MICROPALAEONTOLOGICAL AND PALYNOLOGICAL REPORTS ON SAMPLES FROM BEACH PETROLEUM GREEN BANKS NO 1 AND DEPARTMENT OF MINERALS AND ENERGY HOTSPUR NO 1 WELLS

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Micropalaeontological report on samples from Green Banks 1 well.

Three samples of unwashed cuttings from the Green Banks 1 well near Heywood in southwestern Victoria were investigated palaeontologically at the request of Beach Petroleum N. L.

The samples contain fragments of bryozoans, pelecypods and gastropods, and fairly rich assemblages of foraminifera. The following planktonic species, relevant for biostratigraphic correlation and age determination, are present:

280 - 290m

Globigerinoides sicanus, Globigerinoides trilobus, Globoquadrina dehiscens, Globorotalia semivera, Globigerina woodi woodi, Globigerina praebulloides

330 - 340m

Globigerinoides trilobus (some tending towards sicanus), Globigerinoides ~~rubor~~ subquadratus, Globoquadrina dehiscens, Globigerina woodi woodi, Globigerina praebulloides

370 - 380m

Globigerinoides trilobus, Globoquadrina dehiscens, Globorotalia semivera, Globigerina woodi woodi, Globigerina woodi connecta, Globigerina praebulloides

In terms of Australian foraminiferal zones, the planktonic foraminifera represent the Globigerinoides trilobus and Globigerinoides sicanus zones (distinguished by the absence or presence of G. sicanus). These correspond to the internationally used planktonic foraminiferal zones N7 and lower part of N8, indicating a late Early Miocene age. No pre-Miocene foraminifera were observed in the samples.

In the Heywood area the foraminifera observed would be expected to occur in the upper part of the Gellibrand Marl. The foraminifera and other fossil fragments in the samples from the Green Banks 1 well obviously come from strata well above the Upper Cretaceous section.

C Abele 2.6.1983

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Palynological Report on samples from the Green Banks 1 and Hotspur 1 wells.

Samples from the Beach Petroleum well Green Banks 1 and the DM&E Well Hotspur 1 were examined for palynological dating at the request of Beach Petroleum.

The wells are located in the onshore portion of the Otway Basin, approximately north-east of Heywood, Victoria.

The zonation scheme used is that of Dettmann 1969 in "Palynological Zonation of Lower Cretaceous Sediments of the Otway Basin, Victoria", S.D.A. Report R 1817 (Unpublished).

Samples have been assigned to Subzones, and where possible, to Units, on the basis of the above Zonation Scheme.

A species list for each sample is included in Attachment A.

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9/6/83

Report on Samples from the Green Banks 1 and Hotspur 1 wells

Results

GREEN BANKS 1

TYPE	DEPTH (M)	LITHOLOGY	CONFIDENCE RATING	SPORE-POLLEN ZONE	AGE
SWC	454.0	Carb. silty clay	0	T. longus Zone	Maastrichtian
"	569.5	"	2	C.paradoxa Zone : D.filosus unit	Middle Albian
"	755	"	1	"	"
"	812.0	"	1	"	"
"	1155.0	"	1	C.hughesi Subzone	Late Neocomian - Aptia
"	1195.5	"	2	"	"
"	1207	Coal	1	"	"

HOTSPUR 1

Core	319 - 321	Sandy mudstone	1	C.striatus Subzone	Early Albian
SWC	409.5	"	2	"	"
"	776.0	"	2	"	"
Core	917-919	"	1	"	"
SWC	1138.5	"	1	C.hughesi Subzone : Rouseisporites reticulatus unit	Early Aptian

CONFIDENCE RATING

0 = Excellent confidence; assemblage with zone species of spores, pollen and microplankton.

1 = Good confidence; assemblage with zone species of spores and pollen or microplankton.

[illegible] pollen and/or microplankton.

