The 410 samples collected were dried, seived to -80# and assayed by AAS at Mt. Lyell for Cu, Pb, Zn, Mn, Fe and Co firstly by total extraction $HClO_4/HNO_3$ and secondly by cold extraction (1N HCl). A total of 69 samples, chosen at random and for high base metal values were also assayed by AMDEL for Au using AAS. All assays are shown in Appendix M. Location of samples and Cu, Pb, Zn total extraction assays are given on Figure 62. Anomalous drainage basins are shown on Figure 63.

Rocks occuring in the sampled area are described in detail by Corbett (1979).

2. Stream Sediment - Results

Three areas contain low to moderate order anomalous values.

(i) Roaring Meg drainage contains numerous Cu anomalies, probably due to enhanced bedrock background values or Mt. Lyell smelter contamination (closed 1968), or both. No significant Au assays occur in this area.

(ii) A north trending 2km by 1km Cu, Pb, Zn anomalous area in the vicinity of Lynch Creek, is probably due to high base metal background values in the Lynch Creek Basalts. Minor Au occurs within the stream seds. Prospects in the area either followed up alluvial Au or Au in quartz veins.

(iii) Scattered Cu, Pb, Zn anomalies occur south of Whip Spur in a belt of sericitized felsic tuffs and lavas. South of Whip Spur above detection limit Au assays occur: to the west of a Dighem anomaly, in the vicinity of the Mount Ellen Gold Mine and on the western slopes of Mt. Huxley. Dilution of stream sediments in this area occurs due to glacial morraine derived from the Owen Conglomerate of Mt. Owen and Mt. Huxley.

3. Rock Chip Geochemistry

To determine background values, rock chip samples were collected by contractors (G.A.M.S.) during the stream sediment survey. Samples were crushed and assayed at Mt. Lyell for Cu, Pb, Zn, Ag, Fe, Mn, S and 'soluble' Ba by A.A.S. No significant anomalous samples were collected except for a quartz vein, containing galena (21026) which assayed at 1.5% Pb.

2.9.4 Geophysics

A Dighem survey of 297 line-kms was flown over the Huxley area in February, 1982. The ground covered lies within the rectangle defined by AMG co-ordinates 5330500mN, 5338000mN and 376500mE, 384000mE. The line spacing and bird height were nominally 150m and 35m respectively. EM, resistivity, magnetic and enhanced magnetic maps were produced on photo-mosaic base at a scale of 1:10,000.

The EM results were disappointing, producing only two definite anomalies, one of which was over Queenstown's rubbish tip. The other anomaly was located over Central Sequence volcanics (Corbett, 1981) near the Huxley track, about 2kms north of Mt. Huxley. It was a very low amplitude response, (all four channels less than 5ppm) and the interpreted source of a 32mho tabular conductor at 80m depth