

model data has been calculated for points on east-west lines at the nominated northing. However, not all actual lines are straight, precisely east-west or at the nominal northing. (The modelling programme used can determine the value of the magnetic field at ANY point or across any grid however oriented but the extra operator effort was not justified in this case since the line positions do approximate and the effect can be assessed over many lines - even if slightly errant in position).

Topographic effects will have introduced more serious errors during processing, since they have been ignored. Most deviations between the calculated and observed profiles can be related to topographic forms (esp. Figures 8 to 12). Most deviations are negative, implying reversely magnetised source bodies. While it is possible that some high amplitude, short wavelength features are of this type (e.g. features A, B - Figure 10) most 'flat' spots on the anomaly peak and 'bites' on the limbs (especially to the east) can be explained by hill side - topography/depth variation effects.

When the interpreted form of the body (Figure 13) is superimposed on available geological data (Figure 14) - as is partly done in Figure 13 - the shape and orientation of the body is found to correlate easily with inferred fault trends. Some possible map revisions are suggested; given the inferred nature of the structures it should be possible to match the geological and magnetic interpretations. The shallowest part of the body appears to correlate with the core of an anticline. The east side of the body may also be faulted and geological data are not inconsistent with this possibility.

The source of the anomaly could be ultrabasics, basic volcanics or intrusives, tuffs, magnetite-bearing granites or contact zones, or mineralisation. The writer is not in a position to fully appraise these options due to lack of rock property or stratigraphic data but ultrabasics are commonly much more strongly magnetised (see Colebrook Hill anomaly discussion). The general shape of the body and the implied depth extent indicate an intrusive feature rather than a folded and faulted sedimentary feature.

Spectral analysis has also indicated a number of sources in the 15 to 80 metre depth range. While many of these (60-80m) may reflect topographic relief effects some are real. Anomaly A (Figure 11, 12) can be correlated with the mineralised zone south of the Fahlore Mine. The source is narrow (10-25 m wide) at the south end of the zone but broadens northward. It is reversely and strongly magnetised. No obvious explanation can be offered for anomaly B (Figure 10) but it has the same characteristics as A and is due either to compound or larger sources. In each case the top of the source is within ten metres of the surface.