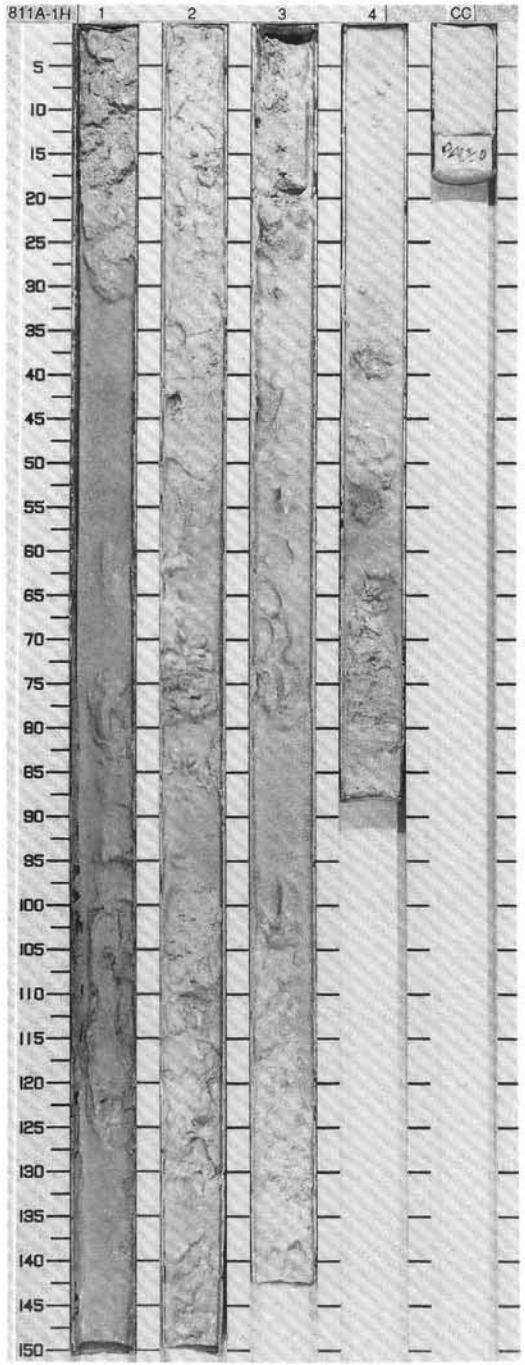
SITE 811 HOLE A CORE 1H CORED INTERVAL 0.0-5.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
PLEISTOCENE	N23	CN14b				● 73.6% 1.49	● 89.7%	1	0.5					NANNOFOSSIL FORAMINIFER OOZE to NANNOFOSSIL OOZE with FORAMINIFERS
						● 77.9% 1.35	● 89.7%	2	1.0				*	Major lithology: NANNOFOSSIL FORAMINIFER OOZE with PTEROPODS in Section 1; NANNOFOSSIL FORAMINIFER OOZE to NANNOFOSSIL OOZE with FORAMINIFERS in the following sections. The color of the sediment grades from light gray (10YR 7/2) in Section 1 to white (10YR 8/1) in Section 2, to very pale brown (10YR 8/3) in Section 3, 0-90 cm. Section 3, 90-140 cm are white (10YR 8/1 to 8/0). Alternations of colors between very pale brown (10YR 8/3 and 8/4), yellow (10YR 7/7) and white (10YR 8/1) were noted throughout Section 4.
					● 77.5% 1.78	● 91.5%	● 89.7%	3					*	Minor lithology: A 1-cm-thick NANNOFOSSIL FORAMINIFER OOZE with skeletal fragments was recovered at the bottom of Section 4, between 87 an 88 cm. A white (10YR 8/1) coarser grained (sediment gravity flow deposit?) foraminifer ooze occurs in CC, 0-6 cm.
A/G							94.3%	4					*	SMEAR SLIDE SUMMARY (%):
								CC					PAL	

	2, 37 D	2, 100 D	3, 15 D	4, 78 D
TEXTURE:				
Sand	20	15	20	15
Silt	80	85	80	85
COMPOSITION:				
Aragonite	7	10	4	5
Bioclast	3	2	3	2
Foraminifers	20	15	20	15
Nannofossils	65	70	67	75
Spicules	5	3	4	3

Information on Core Description Forms, for ALL sites, represents field notes taken aboard ship. Some of this information has been refined in accord with post-cruise findings, but production schedules prohibit definitive correlation of these forms with subsequent findings. Thus, the reader should be alerted to the occasional ambiguity or discrepancy.



SITE 811 HOLE A CORE 2H CORED INTERVAL 5.6-15.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
PLEISTOCENE	A/G	N22 - N23 / CN14a			● 72.4% 1.70 ● 90.0%	● 72.2% 1.68 ● 65.0% 1.71	● 93.4% ● XTOC=0.1 ● 94.7% 93.72%	1 2 3 4 5 6 CC	0.5 1.0				* * * 1W PAL

LITHOLOGIC DESCRIPTION

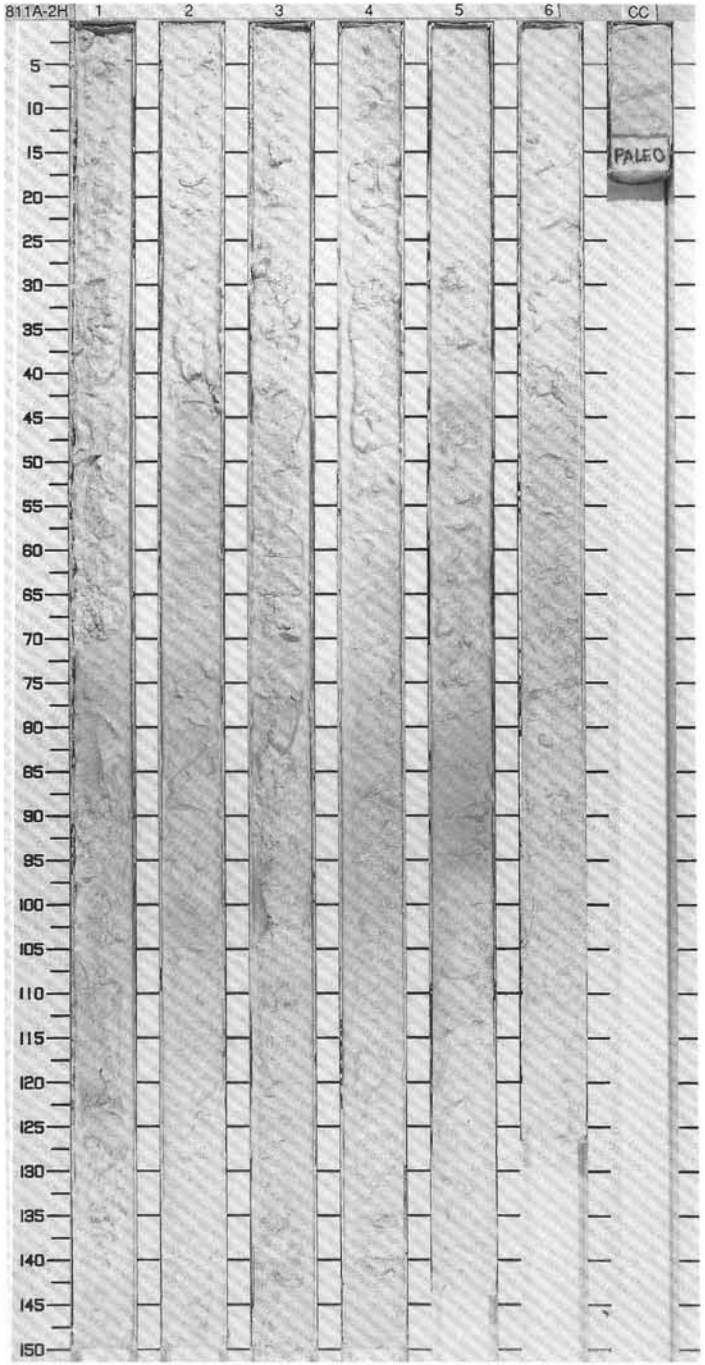
NANNOFOSSIL FORAMINIFER OOZE to FORAMINIFER OOZE with NANNOFOSSILS

Major lithology: NANNOFOSSIL FORAMINIFER OOZE to FORAMINIFER OOZE with NANNOFOSSILS. The color of the ooze in Section 1 through Section 4 and in Section 6 is white (10YR 8/0 to 8/1). The ooze in Section 5 is white (10YR 8/1) with light gray (10YR 7/1) layers, 45-50 cm and 79-98 cm. In the core catcher colors change between white (10YR 8/0 and 8/1; 2.5Y 8/0) and light gray (2.5Y 7/0).

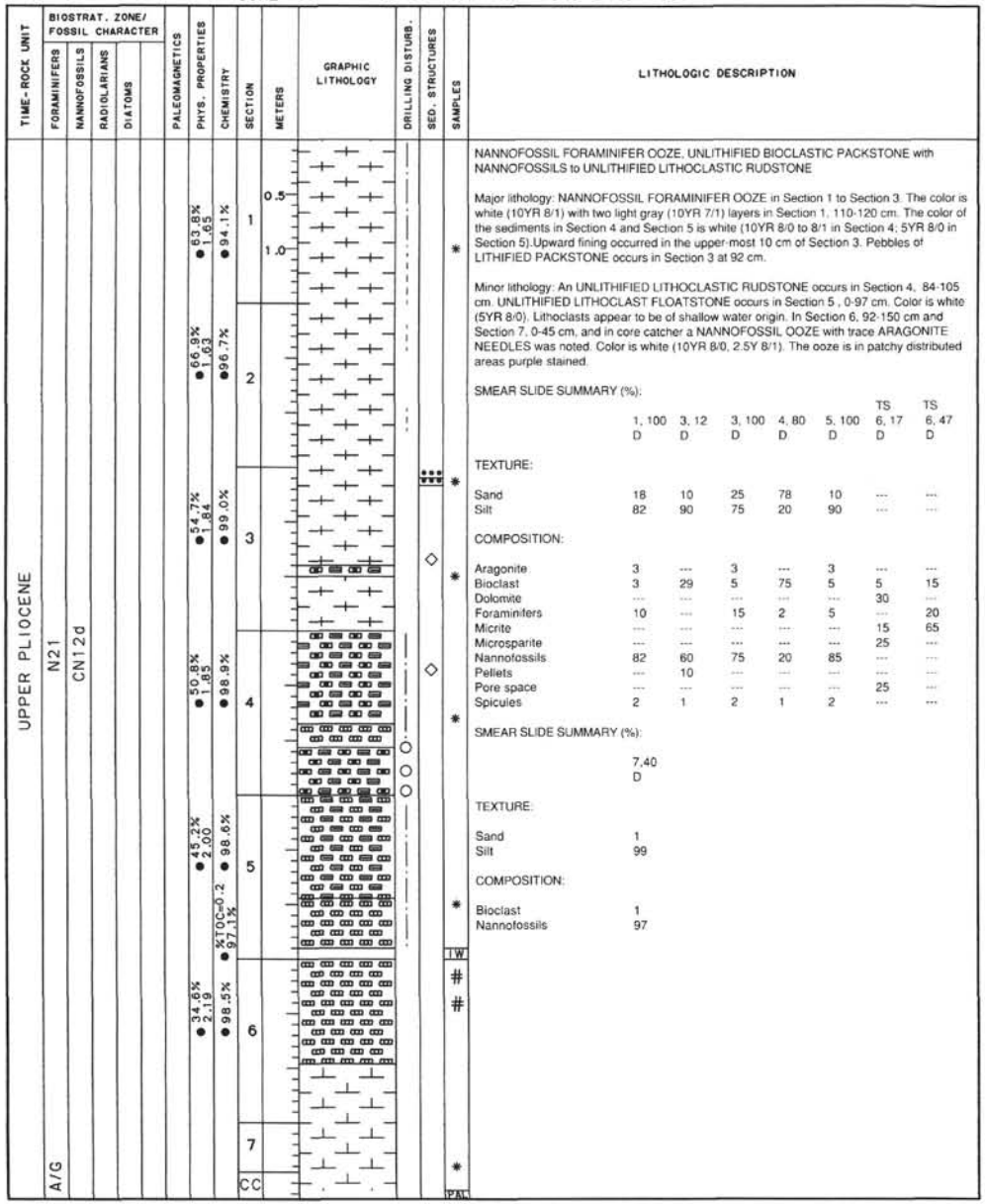
Minor lithology: NANNOFOSSIL FORAMINIFER OOZE with PTEROPODS, light gray (10YR 7/1), occurred in Section 1, 120-130 cm. FORAMINIFER NANNOFOSSIL OOZE was found in Section 5, 45-50 cm, and 79-98 cm.

SMEAR SLIDE SUMMARY (%):

	1, 100 D	3, 100 D	5, 100 D
TEXTURE:			
Sand	15	25	28
Silt	85	75	72
COMPOSITION:			
Aragonite	5	3	3
Bioclast	2	5	3
Foraminifers	15	20	25
Nannofossils	75	69	66
Pteropod	---	---	1
Spicules	3	3	2



SITE 811 HOLE A CORE 3H CORED INTERVAL 15.0-24.5 mbsf



LITHOLOGIC DESCRIPTION

NANNOFOSSIL FORAMINIFER OOZE, UNLITHIFIED BIOCLASTIC PACKSTONE with NANNOFOSSILS to UNLITHIFIED LITHOCLASTIC RUDSTONE

Major lithology: NANNOFOSSIL FORAMINIFER OOZE in Section 1 to Section 3. The color is white (10YR 8/1) with two light gray (10YR 7/1) layers in Section 1, 110-120 cm. The color of the sediments in Section 4 and Section 5 is white (10YR 8/0 to 8/1 in Section 4; 5YR 8/0 in Section 5). Upward fining occurred in the upper-most 10 cm of Section 3. Pebbles of LITHIFIED PACKSTONE occurs in Section 3 at 92 cm.

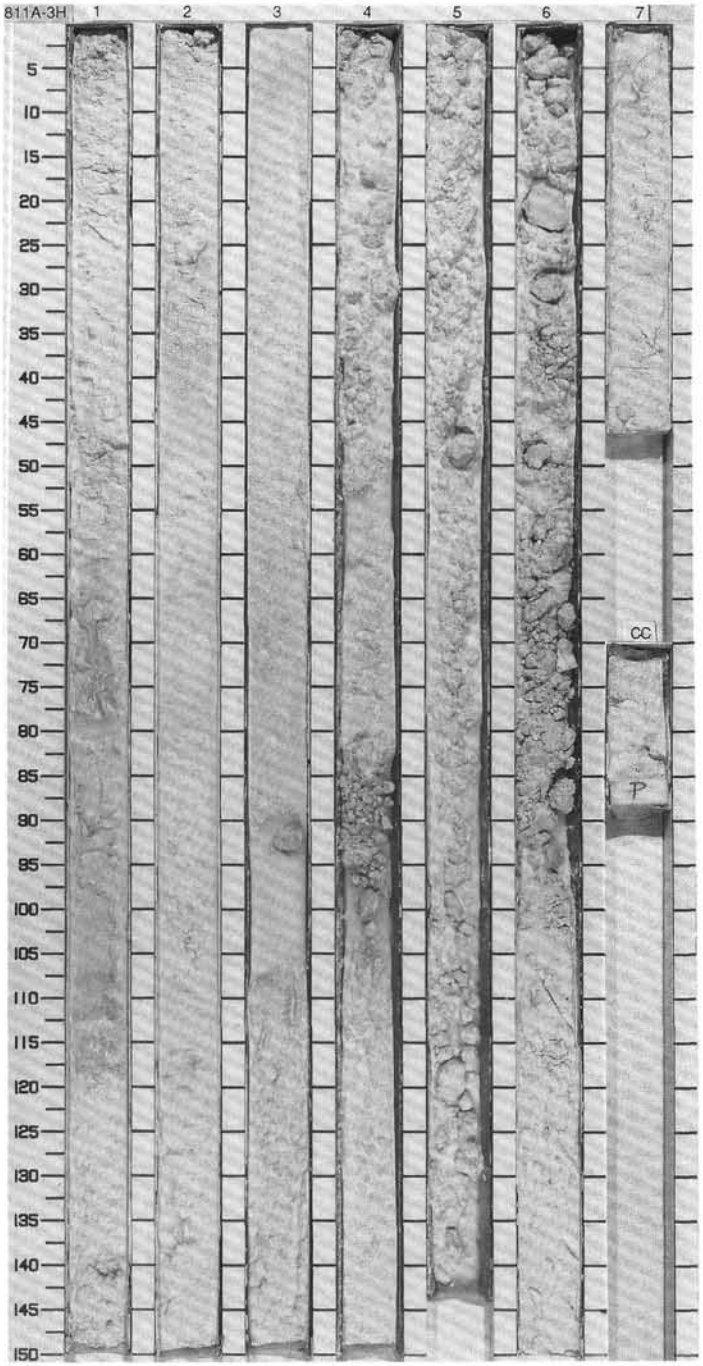
Minor lithology: An UNLITHIFIED LITHOCLASTIC RUDSTONE occurs in Section 4, 84-105 cm. UNLITHIFIED LITHOCLAST FLOATSTONE occurs in Section 5 , 0-97 cm. Color is white (5YR 8/0). Lithoclasts appear to be of shallow water origin. In Section 6, 92-150 cm and Section 7, 0-45 cm, and in core catcher a NANNOFOSSIL OOZE with trace ARAGONITE NEEDLES was noted. Color is white (10YR 8/0, 2.5Y 8/1). The ooze is in patchy distributed areas purple stained.

SMEAR SLIDE SUMMARY (%):

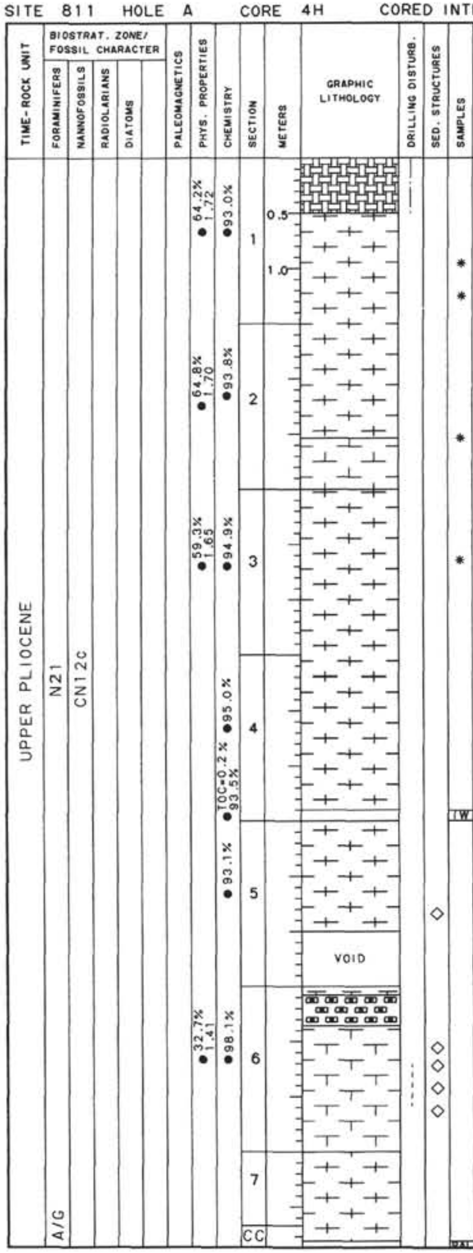
	1, 100 D	3, 12 D	3, 100 D	4, 80 D	5, 100 D	TS 6, 17 D	TS 6, 47 D
TEXTURE:							
Sand	18	10	25	78	10	---	---
Silt	82	90	75	20	90	---	---
COMPOSITION:							
Aragonite	3	---	3	---	3	---	---
Bioclast	3	29	5	75	5	5	15
Dolomite	---	---	---	---	---	30	---
Foraminifers	10	---	15	2	5	---	20
Micrite	---	---	---	---	---	15	65
Microsparite	---	---	---	---	---	25	---
Nannofossils	82	60	75	20	85	---	---
Pellets	---	10	---	---	---	---	---
Pore space	---	---	---	---	---	25	---
Spicules	2	1	2	1	2	---	---

SMEAR SLIDE SUMMARY (%):

	7, 40 D
TEXTURE:	
Sand	1
Silt	99
COMPOSITION:	
Bioclast	1
Nannofossils	97



SITE 811 HOLE A CORE 4H CORED INTERVAL 24.5-34.0 mbsf



LITHOLOGIC DESCRIPTION

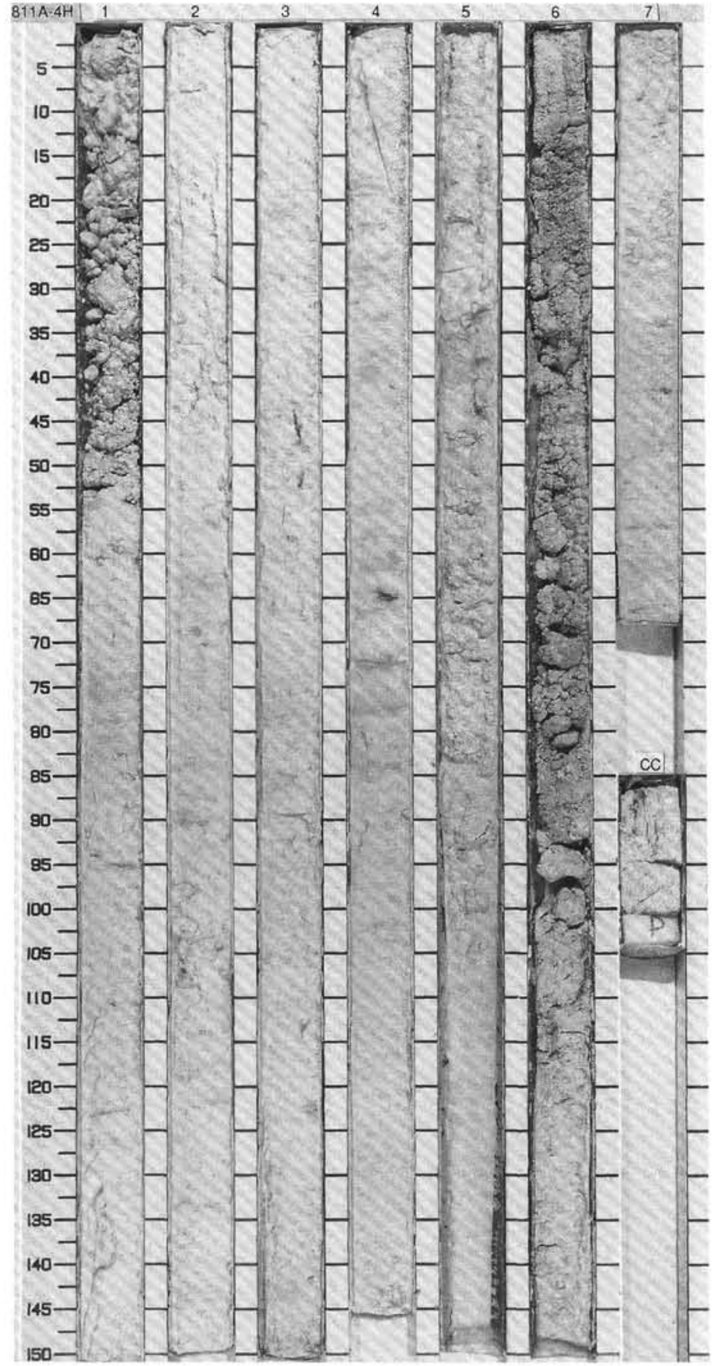
FORAMINIFER NANNOFOSSIL OOZE with BIOCLASTS and NANNOFOSSIL OOZE with ARAGONITE NEEDLES

Major lithology: FORAMINIFER NANNOFOSSIL OOZE, white (10YR 8/0 and 8/1), in Section 1 through Section 5. ARAGONITIC NEEDLES within this ooze were observed in Section 1 and Section 2. Bioclasts appear in brown (10YR 5/3) beds, 1-3 cm thick. These bands display gradational contacts and contain echinoids and other bioclastic shells, suggesting a sediment gravity flow deposit.

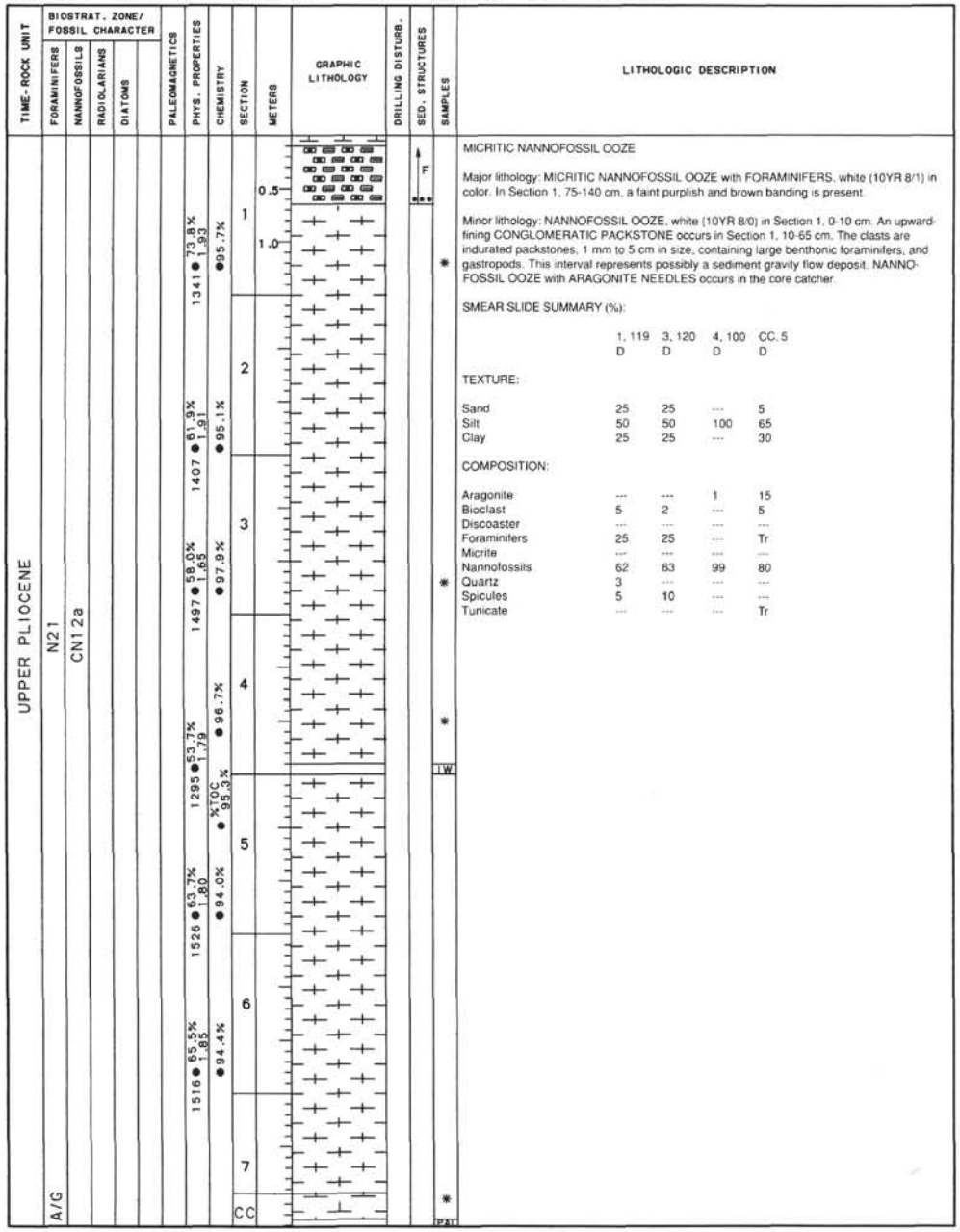
Minor lithology: RUBBLY CONGLOMERATIC LITHOCLASTIC RUDSTONE occurs in Section 1, 0-50 cm, most likely as downhole contamination. A single lithoclast was found in Section 5, at 90 cm. Within a FORAMINIFER OOZE in Section 6, 35-115 cm, the occurrence of subangular pebbles of leached packstone and wackestone with abundant moldic porosity, containing shell fragments, was noted. This interval might represent a sediment gravity flow deposit.

