

Sample: TSC47074; Location: Pelican-5, Core 2; 2881 m

Rock Name:

Compact lithic sandstone

Hand Specimen:

A friable very pale sandstone which appears to be essentially massive.

Thin Section:

An optical estimate of the constituents gives the following:

	<u>%</u>
Quartz	80
Lithic fragments	12
Pores	5-7
Authigenic kaolinite	1
Carbonate	Trace

This sandstone is somewhat more argillaceous and coarser grained than those described above; the rock is not well sorted but the average grain size is estimated to be about 0.3 mm and there are several grains up to about 0.8 mm in size. The sample probably also shows somewhat more evidence of quartz overgrowths than many in this collection. Grain boundaries are definitely concavo-convex but sutures are not abundant.

The intergranular material is at least as abundant as in any other rock from this core but it is in some ways less obviously derived from lithic fragments and is difficult to classify. This is probably because of the amount of quartz which has a crystal size of the order of 0.05 to 0.1 mm. This appears to occur in a fine-grained mosaic with indeterminate argillaceous material and hence to be of lithic origin but in some places there is a question whether such material is derived from fracturing of adjacent larger sand-grade grains. Elsewhere lithic material is better defined and clearly of metasedimentary origin and there are one or two fragments which are definitely chert. Authigenic kaolinite in this sample also forms both relatively large patches of distinctly well formed crystals. One such patch is about 0.5 mm in size and the kaolinite occurs adjacent to a fine-grained lithic fragment which contains finely dispersed authigenic carbonate. The kaolinite is slightly porous and a little blue stain can be seen within it.