



Where energy meets innovation.

EQT PRODUCTION

Ritchie County, WV

PEN54

Well #514475 - Slot 514475

Main Wellbore

Design: Well # 514475 As Drilled Surveys

Standard Survey Report

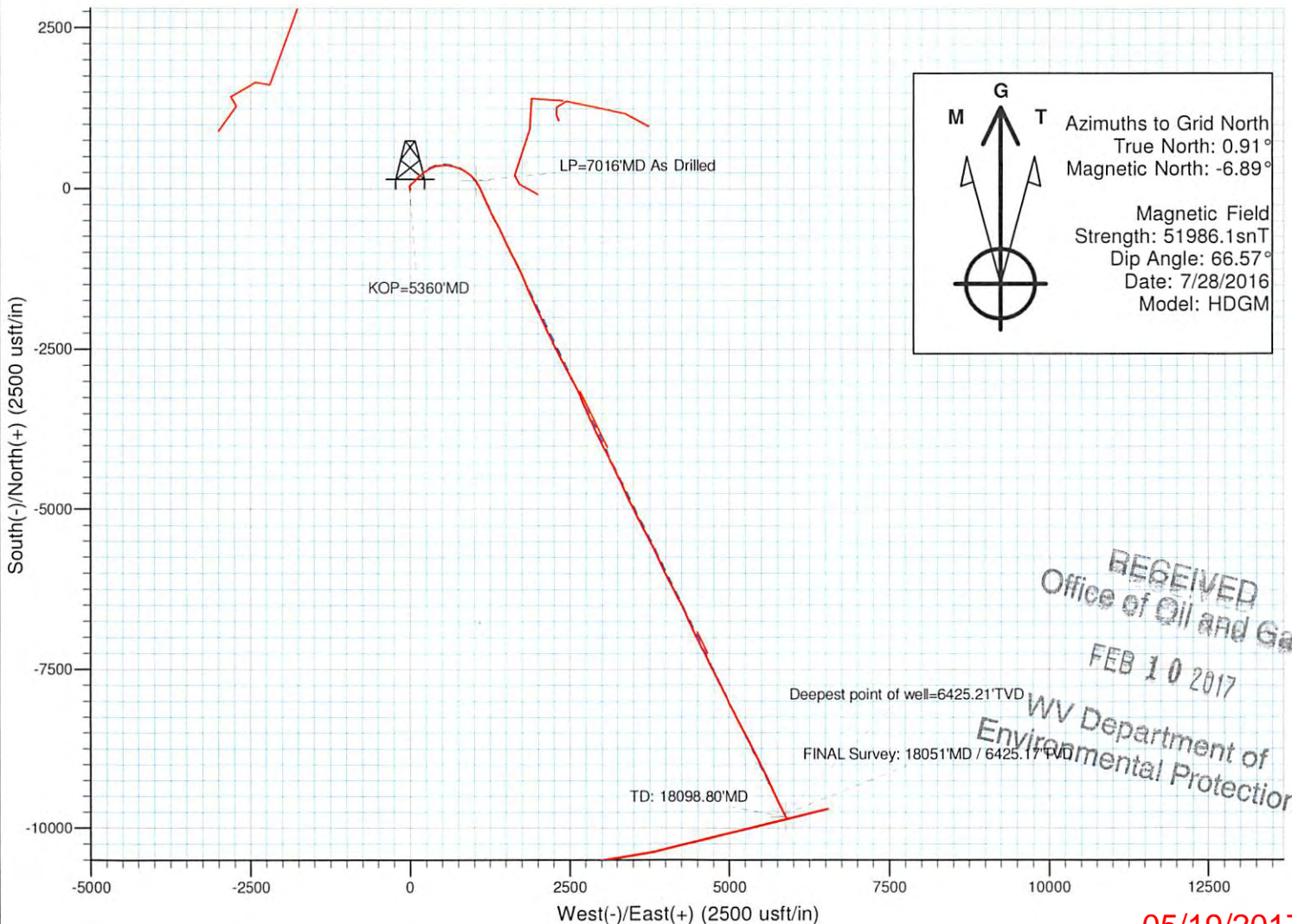
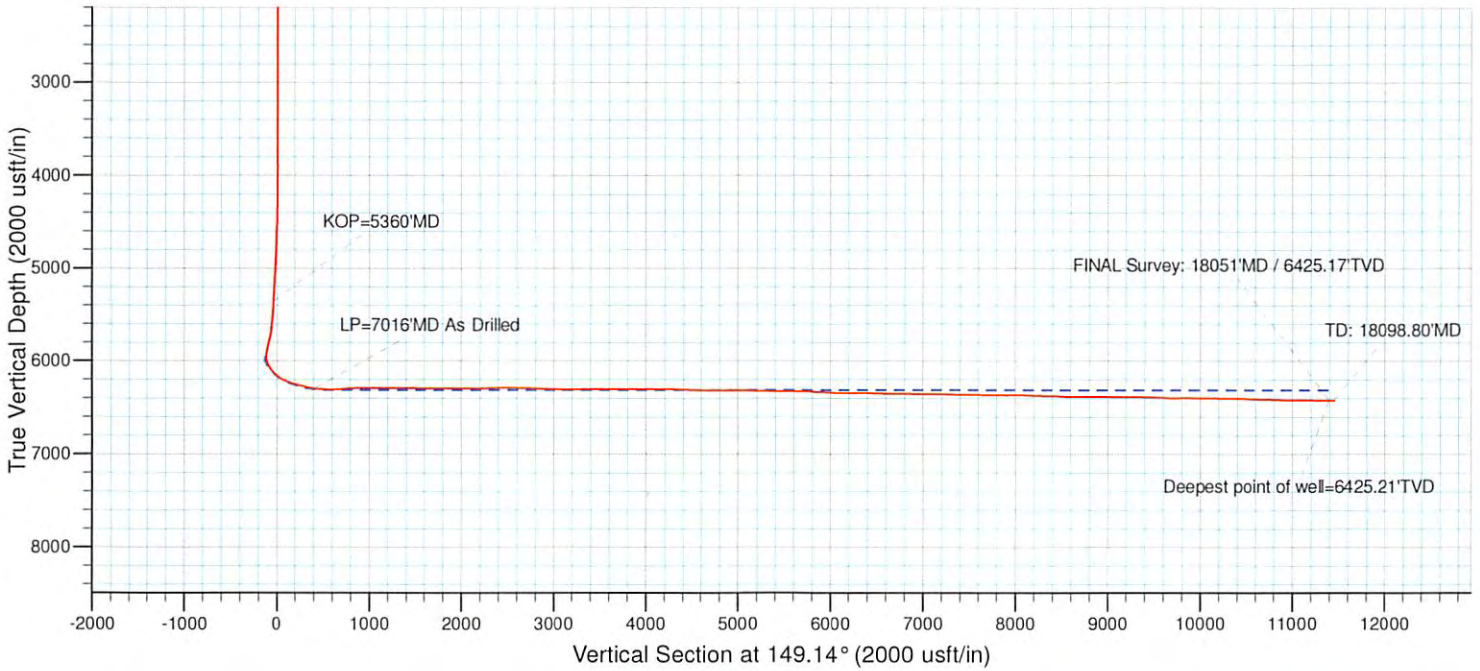
05 October, 2016



