



# SWN PRODUCTION COMPANY, LLC



Location: Brooke County, WV

Slot: 206H

Field: Brooke

Well: State of WV DNR C BRK 206H

Facility: State of WV DNR C BRK Pad

Wellbore: State of WV DNR C BRK 206H AWB

Plot reference wellpath is State of WV DNR C BRK 206H awp Proj: 31365'

Grid System: NAD83 / UTM Zone 17 North, US feet

True vertical depths are referenced to SDC 501 (KB)

North Reference: Grid north

Reference wellpath measured depths are referenced to SDC 501 (KB)

Scale: True distance

SDC 501 (KB) to Mean Sea Level: 1015 feet

Coordinates are in feet referenced to Slot

Mean Sea Level to Ground level (At Slot: 206H): -989 feet

Depths are in feet

Offset wellpath MDs are referenced to each path's default MD datum

Created by: tranlam on 2024-07-08; Database: WA\_MPL\_EASTERNUS\_Defn

## Location Information

| Facility Name                                  |              |              | Grid East (US ft) | Grid North (US ft) | Latitude       | Longitude       |
|------------------------------------------------|--------------|--------------|-------------------|--------------------|----------------|-----------------|
| State of WV DNR C BRK Pad                      |              |              | 1769295.332       | 14637176.548       | 40°18'8.5200"N | 80°32'15.9300"W |
| Slot                                           | Local N (ft) | Local E (ft) | Grid East (US ft) | Grid North (US ft) | Latitude       | Longitude       |
| 206H                                           | -31.64       | 11.31        | 1769306.640       | 14637144.920       | 40°18'8.2068"N | 80°32'15.7861"W |
| SDC 501 (KB) to Ground level (At Slot: 206H)   |              |              |                   |                    | 26ft           |                 |
| Mean Sea Level to Ground level (At Slot: 206H) |              |              |                   |                    | -989ft         |                 |
| SDC 501 (KB) to Mean Sea Level                 |              |              |                   |                    | 1015ft         |                 |

## Bottom Hole Location

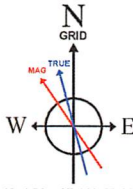
| MD (ft)  | Inc (°) | Az (°)  | TVD (ft) | Local N (ft) | Local E (ft) | Grid East (US ft) | Grid North (US ft) | Latitude       | Longitude       |
|----------|---------|---------|----------|--------------|--------------|-------------------|--------------------|----------------|-----------------|
| 31365.00 | 89.230  | 157.850 | 5945.32  | -24085.31    | 7926.43      | 1777230.04        | 14613068.83        | 40°14'9.7819"N | 80°30'35.2027"W |

API: 47009003410000  
BH JOB: 112302105  
DURATION: 06.27.2024 to 07.02.2024  
RIG: SDC 501

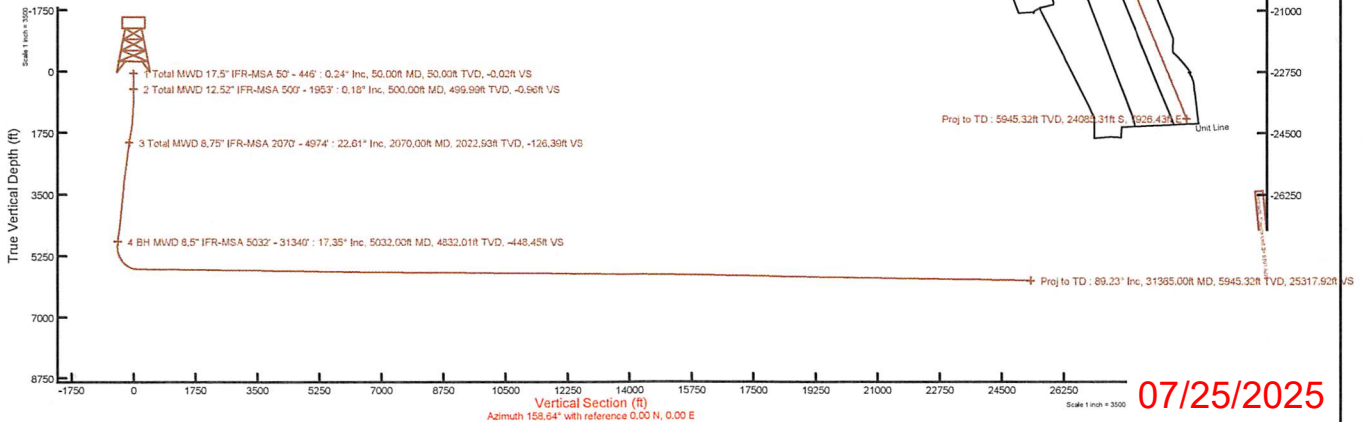
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Environmental Protection



User specified Dip: 67.10° Field: 51821 nT  
Magnetic North is 8.90 degrees West of True North (at 6/18/2024)  
Grid North is 0.30 degrees East of True North  
To correct azimuth from True to Grid subtract 0.30 degrees  
To correct azimuth from Magnetic to Grid subtract 9.20 degrees



**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**REPORT SETUP INFORMATION**

|                     |                                    |                  |                          |
|---------------------|------------------------------------|------------------|--------------------------|
| Projection System   | NAD83 / UTM Zone 17 North, US feet | Software System  | WellArchitect® 6.0       |
| North Reference     | Grid                               | User             | Tranlam                  |
| Scale               | 0.999619                           | Report Generated | 7/11/2024 at 11:22:54 PM |
| Convergence at slot | 0.30° 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         | -31.64            | 11.31    | 1769306.64       | 14637144.92     | 40°18'8.2068"N         | 80°32'15.7861"W |
| Facility Reference Pt |                   |          | 1769295.33       | 14637176.55     | 40°18'8.5200"N         | 80°32'15.9300"W |
| Field Reference Pt    |                   |          | 0.00             | 0.00            | 0°00'0.0000"           | 85°29'19.4780"W |

**WELLPATH DATUM**

|                          |                   |                                             |                   |
|--------------------------|-------------------|---------------------------------------------|-------------------|
| Calculation method       | Minimum curvature | SDC 501 (KB) to Facility Vertical Datum     | 1015.00ft         |
| Horizontal Reference Pt  | Slot              | SDC 501 (KB) to Mean Sea Level              | 1015.00ft         |
| Vertical Reference Pt    | SDC 501 (KB)      | SDC 501 (KB) to Ground Level at Slot (206H) | 26.00ft           |
| MD Reference Pt          | SDC 501 (KB)      | Section Origin                              | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level    | Section Azimuth                             | 158.64°           |

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WV Department of  
Environmental Protection

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 stations)** † = interpolated, ‡ = extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|----------------------|--------------------|------------------|
| 0.00†      | 0.000              | 45.170         | 0.00        | 0.00              | 0.00          | 0.00         | 1769306.64           | 14637144.92           | 40°18'8.2068"N | 80°32'15.7861"W | 0.00                 | 0.000              | 0.00             |
| 26.00      | 0.000              | 45.170         | 26.00       | 0.00              | 0.00          | 0.00         | 1769306.64           | 14637144.92           | 40°18'8.2068"N | 80°32'15.7861"W | 0.00                 | 0.000              | 0.00             |
| 50.00      | 0.240              | 45.170         | 50.00       | -0.02             | 0.04          | 0.04         | 1769306.68           | 14637144.96           | 40°18'8.2071"N | 80°32'15.7857"W | 0.05                 | 45.170             | 1.00             |
| 100.00     | 0.300              | 53.590         | 100.00      | -0.10             | 0.19          | 0.22         | 1769306.86           | 14637145.11           | 40°18'8.2086"N | 80°32'15.7833"W | 0.29                 | 49.025             | 0.14             |
| 150.00     | 0.280              | 74.860         | 150.00      | -0.12             | 0.30          | 0.44         | 1769307.08           | 14637145.22           | 40°18'8.2097"N | 80°32'15.7805"W | 0.53                 | 55.931             | 0.22             |
| 200.00     | 0.130              | 42.360         | 200.00      | -0.13             | 0.37          | 0.59         | 1769307.23           | 14637145.29           | 40°18'8.2104"N | 80°32'15.7784"W | 0.70                 | 58.084             | 0.37             |
| 250.00     | 0.280              | 18.490         | 250.00      | -0.25             | 0.53          | 0.67         | 1769307.31           | 14637145.45           | 40°18'8.2119"N | 80°32'15.7774"W | 0.85                 | 51.820             | 0.34             |
| 300.00     | 0.360              | 43.150         | 300.00      | -0.41             | 0.76          | 0.82         | 1769307.46           | 14637145.68           | 40°18'8.2142"N | 80°32'15.7755"W | 1.12                 | 47.150             | 0.31             |
| 350.00     | 0.450              | 40.490         | 350.00      | -0.57             | 1.02          | 1.05         | 1769307.69           | 14637145.94           | 40°18'8.2168"N | 80°32'15.7725"W | 1.47                 | 45.833             | 0.18             |
| 357.00     | 0.480              | 41.910         | 357.00      | -0.60             | 1.07          | 1.09         | 1769307.73           | 14637145.98           | 40°18'8.2172"N | 80°32'15.7720"W | 1.52                 | 45.662             | 0.46             |
| 400.00     | 0.270              | 27.070         | 399.99      | -0.74             | 1.29          | 1.26         | 1769307.90           | 14637146.21           | 40°18'8.2194"N | 80°32'15.7698"W | 1.80                 | 44.259             | 0.53             |
| 446.00     | 0.430              | 56.470         | 445.99      | -0.85             | 1.48          | 1.45         | 1769308.09           | 14637146.40           | 40°18'8.2213"N | 80°32'15.7673"W | 2.07                 | 44.383             | 0.51             |
| 500.00     | 0.180              | 12.260         | 499.99      | -0.96             | 1.68          | 1.64         | 1769308.28           | 14637146.60           | 40°18'8.2232"N | 80°32'15.7649"W | 2.34                 | 44.317             | 0.60             |
| 538.00     | 0.260              | 330.670        | 537.99      | -1.10             | 1.81          | 1.61         | 1769308.25           | 14637146.73           | 40°18'8.2246"N | 80°32'15.7653"W | 2.42                 | 41.608             | 0.46             |
| 550.00     | 0.300              | 316.320        | 549.99      | -1.16             | 1.86          | 1.57         | 1769308.21           | 14637146.78           | 40°18'8.2250"N | 80°32'15.7657"W | 2.43                 | 40.264             | 0.67             |
| 600.00     | 1.100              | 278.150        | 599.99      | -1.51             | 2.02          | 1.01         | 1769307.65           | 14637146.94           | 40°18'8.2267"N | 80°32'15.7730"W | 2.26                 | 26.502             | 1.77             |
| 628.00     | 1.330              | 265.920        | 627.98      | -1.74             | 2.03          | 0.42         | 1769307.06           | 14637146.95           | 40°18'8.2268"N | 80°32'15.7806"W | 2.08                 | 11.572             | 1.23             |
| 650.00     | 1.630              | 267.160        | 649.98      | -1.92             | 2.00          | -0.15        | 1769306.49           | 14637146.92           | 40°18'8.2265"N | 80°32'15.7879"W | 2.01                 | 355.691            | 1.37             |
| 700.00     | 2.770              | 267.250        | 699.94      | -2.53             | 1.91          | -2.07        | 1769304.57           | 14637146.83           | 40°18'8.2257"N | 80°32'15.8127"W | 2.81                 | 312.683            | 2.28             |
| 720.00     | 3.010              | 267.290        | 719.91      | -2.85             | 1.86          | -3.08        | 1769303.57           | 14637146.78           | 40°18'8.2253"N | 80°32'15.8257"W | 3.59                 | 301.155            | 1.20             |
| 783.00     | 4.560              | 264.710        | 782.77      | -4.07             | 1.55          | -7.22        | 1769299.42           | 14637146.47           | 40°18'8.2224"N | 80°32'15.8792"W | 7.39                 | 282.113            | 2.47             |
| 874.00     | 6.570              | 269.180        | 873.34      | -6.90             | 1.14          | -16.03       | 1769290.62           | 14637146.06           | 40°18'8.2189"N | 80°32'15.9929"W | 16.07                | 274.074            | 2.26             |
| 965.00     | 8.770              | 270.110        | 963.52      | -11.27            | 1.08          | -28.17       | 1769278.48           | 14637146.00           | 40°18'8.2189"N | 80°32'16.1497"W | 28.19                | 272.197            | 2.42             |
| 1056.00    | 11.040             | 269.470        | 1053.16     | -16.91            | 1.01          | -43.83       | 1769262.83           | 14637145.93           | 40°18'8.2190"N | 80°32'16.3517"W | 43.84                | 271.325            | 2.50             |
| 1149.00    | 12.270             | 264.640        | 1144.24     | -22.80            | 0.01          | -62.57       | 1769244.09           | 14637144.93           | 40°18'8.2101"N | 80°32'16.5937"W | 62.57                | 270.007            | 1.69             |
| 1239.00    | 12.160             | 261.270        | 1232.20     | -27.51            | -2.32         | -81.46       | 1769225.21           | 14637142.60           | 40°18'8.1880"N | 80°32'16.8377"W | 81.49                | 268.366            | 0.80             |
| 1331.00    | 13.190             | 260.230        | 1321.96     | -31.73            | -5.58         | -101.38      | 1769205.30           | 14637139.35           | 40°18'8.1569"N | 80°32'17.0950"W | 101.54               | 266.852            | 1.15             |
| 1421.00    | 13.280             | 263.700        | 1409.57     | -36.48            | -8.45         | -121.78      | 1769184.91           | 14637136.47           | 40°18'8.1295"N | 80°32'17.3584"W | 122.07               | 266.029            | 0.89             |
| 1512.00    | 14.480             | 269.110        | 1497.92     | -43.18            | -9.78         | -143.54      | 1769163.15           | 14637135.15           | 40°18'8.1175"N | 80°32'17.6394"W | 143.88               | 266.104            | 1.94             |
| 1602.00    | 15.900             | 276.060        | 1584.78     | -52.79            | -8.65         | -167.06      | 1769139.65           | 14637136.27           | 40°18'8.1299"N | 80°32'17.9428"W | 167.28               | 267.036            | 2.56             |