SMEAR SLIDE SUMMARY (%):

	1, 99 D	1, 121 M	2, 100 D	3, 66 D
TEXTURE:				
Sand	25	20	---	20
Silt	75	60	100	60
Clay	---	20	---	20
COMPOSITION:				
Aragonite	15	---	---	---
Bioclast	5	---	3	10
Discoaster	---	10	---	---
Echinoid	---	5	2	---
Foraminifers	20	15	5	10
Micrite	---	60	---	40
Nannofossils	60	10	79	40
Pellets	---	---	10	---
Spicules	---	---	1	---



SITE 811 HOLE A CORE 5H CORED INTERVAL 34.0-43.5 mbsf



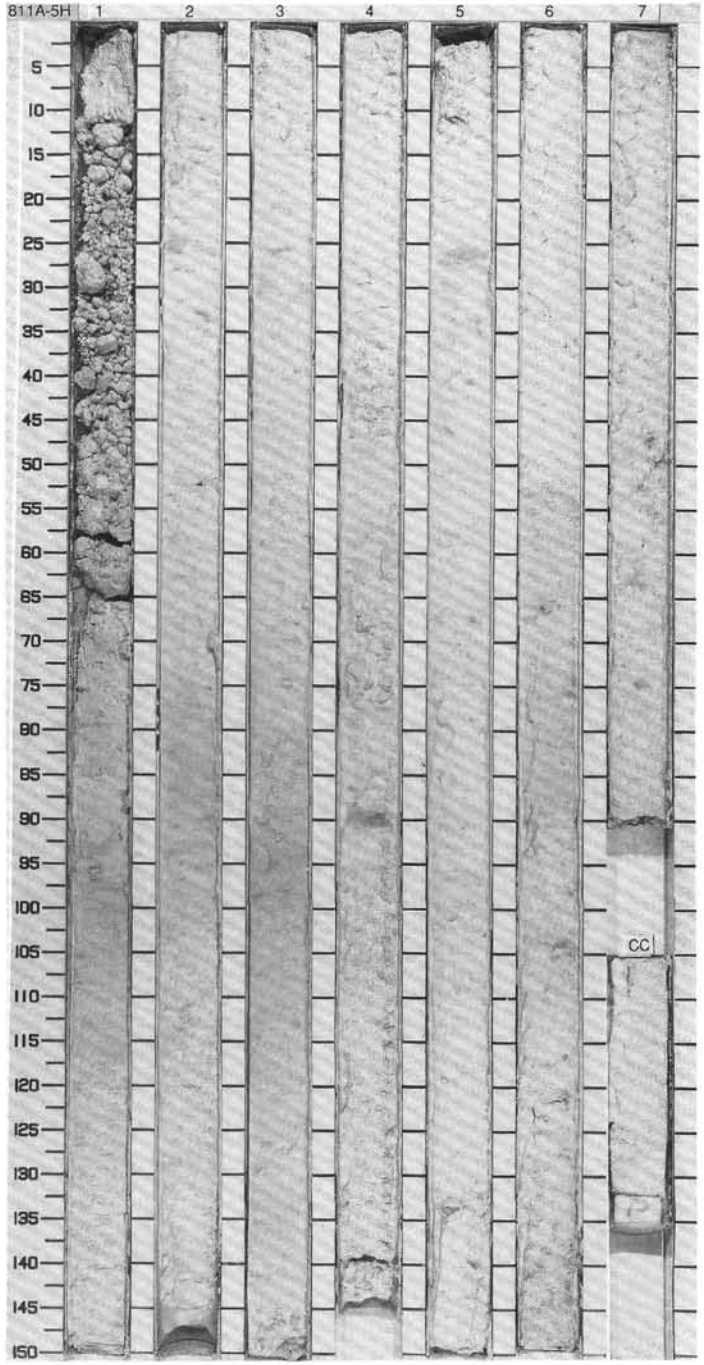
MICRITIC NANNOFOSSIL OOZE

Major lithology: MICRITIC NANNOFOSSIL OOZE with FORAMINIFERS, white (10YR 8/1) in color. In Section 1, 75-140 cm, a faint purplish and brown banding is present.

Minor lithology: NANNOFOSSIL OOZE, white (10YR 8/0) in Section 1, 0-10 cm. An upward-fining CONGLOMERATIC PACKSTONE occurs in Section 1, 10-65 cm. The clasts are indurated packstones, 1 mm to 5 cm in size, containing large benthonic foraminifers, and gastropods. This interval represents possibly a sediment gravity flow deposit. NANNOFOSSIL OOZE with ARAGONITE NEEDLES occurs in the core catcher.

SMEAR SLIDE SUMMARY (%):

	1, 119 D	3, 120 D	4, 100 D	CC, 5 D
TEXTURE:				
Sand	25	25	---	5
Silt	50	50	100	65
Clay	25	25	---	30
COMPOSITION:				
Aragonite	---	---	1	15
Bioclast	5	2	---	5
Discoaster	---	---	---	---
Foraminifers	25	25	---	Tr
Micrite	---	---	---	---
Nannofossils	62	63	99	80
Quartz	3	---	---	---
Spicules	5	10	---	---
Tunicate	---	---	---	Tr



SITE 811 HOLE A CORE 6H CORED INTERVAL 43.5-53.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER PLIOCENE	A/G	N21 / CN12a			1567 ● 62.0% 1.73 ● 93.0%	1559 ● 59.7% 1.78	● %TOC=0.3 ● 94.2% 94.9%	7					
						1570 ● 60.1% 1.82	● 95.0%	6					
						1570 ● 59.1% 1.86	● 94.5%	5					
						● 1502	● 96.7%	4					
						1527 ● 63.6% 1.78	● 94.0%	3					
								2					
								1	0.5				*
									1.0				
								CC					PAL

LITHOLOGIC DESCRIPTION

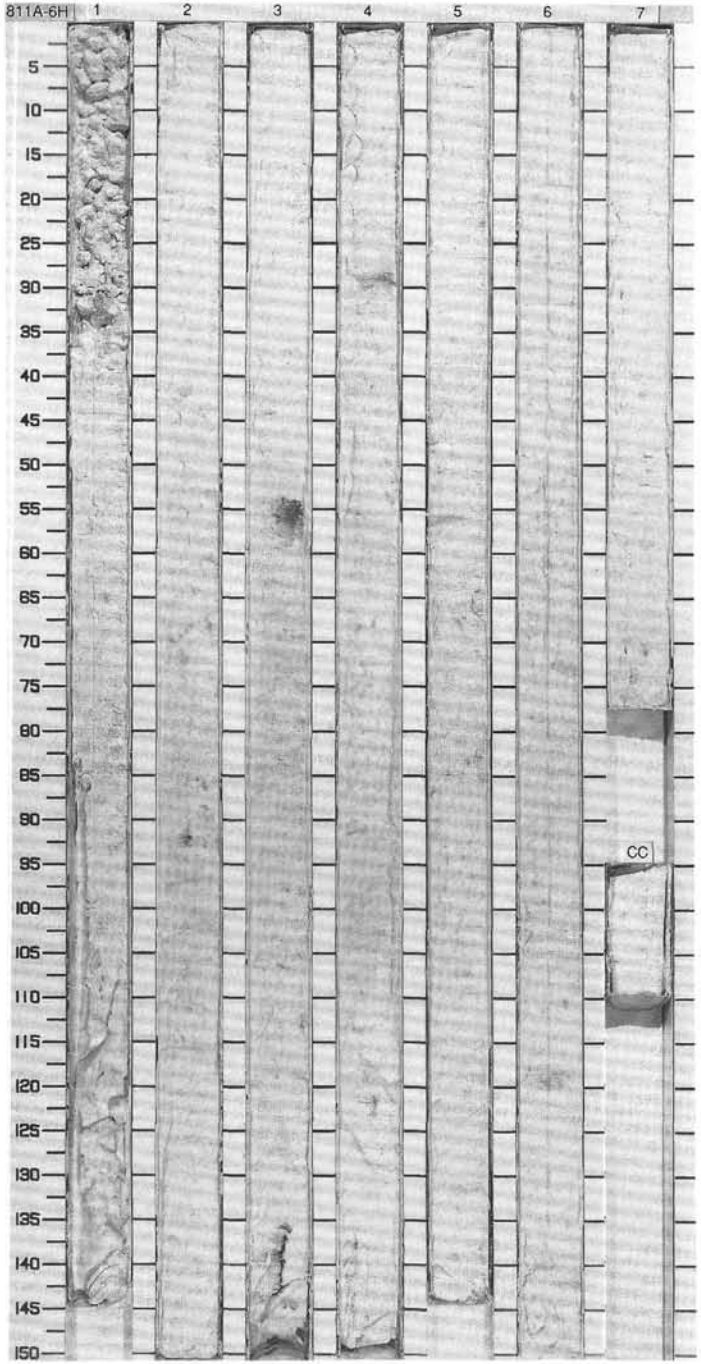
NANNOFOSSIL OOZE with FORAMINIFERS

Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS throughout all sections. In Section 1 some ARAGONITIC NEEDLES occurred. The color is white (10YR 8/1). In Section 2, 95-150 cm, slightly brownish (2.5Y 8/2) layers are intercalated in the white ooze. In this interval horizontal to slightly inclined burrows occur.

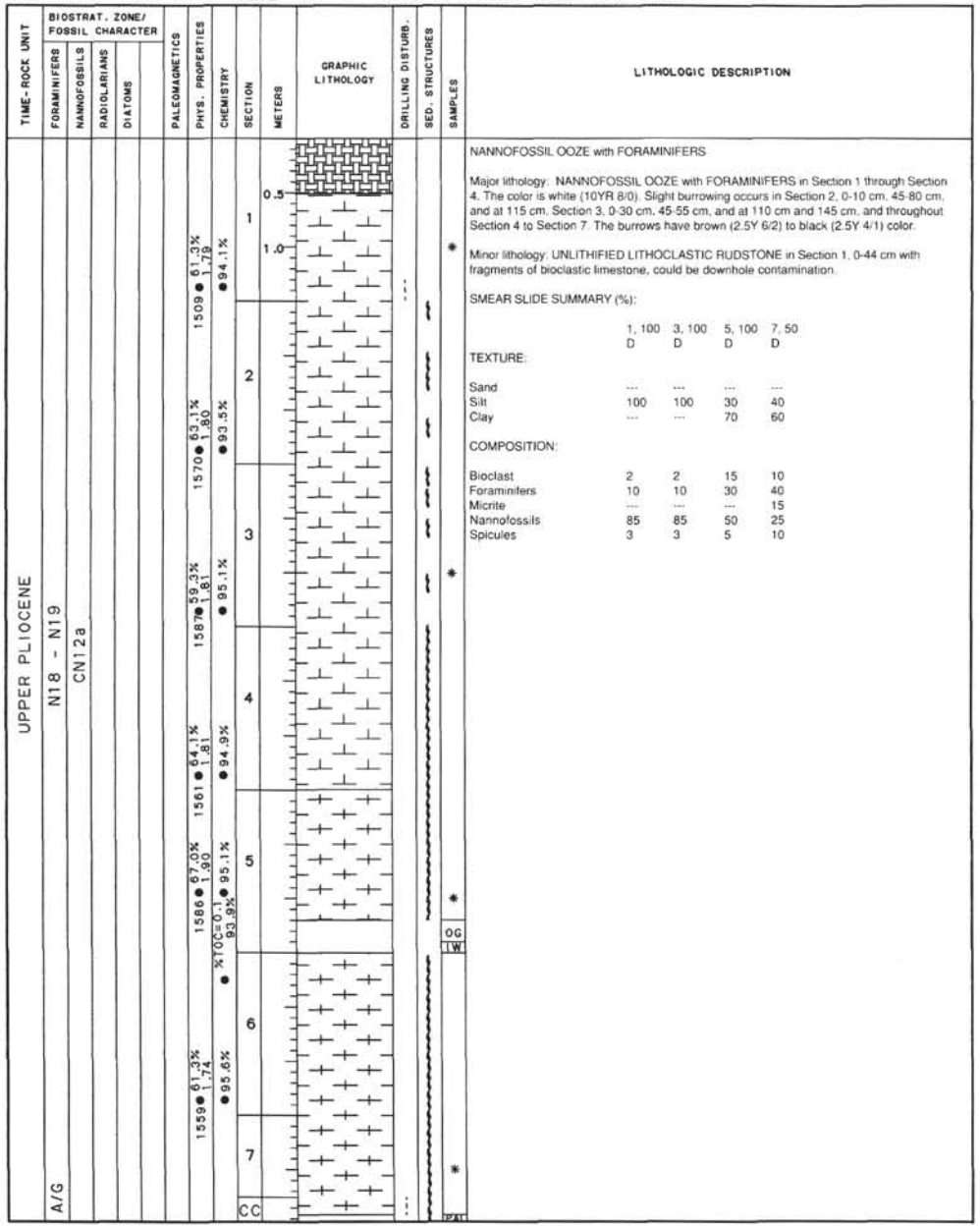
Minor lithology: UNLITHIFIED LITHOCLASTIC RUDSTONE (downhole contamination?) in Section 1, 0-32 cm with fragments of bioclastic limestone.

SMEAR SLIDE SUMMARY (%):

	1, 100 D	3, 65 D
TEXTURE:		
Sand	5	5
Silt	95	90
Clay	---	5
COMPOSITION:		
Bioclast	---	10
Carbonate particles	5	---
Dolomite	1	---
Foraminifers	---	5
Glass	---	Tr
Micrite	---	5
Nannofossils	94	80



SITE 811 HOLE A CORE 7H CORED INTERVAL 53.0-62.5 mbsf



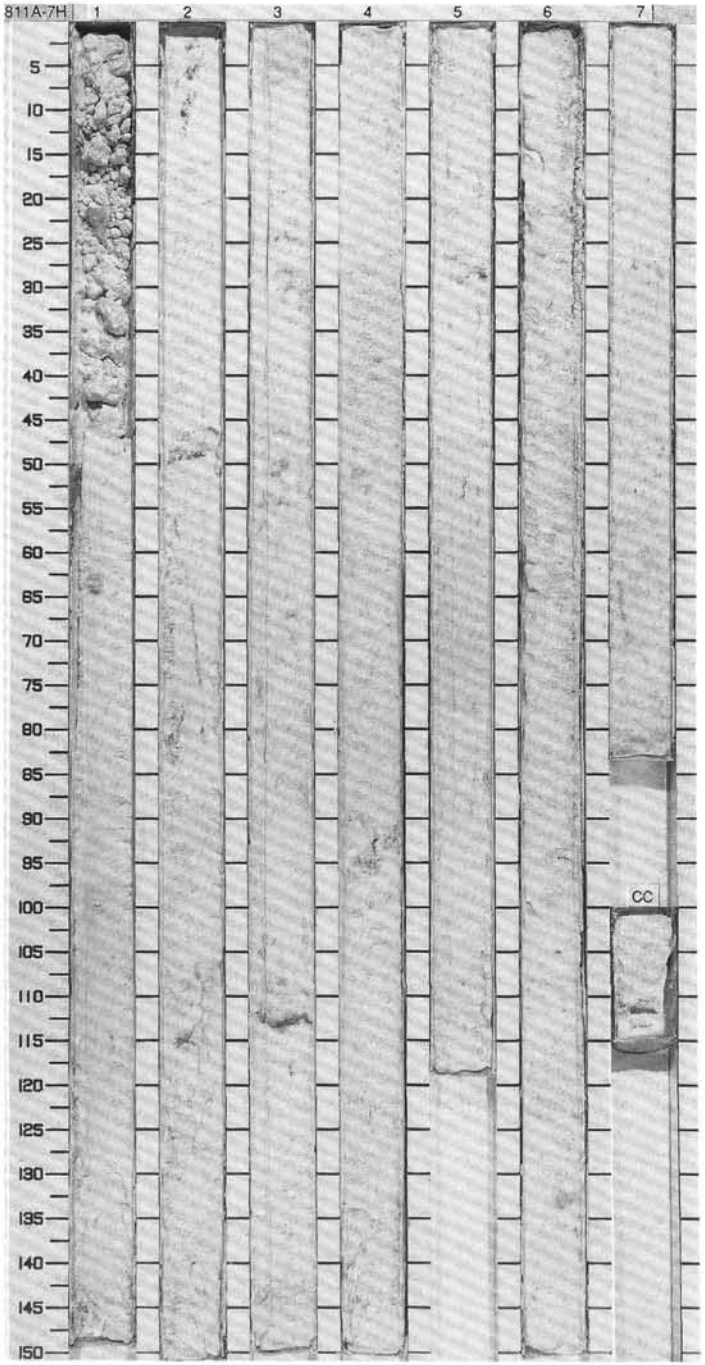
NANNOFOSSIL OOZE with FORAMINIFERS

Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS in Section 1 through Section 4. The color is white (10YR 8/0). Slight burrowing occurs in Section 2, 0-10 cm, 45-80 cm, and at 115 cm, Section 3, 0-30 cm, 45-55 cm, and at 110 cm and 145 cm, and throughout Section 4 to Section 7. The burrows have brown (2.5Y 6/2) to black (2.5Y 4/1) color.

Minor lithology: UNLITHIFIED LITHOCLASTIC RUDSTONE in Section 1, 0-44 cm with fragments of bioclastic limestone, could be downhole contamination.

SMEAR SLIDE SUMMARY (%):

	1, 100 D	3, 100 D	5, 100 D	7, 50 D
TEXTURE:				
Sand	---	---	---	---
Silt	100	100	30	40
Clay	---	---	70	60
COMPOSITION:				
Bioclast	2	2	15	10
Foraminifers	10	10	30	40
Micrite	---	---	---	15
Nannofossils	85	85	50	25
Spicules	3	3	5	10



SITE 811 HOLE A CORE 8H CORED INTERVAL 62.5-70.0

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER PLIOCENE	N18 - N19	CN11				1592 ● 59.8% 1.79	● 95.5%	1	0.5				*
									1.0				
						1608 ● 66.7% 1.93	● 93.5%	2					
						1568 ● 66.4% 1.85	● 95.7%	3					*
						1370 ● 67.4% 1.90	● 94.3%	4					*
						● 1520	● 96.3%	5					*
						1601 ● 64.4% 1.82	● %TOC=0.3 95.8% ● 96.5%	6					IW *
	A/G							7					*
								CC					PAL

LITHOLOGIC DESCRIPTION

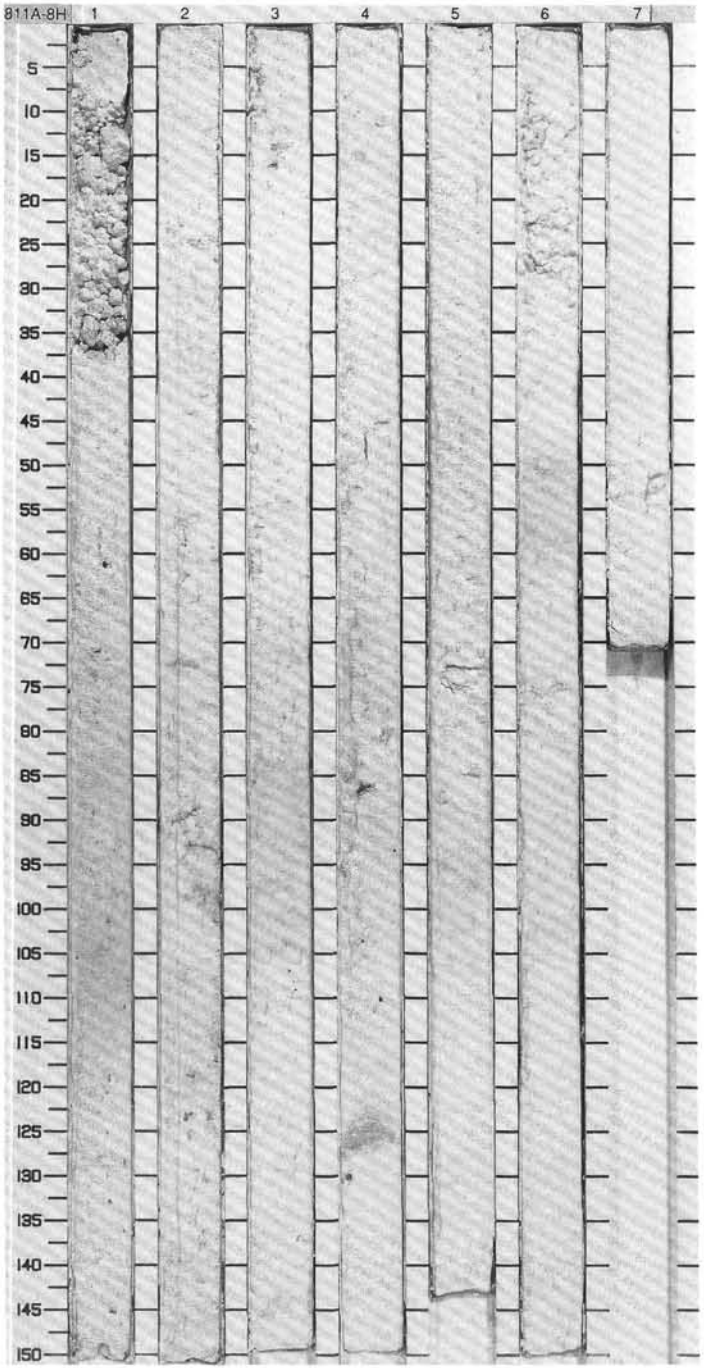
NANNOFOSSIL FORAMINIFER OOZE to NANNOFOSSIL OOZE with FORAMINIFERS

Major lithology: NANNOFOSSIL FORAMINIFER OOZE, with bioclasts in Section 1, grading in Section 3 into a NANNOFOSSIL OOZE with FORAMINIFERS. The color is white (10YR 8/0). Slight bioturbation occurs in Section 1 through Section 4. The burrows are brown (2.5Y 6/2) to black (2.5Y 4/1) colored. A light gray (10YR 7/1) interval in Section 4, 123-127 cm contains large foraminifers and bivalve remains.

Minor lithology: UNLITHIFIED LITHOCLASTIC RUDSTONE occurs in Section 1, from 10-35 cm. Could be downhole contamination. FORAMINIFER NANNOFOSSIL OOZE in Section 3, 0-108 cm, and throughout Section 6. The color of this ooze is white (10YR 8/0); slight bioturbation is present in Section 3. In Section 6 this ooze is moderately lithified 10-42 cm, and 73-85 cm.

SMEAR SLIDE SUMMARY (%):

	1, 100 D	3, 100 D	3, 130 D	4, 125 D	6, 25 D	7, 40 D
TEXTURE:						
Sand	---	---	5	5	---	15
Silt	50	40	95	95	45	85
Clay	50	60	---	---	55	---
COMPOSITION:						
Bioclast	20	20	2	3	15	---
Foraminifers	50	20	10	10	35	15
Micrite	---	25	---	---	20	---
Nannofossils	25	30	80	85	25	82
Pellets	---	---	5	---	---	---
Spicules	5	5	3	2	5	3



SITE 811 HOLE A CORE 9H CORED INTERVAL 72.0-81.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER PLIOCENE	A/G	N18 - N19 / CN11				1560 ● 66.2% 1.81 ● 95.7% ● 1546 1539 ● 67.2% 1.85 ● 95.0% ● 1334 ● 95.0% ● 1348 ● 94.5% %TOC ● 94.5% 0.2 95.3% ● 1353 ● 60.6% 1.94 ● 95.0%		1 2 3 4 5 6 7 CC	0.5 1.0				* * * * * LW

LITHOLOGIC DESCRIPTION

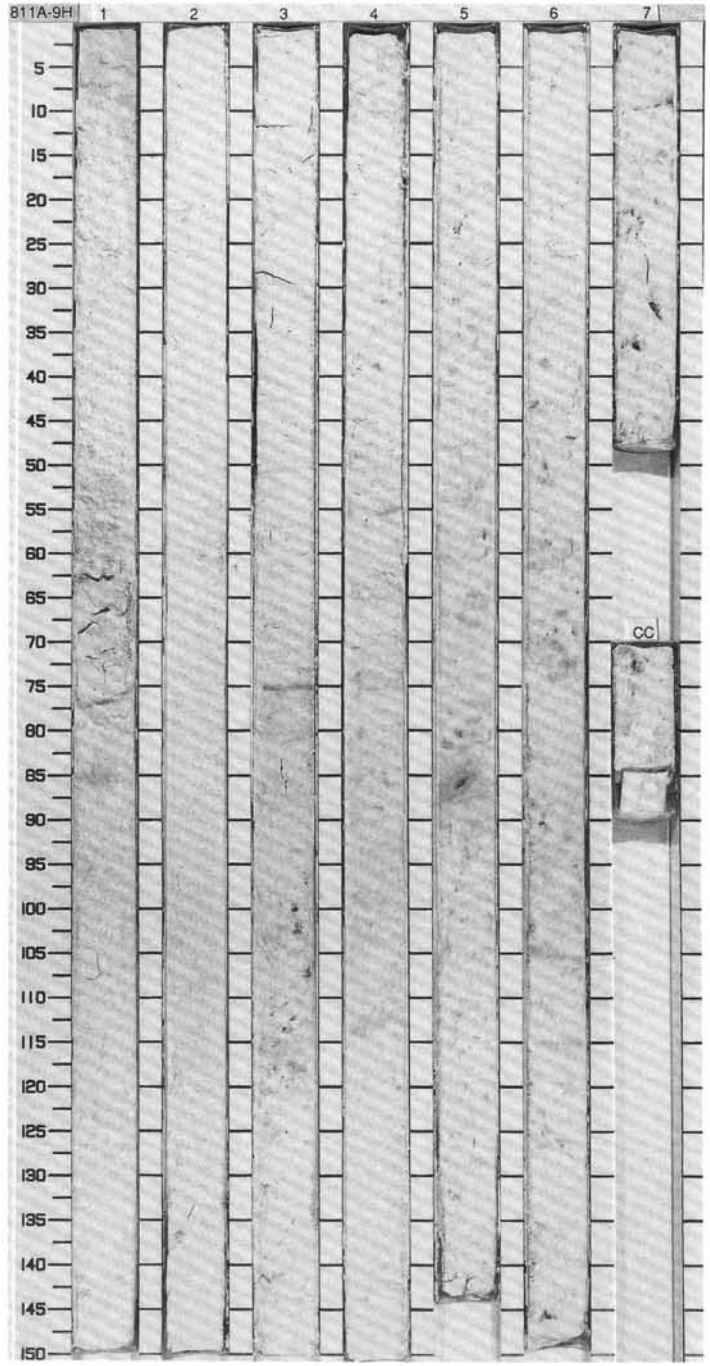
FORAMINIFER NANNOFOSSIL OOZE with local weakly lithified CHALK zones

Major lithology: FORAMINIFER NANNOFOSSIL OOZE containing local weakly lithified chalk intervals in Section 1, at 10 cm, 62-85 cm, otherwise throughout the sections. The color is white (10YR 8/0). Slight bioturbation occurs in Section 2, at 20 cm and 60 cm, Section 3, at 10, 30, and 70 cm, and 100-125 cm, and Section 4 through 7 throughout.

Minor lithology: NANNOFOSSIL OOZE with FORAMINIFERS in Section 1, 10-51 cm. FORAMINIFER CHALK with NANNOFOSSILS as lithoclast in Section 1, 60-65 cm.

