

Sample No.

44907

Thin Section

This is an unsorted sample containing both lithic and crystal material of various sizes ranging up to a maximum of about 5mm. Lithic particles predominate, comprising at least 60% of the sample, while silicates comprise the remainder except for oxides which only account for somewhat less than 2% of the sample.

The lithic fraction includes mainly weakly foliated elongate carbonaceous siltstone fragments with sparse angular silt-sized quartz detritus scattered throughout a matrix of well oriented sericite flakes, carbonaceous matter and extremely fine grained low birefringent clay. Fine grained quartz arenite is also represented and is weakly recrystallised and contains quite abundant fine sericite particularly in grain boundary positions and in sparse sites of previous detrital feldspathic components. Some distinctly banded material contains both carbonaceous silty and fine grained quartz arenite. Several of the larger lithic fragments have subrounded to irregular shapes and these comprise extremely fine grained non-foliated slumped carbonaceous siltstone. The lithic material is variously stained by red to yellow-brown limonitic oxides produced by weathering. Sparse lithic fragments are present of a rather coarse grained, holocrystalline basic igneous type (possibly dolerite) in which clusters of very pale green clinopyroxene are set in aggregates of zoned plagioclase grains with accessory opaque oxides that are possibly titaniferous since they have rims of granular sphene. Rare highly angular fragments comprise a somewhat cuneiform quartz K-feldspar intergrowth.

The crystal fraction contains mostly angular quartz chips and granular partly recrystallised quartz aggregates. Much of the quartz exhibits distinct strain shadows. Sparse angular to irregular shaped grains of clinopyroxene, similar to those in the basic igneous lithic chips, commonly exhibit narrow exsolution lamellae. Rare angular cleavage chips of plagioclase are present. Zircon is a rare accessory phase.