

Biostratigraphic logs of four bores
(Birregurra 1, Cressy 1, Cundare 1 and Warrion 5)
in the northeastern part of Port Campbell Embay-
ment (Otway Basin)

Samples from the Birregurra 1, Cressy 1, Cundare 1, and Warrion 5 bores have been examined micropaleontologically by the writer during the last few years, largely in order to determine the age of deposition of the strata on the basis of foraminiferal evidence. Only parts of the Tertiary sequences penetrated by these bores are sufficiently fossiliferous (i.e. deposited in open-marine environment) for this purpose.

The conclusions are expressed in terms of numbered zones based on A.N.Carter's numbered "Faunal Units". These zones, though recognized largely on the basis of paleontologic evidence, are regarded as informal chronostratigraphic rather than biostratigraphic units. In terms of Australian stages as redefined by Carter, Janjukian is represented by zones 4 and 5, Longfordian by 6-8, Batesfordian by 9, Balcombian by 10 and Bairnsdalian by 11.

The placement of the boundaries between the zones is tentative, subject to modification as the foraminiferal faunas are investigated in greater detail in the future. - Though no species (e.g. Chiloguembelina cubensis) definitely characterizing zone 4 were observed, the presence of this zone near the base of the open-marine sequence in bores located at some distance from the margin of the embayment is strongly suspected, since this zone has been definitely recognized in the Dorak 2 bore. Similarly, recognition of zone 9 (and zone 10 in Cundare 1 bore) is based largely on non-paleontologic criteria; species definitely characterizing zone 9, such as Lepidocyclina, were not observed.

The presence of some of the most significant planktonic foram species (largely those of the Orbulina lineage) is indicated in the appropriate column. Vertical positions of samples examined are also indicated (NF= no forams observed; rr= rare; vrr= very rare).

Lithostratigraphic and lithologic observations are also summarized to give a framework for reference to the biostratigraphic conclusions. To some extent the lithologic data are based on the work of previous authors (for Birregurra 1 bore, A.N.Carter in I.C. Cookson, 1954, "A palynological examination of No.1 Bore, Birregurra, Victoria", Proc.Roy.

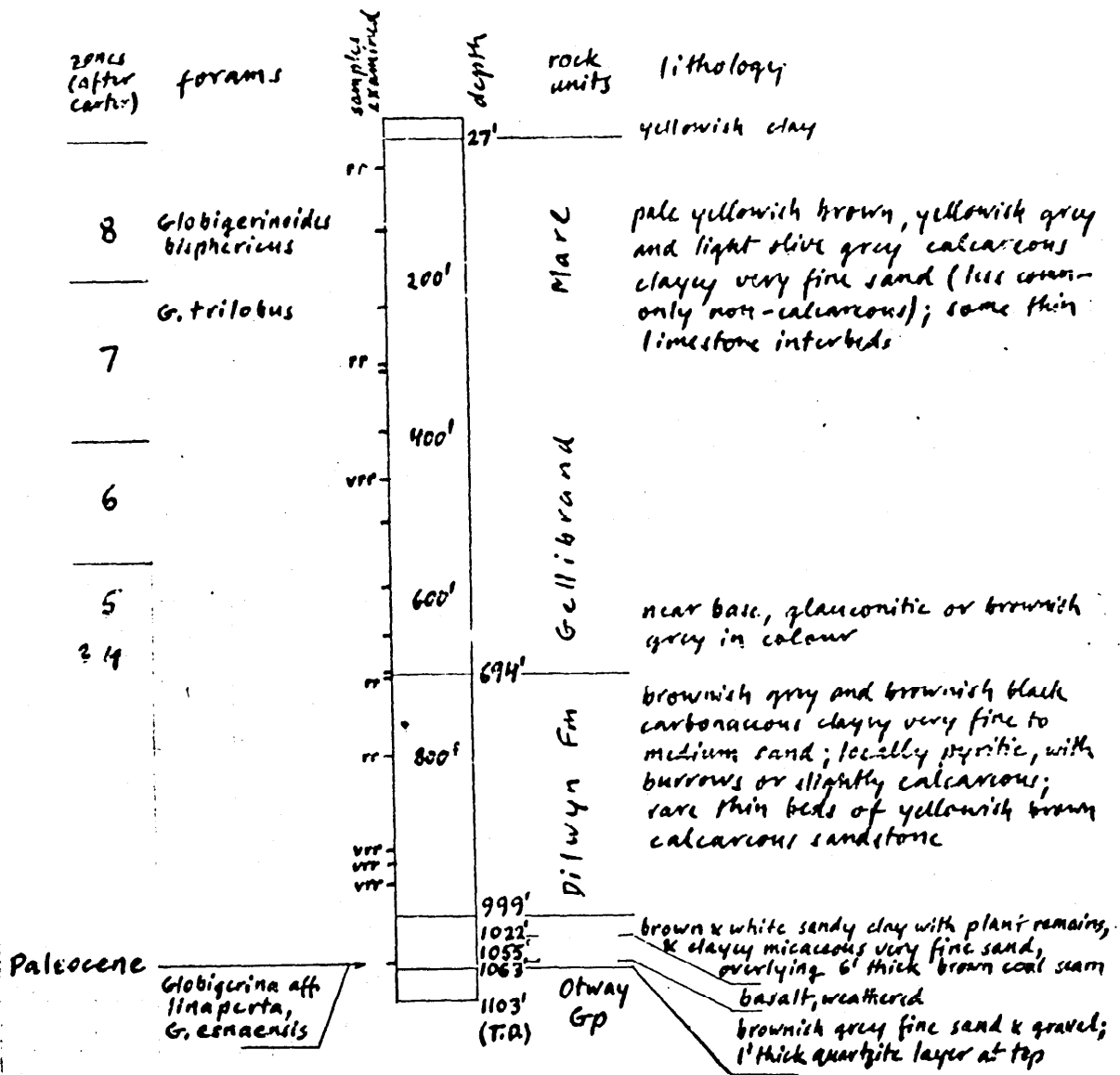
Soc.Vict. 66: 119-128; for Cressy 1 Bore, K.J.Reed, unpubl. rept. 1960-54, also in P.E.Bock, R.C. Glenie and K.J.Reed, unpubl. rept. 1964-32). Electric logs of Cundare 1 and Warrion 5 bores have also assisted in recognition of some stratigraphic boundaries.

