AML REPORT 3650

PETROLOGICAL ANALYSIS OF THIRTEENTH CENTURY POTTERY FROM EXETER

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Introduction

Eight sherds of Mediaeval pottery from Exeter were submitted for fabric examination in thin section under the petrological microscope. The eight sherds, all from contexts dated c. A.D. 1230-1300, are largely micaceous in the hand-specimen, and are generally thought to be non-Cornish in origin - possibly from Brittany. The object of the analysis was therefore twofold: (1) to characterize in detail the fabrics involved and compare them with each other, and (2) if possible, to suggest likely source areas. Munsell colour charts are referred to, together with free descriptive terms.

Results

(1) 3016 : GS 39-46-9

Hard, moderately rough sandy and slighty micaceous fabric, reddish-yellow (between 5YR 7/6 and6/6) throughout. Thin sectioning shows frequent grains of quartz up to 0.70 mm in size, red iron ore and flecks of mica. The common nature of the inclusions give no indication of origin.

(2) 1064 : F256

Moderately hard, rough sandy micaceous fabric, green glaze (between 5Y 6/4 and 5/3) on the outer surface, light grey inner surface and core.

(3) 1284 : GS F243

Hard, moderately rough sandy micaceous fabric, dark reddish-grey (5YR 4/2) outer surface and core, dark grey inner surface.

(4) 1447 : F393

Hard, rough sandy micaceous fabric, dark green (5Y 4/3) glaze covered by a lighter coloured patina on parts of the outer surface, reddish-brown (5YR 5/4) elsewhere.

(5) 1085 : TS F251

Hard, moderately rough sandy micaceous fabric, greyish-brown (10YR 5/2) outer surface and core, patchy dark grey inner surface.

(6) 2310 : WS Pit 12

Hard, moderately rough sandy micaceous fabric, dark green (5Y 4/3) glaze on parts of the outer surface, grey core and reddish-brown (between 2.5YR 6/4 and 5/4) elsewhere.

In thin section samples 2-6 show a similar range of inclusions, the main features of which are frequent quartz grains up to 1 mm in size, plentiful discrete grains of biotite and muscovite, chlorite, quartz-mica-schist and a little iron ore and quartzite. This composition clearly indicates an origin in an area dominated by metamorphic mica schists. The nearest large source of such rocks to Exeter is in Brittany, and this could be significant in view of the (?)typological features of these sherds which led to the suggestion of a Breton origin. However, scattered outcrops of mica schists also occur in Devon and Cornwall, in the area of Bolt Head and the Lizard peninsula for example, and further work needs to be done in order to more confidently allocate this material to its source.

(7) 1451 : F393

Small ribbed handle. Hard, moderately smooth sandy micaceous fabric, light reddish-brown (2.5YR 6/4) surfaces, grey core. Thin section study shows a groundmass composed of numerous silt-sized quartz grains and small flecks of mica, together with a scatter of larger-sized quartz grains and black iron ore. The prevalence of mica in this sherd suggests an origin in or close to an outcrop of metamorphic rocks, and so the possible source areas mentioned for samples 2-6 could equally apply in this case.

(8) 983 : F243

Hard, rough sandy fabric, very pale brown (10YR 8/4) outer surface, reddish-brown inner surface and grey core. In thin section this sherd is characterized by large fragments of a volcanic rock, composed principally of felspar microlites set in a dark brown altered matrix. Also present is a groundmass of quartz grains, average size 0.05-0.20 mm, with a scatter of larger grains up to 1.60 mm across, flecks of mica, discrete grains of plagioclase felspar and a little chert. The composition and condition of the volcanic rock in this sample suggests an origin in the Permian of the Exeter district (Tidmarsh, 1932). If this identification is correct, the vessel may have been made fairly locally.

Tidmarsh, W. G. (1932) ' The Permian lavas of Devon' Quart. J. Geol. Soc., 88(1932), 712-775.