05/19/2017



Project: Ritchie County, WV
 Site: PEN54
 Well: Well #514475
 Wellbore: Main Wellbore
 Design: Well # 514475 As Drilled Surveys
 Elevation: GL 1016 + 23' KB @ 1039.00usft



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 WV Department of
 Environmental Protection

05/19/2017

| | | | |
|------------------|----------------------------------|-------------------------------------|---------------------------------|
| Company: | EQT PRODUCTION | Local Co-ordinate Reference: | Well Well #514475 - Slot 514475 |
| Project: | Ritchie County, WV | TVD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Site: | PEN54 | MD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Well: | Well #514475 | North Reference: | Grid |
| Wellbore: | Main Wellbore | Survey Calculation Method: | Minimum Curvature |
| Design: | Well # 514475 As Drilled Surveys | Database: | Well_Planner1 |

| | | | |
|--------------------|--------------------------------------|----------------------|----------------|
| Project | Ritchie County, WV | | |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum: | NAD 1927 (NADCON CONUS) | | |
| Map Zone: | West Virginia North 4701 | | |

| | | | | | |
|------------------------------|-----------|---------------------|-------------------|--------------------------|------------------|
| Site | PEN54 | | | | |
| Site Position: | | Northing: | 279,215.27 usft | Latitude: | 39° 15' 28.054 N |
| From: | Map | Easting: | 1,595,775.03 usft | Longitude: | 80° 55' 39.233 W |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13-3/16 " | Grid Convergence: | -0.91 ° |

| | | | | | | |
|-----------------------------|----------------------------|-----------|----------------------------|-------------------|----------------------|------------------|
| Well | Well #514475 - Slot 514475 | | | | | |
| Well Position | +N/-S | 0.00 usft | Northing: | 279,201.67 usft | Latitude: | 39° 15' 27.921 N |
| | +E/-W | 0.00 usft | Easting: | 1,595,781.38 usft | Longitude: | 80° 55' 39.149 W |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 1,016.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Main Wellbore | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | HDGM | 7/28/2016 | -7.80 | 66.57 | 51,986 |

| | | | | | |
|--------------------------|----------------------------------|---------------------|---------------------|----------------------|------|
| Design | Well # 514475 As Drilled Surveys | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 149.14 | |

| | | | | | |
|-----------------------|------------------|--------------------------------------|------------------|-----------------------------------|--|
| Survey Program | Date | 10/5/2016 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 110.00 | 5,210.00 | 514475 Gyrodata Gyro (Main Wellbore) | GYD_DP_MS | Gyrodata gyro-compassing and drop | |
| 5,286.00 | 18,098.80 | 514475 PRO MWD (Main Wellbore) | MWD - OWSG | MWD - OWSG | |

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 110.00 | 0.47 | 77.91 | 110.00 | 0.09 | 0.44 | 0.15 | 0.43 | 0.43 | 0.00 |
| 210.00 | 1.18 | 137.58 | 209.99 | -0.58 | 1.54 | 1.29 | 1.03 | 0.71 | 59.67 |
| 310.00 | 1.47 | 146.99 | 309.96 | -2.42 | 2.93 | 3.58 | 0.36 | 0.29 | 9.41 |
| 410.00 | 0.87 | 150.84 | 409.94 | -4.15 | 4.00 | 5.62 | 0.60 | -0.60 | 3.85 |
| 510.00 | 0.25 | 155.98 | 509.94 | -5.02 | 4.46 | 6.59 | 0.62 | -0.62 | 5.14 |
| 610.00 | 0.19 | 148.69 | 609.94 | -5.36 | 4.63 | 6.98 | 0.07 | -0.06 | -7.29 |
| 710.00 | 0.15 | 163.09 | 709.93 | -5.62 | 4.76 | 7.27 | 0.06 | -0.04 | 14.40 |
| 810.00 | 0.08 | 191.17 | 809.93 | -5.82 | 4.78 | 7.45 | 0.09 | -0.07 | 28.08 |
| 910.00 | 0.10 | 216.62 | 909.93 | -5.96 | 4.72 | 7.53 | 0.04 | 0.02 | 25.45 |



Professional Directional Survey Report



| | |
|---|---|
| Company: EQT PRODUCTION | Local Co-ordinate Reference: Well Well #514475 - Slot 514475 |
| Project: Ritchie County, WV | TVD Reference: GL 1016 + 23' KB @ 1039.00usft |
| Site: PEN54 | MD Reference: GL 1016 + 23' KB @ 1039.00usft |
| Well: Well #514475 | North Reference: Grid |
| Wellbore: Main Wellbore | Survey Calculation Method: Minimum Curvature |
| Design: Well # 514475 As Drilled Surveys | Database: Well_Planner1 |

| Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 1,010.00 | 0.19 | 335.60 | 1,009.93 | -5.88 | 4.60 | 7.40 | 0.25 | 0.09 | 118.98 |
| 1,110.00 | 0.27 | 352.12 | 1,109.93 | -5.49 | 4.49 | 7.02 | 0.10 | 0.08 | 16.52 |
| 1,210.00 | 0.30 | 358.49 | 1,209.93 | -5.00 | 4.46 | 6.57 | 0.04 | 0.03 | 6.37 |
| 1,310.00 | 0.36 | 349.68 | 1,309.93 | -4.43 | 4.39 | 6.05 | 0.08 | 0.06 | -8.81 |
| 1,410.00 | 0.34 | 342.96 | 1,409.93 | -3.83 | 4.25 | 5.47 | 0.05 | -0.02 | -6.72 |
| 1,510.00 | 0.20 | 17.98 | 1,509.93 | -3.38 | 4.22 | 5.07 | 0.21 | -0.14 | 35.02 |
| 1,610.00 | 0.24 | 44.66 | 1,609.93 | -3.07 | 4.42 | 4.90 | 0.11 | 0.04 | 26.68 |
| 1,710.00 | 0.18 | 33.57 | 1,709.93 | -2.79 | 4.65 | 4.78 | 0.07 | -0.06 | -11.09 |
| 1,810.00 | 0.22 | 63.79 | 1,809.93 | -2.57 | 4.91 | 4.73 | 0.11 | 0.04 | 30.22 |
| 1,910.00 | 0.22 | 68.25 | 1,909.92 | -2.42 | 5.26 | 4.77 | 0.02 | 0.00 | 4.46 |
| 2,010.00 | 0.20 | 64.69 | 2,009.92 | -2.27 | 5.60 | 4.82 | 0.02 | -0.02 | -3.56 |
| 2,110.00 | 0.26 | 71.06 | 2,109.92 | -2.12 | 5.97 | 4.88 | 0.07 | 0.06 | 6.37 |
| 2,210.00 | 0.21 | 66.11 | 2,209.92 | -1.97 | 6.35 | 4.95 | 0.05 | -0.05 | -4.95 |
| 2,310.00 | 0.19 | 75.66 | 2,309.92 | -1.86 | 6.68 | 5.02 | 0.04 | -0.02 | 9.55 |
| 2,410.00 | 0.19 | 57.11 | 2,409.92 | -1.73 | 6.98 | 5.06 | 0.06 | 0.00 | -18.55 |
| 2,510.00 | 0.11 | 22.50 | 2,509.92 | -1.55 | 7.16 | 5.00 | 0.12 | -0.08 | -34.61 |
| 2,610.00 | 0.16 | 73.96 | 2,609.92 | -1.42 | 7.33 | 4.98 | 0.13 | 0.05 | 51.46 |
| 2,710.00 | 0.11 | 48.85 | 2,709.92 | -1.32 | 7.53 | 5.00 | 0.08 | -0.05 | -25.11 |
| 2,810.00 | 0.09 | 45.20 | 2,809.92 | -1.20 | 7.66 | 4.96 | 0.02 | -0.02 | -3.65 |
| 2,910.00 | 0.04 | 348.59 | 2,909.92 | -1.11 | 7.71 | 4.91 | 0.08 | -0.05 | -56.61 |
| 3,010.00 | 0.04 | 128.54 | 3,009.92 | -1.10 | 7.73 | 4.91 | 0.08 | 0.00 | 139.95 |
| 3,110.00 | 0.09 | 162.44 | 3,109.92 | -1.20 | 7.78 | 5.02 | 0.06 | 0.05 | 33.90 |
| 3,210.00 | 0.06 | 134.74 | 3,209.92 | -1.31 | 7.84 | 5.15 | 0.05 | -0.03 | -27.70 |
| 3,310.00 | 0.09 | 150.77 | 3,309.92 | -1.41 | 7.92 | 5.27 | 0.04 | 0.03 | 16.03 |
| 3,410.00 | 0.11 | 215.15 | 3,409.92 | -1.56 | 7.90 | 5.39 | 0.11 | 0.02 | 64.38 |
| 3,510.00 | 0.10 | 151.16 | 3,509.92 | -1.72 | 7.89 | 5.52 | 0.11 | -0.01 | -63.99 |
| 3,610.00 | 0.09 | 174.69 | 3,609.92 | -1.87 | 7.94 | 5.68 | 0.04 | -0.01 | 23.53 |
| 3,710.00 | 0.09 | 171.38 | 3,709.92 | -2.03 | 7.96 | 5.82 | 0.01 | 0.00 | -3.31 |
| 3,810.00 | 0.09 | 163.88 | 3,809.92 | -2.18 | 7.99 | 5.97 | 0.01 | 0.00 | -7.50 |
| 3,910.00 | 0.03 | 225.91 | 3,909.92 | -2.27 | 7.99 | 6.05 | 0.08 | -0.06 | 62.03 |
| 4,010.00 | 0.22 | 10.37 | 4,009.92 | -2.10 | 8.01 | 5.91 | 0.25 | 0.19 | 144.46 |
| 4,110.00 | 0.29 | 336.51 | 4,109.92 | -1.68 | 7.94 | 5.52 | 0.16 | 0.07 | -33.86 |
| 4,210.00 | 0.64 | 344.53 | 4,209.91 | -0.91 | 7.69 | 4.73 | 0.36 | 0.35 | 8.02 |
| 4,310.00 | 1.09 | 339.01 | 4,309.90 | 0.52 | 7.20 | 3.25 | 0.46 | 0.45 | -5.52 |
| 4,410.00 | 1.44 | 338.58 | 4,409.88 | 2.57 | 6.40 | 1.08 | 0.35 | 0.35 | -0.43 |
| 4,510.00 | 1.60 | 335.40 | 4,509.84 | 5.01 | 5.36 | -1.55 | 0.18 | 0.16 | -3.18 |
| 4,610.00 | 1.81 | 334.75 | 4,609.80 | 7.71 | 4.11 | -4.51 | 0.21 | 0.21 | -0.65 |
| 4,710.00 | 1.93 | 332.88 | 4,709.75 | 10.64 | 2.67 | -7.76 | 0.13 | 0.12 | -1.87 |
| 4,810.00 | 2.09 | 337.39 | 4,809.68 | 13.82 | 1.20 | -11.25 | 0.22 | 0.16 | 4.51 |
| 4,910.00 | 2.29 | 338.12 | 4,909.61 | 17.36 | -0.25 | -15.03 | 0.20 | 0.20 | 0.73 |
| 5,010.00 | 2.66 | 337.67 | 5,009.52 | 21.36 | -1.87 | -19.29 | 0.37 | 0.37 | -0.45 |
| 5,110.00 | 2.89 | 336.53 | 5,109.40 | 25.82 | -3.76 | -24.09 | 0.24 | 0.23 | -1.14 |
| 5,210.00 | 3.16 | 336.47 | 5,209.26 | 30.66 | -5.86 | -29.32 | 0.27 | 0.27 | -0.06 |

| | | | |
|------------------|----------------------------------|-------------------------------------|---------------------------------|
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| Well: | Well #514475 | North Reference: | Grid |
| Wellbore: | Main Wellbore | Survey Calculation Method: | Minimum Curvature |
| Design: | Well # 514475 As Drilled Surveys | Database: | Well_Planner1 |

Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N-S (usft) | +E-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|-------------|-------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,286.00 | 3.30 | 331.90 | 5,285.14 | 34.51 | -7.73 | -33.59 | 0.39 | 0.18 | -6.01 |
| 5,317.00 | 3.30 | 329.40 | 5,316.09 | 36.06 | -8.61 | -35.37 | 0.46 | 0.00 | -8.06 |
| 5,349.00 | 3.20 | 333.00 | 5,348.04 | 37.65 | -9.48 | -37.18 | 0.71 | -0.31 | 11.25 |
| 5,360.00 | 3.25 | 350.29 | 5,359.02 | 38.23 | -9.67 | -37.78 | 8.82 | 0.47 | 157.15 |
| KOP=5360'MD | | | | | | | | | |
| 5,380.00 | 4.00 | 15.90 | 5,378.98 | 39.46 | -9.58 | -38.79 | 8.82 | 3.74 | 128.07 |
| 5,412.00 | 7.20 | 40.60 | 5,410.83 | 42.06 | -7.96 | -40.19 | 12.30 | 10.00 | 77.19 |
| 5,443.00 | 11.00 | 41.90 | 5,441.43 | 45.73 | -4.72 | -41.68 | 12.28 | 12.26 | 4.19 |
| 5,474.00 | 13.90 | 40.90 | 5,471.70 | 50.75 | -0.31 | -43.73 | 9.38 | 9.35 | -3.23 |
| 5,506.00 | 16.00 | 42.50 | 5,502.62 | 56.91 | 5.19 | -46.19 | 6.69 | 6.56 | 5.00 |
| 5,537.00 | 18.30 | 43.90 | 5,532.24 | 63.57 | 11.45 | -48.69 | 7.54 | 7.42 | 4.52 |
| 5,569.00 | 20.40 | 44.60 | 5,562.43 | 71.16 | 18.85 | -51.42 | 6.60 | 6.56 | 2.19 |
| 5,600.00 | 22.60 | 44.50 | 5,591.27 | 79.26 | 26.82 | -54.28 | 7.10 | 7.10 | -0.32 |
| 5,632.00 | 25.10 | 45.80 | 5,620.53 | 88.37 | 36.00 | -57.40 | 7.98 | 7.81 | 4.06 |
| 5,663.00 | 28.50 | 47.30 | 5,648.20 | 97.98 | 46.15 | -60.43 | 11.18 | 10.97 | 4.84 |
| 5,694.00 | 31.70 | 47.10 | 5,675.02 | 108.54 | 57.55 | -63.65 | 10.33 | 10.32 | -0.65 |
| 5,726.00 | 34.30 | 45.30 | 5,701.85 | 120.61 | 70.12 | -67.56 | 8.68 | 8.13 | -5.63 |
| 5,757.00 | 36.30 | 43.10 | 5,727.15 | 133.45 | 82.60 | -72.19 | 7.64 | 6.45 | -7.10 |
| 5,789.00 | 39.10 | 42.20 | 5,752.47 | 147.85 | 95.86 | -77.75 | 8.92 | 8.75 | -2.81 |
| 5,820.00 | 42.00 | 44.10 | 5,776.02 | 162.54 | 109.64 | -83.29 | 10.17 | 9.35 | 6.13 |
| 5,852.00 | 44.50 | 45.80 | 5,799.33 | 178.05 | 125.14 | -88.65 | 8.62 | 7.81 | 5.31 |
| 5,883.00 | 47.00 | 47.40 | 5,820.96 | 193.30 | 141.27 | -93.47 | 8.87 | 8.06 | 5.16 |
| 5,915.00 | 48.80 | 48.30 | 5,842.41 | 209.23 | 158.88 | -98.11 | 6.00 | 5.63 | 2.81 |
| 5,946.00 | 51.30 | 50.10 | 5,862.32 | 224.75 | 176.87 | -102.21 | 9.21 | 8.06 | 5.81 |
| 5,978.00 | 54.40 | 50.80 | 5,881.64 | 240.99 | 196.53 | -106.06 | 9.84 | 9.69 | 2.19 |
| 6,009.00 | 57.40 | 50.90 | 5,899.02 | 257.19 | 216.44 | -109.76 | 9.68 | 9.68 | 0.32 |
| 6,040.00 | 58.40 | 53.30 | 5,915.49 | 273.32 | 237.16 | -112.97 | 7.31 | 3.23 | 7.74 |
| 6,072.00 | 58.00 | 56.20 | 5,932.36 | 289.02 | 259.37 | -115.06 | 7.80 | -1.25 | 9.06 |
| 6,103.00 | 57.60 | 58.40 | 5,948.88 | 303.19 | 281.44 | -115.90 | 6.14 | -1.29 | 7.10 |
| 6,135.00 | 57.10 | 61.00 | 5,966.14 | 316.78 | 304.70 | -115.64 | 7.02 | -1.56 | 8.13 |
| 6,166.00 | 56.90 | 64.40 | 5,983.03 | 328.70 | 327.79 | -114.03 | 9.22 | -0.65 | 10.97 |
| 6,198.00 | 56.20 | 68.50 | 6,000.68 | 339.37 | 352.26 | -110.63 | 10.91 | -2.19 | 12.81 |
| 6,229.00 | 55.90 | 72.00 | 6,017.99 | 348.06 | 376.46 | -105.68 | 9.41 | -0.97 | 11.29 |
| 6,261.00 | 56.30 | 75.60 | 6,035.84 | 355.46 | 401.95 | -98.96 | 9.42 | 1.25 | 11.25 |
| 6,292.00 | 57.40 | 79.50 | 6,052.80 | 361.05 | 427.29 | -90.76 | 11.11 | 3.55 | 12.58 |
| 6,323.00 | 58.30 | 82.40 | 6,069.30 | 365.18 | 453.21 | -81.01 | 8.44 | 2.90 | 9.35 |
| 6,355.00 | 58.30 | 85.50 | 6,086.12 | 368.05 | 480.28 | -69.59 | 8.24 | 0.00 | 9.69 |
| 6,386.00 | 58.80 | 87.70 | 6,102.29 | 369.61 | 506.67 | -57.39 | 6.27 | 1.61 | 7.10 |
| 6,418.00 | 59.30 | 90.00 | 6,118.75 | 370.16 | 534.11 | -43.79 | 6.36 | 1.56 | 7.19 |
| 6,449.00 | 61.00 | 92.80 | 6,134.18 | 369.50 | 560.98 | -29.44 | 9.56 | 5.48 | 9.03 |
| 6,480.00 | 63.60 | 95.20 | 6,148.59 | 367.58 | 588.36 | -13.74 | 10.83 | 8.39 | 7.74 |
| 6,512.00 | 65.10 | 97.40 | 6,162.45 | 364.41 | 617.03 | 3.68 | 7.77 | 4.69 | 6.88 |
| 6,543.00 | 65.80 | 100.80 | 6,175.33 | 359.95 | 644.86 | 21.79 | 10.23 | 2.26 | 10.97 |



Professional Directional
Survey Report



| | | | |
|------------------|----------------------------------|-------------------------------------|---------------------------------|
| Company: | EQT PRODUCTION | Local Co-ordinate Reference: | Well Well #514475 - Slot 514475 |
| Project: | Ritchie County, WV | TVD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Site: | PEN54 | MD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Well: | Well #514475 | North Reference: | Grid |
| Wellbore: | Main Wellbore | Survey Calculation Method: | Minimum Curvature |
| Design: | Well # 514475 As Drilled Surveys | Database: | Well_Planner1 |

Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 6,575.00 | 66.90 | 103.50 | 6,188.17 | 353.78 | 673.51 | 41.78 | 8.46 | 3.44 | 8.44 |
| 6,606.00 | 68.80 | 106.20 | 6,199.86 | 346.42 | 701.26 | 62.34 | 10.13 | 6.13 | 8.71 |
| 6,638.00 | 71.20 | 109.00 | 6,210.80 | 337.32 | 729.92 | 84.84 | 11.13 | 7.50 | 8.75 |
| 6,669.00 | 73.00 | 111.40 | 6,220.33 | 327.13 | 757.60 | 107.79 | 9.38 | 5.81 | 7.74 |
| 6,700.00 | 73.60 | 113.50 | 6,229.24 | 315.79 | 785.04 | 131.59 | 6.77 | 1.94 | 6.77 |
| 6,732.00 | 74.20 | 116.40 | 6,238.12 | 302.83 | 812.91 | 157.02 | 8.91 | 1.88 | 9.06 |
| 6,763.00 | 74.70 | 119.30 | 6,246.43 | 288.87 | 839.31 | 182.54 | 9.16 | 1.61 | 9.35 |
| 6,794.00 | 75.90 | 123.30 | 6,254.30 | 273.30 | 864.92 | 209.05 | 13.07 | 3.87 | 12.90 |
| 6,826.00 | 77.30 | 125.70 | 6,261.72 | 255.67 | 890.58 | 237.34 | 8.51 | 4.38 | 7.50 |
| 6,857.00 | 78.00 | 125.70 | 6,268.35 | 238.00 | 915.17 | 265.13 | 2.26 | 2.26 | 0.00 |
| 6,889.00 | 77.80 | 128.40 | 6,275.05 | 219.15 | 940.14 | 294.12 | 8.27 | -0.63 | 8.44 |
| 6,920.00 | 78.90 | 131.80 | 6,281.32 | 199.59 | 963.36 | 322.81 | 11.31 | 3.55 | 10.97 |
| 6,952.00 | 80.00 | 136.30 | 6,287.18 | 177.72 | 985.96 | 353.18 | 14.25 | 3.44 | 14.06 |
| 6,983.00 | 81.50 | 140.10 | 6,292.16 | 154.92 | 1,006.35 | 383.21 | 13.03 | 4.84 | 12.26 |
| 7,015.00 | 82.80 | 143.60 | 6,296.53 | 129.99 | 1,025.92 | 414.65 | 11.57 | 4.06 | 10.94 |
| 7,016.00 | 82.82 | 143.73 | 6,296.66 | 129.19 | 1,026.51 | 415.64 | 12.59 | 1.56 | 12.59 |
| LP=7016'MD As Drilled | | | | | | | | | |
| 7,046.00 | 83.30 | 147.50 | 6,300.29 | 104.62 | 1,043.33 | 445.36 | 12.59 | 1.61 | 12.58 |
| 7,078.00 | 83.70 | 150.40 | 6,303.91 | 77.39 | 1,059.72 | 477.15 | 9.09 | 1.25 | 9.06 |
| 7,109.00 | 85.40 | 152.30 | 6,306.85 | 50.31 | 1,074.52 | 507.98 | 8.20 | 5.48 | 6.13 |
| 7,141.00 | 87.30 | 154.10 | 6,308.89 | 21.80 | 1,088.91 | 539.83 | 8.17 | 5.94 | 5.63 |
| 7,172.00 | 88.40 | 155.30 | 6,310.05 | -6.20 | 1,102.15 | 570.67 | 5.25 | 3.55 | 3.87 |
| 7,204.00 | 90.50 | 156.30 | 6,310.36 | -35.39 | 1,115.27 | 602.45 | 7.27 | 6.56 | 3.13 |
| 7,235.00 | 93.40 | 156.10 | 6,309.31 | -63.73 | 1,127.77 | 633.19 | 9.38 | 9.35 | -0.65 |
| 7,267.00 | 94.50 | 156.70 | 6,307.10 | -92.98 | 1,140.55 | 664.86 | 3.91 | 3.44 | 1.88 |
| 7,361.00 | 95.10 | 156.90 | 6,299.24 | -179.08 | 1,177.45 | 757.69 | 0.67 | 0.64 | 0.21 |
| 7,456.00 | 92.40 | 154.50 | 6,293.02 | -265.46 | 1,216.46 | 851.85 | 3.80 | -2.84 | -2.53 |
| 7,550.00 | 89.80 | 152.50 | 6,291.22 | -349.56 | 1,258.39 | 945.55 | 3.49 | -2.77 | -2.13 |
| 7,644.00 | 90.10 | 152.00 | 6,291.30 | -432.75 | 1,302.16 | 1,039.41 | 0.62 | 0.32 | -0.53 |
| 7,739.00 | 90.30 | 151.70 | 6,290.97 | -516.51 | 1,346.97 | 1,134.30 | 0.38 | 0.21 | 0.32 |
| 7,833.00 | 89.60 | 152.80 | 6,291.05 | -599.70 | 1,390.74 | 1,228.16 | 1.39 | 0.74 | 1.17 |
| 7,928.00 | 89.90 | 156.50 | 6,291.47 | -685.53 | 1,431.41 | 1,322.71 | 3.91 | 0.32 | 3.89 |
| 8,022.00 | 89.60 | 154.90 | 6,291.88 | -771.20 | 1,470.09 | 1,416.09 | 1.73 | -0.32 | 1.79 |
| 8,117.00 | 89.70 | 154.90 | 6,292.46 | -857.23 | 1,510.39 | 1,510.61 | 0.11 | 0.11 | 0.00 |
| 8,211.00 | 90.20 | 154.20 | 6,292.54 | -942.11 | 1,550.78 | 1,604.19 | 0.92 | 0.53 | -0.74 |
| 8,305.00 | 90.00 | 151.70 | 6,292.37 | -1,025.82 | 1,593.52 | 1,697.97 | 2.97 | -0.21 | 2.66 |
| 8,400.00 | 89.30 | 151.90 | 6,292.95 | -1,109.54 | 1,638.42 | 1,792.87 | 0.77 | -0.74 | 0.21 |
| 8,494.00 | 89.20 | 154.70 | 6,294.19 | -1,193.50 | 1,680.64 | 1,886.60 | 2.98 | -0.11 | 2.98 |
| 8,588.00 | 89.50 | 153.90 | 6,295.25 | -1,278.20 | 1,721.40 | 1,980.21 | 0.91 | 0.32 | -0.86 |
| 8,703.00 | 90.50 | 157.60 | 6,295.25 | -1,383.03 | 1,768.63 | 2,094.43 | 3.33 | 0.87 | 3.22 |
| 8,797.00 | 91.50 | 157.50 | 6,293.61 | -1,469.89 | 1,804.52 | 2,187.40 | 1.07 | 1.06 | -0.11 |
| 8,891.00 | 90.30 | 155.80 | 6,292.13 | -1,556.18 | 1,841.77 | 2,280.58 | 2.21 | -0.28 | -1.81 |
| 8,986.00 | 91.80 | 156.80 | 6,290.39 | -1,643.15 | 1,879.95 | 2,374.82 | 1.90 | 1.58 | 1.05 |
| 9,080.00 | 89.40 | 155.30 | 6,289.41 | -1,729.04 | 1,918.10 | 2,468.12 | 3.01 | -2.55 | -1.60 |

