

As mentioned above, physical diagenesis has changed the texture of the rock considerably. Lithic material has been squashed to form 'pseudomatrix' and quartz grains have long to sutured boundaries where solution of quartz from favourable sites has occurred. In a few places the quartz crystals/grains even appear to have a crude preferred orientation of their long axes parallel to the beds. Where suturing has been particularly extensive microstylolites have formed. In these sites, quartz has been dissolved away in circulating liquids and a relative concentration of insoluble material (commonly limonite, carbonate and clay) remains. The microstylolites show distinctive columnar structures.

The thin section contains one large flake of shale, about 0.5 mm thick.

Despite the intensive authigenesis and compaction of the sandstone it still retains a high proportion of voids. Most voids are less than 0.4 mm across but they appear to be interconnected with each other nevertheless. No generalisations about the position of the voids in the rock seem possible; some voids are bounded, at least in part, by rational crystal faces of overgrowth silica but many are simply empty gaps between quartz grains into which no lithic material has been squeezed and within which no dickite crystallised.

In summary this is a medium-grained argillaceous sandstone showing extensive authigenesis and compaction but retaining a system of interconnected pore spaces.

Sample: 8551' : TS C7860

Rock Name:

Argillaceous sandstone

Thin Section:

An optical estimate of the constituents gives the following: