

MAY 9 2017



Antero
Wentz Unit 1H
Doddridge County WV
Northing: 14272992.98
Easting: 1692773.85
As Drilled

WELL DETAILS: Wentz Unit 1H

| +N/-S | +E/-W | Northing | Ground Level | 1171.0 | Latitude | Longitude | Slot |
|-------|-------|-------------|--------------|------------------|------------------|-----------|------|
| 0.0 | 0.0 | 14272992.98 | 1692773.85 | 39° 18' 17.533 N | 80° 48' 53.683 W | | |

PROJECT DETAILS: Doddridge County WV

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



Genie Lightfoot
9:37, February 12 2015

Scientific Drilling
11220 N.W. 10th Street
Yukon, OK 73099

REFERENCE INFORMATION

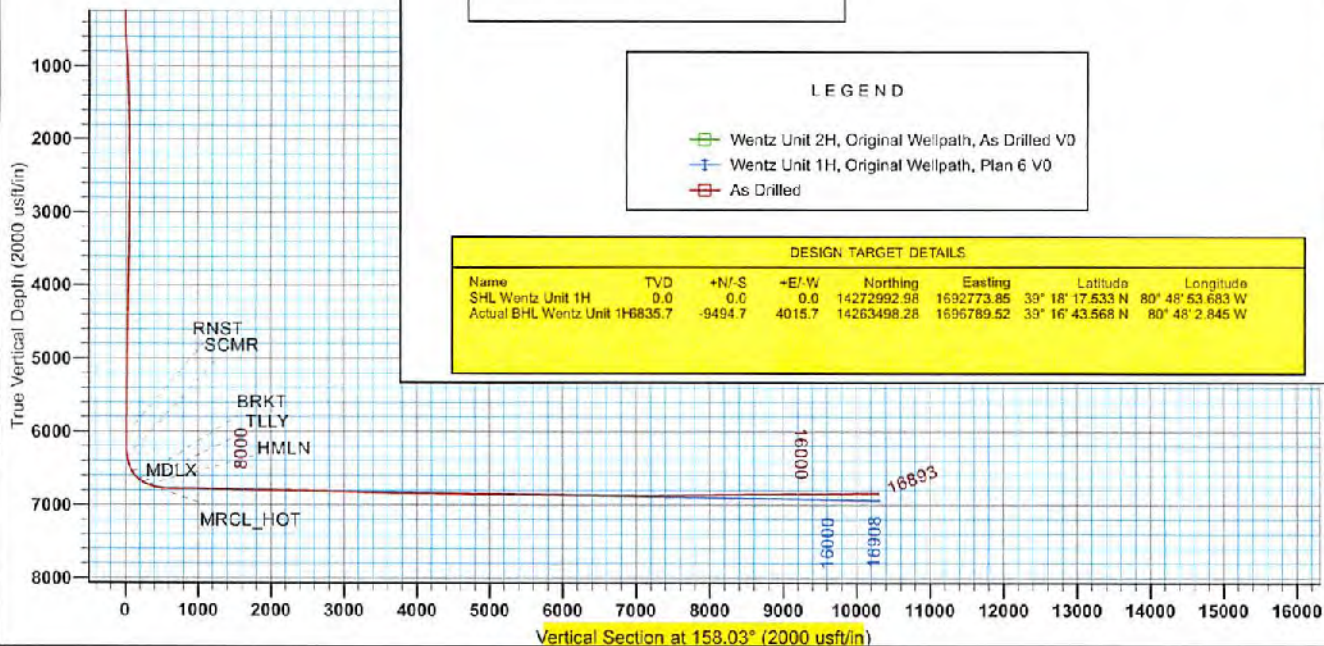
Coordinates (N/E) Reference: Well Wentz Unit 1H, Grid No. 98
Vertical (TVD) Reference: Patterson 317 GL 1131' + RD 22 @ 1194.0usf
Section (VS) Reference: Slot + (0.0v, 0.0f)
Measured Depth Reference: Patterson 317 GL 1131' + RD 22 @ 1194.0usf
Calculation Method: Minimum Curvature

LEGEND

- Wentz Unit 2H, Original Wellpath, As Drilled V0
- Wentz Unit 1H, Original Wellpath, Plan 6 V0
- As Drilled

DESIGN TARGET DETAILS

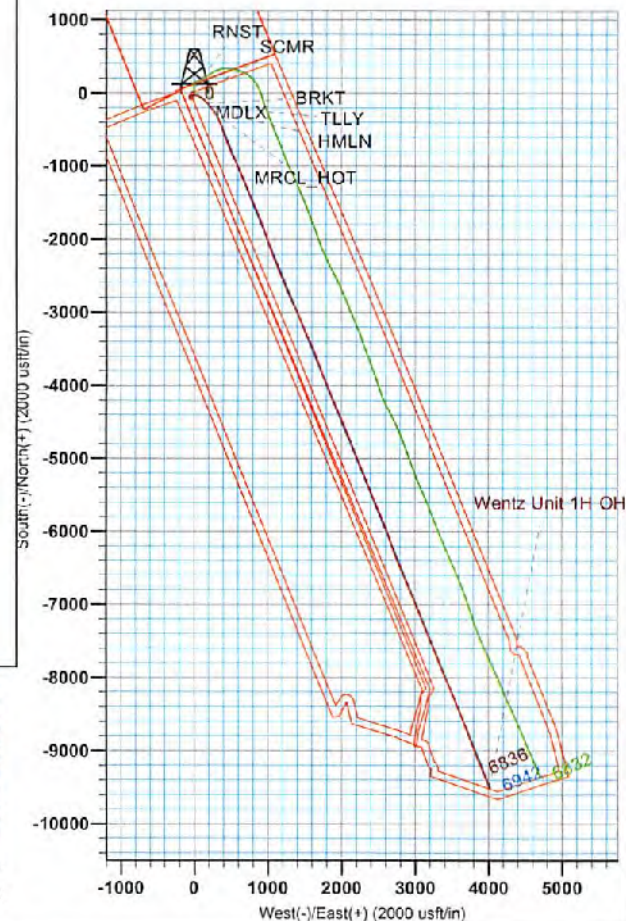
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|--------------------------|--------|---------|--------|-------------|------------|------------------|------------------|
| SHL Wentz Unit 1H | 0.0 | 0.0 | 0.0 | 14272992.98 | 1692773.85 | 39° 18' 17.533 N | 80° 48' 53.683 W |
| Actual BHL Wentz Unit 1H | 6835.7 | -9494.7 | 4015.7 | 14263498.28 | 1696789.52 | 39° 16' 43.568 N | 80° 48' 2.845 W |



To convert Magnetic North to Grid, Subtract 3.55°
To convert True North to Grid, Subtract 0.12°

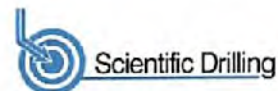
Azimuths to Grid North
True North: -0.12°
Magnetic North: -6.58°

Magnetic Field
Strength: 52218.0nT
Dip Angle: 66.85°
Date: 11/10/2014
Model: BGM2014





EOW Completion Report



| | | | |
|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
| Project: | Doddridge County WV | TVD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| | | | |
|--------------------|--|----------------------|----------------|
| 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 | Rock Run Pad:Wentz/Twyford/Devonian | | |
|-------------|-------------------------------------|--|--|

| | | | | | |
|------------------------------|----------|---------------------|--------------------|--------------------------|------------------|
| Site Position: | | Northing: | 14,272,993.14 usft | Latitude: | 39° 18' 17.534 N |
| From: | Map | Easting: | 1,692,783.84 usft | Longitude: | 80° 48' 53.556 W |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16" | Grid Convergence: | 0.12 ° |

| | | | | | | |
|-----------------------------|--------------------------|----------|----------------------------|--------------------|----------------------|------------------|
| Well | Wentz Unit 1H, Marcellus | | | | | |
| Well Position | +N/-S | 0.0 usft | Northing: | 14,272,992.98 usft | Latitude: | 39° 18' 17.533 N |
| | +E/-W | 0.0 usft | Easting: | 1,692,773.85 usft | Longitude: | 80° 48' 53.683 W |
| Position Uncertainty | 2.0 usft | | Wellhead Elevation: | 1,194.0 usft | Ground Level: | 1,171.0 usft |

| | | | | | |
|-----------------|-------------------|--|--|--|--|
| Wellbore | Original Wellpath | | | | |
|-----------------|-------------------|--|--|--|--|