# Actual Wellpath Report

State of WV DNR C BRK 206H awp Proj: 31365'  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

## WELLPATH DATA (343 stations)

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|----------------------|--------------------|------------------|
| 1692.00    | 18.020             | 280.150        | 1670.86     | -65.75            | -4.89         | -193.02      | 1769113.69           | 14637140.03           | 40°18'8.1683"N | 80°32'18.2777"W | 193.08               | 268.547            | 2.70             |
| 1783.00    | 20.500             | 279.040        | 1756.76     | -81.17            | 0.09          | -222.62      | 1769084.11           | 14637145.01           | 40°18'8.2191"N | 80°32'18.6594"W | 222.62               | 270.023            | 2.75             |
| 1875.00    | 22.460             | 275.810        | 1842.37     | -97.35            | 4.40          | -256.02      | 1769050.72           | 14637149.32           | 40°18'8.2634"N | 80°32'19.0901"W | 256.05               | 270.985            | 2.49             |
| 1953.00    | 21.840             | 272.280        | 1914.62     | -109.97           | 6.49          | -285.34      | 1769021.41           | 14637151.40           | 40°18'8.2856"N | 80°32'19.4684"W | 285.41               | 271.302            | 1.88             |
| 2070.00    | 22.610             | 268.640        | 2022.93     | -126.39           | 6.82          | -329.57      | 1768977.20           | 14637151.74           | 40°18'8.2911"N | 80°32'20.0393"W | 329.64               | 271.185            | 1.35             |
| 2161.00    | 21.490             | 268.540        | 2107.27     | -138.05           | 5.98          | -363.72      | 1768943.06           | 14637150.90           | 40°18'8.2846"N | 80°32'20.4801"W | 363.77               | 270.942            | 1.23             |
| 2251.00    | 21.340             | 267.630        | 2191.06     | -148.99           | 4.88          | -396.56      | 1768910.23           | 14637149.80           | 40°18'8.2754"N | 80°32'20.9041"W | 396.59               | 270.705            | 0.41             |
| 2342.00    | 20.100             | 269.110        | 2276.17     | -159.84           | 3.95          | -428.74      | 1768878.06           | 14637148.87           | 40°18'8.2679"N | 80°32'21.3195"W | 428.76               | 270.528            | 1.48             |
| 2432.00    | 19.290             | 269.580        | 2360.91     | -170.56           | 3.60          | -459.07      | 1768847.74           | 14637148.52           | 40°18'8.2660"N | 80°32'21.7109"W | 459.09               | 270.450            | 0.92             |
| 2523.00    | 18.520             | 271.480        | 2447.00     | -181.55           | 3.87          | -488.55      | 1768818.28           | 14637148.79           | 40°18'8.2701"N | 80°32'22.0914"W | 488.57               | 270.454            | 1.08             |
| 2613.00    | 17.940             | 273.000        | 2532.48     | -192.81           | 4.96          | -516.68      | 1768790.16           | 14637149.88           | 40°18'8.2824"N | 80°32'22.4544"W | 516.71               | 270.550            | 0.83             |
| 2705.00    | 18.050             | 270.770        | 2619.98     | -204.02           | 5.90          | -545.08      | 1768761.77           | 14637150.81           | 40°18'8.2931"N | 80°32'22.8209"W | 545.12               | 270.620            | 0.76             |
| 2797.00    | 18.340             | 269.070        | 2707.38     | -214.45           | 5.85          | -573.81      | 1768733.05           | 14637150.77           | 40°18'8.2941"N | 80°32'23.1916"W | 573.84               | 270.584            | 0.66             |
| 2888.00    | 18.170             | 274.890        | 2793.81     | -225.72           | 6.83          | -602.26      | 1768704.61           | 14637151.75           | 40°18'8.3052"N | 80°32'23.5588"W | 602.30               | 270.650            | 2.01             |
| 2979.00    | 19.010             | 272.700        | 2880.06     | -238.04           | 8.74          | -631.20      | 1768675.68           | 14637153.65           | 40°18'8.3256"N | 80°32'23.9322"W | 631.26               | 270.793            | 1.20             |
| 3069.00    | 19.660             | 270.470        | 2964.99     | -249.64           | 9.55          | -660.99      | 1768645.91           | 14637154.47           | 40°18'8.3351"N | 80°32'24.3165"W | 661.05               | 270.828            | 1.09             |
| 3160.00    | 18.880             | 268.740        | 3050.89     | -260.40           | 9.35          | -691.01      | 1768615.89           | 14637154.27           | 40°18'8.3347"N | 80°32'24.7041"W | 691.08               | 270.776            | 1.06             |
| 3250.00    | 18.480             | 266.770        | 3136.15     | -269.84           | 8.23          | -719.81      | 1768587.10           | 14637153.15           | 40°18'8.3251"N | 80°32'25.0759"W | 719.86               | 270.655            | 0.83             |
| 3340.00    | 18.630             | 264.120        | 3221.47     | -278.11           | 5.95          | -748.35      | 1768558.57           | 14637150.87           | 40°18'8.3041"N | 80°32'25.4444"W | 748.38               | 270.456            | 0.95             |
| 3431.00    | 17.600             | 264.870        | 3307.96     | -285.84           | 3.23          | -776.52      | 1768530.42           | 14637148.15           | 40°18'8.2786"N | 80°32'25.8081"W | 776.52               | 270.239            | 1.16             |
| 3522.00    | 16.510             | 266.420        | 3394.96     | -293.63           | 1.20          | -803.13      | 1768503.82           | 14637146.12           | 40°18'8.2599"N | 80°32'26.1516"W | 803.13               | 270.085            | 1.30             |
| 3615.00    | 16.640             | 266.590        | 3484.09     | -301.77           | -0.42         | -829.61      | 1768477.35           | 14637144.50           | 40°18'8.2452"N | 80°32'26.4935"W | 829.61               | 269.971            | 0.15             |
| 3706.00    | 16.800             | 267.210        | 3571.24     | -309.98           | -1.84         | -855.75      | 1768451.22           | 14637143.08           | 40°18'8.2326"N | 80°32'26.8310"W | 855.75               | 269.877            | 0.26             |
| 3797.00    | 17.140             | 267.730        | 3658.28     | -318.55           | -3.01         | -882.28      | 1768424.70           | 14637141.91           | 40°18'8.2224"N | 80°32'27.1736"W | 882.29               | 269.805            | 0.41             |
| 3887.00    | 17.580             | 267.790        | 3744.18     | -327.35           | -4.06         | -909.12      | 1768397.87           | 14637140.86           | 40°18'8.2134"N | 80°32'27.5199"W | 909.12               | 269.744            | 0.49             |
| 3978.00    | 18.090             | 266.730        | 3830.81     | -336.24           | -5.39         | -936.95      | 1768370.05           | 14637139.53           | 40°18'8.2016"N | 80°32'27.8793"W | 936.97               | 269.670            | 0.66             |
| 4068.00    | 18.350             | 264.960        | 3916.30     | -344.56           | -7.43         | -965.02      | 1768341.99           | 14637137.49           | 40°18'8.1829"N | 80°32'28.2417"W | 965.04               | 269.559            | 0.68             |
| 4159.00    | 18.550             | 266.110        | 4002.62     | -352.93           | -9.67         | -993.73      | 1768313.29           | 14637135.25           | 40°18'8.1622"N | 80°32'28.6124"W | 993.77               | 269.442            | 0.46             |
| 4250.00    | 18.370             | 266.190        | 4088.94     | -361.60           | -11.61        | -1022.48     | 1768284.56           | 14637133.32           | 40°18'8.1446"N | 80°32'28.9835"W | 1022.54              | 269.349            | 0.20             |
| 4340.00    | 18.640             | 267.510        | 4174.28     | -370.53           | -13.18        | -1051.00     | 1768256.05           | 14637131.75           | 40°18'8.1305"N | 80°32'29.3517"W | 1051.08              | 269.282            | 0.55             |

# Actual Wellpath Report

State of WV DNR C BRK 206H awp Proj: 31365'  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

