

There are, however, no established outcrops of Crimson Creek within the Ring River Area; it is known only from the drill core. All outcropping rocks would appear to be of overlying Dundas Group age. It seems unlikely that a non-outcropping rock unit could consistently be the source of shallow magnetic responses. The tuff members of UNIT III contain erratic high susceptibility values in the core and where they outcrop in the bed of the Ring River. These could be a possible source for G.E.C. anomalies. The sulphide mineralisation seen in the drill hole has sufficient susceptibility contrast to produce shallow narrow magnetic responses. Similar mineralisation is known from old workings so this also could be a source for G.E.C. anomalies, particularly the more spiky features.

The data from DDH RRP 239 appear to be more consistent with the G.E.C. style of interpretation than the L.G. interpretations. The core shows evidence for multiple faulting (Fig. 3) and there are rocks which exhibit elevated magnetic susceptibilities over narrow intervals. Figures 4 and 5 show the magnetic profiles and interpreted geological section across line 367,100N. The geological section shows that it is possible to match the magnetic profile form using the UNIT III tuffs as a magnetic source, and at the same time retain the anticlinal structure indicated from surface structural measurements. However, as no mathematical modelling of this interpretation has been undertaken, it is not possible to say whether the measured susceptibilities of the rock units could successfully account for the magnitude as well as the general form of the magnetic profile.

In contrast to the above the interpretation of L.G. is very much a mathematical model which explains the magnitude of the profile very well but is not such a good fit for the form of the profile. As can be seen from Fig. 4, the calculated profile does not match any of the small scale features on the measured field profile. This is true for all the profiles calculated by L.G. (refer E.Z. Report No. 158). The small scale features were explained (?away) by L.G. as:-

1. In two places narrow near surface magnetic bodies were interpreted but were regarded as being entirely superimposed on the primary large body field.
2. The remainder were regarded as local effects produced by the extreme topography, as the modelling assumes a flat earth.

Although DDH RRP 239 did not intersect any body as modelled by L.G. the interpretation could still be valid. An intrusive stock could still exist provided that it is deeper than the drill hole and has a correspondingly higher susceptibility contrast.