

INTRODUCTION

Summons Geoservices Pty. Ltd. was instructed to plan and supervise a coal exploration program for Exploration Licences (EL's) 18/82, 19/82 and 20/82 in southern Tasmania.

This report was requested by T.W. Dickson of CRAE Pty. Ltd., and describes the results of both office and field investigations made during 1983-84 over the licence areas.

The nominal target of the exploration was an in situ resource of coal $\geq 50 \times 10^6$ tonnes, based on seam width of ≥ 1.0 m, with these coal seams situated at sufficiently shallow depth (≤ 50 m) to allow open pit extraction of the coal.

Information was obtained as follows:

- (i) Literature research of data on Triassic stratigraphy,
- (ii) Satellite photography,
- (iii) Published geological maps: Oatlands 1:250 000 scale, Oatlands 1:50 000 scale, and Brighton 1:50 000 scale;
- (iv) Open hole drilling and lithological logging;
- (v) Geophysical logging of these holes.

The scope of this report covers the structural controls on the distribution of the Triassic freshwater sediments, the volumetric and other sedimentological statistics of the various sedimentary sequences, the geophysical signatures of the individual lithologies, details of the coal seam intersections, correlation of coal seams, estimation of coal reserves and discussion of the coal potential of the main lithostratigraphic units investigated.

The assumption is made that the reader is familiar with the regional setting and general characteristics of the Carboniferous - Permian - Triassic age Parmeener Super Group in the "Tasmania Basin", and with the various palaeo-graphic models for the formation of the Upper Freshwater Sequence of the Parmeener Super Group.

One of the main potential problems of the program of work was the imprecise knowledge of the coal potential of the lithostratigraphic units of Triassic