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Sample Number : 3051

Identification : Regionally metamorphosed pumice tuff of apparently intermediate composition

Description :

The hand specimen is slightly weathered sample of medium light grey, fine-grained rock with aligned dark greenish grey wisps, several millimetres in size and resembling flattened or stringy vitric shards.

A staining test revealed no K-feldspar.

In thin section the greenish grey wisps are seen to be aggregates of chlorite with shapes more consistent with former vitric "dollops" than with any precursor mineral fragment or other structure. The surrounding groundmass is composed of untwinned, anhedral feldspar (finer than about 0.02mm), a few grains of quartz and abundant moderately aligned fine sericite. The minerals are not evenly distributed and there are many ghosted stringy to smoothly irregular clastic shapes which can be discerned, about 2 to 10mm in size. The largest resemble filamentous pumice. There are no phenocrysts of phenoclasts.

An approximate mode is :

4-6%	chlorite
65-75%	untwinned plagioclase
20-30%	sericite
0.5-1%	quartz

Comments and Interpretation :

The sample is confidently interpreted to have consisted of pumice and "dollops" of glass prior to recrystallization to a sericite and chlorite-dominated mineral assemblage, largely or wholly as a consequence of low grade regional metamorphic processes. The source magma may have been leucocratic intermediate, rather than acid.

The most likely environment in which to accumulate unsorted, non-rounded fragments of pumice and glass is in a terrestrial ashflow deposit.

There is no veining, nor metallic mineralization.