



PE990627

## APPENDIX

### FORAMINIFERAL ANALYSIS, VEILFIN-1, GIPPSLAND BASIN

by

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Esso Australia Ltd  
Palaeontological Report, 1984/21

July 1984

0935L

## INTERPRETATIVE DATA

### INTRODUCTION

TABLE 1: CALCAREOUS MICROFOSSIL SUMMARY, VEILFIN-1

GEOLOGICAL COMMENTS

DISCUSSION OF ZONES

REFERENCES

FORAMINIFERAL DATA SHEET

TABLE 2: INTERPRETATIVE DATA, VEILFIN-1

## INTRODUCTION

Forty one sidewall core samples from Veilfin-1 between 934.8 and 2024.0m (KB depth) were processed for foraminiferal analysis. Select samples were also examined for calcareous nannoplankton. All samples from Latrobe Group coarse clastics between 2002.6 and 2024.0m were barren of skeletal material. Four additional samples from the Latrobe Group (sidewall cores at 2395.1, 2399.0, 2678.0 and 2765.0m) were checked for their calcareous microfossil content because palynological evidence indicated a marine environment. These samples proved to be barren of foraminifera and calcareous nannoplankton.

Table 1 summarises the biostratigraphy of the units in Veilfin-1. Tables 2 and 3 summarise the palaeontological analysis of Veilfin-1 (basic and interpretative data). A range chart for planktonic foraminifera and calcareous nannoplankton is included as basic data.

TABLE 1  
CALCAREOUS MICROFOSSIL SUMMARY, VEILFIN-1

AGE	UNIT	ZONE	DEPTH(mKB)
- Late Miocene	Gippsland Limestone	Indeterm. C	934.8-1234.2 1300.0-1427.5
<hr/> log break at 1441.5m (latest Middle Miocene disconformity)			
Middle Miocene	Gippsland Limestone	D1	1449.9
<hr/> log break at 1472.0m (mid Middle Miocene disconformity - base channelling)			
Middle Miocene	Gippsland Limestone	D1	1490.2-1675.3
<hr/> log break at 1682.0m (early Middle Miocene disconformity)			
Middle Miocene	Lakes Entrance Fm	D2	1706.6
<hr/> log break at 1735.0m			
# upper Early Miocene - earliest Middle Miocene	Lakes Entrance Fm (shelf-derived skeletal limestone unit)	Indeterm. CN2-CN4	1761.0 1799.0
-		Indeterm.	1866.0
<hr/> log break at 1867.0m (latest Early Miocene disconformity)			
Early Miocene	Lakes Entrance Fm	H1	1949.5-1983.0
<hr/> log break at 1985.0m (basal Early Miocene, mid Late Oligocene or basal Late Oligocene disconformity)			
- latest Late Eocene	un-named glauconitic marl	Indeterm. K	1986.0 1988.0
<hr/> log break at 1988.0m			
latest Late Eocene # Late Eocene	Gurnard Formation (Member A)	K CP15a or younger	1990.0-1992.5 1996.1-1999.5
<hr/> lithological change at 2000.0m (?basal Late Eocene disconformity)			
* Middle Eocene	Gurnard Formation (Member B)	Lower <u>N. asperus</u>	2002.6-2024.0
<hr/> log break at 2025.0m (latest Early Eocene disconformity)			
+	Latrobe Group (coarse clastics)		

\* Age based on Hannah & Macphail (1985)

T.D. 3521mKB

# Age based on calcareous nannoplankton

+ Not studied

#### GEOLOGICAL COMMENTS

The Gurnard Formation disconformably overlies the Latrobe Group "coarse clastics". The log break at 2025.0m equates with the 49.5Ma event (latest Early Eocene disconformity) of Vail et al. (1977). This event coincides with the cutting of the Marlin Channel in the northwestern part of the offshore Gippsland Basin. The Gurnard Formation in Veilfin-1 consists of two members, one of Middle Eocene age (Member B) and one of Late Eocene age (Member A). Member B (2000.0-2025.0m) comprises non-calcareous glauconitic sandstone and has been age-dated as Lower N. asperus Zone by Hannah & Macphail (1985). Member A (1988.0-2000.0m) comprises calcareous glauconitic sandstone and calcareous greensand, and is Middle N. asperus Zone, Late Eocene in age. A Late Eocene age for Member A is confirmed by calcareous microfossil (this report) and palynological evidence (Hannah & Macphail, 1985). A disconformity which equates with the basal Late Eocene disconformity (40Ma event) of Vail et al. (1977) is suspected to separate Members A and B. A hiatus would be expected between the two greensand members but this cannot be confirmed by biostratigraphic evidence.

