

REPORT CMS 79/9/47

Petrological Descriptions

JCP211

T 28369

51 m

(T.S. 29461) K-stain positive.

This sericitic, mildly sheared pelitic sediment is best interpreted as a subaqueous tuff, although the evidence is partly negative.

The rock consists essentially of orientated sericite and micro-crystalline, quartzofeldspathic material. Sparse silt- to fine-sand-sized clastic alkali feldspar particles are present, but there are no tangible detrital features (e.g. rounded particles, heavy mineral grains, detrital mica flakes). Fine silt-sized, devitrified shards are pervasive and represent the main clastic component. These features show little evidence of abrasion and it is on this basis that the rock is considered as a primary pyroclastic deposit rather than re-worked.

The rock is weakly laminated on a sub- to millimetric scale. There is evidence of two phases of incipient shearing at low angles to the bedding traces. Sericite has developed as a partial degradation of feldspathic material (devitrified shards and interstitial pelitic ashy material).

T 28370

71.8 m.

(T.S. 29462) K-stain positive.

This is an altered and sheared rhyolitic tuff, reasonably interpreted as a flow- or autobrecciated ignimbrite.

Texturally, the rock consists largely of randomly sized (to 1 cm+), irregular to angular lithic clasts, partly moulded onto one another and typically showing vague pyroclastic textures. Fine-scale flow-banding, eutaxitic structures and accessory quartz and alkali feldspar crystals/crystal fragments are semi-ubiquitous, although partly obliterated by devitrification alteration and shearing effects. There is no tangible matrix phase as is typical of autobrecciated pyroclastics and lavas. A few clasts are Fe-pigmented. Traces of magnetite and leucogenised opaques are accessory primary constituents. There are no xenolithic sediment clasts in the area sectioned.

Alteration features comprise pervasive sericitisation, semi-pervasive development of carbonate (calcite), accessory chlorite, and traces of fine-grained pyrite. Sparse stressed quartz-calcite veinlets are present. In common with T 28369, there is evidence of re-shearing.

T 28371

122.9 m.

(T.S. 29463) K-stain negative.

This is a weakly xenolithic acid tuff with similarities to 28370. In contrast, it is of (inferred) dacitic composition and has a more homogeneous fabric, reflecting only one phase of shearing.

Lithic-vitric-crystal tuff.