SMEAR SLIDE SUMMARY (%):

	1, 5 D	1, 62 D	1, 84 D	2, 83 D	5, 100 D
TEXTURE:					
Sand	33	---	65	25	25
Silt	67	50	20	75	75
Clay	---	50	15	---	---
COMPOSITION:					
Bioclast	---	10	20	---	---
Foraminifers	33	30	65	25	25
Lithoclast	---	20	5	---	---
Micrite	---	20	5	---	---
Nannofossils	65	15	Tr	72	74
Radiolarians	---	---	Tr	---	---
Spicules	2	5	---	3	1



SITE 811 HOLE A CORE 10H CORED INTERVAL 81.5-91.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER PLIOCENE	N18 - N19	CN10/CN11				1550 ● 66.7% 1.74 ● 1530 ● 1353 1550 ● 70.8% 1.90 1531 ● 64.7% 1.76	● 94.2% ● 95.2% ● 94.4% ● 95.2% %TOC *0.3 93.7% ● ● 97.8%	1 2 3 4 5 CC	0.5 1.0			*	OG TW PAL

LITHOLOGIC DESCRIPTION

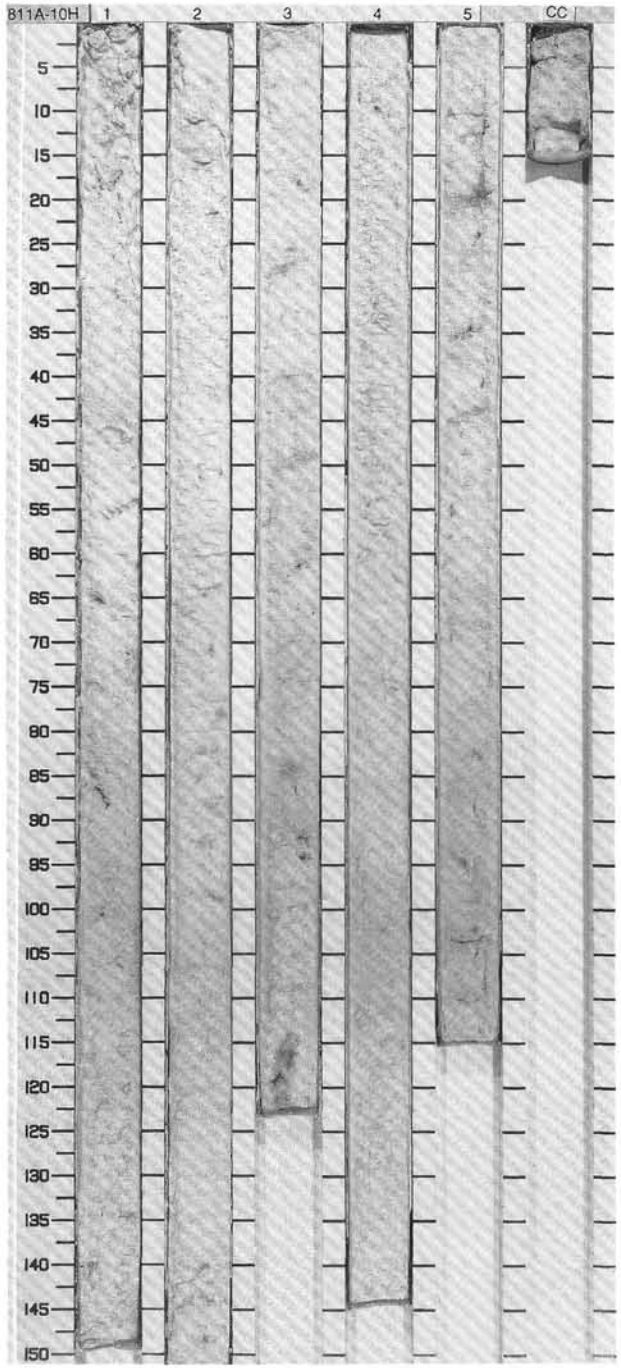
NANNOFOSSIL OOZE with FORAMINIFERS with local weakly lithified chalk zones

Major lithology: Unconsolidated to weakly lithified NANNOFOSSIL OOZE, white color (10YR 8/0 and 8/1). The proportion of weak lithified layers to ooze is in Section 2 and Section 3 about 25% to 75%, respectively. Slight bioturbation throughout Section 3 to Section 5.

Minor lithology: White (10YR 8/1) LITHOCLAST RUDSTONE in Section 1, 0-7 cm (downhole contamination?). Firm FORAMINIFER NANNOFOSSIL OOZE in the core catcher, light gray (5Y 7/1).

SMEAR SLIDE SUMMARY (%):

	1, 75 *D*	CC, 5 *D*
TEXTURE:		
Sand	---	30
Silt	70	70
Clay	30	---
COMPOSITION:		
Bioclast	5	---
Foraminifers	25	30
Micrite	5	---
Nannofossils	63	68
Spicules	2	2



SITE 811 HOLE A CORE 11H CORED INTERVAL 91.0-100.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER MIOCENE	N16 - N17	CN9b	CN9b			●1486	● 96.4%	1	0.5 / 1.0				D*
						●1356 ● 65.6% 1.80	● 95.4%	2					*
						●1372	● 95.0%	3					*
						●1573	● 95.4%	4					*
					●1527		● 94.8%	5					*
					●1351		95.6% %TOC =0.7 ●	6					LW *
	A/G				95.7% ●			7					*
								CC					PAL

LITHOLOGIC DESCRIPTION

NANNOFOSSIL FORAMINIFER OOZE to FORAMINIFER NANNOFOSSIL OOZE

Major lithology: NANNOFOSSIL FORAMINIFER OOZE with isolated lithoclasts and bioclasts. The FORAMINIFER NANNOFOSSIL OOZE occurs in Section 1, 0-5 cm; Section 2, 56-98 cm; Section 3, 130-150 cm;and in Section 7. The color of these oozes is generally white (10YR 8/0) with a few light gray (2.5Y 7/0) layers in Section 2, 53-58 cm and 98-100 cm; Section 4, 56-62 cm.

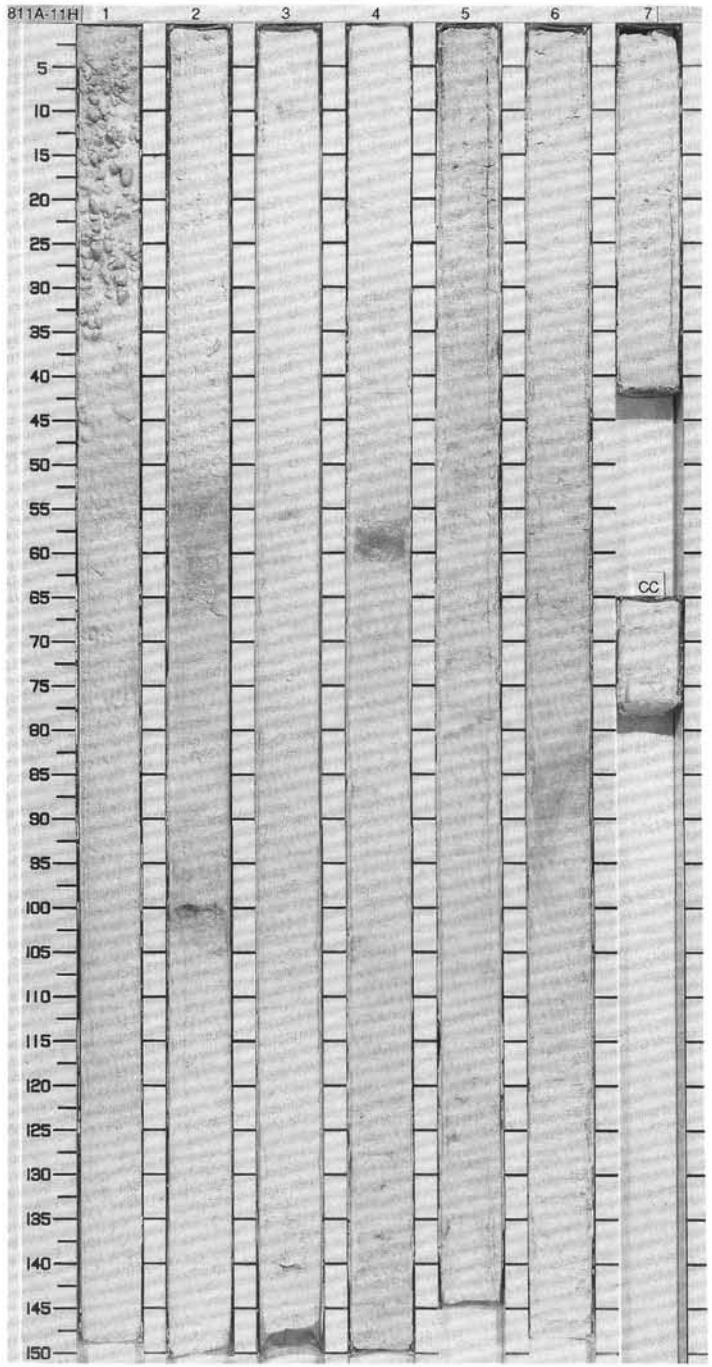
Minor lithology: White (10YR 8/0) unlithified LITHOCLAST RUDSTONE (sediment gravity flow deposit or downhole contamination), in Section 1, 5-36 cm.

SMEAR SLIDE SUMMARY (%):

	1, 70 D	CF 1, 75 D	2, 80 D	3, 137 D	4, 60 M	5, 13 D	5, 70 D
TEXTURE:							
Sand	12	70	45	30	20	35	20
Silt	88	30	55	65	80	65	80
Clay	---	---	---	5	---	---	---
COMPOSITION:							
Aragonite	---	---	3	3	---	2	3
Bioclast	---	5	10	10	20	15	5
Dolomite	---	---	---	---	Tr	---	---
Foraminifers	12	95	35	20	15	20	15
Micrite	---	---	---	5	5	---	---
Nannofossils	86	---	50	61	60	62	76
Spicules	2	---	2	1	---	1	1

SMEAR SLIDE SUMMARY (%):

	6, 100 D	7, 20 D
TEXTURE:		
Sand	30	15
Silt	70	85
COMPOSITION:		
Aragonite	2	3
Bioclast	13	5
Foraminifers	20	10
Nannofossils	63	80
Spicules	2	2



SITE 811 HOLE A CORE 12H CORED INTERVAL 100.5-110.0 mbsf

TIME-ROCK UNIT: UPPER MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: C/M; N16 - N17; NANNOFOSSILS; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: 1578 ● 61.2% 1.77; 1565 ● 59.6% 1.83; 1588; 1605 ● 59.6% 1.88; 1558; 1546

CHEMISTRY: ● 93.3%; ● 97.2%; ● %100+0.5 94.5%; ● 96.6%; ● 96.5%; ● 95.8%; ● 95.0%

SECTION: 1, 2, 3, 4, 5, 6, 7, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: PAL

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE to NANNOFOSSIL FORAMINIFER OOZE to FORAMINIFER OOZE with NANNOFOSSILS

Major lithology: NANNOFOSSIL OOZE, partly lithified in Section 1 at 67, 117, and 147 cm, in Section 2 at 47 cm and 59 cm, in Section 3 between 23-30 cm, and at 64 cm, and in Section 6, between 65 and 75 cm and 145-150 cm. In Section 3,101-109 cm, a sediment gravity flow deposit , containing shell fragments, larger foraminifers and pieces of grainstones, is interbedded with the ooze. The larger foraminifers are shallow water, tropical, reef-related forms. The color of the ooze is white (10YR 8/0). Section 4 and Section 5, 80-150 cm consists of FORAMINIFER OOZE with NANNOFOSSILS. The ooze is white (10YR 8/0) with light gray (10YR 7/2) mottles.

Minor lithology: FORAMINIFER OOZE with large bioclasts, including a mollusc (oyster?) of 2 x 4 cm size. NANNOFOSSIL OOZE with FORAMINIFERS in Section 7 is white (10YR 8/0) colored, contains light gray (10YR 7/2) mottles, and is partly lithified 25-40 cm.

COARSE FRACTION SUMMARY (%):

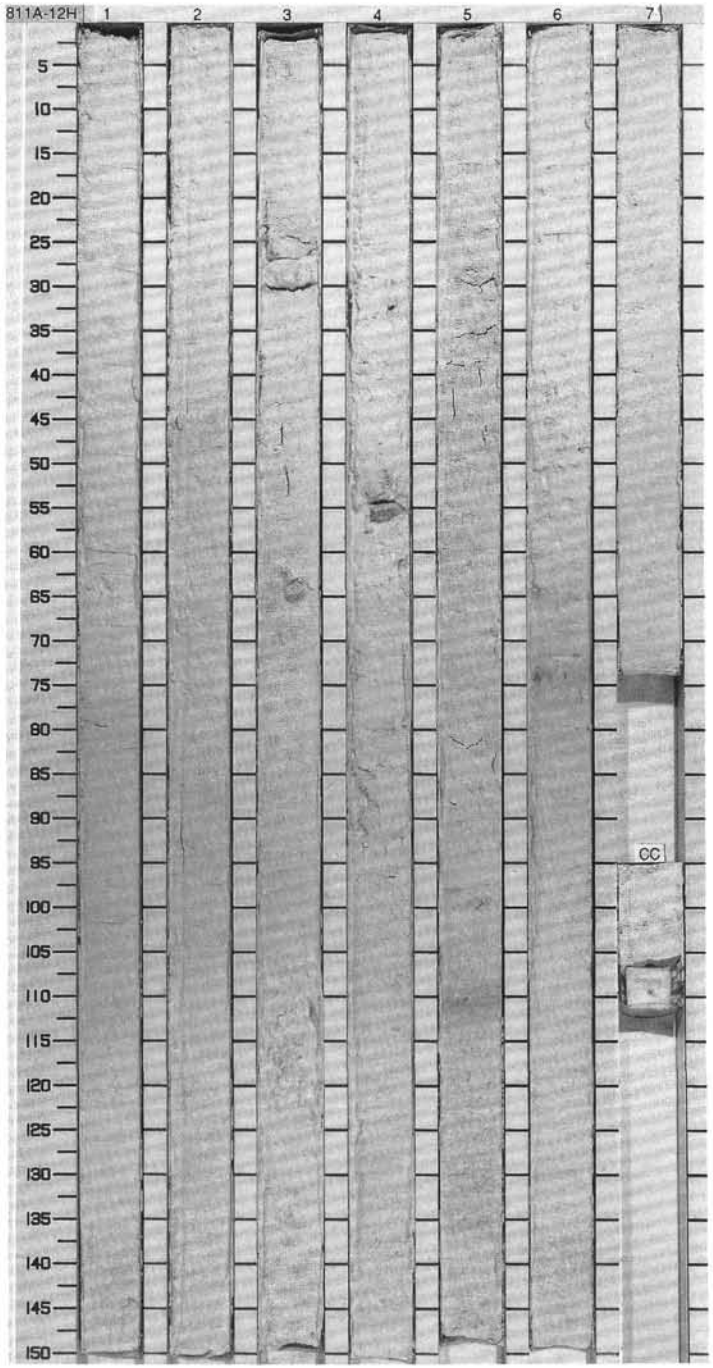
	5, 120 D

TEXTURE:

Sand	89
Silt	11

COMPOSITION:

Bioclast	5
Foraminifers	95



SITE 811 HOLE A CORE 13H CORED INTERVAL 110.0-119.5 mbsf

TIME-ROCK UNIT: UPPER MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS A/P; N16 - N17; NANNOFOSSILS CN9; RADIOLARIANS; DIATOMS

PALEOMAGNETICS; PHYS. PROPERTIES; CHEMISTRY

SECTION; METERS; GRAPHIC LITHOLOGY; DRILLING DISTURB.; SED. STRUCTURES; SAMPLES

LITHOLOGIC DESCRIPTION

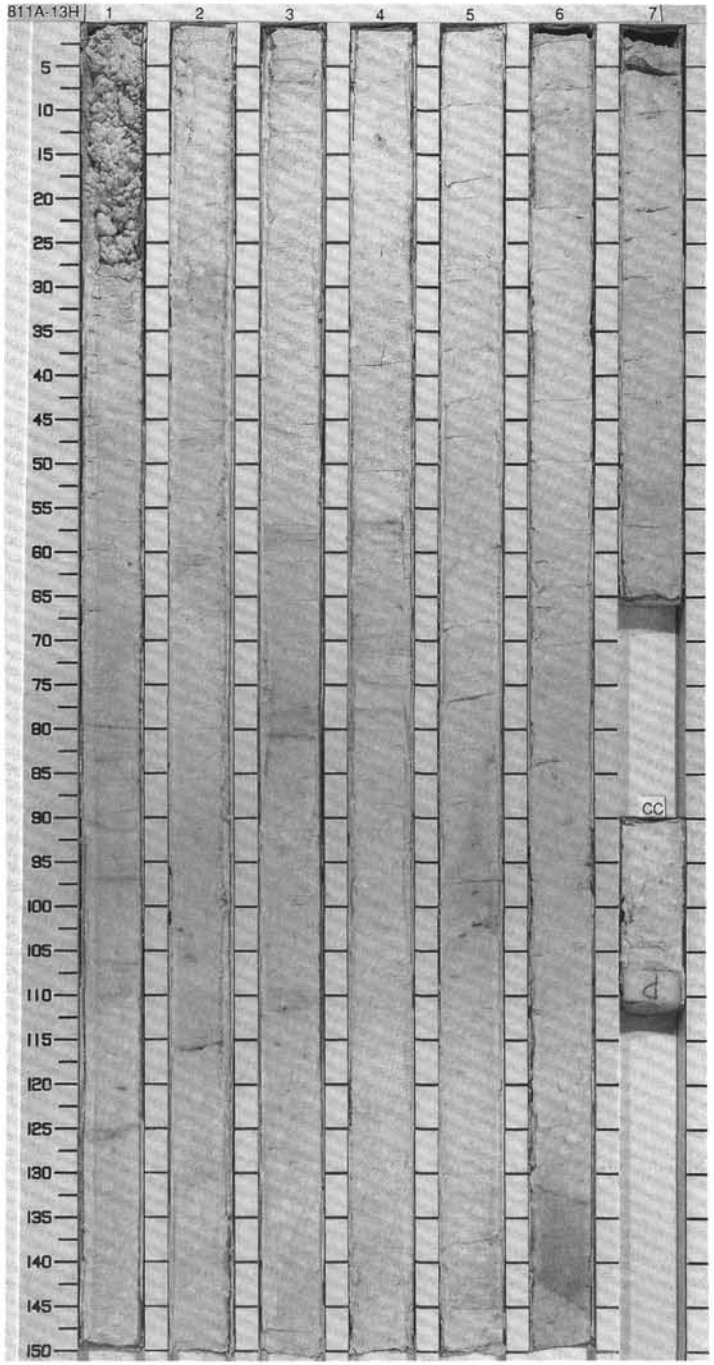
FORAMINIFER OOZE with NANNOFOSSILS to NANNOFOSSIL OOZE

Major lithology: FORAMINIFER OOZE with NANNOFOSSILS is white (10YR 8/0) colored and contains light gray (2.5Y 8/0 and 5Y 7/1, 7/0) mottles in Section 1 through Section 4. White (10YR 8/0) NANNOFOSSIL OOZE shows in Section 5 gray (2.5Y 8/0 to 7/0) colored layers at 38-40 cm and 83-84 cm, and several irregular light gray (2.5Y 8/0) to light green (5Y 8/1) colored layers between 132 and 145 cm; in Section 6, 8-10 cm, 106-109 cm, and 115-116 cm, and in Section 7, 53-54 cm.

Minor lithology: PEBBLES with metal flakes (probably downhole contamination), occur in Section 1, 0-25 cm. NANNOFOSSIL FORAMINIFER OOZE in Section 1, 25-80 cm, white (10YR 8/0).

COARSE FRACTION SUMMARY (%):

	7, 47 D
TEXTURE:	
Sand	46
Silt	54
COMPOSITION:	
Bioclast	2
Foraminifers	98



SITE 811 HOLE A CORE 14H CORED INTERVAL 119.5-129.0 mbsf

TIME-ROCK UNIT: UPPER MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: A/P; N16 - N17; NANNOFOSSILS: CN9; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: 1554; 1560; 1565 ● 62.5% 1.89; 1568 ● 63.5% 1.93; 1597 ● 61.5% 1.86

CHEMISTRY: ● 97.1%; ● 96.2%; ● 57.0%; ● 97.0%; ● 96.1%; 1554 ● 63.4% 1.80; %TOC =0.2; ● 95.4%

SECTION; METERS

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: TW; PAL

LITHOLOGIC DESCRIPTION

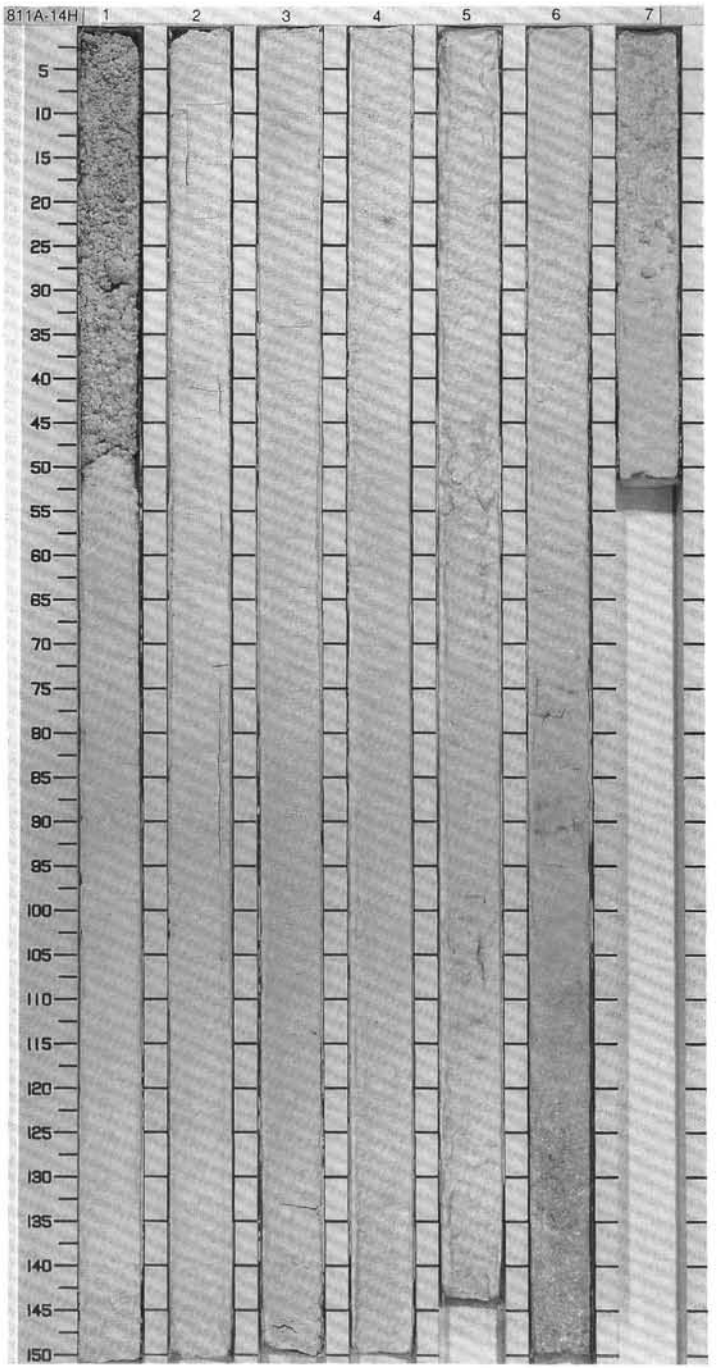
NANNOFOSSIL FORAMINIFER OOZE to NANNOFOSSIL OOZE

Major lithology: NANNOFOSSIL FORAMINIFER OOZE, white (10YR 8/0) homogenous, and very white (10YR 8/0) unlithified NANNOFOSSIL OOZE, with partly lithified layers in Section 4, 67-70 cm, 120 cm, and 130-132 cm; in Section 5, 0-10 cm, 78-80 cm, and 109 cm.

Minor lithology: PEBBLES, GRANULES and metal shavings (downhole contamination) in Section 1, 0-50 cm. In Section 6, 100-150 cm, coarse grained white to black particles occur within the nannofossil ooze, corresponding to the poorly sorted, UNLITHIFIED CORAL FORAMINIFER RUDSTONE, in Section 7, 0-23 cm. This is the lower part of a sediment gravity flow deposit, which is fining upward in Section 6. The upper contact in Section 6, at 100 cm, is gradational.

SMEAR SLIDE SUMMARY (%):

	1, 100 D	3, 100 D	5, 100 D	CF 6, 124 M
TEXTURE:				
Sand	50	50	50	---
Silt	40	---	40	---
Clay	10	10	10	---
COMPOSITION:				
Bioclast	4	---	---	30
Bryozoa	---	---	---	5
Coral	---	---	---	20
Foraminifers	50	50	55	40
Micrite	3	2	2	---
Nannofossils	40	45	40	---
Spicules	3	3	3	5



SITE 811 HOLE A CORE 15H CORED INTERVAL 129.0-138.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER MIOCENE	P/A N16 - N17	CN8				1573 ● 96.5% 1576 ● 96.3% 59.9% 1.82 1540 ● 96.0% 59.7% 1.87 1379 ● 96.4% 59.7% 1.87 1558 ● 96.2% 60.7% 1.80 1556 ● 95.5% 58.8% 1.83 ● 95.9%	%TOC 0.9	1 2 3 4 5 6 7 CC	0.5 1.0			* □ * □ * PAL

LITHOLOGIC DESCRIPTION

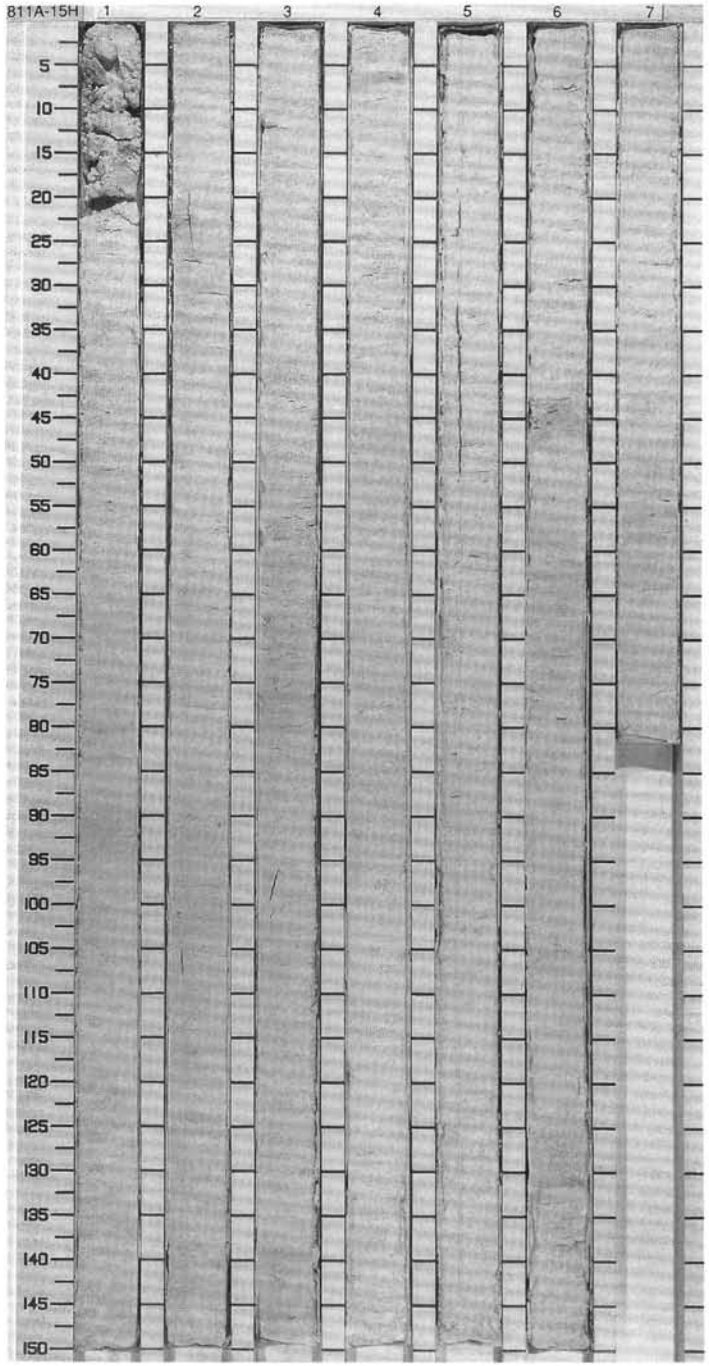
FORAMINIFER NANNOFOSSIL OOZE

Major lithology: FORAMINIFER NANNOFOSSIL OOZE, unlithified, very white (10YR 8/0) throughout. Dark greenish gray (5G 4/4) spots and cm-thick layers occur throughout this core.

