

PALYNOLOGICAL ZONE DETERMINATIONS  
FOR YURONGI-1, BASS BASIN, AUSTRALIA

By

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SUMMARY

<u>DEPTHS</u>	<u>ZONES</u>	<u>AGES</u>
4145'	Upper <i>N. asperus</i>	Late Eocene
4000' - 4500'	Middle <i>N. asperus</i>	Middle to Late Eocene
5037' - 5195'	Lower <i>N. asperus</i>	Middle Eocene
5415' - 5610'	<i>Proteacidites asperopolus</i>	Early Eocene
5825' - 6075'	Middle <i>M. diversus</i>	Early Eocene
6130' - 6400'	Lower <i>M. diversus</i>	Early Eocene
6620' - 7096'	Upper <i>L. balmei</i>	Paleocene
7420' - 7935'	Lower <i>L. balmei</i>	Paleocene

Spore pollen zone assignments for Yurongi-1, Bass Basin, are based on the examination of palynomorph assemblages from 21 sidewall cores and one conventional core. Generally well preserved and diverse assemblages occur between 4145 and 7000 feet; poorly preserved assemblages with low species diversity were recovered from 7096 to 7935 feet. Microplankton are present in all but the Lower *N. asperus* zone, the Lower *L. balmei* zone and the upper part of the *P. asperopolus* zone. Recycled spore-pollen, mainly Permian forms, occur in samples at 5825 and 6075 feet (Middle *M. diversus* zone) and sporadically in samples between 7000 and 7705 feet (*L. balmei* zones). Occurrences of spore-pollen species in Yurongi-1 are shown on the accompanying palynomorph distribution sheets and a summary of the palynological analyses is presented on Table 1.

DISCUSSION

Upper *Nothofagidites asperus* Zone - Only the assemblage from sidewall core 29 at 4145 feet is assigned to this zone. The sample is abundantly fossiliferous and contains both spore-pollen and microplankton. Pollen of *Nothofagidites* spp. dominate the assemblage and are represented by a variety of species as well as an abundance of specimens. Proteaceous pollen, in contrast, are relatively rare with low species diversity. Preservation of the spore-pollen varies from excellent to fair, and a majority of the specimens were identified confidently. Microplankton are not only much rarer than spore-pollen but also generally less well preserved. The following dinoflagellates and acritarchs occur at 4145 feet.

INTERPRETATIVE