

Sample Number : T 218

251157

Identification : Chloritic, sandy and silty pelite with pre-metamorphic veins of calcite with quartz and chlorite

Description :

The sample is an essentially fresh hand specimen of dark greenish grey, massive, fine-grained rock, devoid of obvious foliation, but with some undulating, coarsely slickensided joints.

When etched and tested with cobaltinitrite the sample revealed moderately abundant fine K-feldspar with a disturbed, but crudely layered distribution.

In thin section the sample reveals finely sandy, epiclastic textures. One microfaulted sedimentary layer, about 4mm thick, displays well sorted, subangular and subrounded sand grains, about 0.05 to 0.1mm in size, with a minor matrix of sericite, chlorite, leucoxene and a few grains of opaque oxide. The sand grains are quartz, plagioclase and K-feldspar. More commonly the rock consists of disseminated silt and fine sand grains of subrounded and subangular quartz, plagioclase and K-feldspar set in a matrix of fine chlorite with minor sericite and calcite. There is an incipient metamorphic foliation, revealed by minor streaking of chlorite and (?) segregation of sericite veinlets.

Calcite and quartz and calcite and chlorite occur as irregular veins and patches, up to several millimetres wide. They are deformed.

A crude, generalized mode is :

10-20%	quartz and feldspar silt and sand
75-85%	chlorite
1-3%	sericite
0.7-0.8%	leucoxene
0.2-0.3%	opaque oxides
2-3%	veins of calcite, quartz and chlorite

Comments and Interpretations :

The sample is considered to be an epiclastic rock, probably derived from tuffaceous sources. It consists of silt and fine sand grains of quartz, K-feldspar and plagioclase generally scattered through a dominant muddy matrix now represented by chlorite, leucoxene (possibly after secondary rutile) and minor opaques. Veins of calcite with quartz and chlorite pre-date an incipient metamorphic foliation which appears responsible for minor sericite.