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
| | BGGM2014 | 11/10/2014 | -8.46 | 66.85 | 52,218 |

| | | | | | |
|---------------|------------|--|--|--|--|
| Design | As Drilled | | | | |
|---------------|------------|--|--|--|--|

| | | | | | |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|-----|
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.0 | 0.0 | 0.0 | 158.03 | |

| Survey Program | Date 2/12/2015 | | | | |
|----------------|----------------|--|---------------------|--|--|
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 25.0 | 5,976.0 | Survey #4 Final Gyro to KOP (Original We | Standard Keeper 104 | Standard Wireline Keeper ver 1.0.4 | |
| 5,976.0 | 16,893.0 | Survey #5 SDI MWD (Original Wellpath) | SDI MWD | Scientific Drilling Intl. MWD - Standard ver 1.0.1 | |

| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 |
| 25.0 | 0.09 | 314.45 | 25.0 | 0.0 | 0.0 | 0.0 | 0.36 |
| 50.0 | 0.19 | 314.45 | 50.0 | 0.1 | -0.1 | -0.1 | 0.40 |
| 75.0 | 0.28 | 314.45 | 75.0 | 0.1 | -0.1 | -0.2 | 0.36 |
| 100.0 | 0.37 | 315.83 | 100.0 | 0.2 | -0.2 | -0.3 | 0.36 |
| 125.0 | 0.45 | 344.10 | 125.0 | 0.4 | -0.3 | -0.5 | 0.86 |
| 150.0 | 0.42 | 349.75 | 150.0 | 0.6 | -0.4 | -0.7 | 0.21 |
| 175.0 | 0.29 | 336.76 | 175.0 | 0.7 | -0.4 | -0.8 | 0.81 |
| 200.0 | 0.33 | 351.87 | 200.0 | 0.8 | -0.4 | -0.9 | 0.36 |
| 225.0 | 0.40 | 344.98 | 225.0 | 1.0 | -0.5 | -1.1 | 0.33 |
| 250.0 | 0.40 | 331.43 | 250.0 | 1.2 | -0.5 | -1.3 | 0.38 |



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|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
| Project: | Doddridge County WV | TVD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| Survey | | | | | | | | |
|-----------|---------|-------------------|------------|------------|-----------|---------------|------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | EW (usft) | V. Sec (usft) | DLeg (°/100usft) | |
| 275.0 | 0.44 | 346.66 | 275.0 | 1.3 | -0.6 | -1.5 | 0.47 | |
| 300.0 | 0.45 | 357.18 | 300.0 | 1.5 | -0.6 | -1.6 | 0.33 | |
| 325.0 | 0.40 | 345.24 | 325.0 | 1.7 | -0.6 | -1.8 | 0.41 | |
| 350.0 | 0.46 | 348.12 | 350.0 | 1.9 | -0.7 | -2.0 | 0.26 | |
| 375.0 | 0.50 | 351.21 | 375.0 | 2.1 | -0.7 | -2.2 | 0.19 | |
| 400.0 | 0.37 | 328.55 | 400.0 | 2.3 | -0.8 | -2.4 | 0.85 | |
| 425.0 | 0.33 | 337.87 | 425.0 | 2.4 | -0.9 | -2.6 | 0.28 | |
| 450.0 | 0.32 | 327.47 | 450.0 | 2.5 | -0.9 | -2.7 | 0.24 | |
| 475.0 | 0.46 | 233.54 | 475.0 | 2.5 | -1.0 | -2.7 | 2.31 | |
| 500.0 | 0.92 | 215.77 | 500.0 | 2.3 | -1.2 | -2.6 | 2.01 | |
| 525.0 | 1.40 | 214.65 | 525.0 | 1.9 | -1.5 | -2.3 | 1.92 | |
| 550.0 | 1.44 | 208.66 | 550.0 | 1.4 | -1.9 | -2.0 | 0.61 | |
| 575.0 | 2.29 | 200.22 | 575.0 | 0.6 | -2.2 | -1.4 | 3.56 | |
| 600.0 | 3.27 | 195.07 | 599.9 | -0.5 | -2.5 | -0.5 | 4.04 | |
| 625.0 | 3.65 | 192.76 | 624.9 | -2.0 | -2.9 | 0.8 | 1.62 | |
| 650.0 | 4.09 | 192.48 | 649.8 | -3.6 | -3.3 | 2.2 | 1.76 | |
| 675.0 | 4.84 | 192.55 | 674.8 | -5.5 | -3.7 | 3.8 | 3.00 | |
| 700.0 | 5.05 | 193.81 | 699.7 | -7.6 | -4.2 | 5.5 | 0.95 | |
| 725.0 | 5.26 | 193.09 | 724.6 | -9.8 | -4.7 | 7.4 | 0.88 | |
| 750.0 | 5.23 | 193.18 | 749.5 | -12.1 | -5.2 | 9.2 | 0.12 | |
| 775.0 | 5.24 | 193.84 | 774.4 | -14.3 | -5.8 | 11.1 | 0.24 | |
| 800.0 | 5.34 | 194.08 | 799.2 | -16.5 | -6.3 | 13.0 | 0.41 | |
| 825.0 | 5.34 | 193.71 | 824.1 | -18.8 | -6.9 | 14.8 | 0.14 | |
| 850.0 | 5.59 | 193.88 | 849.0 | -21.1 | -7.4 | 16.8 | 1.00 | |
| 875.0 | 5.44 | 193.46 | 873.9 | -23.4 | -8.0 | 18.7 | 0.62 | |
| 900.0 | 5.42 | 194.22 | 898.8 | -25.7 | -8.6 | 20.6 | 0.30 | |
| 925.0 | 4.88 | 198.18 | 923.7 | -27.9 | -9.2 | 22.4 | 2.58 | |
| 950.0 | 4.23 | 202.87 | 948.6 | -29.7 | -9.9 | 23.9 | 2.99 | |
| 975.0 | 4.04 | 205.28 | 973.5 | -31.4 | -10.6 | 25.1 | 1.03 | |
| 1,000.0 | 3.99 | 204.91 | 998.5 | -33.0 | -11.4 | 26.3 | 0.23 | |
| 1,025.0 | 3.88 | 207.57 | 1,023.4 | -34.5 | -12.1 | 27.5 | 0.85 | |
| 1,050.0 | 3.96 | 205.56 | 1,048.4 | -36.0 | -12.9 | 28.6 | 0.64 | |
| 1,075.0 | 3.89 | 205.94 | 1,073.3 | -37.6 | -13.6 | 29.7 | 0.30 | |
| 1,100.0 | 3.78 | 206.92 | 1,098.3 | -39.1 | -14.4 | 30.9 | 0.51 | |
| 1,125.0 | 3.61 | 206.71 | 1,123.2 | -40.5 | -15.1 | 31.9 | 0.68 | |
| 1,150.0 | 3.64 | 205.95 | 1,148.2 | -41.9 | -15.8 | 33.0 | 0.23 | |
| 1,175.0 | 3.63 | 206.70 | 1,173.1 | -43.3 | -16.5 | 34.0 | 0.19 | |
| 1,200.0 | 3.73 | 206.41 | 1,198.1 | -44.8 | -17.2 | 35.1 | 0.41 | |
| 1,225.0 | 3.64 | 207.32 | 1,223.0 | -46.2 | -17.9 | 36.1 | 0.43 | |
| 1,250.0 | 3.50 | 207.53 | 1,248.0 | -47.6 | -18.7 | 37.2 | 0.56 | |
| 1,275.0 | 3.28 | 208.21 | 1,272.9 | -48.9 | -19.3 | 38.1 | 0.89 | |
| 1,300.0 | 3.17 | 210.60 | 1,297.9 | -50.1 | -20.0 | 39.0 | 0.69 | |
| 1,325.0 | 3.18 | 210.57 | 1,322.8 | -51.3 | -20.7 | 39.8 | 0.04 | |
| 1,350.0 | 3.13 | 208.73 | 1,347.8 | -52.5 | -21.4 | 40.7 | 0.45 | |

