

Fine-grained magnetite is disseminated throughout the rock and may be loosely intergrown with sulphides (red sphalerite, subordinate pyrite), which are generally of silicate-intergranular habit.

The area sectioned is traversed by a 2-3.5 mm wide vein of Fe-pigmented sanidine. This feature includes sporadic discontinuous microscopic films of fluorite, accessory pale green phlogopite and spongy aggregates (to 750 μ x 4.5 mm) of scheelite. Scheelite is partly pseudomorphous after blades of wolframite and is stained with corroded microscopic relict wolfram inclusions. Phlogopitic replacement selvages adjacent to the vein range up to 5 mm in width and are heavily impregnated with extremely fine-grained fluorite.

This rock includes sporadic lenses of semi-massive sulphide. Polished section examination of one of these zones reveals it to consist largely of coarse-grained sphalerite with a weakly directed polygonal mosaic fabric and a mean grain size about 300 μ . Subordinate intergranular pyrite similarly occurs as polygonal to subpolygonal aggregates with an internal microstructure characteristic of pyritised pyrrhotite. Rare relics of pyrrhotite occur as microscopic (< 15 μ) inclusions in disseminated magnetite subhedra, as corroded relics in pyrite and as exsolution blebs in sphalerite. Exsolution chalcopyrite is conspicuously absent.

Very rare, highly skeletal grains of wolframite (to 200 μ) occur included in sphalerite. The sectioned area also includes a single 40 μ diameter blade of jamesonite, loosely intergrown with sphalerite and pyritised pyrrhotite.

Sn 130 ppm; W 2650 ppm; Zn ~~1000~~ 740 ppm; Au 0.04 ppm

00007

SmD16

88'8m

(T.S., P.S. 32442) K-stain positive.

This rock can be classified as a feldspar-veined and altered skarn and is of similar paragenesis to 00006. On the basis of the relict fabric and sparse relics of the calc-silicates, it was originally a banded garnet-diopside skarn with accessory fluorite, ?tremolite-actinolite and possibly vesuvianite. Mineralogical banding is on a sub- to millimetric scale, with a finer, submillimetric ?relict bedding "ghosted" in the distribution of inclusions.

The calc-silicates are thoroughly altered to a secondary micaceous assemblage. This grades from green phlogopite to talc-minnesotaite. Secondary fluorite is semi-ubiquitous in fine-grained disseminations, crude lenses and discontinuous, crosscutting veinlets with accessory quartz. Fine to ultrafine secondary magnetite is associated with altered garnetiferous zones.

The sectioned area includes a 1.5 cm wide zone of feldspathic vein material (pinkish off-white in hand specimen). This consists largely of coarse (to 5 mm+), granular to subhedral orthoclase with patchy