An un-named glauconitic marl unit (1985.0-1988.0m) conformably overlies the Gurnard Formation in Veilfin-1. The unit is latest Late Eocene in age (Zone K). The common occurrence of pelletal glauconite and the presence of fish teeth remains in the marl indicate that it represents a condensed sequence deposited during a period of high relative sea-level (transgressive phase).

The un-named glauconitic marl is disconformably overlain by Early Miocene (Zone H1) calcareous shale of the Lakes Entrance Formation. The disconformity at 1985.0m may equate with the basal Early Miocene, mid Late Oligocene or basal Late Oligocene (30Ma event) events of Vail et al. (1977). The hiatus between the un-named glauconitic marl and the Lakes Entrance Formation spans the entire Oligocene interval (approximately 11myr).

The log break at 1867.0m in Veilfin-1 marks the base of a 132m thick shelfal-derived skeletal limestone unit which probably was derived from the distal edge of the prograding Gippsland Limestone. Three sidewall core samples shot in the unit (1761.0, 1799.0 and 1866.0m) contain abundant skeletal remains (echinoid spines, bryozoan fragments and shell fragments) and very impoverished planktonic foraminiferal assemblages. On the basis of a calcareous nannoplankton dating of one sidewall core sample from the unit (SWC at 1799.0m), the skeletal limestone unit is considered to be upper Early Miocene to earliest Middle Miocene in age. It is suspected that this skeletal limestone unit disconformably overlies calcareous shales of the Lakes Entrance

Formation, however, this conclusion is speculative because of poor sample control between the units. The log break at 1867.0m (base skeletal limestone unit) probably equates with the Mid Miocene Seismic Marker (latest Early Miocene disconformity). The skeletal limestone unit may well have slumped from the shelf edge of the prograding Gippsland Limestone into a slope/bathyal environment.

The shelf-derived skeletal limestone unit is conformably (?) overlain by early Middle Miocene calcilutites (Zone D2) referred to the Lakes Entrance Formation.

The Lakes Entrance Formation is disconformably overlain by Gippsland Limestone of Zone D1 age. The log break at 1682m equates with an early Middle Miocene disconformity which is known to straddle the Zone D2/D1 boundary basinwide. Sidewall core samples of the Gippsland Limestone in Veilfin-1 indicate that the basal 700m of the unit comprises sponge spicule rich calcilutite, calcisiltite and fine grained calcarenite.

The log break at 1472.0m occurs within Zone D1 and probably equates with the mid Middle Miocene disconformity (13Ma event) of Vail et al. (1977). Seismic evidence indicates that this event represents the base of "Late Miocene Channelling". Another log break approximately 30m higher at 1441.5m may equate with the latest Middle Miocene (11Ma event) of Vail et al. (1977).

## DISCUSSIONS OF ZONES

The Tertiary biostratigraphy in Veilfin-1 is based on the Gippsland Basin planktonic foraminiferal zonal scheme of Taylor (in prep.) and the calcareous nannoplankton zonal scheme of Bukry (1981).

### Indeterminate Interval: 2002.6 - 2024.0m

The interval is barren of foraminifera. Palynological evidence indicates that the interval is assignable to the Lower N. asperus spore/pollen Zone (Hannah & Macphail, 1985).

### Zone CP15a or younger: 1996.1-1999.5m

The sidewall core sample at 1999.5m contains very poorly preserved specimens of Chiamolithus oamaruensis. This indicates that the interval is no older than Zone CP15a. The interval is assignable to the Middle N. asperus spore/pollen Zone (Hannah & Macphail, 1985).

### Zone K: 1988.0-1992.5m

Typical Zone K planktonic foraminiferal assemblages including Globigerina angaporoides, G. brevis, G. linaperta and Globorotalia gemma, occur in the interval.

### Indeterminate Interval: 1986.0m

The sidewall core sample at 1986.0m only contains severely recrystallized indeterminate planktonics and is not age-diagnostic.

### Zone H1: 1949.5-1983.0m

The uphole entry of Globigerina woodi connecta at 1983.0m defines the base of Zone H1 in the well.

### Indeterminate Interval: 1866.0m

The sample at 1866.0m contains a very sparse indeterminate planktonic foraminiferal assemblage which is not age diagnostic. Calcareous nannoplankton are more common but the assemblage is also not age diagnostic. Sphenolithus moriformis represents a dominant floral component of the nannofossil assemblage.