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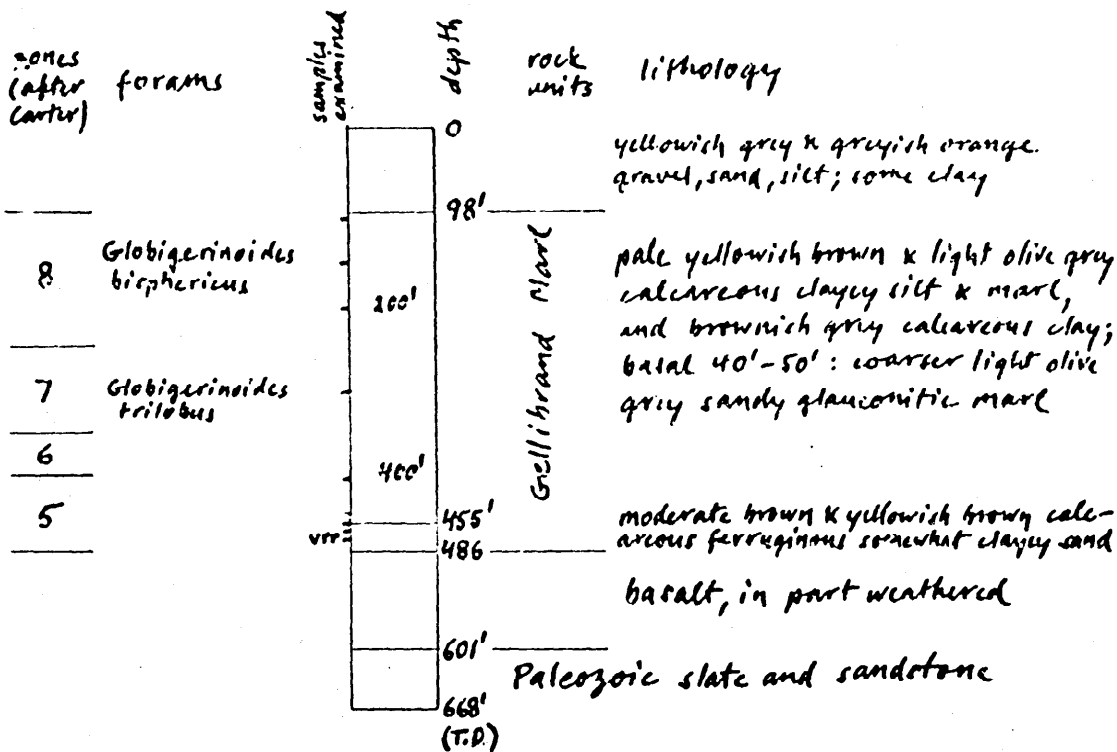
