

SAMPLE NUMBER: 431564

SUMMARY:

This is a thoroughly recrystallized felsic glassy lava that has suffered strong hydrothermal alteration and recrystallization to an assemblage dominated by polygonal quartz and barite, with abundant sphalerite and chalcopyrite replacing galena; pyrite is rare in this sample, possibly much of it has been replaced by the sphalerite.

HAND SPECIMEN:

This is a grey-green strongly recrystallized and silicified glassy felsic lava with thin quartz veinlets, disseminated pyrite and a few patchy barite development.

THIN SECTION:

The only trace of the original texture or mineralogy left in this sample is a few ghost remnants of former plagioclase phenocrysts now replaced by polycrystalline quartz. The remainder of the rock is composed of a medium- to coarse-grained intergrowth of polygonal quartz and abundant anhedral barite that often occurs as rather large grains to several mm long in a finer-grained recrystallized matrix of polygonal quartz and barite. By far the most abundant other phase is colourless to very pale yellow sphalerite, that occurs as abundant interstitial amorphous patches, that in about half of the thin section form a connected intergrowth.

OPAQUE MINERALOGY

Disseminated pyrite grains are much less common than in many of the other samples in this set, and occur as rather ragged, moth-eaten grains (eaten by the rare migratory moth, the spotted Sudanese sulphide-sucker, that stinks when you squash it). The abundant sphalerite contains relic patches of galena being replaced by the sphalerite. Many contacts between sphalerite and galena are sites of chalcopyrite growth, but chalcopyrite never seems to occur within galena unless there is sphalerite also in contact. This sample contains more chalcopyrite than the previous two polished thin sections, probably totalling around 5 modal% of the sulphide assemblage.