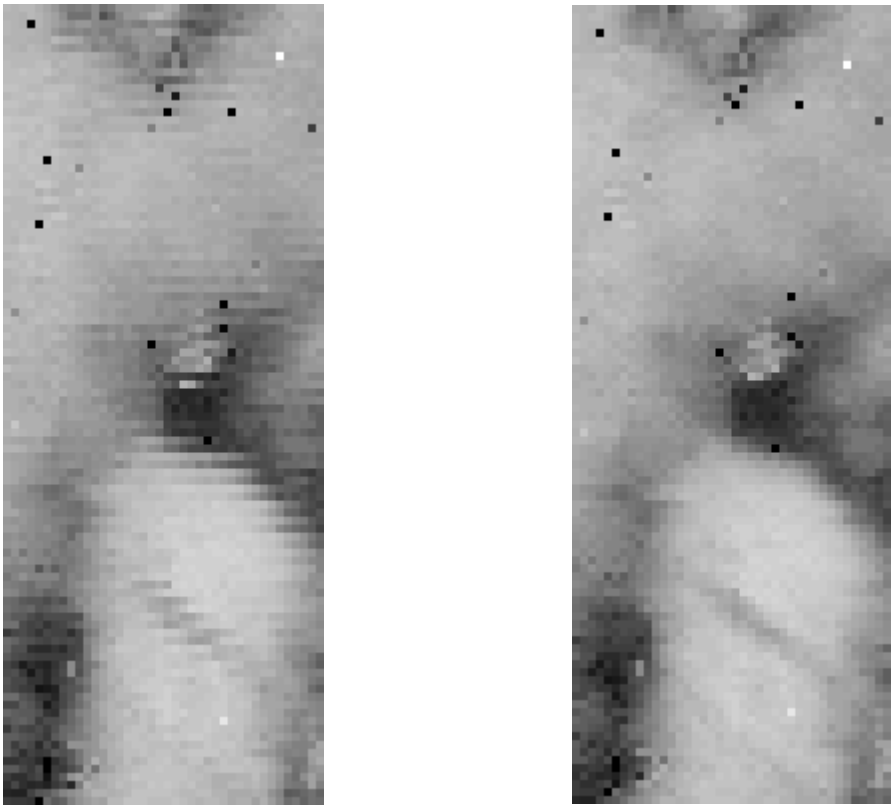
Striping Defect Due To Incorrect Probe Connections

The probe connections given in figure 2-6 (main part) and C-3 (appendix) of the MPX15 manual for 2 Parallel Twin (3 probes), 2 Parallel Twin (4 probes), 3 Parallel Twin and 4 Parallel Twin can be misleading in older manuals. Depending on how they are interpreted, the resulting data may have alternate traverses swopped over, giving a stripy appearance – this applies to both zig-zag and parallel traverse methods. This happens because measurement A2 / M2 has been made before A1 / M1.

A correction utility is now available in Geoplot 3.00g Edit menu that will swop adjacent traverses in either a grid or a composite. An example of this striping defect is shown below (left hand side), together with the correction made by the "Swop Adjacent Traverses" utility (right hand side).



Clearly the magnitude of the striping defect in this case will depend on the background resistance and strength of the anomalies – if background resistance is low with low magnitude anomalies then the striping may appear very superficial whereas sharp and large anomalies on a changing background may produce large magnitude striping between rows. The mean of the data set shown above is 248 ohms with the central dark region reaching 500 ohms. Striping mismatch just below the large anomaly is nearly 90 ohms. On a very quiet site it may be as little as 1 ohm; on a site with strong features it may be up to 250 ohms or more, with typical sites lying somewhere between these two values.