

122.

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Sample Number : 3027

Identification : Sericite slate with traces of nodular sulphides

Description :

The hand specimen is a very fine-grained, inconspicuously foliated rock which grades from greenish grey in its freshest part to a bleached light greenish grey near a weathering surface. Possible bedding laminations are oriented at about 15° to a slaty cleavage.

A staining test revealed no K-feldspar.

In thin section the sample is seen to consist mainly of aligned, fine sericite, minor chlorite, fine quartz and a dusting of a translucent mineral which may be metamorphic rutile. There are scattered clasts of angular quartz up to 0.03mm in size.

The possible bedding laminations noted in hand specimen are seen to be widely spaced planes within which there are lines of probably detrital fine quartz along with metamorphic chlorite and sporadic ovoid nodules (0.1 to 1mm) of very fine sulphide. Some of the sulphide resembles pyrite, but some has elongate subhedral forms inconsistent with pyrite.

There are a few thin fissure veins (0.2mm wide) of chlorite with minor sulphide and a few grains of quartz.

An approximate mode is :

87-93%	sericite
2-3%	chlorite
5-10%	quartz
0.1-0.3%	rutile
0.1-0.2%	sulphides (not solely pyrite)

Comments and Interpretation :

The sample is considered to be a slate, formed by low grade regional metamorphism of mud which probably consisted largely of clay-sized detritus. The only laminations are layers of apparently silty quartz deposited very thinly and associated with nodules of probably diagenetic fine sulphides.

Very minor chlorite-sulphide-quartz veins may well represent material remobilized during metamorphism.