

Appendix A

Charles County Tiles

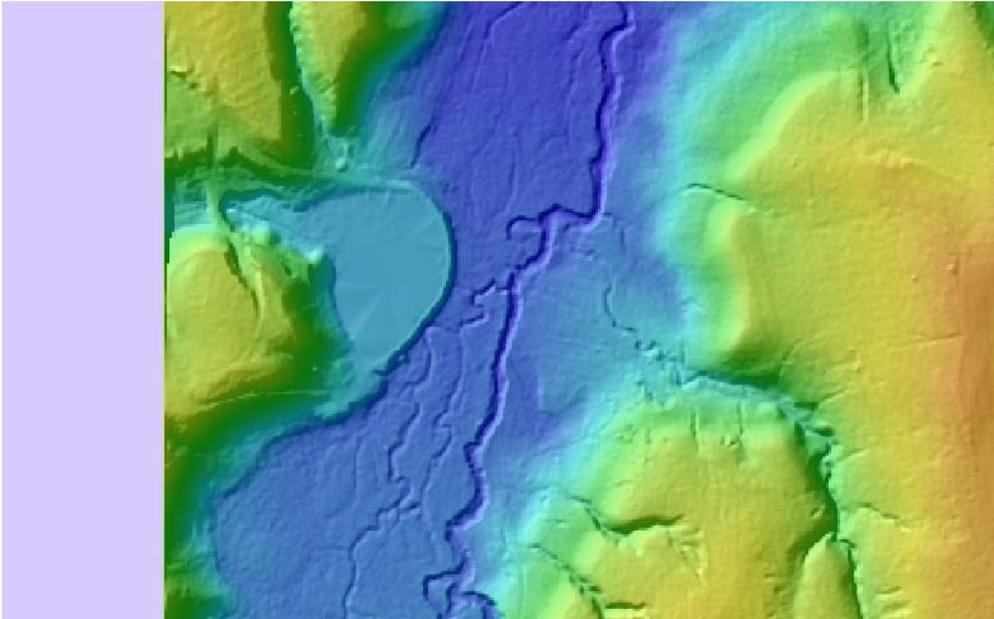


Figure 18 - AA1064 Excellent example of retaining the dam structure which typically gets removed because of it's similarity to a structure (building).

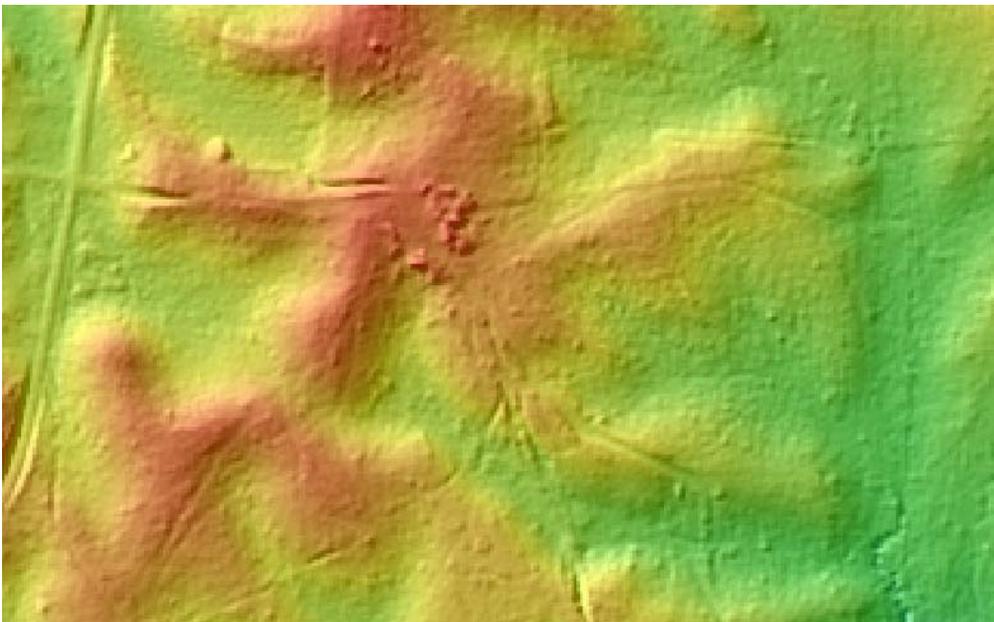


Figure 19 - AA1083 – potential artifacts (minor)

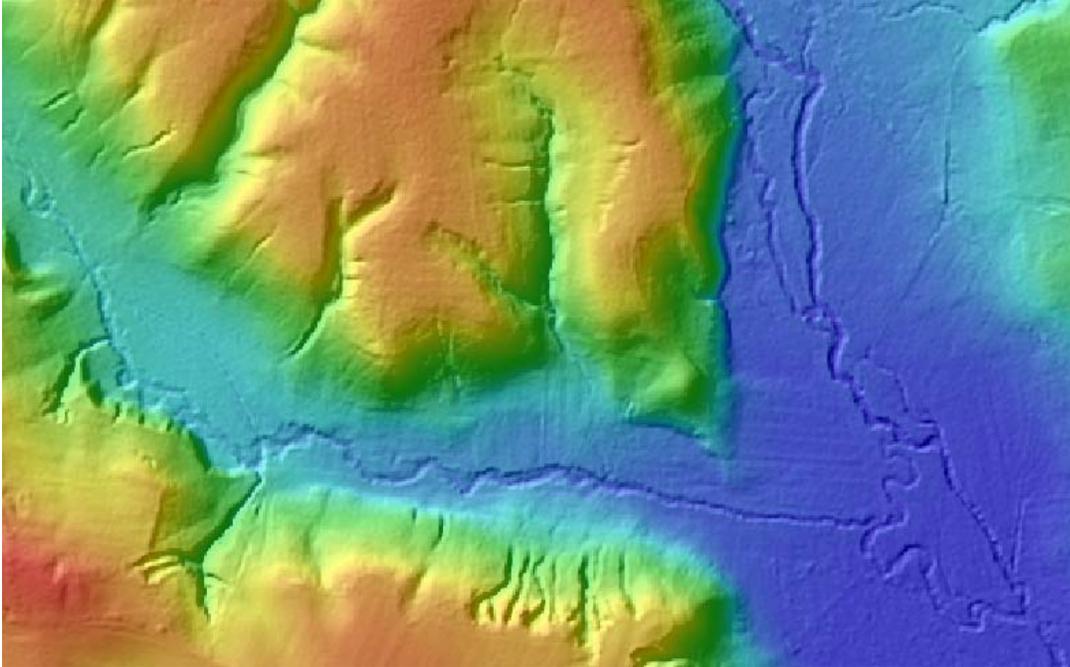


Figure 20 - AA1096 – excellent drainage patterns and cleanliness.

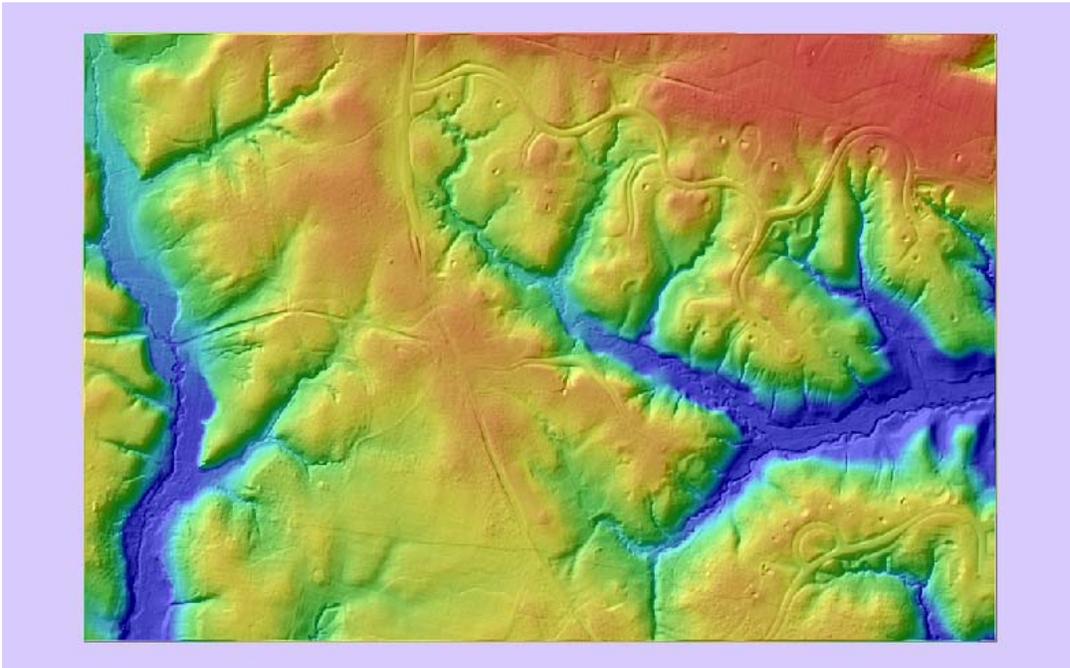


Figure 21 - A1111- example of small divots.

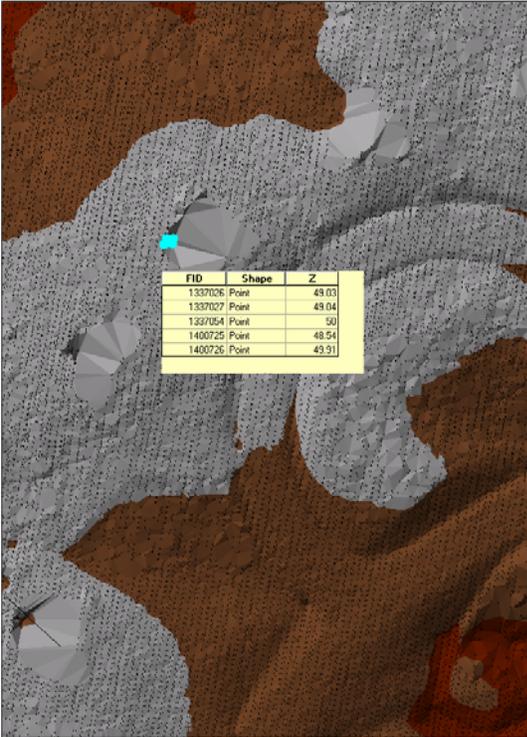


Figure 22- A1111 - Illustrates that the divot is 1 – 1.5 meters deep.

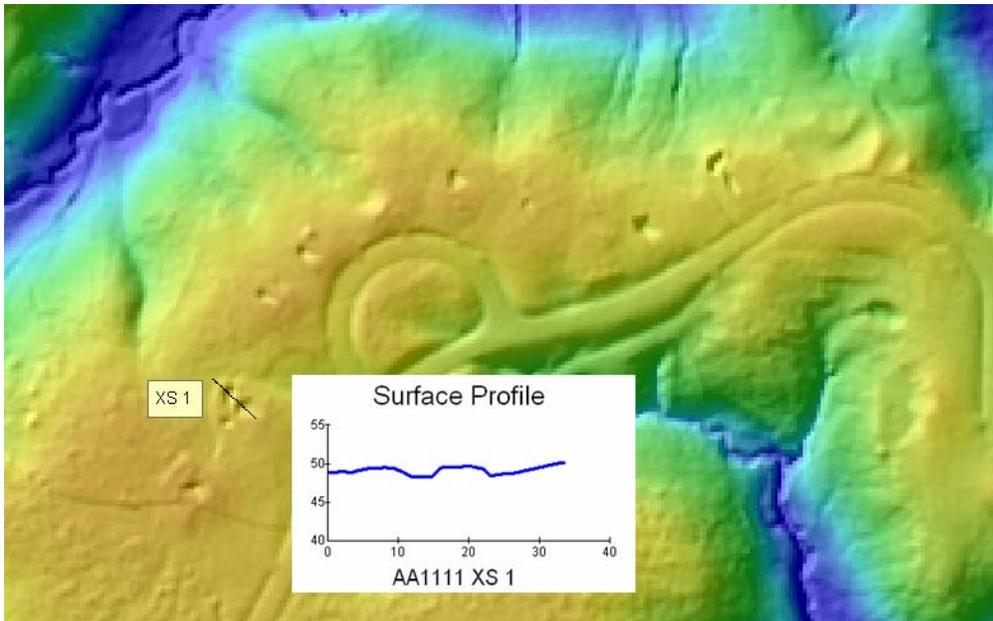


Figure 23 - AA1111 - zoomed in area and location of cross section with associated graph depicting divot.

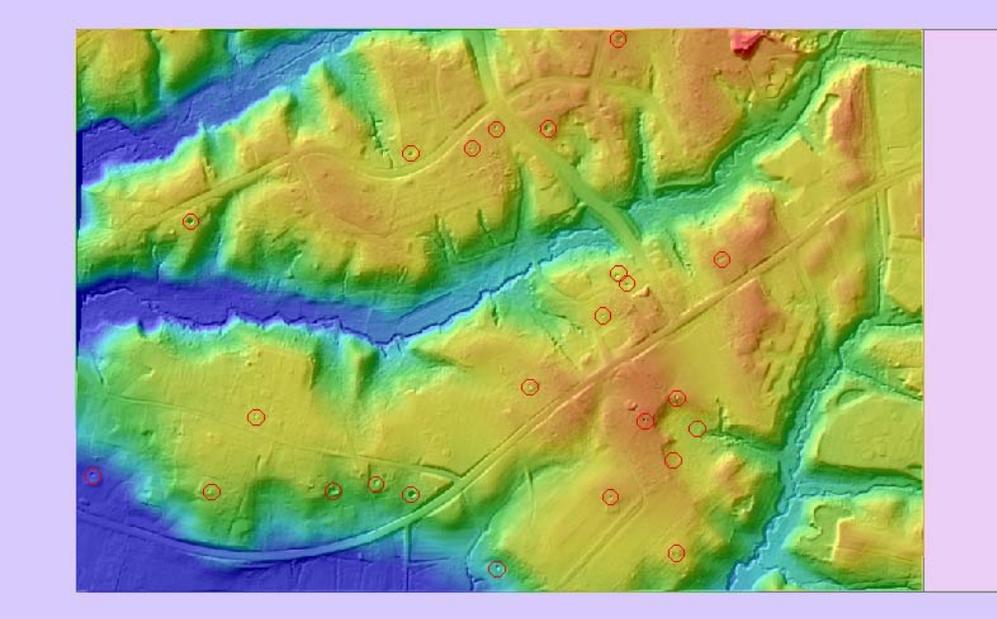


Figure 24 - AA1123 divots.

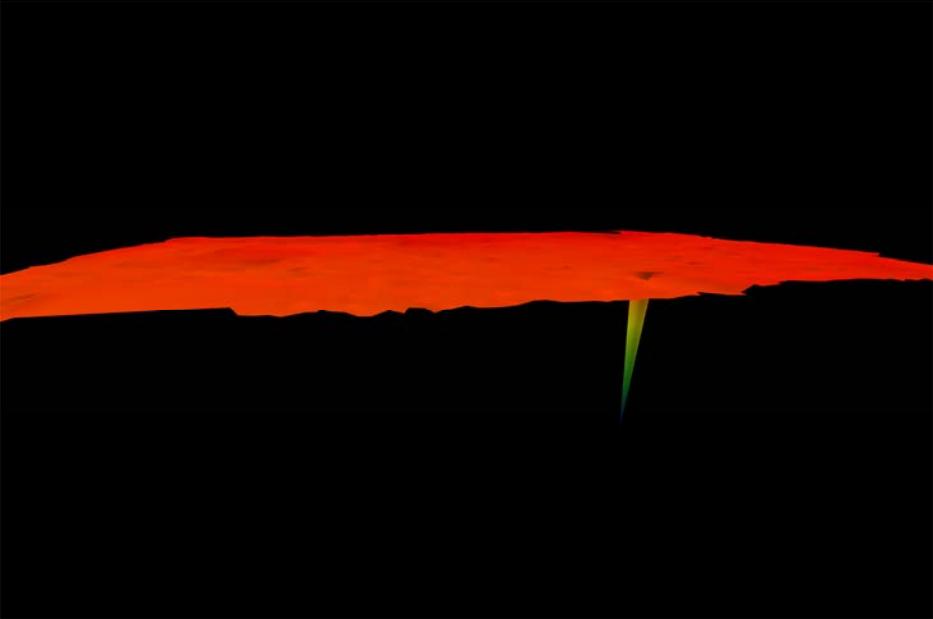


Figure 25 - AA1124 – 3D view of low point.

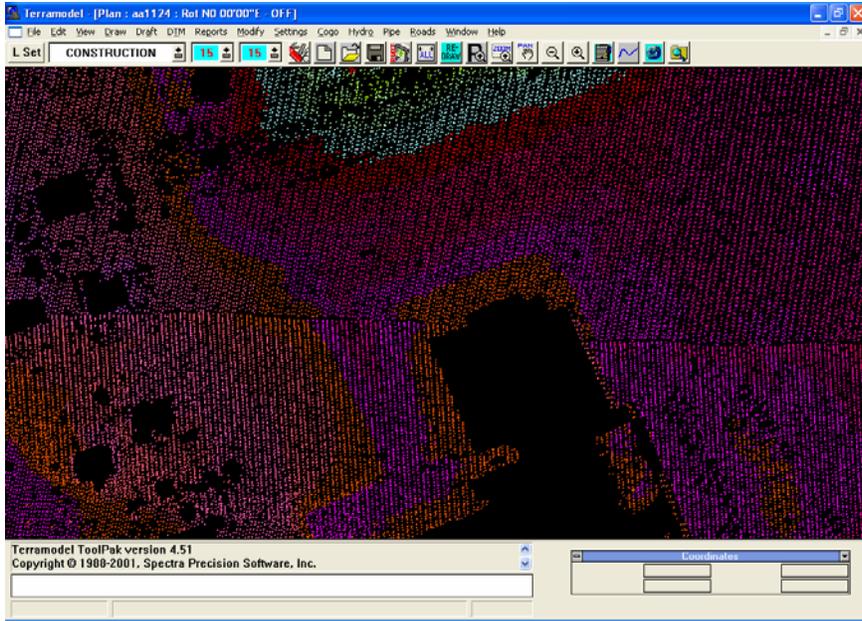


Figure 26 - AA1124: scan line issue (see figure 14)

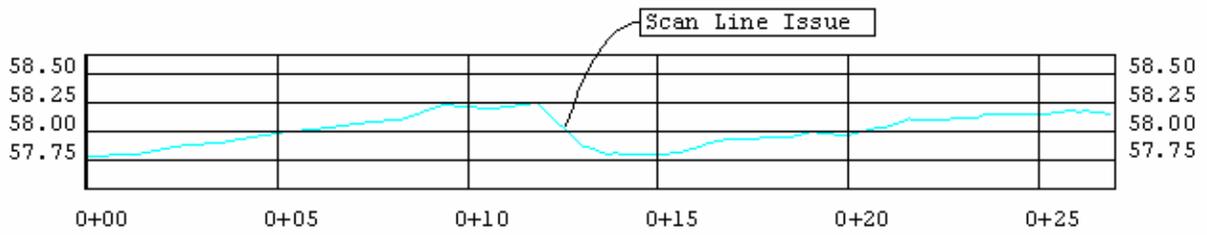


Figure 27 AA1124 profile scan line issue (see figure 15).

