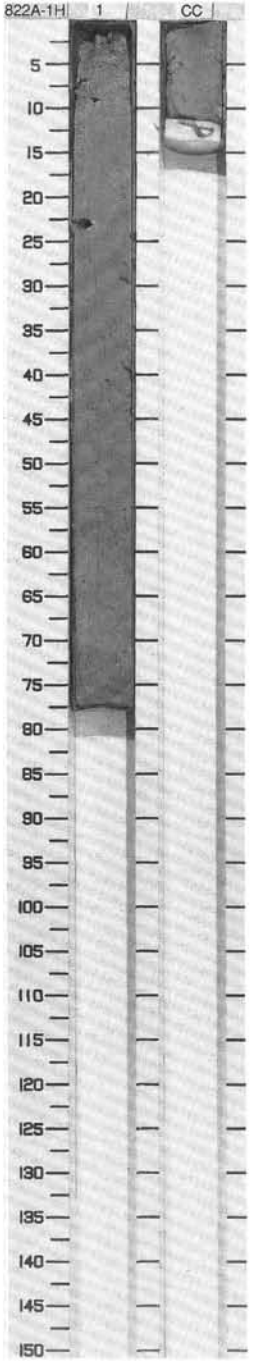
SITE 822 HOLE A CORE 1H CORED INTERVAL 0.0-0.9 mbsf

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
PLEISTOCENE	A/G N22-N23	A/G CN15						1	0.5				*	CLAYEY BIOCLASTIC MICRITIC OOZE/MUD with NANNOFOSSILS Major Lithology: Unlithified, light brownish green (10Y 6/2), soft, CLAYEY BIOCLASTIC MICRITIC OOZE/MUD with NANNOFOSSILS. The upper 4 cm are olive colored (5Y 5/3), but are the same lithology. Scattered PTEROPODS.
								CC					PAL	SMEAR SLIDE SUMMARY (%): 1, 40 D COMPOSITION: Bioclast 29 Foraminifers 5 Micrite 25 Nannofossils 15 Quartz 5 Siliceous sponge spicules 3 Spicules 15 Tunicate 3



SITE 822 HOLE A CORE 2H CORED INTERVAL 0.9-10.4 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
PLEISTOCENE	A/G	CN15			N	60.1% 1.75	71.5%	1	0.5 1.0				*
					N	58.8% 1.77		2					
					N	62.8% 1.72	63.6%	3					
					N	67.6 1.65		4					
					N	60.4% 1.73	66.7% 60.7%	5					
					N	61.5% 1.75		6					*
	A/G				N			7					*
								CC					

