REPORT CMS 80/6/1

Petrological Descriptions

Mount Bischoff Drill Cores

98072

b 28
593.3m.

(T.S. 32125)
This is a metasomatic rock with an irregular sub- to millimetric scale banding, crudely crustiform-like and closely analogous to the so-called "wrigglites" for example at Moina. The banding is inherited and is reminiscent of that in a stromatolitic limestone or, alternately, the contorted flow-banding semi-characteristic of obsidians. In this case, the primary rock type is obscure, although the metasomatic assemblage is consistent with an altered obsidian interpretation.

In thin-section, banding comprises an alternation of relatively clear and semi-opaque bands. Mineralogically, this is reflected in an alternation of semi-massive, fine-grained, random, apple-green schorl and cloudy sericite aggregates which represent degraded, microgranular topaz on the basis of corroded relics. Fine granular to bladed pyrrhotite is more or less pervasive. Sellaite is conspicuous throughout the sericitic bands and occurs with fluorite as an accessory in tourmaline aggregates.

Cassiterite is present as microscopic (<5 - 50μ, mean 10-15μ) inclusions in tourmaline. These are discrete to clustered and typically cloudy and semi-opaque. Distribution is crudely banded. Possibly, more cassiterite is present than the optically detectable minor traces.

98073

MBD 42
712.7m.

(T.S. 32126)
This is a moderately altered and extensively deformed pelitic sediment. The rock grades from argillaceous siltstone through silty shale to massive shale with relict bedding on a fine millimetric scale. Clastic components are angular to subround quartz with relatively minor muscovite, sericitised feldspar and a sparse heavy mineral assemblage (tourmaline, zircon, leucoxenic semi-opaques). The "clay" fraction is weakly orientated sericite. This sediment is weakly carbonaceous. Deformation is of semi-plastic style and postdates the incipient slaty cleavage, which reflects no more than load- or burial-metamorphic conditions.

The rock is weakly, but pervasively, impregnated with sideritic carbonate in disseminated to frequent cloudy, microscopic clots, irregular anhedral, weakly poikilitic masses, and discontinuous veinlets and films. Veinlets are weakly displaced and deformed by late sericitic microfractures. Rare grains of cloudy rutile represent a minor accessory alteration phase, along with minor traces of pyrite (?pyritised pyrrhotite). There is no detectable cassiterite.