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EXAMINATION OF MACROFOSSILS FROM AN UNNAMED ORDOVICIAN UNIT NEAR LAKE GAIRDNER, TASMANIA.

by

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A CONTRIBUTION FROM
MARINE, PETROLEUM AND SEDIMENTARY RESOURCES DIVISION

Professional Opinion

1996/007

GEOSCIENCE FOR AUSTRALIA'S FUTURE

A Research Bureau of the Department of Primary Industries & Energy

Examination of macrofossils from an unnamed Ordovician unit near Lake Gairdner, Tasmania.

Sample Locality

Samples totalling about 10kg of light grey to white, granular, quartz sandstone containing numerous brachiopod fossils were collected by the author and Mr C. Calver of Tasmania Development and Resources during field work in October, 1995. The samples come from a road cutting on the eastern side of Lake Gairdner (GR 226080, Mount Read Volcanics Project Map 9, Winterbrook-Moina area). These sandstones are referred by Pemberton & Vicary (1989) to an unnamed unit described as a fawn weathering siltstone and calcareous sandstone considered to overly and perhaps interdigitate with the Moina Sandstone. Pemberton & Vicary (1989) believed the unit to be a correlate of the Florentine Valley Formation

Sample Preparation

Included in the sample are fairly well preserved brachiopods, and fragments of possible gastropods. The brachiopods are the predominant element of the fauna and are usually preserved as moulds. As a consequence, mechanical excavation using a compressed air powered vibrotool was undertaken.

Interpretation

The fauna from this locality includes the following:

rhynchonellid brachiopod (belonging to family Rhynchotrematidae)
indeterminate orthoid brachiopod
indeterminate ?gastropod

The orthoid and possible gastropod were each represented by one specimen and nothing further could be done with them. The rhynchonellid brachiopods belong to the Family Rhychotrematidae, a group which first appeared in the fossil record during the earliest Caradoc. As the Florentine Valley Formation was deposited well before the evolution of the Rhynchotrematidae, it is extremely unlikely that this unit is of similar age. The oldest Rhynchotrematidae in Tasmania are known from the upper part of the Cashions Creek Limestone (Laurie, 1991a, b). The specimens from the Lake Gairdner locality are similar in convexity and the angular nature of the costae to *Rhynchotrema crossi* Laurie, 1991 but are somewhat smaller in size. *Rhychotrema crossi* is found in the *Tasmanorthis costata* Assemblage of Laurie (1991a, b), which is known from the middle Lower Limestone Member of the Benjamin Limestone in the Florentine Valley and in the middle Dogs Head Formation at Mole Creek. A similar age is suggested for these sandstones at Lake Gairdner.

References

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