### Zones CN2-CN4: 1799.0m

The occurrence of Sphenolithus heteromorphous indicates that the sidewall core sample at 1799.0m is Zone CN2, CN3 or CN4 in age.

Indeterminate Interval: 1761.0m

Very impoverished planktonic foraminiferal and calcareous nannoplankton assemblages in the sample at 1761.0m are not age diagnostic.

Zone D2: 1706.6m

A diverse, well preserved Zone D2 assemblage occurs in the sidewall core sample at 1706.6m.

Zone D1: 1449.9-1675.3m

The association of Orbulina universa and Globorotalia miozea miozea without a diverse Globigerinoides fauna indicates that the interval is assignable to Zone D1.

Zone C: 1300.0-1427.5m

The uphole entry of Globorotalia miotumida miotumida at 1427.5m defines the base of Zone C in the well.

Indeterminate Interval: 934.8-1234.2m

The planktonic foraminiferal faunas in the interval are very poorly preserved and no zonal assignment is possible.

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TABLE I  
SUMMARY OF PALAEONTOLOGICAL ANALYSIS, VEILFIN-1, GIPPSLAND BASIN  
INTERPRETATIVE DATA

NATURE OF SAMPLE	DEPTH (mKB)	PLANKTONIC FORAMINIFERAL YIELD	PRESERVATION	PLANKTONIC FORAMINIFERAL DIVERSITY	ZONE	AGE	COMMENTS
SWC 184	2024.0	Barren	-	-	-	-	
SWC 185	2022.0	Barren	-	-	-	-	
SWC 186	2020.0	Barren	-	-	-	-	
SWC 187	2017.5	Barren	-	-	-	-	
SWC 188	2016.7	Barren	-	-	-	-	
SWC 189	2014.1	Barren	-	-	-	-	
SWC 190	2012.0	Barren	-	-	-	-	
SWC 191	2009.5	Barren	-	-	-	-	
SWC 192	2008.0	Barren	-	-	-	-	
SWC 193	2005.9	Barren	-	-	-	-	
SWC 194	2004.0	Barren	-	-	-	-	
SWC 195	2002.6	Barren	-	-	-	-	
SWC 196	1999.5	Barren	-	-	-	-	
SWC 197	1996.1	Barren	-	-	-	-	
SWC 198	1992.5	Low	Poor	Low	K	L.Eocene-E.Oligocene	
SWC 199	1990.0	Low/Moderate	Poor	Low	K	" "	
SWC 200	1988.0	Low/Moderate	Very poor	Low	K	" "	Fish Teeth
SWC 201	1986.0	Low	Very poor	Very Low	Indeterm.	-	
SWC 202	1983.0	Low/Moderate	Poor	Moderate	H-I	Early Miocene	
SWC 203	1980.0	High	Moderate	Moderate	H-I	"	echinoid spines (few)
SWC 204	1975.5	High	Moderate/poor	High	H-I	"	echinoid spines (common)
SWC 205	1970.1	High	Poor	Moderate	H-I	"	echinoid spines (common), shell frags (few)
SWC 206	1965.0	Moderate	Poor	Moderate	H-I	"	echinoid spines, sponge spicules (few)
SWC 207	1957.5	High	Poor	Moderate	H-I	"	sponge spicules (few)
SWC 208	1949.5	High	Moderate/poor	Moderate	H-I	"	echinoid spines (few)
SWC 209	1866.0	Very low	Very poor	Very low	Indeterm.	-	shell fragments, echinoid spines (common)
SWC 210	1799.0	Very low	Very poor	Very low	Indeterm.	-	bryozod, echinoid spines (common), sponge spics (few)
SWC 211	1761.0	Very Low	Very poor	Very low	Indeterm.	-	as above
SWC 212	1706.6	High	Moderate	Moderate/High	D-2/D-I	Mid Miocene	
SWC 213	1675.3	Very Low	Very poor	Very low	D-2/D-I	"	sponge spicules (few)
SWC 214	1660.1	Low	Very poor	Very low	D-2/D-I	"	as above
SWC 215	1520.1	High	Poor	Moderate	D-2/D-I	"	sponge spicules (common)
SWC 216	1490.2	Moderate	Moderate/Poor	Low/Moderate	D-2/D-I	"	as above plus echinoid spines (few)

