



# ANTERO RESOURCES CORPORATION

Location: Tyler County, WV  
Field: Tyler  
Facility: Dry Run Pad

Slot: Slot B  
Well: Ringnus Unit 2H  
Wellbore: Ringnus Unit 2H PWB



|  |  |   |
|--|--|---|
| Plot reference wellpath is Ringnus Unit 2HPWP Rev-C.0              |  | Grid System: NAD27 / UTM Zone 17 North, US feet                     |
| True vertical depths are referenced to H&P 317 (RKB)               |  | North Reference: Grid north   |
| Reference wellpath measured depths are referenced to H&P 317 (RKB) |  | Scale: True distance  |
| H&P 317 (RKB) to Mean Sea Level: 1032.5 feet                       |  | Coordinates are in feet referenced to Slot                          |
| Mean Sea Level to Ground level (At Slot: Slot B) : -1007 feet      |  | Depths are in feet  |
| Offset wellpath MDs are referenced to each path's default MD datum |  | Created by: edsanyar on 2023-08-04; Database: WA_MPL_EASTERNUS_Oeth |

### Location Information

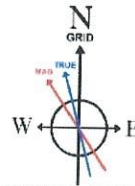
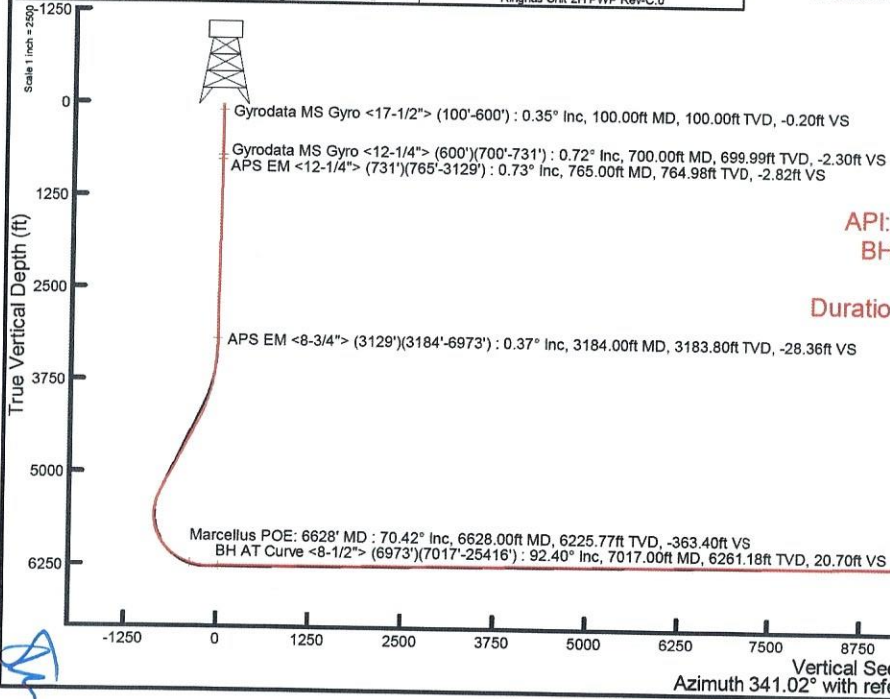
| Facility Name                                    |              | Grid East (US ft) | Grid North (US ft) | Latitude           | Longitude       |                 |
|--|--------------|-------------------|--------------------|--------------------|-----------------|-----------------|
| Dry Run Pad                                      |              | 1665236.690       | 14362894.350       | 39°33'6.8396"N     | 80°54'43.0140"W |                 |
| Slot   | Local N (ft) | Local E (ft)      | Grid East (US ft)  | Grid North (US ft) | Latitude        | Longitude       |
| Slot B   | -10.64       | 10.55             | 1665247.240        | 14362883.710       | 39°33'6.7333"N  | 80°54'42.8794"W |
| Comment: Ringnus Unit 2H                         |              |                   |                    |                    |                 |                 |
| H&P 317 (RKB) to Ground level (At Slot: Slot B)  |              |                   |                    |                    | 25.5ft          |                 |
| Mean Sea Level to Ground level (At Slot: Slot B) |              |                   |                    |                    | -1007ft         |                 |
| H&P 317 (RKB) to Mean Sea Level                  |              |                   |                    |                    | 1032.5ft        |                 |

### Well Profile Data

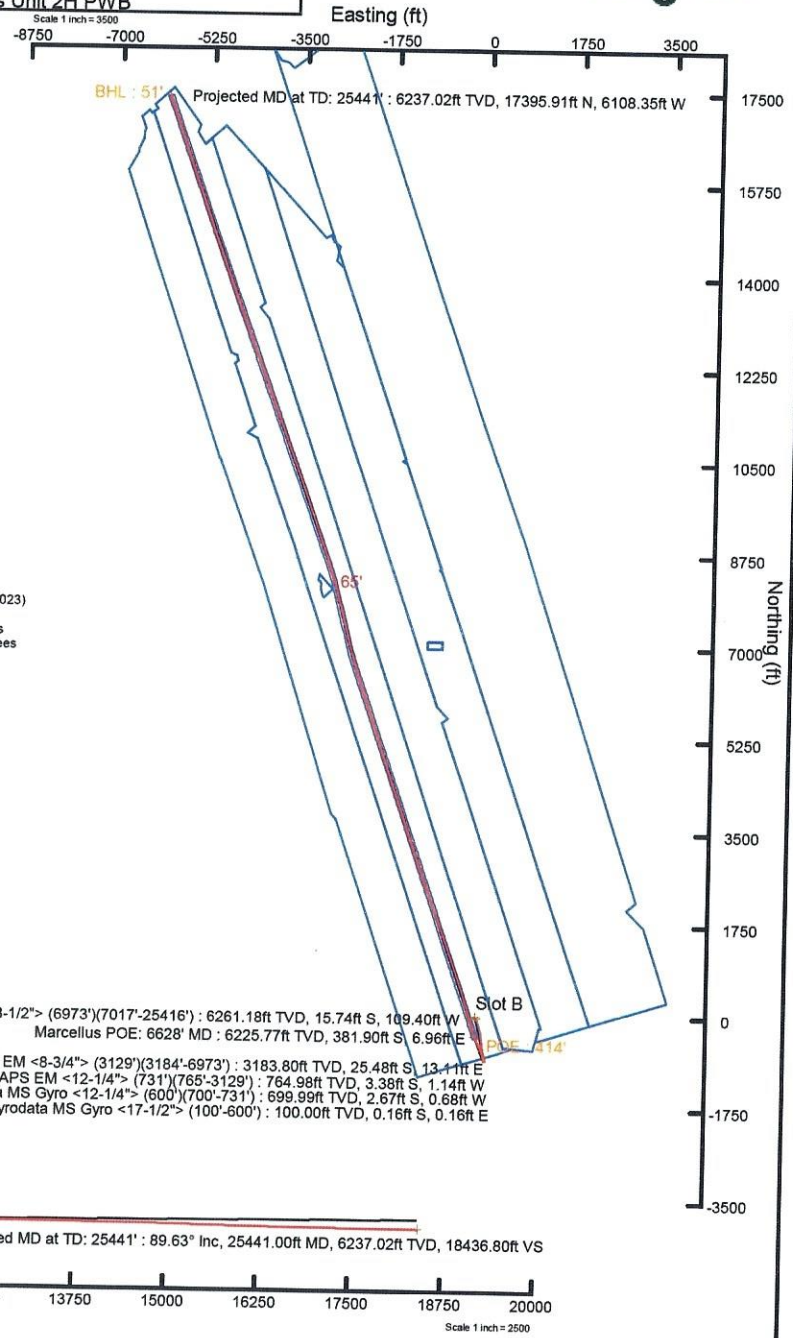
| Design Comment  | MD (ft)  | Inc (") | Az (°)  | TVD (ft) | Local N (ft) | Local E (ft) | DLS (°/100ft) | VS (ft)  |
|-----------------|----------|---------|---------|----------|--------------|--------------|---------------|----------|
| Tie On          | 3129.00  | 0.500   | 125.340 | 3128.80  | -25.34       | 12.74        | 0.51          | -28.11   |
| Proj. to Bottom | 3203.00  | 0.500   | 125.340 | 3202.80  | -25.72       | 13.26        | 0.00          | -28.63   |
| KOP 1           | 3283.00  | 0.500   | 125.340 | 3282.79  | -26.12       | 13.83        | 0.00          | -29.20   |
| End of 3D Arc   | 4131.06  | 25.811  | 167.340 | 4102.04  | -211.45      | 58.05        | 3.00          | -218.83  |
| Curve KOP       | 5414.90  | 25.811  | 167.340 | 5257.80  | -756.86      | 180.56       | 0.00          | -774.44  |
| POE             | 6595.96  | 88.815  | 341.017 | 6235.00  | -402.97      | 19.55        | 8.00          | -387.42  |
| Landing Pt.     | 6836.90  | 90.500  | 341.017 | 6278.00  | -180.17      | -57.10       | 9.00          | -151.80  |
| Hold            | 14010.33 | 90.500  | 341.017 | 6215.40  | 6602.86      | -2390.46     | 0.00          | 7021.35  |
| Turn            | 14508.63 | 90.500  | 346.000 | 6211.05  | 7080.50      | -2531.87     | 1.00          | 7519.01  |
| Hold            | 15508.63 | 90.500  | 346.000 | 6202.32  | 8050.76      | -2773.78     | 0.00          | 8515.19  |
| Turn            | 16086.54 | 90.500  | 340.221 | 6197.28  | 8603.48      | -2941.60     | 1.00          | 9092.45  |
| BHL             | 25416.10 | 90.500  | 340.221 | 6115.86  | 17382.30     | -6098.59     | 0.00          | 18420.75 |

### Well Data

| Slot   | Well            | Wellbore             | Wellpath                         |
|--------|-----------------|----------------------|----------------------------------|
| Slot B | Ringnus Unit 2H | Ringnus Unit 2H AAWB | Ringnus Unit 2H AWP Proj: 25441' |
| Slot B | Ringnus Unit 2H | Ringnus Unit 2H PWB  | Ringnus Unit 2H PWP Rev-C.0      |



User specified (HDGM) Dip: 66.20° Field: 51414 nT  
Magnetic North is 7.38 degrees West of True North (at 7/10/2023)  
Grid North is 0.06 degrees East of True North  
To correct azimuth from True to Grid subtract 0.06 degrees  
To correct azimuth from Magnetic to Grid subtract 7.44 degrees





# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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| REFERENCE WELLPATH IDENTIFICATION |                              |          |                     |
|-----------------------------------|------------------------------|----------|---------------------|
| Operator                          | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field                             | Tyler                        | API      | 47-095-02863-0000   |
| Facility                          | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot                              | Slot B                       |          |                     |

| REPORT SETUP INFORMATION |                                    |                  |                        |
|--------------------------|------------------------------------|------------------|------------------------|
| Projection System        | NAD27 / UTM Zone 17 North, US feet | Software System  | WellArchitect@ 6.0     |
| North Reference          | Grid                               | User             | Edsaryar               |
| Scale                    | 0.999601                           | Report Generated | 8/4/2023 at 1:58:59 PM |
| Convergence at slot      | 0.06° East                         | Database         | WA_MPL_EASTERNUS_Defn  |

| WELLPATH LOCATION     |                   |          |                  |                 |                        |                 |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
|                       | Local coordinates |          | Grid coordinates |                 | Geographic coordinates |                 |
|                       | North[ft]         | East[ft] | Easting[US ft]   | Northing[US ft] | Latitude               | Longitude       |
| Slot Location         | -10.64            | 10.55    | 1665247.24       | 14362883.71     | 39°33'6.7333"N         | 80°54'42.8794"W |
| Facility Reference Pt |                   |          | 1665236.69       | 14362894.35     | 39°33'6.8386"N         | 80°54'43.0140"W |
| Field Reference Pt    |                   |          | 0.00             | 0.00            | 0°00'0.0000"           | 85°29'19.3013"W |

| WELLPATH DATUM           |                   |  |                   |
|--------------------------|-------------------|--|-------------------|
| Calculation method       | Minimum curvature | H&P 317 (RKB) to Facility Vertical Datum       | 1032.50ft         |
| Horizontal Reference Pt  | Slot              | H&P 317 (RKB) to Mean Sea Level                | 1032.50ft         |
| Vertical Reference Pt    | H&P 317 (RKB)     | H&P 317 (RKB) to Ground Level at Slot (Slot B) | 25.50ft           |
| MD Reference Pt          | H&P 317 (RKB)     | Section Origin                                 | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level    | Section Azimuth                                | 341.02°           |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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| REFERENCE WELLPATH IDENTIFICATION |                              |          |                     |
|-----------------------------------|------------------------------|----------|---------------------|
| Operator                          | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field                             | Tyler                        | API      | 47-095-02863-0000   |
| Facility                          | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot                              | Slot B                       |          |                     |