## WELLPATH DATA (343 stations)

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| 4431.00    | 18.920             | 269.280        | 4260.44     | -380.43           | -13.99        | -1080.28     | 1768226.78           | 14637130.93           | 40°18'8.1240"N  | 80°32'29.7297"W | 1080.37              | 269.258            | 0.70             |
| 4521.00    | 19.080             | 266.190        | 4345.54     | -390.01           | -15.15        | -1109.55     | 1768197.52           | 14637129.77           | 40°18'8.1140"N  | 80°32'30.1076"W | 1109.65              | 269.217            | 1.13             |
| 4612.00    | 18.760             | 269.010        | 4431.62     | -399.59           | -16.40        | -1139.02     | 1768168.06           | 14637128.53           | 40°18'8.1032"N  | 80°32'30.4880"W | 1139.14              | 269.175            | 1.06             |
| 4702.00    | 18.230             | 271.550        | 4516.98     | -410.11           | -16.27        | -1167.56     | 1768139.53           | 14637128.66           | 40°18'8.1060"N  | 80°32'30.8564"W | 1167.67              | 269.202            | 1.07             |
| 4793.00    | 17.650             | 273.180        | 4603.55     | -421.38           | -15.11        | -1195.56     | 1768111.53           | 14637129.81           | 40°18'8.1188"N  | 80°32'31.2178"W | 1195.66              | 269.276            | 0.84             |
| 4884.00    | 16.700             | 273.090        | 4690.49     | -432.52           | -13.64        | -1222.40     | 1768084.71           | 14637131.28           | 40°18'8.1347"N  | 80°32'31.5640"W | 1222.47              | 269.360            | 1.04             |
| 4974.00    | 17.100             | 269.480        | 4776.61     | -442.58           | -13.07        | -1248.54     | 1768058.58           | 14637131.86           | 40°18'8.1417"N  | 80°32'31.9014"W | 1248.61              | 269.400            | 1.25             |
| 5032.00    | 17.350             | 267.770        | 4832.01     | -448.45           | -13.48        | -1265.71     | 1768041.42           | 14637131.44           | 40°18'8.1385"N  | 80°32'32.1230"W | 1265.78              | 269.390            | 0.97             |
| 5123.00    | 18.180             | 267.520        | 4918.67     | -457.49           | -14.62        | -1293.45     | 1768013.69           | 14637130.30           | 40°18'8.1286"N  | 80°32'32.4811"W | 1293.53              | 269.352            | 0.92             |
| 5222.00    | 18.180             | 238.900        | 5012.91     | -459.88           | -23.29        | -1322.16     | 1767984.99           | 14637121.64           | 40°18'8.0445"N  | 80°32'32.8522"W | 1322.37              | 268.991            | 8.94             |
| 5317.00    | 21.030             | 214.720        | 5102.54     | -447.84           | -44.99        | -1344.60     | 1767962.55           | 14637099.94           | 40°18'7.8311"N  | 80°32'33.1433"W | 1345.35              | 268.084            | 8.98             |
| 5413.00    | 23.750             | 197.650        | 5191.39     | -423.17           | -77.61        | -1360.29     | 1767946.87           | 14637067.34           | 40°18'7.5096"N  | 80°32'33.3480"W | 1362.51              | 266.734            | 7.31             |
| 5508.00    | 28.780             | 185.400        | 5276.62     | -387.84           | -118.67       | -1368.26     | 1767938.91           | 14637026.30           | 40°18'7.1043"N  | 80°32'33.4535"W | 1373.39              | 265.043            | 7.76             |
| 5603.00    | 35.800             | 179.160        | 5356.90     | -341.33           | -169.29       | -1370.00     | 1767937.16           | 14636975.69           | 40°18'6.6041"N  | 80°32'33.4794"W | 1380.42              | 262.956            | 8.17             |
| 5698.00    | 44.410             | 174.100        | 5429.52     | -283.14           | -230.27       | -1366.17     | 1767940.99           | 14636914.74           | 40°18'6.0014"N  | 80°32'33.4340"W | 1385.44              | 260.433            | 9.68             |
| 5793.00    | 51.580             | 170.270        | 5493.06     | -214.55           | -300.12       | -1356.45     | 1767950.71           | 14636844.91           | 40°18'5.3106"N  | 80°32'33.3132"W | 1389.26              | 257.524            | 8.12             |
| 5888.00    | 61.120             | 167.120        | 5545.65     | -136.77           | -377.54       | -1340.85     | 1767966.30           | 14636767.53           | 40°18'4.5448"N  | 80°32'33.1171"W | 1392.99              | 254.275            | 10.41            |
| 5983.00    | 71.260             | 164.190        | 5583.96     | -50.62            | -461.60       | -1319.26     | 1767987.88           | 14636683.50           | 40°18'3.7131"N  | 80°32'32.8441"W | 1397.69              | 250.715            | 11.04            |
| 6079.00    | 80.690             | 160.880        | 5607.20     | 42.19             | -550.31       | -1291.29     | 1768015.84           | 14636594.82           | 40°18'2.8350"N  | 80°32'32.4890"W | 1403.67              | 246.918            | 10.38            |
| 6174.00    | 89.140             | 159.110        | 5615.62     | 136.70            | -639.14       | -1258.94     | 1768048.18           | 14636506.02           | 40°18'1.9556"N  | 80°32'32.0774"W | 1411.89              | 243.084            | 9.09             |
| 6270.00    | 89.420             | 159.050        | 5616.82     | 232.69            | -728.81       | -1224.67     | 1768082.44           | 14636416.39           | 40°18'1.0678"N  | 80°32'31.6410"W | 1425.12              | 239.243            | 0.30             |
| 6366.00    | 89.510             | 159.050        | 5617.72     | 328.68            | -818.46       | -1190.34     | 1768116.75           | 14636326.78           | 40°18'0.1801"N  | 80°32'31.2040"W | 1444.57              | 235.488            | 0.09             |
| 6461.00    | 89.630             | 159.220        | 5618.43     | 423.68            | -907.23       | -1156.51     | 1768150.57           | 14636238.04           | 40°17'59.3012"N | 80°32'30.7732"W | 1469.89              | 231.888            | 0.22             |
| 6556.00    | 89.940             | 159.330        | 5618.79     | 518.67            | -996.08       | -1122.89     | 1768184.18           | 14636149.22           | 40°17'58.4215"N | 80°32'30.3453"W | 1501.02              | 228.425            | 0.35             |
| 6652.00    | 89.320             | 159.060        | 5619.41     | 614.66            | -1085.82      | -1088.79     | 1768218.26           | 14636059.52           | 40°17'57.5330"N | 80°32'29.9112"W | 1537.68              | 225.078            | 0.70             |
| 6747.00    | 89.540             | 159.380        | 5620.35     | 709.65            | -1174.63      | -1055.09     | 1768251.95           | 14635970.74           | 40°17'56.6536"N | 80°32'29.4822"W | 1578.92              | 221.931            | 0.41             |
| 6843.00    | 89.380             | 158.600        | 5621.26     | 805.65            | -1264.24      | -1020.67     | 1768286.36           | 14635881.16           | 40°17'55.7663"N | 80°32'29.0440"W | 1624.83              | 218.915            | 0.83             |
| 6939.00    | 89.630             | 159.350        | 5622.09     | 901.64            | -1353.85      | -986.23      | 1768320.78           | 14635791.59           | 40°17'54.8791"N | 80°32'28.6055"W | 1674.98              | 216.072            | 0.82             |
| 7034.00    | 89.050             | 159.330        | 5623.18     | 996.63            | -1442.73      | -952.72      | 1768354.29           | 14635702.74           | 40°17'53.9991"N | 80°32'28.1789"W | 1728.92              | 213.439            | 0.61             |
| 7129.00    | 89.380             | 159.570        | 5624.48     | 1091.61           | -1531.68      | -919.37      | 1768387.62           | 14635613.83           | 40°17'53.1184"N | 80°32'27.7545"W | 1786.42              | 210.974            | 0.43             |

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 stations)**

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| 7224.00    | 88.490             | 159.090        | 5626.25     | 1186.58           | -1620.55      | -885.85      | 1768421.13           | 14635524.99           | 40°17'52.2386"N | 80°32'27.3277"W | 1846.86              | 208.663            | 1.06             |
| 7320.00    | 88.210             | 159.020        | 5629.01     | 1282.54           | -1710.17      | -851.54      | 1768455.42           | 14635435.41           | 40°17'51.3512"N | 80°32'26.8910"W | 1910.44              | 206.470            | 0.30             |
| 7415.00    | 88.060             | 158.630        | 5632.11     | 1377.49           | -1798.71      | -817.25      | 1768489.71           | 14635346.90           | 40°17'50.4745"N | 80°32'26.4543"W | 1975.66              | 204.435            | 0.44             |
| 7510.00    | 89.170             | 159.020        | 5634.40     | 1472.46           | -1887.26      | -782.94      | 1768524.00           | 14635258.38           | 40°17'49.5977"N | 80°32'26.0175"W | 2043.22              | 202.531            | 1.24             |
| 7605.00    | 89.420             | 159.340        | 5635.57     | 1567.45           | -1976.05      | -749.18      | 1768557.75           | 14635169.62           | 40°17'48.7186"N | 80°32'25.5877"W | 2113.30              | 200.763            | 0.43             |
| 7700.00    | 89.350             | 159.290        | 5636.59     | 1662.44           | -2064.92      | -715.62      | 1768591.29           | 14635080.79           | 40°17'47.8386"N | 80°32'25.1606"W | 2185.41              | 199.114            | 0.09             |
| 7795.00    | 89.230             | 159.180        | 5637.77     | 1757.42           | -2153.75      | -681.94      | 1768624.96           | 14634992.00           | 40°17'46.9592"N | 80°32'24.7320"W | 2259.13              | 197.569            | 0.17             |
| 7891.00    | 89.350             | 158.890        | 5638.96     | 1853.41           | -2243.38      | -647.60      | 1768659.29           | 14634902.40           | 40°17'46.0717"N | 80°32'24.2947"W | 2334.99              | 196.102            | 0.33             |
| 7986.00    | 89.320             | 158.800        | 5640.06     | 1948.41           | -2331.98      | -613.32      | 1768693.56           | 14634813.84           | 40°17'45.1945"N | 80°32'23.8582"W | 2411.28              | 194.735            | 0.10             |
| 8081.00    | 89.320             | 158.770        | 5641.19     | 2043.40           | -2420.53      | -578.94      | 1768727.92           | 14634725.32           | 40°17'44.3176"N | 80°32'23.4205"W | 2488.80              | 193.451            | 0.03             |
| 8176.00    | 89.050             | 158.770        | 5642.54     | 2138.39           | -2509.08      | -544.54      | 1768762.31           | 14634636.81           | 40°17'43.4409"N | 80°32'22.9826"W | 2567.49              | 192.245            | 0.28             |
| 8271.00    | 89.290             | 158.810        | 5643.92     | 2233.38           | -2597.63      | -510.18      | 1768796.66           | 14634548.28           | 40°17'42.5641"N | 80°32'22.5450"W | 2647.26              | 191.112            | 0.26             |
| 8366.00    | 88.980             | 158.700        | 5645.35     | 2328.37           | -2686.16      | -475.76      | 1768831.06           | 14634459.78           | 40°17'41.6874"N | 80°32'22.1068"W | 2727.97              | 190.044            | 0.35             |
| 8462.00    | 89.200             | 158.460        | 5646.87     | 2424.36           | -2775.52      | -440.70      | 1768866.11           | 14634370.46           | 40°17'40.8026"N | 80°32'21.6604"W | 2810.29              | 189.022            | 0.34             |
| 8558.00    | 89.450             | 158.820        | 5648.00     | 2520.35           | -2864.92      | -405.74      | 1768901.06           | 14634281.10           | 40°17'39.9174"N | 80°32'21.2152"W | 2893.51              | 188.061            | 0.46             |
| 8653.00    | 89.450             | 158.810        | 5648.92     | 2615.34           | -2953.50      | -371.41      | 1768935.37           | 14634192.55           | 40°17'39.0404"N | 80°32'20.7781"W | 2976.76              | 187.167            | 0.01             |
| 8749.00    | 88.890             | 158.680        | 5650.31     | 2711.33           | -3042.96      | -336.61      | 1768970.16           | 14634103.13           | 40°17'38.1546"N | 80°32'20.3350"W | 3061.52              | 186.312            | 0.60             |
| 8844.00    | 89.350             | 159.050        | 5651.77     | 2806.32           | -3131.56      | -302.36      | 1769004.39           | 14634014.56           | 40°17'37.2773"N | 80°32'19.8990"W | 3146.12              | 185.515            | 0.62             |
| 8939.00    | 90.430             | 158.980        | 5651.95     | 2901.32           | -3220.25      | -268.34      | 1769038.40           | 14633925.90           | 40°17'36.3991"N | 80°32'19.4659"W | 3231.41              | 184.763            | 1.14             |
| 9034.00    | 89.110             | 159.330        | 5652.33     | 2996.31           | -3309.03      | -234.54      | 1769072.19           | 14633837.16           | 40°17'35.5200"N | 80°32'19.0356"W | 3317.33              | 184.054            | 1.44             |
| 9130.00    | 89.260             | 158.880        | 5653.70     | 3092.30           | -3398.71      | -200.30      | 1769106.42           | 14633747.51           | 40°17'34.6321"N | 80°32'18.5999"W | 3404.61              | 183.373            | 0.49             |
| 9225.00    | 89.600             | 159.020        | 5654.64     | 3187.29           | -3487.37      | -166.18      | 1769140.52           | 14633658.89           | 40°17'33.7543"N | 80°32'18.1655"W | 3491.32              | 182.728            | 0.39             |
| 9321.00    | 89.540             | 159.460        | 5655.36     | 3283.28           | -3577.13      | -132.15      | 1769174.54           | 14633569.16           | 40°17'32.8655"N | 80°32'17.7324"W | 3579.57              | 182.116            | 0.46             |
| 9416.00    | 89.170             | 159.200        | 5656.43     | 3378.27           | -3666.01      | -98.62       | 1769208.05           | 14633480.32           | 40°17'31.9855"N | 80°32'17.3057"W | 3667.33              | 181.541            | 0.48             |
| 9511.00    | 89.510             | 159.080        | 5657.52     | 3473.26           | -3754.78      | -64.80       | 1769241.87           | 14633391.58           | 40°17'31.1066"N | 80°32'16.8752"W | 3755.33              | 180.989            | 0.38             |
| 9608.00    | 89.230             | 159.050        | 5658.59     | 3570.25           | -3845.37      | -30.14       | 1769276.51           | 14633301.03           | 40°17'30.2096"N | 80°32'16.4340"W | 3845.48              | 180.449            | 0.29             |
| 9705.00    | 88.920             | 158.580        | 5660.16     | 3667.24           | -3935.80      | 4.91         | 1769311.55           | 14633210.63           | 40°17'29.3142"N | 80°32'15.9878"W | 3935.80              | 179.929            | 0.58             |
| 9802.00    | 88.980             | 158.680        | 5661.93     | 3764.22           | -4026.11      | 40.25        | 1769346.87           | 14633120.35           | 40°17'28.4199"N | 80°32'15.5379"W | 4026.32              | 179.427            | 0.12             |
| 9899.00    | 89.110             | 158.870        | 5663.55     | 3861.21           | -4116.52      | 75.36        | 1769381.97           | 14633029.97           | 40°17'27.5247"N | 80°32'15.0908"W | 4117.21              | 178.951            | 0.24             |
| 9995.00    | 89.110             | 158.780        | 5665.04     | 3957.20           | -4206.03      | 110.03       | 1769416.63           | 14632940.50           | 40°17'26.6384"N | 80°32'14.6494"W | 4207.47              | 178.501            | 0.09             |