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|------------------|----------------------------------|-------------------------------------|---------------------------------|
| Company: | EQT PRODUCTION | Local Co-ordinate Reference: | Well Well #514475 - Slot 514475 |
| Project: | Ritchie County, WV | TVD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Site: | PEN54 | MD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Well: | Well #514475 | North Reference: | Grid |
| Wellbore: | Main Wellbore | Survey Calculation Method: | Minimum Curvature |
| Design: | Well # 514475 As Drilled Surveys | Database: | Well_Planner1 |

| Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 9,174.00 | 90.00 | 155.80 | 6,289.90 | -1,814.61 | 1,957.00 | 2,561.53 | 0.83 | 0.64 | 0.53 |
| 9,268.00 | 87.90 | 154.40 | 6,291.62 | -1,899.85 | 1,996.57 | 2,655.00 | 2.68 | -2.23 | -1.49 |
| 9,363.00 | 88.60 | 153.50 | 6,294.53 | -1,985.16 | 2,038.27 | 2,749.62 | 1.20 | 0.74 | -0.95 |
| 9,457.00 | 88.00 | 154.90 | 6,297.31 | -2,069.75 | 2,079.16 | 2,843.21 | 1.62 | -0.64 | 1.49 |
| 9,551.00 | 88.70 | 155.40 | 6,300.02 | -2,155.01 | 2,118.65 | 2,936.65 | 0.92 | 0.74 | 0.53 |
| 9,645.00 | 87.70 | 152.90 | 6,302.97 | -2,239.55 | 2,159.61 | 3,030.24 | 2.86 | -1.06 | -2.66 |
| 9,739.00 | 88.50 | 152.90 | 6,306.09 | -2,323.18 | 2,202.41 | 3,123.98 | 0.85 | 0.85 | 0.00 |
| 9,833.00 | 90.60 | 157.10 | 6,306.83 | -2,408.35 | 2,242.12 | 3,217.46 | 5.00 | 2.23 | 4.47 |
| 9,928.00 | 90.90 | 152.90 | 6,305.58 | -2,494.42 | 2,282.26 | 3,311.94 | 4.43 | 0.32 | -4.42 |
| 10,022.00 | 91.80 | 152.20 | 6,303.37 | -2,577.82 | 2,325.58 | 3,405.74 | 1.21 | 0.96 | -0.74 |
| 10,116.00 | 89.30 | 151.70 | 6,302.47 | -2,660.76 | 2,369.77 | 3,499.62 | 2.71 | -2.66 | -0.53 |
| 10,211.00 | 89.50 | 152.30 | 6,303.46 | -2,744.64 | 2,414.37 | 3,594.49 | 0.67 | 0.21 | 0.63 |
| 10,305.00 | 89.60 | 152.60 | 6,304.20 | -2,827.98 | 2,457.85 | 3,688.33 | 0.34 | 0.11 | 0.32 |
| 10,399.00 | 90.20 | 153.10 | 6,304.37 | -2,911.62 | 2,500.74 | 3,782.14 | 0.83 | 0.64 | 0.53 |
| 10,494.00 | 89.80 | 149.70 | 6,304.37 | -2,995.02 | 2,546.21 | 3,877.05 | 3.60 | -0.42 | -3.58 |
| 10,588.00 | 89.40 | 151.70 | 6,305.02 | -3,076.98 | 2,592.21 | 3,971.01 | 2.17 | -0.43 | 2.13 |
| 10,682.00 | 90.60 | 155.80 | 6,305.02 | -3,161.27 | 2,633.77 | 4,064.68 | 4.54 | 1.28 | 4.36 |
| 10,777.00 | 90.60 | 157.30 | 6,304.03 | -3,248.42 | 2,671.58 | 4,158.88 | 1.58 | 0.00 | 1.58 |
| 10,871.00 | 89.20 | 157.90 | 6,304.19 | -3,335.32 | 2,707.40 | 4,251.85 | 1.62 | -1.49 | 0.64 |
| 10,965.00 | 87.00 | 156.90 | 6,307.31 | -3,422.05 | 2,743.50 | 4,344.82 | 2.57 | -2.34 | -1.06 |
| 11,059.00 | 87.30 | 155.40 | 6,311.98 | -3,507.91 | 2,781.46 | 4,438.00 | 1.63 | 0.32 | -1.60 |
| 11,154.00 | 88.00 | 155.10 | 6,315.88 | -3,594.11 | 2,821.20 | 4,532.38 | 0.80 | 0.74 | -0.32 |
| 11,248.00 | 88.70 | 155.00 | 6,318.58 | -3,679.31 | 2,860.83 | 4,625.84 | 0.75 | 0.74 | -0.11 |
| 11,342.00 | 89.60 | 154.70 | 6,319.98 | -3,764.38 | 2,900.77 | 4,719.36 | 1.01 | 0.96 | -0.32 |
| 11,436.00 | 90.60 | 154.50 | 6,319.81 | -3,849.30 | 2,941.09 | 4,812.94 | 1.08 | 1.06 | -0.21 |
| 11,530.98 | 89.90 | 153.80 | 6,319.40 | -3,934.77 | 2,982.50 | 4,907.55 | 1.04 | -0.74 | -0.74 |
| 11,624.98 | 90.20 | 153.70 | 6,319.32 | -4,019.07 | 3,024.08 | 5,001.24 | 0.34 | 0.32 | -0.11 |
| 11,720.00 | 89.10 | 150.50 | 6,319.90 | -4,103.04 | 3,068.54 | 5,096.12 | 3.56 | -1.16 | -3.37 |
| 11,814.00 | 87.70 | 152.80 | 6,322.52 | -4,185.72 | 3,113.15 | 5,189.99 | 2.86 | -1.49 | 2.45 |
| 11,908.00 | 88.70 | 152.50 | 6,325.48 | -4,269.17 | 3,156.32 | 5,283.76 | 1.11 | 1.06 | -0.32 |
| 12,002.00 | 89.30 | 154.40 | 6,327.12 | -4,353.24 | 3,198.32 | 5,377.48 | 2.12 | 0.64 | 2.02 |
| 12,097.00 | 90.10 | 154.60 | 6,327.61 | -4,438.99 | 3,239.22 | 5,472.06 | 0.87 | 0.84 | 0.21 |
| 12,191.00 | 91.20 | 154.00 | 6,326.55 | -4,523.68 | 3,279.98 | 5,565.67 | 1.33 | 1.17 | -0.64 |
| 12,286.00 | 89.10 | 155.70 | 6,326.30 | -4,609.67 | 3,320.35 | 5,660.19 | 2.84 | -2.21 | 1.79 |
| 12,380.00 | 87.50 | 156.30 | 6,329.09 | -4,695.50 | 3,358.57 | 5,753.48 | 1.82 | -1.70 | 0.64 |
| 12,474.00 | 88.70 | 156.60 | 6,332.20 | -4,781.62 | 3,396.10 | 5,846.66 | 1.32 | 1.28 | 0.32 |
| 12,569.00 | 86.50 | 152.60 | 6,336.18 | -4,867.34 | 3,436.80 | 5,941.12 | 4.80 | -2.32 | -4.21 |
| 12,663.00 | 87.20 | 152.30 | 6,341.35 | -4,950.56 | 3,480.21 | 6,034.82 | 0.81 | 0.74 | -0.32 |
| 12,757.00 | 88.80 | 154.40 | 6,344.63 | -5,034.51 | 3,522.35 | 6,128.50 | 2.81 | 1.70 | 2.23 |
| 12,852.00 | 91.00 | 154.10 | 6,344.79 | -5,120.07 | 3,563.62 | 6,223.12 | 2.34 | 2.32 | -0.32 |
| 12,946.00 | 89.10 | 153.50 | 6,344.71 | -5,204.41 | 3,605.12 | 6,316.80 | 2.12 | -2.02 | -0.64 |
| 13,040.00 | 89.80 | 153.20 | 6,345.62 | -5,288.42 | 3,647.28 | 6,410.54 | 0.81 | 0.74 | -0.32 |
| 13,135.00 | 88.40 | 153.00 | 6,347.11 | -5,373.13 | 3,690.25 | 6,505.30 | 1.49 | -1.47 | -0.21 |

