

ABSTRACT

Prior to this study, geological mapping within this portion of the Mt. Read Volcanics had been mainly confined to detailed investigations of small areas. Although a few previous workers had attempted to provide an overall regional picture of the Mt. Read Volcanics, this study is the first real attempt to combine previously undertaken fact-mapping with detailed airphoto interpretation.

The previously held idea that the Volcanics occupied a palaeo-rift valley was confirmed. Thirteen (13) units were recognized on the aerial photographs. These are made up of two (2) intrusive units (Intrusive Porphyries, Murchison Granite); four (4) flow units (Mt. Black Volcanics, Burns Peak Rhyolite, Murchison Volcanics and Mackintosh Volcanics (?)); four (4) pyroclastic units (Primrose and Queenstown Pyroclastics and Selina and Anthony Creek Volcanics); and three (3) essentially sedimentary units (Bulgobac, Rosebery and June Group, and the Farrell/Que River Slates). Of these, five (5) new units, which although previously recognized, are now confirmed and their extent defined on the aerial photographs.

Faulting was seen to be mainly block faulting with little or no strike movement, and folding was simple and open in style and apparently related to the block faulting rather than to any regional compressive forces.

A close genetic relationship of known mineralisation to the intrusive and flow units is suspected by the author. Although most mineralisation found to date, with the major exception of Que River, has been found associated with sedimentary units, future exploration should be directed towards the intrusive and flow units, and especially to the search for volcanic centres or vents that they may contain. Based on experience in Canada, coarse agglomerates, and vent breccias are found very close to mineralisation found in the same type of geological environment as that seen within the Mt. Read Volcanics.