

Sample Number : 10977 L.S.10 250.4m  
Identification : Slightly pyritic sericite schist, formed  
 from very fine pelite

Description :

The hand specimen is a drill core sample of very fine-grained, yellowish grey rock, foliated at about 20° to the core axis. There are several discontinuous, irregular veins and patches of very fine brassy sulphide and a straight yellowish grey fissure vein.

A staining test revealed no K-feldspar.

In thin section the sample is seen to consist of fine foliated sericite with sparse lenticular aggregates (0.5mm size) of microcrystalline to cryptocrystalline cherty quartz and very sparse silt grains of quartz (about 0.03mm in size). Subhedral, multifaceted pyrite, 0.03 to 0.5mm in grainsize, occurs as irregularly disseminated grains, generally with deformed quartz occurring in associated strain shadows. A few rhombs of (?)dolomite occur within one siliceous concentration of pyrite. There are inconspicuous, strained fissure veins of quartz with minor carbonate and pyrite occurs in and near one such vein. The widest, most prominent vein in the sample (0.5mm) is a deformed fissure vein with thin outer zones of strained quartz, a thicker zone of (?)dolomite and a discontinuous core of strained quartz. Rare grains of pyrite occur in the vein and it is quite porous, apparently because of incipient weathering.

An approximate mode is :

94-97%	sericite
3-5%	cherty quartz
0.1%	silt grains of quartz
0.2-0.3%	vein quartz and quartz in strain shadows
0.2-0.3%	carbonate (?dolomite), mainly in veins
0.2-0.3%	pyrite

Comments and Interpretation :

This sample is considered to have originated as very fine-grained pelite, probably composed of clays and minor amorphous silica. The absence of coarse clastic material, conversion to sericite and presence of diagenetic or hydrothermal pyrite all suggest that this unit could be an indicator of appropriate conditions for generation of massive sulphides. Negative features are the absence of sphalerite or barytes.

Regional metamorphism has foliated the sericite and strained the quartz within the sample. Strain shadows indicate that the pyrite crystals pre-date metamorphism.