

Sample: 10062' : TS C 7862

Rock Name:

Coarse argillaceous sandstone

Thin Section:

An optical estimate of the constituents gives the following:

	<u>%</u>
Quartz	75-80
Plagioclase	Rare
Lithic fragments	10-15
Carbonate	Trace -1
Opagues	1
Chalcedony	Trace
Tourmaline	Trace
Kaolinite/dickite	Trace
Voids	7 -10

This coarse sandstone has undergone extensive compaction resulting in fracturing, recrystallisation and redeposition of quartz grains and lithic material. There has been secondary formation of chalcedony.

The mean grain size of the single quartz crystals is about 0.5 mm but recrystallisation and fracturing have also led to the development of a population of apparently somewhat smaller grains. Most quartz grains show well-developed undulatory extinction and some have clearly been granulated during compaction. It is difficult to distinguish these compacted grains from quartzite fragments which were part of the detrital load. As well as causing extreme deformation load pressures, have resulted in greatly increased packing of the grains and the development of sutured grain boundaries. Silica has been dissolved away at these sites and then redeposited as quartz overgrowths. Some intergranular material is chalcedonic in character and has probably crystallised from material derived from dissolution of the grains. One grain itself consists of banded chalcedony.