**WELLPATH DATA (277 stations) † = interpolated, ‡ = extrapolated station**

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude       | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments                                     |
|---------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|--|
| 0.00†   | 0.000           | 134.580     | 0.00     | 0.00           | 0.00       | 0.00      | 1665247.24        | 14362883.71        | 39°33'6.7333"N | 80°54'42.8794"W | 0.00              | 0.000           | 0.00          | 0.00                 | 0.00                |  |
| 25.50   | 0.000           | 134.580     | 25.50    | 0.00           | 0.00       | 0.00      | 1665247.24        | 14362883.71        | 39°33'6.7333"N | 80°54'42.8794"W | 0.00              | 0.000           | 0.00          | 0.00                 | 0.00                |  |
| 100.00  | 0.350           | 134.580     | 100.00   | -0.20          | -0.16      | 0.16      | 1665247.40        | 14362883.55        | 39°33'6.7318"N | 80°54'42.8774"W | 0.23              | 134.580         | 0.47          | 0.00                 | 0.00                |  |
| 200.00  | 0.190           | 151.860     | 200.00   | -0.64          | -0.52      | 0.46      | 1665247.70        | 14362883.19        | 39°33'6.7282"N | 80°54'42.8736"W | 0.69              | 138.655         | 0.18          | -0.16                | 17.28               | Gyrodata MS Gyro <17-1/2"> (100'-600')       |
| 300.00  | 0.130           | 141.160     | 300.00   | -0.91          | -0.75      | 0.61      | 1665247.85        | 14362882.96        | 39°33'6.7259"N | 80°54'42.8717"W | 0.97              | 141.189         | 0.07          | -0.06                | -10.70              |  |
| 400.00  | 0.180           | 217.320     | 400.00   | -1.11          | -0.97      | 0.58      | 1665247.82        | 14362882.74        | 39°33'6.7238"N | 80°54'42.8720"W | 1.13              | 148.941         | 0.20          | 0.05                 | 76.16               |  |
| 500.00  | 0.480           | 215.810     | 500.00   | -1.43          | -1.43      | 0.24      | 1665247.48        | 14362882.28        | 39°33'6.7192"N | 80°54'42.8763"W | 1.45              | 170.383         | 0.30          | 0.30                 | -1.51               |  |
| 600.00  | 0.290           | 226.280     | 599.99   | -1.78          | -1.95      | -0.19     | 1665247.05        | 14362881.76        | 39°33'6.7141"N | 80°54'42.8818"W | 1.96              | 185.433         | 0.20          | -0.19                | 10.47               |  |
| 700.00  | 0.720           | 209.570     | 699.99   | -2.30          | -2.67      | -0.68     | 1665246.56        | 14362881.04        | 39°33'6.7070"N | 80°54'42.8881"W | 2.75              | 194.258         | 0.45          | 0.43                 | -16.71              | Gyrodata MS Gyro <12-1/4"> (600')(700'-731') |
| 731.00  | 0.770           | 216.610     | 730.99   | -2.55          | -3.01      | -0.90     | 1665246.34        | 14362880.71        | 39°33'6.7037"N | 80°54'42.8909"W | 3.14              | 196.645         | 0.34          | 0.16                 | 22.71               |  |
| 765.00  | 0.730           | 209.530     | 764.98   | -2.82          | -3.38      | -1.14     | 1665246.10        | 14362880.33        | 39°33'6.7000"N | 80°54'42.8940"W | 3.56              | 198.676         | 0.30          | -0.12                | -20.82              | APS EM <12-1/4"> (731')(765'-3129')          |
| 855.00  | 0.790           | 213.790     | 854.98   | -3.58          | -4.39      | -1.77     | 1665245.47        | 14362879.32        | 39°33'6.6900"N | 80°54'42.9021"W | 4.73              | 201.942         | 0.09          | 0.07                 | 4.73                |  |
| 943.00  | 0.740           | 204.030     | 942.97   | -4.36          | -5.41      | -2.34     | 1665244.90        | 14362878.30        | 39°33'6.6799"N | 80°54'42.9093"W | 5.90              | 203.353         | 0.16          | -0.06                | -11.09              |  |
| 1033.00 | 0.650           | 196.800     | 1032.96  | -5.20          | -6.43      | -2.72     | 1665244.52        | 14362877.28        | 39°33'6.6698"N | 80°54'42.9143"W | 6.99              | 202.932         | 0.14          | -0.10                | -8.03               |  |
| 1127.00 | 0.650           | 200.490     | 1126.96  | -6.04          | -7.44      | -3.06     | 1665244.18        | 14362876.27        | 39°33'6.6598"N | 80°54'42.9186"W | 8.05              | 202.364         | 0.04          | 0.00                 | 3.93                |  |
| 1222.00 | 0.510           | 162.990     | 1221.95  | -6.88          | -8.35      | -3.13     | 1665244.11        | 14362875.36        | 39°33'6.6508"N | 80°54'42.9195"W | 8.92              | 200.528         | 0.42          | -0.15                | -39.47              |  |
| 1316.00 | 0.650           | 150.860     | 1315.95  | -7.82          | -9.22      | -2.75     | 1665244.50        | 14362874.49        | 39°33'6.6423"N | 80°54'42.9146"W | 9.62              | 196.586         | 0.20          | 0.15                 | -12.90              |  |
| 1411.00 | 0.790           | 137.730     | 1410.94  | -8.96          | -10.17     | -2.04     | 1665245.20        | 14362873.54        | 39°33'6.6328"N | 80°54'42.9056"W | 10.38             | 191.354         | 0.23          | 0.15                 | -13.82              |  |
| 1506.00 | 0.590           | 132.090     | 1505.93  | -9.99          | -10.99     | -1.24     | 1665246.00        | 14362872.73        | 39°33'6.6248"N | 80°54'42.8954"W | 11.06             | 186.436         | 0.22          | -0.21                | -5.94               |  |
| 1601.00 | 0.740           | 149.390     | 1600.93  | -11.02         | -11.84     | -0.56     | 1665246.68        | 14362871.87        | 39°33'6.6163"N | 80°54'42.8868"W | 11.86             | 182.727         | 0.26          | 0.16                 | 18.21               |  |
| 1695.00 | 0.710           | 159.710     | 1694.92  | -12.19         | -12.91     | -0.05     | 1665247.19        | 14362870.80        | 39°33'6.6057"N | 80°54'42.8803"W | 12.91             | 180.235         | 0.14          | -0.03                | 10.98               |  |
| 1790.00 | 0.810           | 148.010     | 1789.91  | -13.43         | -14.03     | 0.51      | 1665247.75        | 14362869.68        | 39°33'6.5946"N | 80°54'42.8731"W | 14.04             | 177.932         | 0.19          | 0.11                 | -12.32              |  |
| 1885.00 | 0.810           | 150.220     | 1884.90  | -14.75         | -15.19     | 1.20      | 1665248.44        | 14362868.53        | 39°33'6.5833"N | 80°54'42.8644"W | 15.23             | 175.497         | 0.03          | 0.00                 | 2.33                |  |
| 1979.00 | 0.810           | 152.040     | 1978.89  | -16.06         | -16.35     | 1.84      | 1665249.08        | 14362867.37        | 39°33'6.5717"N | 80°54'42.8562"W | 16.45             | 173.587         | 0.03          | 0.00                 | 1.94                |  |
| 2074.00 | 0.840           | 145.140     | 2073.88  | -17.39         | -17.51     | 2.55      | 1665249.79        | 14362866.20        | 39°33'6.5602"N | 80°54'42.8471"W | 17.70             | 171.714         | 0.11          | 0.03                 | -7.26               |  |
| 2169.00 | 0.780           | 133.900     | 2168.87  | -18.64         | -18.53     | 3.41      | 1665250.65        | 14362865.18        | 39°33'6.5408"N | 80°54'42.8240"W | 18.85             | 169.561         | 0.18          | -0.06                | -11.83              |  |
| 2264.00 | 0.840           | 135.990     | 2263.86  | -19.84         | -19.48     | 4.36      | 1665251.60        | 14362864.24        | 39°33'6.5233"N | 80°54'42.8109"W | 21.04             | 165.157         | 0.07          | 0.06                 | 2.20                |  |
| 2358.00 | 0.800           | 123.460     | 2357.85  | -20.99         | -20.34     | 5.39      | 1665252.63        | 14362863.38        | 39°33'6.5253"N | 80°54'42.7972"W | 22.02             | 162.931         | 0.05          | -0.05                | -0.08               |  |
| 2453.00 | 0.750           | 123.380     | 2452.84  | -22.01         | -21.05     | 6.46      | 1665253.70        | 14362862.67        | 39°33'6.5187"N | 80°54'42.7835"W | 22.98             | 160.868         | 0.05          | 0.02                 | -3.09               |  |
| 2548.00 | 0.770           | 120.440     | 2547.84  | -22.98         | -21.71     | 7.53      | 1665254.77        | 14362862.01        | 39°33'6.5187"N | 80°54'42.7835"W | 22.98             | 160.868         | 0.05          | 0.02                 | -3.09               |  |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

