

v) Geophysics

A gradient array IP survey was completed over the Voyager 19 grid. The chargeability contours, although not outlining any significant anomalies, illustrate the clear distinction between a broad strongly chargeable area on the eastern boundary of the grid and a less chargeable zone to the west. The boundary between the zones is outlined by a steep gradient which approximates the Ordovician unconformity, and separates pyritic black siltstones and shales from the siliceous Wart Hill pyroclastics to the west. This linear feature extends in a NW direction from 10700E, 11800N to 10200E, 13600N, where it broadens into a more diffuse zone.

Contours of apparent resistivity also support this distinction, with a broad resistivity low corresponding to the more conductive sediments. Weak inflections in the contours suggests there is a wide but subtle resistivity low centred on line 13200N (plans 45-47).

Three lines of Dipole-Dipole IP, using a 50m Dipole spacing, were completed over the three most interesting areas arising from the gradient array survey. The spreads were centred at 9900E on lines 12400N, 12300N and 12100N. A very weak chargeability anomaly was outlined on line 12500N (plan 48).

Total field magnetic intensities were read at 12.5m centres across the grid. Although the magnetic character of the rock proved to be flat a number of small ± 100 nT peaks were continuous over several lines (see plan 49).

After interest was focused on the geochemical anomaly on line 13300N a variety of geophysical methods were adopted on a more detailed level. The principal aim being to try and ascertain the response of the sphalerite-galena-pyrite mineralization and its