10. GEOCHEMICAL SOIL SAMPLING.

A. SHEET 1, SHEPHERD AND MURPHY AREA.

Because outcropping wrigglite was obvious in the mine area and most of the prospective area is covered by basalt, no geochemical soil sampling was attempted in the eastern part of the sheet. The only area soil sampled was the far west of the sheet - this area is the Post Office anomaly, mostly on sheet 2. (see below).

B. SHEET 2, IRIS RIVER AREA.

General area:

Samples were collected over a wide area of this sheet. The aim was to detect mineralized skarns. Patchy outcrops of skarn are common on this sheet and basalt was suspected to be thin because of the presence of grey-billy in many places. Samples of C horizon were collected at 50 m spacings with the aid of a hand auger where necessary. The - 80 mesh fraction was analysed for Cu, Pb, Zn, F, Bi, Mo by the Comalco laboratory. For analytical methods used see Appendix 8. No attempt was made to analyse for Sn or W since it was thought that the other elements would be adequate pathfinders. Analytical results are plotted on drawing TAS-77-83.

All elements were found to reflect known outcropping skarns and calc-silicate rocks, but bismuth and lead are the most specific. Contoured bismuth and lead values are on drawings TAS-77-89 and 86.

Bismuth values of about 50 ppm or less are background; values range up to a peak of 1990 ppm at the Tea Tree Creek skarn locality. The bismuth content in the soil is possibly enriched compared to the underlying rock since sampled rocks in the area do not in general have such high values (see Appendix 14).

Lead values of about 50 ppm or less are background and values range up to 1580 ppm in calc-silicate rocks in the south-eastern part of the sheet.

There are no skarns detected in the geochemical survey which had not been previously found by mapping. It seems that a shallow cover of alluvium, basalt etc. is sufficient to geochemically mask skarn bodies.

The fluorite, tin and tungsten content of the skarns, and calc-silicates is not known except for sporadic rock sampling, but all the known skarn bodies are very small and the calc-silicate outcrops have no depth extent.