

deepest sample possible with a one metre auger, were taken. The samples at depth showed a higher contrast in values from the background. Sampling delineated a zone of zinc soil anomalies, 60 m by 90 m long open to the north and south, occurring within a 60 m wide depression. The topographic control could suggest that the anomaly is hydromorphic in origin. However resampling of the line 23.7N pit showed that the anomalous Zn was not associated directly with Mn as Mn decreases down the pit without the corresponding decrease in Zn values (see Fig. 7). The anomalous Zn was also found to be confined to certain coarse grained layers in the pit profile. Results from electron microprobe analysis by Amdel (1981) of two Zn bearing samples from the pit, sieved to -80#, with assays of 5.0% Zn and 2.6% Zn respectively, showed that the Zn occurs as ZnS grains (either sphalerite or wurtzite) and is associated with more abundant pyrite grains. This suggests that the high zinc values in the area are probably derived from glacial or fluvio-glacial transported zinc sulphide grains. Local derivation of the sulphides is possible as the pit possibly occurs on strike from a unit associated with anomalous Zn soil values. Further delineation of this zone is to be carried out to the south of the pit.

Soil sampling on eastern extensions to lines 21.6N and 24.5N gave no anomalous values. Soil sampling on line 23N revealed an anomalous zone between 1850'W and 2100'W with maximum values of 1400 ppm Pb, 2000 ppm Ba, 2.5% Mn at 1925'W and 730 ppm Zn, 4000 ppm Ba, 13.2% Mn at 2000'W.

Soil sampled, from A and B horizons at 5 ft. intervals, directly over outcrop bearing 10 m of 73 g/t Ag, on line 21N (1250'W-1300'W), gave maximum values of 1050 ppm Pb, 6000 ppm Ba and 26 ppm Ag in the A horizon and 1100 ppm Pb, 6000 ppm Ba and 85 ppm Ag from the B/C horizon. This indicates that the anomalous bedrock Ag values will report in overlying residual soils. It should be noted however that the soil tested had a shallow and poorly developed profile with no glacial masking. Deeply weathered Ag bearing bedrock probably would not give as good a Ag response in overlying soil (as shown by soil sampling in other areas).

### 3. Stream Sediments

Stream sediment sampling at 50 m and 100 m intervals of Tyndall Creek and Newton Creek respectively showed no significant anomalies except for minor above average base metal values in the section of Tyndall Creek between 20N and 24N. Assays and locations are shown on Figure 8.

### 4. Rock Chip Geochemistry

Rock chip samples were collected during routine mapping traverses, especially Tyndall Creek and Newton Creek. In addition systematic rock chip sampling from four costeans and from outcrops on line 21N were carried out. Samples were routinely analysed for Cu, Pb, Zn, Ag, Mn and soluble Ba by AAS following perchloric acid/nitric acid digestion. Rock chip sample locations are presented in Figure 9 and assay data is tabulated in Appendix C. Details of results are presented as follows:

#### Costeans 1 and 2:

These two costeans on line 22N were dug to evaluate a strong soil geochemical anomaly centred at line 22N, 1450'W (with maximum values in residual soils of 740 ppm Cu, 2.0% Pb, 0.52% Zn and 17 g/t Ag) and anomalous rock chip samples from pits dug at line 22N, 1430'W and 1450'W (see Meares et al 1980). Rock chip sampling at 5 m intervals, of the costeans, failed to confirm the high Ag values (up to 35 ppm Ag) obtained from bedrock samples in the pits