

SHEET 14 REGIONAL CONTD.

Thirdly further to the east there is another major magnetic trend underneath Tertiary cover, indicating another major zonal trend of faulting, on the downthrow side of which, Tertiary sediments (Macquarie) have been deposited and have overlapped onto the Cambrian Dundas in part. The Tertiary area east of this major magnetic trend is rather flatter magnetically, whilst the E.M. pattern is complex and of higher background response generally, the cause being presumed to be the presence of horizontal conductive horizons within the sediments.

This feature of the nature of E.M. response is characteristic of Tertiary cover throughout the area so that frequently (Sheets 17, 20 and 21 provide notable examples) the margin of the Tertiary areas is faithfully followed by trends of increase in background E.M. response.

Another feature, which is common to other Tertiary covered portions of the area is the presence of large magnetic anomalies, which imply the existence of major faults within the sub-Tertiary formations. As can be gauged from the exposed regions, the major faults more or less follow the magnetic peaks but faulting is usually complex so that this principle can provide merely a guide and should not be applied too rigorously.

DETAILED:

In the light of the above factors, combined with the favourable geological nature of the Cambrian Dundas, it was deemed advisable, at least in the early stages, to devote more attention to this rock group, especially on Sheets 14, 17, 20 and 23.

Western Margin of Cambrian.

The most persistent and causal structural feature is the NNE-SSW trending major fault. At the north end, there are two E.M. high trends with an intermediate low trend more or less paralleling the fault.

14/1: Is well to the west of the fault, with ratios of the order of 0.3, and is possibly correlated with the timbered pre-Cambrian junction.

14/2: Has ratios of the order of 0.5 and closely follows the magnetic anomaly peaks, which have a range of values from 3500 gammas maximum to less than 500 gammas to the south where there is a pinching out of the magnetic contours.

This is undoubtedly an important trend in that it is another E.M. trend associated with serpentinites, although the exact origin cannot be tied down as yet.