

Gradient analysis and calculation of the analytic signal suggest a roughly cylindrical body with radius of 400 metres. On this basis the indicated magnetic contrast is about 0.003 cgs. Slight variations in dimensions or source shape type (sphere, slab etc) confirm a value within the range 0.0005 to 0.005 cgs, with a typical value of 0.002 to 0.004 cgs.

The preliminary indications noted above have been compiled into a three-dimensional model and iterated until a reasonable fit was achieved. The body shown in Figure 13 is responsible for the calculated profiles superimposed on field data in Figures 2 to 12. It accounts for all salient features of the primary anomaly and allows resolution and separation of the disturbing features (especially A and B, see above).

The solution was derived after eight iterations and testing of five secondary variations from a basic cylinder. Iterations have defined the shape in plan and the form of the upper surface while variations have tested the possibility of contact dips.

No permanent magnetisation has been included in the calculation. At the depth and contrast implied little is indicated. Any remanence effects, normal or reverse or both, would be accreted within the induction vector. The contrast estimated may, due to continuation effects, represent a slightly amplified bulk susceptibility for the material or the magnetisation itself. Since the calculated susceptibility is about 0.003 cgs, and could include a remanent component, the true susceptibility could be less than 0.002 cgs if the Koenigsberger ratio exceeds unity. In any event the source is neither strongly magnetised nor strongly magnetic and the value of 0.003 cgs should be regarded as a total or resultant value. Modelling also suggested a slight reduction northward (0.0032 to 0.0027 cgs) along the body.

It has not been possible to reliably resolve the dip of any edge of the body, due to its shape, but there are suggestions on both eastern and western faces of a very steep westerly dip. All dips are subvertical (in excess of 70°).

Although some uncertainty inevitably attaches to depth estimates, being a function of body shape/volume and contrast, the body lies at a depth of about 300 metres. Using the control of analytically determined body edges it may be stated that any protrusion of the body above 240 metres will be very minor. The body appears to possess a substantial depth extent (in excess of 1000-1500 metres) with a pinnacle near 374500mE, 5367100mN. All depth estimates must be regarded as order of magnitude only due to interpretive ambiguity, uncontrolled interpretation and topographic effects. Figure 13 presents the interpreted form of the upper surface of the body with respect to the land surface. Elevation differences across the survey area have not been applied to correct the depth values and define the actual form of the upper surface.

Small differences between calculated and observed profile may be due to small line deviations. For ease of calculation all