

Polished section examination reveals the magnetite in this rock to be extensively martitised. There are no sulphides in the area sectioned and this confirms the sphalerite detected in thin-section as a very minor accessory phase.

Sn 740 ppm; W 310 ppm;

00004

SMD16

H1m

(T.S., P.S. 32439) K-stain negative.

This banded skarn is similar to 00003, but is slightly finer- and more even-grained. It consists essentially of granular (mean 500 μ) to massive grossular-andradite with subordinate to minor included and intergranular diopside. Accessories include poikilitic quartz, green Fe-Mg chlorite (?after biotite) and poikilitic calcite which locally develops by corroding/replacing relatively diopsidic lenses. In addition, this rock includes conspicuous sphalerite (moderate Fe, red in thin-section) in a 1 cm wide band of closely spaced, semi-continuous lenses with subordinate, closely associated pyrite. The sphalerite forms spongy, intergranular aggregates interspersed with granular diopside, garnet and relatively abundant quartz, chlorite and carbonate.

This rock has a weakly directed fabric paralleling the weak relict sub- to millimetric scale banding, and sulphide-rich zones are crudely schistose. Late discontinuous, intersecting microfractures are healed with films of quartz, calcite, chlorite and locally remobilised sphalerite. Later crosscutting, quartz-healed microfractures occur sporadically and are relatively continuous.

Polished section examination reveals sphalerite aggregates to be weakly stained throughout with exsolution chalcopryite, typically as microscopic blebs, but with sporadic coarser blebs (to 100 μ) at sphalerite "triple points". Rare exsolution blebs of pyrrhotite are present. Pyrite occurs as subskeletal grains clustered into spongy aggregates (to 2.5 mm), and there is some evidence that these pseudomorph pyrrhotite. Rare blebs (max. 60 μ) and discontinuous films of a Pb-sulphosalt (?jamesonite) are randomly disseminated throughout.

Sn 640 ppm; W 210 ppm; Zn 7.6%; Au 0.38 ppm.

00005

SMD16

47.80

(T.S., P.S. 32440) K-stain negative.

This is a mineralogically and texturally complex rock reflecting two metasomatic phases with some common constituents. Essential features comprise a hastingsite-vesuvianite-magnetite skarn, veined and partly replaced by a phlogopite-albite-fluorite assemblage.