

CONCLUSIONS

1. The largest volume of Triassic age freshwater sediments (part of the Upper Freshwater Sequence of the Parmeener Super Group), particularly the youngest (coal bearing) rocks, are present beneath dolerite sills of Jurassic age. Where this protective cover is absent, probably only about 10% of these coal bearing sediments are preserved.

Both the erosion and preservation of these rocks is primarily a function of Tertiary age faulting, which produced horst and graben structures.

2.1. Tensional stress induced faulting in the early Tertiary (probably associated with the fragmentation of Gondwanaland), appears to have reactivated underlying basement faults, with mean orientations of NNW, NE and WE.

2.2. The maximum principal tensile stress was aligned ENE such that the resultant strain in the horizontal plane was accommodated mainly by the NE and WE groups of faults, and in the vertical planes mainly by the NNW group of faults.

2.3. The net result of the Tertiary faulting was to produce relatively continuous NNW orientated grabens ( $> 50$ km long, 1-3 km wide), and discontinuous NE and WE aligned graben complexes of varying size.

3.1. New information was obtained on several lithologically and palynologically defined Triassic freshwater units recognised by the Geological Survey of Tas.; these sedimentary sequences (here termed Sequences 1, 2, 3 and 4), were more rigorously defined in terms of component lithologies, inter sequence relationships, and coal potential.

3.2. Sequence 1 was confirmed as a sand dominated unit with a sandstone/mudstone ratio of  $\approx 7$ , Sequence 2 as a lutite dominated unit with sandstone/mudstone ratio of  $\approx 0.2$ , Sequence 3 as an interbedded unit of mudstone-siltstone-sandstone with sandstone/mudstone ratio of  $\approx 1.5$ , and Sequence 4 as a sand dominated unit with a variable sandstone/mudstone ratio averaging 8.

3.3. A significant result of the drilling was the recognition of interdigitation of Sequence 2 with Sequence 3, and of the latter with Sequence 4. Based on