

PE990104

PLANT REMAINS, PORT CAMPBELL NO. 4 BORE

Core 14 (4,985 - 5,005 feet) Frome-Broken Hill Co. Pty. Ltd. Port Campbell No. 4 bore contained large megascopic plant compressions as well as smaller fragmentary compressions.

All the larger strap-like compressions so far examined are conifer leaves with cuticular anatomy comparable to the present day genus Agathis.

Briefly they may be described as:

Megascopic.

Broad strap-like leaves, venation parallel, apex rounded or bluntly pointed, method of attachment unknown.

Microscopic.

Adhering cuticles, one (lower and upper not distinguishable in fragments examined) slightly thicker than the other. Both divided into stomatal and non stomatal areas, stomata in rows, orientation of stomatal slit variable in regard to rows but rarely longitudinal, and most frequently transverse. Sub circular with longer diameter transversely orientated, often greater than 70 microns, smaller diameter averaging 60 microns. Subsidiary cells 4-6, encircling cells present, epidermal cells generally sub rectangular.

Remarks:

Leaves morphologically and anatomically similar to Agathis sp. have not been described previously from the Victorian Mesozoic, but occur at Moonlight Head and Mornington in outcrop sediments. (Douglas MS.) Cookson and Duigan (1951) have described similar specimens from Tertiary sediments (cf. Agathis vallournensis) but these differ in having essentially hypostomatic leaf cuticles.

The general leaf type is one which has a wide range through Upper Mesozoic and Lower Tertiary sediments in Victoria.

Maceration of core portions has yielded cuticular fragments, the greater majority of which are from sterile or fertile fragments of Agathis-like plants, or other members of the Araucariae.

Maceration of bore core from Frome-Broken Hill Port Campbell No. 1 bore at 5,705 feet has yielded similar Araucarian material, although in this latter sample it is not nearly so predominant as in the sample under discussion from Port Campbell No. 4 bore.

Microplankton remains from P.C. 1 5705 enabled Evans 1961 to give an Upper Cretaceous (Cenomanian) age for these sediments.

A description of the plant remains in both these cores is being undertaken in conjunction with Otway Basin studies.

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Reference:

A palynological report on Frome-Broken Hill Port Campbell No. 1 and 2 Wells, Victoria. Evans, P.R. Bur. Min. Res. Rec. 1961/63.