Pretty Hill

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INTERIM NOTE NO. 2 ON F.B.H. PRETTY HILL NO. 1 WELL, OTWAY BASIN, VICTORIA

1. Samples of the cores listed below from F.B.H. Pretty Hill No. 1 Well have now been examined for their content of spores and microplankton.

Depth of Core Sample	Probable Age
c.1, 1286-1288 feet	Tertiary
c.2, 1816-1818 "	"
c.4, 2391-2393 "	Upper Cretaceous, marine.
c.6, 2728-2730 "	" " "
c.7, 2938-2940 "	Cretaceous undiff.?non-marine
c.16, 5954-5957 "	Lower Cretaceous, non-marine
c.19, 6696-6697½ "	" " "
c.20, 7200-7214 "	" " "

2. Cores 1 and 2 contained few pollens and very rare microplankton (hystrichospheres only).

Core 4 contained fairly common marine micro-organisms, but none of the marker microfossils located at Port Campbell and Flaxman's Hill were observed. Two specimens of Deflandrea aff. serratula were present. If the specific identification is correct, this is the first time D. serratula has been recorded from the Otway Basin. Uncertainty of identification of the specimens arises from their fairly close relationship to Deflandrea minor. However, what appear to be serrated borders to the shell and the size and shape of the capsule suggest D. serratula rather than D. minor. The distinction is significant stratigraphically as D. serratula appeared in a younger horizon than Xenikoon australis in Western Australia (Cookson & Eisenack, 1960 Micropalaeontology, 6(1); in consequence, Pretty Hill No. 1, c.4 may be somewhat younger than Flaxman's Hill No. 1, c.3 (4126-4134 feet). Triorites edwardsii was observed among the content of pollen.

Core 6 contained abundant microspores and microplankton, and included common Hexagonifera glabra with Delfandrea tripartita and Odontochitina cribropoda. They indicate that the c.6 is a correlate of an horizon within the Belfast Mudstone of Flaxman's Hill No. 1

Core 7 yielded few spores and no microplankton. The sample from core 16 contained abundant microspores and no microplankton. The spores included:

Sphagnumsporites australiensis
Cyathidites spp.
Baculatisporites comaumensis
Cicatriocosisporites australiensis
Lycopodiumsporites spp.
Dictyotosporites speciosus
Inaperturate spp.

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Comments on core 19 and 20 were made in Interim Note No. 1 (16th November). The appearance of D. speciosus in c.16 suggests that the sandstones of c.20 are not much older than c.16. The association of D. speciosus and C. australiensis in c.16, above the D. speciosus, L. circolumenus combination of c.20, is a repetition of the sequence in Penola No. 1. It might suggest that the base of the Otway Group in Pretty Hill No. 1 (5990 feet) may correlate with an horizon in the region of 3524-3715 feet in Penola No. 1. However, evidence from other species is desirable before such a correlation is affirmed.

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26th November, 1962.