
**STRUCTURE AND SEDIMENTOLOGY OF THE CAPE FORBIN
AREA, SOUTHERN ADELAIDE FOLD-THRUST BELT:
IMPLICATIONS FOR REGIONAL TECTONICS.**

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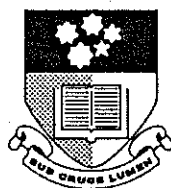
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NATIONAL GRID REFERENCE:

Kingscote (SI-53-16) 1:250 000 sheet

Snug Cove (SI-53-6626-I) & Borda (SI-53-6626-IV) 1:50 000 sheets



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§1.2: AIMS AND METHODS OF INVESTIGATION

Recent detailed work (eg. *Johnson*, 1991; *Rogers*, 1991; *Flöttmann* et al, 1992; *Flöttmann & James*, 1992) has attempted to elucidate the structural and stratigraphic relationships within the Kanmantoo Group of the southern Adelaide Fold Belt, and to help solve some of the problems outlined above. The present study is partly a continuation of this program of investigation. Detailed structural investigations were carried out within the chosen 3x9 km field area, situated on the north-west coast of Kangaroo Island (Figure 3). The region was chosen specifically to examine a recently discovered shear zone east of Cape Forbin, and its possible implications for local and regional geological relationships within the Kanmantoo Group. Geological mapping at a scale of 1:10 000, appropriate strain analysis techniques, and thin-section microstructural analysis were implemented to determine the geometric, kinematic and tectonic evolution of the area. Additional brief investigations were conducted outside of the original study area (eg Harveys Return, Scott Cove; Figure 3) in order to clarify various geological relationships.

The aims of this study also encompass sedimentological and stratigraphic aspects of the Cape Forbin area. Such studies are, in part, intended to provide some understanding of the (disputed) depositional environments of the Kanmantoo Group. Consequently, detailed sedimentological examinations are intended to provide important information upon the tectonostratigraphic evolution of the Kanmantoo Trough. Furthermore, it is intended that the present study will be a useful adjunct to regional geological mapping presently being conducted by geologists of the S.A. Department of Mines & Energy, in preparation for the revised version of the KINGSCOTE 1:250 000 sheet. To this end, an attempt has been made to correlate the previously 'undifferentiated' lithologies within the area with known Kanmantoo Group formations elsewhere in the southern Adelaide Fold Belt. This was achieved by a detailed study of all available stratigraphic information concerning the Kanmantoo Group, examination of the type-section on the south coast of the Fleurieu Peninsula, and consideration of local structural complexities between areas of known stratigraphy and the Cape Forbin region.
