

Sample: S 422; TSC34422

Location:

LS 8 at 24.0 m

and Specimen:

Much of the rock is a green and white schist in which there are small, elongate and lenticular aggregates of white quartz in a very fine-grained, dark greenish matrix. There is one band 1 to 2 cm thick of much finer-grained rock which is predominantly pale grey with a darker greenish-grey zone. The rock has a weak foliation at a moderate angle to the direction of the drill hole and this is almost parallel to the band of finer-grained material.

Staining with cobaltinitrite shows no potash feldspar.

Thin Section:

A visual estimate of the minerals is as follows:

	<u>Z</u>
Quartz	35-40
Sericite	30-35 (varies)
Chlorite	15-20
Calcite	5-10
Opaque oxide/leucoxene	trace-1
Sulphide	trace-1
Zircon	minute trace

The coarser-grained zones in the rock contain numerous quartz grains and fractured fragments varying in size from less than 0.05 mm to a maximum of about 1 mm but practically all of the larger ones have been so extensively fractured and the fragments displaced or drawn out in the direction of foliation that it is uncertain what proportion of quartz grains were originally up to 1 mm in size. A few of the less-deformed quartz grains have shapes suggesting that they were originally quartz phenocrysts in acid volcanic rock but most of them are now angular fragments. Some of the extensively fractured quartz grains which have been drawn out to form elongate aggregates have been invaded by calcite which now fills many of the fractures in the deformed and elongated grain. If feldspar fragments or phenocrysts were ever present in this portion of the rock all evidence has been obliterated but there are a few elongate and lenticular patches of fine-grained quartz intergrown with sericite and chlorite which may have been volcanic-lithic fragments up to at least 1 mm in size. The matrix of this portion of the rock is now a fine-grained schist composed of varying concentrations of sericite and chlorite with a small amount of fine-grained quartz and small patches of calcite. There are a few streaks and aggregates of very fine-grained opaque oxide and leucoxene and there are some groups of sulphide grains which generally are elongate in the direction of foliation. A few crystals of sulphide, probably pyrite are partly surrounded by small fringes of quartz showing pressure-shadow textures. In one elongate aggregate containing sulphide there is a translucent, isotropic mineral with high refractive index which may be sphalerite.

The band of finer-grained material is predominantly sericite intergrown with lesser chlorite and these minerals show a preferred orientation parallel to the foliation. There are a few scattered grains of quartz generally less than 0.05 mm but varying up to 0.3 mm and there are a few elongated aggregates of chlorite and of microcrystalline quartz. Some lenticular patches of