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|------------------|----------------------------------|-------------------------------------|---------------------------------|
| Company: | EQT PRODUCTION | Local Co-ordinate Reference: | Well Well #514475 - Slot 514475 |
| Project: | Ritchie County, WV | TVD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Site: | PEN54 | MD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Well: | Well #514475 | North Reference: | Grid |
| Wellbore: | Main Wellbore | Survey Calculation Method: | Minimum Curvature |
| Design: | Well # 514475 As Drilled Surveys | Database: | Well_Planner1 |

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N-S (usft) | +E-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|-------------|-------------|-------------------------|-------------------------|------------------------|-----------------------|
| 13,229.00 | 88.90 | 152.80 | 6,349.32 | -5,456.78 | 3,733.06 | 6,599.07 | 0.57 | 0.53 | -0.21 |
| 13,323.00 | 89.40 | 152.40 | 6,350.72 | -5,540.23 | 3,776.31 | 6,692.89 | 0.68 | 0.53 | -0.43 |
| 13,418.00 | 90.00 | 154.80 | 6,351.21 | -5,625.31 | 3,818.55 | 6,787.60 | 2.60 | 0.63 | 2.53 |
| 13,512.00 | 88.60 | 155.50 | 6,352.36 | -5,710.60 | 3,858.05 | 6,881.07 | 1.67 | -1.49 | 0.74 |
| 13,606.00 | 89.10 | 155.50 | 6,354.25 | -5,796.12 | 3,897.02 | 6,974.47 | 0.53 | 0.53 | 0.00 |
| 13,701.00 | 90.00 | 156.00 | 6,354.99 | -5,882.73 | 3,936.04 | 7,068.84 | 1.08 | 0.95 | 0.53 |
| 13,795.00 | 88.90 | 153.90 | 6,355.90 | -5,967.88 | 3,975.83 | 7,162.34 | 2.52 | -1.17 | -2.23 |
| 13,889.00 | 89.60 | 153.80 | 6,357.13 | -6,052.25 | 4,017.26 | 7,256.02 | 0.75 | 0.74 | -0.11 |
| 13,983.00 | 88.30 | 152.80 | 6,358.85 | -6,136.21 | 4,059.49 | 7,349.75 | 1.74 | -1.38 | -1.06 |
| 14,078.00 | 89.20 | 152.60 | 6,360.92 | -6,220.61 | 4,103.05 | 7,444.54 | 0.97 | 0.95 | -0.21 |
| 14,172.00 | 90.20 | 152.50 | 6,361.41 | -6,304.03 | 4,146.38 | 7,538.37 | 1.07 | 1.06 | -0.11 |
| 14,266.00 | 88.80 | 153.30 | 6,362.24 | -6,387.70 | 4,189.20 | 7,632.16 | 1.72 | -1.49 | 0.85 |
| 14,360.00 | 89.60 | 152.50 | 6,363.55 | -6,471.37 | 4,232.01 | 7,725.95 | 1.20 | 0.85 | -0.85 |
| 14,455.00 | 88.80 | 154.70 | 6,364.87 | -6,556.45 | 4,274.25 | 7,820.65 | 2.46 | -0.84 | 2.32 |
| 14,549.00 | 89.60 | 156.50 | 6,366.19 | -6,642.04 | 4,313.07 | 7,914.04 | 2.10 | 0.85 | 1.91 |
| 14,643.00 | 90.80 | 156.10 | 6,365.86 | -6,728.11 | 4,350.85 | 8,007.30 | 1.35 | 1.28 | -0.43 |
| 14,738.00 | 88.30 | 154.90 | 6,366.60 | -6,814.55 | 4,390.24 | 8,101.70 | 2.92 | -2.63 | -1.26 |
| 14,832.00 | 88.20 | 156.20 | 6,369.48 | -6,900.07 | 4,429.13 | 8,195.07 | 1.39 | -0.11 | 1.38 |
| 14,927.00 | 88.30 | 154.10 | 6,372.38 | -6,986.23 | 4,469.03 | 8,289.50 | 2.21 | 0.11 | -2.21 |
| 15,021.00 | 88.40 | 151.60 | 6,375.08 | -7,069.83 | 4,511.91 | 8,383.26 | 2.66 | 0.11 | -2.66 |
| 15,115.00 | 88.20 | 152.50 | 6,377.87 | -7,152.83 | 4,555.95 | 8,477.09 | 0.98 | -0.21 | 0.96 |
| 15,209.00 | 89.30 | 153.80 | 6,379.92 | -7,236.68 | 4,598.39 | 8,570.84 | 1.81 | 1.17 | 1.38 |
| 15,304.00 | 90.50 | 153.80 | 6,380.09 | -7,321.91 | 4,640.33 | 8,665.52 | 1.26 | 1.26 | 0.00 |
| 15,398.00 | 88.80 | 153.20 | 6,380.66 | -7,406.03 | 4,682.27 | 8,759.24 | 1.92 | -1.81 | -0.64 |
| 15,492.00 | 89.80 | 153.60 | 6,381.81 | -7,490.07 | 4,724.36 | 8,852.98 | 1.15 | 1.06 | 0.43 |
| 15,586.00 | 88.10 | 153.10 | 6,383.53 | -7,574.07 | 4,766.51 | 8,946.70 | 1.89 | -1.81 | -0.53 |
| 15,680.00 | 89.10 | 153.10 | 6,385.83 | -7,657.87 | 4,809.03 | 9,040.45 | 1.06 | 1.06 | 0.00 |
| 15,775.00 | 90.10 | 152.80 | 6,386.49 | -7,742.48 | 4,852.23 | 9,135.24 | 1.10 | 1.05 | -0.32 |
| 15,869.00 | 89.40 | 154.70 | 6,386.90 | -7,826.78 | 4,893.80 | 9,228.93 | 2.15 | -0.74 | 2.02 |
| 15,963.00 | 90.50 | 154.50 | 6,386.99 | -7,911.69 | 4,934.12 | 9,322.50 | 1.19 | 1.17 | -0.21 |
| 16,058.00 | 88.20 | 153.50 | 6,388.06 | -7,997.06 | 4,975.76 | 9,417.14 | 2.64 | -2.42 | -1.05 |
| 16,152.00 | 87.30 | 153.50 | 6,391.75 | -8,081.12 | 5,017.67 | 9,510.80 | 0.96 | -0.96 | 0.00 |
| 16,246.00 | 87.70 | 152.90 | 6,395.85 | -8,164.95 | 5,060.01 | 9,604.47 | 0.77 | 0.43 | -0.64 |
| 16,340.00 | 89.60 | 153.10 | 6,398.07 | -8,248.67 | 5,102.67 | 9,698.23 | 2.03 | 2.02 | 0.21 |
| 16,435.00 | 91.10 | 153.20 | 6,397.49 | -8,333.43 | 5,145.58 | 9,792.99 | 1.58 | 1.58 | 0.11 |
| 16,533.00 | 89.10 | 152.30 | 6,397.32 | -8,420.55 | 5,190.45 | 9,890.79 | 2.24 | -2.04 | -0.92 |
| 16,628.00 | 89.70 | 152.30 | 6,398.31 | -8,504.65 | 5,234.60 | 9,985.64 | 0.63 | 0.63 | 0.00 |
| 16,723.00 | 89.10 | 153.00 | 6,399.31 | -8,589.03 | 5,278.25 | 10,080.46 | 0.97 | -0.63 | 0.74 |
| 16,817.00 | 88.50 | 153.30 | 6,401.28 | -8,672.88 | 5,320.69 | 10,174.20 | 0.71 | -0.64 | 0.32 |
| 16,912.00 | 89.60 | 152.60 | 6,402.85 | -8,757.47 | 5,363.89 | 10,268.98 | 1.37 | 1.16 | -0.74 |
| 17,006.00 | 88.70 | 154.60 | 6,404.25 | -8,841.65 | 5,405.68 | 10,362.68 | 2.33 | -0.96 | 2.13 |
| 17,101.00 | 90.00 | 154.20 | 6,405.32 | -8,927.32 | 5,446.72 | 10,457.27 | 1.43 | 1.37 | -0.42 |
| 17,196.00 | 86.50 | 153.90 | 6,408.22 | -9,012.69 | 5,488.27 | 10,551.86 | 3.70 | -3.68 | -0.32 |
| 17,290.00 | 87.70 | 153.90 | 6,412.98 | -9,096.99 | 5,529.57 | 10,645.42 | 1.28 | 1.28 | 0.00 |