## WELLPATH DATA (277 stations)

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments                           |
|---------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|------------------------------------|
| 2643.00 | 0.870           | 125.040     | 2642.83  | -24.05         | -22.45     | 8.67      | 1665255.91        | 14362861.27        | 39°33'6.5114"N  | 80°54'42.7690"W | 24.07             | 158.877         | 0.13          | 0.11                 | 4.84                |                                    |
| 2737.00 | 0.640           | 123.910     | 2736.82  | -25.05         | -23.15     | 9.69      | 1665256.93        | 14362860.57        | 39°33'6.5044"N  | 80°54'42.7560"W | 25.10             | 157.283         | 0.25          | -0.24                | -1.20               |                                    |
| 2832.00 | 0.580           | 123.300     | 2831.81  | -25.85         | -23.71     | 10.54     | 1665257.77        | 14362860.01        | 39°33'6.4989"N  | 80°54'42.7452"W | 25.95             | 156.045         | 0.06          | -0.06                | -0.64               |                                    |
| 2927.00 | 0.540           | 132.930     | 2926.81  | -26.63         | -24.28     | 11.27     | 1665258.50        | 14362859.44        | 39°33'6.4933"N  | 80°54'42.7359"W | 26.77             | 155.112         | 0.11          | -0.04                | 10.14               |                                    |
| 3021.00 | 0.520           | 118.190     | 3020.80  | -27.33         | -24.79     | 11.97     | 1665259.20        | 14362858.93        | 39°33'6.4883"N  | 80°54'42.7270"W | 27.52             | 154.231         | 0.15          | -0.02                | -15.68              |                                    |
| 3116.00 | 0.500           | 132.900     | 3115.80  | -28.01         | -25.27     | 12.65     | 1665259.88        | 14362858.45        | 39°33'6.4835"N  | 80°54'42.7183"W | 28.26             | 153.411         | 0.14          | -0.02                | 15.48               |                                    |
| 3129.00 | 0.500           | 125.340     | 3128.80  | -28.11         | -25.34     | 12.74     | 1665259.97        | 14362858.38        | 39°33'6.4828"N  | 80°54'42.7171"W | 28.36             | 153.317         | 0.51          | 0.00                 | -58.15              |                                    |
| 3184.00 | 0.370           | 90.650      | 3183.80  | -28.36         | -25.48     | 13.11     | 1665260.34        | 14362858.24        | 39°33'6.4814"N  | 80°54'42.7124"W | 28.66             | 152.776         | 0.52          | -0.24                | -63.07              | APS EM <8-3/4"> (3129)(3184-6973') |
| 3278.00 | 3.840           | 143.460     | 3277.72  | -31.47         | -28.02     | 15.29     | 1665262.52        | 14362855.70        | 39°33'6.4563"N  | 80°54'42.6846"W | 31.92             | 151.379         | 3.86          | 3.69                 | 56.18               |                                    |
| 3373.00 | 4.470           | 144.950     | 3372.47  | -38.06         | -33.60     | 19.31     | 1665266.54        | 14362850.12        | 39°33'6.4011"N  | 80°54'42.6334"W | 38.76             | 150.118         | 0.67          | 0.66                 | 1.57                |                                    |
| 3468.00 | 4.540           | 138.810     | 3467.18  | -45.09         | -39.46     | 23.91     | 1665271.14        | 14362844.26        | 39°33'6.3431"N  | 80°54'42.5747"W | 46.14             | 148.788         | 0.51          | 0.07                 | -6.46               |                                    |
| 3563.00 | 6.020           | 141.290     | 3561.77  | -53.26         | -46.18     | 29.50     | 1665276.73        | 14362837.55        | 39°33'6.2766"N  | 80°54'42.5034"W | 54.80             | 147.427         | 1.58          | 1.56                 | 2.61                |                                    |
| 3657.00 | 9.190           | 157.990     | 3654.95  | -65.40         | -56.99     | 35.40     | 1665282.63        | 14362826.74        | 39°33'6.1698"N  | 80°54'42.4282"W | 67.09             | 148.153         | 4.08          | 3.37                 | 17.77               |                                    |
| 3752.00 | 11.340          | 152.050     | 3748.42  | -82.21         | -72.28     | 42.62     | 1665289.84        | 14362811.46        | 39°33'6.0186"N  | 80°54'42.3362"W | 83.91             | 149.472         | 2.52          | 2.26                 | -6.25               |                                    |
| 3847.00 | 13.940          | 157.910     | 3841.12  | -102.86        | -91.13     | 51.30     | 1665298.52        | 14362792.61        | 39°33'5.8322"N  | 80°54'42.2256"W | 104.58            | 150.622         | 3.05          | 2.74                 | 6.17                |                                    |
| 3942.00 | 16.410          | 161.870     | 3932.80  | -127.71        | -114.49    | 59.79     | 1665307.00        | 14362769.26        | 39°33'5.6012"N  | 80°54'42.0182"W | 129.16            | 152.428         | 2.82          | 2.60                 | 4.17                |                                    |
| 4036.00 | 19.290          | 166.280     | 4022.27  | -156.46        | -142.20    | 67.60     | 1665314.81        | 14362741.56        | 39°33'5.3273"N  | 80°54'42.0182"W | 157.45            | 154.574         | 3.38          | 3.06                 | 4.69                |                                    |
| 4131.00 | 22.060          | 165.500     | 4111.14  | -189.88        | -174.72    | 75.79     | 1665323.00        | 14362709.06        | 39°33'5.0058"N  | 80°54'41.9140"W | 190.45            | 156.550         | 2.93          | 2.92                 | -0.82               |                                    |
| 4225.00 | 24.500          | 161.190     | 4197.49  | -226.97        | -210.27    | 86.50     | 1665333.70        | 14362673.52        | 39°33'4.6543"N  | 80°54'41.7778"W | 227.37            | 157.640         | 3.16          | 2.60                 | -4.59               |                                    |
| 4320.00 | 26.360          | 162.600     | 4283.28  | -267.76        | -249.05    | 99.16     | 1665346.36        | 14362634.76        | 39°33'4.2710"N  | 80°54'41.6167"W | 268.06            | 158.290         | 2.06          | 1.96                 | 1.48                |                                    |
| 4415.00 | 27.270          | 167.090     | 4368.07  | -310.49        | -290.39    | 110.33    | 1665357.52        | 14362593.44        | 39°33'3.8623"N  | 80°54'41.4746"W | 310.64            | 159.197         | 2.34          | 0.96                 | 4.73                |                                    |
| 4510.00 | 27.850          | 173.410     | 4452.31  | -353.81        | -333.66    | 117.74    | 1665364.93        | 14362550.19        | 39°33'3.4346"N  | 80°54'41.3805"W | 353.82            | 160.563         | 3.14          | 0.61                 | 6.65                |                                    |
| 4604.00 | 28.000          | 175.860     | 4535.37  | -396.59        | -377.48    | 121.85    | 1665369.04        | 14362506.38        | 39°33'3.0014"N  | 80°54'41.3286"W | 396.66            | 162.110         | 1.23          | 0.16                 | 2.61                |                                    |
| 4699.00 | 26.610          | 171.950     | 4619.79  | -439.04        | -420.79    | 126.44    | 1665373.63        | 14362463.09        | 39°33'2.5733"N  | 80°54'41.2705"W | 439.38            | 163.275         | 2.39          | -1.46                | -4.12               |                                    |
| 4794.00 | 27.780          | 171.540     | 4704.29  | -481.70        | -463.76    | 132.68    | 1665379.87        | 14362420.14        | 39°33'2.1486"N  | 80°54'41.1915"W | 482.36            | 164.034         | 1.25          | 1.23                 | -0.43               |                                    |
| 4889.00 | 27.690          | 176.200     | 4788.38  | -524.77        | -507.69    | 137.40    | 1665384.58        | 14362376.23        | 39°33'1.7144"N  | 80°54'41.1317"W | 525.95            | 164.856         | 2.28          | -0.09                | 4.91                |                                    |
| 4983.00 | 28.830          | 175.030     | 4871.18  | -567.84        | -552.06    | 140.81    | 1665387.99        | 14362331.87        | 39°33'1.2758"N  | 80°54'41.0888"W | 569.73            | 165.691         | 1.35          | 1.21                 | -1.24               |                                    |
| 5078.00 | 28.100          | 171.890     | 4954.70  | -612.04        | -597.03    | 145.95    | 1665393.13        | 14362286.92        | 39°33'0.8313"N  | 80°54'41.0237"W | 614.61            | 166.263         | 1.75          | -0.77                | -3.31               |                                    |
| 5172.00 | 29.370          | 168.170     | 5037.13  | -656.66        | -641.51    | 153.80    | 1665400.98        | 14362242.45        | 39°33'0.3916"N  | 80°54'40.9240"W | 659.69            | 166.518         | 2.33          | 1.35                 | -3.96               |                                    |
| 5267.00 | 27.710          | 162.890     | 5120.59  | -701.86        | -685.43    | 165.08    | 1665412.25        | 14362198.55        | 39°32'59.9574"N | 80°54'40.7806"W | 705.03            | 166.459         | 3.18          | -1.75                | -5.56               |                                    |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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### REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

### WELLPATH DATA (277 stations) † = interpolated, ‡ = extrapolated station

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments                                   |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|--|
| 5362.00  | 28.330          | 161.900     | 5204.46  | -746.47        | -727.97    | 178.58    | 1665425.75        | 14362156.03        | 39°32'59.5369"N | 80°54'40.6088"W | 749.55            | 166.217         | 0.82          | 0.65                 | -1.04               |  |
| 5456.00  | 23.560          | 162.830     | 5288.96  | -787.57        | -767.14    | 191.06    | 1665438.22        | 14362116.88        | 39°32'59.1496"N | 80°54'40.4500"W | 790.58            | 166.015         | 5.09          | -5.07                | 0.99                |  |
| 5551.00  | 17.310          | 163.860     | 5377.94  | -820.70        | -798.89    | 200.60    | 1665447.76        | 14362085.14        | 39°32'58.8358"N | 80°54'40.3285"W | 823.69            | 165.904         | 6.59          | -6.58                | 1.08                |  |
| 5648.00  | 14.340          | 180.630     | 5471.30  | -846.45        | -824.78    | 204.49    | 1665451.64        | 14362059.26        | 39°32'58.5798"N | 80°54'40.2793"W | 849.75            | 166.076         | 5.59          | -3.06                | 17.29               |  |
| 5743.00  | 6.600           | 239.020     | 5564.86  | -858.71        | -839.41    | 199.66    | 1665446.82        | 14362044.63        | 39°32'58.4353"N | 80°54'40.3411"W | 862.83            | 166.621         | 12.86         | -8.15                | 61.46               |  |
| 5837.00  | 10.100          | 315.950     | 5658.09  | -852.35        | -836.26    | 189.27    | 1665436.43        | 14362047.79        | 39°32'58.4665"N | 80°54'40.4737"W | 857.41            | 167.247         | 11.41         | 3.72                 | 81.84               |  |
| 5932.00  | 15.360          | 337.600     | 5750.77  | -832.22        | -818.62    | 178.67    | 1665425.83        | 14362065.42        | 39°32'58.6410"N | 80°54'40.6088"W | 837.89            | 167.688         | 7.39          | 5.54                 | 22.79               |  |
| 6027.00  | 22.470          | 347.380     | 5840.61  | -801.57        | -789.22    | 169.89    | 1665417.06        | 14362094.80        | 39°32'58.9316"N | 80°54'40.7205"W | 807.30            | 167.852         | 8.17          | 7.48                 | 10.29               |  |
| 6122.00  | 32.330          | 343.840     | 5924.85  | -758.05        | -747.00    | 158.83    | 1665406.00        | 14362137.01        | 39°32'59.3490"N | 80°54'40.8612"W | 763.70            | 167.997         | 10.52         | 10.38                | -3.73               |  |
| 6216.00  | 41.400          | 340.120     | 5999.99  | -701.74        | -693.51    | 141.22    | 1665388.41        | 14362190.48        | 39°32'59.8778"N | 80°54'41.0853"W | 707.75            | 168.490         | 9.93          | 9.65                 | -3.96               |  |
| 6221.00† | 41.823          | 339.957     | 6003.73  | -698.42        | -690.39    | 140.09    | 1665387.27        | 14362193.60        | 39°32'59.9087"N | 80°54'41.0997"W | 704.46            | 168.530         | 8.73          | 8.46                 | -3.26               | Sycamore: 6221' MD                         |
| 6311.00  | 49.470          | 337.410     | 6066.60  | -634.18        | -630.53    | 116.63    | 1665363.82        | 14362253.43        | 39°33'0.5005"N  | 80°54'41.3984"W | 641.22            | 169.520         | 8.73          | 8.50                 | -2.83               |  |
| 6377.00† | 52.882          | 335.384     | 6107.98  | -582.94        | -583.43    | 96.03     | 1665343.23        | 14362300.51        | 39°33'0.9662"N  | 80°54'41.6608"W | 591.28            | 170.653         | 5.70          | 5.17                 | -3.07               | Middlesex: 6377' MD                        |
| 6405.00  | 54.340          | 334.580     | 6124.59  | -560.53        | -563.01    | 86.49     | 1665333.70        | 14362320.93        | 39°33'1.1682"N  | 80°54'41.7823"W | 569.61            | 171.266         | 5.70          | 5.21                 | -2.87               |  |
| 6500.00  | 61.560          | 335.210     | 6174.97  | -480.52        | -490.14    | 52.37     | 1665299.59        | 14362393.77        | 39°33'1.8887"N  | 80°54'42.2170"W | 492.92            | 173.901         | 7.62          | 7.60                 | 0.66                |  |
| 6542.00† | 66.197          | 337.437     | 6193.46  | -442.95        | -455.61    | 37.24     | 1665284.47        | 14362428.29        | 39°33'2.2301"N  | 80°54'42.4097"W | 457.13            | 175.327         | 12.02         | 11.04                | 5.30                | Burkett: 6542' MD                          |
| 6546.00  | 66.640          | 337.640     | 6195.06  | -439.29        | -452.22    | 35.84     | 1665283.07        | 14362431.67        | 39°33'2.2636"N  | 80°54'42.4275"W | 453.64            | 175.468         | 12.02         | 11.08                | 5.08                |  |
| 6595.00  | 67.840          | 337.420     | 6214.01  | -394.19        | -410.46    | 18.57     | 1665265.81        | 14362473.41        | 39°33'2.6764"N  | 80°54'42.6474"W | 410.88            | 177.409         | 2.48          | 2.45                 | -0.45               |  |
| 6628.00† | 70.421          | 338.314     | 6225.77  | -363.40        | -381.90    | 6.96      | 1665254.20        | 14362501.96        | 39°33'2.9588"N  | 80°54'42.7953"W | 381.97            | 178.956         | 8.22          | 7.82                 | 2.71                | Marcellus POE: 6628' MD                    |
| 6690.00  | 75.280          | 339.920     | 6244.04  | -304.21        | -326.57    | -14.14    | 1665233.11        | 14362557.27        | 39°33'3.5059"N  | 80°54'43.0640"W | 326.87            | 182.479         | 8.22          | 7.84                 | 2.59                |  |
| 6784.00  | 84.390          | 341.380     | 6260.62  | -211.79        | -239.36    | -44.75    | 1665202.51        | 14362644.45        | 39°33'4.3681"N  | 80°54'43.4537"W | 243.50            | 190.589         | 9.81          | 9.69                 | 1.55                |  |
| 6879.00  | 90.770          | 344.170     | 6264.63  | -116.98        | -148.75    | -72.83    | 1665174.44        | 14362735.02        | 39°33'5.2639"N  | 80°54'43.8111"W | 165.63            | 206.087         | 7.33          | 6.72                 | 2.94                |  |
| 6973.00  | 91.570          | 344.890     | 6262.71  | -23.18         | -58.18     | -97.90    | 1665149.38        | 14362825.55        | 39°33'6.1593"N  | 80°54'44.1300"W | 113.88            | 239.278         | 1.14          | 0.85                 | 0.77                |  |
| 7017.00  | 92.400          | 344.780     | 6261.18  | 20.70          | -15.74     | -109.40   | 1665137.88        | 14362867.98        | 39°33'6.5789"N  | 80°54'44.2763"W | 110.53            | 261.814         | 1.90          | 1.89                 | -0.25               | BH AT Curve <8-1/2"> (6973')(7017'-25416') |
| 7040.00  | 92.650          | 344.790     | 6260.17  | 43.63          | 6.43       | -115.43   | 1665131.85        | 14362890.14        | 39°33'6.7981"N  | 80°54'44.3530"W | 115.61            | 273.190         | 1.09          | 1.09                 | 0.04                |  |
| 7134.00  | 91.020          | 341.810     | 6257.16  | 137.49         | 96.41      | -142.43   | 1665104.87        | 14362980.08        | 39°33'7.6876"N  | 80°54'44.6965"W | 171.99            | 304.094         | 3.61          | -1.73                | -3.17               |  |
| 7229.00  | 90.220          | 342.740     | 6256.13  | 232.46         | 186.89     | -171.35   | 1665075.96        | 14363070.53        | 39°33'8.5821"N  | 80°54'45.0646"W | 253.55            | 317.484         | 1.29          | -0.84                | 0.98                |  |
| 7324.00  | 90.120          | 342.500     | 6255.85  | 327.42         | 277.56     | -199.73   | 1665047.59        | 14363161.15        | 39°33'9.4784"N  | 80°54'45.4257"W | 341.95            | 324.262         | 0.27          | -0.11                | -0.25               |  |
| 7418.00  | 90.090          | 342.510     | 6255.68  | 421.39         | 367.21     | -227.98   | 1665019.35        | 14363250.77        | 39°33'10.3647"N | 80°54'45.7854"W | 432.22            | 328.165         | 0.03          | -0.03                | 0.01                |  |
| 7513.00  | 90.340          | 342.680     | 6255.32  | 516.36         | 457.86     | -256.40   | 1664990.94        | 14363341.38        | 39°33'11.2609"N | 80°54'46.1470"W | 524.76            | 330.751         | 0.32          | 0.26                 | 0.18                |  |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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### REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

