



PE990131

PALYNOLOGICAL REPORT 2 ON THE GREEN BANKS 1 WELL  
FOR BEACH PETROLEUM N.L.

V Archer  
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Palynological Report 2 on the Green Banks 1 Well for Beach Petroleum N.L.

An additional four samples, all cuttings, were examined from the Green Banks 1 well for Beach Petroleum.

The three shallowest samples had previously been examined for micropalaeontological dating by Dr C.Abele, but they yielded only Miocene foraminifera, which were assumed to be present from downhole contamination.

The palynological data for these three samples suggests that they are all of early Eocene age. No evident contamination was recorded in the spore-pollen assemblages and this is presumably because the late Miocene sediments which produced the cavings are marine and contain little in the way of spores and pollen.


A small number of dinoflagellates were recorded in the assemblages, suggesting a minor marine influence for the sediments.

The fourth sample examined at a depth of 510-520 m, is stratigraphically situated between Early Cretaceous and Late Cretaceous sediments. (Refer Report 1).

The assemblage contains no dinoflagellates, unlike the Maastrichtian sample above it at 454.0 m. The spore-pollen species are non-diagnostic but do indicate that the sample is not of an Early Cretaceous age. The maturation of the grains (brownish-yellow in colour) suggests that they are not present from cavings from younger sediments, nor are there any species diagnostic of younger zones.

It seems reasonable to assume that the sample may be of a Late Cretaceous age.

The results are on Attachment 'A', with species lists on Attachment 'B'. The zonation scheme used is that of Stover and Partridge 1973 in 'Tertiary and Late Cretaceous Spores and Pollen from the Gippsland Basin, South-eastern Australia', Proc. R. Soc. Vict. Vol 85 Pt.2, 237-286.

  
Vivienne Archer  
PALYNOLOGIST

## ATTACHMENT A

## RESULTS OF PALYNOLOGICAL EXAMINATION OF THE GREEN BANKS 1 WELL

TYPE	DEPTH (m)	CONFIDENCE RATING	SPORE-POLLEN ZONE	AGE
Cuttings	290	3	Lower-Upper <u>M. diversus</u> Zone	Early Eocene
"	340	3	"	"
"	380	3	"	"
"	510 - 520	4	-	Maastrichtian

## Confidence Ratings

- 0 = SWC or core, excellent confidence assemblage with zone species of spores, pollen and microplankton
- 1 = SWC or core, good confidence, assemblage with zone species of spores and pollen or microplankton
- 2 = SWC or core, poor confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.
- 3 = Cuttings, fair confidence, assemblage with zone species of either spore and pollen or microplankton, or both.
- 4 = Cuttings, no confidence, assemblage with non-diagnostic spores, pollen and/or microplankton.

## APPENDIX B

## SPECIES LIST - GREEN BANKS 1

	DEPTH (m)	290	340	380	510-520
<i>Alisporites grandis</i>			R/W		
<i>Araucariacites australis</i>			X		
<i>Baculatisporites comaumensis</i>		X			
<i>Camazonosporites bullatus</i>				X	
<i>Ceratosporites equalis</i>					X
<i>Calvifera triplex</i>		X			
<i>Cyathidites gigantis</i>			X		
<i>C. minor</i>		X	X	X	X
<i>Dictyophyllidites concavus</i>		X			
<i>Dilwynites granulatus</i>		X	X		
<i>Gleicheniidites cercinidites</i>			X		X
<i>Haloragacidites harrisii</i>		X	X	X	
<i>Ilexpollenites anguloclavatus</i>			X		
<i>Kraeuselisporites linearis</i>					Cf.
<i>Latrobosporites crassus</i>		X	X		
<i>Lycopodiumsporites austroclavatidites</i>		X	X		
<i>Lygistepollenites florinii</i>		X	X	X	
<i>Malvacipollis diversus</i>		X			
<i>M. subtilis</i>		X			
<i>Microcachyridites antarcticus</i>		X		X	X
<i>Monosulcites waitakiensis</i>			X	X	
<i>Myrtaceidites parvus/mesonesus</i>		X			
<i>Nothofagidites deminutus</i>		X			
<i>N. emarcidus/heterus</i>		X	X	X	
<i>Osmundacidites wellmanii</i>				X	Cf.
<i>Parvisaccites catastus</i>					X
<i>Periporopollenites demarcatus</i>		X			
<i>P. polyoratus</i>				X	
<i>Phyllocladidites paleogenicus</i>		X			
<i>Podocarpidites spp.</i>		X	X		X
<i>Proteacidites angulatus</i>		Cf.			
<i>P. annularis</i>		X	X		
<i>P. crassus</i>		Cf.			

## APPENDIX B (Continued)

## SPECIES LIST - GREEN BANKS 1

	DEPTH (m)	290	340	380	510-520
<i>P. grandis</i>		X	X	X	
<i>P. incurvatus</i>			X		
<i>P. latrobensis</i>		X			
<i>P. leightonii</i>		X			
<i>P. obscurus</i>					Cf.
<i>P. reticuloscabratus</i>		X			
<i>Reticulatisporites pudens</i>				X	
<i>Simplicepollis meridianus</i>		X			
<i>Stereisporites antiquasporites</i>		X	X		
<i>Tricolpites cooksonae</i>			X		
<i>T. fissilis</i>		X			
<i>T. minor</i>			X		X
<i>Tricolporites adelaidensis</i>			X		
<i>Verrucosisporites Kopukuensis</i>			X		
Microplankton					
<i>Crassosphaera concinna</i>		Cf.			
<i>Deflandrea pachyceros</i>		Cf.			
<i>Hystrichosphaeridium</i> sp.		X			
<i>Spiniferites ramosus</i>		X	X	Cf.	