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NATURE AND ENVIRONMENTAL SIGNIFICANCE OF LARGE SCALE
HETEROLITHIC CROSSBEDS, SINGLETON COAL MEASURES (PERMIAN)
SYDNEY BASIN, NEW SOUTH WALES

by

C.F.R. PARBURY

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of the requirements for the Degree of
Bachelor of Arts (Honours) in the School
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DEDICATION

TO MY FAMILY

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A B S T R A C T

Large scale inclined strata consisting of shale, siltstone, and fine-to-medium sandstone occur directly over the main Liddell Coal Seam and below the Arties Coal Seam in the Foybrook-Liddell-Howick area within the Upper Permian Singleton Coal Measures, Sydney Basin, N.S.W. Results of the study of: the stratigraphic content within which the large scale inclined strata occur; the nature of the external regional form of the crossbed set; the lithology and the internal organization of the inclined strata is presented. A model incorporating the inclined bedding structure as the product of 'mobile differential compaction' is seen to be totally inadequate in the light of field evidence and observation. Comparison with and recognition of the characteristic features of 'Gilbert-type delta' deposits indicate that the large scale inclined bedding structure has a primary depositional origin and is, in fact, a set of crossbeds developed by the introduction of sediment-laden waters into a non-marine deltaic environment.