

SOUTHWESTERN ENERGY



Location: Ohio County, WV
 Field: Ohio
 Facility: Edward Dremak OHI Pad

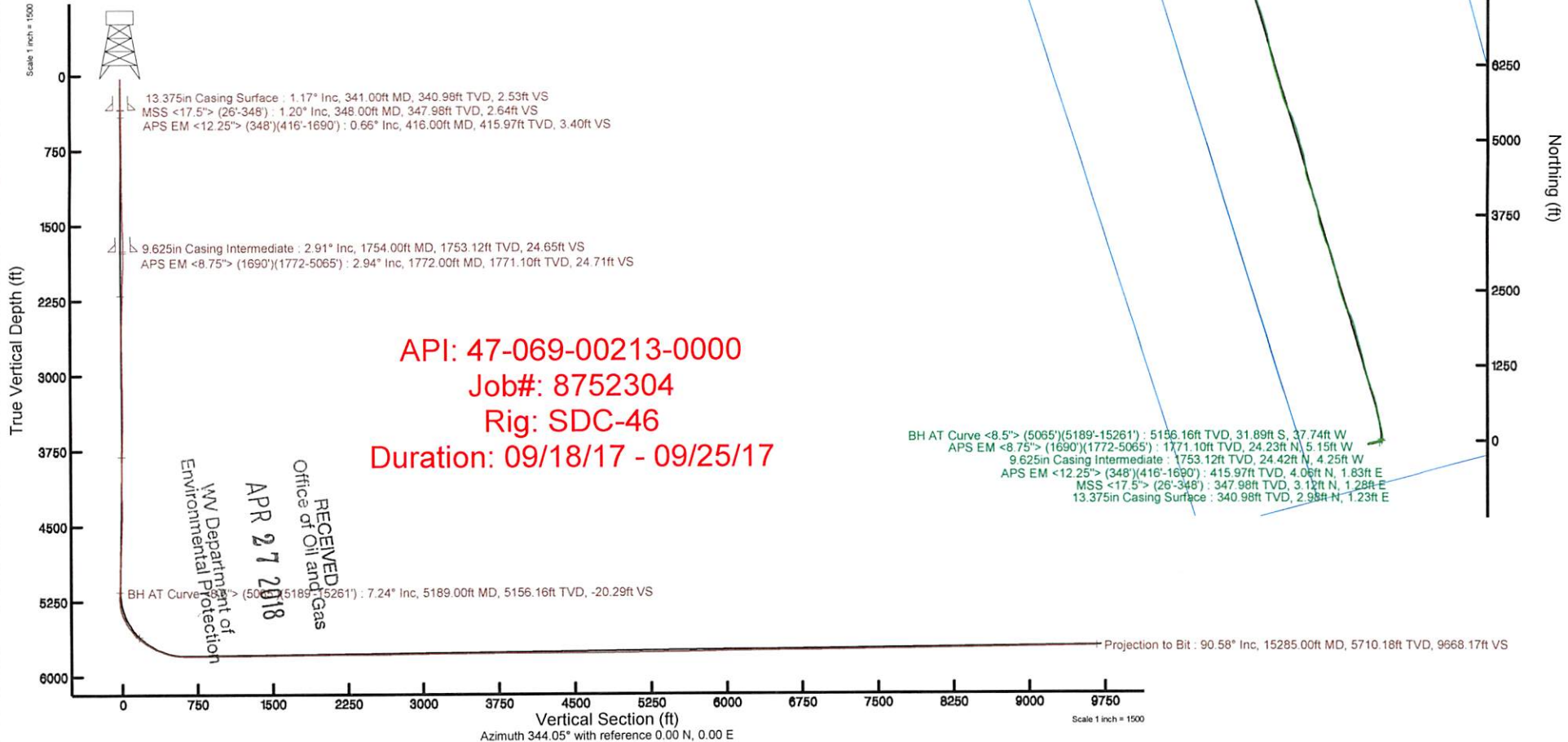
Slot: Slot #3H
 Well: Edward Dremak OHI 3H
 Wellbore: Edward Dremak OHI 3H PWB

| Location Information | | | | |
|--|-------------------|--------------------|--------------------|----------------|
| Facility Name | Grid East (US ft) | Grid North (US ft) | Latitude | Longitude |
| Edward Dremak OHI Pad | 1737740.826 | 14584704.331 | 40°09'31.223"N | 80°39'06.011"W |
| Slot | Local N (ft) | Local E (ft) | Grid North (US ft) | Latitude |
| Slot #3H | 31.75 | 55.53 | 1737796.335 | 40°09'31.535"N |
| | | | 14584736.070 | 80°39'05.294"W |
| SDC-46 (RKB) to Ground level (At Slot: Slot #3H) | | | 26ft | |
| Mean Sea Level to Ground level (At Slot: Slot #3H) | | | -1087.95ft | |
| SDC-46 (RKB) to Mean Sea Level | | | 1113.95ft | |

| | |
|---|--|
| Plot reference wellpath is Edward Dremak OHI 3H PWP Rev-B.0 | Grid System: NAD83 / UTM Zone 17 North, US feet |
| True vertical depths are referenced to SDC-46 (RKB) | * = Wellpath was transformed from a different geodetic datum |
| Measured depths are referenced to SDC-46 (RKB) | North Reference: Grid north |
| SDC-46 (RKB) to Mean Sea Level: 1113.95 feet | Scale: True distance |
| Mean Sea Level to Ground level (At Slot: Slot #3H): -1087.95 feet | Depths are in feet |
| Coordinates are in feet referenced to Slot | Created by: thomsuzc on 2017-10-05 |
| | Database: WA, Pennsylvania |



User specified Dip 87.81° Field 5.2679 mT
 Magnetic North is 8.02 degrees West of True North (at 18-Sep-2017)
 Grid North is 0.22 degrees East of True North
 To correct azimuth from True to Grid subtract 0.22 degrees
 To correct azimuth from Magnetic to Grid subtract 8.24 degrees





Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWP |
| Facility | Edward Dremak OHI Pad | | |

REPORT SETUP INFORMATION

| | | | |
|---------------------|------------------------------------|----------------------|--|
| Projection System | NAD83 / UTM Zone 17 North, US feet | Software System | WellArchitect® 5.0 |
| North Reference | Grid | User | Thomsuzc |
| Scale | 0.999611 | Report Generated | 05/Oct/2017 at 09:43 |
| Convergence at slot | 0.23° East | Database/Source file | WA_Pennsylvania/Edward_Dremak_OHI_3H_AWP_Proj_15285_.xml |

WELLPATH LOCATION

| | Local coordinates | | Grid coordinates | | Geographic coordinates | |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|----------------|
| | North[ft] | East[ft] | Easting[US ft] | Northing[US ft] | Latitude | Longitude |
| Slot Location | 31.75 | 55.53 | 1737796.34 | 14584736.07 | 40°09'31.535"N | 80°39'05.294"W |
| Facility Reference Pt | | | 1737740.83 | 14584704.33 | 40°09'31.223"N | 80°39'06.011"W |
| Field Reference Pt | | | 0.00 | 0.00 | 0°00'00.000" | 85°29'19.478"W |

WELLPATH DATUM

| | | | |
|--------------------------|-------------------|---|-------------------|
| Calculation method | Minimum curvature | SDC-46 (RKB) to Facility Vertical Datum | 1113.95ft |
| Horizontal Reference Pt | Slot | SDC-46 (RKB) to Mean Sea Level | 1113.95ft |
| Vertical Reference Pt | SDC-46 (RKB) | SDC-46 (RKB) to Ground Level at Slot (Slot #3H) | 26.00ft |
| MD Reference Pt | SDC-46 (RKB) | Section Origin | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level | Section Azimuth | 344.05° |

RECEIVED
 Office of Oil and Gas
 APR 27 2018
 WV Department of
 Environmental Protection



Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 2 of 9



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWB |
| Facility | Edward Dremak OHI Pad | | |

| WELLPATH DATA (176 stations) † = interpolated/extrapolated station | | | | | | | | | | | | | | | |
|--|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|----------------|----------------|-------------------|-----------------|---------------|----------------------|---------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] |
| 0.00† | 0.000 | 22.400 | 0.00 | 0.00 | 0.00 | 0.00 | 1737796.33 | 14584736.07 | 40°09'31.535"N | 80°39'05.294"W | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.000 | 22.400 | 26.00 | 0.00 | 0.00 | 0.00 | 1737796.33 | 14584736.07 | 40°09'31.535"N | 80°39'05.294"W | 0.00 | 0.000 | 0.00 | 0.00 | 0.00 |
| 348.00 | 1.200 | 22.400 | 347.98 | 2.64 | 3.12 | 1.28 | 1737797.62 | 14584739.19 | 40°09'31.565"N | 80°39'05.277"W | 3.37 | 22.400 | 0.37 | 0.37 | 6.96 |
| 416.00 | 0.660 | 44.430 | 415.97 | 3.40 | 4.06 | 1.83 | 1737798.16 | 14584740.12 | 40°09'31.575"N | 80°39'05.270"W | 4.45 | 24.292 | 0.94 | -0.79 | 32.40 |
| 509.00 | 0.400 | 25.290 | 508.96 | 3.91 | 4.73 | 2.34 | 1737798.68 | 14584740.80 | 40°09'31.581"N | 80°39'05.264"W | 5.28 | 26.355 | 0.33 | -0.28 | -20.58 |
| 602.00 | 0.500 | 69.290 | 601.96 | 4.18 | 5.17 | 2.86 | 1737799.20 | 14584741.24 | 40°09'31.586"N | 80°39'05.257"W | 5.91 | 28.978 | 0.38 | 0.11 | 47.31 |
| 695.00 | 0.720 | 64.980 | 694.96 | 4.31 | 5.56 | 3.77 | 1737800.10 | 14584741.63 | 40°09'31.589"N | 80°39'05.245"W | 6.72 | 34.153 | 0.24 | 0.24 | -4.63 |
| 788.00 | 0.780 | 72.460 | 787.95 | 4.42 | 6.00 | 4.90 | 1737801.24 | 14584742.06 | 40°09'31.594"N | 80°39'05.231"W | 7.75 | 39.277 | 0.12 | 0.06 | 8.04 |
| 881.00 | 1.490 | 54.270 | 880.93 | 4.85 | 6.89 | 6.49 | 1737802.82 | 14584742.96 | 40°09'31.602"N | 80°39'05.210"W | 9.47 | 43.270 | 0.85 | 0.76 | -19.56 |
| 974.00 | 1.950 | 45.070 | 973.89 | 6.02 | 8.72 | 8.59 | 1737804.92 | 14584744.78 | 40°09'31.620"N | 80°39'05.183"W | 12.24 | 44.583 | 0.58 | 0.49 | -9.89 |
| 1066.00 | 2.280 | 42.530 | 1065.82 | 7.74 | 11.17 | 10.94 | 1737807.27 | 14584747.24 | 40°09'31.645"N | 80°39'05.153"W | 15.63 | 44.391 | 0.37 | 0.36 | -2.76 |
| 1159.00 | 2.590 | 36.800 | 1158.74 | 9.98 | 14.22 | 13.45 | 1737809.78 | 14584750.28 | 40°09'31.675"N | 80°39'05.120"W | 19.57 | 43.402 | 0.42 | 0.33 | -6.16 |
| 1252.00 | 1.850 | 22.720 | 1251.67 | 12.42 | 17.28 | 15.28 | 1737811.61 | 14584753.35 | 40°09'31.705"N | 80°39'05.096"W | 23.07 | 41.485 | 0.98 | -0.80 | -15.14 |
| 1345.00 | 1.590 | 326.010 | 1344.63 | 14.82 | 19.74 | 15.14 | 1737811.47 | 14584755.80 | 40°09'31.729"N | 80°39'05.098"W | 24.88 | 37.493 | 1.77 | -0.28 | -60.98 |
| 1437.00 | 2.860 | 284.400 | 1436.57 | 17.19 | 21.37 | 12.21 | 1737808.54 | 14584757.43 | 40°09'31.745"N | 80°39'05.136"W | 24.61 | 29.735 | 2.15 | 1.38 | -45.23 |
| 1530.00 | 3.370 | 280.840 | 1529.43 | 19.60 | 22.46 | 7.27 | 1737803.61 | 14584758.52 | 40°09'31.756"N | 80°39'05.199"W | 23.61 | 17.945 | 0.59 | 0.55 | -3.83 |
| 1623.00 | 2.870 | 286.830 | 1622.29 | 22.09 | 23.65 | 2.36 | 1737798.69 | 14584759.71 | 40°09'31.768"N | 80°39'05.263"W | 23.77 | 5.701 | 0.64 | -0.54 | 6.44 |
| 1690.00 | 3.010 | 279.040 | 1689.21 | 23.74 | 24.41 | -0.98 | 1737795.35 | 14584760.47 | 40°09'31.776"N | 80°39'05.306"W | 24.43 | 357.696 | 0.63 | 0.21 | -11.63 |
| 1772.00 | 2.940 | 255.820 | 1771.10 | 24.71 | 24.23 | -5.15 | 1737791.19 | 14584760.29 | 40°09'31.774"N | 80°39'05.359"W | 24.77 | 348.008 | 1.46 | -0.09 | -28.32 |
| 1819.00 | 3.060 | 256.970 | 1818.03 | 24.82 | 23.65 | -7.54 | 1737788.80 | 14584759.72 | 40°09'31.769"N | 80°39'05.390"W | 24.83 | 342.324 | 0.29 | 0.26 | 2.45 |
| 1911.00 | 3.170 | 215.750 | 1909.91 | 23.36 | 21.04 | -11.42 | 1737784.92 | 14584757.10 | 40°09'31.743"N | 80°39'05.440"W | 23.93 | 331.510 | 2.39 | 0.12 | -44.80 |
| 2004.00 | 3.010 | 208.860 | 2002.77 | 20.04 | 16.81 | -14.10 | 1737782.24 | 14584752.87 | 40°09'31.701"N | 80°39'05.475"W | 21.94 | 320.016 | 0.43 | -0.17 | -7.41 |
| 2097.00 | 3.360 | 228.290 | 2095.63 | 17.12 | 12.86 | -17.31 | 1737779.03 | 14584748.92 | 40°09'31.662"N | 80°39'05.516"W | 21.56 | 306.606 | 1.21 | 0.38 | 20.89 |
| 2189.00 | 3.760 | 234.960 | 2187.46 | 14.96 | 9.33 | -21.79 | 1737774.55 | 14584745.40 | 40°09'31.628"N | 80°39'05.574"W | 23.71 | 293.183 | 0.63 | 0.43 | 7.25 |
| 2282.00 | 5.220 | 236.130 | 2280.17 | 12.66 | 5.22 | -27.80 | 1737768.54 | 14584741.29 | 40°09'31.587"N | 80°39'05.652"W | 28.29 | 280.642 | 1.57 | 1.57 | 1.26 |
| 2375.00 | 8.160 | 239.760 | 2372.52 | 9.73 | -0.46 | -37.02 | 1737759.33 | 14584735.61 | 40°09'31.532"N | 80°39'05.771"W | 37.02 | 269.290 | 3.19 | 3.16 | 3.90 |
| 2467.00 | 9.340 | 239.010 | 2463.45 | 6.18 | -7.59 | -49.06 | 1737747.29 | 14584728.48 | 40°09'31.462"N | 80°39'05.926"W | 49.64 | 261.205 | 1.29 | 1.28 | -0.82 |
| 2560.00 | 8.990 | 249.770 | 2555.27 | 3.68 | 13.99 | -62.35 | 1737734.01 | 14584722.09 | 40°09'31.399"N | 80°39'06.098"W | 63.90 | 257.354 | 1.88 | -0.38 | 11.57 |
| 2653.00 | 10.400 | 257.860 | 2646.95 | 3.70 | 18.27 | -77.38 | 1737718.99 | 14584717.81 | 40°09'31.357"N | 80°39'06.292"W | 79.50 | 256.716 | 2.10 | 1.52 | 8.70 |
| 2746.00 | 10.540 | 258.900 | 2738.40 | 4.97 | 21.67 | -93.93 | 1737702.44 | 14584714.41 | 40°09'31.324"N | 80°39'06.505"W | 96.40 | 257.008 | 0.25 | 0.15 | 1.12 |