Minor lithology: PEBBLES as downhole contamination in Section 1, 0-20 cm.

SMEAR SLIDE SUMMARY (%):

	2, 100 D	CF 3, 15 D	4, 5 M	CF 5, 81 D	5, 100 D
TEXTURE:					
Sand	40	36	25	38	30
Silt	50	64	70	62	60
Clay	10	---	5	---	10
COMPOSITION:					
Bioclast	5	5	5	5	5
Dolomite	---	---	Tr	---	---
Foraminifers	40	95	25	95	30
Micrite	5	---	---	---	5
Nannofossils	50	---	70	---	60
Spicules	---	---	Tr	---	---



SITE 811 HOLE A CORE 16H CORED INTERVAL 138.5-148.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER MIOCENE	A/P	N16 - N17 / CN8				1630 ● 59.2% 1.88 96.3% ●	1638 ● 98.8% 2.12 96.5% ● %TOC ±0.3 96.7%	1598 ● 63.5% 1.94 ● 96.6%	1548 ● 64.0% 1.90 ● 95.5%	1556 ● 62.3% 1.88 ● 96.0%	1 2 3 4 5 6 7 CC	0.5 1.0		* * □ □ *

LITHOLOGIC DESCRIPTION

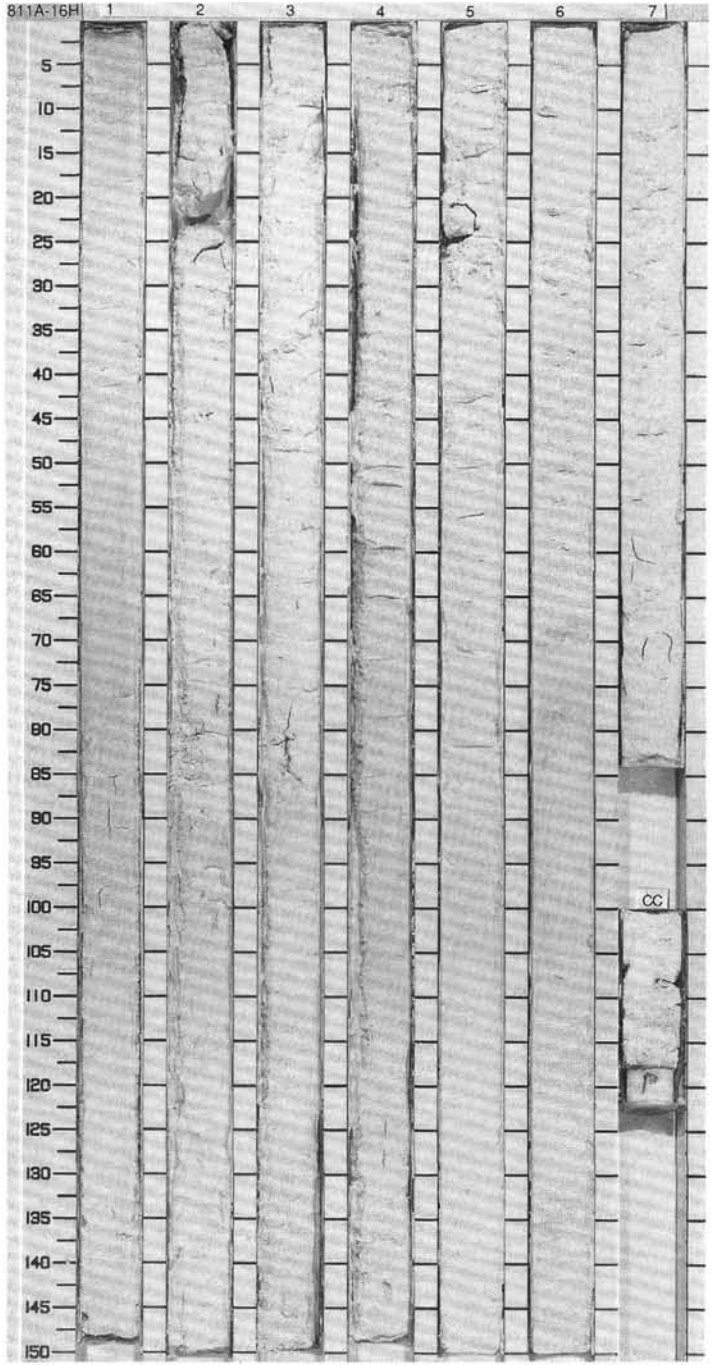
FORAMINIFER NANNOFOSSIL OOZE

Major lithology: FORAMINIFER NANNOFOSSIL OOZE, very white (10YR 8/0) with micrite in Section 2, 60-150 cm. This ooze alternates in irregular thick (1 to 5 cm) intervals in Section 6 with nannofossil foraminifer ooze.

Minor lithology: NANNOFOSSIL FORAMINIFER OOZE in Section 4, 0-20 cm, and 120-130 cm, in Section 5, 25-82 cm, very white (10YR 8/0), and in Section 6, alternating with foraminifer nannofossil ooze. NANNOFOSSIL OOZE in Section 7, white (10YR 8/0), with light gray (2.5Y 8/0) laminations at 8, 26, 54 and 67 cm.

SMEAR SLIDE SUMMARY (%):

	2, 45 D	2, 90 D	CF 2, 95 D	CF 6, 66 D	6, 70 M
TEXTURE:					
Sand	25	30	44	84	60
Silt	70	50	56	16	30
Clay	5	20	---	---	10
COMPOSITION:					
Bioclast	7	3	15	30	30
Foraminifers	25	40	85	70	40
Micrite	20	20	---	---	20
Nannofossils	45	35	---	---	8
Pteropod	---	---	---	Tr	---
Spicules	3	2	---	---	2



SITE 811 HOLE A CORE 17H CORED INTERVAL 148.0-157.5 mbsf

TIME-ROCK UNIT: UPPER MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: N16 - N17; NANNOFOSSILS: CN8; RADIOLARIANS: A/P; DIATOMS:

PALEOMAGNETICS

PHYS. PROPERTIES: ● 62.3% 1.81; ● 65.1% 1.83; ● 57.7% 1.81; ● 57.7% 1.85; ● 97.0%

CHEMISTRY: ● 95.5%; ● 96.1%; ● 95.2%; ● 97.4%; %TOC ● 97.2% ≤0.1

SECTION: 1, 2, 3, 4, 5, 6, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: TW, PAL

LITHOLOGIC DESCRIPTION

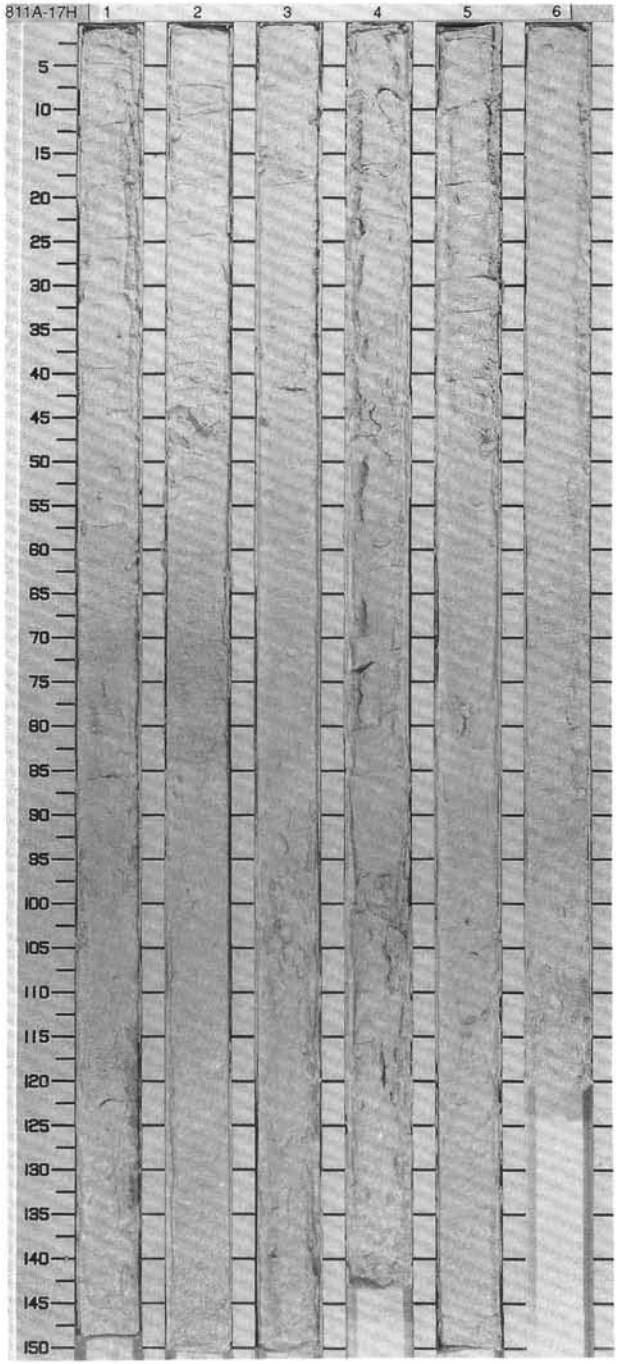
NANNOFOSSIL OOZE

Major lithology: NANNOFOSSIL OOZE, monotonous throughout, white (10YR 8/0) colored. Partly lithified layers were noted in Section 1, 80-85 cm, 120-122 cm, 135-137 cm, in Section 2, 45-47 cm, 52-54 cm, and in Section 3, 15-16 cm. In Section 5, 44-68 cm, and 100-150 cm, a sandy fraction occurs within the ooze.

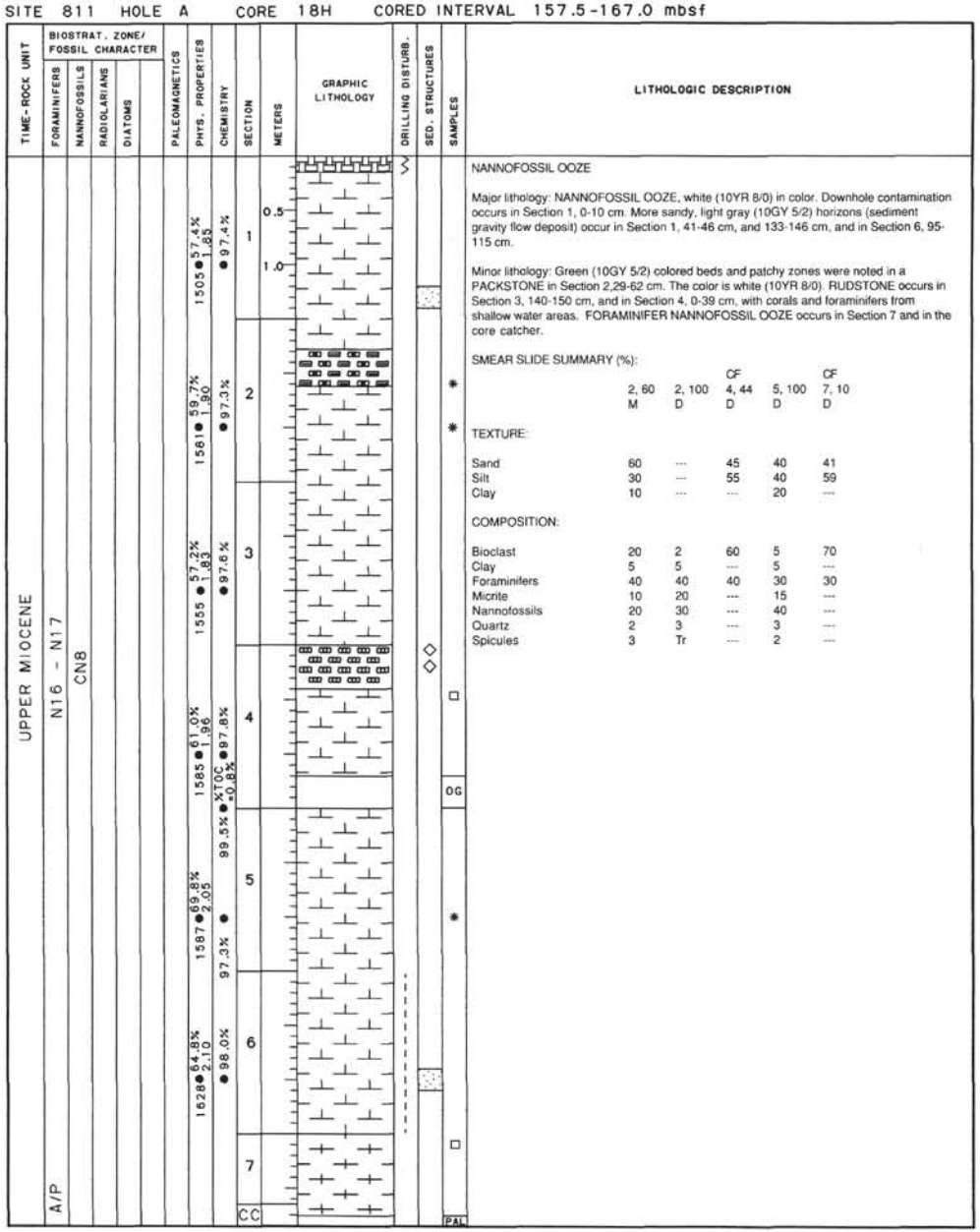
Minor lithology: A well-sorted, sand-sized BIOCLASTIC FORAMINIFER PACKSTONE (sediment gravity flow deposit) occurs in Section 1, 70-75 cm. Normal graded bedding was noted in Section 2, 62-102 cm. The coarse grained deposit between 62 and 83 cm with dark particles is light gray to gray (10YR 7/1 to 6/1). A finer sand-sized CALCAREOUS OOZE with nannofossils and micrite occurs 83-102 cm.

SMEAR SLIDE SUMMARY (%):

	1, 72 D	CF 2, 75 D	2, 100 D	5, 100 D
TEXTURE:				
Sand	60	87	20	20
Silt	35	13	70	50
Clay	5	---	10	30
COMPOSITION:				
Bioclast	25	55	15	---
Dolomite	Tr	---	---	---
Foraminifers	35	45	15	30
Micrite	30	---	35	40
Nannofossils	5	---	30	25
Quartz	---	---	---	3
Spicules	5	---	5	2



SITE 811 HOLE A CORE 18H CORED INTERVAL 157.5-167.0 mbsf



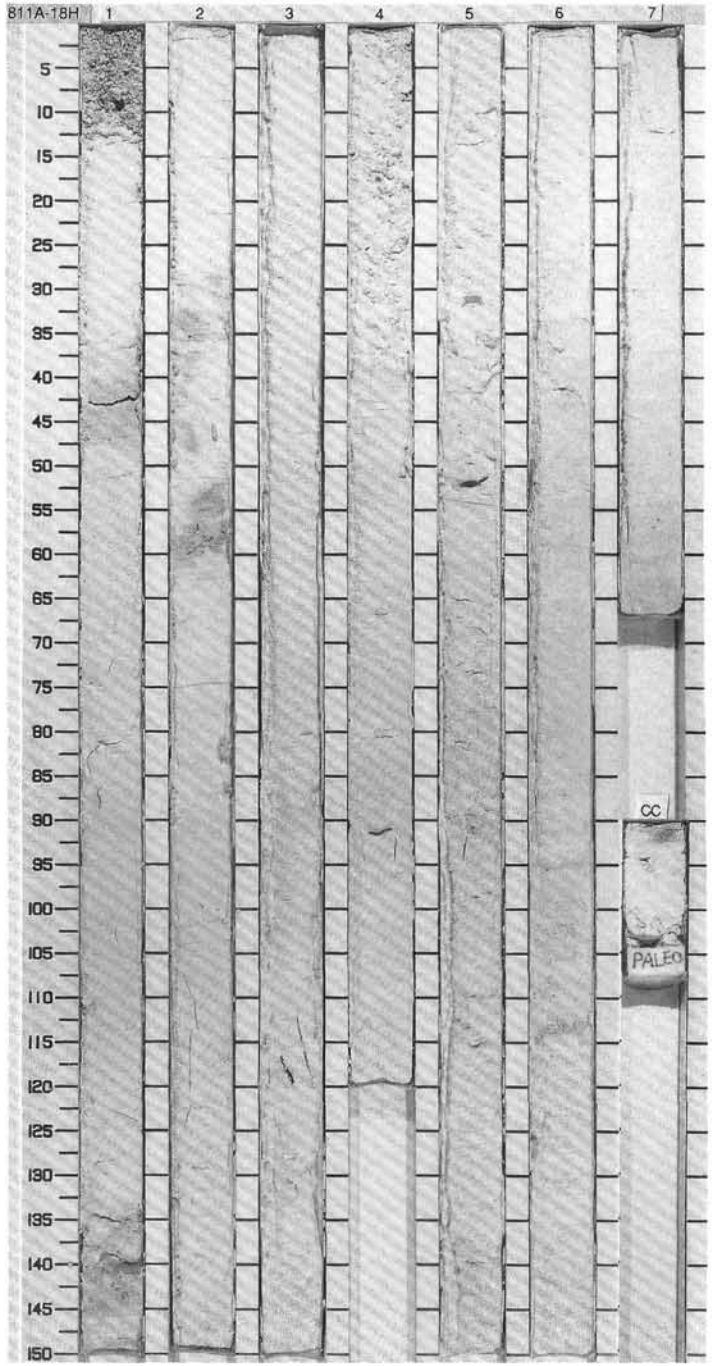
NANNOFOSSIL OOZE

Major lithology: NANNOFOSSIL OOZE, white (10YR 8/0) in color. Downhole contamination occurs in Section 1, 0-10 cm. More sandy, light gray (10GY 5/2) horizons (sediment gravity flow deposit) occur in Section 1, 41-46 cm, and 133-146 cm, and in Section 6, 95-115 cm.

Minor lithology: Green (10GY 5/2) colored beds and patchy zones were noted in a PACKSTONE in Section 2,29-62 cm. The color is white (10YR 8/0). RUDSTONE occurs in Section 3, 140-150 cm, and in Section 4, 0-39 cm, with corals and foraminifers from shallow water areas. FORAMINIFER NANNOFOSSIL OOZE occurs in Section 7 and in the core catcher.

SMEAR SLIDE SUMMARY (%):

	2, 60 M	2, 100 D	CF 4, 44 D	5, 100 D	CF 7, 10 D
TEXTURE:					
Sand	60	---	45	40	41
Silt	30	---	55	40	59
Clay	10	---	---	20	---
COMPOSITION:					
Bioclast	20	2	60	5	70
Clay	5	5	---	5	---
Foraminifers	40	40	40	30	30
Micrite	10	20	---	15	---
Nannofossils	20	30	---	40	---
Quartz	2	3	---	3	---
Spicules	3	Tr	---	2	---



SITE 811 HOLE A CORE 19H CORED INTERVAL 167.0-176.5 mbsf

TIME-ROCK UNIT: MIDDLE MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: A/P; FORAMINIFERS: N16 - N17; NANNOFOSSILS: CN7; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: 1605 ● 49.7% 1.80; 1617 ● 59.9% 1.84; 1617 ● 51.4% 2.01; 1612 ● 53.5% 1.98; 1363 ● 58.2% 1.88

CHEMISTRY: ● 97.5% %TOC=0.3; ● 98.5%; ● 94.6%; ● 96.9%; ● 97.0%; ● 97.7%; ● 97.2%

SECTION: 1, 2, 3, 4, 5, 6, 7, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: PAL

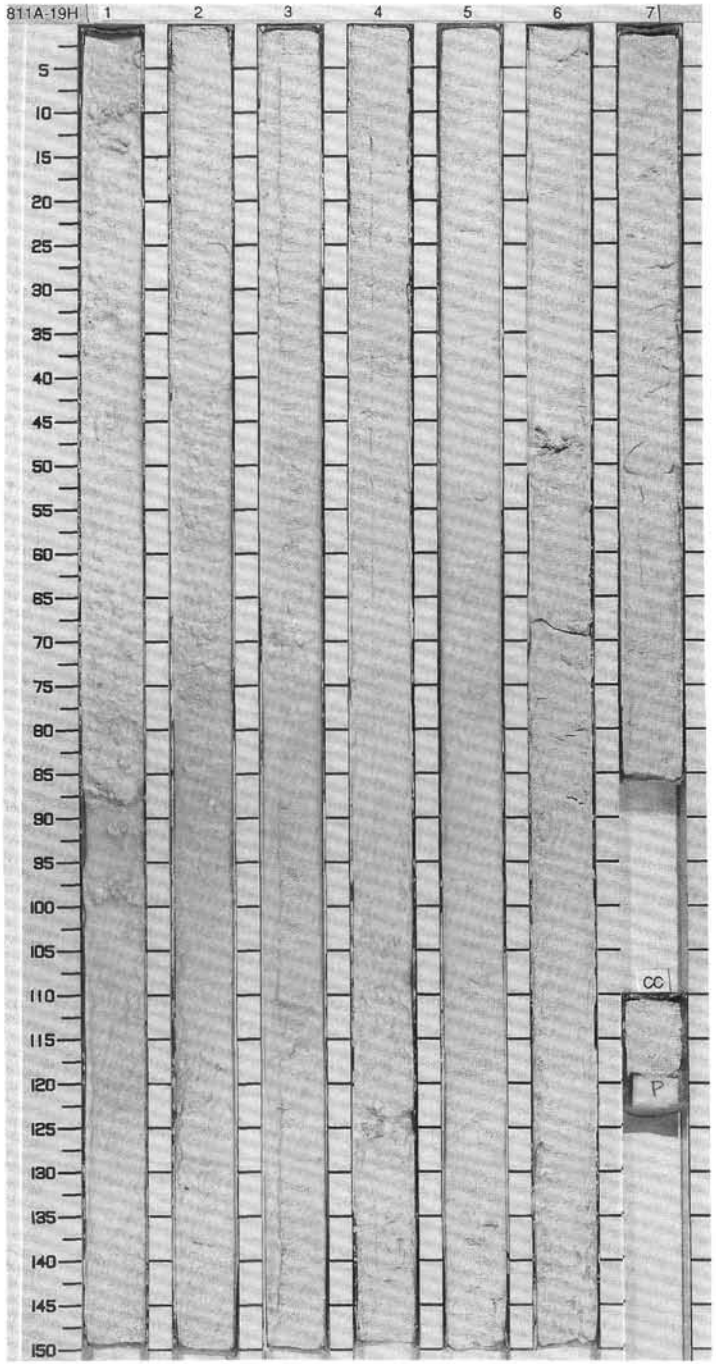
LITHOLOGIC DESCRIPTION

BIOCLASTIC PACKSTONE and FLOATSTONE to MICRITIC FORAMINIFER OOZE with BIOCLASTS

Major lithology: Sections 1 and 2 contain upward fining BIOCLASTIC PACKSTONE and FLOATSTONE, white (10YR 8/0) in color. Upward fining sequences which are more lithified at the base occur in Section 1, 0 -15 cm, 15-48 cm, 48-95 cm, and 100-125 cm, in Section 2, 30 -84 cm, in Section 3, 103-130 cm, and in Section 4, 51-84 cm. MICRITIC FORAMINIFER OOZE with BIOCLASTS contains chalky concretions and layers in Section 2 and Section 4. The color is white (10YR 8/0). Slight bioturbation occurs in Section 2 through Section 5.

SMEAR SLIDE SUMMARY (%):

	CF 1, 80 D	1, 85 D	CF 3, 100 D	3, 100 D	5, 100 D	7, 70 D
TEXTURE:						
Sand	90	10	46	---	---	30
Silt	10	50	54	40	40	25
Clay	---	40	---	60	60	45
COMPOSITION:						
Bioclast	70	30	20	15	15	15
Clay	---	Tr	---	---	---	---
Foraminifers	30	20	80	25	30	40
Micrite	---	40	---	40	40	20
Nannofossils	---	10	---	20	15	25
Quartz	---	Tr	---	---	---	---



SITE 811 HOLE A CORE 20H CORED INTERVAL 176.5-186.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
?MIDDLE MIOCENE	A/P	N15? ?				1621 ● 56.1% 1.93 1623 ● 51.3% 1.97	● 98.4% ● 98.9%	1 2 3	0.5 1.0			F F F	□ *
					● 53.4% 1.88		● 98.7%	4					
					● 55.9% 1.84		● 98.6%	5					*
					● 57.5% 1.85 ● 97.7%		● 97.6% ×10⁻⁶ SI ~0.2	6					IW
								7					
								CC					PAL

LITHOLOGIC DESCRIPTION

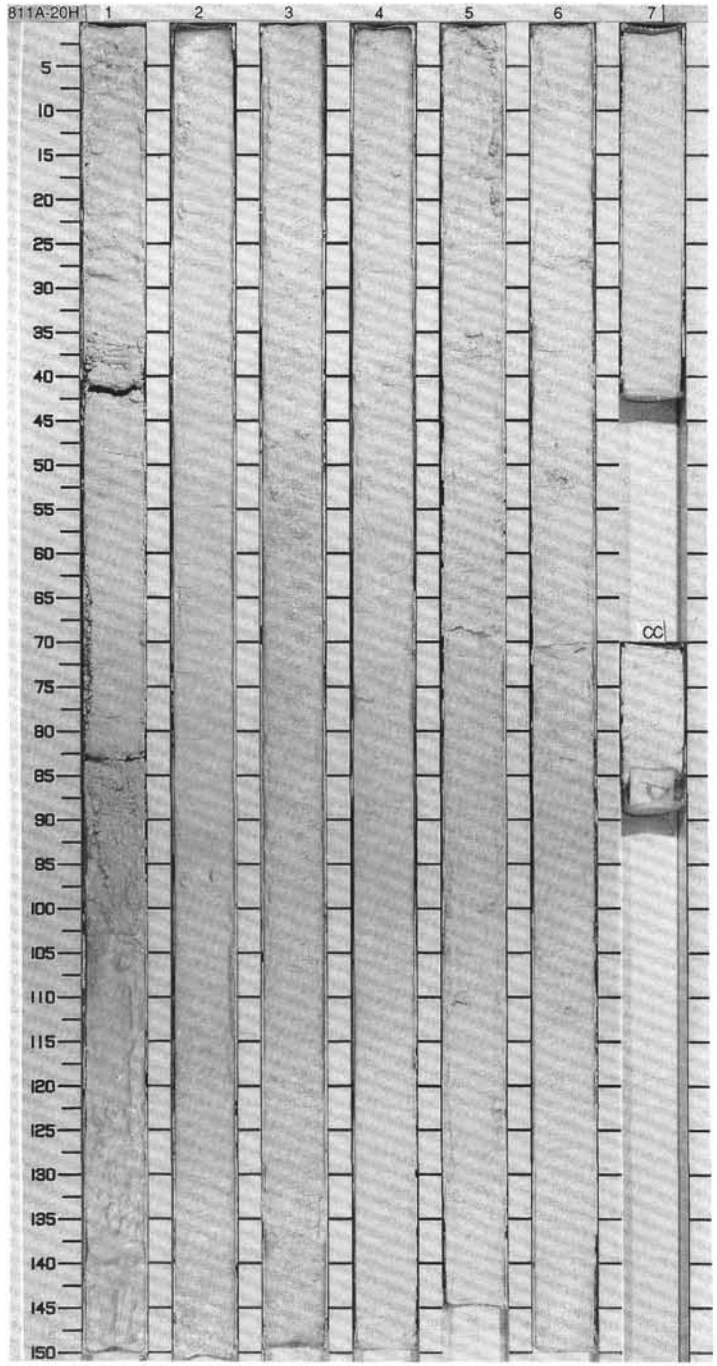
FORAMINIFER NANNOFOSSIL OOZE

Major lithology: FORAMINIFER NANNOFOSSIL OOZE, white (10YR 8/0), is characterized by partly lithified layers (weak chalk), 1-3 cm in thickness. In Section 4 these layers occur at 38, 41, 53, 65, and 173 cm, in Section 1 to Section 3 equally distributed throughout the ooze.

