 39° 18' 8.747 N | 80° 52' 10.131 W |
| 16,424.0 | 90.20 | 343.09 | 6,555.1 | 9,241.0 | -2,057.5 | 14,272,163.47 | 1,677,312.32 | 39° 18' 9.598 N | 80° 52' 10.467 W |
| 16,513.0 | 89.22 | 342.26 | 6,555.6 | 9,326.0 | -2,084.0 | 14,272,248.43 | 1,677,285.82 | 39° 18' 10.438 N | 80° 52' 10.803 W |
| 16,603.0 | 89.86 | 340.89 | 6,556.3 | 9,411.4 | -2,112.4 | 14,272,333.81 | 1,677,257.38 | 39° 18' 11.283 N | 80° 52' 11.163 W |
| 16,693.0 | 90.63 | 340.02 | 6,555.9 | 9,496.2 | -2,142.5 | 14,272,418.62 | 1,677,227.27 | 39° 18' 12.122 N | 80° 52' 11.545 W |
| 16,783.0 | 90.73 | 340.01 | 6,554.8 | 9,580.7 | -2,173.3 | 14,272,503.20 | 1,677,196.51 | 39° 18' 12.958 N | 80° 52' 11.935 W |
| 16,872.0 | 90.70 | 340.14 | 6,553.7 | 9,664.4 | -2,203.6 | 14,272,586.86 | 1,677,166.18 | 39° 18' 13.786 N | 80° 52' 12.319 W |
| 16,962.0 | 90.70 | 340.49 | 6,552.6 | 9,749.1 | -2,233.9 | 14,272,671.60 | 1,677,135.87 | 39° 18' 14.624 N | 80° 52' 12.703 W |
| 16,990.0 | 90.57 | 340.39 | 6,552.3 | 9,775.5 | -2,243.3 | 14,272,697.98 | 1,677,126.49 | 39° 18' 14.885 N | 80° 52' 12.822 W |
| Last SDI MWD @ 16990 | | | | | | | | | |
| 17,051.0 | 90.57 | 340.39 | 6,551.7 | 9,833.0 | -2,263.8 | 14,272,755.44 | 1,677,106.02 | 39° 18' 15.454 N | 80° 52' 13.082 W |
| Projection To Bit @ 17051 MD / 6551 TVD | | | | | | | | | |

| Formations | | | | | | |
|-----------------------|-----------------------|------------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 6,589.0 | 6,410.5 | Middlesex @ 6589 | | 0.00 | | |
| 6,779.0 | 6,525.8 | Burket @ 6779 | | 0.00 | | |
| 6,846.0 | 6,554.0 | Tully @ 6846 | | 0.00 | | |
| 6,941.0 | 6,584.1 | Marcellus @ 6941 | | 0.00 | | |

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|------------------|----------------------------------|-------------------------------------|--|
| Company: | Antero Resources | Local Co-ordinate Reference: | Well McGill Unit 2H |
| Project: | Doddridge County WV | TVD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Site: | Vogt: Seaborn/Violet/Tulip/Marks | MD Reference: | PD 525: 1112' GL + 19' KB @ 1131.0usft |
| Well: | McGill Unit 2H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Antero NE |

| Design Annotations | | | | | |
|-----------------------------|-----------------------------|-------------------|-----------------|---|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment | |
| | | +N/-S (usft) | +E/-W (usft) | | |
| 5,569.0 | 5,449.5 | -221.8 | 851.7 | First SDI MWD @ 5569 | |
| 16,990.0 | 6,552.3 | 9,775.5 | -2,243.3 | Last SDI MWD @ 16990 | |
| 17,051.0 | 6,551.7 | 9,833.0 | -2,263.8 | Projection To Bit @ 17051 MD / 6551 TVD | |

Checked By: _____ Approved By: _____ Date: _____

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