

4. Central Volcanic Sequence

This sequence consists of a mixture of felsic pyroclastics and rhyolitic lavas, all of which contain quartz phenocrysts. In the northern grid extension outcrop is poor due to scree and glacial moraine cover, but good exposures were found in the Anthony River and Quinn Ck.

Gradient array I.P. results indicate that the quartz-sericite-chlorite-pyrite schists of the Eastern Pyrite Zone continue north to line 248N. Pyritic outcrops were located on lines 200N, 240N and 248N.

Detailed mapping between lines 108N and 132N, along with data from ground magnetic surveys and airphoto interpretation, has better differentiated the volcanic sequences within the Mt. Selina Geochemical Anomaly Zone. However, the dividing line between the various lithologies is rather slight in some instances and the distribution of units as shown in Figure 1 is quite tenuous. Lack of outcrop in some places has added to the complexity of the area.

A number of rock specimens from this area were found to contain disseminated magnetite and/or hematite. Some dextral movement along NW-trending faults has been inferred from sudden changes in the shapes of line profiles of the ground magnetic data.

Sericitic-chloritic alteration is pervasive through most of the volcanics, apart from a few samples of massive rhyolitic lavas which were probably too impermeable for the hydrothermal solutions.

A suite of 23 rock specimens, collected in 1980-81, were submitted for petrographic descriptions. Amdel report GS 831/82 is presented in Appendix D.

5. Granitic Intrusives

Several minor occurrences of intrusive rocks were found in the Selina area. Two types of intrusives were noted:

- (i) Coarse-grained adamellite to quartz monzonite with granoblastic texture, similar to the Murchison Granite and probably deep intrusives (see petrographic descriptions for samples S303, S365, S401 and S405 in Appendix D)
- (ii) Porphyritic microgranite to microgranodiorite with quartz \pm feldspar \pm biotite phenocrysts in a fine-grained groundmass. These porphyries were probably intruded at shallow depths since, on line 112N, nearby lithic tuffs contain clasts of porphyry.

Two H.E.C. drill holes north of Quinn Ck. intersected a coarse-grained intrusives similar to the Murchison Granite. One hole was drilled from a site at approximately 5366830 mN (Figure 15), the other site is not accurately known but it was about 1.3 km north-east from the first.