

REPORT CMS 80/6/39Notes:

This is a texturally and compositionally complex suite of rocks, which may be categorised as veined and hydrothermally altered skarns.

Where relatively fresh, the typical skarn assemblage comprises diopside (+ tremolite) and grossular-andradite in varying proportions with accessory to abundant magnetite. These rocks are typically banded and may be intricately laminated. A few exhibit vague relict turbiditic features, and generally they are considered as representing skarnised labile clastic sediments, possibly with subordinate chemical sedimentary facies (?B.I.F.). The secondary phases are Ca-Mg-Fe silicates, and there is a marked paucity of Ca-silicates and carbonate which would be expected in orthodox pyrometamatised carbonate facies. This interpretation tends to be confirmed by similarities with, for example, metasomatised tuffaceous greywackes of the Crimson Creek Formation.

Fluorite and vesuvianite are more or less ubiquitous in the skarns. Some of these rocks contain conspicuous sphalerite. Pyrite is not uncommon, but is generally secondary after pyrrhotite. Minor chalcopyrite is present and there are traces of bismuth, bismuthinite, wolframite and ?jamesonite.

Grain-sizings are widely variable, but generally fine. This pertains particularly to the silicates and is complicated by the generally marked alteration. Thus, quoted sizing ranges can be considered only as a guide.

The veins are complex. Discounting sparse Ca-Mg-Fe silicate veins related to the pyrometamorphic phase, the most conspicuous features is K-feldspar veining. These features are generally pink in hand specimen. The feldspar is generally sanidine, but elsewhere orthoclase predominates and adularia may be present. Zeolite veins are present locally, and the variation sanidine-orthoclase-adularia-zeolite can be interpreted as reflecting a range of temperatures of vein formation.

Accessory vein phases include wolframite, scheelite, fluorite, beryl, biotite-phlogopite and muscovite. Veins are typically devoid of sulphide, but may include extremely rare microscopic gold and thinly disseminated molybdenite. In general, these features have a pneumatolytic character.

Veined rocks are typically extensively altered. The main effect here is phlogopitisation (or biotitisation). Feldspathisation is developed to varying degrees and the rocks may be impregnated with a second generation of fluorite and fine magnetite.

No cassiterite was detected in the various thin- and polished sections. This aspect may warrant further examination on the basis of assay data. By analogy with other altered skarn situations, tin, if present, may be a "silicate" form.