DEPARTMENT OF MINES AND ENERGY
SOUTH AUSTRALIA

REPT. BK. NO 89/29

PALYNOLOGICAL DATING OF PIDINGA FORMATION FROM AQUITAINE SMD 4031, SMD 4034 & SMD 4035 WELLS

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BIOSTRATIGRAPHY

MAY, 1989

DME ENV. 3816

D00009

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BIOSTRAT. NO. 3/89
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TITLE:	PALYNOLOGICAL DATING OF PIDINGA FORMATION FROM AQUITAINE SMD 4031, SMD 4034 AND SMD 4035 WELLS.
AUTHOR:	N.F. Alley Biostratigraphy Branch
BOREHOLES:	Aquitaine SMD 4031, SMD 4034 and SMD 4035.

SAMPLE DATA:

Branch Nos.:	S 6332, S 6333, S 6331
Depths:	30-33m, 51-54m, 9-10 m
Type of Samples:	Cuttings
Lithology:	Carbonaceous sand
Submitter:	M. Benbow, Regional Geology

LOCATION:

General location:	Lake Maurice area
Mapsheet:	MAURICE 1:250 000

STRATIGRAPHIC INFORMATION:

Stratigraphic unit:	Pidinga Formation
Geological Province:	Eucla Basin
Rock sample (RS) No:	5039-RS-219, 5039-RS-220, 5035-RS-221

ANALYTICAL DATA:

Laboratory technique:	HF, heavy liquid, 129um and 10um sieve, 3-4 min. Schulze, very dilute K_2C0_3 solution, repeat sieve.
Microscope used:	Zeiss Photomicroscope III
Palynomorphs counted:	No counts were undertaken since the yield and preservation of palynomorphs were poor.

RESULTS:

Zonation:

Zonal species are poorly represented and thus all three samples can only be tentatively assigned to the Middle Nothofagidites asperus Zone of Stover and Partridge (1982). Based on a single poorly preserved specimen of ?Sparganiaceaepollenites barungensis, the palynoflora from the SMD 4035 sample may belong to the S. barungensis Zone of Harris (1971).

Zonal Species and Associates Present or Absent:

Nothofagidites falcatus present; Proteacidites tuberculatus absent.

Age:

Late Eocene to latest Eocene

Palaeoenvironment:

Paralic. Low frequencies of dinoflagellates are present.

REFERENCES:

Harris, W.K. 1971. Tertiary stratigraphic palynology, Otway Basin. In: Wopfner, H. and Douglas, J.G. (Eds.), The Otway Basin of Southeastern Australia. Special Bulletin of the Geological surveys of South Australia and Victoria, pp. 67-87.

Stover, L.E. and Partridge, A.D. 1982. Eocene spore-pollen from the Werillup Formation, Western Australia. Palynology, 6, pp. 69-96.