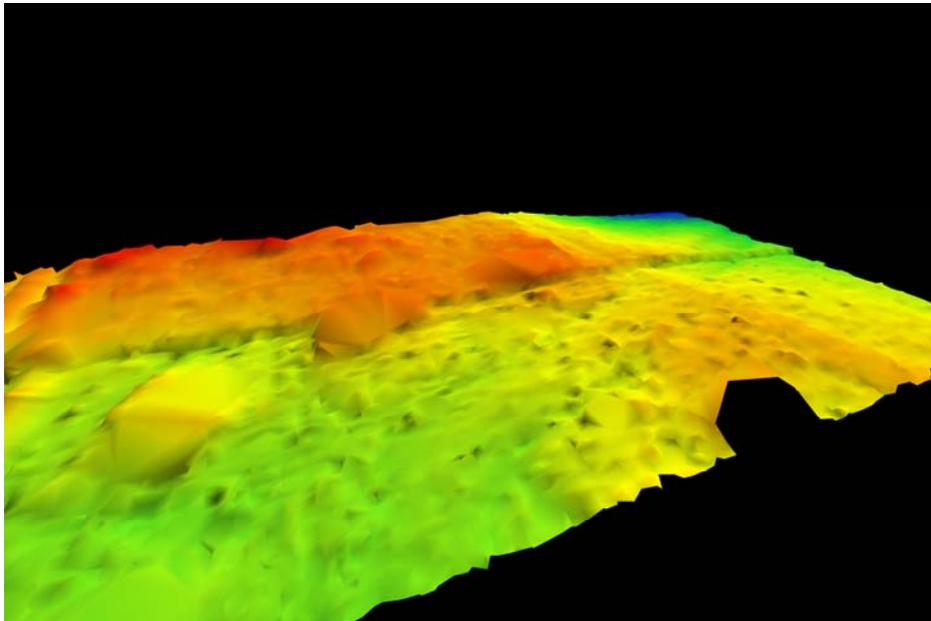


Figure 28 - AA124 scan line issue (See figure 16)

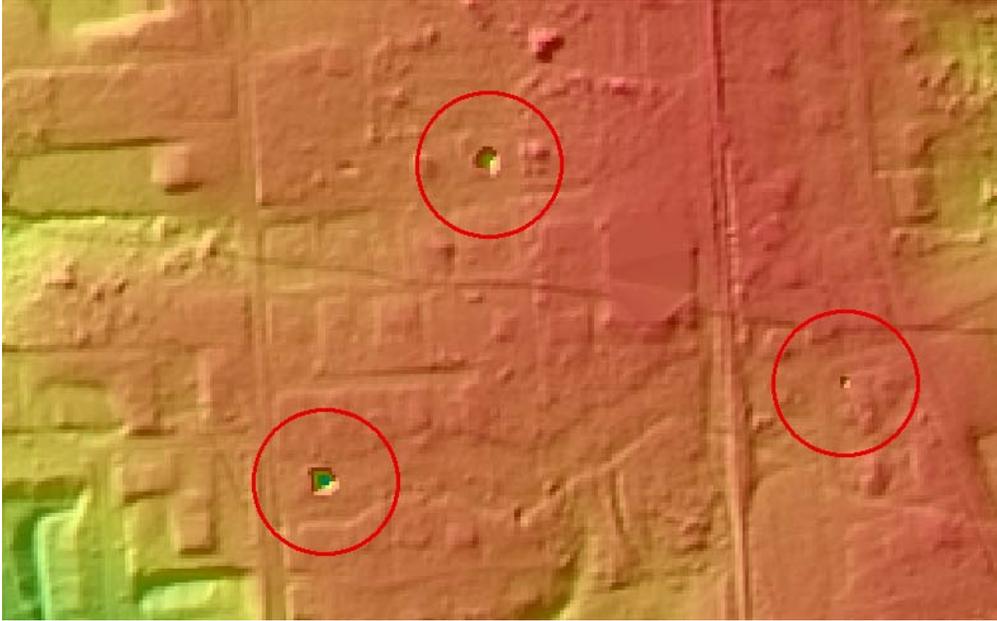


Figure 29- AA1124 divots.

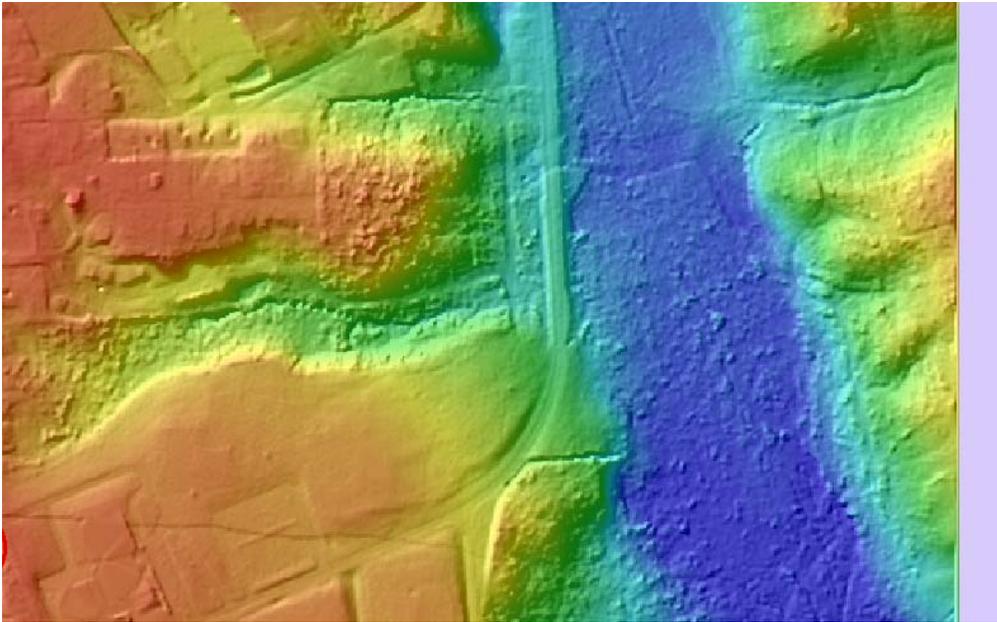


Figure 30 - AA1124 noisy data of potential artifacts.

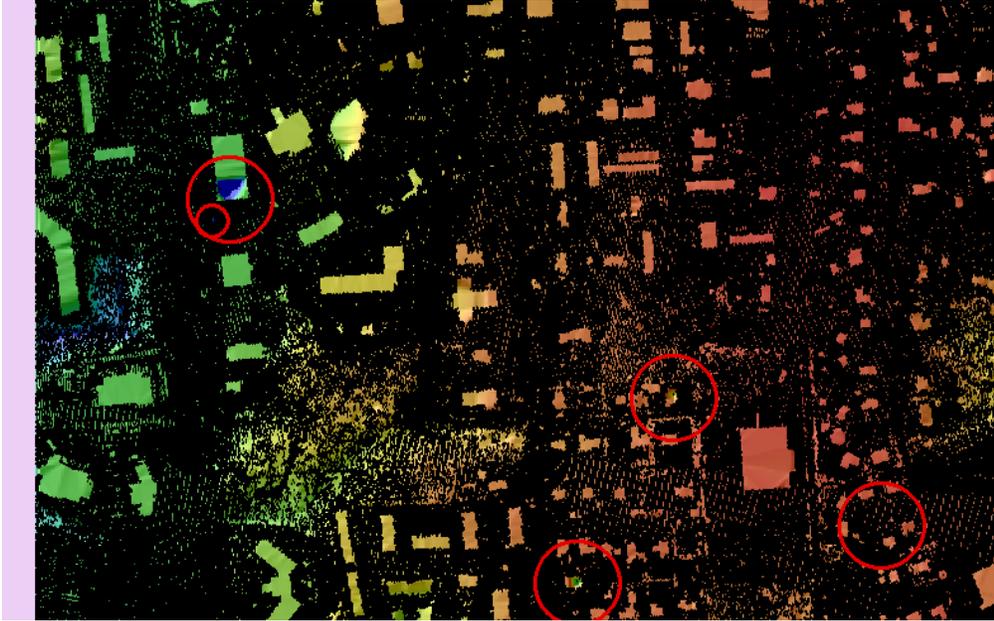


Figure 31 - AA1124 Terrain model with overlaid LIDAR. Note within the red circles that an errant LIDAR point exists within the confine of the building's perimeters.

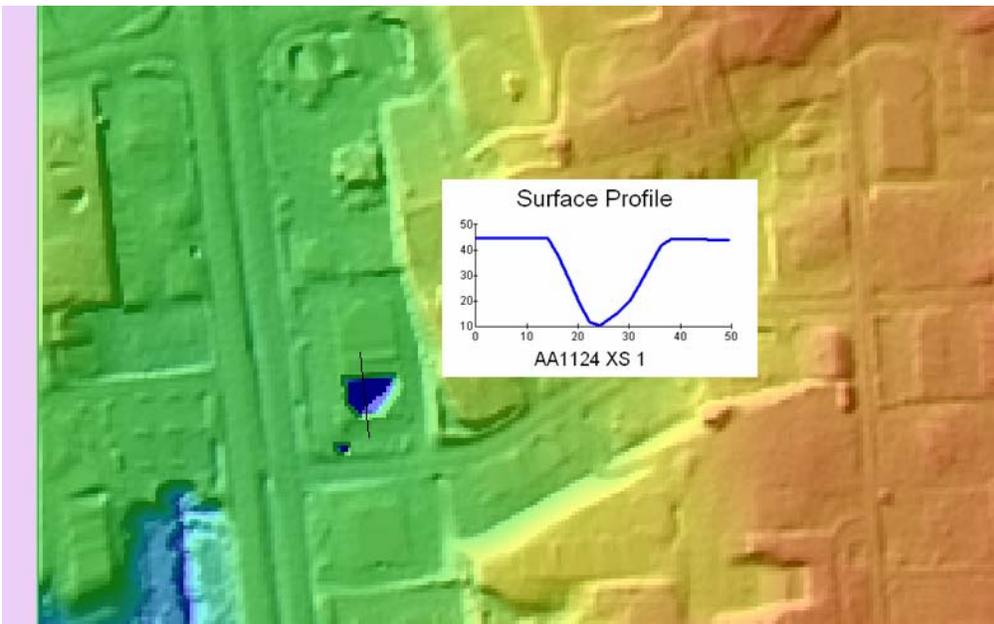


Figure 32 - AA1124 deep divot with cross section.

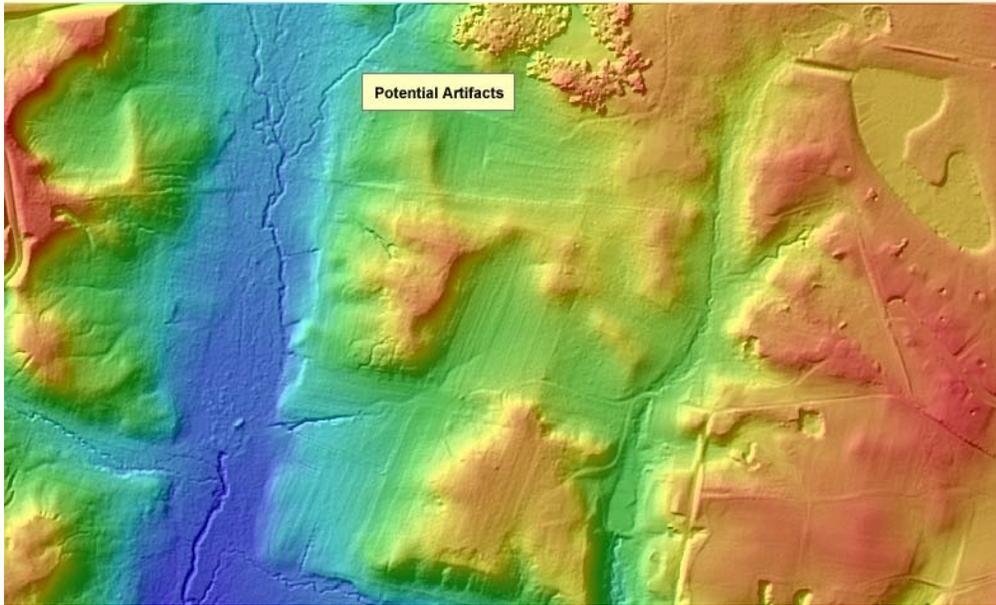


Figure 33 - AB1151 with potential artifacts.

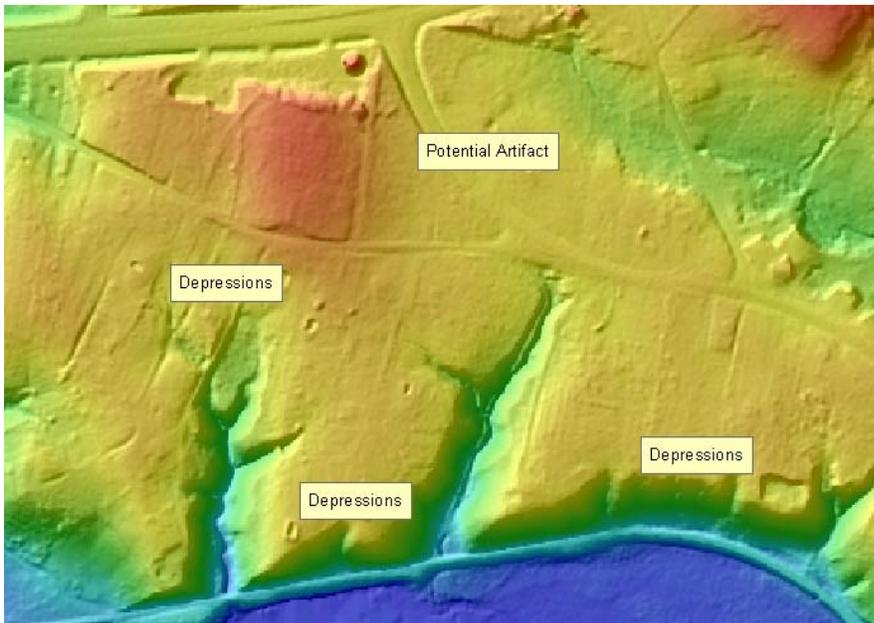


Figure 34 - AC1082 with potential artifacts and divots labeled depressions.

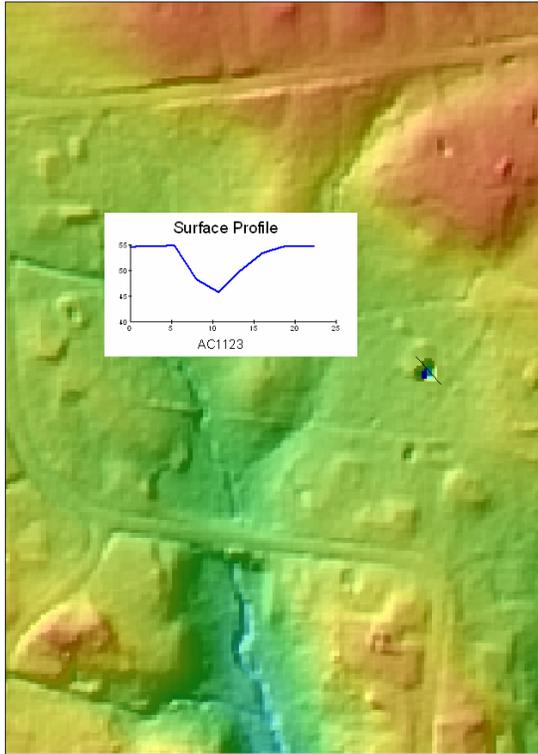


Figure 35 AC1123 with large divot.

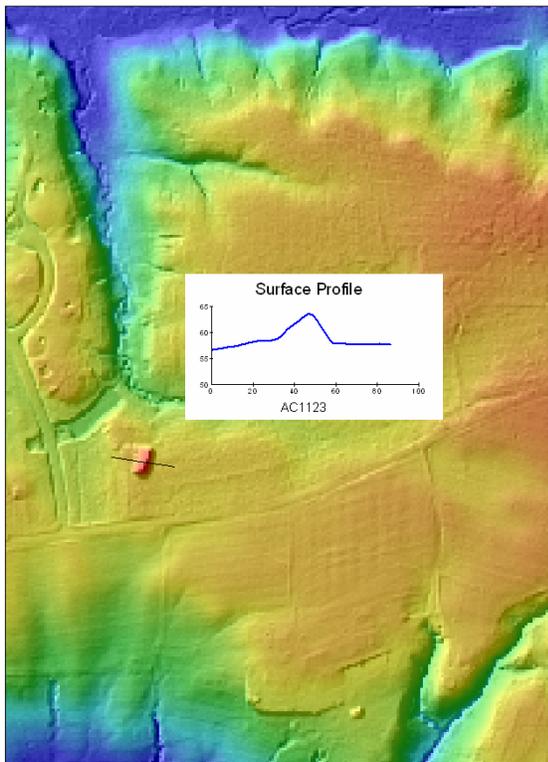


Figure 36 – AC1123 with potential artifact.

