

Sample Number : 3078

Identification : Regionally metamorphosed, chloritized probable hornblende andesite lava with abundant quartz-filled vesicles

Description :

The hand specimen is a slightly weathered sample of greenish grey, fine-grained rock with numerous partly aligned, dark greenish grey lenses about 2mm long.

A staining test revealed no K-feldspar.

In thin section the sample is seen to consist of evenly disseminated 1 to 3mm aggregates of chlorite, 0.5 to 3mm aggregates of strained quartz and an allotriomorphic groundmass, finer than 0.1mm in grainsize.

The chlorite aggregates have shapes which are reasonably consistent with former hornblende phenocrysts, moderately aligned.

The quartz aggregates are commonly oval to elongate, aligned structures resembling flattened vesicles.

The groundmass consists of untwinned, sutured, anhedral plagioclase with minor interstitial chlorite and moderately overprinted by moderately aligned fine, evenly distributed sericite.

A fissure vein of quartz and chlorite cuts the sample, predating sericite formation.

An approximate mode is :

5-7%	chlorite aggregates
8-12%	quartz aggregates
70-80%	groundmass plagioclase
2-4%	groundmass chlorite
5-8%	groundmass sericite

Comments and Interpretation :

The sample is thought to represent an abundantly vesicular hornblende andesite lava which experienced complete hydrothermal chloritization of its hornblende phenocrysts and filling of its vesicles by quartz prior to production of pervasive aligned sericite by regional metamorphic processes. Metamorphism may have flattened the vesicles. No metallic mineralization is evident.

The sample does not closely resemble any of the other samples, but as an intermediate, vesicular lava it reflects a similar mode of formation and generally similar magma source to 3062. It is unlikely that 3078 and 3062 represent the same lava flow.