

PALYNOLOGICAL EXAMINATION-ESSO GIPPSLAND NO. 1. WELL.

Plant remains present in Esso Gippeland Shelf Well cores 14, 15, 16, 19, 20 and 21 were examined, and the samples macerated by the hydrofluoric acid-Schulz solution method and the residues examined under the microscope for acid insoluble microfossils.

Core 14.

Microfloras present include Proteacidites sp. a, b, and c, and Nothofagus species including Nediminuta Cookson. Upper and lower leaf surface cuticular fragments from angiosperm leaves were also common.

Core 15.

Microfloras include Proteacidites sp. a and b; Cyathidites sp., Taeugaepollenites sp., Alesporites sp., and unidentified gymnosperm pollen. Megaplant remains identified as Pagiophyllum sp. were compared in my preliminary report to P. Chambersi n.sp. (Douglas MS), from Arco Woodside Merriman No. 1. at 5070-5081 feet.

Core 16.

Plant mega-remains from this core were tentatively identified in my preliminary report as sphenopsid stems or rhizomes.

Core 19.

Microfloras include Lycopodiumsporites sp., Proteacidites sp. a and b Triorites of Tedwardsi Regulatisporites sp.

Core 20.

No diagnostic microfloras were isolated.

Core 21.

A very rich microflora was isolated from this core including Nothofagus cf. N. aspera, Nothofagus sp. a and b, Triorites cf. T. edwardsi, Rugulatisporites sp., Ginkgoocycadophytus sp., Triorites sp. a. Conifer pollens were most infrequent.

Age of the sediments.

Two main points can be made.

1. I can make no distinction in age between any of the samples studied.
2. A continental depositional environment is indicated by the apparent absence of marine microfossils.

In the preliminary report on core 14 I stated that the age of the sample was Lower Miocene-Upper Cretaceous, and all microfloras examined from subsequent cores fall into this category, although certain species, for example Rugulatisporites sp. indicate that an Eocene-Upper Cretaceous age is most likely for cores 19 - 21. Precise time ranges of many Victorian Upper Cretaceous and lower Tertiary microspores is not known. As no marine fossils indicating Upper Cretaceous age appear to have been found, and Western Victorian Upper Cretaceous sediments are predominantly marine, I think that the sediments intersected by cores 19 - 21 would be best regarded as Eocene or Paleocene in age.

John Douglas.

Geologist.