

129

251131

Sample Number : 3055

Identification : Moderately sericitized, lightly chloritized dacite porphyry with a few grains of disseminated pyrite

Description :

The hand specimen is a slightly weathered, greyish orange sample of massive porphyry with abundant small phenocrysts of feldspar and a few of quartz.

A staining test revealed no K-feldspar.

In thin section the sample is seen to have a simple porphyritic texture, with abundant subhedral phenocrysts, about 0.5 to 2mm in size, set in an allotriomorphic groundmass with a grainsize of about 0.03mm.

The most abundant phenocrysts are moderately sericitized, tabular grains of twinned plagioclase (oligoclase-andesine). Smoothly embayed phenocrysts of quartz with  $\beta$ -form are common. Brown biotite, heavily altered to chlorite, rutile and minor sericite is prominent.

The groundmass consists of quartz and poorly twinned plagioclase with abundant sericite, particularly around grain boundaries.

A few grains of subhedral, partly oxidized pyrite occur in several altered biotite and feldspar phenocrysts.

An approximate mode is :

10-12%	quartz phenocrysts
15-25%	moderately sericitized plagioclase phenocrysts
2-3%	heavily chloritized, partly sericitized biotite phenocrysts
45-55%	groundmass plagioclase
10-12%	groundmass quartz
4-6%	groundmass sericite
0.1%	pyrite and oxidation products

Comments and Interpretation :

The sample is confidently interpreted to have crystallized as a dacite porphyry, probably in a subvolcanic intrusion but just possibly as a lava. It was not tuffaceous.

Pervasive fine sericite, minor chlorite and the few grains of disseminated pyrite are interpreted to be products of hydrothermal alteration.

The sample could be related to the heavily mineralized Sample 3014.