CAINOZOIC BASALTS OF THE MT. FOX AREA, NORTH QUEENSLAND

F. L. SUTHERLAND
Department of Mineralogy and Petrology
The Australian Museum, Sydney

SUMMARY

The Mt. Fox basalt field encompasses late Tertiary plugs and flow remnants and the Pleistocene Mt. Fox volcano. The flow remnants suggest an earlier largely westerly flowing plateau drainage, captured by southerly flowing drainages which cut through the old valley fills.

The basalts are mostly undersaturated types, basanitic and alkali basaltic rocks, but include transitional olivine tholeiite. Geochemically, the younger Mt. Fox lavas are the most undersaturated and show relative enrichment in alkali and alkaline earth elements.

INTRODUCTION

Cainozoic basalts in north Queensland form a number of provinces ranging up to 7,500 km^2 in area (Twidale, 1956; Branch, 1969; Stephenson and Griffin, 1973). The Mt. Fox field, west of Ingham, is a sparsely scattered province covering about 2,500 km^2 (Figs. 1 and 1a). It flanks the extensive voluminous McBride Province (5,500 km^2) to the north-west. Its westernmost occurrences have been referred to as the Older McBride Province and assigned late Miocene (?) to early Pliocene ages on the association with diatomite deposits (Best, 1959, 1960).

Basalts form older denuded plugs and dissected flows as well as youthful pyroclastics and lavas of the extinct Mt. Fox volcano. These lie on a dissected Tertiary plateau, which slopes gently westwards from about 800 m to 480 m a.s.l. at the Burdekin River, where it skirts the flank of the McBride basalt shield. Study of the flow remnants is important in reconstructions of the old plateau drainage; some basalts appear to trend across the Douglas River valley which has captured much of the present drainage.

Specimens and thin sections of the rocks are held in the collections of The Australian Museum. Analysed rocks are registered from DR9426 to DR9434 and thin sections are registered from AM6716 to AM6744.

Records of The Australian Museum, 1977, **Vol. 30, No. 19,** 532-543, Figures 1-3.