RECEIVED
 Department of Oil and Gas
 Environmental Protection
 27 2018



Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 3 of 9



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWB |
| Facility | Edward Dremak OHI Pad | | |

| WELLPATH DATA (176 stations) | | | | | | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|----------------|----------------------|--------------------|------------------|-------------------------|------------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] |
| 2842.00 | 9.790 | 259.690 | 2832.89 | 6.52 | -24.82 | -110.57 | 1737685.80 | 14584711.26 | 40°09'31.294"N | 80°39'06.720"W | 113.33 | 257.348 | 0.79 | -0.78 | 0.82 |
| 2934.00 | 9.560 | 258.690 | 2923.58 | 7.91 | -27.72 | -125.76 | 1737670.62 | 14584708.36 | 40°09'31.266"N | 80°39'06.915"W | 128.78 | 257.570 | 0.31 | -0.25 | -1.09 |
| 3027.00 | 8.720 | 258.390 | 3015.40 | 9.06 | -30.65 | -140.24 | 1737656.15 | 14584705.43 | 40°09'31.237"N | 80°39'07.102"W | 143.55 | 257.670 | 0.90 | -0.90 | -0.32 |
| 3120.00 | 9.430 | 257.820 | 3107.23 | 10.10 | -33.68 | -154.59 | 1737641.80 | 14584702.40 | 40°09'31.208"N | 80°39'07.287"W | 158.22 | 257.710 | 0.77 | 0.76 | -0.61 |
| 3213.00 | 10.000 | 258.140 | 3198.90 | 11.18 | -36.95 | -169.94 | 1737626.46 | 14584699.14 | 40°09'31.176"N | 80°39'07.485"W | 173.91 | 257.734 | 0.62 | 0.61 | 0.34 |
| 3306.00 | 9.820 | 257.350 | 3290.51 | 12.21 | -40.34 | -185.58 | 1737610.82 | 14584695.74 | 40°09'31.143"N | 80°39'07.686"W | 189.92 | 257.736 | 0.24 | -0.19 | -0.85 |
| 3398.00 | 8.000 | 252.720 | 3381.40 | 12.51 | -43.96 | -199.35 | 1737597.06 | 14584692.12 | 40°09'31.108"N | 80°39'07.864"W | 204.14 | 257.564 | 2.12 | -1.98 | -5.03 |
| 3491.00 | 5.330 | 244.700 | 3473.77 | 11.66 | -47.73 | -209.44 | 1737586.98 | 14584688.36 | 40°09'31.071"N | 80°39'07.994"W | 214.81 | 257.161 | 3.03 | -2.87 | -8.62 |
| 3581.00 | 3.650 | 234.010 | 3563.49 | 10.00 | -51.20 | -215.54 | 1737580.88 | 14584684.89 | 40°09'31.037"N | 80°39'08.073"W | 221.53 | 256.637 | 2.08 | -1.87 | -11.88 |
| 3674.00 | 3.660 | 229.080 | 3656.30 | 7.73 | -54.89 | -220.17 | 1737576.25 | 14584681.21 | 40°09'31.001"N | 80°39'08.133"W | 226.91 | 256.002 | 0.34 | 0.01 | -5.30 |
| 3770.00 | 2.300 | 218.330 | 3752.17 | 5.31 | -58.40 | -223.68 | 1737572.74 | 14584677.69 | 40°09'30.966"N | 80°39'08.178"W | 231.18 | 255.367 | 1.53 | -1.42 | -11.20 |
| 3859.00 | 1.640 | 129.040 | 3841.13 | 3.23 | -60.61 | -223.80 | 1737572.62 | 14584675.49 | 40°09'30.944"N | 80°39'08.180"W | 231.86 | 254.847 | 3.16 | -0.74 | -100.33 |
| 3952.00 | 3.740 | 87.470 | 3934.03 | 1.43 | -61.31 | -219.74 | 1737576.68 | 14584674.78 | 40°09'30.937"N | 80°39'08.127"W | 228.13 | 254.410 | 2.94 | 2.26 | -44.70 |
| 4045.00 | 5.850 | 75.020 | 4026.70 | 0.65 | -59.95 | -212.13 | 1737584.29 | 14584676.14 | 40°09'30.950"N | 80°39'08.029"W | 220.44 | 254.218 | 2.52 | 2.27 | -13.39 |
| 4138.00 | 6.540 | 66.920 | 4119.16 | 1.22 | -56.65 | -202.68 | 1737593.74 | 14584679.44 | 40°09'30.983"N | 80°39'07.907"W | 210.45 | 254.383 | 1.20 | 0.74 | -8.71 |
| 4231.00 | 7.240 | 68.250 | 4211.49 | 2.47 | -52.40 | -192.36 | 1737604.05 | 14584683.69 | 40°09'31.024"N | 80°39'07.774"W | 199.37 | 254.761 | 0.77 | 0.75 | 1.43 |
| 4323.00 | 8.740 | 71.550 | 4302.59 | 3.37 | -48.04 | -180.35 | 1737616.06 | 14584688.05 | 40°09'31.067"N | 80°39'07.619"W | 186.64 | 255.083 | 1.70 | 1.63 | 3.59 |
| 4416.00 | 10.720 | 75.350 | 4394.25 | 3.48 | -43.62 | -165.27 | 1737631.13 | 14584692.47 | 40°09'31.110"N | 80°39'07.425"W | 170.93 | 255.216 | 2.24 | 2.13 | 4.09 |
| 4509.00 | 11.680 | 83.750 | 4485.49 | 1.69 | -40.41 | -147.55 | 1737648.85 | 14584695.68 | 40°09'31.141"N | 80°39'07.197"W | 152.98 | 254.685 | 2.03 | 1.03 | 9.03 |
| 4601.00 | 12.230 | 83.020 | 4575.49 | -1.39 | -38.21 | -128.62 | 1737667.77 | 14584697.88 | 40°09'31.162"N | 80°39'06.953"W | 134.17 | 253.455 | 0.62 | 0.60 | -0.79 |
| 4694.00 | 10.780 | 84.590 | 4666.62 | -4.52 | -36.19 | -110.18 | 1737686.20 | 14584699.89 | 40°09'31.181"N | 80°39'06.715"W | 115.97 | 251.816 | 1.59 | -1.56 | 1.69 |
| 4787.00 | 8.900 | 90.510 | 4758.25 | -8.15 | -35.44 | -94.33 | 1737702.05 | 14584700.65 | 40°09'31.188"N | 80°39'06.511"W | 100.76 | 249.410 | 2.29 | -2.02 | 6.37 |
| 4880.00 | 8.760 | 90.270 | 4850.15 | -12.17 | -35.53 | -80.05 | 1737716.32 | 14584700.55 | 40°09'31.187"N | 80°39'06.327"W | 87.58 | 246.065 | 0.16 | -0.15 | -0.26 |
| 4973.00 | 8.220 | 81.810 | 4942.13 | -15.04 | -34.62 | -66.39 | 1737729.97 | 14584701.46 | 40°09'31.195"N | 80°39'06.151"W | 74.87 | 242.459 | 1.46 | -0.58 | -9.10 |
| 5065.00 | 7.990 | 75.770 | 5033.21 | -16.12 | -32.11 | -53.68 | 1737742.68 | 14584703.97 | 40°09'31.219"N | 80°39'05.987"W | 62.55 | 239.113 | 0.96 | -0.25 | -6.57 |
| 5189.00 | 7.240 | 104.080 | 5156.16 | -20.29 | -31.89 | -37.74 | 1737758.61 | 14584704.19 | 40°09'31.221"N | 80°39'05.782"W | 49.41 | 229.801 | 3.05 | -0.60 | 22.83 |
| 5282.00 | 14.970 | 68.420 | 5247.45 | -22.05 | -28.89 | -20.85 | 1737775.50 | 14584707.19 | 40°09'31.250"N | 80°39'05.564"W | 35.63 | 215.809 | 10.75 | 8.31 | -38.34 |
| 5374.00 | 19.080 | 30.750 | 5335.65 | -10.54 | -11.54 | -2.04 | 1737794.29 | 14584724.53 | 40°09'31.421"N | 80°39'05.321"W | 11.72 | 190.043 | 12.53 | 4.47 | -40.95 |
| 5467.00 | 25.960 | 3.800 | 5421.74 | 19.16 | 21.96 | 7.11 | 1737803.44 | 14584758.02 | 40°09'31.751"N | 80°39'05.201"W | 23.08 | 17.945 | 13.16 | 7.40 | -28.98 |
| 5560.00 | 34.490 | 355.650 | 5502.95 | 64.21 | 68.63 | 6.46 | 1737802.79 | 14584804.67 | 40°09'32.213"N | 80°39'05.207"W | 68.93 | 5.379 | 10.16 | 9.17 | -8.76 |

