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OMEO NO. 1 WELL, GIPPSLAND BASIN

PALYNOLOGICAL EXAMINATION OF
SELECTED SAMPLES

by

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Palynological Report

Client : Australian Aquitaine Petroleum
Study : Omeo No. 1 Well, Gippsland Basin
Aims : Determination of age, selected samples

INTRODUCTION

Two core and six cuttings samples from Omeo No. 1 Well drilled in the Gippsland Basin at Latitude 30°36'45.6"S, Longitude 147°43'02.5"E in Victoria P17 were processed by normal palynological procedures. The basis for the biostratigraphy and consequent age determinations are based on Stover & Partridge (1973), Partridge (1976) and Dettmann & Playford (1969).

OBSERVATIONS

Two core samples were examined. The bottom core at 3036.5 m yielded the following assemblage:

Cyathidites australis
Cycadopites sp.
Gambierina rudata
aff *Haloragacidites* sp.
Lygistopollenites florinii
Phyllocladidites mawsonii
Podocarpidites sp.
Proteacidites spp.

The yield was very low and preservation was very poor.

Likewise the organic yield was very low and the kerogens were composed of the following macerals: Amorphogen, 5%; Phyrogen, 10% hylogen 5% and melanogen 80%.

No TAI determinations was made because of the very low yield. Core 1 at 2357 m yielded the following assemblage

Banksiaeidites arcuatus
Cyathidites splendens
Ericipites sp.
Haloragacidites harrisii
Lygisteopollenites florinii
Micrantheum sp.
Myrtaceidites parvus/mesonesus
Nothofagidites brachyspinulosa
N. Emarcidus
N. flemingii
N. vansteenisii
Periporopollenites sp.
Podocarpidites sp.
Proteacidites parvus
P. recavus
Phyllocladidites mawsonii

Simplicipollis meridianus
Stereisporites (Tripunctisporis) sp.
Tricolporites adelaidensis
T. sphaerica

The microfossil yield was very low and preservation poor. Similarly the organic yield was low and the kerogens are comprised of the following macerals: Amorphogen, 90%, hylogen, 5%, phyrogen, 5%. The TAI was determined at 2+.

Six cuttings samples from the following intervals were examined:

3174m
3209
3219
3237
3249
3351

With the exception of the two highest samples all yield similar assemblages. The microfossil yield was low and preservation poor. The assemblage comprised:

Baculatisporites comaumensis
Cicatricosisporites australiensis
Cycadopites sp.
Cyathidites australis
Falcisporites spp.
Microcachyridites antarcticus
Podocarpidites spp.
Podosporites microsaccatus
Stereisporites antiquasporites.

In addition the two highest samples contained Phyllocladidites mawsonii.

INTERPRETATION

Core 2 at 3036.5m

Because of its low diversity and poor preservation the assemblage can only be determined as Late Cretaceous undifferentiated. the presence of G. rudata and L. florinii would suggest that the age is no older than the N. senectus zone but it may be younger.

Core 1 at 2357m

This assemblage although it does not contain all of the diagnostic species, such as Nothofagidites asperus or N. falcata, of the N. asperus zone is sufficiently diverse to permit this correlation. Further subdivision is not forthcoming, but the assemblage has some affinity with those from the middle and late N. asperus sub-zone. The sample is non marine.

Cuttings Samples

The bottom four samples although they are poorly preserved and low in diversity have affinities with undifferentiated early Cretaceous assemblages. There is nothing in the assemblages to permit finer zonation.

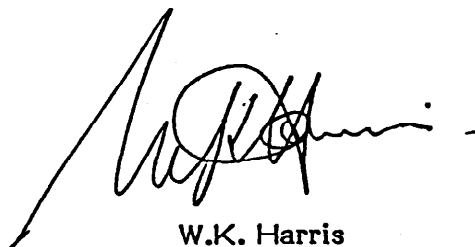
The top two samples that contain P. mawsonii may be of Late Cretaceous age but because the assemblages are derived from cuttings the species maybe from down hole contamination.

REFERENCES

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