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 stations)**

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| 10090.00   | 89.140             | 158.900        | 5666.49     | 4052.18           | -4294.61      | 144.32       | 1769450.91           | 14632851.95           | 40°17'25.7613"N | 80°32'14.2129"W | 4297.04              | 178.075            | 0.13             |
| 10186.00   | 89.350             | 159.350        | 5667.76     | 4148.17           | -4384.30      | 178.53       | 1769485.10           | 14632762.29           | 40°17'24.8732"N | 80°32'13.7776"W | 4387.94              | 177.668            | 0.52             |
| 10283.00   | 89.290             | 159.270        | 5668.91     | 4245.16           | -4475.04      | 212.80       | 1769519.35           | 14632671.59           | 40°17'23.9748"N | 80°32'13.3415"W | 4480.10              | 177.278            | 0.10             |
| 10377.00   | 89.630             | 158.980        | 5669.80     | 4339.15           | -4562.87      | 246.29       | 1769552.83           | 14632583.80           | 40°17'23.1052"N | 80°32'12.9152"W | 4569.51              | 176.910            | 0.48             |
| 10473.00   | 89.320             | 159.100        | 5670.68     | 4435.14           | -4652.51      | 280.63       | 1769587.16           | 14632494.19           | 40°17'22.2176"N | 80°32'12.4782"W | 4660.97              | 176.548            | 0.35             |
| 10569.00   | 89.230             | 159.120        | 5671.89     | 4531.13           | -4742.19      | 314.86       | 1769621.38           | 14632404.54           | 40°17'21.3297"N | 80°32'12.0425"W | 4752.64              | 176.201            | 0.10             |
| 10664.00   | 89.200             | 159.250        | 5673.19     | 4626.12           | -4830.99      | 348.61       | 1769655.12           | 14632315.78           | 40°17'20.4505"N | 80°32'11.6129"W | 4843.55              | 175.873            | 0.14             |
| 10760.00   | 89.020             | 158.870        | 5674.68     | 4722.11           | -4920.63      | 382.92       | 1769689.41           | 14632226.17           | 40°17'19.5628"N | 80°32'11.1763"W | 4935.51              | 175.550            | 0.44             |
| 10855.00   | 89.050             | 158.980        | 5676.28     | 4817.09           | -5009.27      | 417.07       | 1769723.55           | 14632137.57           | 40°17'18.6852"N | 80°32'10.7415"W | 5026.60              | 175.241            | 0.12             |
| 10950.00   | 89.140             | 158.740        | 5677.78     | 4912.08           | -5097.86      | 451.33       | 1769757.80           | 14632049.01           | 40°17'17.8080"N | 80°32'10.3055"W | 5117.80              | 174.941            | 0.27             |
| 11046.00   | 89.230             | 158.980        | 5679.15     | 5008.07           | -5187.39      | 485.95       | 1769792.40           | 14631959.51           | 40°17'16.9215"N | 80°32'9.8648"W  | 5210.10              | 174.648            | 0.27             |
| 11142.00   | 89.110             | 158.870        | 5680.54     | 5104.06           | -5276.96      | 520.47       | 1769826.91           | 14631869.98           | 40°17'16.0346"N | 80°32'9.4255"W  | 5302.57              | 174.367            | 0.17             |
| 11237.00   | 89.140             | 159.080        | 5681.99     | 5199.04           | -5365.63      | 554.55       | 1769860.97           | 14631781.35           | 40°17'15.1567"N | 80°32'8.9917"W  | 5394.21              | 174.099            | 0.22             |
| 11332.00   | 88.950             | 159.090        | 5683.57     | 5294.03           | -5454.36      | 588.45       | 1769894.87           | 14631692.65           | 40°17'14.2781"N | 80°32'8.5601"W  | 5486.01              | 173.842            | 0.20             |
| 11428.00   | 89.050             | 158.710        | 5685.25     | 5390.01           | -5543.90      | 623.01       | 1769929.41           | 14631603.14           | 40°17'13.3915"N | 80°32'8.1203"W  | 5578.80              | 173.588            | 0.41             |
| 11524.00   | 88.920             | 157.780        | 5686.95     | 5485.99           | -5633.05      | 658.58       | 1769964.97           | 14631514.02           | 40°17'12.5087"N | 80°32'7.6673"W  | 5671.42              | 173.332            | 0.98             |
| 11619.00   | 89.230             | 158.190        | 5688.48     | 5580.98           | -5721.11      | 694.19       | 1770000.56           | 14631426.00           | 40°17'11.6366"N | 80°32'7.2138"W  | 5763.08              | 173.082            | 0.54             |
| 11714.00   | 89.080             | 157.880        | 5689.88     | 5675.96           | -5809.21      | 729.72       | 1770036.08           | 14631337.94           | 40°17'10.7643"N | 80°32'6.7613"W  | 5854.86              | 172.840            | 0.36             |
| 11809.00   | 89.050             | 157.650        | 5691.43     | 5770.94           | -5897.13      | 765.66       | 1770072.01           | 14631250.05           | 40°17'9.8936"N  | 80°32'6.3035"W  | 5946.63              | 172.602            | 0.24             |
| 11904.00   | 88.950             | 157.520        | 5693.09     | 5865.90           | -5984.94      | 801.88       | 1770108.22           | 14631162.27           | 40°17'9.0240"N  | 80°32'5.8421"W  | 6038.42              | 172.369            | 0.17             |
| 12000.00   | 89.170             | 157.680        | 5694.67     | 5961.88           | -6073.69      | 838.46       | 1770144.78           | 14631073.56           | 40°17'8.1452"N  | 80°32'5.3761"W  | 6131.29              | 172.140            | 0.28             |
| 12095.00   | 89.080             | 157.600        | 5696.12     | 6056.85           | -6161.53      | 874.60       | 1770180.90           | 14630985.75           | 40°17'7.2752"N  | 80°32'4.9158"W  | 6223.30              | 171.921            | 0.13             |
| 12190.00   | 89.320             | 157.890        | 5697.44     | 6151.83           | -6249.45      | 910.57       | 1770216.86           | 14630897.87           | 40°17'6.4046"N  | 80°32'4.4575"W  | 6315.44              | 171.710            | 0.40             |
| 12286.00   | 89.320             | 157.910        | 5698.58     | 6247.81           | -6338.39      | 946.69       | 1770252.96           | 14630808.96           | 40°17'5.5238"N  | 80°32'3.9976"W  | 6408.70              | 171.505            | 0.02             |
| 12381.00   | 89.450             | 158.050        | 5699.60     | 6342.80           | -6426.45      | 982.30       | 1770288.57           | 14630720.93           | 40°17'4.6518"N  | 80°32'3.5440"W  | 6501.09              | 171.309            | 0.20             |
| 12476.00   | 89.820             | 158.030        | 5700.21     | 6437.80           | -6514.56      | 1017.83      | 1770324.08           | 14630632.86           | 40°17'3.7793"N  | 80°32'3.0915"W  | 6593.59              | 171.120            | 0.39             |
| 12572.00   | 89.450             | 158.010        | 5700.82     | 6533.79           | -6603.58      | 1053.76      | 1770360.00           | 14630543.87           | 40°17'2.8977"N  | 80°32'2.6340"W  | 6687.13              | 170.934            | 0.39             |
| 12667.00   | 89.630             | 158.000        | 5701.58     | 6628.78           | -6691.66      | 1089.34      | 1770395.56           | 14630455.82           | 40°17'2.0255"N  | 80°32'2.1809"W  | 6779.75              | 170.754            | 0.19             |
| 12762.00   | 89.510             | 157.910        | 5702.30     | 6723.77           | -6779.71      | 1124.99      | 1770431.20           | 14630367.80           | 40°17'1.1535"N  | 80°32'1.7268"W  | 6872.42              | 170.578            | 0.16             |
| 12858.00   | 89.480             | 158.040        | 5703.14     | 6819.76           | -6868.70      | 1160.99      | 1770467.19           | 14630278.85           | 40°17'0.2723"N  | 80°32'1.2683"W  | 6966.13              | 170.406            | 0.14             |

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 stations)**

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| 12953.00   | 89.540             | 157.900        | 5703.95     | 6914.75           | -6956.76      | 1196.63      | 1770502.81           | 14630190.82           | 40°16'59.4002"N | 80°32'0.8145"W  | 7058.93              | 170.240            | 0.16             |
| 13048.00   | 89.450             | 157.760        | 5704.79     | 7009.74           | -7044.74      | 1232.47      | 1770538.64           | 14630102.88           | 40°16'58.5291"N | 80°32'0.3580"W  | 7151.73              | 170.077            | 0.18             |
| 13144.00   | 89.420             | 158.190        | 5705.74     | 7105.72           | -7133.73      | 1268.47      | 1770574.63           | 14630013.93           | 40°16'57.6478"N | 80°31'59.8995"W | 7245.62              | 169.917            | 0.45             |
| 13239.00   | 89.230             | 157.770        | 5706.86     | 7200.71           | -7221.79      | 1304.09      | 1770610.23           | 14629925.90           | 40°16'56.7757"N | 80°31'59.4460"W | 7338.59              | 169.764            | 0.49             |
| 13334.00   | 89.350             | 157.880        | 5708.03     | 7295.69           | -7309.76      | 1339.94      | 1770646.07           | 14629837.96           | 40°16'55.9046"N | 80°31'58.9893"W | 7431.55              | 169.613            | 0.17             |
| 13430.00   | 89.420             | 157.700        | 5709.07     | 7391.68           | -7398.63      | 1376.23      | 1770682.34           | 14629749.12           | 40°16'55.0245"N | 80°31'58.5272"W | 7525.54              | 169.463            | 0.20             |
| 13525.00   | 89.350             | 158.070        | 5710.08     | 7486.66           | -7486.63      | 1411.99      | 1770718.09           | 14629661.15           | 40°16'54.1530"N | 80°31'58.0718"W | 7618.62              | 169.319            | 0.40             |
| 13620.00   | 89.320             | 157.750        | 5711.19     | 7581.65           | -7574.65      | 1447.71      | 1770753.80           | 14629573.17           | 40°16'53.2814"N | 80°31'57.6168"W | 7711.76              | 169.180            | 0.34             |
| 13716.00   | 89.420             | 157.920        | 5712.24     | 7677.63           | -7663.56      | 1483.93      | 1770790.00           | 14629484.30           | 40°16'52.4010"N | 80°31'57.1556"W | 7805.90              | 169.041            | 0.21             |
| 13812.00   | 89.850             | 157.860        | 5712.85     | 7773.62           | -7752.49      | 1520.06      | 1770826.12           | 14629395.40           | 40°16'51.5202"N | 80°31'56.6954"W | 7900.11              | 168.907            | 0.45             |
| 13907.00   | 89.750             | 157.890        | 5713.19     | 7868.62           | -7840.50      | 1555.84      | 1770861.89           | 14629307.43           | 40°16'50.6487"N | 80°31'56.2398"W | 7993.38              | 168.776            | 0.11             |
| 14002.00   | 89.660             | 157.660        | 5713.68     | 7963.60           | -7928.44      | 1591.77      | 1770897.81           | 14629219.52           | 40°16'49.7779"N | 80°31'55.7822"W | 8086.65              | 168.648            | 0.26             |
| 14097.00   | 89.690             | 157.950        | 5714.21     | 8058.59           | -8016.40      | 1627.66      | 1770933.68           | 14629131.59           | 40°16'48.9068"N | 80°31'55.3251"W | 8179.97              | 168.523            | 0.31             |
| 14193.00   | 89.850             | 157.670        | 5714.60     | 8154.58           | -8105.29      | 1663.92      | 1770969.92           | 14629042.74           | 40°16'48.0265"N | 80°31'54.8634"W | 8274.32              | 168.399            | 0.34             |
| 14288.00   | 89.570             | 157.810        | 5715.08     | 8249.57           | -8193.21      | 1699.90      | 1771005.89           | 14628954.85           | 40°16'47.1559"N | 80°31'54.4051"W | 8367.69              | 168.279            | 0.33             |
| 14383.00   | 89.660             | 157.380        | 5715.72     | 8344.55           | -8281.03      | 1736.11      | 1771042.09           | 14628867.06           | 40°16'46.2861"N | 80°31'53.9439"W | 8461.06              | 168.159            | 0.46             |
| 14479.00   | 89.690             | 156.860        | 5716.26     | 8440.51           | -8369.48      | 1773.44      | 1771079.40           | 14628778.65           | 40°16'45.4102"N | 80°31'53.4684"W | 8555.30              | 168.036            | 0.54             |
| 14574.00   | 89.910             | 157.720        | 5716.59     | 8535.49           | -8457.11      | 1810.11      | 1771116.06           | 14628691.05           | 40°16'44.5423"N | 80°31'53.0011"W | 8648.65              | 167.919            | 0.93             |
| 14669.00   | 89.660             | 157.660        | 5716.95     | 8630.47           | -8545.00      | 1846.18      | 1771152.11           | 14628603.19           | 40°16'43.6719"N | 80°31'52.5418"W | 8742.16              | 167.808            | 0.27             |
| 14765.00   | 89.630             | 157.800        | 5717.55     | 8726.46           | -8633.84      | 1882.56      | 1771188.48           | 14628514.39           | 40°16'42.7921"N | 80°31'52.0785"W | 8836.69              | 167.700            | 0.15             |
| 14860.00   | 89.570             | 155.840        | 5718.21     | 8821.40           | -8721.16      | 1919.95      | 1771225.85           | 14628427.10           | 40°16'41.9273"N | 80°31'51.6021"W | 8930.00              | 167.584            | 2.06             |
| 14955.00   | 89.420             | 153.900        | 5719.05     | 8916.19           | -8807.16      | 1960.29      | 1771266.18           | 14628341.13           | 40°16'41.0753"N | 80°31'51.0875"W | 9022.68              | 167.452            | 2.05             |
| 15051.00   | 89.510             | 151.830        | 5719.94     | 9011.69           | -8892.59      | 2004.07      | 1771309.94           | 14628255.74           | 40°16'40.2289"N | 80°31'50.5284"W | 9115.61              | 167.300            | 2.16             |
| 15146.00   | 89.570             | 152.100        | 5720.71     | 9106.05           | -8976.44      | 2048.72      | 1771354.57           | 14628171.92           | 40°16'39.3980"N | 80°31'49.9581"W | 9207.26              | 167.143            | 0.29             |
| 15241.00   | 89.480             | 152.480        | 5721.49     | 9200.46           | -9060.54      | 2092.89      | 1771398.73           | 14628087.85           | 40°16'38.5646"N | 80°31'49.3940"W | 9299.12              | 166.993            | 0.41             |
| 15337.00   | 89.420             | 153.060        | 5722.42     | 9295.95           | -9145.89      | 2136.82      | 1771442.64           | 14628002.53           | 40°16'37.7188"N | 80°31'48.8331"W | 9392.20              | 166.850            | 0.61             |
| 15432.00   | 89.450             | 154.250        | 5723.35     | 9390.59           | -9231.02      | 2178.97      | 1771484.78           | 14627917.43           | 40°16'36.8754"N | 80°31'48.2950"W | 9484.71              | 166.719            | 1.25             |
| 15527.00   | 89.510             | 156.280        | 5724.21     | 9485.41           | -9317.30      | 2218.72      | 1771524.51           | 14627831.19           | 40°16'36.0208"N | 80°31'47.7881"W | 9577.83              | 166.606            | 2.14             |
| 15623.00   | 89.450             | 158.290        | 5725.09     | 9581.38           | -9405.84      | 2255.78      | 1771561.56           | 14627742.68           | 40°16'35.1439"N | 80°31'47.3160"W | 9672.56              | 166.514            | 2.09             |
| 15719.00   | 89.540             | 160.370        | 5725.93     | 9677.36           | -9495.66      | 2289.67      | 1771595.43           | 14627652.90           | 40°16'34.2546"N | 80°31'46.8850"W | 9767.81              | 166.443            | 2.17             |

