



Interim Note on F.B.H. Pretty Hill No. 1 Well
Otway Basin, Victoria

1. F.B.H. Pretty Hill No. 1 Well passed from the Otway Group at 5990 feet to a sandstone with minor coals that persisted to 7874 feet; this sandstone section has been referred to the (?) Grampian Series of Upper Devonian-Lower Carboniferous age by the well-site geologist.
2. Cores 17 (6070-6080 feet) to 21 (7585-7597 feet) were cut from this interval. They have been examined for their spore content to determine their age. Only samples from cores 19 (6690-6702 feet) and 20 (7200-7214 feet) were processed; cuts available from the other three cores were of porous sandstone that would have a very low spore content and that in any case might have been invaded by contaminated drilling mud.
3. Core 19 (6696-6697 ft. 6 in.) included a thin ($\frac{1}{4}$ in.) lamination of coaly matter. Maceration of this material yielded vegetable tissue and extremely few spores, none diagnostic.
4. Core 20 (7200-7214 feet: precise interval not determinable) was also of sandstone, but included a very thin lamination of grey silty sandstone. This lamination yielded a moderate number of well preserved spores. They included:

<u>Cyathidites</u> spp. incl. <u>C. australis rimalis</u>	}	1 specimen of each
<u>Dictyosporites speciosus</u>		
<u>Lycopodiumsporites circolumenus</u>		
<u>Aequitriradites tilchaensis</u>		
Disaccites spp. (common)		
<u>"Inaperturopollenites" spp.</u> (fairly common).		

This a Mesozoic, probably Lower Cretaceous assemblage, although, depending on definitions, it could be in the Upper Jurassic. The association of D. speciosus and L. circolumenus is a characteristic of a basal Cretaceous zone in the Great Artesian Basin that includes a lower portion of the Roma Formation and the Transition Beds of the Blythesdale Group. Unfortunately the apparent absence of other key fossils used to define stratigraphic position in that basin precludes further discussion.

5. Pretty Hill No. 1, core 20 differs from the Otway Group of Flaxman's Hill No. 1 (Evans, 1962) by the lack of Cicatricosisporites australiensis and the presence of D. speciosus and L. circolumenus. Apart from the lithological sequence this sandstone unit may thus be older than the Otway Group of Flaxman's Hill No. 1. A comparable assemblage was observed in cores 15 - 19 (3917-4400 feet) in Penola No. 1 (Evans, 1961) to which Pretty Hill No. 1 core 20 might be compared.

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6. The section 5990-7874 feet in Pretty Hill No. 1 is therefore not a correlate of the U. Devonian - L. Carboniferous "Grampian Series" or Group (Jones, 1958).

References:

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N.L. Penola No. 1 Well, South Australia.
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- JONES, D.S. 1958 Humicite in the Grampians Sandstones at
McKenzie Creek, Western Victoria.
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