Mineralogy

The predominant mineral present is quartz, followed by dispersed or laminated shale fragments and clay. An estimate of the percent abundance of minerals is as follows:

Mineral	Abundance (%)
Quartz	85
Clay and shale	8 (varies)
Polyx'lline quartz (incl. chert)	2
Pyrite	2
Feldspar	2
Others (mica, collophane, rock fragments)	1

Based on the above mineral percentages, the D sand is classified as a **sublitharenite**, according to McBride, 1963 (Figure 3).

Porosity

Abundant quartz cement overgrowths indicate that original porosity was substantially reduced during lithification. However, the presence of oversized pores, "floating grains", molds, and partial dissolution of grains indicates that substantial leaching has occurred, resulting in the enhancement of secondary porosity. Pore diameters range from less than 0.05 mm to as large as 0.2 mm where a grain has been completely removed by dissolution.

Permeability

Permeability appears to be controlled by the presence of fine laminae of shale or clay and pyrite. These discontinuous laminae are more abundant in samples 81-2 and 82-2, which exhibited substantially lower core permeabilities.

PHOTOMICROGRAPHS

A series of photomicrographs follows, showing various characteristics of the D sand in thin section. The majority of photographs were taken with transmitted light with uncrossed polarizers (plain light). With plain light, porosity is blue in color. The blue color is due to the presence of blue-stained plastic which is introduced into the sample prior to cutting or polishing, to distinguish true porosity from grain flaking during the preparation of the thin section. In a few cases, crossed