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 stations)**

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| 15814.00   | 89.420             | 162.450        | 5726.79     | 9772.24           | -9585.69      | 2319.95      | 1771625.70           | 14627562.90           | 40°16'33.3633"N | 80°31'46.5004"W | 9862.44              | 166.395            | 2.19             |
| 15909.00   | 89.600             | 164.550        | 5727.61     | 9866.89           | -9676.77      | 2346.93      | 1771652.67           | 14627471.86           | 40°16'32.4619"N | 80°31'46.1586"W | 9957.31              | 166.367            | 2.22             |
| 16005.00   | 89.880             | 164.340        | 5728.04     | 9962.40           | -9769.25      | 2372.67      | 1771678.40           | 14627379.41           | 40°16'31.5466"N | 80°31'45.8328"W | 10053.25             | 166.349            | 0.36             |
| 16100.00   | 89.690             | 164.420        | 5728.40     | 10056.92          | -9860.74      | 2398.25      | 1771703.97           | 14627287.95           | 40°16'30.6412"N | 80°31'45.5091"W | 10148.20             | 166.330            | 0.22             |
| 16195.00   | 89.540             | 163.940        | 5729.04     | 10151.47          | -9952.14      | 2424.15      | 1771729.86           | 14627196.59           | 40°16'29.7367"N | 80°31'45.1812"W | 10243.13             | 166.310            | 0.53             |
| 16291.00   | 89.630             | 163.910        | 5729.73     | 10247.06          | -10044.39     | 2450.73      | 1771756.43           | 14627104.38           | 40°16'28.8237"N | 80°31'44.8446"W | 10339.04             | 166.288            | 0.10             |
| 16386.00   | 89.750             | 164.170        | 5730.25     | 10341.64          | -10135.72     | 2476.85      | 1771782.54           | 14627013.08           | 40°16'27.9198"N | 80°31'44.5139"W | 10433.97             | 166.268            | 0.30             |
| 16482.00   | 89.380             | 161.950        | 5730.98     | 10437.34          | -10227.55     | 2504.82      | 1771810.50           | 14626921.29           | 40°16'27.0109"N | 80°31'44.1593"W | 10529.81             | 166.239            | 2.34             |
| 16577.00   | 89.940             | 160.010        | 5731.54     | 10532.26          | -10317.36     | 2535.78      | 1771841.45           | 14626831.52           | 40°16'26.1219"N | 80°31'43.7661"W | 10624.41             | 166.192            | 2.13             |
| 16672.00   | 89.660             | 157.790        | 5731.87     | 10627.25          | -10405.98     | 2569.98      | 1771875.63           | 14626742.92           | 40°16'25.2443"N | 80°31'43.3310"W | 10718.64             | 166.127            | 2.36             |
| 16768.00   | 89.690             | 158.100        | 5732.42     | 10723.24          | -10494.95     | 2606.02      | 1771911.67           | 14626653.99           | 40°16'24.3632"N | 80°31'42.8721"W | 10813.67             | 166.055            | 0.32             |
| 16863.00   | 89.540             | 157.900        | 5733.05     | 10818.23          | -10583.03     | 2641.61      | 1771947.24           | 14626565.94           | 40°16'23.4909"N | 80°31'42.4190"W | 10907.74             | 165.985            | 0.26             |
| 16958.00   | 89.780             | 157.930        | 5733.62     | 10913.23          | -10671.06     | 2677.33      | 1771982.94           | 14626477.94           | 40°16'22.6192"N | 80°31'41.9643"W | 11001.80             | 165.915            | 0.25             |
| 17053.00   | 89.780             | 157.820        | 5733.98     | 11008.22          | -10759.07     | 2713.11      | 1772018.71           | 14626389.97           | 40°16'21.7477"N | 80°31'41.5087"W | 11095.88             | 165.847            | 0.12             |
| 17149.00   | 89.480             | 158.030        | 5734.60     | 11104.21          | -10848.03     | 2749.19      | 1772054.77           | 14626301.05           | 40°16'20.8667"N | 80°31'41.0494"W | 11190.97             | 165.779            | 0.38             |
| 17244.00   | 89.540             | 157.790        | 5735.41     | 11199.20          | -10936.05     | 2784.91      | 1772090.48           | 14626213.06           | 40°16'19.9950"N | 80°31'40.5945"W | 11285.08             | 165.713            | 0.26             |
| 17339.00   | 89.450             | 158.050        | 5736.25     | 11294.18          | -11024.08     | 2820.62      | 1772126.18           | 14626125.06           | 40°16'19.1233"N | 80°31'40.1399"W | 11379.20             | 165.648            | 0.29             |
| 17435.00   | 89.480             | 157.690        | 5737.15     | 11390.17          | -11113.00     | 2856.78      | 1772162.33           | 14626036.17           | 40°16'18.2426"N | 80°31'39.6795"W | 11474.32             | 165.583            | 0.38             |
| 17530.00   | 89.350             | 157.830        | 5738.12     | 11485.15          | -11200.93     | 2892.74      | 1772198.27           | 14625948.28           | 40°16'17.3719"N | 80°31'39.2217"W | 11568.44             | 165.519            | 0.20             |
| 17625.00   | 89.380             | 157.850        | 5739.17     | 11580.14          | -11288.91     | 2928.57      | 1772234.09           | 14625860.33           | 40°16'16.5006"N | 80°31'38.7655"W | 11662.59             | 165.457            | 0.04             |
| 17721.00   | 89.600             | 157.950        | 5740.03     | 11676.13          | -11377.85     | 2964.68      | 1772270.19           | 14625771.43           | 40°16'15.6198"N | 80°31'38.3057"W | 11757.76             | 165.395            | 0.25             |
| 17816.00   | 89.630             | 158.000        | 5740.66     | 11771.12          | -11465.92     | 3000.31      | 1772305.80           | 14625683.39           | 40°16'14.7477"N | 80°31'37.8522"W | 11851.97             | 165.336            | 0.06             |
| 17912.00   | 89.480             | 158.020        | 5741.41     | 11867.11          | -11554.93     | 3036.25      | 1772341.73           | 14625594.42           | 40°16'13.8662"N | 80°31'37.3946"W | 11947.19             | 165.277            | 0.16             |
| 18008.00   | 89.510             | 157.890        | 5742.26     | 11963.10          | -11643.91     | 3072.29      | 1772377.75           | 14625505.47           | 40°16'12.9850"N | 80°31'36.9359"W | 12042.41             | 165.219            | 0.14             |
| 18103.00   | 89.420             | 158.000        | 5743.14     | 12058.09          | -11731.95     | 3107.96      | 1772413.41           | 14625417.46           | 40°16'12.1131"N | 80°31'36.4818"W | 12136.64             | 165.162            | 0.15             |
| 18199.00   | 89.140             | 157.740        | 5744.35     | 12154.07          | -11820.87     | 3144.12      | 1772449.55           | 14625328.57           | 40°16'11.2325"N | 80°31'36.0214"W | 12231.86             | 165.105            | 0.40             |
| 18294.00   | 89.230             | 157.480        | 5745.70     | 12249.05          | -11908.70     | 3180.30      | 1772485.72           | 14625240.78           | 40°16'10.3627"N | 80°31'35.5607"W | 12326.05             | 165.048            | 0.29             |
| 18390.00   | 89.320             | 158.940        | 5746.92     | 12345.03          | -11997.83     | 3215.93      | 1772521.34           | 14625151.68           | 40°16'9.4801"N  | 80°31'35.1072"W | 12421.36             | 164.995            | 1.52             |
| 18485.00   | 89.170             | 158.720        | 5748.17     | 12440.03          | -12086.41     | 3250.24      | 1772555.63           | 14625063.13           | 40°16'8.6029"N  | 80°31'34.6708"W | 12515.81             | 164.948            | 0.28             |
| 18580.00   | 89.350             | 158.830        | 5749.39     | 12535.02          | -12174.96     | 3284.63      | 1772590.01           | 14624974.62           | 40°16'7.7261"N  | 80°31'34.2332"W | 12610.25             | 164.902            | 0.22             |

| REFERENCE WELLPATH IDENTIFICATION |                             |          |                                |
|-----------------------------------|-----------------------------|----------|--------------------------------|
| Operator                          | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field                             | Brooke                      | API      | 47009003410000                 |
| Facility                          | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot                              | 206H                        |          |                                |