TABLE I cont.  
SUMMARY OF PALAEONTOLOGICAL ANALYSIS, VEILFIN-1, GIPPSLAND BASIN  
INTERPRETATIVE DATA

NATURE OF SAMPLE	DEPTH (mKB)	PLANKTONIC FORAMINIFERAL YIELD	PRESERVATION	PLANKTONIC FORAMINIFERAL DIVERSITY	ZONE	AGE	COMMENTS
SWC 217	1449.9	Moderate	Moderate/Poor	Low/Moderate	D-2/D-1	"	sponge spicules (common)
SWC 218	1427.5	Moderate	Moderate	Moderate	C	Late Miocene	sponge spicules, echinoid spines (few)
SWC 219	1400.0	Moderate	Moderate	Moderate	C	"	sponge spicules (few)
SWC 220	1300.0	Low	Poor	Low/Moderate	C	"	sponge spicules (common)
SWC 221	1234.2	Very low	Moderate/Poor	Very Low	Inderm.	-	sponge spicules (few)
SWC 222	1150.1	Very low	Poor	Very Low	Inderm.	-	as above
SWC 223	1045.1	Very low	Poor	Very low	Inderm.	-	
SWC 224	934.8	Low	Poor	Very low	Inderm.	-	

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TABLE 2

SUMMARY OF PALAEONTOLOGICAL ANALYSIS, VEILFIN-I, GIPPSLAND BASIN  
INTERPRETATIVE DATA

NATURE OF SAMPLE	DEPTH (mKB)	YIELD		PRESERVATION		DIVERSITY		ZONE	AGE	COMMENTS	
		PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS				
SWC 184	2024.0	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 185	2022.0	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 186	2020.0	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 187	2017.5	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 188	2016.7	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 189	2014.1	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 190	2012.0	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 191	2009.5	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 192	2008.0	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 193	2005.9	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 194	2004.0	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 195	2002.6	Barren	Not stud.	-	-	-	-	-	-	-	
SWC 196	1999.5	Barren	Low	-	Poor	Very low	-	No older than CPI5a	Late Eocene		
SWC 197	1996.1	Barren	Mod/low	-	Poor	Low	-	Indeterm.	Late Eocene		
SWC 198	1992.5	Low	Low	Poor	Poor	Very low	K	Indeterm.	latest L. Eocene	Fish teeth	
SWC 199	1990.0	Low/mod	Mod/low	Poor	Poor	Low	K	Indeterm.	latest L. Eocene	Fish teeth	
SWC 200	1988.0	Low/mod	High	Very poor	Mod/poor	Low	Low	K	Indeterm.	latest L. Eocene	Fish teeth
SWC 201	1986.0	Low	Very low	Very poor	Very poor	Very low	-	Indeterm.	Indeterm.	-	Fish teeth
SWC 202	1983.0	Low/mod	Not stud.	Poor	-	Mod.	-	HII	-	E. Miocene	-
SWC 203	1980.0	High	Not stud.	Mod.	-	Mod.	-	HII	-	E. Miocene	Echinoid spines (few)
SWC 204	1975.5	High	Not stud.	Mod/poor	-	High	-	HII	-	E. Miocene	Echinoid spines (common)
SWC 205	1970.1	High	Not stud.	Poor	-	Mod.	-	HII	-	E. Miocene	Echinoid spines (common), shell fragments (few)

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TABLE 2 cont.