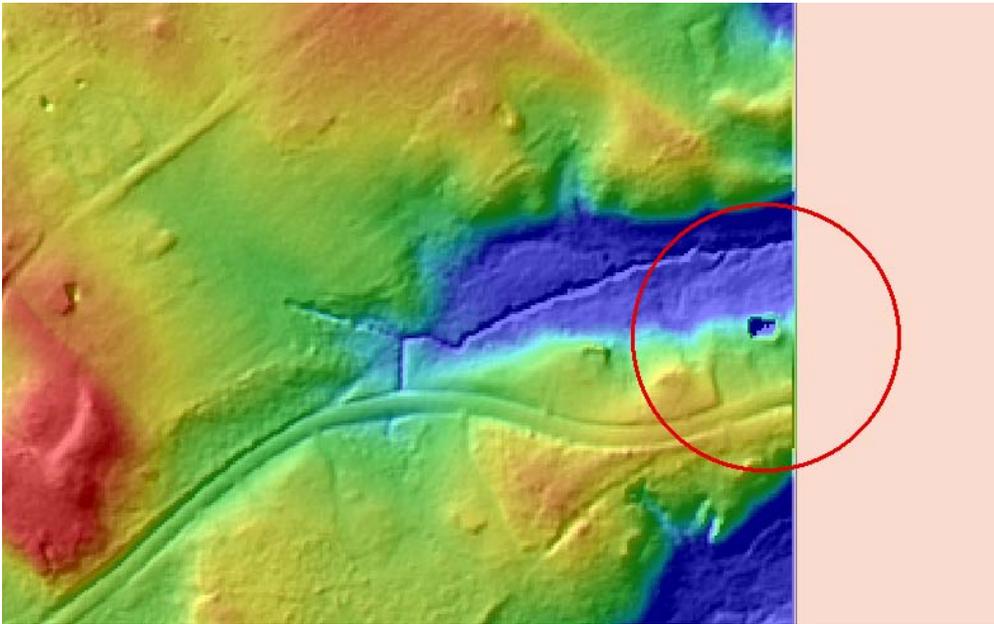


Figure 37- AC1153 with large divot.

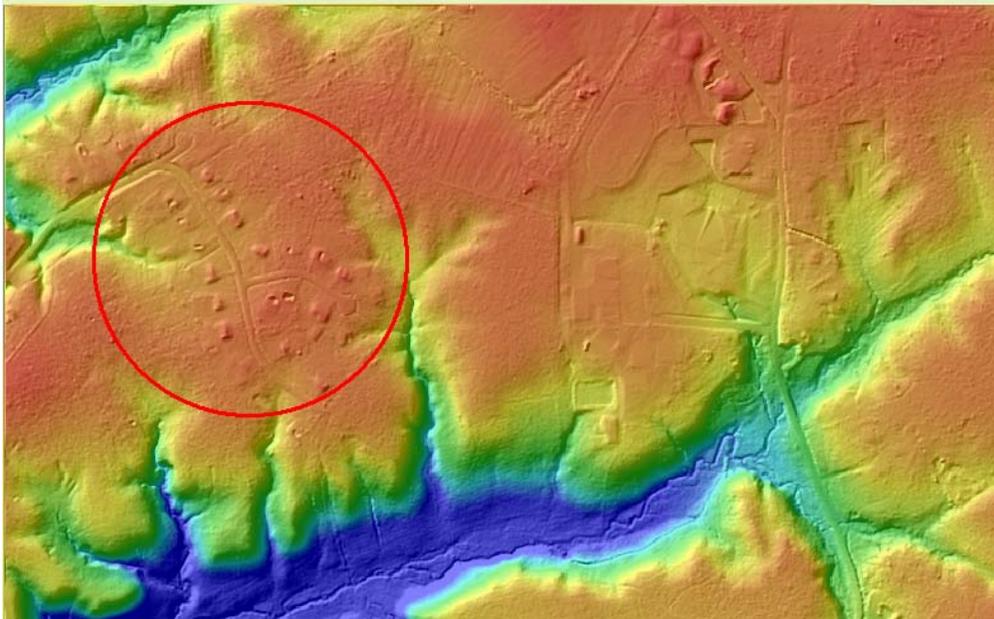


Figure 38 AD1105 with small divots.

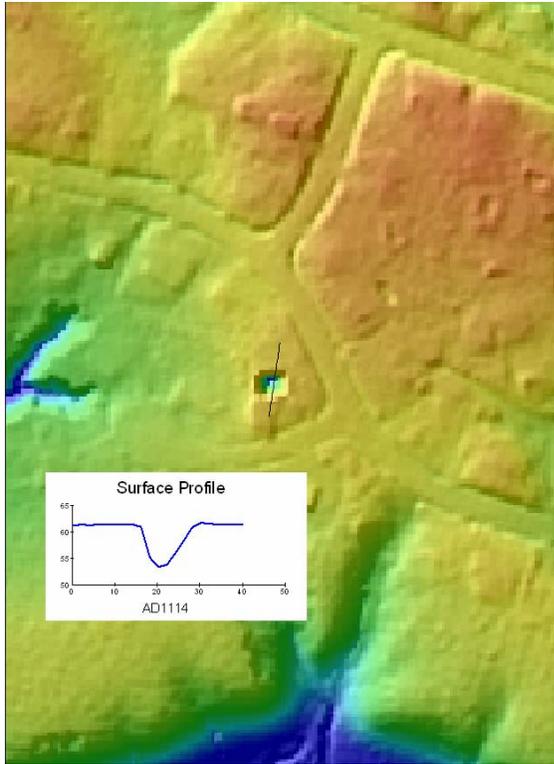


Figure 39 AD1114 with large divot.

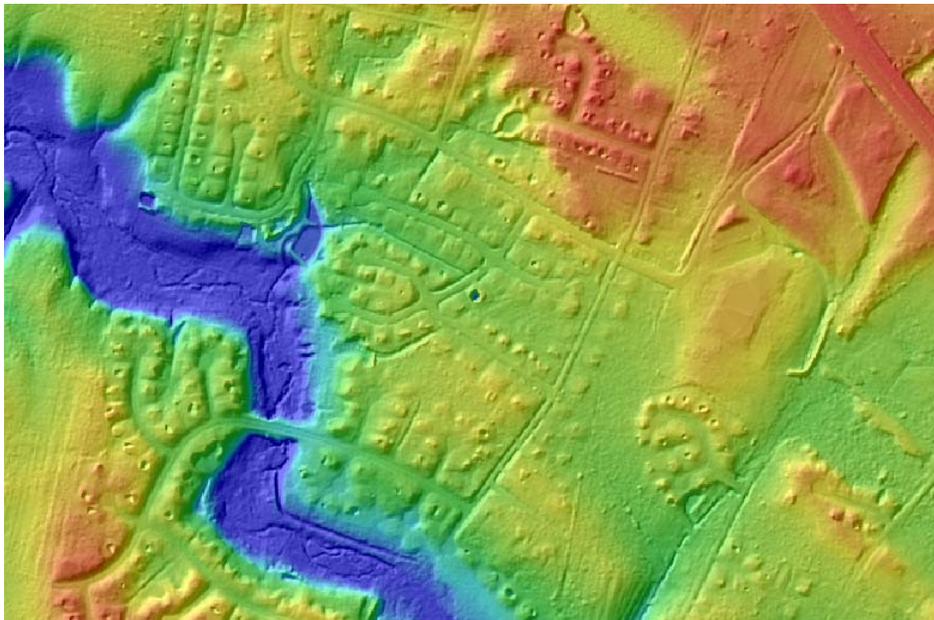


Figure 40 - Tile AD1132 with both large and small divots.

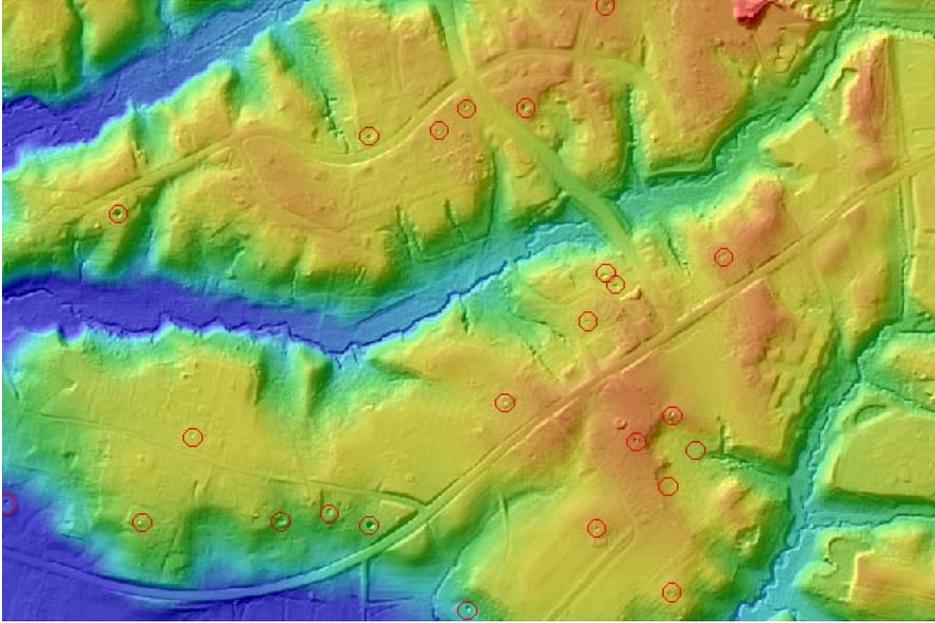


Figure 41 - AD1132 with small divots.

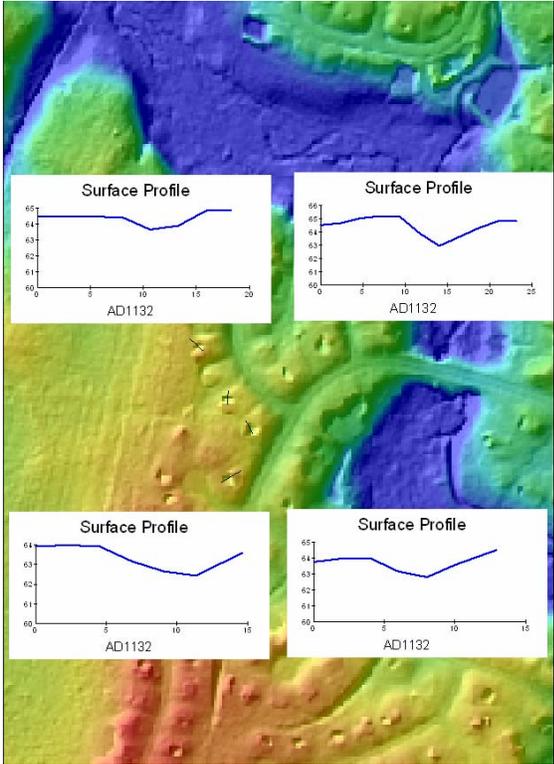


Figure 42- Tile AD1132 with small divots and associated cross sections.



Figure 43 - Larger divot highlighted in red, smaller divots elsewhere.

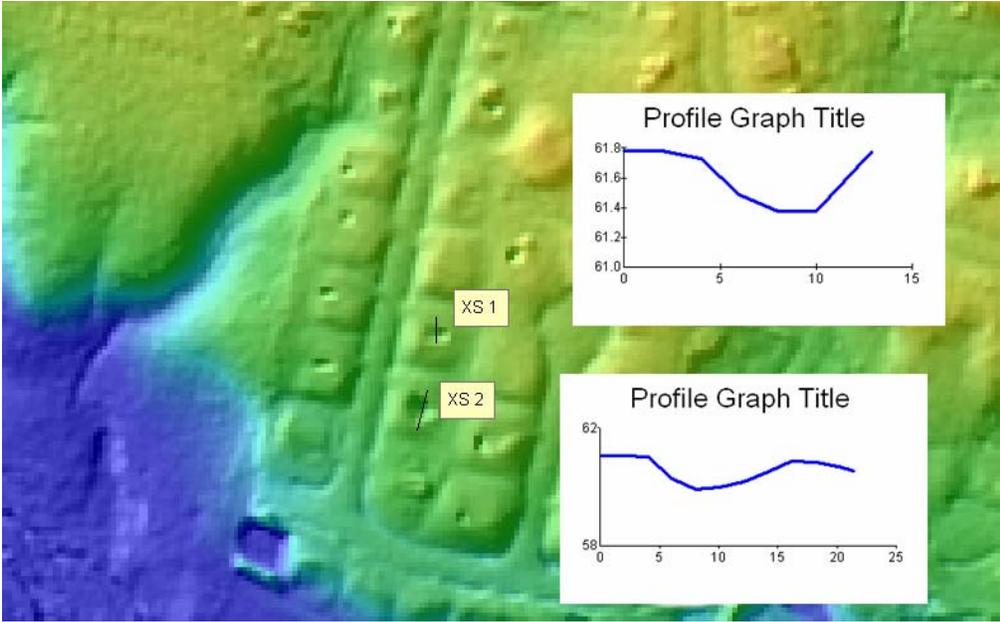


Figure 44 - AD1132 – smaller divots with associated cross sections.



Figure 45 - AD1132 LIDAR points with their associated elevations. Three points exist that are approximately 5 meters less than the surrounding terrain.

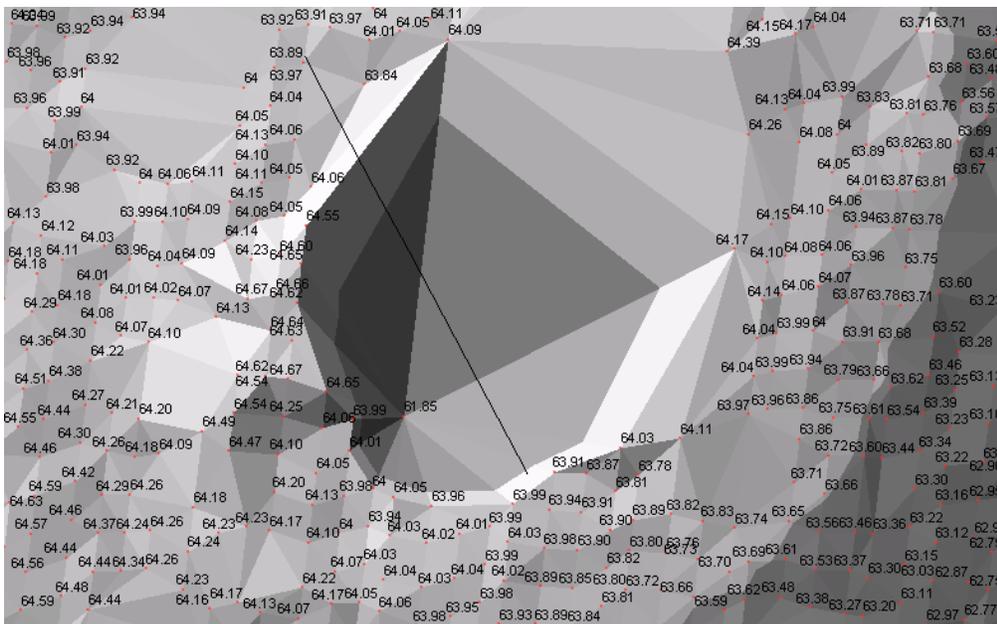


Figure 46 - AD1132 TIN with associated elevations. One point is three meters less than the surrounding area.

Upon working with Spatial Systems and Sanborn, an explanation was sought to find the cause of these divots. Sanborn was able to prove on the smaller divots at some locations that an external stairway leading to the basement was the culprit. However Dewberry is not convinced that this is the cause for all instances as there are too many. The divot issue also has to be broken down into to categories; small divots that are 1- 2 meters in depth and those 5 meters or greater.

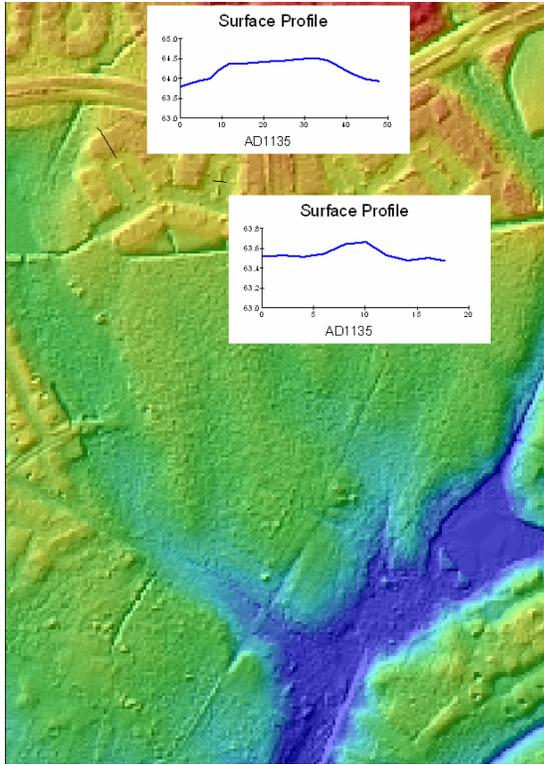


Figure 47 - AD1135 - Potential artifacts with associated cross sections.

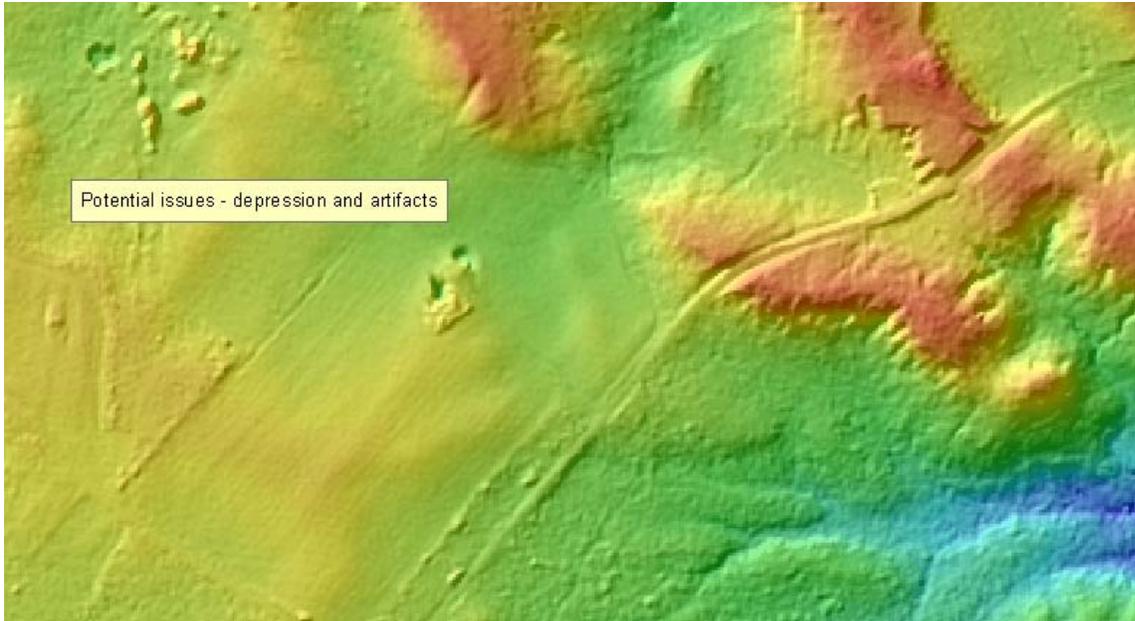


Figure 48- AD1176 – potential artifacts and depressions.