Minor lithology: LITHOCLASTIC RUDSTONE in Section 1, 0-8 cm as downhole contamination. NANNOFOSSIL FORAMINIFER OOZE normal graded FLOATSTONE in Section 1, 80-103 cm with abundant large benthic foraminifers. FLOATSTONE to WACKESTONE in Section 2, 92-131 cm (possibly turbidite), and a fining upward unlithified WACKESTONE in Section 3, 41-58 cm. NANNOFOSSIL FORAMINIFER OOZE occurs in Section 7.

SMEAR SLIDE SUMMARY (%):

	CF 1, 94 M	2, 80 D	5, 40 D
TEXTURE:			
Sand	100	20	---
Silt	---	25	40
Clay	---	55	60
COMPOSITION:			
Bioclast	70	15	10
Foraminifers	30	30	30
Micrite	---	20	30
Nannofossils	---	35	30
Spicules	---	Tr	---



SITE 811 HOLE A CORE 21H CORED INTERVAL 186.0-195.5 mbsf

TIME-ROCK UNIT: MIDDLE MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: A/P; NANNOFOSSILS: N14; RADIOLARIANS: ?; DIATOMS:

PALEOMAGNETICS

PHYS. PROPERTIES: 57.0% 1.97 | 56.4% 2.09 | 53.4% 1.94 | 50.7% 1.89 | 51.4% 1.87 | 52.8% 1.93 (1608)

CHEMISTRY: 97.5% | 97.3% | 97.3% | 96.4% ● %TOC =0.2 | 97.3% | 97.4% | 97.8%

SECTION: 1 2 3 4 5 6 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG; TPAT

LITHOLOGIC DESCRIPTION

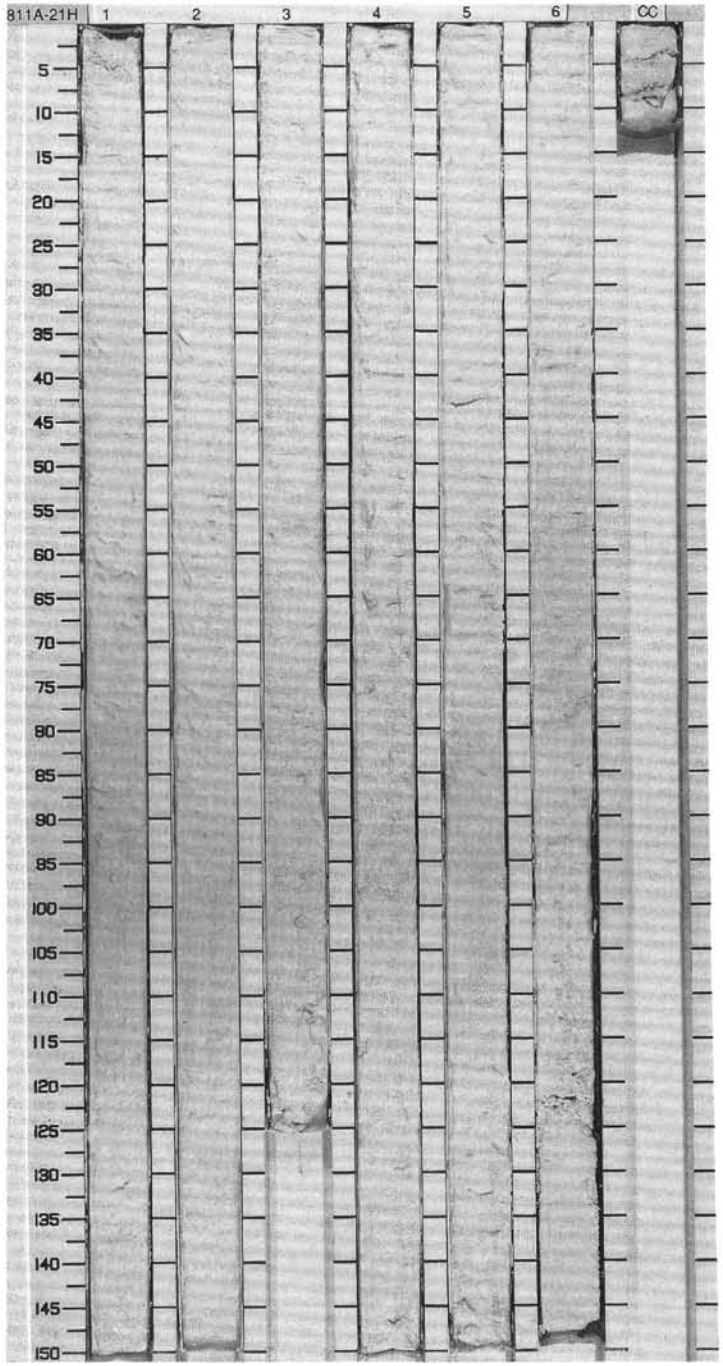
FORAMINIFER NANNOFOSSIL OOZE

Major lithology: FORAMINIFER NANNOFOSSIL OOZE, white (10YR 8/0) in color and locally partially consolidated. These chalky layers are irregularly distributed throughout the core.

Minor lithology: Upward-fining UNLITHIFIED PACKSTONE with large foraminifers and other shallow water derived material mixed with the pelagic components (nannofossils and foraminifers) occurs in Section 6, 92-125 cm.

SMEAR SLIDE SUMMARY (%):

	1, 120 D	2, 92 D	4, 114 D	6, 106 D
TEXTURE:				
Sand	35	---	---	20
Silt	42	---	---	50
Clay	23	---	---	30
COMPOSITION:				
Bioclast	---	---	---	30
Foraminifers	35	25	25	30
Micrite	23	28	50	---
Nannofossils	40	43	25	10
Quartz	---	2	---	---
Spar cement	---	---	---	30
Spicules	2	1	---	---



SITE 811 HOLE A CORE 22H CORED INTERVAL 195.5-205.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE MIOCENE	A/P	N142	?			1582 ● 98.1% 1621 ● 60.5% 1.91 ● 96.6% 1597 ● 58.4% 1.96 ● 96.2% 1608 ● 56.2% 1.91 ● 96.4% 1610 ● 55.3% 1.89 ● 94.0%	● 99.0%	1 2 3 4 5 6 7 CC	0.5 1.0			Tr F F	PAL

LITHOLOGIC DESCRIPTION

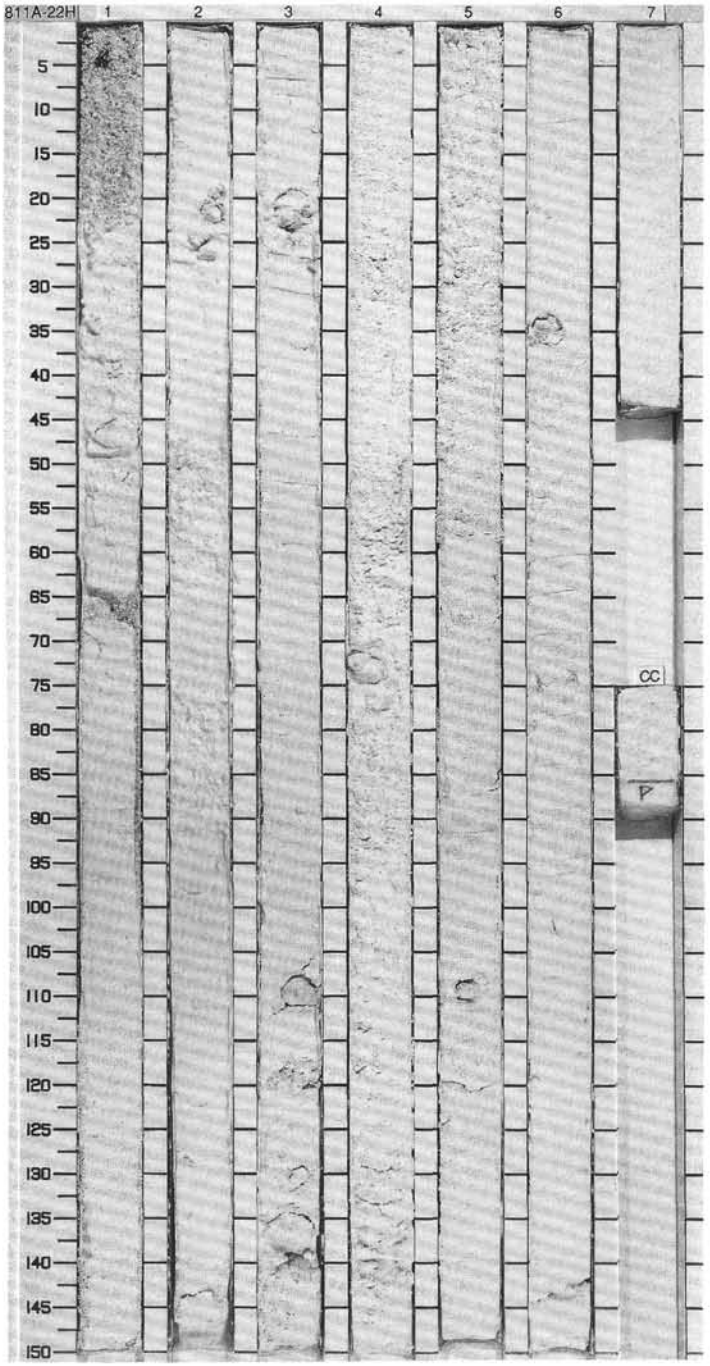
NANNOFOSSIL FORAMINIFER OOZE to FORAMINIFER BIOCLASTIC PACKSTONE

Major lithology: NANNOFOSSIL FORAMINIFER OOZE, white (10YR 8/0), and containing lithified particles (2-3 cm in size) in Section 3, at 20 cm and 110 cm, and in Section 6, at 35 cm. Chalk nodules and layers occur within Section 7. FORAMINIFER BIOCLASTIC PACKSTONE occurs within fining upward sediment gravity flow deposits in Section 2, from 27-63 cm, and 74 -91 cm, and in Section 5, 37-58 cm, as well as in Section 4 throughout and Section 5, from 0-37 cm.

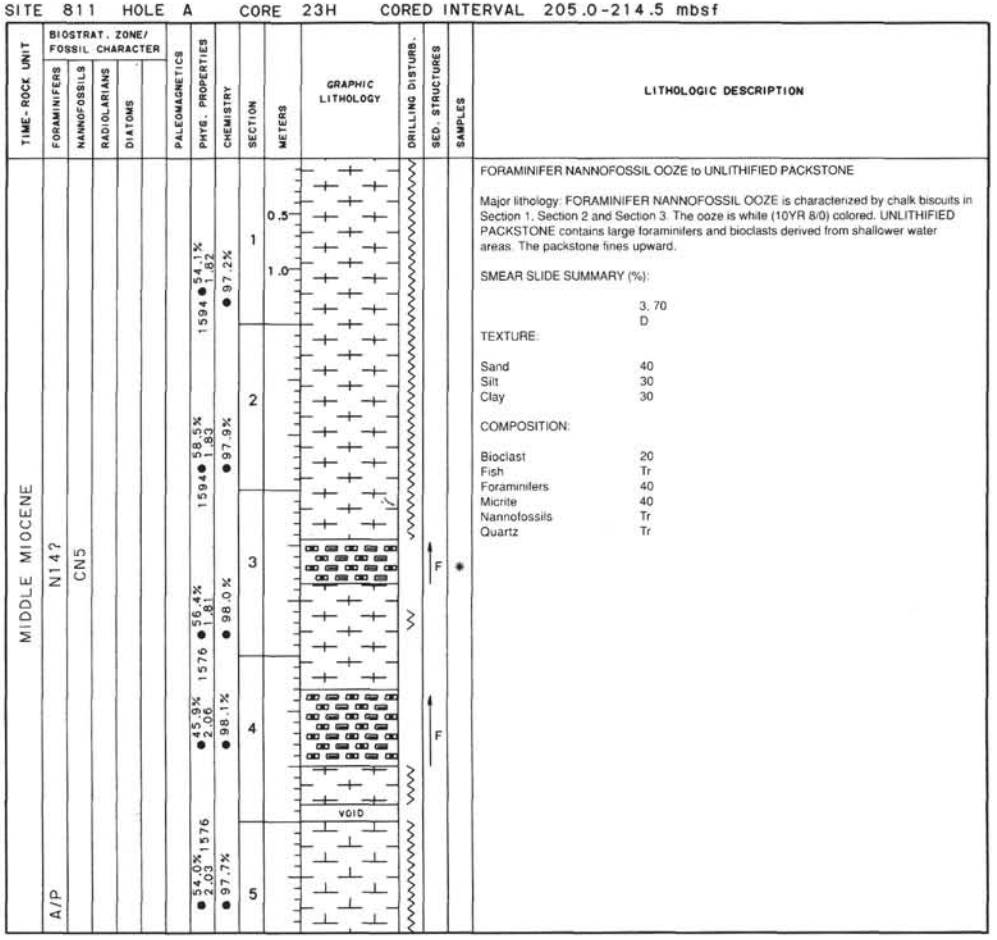
Minor lithology: Possible downhole contamination occurs in Section 1, 0-68 cm.

COARSE FRACTION SUMMARY (%):

	2, 8	4, 58
	D	D
TEXTURE:		
Sand	65	47
Silt	35	53
COMPOSITION:		
Bioclast	55	45
Bryozoa	1	Tr
Coral	1	Tr
Foraminifers	40	50
Skeletal debris	1	---
Spicules	2	5



SITE 811 HOLE A CORE 23H CORED INTERVAL 205.0-214.5 mbsf



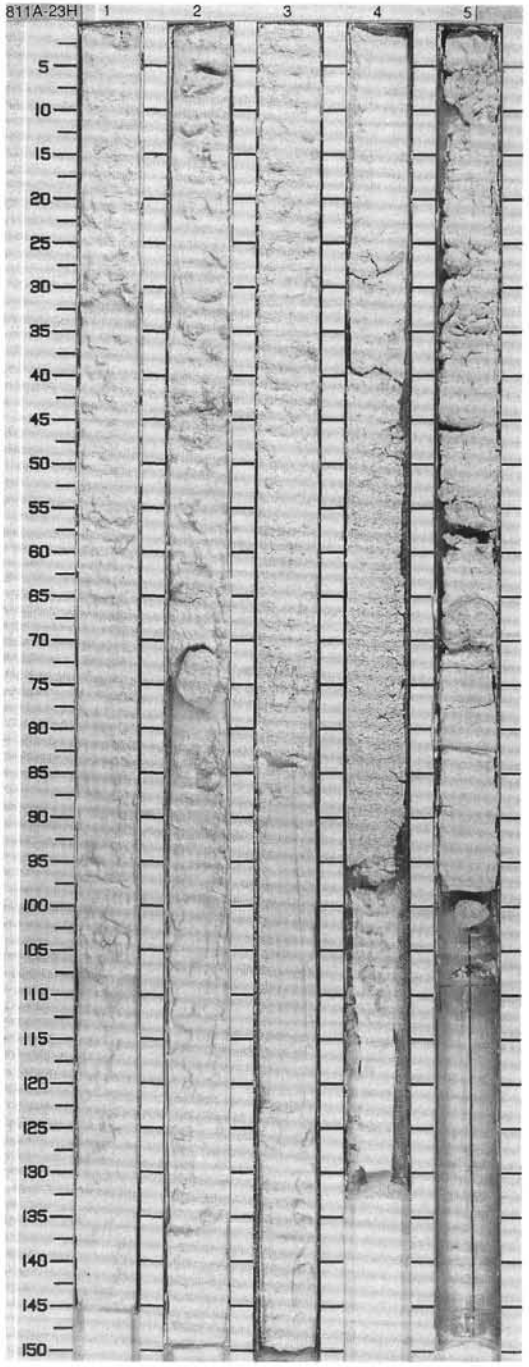
FORAMINIFER NANNOFOSSIL OOZE to UNLITHIFIED PACKSTONE

Major lithology: FORAMINIFER NANNOFOSSIL OOZE is characterized by chalk biscuits in Section 1, Section 2 and Section 3. The ooze is white (10YR 8/0) colored. UNLITHIFIED PACKSTONE contains large foraminifers and bioclasts derived from shallower water areas. The packstone fines upward.

SMEAR SLIDE SUMMARY (%):

	3, 70 D
TEXTURE:	
Sand	40
Silt	30
Clay	30
COMPOSITION:	
Bioclast	20
Fish	Tr
Foraminifers	40
Micrite	40
Nannofossils	Tr
Quartz	Tr

811A 24H NO RECOVERY



811B 1X NO RECOVERY

811B 2X NO RECOVERY

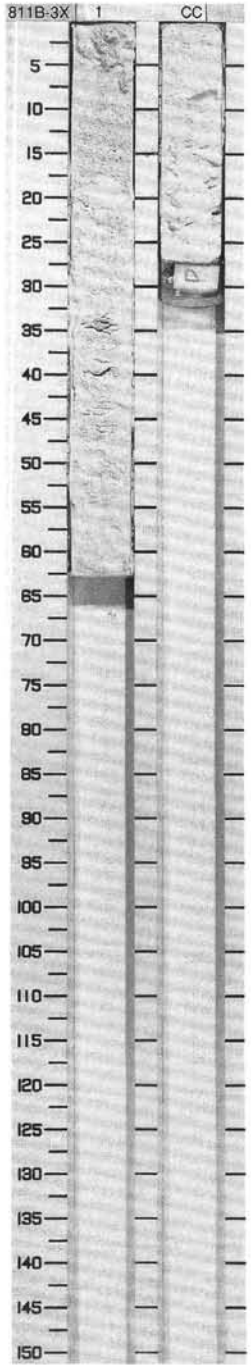
SITE 811 HOLE B CORE 3X CORED INTERVAL 212.0-221.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE MIOCENE	N10 - N12 C/P	?						1 0.5 CC					*	FORAMINIFER NANNOFOSSIL CHALK to FORAMINIFER NANNOFOSSIL OOZE Major lithology: FORAMINIFER NANNOFOSSIL CHALK and FORAMINIFER NANNOFOSSIL OOZE are white (10YR 8/0). The chalk is present in form of biscuits. Minor lithology: FORAMINIFER SAND with rusty flakes. This could be a downhole contamination. SMEAR SLIDE SUMMARY (%): 1, 50 D TEXTURE: Sand 25 Silt 10 Clay 65 COMPOSITION: Foraminifers 20 Micrite 65 Nannofossils 10

811B 4X NO RECOVERY

811B 5X NO RECOVERY

811B 6X NO RECOVERY

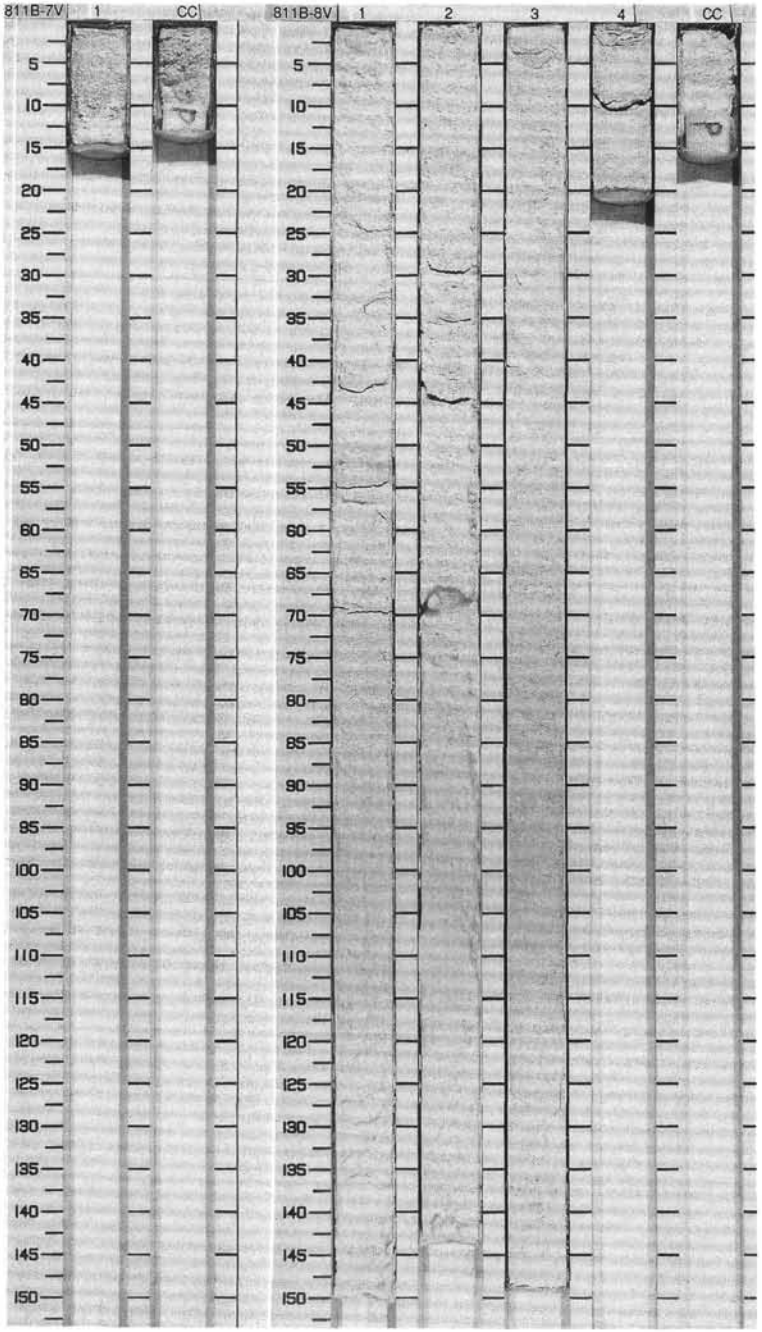


SITE 811 HOLE B CORE 7V CORED INTERVAL 250.3-258.8 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE MIOCENE	N10 - N12	C/P						1 CC						CARBONATE SAND Major lithology: The white (10YR 8/0) CARBONATE SAND contains skeletal particles and iron chips (possible downhole contamination).

SITE 811 HOLE B CORE 8V CORED INTERVAL 258.8-263.7 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE MIOCENE	N10 - N12	CN5b						1 2 3 4 CC	0.5 1.0				* □ TW *	BIOCLASTIC NANNOFOSSIL OOZE to BIOCLASTIC NANNOFOSSIL CHALK Major lithology: BIOCLASTIC NANNOFOSSIL OOZE to BIOCLASTIC NANNOFOSSIL CHALK with approximately 10% foraminifers. The ooze may have been produced by the drilling. Otherwise this core is an interbedded bioclastic nannofossil ooze and chalk. The color of the sediment is white (10YR 8/0), with local green (5G 5/4) horizontal banding and narrow subvertical streaks. Minor lithology: LITHOCLAST RUDSTONE in Section 1, 0-7 cm (drilling contamination?). SMEAR SLIDE SUMMARY (%): 1, 20 D / 1, 60 CF D / 3, 80 D TEXTURE: Sand 40 45 20 Silt 60 55 30 Clay --- --- 50 COMPOSITION: Bioclast 40 --- 11 Calcispheres --- --- 6 Foraminifers 10 95 31 Micrite 5 --- 16 Nannofossils 40 --- 36 Spicules 5 5 ---



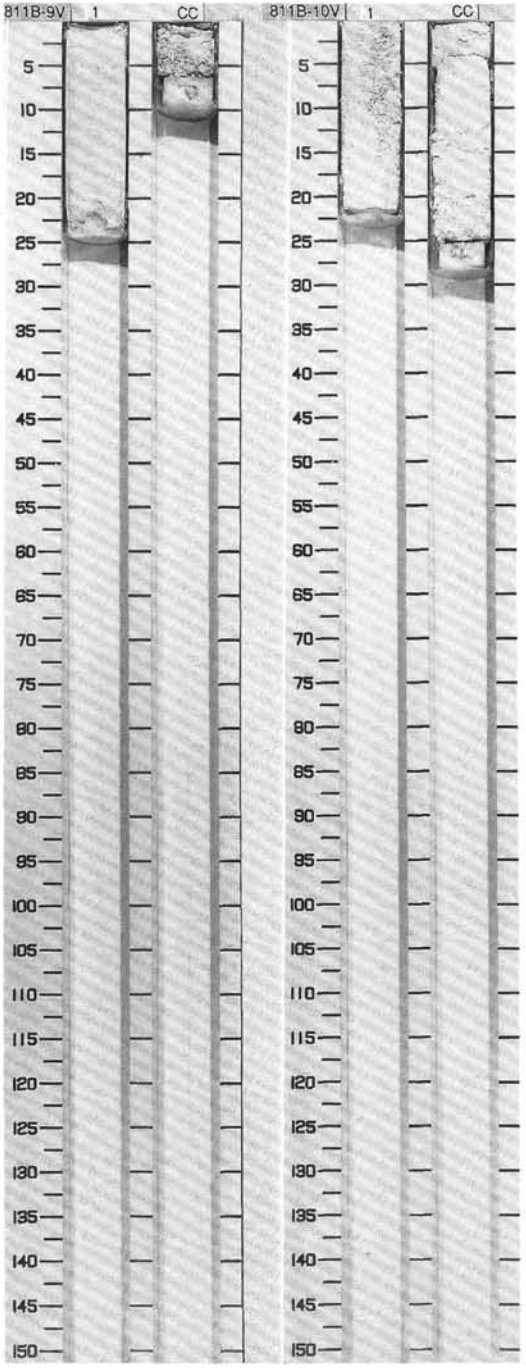
SITE 811 HOLE B CORE 9V CORED INTERVAL 263.7-264.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE MIOCENE	C/P	N10 - N12?	CN5					1, CC					*	FORAMINIFER NANNOFOSSIL OOZE Major lithology: FORAMINIFER NANNOFOSSIL OOZE White (10YR 8/1) Minor lithology: BIOCLASTIC FORAMINIFER PACKSTONE White (10YR 8/1) Section CC, 0-7 cm. SMEAR SLIDE SUMMARY (%): 1, 2 D TEXTURE: Silt 20 Clay 80 COMPOSITION: Bioclast 15 Foraminifers 10 Micrite 70 Nannofossils 5

SITE 811 HOLE B CORE 10V CORED INTERVAL 264.1-264.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	? F/P	B						1, CC					*	BIOCLASTIC to MICRITIC(?) CHALK with FORAMINIFERS Major lithology: BIOCLASTIC to MICRITIC(?) CHALK with FORAMINIFERS. The foraminifers are heavily overgrown by calcite cement. Minor lithology: SAND to GRAVEL in Section 1, 7-10 cm, coarse, contains lithoclasts, foraminifers, bioclasts, and nannofossils. This sand and gravel may be filling a burrow, since it is covering only half the core and is inclined at 45°. SMEAR SLIDE SUMMARY (%): 1, 17 D TEXTURE: Sand 5 Silt 20 Clay 75 COMPOSITION: Bioclast 30 Dolomite Tr Foraminifers 5 Micrite 60 Nannofossils 5

811B 11X NO RECOVERY



SITE 811 HOLE B CORE 12X CORED INTERVAL 269.5-279.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B						CC			V		*	BIOCLASTIC PACKSTONE with abraded rounded grains. The color is very white (10YR 8/0).

