

Sample Number : 3063

Identification : Quartz veined, heavily sericitized and pyritized porphyritic andesite

Description :

The hand specimen is a weathered sample with possible porphyry textures heavily obscured by moderate brown limonitic staining in pores, veins and on joint surfaces. Quartz veining is visible.

A staining test revealed no K-feldspar.

In thin section the sample is seen to have been heavily hydrothermally altered, veined and mineralized prior to weathering. Primary textures are poorly preserved, but seem to have consisted of abundant 0.5 to 2mm phenocrysts of plagioclase and a few phenocrysts of quartz set in a very fine groundmass. The groundmass is finely recrystallized and the rock is pervasively sericitized. Clusters of fine rutile may indicate former biotite.

Throughout the sample there are abundant limonitic aggregates and pores interpretable as representing former pyrite cubes 0.1 to 0.5mm in size. Some aggregates appear more rhombic. There are some incompletely oxidized grains of pyrite preserved.

Fissure veins of strained quartz with limonitic aggregates after probable anhedral sulphide are prominent and about 1mm wide.

An approximate mode is :

30-40%	remnant plagioclase
5-6%	quartz (mainly in veins)
30-50%	sericite
10-20%	pyrite, limonite and pores
0.1-0.2%	rutile

Comments and Interpretation :

The sample was probably a porphyritic andesite, perhaps a flow but possibly an intrusive porphyry, but it has been heavily sericitized and heavily impregnated with pyrite, then fissure-veined by quartz and probable sulphide. It is possible that some of the ferruginous pseudomorphs reflect dolomite or siderite rhombs, but certainly pyrite cubes were abundant, if not exclusive, in producing the iron oxides.