

interdigitation. However, the contact relationships are obscure, and it is not stated in the literature that a non-faulted western contact of the volcanics has been seen.

In the project area, and in the Pieman River to the south, the contact between the clastic sediments to the west and the Mount Read Volcanics to the east, is a shallow angle fault (thrust ?), dipping east at 35°-40°. The development of about 2cm of pug at the fault, and the severe contortions within the incompetent sediments, suggest significant movement on the thrust. Since the thrust truncates tectonic features that are accepted as being due to the Tabberabberan Orogeny, the thrust is either related to a late phase of this Orogeny or a separate, later phase of orogenesis.

The Mount Read Volcanics can be subdivided into two broad rock groupings, termed the Primrose Pyroclastics, and the Mount Black Volcanics, in this part of the belt (8). The older Primrose Pyroclastics are essentially a thick sequence of ash flow and ash fall tuffs, coarse pyroclastics, ignimbrites, rhyolitic lavas, subordinate intrusive porphyries and intercalated marine sediments. The Mount Black Volcanics comprise a thick (2200m) sequence of massive andesitic, dacitic, rhyolitic and keratophyric lavas, autoclastic tuffs and ignimbrites.

The equivalents of these units are present in the Queenstown area to the south, and are there referred to as the Queenstown Pyroclastics and the Central Lavas.

The recognition of substantial ignimbritic units within the volcanic units indicates significant sub-aerial activity. Siltstone and shale lenses within the volcanics testify to local subaqueous conditions, some obviously marine, and some possibly lacustrine. Braithwaite (11) suggested that the Rosebery ore, formed near the western margin of the volcanics, may have developed in shallow water, lacustrine or lagoonal conditions.

The association of the major base metal deposits of the region with the Primrose Pyroclastics has focused a great deal of attention on these rocks.