### WELLPATH DATA (277 stations)

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|----------|
| 7608.00  | 90.120          | 341.950     | 6254.94  | 611.33         | 548.37     | -285.26   | 1664962.09        | 14363431.86        | 39°33'12.1557"N | 80°54'46.5144"W | 618.13            | 332.517         | 0.80          | -0.23                | -0.77               |          |
| 7797.00  | 89.510          | 340.720     | 6255.55  | 800.32         | 727.42     | -345.75   | 1664901.63        | 14363610.84        | 39°33'13.9260"N | 80°54'47.2843"W | 805.41            | 334.578         | 0.73          | -0.32                | -0.65               |          |
| 7892.00  | 90.310          | 340.860     | 6255.70  | 895.32         | 817.13     | -377.00   | 1664870.39        | 14363700.51        | 39°33'14.8129"N | 80°54'47.6823"W | 899.91            | 335.233         | 0.85          | 0.84                 | 0.15                |          |
| 7986.00  | 91.020          | 340.650     | 6254.61  | 989.31         | 905.87     | -407.98   | 1664839.42        | 14363789.22        | 39°33'15.6902"N | 80°54'48.0767"W | 993.50            | 335.754         | 0.79          | 0.76                 | -0.22               |          |
| 8081.00  | 90.430          | 340.970     | 6253.41  | 1084.30        | 995.58     | -439.21   | 1664808.21        | 14363878.89        | 39°33'16.5772"N | 80°54'48.4742"W | 1088.16           | 336.195         | 0.71          | -0.62                | 0.34                |          |
| 8176.00  | 90.220          | 339.860     | 6252.87  | 1179.29        | 1085.08    | -471.05   | 1664776.38        | 14363968.36        | 39°33'17.4620"N | 80°54'48.8797"W | 1182.92           | 336.534         | 1.19          | -0.22                | -1.17               |          |
| 8270.00  | 90.460          | 341.280     | 6252.31  | 1273.29        | 1173.73    | -502.32   | 1664745.12        | 14364056.97        | 39°33'18.3384"N | 80°54'49.2778"W | 1276.70           | 336.831         | 1.53          | 0.26                 | 1.51                |          |
| 8365.00  | 90.280          | 339.130     | 6251.70  | 1368.27        | 1263.11    | -534.49   | 1664712.97        | 14364146.31        | 39°33'19.2221"N | 80°54'49.6874"W | 1371.54           | 337.064         | 2.27          | -0.19                | -2.26               |          |
| 8460.00  | 91.290          | 340.400     | 6250.40  | 1463.24        | 1352.23    | -567.34   | 1664680.12        | 14364235.40        | 39°33'20.1032"N | 80°54'50.1057"W | 1466.43           | 337.239         | 1.71          | 1.06                 | 1.34                |          |
| 8555.00  | 90.710          | 340.520     | 6248.74  | 1558.22        | 1441.75    | -599.11   | 1664648.37        | 14364324.88        | 39°33'20.9882"N | 80°54'50.5102"W | 1561.27           | 337.435         | 0.62          | -0.61                | 0.13                |          |
| 8650.00  | 90.340          | 339.870     | 6247.87  | 1653.20        | 1531.12    | -631.30   | 1664616.20        | 14364414.22        | 39°33'21.8719"N | 80°54'50.9201"W | 1656.16           | 337.593         | 0.79          | -0.39                | -0.68               |          |
| 8744.00  | 90.520          | 340.180     | 6247.16  | 1747.18        | 1619.47    | -663.41   | 1664584.10        | 14364502.53        | 39°33'22.7453"N | 80°54'51.3290"W | 1750.08           | 337.724         | 0.38          | 0.19                 | 0.33                |          |
| 8839.00  | 90.430          | 339.390     | 6246.37  | 1842.16        | 1708.61    | -696.23   | 1664551.29        | 14364591.63        | 39°33'23.6266"N | 80°54'51.7470"W | 1845.02           | 337.830         | 0.84          | -0.09                | -0.83               |          |
| 8934.00  | 90.580          | 340.490     | 6245.54  | 1937.14        | 1797.84    | -728.82   | 1664518.71        | 14364680.83        | 39°33'24.5088"N | 80°54'52.1619"W | 1939.95           | 337.933         | 1.17          | 0.16                 | 1.16                |          |
| 9029.00  | 90.490          | 339.820     | 6244.65  | 2032.12        | 1887.20    | -761.07   | 1664486.48        | 14364770.15        | 39°33'25.3923"N | 80°54'52.5725"W | 2034.88           | 338.037         | 0.71          | -0.09                | -0.71               |          |
| 9124.00  | 90.710          | 337.590     | 6243.65  | 2127.03        | 1975.70    | -795.56   | 1664452.00        | 14364858.62        | 39°33'26.2673"N | 80°54'53.0119"W | 2129.86           | 338.067         | 2.36          | 0.23                 | -2.35               |          |
| 9218.00  | 90.280          | 340.130     | 6242.84  | 2220.95        | 2063.36    | -829.46   | 1664418.11        | 14364946.24        | 39°33'27.1340"N | 80°54'53.4436"W | 2223.84           | 338.100         | 2.74          | -0.46                | 2.70                |          |
| 9313.00  | 90.430          | 340.820     | 6242.25  | 2315.95        | 2152.90    | -861.21   | 1664386.38        | 14365035.74        | 39°33'28.0192"N | 80°54'53.8479"W | 2318.76           | 338.197         | 0.74          | 0.16                 | 0.73                |          |
| 9407.00  | 90.620          | 340.770     | 6241.39  | 2409.94        | 2241.66    | -892.13   | 1664355.47        | 14365124.47        | 39°33'28.8968"N | 80°54'54.2416"W | 2412.66           | 338.299         | 0.21          | 0.20                 | -0.05               |          |
| 9502.00  | 90.770          | 340.570     | 6240.24  | 2504.93        | 2331.30    | -923.57   | 1664324.04        | 14365214.07        | 39°33'29.7830"N | 80°54'54.6419"W | 2507.58           | 338.388         | 0.26          | 0.16                 | -0.21               |          |
| 9597.00  | 90.310          | 338.600     | 6239.34  | 2599.89        | 2420.32    | -956.71   | 1664290.92        | 14365303.06        | 39°33'30.6631"N | 80°54'55.0639"W | 2602.55           | 338.432         | 2.13          | -0.48                | -2.07               |          |
| 9692.00  | 90.740          | 340.810     | 6238.47  | 2694.86        | 2509.42    | -989.66   | 1664257.98        | 14365392.12        | 39°33'31.5440"N | 80°54'55.4835"W | 2697.52           | 338.477         | 2.37          | 0.45                 | 2.33                |          |
| 9786.00  | 90.490          | 340.740     | 6237.46  | 2788.85        | 2598.17    | -1020.61  | 1664227.04        | 14365480.84        | 39°33'32.4214"N | 80°54'55.8776"W | 2791.44           | 338.554         | 0.28          | -0.27                | -0.07               |          |
| 9881.00  | 90.460          | 340.600     | 6236.68  | 2883.85        | 2687.81    | -1052.05  | 1664195.61        | 14365570.44        | 39°33'33.3077"N | 80°54'56.2780"W | 2886.37           | 338.624         | 0.15          | -0.03                | -0.15               |          |
| 9976.00  | 90.650          | 340.680     | 6235.76  | 2978.84        | 2777.44    | -1083.54  | 1664164.13        | 14365660.03        | 39°33'34.1937"N | 80°54'56.6790"W | 2981.31           | 338.688         | 0.22          | 0.20                 | 0.08                |          |
| 10071.00 | 90.520          | 340.670     | 6234.79  | 3073.83        | 2867.08    | -1114.98  | 1664132.71        | 14365749.64        | 39°33'35.0800"N | 80°54'57.0793"W | 3076.25           | 338.749         | 0.14          | -0.14                | -0.01               |          |
| 10165.00 | 90.310          | 340.730     | 6234.11  | 3167.83        | 2955.79    | -1146.05  | 1664101.65        | 14365838.32        | 39°33'35.9571"N | 80°54'57.4749"W | 3170.19           | 338.807         | 0.23          | -0.22                | 0.06                |          |
| 10355.00 | 90.550          | 340.620     | 6232.68  | 3357.82        | 3135.08    | -1208.92  | 1664038.81        | 14366017.53        | 39°33'37.7296"N | 80°54'58.2755"W | 3360.09           | 338.913         | 0.14          | 0.13                 | -0.06               |          |
| 10449.00 | 90.310          | 340.580     | 6231.97  | 3451.82        | 3223.74    | -1240.14  | 1664007.60        | 14366106.16        | 39°33'38.6061"N | 80°54'58.6731"W | 3454.05           | 338.959         | 0.26          | -0.26                | -0.04               |          |
| 10544.00 | 90.620          | 340.790     | 6231.20  | 3546.81        | 3313.39    | -1271.56  | 1663976.19        | 14366195.77        | 39°33'39.4925"N | 80°54'59.0732"W | 3549.01           | 339.005         | 0.39          | 0.33                 | 0.22                |          |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