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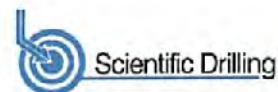
| | | | |
|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
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| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| Survey | | | | | | | | |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) | |
| 1,375.0 | 3.11 | 209.27 | 1,372.8 | -53.7 | -22.1 | 41.5 | 0.14 | |
| 1,400.0 | 2.92 | 209.45 | 1,397.7 | -54.8 | -22.7 | 42.4 | 0.76 | |
| 1,425.0 | 2.89 | 209.98 | 1,422.7 | -55.9 | -23.4 | 43.1 | 0.16 | |
| 1,450.0 | 2.85 | 210.47 | 1,447.7 | -57.0 | -24.0 | 43.9 | 0.19 | |
| 1,475.0 | 2.70 | 210.71 | 1,472.6 | -58.1 | -24.6 | 44.6 | 0.60 | |
| 1,500.0 | 2.70 | 212.33 | 1,497.6 | -59.1 | -25.2 | 45.3 | 0.31 | |
| 1,525.0 | 2.64 | 209.95 | 1,522.6 | -60.1 | -25.8 | 46.0 | 0.50 | |
| 1,550.0 | 2.62 | 209.56 | 1,547.5 | -61.1 | -26.4 | 46.8 | 0.11 | |
| 1,575.0 | 2.69 | 209.87 | 1,572.5 | -62.1 | -27.0 | 47.5 | 0.29 | |
| 1,600.0 | 2.76 | 212.43 | 1,597.5 | -63.1 | -27.6 | 48.2 | 0.56 | |
| 1,625.0 | 2.64 | 212.19 | 1,622.5 | -64.1 | -28.2 | 48.9 | 0.48 | |
| 1,650.0 | 2.56 | 211.30 | 1,647.4 | -65.0 | -28.8 | 49.5 | 0.36 | |
| 1,675.0 | 2.46 | 211.61 | 1,672.4 | -66.0 | -29.4 | 50.2 | 0.40 | |
| 1,700.0 | 2.32 | 212.17 | 1,697.4 | -66.9 | -29.9 | 50.8 | 0.57 | |
| 1,725.0 | 2.23 | 212.34 | 1,722.4 | -67.7 | -30.5 | 51.4 | 0.36 | |
| 1,750.0 | 2.17 | 212.14 | 1,747.4 | -68.5 | -31.0 | 52.0 | 0.24 | |
| 1,775.0 | 2.09 | 213.26 | 1,772.3 | -69.3 | -31.5 | 52.5 | 0.36 | |
| 1,800.0 | 1.95 | 209.88 | 1,797.3 | -70.0 | -31.9 | 53.0 | 0.74 | |
| 1,825.0 | 2.01 | 211.73 | 1,822.3 | -70.8 | -32.4 | 53.5 | 0.35 | |
| 1,850.0 | 1.97 | 213.80 | 1,847.3 | -71.5 | -32.8 | 54.0 | 0.33 | |
| 1,875.0 | 1.95 | 213.49 | 1,872.3 | -72.2 | -33.3 | 54.5 | 0.09 | |
| 1,900.0 | 1.82 | 213.25 | 1,897.3 | -72.9 | -33.8 | 55.0 | 0.52 | |
| 1,925.0 | 1.94 | 213.81 | 1,922.2 | -73.6 | -34.2 | 55.5 | 0.49 | |
| 1,950.0 | 1.72 | 215.08 | 1,947.2 | -74.3 | -34.7 | 55.9 | 0.89 | |
| 1,975.0 | 1.68 | 218.51 | 1,972.2 | -74.9 | -35.1 | 56.3 | 0.44 | |
| 2,000.0 | 1.63 | 217.18 | 1,997.2 | -75.4 | -35.6 | 56.6 | 0.25 | |
| 2,025.0 | 1.64 | 218.98 | 2,022.2 | -76.0 | -36.0 | 57.0 | 0.21 | |
| 2,050.0 | 1.52 | 218.78 | 2,047.2 | -76.5 | -36.4 | 57.3 | 0.48 | |
| 2,075.0 | 1.51 | 222.21 | 2,072.2 | -77.0 | -36.9 | 57.6 | 0.36 | |
| 2,100.0 | 1.56 | 222.32 | 2,097.2 | -77.5 | -37.3 | 57.9 | 0.20 | |
| 2,125.0 | 1.48 | 222.31 | 2,122.2 | -78.0 | -37.8 | 58.2 | 0.32 | |
| 2,150.0 | 1.37 | 222.88 | 2,147.2 | -78.5 | -38.2 | 58.5 | 0.44 | |
| 2,175.0 | 1.33 | 225.08 | 2,172.2 | -78.9 | -38.6 | 58.7 | 0.26 | |
| 2,200.0 | 1.22 | 223.04 | 2,197.1 | -79.3 | -39.0 | 59.0 | 0.48 | |
| 2,225.0 | 1.26 | 227.42 | 2,222.1 | -79.7 | -39.4 | 59.2 | 0.41 | |
| 2,250.0 | 1.15 | 228.31 | 2,247.1 | -80.0 | -39.7 | 59.3 | 0.45 | |
| 2,275.0 | 1.22 | 229.61 | 2,272.1 | -80.4 | -40.1 | 59.5 | 0.30 | |
| 2,300.0 | 1.33 | 230.46 | 2,297.1 | -80.7 | -40.6 | 59.7 | 0.45 | |
| 2,325.0 | 1.18 | 230.73 | 2,322.1 | -81.1 | -41.0 | 59.8 | 0.60 | |
| 2,350.0 | 1.14 | 238.74 | 2,347.1 | -81.4 | -41.4 | 60.0 | 0.67 | |
| 2,375.0 | 1.14 | 234.57 | 2,372.1 | -81.6 | -41.8 | 60.1 | 0.33 | |
| 2,400.0 | 1.01 | 234.16 | 2,397.1 | -81.9 | -42.2 | 60.2 | 0.52 | |
| 2,425.0 | 1.01 | 231.90 | 2,422.1 | -82.2 | -42.5 | 60.3 | 0.16 | |
| 2,450.0 | 1.14 | 240.75 | 2,447.1 | -82.4 | -42.9 | 60.4 | 0.84 | |
| 2,475.0 | 0.91 | 248.96 | 2,472.1 | -82.6 | -43.3 | 60.4 | 1.09 | |

