

9.2 GEOLOGY

Erosion of a broad anticline with an axis trending E-W has exposed a 50 sq km window of Cambrian volcanics.

The Cambrian volcanics consist of acid tuffs, acid volcanoclastics, andesitic tuffs and andesitic and rhyolitic lavas and intrusives.

Sericite alteration is common in the acid rocks, some of it related to deformation. (The feldspars are most commonly sericitised). Chlorite-carbonate-epidote alteration is most prevalent in the intermediate rock types. The andesites very often show deuteric alteration of feldspar to chlorite and patches of chlorite-epidote-carbonate occur in the groundmass.

The volcanics are unconformably overlain to the north, south and west by the conformable Ordovician sequence of Roland Conglomerate, Moina Sandstone and minor Gordon Limestone. These form the limbs of the anticline which has been weathered down to expose the Cambrian volcanics.

Tertiary basalt covers the eastward extensions of the volcanics. Pleistocene glacials and recent talus obscure the contact between the Ordovician sandstones (resistant, topographic highs) and Cambrian volcanics (easily weathered, topographic low).

The volcanics trend east-north-east and dip and face to the south throughout the area. The Ordovician rocks trend east-west and form a west plunging anticline.

Faults, including the Bismuth Creek Fault, strike north northwest and also north-south. Two directions of cleavage are developed, 315° and 355° .