

Sample Number :

10973

L.S.10 37-4m

Identification :

Hematized, sheared, rhyolitic lithic vitric tuff

Description :

The hand specimen is a drill core sample of greyish red, slightly weathered rock with finely lenticular foliation oriented at about 30-40° to the core axis. Textures are suggestive of a deformed lithic tuff.

A cobaltinitrite staining test indicated a fragmental texture in which most clasts are rich in fine K-feldspar, but there is a 20mm x 7mm siliceous patch or clast transgressive to the foliation.

In thin section most of the sample is seen to have sheared, lenticular structures with stringy sericite lenses, several millimetres long, alternating with thicker, larger lenses of fine, sutured, allotriomorphic K-feldspar and quartz. There are also moderately abundant strained grains of quartz with embayed B forms. Many appear phenocrystal, within quartzofeldspathic lenses, but a few have phenoclastic shapes. The large K-feldspar-poor patch noted in the stained offcut seems to be an ovoid clast of finely silicified, weakly sericitic rock.

Hematite is prominent in the sample as tiny flecks throughout the sample and as concordant, ragged stringers of microcrystalline to earthy grains. No sulphide textures were recognised.

An approximate mode is :

2-3%	quartz phenocrysts or clasts
65-75%	quartzofeldspathic and siliceous lenses or clasts
20-30%	sericitic lenses or clasts
1-2%	hematite

Comments and Interpretation :

This sample is interpreted with moderate confidence to represent a rhyolitic lithic vitric tuff which has been sheared and partly recrystallized by regional metamorphic processes. The inferred former vitric clasts are now represented by fine sericite which may have been produced either by low grade metamorphism or previous hydrothermal alteration. The rock is heavily pigmented by fine to earthy hematite which has been mobile along foliation planes; weathering may be responsible.

Neither sulphide mineralization nor hydrothermal veining was recognised.