SUMMARY OF PALAEONTOLOGICAL ANALYSIS, VEILFIN-I, GIPPSLAND BASIN  
INTERPRETATIVE DATA

NATURE OF SAMPLE	DEPTH (mKB)	YIELD		PRESERVATION		DIVERSITY		ZONE	AGE	COMMENTS
		PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS			
SWC 206	1965.0	Mod.	Not stud.	Poor	-	Mod.	-	H1	-	E. Miocene Echinoid spines, sponge spicules (few)
SWC 207	1957.5	High	Not stud.	Poor	-	Mod	-	H1	-	E. Miocene Sponge spicules (few)
SWC 208	1949.5	High	Not stud.	Mod/poor	-	Mod.	-	H1	-	E. Miocene Echinoid spines (few)
SWC 209	1866.0	Very low	Moderate	Very poor	Mod/poor	Very low	Very low	Inderm.	Inderm.	- Shell fragments, echinoid spines (common)
SWC 210	1799.0	Very low	Low	Very poor	Mod.	Very low	Low	Inderm.	CN2-CN4	upper E. Miocene Bryozoa, echinoid spines - earliest M. (common), sponge spics (few)
SWC 211	1761.0	Very low	Very low	Very poor	Mod.	Very low	Very low	Inderm.	Inderm.	earliest M. Miocene Bryozoa, echinoid spines (common), sponge spics (few)
SWC 212	1706.6	High	Not stud.	Mod.	-	Mod/high	-	D2	-	M. Miocene -
SWC 213	1675.3	Very low	Not stud.	Very poor	-	Very low	-	D1	-	M. Miocene sponge spicules (few)
SWC 214	1660.1	Low	Not stud.	Very poor	-	Very low	-	D1	-	M. Miocene sponge spicules (few)
SWC 215	1520.1	High	Not stud.	Poor	-	Mod.	-	D1	-	M. Miocene sponge spicules (common)
SWC 216	1490.2	Mod.	Not stud.	Mod/poor	-	Low/mod.	-	D1	-	M. Miocene sponge spicules (common), echinoid spines (few)
SWC 217	1449.9	Mod.	Not stud.	Mod/poor	-	Low/mod.	-	D1	-	M. Miocene sponge spicules (common)
SWC 218	1427.5	Mod.	Not stud.	Mod.	-	Mod.	-	C	-	L. Miocene sponge spicules, echinoid spines (few)
SWC 219	1400.0	Mod.	Not stud.	Mod.	-	Mod.	-	C	-	L. Miocene sponge spicules (few)
SWC 220	1300.0	Low	Not stud.	Poor	-	Low/mod.	-	C	-	L. Miocene sponge spicules (common)
SWC 221	1234.2	Very low	Not stud.	Mod/poor	-	Very low	-	Inderm.	-	L. Miocene sponge spicules (few)
SWC 222	1150.1	Very low	Not stud.	Poor	-	Very low	-	Inderm.	-	L. Miocene sponge spicules (few)
SWC 223	1045.1	Very low	Not stud.	Poor	-	Very low	-	Inderm.	-	L. Miocene sponge spicules (few)
SWC 224	934.8	Low	Not stud.	Poor	-	Very low	-	Inderm.	-	L. Miocene sponge spicules (few)

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BASIC DATA

TABLE 3: FORAMINIFERAL DATA, VEILFIN-1

RANGE CHART: TERTIARY PLANKTONIC FORAMINIFERA AND  
CALCAREOUS NANNOPLANKTON

TABLE 3

SUMMARY OF PALAEONTOLOGICAL ANALYSIS, VEILFIN-1, GIPPSLAND BASIN  
BASIC DATA

NATURE OF SAMPLE	DEPTH (mKB)	YIELD		PRESERVATION		DIVERSITY	
		PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS	PLANK FORAMS	NANNOS
SWC 184	2024.0	Barren	Not stud.	-	-	-	-
SWC 185	2022.0	Barren	Not stud.	-	-	-	-
SWC 186	2020.0	Barren	Not stud.	-	-	-	-
SWC 187	2017.5	Barren	Not stud.	-	-	-	-
SWC 188	2016.7	Barren	Not stud.	-	-	-	-
SWC 189	2014.1	Barren	Not stud.	-	-	-	-
SWC 190	2012.0	Barren	Not stud.	-	-	-	-
SWC 191	2009.5	Barren	Not stud.	-	-	-	-
SWC 192	2008.0	Barren	Not stud.	-	-	-	-
SWC 193	2005.9	Barren	Not stud.	-	-	-	-
SWC 194	2004.0	Barren	Not stud.	-	-	-	-
SWC 195	2002.6	Barren	Not stud.	-	-	-	-
SWC 196	1999.5	Barren	Low	-	Poor	-	Very low
SWC 197	1996.1	Barren	Mod/low	-	Poor	-	Low
SWC 198	1992.5	Low	Low	Poor	Poor	Low	Very low
SWC 199	1990.0	Low/mod	Mod/low	Poor	Poor	Low	Very low
SWC 200	1988.0	Low/mod	High	Very poor	Mod/poor	Low	Low
SWC 201	1986.0	Low	Very low	Very poor	Very poor	Very low	-
SWC 202	1983.0	Low/mod	Not stud.	Poor	-	Mod.	-
SWC 203	1980.0	High	Not stud.	Mod.	-	Mod.	-
SWC 204	1975.5	High	Not stud.	Mod/poor	-	High	-
SWC 205	1970.1	High	Not stud.	Poor	-	Mod.	-
SWC 206	1965.0	Mod.	Not stud.	Poor	-	Mod.	-
SWC 207	1957.5	High	Not stud.	Poor	-	Mod	-
SWC 208	1949.5	High	Not stud.	Mod/poor	-	Mod.	-
SWC 209	1866.0	Very low	Moderate	Very poor	Mod/poor	Very low	Very low
SWC 210	1799.0	Very low	Low	Very poor	Mod.	Very low	Low
SWC 211	1761.0	Very low	Very low	Very poor	Mod.	Very low	Very low
SWC 212	1706.6	High	Not stud.	Mod.	-	Mod/high	-
SWC 213	1675.3	Very low	Not stud.	Very poor	-	Very low	-
SWC 214	1660.1	Low	Not stud.	Very poor	-	Very low	-
SWC 215	1520.1	High	Not stud.	Poor	-	Mod.	-
SWC 216	1490.2	Mod.	Not stud.	Mod/poor	-	Low/mod.	-
SWC 217	1449.9	Mod.	Not stud.	Mod/poor	-	Low/mod.	-
SWC 218	1427.5	Mod.	Not stud.	Mod.	-	Mod.	-
SWC 219	1400.0	Mod.	Not stud.	Mod.	-	Mod.	-
SWC 220	1300.0	Low	Not stud.	Poor	-	Low/mod.	-
SWC 221	1234.2	Very low	Not stud.	Mod/poor	-	Very low	-
SWC 222	1150.1	Very low	Not stud.	Poor	-	Very low	-
SWC 223	1045.1	Very low	Not stud.	Poor	-	Very low	-
SWC 224	934.8	Low	Not stud.	Poor	-	Very low	-