APR 27 2018
WV Department of Environmental Protection



Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 4 of 9



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWB |
| Facility | Edward Dremak OHI Pad | | |

| WELLPATH DATA (176 stations) | | | | | | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|----------------|----------------------|--------------------|------------------|-------------------------|------------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] |
| 5652.00 | 42.350 | 350.770 | 5574.09 | 120.61 | 125.29 | -0.50 | 1737795.84 | 14584861.31 | 40°09'32.773"N | 80°39'05.294"W | 125.29 | 359.773 | 9.15 | 8.54 | -5.30 |
| 5745.00 | 50.820 | 348.680 | 5637.95 | 187.77 | 191.68 | -12.62 | 1737783.72 | 14584927.68 | 40°09'33.429"N | 80°39'05.447"W | 192.10 | 356.233 | 9.25 | 9.11 | -2.25 |
| 5838.00 | 59.020 | 348.700 | 5691.36 | 263.56 | 266.25 | -27.53 | 1737768.81 | 14585002.21 | 40°09'34.167"N | 80°39'05.635"W | 267.67 | 354.096 | 8.82 | 8.82 | 0.02 |
| 5884.00 | 64.400 | 348.960 | 5713.15 | 303.91 | 305.97 | -35.37 | 1737760.98 | 14585041.92 | 40°09'34.560"N | 80°39'05.734"W | 308.01 | 353.405 | 11.71 | 11.70 | 0.57 |
| 5930.00 | 66.810 | 349.030 | 5732.15 | 345.65 | 347.09 | -43.37 | 1737752.98 | 14585083.03 | 40°09'34.966"N | 80°39'05.835"W | 349.79 | 352.878 | 5.24 | 5.24 | 0.15 |
| 5977.00 | 68.570 | 348.020 | 5749.99 | 388.99 | 389.70 | -52.02 | 1737744.33 | 14585125.62 | 40°09'35.388"N | 80°39'05.945"W | 393.16 | 352.396 | 4.24 | 3.74 | -2.15 |
| 6023.00 | 71.130 | 347.830 | 5765.84 | 432.08 | 431.93 | -61.06 | 1737735.30 | 14585167.83 | 40°09'35.805"N | 80°39'06.059"W | 436.22 | 351.954 | 5.58 | 5.57 | -0.41 |
| 6070.00 | 77.620 | 347.790 | 5778.49 | 477.22 | 476.14 | -70.61 | 1737725.75 | 14585212.03 | 40°09'36.243"N | 80°39'06.180"W | 481.35 | 351.565 | 13.81 | 13.81 | -0.09 |
| 6116.00 | 81.310 | 347.850 | 5786.90 | 522.34 | 520.34 | -80.15 | 1737716.22 | 14585256.21 | 40°09'36.680"N | 80°39'06.300"W | 526.48 | 351.244 | 8.02 | 8.02 | 0.13 |
| 6162.00 | 85.160 | 347.460 | 5792.31 | 567.92 | 564.96 | -89.91 | 1737706.46 | 14585300.81 | 40°09'37.121"N | 80°39'06.424"W | 572.07 | 350.957 | 8.41 | 8.37 | -0.85 |
| 6209.00 | 89.820 | 347.000 | 5794.37 | 614.79 | 610.74 | -100.29 | 1737696.09 | 14585346.57 | 40°09'37.574"N | 80°39'06.555"W | 618.92 | 350.675 | 9.96 | 9.91 | -0.98 |
| 6301.00 | 89.970 | 345.210 | 5794.54 | 706.72 | 700.04 | -122.38 | 1737674.00 | 14585435.84 | 40°09'38.457"N | 80°39'06.835"W | 710.66 | 350.084 | 1.95 | 0.16 | -1.95 |
| 6394.00 | 89.970 | 341.870 | 5794.59 | 799.71 | 789.22 | -148.73 | 1737647.66 | 14585524.98 | 40°09'39.339"N | 80°39'07.170"W | 803.11 | 349.328 | 3.59 | 0.00 | -3.59 |
| 6487.00 | 90.180 | 339.330 | 5794.47 | 892.53 | 876.93 | -179.62 | 1737616.79 | 14585612.66 | 40°09'40.207"N | 80°39'07.563"W | 895.14 | 348.425 | 2.74 | 0.23 | -2.73 |
| 6579.00 | 90.430 | 341.540 | 5793.98 | 984.34 | 963.61 | -210.42 | 1737585.99 | 14585699.31 | 40°09'41.065"N | 80°39'07.956"W | 986.32 | 347.682 | 2.42 | 0.27 | 2.40 |
| 6672.00 | 90.370 | 344.500 | 5793.33 | 1077.31 | 1052.55 | -237.58 | 1737558.85 | 14585788.21 | 40°09'41.945"N | 80°39'08.301"W | 1079.03 | 347.280 | 3.18 | -0.06 | 3.18 |
| 6765.00 | 90.430 | 344.790 | 5792.68 | 1170.30 | 1142.22 | -262.20 | 1737534.23 | 14585877.85 | 40°09'42.832"N | 80°39'08.614"W | 1171.93 | 347.071 | 0.32 | 0.06 | 0.31 |
| 6858.00 | 90.550 | 346.440 | 5791.88 | 1263.26 | 1232.30 | -285.31 | 1737511.14 | 14585967.89 | 40°09'43.723"N | 80°39'08.907"W | 1264.90 | 346.964 | 1.78 | 0.13 | 1.77 |
| 6944.00 | 90.710 | 347.090 | 5790.94 | 1349.16 | 1316.01 | -305.00 | 1737491.46 | 14586051.57 | 40°09'44.551"N | 80°39'09.156"W | 1350.89 | 346.952 | 0.78 | 0.19 | 0.76 |
| 7031.00 | 90.460 | 346.380 | 5790.05 | 1436.06 | 1400.69 | -324.96 | 1737471.50 | 14586136.21 | 40°09'45.389"N | 80°39'09.409"W | 1437.89 | 346.939 | 0.87 | -0.29 | -0.82 |
| 7118.00 | 90.490 | 345.130 | 5789.33 | 1523.02 | 1485.01 | -346.36 | 1737450.11 | 14586220.50 | 40°09'46.223"N | 80°39'09.680"W | 1524.87 | 346.871 | 1.44 | 0.03 | -1.44 |
| 7205.00 | 90.550 | 343.690 | 5788.54 | 1610.01 | 1568.80 | -369.74 | 1737426.74 | 14586304.26 | 40°09'47.052"N | 80°39'09.977"W | 1611.78 | 346.738 | 1.66 | 0.07 | -1.66 |
| 7291.00 | 90.550 | 343.190 | 5787.71 | 1696.00 | 1651.23 | -394.25 | 1737402.23 | 14586386.65 | 40°09'47.867"N | 80°39'10.289"W | 1697.64 | 346.571 | 0.58 | 0.00 | -0.58 |
| 7378.00 | 90.590 | 345.070 | 5786.85 | 1782.99 | 1734.91 | -418.04 | 1737378.46 | 14586470.30 | 40°09'48.695"N | 80°39'10.591"W | 1784.56 | 346.452 | 2.16 | 0.05 | 2.16 |
| 7465.00 | 90.590 | 346.810 | 5785.95 | 1869.94 | 1819.29 | -439.18 | 1737357.33 | 14586554.65 | 40°09'49.530"N | 80°39'10.859"W | 1871.55 | 346.428 | 2.00 | 0.00 | 2.00 |
| 7552.00 | 90.460 | 345.480 | 5785.15 | 1956.87 | 1903.75 | -460.01 | 1737336.51 | 14586639.08 | 40°09'50.365"N | 80°39'11.123"W | 1958.54 | 346.416 | 1.54 | -0.15 | -1.53 |
| 7639.00 | 90.590 | 340.580 | 5784.36 | 2043.83 | 1986.94 | -485.39 | 1737311.13 | 14586722.23 | 40°09'51.188"N | 80°39'11.446"W | 2045.37 | 346.272 | 5.63 | 0.15 | -5.63 |
| 7726.00 | 90.430 | 334.730 | 5783.58 | 2130.25 | 2067.37 | -518.45 | 1737278.09 | 14586802.63 | 40°09'51.984"N | 80°39'11.868"W | 2131.38 | 345.922 | 6.73 | -0.18 | -6.72 |
| 7815.00 | 89.970 | 333.800 | 5783.27 | 2217.95 | 2147.54 | -557.10 | 1737239.46 | 14586882.77 | 40°09'52.778"N | 80°39'12.361"W | 2218.62 | 345.457 | 1.17 | -0.52 | -1.04 |
| 7903.00 | 90.400 | 336.670 | 5782.99 | 2304.90 | 2227.44 | -593.96 | 1737202.61 | 14586962.63 | 40°09'53.569"N | 80°39'12.832"W | 2305.27 | 345.069 | 3.30 | 0.49 | 3.26 |

