FORAMINIFERAL SEQUENCE IN WHALE #1.

For: HUDBAY OIL (AUSTRALIA) LTD.

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PALTECH PTY LTD
MARINE MICROPALEONTOLOGISTS
SYDNEY NEW SOUTH WALES
MIDLAND WESTERN AUSTRALIA

THE FORAMINIFERAL SEQUENCE
IN WHALE # 1

Nineteen side wall cores from WHALE #1 were examined for foraminiferal content. On the basis of this examination the following biostratigraphic and environmental breakdown of the sequence was noted:-

Sidewall Cores Depth (m)	Approx. E-log Unit Boundary	Age	Zone*	Paleoenvironment
388.3 to 394.2	Top	Early Miocene	F	Shelf edge canyon (>100m)
	transitional			
400.1 to 412.0		Early Miocene	G	Mid shelf canyon (>40m)
	transitional			
417.0 to 437.0		Early Miocene	H-1 to ?H-2	Inner/mid shelf Canyon Head (∿40m)
	439.0			
440.0 to 457.0		Late Eocene to ?Oligocene	K to ?J	Estuarine to back barrier lagoon
	459.0			
460.0 to 467.0		?	No forams found	back barrier lagoon to deltaic
	base of sequence examined			

*Planktonic foraminiferal zones after Taylor (in prep.).

A list of sidewall cores studied is shown on Tables 1 & 2. Side-wall cores at 470m, 472m & 475m were not examined as perusal indicated no meaningful yield of foraminifera would be obtained from destroying the sparse marterials recovered. Side-wall core at 407m was a very small sample and was not processed as samples above and below yielded sufficient data.

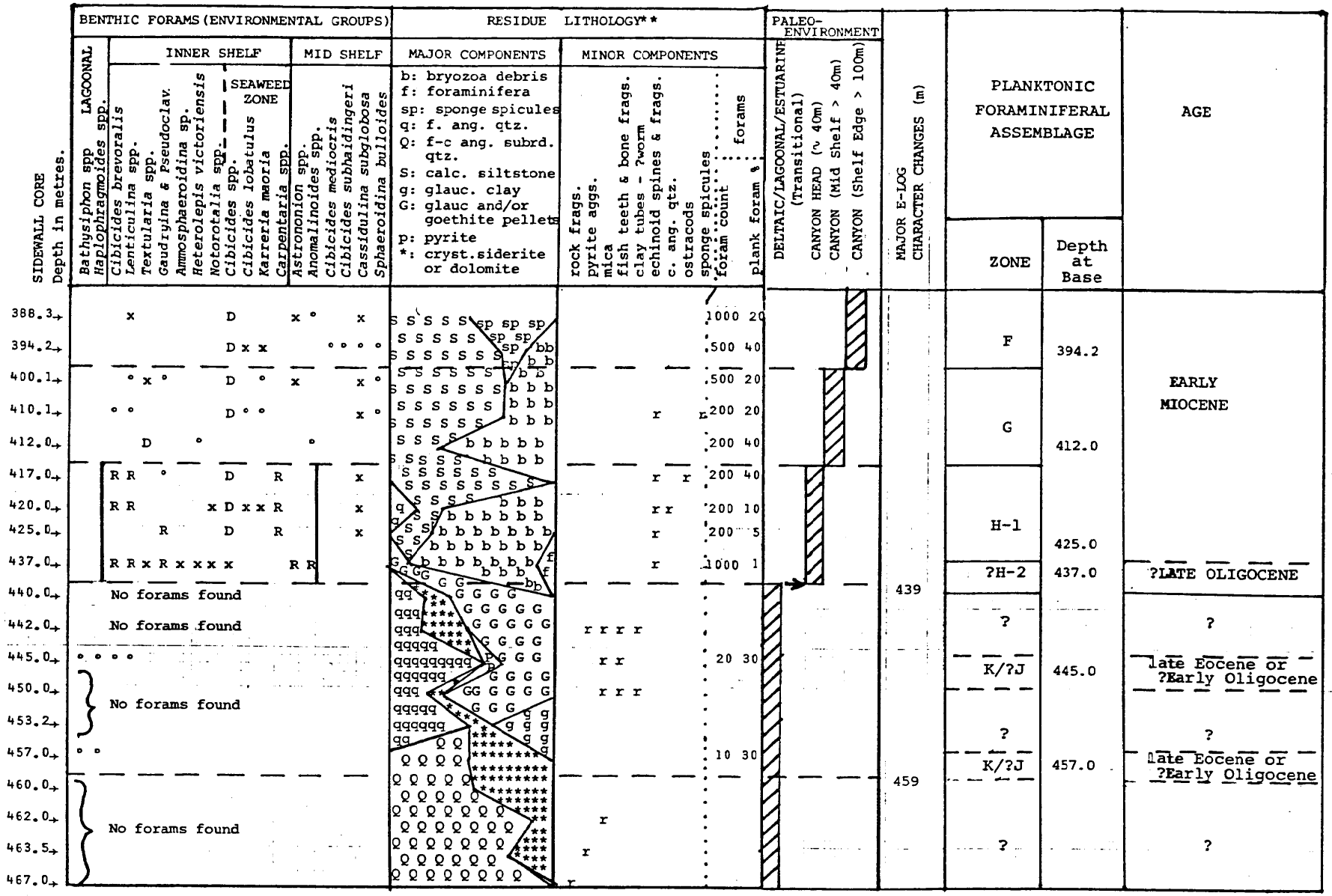
Planktonic foraminiferal content varied; being sporadic in the deltaic / estuarine sediments, but consistantly diagnostic in the marine carbonate sediments above 437m.