ATTACHMENT A	WELL	GREEN BANKS 1							HOTSPUR 1			
	DEPTH (M)	454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776	917-919	113
Aequitriradites spinulosus													X
A. verrucosus						X			X				X
Alisporites grandis		X	X	X	X	X	X	X	X		X	X	X
A similis				X	X	X	X	X	X				X
Amosipollis cruciformis		X											
Araucariacites australis		X							X				
Arcellites reticulatus				X									
Baculatisporites comaumensis			X					X	X	X	X		X
Balmeisporites holodictyus				X									
B. tridictyus				X									
Biretisporites spectabilis			X	X					X				
Beaupreaidites verrucosus		C											
Camaro zonosporites amplus		X											
C. ohaiensis		X											
Ceratosporites equalis			X		X	X	X		X			X	X
Cicatricosisporites australiensis			X	X	X	X			X	X	X		X
C. ludbrooki						X	X						X
C. pseudotripartitus									X				
Classopollis classoides			X	X	X	X	X	X	X	X	X		X
Cooksonites Variabilis								Cf.					X
Coptospora paradoxa				X	X								
C. Sp. A Dettman 1963					X								
Crybelosporites striatus			X						X			X	
C. stylosus									R/W		Cf.	R/W	
Cyathidites asper				X	X	X	X			X			
C. australis			X	X	X	X	X	X	X		X	X	X

WELL	GREEN BANKS 1							HOTSPUR 1				
DEPTH (M)	454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776.0	917-919	11
C. minor	X			X				X	X	X	X	
Cyclosporites hughesi					X							
Dictyotosporites complex						X						
D. filosus											X	
D. speciosus		X			X	X						
Dilwynites granulatus	X											
D. tuberculatus	X											
Foraminisporis asymmetricus			X	X				X	X	X		
F. dailyi		X				X						
F. wonthaggiensis						X		X		X		X
Foveotriletes parviretus		X										
Gambierina edwardsii	X											
G. rudata	X											
Gephyrapollenites wahooensis	X											
Gingkocycadophytus nitidus		X		X	X		X					
Gleicheniidites cercinidites	X			X			X	X	X			
Haloragacidites haloragoides								C				
H. harrisii	X	C										
Herkosporites elliottii	X											
Ilexpollenites anguloclavatus	X											
Ishyosporites punctatus	X				X						X	X
Klukisporites scaberis		X				X	X				X	X
Kuylisporites lunaris						X						
Laevigatisporites ovatus				X				X		X		
Leptolepidites major				X								X
L. verrucatus				X	X	X						

WELL	GREENBANKS 1							HOTSPUR 1				
DEPTH (M)	454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776.0	917-919	11
Lycopodiacidites asperatus								X				
Lycopodiumsporites austroclavatidites	X	X		x		x	x		x	x	x	
L. facetus						X						
L. nodosus						X	X	X				
L. reticulumsporites						X						
Lygistepollenites balmei	X											
L. florinii	X											
Microcachyridites antarcticus		X				X	X		X			
Neoraistrickia truncatus				X	X	X						
Nothofagidites heterus				C								
N senectus	X											
Ornamentifera sentosa	X											
Osmundacidites wellmanii				X			X				X	
Parvisaccites catastus								Cf.	Cf.			
Periporopollenites polyoratus	X											
Peromonolites densus	X											
Phyllocladidites mawsonii								X				
P. reticulosaccatus	X											
Pilosisporites parvispinosus									X			
P. notensis					X	X						
Podocarpidites spp.	X	X	X		X	X	X	X	X	X	X	
Podosporites microsaccatus	X	X	X	X	X			X				
Proteacidites adenanthoides	X											
P. amolosexinus	X											
P. angulatus	X											
P. crassus	Cf.											

	WELL	GREENBANKS 1						HOTSPUR 1				
	DEPTH (M) 454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776.0	917-919	11
P. latrobensis	X											
P. palisadus	X											
P. reticoloscabratus	X											
Quadraplanus brossus	X											
Reticulatisporites pudens						X						
Rouseisporites radiatus			X	X								
R. reticulatus			X						X			
R. simplex								X		X		
Schizosporis parvus			X			X						
S. reticulatus		X	X			X						
Simplicepollice meridianus	X											
Stereisporites antiquasporites		X	X	X	X	X		X	X	X		
S. (Tripunctisporis) sp.	X											
Tetracolporites verrucosus	Cf.											
Tricolpites confessus	X											
T. gillii	X											
T. longus	X											
T. waiparaensis	X											
Tricolporites lillei	X											
Trilobosporites trioreticulosus		X						X				
Triporopollenites sectilis	X											
Tsugaepollenites dampieri				X	X					X		
T. trilobatus				X								
Velosporites triquetrus				X								

WELL	GREENBANKS 1							HOTSPUR 1				
DEPTH (M)	454.0	569.0	755.5	812.0	1155.0	1195.0	1207.5	319-321	409.5	776.0	917-919	11
MICROPLANKTON												
Eurydinium conoratum	X											
Trichodinium hirsutum	X											

C = Cavings/contamination

R/W = Reworking