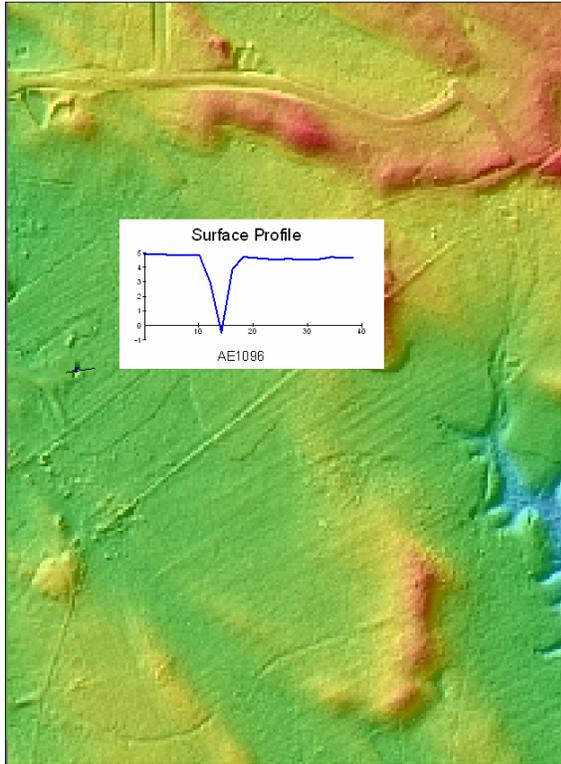


Figure 49 - AE1098 - Large divot.

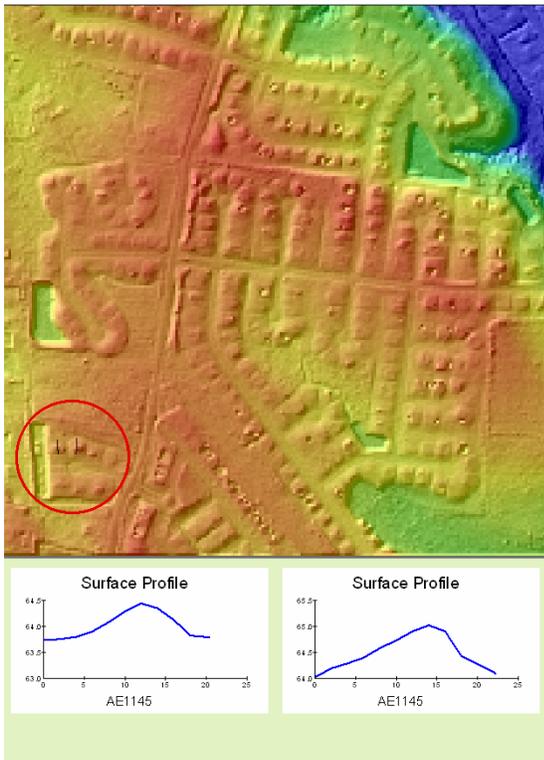


Figure 50 - AE1145 potential artifacts and associated cross sections.



Figure 51 S1154 – Large divot

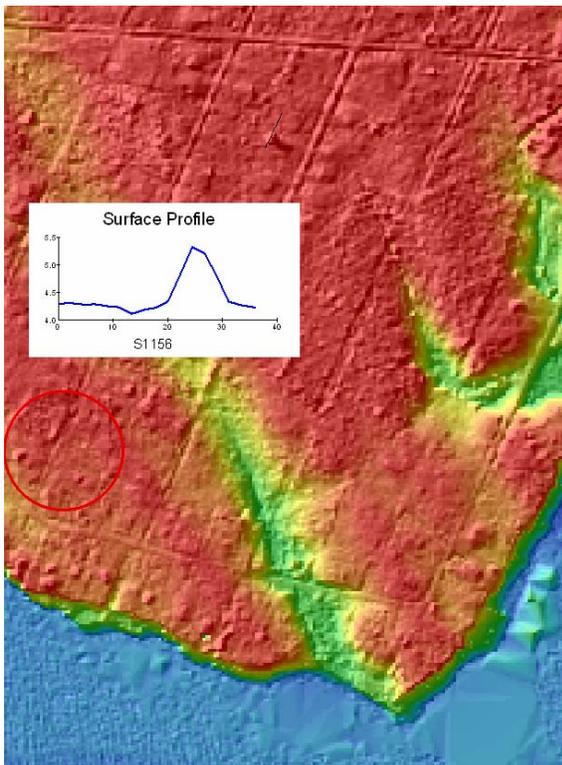


Figure 52 - S1156 – Potential artifact.

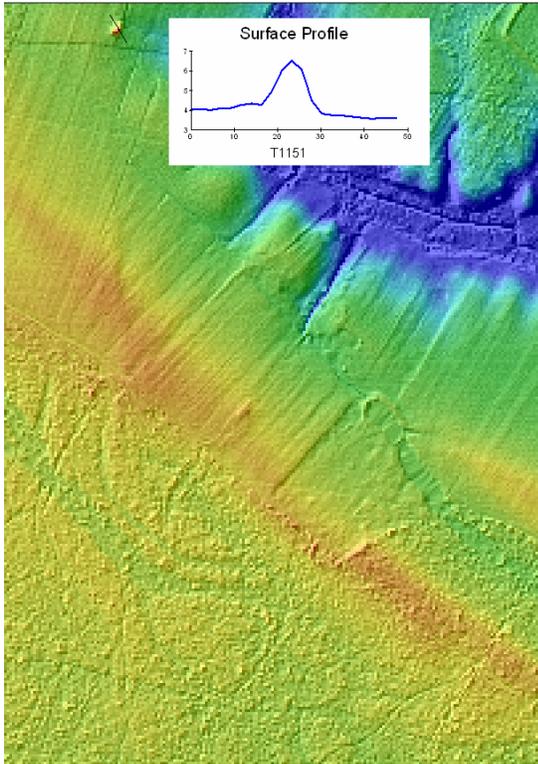


Figure 53 - T1146 - potential artifact.

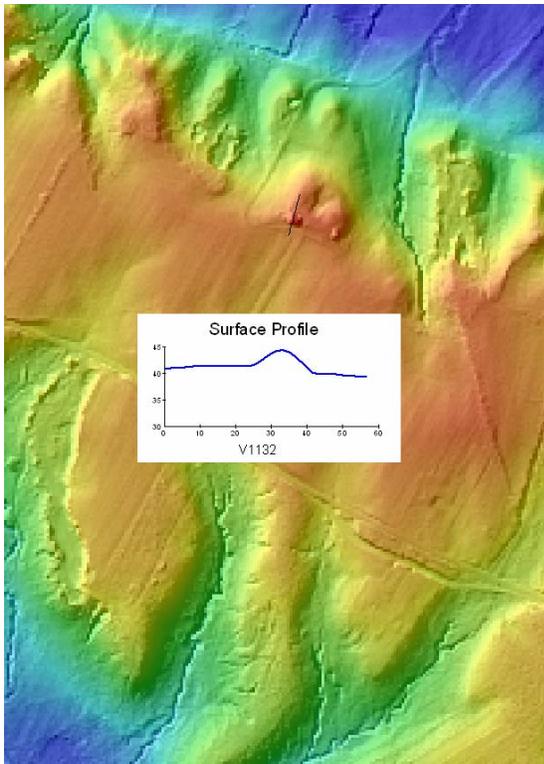


Figure 54 - V1132 – Potential artifact.

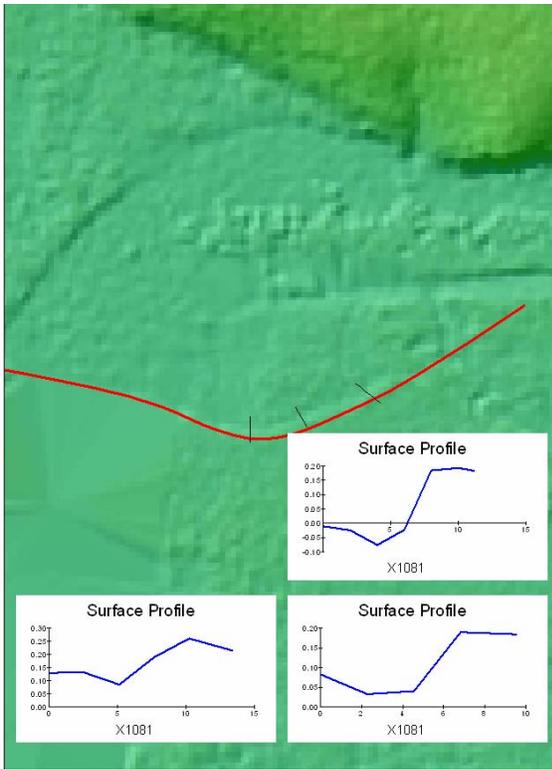


Figure 55 -X1081 Scan line issue with associated cross sections.



Figure 56 - X1081- Scan line issues illustrated with LIDAR points. The red line depicts the edge of scan. Note the small gap between scan lines.

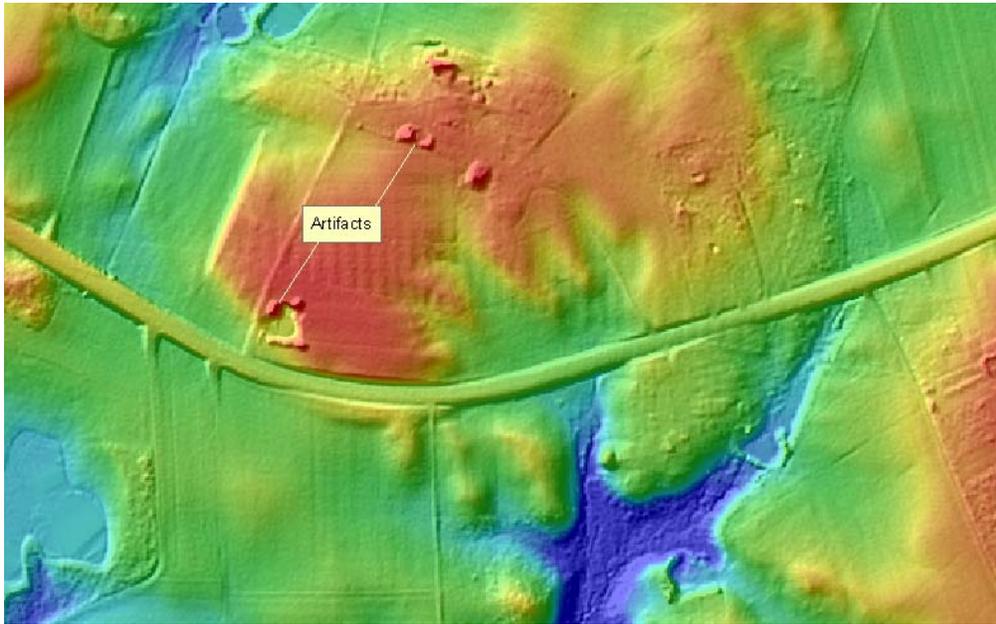


Figure 57 - Y1162 – Potential artifacts.

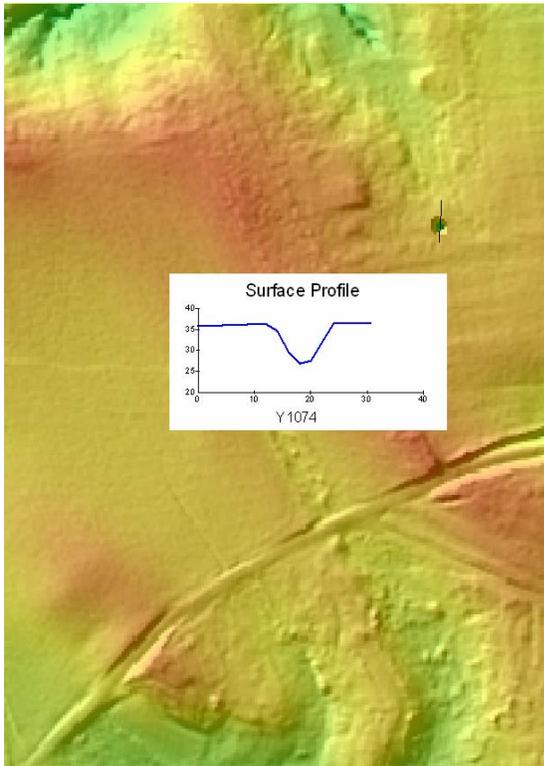


Figure 58 - Y1074 – Large divot.

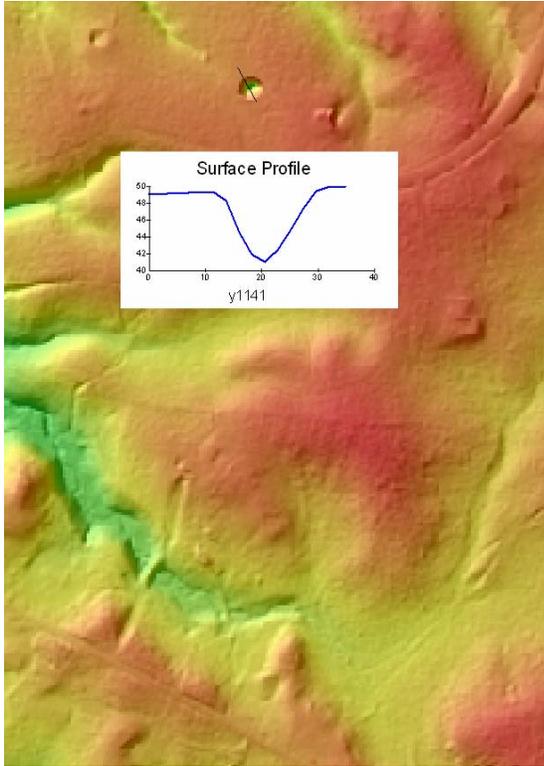


Figure 59 – Y1141 – Large divot.

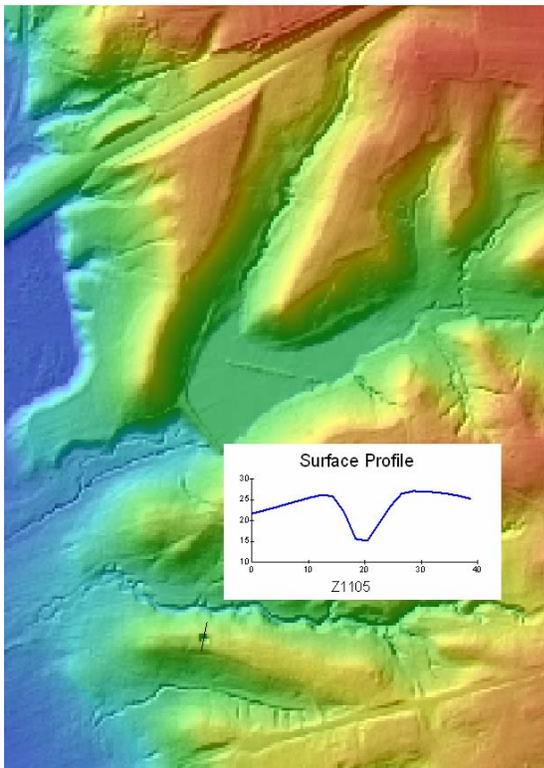


Figure 60- Z1105 – Large divot.

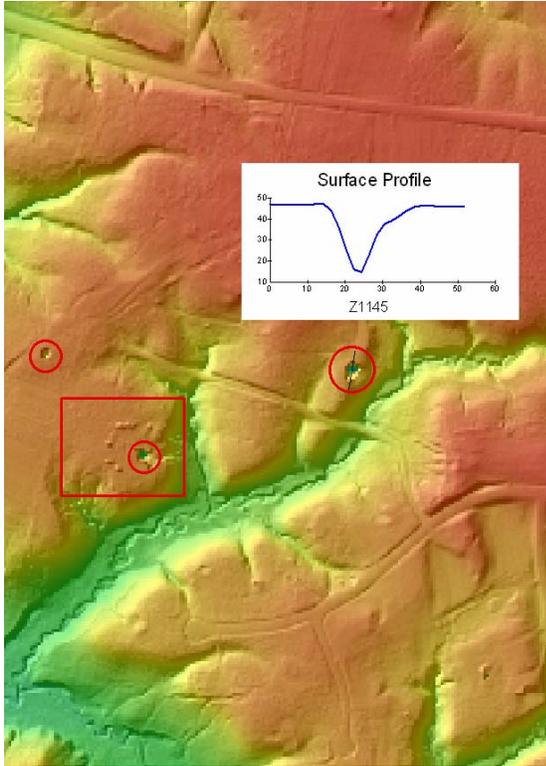


Figure 61- Z1145 – Large divot.

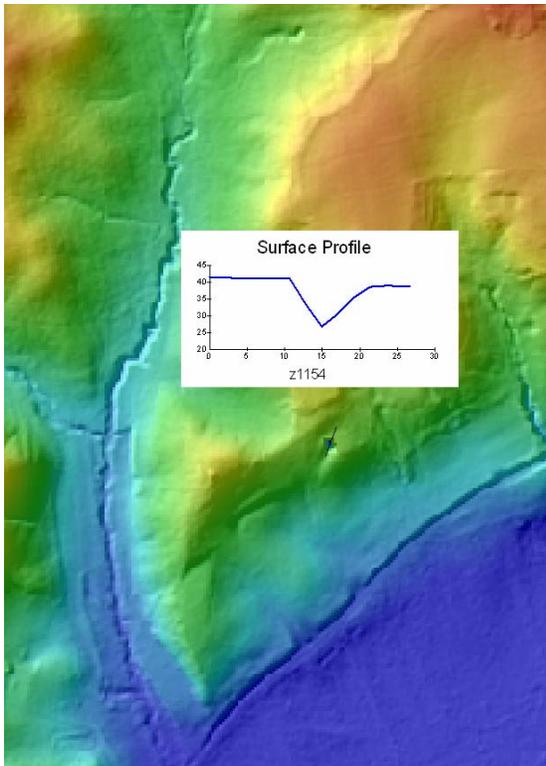


Figure 62 - Z1154 – Large divot.