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09/15/2017



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|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
| Project: | Doddridge County WV | TVD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| Survey | | | | | | | |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |
| 2,500.0 | 1.04 | 247.00 | 2,497.1 | -82.8 | -43.7 | 60.4 | 0.54 |
| 2,525.0 | 1.15 | 243.42 | 2,522.1 | -83.0 | -44.2 | 60.4 | 0.52 |
| 2,550.0 | 1.27 | 242.22 | 2,547.1 | -83.2 | -44.6 | 60.5 | 0.49 |
| 2,575.0 | 1.52 | 250.58 | 2,572.1 | -83.5 | -45.2 | 60.5 | 1.29 |
| 2,600.0 | 1.29 | 251.00 | 2,597.1 | -83.7 | -45.8 | 60.5 | 0.92 |
| 2,625.0 | 1.24 | 255.97 | 2,622.1 | -83.8 | -46.3 | 60.4 | 0.48 |
| 2,650.0 | 1.22 | 257.97 | 2,647.1 | -83.9 | -46.8 | 60.3 | 0.19 |
| 2,675.0 | 1.30 | 260.40 | 2,672.0 | -84.0 | -47.4 | 60.2 | 0.38 |
| 2,700.0 | 1.10 | 266.60 | 2,697.0 | -84.1 | -47.9 | 60.1 | 0.95 |
| 2,725.0 | 1.06 | 276.20 | 2,722.0 | -84.1 | -48.4 | 59.9 | 0.74 |
| 2,750.0 | 1.04 | 276.86 | 2,747.0 | -84.0 | -48.8 | 59.7 | 0.09 |
| 2,775.0 | 1.03 | 278.70 | 2,772.0 | -84.0 | -49.3 | 59.5 | 0.14 |
| 2,800.0 | 1.02 | 277.56 | 2,797.0 | -83.9 | -49.7 | 59.2 | 0.09 |
| 2,825.0 | 1.05 | 283.53 | 2,822.0 | -83.8 | -50.1 | 59.0 | 0.45 |
| 2,850.0 | 1.04 | 282.63 | 2,847.0 | -83.7 | -50.6 | 58.7 | 0.08 |
| 2,875.0 | 1.07 | 283.01 | 2,872.0 | -83.6 | -51.0 | 58.5 | 0.12 |
| 2,900.0 | 1.05 | 286.43 | 2,897.0 | -83.5 | -51.5 | 58.2 | 0.27 |
| 2,925.0 | 1.03 | 292.99 | 2,922.0 | -83.4 | -51.9 | 57.9 | 0.48 |
| 2,950.0 | 1.08 | 291.80 | 2,947.0 | -83.2 | -52.3 | 57.6 | 0.22 |
| 2,975.0 | 1.03 | 293.19 | 2,972.0 | -83.0 | -52.8 | 57.2 | 0.22 |
| 3,000.0 | 1.13 | 291.62 | 2,997.0 | -82.8 | -53.2 | 56.9 | 0.42 |
| 3,025.0 | 1.03 | 290.19 | 3,022.0 | -82.7 | -53.6 | 56.6 | 0.41 |
| 3,050.0 | 1.11 | 299.01 | 3,047.0 | -82.5 | -54.1 | 56.3 | 0.73 |
| 3,075.0 | 1.00 | 294.12 | 3,072.0 | -82.3 | -54.5 | 55.9 | 0.57 |
| 3,100.0 | 1.02 | 297.28 | 3,097.0 | -82.1 | -54.9 | 55.6 | 0.24 |
| 3,125.0 | 1.01 | 296.66 | 3,122.0 | -81.9 | -55.3 | 55.3 | 0.06 |
| 3,150.0 | 0.99 | 301.37 | 3,147.0 | -81.7 | -55.6 | 54.9 | 0.34 |
| 3,175.0 | 1.02 | 301.78 | 3,172.0 | -81.4 | -56.0 | 54.6 | 0.12 |
| 3,200.0 | 0.99 | 302.01 | 3,197.0 | -81.2 | -56.4 | 54.2 | 0.12 |
| 3,225.0 | 0.99 | 307.64 | 3,222.0 | -81.0 | -56.7 | 53.8 | 0.39 |
| 3,250.0 | 0.97 | 311.60 | 3,247.0 | -80.7 | -57.1 | 53.5 | 0.28 |
| 3,275.0 | 0.91 | 307.39 | 3,271.9 | -80.4 | -57.4 | 53.1 | 0.37 |
| 3,300.0 | 0.93 | 310.63 | 3,296.9 | -80.2 | -57.7 | 52.8 | 0.22 |
| 3,325.0 | 0.91 | 315.77 | 3,321.9 | -79.9 | -58.0 | 52.4 | 0.34 |
| 3,350.0 | 0.93 | 320.81 | 3,346.9 | -79.6 | -58.3 | 52.0 | 0.33 |
| 3,375.0 | 0.99 | 324.32 | 3,371.9 | -79.3 | -58.5 | 51.6 | 0.34 |
| 3,400.0 | 0.93 | 324.31 | 3,396.9 | -78.9 | -58.8 | 51.2 | 0.24 |
| 3,425.0 | 0.99 | 321.45 | 3,421.9 | -78.6 | -59.0 | 50.8 | 0.31 |
| 3,450.0 | 0.94 | 325.32 | 3,446.9 | -78.2 | -59.3 | 50.4 | 0.33 |
| 3,475.0 | 0.96 | 322.56 | 3,471.9 | -77.9 | -59.5 | 50.0 | 0.20 |
| 3,500.0 | 0.93 | 326.84 | 3,496.9 | -77.6 | -59.7 | 49.6 | 0.31 |
| 3,525.0 | 0.94 | 325.82 | 3,521.9 | -77.2 | -60.0 | 49.2 | 0.08 |
| 3,550.0 | 0.96 | 329.07 | 3,546.9 | -76.9 | -60.2 | 48.8 | 0.23 |
| 3,575.0 | 0.94 | 322.93 | 3,571.9 | -76.5 | -60.4 | 48.4 | 0.41 |

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|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
| Project: | Doddridge County WV | TVD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| Survey | | | | | | | | |
|-----------|---------|-------------------|------------|------------|-----------|---------------|------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | EW (usft) | V. Sec (usft) | DLeg (°/100usft) | |
| 3,600.0 | 0.97 | 326.07 | 3,596.9 | -76.2 | -60.7 | 48.0 | 0.24 | |
| 3,625.0 | 0.99 | 330.53 | 3,621.9 | -75.8 | -60.9 | 47.6 | 0.32 | |
| 3,650.0 | 0.88 | 328.29 | 3,646.9 | -75.5 | -61.1 | 47.2 | 0.46 | |
| 3,675.0 | 0.94 | 326.39 | 3,671.9 | -75.2 | -61.3 | 46.8 | 0.27 | |
| 3,700.0 | 0.92 | 322.17 | 3,696.9 | -74.8 | -61.5 | 46.4 | 0.29 | |
| 3,725.0 | 0.90 | 335.12 | 3,721.9 | -74.5 | -61.8 | 46.0 | 0.82 | |
| 3,750.0 | 0.92 | 327.42 | 3,746.9 | -74.1 | -61.9 | 45.6 | 0.50 | |
| 3,775.0 | 0.88 | 331.59 | 3,771.9 | -73.8 | -62.1 | 45.2 | 0.31 | |
| 3,800.0 | 0.88 | 334.98 | 3,796.9 | -73.5 | -62.3 | 44.8 | 0.21 | |
| 3,825.0 | 0.92 | 332.90 | 3,821.9 | -73.1 | -62.5 | 44.4 | 0.21 | |
| 3,850.0 | 0.94 | 332.42 | 3,846.9 | -72.8 | -62.7 | 44.0 | 0.09 | |
| 3,875.0 | 0.97 | 334.58 | 3,871.9 | -72.4 | -62.9 | 43.6 | 0.19 | |
| 3,900.0 | 0.97 | 330.94 | 3,896.9 | -72.0 | -63.1 | 43.2 | 0.25 | |
| 3,925.0 | 0.95 | 334.12 | 3,921.9 | -71.6 | -63.2 | 42.8 | 0.23 | |
| 3,950.0 | 0.94 | 330.50 | 3,946.9 | -71.3 | -63.4 | 42.4 | 0.24 | |
| 3,975.0 | 0.94 | 333.25 | 3,971.9 | -70.9 | -63.6 | 41.9 | 0.18 | |
| 4,000.0 | 0.95 | 332.63 | 3,996.8 | -70.5 | -63.8 | 41.5 | 0.06 | |
| 4,025.0 | 0.94 | 337.88 | 4,021.8 | -70.2 | -64.0 | 41.1 | 0.35 | |
| 4,050.0 | 0.99 | 333.81 | 4,046.8 | -69.8 | -64.2 | 40.7 | 0.34 | |
| 4,075.0 | 1.09 | 331.09 | 4,071.8 | -69.4 | -64.4 | 40.3 | 0.45 | |
| 4,100.0 | 1.05 | 335.09 | 4,096.8 | -69.0 | -64.6 | 39.8 | 0.34 | |
| 4,125.0 | 1.17 | 328.23 | 4,121.8 | -68.5 | -64.8 | 39.3 | 0.72 | |
| 4,150.0 | 1.18 | 335.78 | 4,146.8 | -68.1 | -65.1 | 38.8 | 0.62 | |
| 4,175.0 | 1.23 | 333.66 | 4,171.8 | -67.6 | -65.3 | 38.3 | 0.27 | |
| 4,200.0 | 1.12 | 329.76 | 4,196.8 | -67.2 | -65.5 | 37.8 | 0.54 | |
| 4,225.0 | 1.22 | 333.53 | 4,221.8 | -66.7 | -65.8 | 37.3 | 0.50 | |
| 4,250.0 | 1.18 | 333.16 | 4,246.8 | -66.2 | -66.0 | 36.7 | 0.16 | |
| 4,275.0 | 1.27 | 330.72 | 4,271.8 | -65.8 | -66.3 | 36.2 | 0.42 | |
| 4,300.0 | 1.23 | 332.86 | 4,296.8 | -65.3 | -66.5 | 35.7 | 0.25 | |
| 4,325.0 | 1.28 | 338.20 | 4,321.8 | -64.8 | -66.7 | 35.1 | 0.51 | |
| 4,350.0 | 1.12 | 332.93 | 4,346.8 | -64.3 | -67.0 | 34.6 | 0.78 | |
| 4,375.0 | 1.08 | 335.64 | 4,371.8 | -63.9 | -67.2 | 34.1 | 0.26 | |
| 4,400.0 | 1.05 | 340.29 | 4,396.8 | -63.5 | -67.3 | 33.7 | 0.37 | |
| 4,425.0 | 1.08 | 339.37 | 4,421.8 | -63.0 | -67.5 | 33.2 | 0.14 | |
| 4,450.0 | 1.03 | 339.39 | 4,446.8 | -62.6 | -67.7 | 32.7 | 0.20 | |
| 4,475.0 | 0.97 | 339.78 | 4,471.8 | -62.2 | -67.8 | 32.3 | 0.24 | |
| 4,500.0 | 0.95 | 340.71 | 4,496.8 | -61.8 | -68.0 | 31.9 | 0.10 | |
| 4,525.0 | 0.87 | 344.40 | 4,521.8 | -61.4 | -68.1 | 31.5 | 0.40 | |
| 4,550.0 | 0.82 | 351.38 | 4,546.7 | -61.0 | -68.1 | 31.1 | 0.46 | |
| 4,575.0 | 0.78 | 349.43 | 4,571.7 | -60.7 | -68.2 | 30.8 | 0.19 | |
| 4,600.0 | 0.75 | 345.42 | 4,596.7 | -60.4 | -68.3 | 30.4 | 0.25 | |
| 4,625.0 | 0.84 | 340.64 | 4,621.7 | -60.0 | -68.4 | 30.1 | 0.45 | |
| 4,650.0 | 0.70 | 347.06 | 4,646.7 | -59.7 | -68.5 | 29.8 | 0.66 | |
| 4,675.0 | 0.76 | 342.91 | 4,671.7 | -59.4 | -68.6 | 29.4 | 0.32 | |