APR 27 2018
WV Department of
Environmental Protection



Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 5 of 9



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWB |
| Facility | Edward Dremak OHI Pad | | |

| WELLPATH DATA (176 stations) | | | | | | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|----------------|----------------------|--------------------|------------------|-------------------------|------------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] |
| 7989.00 | 89.510 | 340.510 | 5783.05 | 2390.49 | 2307.49 | -625.34 | 1737171.24 | 14587042.65 | 40°09'54.361"N | 80°39'13.232"W | 2390.72 | 344.837 | 4.58 | -1.03 | 4.47 |
| 8076.00 | 89.880 | 342.410 | 5783.52 | 2477.40 | 2389.96 | -653.00 | 1737143.59 | 14587125.10 | 40°09'55.177"N | 80°39'13.585"W | 2477.57 | 344.718 | 2.22 | 0.43 | 2.18 |
| 8163.00 | 90.520 | 345.830 | 5783.21 | 2564.39 | 2473.63 | -676.81 | 1737119.79 | 14587208.73 | 40°09'56.005"N | 80°39'13.887"W | 2564.55 | 344.698 | 4.00 | 0.74 | 3.93 |
| 8249.00 | 90.920 | 348.160 | 5782.13 | 2650.26 | 2557.41 | -696.16 | 1737100.45 | 14587292.48 | 40°09'56.834"N | 80°39'14.132"W | 2650.47 | 344.772 | 2.75 | 0.47 | 2.71 |
| 8336.00 | 90.800 | 345.880 | 5780.83 | 2737.13 | 2642.17 | -715.69 | 1737080.92 | 14587377.21 | 40°09'57.672"N | 80°39'14.379"W | 2737.39 | 344.844 | 2.62 | -0.14 | -2.62 |
| 8423.00 | 90.740 | 343.520 | 5779.66 | 2824.11 | 2726.08 | -738.65 | 1737057.98 | 14587461.08 | 40°09'58.502"N | 80°39'14.671"W | 2824.38 | 344.839 | 2.71 | -0.07 | -2.71 |
| 8510.00 | 90.830 | 347.330 | 5778.47 | 2911.06 | 2810.25 | -760.53 | 1737036.10 | 14587545.23 | 40°09'59.335"N | 80°39'14.949"W | 2911.35 | 344.857 | 4.38 | 0.10 | 4.38 |
| 8596.00 | 90.740 | 349.520 | 5777.29 | 2996.79 | 2894.49 | -777.79 | 1737018.85 | 14587629.43 | 40°10'00.168"N | 80°39'15.167"W | 2997.17 | 344.959 | 2.55 | -0.10 | 2.55 |
| 8685.00 | 90.460 | 346.330 | 5776.36 | 3085.57 | 2981.51 | -796.40 | 1737000.24 | 14587716.41 | 40°10'01.029"N | 80°39'15.402"W | 3086.04 | 345.045 | 3.60 | -0.31 | -3.58 |
| 8772.00 | 90.430 | 341.490 | 5775.68 | 3172.55 | 3065.07 | -820.51 | 1736976.15 | 14587799.94 | 40°10'01.855"N | 80°39'15.708"W | 3172.99 | 345.014 | 5.56 | -0.03 | -5.56 |
| 8859.00 | 90.370 | 339.330 | 5775.07 | 3259.36 | 3147.03 | -849.67 | 1736946.99 | 14587881.87 | 40°10'02.666"N | 80°39'16.080"W | 3259.71 | 344.891 | 2.48 | -0.07 | -2.48 |
| 8945.00 | 90.340 | 336.350 | 5774.54 | 3344.85 | 3226.67 | -882.11 | 1736914.57 | 14587961.47 | 40°10'03.454"N | 80°39'16.494"W | 3345.07 | 344.710 | 3.47 | -0.03 | -3.47 |
| 9032.00 | 90.250 | 339.140 | 5774.09 | 3431.31 | 3307.18 | -915.05 | 1736881.64 | 14588041.95 | 40°10'04.251"N | 80°39'16.914"W | 3431.43 | 344.534 | 3.21 | -0.10 | 3.21 |
| 9119.00 | 90.740 | 341.940 | 5773.34 | 3518.14 | 3389.19 | -944.03 | 1736852.67 | 14588123.94 | 40°10'05.063"N | 80°39'17.283"W | 3518.22 | 344.435 | 3.27 | 0.56 | 3.22 |
| 9206.00 | 90.620 | 341.490 | 5772.31 | 3605.06 | 3471.80 | -971.33 | 1736825.39 | 14588206.51 | 40°10'05.880"N | 80°39'17.631"W | 3605.11 | 344.370 | 0.54 | -0.14 | -0.52 |
| 9293.00 | 90.250 | 341.670 | 5771.65 | 3691.97 | 3554.34 | -998.82 | 1736797.91 | 14588289.02 | 40°10'06.697"N | 80°39'17.981"W | 3692.01 | 344.304 | 0.47 | -0.43 | 0.21 |
| 9379.00 | 90.340 | 346.960 | 5771.20 | 3777.94 | 3637.10 | -1022.06 | 1736774.68 | 14588371.75 | 40°10'07.516"N | 80°39'18.276"W | 3777.98 | 344.304 | 6.15 | 0.10 | 6.15 |
| 9466.00 | 90.430 | 350.930 | 5770.62 | 3864.60 | 3722.47 | -1038.74 | 1736758.00 | 14588457.08 | 40°10'08.360"N | 80°39'18.486"W | 3864.68 | 344.409 | 4.56 | 0.10 | 4.56 |
| 9553.00 | 89.880 | 349.760 | 5770.38 | 3951.08 | 3808.24 | -1053.33 | 1736743.42 | 14588542.82 | 40°10'09.208"N | 80°39'18.670"W | 3951.22 | 344.539 | 1.49 | -0.63 | -1.34 |
| 9639.00 | 89.940 | 346.650 | 5770.52 | 4036.84 | 3892.41 | -1070.90 | 1736725.85 | 14588626.96 | 40°10'10.041"N | 80°39'18.892"W | 4037.04 | 344.617 | 3.62 | 0.07 | -3.62 |
| 9726.00 | 90.120 | 344.330 | 5770.47 | 4123.81 | 3976.63 | -1092.70 | 1736704.06 | 14588711.14 | 40°10'10.874"N | 80°39'19.169"W | 4124.02 | 344.635 | 2.67 | 0.21 | -2.67 |
| 9813.00 | 90.060 | 341.830 | 5770.34 | 4210.79 | 4059.86 | -1118.02 | 1736678.75 | 14588794.34 | 40°10'11.697"N | 80°39'19.491"W | 4210.98 | 344.603 | 2.87 | -0.07 | -2.87 |
| 9900.00 | 90.120 | 339.170 | 5770.20 | 4297.61 | 4141.86 | -1147.06 | 1736649.73 | 14588876.31 | 40°10'12.509"N | 80°39'19.861"W | 4297.76 | 344.520 | 3.06 | 0.07 | -3.06 |
| 9986.00 | 90.030 | 338.280 | 5770.09 | 4383.24 | 4222.00 | -1178.26 | 1736618.53 | 14588956.41 | 40°10'13.302"N | 80°39'20.259"W | 4383.33 | 344.407 | 1.04 | -0.10 | -1.03 |
| 10073.00 | 90.090 | 339.870 | 5769.99 | 4469.91 | 4303.26 | -1209.33 | 1736587.48 | 14589037.64 | 40°10'14.106"N | 80°39'20.655"W | 4469.95 | 344.303 | 1.83 | 0.07 | 1.83 |
| 10160.00 | 89.940 | 344.980 | 5769.97 | 4556.85 | 4386.17 | -1235.59 | 1736561.22 | 14589120.52 | 40°10'14.926"N | 80°39'20.989"W | 4556.88 | 344.267 | 5.88 | -0.17 | 5.87 |
| 10246.00 | 89.970 | 349.770 | 5770.04 | 4642.68 | 4470.06 | -1254.39 | 1736542.44 | 14589204.38 | 40°10'15.756"N | 80°39'21.227"W | 4642.73 | 344.325 | 5.57 | 0.03 | 5.57 |
| 10333.00 | 90.280 | 352.360 | 5769.85 | 4729.02 | 4556.00 | -1267.90 | 1736528.93 | 14589290.29 | 40°10'16.606"N | 80°39'21.397"W | 4729.13 | 344.449 | 3.00 | 0.36 | 2.98 |
| 10420.00 | 90.090 | 351.650 | 5769.57 | 4815.18 | 4642.15 | -1280.00 | 1736516.84 | 14589376.41 | 40°10'17.458"N | 80°39'21.548"W | 4815.39 | 344.585 | 0.84 | -0.22 | -0.82 |
| 10507.00 | 90.860 | 349.910 | 5768.85 | 4901.57 | 4728.02 | -1293.94 | 1736502.91 | 14589462.24 | 40°10'18.307"N | 80°39'21.724"W | 4901.88 | 344.694 | 2.19 | 0.89 | -2.00 |