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Well Name Veilfin-1

Basin Gippsland

Sheet No. 1 of 2

\* C=CORE S=SIDEWALL CORE  
T=CUTTINGS J=JUNK BASKET

RARE  
FEW

**COMMON  
ABUNDANT**

PALAEO.CHART-2  
DWG.1107/OP/287

Well Name Veilfin-1

Gippsland

Sheet No. 2 of 2

Well Name Veilfin-1

Gippsland

Sheet No. 1 of 2

SAMPLE TYPE OR NO. *	DEPTH	2024.0	184
PLANKTONIC FORAMINIFERA		2022.0	185
<i>Globigerina angiporoides</i>		2020.0	186
<i>G. brevis</i>		2017.5	187
<i>G. linaperta</i>		2016.0	188
<i>Globorotalia gemma</i>		2014.1	189
<i>Chiloguembelina cubensis</i>		2012.0	190
<i>indeterminate globigerinids</i>		2009.5	191
<i>indeterminate planktonics</i>		2008.0	192
<i>Globoquadrina dehiscens s.l.</i>		2005.9	193
<i>G. dehiscens s.s.</i>		2004.0	194
<i>Globigerina praebulloides</i>		2002.6	195
<i>G. woodi connecta</i>		1999.5	196
<i>G. cf. tripartita</i>		1996.1	197
<i>Catapsydrax dissimilis</i>		1992.5	198
<i>Globoquadrina advena</i>		1990.0	199
<i>Globorotalia continuosa</i>		1988.0	200
<i>G. mayeri group</i>		1986.0	201
<i>G. sp. 1</i>		1983.0	202
<i>Globigerina woodi woodi</i>		1980.0	203
<i>Globorotalia obesa</i>		1975.5	204
<i>juvenile planktonics</i>		1970.1	205
<i>Globorotalia miozea miozea</i>		1965.0	206
<i>G. miozea conoidea</i>		1957.5	207
<i>G. praemenardii</i>		1949.5	208
<i>G. praescitula</i>		1866.0	209
<i>Globigerina bulloides</i>			
<i>Globigerinoides sicanus</i>			
<i>G. trilobus</i>			
<i>Orbulina universa</i>			
<i>Globorotalia menardii group</i>			
<i>G. miotumida miotumida</i>			
CALCAREOUS NANNOPLANKTON			
<i>Cyclococcolithus</i> sp.			
<i>Reticulofenestra</i> aff. <i>scissura</i>			
<i>indeterminate coccoliths</i>			
<i>Coccolithus</i> spp.			
<i>Helicopontosphaera</i> sp.			
<i>Reticulofenestra</i> <i>scissura</i>			
<i>Discoaster</i> sp. 1			
<i>Chiasmolithus oamaruensis</i>			
<i>Zygrhablithus bijugatus</i>			
<i>Discoaster tani nodifer</i>			
<i>Braarudosphaera bigelowi</i>			
<i>Discoaster druggi</i>			
<i>Coccolithus pelagicus</i>			
<i>Sphenolithus moriformis</i>			
<i>Discoaster deflandre</i>			
<i>Sphenolithus heteromorphus</i>			
<i>Micrantholithus pinguis</i>			