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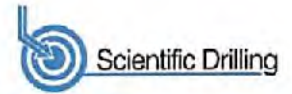


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|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
| Project: | Doddridge County WV | TVD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| Survey | | | | | | | | |
|-----------|---------|-------------------|------------|------------|-----------|---------------|------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | EW (usft) | V. Sec (usft) | DLeg (°/100usft) | |
| 4,700.0 | 0.76 | 346.18 | 4,696.7 | -59.1 | -68.6 | 29.1 | 0.17 | |
| 4,725.0 | 0.70 | 349.98 | 4,721.7 | -58.8 | -68.7 | 28.8 | 0.31 | |
| 4,750.0 | 0.74 | 351.33 | 4,746.7 | -58.5 | -68.8 | 28.5 | 0.17 | |
| 4,775.0 | 0.79 | 354.29 | 4,771.7 | -58.1 | -68.8 | 28.2 | 0.25 | |
| 4,800.0 | 0.74 | 344.63 | 4,796.7 | -57.8 | -68.9 | 27.9 | 0.55 | |
| 4,825.0 | 0.71 | 348.50 | 4,821.7 | -57.5 | -68.9 | 27.5 | 0.23 | |
| 4,850.0 | 0.70 | 344.89 | 4,846.7 | -57.2 | -69.0 | 27.2 | 0.18 | |
| 4,875.0 | 0.66 | 347.29 | 4,871.7 | -56.9 | -69.1 | 26.9 | 0.20 | |
| 4,900.0 | 0.60 | 342.06 | 4,896.7 | -56.7 | -69.2 | 26.7 | 0.33 | |
| 4,925.0 | 0.54 | 342.40 | 4,921.7 | -56.4 | -69.2 | 26.4 | 0.24 | |
| 4,950.0 | 0.59 | 347.80 | 4,946.7 | -56.2 | -69.3 | 26.2 | 0.29 | |
| 4,975.0 | 0.53 | 354.35 | 4,971.7 | -55.9 | -69.3 | 25.9 | 0.35 | |
| 5,000.0 | 0.66 | 0.43 | 4,996.7 | -55.7 | -69.3 | 25.7 | 0.58 | |
| 5,025.0 | 0.53 | 346.93 | 5,021.7 | -55.4 | -69.4 | 25.4 | 0.76 | |
| 5,050.0 | 0.52 | 345.82 | 5,046.7 | -55.2 | -69.4 | 25.2 | 0.06 | |
| 5,075.0 | 0.45 | 340.51 | 5,071.7 | -55.0 | -69.5 | 25.0 | 0.33 | |
| 5,100.0 | 0.36 | 334.99 | 5,096.7 | -54.8 | -69.5 | 24.8 | 0.39 | |
| 5,125.0 | 0.41 | 337.98 | 5,121.7 | -54.7 | -69.6 | 24.7 | 0.22 | |
| 5,150.0 | 0.43 | 345.03 | 5,146.7 | -54.5 | -69.7 | 24.5 | 0.22 | |
| 5,175.0 | 0.41 | 333.36 | 5,171.7 | -54.3 | -69.7 | 24.3 | 0.35 | |
| 5,200.0 | 0.43 | 335.35 | 5,196.7 | -54.2 | -69.8 | 24.1 | 0.10 | |
| 5,225.0 | 0.46 | 354.41 | 5,221.7 | -54.0 | -69.9 | 23.9 | 0.60 | |
| 5,250.0 | 0.39 | 356.54 | 5,246.7 | -53.8 | -69.9 | 23.8 | 0.29 | |
| 5,275.0 | 0.43 | 7.76 | 5,271.7 | -53.6 | -69.9 | 23.6 | 0.36 | |
| 5,300.0 | 0.56 | 6.60 | 5,296.7 | -53.4 | -69.8 | 23.4 | 0.52 | |
| 5,325.0 | 0.61 | 354.90 | 5,321.7 | -53.2 | -69.8 | 23.2 | 0.52 | |
| 5,350.0 | 0.50 | 10.61 | 5,346.7 | -52.9 | -69.8 | 22.9 | 0.75 | |
| 5,375.0 | 0.53 | 7.49 | 5,371.7 | -52.7 | -69.8 | 22.8 | 0.16 | |
| 5,400.0 | 0.63 | 17.81 | 5,396.7 | -52.4 | -69.7 | 22.5 | 0.58 | |
| 5,425.0 | 0.64 | 5.61 | 5,421.7 | -52.2 | -69.7 | 22.3 | 0.54 | |
| 5,450.0 | 0.66 | 355.26 | 5,446.7 | -51.9 | -69.7 | 22.1 | 0.48 | |
| 5,475.0 | 0.66 | 1.35 | 5,471.7 | -51.6 | -69.7 | 21.8 | 0.28 | |
| 5,500.0 | 0.65 | 4.17 | 5,496.7 | -51.3 | -69.7 | 21.5 | 0.13 | |
| 5,525.0 | 0.89 | 359.95 | 5,521.7 | -51.0 | -69.7 | 21.3 | 0.25 | |
| 5,550.0 | 0.75 | 356.35 | 5,546.7 | -50.7 | -69.7 | 21.0 | 0.30 | |
| 5,575.0 | 0.75 | 0.83 | 5,571.7 | -50.4 | -69.7 | 20.7 | 0.23 | |
| 5,600.0 | 0.90 | 0.42 | 5,596.7 | -50.0 | -69.7 | 20.3 | 0.60 | |
| 5,625.0 | 0.81 | 351.33 | 5,621.7 | -49.7 | -69.7 | 20.0 | 0.65 | |
| 5,650.0 | 0.88 | 358.78 | 5,646.7 | -49.3 | -69.7 | 19.6 | 0.52 | |
| 5,675.0 | 0.87 | 359.33 | 5,671.7 | -48.9 | -69.7 | 19.3 | 0.05 | |
| 5,700.0 | 0.76 | 4.49 | 5,696.7 | -48.6 | -69.7 | 18.9 | 0.53 | |
| 5,725.0 | 0.78 | 355.27 | 5,721.7 | -48.2 | -69.7 | 18.6 | 0.50 | |
| 5,750.0 | 0.75 | 6.69 | 5,746.7 | -47.9 | -69.7 | 18.3 | 0.62 | |
| 5,775.0 | 0.73 | 4.17 | 5,771.7 | -47.6 | -69.7 | 18.0 | 0.15 | |