| WELLPATH DATA (343 stations) |                    |                |             |                   |               |              |                      |                       |                 |                 |                      |                    |                  |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| MD<br>[ft]                   | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
| 18676.00                     | 89.140             | 158.760        | 5750.66     | 12631.01          | -12264.46     | 3319.35      | 1772624.72           | 14624885.16           | 40°16'6.8399"N  | 80°31'33.7915"W | 12705.70             | 164.856            | 0.23             |
| 18771.00                     | 89.200             | 158.790        | 5752.03     | 12726.00          | -12353.00     | 3353.74      | 1772659.09           | 14624796.65           | 40°16'5.9631"N  | 80°31'33.3540"W | 12800.16             | 164.811            | 0.07             |
| 18866.00                     | 89.230             | 159.010        | 5753.34     | 12820.99          | -12441.62     | 3387.93      | 1772693.28           | 14624708.06           | 40°16'5.0856"N  | 80°31'32.9190"W | 12894.65             | 164.767            | 0.23             |
| 18961.00                     | 89.200             | 158.640        | 5754.64     | 12915.98          | -12530.20     | 3422.25      | 1772727.57           | 14624619.52           | 40°16'4.2085"N  | 80°31'32.4825"W | 12989.14             | 164.724            | 0.39             |
| 19056.00                     | 89.320             | 159.000        | 5755.86     | 13010.97          | -12618.78     | 3456.57      | 1772761.88           | 14624530.98           | 40°16'3.3314"N  | 80°31'32.0458"W | 13083.63             | 164.681            | 0.40             |
| 19152.00                     | 89.230             | 158.930        | 5757.08     | 13106.96          | -12708.37     | 3491.02      | 1772796.32           | 14624441.42           | 40°16'2.4442"N  | 80°31'31.6076"W | 13179.15             | 164.640            | 0.12             |
| 19247.00                     | 89.320             | 159.000        | 5758.28     | 13201.95          | -12797.03     | 3525.12      | 1772830.41           | 14624352.79           | 40°16'1.5662"N  | 80°31'31.1738"W | 13273.68             | 164.599            | 0.12             |
| 19343.00                     | 89.260             | 159.120        | 5759.47     | 13297.94          | -12886.69     | 3559.42      | 1772864.70           | 14624263.17           | 40°16'0.6785"N  | 80°31'30.7375"W | 13369.23             | 164.559            | 0.14             |
| 19439.00                     | 89.230             | 158.860        | 5760.74     | 13393.93          | -12976.30     | 3593.84      | 1772899.10           | 14624173.59           | 40°15'59.7912"N | 80°31'30.2997"W | 13464.77             | 164.520            | 0.27             |
| 19535.00                     | 89.200             | 159.050        | 5762.05     | 13489.92          | -13065.88     | 3628.31      | 1772933.56           | 14624084.04           | 40°15'58.9041"N | 80°31'29.8612"W | 13560.31             | 164.480            | 0.20             |
| 19631.00                     | 89.050             | 158.630        | 5763.52     | 13585.91          | -13155.40     | 3662.96      | 1772968.20           | 14623994.56           | 40°15'58.0177"N | 80°31'29.4205"W | 13655.84             | 164.441            | 0.46             |
| 19727.00                     | 89.110             | 158.700        | 5765.06     | 13681.90          | -13244.81     | 3697.88      | 1773003.11           | 14623905.18           | 40°15'57.1323"N | 80°31'28.9762"W | 13751.34             | 164.401            | 0.10             |
| 19823.00                     | 89.230             | 158.920        | 5766.45     | 13777.89          | -13334.31     | 3732.58      | 1773037.79           | 14623815.72           | 40°15'56.2460"N | 80°31'28.5348"W | 13846.88             | 164.362            | 0.26             |
| 19918.00                     | 89.170             | 158.990        | 5767.78     | 13872.88          | -13422.97     | 3766.69      | 1773071.89           | 14623727.10           | 40°15'55.3682"N | 80°31'28.1009"W | 13941.45             | 164.325            | 0.10             |
| 20014.00                     | 89.200             | 159.180        | 5769.14     | 13968.86          | -13512.63     | 3800.96      | 1773106.14           | 14623637.46           | 40°15'54.4803"N | 80°31'27.6651"W | 14037.04             | 164.289            | 0.20             |
| 20109.00                     | 89.170             | 158.890        | 5770.49     | 14063.85          | -13601.33     | 3834.94      | 1773140.12           | 14623548.80           | 40°15'53.6020"N | 80°31'27.2328"W | 14131.63             | 164.254            | 0.31             |
| 20205.00                     | 89.080             | 158.720        | 5771.96     | 14159.84          | -13690.83     | 3869.65      | 1773174.81           | 14623459.34           | 40°15'52.7158"N | 80°31'26.7913"W | 14227.19             | 164.217            | 0.20             |
| 20301.00                     | 89.570             | 158.860        | 5773.09     | 14255.83          | -13780.32     | 3904.38      | 1773209.52           | 14623369.88           | 40°15'51.8296"N | 80°31'26.3496"W | 14322.76             | 164.181            | 0.53             |
| 20396.00                     | 89.480             | 158.820        | 5773.88     | 14350.83          | -13868.91     | 3938.67      | 1773243.80           | 14623281.32           | 40°15'50.9524"N | 80°31'25.9134"W | 14417.34             | 164.146            | 0.10             |
| 20491.00                     | 89.350             | 159.090        | 5774.85     | 14445.82          | -13957.57     | 3972.78      | 1773277.90           | 14623192.70           | 40°15'50.0744"N | 80°31'25.4795"W | 14511.95             | 164.112            | 0.32             |
| 20587.00                     | 89.480             | 158.900        | 5775.83     | 14541.81          | -14047.19     | 4007.19      | 1773312.30           | 14623103.11           | 40°15'49.1871"N | 80°31'25.0418"W | 14607.57             | 164.078            | 0.24             |
| 20682.00                     | 89.450             | 159.090        | 5776.71     | 14636.81          | -14135.87     | 4041.24      | 1773346.33           | 14623014.47           | 40°15'48.3089"N | 80°31'24.6087"W | 14702.19             | 164.046            | 0.20             |
| 20778.00                     | 89.480             | 158.880        | 5777.61     | 14732.80          | -14225.48     | 4075.67      | 1773380.75           | 14622924.89           | 40°15'47.4216"N | 80°31'24.1709"W | 14797.81             | 164.013            | 0.22             |
| 20874.00                     | 89.570             | 158.830        | 5778.41     | 14828.80          | -14315.01     | 4110.30      | 1773415.36           | 14622835.39           | 40°15'46.5350"N | 80°31'23.7304"W | 14893.43             | 163.980            | 0.11             |
| 20969.00                     | 89.570             | 159.220        | 5779.12     | 14923.79          | -14403.71     | 4144.30      | 1773449.35           | 14622746.72           | 40°15'45.6566"N | 80°31'23.2980"W | 14988.07             | 163.948            | 0.41             |
| 21064.00                     | 89.750             | 159.460        | 5779.68     | 15018.78          | -14492.60     | 4177.82      | 1773482.86           | 14622657.87           | 40°15'44.7765"N | 80°31'22.8718"W | 15082.76             | 163.919            | 0.32             |
| 21160.00                     | 89.600             | 159.110        | 5780.23     | 15114.78          | -14582.40     | 4211.78      | 1773516.80           | 14622568.11           | 40°15'43.8874"N | 80°31'22.4400"W | 15178.45             | 163.890            | 0.40             |
| 21255.00                     | 89.540             | 159.130        | 5780.94     | 15209.77          | -14671.15     | 4245.63      | 1773550.65           | 14622479.38           | 40°15'43.0085"N | 80°31'22.0094"W | 15273.12             | 163.860            | 0.07             |
| 21350.00                     | 89.450             | 158.740        | 5781.78     | 15304.77          | -14759.80     | 4279.78      | 1773584.78           | 14622390.77           | 40°15'42.1307"N | 80°31'21.5752"W | 15367.77             | 163.830            | 0.42             |
| 21446.00                     | 89.720             | 158.590        | 5782.47     | 15400.76          | -14849.22     | 4314.70      | 1773619.69           | 14622301.39           | 40°15'41.2452"N | 80°31'21.1309"W | 15463.38             | 163.798            | 0.32             |

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 stations)**

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| 21540.00   | 89.690             | 158.900        | 5782.96     | 15494.76          | -14936.83     | 4348.78      | 1773653.75           | 14622213.82           | 40°15'40.3777"N | 80°31'20.6974"W | 15557.01             | 163.767            | 0.33             |
| 21636.00   | 89.630             | 158.920        | 5783.53     | 15590.76          | -15026.39     | 4383.32      | 1773688.28           | 14622124.28           | 40°15'39.4908"N | 80°31'20.2581"W | 15652.67             | 163.738            | 0.07             |
| 21730.00   | 89.570             | 158.580        | 5784.18     | 15684.76          | -15114.00     | 4417.39      | 1773722.34           | 14622036.71           | 40°15'38.6233"N | 80°31'19.8248"W | 15746.31             | 163.708            | 0.37             |
| 21826.00   | 89.600             | 158.850        | 5784.88     | 15780.75          | -15203.45     | 4452.24      | 1773757.17           | 14621947.29           | 40°15'37.7375"N | 80°31'19.3815"W | 15841.95             | 163.678            | 0.28             |
| 21921.00   | 89.170             | 159.350        | 5785.90     | 15875.74          | -15292.19     | 4486.13      | 1773791.05           | 14621858.58           | 40°15'36.8588"N | 80°31'18.9505"W | 15936.64             | 163.650            | 0.69             |
| 22016.00   | 89.230             | 158.910        | 5787.22     | 15970.73          | -15380.95     | 4519.97      | 1773824.88           | 14621769.86           | 40°15'35.9799"N | 80°31'18.5202"W | 16031.34             | 163.624            | 0.47             |
| 22113.00   | 89.320             | 159.080        | 5788.45     | 16067.72          | -15471.50     | 4554.73      | 1773859.63           | 14621679.35           | 40°15'35.0833"N | 80°31'18.0781"W | 16128.01             | 163.596            | 0.20             |
| 22208.00   | 89.170             | 158.850        | 5789.70     | 16162.71          | -15560.16     | 4588.83      | 1773893.71           | 14621590.72           | 40°15'34.2053"N | 80°31'17.6445"W | 16222.70             | 163.569            | 0.29             |
| 22303.00   | 89.110             | 159.070        | 5791.13     | 16257.70          | -15648.82     | 4622.93      | 1773927.80           | 14621502.10           | 40°15'33.3274"N | 80°31'17.2108"W | 16317.38             | 163.542            | 0.24             |
| 22399.00   | 89.050             | 159.050        | 5792.67     | 16353.68          | -15738.46     | 4657.24      | 1773962.09           | 14621412.48           | 40°15'32.4397"N | 80°31'16.7745"W | 16413.08             | 163.516            | 0.07             |
| 22494.00   | 89.010             | 158.860        | 5794.28     | 16448.67          | -15827.11     | 4691.35      | 1773996.19           | 14621323.87           | 40°15'31.5619"N | 80°31'16.3408"W | 16507.77             | 163.490            | 0.20             |
| 22589.00   | 89.140             | 158.920        | 5795.81     | 16543.66          | -15915.73     | 4725.56      | 1774030.39           | 14621235.29           | 40°15'30.6844"N | 80°31'15.9057"W | 16602.45             | 163.463            | 0.15             |
| 22684.00   | 88.860             | 158.820        | 5797.47     | 16638.64          | -16004.33     | 4759.80      | 1774064.62           | 14621146.72           | 40°15'29.8071"N | 80°31'15.4702"W | 16697.13             | 163.437            | 0.31             |
| 22780.00   | 88.950             | 157.900        | 5799.31     | 16734.62          | -16093.54     | 4795.20      | 1774100.00           | 14621057.54           | 40°15'28.9236"N | 80°31'15.0199"W | 16792.74             | 163.408            | 0.96             |
| 22875.00   | 89.080             | 158.970        | 5800.94     | 16829.61          | -16181.88     | 4830.11      | 1774134.90           | 14620969.24           | 40°15'28.0488"N | 80°31'14.5757"W | 16887.37             | 163.380            | 1.13             |
| 22970.00   | 88.800             | 158.680        | 5802.70     | 16924.59          | -16270.45     | 4864.42      | 1774169.19           | 14620880.70           | 40°15'27.1717"N | 80°31'14.1394"W | 16982.05             | 163.355            | 0.42             |
| 23065.00   | 89.050             | 159.180        | 5804.48     | 17019.57          | -16359.08     | 4898.56      | 1774203.33           | 14620792.10           | 40°15'26.2941"N | 80°31'13.7052"W | 17076.75             | 163.330            | 0.59             |
| 23161.00   | 89.080             | 158.950        | 5806.05     | 17115.55          | -16448.73     | 4932.86      | 1774237.61           | 14620702.49           | 40°15'25.4063"N | 80°31'13.2690"W | 17172.48             | 163.306            | 0.24             |
| 23256.00   | 89.200             | 158.990        | 5807.47     | 17210.54          | -16537.40     | 4966.95      | 1774271.69           | 14620613.86           | 40°15'24.5284"N | 80°31'12.8356"W | 17267.19             | 163.283            | 0.13             |
| 23351.00   | 88.980             | 158.990        | 5808.98     | 17305.53          | -16626.07     | 5001.00      | 1774305.73           | 14620525.22           | 40°15'23.6503"N | 80°31'12.4025"W | 17361.92             | 163.259            | 0.23             |
| 23446.00   | 88.890             | 158.940        | 5810.75     | 17400.51          | -16714.72     | 5035.10      | 1774339.81           | 14620436.60           | 40°15'22.7724"N | 80°31'11.9690"W | 17456.64             | 163.236            | 0.11             |
| 23542.00   | 88.830             | 158.620        | 5812.66     | 17496.49          | -16804.20     | 5069.84      | 1774374.54           | 14620347.16           | 40°15'21.8864"N | 80°31'11.5272"W | 17552.33             | 163.211            | 0.34             |
| 23637.00   | 88.400             | 158.620        | 5814.95     | 17591.46          | -16892.63     | 5104.46      | 1774409.15           | 14620258.76           | 40°15'21.0107"N | 80°31'11.0868"W | 17647.00             | 163.187            | 0.45             |
| 23732.00   | 88.830             | 158.530        | 5817.25     | 17686.43          | -16981.04     | 5139.15      | 1774443.82           | 14620170.38           | 40°15'20.1352"N | 80°31'10.6455"W | 17741.66             | 163.162            | 0.46             |
| 23827.00   | 88.710             | 158.550        | 5819.29     | 17781.41          | -17069.43     | 5173.90      | 1774478.56           | 14620082.02           | 40°15'19.2598"N | 80°31'10.2035"W | 17836.33             | 163.137            | 0.13             |
| 23923.00   | 88.950             | 158.980        | 5821.25     | 17877.39          | -17158.90     | 5208.66      | 1774513.31           | 14619992.59           | 40°15'18.3739"N | 80°31'9.7614"W  | 17932.04             | 163.114            | 0.51             |
| 24018.00   | 88.950             | 158.920        | 5822.99     | 17972.37          | -17247.54     | 5242.78      | 1774547.41           | 14619903.98           | 40°15'17.4961"N | 80°31'9.3276"W  | 18026.77             | 163.092            | 0.06             |
| 24113.00   | 89.080             | 159.080        | 5824.62     | 18067.36          | -17336.22     | 5276.82      | 1774581.44           | 14619815.34           | 40°15'16.6180"N | 80°31'8.8948"W  | 18121.52             | 163.071            | 0.22             |
| 24209.00   | 89.050             | 159.070        | 5826.19     | 18163.34          | -17425.88     | 5311.10      | 1774615.71           | 14619725.72           | 40°15'15.7302"N | 80°31'8.4589"W  | 18217.27             | 163.050            | 0.03             |
| 24304.00   | 89.110             | 159.230        | 5827.71     | 18258.33          | -17514.64     | 5344.91      | 1774649.50           | 14619636.98           | 40°15'14.8512"N | 80°31'8.0291"W  | 18312.04             | 163.029            | 0.18             |

