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c w a d where

c = conductivity of the body

w = angular frequency

a = linear dimension of the body

d = thickness.

As a result of this type of quadrature response curve it is thought that:-

- (a) Magnitude of E.M. anomaly is no necessary criterion of importance.
- (b) The ratio of the response at a lower to response at a higher frequency (400c/s to 2300c/s in the case of the Ronka system) can provide an indication of the conductivity - size factor. While it is important not to attach too great a significance to the entity of ratio, because of the dependence of impedance (and hence response) on the geometry and size of the conductor, it can be a useful characteristic with higher ratios being regarded as more favourable.

(iii) In view of (i) and (ii), the basis which has been adopted in examining the AH117 results is that of coupling E.M. anomalies with magnetic contours initially to determine any geophysically significant feature and then to correlate with any known geology (mainly photogeology).

It is understood that the main purpose of the survey has been to select areas for ground follow-up investigation (both geological and geophysical), which have shown some sign of being conductive and are promising in other respects.

Magnetic data can be very valuable in providing confirmation of the existence of structural features.

The writer does not believe that there is available any diagnostic property or group of them which can provide a final definite decisive means of acceptance or rejection of anomalies as potential zones of mineralisation. The selection process is rather akin to the cumulative weighing of probabilities.

In the same category fall queries concerning the origin of anomalies from changes in ground-aircraft clearance. Whilst the fact of increase in response with decrease of altitude is clearly established, it is maintained that anomalies should not be automatically rejected just because there is a height change. Frequently instances arise where on either side of an anomaly associated with some height change there are comparable or greater height changes without a corresponding response on E.M.