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|------------------|-------------------------------------|-------------------------------------|---|
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| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| Survey | | | | | | | | |
|-------------|---------|-------------------|------------|------------|------------|---------------|------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) | |
| 5,800.0 | 0.74 | 351.63 | 5,796.7 | -47.2 | -69.7 | 17.7 | 0.64 | |
| 5,825.0 | 0.76 | 351.67 | 5,821.7 | -46.9 | -69.8 | 17.4 | 0.08 | |
| 5,850.0 | 0.63 | 351.45 | 5,846.7 | -46.6 | -69.8 | 17.1 | 0.52 | |
| 5,875.0 | 0.64 | 349.84 | 5,871.7 | -46.4 | -69.8 | 16.9 | 0.08 | |
| 5,900.0 | 0.61 | 9.21 | 5,896.7 | -46.1 | -69.9 | 16.6 | 0.85 | |
| 5,925.0 | 0.72 | 342.98 | 5,921.7 | -45.8 | -69.9 | 16.3 | 1.28 | |
| 5,950.0 | 0.62 | 331.36 | 5,946.7 | -45.5 | -70.0 | 16.0 | 0.67 | |
| 5,976.0 | 0.74 | 332.76 | 5,972.6 | -45.3 | -70.1 | 15.7 | 0.47 | |
| 5,986.0 | 0.62 | 344.65 | 5,982.7 | -45.1 | -70.2 | 15.6 | 1.84 | |
| 6,017.0 | 0.70 | 337.09 | 6,013.7 | -44.8 | -70.3 | 15.3 | 0.38 | |
| 6,038.0 | 0.70 | 336.92 | 6,034.7 | -44.6 | -70.4 | 15.0 | 0.01 | |
| RNST | | | | | | | | |
| 6,049.0 | 0.70 | 336.83 | 6,045.6 | -44.5 | -70.4 | 14.9 | 0.01 | |
| 6,081.0 | 0.53 | 350.54 | 6,077.6 | -44.1 | -70.5 | 14.5 | 0.70 | |
| 6,112.0 | 1.93 | 55.14 | 6,108.6 | -43.7 | -70.1 | 14.3 | 5.71 | |
| 6,144.0 | 5.36 | 70.34 | 6,140.6 | -42.9 | -68.3 | 14.2 | 11.04 | |
| 6,176.0 | 9.58 | 72.80 | 6,172.3 | -41.6 | -64.3 | 14.5 | 13.22 | |
| 6,207.0 | 13.01 | 73.59 | 6,202.7 | -39.8 | -58.5 | 15.0 | 11.08 | |
| 6,239.0 | 16.00 | 74.56 | 6,233.7 | -37.6 | -50.8 | 15.9 | 9.37 | |
| 6,271.0 | 18.99 | 75.61 | 6,264.2 | -35.2 | -41.5 | 17.1 | 9.40 | |
| 6,302.0 | 22.16 | 77.11 | 6,293.2 | -32.6 | -30.9 | 18.7 | 10.37 | |
| 6,334.0 | 25.06 | 78.95 | 6,322.5 | -30.0 | -18.4 | 20.9 | 9.35 | |
| 6,366.0 | 26.12 | 84.67 | 6,351.4 | -28.0 | -4.7 | 24.2 | 8.40 | |
| 6,373.0 | 26.08 | 86.83 | 6,357.7 | -27.8 | -1.7 | 25.2 | 13.61 | |
| SCMR | | | | | | | | |
| 6,397.0 | 26.20 | 94.25 | 6,379.2 | -27.9 | 8.9 | 29.2 | 13.61 | |
| 6,429.0 | 25.94 | 102.25 | 6,408.0 | -29.9 | 22.8 | 36.3 | 11.01 | |
| 6,460.0 | 26.91 | 109.54 | 6,435.7 | -33.7 | 36.0 | 44.7 | 10.92 | |
| 6,492.0 | 29.11 | 114.64 | 6,464.0 | -39.4 | 49.9 | 55.2 | 10.16 | |
| 6,524.0 | 31.66 | 116.84 | 6,491.6 | -46.4 | 64.5 | 67.2 | 8.69 | |
| 6,555.0 | 34.47 | 120.00 | 6,517.6 | -54.5 | 79.4 | 80.2 | 10.63 | |
| 6,572.0 | 36.10 | 121.64 | 6,531.5 | -59.5 | 87.8 | 88.0 | 11.08 | |
| MDLX | | | | | | | | |
| 6,587.0 | 37.55 | 122.99 | 6,543.5 | -64.3 | 95.4 | 95.3 | 11.08 | |
| 6,619.0 | 40.45 | 126.42 | 6,568.3 | -75.8 | 111.9 | 112.1 | 11.29 | |
| 6,650.0 | 44.05 | 129.40 | 6,591.3 | -88.6 | 128.3 | 130.2 | 13.29 | |
| 6,682.0 | 47.46 | 131.95 | 6,613.6 | -103.5 | 145.7 | 150.5 | 12.14 | |
| 6,714.0 | 51.00 | 134.88 | 6,634.5 | -120.2 | 163.3 | 172.6 | 12.76 | |
| 6,743.0 | 54.38 | 137.40 | 6,652.1 | -136.8 | 179.3 | 193.9 | 13.82 | |
| BRKT | | | | | | | | |
| 6,745.0 | 54.61 | 137.58 | 6,653.2 | -138.0 | 180.4 | 195.5 | 13.82 | |
| 6,777.0 | 57.60 | 139.16 | 6,671.1 | -157.8 | 198.1 | 220.5 | 10.20 | |
| 6,809.0 | 60.23 | 141.44 | 6,687.6 | -178.9 | 215.6 | 246.6 | 10.24 | |
| 6,810.0 | 60.33 | 141.48 | 6,688.1 | -179.6 | 216.1 | 247.4 | 11.09 | |
| TLLY | | | | | | | | |