## WELLPATH DATA (277 stations)

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|----------|
| 10639.00 | 90.340          | 340.820     | 6230.41  | 3641.81        | 3403.11    | -1302.80  | 1663944.97        | 14366285.45        | 39°33'40.3794"N | 80°54'59.4709"W | 3643.96           | 339.052         | 0.30          | -0.29                | 0.03                |          |
| 10734.00 | 90.460          | 340.650     | 6229.74  | 3736.80        | 3492.79    | -1334.14  | 1663913.64        | 14366375.09        | 39°33'41.2660"N | 80°54'59.8701"W | 3738.92           | 339.095         | 0.22          | 0.13                 | -0.18               |          |
| 10828.00 | 90.340          | 340.400     | 6229.09  | 3830.80        | 3581.41    | -1365.48  | 1663882.31        | 14366463.68        | 39°33'42.1422"N | 80°55'0.2691"W  | 3832.88           | 339.130         | 0.30          | -0.13                | -0.27               |          |
| 10923.00 | 90.340          | 341.000     | 6228.52  | 3925.79        | 3671.07    | -1396.88  | 1663850.92        | 14366553.30        | 39°33'43.0286"N | 80°55'0.6690"W  | 3927.85           | 339.168         | 0.63          | 0.00                 | 0.63                |          |
| 11017.00 | 90.490          | 341.590     | 6227.84  | 4019.79        | 3760.10    | -1427.02  | 1663820.79        | 14366642.30        | 39°33'43.9088"N | 80°55'1.0528"W  | 4021.78           | 339.217         | 0.65          | 0.16                 | 0.63                |          |
| 11112.00 | 90.090          | 340.330     | 6227.36  | 4114.79        | 3849.90    | -1458.01  | 1663789.81        | 14366732.06        | 39°33'44.7966"N | 80°55'1.4474"W  | 4116.73           | 339.258         | 1.39          | -0.42                | -1.33               |          |
| 11207.00 | 90.490          | 341.180     | 6226.88  | 4209.78        | 3939.59    | -1489.32  | 1663758.51        | 14366821.72        | 39°33'45.6833"N | 80°55'1.8462"W  | 4211.70           | 339.291         | 0.99          | 0.42                 | 0.89                |          |
| 11302.00 | 90.460          | 340.880     | 6226.09  | 4304.78        | 4029.42    | -1520.20  | 1663727.65        | 14366911.52        | 39°33'46.5714"N | 80°55'2.2394"W  | 4306.65           | 339.330         | 0.32          | -0.03                | -0.32               |          |
| 11397.00 | 90.220          | 339.780     | 6225.53  | 4399.77        | 4118.88    | -1552.18  | 1663695.68        | 14367000.93        | 39°33'47.4558"N | 80°55'2.6467"W  | 4401.64           | 339.351         | 1.19          | -0.25                | -1.16               |          |
| 11491.00 | 90.250          | 341.100     | 6225.15  | 4493.76        | 4207.45    | -1583.65  | 1663664.23        | 14367089.47        | 39°33'48.3315"N | 80°55'3.0474"W  | 4495.62           | 339.374         | 1.40          | 0.03                 | 1.40                |          |
| 11586.00 | 90.800          | 341.680     | 6224.27  | 4588.76        | 4297.48    | -1613.97  | 1663633.92        | 14367179.46        | 39°33'49.2215"N | 80°55'3.4335"W  | 4590.56           | 339.416         | 0.84          | 0.58                 | 0.61                |          |
| 11681.00 | 90.580          | 339.390     | 6223.13  | 4683.74        | 4387.04    | -1645.62  | 1663602.28        | 14367268.98        | 39°33'50.1069"N | 80°55'3.8366"W  | 4685.52           | 339.438         | 2.42          | -0.23                | -2.41               |          |
| 11775.00 | 90.060          | 342.090     | 6222.61  | 4777.73        | 4475.76    | -1676.62  | 1663571.29        | 14367357.68        | 39°33'50.9842"N | 80°55'4.2314"W  | 4779.49           | 339.464         | 2.93          | -0.55                | 2.87                |          |
| 11870.00 | 90.030          | 341.010     | 6222.53  | 4872.72        | 4565.88    | -1706.69  | 1663541.24        | 14367447.76        | 39°33'51.8751"N | 80°55'4.6142"W  | 4874.43           | 339.505         | 1.14          | -0.03                | -1.14               |          |
| 11965.00 | 90.890          | 341.710     | 6221.77  | 4967.72        | 4655.89    | -1737.05  | 1663510.89        | 14367537.73        | 39°33'52.7649"N | 80°55'5.0009"W  | 4969.37           | 339.540         | 1.17          | 0.91                 | 0.74                |          |
| 12059.00 | 90.620          | 342.180     | 6220.53  | 5061.70        | 4745.26    | -1766.18  | 1663481.77        | 14367627.06        | 39°33'53.6484"N | 80°55'5.3718"W  | 5063.28           | 339.585         | 0.58          | -0.29                | 0.50                |          |
| 12154.00 | 90.860          | 341.430     | 6219.30  | 5156.68        | 4835.50    | -1795.84  | 1663452.12        | 14367717.27        | 39°33'54.5406"N | 80°55'5.7495"W  | 5158.21           | 339.626         | 0.83          | 0.25                 | -0.79               |          |
| 12249.00 | 90.180          | 341.440     | 6218.44  | 5251.67        | 4925.55    | -1826.09  | 1663421.89        | 14367807.28        | 39°33'55.4308"N | 80°55'6.1346"W  | 5253.15           | 339.658         | 0.72          | -0.72                | 0.01                |          |
| 12344.00 | 90.550          | 341.560     | 6217.84  | 5346.67        | 5015.64    | -1856.23  | 1663391.76        | 14367897.34        | 39°33'56.3215"N | 80°55'6.5185"W  | 5348.10           | 339.691         | 0.41          | 0.39                 | 0.13                |          |
| 12438.00 | 90.220          | 341.020     | 6217.20  | 5440.66        | 5104.67    | -1886.38  | 1663361.62        | 14367986.33        | 39°33'57.2017"N | 80°55'6.9024"W  | 5442.07           | 339.719         | 0.67          | -0.35                | -0.57               |          |
| 12533.00 | 91.020          | 342.630     | 6216.18  | 5535.64        | 5194.92    | -1916.01  | 1663332.00        | 14368076.55        | 39°33'58.0939"N | 80°55'7.2797"W  | 5536.99           | 339.755         | 1.89          | 0.84                 | 1.69                |          |
| 12627.00 | 90.280          | 341.940     | 6215.11  | 5629.61        | 5284.46    | -1944.61  | 1663303.41        | 14368166.05        | 39°33'58.9791"N | 80°55'7.6439"W  | 5630.90           | 339.797         | 1.08          | -0.79                | -0.73               |          |
| 12722.00 | 90.150          | 341.930     | 6214.75  | 5724.60        | 5374.77    | -1974.07  | 1663273.96        | 14368256.33        | 39°33'59.8719"N | 80°55'8.0190"W  | 5725.83           | 339.833         | 0.14          | -0.14                | -0.01               |          |
| 12817.00 | 90.180          | 341.540     | 6214.48  | 5819.59        | 5464.99    | -2003.84  | 1663244.20        | 14368346.50        | 39°34'0.7638"N  | 80°55'8.3982"W  | 5820.78           | 339.864         | 0.41          | 0.03                 | -0.41               |          |
| 12911.00 | 90.310          | 341.740     | 6214.08  | 5913.59        | 5554.20    | -2033.45  | 1663214.60        | 14368435.68        | 39°34'1.6458"N  | 80°55'8.7752"W  | 5914.73           | 339.892         | 0.25          | 0.14                 | 0.21                |          |
| 13006.00 | 90.400          | 341.140     | 6213.49  | 6008.58        | 5644.26    | -2063.69  | 1663184.38        | 14368525.70        | 39°34'2.5361"N  | 80°55'9.1603"W  | 6009.70           | 339.916         | 0.64          | 0.09                 | -0.63               |          |
| 13101.00 | 90.520          | 341.710     | 6212.73  | 6103.57        | 5734.30    | -2093.95  | 1663154.13        | 14368615.71        | 39°34'3.4263"N  | 80°55'9.5456"W  | 6104.66           | 339.940         | 0.61          | 0.13                 | 0.60                |          |
| 13196.00 | 90.400          | 341.540     | 6211.96  | 6198.57        | 5824.46    | -2123.90  | 1663124.20        | 14368705.83        | 39°34'4.3176"N  | 80°55'9.9270"W  | 6199.62           | 339.966         | 0.22          | -0.13                | -0.18               |          |
| 13385.00 | 90.680          | 341.610     | 6210.18  | 6387.55        | 6003.76    | -2183.63  | 1663064.49        | 14368885.06        | 39°34'6.0902"N  | 80°55'10.6877"W | 6388.54           | 340.013         | 0.15          | 0.15                 | 0.04                |          |
| 13480.00 | 90.280          | 340.420     | 6209.39  | 6482.54        | 6093.59    | -2214.53  | 1663033.59        | 14368974.85        | 39°34'6.9783"N  | 80°55'11.0813"W | 6483.52           | 340.028         | 1.32          | -0.42                | -1.25               |          |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

## WELLPATH DATA (277 stations)

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|----------|
| 13574.00 | 90.580          | 341.650     | 6208.68  | 6576.54        | 6182.48    | -2245.08  | 1663003.06        | 14369063.71        | 39°34'7.8571"N  | 80°55'11.4704"W | 6577.50           | 340.042         | 1.35          | 0.32                 | 1.31                |          |
| 13669.00 | 90.460          | 341.620     | 6207.82  | 6671.53        | 6272.64    | -2275.01  | 1662973.14        | 14369153.83        | 39°34'8.7484"N  | 80°55'11.8515"W | 6672.46           | 340.065         | 0.13          | -0.13                | -0.03               |          |
| 13764.00 | 89.910          | 341.870     | 6207.51  | 6766.52        | 6362.86    | -2304.77  | 1662943.40        | 14369244.01        | 39°34'9.6403"N  | 80°55'12.2305"W | 6767.42           | 340.088         | 0.64          | -0.58                | 0.26                |          |
| 13858.00 | 90.000          | 341.740     | 6207.59  | 6860.51        | 6452.16    | -2334.12  | 1662914.06        | 14369333.28        | 39°34'10.5232"N | 80°55'12.6043"W | 6861.37           | 340.112         | 0.17          | 0.10                 | -0.14               |          |
| 13953.00 | 90.430          | 343.290     | 6207.23  | 6955.48        | 6542.76    | -2362.66  | 1662885.52        | 14369423.85        | 39°34'11.4189"N | 80°55'12.9677"W | 6956.29           | 340.145         | 1.69          | 0.45                 | 1.63                |          |
| 14048.00 | 89.720          | 343.970     | 6207.10  | 7050.38        | 6633.91    | -2389.44  | 1662858.76        | 14369514.96        | 39°34'12.3200"N | 80°55'13.3086"W | 7051.11           | 340.192         | 1.03          | -0.75                | 0.72                |          |
| 14143.00 | 90.250          | 343.500     | 6207.13  | 7145.27        | 6725.11    | -2416.05  | 1662832.16        | 14369606.12        | 39°34'13.2215"N | 80°55'13.6473"W | 7145.93           | 340.239         | 0.75          | 0.56                 | -0.49               |          |
| 14238.00 | 90.620          | 345.130     | 6206.41  | 7240.11        | 6816.57    | -2441.73  | 1662806.49        | 14369697.54        | 39°34'14.1256"N | 80°55'13.9742"W | 7240.69           | 340.292         | 1.76          | 0.39                 | 1.72                |          |
| 14332.00 | 89.880          | 343.700     | 6206.00  | 7333.94        | 6907.11    | -2466.98  | 1662781.25        | 14369788.04        | 39°34'15.0207"N | 80°55'14.2957"W | 7334.45           | 340.345         | 1.71          | -0.79                | -1.52               |          |
| 14427.00 | 89.750          | 343.490     | 6206.30  | 7428.84        | 6998.24    | -2493.81  | 1662754.43        | 14369879.14        | 39°34'15.9216"N | 80°55'14.6373"W | 7429.29           | 340.387         | 0.26          | -0.14                | -0.22               |          |
| 14522.00 | 90.220          | 345.190     | 6206.33  | 7523.68        | 7089.71    | -2519.45  | 1662728.80        | 14369970.57        | 39°34'16.8259"N | 80°55'14.9637"W | 7524.07           | 340.436         | 1.86          | 0.49                 | 1.79                |          |
| 14617.00 | 90.250          | 345.570     | 6205.94  | 7618.40        | 7181.63    | -2543.43  | 1662704.83        | 14370062.46        | 39°34'17.7346"N | 80°55'15.2689"W | 7618.72           | 340.498         | 0.40          | 0.03                 | 0.40                |          |
| 14711.00 | 90.340          | 345.910     | 6205.46  | 7712.08        | 7272.73    | -2566.59  | 1662681.68        | 14370153.52        | 39°34'18.6351"N | 80°55'15.5635"W | 7712.33           | 340.562         | 0.37          | 0.10                 | 0.36                |          |
| 14806.00 | 90.090          | 346.290     | 6205.10  | 7806.71        | 7364.95    | -2589.41  | 1662658.87        | 14370245.70        | 39°34'19.5467"N | 80°55'15.8539"W | 7806.89           | 340.629         | 0.48          | -0.26                | 0.40                |          |
| 14901.00 | 89.510          | 345.170     | 6205.43  | 7901.38        | 7457.02    | -2612.82  | 1662635.47        | 14370337.73        | 39°34'20.4569"N | 80°55'16.1519"W | 7901.51           | 340.690         | 1.33          | -0.61                | -1.18               |          |
| 14995.00 | 90.090          | 345.530     | 6205.76  | 7995.11        | 7547.96    | -2636.60  | 1662611.70        | 14370428.64        | 39°34'21.3559"N | 80°55'16.4545"W | 7995.21           | 340.745         | 0.73          | 0.62                 | 0.38                |          |
| 15090.00 | 90.430          | 345.820     | 6205.33  | 8089.80        | 7640.00    | -2660.10  | 1662588.21        | 14370520.65        | 39°34'22.2658"N | 80°55'16.7536"W | 8089.86           | 340.803         | 0.47          | 0.36                 | 0.31                |          |
| 15184.00 | 90.120          | 346.730     | 6204.88  | 8183.40        | 7731.32    | -2682.40  | 1662565.91        | 14370611.93        | 39°34'23.1685"N | 80°55'17.0374"W | 8183.43           | 340.866         | 1.02          | -0.33                | 0.97                |          |
| 15279.00 | 90.150          | 345.480     | 6204.65  | 8278.03        | 7823.54    | -2705.22  | 1662543.11        | 14370704.11        | 39°34'24.0801"N | 80°55'17.3277"W | 8278.04           | 340.926         | 1.32          | 0.03                 | -1.32               |          |
| 15373.00 | 90.250          | 346.000     | 6204.33  | 8371.71        | 7914.64    | -2728.37  | 1662519.96        | 14370795.17        | 39°34'24.9807"N | 80°55'17.6224"W | 8371.71           | 340.980         | 0.56          | 0.11                 | 0.55                |          |
| 15468.00 | 90.620          | 345.890     | 6203.60  | 8466.35        | 8006.79    | -2751.44  | 1662496.90        | 14370887.29        | 39°34'25.8916"N | 80°55'17.9159"W | 8466.35           | 341.035         | 0.41          | 0.39                 | -0.12               |          |
| 15563.00 | 90.340          | 343.780     | 6202.81  | 8561.13        | 8098.48    | -2776.29  | 1662472.06        | 14370978.94        | 39°34'26.7980"N | 80°55'18.2323"W | 8561.14           | 341.077         | 2.24          | -0.29                | -2.22               |          |
| 15658.00 | 90.710          | 344.190     | 6201.94  | 8656.00        | 8189.78    | -2802.50  | 1662445.87        | 14371070.21        | 39°34'27.7006"N | 80°55'18.5659"W | 8656.01           | 341.109         | 0.58          | 0.39                 | 0.43                |          |
| 15752.00 | 90.550          | 344.990     | 6200.90  | 8749.81        | 8280.40    | -2827.48  | 1662420.90        | 14371160.79        | 39°34'28.5964"N | 80°55'18.8839"W | 8749.84           | 341.147         | 0.87          | -0.17                | 0.85                |          |
| 15847.00 | 90.250          | 341.530     | 6200.24  | 8844.72        | 8371.36    | -2854.83  | 1662393.55        | 14371251.71        | 39°34'29.4956"N | 80°55'19.2323"W | 8844.75           | 341.169         | 3.66          | -0.32                | -3.64               |          |
| 15942.00 | 91.450          | 341.450     | 6198.83  | 8939.71        | 8461.43    | -2884.99  | 1662363.41        | 14371341.74        | 39°34'30.3861"N | 80°55'19.6164"W | 8939.74           | 341.173         | 1.27          | 1.26                 | -0.08               |          |
| 16036.00 | 90.030          | 341.860     | 6197.62  | 9033.69        | 8550.64    | -2914.57  | 1662333.84        | 14371430.92        | 39°34'31.2680"N | 80°55'19.9932"W | 9033.73           | 341.178         | 1.57          | -1.51                | 0.44                |          |
| 16131.00 | 90.280          | 341.580     | 6197.36  | 9128.69        | 8640.85    | -2944.37  | 1662304.05        | 14371521.09        | 39°34'32.1598"N | 80°55'20.3727"W | 9128.72           | 341.183         | 0.40          | 0.26                 | -0.29               |          |
| 16226.00 | 91.110          | 342.180     | 6196.21  | 9223.67        | 8731.13    | -2973.91  | 1662274.52        | 14371611.34        | 39°34'33.0523"N | 80°55'20.7490"W | 9223.71           | 341.191         | 1.08          | 0.87                 | 0.63                |          |
| 16321.00 | 90.150          | 340.440     | 6195.16  | 9318.65        | 8821.11    | -3004.35  | 1662244.09        | 14371701.28        | 39°34'33.9419"N | 80°55'21.1367"W | 9318.70           | 341.192         | 2.09          | -1.01                | -1.83               |          |





# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

## WELLPATH DATA (277 stations)

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|----------|
| 16415.00 | 90.620          | 340.590     | 6194.53  | 9412.65        | 8909.72    | -3035.71  | 1662212.75        | 14371789.86        | 39°34'34.8179"N | 80°55'21.5362"W | 9412.69           | 341.185         | 0.52          | 0.50                 | 0.16                |          |
| 16510.00 | 90.180          | 340.540     | 6193.87  | 9507.64        | 8999.31    | -3067.31  | 1662181.16        | 14371879.41        | 39°34'35.7036"N | 80°55'21.9389"W | 9507.68           | 341.179         | 0.47          | -0.46                | -0.05               |          |
| 16604.00 | 90.150          | 340.670     | 6193.60  | 9601.64        | 9087.97    | -3098.53  | 1662149.95        | 14371968.04        | 39°34'36.5802"N | 80°55'22.3365"W | 9601.67           | 341.173         | 0.14          | -0.03                | 0.14                |          |
| 16699.00 | 90.830          | 340.540     | 6192.79  | 9696.63        | 9177.58    | -3130.08  | 1662118.42        | 14372057.61        | 39°34'37.4660"N | 80°55'22.7384"W | 9696.67           | 341.168         | 0.73          | 0.72                 | -0.14               |          |
| 16794.00 | 90.180          | 341.020     | 6191.95  | 9791.63        | 9267.28    | -3161.35  | 1662087.16        | 14372147.27        | 39°34'38.3528"N | 80°55'23.1368"W | 9791.66           | 341.164         | 0.85          | -0.68                | 0.51                |          |
| 16888.00 | 90.180          | 340.840     | 6191.65  | 9885.63        | 9356.12    | -3192.06  | 1662056.46        | 14372236.08        | 39°34'39.2311"N | 80°55'23.5281"W | 9885.66           | 341.162         | 0.19          | 0.00                 | -0.19               |          |
| 16983.00 | 90.310          | 340.490     | 6191.25  | 9980.62        | 9445.76    | -3223.51  | 1662025.02        | 14372325.68        | 39°34'40.1173"N | 80°55'23.9288"W | 9980.65           | 341.157         | 0.39          | 0.14                 | -0.37               |          |
| 17077.00 | 90.060          | 340.710     | 6190.94  | 10074.62       | 9534.42    | -3254.74  | 1661993.81        | 14372414.31        | 39°34'40.9938"N | 80°55'24.3265"W | 10074.65          | 341.152         | 0.35          | -0.27                | 0.23                |          |
| 17172.00 | 89.970          | 340.700     | 6190.92  | 10169.62       | 9624.09    | -3286.13  | 1661962.43        | 14372503.94        | 39°34'41.8803"N | 80°55'24.7265"W | 10169.65          | 341.148         | 0.10          | -0.09                | -0.01               |          |
| 17266.00 | 90.430          | 341.090     | 6190.59  | 10263.62       | 9712.91    | -3316.89  | 1661931.68        | 14372592.72        | 39°34'42.7584"N | 80°55'25.1184"W | 10263.64          | 341.145         | 0.64          | 0.49                 | 0.41                |          |
| 17361.00 | 90.310          | 340.750     | 6189.98  | 10358.62       | 9802.69    | -3347.95  | 1661900.64        | 14372682.46        | 39°34'43.6459"N | 80°55'25.5140"W | 10358.64          | 341.143         | 0.38          | -0.13                | -0.36               |          |
| 17456.00 | 90.250          | 339.460     | 6189.51  | 10453.60       | 9892.01    | -3380.27  | 1661868.32        | 14372771.76        | 39°34'44.5290"N | 80°55'25.9259"W | 10453.62          | 341.134         | 1.36          | -0.06                | -1.36               |          |
| 17551.00 | 90.150          | 339.940     | 6189.18  | 10548.58       | 9981.11    | -3413.23  | 1661835.38        | 14372860.82        | 39°34'45.4099"N | 80°55'26.3459"W | 10548.59          | 341.121         | 0.52          | -0.11                | 0.51                |          |
| 17645.00 | 90.030          | 339.720     | 6189.03  | 10642.55       | 10069.35   | -3445.64  | 1661802.98        | 14372949.02        | 39°34'46.2822"N | 80°55'26.7589"W | 10642.57          | 341.109         | 0.27          | -0.13                | -0.23               |          |
| 17740.00 | 90.400          | 339.530     | 6188.68  | 10737.53       | 10158.40   | -3478.72  | 1661769.92        | 14373038.04        | 39°34'47.1626"N | 80°55'27.1803"W | 10737.54          | 341.096         | 0.44          | 0.39                 | -0.20               |          |
| 17835.00 | 90.250          | 339.670     | 6188.14  | 10832.49       | 10247.44   | -3511.83  | 1661736.82        | 14373127.04        | 39°34'48.0429"N | 80°55'27.6023"W | 10832.50          | 341.083         | 0.22          | -0.16                | 0.15                |          |
| 17930.00 | 90.250          | 339.750     | 6187.72  | 10927.47       | 10336.55   | -3544.78  | 1661703.89        | 14373216.11        | 39°34'48.9238"N | 80°55'28.0221"W | 10927.47          | 341.071         | 0.08          | 0.00                 | 0.08                |          |
| 18024.00 | 90.120          | 339.790     | 6187.42  | 11021.45       | 10424.75   | -3577.28  | 1661671.40        | 14373304.28        | 39°34'49.7958"N | 80°55'28.4362"W | 11021.45          | 341.060         | 0.14          | -0.14                | 0.04                |          |
| 18119.00 | 90.220          | 339.840     | 6187.14  | 11116.42       | 10513.91   | -3610.06  | 1661638.63        | 14373393.41        | 39°34'50.6773"N | 80°55'28.8539"W | 11116.43          | 341.050         | 0.12          | 0.11                 | 0.05                |          |
| 18214.00 | 90.250          | 339.920     | 6186.75  | 11211.41       | 10603.12   | -3642.74  | 1661605.96        | 14373482.57        | 39°34'51.5592"N | 80°55'29.2703"W | 11211.41          | 341.040         | 0.09          | 0.03                 | 0.08                |          |
| 18308.00 | 90.490          | 339.900     | 6186.14  | 11305.39       | 10691.39   | -3675.03  | 1661573.69        | 14373570.81        | 39°34'52.4319"N | 80°55'29.6818"W | 11305.39          | 341.030         | 0.26          | 0.26                 | -0.02               |          |
| 18403.00 | 90.060          | 339.980     | 6185.69  | 11400.37       | 10780.63   | -3707.61  | 1661541.12        | 14373660.01        | 39°34'53.3141"N | 80°55'30.0970"W | 11400.37          | 341.021         | 0.46          | -0.45                | 0.08                |          |
| 18498.00 | 90.120          | 339.740     | 6185.54  | 11495.35       | 10869.82   | -3740.32  | 1661508.42        | 14373749.17        | 39°34'54.1959"N | 80°55'30.5138"W | 11495.35          | 341.012         | 0.26          | 0.06                 | -0.25               |          |
| 18592.00 | 90.060          | 340.040     | 6185.39  | 11589.33       | 10958.09   | -3772.64  | 1661476.11        | 14373837.40        | 39°34'55.0686"N | 80°55'30.9256"W | 11589.33          | 341.002         | 0.33          | -0.06                | 0.32                |          |
| 18687.00 | 90.120          | 339.880     | 6185.24  | 11684.31       | 11047.34   | -3805.19  | 1661443.57        | 14373926.62        | 39°34'55.9509"N | 80°55'31.3404"W | 11684.31          | 340.994         | 0.18          | 0.06                 | -0.17               |          |
| 18781.00 | 90.340          | 339.650     | 6184.86  | 11778.29       | 11135.54   | -3837.71  | 1661411.07        | 14374014.78        | 39°34'56.8228"N | 80°55'31.7547"W | 11778.29          | 340.984         | 0.34          | 0.23                 | -0.24               |          |
| 18876.00 | 90.030          | 339.680     | 6184.55  | 11873.26       | 11224.61   | -3870.72  | 1661378.07        | 14374103.82        | 39°34'57.7035"N | 80°55'32.1754"W | 11873.27          | 340.974         | 0.33          | -0.33                | 0.03                |          |
| 18971.00 | 90.250          | 339.450     | 6184.32  | 11968.23       | 11313.64   | -3903.89  | 1661344.92        | 14374192.81        | 39°34'58.5836"N | 80°55'32.5981"W | 11968.24          | 340.962         | 0.34          | 0.23                 | -0.24               |          |
| 19065.00 | 89.820          | 339.890     | 6184.27  | 12062.20       | 11401.78   | -3936.55  | 1661312.27        | 14374280.91        | 39°34'59.4550"N | 80°55'33.0143"W | 12062.21          | 340.952         | 0.65          | -0.46                | 0.47                |          |
| 19160.00 | 89.780          | 339.660     | 6184.60  | 12157.18       | 11490.92   | -3969.39  | 1661279.44        | 14374370.02        | 39°35'0.3363"N  | 80°55'33.4328"W | 12157.19          | 340.943         | 0.25          | -0.04                | -0.24               |          |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