SAMPLE TYPE OR NO. *	DEPTH	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
<b>PLANKTONIC FORAMINIFERA</b>																
<i>Globigerina angaporoides</i>																
<i>G. brevis</i>																
<i>G. linaperta</i>																
<i>Globorotalia gemma</i>																
<i>Chiloquembelina cubensis</i>																
<i>indeterminate globigerinids</i>		---														
<i>indeterminate planktonics</i>			■													
<i>Globorquadrina dehiscens s.l.</i>								---								
<i>G. dehiscens s.s.</i>								---								
<i>Globigerina praebulloides</i>																
<i>G. woodi connecta</i>																
<i>G. cf. tripartita</i>																
<i>Catapsydrax dissimilis</i>																
<i>Globogaudrina advena</i>																
<i>Globorotalia continua</i>																
<i>G. mayeri group</i>																
<i>G. sp. 1</i>																
<i>Globigerina woodi woodi</i>		---	■					---	■							
<i>Globorotalia obesa</i>			■					■								
<i>juvenile planktonics</i>			---					---								
<i>Globorotalia miozea miozea</i>																
<i>G. miozea conoidea</i>																
<i>G. praemenardii</i>																
<i>G. praescitula</i>							■									
<i>Globigerina bulloides</i>																
<i>Globigerinoides sicanus</i>			■													
<i>G. trilobus</i>								■		■						
<i>Orbulina univaria</i>								■		■						
<i>Globorotalia menardii group</i>																
<i>G. miotumida miotumida</i>																
<b>CALCAREOUS NANNOPLANKTON</b>																
<i>Cyclococcolithus sp.</i>																
<i>Reticulofenestra aff. scissura</i>																
<i>indeterminate coccoliths</i>																
<i>Coccolithus spp.</i>			---													
<i>Helicopontosphaera sp.</i>																
<i>Reticulofenestra scissura</i>																
<i>Discoaster sp. 1</i>																
<i>Chiasmolithus oamaruensis</i>																
<i>Zygrhablithus bijugatus</i>																
<i>Discoaster tani nodifer</i>																
<i>Braarudosphaera bigelowi</i>																
<i>Discoaster druggi</i>																
<i>Coccolithus pelagicus</i>																
<i>Sphenolithus moriformis</i>																
<i>Discoaster deflandre</i>																
<i>Sphenolithus heteromorphus</i>																
<i>Micrantholithus pinguis</i>																

