PETROLOGICAL ANALYSIS OF POTTERY FROM THE LINCOLN KILN BLOCK

Report sent to
Leo Biek.

2094

The sherds from the kiln block, all of which appear to be similar, are in a medium thick, moderately hard-fired fabric, reddish-brown throughout. They are all heavily gritted with shell, numerous fragments of which show through the surfaces.

One sample from each of the layers I-VII and IX-X was examined in thin section under the petrological microscope. All the sections appear to be very homogeneous, and it is not possible to differentiate between them. There is no indication of a change of clay or filler during the lifetime of the kiln block.

Thin sectioning shows an anisotropic matrix of fired clay containing numerous inclusions of shell and small amounts of limestone. It is possible to see some recrystalization of calcite in the shell suggesting that it is fossiliferous. The sample from level I also contains a fine specimen of an echinoid spine (see plate). A sparse scatter of subangular quartz, average size 0.15-0.30mm., and a few grains of chert are present.

It is conceivable that some modern shell may have been included as a filler, but much of the shell examined does appear to be fossiliferous in origin. In view of this it seems likely that the raw materials used in making the pottery were obtained from the local Lias outcrops, which are known to contain echinoidea (Truman, 1918).

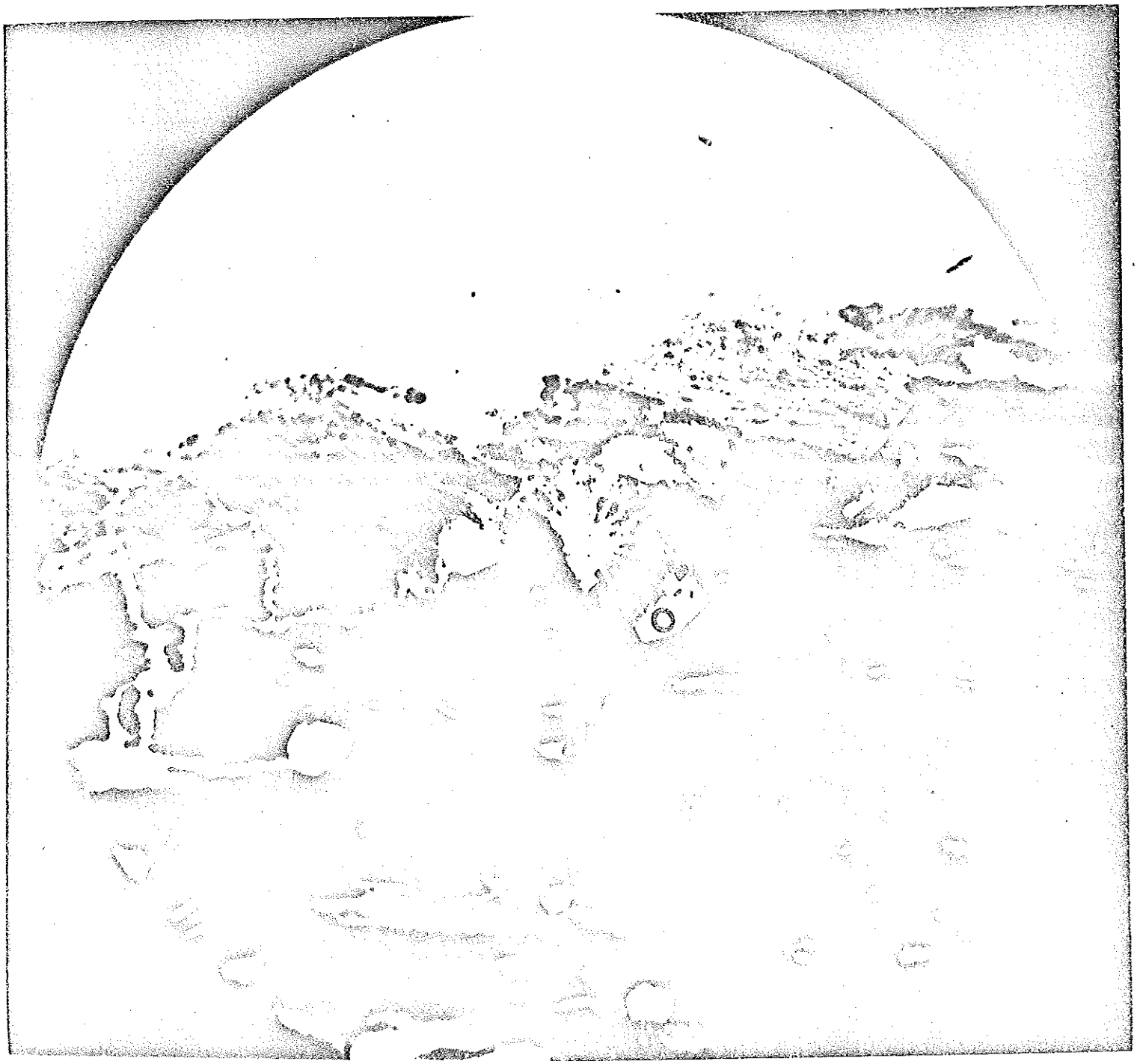

Plate - Photomicrograph showing part of an echinoid spine (centre) in a dark matrix of baked clay. Crossed polars (x 126). From level I.

(Photomicrograph taken by N.Bradford)

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Trueman, A.E. (1918) 'The Lias of South Lincolnshire', Geol. Mag., 55(1918), 64-73.