

4. INTERPRETATION OF RESULTS

4.1. STRATIGRAPHY OF COAL BEARING SEQUENCES

4.1.1. Introduction

The Upper Freshwater Sequence of the Parmeener Super Group has been mapped on a lithostratigraphic basis on the Oatlands and Brighton 1:50 000 scale geological sheets and described in explanatory reports (Leaman 1977, Forsyth 1984).

Slight facies changes are apparent to the west (Great Western Tiers) and to the north east (Fingal area) of the Midlands region of the state, resulting in the absence of some rock units, although biostratigraphic correlation can often be made.

More recently, Forsyth (1984) has shown that most of the lithostratigraphic units have characteristic macro and/or micro floral assemblages. Forsyth (1984) recognised five main successions of sedimentary rocks, in order of increasing age as follows:

- (a) Volcanic Lithic Arenite, Lutite and Coal Measures (Rg) ;
- (b) Quartz and Lithic Feldspathic Sandstone, with interbedded mudstone/siltstone (Rs);
 - (i) Lutite with minor, mainly quartz rich lithic arenite (Rsfu)
 - (ii) Interbedded quartz arenite and lutite, with carbonaceous beds (Rsq¹)
 - (iii) Interbedded quartz rich arenite and lutite (Rsf1)
 - (iv) Interbedded quartz arenite and lutite (Rsq);
- (c) Muddy Fluvial Plain Facies (Rm);
- (d) Quartz sandstone (Rp);
- (e) Cygnet Coal Measures Correlate (Pj).

In this report, most emphasis will be on the lithological nature of the younger (coal bearing) successions, (Sequences 1 to 4).

Because the interpretation of lithocorrelates of the above units was done predominately from wireline logs, it is appropriate to describe them under the following headings:

- Sequence 1 (≈ Rg)
- Sequence 2 (≈ Rsfu)
- Sequence 3 (≈ Rsq¹)