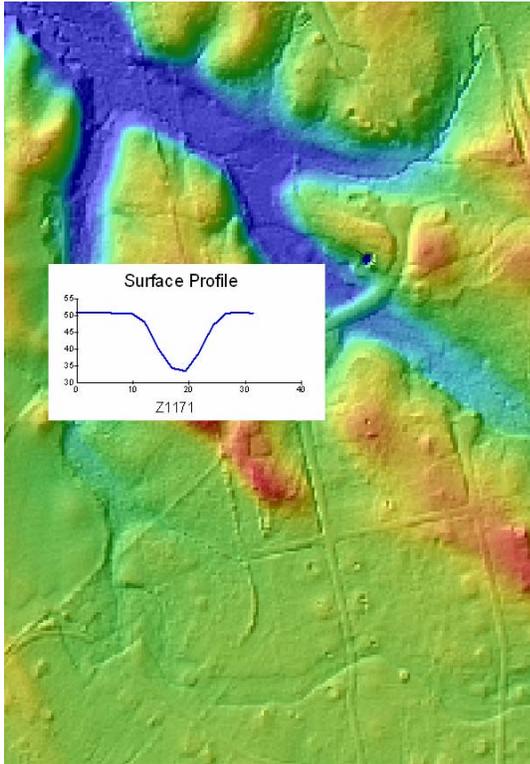


Figure 63 – Z1171 – Large divot.

St Mary's County



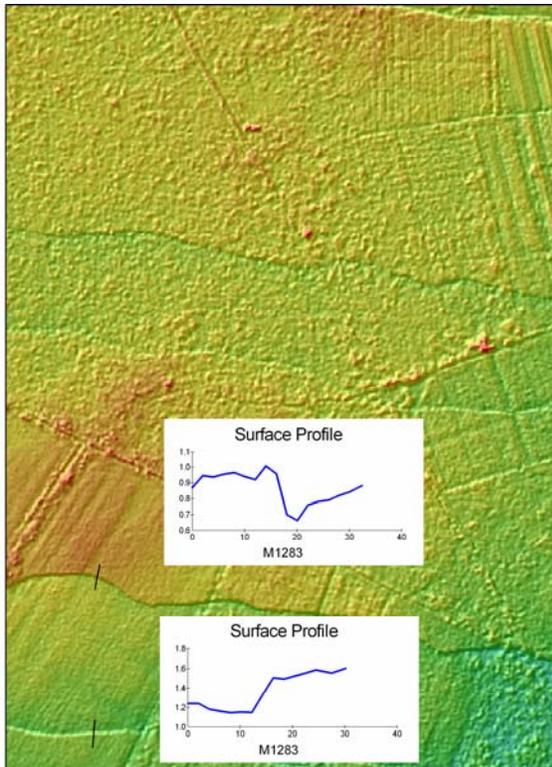


Figure 64 – M1283 – Scan line issue with associated cross section.

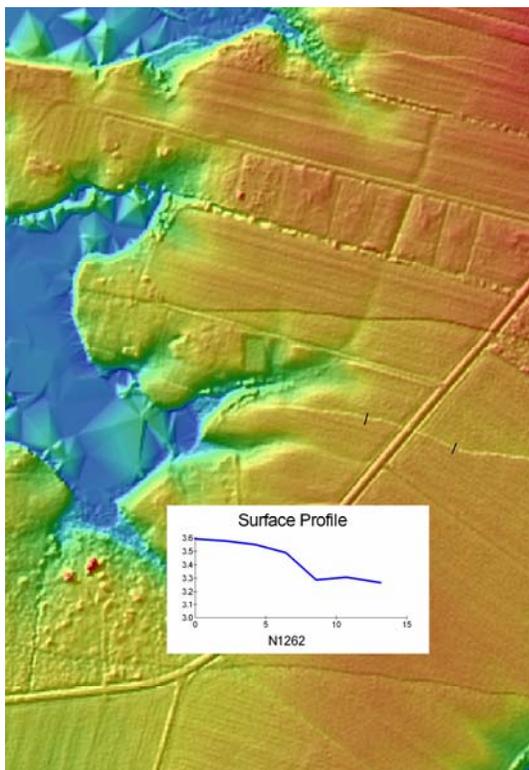


Figure 65 - N1262 - Scan line issue with associated cross section.

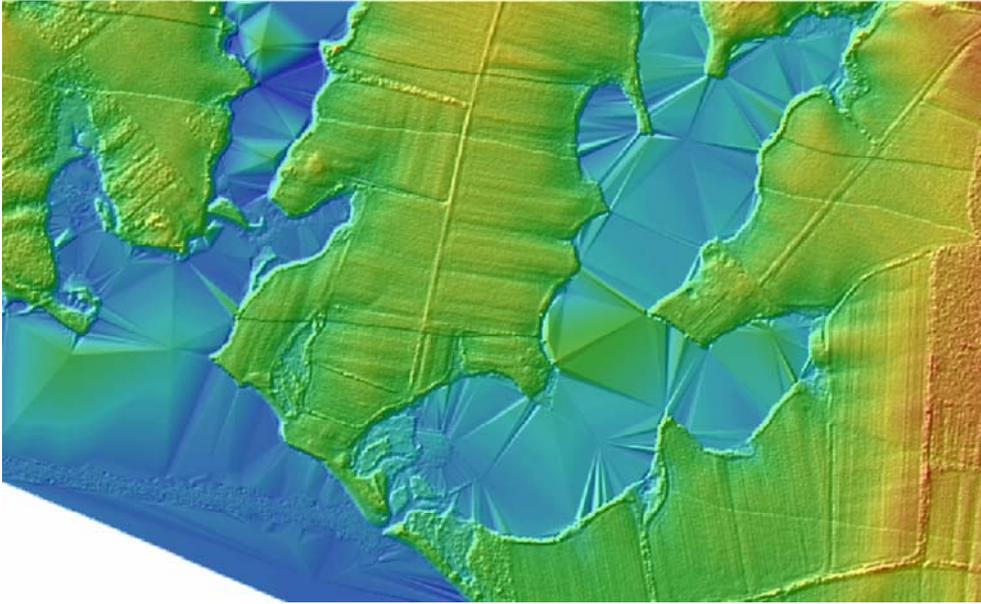


Figure 66 - N1275 – Scan line issues (multiple lines) but are less than 20 cm.

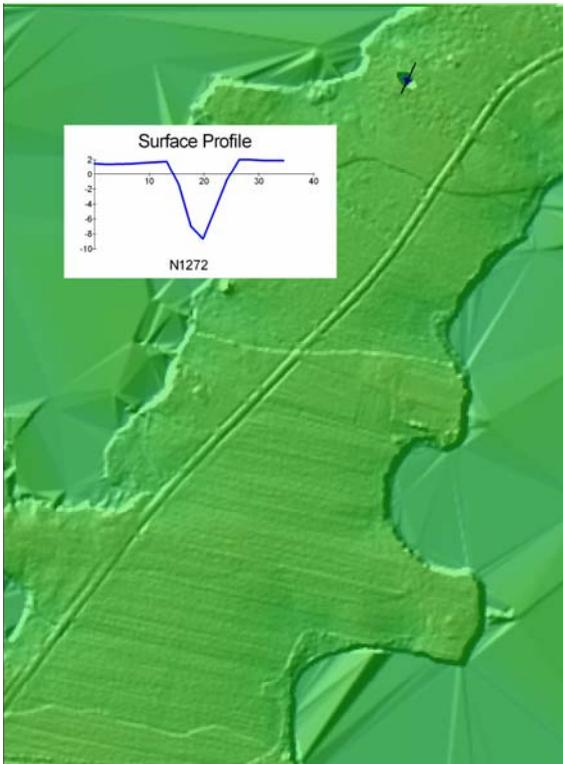


Figure 67 – N1272 – Large divot.



Figure 68 – N1272 – Ortho image with location of cross section of large divot (Figure 67)

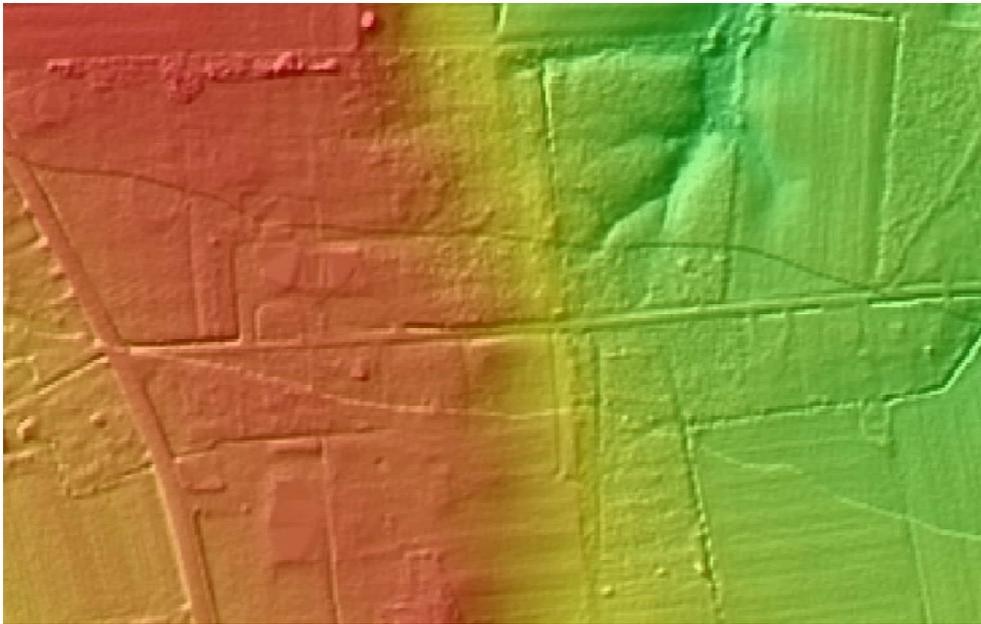


Figure 69 - N1272 - Scan line issues.

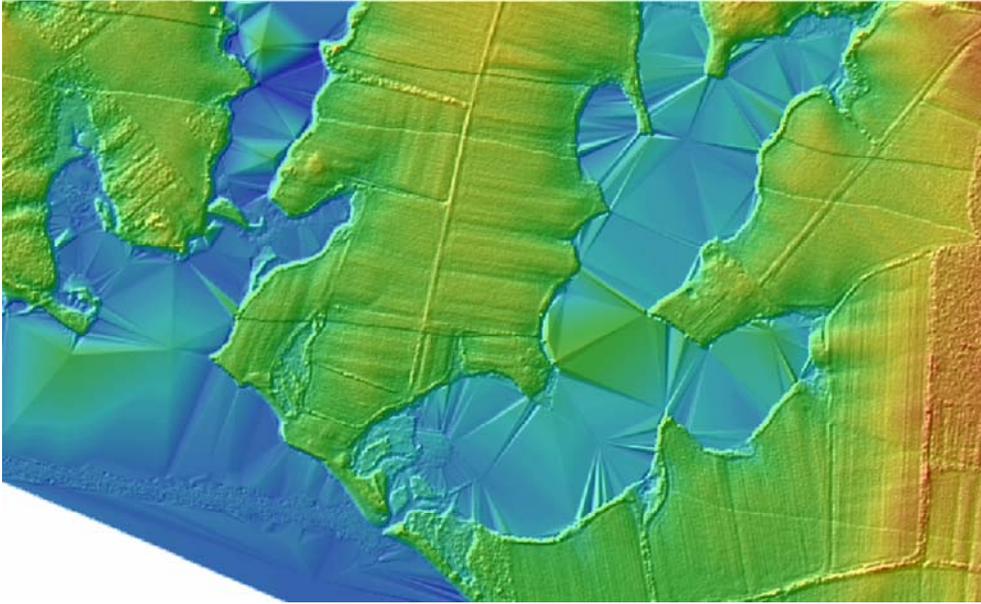


Figure 70 - N1275 - Scan line issues.

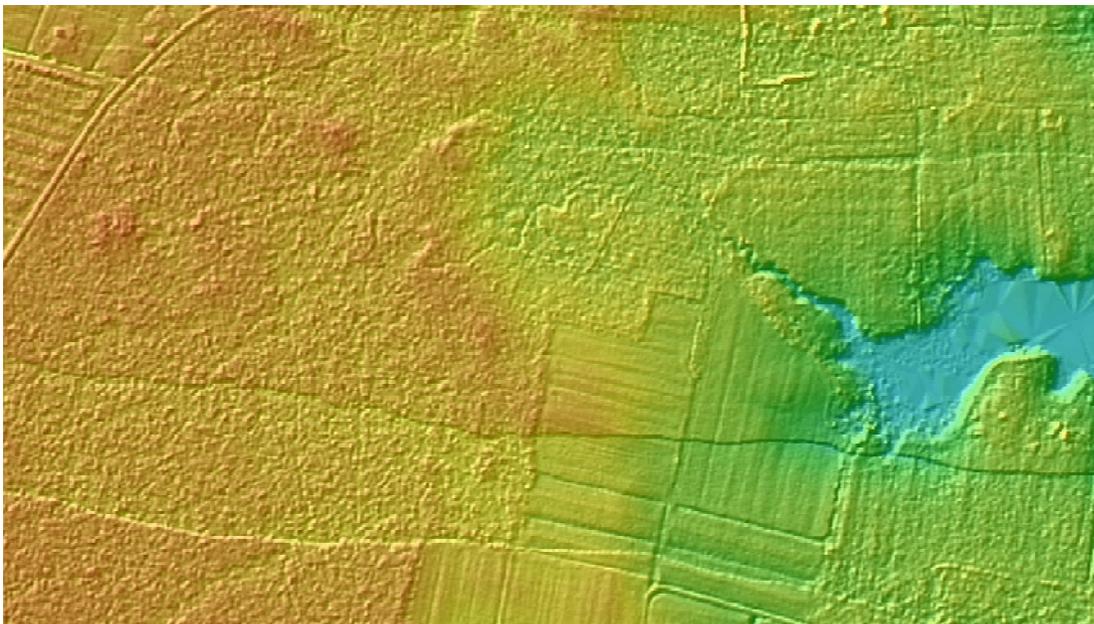


Figure 71 - N1283 - Scan line issues.

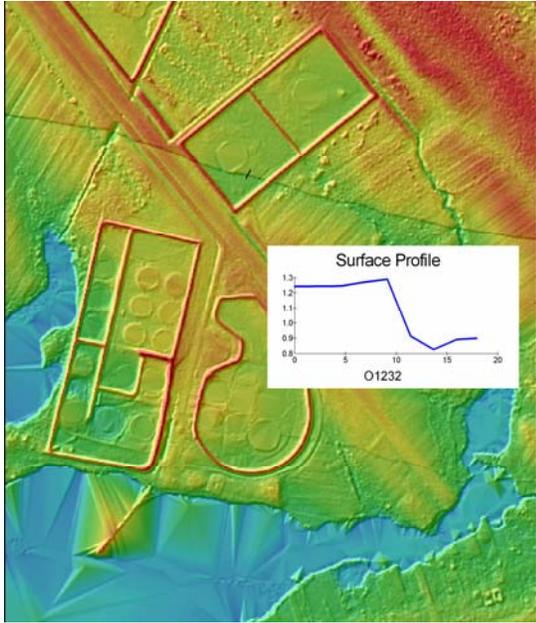


Figure 72 - O1232 - Scan line issues.

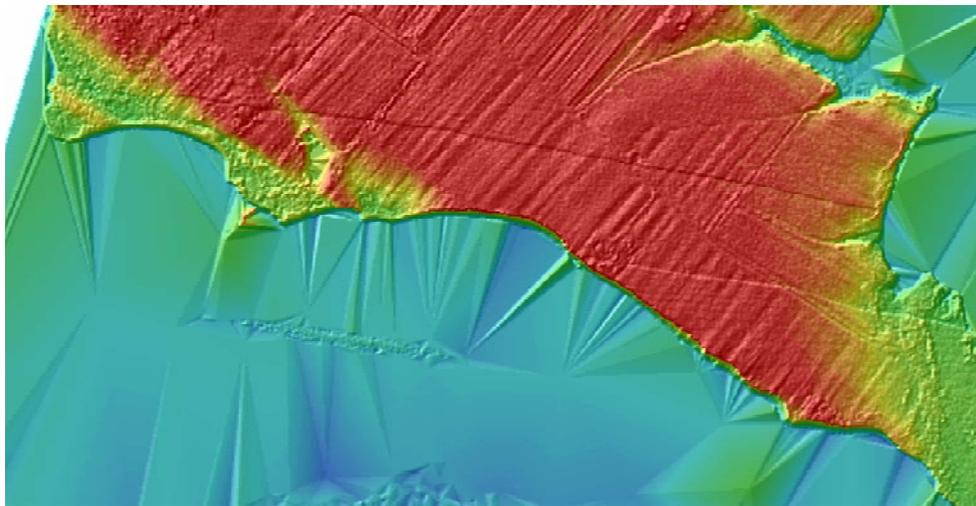


Figure 73 - O1244- Scan line issue (20 cm).

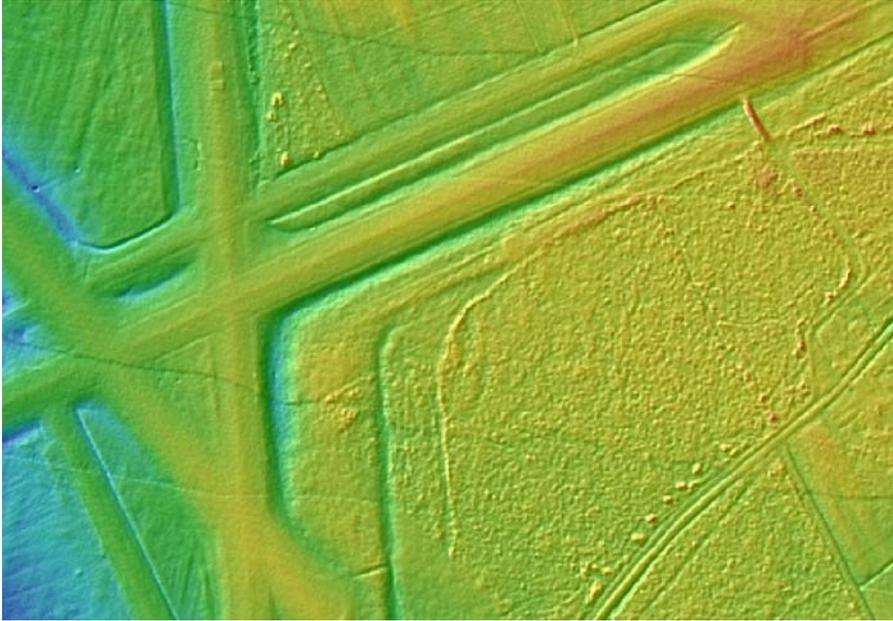


Figure 74 - O1261 - Scan line issues.