## WELLPATH DATA (277 stations)

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|----------|
| 19255.00 | 89.910          | 339.680     | 6184.85  | 12252.15       | 11580.00   | -4002.39  | 1661246.45        | 14374459.07        | 39°35'1.2169"N  | 80°55'33.8534"W | 12252.17          | 340.933         | 0.14          | 0.14                 | 0.02                |          |
| 19349.00 | 90.000          | 339.600     | 6184.93  | 12346.13       | 11668.13   | -4035.10  | 1661213.76        | 14374547.16        | 39°35'2.0882"N  | 80°55'34.2702"W | 12346.14          | 340.923         | 0.13          | 0.10                 | -0.09               |          |
| 19444.00 | 90.030          | 339.650     | 6184.90  | 12441.10       | 11757.19   | -4068.17  | 1661180.70        | 14374636.18        | 39°35'2.9686"N  | 80°55'34.6917"W | 12441.12          | 340.914         | 0.06          | 0.03                 | 0.05                |          |
| 19539.00 | 89.910          | 339.640     | 6184.95  | 12536.07       | 11846.26   | -4101.22  | 1661147.67        | 14374725.21        | 39°35'3.8492"N  | 80°55'35.1128"W | 12536.10          | 340.904         | 0.13          | -0.13                | -0.01               |          |
| 19633.00 | 90.000          | 339.670     | 6185.03  | 12630.05       | 11934.39   | -4133.90  | 1661115.00        | 14374813.31        | 39°35'4.7205"N  | 80°55'35.5293"W | 12630.08          | 340.895         | 0.10          | 0.10                 | 0.03                |          |
| 19728.00 | 89.940          | 339.670     | 6185.08  | 12725.02       | 12023.47   | -4166.90  | 1661082.01        | 14374902.36        | 39°35'5.6012"N  | 80°55'35.9500"W | 12725.05          | 340.886         | 0.06          | -0.06                | 0.00                |          |
| 19823.00 | 90.000          | 339.510     | 6185.13  | 12819.99       | 12112.51   | -4200.03  | 1661048.89        | 14374991.36        | 39°35'6.4814"N  | 80°55'36.3722"W | 12820.03          | 340.876         | 0.18          | 0.06                 | -0.17               |          |
| 19918.00 | 89.850          | 339.640     | 6185.25  | 12914.96       | 12201.54   | -4233.19  | 1661015.75        | 14375080.35        | 39°35'7.3615"N  | 80°55'36.7947"W | 12915.01          | 340.866         | 0.21          | -0.16                | 0.14                |          |
| 20012.00 | 89.850          | 339.620     | 6185.50  | 13008.93       | 12289.66   | -4265.91  | 1660983.05        | 14375168.44        | 39°35'8.2327"N  | 80°55'37.2117"W | 13008.98          | 340.857         | 0.02          | 0.00                 | -0.02               |          |
| 20107.00 | 89.850          | 339.600     | 6185.75  | 13103.90       | 12378.70   | -4299.01  | 1660949.96        | 14375257.45        | 39°35'9.1131"N  | 80°55'37.6335"W | 13103.96          | 340.848         | 0.02          | 0.00                 | -0.02               |          |
| 20201.00 | 89.910          | 339.520     | 6185.94  | 13197.87       | 12466.79   | -4331.83  | 1660917.15        | 14375345.49        | 39°35'9.9839"N  | 80°55'38.0519"W | 13197.94          | 340.839         | 0.11          | 0.06                 | -0.09               |          |
| 20296.00 | 90.000          | 339.700     | 6186.02  | 13292.84       | 12555.83   | -4364.93  | 1660884.06        | 14375434.51        | 39°35'10.8642"N | 80°55'38.4737"W | 13292.91          | 340.830         | 0.21          | 0.09                 | 0.19                |          |
| 20391.00 | 90.090          | 339.670     | 6185.94  | 13387.82       | 12644.92   | -4397.91  | 1660851.09        | 14375523.56        | 39°35'11.7450"N | 80°55'38.8941"W | 13387.90          | 340.822         | 0.10          | 0.09                 | -0.03               |          |
| 20485.00 | 90.280          | 339.730     | 6185.64  | 13481.79       | 12733.09   | -4430.53  | 1660818.49        | 14375611.69        | 39°35'12.6165"N | 80°55'39.3097"W | 13481.88          | 340.814         | 0.21          | 0.20                 | 0.06                |          |
| 20580.00 | 89.850          | 339.710     | 6185.53  | 13576.77       | 12822.20   | -4463.45  | 1660785.58        | 14375700.76        | 39°35'13.4975"N | 80°55'39.7294"W | 13576.86          | 340.807         | 0.45          | -0.45                | -0.02               |          |
| 20675.00 | 89.880          | 339.560     | 6185.75  | 13671.74       | 12911.26   | -4496.51  | 1660752.53        | 14375789.79        | 39°35'14.3780"N | 80°55'40.1507"W | 13671.84          | 340.799         | 0.16          | 0.03                 | -0.16               |          |
| 20770.00 | 89.850          | 339.290     | 6185.98  | 13766.70       | 13000.20   | -4529.90  | 1660719.16        | 14375878.69        | 39°35'15.2573"N | 80°55'40.5762"W | 13766.81          | 340.789         | 0.29          | -0.03                | -0.28               |          |
| 20864.00 | 89.510          | 339.690     | 6186.50  | 13860.67       | 13088.24   | -4562.83  | 1660686.24        | 14375966.70        | 39°35'16.1276"N | 80°55'40.9960"W | 13860.79          | 340.780         | 0.56          | -0.36                | 0.43                |          |
| 20959.00 | 89.510          | 339.600     | 6187.32  | 13955.63       | 13177.30   | -4595.88  | 1660653.21        | 14376055.72        | 39°35'17.0081"N | 80°55'41.4171"W | 13955.76          | 340.773         | 0.09          | 0.00                 | -0.09               |          |
| 21054.00 | 89.660          | 339.880     | 6188.00  | 14050.61       | 13266.42   | -4628.77  | 1660620.33        | 14376144.81        | 39°35'17.8892"N | 80°55'41.8364"W | 14050.75          | 340.766         | 0.33          | 0.16                 | 0.29                |          |
| 21149.00 | 89.660          | 339.330     | 6188.57  | 14145.58       | 13355.46   | -4661.88  | 1660587.23        | 14376233.82        | 39°35'18.7695"N | 80°55'42.2584"W | 14145.73          | 340.758         | 0.58          | 0.00                 | -0.58               |          |
| 21244.00 | 89.720          | 339.830     | 6189.08  | 14240.55       | 13444.49   | -4695.02  | 1660554.10        | 14376322.81        | 39°35'19.6496"N | 80°55'42.6808"W | 14240.70          | 340.750         | 0.53          | 0.06                 | 0.53                |          |
| 21338.00 | 89.660          | 339.660     | 6189.59  | 14334.52       | 13532.68   | -4727.57  | 1660521.57        | 14376410.96        | 39°35'20.5214"N | 80°55'43.0956"W | 14334.69          | 340.743         | 0.19          | -0.06                | -0.18               |          |
| 21433.00 | 89.660          | 339.650     | 6190.15  | 14429.49       | 13621.75   | -4760.59  | 1660488.56        | 14376500.00        | 39°35'21.4020"N | 80°55'43.5166"W | 14429.67          | 340.736         | 0.01          | 0.00                 | -0.01               |          |
| 21528.00 | 89.720          | 339.580     | 6190.67  | 14524.46       | 13710.80   | -4793.68  | 1660455.48        | 14376589.01        | 39°35'22.2824"N | 80°55'43.9383"W | 14524.65          | 340.729         | 0.10          | 0.06                 | -0.07               |          |
| 21623.00 | 89.290          | 339.990     | 6191.49  | 14619.44       | 13799.94   | -4826.51  | 1660422.67        | 14376678.12        | 39°35'23.1636"N | 80°55'44.3567"W | 14619.63          | 340.723         | 0.63          | -0.45                | 0.43                |          |
| 21717.00 | 89.260          | 339.870     | 6192.68  | 14713.41       | 13888.23   | -4858.76  | 1660390.43        | 14376766.37        | 39°35'24.0364"N | 80°55'44.7678"W | 14713.62          | 340.718         | 0.13          | -0.03                | -0.13               |          |
| 21812.00 | 89.290          | 339.690     | 6193.88  | 14808.38       | 13977.37   | -4891.60  | 1660357.61        | 14376855.47        | 39°35'24.9177"N | 80°55'45.1863"W | 14808.60          | 340.712         | 0.19          | 0.03                 | -0.19               |          |
| 21907.00 | 89.380          | 339.830     | 6194.98  | 14903.35       | 14066.50   | -4924.46  | 1660324.76        | 14376944.56        | 39°35'25.7988"N | 80°55'45.6052"W | 14903.58          | 340.706         | 0.18          | 0.09                 | 0.15                |          |
| 22001.00 | 88.710          | 339.700     | 6196.55  | 14997.32       | 14154.68   | -4956.97  | 1660292.26        | 14377032.71        | 39°35'26.6706"N | 80°55'46.0195"W | 14997.55          | 340.700         | 0.73          | -0.71                | -0.14               |          |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