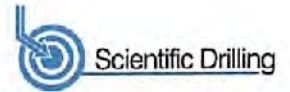
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|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
| Project: | Doddridge County WV | TVD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| Survey | | | | | | | | |
|-----------------|---------|-------------------|------------|------------|------------|---------------|------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) | |
| 6,840.0 | 63.49 | 142.68 | 6,702.2 | -200.5 | 232.4 | 272.9 | 11.09 | |
| 6,872.0 | 67.27 | 144.26 | 6,715.5 | -223.9 | 249.7 | 301.0 | 12.64 | |
| 6,893.0 | 69.29 | 145.51 | 6,723.3 | -239.8 | 260.9 | 320.0 | 11.12 | |
| HMLN | | | | | | | | |
| 6,903.0 | 70.26 | 146.10 | 6,726.8 | -247.6 | 266.2 | 329.2 | 11.12 | |
| 6,914.0 | 71.14 | 146.62 | 6,730.4 | -256.2 | 271.9 | 339.3 | 9.12 | |
| MRCL_HOT | | | | | | | | |
| 6,935.0 | 72.81 | 147.60 | 6,736.9 | -273.0 | 282.8 | 358.9 | 9.12 | |
| 6,967.0 | 75.71 | 148.92 | 6,745.6 | -299.2 | 299.0 | 389.3 | 9.89 | |
| 6,998.0 | 77.82 | 150.41 | 6,752.7 | -325.2 | 314.2 | 419.2 | 8.26 | |
| 7,030.0 | 79.84 | 152.52 | 6,758.9 | -352.8 | 329.2 | 450.3 | 9.04 | |
| 7,061.0 | 81.16 | 155.24 | 6,764.0 | -380.2 | 342.7 | 480.8 | 9.64 | |
| 7,101.0 | 84.86 | 157.62 | 6,768.9 | -416.6 | 358.5 | 520.5 | 10.97 | |
| 7,132.0 | 87.49 | 158.50 | 6,770.9 | -445.3 | 370.1 | 551.4 | 8.94 | |
| 7,164.0 | 88.11 | 159.20 | 6,772.2 | -475.1 | 381.6 | 583.4 | 2.92 | |
| 7,259.0 | 90.48 | 162.45 | 6,773.3 | -564.8 | 412.8 | 678.3 | 4.23 | |
| 7,353.0 | 90.04 | 159.90 | 6,772.9 | -653.8 | 443.1 | 772.1 | 2.75 | |
| 7,448.0 | 89.34 | 155.95 | 6,773.4 | -741.8 | 478.8 | 867.1 | 4.22 | |
| 7,543.0 | 89.08 | 155.95 | 6,774.7 | -828.6 | 517.5 | 962.0 | 0.27 | |
| 7,638.0 | 89.08 | 155.77 | 6,776.3 | -915.2 | 556.4 | 1,056.9 | 0.19 | |
| 7,732.0 | 87.58 | 155.60 | 6,779.0 | -1,000.9 | 595.1 | 1,150.8 | 1.61 | |
| 7,827.0 | 88.55 | 156.65 | 6,782.2 | -1,087.7 | 633.5 | 1,245.7 | 1.50 | |
| 7,921.0 | 88.90 | 157.00 | 6,784.3 | -1,174.1 | 670.5 | 1,339.7 | 0.53 | |
| 8,016.0 | 89.16 | 157.35 | 6,785.9 | -1,261.6 | 707.3 | 1,434.6 | 0.46 | |
| 8,111.0 | 89.78 | 159.11 | 6,786.8 | -1,349.8 | 742.6 | 1,529.6 | 1.96 | |
| 8,206.0 | 89.08 | 156.91 | 6,787.7 | -1,437.9 | 778.1 | 1,624.6 | 2.43 | |
| 8,301.0 | 88.11 | 157.53 | 6,790.1 | -1,525.5 | 814.9 | 1,719.6 | 1.21 | |
| 8,396.0 | 88.64 | 156.74 | 6,792.8 | -1,613.0 | 851.8 | 1,814.5 | 1.00 | |
| 8,490.0 | 88.72 | 158.06 | 6,794.9 | -1,699.7 | 887.9 | 1,908.5 | 1.41 | |
| 8,585.0 | 88.81 | 160.17 | 6,797.0 | -1,788.5 | 921.8 | 2,003.5 | 2.22 | |
| 8,680.0 | 89.52 | 160.52 | 6,798.3 | -1,877.9 | 953.7 | 2,098.4 | 0.83 | |
| 8,775.0 | 88.29 | 160.17 | 6,800.2 | -1,967.4 | 985.7 | 2,193.3 | 1.35 | |
| 8,870.0 | 89.87 | 163.33 | 6,801.7 | -2,057.6 | 1,015.4 | 2,288.0 | 3.72 | |
| 8,965.0 | 88.99 | 160.52 | 6,802.6 | -2,147.9 | 1,044.9 | 2,382.8 | 3.10 | |
| 9,060.0 | 88.20 | 155.77 | 6,805.0 | -2,236.0 | 1,080.2 | 2,477.8 | 5.07 | |
| 9,155.0 | 89.52 | 159.46 | 6,806.9 | -2,323.8 | 1,116.4 | 2,572.7 | 4.12 | |
| 9,250.0 | 88.55 | 159.90 | 6,808.5 | -2,412.9 | 1,149.4 | 2,667.7 | 1.12 | |
| 9,344.0 | 88.99 | 158.23 | 6,810.5 | -2,500.6 | 1,183.0 | 2,761.6 | 1.84 | |
| 9,440.0 | 88.64 | 157.35 | 6,812.5 | -2,589.5 | 1,219.2 | 2,857.6 | 0.99 | |
| 9,535.0 | 89.16 | 157.44 | 6,814.3 | -2,677.2 | 1,255.7 | 2,952.6 | 0.56 | |
| 9,630.0 | 88.37 | 156.91 | 6,816.3 | -2,764.7 | 1,292.6 | 3,047.5 | 1.00 | |
| 9,724.0 | 87.14 | 155.24 | 6,820.0 | -2,850.6 | 1,330.7 | 3,141.4 | 2.21 | |
| 9,819.0 | 87.49 | 155.33 | 6,824.5 | -2,936.8 | 1,370.4 | 3,236.2 | 0.38 | |
| 9,914.0 | 87.76 | 155.68 | 6,828.4 | -3,023.2 | 1,409.7 | 3,331.0 | 0.47 | |
| 10,009.0 | 87.85 | 157.00 | 6,832.0 | -3,110.1 | 1,447.8 | 3,425.9 | 1.39 | |

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 MAR 18 2017



EOW Completion Report



| | | | |
|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
| Project: | Doddridge County WV | TVD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| Survey | | | | | | | | |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) | |
| 10,103.0 | 90.57 | 159.11 | 6,833.3 | -3,197.3 | 1,482.9 | 3,519.9 | 3.66 | |
| 10,198.0 | 90.04 | 157.97 | 6,832.8 | -3,285.7 | 1,517.7 | 3,614.9 | 1.32 | |
| 10,293.0 | 88.46 | 154.54 | 6,834.1 | -3,372.6 | 1,555.9 | 3,709.8 | 3.97 | |
| 10,388.0 | 89.16 | 157.79 | 6,836.0 | -3,459.5 | 1,594.3 | 3,804.7 | 3.50 | |
| 10,483.0 | 89.34 | 157.18 | 6,837.3 | -3,547.2 | 1,630.7 | 3,899.7 | 0.67 | |
| 10,578.0 | 88.64 | 159.55 | 6,839.0 | -3,635.5 | 1,665.7 | 3,994.7 | 2.60 | |
| 10,669.0 | 91.01 | 161.04 | 6,839.2 | -3,721.2 | 1,696.4 | 4,085.6 | 3.08 | |
| 10,761.0 | 90.40 | 159.90 | 6,838.1 | -3,807.9 | 1,727.1 | 4,177.5 | 1.41 | |
| 10,853.0 | 88.81 | 157.97 | 6,838.7 | -3,893.7 | 1,760.2 | 4,269.5 | 2.72 | |
| 10,944.0 | 88.81 | 156.56 | 6,840.6 | -3,977.6 | 1,795.3 | 4,360.5 | 1.55 | |
| 11,035.0 | 88.46 | 155.16 | 6,842.8 | -4,060.7 | 1,832.5 | 4,451.4 | 1.59 | |
| 11,126.0 | 89.16 | 159.11 | 6,844.7 | -4,144.5 | 1,867.9 | 4,542.3 | 4.41 | |
| 11,217.0 | 89.87 | 158.41 | 6,845.5 | -4,229.3 | 1,900.9 | 4,633.3 | 1.10 | |
| 11,308.0 | 88.64 | 155.68 | 6,846.6 | -4,313.1 | 1,936.3 | 4,724.3 | 3.29 | |
| 11,398.0 | 90.48 | 158.85 | 6,847.3 | -4,396.1 | 1,971.1 | 4,814.2 | 4.07 | |
| 11,490.0 | 90.92 | 158.41 | 6,846.2 | -4,481.7 | 2,004.6 | 4,906.2 | 0.68 | |
| 11,581.0 | 90.40 | 157.79 | 6,845.2 | -4,566.1 | 2,038.6 | 4,997.2 | 0.89 | |
| 11,672.0 | 89.80 | 157.70 | 6,845.2 | -4,650.4 | 2,073.0 | 5,088.2 | 0.88 | |
| 11,767.0 | 88.64 | 155.60 | 6,846.6 | -4,737.6 | 2,110.7 | 5,183.2 | 2.43 | |
| 11,861.0 | 89.16 | 158.32 | 6,848.4 | -4,824.0 | 2,147.5 | 5,277.1 | 2.95 | |
| 11,956.0 | 89.52 | 158.41 | 6,849.5 | -4,912.3 | 2,182.5 | 5,372.1 | 0.39 | |
| 12,051.0 | 89.87 | 159.81 | 6,850.0 | -5,001.1 | 2,216.4 | 5,467.1 | 1.52 | |
| 12,146.0 | 89.25 | 158.93 | 6,850.8 | -5,090.0 | 2,249.8 | 5,562.1 | 1.13 | |
| 12,241.0 | 89.25 | 157.79 | 6,852.0 | -5,178.3 | 2,284.9 | 5,657.1 | 1.20 | |
| 12,336.0 | 89.78 | 157.88 | 6,852.8 | -5,266.3 | 2,320.7 | 5,752.1 | 0.57 | |
| 12,430.0 | 90.22 | 158.83 | 6,852.8 | -5,353.0 | 2,356.9 | 5,846.1 | 1.21 | |
| 12,525.0 | 88.72 | 158.23 | 6,853.7 | -5,440.8 | 2,393.2 | 5,941.0 | 2.16 | |
| 12,620.0 | 89.25 | 157.70 | 6,855.4 | -5,528.9 | 2,428.8 | 6,036.0 | 0.79 | |
| 12,715.0 | 90.31 | 158.23 | 6,855.7 | -5,616.9 | 2,464.5 | 6,131.0 | 1.25 | |
| 12,810.0 | 88.81 | 157.62 | 6,856.5 | -5,704.9 | 2,500.2 | 6,226.0 | 1.70 | |
| 12,905.0 | 88.99 | 157.18 | 6,858.3 | -5,792.6 | 2,536.7 | 6,321.0 | 0.50 | |
| 13,000.0 | 89.25 | 156.12 | 6,859.7 | -5,879.8 | 2,574.3 | 6,416.0 | 1.15 | |
| 13,095.0 | 89.52 | 160.78 | 6,860.8 | -5,968.2 | 2,609.2 | 6,510.9 | 4.91 | |
| 13,190.0 | 89.78 | 161.57 | 6,861.3 | -6,058.1 | 2,639.9 | 6,605.8 | 0.88 | |
| 13,284.0 | 90.31 | 160.52 | 6,861.3 | -6,147.0 | 2,670.4 | 6,699.6 | 1.25 | |
| 13,380.0 | 88.64 | 161.04 | 6,862.2 | -6,237.6 | 2,702.0 | 6,795.5 | 1.82 | |
| 13,475.0 | 89.34 | 159.55 | 6,863.8 | -6,327.0 | 2,734.0 | 6,890.4 | 1.73 | |
| 13,569.0 | 89.25 | 158.67 | 6,865.0 | -6,414.9 | 2,767.5 | 6,984.4 | 0.94 | |
| 13,664.0 | 89.69 | 157.70 | 6,865.9 | -6,503.1 | 2,802.8 | 7,079.4 | 1.12 | |
| 13,759.0 | 89.87 | 155.07 | 6,866.2 | -6,590.1 | 2,840.9 | 7,174.4 | 2.77 | |
| 13,854.0 | 90.22 | 156.30 | 6,866.2 | -6,676.7 | 2,880.0 | 7,269.3 | 1.35 | |
| 13,949.0 | 90.04 | 157.27 | 6,865.9 | -6,764.0 | 2,917.5 | 7,364.2 | 1.04 | |
| 14,044.0 | 91.19 | 158.06 | 6,864.9 | -6,851.8 | 2,953.6 | 7,459.2 | 1.47 | |
| 14,138.0 | 90.31 | 158.76 | 6,863.7 | -6,939.2 | 2,988.1 | 7,553.2 | 1.20 | |