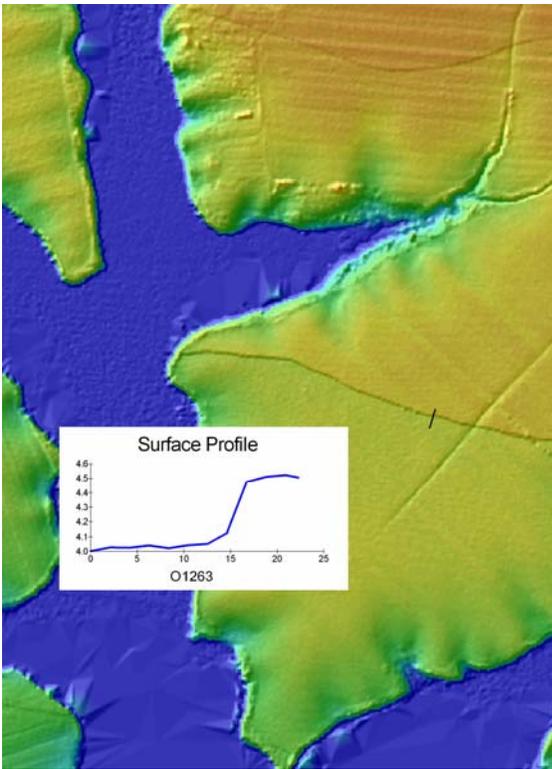


Figure 75 - O1263 - Scan line issue with associated scan line.

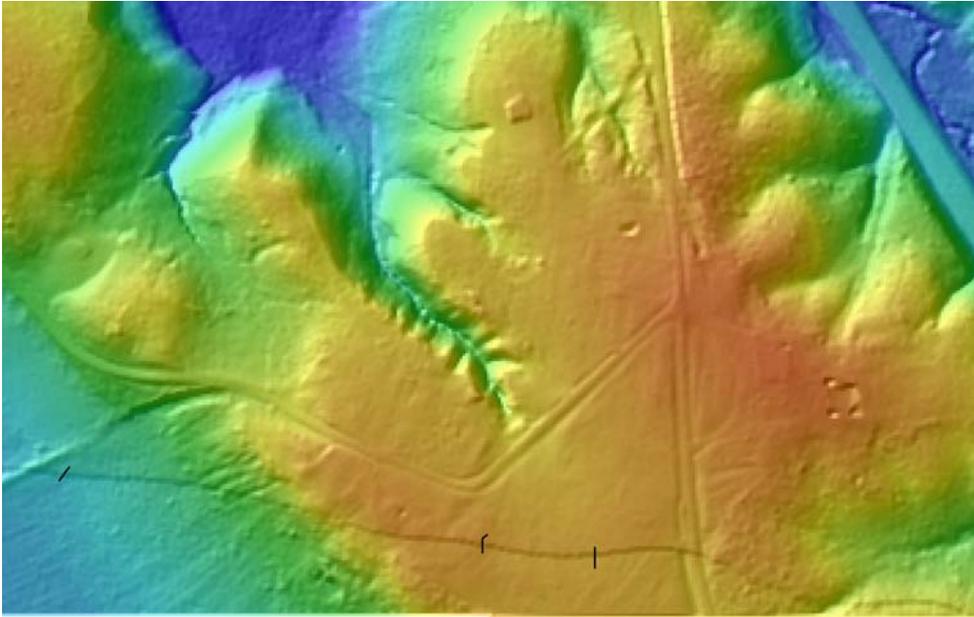


Figure 76 - O1273 - Scan line issue, lower portion.

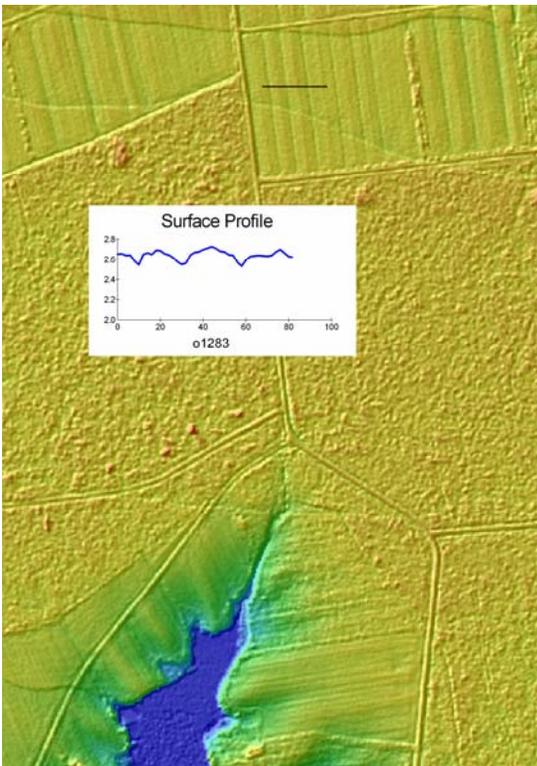


Figure 77 - O1283 - excellent example of precise data. Note the cross section elevation relating to the ploughed field.

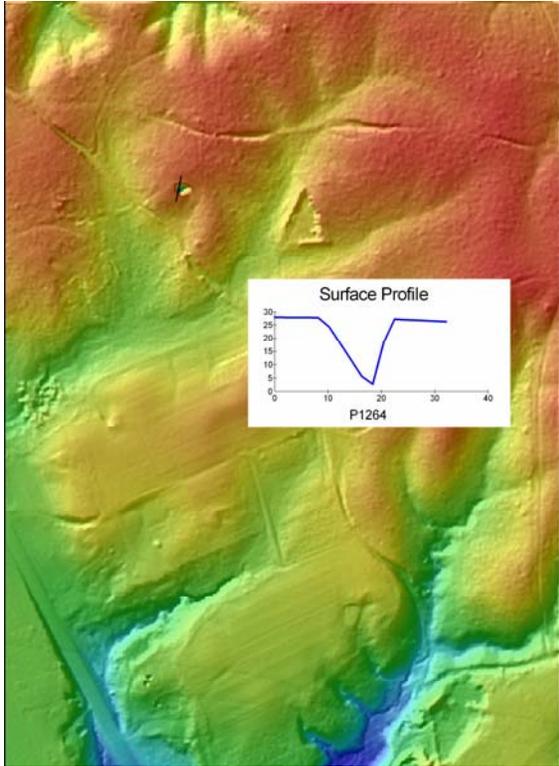


Figure 78 - P1264 - Large divot.



Figure 79 - P1276 - Scan line issue.

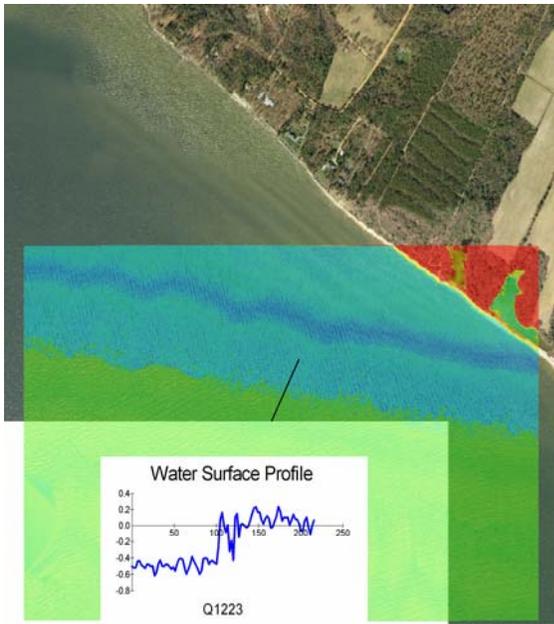


Figure 80 - Scan line issue. Although this is over water, it is a good indication of how the laser system is performing since the surface is fairly flat.

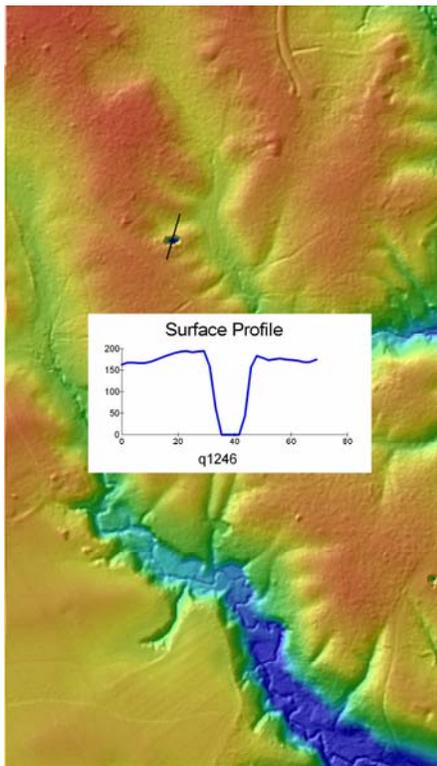


Figure 81 - Q1246 - Large divot.

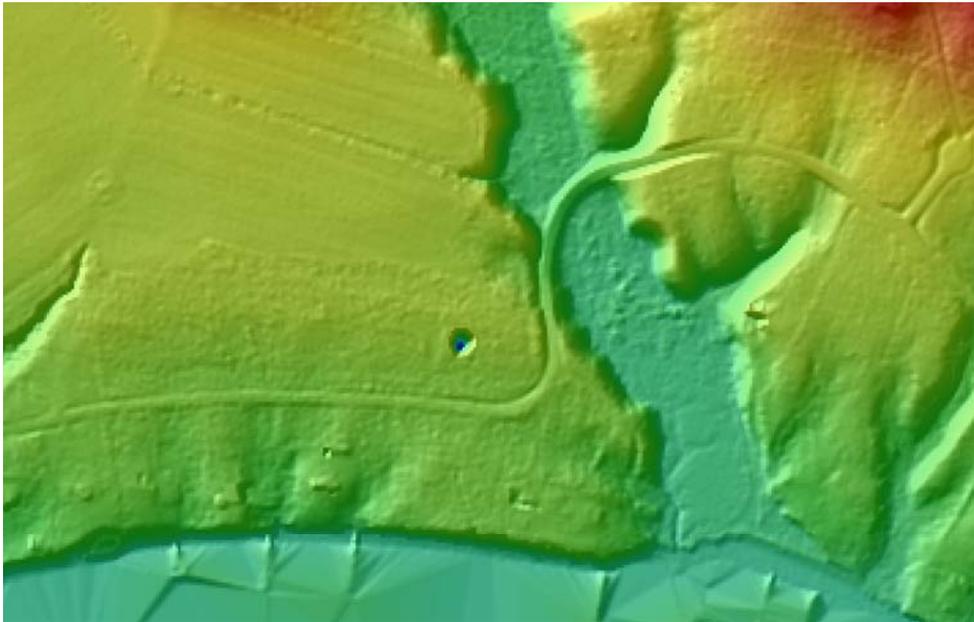


Figure 82 - Q1254 – Large divot but excellent retention of elevated road for transportation studies.



Figure 83 - R1183 - Large divot.

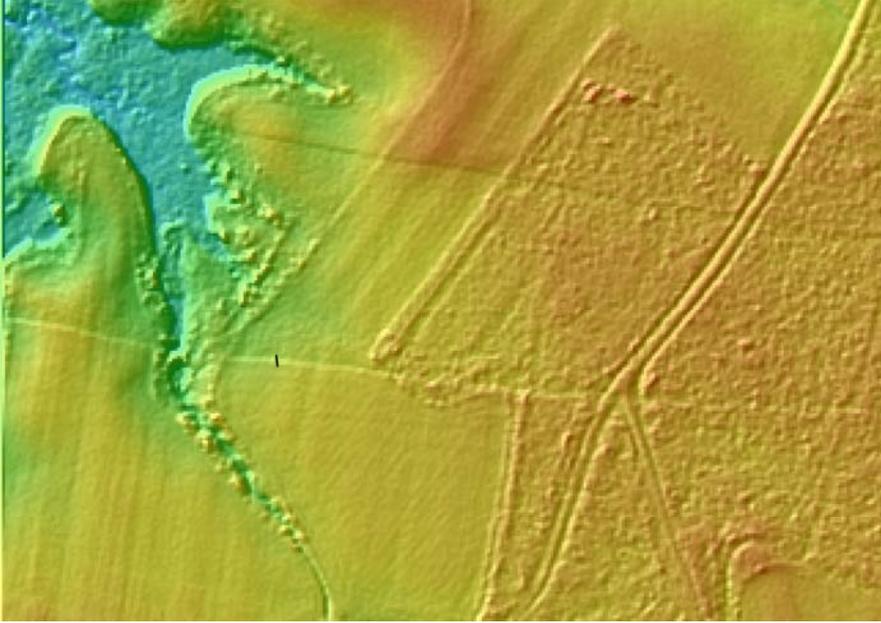


Figure 84 - R1191 - Scan line issue (center of image).

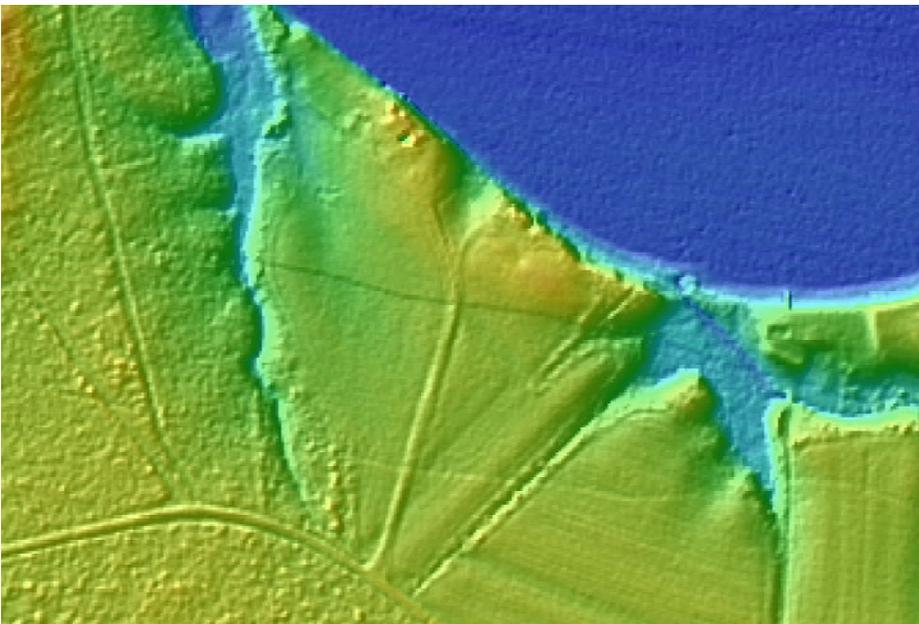


Figure 85 - R1201 - Scan line issue (center of image).

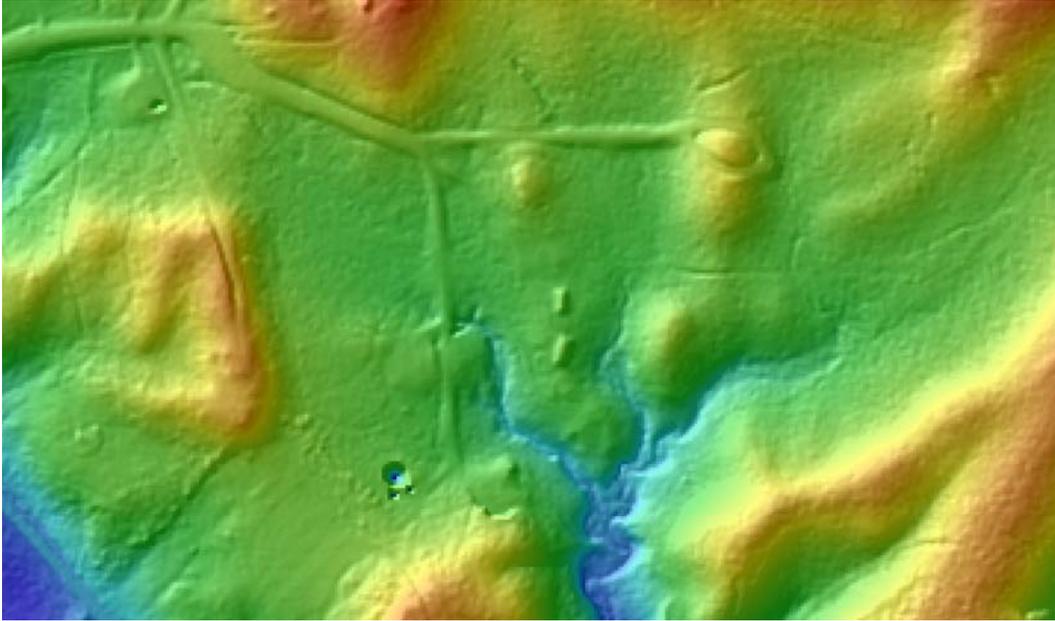


Figure 86 - R1212 - Large divot.

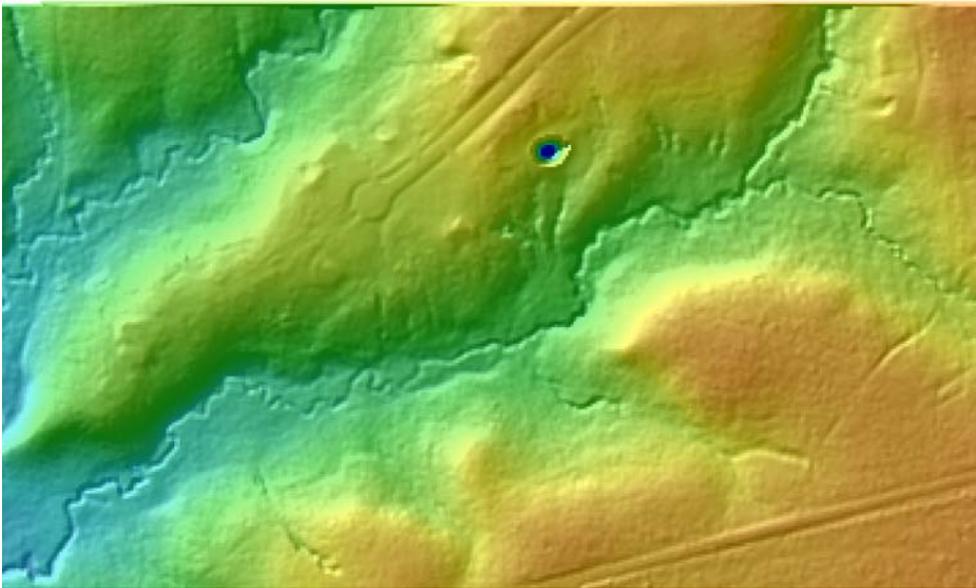


Figure 87 - R1226 - Large divot.