SMEAR SLIDE SUMMARY (%):

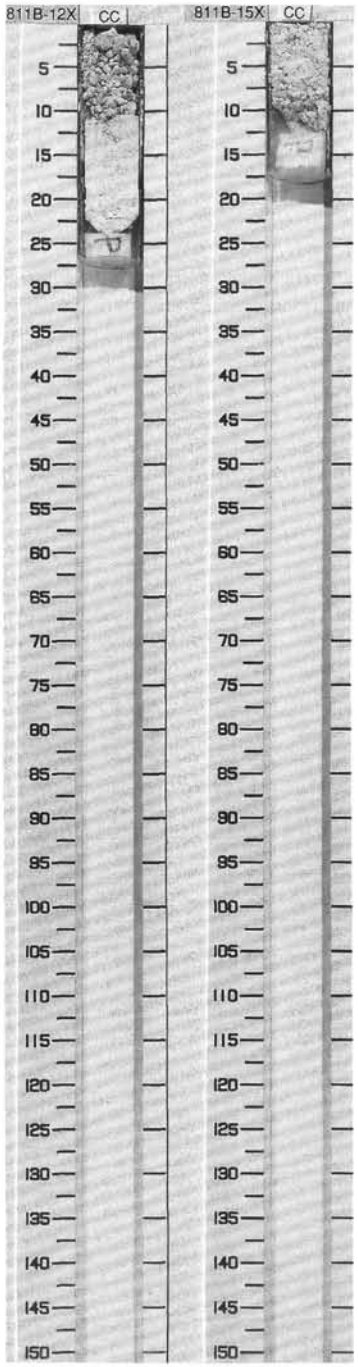
	CC, 20 D
TEXTURE:	
Sand	60
Silt	40
COMPOSITION:	
Bioclast	35
Foraminifers	15
Lithoclast	15
Micrite	30
Spar cement	5

811B 13X NO RECOVERY

811B 14X NO RECOVERY

SITE 811 HOLE B CORE 15X CORED INTERVAL 298.4-308.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
LOWER MIOCENE?	F/P	B						CC						UNLITHIFIED SKELETAL RUDSTONE
	N8?													Major lithology: UNLITHIFIED SKELETAL RUDSTONE with a fine sandy matrix (debris from corals, alcyonarian, spicules, molluscs, crustaceans, rare bryozoans, red algae). The color is white (10YR 8/0).

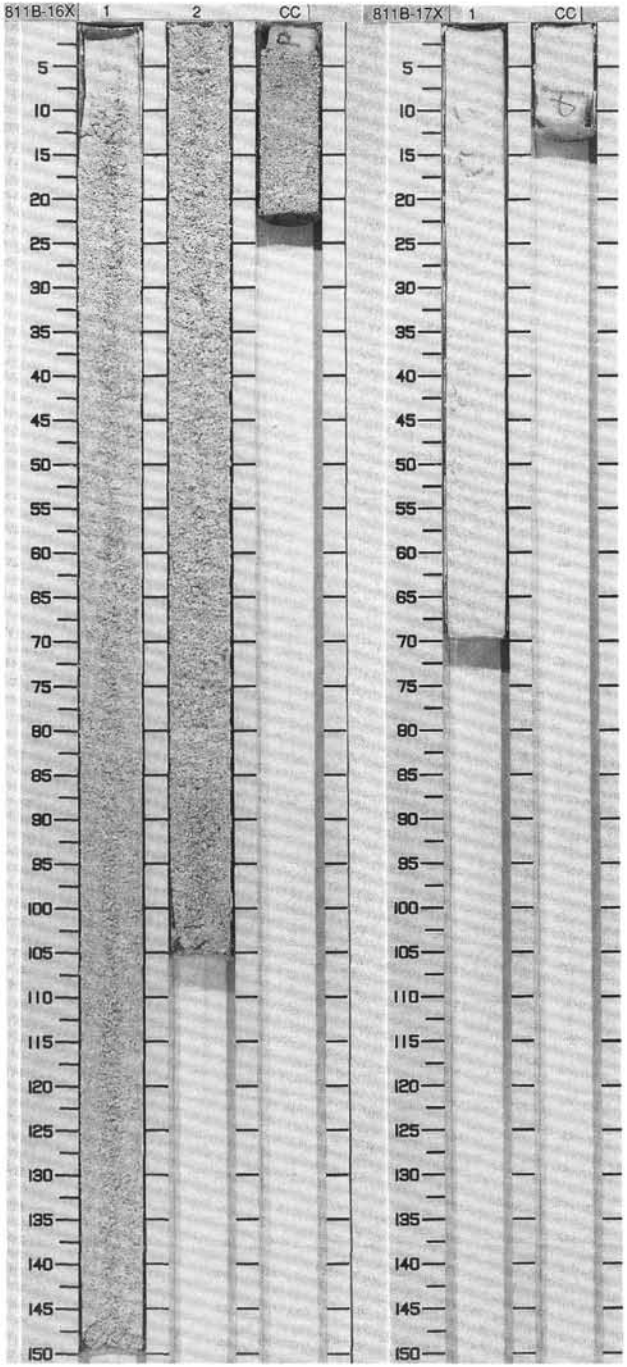


SITE 811 HOLE B CORE 16X CORED INTERVAL 308.0-317.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
		?						1	0.5		O			UNLITHIFIED BIOCLASTIC RUDSTONE to BIOCLASTIC GRAINSTONE Major lithology: UNLITHIFIED BIOCLASTIC RUDSTONE to BIOCLASTIC GRAINSTONE Very white (10YR 8/0), with detrital material composed of: corals, red algae, larger benthic foraminifers (amphisteginids), echinoids. From reef flat areas or upper parts of a reef slope. The occurrence of black-colored skeletal particles is a result of chemical reduction processes. Minor lithology: BIOCLASTIC PACKSTONE in Section 1, 0-8 cm.
									1.0					
								2						
								CC						

SITE 811 HOLE B CORE 17X CORED INTERVAL 317.7-327.3 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
?LOWER MIOCENE		?						1	0.5				*	BIOCLASTIC GRAINSTONE to PACKSTONE Major lithology: Very white (10YR 8/0) fine-grained BIOCLASTIC GRAINSTONE to PACKSTONE, well sorted: dominated by corals, with bryozoans, molluscs, amphisteginids, miliolids, textulariids, heterosteginids (?). SMEAR SLIDE SUMMARY (%): 1, 60 D TEXTURE: Sand 90 Silt 10 COMPOSITION: Bioclast 90 Micrite 10
								CC						

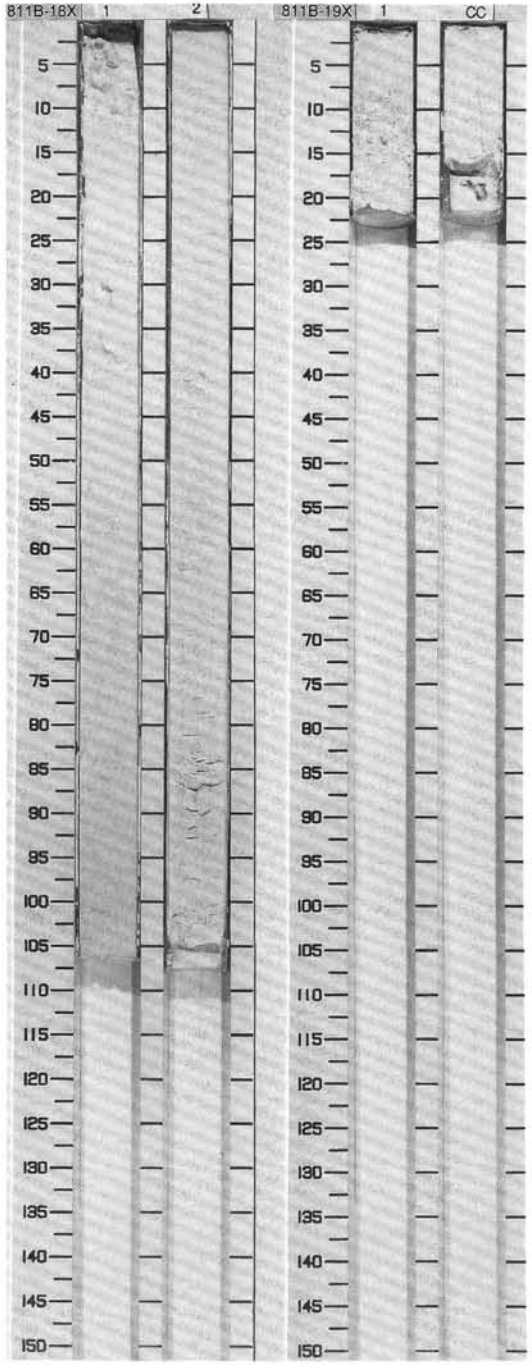


SITE 811 HOLE B CORE 18X CORED INTERVAL 327.3-337.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
?		?						1	0.5 1.0	VOID			*	UNLITHIFIED BIOCLASTIC GRAINSTONE to PACKSTONE Major lithology: UNLITHIFIED BIOCLASTIC GRAINSTONE to PACKSTONE, very white (10YR 8/0) in color. The grains are fragments of corals, molluscs, foraminifers, micritic matrix. SMEAR SLIDE SUMMARY (%): 1, 50 D / 2, 80 D TEXTURE: Sand 90 95 Silt 10 5 COMPOSITION: Bioclast 20 40 Coral 60 40 Foraminifers 10 15 Micrite 10 5
								2					*	

SITE 811 HOLE B CORE 19X CORED INTERVAL 337.0-346.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
?LOWER MIOCENE	F/P	?						1						BIOCLASTIC GRAINSTONE to PACKSTONE Major lithology: BIOCLASTIC GRAINSTONE to moderately sorted PACKSTONE very white (10YR 8/0), well sorted. Detritus consists mainly of corals, molluscs, foraminifers and echinoids.
								CC						



SITE 811 HOLE B CORE 20X CORED INTERVAL 346.6-356.3 mbsf

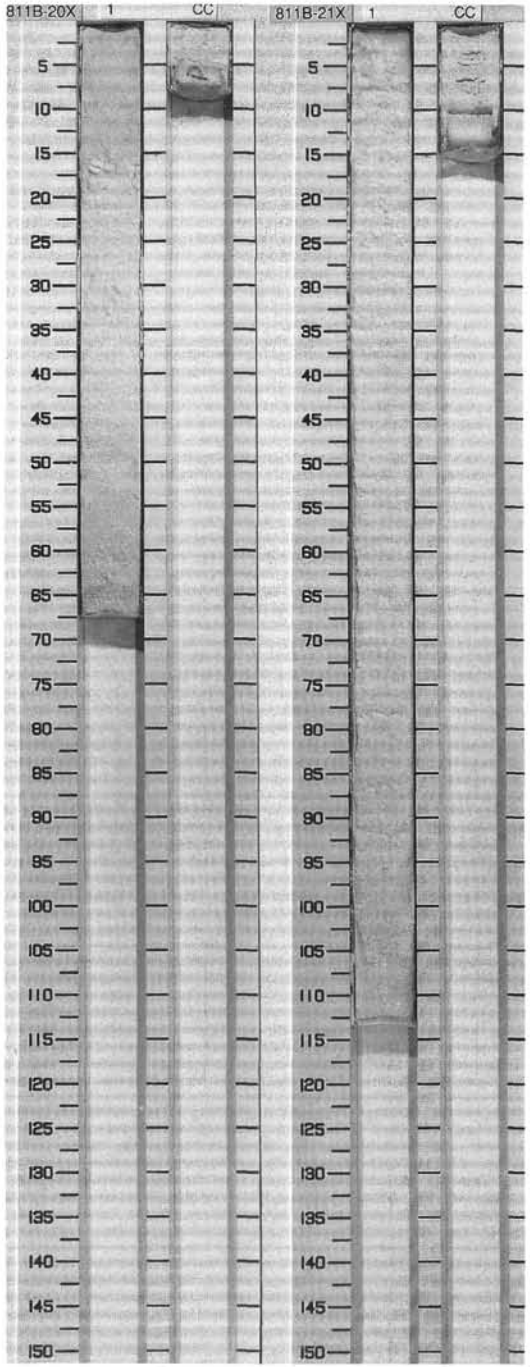
TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER OLIGOCENE	P22 - N3	C/M ?						1 CC					*	UNLITHIFIED BIOCLASTIC PACKSTONE Major lithology: White (10YR 8/2) UNLITHIFIED BIOCLASTIC PACKSTONE, moderately sorted SMEAR SLIDE SUMMARY (%): 1, 13 D TEXTURE: Sand 70 Silt 30 COMPOSITION: Bioclast 17 Coral 50 Foraminifers 3 Micrite 30

SITE 811 HOLE B CORE 21X CORED INTERVAL 356.3-365.9 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER OLIGOCENE	F/M P22 - N3	?						1 CC	0.5 1.0				* * *	UNLITHIFIED SKELETAL PACKSTONE Major lithology: Well sorted, fine-grained, UNLITHIFIED, SKELETAL PACKSTONE white (10YR 8/0). Planktonic foraminifers are abundant. The micritic matrix is composed of silt-sized bioclastic particles. SMEAR SLIDE SUMMARY (%): 1, 60 D / 1, 61 D / CC, 10 D TEXTURE: Sand 70 70 40 Silt 30 30 30 Clay --- --- 30 COMPOSITION: Bioclast 55 55 10 Carbonate particles --- --- 35 Foraminifers 15 15 20 Micrite 30 30 --- Nannofossils Tr Tr 35

SITE 811 HOLE B CORE 22X CORED INTERVAL 365.9-375.6 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
								1 CC						BIOCLASTIC GRAINSTONE Major lithology: BIOCLASTIC GRAINSTONE with high porosity was recovered in this core as a small (1.5 cm) fairly well cemented piece. Bioclasts include both benthic and planktonic foraminifers.



SITE 811 HOLE B CORE 23X CORED INTERVAL 375.6-384.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
								CC						BIOCLASTIC RUDSTONE Major lithology: Coarse grained, unlithified . Composition: coralline algae, intraclasts, corals, molluscs, larger benthic forams (amphisteginids, *Heterostegina*?). Numerous particles are red-brown in color, indicating oxidizing conditions.

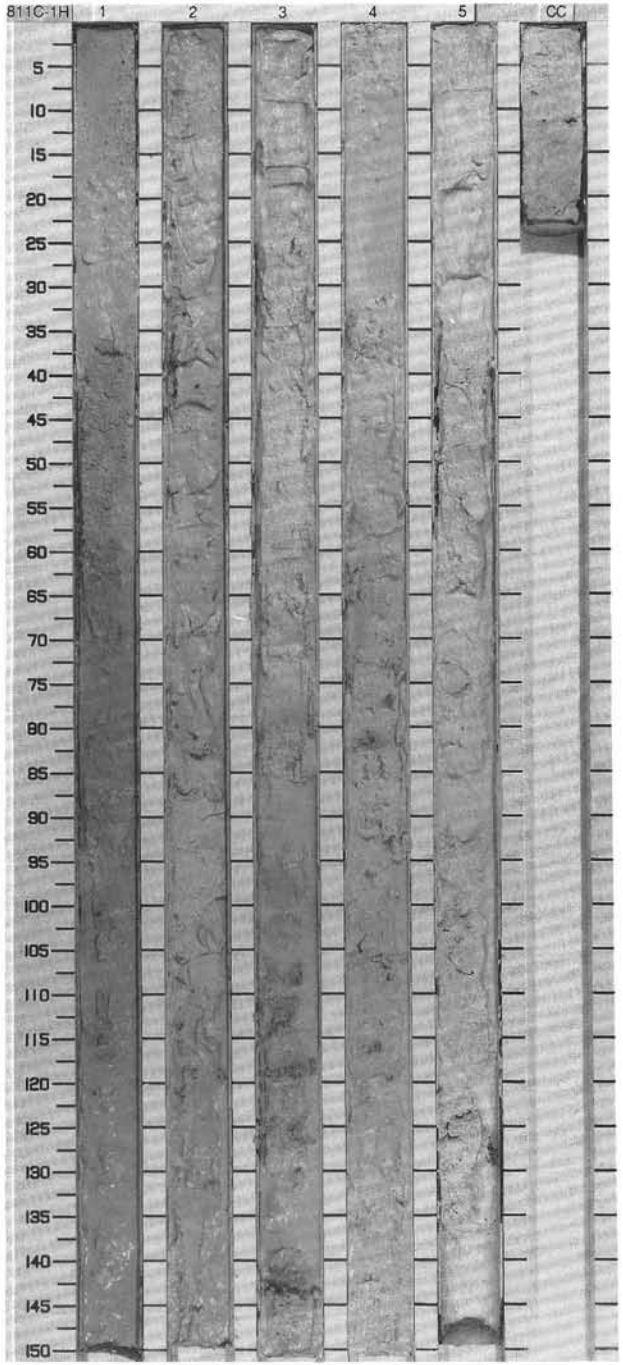
811B 24X NO RECOVERY

SITE 811 HOLE C CORE 1H CORED INTERVAL 0.0-7.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
								1	0.5 1.0			C		NANNOFOSSIL FORAMINIFER OOZE to FORAMINIFER NANNOFOSSIL OOZE Major lithology: NANNOFOSSIL FORAMINIFER OOZE, white (10YR 8/2) in color, to FORAMINIFER NANNOFOSSIL OOZE, very pale brown (10YR 7/3) in color in Section 1 and Section 2. In Section 3, 102-130 cm, bioclasts occur within the nannofossil foraminifer ooze. The color in this interval changes from very pale brown (10YR 7/4) at the base to white (10YR 8/2) at the top. This color change occurs also between 143 and 150 cm of Section 3. Bioclasts within the foraminifer nannofossil ooze in Section 5, 0-137 cm include fragmented foraminifers and reef debris (corals, coralline algae, bryozoans). Minor lithology: A coarsening upward PTEROPOD FORAMINIFER PACKSTONE occurs in Section 1, 0-42 cm. FORAMINIFER BIOCLASTIC PACKSTONES occur in Section 3, 67-80 cm, 85-102 cm, and 130-143 cm, and in the core catcher, 12-23 cm. A BIOCLASTIC PACKSTONE was noted in Section 4, 7-30 cm, with an upward fining sequence. All these packstones are interpreted as gravity-flow deposits.
								2						
								3						
								4				F		
								5						
								CC						

SMEAR SLIDE SUMMARY (%):

	1, 50 D	CF 1, 50 D	2, 72 D	CF 3, 71 D	5, 80 D	CF 5, 80 D
TEXTURE:						
Sand	---	60	---	82	46	46
Silt	---	40	---	18	54	54
COMPOSITION:						
Bioclast	5	---	5	70	8	70
Foraminifers	50	50	30	30	40	30
Nannofossils	30	---	57	---	50	---
Pteropod	10	50	5	---	---	---
Spicules	5	---	3	---	---	---



SITE 811 HOLE C CORE 2H CORED INTERVAL 7.7-17.2 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
								1	0.5				□
									1.0				
								2					□
								3					□
								4					
								5					□
								6					*
													*
													*
								7					*
								CC					

LITHOLOGIC DESCRIPTION

FORAMINIFER NANNOFOSSIL OOZE to NANNOFOSSIL FORAMINIFER OOZE

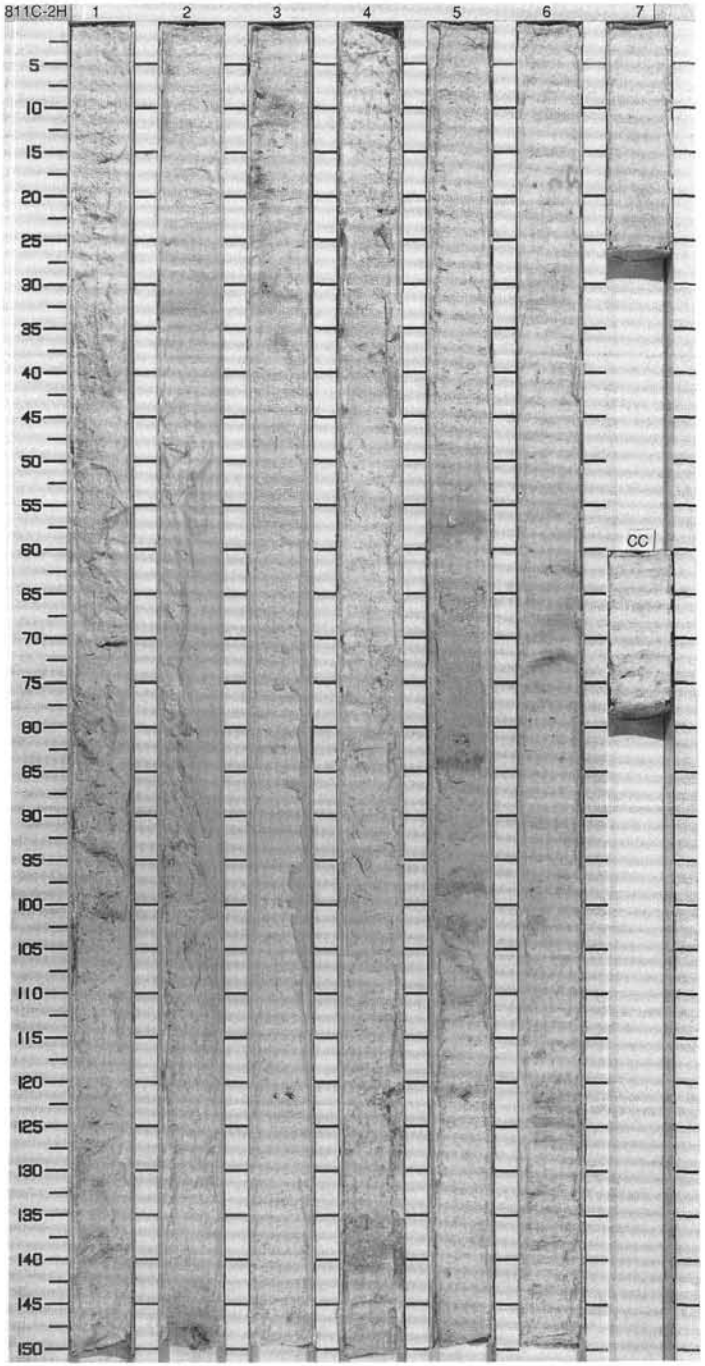
Major lithology: FORAMINIFER NANNOFOSSIL OOZE, light gray (7.5YR 8/0) was recovered in the first 5 sections. Black colored areas within this ooze occur in Section 2, at 30, 85, and 105 cm, in Section 3, 5-40 cm, in Section 4, at 140 cm, and in Section 5 at 86, 98, 111, and 123 cm. A fine-grained sediment gravity-flow deposit occurs in Section 5, 57-63 cm. NANNOFOSSIL FORAMINIFER OOZE occurs in Section 6, 0-70 cm, and 100-150 cm, and in Section 7, 0-25 cm. The color of this ooze is white (10YR 8/0), with some gray (2.5YR 6/0) *laminations and mottles.*

SMEAR SLIDE SUMMARY (%):

	CF 1, 60 D	CF 2, 85 D	CF 3, 85 D	CF 5, 80 D	6, 30 D	6, 80 D	6, 144 D
TEXTURE:							
Sand	---	38	37	35	50	44	39
Silt	---	62	63	65	50	56	61
COMPOSITION:							
Bioclast	5	5	5	5	---	Tr	10
Foraminifers	35	30	30	30	97	99	90
Nannofossils	58	62	61	63	---	---	---
Pteropod	---	---	2	---	---	---	---
Spicules	2	3	2	2	1	1	---

SMEAR SLIDE SUMMARY (%):

	7, 20 D
TEXTURE:	
Sand	53
Silt	47
COMPOSITION:	
Bioclast	10
Foraminifers	90



SITE 811 HOLE C CORE 3H CORED INTERVAL 17.2-26.4 mbsf

TIME-ROCK UNIT | BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS, NANNOFOSSILS, RADIOLARIANS, DIATOMS | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES

LITHOLOGIC DESCRIPTION

NANNOFOSSIL BIOCLASTIC to BIOCLASTIC NANNOFOSSIL FLOATSTONE and FORAMINIFER NANNOFOSSIL to NANNOFOSSIL FORAMINIFER OOZE

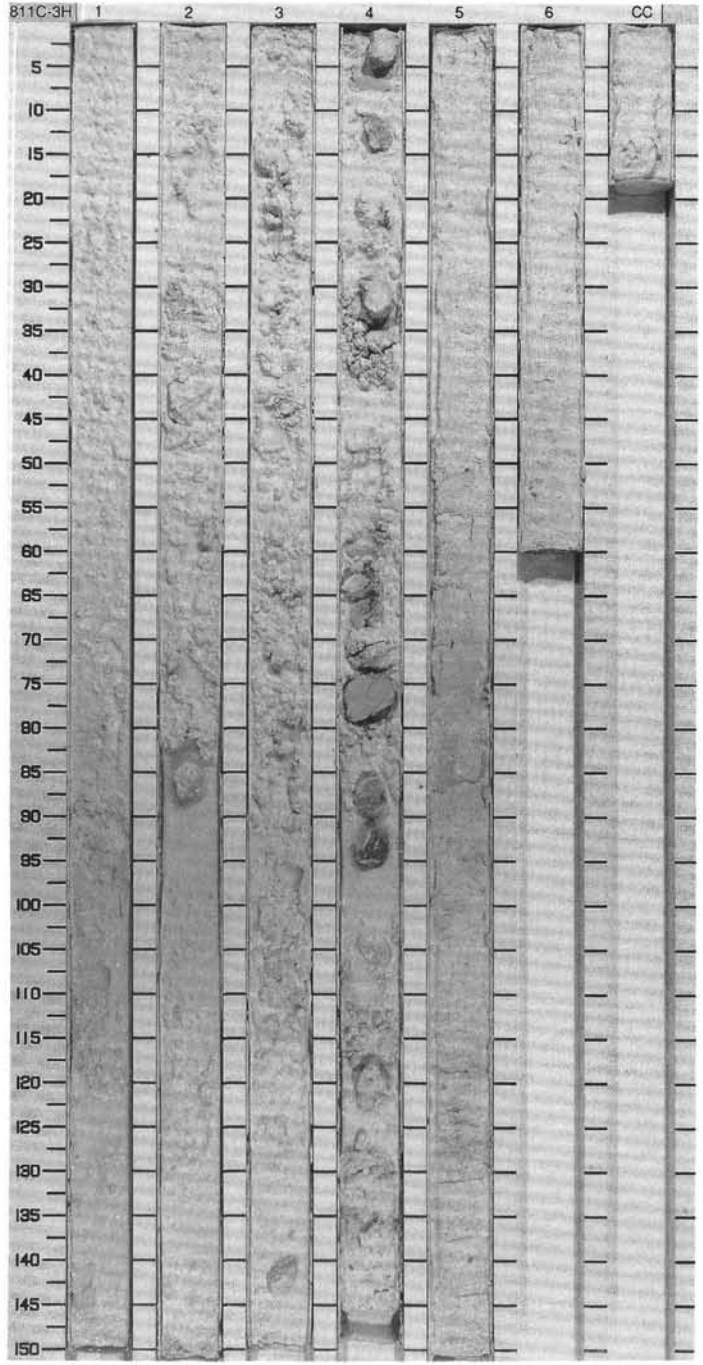
Major lithology: NANNOFOSSIL BIOCLASTIC to BIOCLASTIC NANNOFOSSIL FLOATSTONE which is light gray (7.5YR 8/0) and poorly sorted. In Section 1, bioclasts, foraminifers and nannofossils are mixed with a very fine matrix of microbioclastic grains. In Section 2 larger components occur at 29-33 cm, 41-45 cm, and 86-87 cm. Large, cm-sized clasts are floating in a matrix of nannofossil bioclastic ooze in Section 4. A white limestone clast at 20 cm shows moldic porosity due to dissolved bivalves (?). A bioclastic grainstone clast occurs at 75 cm, a dark gray (2YR 3/0) clast with moldic porosity after skeletal components at 92 cm (subaerial diagenesis?), and a clast containing large foraminifers and bioclasts at 120 cm. The interpretation of this floatstone is a debris flow, containing shallow-marine-derived clasts. FORAMINIFER NANNOFOSSIL to NANNOFOSSIL FORAMINIFER OOZE in Section 5 and Section 6 is very white (10YR 8/0) with light gray (2.5Y 7/0) mottles throughout.