RECEIVED
 Office of Oil and Gas
 APR 27 2018
 WV Department
 Environmental



Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 6 of 9



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWB |
| Facility | Edward Dremak OHI Pad | | |

| WELLPATH DATA (176 stations) | | | | | | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|----------------|----------------------|--------------------|------------------|-------------------------|------------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] |
| 10594.00 | 90.650 | 343.020 | 5767.70 | 4988.44 | 4812.55 | -1314.28 | 1736482.57 | 14589546.74 | 40°10'19.143"N | 80°39'21.981"W | 4988.78 | 344.725 | 7.92 | -0.24 | -7.92 |
| 10680.00 | 90.340 | 339.970 | 5766.96 | 5074.34 | 4894.09 | -1341.57 | 1736455.29 | 14589628.24 | 40°10'19.949"N | 80°39'22.329"W | 5074.63 | 344.671 | 3.56 | -0.36 | -3.55 |
| 10767.00 | 90.250 | 345.000 | 5766.51 | 5161.28 | 4977.03 | -1367.75 | 1736429.12 | 14589711.15 | 40°10'20.770"N | 80°39'22.662"W | 5161.54 | 344.634 | 5.78 | -0.10 | 5.78 |
| 10854.00 | 90.740 | 348.840 | 5765.76 | 5248.15 | 5061.75 | -1387.43 | 1736409.44 | 14589795.84 | 40°10'21.608"N | 80°39'22.911"W | 5248.46 | 344.672 | 4.45 | 0.56 | 4.41 |
| 10941.00 | 90.800 | 344.860 | 5764.59 | 5335.02 | 5146.44 | -1407.22 | 1736389.67 | 14589880.50 | 40°10'22.446"N | 80°39'23.162"W | 5335.37 | 344.707 | 4.57 | 0.07 | -4.57 |
| 11028.00 | 90.430 | 341.250 | 5763.65 | 5421.99 | 5229.65 | -1432.57 | 1736364.32 | 14589963.67 | 40°10'23.269"N | 80°39'23.484"W | 5422.31 | 344.681 | 4.17 | -0.43 | -4.15 |
| 11114.00 | 90.400 | 342.410 | 5763.03 | 5507.92 | 5311.36 | -1459.39 | 1736337.52 | 14590045.35 | 40°10'24.077"N | 80°39'23.826"W | 5508.20 | 344.636 | 1.35 | -0.03 | 1.35 |
| 11203.00 | 90.920 | 334.930 | 5762.00 | 5596.46 | 5394.20 | -1491.73 | 1736305.18 | 14590128.16 | 40°10'24.897"N | 80°39'24.238"W | 5596.66 | 344.542 | 8.42 | 0.58 | -8.40 |
| 11290.00 | 90.890 | 333.330 | 5760.63 | 5682.14 | 5472.46 | -1529.69 | 1736267.24 | 14590206.39 | 40°10'25.672"N | 80°39'24.723"W | 5682.24 | 344.383 | 1.84 | -0.03 | -1.84 |
| 11376.00 | 91.170 | 335.540 | 5759.08 | 5766.91 | 5550.03 | -1566.79 | 1736230.15 | 14590283.93 | 40°10'26.440"N | 80°39'25.198"W | 5766.94 | 344.235 | 2.59 | 0.33 | 2.57 |
| 11463.00 | 91.230 | 337.290 | 5757.26 | 5853.12 | 5629.74 | -1601.59 | 1736195.37 | 14590363.61 | 40°10'27.229"N | 80°39'25.642"W | 5853.13 | 344.120 | 2.01 | 0.07 | 2.01 |
| 11550.00 | 91.230 | 345.910 | 5755.39 | 5939.94 | 5712.20 | -1629.02 | 1736167.95 | 14590446.03 | 40°10'28.045"N | 80°39'25.991"W | 5939.94 | 344.083 | 9.91 | 0.00 | 9.91 |
| 11637.00 | 90.950 | 347.970 | 5753.73 | 6026.81 | 5796.92 | -1648.68 | 1736148.30 | 14590530.73 | 40°10'28.883"N | 80°39'26.240"W | 6026.81 | 344.124 | 2.39 | -0.32 | 2.37 |
| 11724.00 | 90.430 | 343.670 | 5752.69 | 6113.74 | 5881.25 | -1669.98 | 1736127.00 | 14590615.02 | 40°10'29.717"N | 80°39'26.510"W | 6113.75 | 344.148 | 4.98 | -0.60 | -4.94 |
| 11810.00 | 90.520 | 342.720 | 5751.97 | 6199.73 | 5963.57 | -1694.85 | 1736102.15 | 14590697.31 | 40°10'30.532"N | 80°39'26.827"W | 6199.73 | 344.135 | 1.11 | 0.10 | -1.10 |
| 11897.00 | 90.430 | 343.650 | 5751.25 | 6286.71 | 6046.85 | -1720.01 | 1736076.99 | 14590780.55 | 40°10'31.355"N | 80°39'27.147"W | 6286.72 | 344.122 | 1.07 | -0.10 | 1.07 |
| 11984.00 | 90.650 | 344.200 | 5750.43 | 6373.71 | 6130.44 | -1744.10 | 1736052.92 | 14590864.11 | 40°10'32.182"N | 80°39'27.453"W | 6373.71 | 344.119 | 0.68 | 0.25 | 0.63 |
| 12071.00 | 90.490 | 343.680 | 5749.57 | 6460.70 | 6214.04 | -1768.17 | 1736028.86 | 14590947.68 | 40°10'33.009"N | 80°39'27.759"W | 6460.71 | 344.117 | 0.63 | -0.18 | -0.60 |
| 12157.00 | 90.220 | 344.690 | 5749.03 | 6546.70 | 6296.78 | -1791.61 | 1736005.43 | 14591030.39 | 40°10'33.828"N | 80°39'28.057"W | 6546.70 | 344.118 | 1.22 | -0.31 | 1.17 |
| 12244.00 | 89.940 | 345.670 | 5748.91 | 6633.68 | 6380.89 | -1813.86 | 1735983.19 | 14591114.46 | 40°10'34.660"N | 80°39'28.339"W | 6633.69 | 344.131 | 1.17 | -0.32 | 1.13 |
| 12331.00 | 89.880 | 346.340 | 5749.05 | 6720.63 | 6465.31 | -1834.90 | 1735962.15 | 14591198.85 | 40°10'35.495"N | 80°39'28.606"W | 6720.64 | 344.156 | 0.77 | -0.07 | 0.77 |
| 12418.00 | 90.520 | 348.450 | 5748.75 | 6807.48 | 6550.20 | -1853.88 | 1735943.18 | 14591283.71 | 40°10'36.335"N | 80°39'28.846"W | 6807.50 | 344.197 | 2.53 | 0.74 | 2.43 |
| 12504.00 | 91.200 | 352.300 | 5747.45 | 6892.93 | 6634.97 | -1868.26 | 1735928.81 | 14591368.44 | 40°10'37.173"N | 80°39'29.027"W | 6892.98 | 344.274 | 4.55 | 0.79 | 4.48 |
| 12591.00 | 90.520 | 346.370 | 5746.15 | 6979.51 | 6720.42 | -1884.35 | 1735912.72 | 14591453.86 | 40°10'38.018"N | 80°39'29.230"W | 6979.60 | 344.337 | 6.86 | -0.78 | -6.82 |
| 12678.00 | 90.710 | 344.390 | 5745.21 | 7066.48 | 6804.59 | -1906.31 | 1735890.77 | 14591538.00 | 40°10'38.851"N | 80°39'29.509"W | 7066.57 | 344.350 | 2.29 | 0.22 | -2.28 |
| 12765.00 | 90.620 | 344.660 | 5744.20 | 7153.47 | 6888.43 | -1929.52 | 1735867.57 | 14591621.80 | 40°10'39.680"N | 80°39'29.804"W | 7153.57 | 344.352 | 0.33 | -0.10 | 0.31 |
| 12852.00 | 90.800 | 345.480 | 5743.13 | 7240.44 | 6972.49 | -1951.93 | 1735845.17 | 14591705.83 | 40°10'40.511"N | 80°39'30.089"W | 7240.55 | 344.361 | 0.96 | 0.21 | 0.94 |
| 12939.00 | 90.650 | 343.660 | 5742.02 | 7327.43 | 7056.34 | -1975.08 | 1735822.03 | 14591789.65 | 40°10'41.341"N | 80°39'30.383"W | 7327.54 | 344.363 | 2.10 | -0.17 | -2.09 |
| 13027.00 | 90.650 | 340.400 | 5741.03 | 7415.36 | 7140.03 | -2002.22 | 1735794.90 | 14591873.31 | 40°10'42.169"N | 80°39'30.728"W | 7415.45 | 344.335 | 3.70 | 0.00 | -3.70 |
| 13114.00 | 90.740 | 339.780 | 5739.97 | 7502.14 | 7221.82 | -2031.84 | 1735765.29 | 14591955.07 | 40°10'42.978"N | 80°39'31.106"W | 7502.21 | 344.286 | 0.72 | 0.10 | -0.71 |