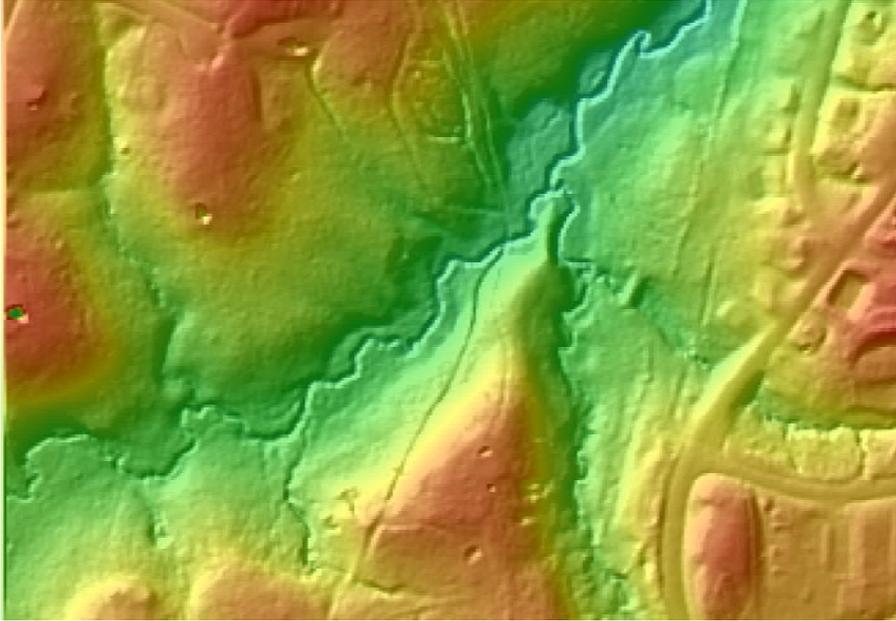


Figure 88 – R1232 – Divots.

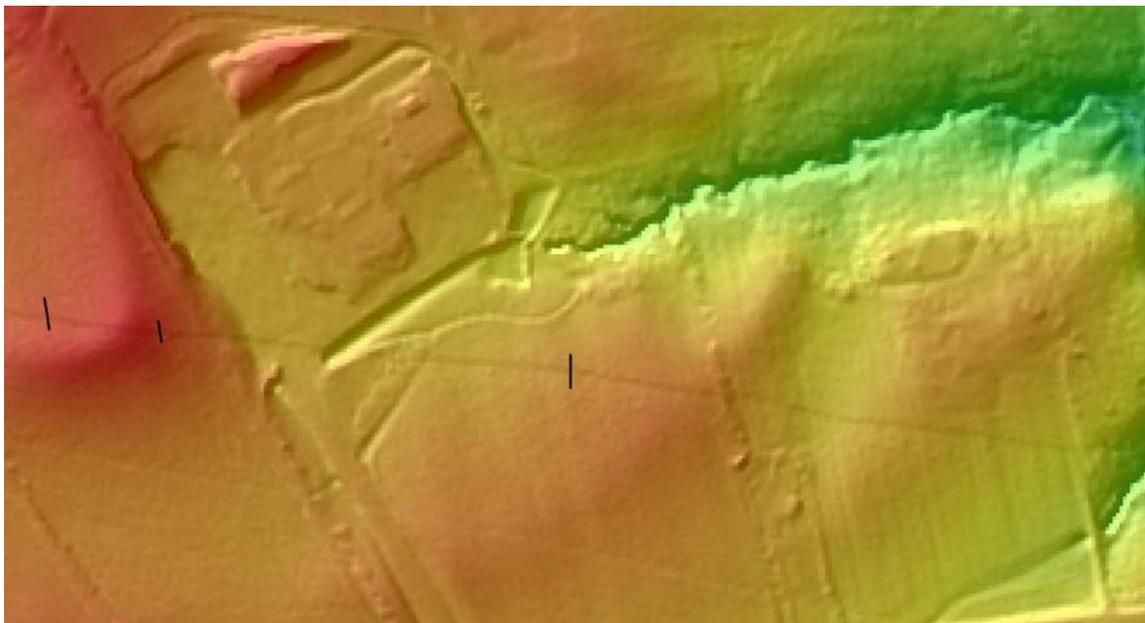


Figure 89 - R1232 - Scan line issue.

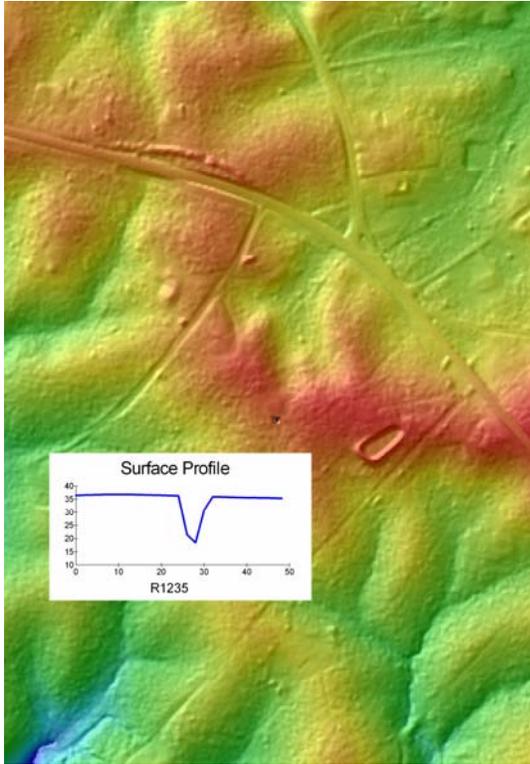


Figure 90 - R1235 - Large divot.

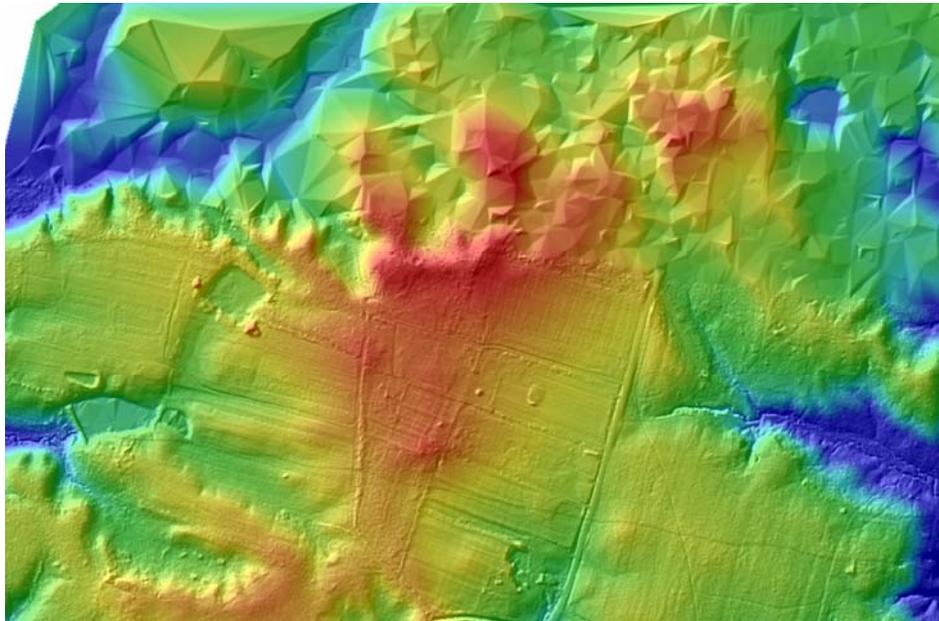


Figure 91 - R1251 - Sparse data in top portion. This is only for reference as this data was re-submitted.

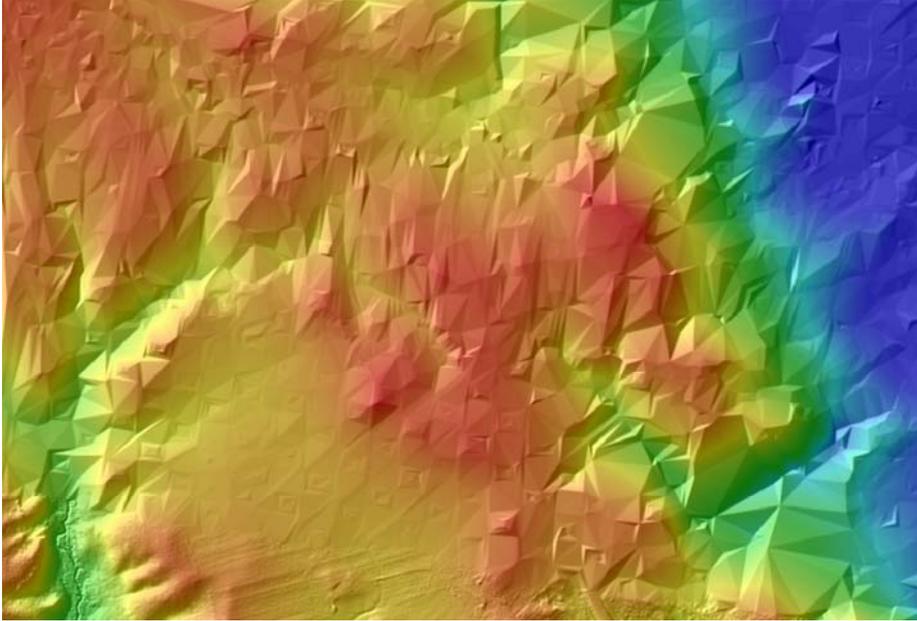


Figure 92 - R1261 - Sparse data in top portion. This is only for reference as this data was re-submitted.

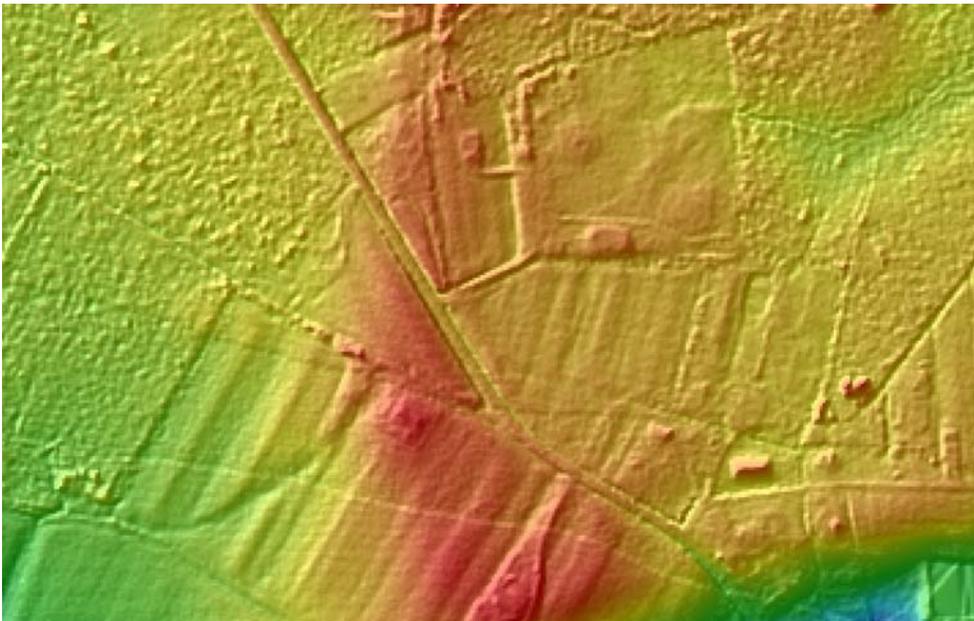


Figure 93 - S1174 - Scan line issue (20 cm.).

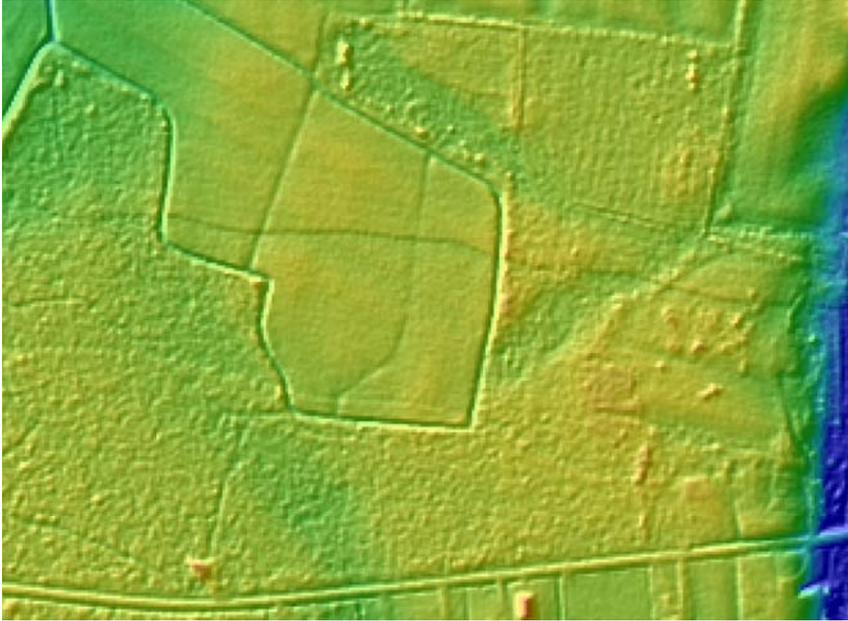


Figure 94 - S1176 - Scan line issue (center of image).

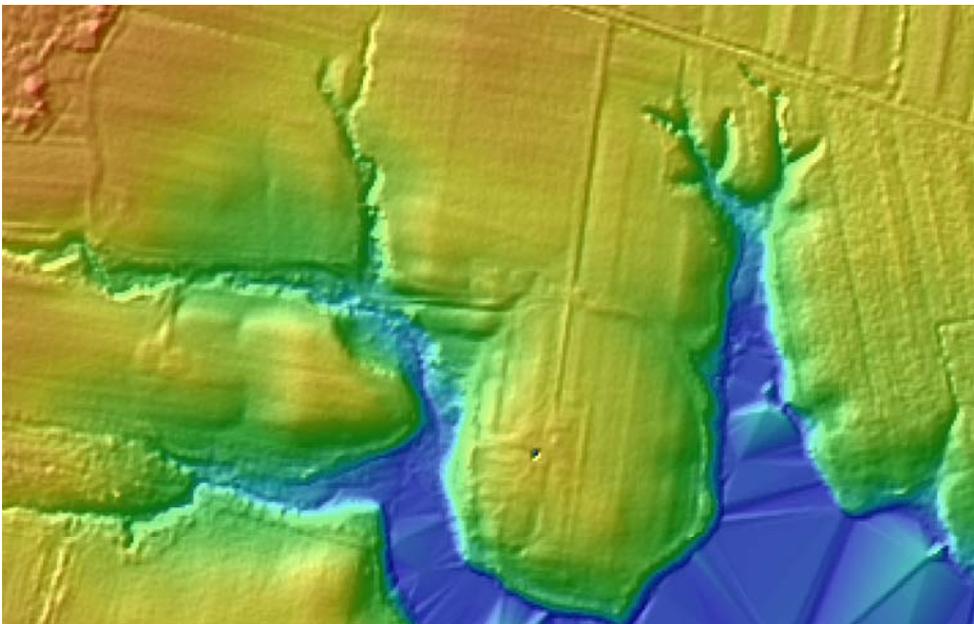


Figure 95 - S1182 - Large divot.

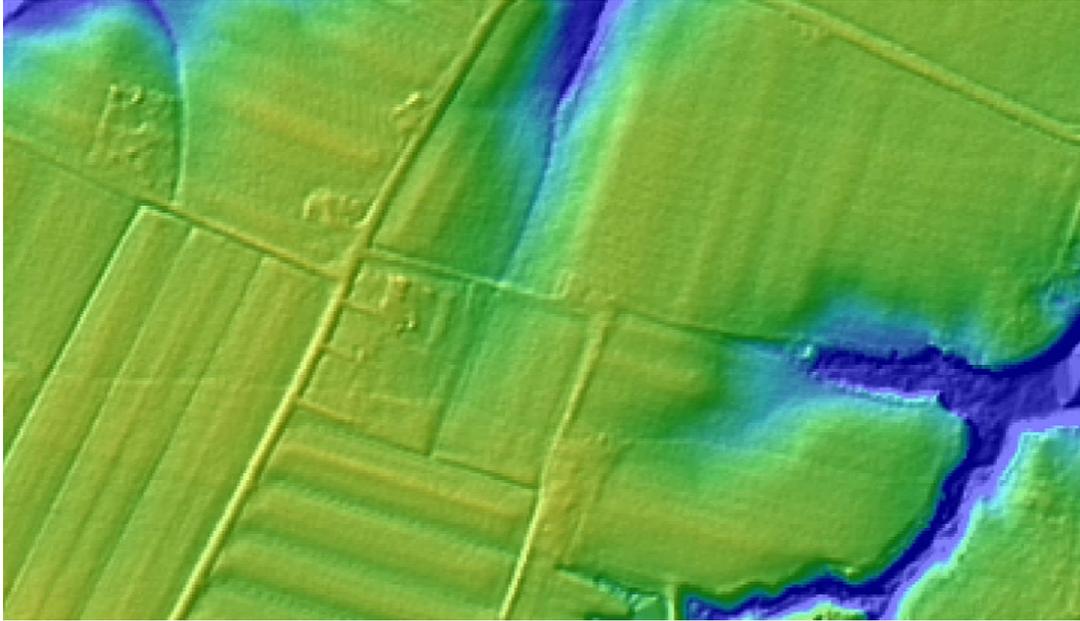


Figure 96 - S1185 - Scan line issue (20 cm).

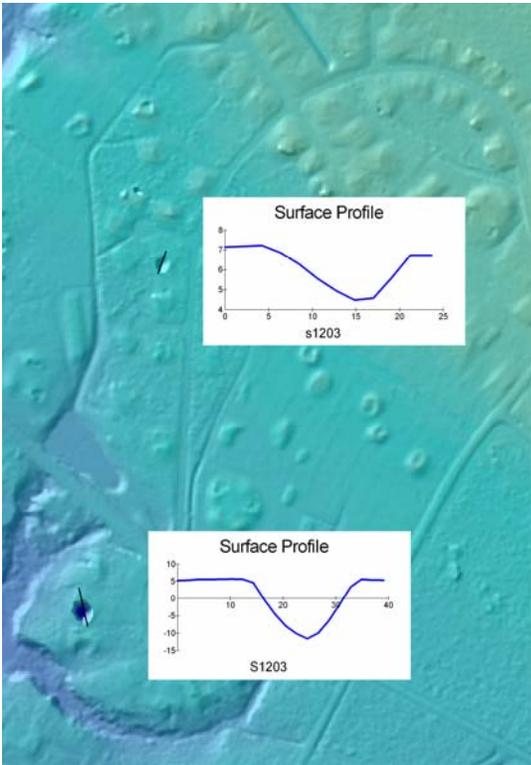


Figure 97 - S1203 - Large divot.

