

## INTRODUCTION

Nineteen cuttings samples from the Eastern View Coal Measures sequence in Flinders-1 have been analysed for palynological age dating. Three samples were initially examined and age dated by Roger Morgan (letter 16 December 1993) while the remainder were examined by Alan Partridge and results given in a provisional report (3 March 1993). Full details of analyses are here presented in this final report which is divided into Interpreted and Basic Data sections.

The cuttings samples, which were preferentially collected from shales (letter from R.J. Willink, 27 January 1993) gave mostly high residue yields, but unfortunately palynomorph concentrations on the palynological slides were only moderate to low and occasionally very low. Palynomorph preservation overall was very poor. The poorest preservation and lowest yields are from the samples between 1702-2304m from which the interpreted *insitu* palynomorphs are all carbonised or thermally mature, presumably due to heating associated with the volcanic intrusion identified between 2207-2272m. The well preserved palynomorphs from the seven samples over this carbonised interval are all interpreted as caved.

Spore-pollen diversity overall was moderate averaging 17+ species per sample while total diversity was 85+ species including 5+ reworked species. Microplankton diversity was very low with an average of less than 3 species per sample. Although a total of 18 microplankton species are recorded on the range chart most specimens are caved from higher in the sequence. Because caved palynomorphs were recorded in all samples it is likely that the *insitu* diversity is somewhat lower than is apparent from the assemblages recorded on the range chart.

The spore-pollen zones identified in Flinders-1 are given in the following summary and on the Palynology Data Sheet. Interpretive data consisting of zone identification, confidence ratings, ages and comments are given in Table-1 and the basic data on residue yields, preservation and diversity for individual samples is given in Table-2. All species identified with binomial names are tabulated on the range chart. The chart is sorted firstly by highest appearance, then by spore-pollen not carbonised (1-73); spore-pollen "dark" or carbonised (74-97); reworked spore-pollen (98-102) and finally microplankton (103-120).