

Irregular, sub- to millimetric veins of cherty microcrystalline, weakly chlorite-stained quartz and albite occur sporadically, with associated displacements and disseminated angular intraclasts of the host rock locally impregnated with late sideritic carbonate. These fracture-healings are locally intersected by late-stage films of sericitic mica.

477

63.50

(T.S., P.S. 34958)

This rock can be broadly categorised as a chlorite-quartz rock with disseminated pyrite and conspicuous fine-grained magnetite. The rock represents a thoroughly altered "breccia", but finer details are obliterated to the extent that it is not clear whether the fabric is a primary (sedimentary) or secondary (i.e. tectonic) feature. Possibly, this will be resolved from field evidence.

The rock consists essentially of thoroughly altered (chloritised, silicified + pyrite, magnetite), angular to subangular clasts (< 1 mm - 1.2 cm) with a weak dimensional preferred orientation, and a sparse, similarly altered matrix. Clasts are generally poorly resolved against the matrix, and the bulk are texturally featureless in terms of primary lithology. A few are recognisable as altered labile (?tuffaceous) psammopelites and others may represent impure chert. The gross fabric is consistent with a lithic (sandy, pebbly) grit, but, as noted above, a tectonic origin cannot be ruled out.

Apart from rare angular grains of clastic character and patchy relics of cherty microcrystalline silica, quartz is entirely secondary, preferentially replacing certain clasts, elsewhere subordinate to the replacive chlorite, and locally as interclast vug-like aggregates. The pervasive chlorite represents a late replacement of green phlogopitic biotite (+ tremolite-actinolite) which persists locally as relics. Pale green hydromuscovite and patchy sideritic carbonate (yellowish in hand specimen) are accessory alteration phases. Opaques (magnetite, pyrite) preferentially impregnate the matrix or, locally, individual clasts.

Polished section examination reveals magnetite to be extensively martitised (i.e. replaced by secondary hematite). Pyrite occurs in two generations with sparse euhedra (mean 100 μ) of primary character and frequent fine-grained clots and irregular anhedral which appear secondary after pyrrhotite. The latter type may include magnetite. Rare chalcopyrite blebs (max. 60 μ , typically < 25 μ) and extremely rare arsenopyrite subhedra are present, but are not observed in contact with pyrite or magnetite, such that their paragenesis is not clear. There is no detectable cassiterite, wolframite, scheelite or bismuth-bismuthinite in the area sectioned.