SMEAR SLIDE SUMMARY (%):

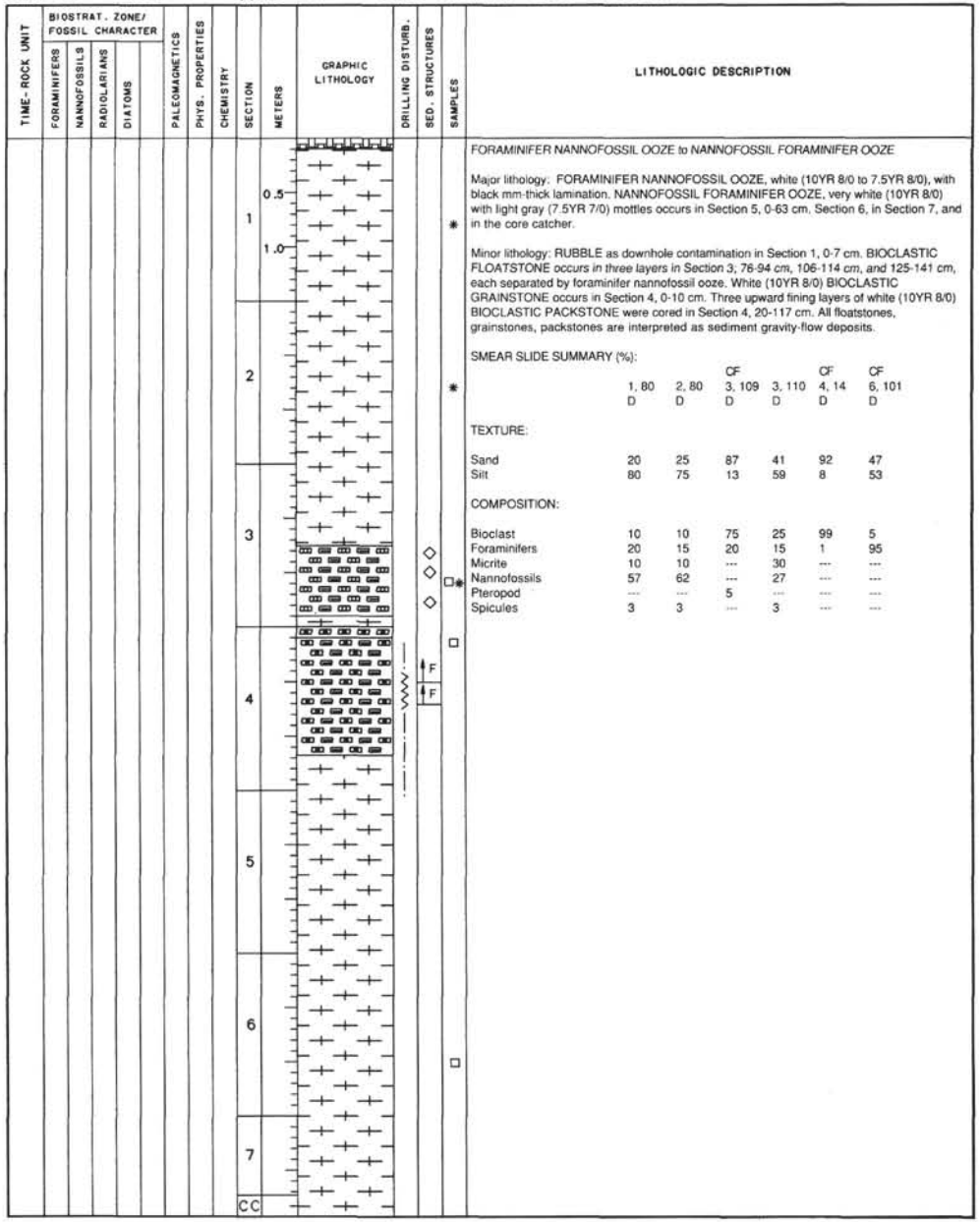
	CF 1, 80 D	1, 80 D	2, 80 D	3, 80 D	TS 4, 12 D	4, 80 D	TS 4, 93 D
TEXTURE:							
Sand	45	84	40	35	---	40	---
Silt	55	16	60	65	---	60	---
COMPOSITION:							
Bioclast	25	90	25	20	25	25	10
Dolomite	---	---	---	---	---	---	10
Foraminifers	20	10	15	15	---	15	10
Micrite	30	---	30	35	35	35	30
Nannofossils	25	---	30	30	---	25	---
Pore space	---	---	---	---	40	---	40

SMEAR SLIDE SUMMARY (%):

	CF 5, 83 D
TEXTURE:	
Sand	38
Silt	62
COMPOSITION:	
Bioclast	5
Foraminifers	93
Spicules	2



SITE 811 HOLE C CORE 4H CORED INTERVAL 26.7-36.2 mbsf



LITHOLOGIC DESCRIPTION

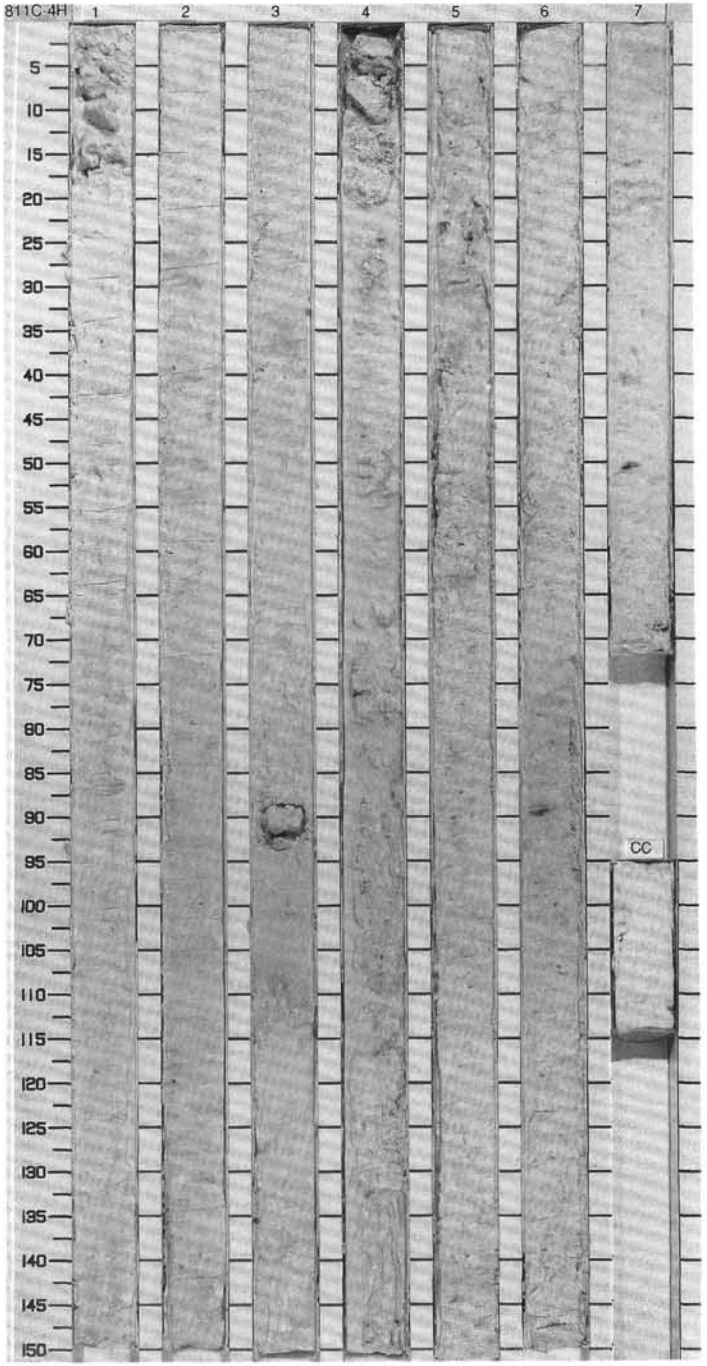
FORAMINIFER NANNOFOSSIL OOZE to NANNOFOSSIL FORAMINIFER OOZE

Major lithology: FORAMINIFER NANNOFOSSIL OOZE, white (10YR 8/0 to 7.5YR 8/0), with black mm-thick lamination. NANNOFOSSIL FORAMINIFER OOZE, very white (10YR 8/0) with light gray (7.5YR 7/0) mottles occurs in Section 5, 0-63 cm. Section 6, in Section 7, and in the core catcher.

Minor lithology: RUBBLE as downhole contamination in Section 1, 0-7 cm. BIOCLASTIC FLOATSTONE occurs in three layers in Section 3, 76-94 cm, 106-114 cm, and 125-141 cm, each separated by foraminifer nannofossil ooze. White (10YR 8/0) BIOCLASTIC GRAINSTONE occurs in Section 4, 0-10 cm. Three upward fining layers of white (10YR 8/0) BIOCLASTIC PACKSTONE were cored in Section 4, 20-117 cm. All floatstones, grainstones, packstones are interpreted as sediment gravity-flow deposits.

SMEAR SLIDE SUMMARY (%):

	1, 80 D	2, 80 D	CF 3, 109 D	3, 110 D	CF 4, 14 D	CF 6, 101 D
TEXTURE:						
Sand	20	25	87	41	92	47
Silt	80	75	13	59	8	53
COMPOSITION:						
Bioclast	10	10	75	25	99	5
Foraminifers	20	15	20	15	1	95
Micrite	10	10	---	30	---	---
Nannofossils	57	62	---	27	---	---
Pteropod	---	---	5	---	---	---
Spicules	3	3	---	3	---	---



SITE 811 HOLE C CORE 5H CORED INTERVAL 36.2-45.7 mbsf

TIME-ROCK UNIT | BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS, NANNOFOSSILS, RADIOLARIANS, DIATOMS | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES

LITHOLOGIC DESCRIPTION

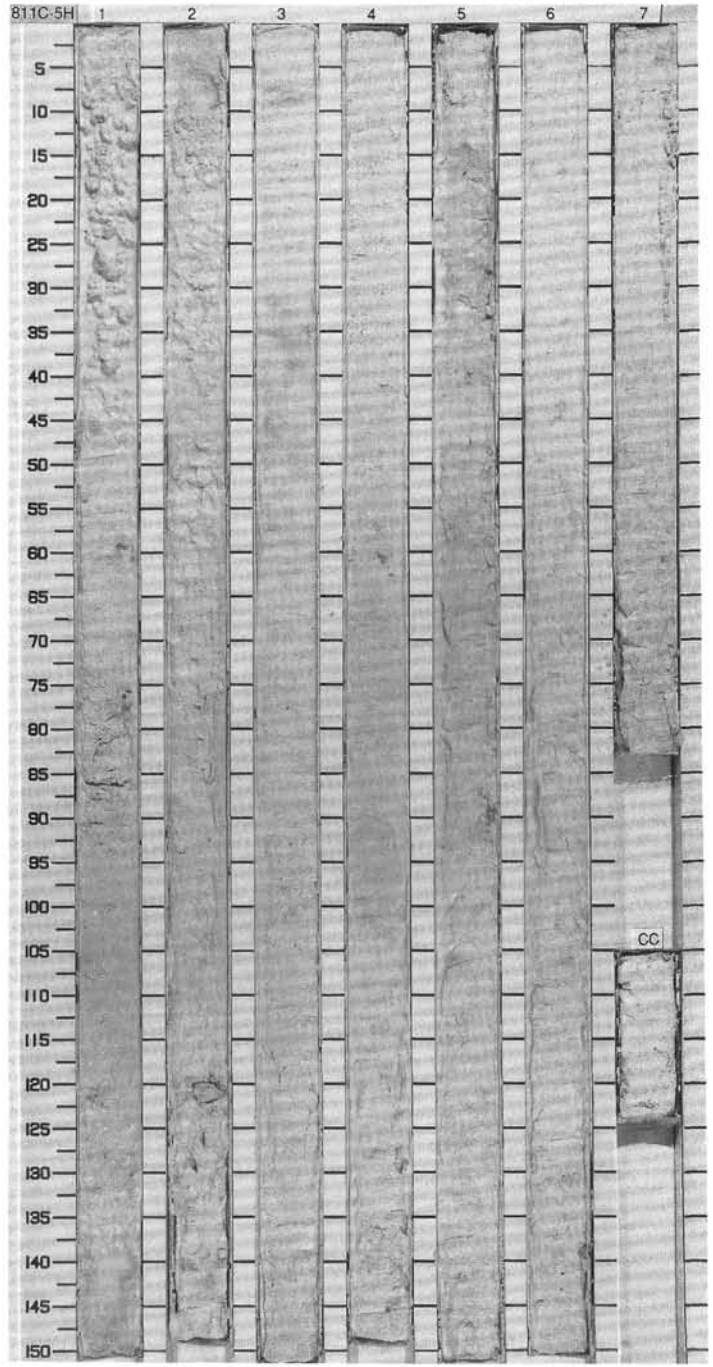
FORAMINIFER NANNOFOSSIL OOZE to NANNOFOSSIL FORAMINIFER OOZE

Major lithology: FORAMINIFER NANNOFOSSIL OOZE, white (10YR 8/0) , in Section 1 and Section 2 interbedded with gravity flow deposits. Light gray (2.5Y 7/0) mottles within this ooze occur in Section 7. The white (2.5Y 7/0) NANNOFOSSIL FORAMINIFER OOZE shows light gray (2.5Y 7/0) mottles in Section 3, 0-79 cm, Section 4, Section 5 and Section 6.

Minor lithology: Downhole contamination in Section 1, 0-47 cm. Rubbly FLOATSTONE and well-sorted PACKSTONE to GRAINSTONE occur in Section 1, 116-139 cm, and 139-150 cm, and in Section 2, 0-9 cm. A FLOATSTONE was recovered in Section 2, 9-53 cm. The color is white (10YR 8/0). These lithologies are interpreted as sediment gravity-flow deposits.

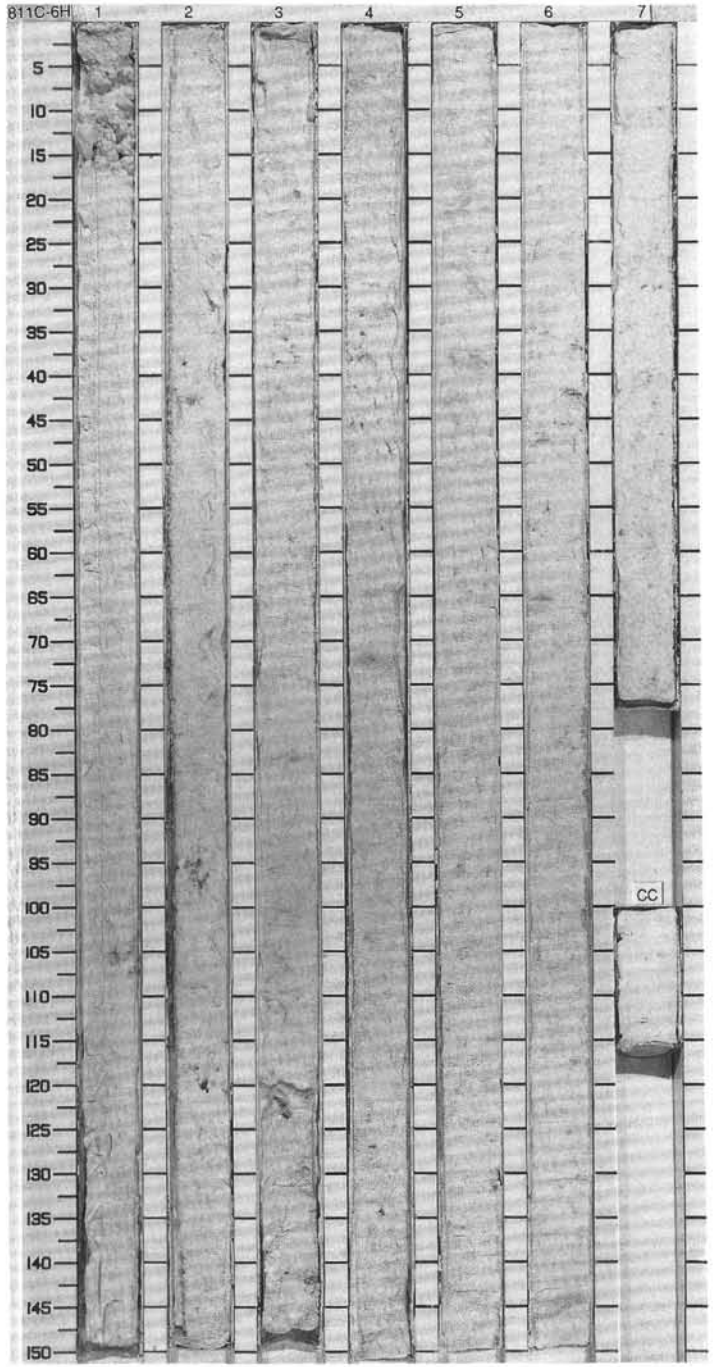
SMEAR SLIDE SUMMARY (%):

	1, 1 D	2, 100 D	3, 100 D	4, 100 D	6, 100 M	CF 6, 140 D	CF 7, 47 D
TEXTURE:							
Sand	28	30	25	32	30	35	95
Silt	72	70	75	68	70	65	5
COMPOSITION:							
Bioclast	8	5	10	7	10	2	2
Foraminifers	20	25	15	25	20	98	98
Micrite	---	5	---	---	---	---	---
Nannofossils	70	62	73	66	68	---	---
Spicules	2	2	2	2	2	---	---



SITE 811 HOLE C CORE 6H CORED INTERVAL 45.7-55.2 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
								1	0.5 1.0					FORAMINIFER NANNOFOSSIL OOZE Major lithology: FORAMINIFER NANNOFOSSIL OOZE homogenous, white (10YR 8/0) with light gray (2.5Y 7/0) mottles in Section 5 to Section 7. Minor lithology: Downhole contamination occurs in Section 1, 0-15 cm. COARSE FRACTION (%): 3,71 D — 5,80 D TEXTURE: Sand 82 46 Silt 18 54 COMPOSITION: Bioclast 70 70 Foraminifers 30 30
								2						
								3					□	
								4						
								5					□	
								6						
								7						
								CC					PAL	



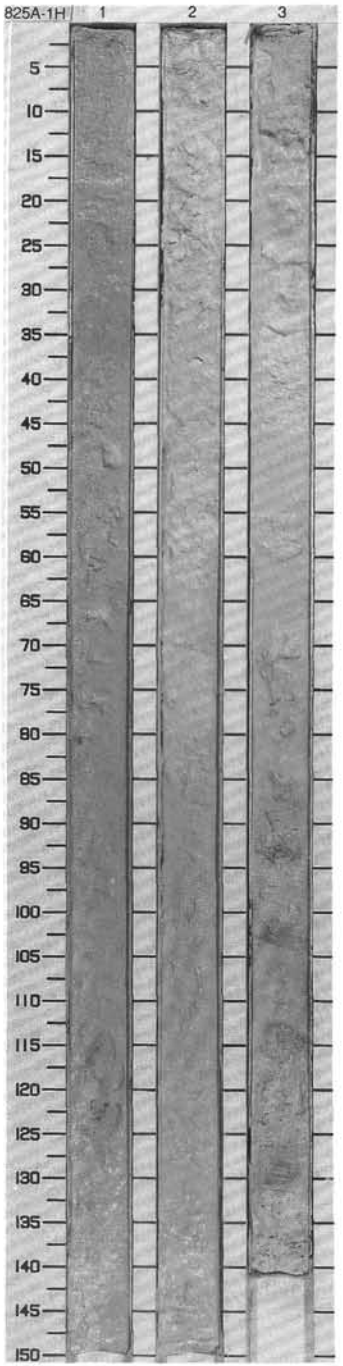
SITE 825 HOLE A CORE 1H CORED INTERVAL 0.0-4.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
PLEISTOCENE		CN14b						1	0.5					NANNOFOSSIL FORAMINIFER OOZE Major lithology: Light gray (10YR 7/2), pinkish white (7.5YR 8.2) and brownish white (10YR 8/2) NANNOFOSSIL FORAMINIFER OOZE. Minor lithology: In Section 3, FORAMINIFER PTEROPOD PACKSTONE.
									1.0					
								2						
	A/M							3					PAL	

825A 2W WASH CORE

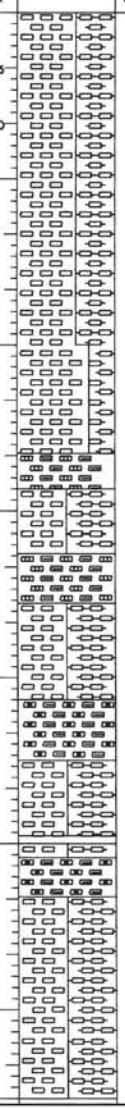
825A 3W WASH CORE

825A 4W WASH CORE



SITE 825 HOLE A CORE 5H CORED INTERVAL 200.0-209.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE MIOCENE	N10 - N14	CN5 - CN11			R?	● 52.5% 1.87	● 95.5%	1	0.5, 1.0				*
					R?	● 53.6% 1.89	● 57.75	2					
					R	● 43.4% 1.82	● 55.8%	3					□*
					R	● 55.0% 1.82	● 98.4%	4					
					R	● 52.0% 1.86	● 97.6%	5					IW
					R	● 65.6% 1.91	● 97.4%	6					
	A/P	C/P						7					
								CC					PAL



LITHOLOGIC DESCRIPTION

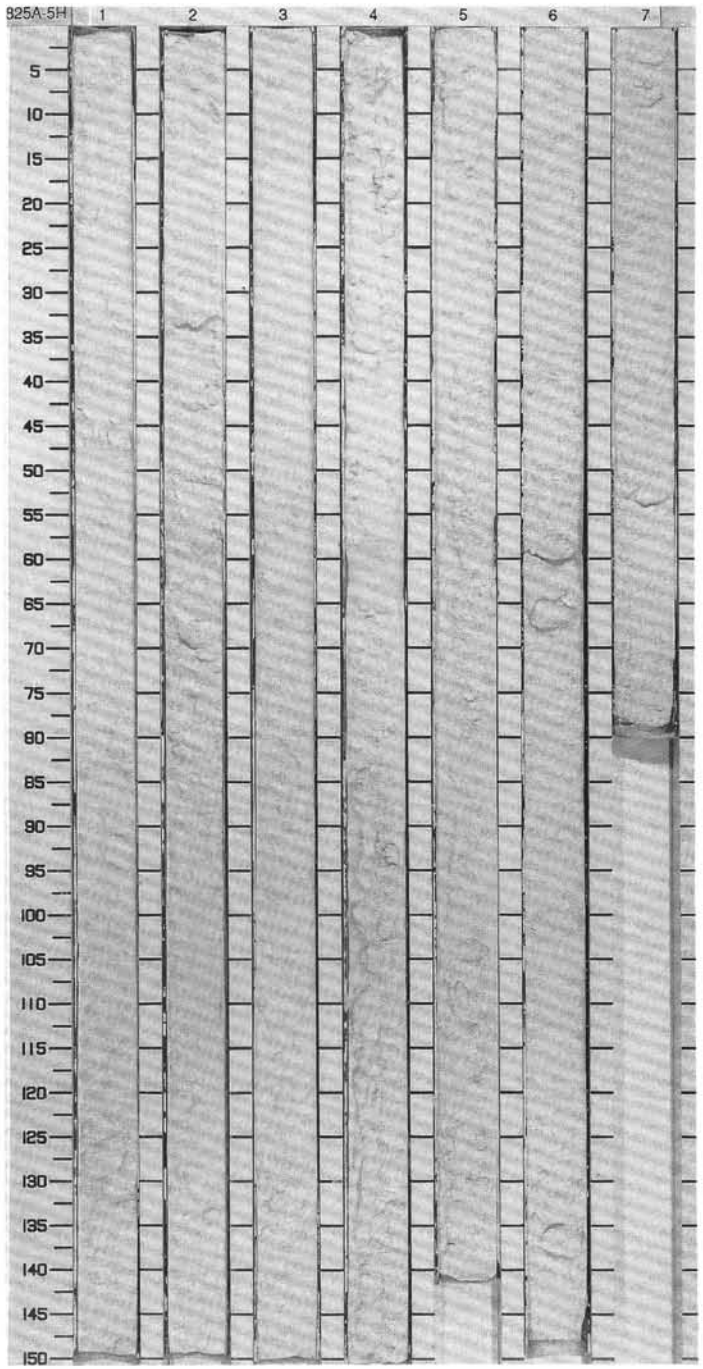
CALCAREOUS OOZE and CHALK: BIOCLASTIC PACKSTONE and FLOATSTONE

Major lithology: White (10YR 8/0) CALCAREOUS OOZE with NANNOFOSSILS and FORAMINIFERS interbedded with CALCAREOUS CHALK; the latter forming either discrete beds or intervals containing chalk lumps.

Minor lithology: White (10YR 8/0), unlithified BIOCLASTIC PACKSTONE and FLOATSTONE, the latter with a matrix of calcareous ooze.

SMEAR SLIDE SUMMARY (%):

	1, 100 D	CF 3, 125 D	3, 126 D
COMPOSITION:			
Bioclast	---	80	---
Calcite	---	---	80
Foraminifers	15	10	---
Intraclasts	55	10	---
Lithoclast	2	--	---
Micrite	15	---	15
Nannofossils	10	---	5
Spicules	3	---	---



SITE 825 HOLE A CORE 6H CORED INTERVAL 209.5-219.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE MIOCENE	A/M	N10 - N14			R?	R? 54.03% 1.87	95.9%	1	0.5				*
					R?	R? 52.85% 1.86	96.8%	2	1.0				
					R?	R? 51.8% 1.84	98.8%	3					
					R?	R? 56.5% 1.84	97.4%	4					
	F/P	CN5 - CN11			R?	R? 56.4% 1.79	98.4%	5					* □
					R?	R? 55.1% 1.69	99.3%	6					
								7					
								CC					PAL

LITHOLOGIC DESCRIPTION

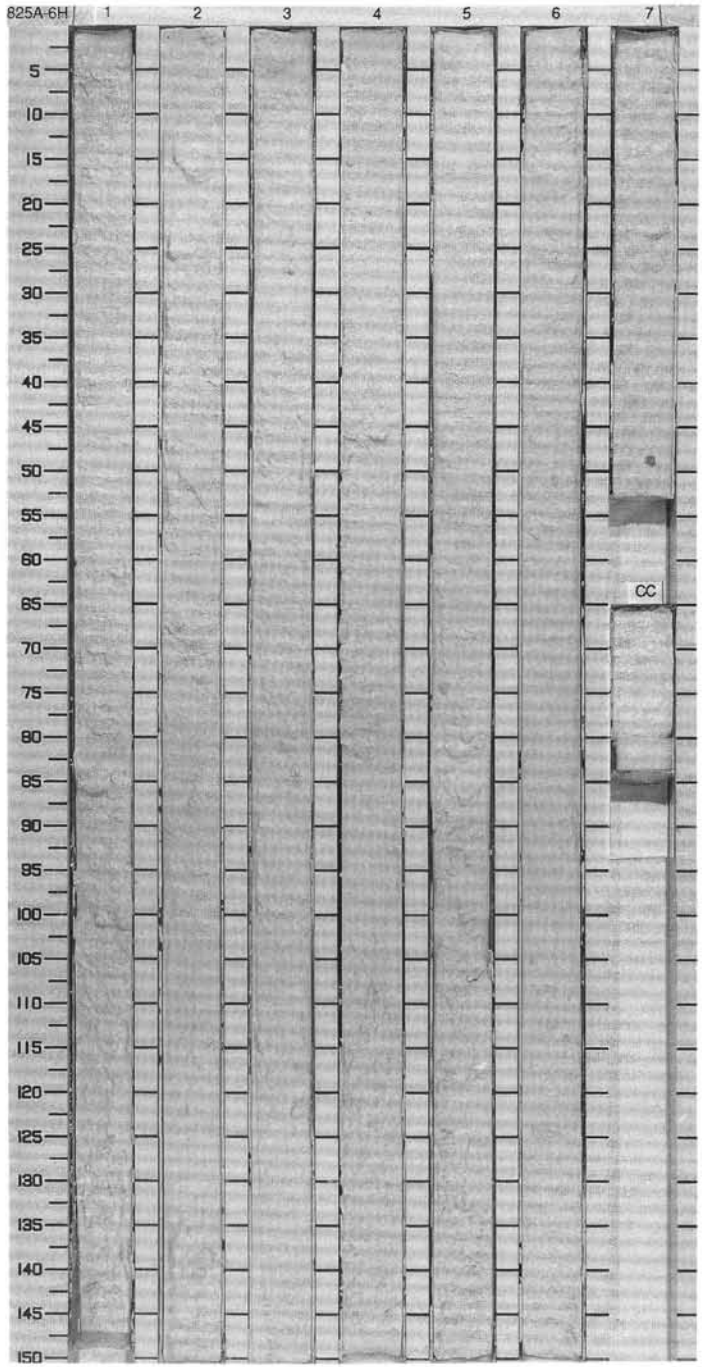
CALCAREOUS OOZE and CHALK; BIOCLASTIC PACKSTONE

Major lithology: White (10YR 8/0) CALCAREOUS OOZE with NANNOFOSSILS and FORAMINIFERS interbedded with CALCAREOUS CHALK; the latter forming either discrete beds or intervals containing chalk lumps.

