

SUMMARY

This report is based on field work carried out during January-February, 1984, this orientated principally toward mapping, rock/stream geochemistry in Mt. Read volcanics of the Garfield Valley in EL 9/66. Aim to define prospective zones for more detailed work in the 1984/85 season.

The Cambrian volcanics in the Garfield can be broadly divided into older dominantly subaerial rhyolites including ignimbrites - lavas, and a younger sequence of fine to coarse volcanoclastics with minor rhyolite lavas, and single andesitic plug like body. The latter units may be Tyndall Group equivalents, appear to be conformable with overlying Cambro-Ordovician conglomerate and sandstones which pass upward into Gordon Limestone and Eldon Group sediments.

All lithological units strike NW with the possible exception of the central felsic lavas of the North trending Mt. Darwin-Intercolonial Spur ridge. Fold structures are only reflected in the younger Cambrian and Ordo-silurian sediments, a folded repetition occurs through the valley. Plunge of folding is North-Westerly, resulting in complete post volcanic cover in the lower Garfield and Currie Rivers. The structural trends parallel and are part of the Andrew River Lineament.

Recent - Pleistocene glaciation of highest peaks has produced extensive fluvioglacials in the northern part of the