

NOTE ON THE PETROLOGY OF SOME SEVENTEENTH CENTURY CRUCIBLESFROM KIMMERIDGE, DORSET

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Four samples of clay crucibles used in the glass making process during the early seventeenth century at Kimmeridge were submitted for petrological examination of the fabric under the polarizing microscope (No's KE 80/10; KE 81/F25; KE 81/26; KE 81/201). All four sherds were thin sectioned and in addition two were subjected to a heavy mineral separation (KE 80/10; KE 81/26). The object of the examination was : (1) to characterize the fabric of the sherds and see if any significant variation could be noted in the samples, and (2) if possible, to suggest the source of the raw material used.

All four sherds are in a very hard white clay fabric of fine texture, covered on the surfaces with a light or dark coloured green glaze. Thin sectioning shows that in three of the sherds the clay matrix is almost inclusion-free, the exception being a scatter of small quartz grains present in sample KE 80/10. A heavy mineral separation was performed on sherds KE 80/10 and 81/26 but, as anticipated, produced no heavy mineral residue. The fine textured white clay that was used for these crucibles brings to mind the white pipe-clays of the local Dorset Bagshot Beds. The principle outcrop of pipe-clay in the region is situated some three miles from Kimmeridge near Corfe, although smaller deposits are scattered throughout the area (Arkell, 1953). The pipe-clay from Dorset has been exploited for many centuries, and amongst its various qualities it is known to be highly refractory. It is possible that this was the source of the clay used for the Kimmeridge

crucibles, left untempered because of the especial refractory properties it possessed. Certainly this clay is still being used today for crucibles (ibid.).

Reference

Arkell, W.J. (1953) The Geology of the Country around Weymouth, Swanage, Corfe and Lulworth (London, 1953).