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 stations)**

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| 24399.00   | 88.860             | 159.030        | 5829.40     | 18353.31          | -17603.40     | 5378.75      | 1774683.33           | 14619548.27           | 40°15'13.9724"N | 80°31'7.5989"W  | 18406.81             | 163.009            | 0.34             |
| 24494.00   | 89.050             | 159.070        | 5831.13     | 18448.29          | -17692.10     | 5412.71      | 1774717.28           | 14619459.59           | 40°15'13.0940"N | 80°31'7.1671"W  | 18501.56             | 162.989            | 0.20             |
| 24590.00   | 89.080             | 159.100        | 5832.70     | 18544.27          | -17781.76     | 5446.98      | 1774751.53           | 14619369.97           | 40°15'12.2061"N | 80°31'6.7314"W  | 18597.33             | 162.969            | 0.04             |
| 24685.00   | 89.080             | 158.930        | 5834.22     | 18639.26          | -17870.45     | 5480.99      | 1774785.53           | 14619281.31           | 40°15'11.3279"N | 80°31'6.2989"W  | 18692.09             | 162.949            | 0.18             |
| 24780.00   | 89.110             | 159.110        | 5835.72     | 18734.25          | -17959.14     | 5515.00      | 1774819.53           | 14619192.66           | 40°15'10.4497"N | 80°31'5.8665"W  | 18786.86             | 162.929            | 0.19             |
| 24876.00   | 89.010             | 159.130        | 5837.30     | 18830.23          | -18048.83     | 5549.21      | 1774853.73           | 14619103.01           | 40°15'9.5616"N  | 80°31'5.4315"W  | 18882.64             | 162.910            | 0.11             |
| 24972.00   | 88.980             | 159.000        | 5838.98     | 18926.21          | -18138.48     | 5583.51      | 1774888.01           | 14619013.39           | 40°15'8.6739"N  | 80°31'4.9955"W  | 18978.41             | 162.890            | 0.14             |
| 25067.00   | 89.050             | 158.980        | 5840.61     | 19021.20          | -18227.15     | 5617.57      | 1774922.05           | 14618924.75           | 40°15'7.7958"N  | 80°31'4.5625"W  | 19073.17             | 162.871            | 0.08             |
| 25162.00   | 89.050             | 158.990        | 5842.19     | 19116.18          | -18315.82     | 5651.63      | 1774956.10           | 14618836.12           | 40°15'6.9178"N  | 80°31'4.1294"W  | 19167.94             | 162.852            | 0.01             |
| 25257.00   | 89.140             | 158.790        | 5843.69     | 19211.17          | -18404.43     | 5685.84      | 1774990.30           | 14618747.54           | 40°15'6.0403"N  | 80°31'3.6944"W  | 19262.70             | 162.832            | 0.23             |
| 25353.00   | 89.170             | 158.970        | 5845.10     | 19307.16          | -18493.97     | 5720.43      | 1775024.88           | 14618658.03           | 40°15'5.1536"N  | 80°31'3.2546"W  | 19358.47             | 162.812            | 0.19             |
| 25448.00   | 89.110             | 160.340        | 5846.53     | 19402.13          | -18583.03     | 5753.45      | 1775057.89           | 14618569.00           | 40°15'4.2718"N  | 80°31'2.8350"W  | 19453.31             | 162.797            | 1.44             |
| 25543.00   | 89.050             | 159.230        | 5848.06     | 19497.10          | -18672.17     | 5786.27      | 1775090.70           | 14618479.90           | 40°15'3.3892"N  | 80°31'2.4179"W  | 19548.17             | 162.782            | 1.17             |
| 25638.00   | 89.110             | 159.240        | 5849.58     | 19592.08          | -18760.99     | 5819.95      | 1775124.36           | 14618391.12           | 40°15'2.5097"N  | 80°31'1.9898"W  | 19642.97             | 162.765            | 0.06             |
| 25733.00   | 89.080             | 159.100        | 5851.08     | 19687.06          | -18849.76     | 5853.73      | 1775158.13           | 14618302.37           | 40°15'1.6306"N  | 80°31'1.5604"W  | 19737.77             | 162.748            | 0.15             |
| 25829.00   | 88.980             | 159.060        | 5852.71     | 19783.05          | -18939.42     | 5888.00      | 1775192.39           | 14618212.75           | 40°15'0.7428"N  | 80°31'1.1247"W  | 19833.57             | 162.730            | 0.11             |
| 25924.00   | 88.950             | 158.860        | 5854.42     | 19878.03          | -19028.08     | 5922.10      | 1775226.47           | 14618124.13           | 40°14'59.8649"N | 80°31'0.6912"W  | 19928.35             | 162.712            | 0.21             |
| 26019.00   | 88.950             | 158.760        | 5856.16     | 19973.01          | -19116.64     | 5956.43      | 1775260.79           | 14618035.60           | 40°14'58.9879"N | 80°31'0.2546"W  | 20023.11             | 162.694            | 0.11             |
| 26114.00   | 89.010             | 158.920        | 5857.85     | 20068.00          | -19205.22     | 5990.72      | 1775295.07           | 14617947.06           | 40°14'58.1107"N | 80°30'59.8187"W | 20117.88             | 162.676            | 0.18             |
| 26210.00   | 88.980             | 158.990        | 5859.54     | 20163.98          | -19294.80     | 6025.19      | 1775329.52           | 14617857.51           | 40°14'57.2236"N | 80°30'59.3804"W | 20213.67             | 162.658            | 0.08             |
| 26305.00   | 88.830             | 158.920        | 5861.35     | 20258.96          | -19383.45     | 6059.30      | 1775363.62           | 14617768.90           | 40°14'56.3458"N | 80°30'58.9468"W | 20308.45             | 162.641            | 0.17             |
| 26404.00   | 88.890             | 159.140        | 5863.32     | 20357.94          | -19475.87     | 6094.72      | 1775399.03           | 14617676.51           | 40°14'55.4306"N | 80°30'58.4965"W | 20407.24             | 162.623            | 0.23             |
| 26499.00   | 88.890             | 159.010        | 5865.16     | 20452.92          | -19564.59     | 6128.64      | 1775432.94           | 14617587.82           | 40°14'54.5521"N | 80°30'58.0652"W | 20502.04             | 162.607            | 0.14             |
| 26593.00   | 89.050             | 159.560        | 5866.85     | 20546.90          | -19652.50     | 6161.89      | 1775466.17           | 14617499.95           | 40°14'53.6816"N | 80°30'57.6427"W | 20595.86             | 162.592            | 0.61             |
| 26784.00   | 89.140             | 159.050        | 5869.87     | 20737.86          | -19831.15     | 6229.38      | 1775533.63           | 14617321.36           | 40°14'51.9125"N | 80°30'56.7849"W | 20786.53             | 162.561            | 0.27             |
| 26879.00   | 89.200             | 159.170        | 5871.25     | 20832.85          | -19919.90     | 6263.25      | 1775567.49           | 14617232.65           | 40°14'51.0337"N | 80°30'56.3544"W | 20881.35             | 162.546            | 0.14             |
| 26973.00   | 89.320             | 158.680        | 5872.46     | 20926.84          | -20097.60     | 6297.05      | 1775601.28           | 14617144.98           | 40°14'50.1652"N | 80°30'55.9247"W | 20975.15             | 162.530            | 0.54             |
| 27067.00   | 89.230             | 159.030        | 5873.65     | 21020.83          | -20095.27     | 6330.95      | 1775635.17           | 14617057.35           | 40°14'49.2971"N | 80°30'55.4936"W | 21068.95             | 162.513            | 0.38             |
| 27162.00   | 89.200             | 159.360        | 5874.95     | 21115.82          | -20184.06     | 6364.69      | 1775668.90           | 14616968.59           | 40°14'48.4179"N | 80°30'55.0648"W | 21163.78             | 162.498            | 0.35             |
| 27352.00   | 89.260             | 158.970        | 5877.50     | 21305.79          | -20361.62     | 6432.27      | 1775736.44           | 14616791.10           | 40°14'46.6596"N | 80°30'54.2059"W | 21353.45             | 162.469            | 0.21             |