## WELLPATH DATA (277 stations)

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|----------|
| 22096.00 | 88.950          | 339.630     | 6198.49  | 15092.27       | 14243.74   | -4989.97  | 1660259.27        | 14377121.74        | 39°35'27.5511"N | 80°55'46.4402"W | 15092.52          | 340.693         | 0.26          | 0.25                 | -0.07               |          |
| 22191.00 | 88.980          | 339.560     | 6200.21  | 15187.23       | 14332.77   | -5023.09  | 1660226.17        | 14377210.72        | 39°35'28.4312"N | 80°55'46.8623"W | 15187.48          | 340.686         | 0.08          | 0.03                 | -0.07               |          |
| 22380.00 | 88.890          | 339.830     | 6203.72  | 15376.14       | 14509.99   | -5088.66  | 1660160.62        | 14377387.88        | 39°35'30.1832"N | 80°55'47.6982"W | 15376.42          | 340.674         | 0.15          | -0.05                | 0.14                |          |
| 22475.00 | 89.110          | 339.800     | 6205.38  | 15471.11       | 14599.14   | -5121.44  | 1660127.86        | 14377476.99        | 39°35'31.0646"N | 80°55'48.1160"W | 15471.40          | 340.669         | 0.23          | 0.23                 | -0.03               |          |
| 22570.00 | 88.830          | 339.790     | 6207.08  | 15566.07       | 14688.28   | -5154.25  | 1660095.06        | 14377566.10        | 39°35'31.9458"N | 80°55'48.5341"W | 15566.37          | 340.664         | 0.29          | -0.29                | -0.01               |          |
| 22664.00 | 89.170          | 340.750     | 6208.72  | 15660.05       | 14776.75   | -5185.97  | 1660063.35        | 14377654.53        | 39°35'32.8204"N | 80°55'48.9385"W | 15660.35          | 340.661         | 1.08          | 0.36                 | 1.02                |          |
| 22759.00 | 88.890          | 340.780     | 6210.33  | 15755.03       | 14866.43   | -5217.27  | 1660032.07        | 14377744.18        | 39°35'33.7070"N | 80°55'49.3374"W | 15755.34          | 340.662         | 0.30          | -0.29                | 0.03                |          |
| 22854.00 | 88.980          | 340.770     | 6212.10  | 15850.01       | 14956.12   | -5248.54  | 1660000.80        | 14377833.83        | 39°35'34.5936"N | 80°55'49.7360"W | 15850.32          | 340.663         | 0.10          | 0.09                 | -0.01               |          |
| 22949.00 | 89.230          | 340.580     | 6213.58  | 15945.00       | 15045.76   | -5279.98  | 1659969.38        | 14377923.43        | 39°35'35.4798"N | 80°55'50.1366"W | 15945.31          | 340.663         | 0.33          | 0.26                 | -0.20               |          |
| 23043.00 | 89.110          | 340.520     | 6214.94  | 16038.99       | 15134.38   | -5311.27  | 1659938.10        | 14378012.02        | 39°35'36.3559"N | 80°55'50.5356"W | 16039.30          | 340.662         | 0.14          | -0.13                | -0.06               |          |
| 23137.00 | 89.230          | 340.720     | 6216.31  | 16132.97       | 15223.05   | -5342.46  | 1659906.92        | 14378100.65        | 39°35'37.2324"N | 80°55'50.9331"W | 16133.29          | 340.662         | 0.25          | 0.13                 | 0.21                |          |
| 23232.00 | 89.140          | 340.530     | 6217.66  | 16227.96       | 15312.66   | -5373.98  | 1659875.42        | 14378190.22        | 39°35'38.1183"N | 80°55'51.3348"W | 16228.28          | 340.661         | 0.22          | -0.09                | -0.20               |          |
| 23326.00 | 89.230          | 340.750     | 6218.99  | 16321.95       | 15401.33   | -5405.13  | 1659844.28        | 14378278.86        | 39°35'38.9949"N | 80°55'51.7319"W | 16322.27          | 340.661         | 0.25          | 0.10                 | 0.23                |          |
| 23421.00 | 89.380          | 340.900     | 6220.15  | 16416.94       | 15491.06   | -5436.33  | 1659813.09        | 14378368.55        | 39°35'39.8819"N | 80°55'52.1296"W | 16417.26          | 340.662         | 0.22          | 0.16                 | 0.16                |          |
| 23515.00 | 89.050          | 340.550     | 6221.43  | 16510.93       | 15579.78   | -5467.36  | 1659782.07        | 14378457.24        | 39°35'40.7590"N | 80°55'52.5251"W | 16511.25          | 340.663         | 0.51          | -0.35                | -0.37               |          |
| 23609.00 | 89.600          | 340.420     | 6222.54  | 16604.92       | 15668.37   | -5498.76  | 1659750.69        | 14378545.79        | 39°35'41.6348"N | 80°55'52.9253"W | 16605.25          | 340.662         | 0.60          | 0.59                 | -0.14               |          |
| 23703.00 | 89.510          | 340.450     | 6223.27  | 16698.91       | 15756.94   | -5530.24  | 1659719.22        | 14378634.33        | 39°35'42.5104"N | 80°55'53.3265"W | 16699.24          | 340.660         | 0.10          | -0.10                | 0.03                |          |
| 23798.00 | 89.570          | 340.400     | 6224.03  | 16793.91       | 15846.45   | -5562.06  | 1659687.41        | 14378723.80        | 39°35'43.3953"N | 80°55'53.7322"W | 16794.24          | 340.659         | 0.08          | 0.06                 | -0.05               |          |
| 23892.00 | 89.350          | 340.540     | 6224.92  | 16887.90       | 15935.04   | -5593.49  | 1659656.00        | 14378812.35        | 39°35'44.2711"N | 80°55'54.1328"W | 16888.23          | 340.658         | 0.28          | -0.23                | 0.15                |          |
| 23986.00 | 89.570          | 340.550     | 6225.81  | 16981.89       | 16023.66   | -5624.79  | 1659624.70        | 14378900.94        | 39°35'45.1472"N | 80°55'54.5318"W | 16982.23          | 340.657         | 0.23          | 0.23                 | 0.01                |          |
| 24080.00 | 89.570          | 340.410     | 6226.51  | 17075.88       | 16112.26   | -5656.20  | 1659593.31        | 14378989.50        | 39°35'46.0231"N | 80°55'54.9322"W | 17076.23          | 340.656         | 0.15          | 0.00                 | -0.15               |          |
| 24175.00 | 89.540          | 340.520     | 6227.25  | 17170.88       | 16201.79   | -5687.97  | 1659561.55        | 14379079.00        | 39°35'46.9081"N | 80°55'55.3371"W | 17171.22          | 340.655         | 0.12          | -0.03                | 0.12                |          |
| 24269.00 | 89.570          | 340.870     | 6227.98  | 17264.87       | 16290.50   | -5719.04  | 1659530.49        | 14379167.67        | 39°35'47.7851"N | 80°55'55.7332"W | 17265.22          | 340.656         | 0.37          | 0.03                 | 0.37                |          |
| 24363.00 | 89.570          | 340.490     | 6228.68  | 17358.87       | 16379.20   | -5750.14  | 1659499.41        | 14379256.34        | 39°35'48.6620"N | 80°55'56.1296"W | 17359.22          | 340.656         | 0.40          | 0.00                 | -0.40               |          |
| 24458.00 | 89.630          | 340.890     | 6229.35  | 17453.86       | 16468.86   | -5781.56  | 1659468.01        | 14379345.96        | 39°35'49.5483"N | 80°55'56.5300"W | 17454.22          | 340.656         | 0.43          | 0.06                 | 0.42                |          |
| 24552.00 | 89.570          | 340.430     | 6230.00  | 17547.86       | 16557.55   | -5812.68  | 1659436.89        | 14379434.62        | 39°35'50.4251"N | 80°55'56.9269"W | 17548.21          | 340.656         | 0.49          | -0.06                | -0.49               |          |
| 24646.00 | 89.510          | 340.430     | 6230.76  | 17641.85       | 16646.12   | -5844.17  | 1659405.42        | 14379523.15        | 39°35'51.3007"N | 80°55'57.3282"W | 17642.21          | 340.655         | 0.06          | -0.06                | 0.00                |          |
| 24740.00 | 89.630          | 340.730     | 6231.46  | 17735.85       | 16734.77   | -5875.42  | 1659374.18        | 14379611.76        | 39°35'52.1771"N | 80°55'57.7266"W | 17736.21          | 340.654         | 0.34          | 0.13                 | 0.32                |          |
| 24834.00 | 89.480          | 340.430     | 6232.19  | 17829.84       | 16823.42   | -5906.68  | 1659342.93        | 14379700.38        | 39°35'53.0534"N | 80°55'58.1250"W | 17830.20          | 340.654         | 0.36          | -0.16                | -0.32               |          |
| 24928.00 | 89.540          | 340.440     | 6233.00  | 17923.83       | 16911.99   | -5938.15  | 1659311.47        | 14379788.91        | 39°35'53.9290"N | 80°55'58.5263"W | 17924.20          | 340.653         | 0.06          | 0.06                 | 0.01                |          |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
Page 11 of 13



### REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

### WELLPATH DATA (277 stations) † = interpolated, ‡ = extrapolated station

| MD [ft]   | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] | Comments                   |
|-----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|----------------------------|
| 25022.00  | 89.450          | 340.670     | 6233.83  | 18017.82       | 17000.62   | -5969.44  | 1659280.19        | 14379877.51        | 39°35'54.8052"N | 80°55'58.9252"W | 18018.20          | 340.652         | 0.26          | -0.10                | 0.24                |                            |
| 25117.00  | 89.570          | 340.760     | 6234.64  | 18112.82       | 17090.29   | -6000.82  | 1659248.83        | 14379967.14        | 39°35'55.6916"N | 80°55'59.3251"W | 18113.19          | 340.653         | 0.16          | 0.13                 | 0.09                |                            |
| 25211.00  | 89.600          | 340.590     | 6235.32  | 18206.82       | 17178.99   | -6031.92  | 1659217.74        | 14380055.80        | 39°35'56.5685"N | 80°55'59.7217"W | 18207.19          | 340.653         | 0.18          | 0.03                 | -0.18               |                            |
| 25305.00  | 89.570          | 340.600     | 6236.00  | 18300.81       | 17267.65   | -6063.16  | 1659186.52        | 14380144.43        | 39°35'57.4450"N | 80°56'0.1198"W  | 18301.19          | 340.652         | 0.03          | -0.03                | 0.01                |                            |
| 25400.00  | 89.540          | 340.610     | 6236.74  | 18395.80       | 17357.25   | -6094.70  | 1659154.98        | 14380234.00        | 39°35'58.3308"N | 80°56'0.5220"W  | 18396.18          | 340.652         | 0.03          | -0.03                | 0.01                |                            |
| 25416.00  | 89.630          | 340.550     | 6236.85  | 18411.80       | 17372.34   | -6100.02  | 1659149.67        | 14380249.08        | 39°35'58.4800"N | 80°56'0.5898"W  | 18412.18          | 340.652         | 0.68          | 0.56                 | -0.37               |                            |
| 25441.00‡ | 89.630          | 340.550     | 6237.02  | 18436.80       | 17395.91   | -6108.35  | 1659141.35        | 14380272.64        | 39°35'58.7130"N | 80°56'0.6959"W  | 18437.18          | 340.652         | 0.00          | 0.00                 | 0.00                | Projected MD at TD: 25441' |

### HOLE & CASING SECTIONS - Ref Wellbore: Ringnus Unit 2H AWB Ref Wellpath: Ringnus Unit 2H AWP Proj: 25441'

| String/Diameter             | Start MD [ft] | End MD [ft] | Interval [ft] | Start TVD [ft] | End TVD [ft] | Start N/S [ft] | Start E/W [ft] | End N/S [ft] | End E/W [ft] |
|-----------------------------|---------------|-------------|---------------|----------------|--------------|----------------|----------------|--------------|--------------|
| 20in Conductor              | 25.50         | 125.50      | 100.00        | 25.50          | 125.50       | 0.00           | 0.00           | -0.26        | 0.26         |
| 17.5in Open Hole            | 125.50        | 623.00      | 497.50        | 125.50         | 622.99       | -0.26          | 0.26           | -2.05        | -0.28        |
| 13.375in Casing Surface     | 25.50         | 593.00      | 567.50        | 25.50          | 592.99       | 0.00           | 0.00           | -1.92        | -0.16        |
| 12.25in Open Hole           | 623.00        | 3203.00     | 2580.00       | 622.99         | 3202.80      | -2.05          | -0.28          | -25.59       | 13.30        |
| 9.625in Casing Intermediate | 25.50         | 3173.00     | 3147.50       | 25.50          | 3172.80      | 0.00           | 0.00           | -25.48       | 13.04        |
| 8.75in Open Hole            | 3203.00       | 7038.00     | 3835.00       | 3202.80        | 6260.26      | -25.59         | 13.30          | 4.51         | -114.91      |
| 8.5in Open Hole             | 7038.00       | 25441.00    | 18403.00      | 6260.26        | 6237.02      | 4.51           | -114.91        | 17395.91     | -6108.35     |
| 5.5in Casing Production     | 25.50         | 25421.00    | 25395.50      | 25.50          | 6236.89      | 0.00           | 0.00           | 17377.06     | -6101.69     |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'  
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### REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

### TARGETS

| Name                      | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude        | Longitude       | Shape |
|---------------------------|----------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------|
| Ringnus Unit 2H BHL Rev-5 | 6115.86  | 17382.30   | -6098.59  | 1659151.10        | 14380259.03        | 39°35'58.5783"N | 80°56'0.5714"W  | point |
| Ringnus Unit 2H POE Rev-4 | 6235.00  | -402.97    | 19.55     | 1665266.78        | 14362480.90        | 39°33'2.7505"N  | 80°54'42.6349"W | point |
| Ringnus Unit 2H LP Rev-4  | 6278.00  | -180.17    | -57.10    | 1665190.17        | 14362703.62        | 39°33'4.9533"N  | 80°54'43.6106"W | point |

### WELLPATH COMPOSITION - Ref Wellbore: Ringnus Unit 2H AWB Ref Wellpath: Ringnus Unit 2H AWP Proj: 25441'

| Start MD [ft] | End MD [ft] | Positional Uncertainty Model                           | Log Name/Comment                                | Wellbore            | Survey Date |
|---------------|-------------|--|---|---------------------|-------------|
| 25.50         | 600.00      | Gyrodata 2015 - GC+WIR+DPIPE                           | 01 Gyrodata MS Gyro <17-1/2"> (100'-600')       | Ringnus Unit 2H AWB | 6/28/2023   |
| 600.00        | 731.00      | Gyrodata 2015 - GC+WIR+DPIPE                           | 02 Gyrodata MS Gyro <12-1/4"> (600')(700'-731') | Ringnus Unit 2H AWB | 6/29/2023   |
| 731.00        | 3129.00     | BH NaviTrak (2019) (Axial Corr+HRGM)                   | 03 APS EM <12-1/4"> (731')(765'-3129')          | Ringnus Unit 2H AWB | 6/28/2023   |
| 3129.00       | 6973.00     | BH NaviTrak (2019) (Axial Corr+HRGM)                   | 04 APS EM <8-3/4"> (3129')(3184'-6973')         | Ringnus Unit 2H AWB | 7/10/2023   |
| 6973.00       | 25441.00    | BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing) | 05 BH AT Curve <8-1/2"> (6973')(7017'-25416')   | Ringnus Unit 2H AWB | 7/10/2023   |



# Actual Wellpath Report

Ringnus Unit 2H AWP Proj: 25441'

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## REFERENCE WELLPATH IDENTIFICATION

|          |                              |          |                     |
|----------|------------------------------|----------|---------------------|
| Operator | ANTERO RESOURCES CORPORATION | Well     | Ringnus Unit 2H     |
| Field    | Tyler                        | API      | 47-095-02863-0000   |
| Facility | Dry Run Pad                  | Wellbore | Ringnus Unit 2H AWB |
| Slot     | Slot B                       |          |                     |

## COMMENTS

### Wellpath general comments

API: 47-095-02863-0000

BH Job #: 111856034

Rig: H&P 317

Duration: 7/14/2023-7/19/2023

Gyrodata MS Gyro <17-1/2"> (100'-600')

Gyrodata MS Gyro <12-1/4"> (600')(700'-731')

APS EM <12-1/4"> (731')(765'-3129')

APS EM <8-3/4"> (3129')(3184'-6973')

BH AT Curve <8-1/2"> (6973')(7017'-25416')

Sycamore: 6221' MD

Middlesex: 6377' MD

Burkett: 6542' MD

Marcellus POE: 6628' MD

Projected MD at TD: 25441'

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