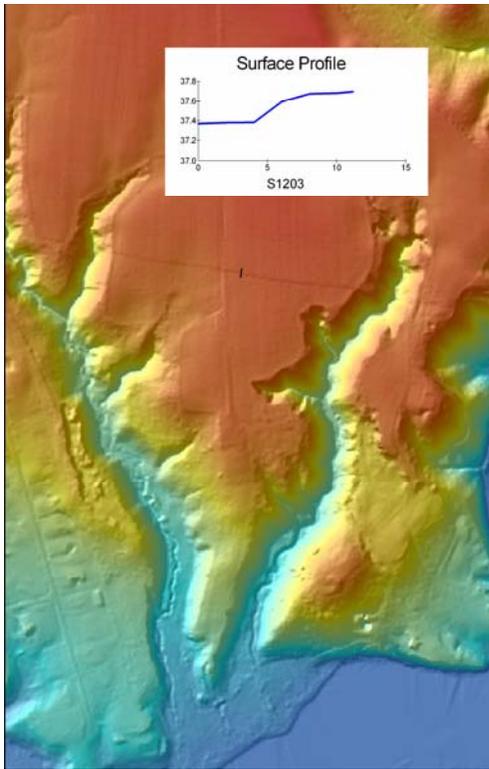


Figure 98 - S1203 - Scan line issue.

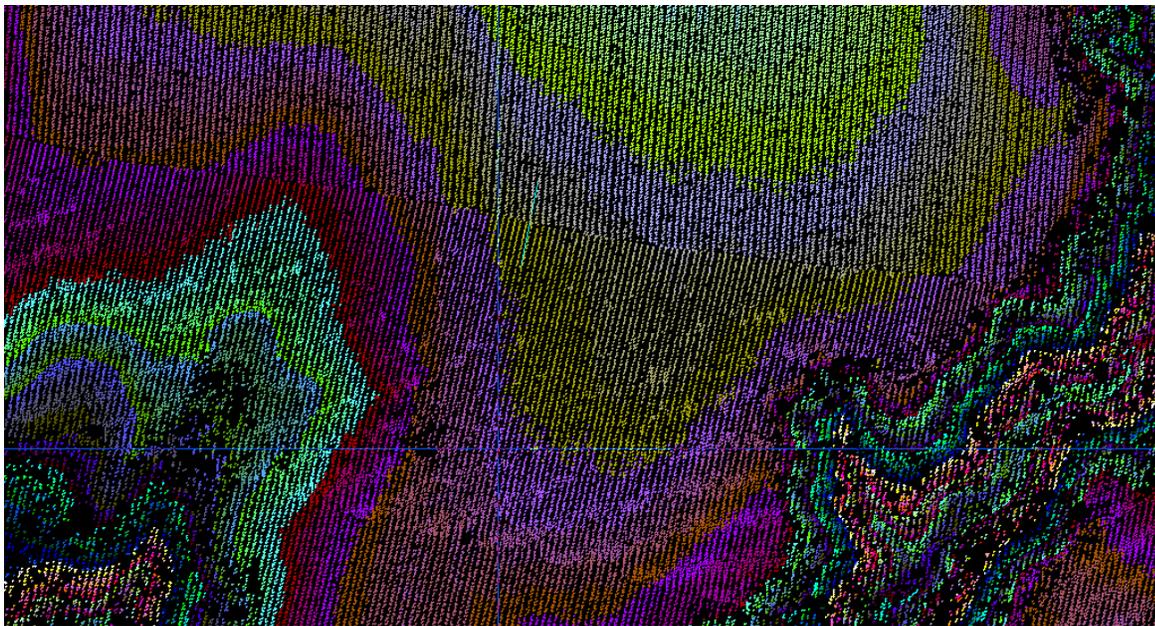


Figure 99 - S1203 - Scan line issue. LIDAR points colored by elevation. Note that the elevations appear to have a horizontal shift due to the differences in elevations.

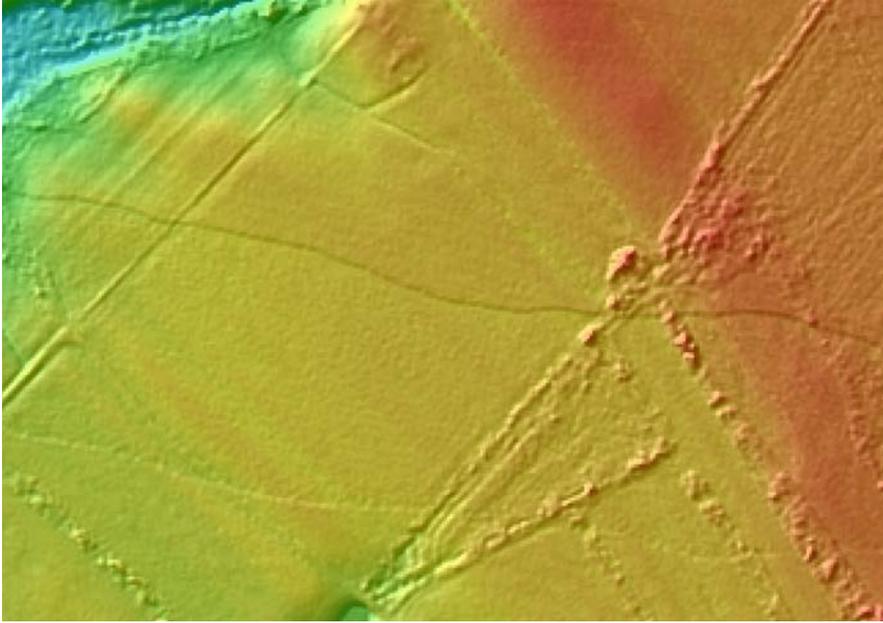


Figure 100 - T1166 - Scan line issue and potential artifacts.

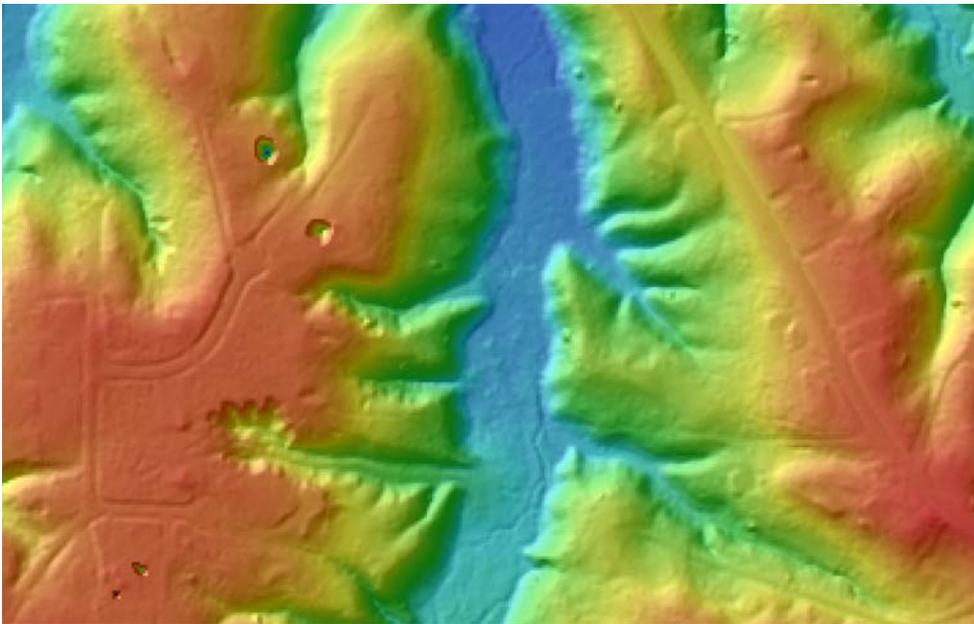


Figure 101 - T1244 - Large divot.

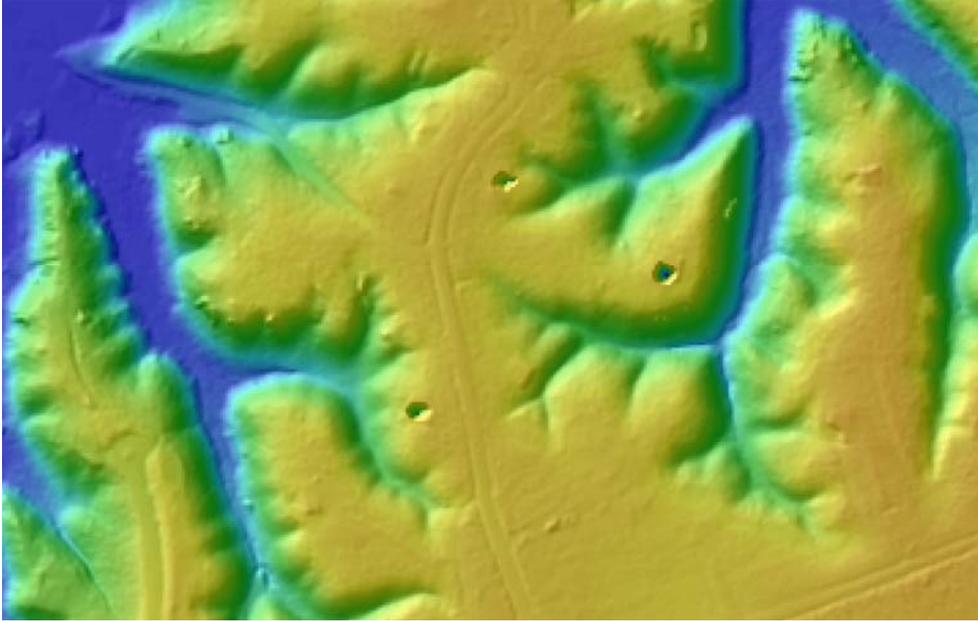


Figure 102 - V1222 - Large divot.

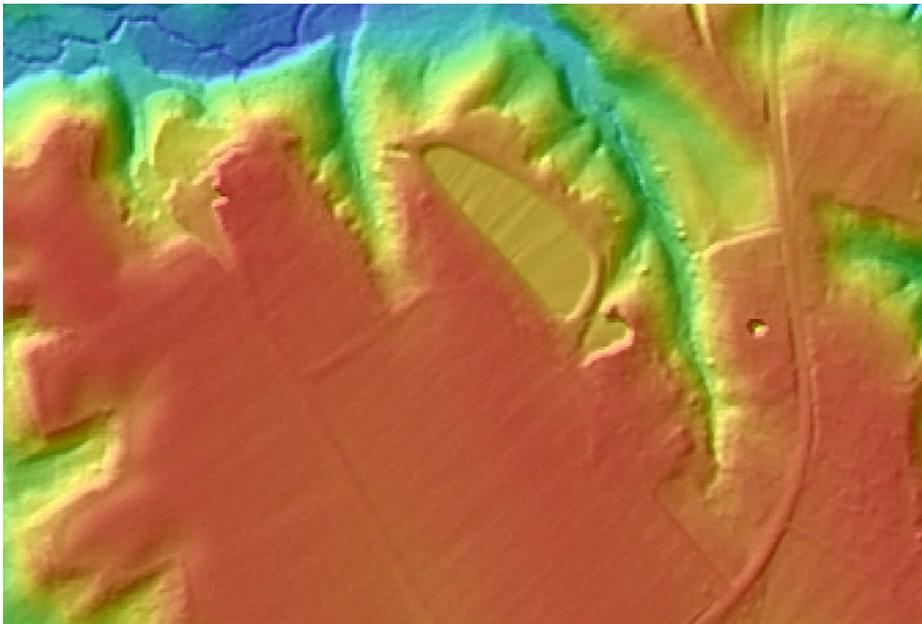


Figure 103 - V1233 - Divot



Figure 104 - W1186 - Large Divot.

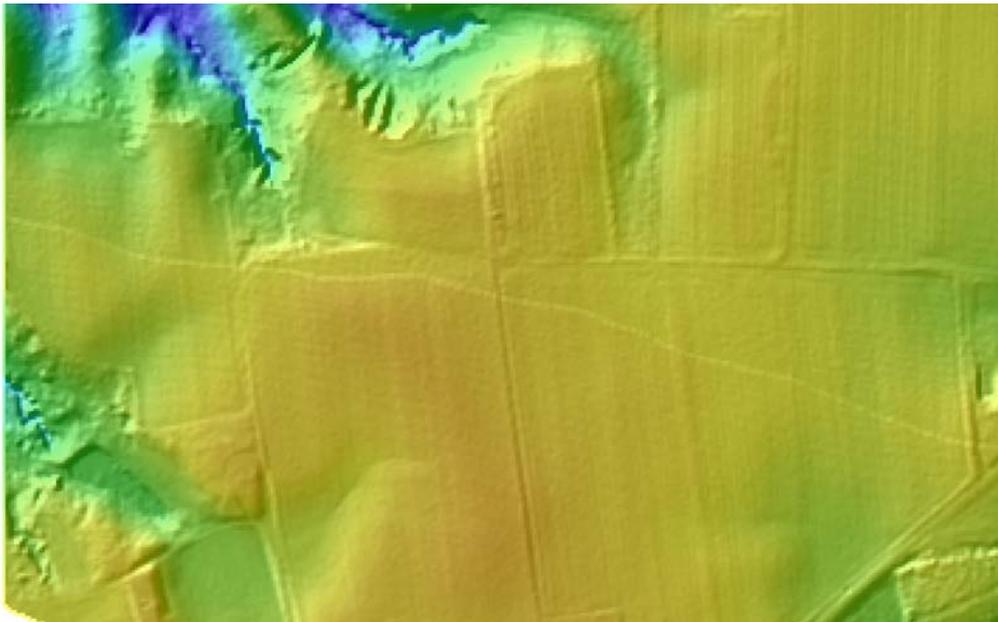


Figure 105 - W1186 - Scan line issue.

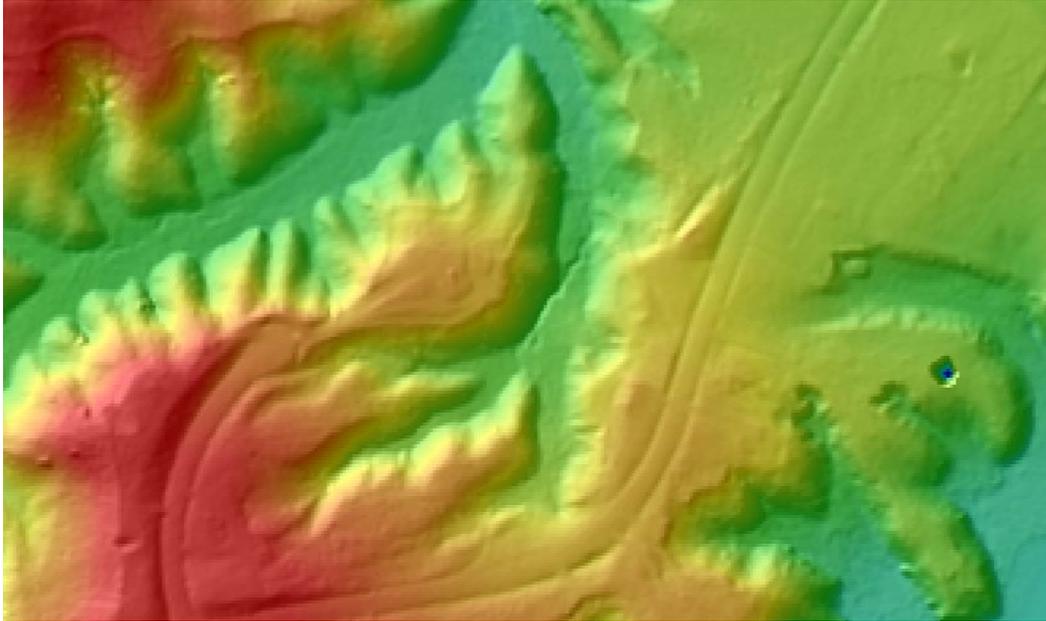


Figure 106 - X1215 - Large divot.

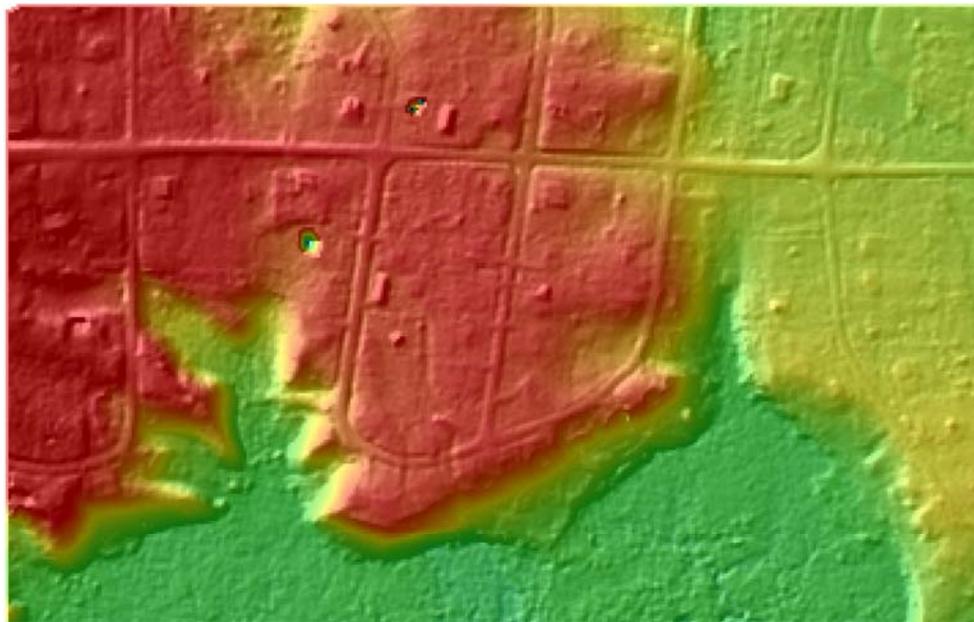


Figure 107 - Z1196 - Large divot.