

## 2.3.4 Geochemistry

### 1. Introduction

During 1980-81 973 soil samples and 21 rock chip samples were taken from the Selina Grid. Routine soil sampling, by hand augering, covered lines 184N to 96N. The rock chip samples came from pits on lines 184N, 144N and 128N.

On the Rolleston Grid 235 soil samples were collected from lines 56N to 40N. Two rock chip samples were also collected.

On the Dora Grid six rock chip samples were taken from old workings near Walford Peak.

A significant Pb-Zn-Ag anomaly zone was detected on Selina Grid between lines 128N-104N, straddling the baseline. Soil assays were up to 4000 ppm Pb, 1400 ppm Zn and 8 ppm Ag. Rock taken from pits on line 128N assayed up to 2500 ppm Pb, 710 ppm Zn and 14 g/t Ag.

### 2. Soils

#### (i) Selina Grid

Systematic hand augering for soil samples was carried out over lines 184N-96N of the Selina Grid. Samples were taken at each peg (20 m intervals east of the baseline, 100 ft. intervals west of the baseline), "C" horizon samples taken wherever possible. The minus 80 mesh fraction was assayed by AAS at Mount Lyell for Cu, Pb, Zn, Ag, Mn and Co. Figure 28 shows the assay results for Cu, Pb, Zn and Ag.

Table 2 and Figures 29 to 31 summarise the distributions of Cu, Pb and Zn for the Selina Grid.

A significant zone of anomalous Pb-Zn-Ag values was detected on the Selina Grid covering lines 128N to 104N and straddling the baseline (Figures 26, 32 and 33). Assays in this zone were up to 75 ppm Cu, 4000 ppm Pb, 1400 ppm Zn and 8 ppm Ag. This zone lies along strike from the eastern pyrite zone, although there is no recognisable association between the two.

The underlying rock is a coarse lithic tuff/volcaniclastic conglomerate with magnetite-hematite mineralisation but no visible sulphides. This rock unit may be related to the Jukes Formation, or a correlate of the Dora Conglomerate.

Minor Cu anomalies were recorded over the eastern pyrite zone, the western pyrite zone on line 136N and the hornfelsed banded tuffs on line 152N, but these are not considered to be significant (Figure 26).

#### (ii) Rolleston Grid

On the Rolleston Grid lines 56N to 40N were sampled at 100 ft. intervals over "background" areas and 50 ft. intervals over I.P. anomalies (A1 and A2, Omnes, 1970). Both "A" and "B/C" horizon samples were taken wherever possible because of the extensive glacial cover. The minus 80 mesh fraction was assayed by AAS at Mount Lyell for Cu, Pb, Zn, Ag, Mn and Co. Assay results are presented in Figure 34. Table 3 summarises the Rolleston assay data.