

Overall, this rock is best interpreted as a rhyolitic xenotuff (i.e. a tuff with subordinate, non-pyroclastic components). Rocks of this type tend to grade laterally into tuffaceous psammopelites.

29831

5 372 450 N
311510 E

Sterling Valley

(T.S. 31972) K-stain positive.

This is a thoroughly altered and sheared rhyolitic lithic-vitric-crystal tuff.

Pyroclasts are extensively flattened along the slaty cleavage, but originally graded up to lapilli dimensions (1-3 cm) in a poorly sorted, generally sand-grade facies. Main components are quartz and alkali feldspar crystals/crystal fragments, with subordinate, but relatively coarse, clasts of porphyritic rhyolite, rhyolitic pitchstone and minor rhyolitic vitric-crystal tuff. Together, these comprise around 50 % of the rock in a matrix of semi-massive sericite with subordinate, closely intergrown, crypto- to microcrystalline quartzofeldspathic material.

Faint relict shard textures are evident in the sheared and weakly crenulated sericitic matrix. Accessories include thinly disseminated clastic grains of apatite, opaques and zircon. Patchy dark green biotite occurs in discontinuous foliae and in pressure shadows and this is consistent with mid-greenschist facies metamorphism.

Much finer detail has been obliterated and any interpretation of the mode of deposition is speculative due to the marked shearing effects.

29861

5 372 195 N
308 420 E

*Trib of Murch.
River
Sterling Valley*

(T.S., P.S. 31973) K-stain virtually negative.

This is a pervasively sericitised and weakly mineralised porphyritic biotite "rhyolite". The fabric is reminiscent of a minor intrusive, but this should be confirmed from field evidence.

Phenocrysts are abundant, comprising around 40 % of the rock, with completely sericitised indeterminate feldspar (mean 750 μ) accompanied by subordinate stressed quartz of corroded inverted beta habit and sparse leucoxene-stained sericite pseudomorphs after biotite flakes. These are evenly disseminated throughout an even-grained granular (mean 50 μ) groundmass of quartz and sericitised feldspar in roughly equal proportions. Accessories include minor apatite, zircon and leucoxenised opaques.

Sporadic crosscutting, weakly schistose sericite veinlets are present. These are postdated and locally displaced by later fractures extensively healed with incipiently stressed quartz with accessory chlorite and disseminated aggregates of pyrite, pale sphalerite, and subordinate galena. The host rock is weakly pyritised and chloritised marginal to these veins which range in width from <1 to 2.5 mm.