

REPORT CMS 80/6/39

Petrological/Mineragraphic Descriptions

00001

SMD 16

9m

(T.S. 32436) K-stain weakly positive.

This is a fine-grained diopside rock or skarn, consisting essentially of near-massive, microcrystalline (mean 10-15 μ) to finely granular (mean 50-75 μ) diopside with sporadic coarser granular aggregates and lenses. Minor ultrafine tremolite occurs intergranular to diopside and is locally concentrated into discontinuous lenses of millimetric proportions. Dark green biotite locally substitutes, texturally, for tremolite. Pyrite occurs in sporadic spongy, intergranular aggregates and crude lenses and appears late secondary after pyrrhotite. Accessory traces of microcrystalline sphene tend to be concentrated into thin lenses.

Sparsely disseminated aggregates of dark green Fe-chlorite (+ quartz, adularia, pyrite) are sized to 1-2 mm with vaguely garnet- and ?vesuvianite-pseudomorphous shapes. Biotite is similarly partly chloritised. Overall, there is some evidence of a weak, late-stage retrogressive phase of alteration.

This rock exhibits a mildly deformed, millimetric-scale relict banding, which is enhanced by the distribution of accessories (e.g. tremolite, sphene, pyrite). Diopside may exhibit "graded" variations in sizing within individual poorly defined bands. Evidence is sketchy, but is consistent with contact-metasomatic alteration of a labile turbiditic sediment.

Si 24ppm; W 40ppm; Cr 270ppm

00002

SMD 16

15m

(T.S. 32437) K-stain positive.

This rock is essentially similar to 00001, but is less altered. It grades from a microcrystalline feldspathic hornfels stained with microgranular diopside into a more or less massive microgranular Diopside skarn.

Where relatively unaltered, the rock consists of extremely fine-grained (mean 20 μ) aggregates of K-feldspar (?adularia) with subordinate to minor, closely intergrown, untwinned plagioclase, traces of quartz and minor, but semi-pervasive, degraded pale ?phlogopite. These zones are variably stained with microgranular diopside and include thinly disseminated chloritised garnet euhedra (mean 50 μ) and chloritic pseudomorphs of a poikilitic phase, possibly amphibole. Fine cloudy sphene is ubiquitous and appears to have replaced titaniferous clastic opaques. This interpretation tends to be confirmed by thinly disseminated grains of zircon and apatite of relict detrital character.