

124

251126

Sample Number : 3045

Identification : Lightly to moderately sericitized, leucocratic porphyritic andesite with disseminated pyrite and quartz-pyrite veins

Description :

The hand specimen is a moderately weathered sample of mottled dark greenish grey and pinkish grey rock with small ferruginous pores and fractures and a few grains of pyrite.

A staining test revealed no K-feldspar.

In thin section the sample is seen to display an abundantly porphyritic texture, modified by veining and minor recrystallization.

The phenocrysts are 0.5 to 2mm in size and mainly subhedral, tabular, moderately twinned, very lightly sericitized plagioclase with their margins somewhat sutured by local recrystallization. Optical properties are consistent with oligoclase-andesine. There are rare phenocrysts of embayed quartz with  $\beta$ -form and several chlorite-rutile aggregates possibly after mafic phenocrysts.

The groundmass is a sutured, allotriomorphic assemblage of untwinned to weakly twinned plagioclase and minor chlorite, with grain size typically 0.02 to 0.1mm.

Subhedral grains of pyrite, up to 0.3mm in size, and many pores recognisable as representing former pyrite are evenly disseminated through the sample and occur to a lesser extent in abundant, randomly oriented quartz fissure veins, up to 0.4mm wide. Randomly bifurcating replacement stringers of sericite pre-date the quartz veins.

An approximate mode is :

10-15%	plagioclase phenocrysts
rare	quartz phenocrysts
75-85%	fine-grained plagioclase
1-3%	chlorite
0.1%	rutile
2-3%	sericite
0.3-0.5%	quartz in veins
2-4%	pyrite and pores after pyrite

Comments and Interpretation :

Relict primary textures favour interpretation that the rock was a porphyritic, intermediate lava or subvolcanic intrusion. Its composition was probably leucocratic andesite.

Hydrothermal alteration has involved light to moderate sericitization as random replacement stringers, introduction of numerous, disseminated grains of subhedral pyrite and late random veining by quartz with minor pyrite.