PALYNOLOGY REPORT

ME/BP 65

Palynological analysis of seven samples from the Muir Unicup Monitoring Bore MU 65

by

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Prepared for:

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SUMMARY

Seven sediment samples from Muir Unicup Monitoring Bore MU 65, submitted by CALM's Warren Region office, have been palynologically processed and analysed. The samples were processed by the Palynology Laboratory, the School of Earth and Geographical Sciences, The University of Western Australia, and microscopically examined by Dr Lynne Milne.

Palynomorphs were rare in all the samples, and the majority of these are considered surface contaminants. The sample at 6-7 m contains rare Eocene palynomorphs that would be worth investigating further and the sample at 19-20 m may be of interest if further investigated (see over).

BOREHOLE	Depth (m)	Suggested age
MU 65	6-7	No age determination
	8-9	No age determination
	10-11	No age determination
	13-14	No age determination
	16-17	No age determination
	19-20	No age determination
	20-22	No age determination

PALYNOSTRATIGRAPHY

Sample from 6-7 m.

A moderate amount of organic matter was recovered from this sample, but the majority of palynomorphs were obvious surface contaminants and included pollen of pine, Restionaceae and Myrtaceae, and an unknown cryptogam spore. However, the occurrence of rare grains of *Nothofagidites* spp is of interest. *Nothofagidites* pollen is common in Eocene sediments and occurs less commonly in sediments through to the Early Pliocene. The well-sorted silty sand sample supplied for analysis has dark brown inclusions/clasts that may be the source of the *Nothofagidites* pollen.

Age: Not possible to determine

Samples 8-9 m, 10-11 m, 13-14 m, 16-17 m, 19-20 m, 20-22 m

Very little organic matter was recovered from these samples. The majority of rare palynomorphs present are considered surface contaminants, although it is possible some of the rare, degraded and therefore difficult to identify pollen grains in the sample at 19-20 m may be *in situ*.

Age: Not possible to determine

Discussion

Very sandy sediments do not commonly yield good palynomorph assemblages. However, I would like to further investigate the samples at 6-7 m and 19-20 m by doing further laboratory preparations myself. In particular I would like to separately process the sandy portion and dark clasts in the sample at 6-7 m.

As there were few palynomorphs in the seven samples, the cost for analysis of each sample will be $80 instead of $180. Any further investigation of the two sediment types within the sample at 6-7 m and the sample at 19-20 m can also be carried out at a reduced cost.

Dr Lynne A. Milne
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