TR12-41-42

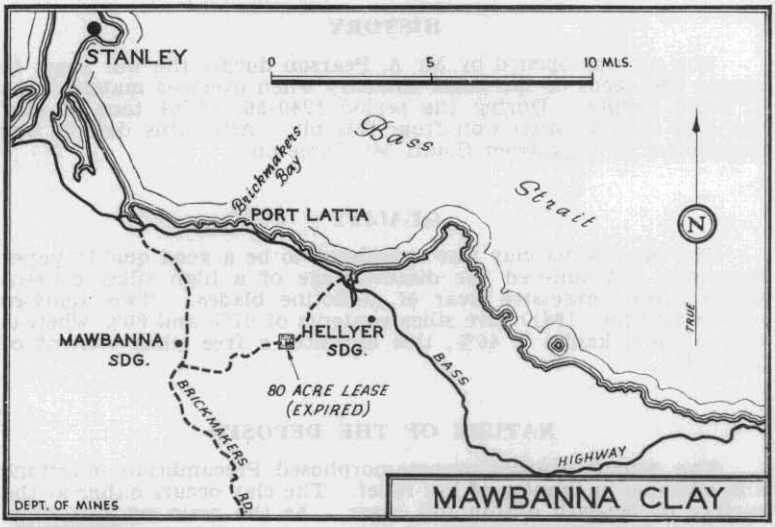

FIGURE 12

5 cm

8. WHITE CLAY FROM MAWBANNA

by V. M. Threader

INTRODUCTION

Representatives of the Wynyard Brick Company have requested ceramic testing of the Mawbanna white clay with a view to blending it with clay from their local pit for brick manufacture. The Chief Chemist and Metallurgist asked for details of this deposit (15.8.1967) and the area was visited on 30 August 1967.

LOCATION AND ACCESS

The deposit lies between the Mawbanna and Hellyer sidings on the NW railway approximately 24 miles W of Wynyard. It can be reached by a Forestry Commission road from the Mawbanna siding or by rough track direct from the Bass Highway. When previously worked, the clay was loaded directly onto railway trucks at the site of the pit.

HISTORY

The pit was opened by Mr A. Pearson during the war years to supply the needs of the paper industry when overseas material was in short supply. During the period 1940-56, 12,361 tons of clay are said to have been won from this pit. After this date it was superseded by clay from South Mt Cameron.

QUALITY

The Mawbanna clay was considered to be a good quality paper filler clay but suffered the disadvantage of a high silica content which caused excessive wear of guillotine blades. Two analyses on the clay file (1941) give silica contents of 67% and 80% whereas that of pure kaolin is 46%, this indicates a free silica content of 20%-34%.

NATURE OF THE DEPOSIT

The deposit overlies unmetamorphosed Precambrian mudstone and siltstone in country of low relief. The clay occurs either at the surface or beneath a thin soil cover. As the main pit was completely water filled when visited it was not possible to examine the working face for evidence of stratification or relict bedding. The material appears to have resulted from the weathering of sediments similar to those exposed in adjacent railway cuttings. In the absence of any evidence to suggest transport of material, it is assumed that the deposit was formed *in situ*. This point has a bearing on the extent of the deposit and requires verification.

RESERVES

Mr Pearson has stated that test drilling to a depth of sixty feet has proved that the clay underlies the entire eighty-acre lease area. This represents a supply of approximately 10,000,000 tons. If the clay is a residual deposit it could be expected to occur more extensively than this, and so vast reserves of this white clay may be present in the area. This could be established by a Proline drilling programme if a use for the material can be found.

UTILISATION

It is suggested that the Department test this material to assess its ceramic properties. It is unlikely that it would be a suitable material for the Wynyard Brick Company as its firing temperature is probably above that attainable in their kilns. The clay may have an application as a low alumina fireclay and some testing to determine this is recommended.