RECEIVED
Office of Oil and Gas

APR 27 2018

WV Department of



Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 7 of 9



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWB |
| Facility | Edward Dremak OHI Pad | | |

| WELLPATH DATA (176 stations) | | | | | | | | | | | | | | | |
|------------------------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|----------------|----------------------|--------------------|------------------|-------------------------|------------------------|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Closure Dist [ft] | Closure Dir [°] | DLS [°/100ft] | Build Rate [°/100ft] | Turn Rate [°/100ft] |
| 13201.00 | 90.950 | 344.580 | 5738.69 | 7589.06 | 7304.62 | -2058.46 | 1735738.68 | 14592037.83 | 40°10'43.798"N | 80°39'31.444"W | 7589.11 | 344.262 | 5.52 | 0.24 | 5.52 |
| 13288.00 | 91.080 | 345.980 | 5737.15 | 7676.03 | 7388.74 | -2080.56 | 1735716.59 | 14592121.92 | 40°10'44.630"N | 80°39'31.725"W | 7676.09 | 344.274 | 1.62 | 0.15 | 1.61 |
| 13375.00 | 90.890 | 341.850 | 5735.65 | 7762.99 | 7472.31 | -2104.66 | 1735692.50 | 14592205.46 | 40°10'45.456"N | 80°39'32.031"W | 7763.05 | 344.270 | 4.75 | -0.22 | -4.75 |
| 13462.00 | 90.950 | 339.210 | 5734.25 | 7849.81 | 7554.32 | -2133.65 | 1735663.52 | 14592287.43 | 40°10'46.268"N | 80°39'32.401"W | 7849.85 | 344.228 | 3.03 | 0.07 | -3.03 |
| 13550.00 | 90.920 | 339.720 | 5732.82 | 7937.52 | 7636.71 | -2164.51 | 1735632.67 | 14592369.80 | 40°10'47.083"N | 80°39'32.794"W | 7937.54 | 344.175 | 0.58 | -0.03 | 0.58 |
| 13637.00 | 90.620 | 335.830 | 5731.65 | 8023.97 | 7717.23 | -2197.41 | 1735599.78 | 14592450.28 | 40°10'47.880"N | 80°39'33.214"W | 8023.98 | 344.106 | 4.48 | -0.34 | -4.47 |
| 13723.00 | 90.740 | 337.560 | 5730.63 | 8109.26 | 7796.20 | -2231.43 | 1735565.78 | 14592529.22 | 40°10'48.662"N | 80°39'33.649"W | 8109.26 | 344.028 | 2.02 | 0.14 | 2.01 |
| 13810.00 | 90.710 | 341.560 | 5729.52 | 8195.96 | 7877.70 | -2261.80 | 1735535.41 | 14592610.69 | 40°10'49.468"N | 80°39'34.036"W | 8195.97 | 343.980 | 4.60 | -0.03 | 4.60 |
| 13897.00 | 90.770 | 339.600 | 5728.40 | 8282.79 | 7959.74 | -2290.73 | 1735506.50 | 14592692.70 | 40°10'50.280"N | 80°39'34.405"W | 8282.81 | 343.945 | 2.25 | 0.07 | -2.25 |
| 13983.00 | 90.590 | 343.580 | 5727.38 | 8368.69 | 8041.32 | -2317.88 | 1735479.36 | 14592774.24 | 40°10'51.087"N | 80°39'34.750"W | 8368.71 | 343.921 | 4.63 | -0.21 | 4.63 |
| 14070.00 | 90.680 | 347.530 | 5726.42 | 8455.64 | 8125.54 | -2339.58 | 1735457.67 | 14592858.44 | 40°10'51.921"N | 80°39'35.026"W | 8455.65 | 343.937 | 4.54 | 0.10 | 4.54 |
| 14157.00 | 90.620 | 342.560 | 5725.43 | 8542.59 | 8209.57 | -2362.02 | 1735435.24 | 14592942.42 | 40°10'52.752"N | 80°39'35.311"W | 8542.61 | 343.949 | 5.71 | -0.07 | -5.71 |
| 14244.00 | 91.140 | 344.630 | 5724.09 | 8629.57 | 8293.01 | -2386.59 | 1735410.68 | 14593025.84 | 40°10'53.577"N | 80°39'35.623"W | 8629.59 | 343.945 | 2.45 | 0.60 | 2.38 |
| 14330.00 | 90.800 | 349.950 | 5722.63 | 8715.39 | 8376.86 | -2405.50 | 1735391.78 | 14593109.65 | 40°10'54.407"N | 80°39'35.863"W | 8715.40 | 343.978 | 6.20 | -0.40 | 6.19 |
| 14417.00 | 90.740 | 350.400 | 5721.47 | 8801.89 | 8462.58 | -2420.34 | 1735376.94 | 14593195.34 | 40°10'55.254"N | 80°39'36.050"W | 8801.89 | 344.039 | 0.52 | -0.07 | 0.52 |
| 14504.00 | 90.800 | 344.570 | 5720.30 | 8888.69 | 8547.46 | -2439.19 | 1735358.10 | 14593280.19 | 40°10'56.094"N | 80°39'36.288"W | 8888.69 | 344.073 | 6.70 | 0.07 | -6.70 |
| 14591.00 | 90.680 | 343.140 | 5719.17 | 8975.68 | 8631.02 | -2463.37 | 1735333.92 | 14593363.72 | 40°10'56.920"N | 80°39'36.596"W | 8975.68 | 344.071 | 1.65 | -0.14 | -1.64 |
| 14678.00 | 90.740 | 348.950 | 5718.09 | 9062.58 | 8715.41 | -2484.34 | 1735312.96 | 14593448.07 | 40°10'57.755"N | 80°39'36.862"W | 9062.58 | 344.090 | 6.68 | 0.07 | 6.68 |
| 14764.00 | 90.860 | 349.600 | 5716.89 | 9148.21 | 8799.90 | -2500.35 | 1735296.97 | 14593532.53 | 40°10'58.591"N | 80°39'37.064"W | 9148.22 | 344.138 | 0.77 | 0.14 | 0.76 |
| 14851.00 | 90.920 | 340.480 | 5715.54 | 9235.10 | 8883.85 | -2522.78 | 1735274.54 | 14593616.45 | 40°10'59.421"N | 80°39'37.349"W | 9235.11 | 344.147 | 10.48 | 0.07 | -10.48 |
| 14937.00 | 90.650 | 341.120 | 5714.36 | 9320.95 | 8965.06 | -2551.06 | 1735246.27 | 14593697.63 | 40°11'00.225"N | 80°39'37.709"W | 9320.96 | 344.116 | 0.81 | -0.31 | 0.74 |
| 15024.00 | 90.680 | 343.380 | 5713.35 | 9407.90 | 9047.91 | -2577.58 | 1735219.76 | 14593780.44 | 40°11'01.044"N | 80°39'38.047"W | 9407.90 | 344.099 | 2.60 | 0.03 | 2.60 |
| 15111.00 | 90.710 | 342.280 | 5712.29 | 9494.87 | 9131.03 | -2603.26 | 1735194.09 | 14593863.52 | 40°11'01.867"N | 80°39'38.373"W | 9494.87 | 344.087 | 1.26 | 0.03 | -1.26 |
| 15198.00 | 90.770 | 340.750 | 5711.17 | 9581.77 | 9213.53 | -2630.84 | 1735166.52 | 14593945.99 | 40°11'02.683"N | 80°39'38.725"W | 9581.77 | 344.064 | 1.76 | 0.07 | -1.76 |
| 15261.00 | 90.580 | 335.740 | 5710.43 | 9644.43 | 9272.02 | -2654.18 | 1735143.19 | 14594004.46 | 40°11'03.262"N | 80°39'39.023"W | 9644.43 | 344.026 | 7.96 | -0.30 | -7.95 |
| 15285.00 | 90.580 | 335.740 | 5710.18 | 9668.17 | 9293.90 | -2664.04 | 1735133.33 | 14594026.33 | 40°11'03.478"N | 80°39'39.148"W | 9668.18 | 344.005 | 0.00 | 0.00 | 0.00 |

