

Sample: 9794' : TS C7864

Rock Name:

Fine-grained sandstone

Thin Section:

An optical estimate of the constituents gives the following:

	<u>%</u>
Quartz	80-85
Feldspar	Trace -1
Argillaceous lithic material	10
Kaolinite/dickite	1- 2
Mica	1- 2
Opagues	1
Carbonate	1
Tourmaline	Trace
Zircon	Rare
Glauconite	Trace
Rutile	Rare

This is a very-fine grained sandstone with a well-compacted texture characterised by numerous microstylolitic seams of opaque and semi-opaque ferruginous material. Voids are absent.

The single quartz crystals which constitute the bulk of the rock have an average grain size of about 0.1 mm and a maximum of approximately 0.25 mm. Detrital grain shapes have been removed during diagenesis and the grains have low sphericities and roundness. Suturing has further removed evidence of grain shapes and has led to the development of a closely interlocked framework with only small patches and seams of intergranular material.

In fact the extreme compaction and lithification is probably the result, in part, of the widespread nature of the argillaceous material - few grain boundaries (and no intergranular spaces) are free from some of this easily deformable material. Generally mica is white and sericitic. Flakes of this show curved shapes whereas the argillaceous lithic material is very fine-grained and is usually admixed with small amounts of quartz.