FOSSIL TYPE: CALCAREOUS MICROFOSSILS

Well Name Veilfin-1

Basin Gippsland Sheet No. 1 of 2

Sheet No. 1 of 2

\* C=CORE S=SIDEWALL CORE  
T=CUTTINGS J=JUNK BASKET

— RARE  
— FEW

**— COMMON  
ABUNDANT**

PALAEO.CHART-2  
DWG.1107/OP/287

Well Name Veilfin-1

## Basin Gippsland

Sheet No. 2 of 2

FOSSIL TYPE: CALCAREOUS MICROFOSSILS

Well Name Veilfin-I

Basin Gippsland Sheet No. 1 of 2

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

\* C=CORE S=SIDEWALL CORE  
T=CUTTINGS J=JUNK BASKET

RARE  
FEW

**—** COMMON  
**■** ABUNDANT

PALAEO.CHART-2  
DWG.1107/OP/287

Well Name Veilfin-1

Bosin

Gippsland

Sheet No. 2 of 2

FOSSIL TYPE: CALCAREOUS MICROFOSSILS

Well Name veilfin-1

## Basin

## Gippsland

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

\* C=CORE S=SIDEWALL CORE  
T=CUTTINGS J=JUNK BASKET

**RARE**  
**FEW**

**COMMON  
ABUNDANT**

PALAEO.CHART-2  
DWG.1107/OP/287

Well Name Veilfin-1Basin Gippsland Sheet No. 2 of 2

SAMPLE TYPE OR NO. *	DEPTH	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224
<b>PLANKTONIC FORAMINIFERA</b>																
<i>Globigerina angaporoides</i>	1799.0															
<i>G. brevis</i>	1761.0															
<i>G. linaperta</i>																
<i>Globorotalia gemma</i>																
<i>Chiloquembelina cubensis</i>																
<i>indeterminate globigerinids</i>																
<i>indeterminate planktonics</i>																
<i>Globogaudrina dehiscens s.l.</i>																
<i>G. dehiscens s.s.</i>																
<i>Globigerina praebulloides</i>																
<i>G. woodi connecta</i>																
<i>G. cf. tripartita</i>																
<i>Catapsudrax dissimilis</i>																
<i>Globogaudrina advena</i>																
<i>Globorotalia continua</i>																
<i>G. mayeri group</i>																
<i>G. sp. 1</i>																
<i>Globigerina woodi woodi</i>																
<i>Globorotalia obesa</i>																
<i>juvenile planktonics</i>																
<i>Globorotalia miozea miozea</i>																
<i>G. miozea connidea</i>																
<i>G. praemenardii</i>																
<i>G. praescitula</i>																
<i>Globigerina bullata</i>																
<i>Globigerinoides sicanus</i>																
<i>G. trilobus</i>																
<i>Orbulina univarea</i>																
<i>Globorotalia menardii group</i>																
<i>G. miotumida miotumida</i>																
<b>CALCAREOUS NANNOPLANKTON</b>																
<i>Cyclococcolithus</i> sp.																
<i>Reticulofenestra aff. scissura</i>																
<i>indeterminate coccoliths</i>																
<i>Coccolithus</i> spp.																
<i>Helicopontosphaera</i> sp.																
<i>Reticulofenestra scissura</i>																
<i>Discoaster</i> sp. 1																
<i>Chiasmolithus camaruensis</i>																
<i>Zygrhablithus bijugatus</i>																
<i>Discoaster tani nodifer</i>																
<i>Braarudosphaera bigelowi</i>																
<i>Discoaster druggi</i>																
<i>Coccolithus pelagicus</i>																
<i>Sphenolithus moriformis</i>																
<i>Discoaster deflandre</i>																
<i>Sphenolithus heteromorphus</i>																
<i>Micrantholithus pinguis</i>																

Well Name Veilfin-1

Basin Gippsland

Sheet No. 1 of 2

Well Name Veilfin-1

Basin

Gippsland

Sheet No. 2 of 2

SAMPLE TYPE OR NO. *	DEPTHS	1799.0	210	1761.0	211	1706.6	212	1675.3	213	1660.1	214	1520.1	215	1490.2	216	1449.9	217	1427.5	218	1400.0	219	1300.0	220	1234.2	221	1150.1	222	1045.1	223	934.8	224
<b>PLANKTONIC FORAMINIFERA</b>																															
<i>Globigerina angaporoides</i>																															
<i>G. brevis</i>																															
<i>G. linaperta</i>																															
<i>Globorotalia gemma</i>																															
<i>Chiloquembelina cubensis</i>																															
indeterminate globigerinids		---																													
indeterminate planktonics																															
<i>Globogaudrina dehiscaens s.l.</i>																															
<i>G. dehiscaens s.s.</i>																															
<i>Globigerina praebulloides</i>																															
<i>G. woodi connecta</i>																															
<i>G. cf. tripartita</i>																															
<i>Catapsudrax dissimilis</i>																															
<i>Globogaudrina advena</i>																															
<i>Globorotalia continua</i>																															
<i>G. mayeri group</i>																															
<i>G. sp. 1</i>																															
<i>Globigerina woodi woodi</i>		---																													
<i>Globorotalia obesa</i>																															
juvenile planktonics																															
<i>Globorotalia miozaea miozaea</i>		---																													
<i>G. miozaea conoidea</i>																															
<i>G. praemaniardii</i>																															
<i>G. praescitula</i>		---																													
<i>Globigerina bulloides</i>																															
<i>Globigerinoides sicanus</i>																															
<i>G. trilobus</i>																															
<i>Orbulina universa</i>		---																													
<i>Globorotalia menardii group</i>																															
<i>G. miotumida miotumida</i>																															
<b>CALCAREOUS NANNOPLANKTON</b>																															
<i>Cyclococcolithus sp.</i>																															
<i>Reticulofenestra aff. scissura</i>																															
indeterminate coccoliths																															
<i>Coccolithus spp.</i>																															
<i>Helicopontosphaera sp.</i>																															
<i>Reticulofenestra scissura</i>																															
<i>Discoaster sp. 1</i>																															
<i>Chiasmolithus camaruensis</i>																															
<i>Zygrhablithus bijugatus</i>																															
<i>Discoaster tani nodifer</i>																															
<i>Braarudosphaera bigelowi</i>		---																													
<i>Discoaster druggi</i>																															
<i>Coccolithus pelagicus</i>		---																													
<i>Sphenolithus moriformis</i>																															
<i>Discoaster deflandre</i>		---																													
<i>Sphenolithus heteromorphus</i>		---																													
<i>Micrantholithus pinguis</i>		---																													