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| | | | |
|------------------|-------------------------------------|-------------------------------------|---|
| Company: | Antero | Local Co-ordinate Reference: | Well Wentz Unit 1H |
| Project: | Doddridge County WV | TVD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Site: | Rock Run Pad:Wentz/Twyford/Devonian | MD Reference: | Patterson 317: GL 1171' + KB 23' @ 1194.0usft |
| Well: | Wentz Unit 1H | North Reference: | Grid |
| Wellbore: | Original Wellpath | Survey Calculation Method: | Minimum Curvature |
| Design: | As Drilled | Database: | Oklahoma District |

| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|
| 14,232.0 | 90.40 | 158.32 | 6,863.1 | -7,026.7 | 3,022.5 | 7,647.2 | 0.48 |
| 14,326.0 | 91.45 | 157.79 | 6,861.6 | -7,113.9 | 3,057.6 | 7,741.2 | 1.25 |
| 14,420.0 | 91.80 | 158.23 | 6,858.9 | -7,201.0 | 3,092.8 | 7,835.2 | 0.60 |
| 14,514.0 | 89.43 | 158.23 | 6,857.9 | -7,288.3 | 3,127.7 | 7,929.2 | 2.52 |
| 14,609.0 | 90.48 | 158.76 | 6,858.0 | -7,376.7 | 3,162.5 | 8,024.2 | 1.24 |
| 14,702.0 | 90.66 | 157.44 | 6,857.1 | -7,463.0 | 3,197.2 | 8,117.1 | 1.43 |
| 14,796.0 | 90.57 | 156.47 | 6,856.1 | -7,549.5 | 3,234.0 | 8,211.1 | 1.04 |
| 14,890.0 | 92.51 | 158.85 | 6,853.5 | -7,636.4 | 3,269.7 | 8,305.1 | 3.27 |
| 14,984.0 | 90.66 | 158.67 | 6,850.9 | -7,723.9 | 3,303.7 | 8,399.0 | 1.98 |
| 15,079.0 | 90.48 | 157.88 | 6,850.0 | -7,812.2 | 3,338.9 | 8,494.0 | 0.85 |
| 15,173.0 | 91.19 | 156.47 | 6,848.6 | -7,898.8 | 3,375.4 | 8,588.0 | 1.68 |
| 15,267.0 | 90.22 | 157.27 | 6,847.5 | -7,985.2 | 3,412.3 | 8,682.0 | 1.34 |
| 15,361.0 | 90.48 | 156.30 | 6,846.9 | -8,071.6 | 3,449.3 | 8,775.9 | 1.07 |
| 15,456.0 | 89.73 | 157.72 | 6,846.7 | -8,159.1 | 3,486.4 | 8,870.9 | 1.69 |
| 15,550.0 | 89.52 | 158.32 | 6,847.3 | -8,246.3 | 3,521.6 | 8,964.9 | 0.68 |
| 15,645.0 | 89.96 | 157.88 | 6,847.8 | -8,334.4 | 3,557.1 | 9,059.9 | 0.65 |
| 15,739.0 | 91.28 | 159.64 | 6,846.7 | -8,422.0 | 3,591.1 | 9,153.9 | 2.34 |
| 15,833.0 | 91.01 | 158.06 | 6,844.9 | -8,509.6 | 3,625.0 | 9,247.9 | 1.70 |
| 15,927.0 | 90.40 | 158.23 | 6,843.7 | -8,596.9 | 3,660.0 | 9,341.9 | 0.67 |
| 16,022.0 | 90.48 | 157.88 | 6,843.0 | -8,685.0 | 3,695.5 | 9,436.9 | 0.38 |
| 16,116.0 | 91.10 | 159.55 | 6,841.7 | -8,772.6 | 3,729.6 | 9,530.8 | 1.89 |
| 16,211.0 | 90.04 | 160.78 | 6,840.7 | -8,861.9 | 3,761.9 | 9,625.8 | 1.71 |
| 16,305.0 | 90.22 | 160.25 | 6,840.5 | -8,950.5 | 3,793.2 | 9,719.7 | 0.60 |
| 16,399.0 | 90.04 | 158.41 | 6,840.3 | -9,038.5 | 3,826.4 | 9,813.6 | 1.97 |
| 16,494.0 | 89.96 | 155.86 | 6,840.3 | -9,126.0 | 3,863.3 | 9,908.6 | 2.69 |
| 16,588.0 | 90.66 | 157.00 | 6,839.8 | -9,212.2 | 3,900.9 | 10,002.6 | 1.42 |
| 16,682.0 | 91.63 | 158.14 | 6,837.9 | -9,299.0 | 3,936.7 | 10,096.6 | 1.59 |
| 16,776.0 | 90.22 | 158.67 | 6,836.4 | -9,386.4 | 3,971.3 | 10,190.5 | 1.60 |
| 16,835.0 | 90.31 | 157.62 | 6,836.1 | -9,441.2 | 3,993.3 | 10,249.5 | 1.79 |
| 16,893.0 | 90.45 | 157.00 | 6,835.7 | -9,494.7 | 4,015.7 | 10,307.5 | 1.10 |

| Design Annotations | | | | |
|-----------------------|-----------------------|-------------------|--------------|----------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
| | | +N/-S (usft) | +E/-W (usft) | |
| 6,038.0 | 6,034.7 | -44.6 | -70.4 | RNST |
| 6,373.0 | 6,357.7 | -27.8 | -1.7 | SCMR |
| 6,572.0 | 6,531.5 | -59.5 | 87.8 | MDLX |
| 6,743.0 | 6,652.1 | -136.8 | 179.3 | BRKT |
| 6,810.0 | 6,688.1 | -179.6 | 216.1 | TLLY |
| 6,893.0 | 6,723.3 | -239.8 | 280.9 | HMLN |
| 6,914.0 | 6,730.4 | -256.2 | 271.9 | MRCL_HOT |

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 Environmental Protection

Checked By: _____ Approved By: _____ Date: _____