| | | | |
|------------------|----------------------------------|-------------------------------------|---------------------------------|
| Company: | EQT PRODUCTION | Local Co-ordinate Reference: | Well Well #514475 - Slot 514475 |
| Project: | Ritchie County, WV | TVD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Site: | PEN54 | MD Reference: | GL 1016 + 23' KB @ 1039.00usft |
| Well: | Well #514475 | North Reference: | Grid |
| Wellbore: | Main Wellbore | Survey Calculation Method: | Minimum Curvature |
| Design: | Well # 514475 As Drilled Surveys | Database: | Well_Planner1 |

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 17,385.00 | 88.90 | 153.70 | 6,415.80 | -9,182.19 | 5,571.49 | 10,740.06 | 1.28 | 1.26 | -0.21 |
| 17,480.00 | 89.40 | 155.20 | 6,417.21 | -9,267.89 | 5,612.46 | 10,834.64 | 1.66 | 0.53 | 1.58 |
| 17,575.00 | 88.90 | 156.30 | 6,418.62 | -9,354.50 | 5,651.47 | 10,928.99 | 1.27 | -0.53 | 1.16 |
| 17,668.00 | 90.30 | 156.30 | 6,419.27 | -9,439.65 | 5,688.85 | 11,021.26 | 1.51 | 1.51 | 0.00 |
| 17,763.00 | 89.30 | 154.60 | 6,419.60 | -9,526.06 | 5,728.32 | 11,115.68 | 2.08 | -1.05 | -1.79 |
| 17,857.00 | 87.80 | 154.30 | 6,421.98 | -9,610.83 | 5,768.85 | 11,209.25 | 1.63 | -1.60 | -0.32 |
| 17,952.00 | 88.90 | 154.10 | 6,424.71 | -9,696.33 | 5,810.18 | 11,303.84 | 1.18 | 1.16 | -0.21 |
| 18,047.00 | 90.50 | 153.90 | 6,425.21 | -9,781.71 | 5,851.82 | 11,398.49 | 1.70 | 1.68 | -0.21 |
| Deepest point of well=6425.21'TVD | | | | | | | | | |
| 18,051.00 | 90.50 | 153.80 | 6,425.17 | -9,785.30 | 5,853.58 | 11,402.48 | 2.50 | 0.00 | -2.50 |
| FINAL Survey: 18051'MD / 6425.17'TVD | | | | | | | | | |
| 18,098.80 | 90.50 | 153.80 | 6,424.76 | -9,828.19 | 5,874.69 | 11,450.12 | 0.00 | 0.00 | 0.00 |
| TD: 18098.80'MD | | | | | | | | | |

| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|------------------|
| TD: 18098.80'MD | 0.00 | 0.00 | 0.00 | -9,828.19 | 5,874.69 | 269,373.48 | 1,601,656.06 | 39° 13' 51.705 N | 80° 54' 22.516 W |
| - actual wellpath misses target center by 6424.76usft at 18098.80usft MD (6424.76 TVD, -9828.19 N, 5874.69 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| LP=7016'MD As Drilled | 0.00 | 0.00 | 0.00 | 129.19 | 1,026.51 | 279,330.86 | 1,596,807.89 | 39° 15' 29.359 N | 80° 55' 26.127 W |
| - actual wellpath misses target center by 1034.62usft at 4.23usft MD (4.23 TVD, 0.00 N, 0.00 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------|-----------------------|-------------------|--------------|--------------------------------------|
| | | +N/-S (usft) | +E/-W (usft) | |
| 5,360.00 | 5,359.02 | 38.23 | -9.67 | KOP=5360'MD |
| 7,016.00 | 6,296.66 | 129.19 | 1,026.51 | LP=7016'MD As Drilled |
| 18,047.00 | 6,425.21 | -9,781.71 | 5,851.82 | Deepest point of well=6425.21'TVD |
| 18,051.00 | 6,425.17 | -9,785.30 | 5,853.58 | FINAL Survey: 18051'MD / 6425.17'TVD |
| 18,098.80 | 6,424.76 | -9,828.19 | 5,874.69 | TD: 18098.80'MD |

Checked By: _____ Approved By: _____ Date: _____