Minor lithology: White (10YR 8/0), unlithified BIOCLASTIC PACKSTONE, the latter with a matrix of calcareous ooze.

SMEAR SLIDE SUMMARY (%):

	1, 101 D	4, 110 D	CF 4, 110 D
COMPOSITION:			
Bioclast	---	---	15
Bryozoa	---	---	15
Calcite	63	55	8
Echinoid	---	---	7
Foraminifers	2	10	22
Lithoclast	10	---	---
Micrite	15	20	---
Mollusk	---	---	20
Nannofossils	10	10	---
Spicules	---	5	13



SITE 825 HOLE A CORE 7H CORED INTERVAL 219.0-228.5 mbsf

TIME-ROCK UNIT: MIDDLE MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS N10 - N14 (A/M); NANNOFOSSILS CN5 - CN11 (F/P)

SECTION	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY
1	R?	50.0% 1.79	99.3%
2	R?	50.4% 1.97	100.0%
3	R?	50.0% 1.82	99.5%
4	R?	52.7% 1.90	97.7%
5	R?	53.8% 1.88	98.0%
6	R?	54.8% 1.84	98.8%
7			
CC			

METERS: 0.5, 1.0

SAMPLES: OG, PAL

LITHOLOGIC DESCRIPTION

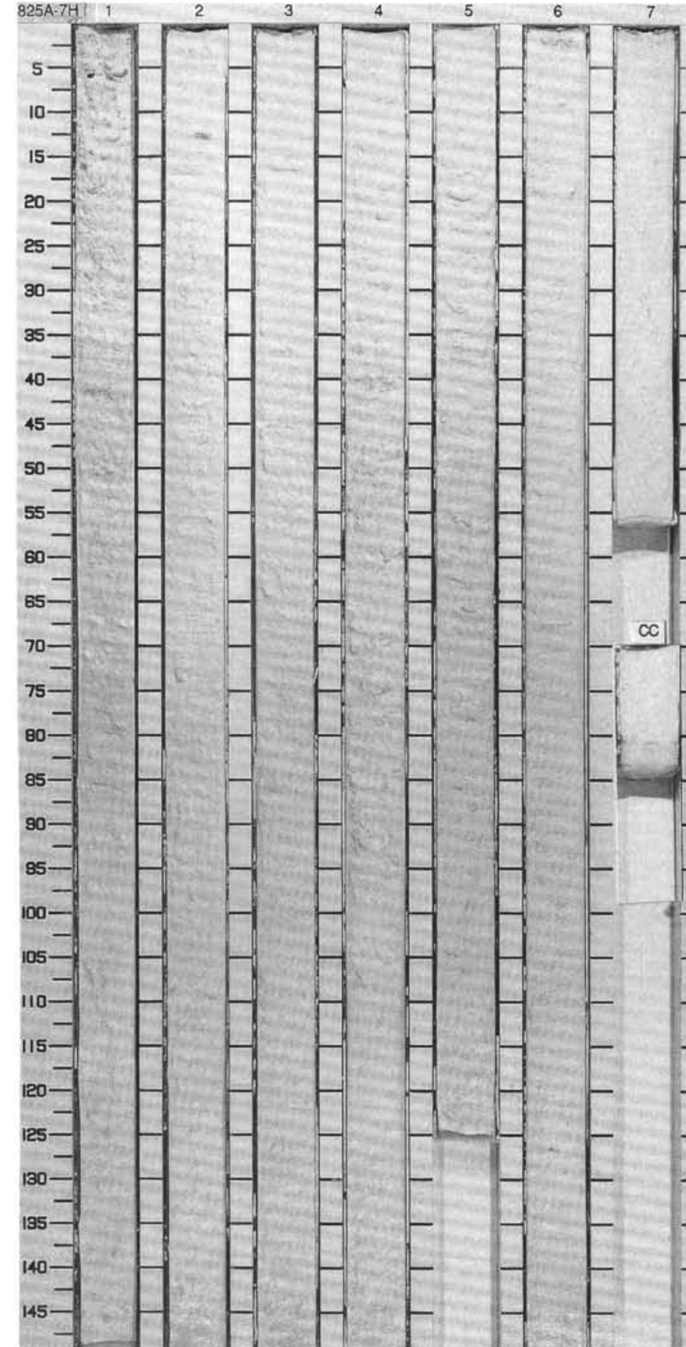
CALCAREOUS OOZE and CHALK; BIOCLASTIC PACKSTONE and FLOATSTONE

Major lithology: White (10YR 8/0) CALCAREOUS OOZE with NANNOFOSSILS and FORAMINIFERS interbedded with CALCAREOUS CHALK; the latter forming either discrete beds or intervals containing chalk lumps.

Minor lithology: White (10YR 8/0), unlithified BIOCLASTIC PACKSTONE and FLOATSTONE, the latter with a matrix of calcareous ooze.

SMEAR SLIDE SUMMARY (%):

	CF 1, 53 D	2, 40 D	4, 102 D
COMPOSITION:			
Bioclast	58	10	---
Calcite	5	30	65
Foraminifers	35	10	10
Intraclasts	2	---	---
Lithoclast	---	30	---
Micrite	---	15	15
Nannofossils	---	5	5
Spicules	---	---	Tr



SITE 825 HOLE A CORE 8H CORED INTERVAL 228.5-238.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE MIOCENE	A/M N10 - N14	F/P CN5 - CN11			R? 50.1% 1.88 98.5%	R? 50.8% 1.90 98.2%	98.2%	5		VOID			* □
					R? 54.3% 1.83 96.2%	R? 50.7% 1.91 99.6%	99.6%	4					
					R? 54.2% 1.84 97.8%		97.8%	3					
					R? 55.7% 1.78 95.9%		95.9%	2					
								1	0.5 1.0				*
								CC					PAL

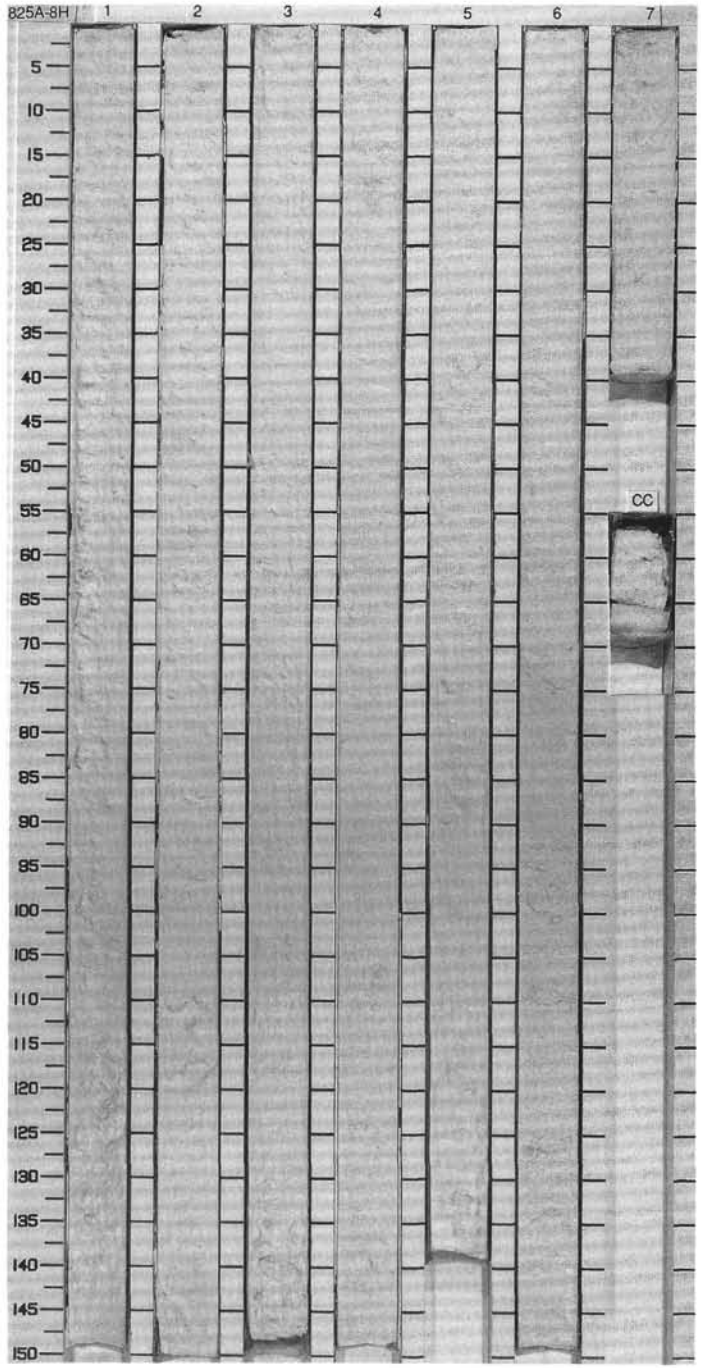
BIOCLASTIC PACKSTONE

Major lithology: White (10YR 8/0), partially lithified FORAMINIFER BIOCLASTIC PACKSTONE.

SMEAR SLIDE SUMMARY (%):

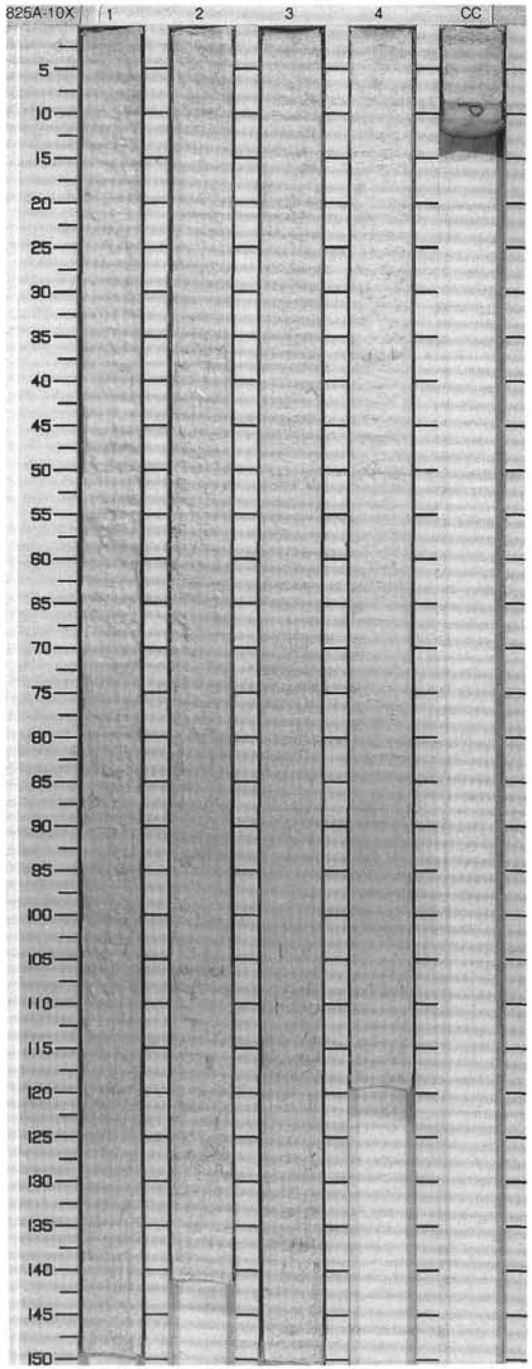
	1, 96 D	CF 5, 85 D	5, 85 D
COMPOSITION:			
Bioclast	15	33	20
Calcite	33	---	30
Foraminifers	15	60	20
Lithoclast	10	---	10
Micrite	15	5	10
Nannofossils	7	---	10
Quartz	---	2	--
Spicules	Tr	---	Tr

825A 9X NO RECOVERY



SITE 825 HOLE A CORE 10X CORED INTERVAL 247.5-257.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE MIOCENE	A/P N10 - N14	F/P CN5 - CN11			UNCERTAIN POLARITY	• 55.0% 1.81 • 49.8% 1.87 • 49.7% 1.92 • 47.9% 1.96	• 99.1% • 98.7% • 98.2% • 98.1%	1 2 3 4 CC	0.5 1.0				TW PAL	CALCAREOUS OOZE and CHALK Major lithology: White (10YR 8/0) CALCAREOUS OOZE and CHALK, both with FORAMINIFERS. SMEAR SLIDE SUMMARY (%): 3, 67 D — 4, 50 D — CF 4, 50 M COMPOSITION: Bioclast 5 — 20 Dolomite 5 — — Foraminifers 10 — 18 — 75 Inorganic calcite 55 — — Lithoclast — 10 — Micrite 15 — 15 — Nannofossils 10 — 22 — Spar cement — 30 — Spicules — 5 — 5



SITE 825 HOLE A CORE 11X CORED INTERVAL 257.1-266.8 mbsf

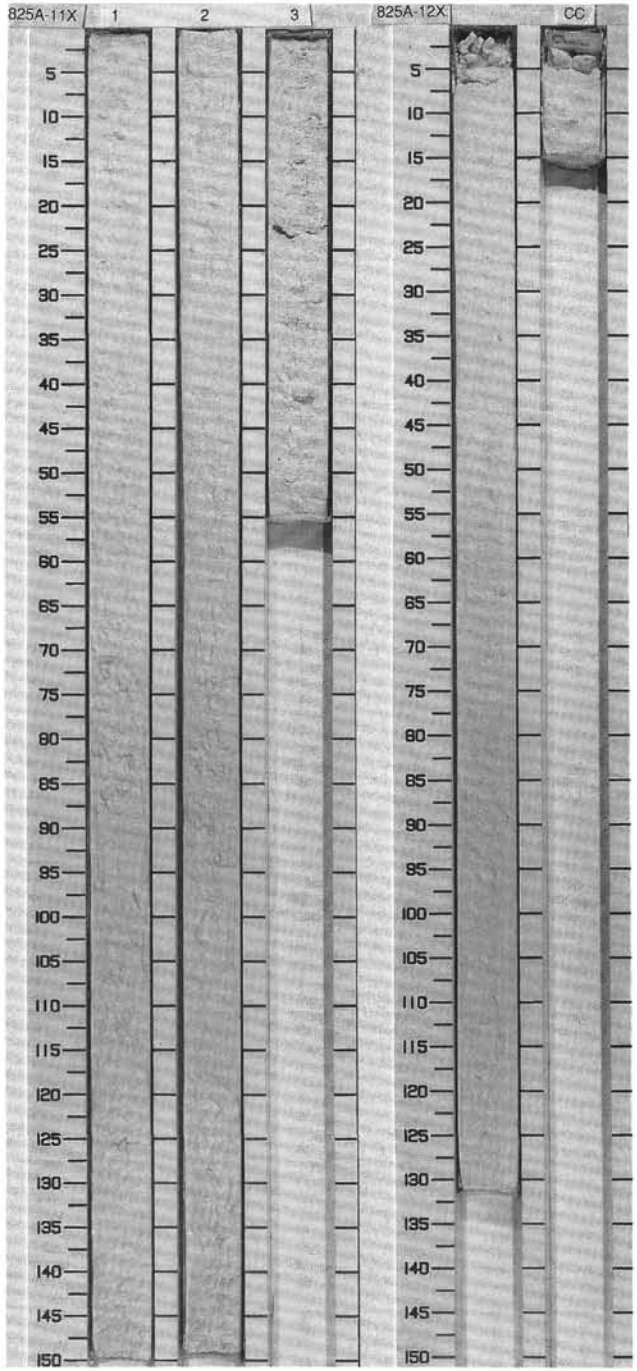
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE MIOCENE	A/G	N10 - N14	F/P	CN4 - CN5	UNCERTAIN POLARITY	● 50.3% 1.92 ● 49.4% 1.89	● 98.8% ● 99.3%	1	0.5				*	FORAMINIFER OOZE and CHALK; FORAMINIFER PACKSTONE
									1.0					Major lithologies: White (10YR 8/0) FORAMINIFER OOZE and CHALK. These lithologies form a unit transitional down into white (10YR 8/0) FORAMINIFER PACKSTONE.
								2						SMEAR SLIDE SUMMARY (%):
														1, 79 D
														COMPOSITION:
														Bioclast 5
														Foraminifers 15
														Lithoclast 5
														Micrite 15
														Nannofossils 10
														Spar cement 45
														Spicules 5
								3					PAL	

SITE 825 HOLE A CORE 12X CORED INTERVAL 266.8-276.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE MIOCENE	A/G N10 - N14	R/P ?				● 46.9% 1.97	● 99.9%	1	0.5				*	MICRITIC OOZE and CHALK
									1.0					Major lithology: White (10YR 8/0) MICRITIC OOZE and CHALK, both with NANNOFOSSILS and BIOCLASTS.
								CC						SMEAR SLIDE SUMMARY (%):
														1, 74 D
														COMPOSITION:
														Bioclast 15
														Calcite 30
														Dolomite Tr
														Foraminifers 5
														Micrite 30
														Nannofossils 20

825A 13X NO RECOVERY

825A 14X NO RECOVERY



SITE 825 HOLE A CORE 15X CORED INTERVAL 295.7-305.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
LOWER MIOCENE	N7 - N8 R/P							CC					PAL	BIOCLASTIC PACKSTONE with FORAMINIFERS Major lithology: White (10YR 8/0), slightly cemented, medium sand-sized, BIOCLASTIC PACKSTONE with FORAMINIFERS.

SITE 825 HOLE A CORE 16X CORED INTERVAL 305.4-315.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
								CC						BIOCLASTIC RUDSTONE. Major lithology: Pale yellow (10YR 8/2 to 10YR 8/6), well lithified BIOCLASTIC RUDSTONE. Fossil elements consist of LARGER FORAMINIFERS, CORALLINE ALGAE, and CORALS (forming molds).

825A 17X NO RECOVERY

825A 18X NO RECOVERY

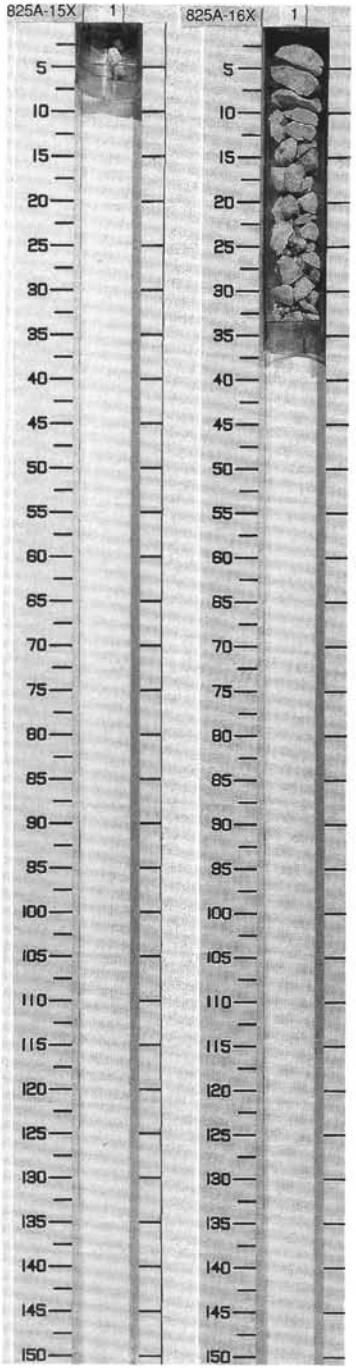
825A 19X NO RECOVERY

825A 20X NO RECOVERY

825A 21X NO RECOVERY

825A 22X NO RECOVERY

825A 23X NO RECOVERY



SITE 825 HOLE B CORE 1W CORED INTERVAL 0.0-379.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
								1						FORAMINIFER BIOCLASTIC PACKSTONE and RUDSTONE Major lithologies: Well lithified, FORAMINIFER BIOCLASTIC RUDSTONE and PACKSTONE. Color varies from white (10YR 8/1) to pale yellow to brownish yellow (10YR 8/3 to 10YR 8/6). Bioclasts include LARGER FORAMINIFERS, BRYOZOANS?, MOLLUSC FRAGMENTS, and local development of molds of *HALIMEDA*?. Pieces 4-9 (15-24 cm) contain glauconitic packstone, with a well-developed erosional hardground in Piece #4.

825B 2R NO RECOVERY

825B 3R NO RECOVERY

825B 4R NO RECOVERY

SITE 825 HOLE B CORE 5R CORED INTERVAL 408.4-418.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B						CC					PAL	BIOCLASTIC PACKSTONE Major lithology: Partly lithified, pale yellow to yellow (10YR 8/3 to 10YR 8/6) BIOCLASTIC PACKSTONE composed of LARGER FORAMINIFERS, branching CORALS, CORALLINE ALGAE, ECHINOIDS, BRYOZOANS.

SITE 825 HOLE B CORE 6R CORED INTERVAL 418.0-427.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B						1					PAL	BIOCLASTIC GRAINSTONE and RUDSTONE Major lithology: Well-lithified, pale yellow to yellow (10YR 8/3 to 10YR 8/4) and locally pink (5YR 7/5), well-lithified BIOCLASTIC GRAINSTONE and RUDSTONE. Bioclasts include BRYOZOANS and LARGER FORAMINIFERS. CORALLINE ALGAE, branching CORALS.

SITE 825 HOLE B CORE 7R CORED INTERVAL 427.7-437.4 mbsf

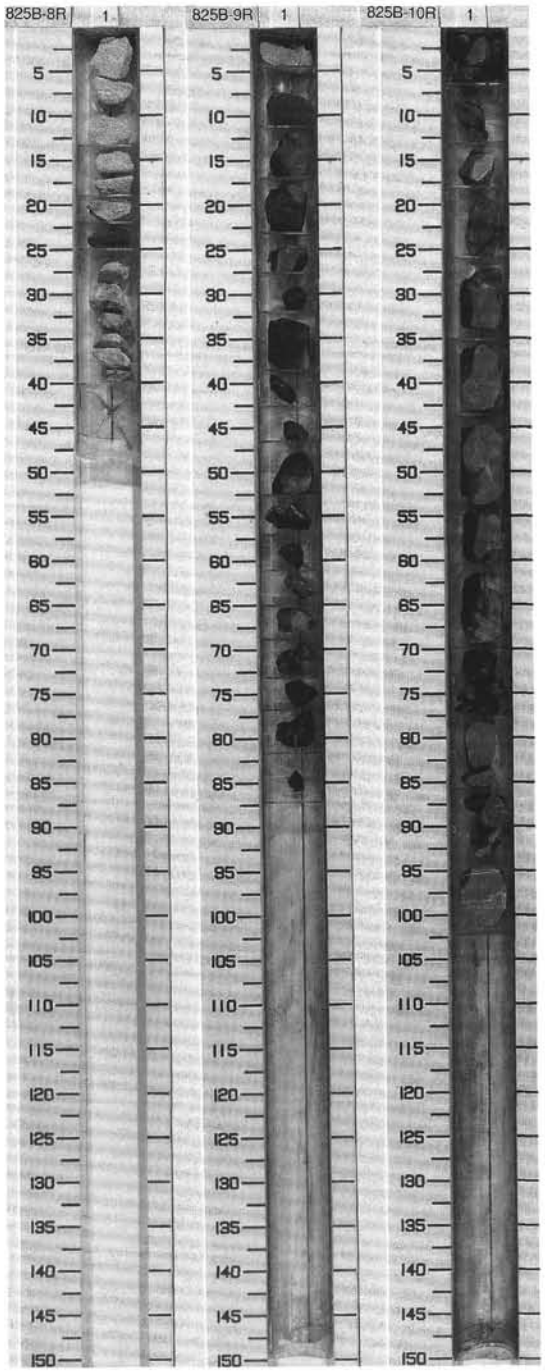
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B						1					PAL	BIOCLASTIC GRAINSTONE and PACKSTONE Major lithology: Well-lithified, BIOCLASTIC GRAINSTONE and PACKSTONE with LARGER FORAMINIFERS and BRYOZOANS; variable in color from white (10YR 8/1), to pink (5YR 8/3), and pale yellow to yellow (10YR 8/2 to 10YR 8/3). CORALLINE ALGAE are subordinate and CORALS are scarce.

SITE 825 HOLE B CORE 8R CORED INTERVAL 437.4-447.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B						1					PAL	BIOCLASTIC GRAINSTONE and RUDSTONE Major lithology: White (10YR 8/1) to pale yellow (10YR 8/3) and pink (5YR 8/3), well lithified BIOCLASTIC RUDSTONE and GRAINSTONE with BRYOZOANS, LARGER FORAMINIFERS and CORALLINE ALGAE. Echinoids, molluscs, and glauconite are locally present. No corals are present. *Minor lithology: Dark brown (10YR 3/3), well-lithified sandstone, presumably reworked as a* large pebble from underlying basement.

SITE 825 HOLE B CORE 9R CORED INTERVAL 447.0-456.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B						1	0.5					QUARTZ-FELDSPAR METASEDIMENT? Major lithology: Dark gray (N4), very fine grained, poorly to moderately foliated QUARTZ-FELDSPAR-MAFIC? METASEDIMENT or METAVOLCANIC with well-developed zones of finely crystalline QUARTZ and FELDSPAR. The boundaries of these zones are commonly abrupt, microfaulted. Discontinuous "laminae" of quartz and/or feldspar are present. Quartz veinlets crosscut both assemblages. Pyrite occurs disseminated throughout. Minor lithologies: Brown (10YR 3/3), coarse grained METASANDSTONE with QUARTZ, FELDSPAR, and LITHIC FRAGMENTS. Several quartz veinlets are present. Well-lithified, pink (5YR 8/3) BIOCLASTIC RUDSTONE with BRYOZOANS, CORALLINE ALGAE and MOLLUSCS, and with a cryptocrystalline matrix.

SITE 825 HOLE B CORE 10R CORED INTERVAL 456.7-466.3 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
	B	B						1	0.5					QUARTZ-FELDSPAR-MAFIC? METASEDIMENT? Major lithology: Dark gray (N4), poorly foliated, well-lithified, fine-grained QUARTZ-FELDSPAR-MAFIC? METASEDIMENT or METAVOLCANIC, containing more coarsely crystalline zones of quartz and feldspar. Thin discontinuous quartz or feldspar "laminae" are present; pyrite is common.