Tables I & II (herein) detail the record summarised on page 1. A correlation diagram, Figure 1, is included, as is a micropaleontological data sheet which shows the interpreted reliability of the planktonic foraminiferal zone determinations.

CORRELATION OF WHALE # 1 with ADJACENT WELLS and LAKES ENTRANCE

Figure 1, a fence diagram, demonstrates both biostratigraphic and approximate paleobathymetric correlation. As correlation with Baleen #1 is the most significant point, reference is made to the Baleen report (Paltech Report 1982/01) in order to avoid repetition.

Comparison between Whale and the nearby Flathead #1 sequence shows a remnant of Oligocene Zone I sediment in the latter sequence, whereas Zone I was not recognised in the former. It is noted that Oligocene planktonic foraminifera were recycled into basal Miocene sediments of Whale.



KEY: ° <20 specimens
x >20 specimens
D >60% of total count
R=reworked
r=rare
** visual estimate of processed sample.

TABLE 2: SIGNIFICANT BENTHONIC FORAMINIFERAL DISTRIBUTION, RESIDUE LITHOLOGY & PALEOENVIRONMENTAL ASSESSMENT - WHALE # 1.

MICROPALEONTOLOGICAL DATA SHEET

BASIN: GIPPSLAND ELEVATION: KB: 9.4 GL: 52.0

WELL NAME: WHALE # 1 TOTAL DEPTH:

AGE		FORAM. ZONULES	HIGHEST DATA					LOWEST DATA				
			Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time	Preferred Depth	Rtg	Alternate Depth	Rtg	Two Way Time
PLEISTOCENE		A_1										
		A_2										
PLIOCENE		A_3										
		A_4										
MIOCENE	LATE	B_1										
		B_2										
		C										
	MIDDLE	D_1										
		D_2										
		E_1										
		E_2										
	EARLY	F	388.3	1				394.2	0			
		G	400.1	0				412	1			
		H_1	417	1				425	1			
OLIGOCENE	LATE	H_2	437	2				437	2			
		I_1										
		I_2										
	EARLY	J_1	445*	2								
		J_2										
EOCENE		K						457*	2			
		Pre-K										

COMMENTS: SWCs at 445 and 457 contain only *Globigerina angiporoides angiporoides* which ranges from K to top J; therefore a K/J determination is all that can be given. However a Zone K designation is preferred.

CONFIDENCE RATING:

- 0: SWC or Core - Complete assemblage (very high confidence).
- 1: SWC or Core - Almost complete assemblage (high confidence).
- 2: SWC or Core - Close to zonule change but able to interpret (low confidence).
- 3: Cuttings - Complete assemblage (low confidence).
- 4: Cuttings - Incomplete assemblage, next to uninterpretable or SWC with depth suspicion (very low confidence).

NOTE: If an entry is given a 3 or 4 confidence rating, an alternative depth with a better confidence rating should be entered, if possible. If a sample cannot be assigned to one particular zone, then no entry should be made, unless a range of zones is given where the highest possible limit will appear in one zone and the lowest possible limit in another.

DATA RECORDED BY: *PALTECH PTY. LTD.* DATE: 4/1/1982.

DATA REVISED BY: DATE: