

likely in Bakers Creek and the creek to the north, this cannot explain the magnitude (up to 17% Zn) and location of many values. Slack samplers are the most probable explanation. However, careful examination of assays from other creeks indicated that sampling throughout the remainder of the survey is probably reliable.

Consistently anomalous samples from several creeks draining into Natone Creek from the east almost certainly reflect contamination from the Williamsford-Rosebery aerial ropeway. The anomalous samples furthest upstream lie directly beneath the aerial ropeway. Anomalous Cu values are confined to one creek and appear to arise from old mine workings above the ropeway.

Anomalous Zn and Cu values occur in the creeks draining Colebrook Ridge to the east. Anomalous Cu and Zn values to the north of Colebrook Hill probably represent contamination from the Colebrook Mine. There are numerous anomalous Pb and Zn values, often coinciding, within the Ring River drainage system. Anomalous Cu values are distinctly less common, apparently reflecting a paucity of copper mineralisation. Many anomalies in Ring River drainage basin (other than in Bakers Creek and Conliffe Creek) may be due to old workings.

Mn values show no obvious pattern or relationship to Cu, Pb or Zn anomalies.

Texins Development carried out detailed stream sediment sampling in the White Spur Creek drainage basin within the eastern portion of E.L. 7/68 in 1973 (Johnson, 1974). 195 -80 mesh samples were assayed for Cu, Pb, Zn, Ag, Ni, Co and results for Cu, Pb and Zn were plotted on separate plans at 1:5,000 (not 1:10,000 as indicated by the bar scales). Background and threshold values were calculated for each element. Sampling was quite dense with samples usually taken every 50-75m. However, not all tributaries were sampled.

Copper values are low (max. 30 ppm), suggesting that this sector has little Cu mineralisation. There are numerous samples scattered throughout the area with greater than 200ppm Zn or Pb; the coincidence of Pb and Zn anomalies is marked. Although background values for Pb and Zn were calculated as 77 and 78ppm respectively, the threshold values are 310 and 365ppm. The occurrence of only a few erratic Pb and Zn values above these threshold values apparently led Discala (1974) to conclude that there are no significant anomalies in the area. The writer suggests, however, that these threshold values are high and that the better anomalies deserve follow-up work. Dispersion trains of both these elements are apparently very short (often only 100-150m), assuming that the sampling technique was consistent. Dispersion trains for Cu, Pb, Zn in Natone Creek are considerably longer (approx. 800m) so this problem will require attention if further stream sediment sampling is undertaken.

8.2. SOILS

C horizon soil sampling was carried out at 100' intervals over the Colebrook Grid in 1973, samples were assayed for Cu, Pb, Zn, Ni, Sn. No field notes remain so the reliability of the sampling is uncertain. The fraction assayed is not recorded. Pb, Zn, Cu, Ni results appear as Plates 21, 22, 23, 24 respectively in Reinhardt (1973). These plans are of lessened value as only broad-spaced contours are shown and individual assays are not indicated. Many anomalous Zn values and, to a lesser extent, Pb values reflect the distribution of serpentinite. High Ni values are restricted to the serpentinite. Anomalous Cu values show a