INTRODUCTION

The study of the Olive Hill Clay Bed in eastern Kentucky and southeastern Virginia was undertaken in an effort to determine the extent of the deposit, its general thickness and physical properties, and its mineral potential. The bed has undergone extensive mining in the past, and the information obtained will be used to answer questions concerning its potential for further development.

GEOLOGY

The geology of the area is dominated by the Pennsylvanian System, which is divided into two units, the Lee Formation and the Overholtz Formation. The Lee Formation consists of a sequence of sandstone, siltstone, and shale, while the Overholtz Formation is composed of dolomite and limestone.

The Olive Hill Clay Bed is a thin, finely lamellated clayey shale, which is part of the Lee Formation. It is interbedded with thin coal seams and is a major source of bentonite and kaolin muds.

STRUCTURE CONTOURS

The structure-contour map of the Olive Hill Clay Bed in northeastern Kentucky shows the irregular surface on which the bed is distributed. The contours indicate the depths that the bed reaches in prospecting for the clay. In general, the distribution of the bed is controlled by the topography of the area. Where the topography is flat, the bed is thin; where the topography is steep, the bed is thick.

CONCLUSIONS

The area where most of the clay is found is in the vicinity of the eastern edge of the Cumberland Plateau. This area is characterized by a number of small, isolated deposits that are difficult to mine. However, the potential for further development is significant, and additional exploration efforts are recommended.

LITERATURE CITED


John W. Houtman

STRUCTURE-CONTOUR MAP OF THE OLIVE HILL CLAY BED IN NORTHEASTERN KENTUCKY

by

John W. Houtman

1963