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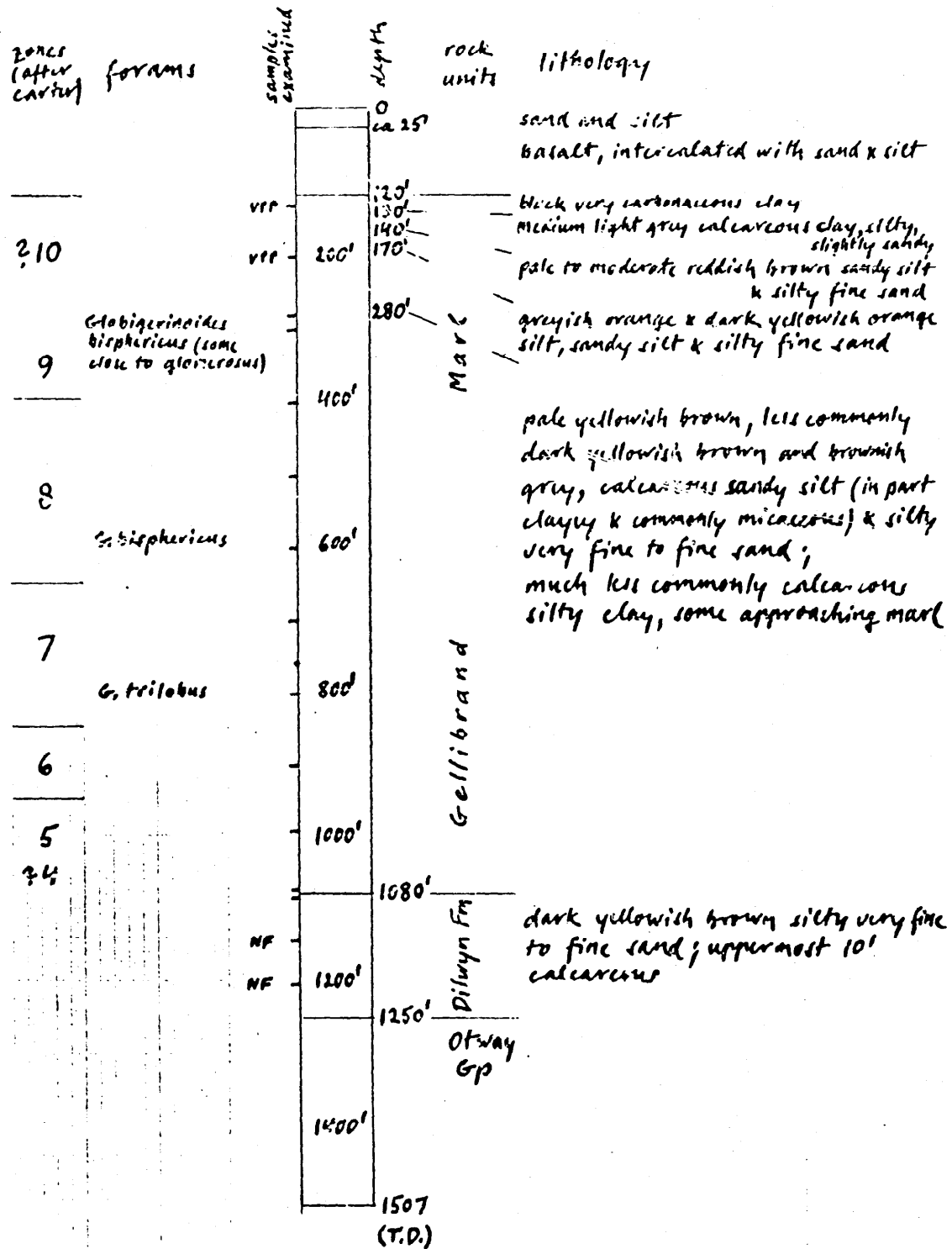
BIRREGURRA 1



CRESSY 1



CUNDARE 1



WARRION 5