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 stations)**

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Closure Dist<br>[ft] | Closure Dir<br>[°] | DLS<br>[°/100ft] |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|------------------|
| 27446.00   | 89.230             | 159.200        | 5878.74     | 21399.78          | -20449.42     | 6465.82      | 1775769.98           | 14616703.33           | 40°14'45.7902"N | 80°30'53.7794"W | 21447.28             | 162.454            | 0.25             |
| 27540.00   | 89.200             | 159.210        | 5880.03     | 21493.77          | -20537.29     | 6499.19      | 1775803.34           | 14616615.50           | 40°14'44.9201"N | 80°30'53.3552"W | 21541.12             | 162.440            | 0.03             |
| 27635.00   | 88.920             | 159.140        | 5881.59     | 21588.75          | -20626.07     | 6532.96      | 1775837.10           | 14616526.75           | 40°14'44.0410"N | 80°30'52.9260"W | 21635.95             | 162.425            | 0.30             |
| 27730.00   | 89.110             | 159.450        | 5883.22     | 21683.73          | -20714.92     | 6566.54      | 1775870.67           | 14616437.93           | 40°14'43.1611"N | 80°30'52.4992"W | 21730.80             | 162.412            | 0.38             |
| 27823.00   | 88.860             | 158.980        | 5884.87     | 21776.71          | -20801.86     | 6599.54      | 1775903.65           | 14616351.03           | 40°14'42.3003"N | 80°30'52.0798"W | 21823.64             | 162.398            | 0.57             |
| 27918.00   | 88.710             | 157.550        | 5886.88     | 21871.68          | -20890.08     | 6634.71      | 1775938.81           | 14616262.84           | 40°14'41.4266"N | 80°30'51.6325"W | 21918.37             | 162.380            | 1.51             |
| 28012.00   | 88.890             | 158.200        | 5888.85     | 21965.66          | -20977.14     | 6670.10      | 1775974.19           | 14616175.82           | 40°14'40.5644"N | 80°30'51.1822"W | 22012.06             | 162.361            | 0.72             |
| 28106.00   | 88.980             | 157.830        | 5890.60     | 22059.63          | -21064.29     | 6705.29      | 1776009.36           | 14616088.70           | 40°14'39.7013"N | 80°30'50.7347"W | 22105.77             | 162.342            | 0.41             |
| 28201.00   | 88.580             | 157.380        | 5892.62     | 22154.60          | -21152.10     | 6741.47      | 1776045.53           | 14616000.92           | 40°14'38.8316"N | 80°30'50.2742"W | 22200.43             | 162.322            | 0.63             |
| 28295.00   | 88.650             | 158.010        | 5894.90     | 22248.56          | -21239.04     | 6777.14      | 1776081.18           | 14615914.01           | 40°14'37.9705"N | 80°30'49.8205"W | 22294.09             | 162.303            | 0.67             |
| 28390.00   | 88.800             | 158.080        | 5897.01     | 22343.53          | -21327.13     | 6812.65      | 1776116.68           | 14615825.96           | 40°14'37.0981"N | 80°30'49.3688"W | 22388.81             | 162.285            | 0.17             |
| 28483.00   | 88.580             | 157.020        | 5899.14     | 22436.48          | -21413.06     | 6848.15      | 1776152.17           | 14615740.06           | 40°14'36.2471"N | 80°30'48.9170"W | 22481.47             | 162.265            | 1.16             |
| 28578.00   | 88.950             | 158.060        | 5901.18     | 22531.44          | -21500.83     | 6884.44      | 1776188.44           | 14615652.32           | 40°14'35.3778"N | 80°30'48.4553"W | 22576.12             | 162.245            | 1.16             |
| 28672.00   | 89.230             | 158.040        | 5902.68     | 22625.43          | -21588.01     | 6919.57      | 1776223.56           | 14615565.18           | 40°14'34.5144"N | 80°30'48.0084"W | 22669.86             | 162.228            | 0.30             |
| 28766.00   | 89.170             | 158.220        | 5903.99     | 22719.41          | -21675.23     | 6954.58      | 1776258.56           | 14615477.99           | 40°14'33.6506"N | 80°30'47.5631"W | 22763.61             | 162.211            | 0.20             |
| 28860.00   | 89.140             | 158.000        | 5905.37     | 22813.40          | -21762.45     | 6989.62      | 1776293.59           | 14615390.81           | 40°14'32.7869"N | 80°30'47.1174"W | 22857.36             | 162.194            | 0.24             |
| 28955.00   | 89.230             | 157.930        | 5906.73     | 22908.38          | -21850.50     | 7025.26      | 1776329.21           | 14615302.79           | 40°14'31.9148"N | 80°30'46.6641"W | 22952.09             | 162.177            | 0.12             |
| 29049.00   | 89.170             | 157.870        | 5908.04     | 23002.37          | -21937.58     | 7060.62      | 1776364.56           | 14615215.74           | 40°14'31.0523"N | 80°30'46.2143"W | 23045.82             | 162.159            | 0.09             |
| 29144.00   | 89.260             | 158.060        | 5909.34     | 23097.35          | -22025.64     | 7096.26      | 1776400.18           | 14615127.72           | 40°14'30.1803"N | 80°30'45.7610"W | 23140.56             | 162.142            | 0.22             |
| 29238.00   | 89.230             | 157.900        | 5910.58     | 23191.34          | -22112.77     | 7131.50      | 1776435.41           | 14615040.62           | 40°14'29.3173"N | 80°30'45.3127"W | 23234.31             | 162.125            | 0.17             |
| 29331.00   | 89.290             | 158.020        | 5911.78     | 23284.32          | -22198.97     | 7166.40      | 1776470.29           | 14614954.45           | 40°14'28.4637"N | 80°30'44.8689"W | 23327.05             | 162.109            | 0.14             |
| 29426.00   | 89.230             | 157.990        | 5913.01     | 23379.31          | -22287.05     | 7201.97      | 1776505.86           | 14614866.41           | 40°14'27.5914"N | 80°30'44.4163"W | 23421.80             | 162.092            | 0.07             |
| 29520.00   | 89.170             | 158.150        | 5914.32     | 23473.29          | -22374.24     | 7237.08      | 1776540.95           | 14614779.25           | 40°14'26.7279"N | 80°30'43.9699"W | 23515.56             | 162.076            | 0.18             |
| 29614.00   | 89.230             | 157.920        | 5915.63     | 23567.28          | -22461.40     | 7272.23      | 1776576.09           | 14614692.12           | 40°14'25.8646"N | 80°30'43.5227"W | 23609.32             | 162.060            | 0.25             |
| 29709.00   | 89.170             | 158.010        | 5916.96     | 23662.26          | -22549.46     | 7307.87      | 1776611.71           | 14614604.10           | 40°14'24.9926"N | 80°30'43.0694"W | 23704.07             | 162.043            | 0.11             |
| 29803.00   | 89.200             | 157.800        | 5918.30     | 23756.25          | -22636.54     | 7343.23      | 1776647.05           | 14614517.05           | 40°14'24.1300"N | 80°30'42.6197"W | 23797.82             | 162.027            | 0.23             |
| 29897.00   | 88.740             | 157.820        | 5919.98     | 23850.22          | -22723.57     | 7378.72      | 1776682.54           | 14614430.05           | 40°14'23.2682"N | 80°30'42.1682"W | 23891.55             | 162.011            | 0.49             |
| 29991.00   | 88.830             | 157.770        | 5921.98     | 23944.19          | -22810.58     | 7414.24      | 1776718.04           | 14614343.08           | 40°14'22.4064"N | 80°30'41.7164"W | 23985.27             | 161.994            | 0.11             |
| 30086.00   | 88.710             | 158.140        | 5924.02     | 24039.16          | -22898.61     | 7449.89      | 1776753.67           | 14614255.08           | 40°14'21.5346"N | 80°30'41.2630"W | 24080.02             | 161.978            | 0.41             |
| 30181.00   | 88.860             | 158.150        | 5926.03     | 24134.14          | -22986.76     | 7485.24      | 1776789.02           | 14614166.96           | 40°14'20.6615"N | 80°30'40.8133"W | 24174.78             | 161.963            | 0.16             |

**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**WELLPATH DATA (343 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] |
|-----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|
| 30274.00  | 88.740          | 158.130     | 5927.98  | 24227.11       | -23073.06  | 7519.86   | 1776823.62        | 14614080.70        | 40°14'19.8069"N | 80°30'40.3731"W | 24267.56          | 161.948         | 0.13          |
| 30368.00  | 88.770          | 157.930     | 5930.02  | 24321.08       | -23160.21  | 7555.02   | 1776858.77        | 14613993.58        | 40°14'18.9438"N | 80°30'39.9259"W | 24361.32          | 161.933         | 0.22          |
| 30463.00  | 88.920          | 158.180     | 5931.94  | 24416.06       | -23248.31  | 7590.52   | 1776894.25        | 14613905.51        | 40°14'18.0713"N | 80°30'39.4745"W | 24456.08          | 161.918         | 0.31          |
| 30557.00  | 88.610          | 157.850     | 5933.96  | 24510.03       | -23335.45  | 7625.70   | 1776929.42        | 14613818.40        | 40°14'17.2082"N | 80°30'39.0270"W | 24549.84          | 161.903         | 0.48          |
| 30652.00  | 89.290          | 158.410     | 5935.70  | 24605.01       | -23423.60  | 7661.08   | 1776964.79        | 14613730.29        | 40°14'16.3353"N | 80°30'38.5771"W | 24644.62          | 161.889         | 0.93          |
| 30840.00  | 89.230          | 158.080     | 5938.13  | 24792.99       | -23598.20  | 7730.76   | 1777034.43        | 14613555.76        | 40°14'14.6062"N | 80°30'37.6911"W | 24832.23          | 161.861         | 0.18          |
| 30935.00  | 89.230          | 157.860     | 5939.41  | 24887.98       | -23686.25  | 7766.39   | 1777070.05        | 14613467.74        | 40°14'13.7341"N | 80°30'37.2379"W | 24927.00          | 161.846         | 0.23          |
| 31029.00  | 89.170          | 158.300     | 5940.72  | 24981.96       | -23773.45  | 7801.47   | 1777105.13        | 14613380.58        | 40°14'12.8705"N | 80°30'36.7917"W | 25020.79          | 161.832         | 0.47          |
| 31123.00  | 89.260          | 158.320     | 5942.01  | 25075.95       | -23860.78  | 7836.21   | 1777139.85        | 14613293.27        | 40°14'12.0056"N | 80°30'36.3500"W | 25114.60          | 161.819         | 0.10          |
| 31217.00  | 89.200          | 158.130     | 5943.27  | 25169.94       | -23948.07  | 7871.08   | 1777174.70        | 14613206.02        | 40°14'11.1411"N | 80°30'35.9067"W | 25208.41          | 161.806         | 0.21          |
| 31311.00  | 89.200          | 158.080     | 5944.58  | 25263.93       | -24035.28  | 7906.13   | 1777209.74        | 14613118.85        | 40°14'10.2774"N | 80°30'35.4609"W | 25302.20          | 161.792         | 0.05          |
| 31340.00  | 89.230          | 157.850     | 5944.98  | 25292.92       | -24062.16  | 7917.01   | 1777220.62        | 14613091.98        | 40°14'10.0112"N | 80°30'35.3226"W | 25331.14          | 161.788         | 0.80          |
| 31365.00‡ | 89.230          | 157.850     | 5945.32  | 25317.92       | -24085.31  | 7926.43   | 1777230.04        | 14613068.83        | 40°14'9.7819"N  | 80°30'35.2027"W | 25356.08          | 161.784         | 0.00          |

**HOLE & CASING SECTIONS - Ref Wellbore: State of WV DNR C BRK 206H AWB Ref Wellpath: State of WV DNR C BRK 206H awp Proj: 31365'**

| 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] |
|-----------------|---------------|-------------|---------------|----------------|--------------|----------------|----------------|--------------|--------------|
| 13.375in Casing | 26.00         | 447.00      | 421.00        | 26.00          | 446.99       | 0.00           | 0.00           | 1.49         | 1.46         |
| 9.625in Casing  | 26.00         | 1953.00     | 1927.00       | 26.00          | 1914.62      | 0.00           | 0.00           | 6.49         | -285.34      |
| 5.5in Casing    | 26.00         | 32365.00    | 32339.00      | 26.00          | N/A          | 0.00           | 0.00           | N/A          | N/A          |

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**REFERENCE WELLPATH IDENTIFICATION**

|          |                             |          |                                |
|----------|-----------------------------|----------|--------------------------------|
| Operator | SWN PRODUCTION COMPANY, LLC | Well     | State of WV DNR C BRK 206H     |
| Field    | Brooke                      | API      | 47009003410000                 |
| Facility | State of WV DNR C BRK Pad   | Wellbore | State of WV DNR C BRK 206H AWB |
| Slot     | 206H                        |          |                                |

**TARGETS**

| Name                                 | TVD<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude        | Longitude       | Shape |
|--------------------------------------|-------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|-------|
| State of WV DNR C BRK 206H LP rev 3  | 5616.00     | -665.76       | -1263.93     | 1768043.20           | 14636479.41           | 40°18'1.6927"N  | 80°32'32.1435"W | point |
| State of WV DNR C BRK 206H wp1       | 5930.00     | -20356.62     | 6459.03      | 1775763.20           | 14616796.10           | 40°14'46.7076"N | 80°30'53.8604"W | point |
| State of WV DNR C BRK 206H BHL rev 5 | 5936.00     | -24095.78     | 7899.54      | 1777203.15           | 14613058.37           | 40°14'9.6800"N  | 80°30'35.5503"W | point |

**WELLPATH COMPOSITION - Ref Wellbore: State of WV DNR C BRK 206H AWB Ref Wellpath: State of WV DNR C BRK 206H awp Proj: 31365'**

| Start MD<br>[ft] | End MD<br>[ft] | Positional Uncertainty Model                    | Log Name/Comment                        | Wellbore                       | Survey Date |
|------------------|----------------|-------------------------------------------------|-----------------------------------------|--------------------------------|-------------|
| 26.00            | 446.00         | OWSG MWD rev2 + IFR1 + Multi-Station Correction | 1 Total MWD 17.5" IFR-MSA 50' - 446'    | State of WV DNR C BRK 206H AWB | 6/26/2024   |
| 446.00           | 1953.00        | OWSG MWD rev2 + IFR1 + Multi-Station Correction | 2 Total MWD 12.52" IFR-MSA 500' - 1953' | State of WV DNR C BRK 206H AWB | 6/26/2024   |
| 1953.00          | 4974.00        | OWSG MWD rev2 + IFR1 + Multi-Station Correction | 3 Total MWD 8.75" IFR-MSA 2070' - 4974' | State of WV DNR C BRK 206H AWB | 6/26/2024   |
| 4974.00          | 31365.00       | OWSG MWD rev2 + IFR1 + Multi-Station Correction | 4 BH MWD 8.5" IFR-MSA 5032' - 31340'    | State of WV DNR C BRK 206H AWB | 6/26/2024   |

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