RECEIVED
Office of Oil and Gas

APR 27 2018

WV Department of
Environmental Protection



Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 8 of 9



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWB |
| Facility | Edward Dremak OHI Pad | | |

| HOLE & CASING SECTIONS - Ref Wellbore: Edward Dremak OHI 3H AWB Ref Wellpath: Edward Dremak OHI 3H AWP Proj: 15285' | | | | | | | | | |
|--|---------------|-------------|---------------|----------------|--------------|----------------|----------------|--------------|--------------|
| 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] |
| 17.5in Open Hole | 26.00 | 359.00 | 333.00 | 26.00 | 358.97 | 0.00 | 0.00 | 3.32 | 1.37 |
| 13.375in Casing Surface | 26.00 | 341.00 | 315.00 | 26.00 | 340.98 | 0.00 | 0.00 | 2.98 | 1.23 |
| 12.25in Open Hole | 359.00 | 1767.00 | 1408.00 | 358.97 | 1766.10 | 3.32 | 1.37 | 24.29 | -4.90 |
| 9.625in Casing Intermediate | 26.00 | 1754.00 | 1728.00 | 26.00 | 1753.12 | 0.00 | 0.00 | 24.42 | -4.25 |
| 8.75in Open Hole | 1767.00 | 5135.00 | 3368.00 | 1766.10 | 5102.60 | 24.29 | -4.90 | -31.00 | -44.49 |
| 8.5in Open Hole | 5135.00 | 15285.00 | 10150.00 | 5102.60 | 5710.18 | -31.00 | -44.49 | 9293.90 | -2664.04 |

| TARGETS | | | | | | | | |
|--------------------------------|----------|------------|-----------|-------------------|--------------------|----------------|----------------|-------|
| Name | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
| Edward Dremak OHI 3H BHL Rev-2 | 5704.00 | 9337.55 | -2669.30 | 1735128.08 | 14594069.97 | 40°11'03.910"N | 80°39'39.214"W | point |
| Edward Dremak OHI 3H LP Rev-2 | 5789.00 | 619.73 | -113.51 | 1737682.87 | 14585355.56 | 40°09'37.663"N | 80°39'06.725"W | point |

| WELLPATH COMPOSITION - Ref Wellbore: Edward Dremak OHI 3H AWB Ref Wellpath: Edward Dremak OHI 3H AWP Proj: 15285' | | | | | |
|--|-------------|------------------------------|---|--------------------------|--|
| Start MD [ft] | End MD [ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore | |
| 26.00 | 348.00 | OWSG EMS rev2 - Standard | 01_MSS <17.5"> (26'-348') | Edward Dremak OHI 3H AWB | |
| 348.00 | 1690.00 | BHI NaviTrak (Axial) | 02_APS EM <12.25"> (348')(416'-1690') | Edward Dremak OHI 3H AWB | |
| 1690.00 | 5065.00 | BHI NaviTrak (Axial) | 03_APS EM <8.75"> (1690')(1772-5065') | Edward Dremak OHI 3H AWB | |
| 5065.00 | 15261.00 | BHI AutoTrak Curve (Short) | 04_BH AT Curve <8.5"> (5065')(5189'-15261') | Edward Dremak OHI 3H AWB | |
| 15261.00 | 15285.00 | Blind Drilling (std) | Projection to bit | Edward Dremak OHI 3H AWB | |

RECEIVED
Office of Oil and Gas

APR 27 2018

WV Department of
Environmental Protection



Actual Wellpath Report

Edward Dremak OHI 3H AWP Proj: 15285'
Page 9 of 9



| REFERENCE WELLPATH IDENTIFICATION | | | |
|-----------------------------------|-----------------------|----------|--------------------------|
| Operator | SOUTHWESTERN ENERGY | Slot | Slot #3H |
| Area | Ohio County, WV | Well | Edward Dremak OHI 3H |
| Field | Ohio | Wellbore | Edward Dremak OHI 3H AWB |
| Facility | Edward Dremak OHI Pad | | |

| WELLPATH COMMENTS | | | | | |
|-------------------|-----------------|-------------|----------|--|--|
| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Comment | |
| 348.00 | 1.200 | 22.400 | 347.98 | MSS <17.5"> (26'-348') | |
| 416.00 | 0.660 | 44.430 | 415.97 | APS EM <12.25"> (348')(416'-1690') | |
| 1772.00 | 2.940 | 255.820 | 1771.10 | APS EM <8.75"> (1690')(1772-5065') | |
| 5189.00 | 7.240 | 104.080 | 5156.16 | BH AT Curve <8.5"> (5065')(5189'-15261') | |
| 15285.00 | 90.580 | 335.740 | 5710.18 | Projection to Bit | |

| COMMENTS |
|--|
| <p>Wellpath general comments API: 47-069-00213-0000 Job#: 8752304 Rig: SDC-46 Duration: 09/18/17 - 09/25/17</p> |

RECEIVED
Office of Oil and Gas
APR 27 2018
WV Department of
Environmental Protection