


PE990429

280380

Page 1 of 4

OIL and GAS DIVISION

THE FORAMINIFERAL SEQUENCE IN GANNET # 1

by

David Taylor
Consultant

January, 1980

Esso Australia Ltd.
Palaeontology Report No. 1980/5

OIL and GAS DIVISION

2/4

INTRODUCTION

GANNET-1

Twenty-two ditch cutting samples were examined between 730 feet and 2200 feet from the Gannet # 1 oil exploration well. However, both the quality of the samples and the forams were so poor as to preclude any reliable biostratigraphic analysis. It was therefore necessary to revert to the outmoded and less accurate "Stage Classification" system. These "stages" are in fact Kleinpellian and show a generalised sequence of events during the ? Pliocene to ? Oligocene. This sequence is as follows:-

DEPTH IN FEET	KLEINPELLIAN ZONE	ENVIRONMENT	AGE
730 to 1120	"Kalimnan" Zone of <i>Cibicides</i> <i>cynorum</i>	shallow inner shelf	? Pliocene to ? Late Miocene
1120 to 1780	"Batesfordian" Zone of <i>Amphistegina</i> and <i>Operculina</i>	Photic Zone Shoal bank edge of inner shelf	? Mid to ? Early Miocene
1860 to 1950	"Longfordian" Zone of miliolids	mid shelf	? Early Miocene
2010 to 2220	"Janjukian" Arenaceous Zone	embayment to inner shelf	? Early Miocene to Late Oligocene

* A distribution chart follows on page 2. Note that very few planktonic specimens were recorded.

Ditch cutting samples in feet at	730	820	940	1030	1120	1230	1330	1430	1530	1610	1730	1780	1860	1900	1950	2010	2060	2090	2150	2200
PLANKTONIC FORAMINIFERA																				
<i>Globigerina bulloides</i>																	D	D		
<i>G. woodi woodi</i>																	1	1	1	
<i>G. praebulloides</i>																			1	
<i>G. aff. euapertura</i>																			1	
BENTHONIC FORAMINIFERA																				
<i>Ammosphaeroidina</i> sp.				°	°															° 1
<i>Quinqueloculina lapidera</i>				°																
<i>Lenticulina megalophoto</i>				°			°			°										
<i>L. spp.</i>				°			°			1	°	°								
<i>Lingulina metungensis</i>				°																
<i>Cibicides cygnorum</i>				°	°	°	1					1	1							
<i>opacus</i>				°			1					°	1	D	1	1	1			
<i>mediocris</i>				°								°	1		1		1			
<i>lobatulus</i>				°	°				1			°	1		1	1				
<i>refulgens</i>				°								°	1							
<i>Operculina victoriensis</i>							D	D	D	A	D	A	A							
<i>Amphistegina lessonii</i>							A	1	1	1	A	A	A							
<i>Nodosaria</i> spp.				°	1	°	°	1	1	°	°	1								°
<i>Carpentaria</i> sp.										1	A									
Miliolids												1	°	°	°	°	°	°	°	°
<i>Guttulina problema</i>												1	°	°	°	°	°			
<i>Textularia</i> spp.												°	1	°	1	1				
<i>Pyrgo</i> sp.												°								
<i>Gyroidinoides</i> sp.												°	°	°	°	°	°	°	°	°
<i>Stomatorbina concentrica</i>												1								
<i>Sphaeroidina bulloides</i>												1	°	°						
<i>Elphidium</i> spp.												°	1	°						
<i>Haplophragmoides</i> spp.														1						
<i>Anomalinoidea</i> spp.																°	1			
<i>Cassidulina subglobosa</i>																1	1	°		
<i>Karrerina maoria</i>																°	1			
<i>Gaudyrina heywoodensis</i>																1	1	1	1	
<i>G. rudis</i>																1	1		1	
<i>Cibicides perforatus</i>																	1	1		

GRAIN COMPOSITION

Cement %	50	40	20	5	10	5	10	30	30	30	5	5								
Bryo. %	40	50	40	75	70	80	70	80	50	50	50	1030	40	20						
Ech. spines %	10	10	15	10	15	10	15	5	15	10	5	5	5							
Moll. frags. %				C	C	r	r	C	r	r	r	r	r	5	5	5				
Pyrite							C	C	r	r	r	r	r							
Limonite									r	r	r	r	C							C C
Calc. Siltst. %														7030	6080	6560	20			
Foraminifera %														5	10	20	5	10		
Ostracodes %														5	r	r	r	r		
Glaucinite																				r r R70 30
Sponge spicules																				r r
Fine qtz. sandst.																				
Coarse angular qtz.																				

LEGEND

- ° = 1-20 specimens
- I = 20 specimens
- D = 60% of specimens
- A = 50 specimens

MICROPALAEONTOLOGICAL DATA SHEET

4/4

BASIN: GIPPSLAND

ELEVATION: KB: _____ GL: _____

WELL NAME: GANNET # 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			730	4							
	A ₄											
MIOCENE	LATE	B ₁										
		B ₂						1030	4			
		C			1120	4						
	MIDDLE	D ₁										
		D ₂										
		E ₁										
		E ₂			1880	4				1780	4	
	EARLY	F										
		G										
		H ₁			2010	4				1950	4	
OLIGOCENE	LATE	H ₂										
		I ₁								2220	4	
	EARLY	I ₂										
		J ₁										
		J ₂										
Eocene	K											
	Pre-K											

COMMENTS: The quality of both the samples and the forams was so poor as to prevent accurate biostratigraphic analysis.

- 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: S.M. CONLEY

DATE: 26th March 1980

DATA REVISED BY: _____

DATE: _____