

MINERALOGICAL AND GEOLOGICAL SERVICES

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Sample MD32-69.4 m

Minerals present -

fluorite
magnetite
chlorite
carbonate - siderite?
sphalerite
cassiterite
vesuvranite

Description

The main structure of the rock is that of a magnetite-wrigglite (see Askins, 1976-thesis). It has been fractured and extensive chlorite and fluorite alteration occurs only minor vesuvranite, common in such rocks, was observed. The degree of chlorite-fluorite alterations generally increases out from the fractures. In many cases, it produces an "atoll" type structure consisting of magnetite rims and chlorite-fluorite centers.

Occasionally, ruby-red sphalerite occurs as small bladed crystals and masses along the peripheries of the magnetite. Fractures are often filled with fluorite, but in some cases drusy cavities lined by colloform carbonate (siderite?) result. Minute amounts of cassiterite (to 3 μ long) were observed included in primary magnetite. This cassiterite tends to be very irregular in form. Cassiterite also occurs as minute (<1mm) crystals particularly noticeable in chlorite-rich areas. The cassiterite forms in loose aggregates and individual equant crystals differing in form to that observed included in magnetite.

The Sn contents in chlorite and magnetite were very low <0.02 weight percent SnO as done by electron microprobe analyses.

Sample MD32-38.2 m

Mineralogy -

magnetite
chlorite
sphalerite
fine grained micaceous/chloritic alteration
vesuvranite
lemonite-carbonate alteration

Description

Like sample MD32-69.4, this sample is an altered magnetite wrigglite. A large degree of chlorite alteration occurs, especially around magnetite grains. Unlike MD32-69.4, a fine grained white micaceous (and chlorite?) alteration occurs comprising large areas between chlorite-rich areas. Cassiterite occurs rarely as small (to 2 μ crystals) in magnetite.

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