LITHOLOGIC DESCRIPTION

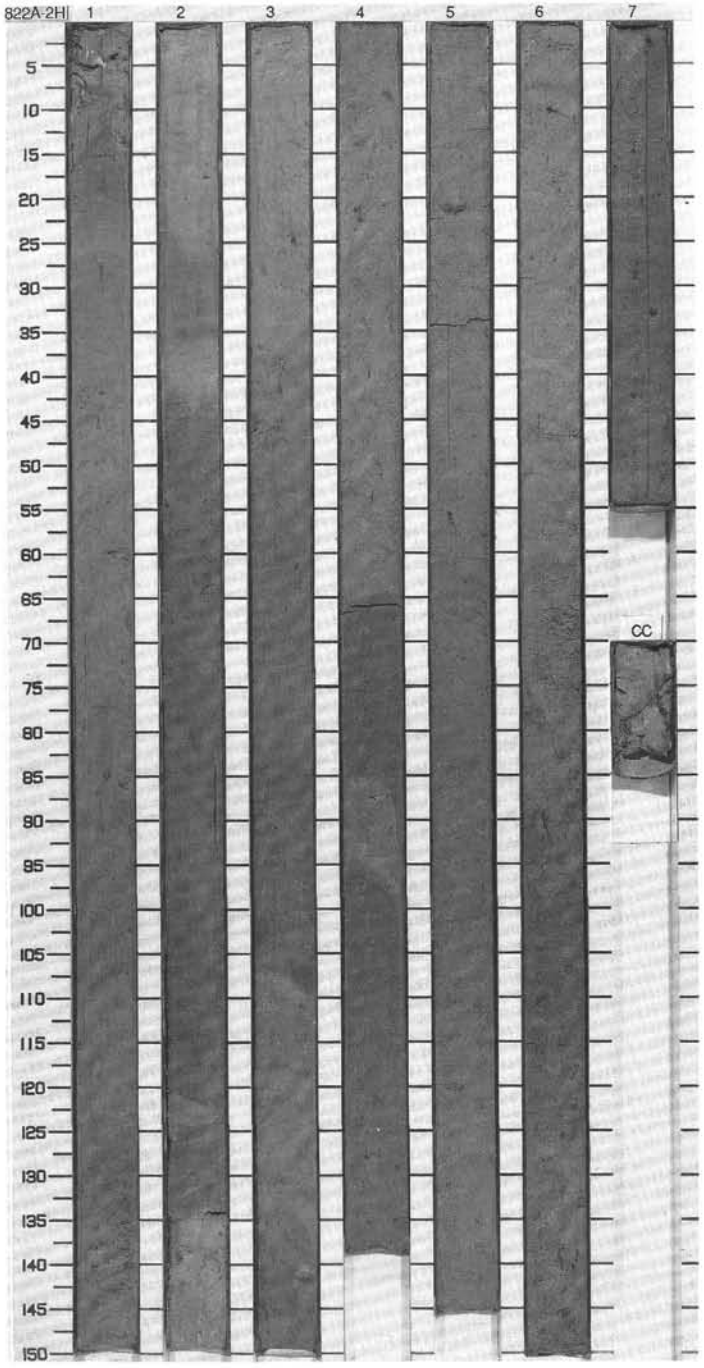
CLAYEY MICRITIC CALCAREOUS OOZE/MUD with BIOCLASTS and NANNOFOSSILS

Major Lithology: Unlithified, soft to firm, CLAYEY MICRITIC CALCAREOUS MUD with BIOCLASTS and NANNOFOSSILS. Color is different shades of green with minor whitish to light brownish gray variations (5Y 5/1, 5/2, 6/1 and 6/2; 10Y 7/1, 4/1, and 6/2; and, 5GY 4/1). Abrupt to transitional changes in color occur over millimeters to ten's of centimeters, apparently associated with variation in clay content.

Minor Lithology: Soft, whitish gray (5Y 6/1), unlithified, CLAYEY NANNOFOSSIL OOZE with BIOCLASTS and MICRITE occurs within upper and lower parts of Section 2. Lenses of BIOCLASTIC PACKSTONE with PTEROPOD fragments occur in Section 6 interbedded with BIOCLASTIC CALCAREOUS OOZE with NANNOFOSSILS and QUARTZ. Locally, burrows are filled with pyritic coarse sand-size FORAMINIFER PACKSTONE. PTEROPOD fragments are sparsely scattered throughout core.

SMEAR SLIDE SUMMARY (%):

	1, 126 D	6, 67 D	6, 116 D
COMPOSITION:			
Bioclast	50	25	10
Calcite	---	1	---
Clay	---	8	15
Feldspar	---	1	1
Foraminifers	---	3	2
Mica	---	1	1
Nannofossils	25	45	57
Pteropod	10	---	---
Quartz	5	10	10
Rock fragment	---	3	2
Siliceous sponge spicules	---	Tr	1
Spicules	5	3	---
Tunicate	---	Tr	1



SITE 822 HOLE A CORE 3H CORED INTERVAL 10.4-19.9 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
PLEISTOCENE	A/G	A/G			N	61.3% 1.74%	70.0%	1	0.5 1.0				*
	N22-N23	CN15			N	54.1% 1.91	54.7%	2					
					N	55.3% 1.82		3					*
					N	66.6% 1.876	65.1%	4					
					N			5					*
					N		67.3%	6					IW OG
					N	62.3% 1.76 57.3% 1.76	53.6%	7					
								CC					PAL

LITHOLOGIC DESCRIPTION

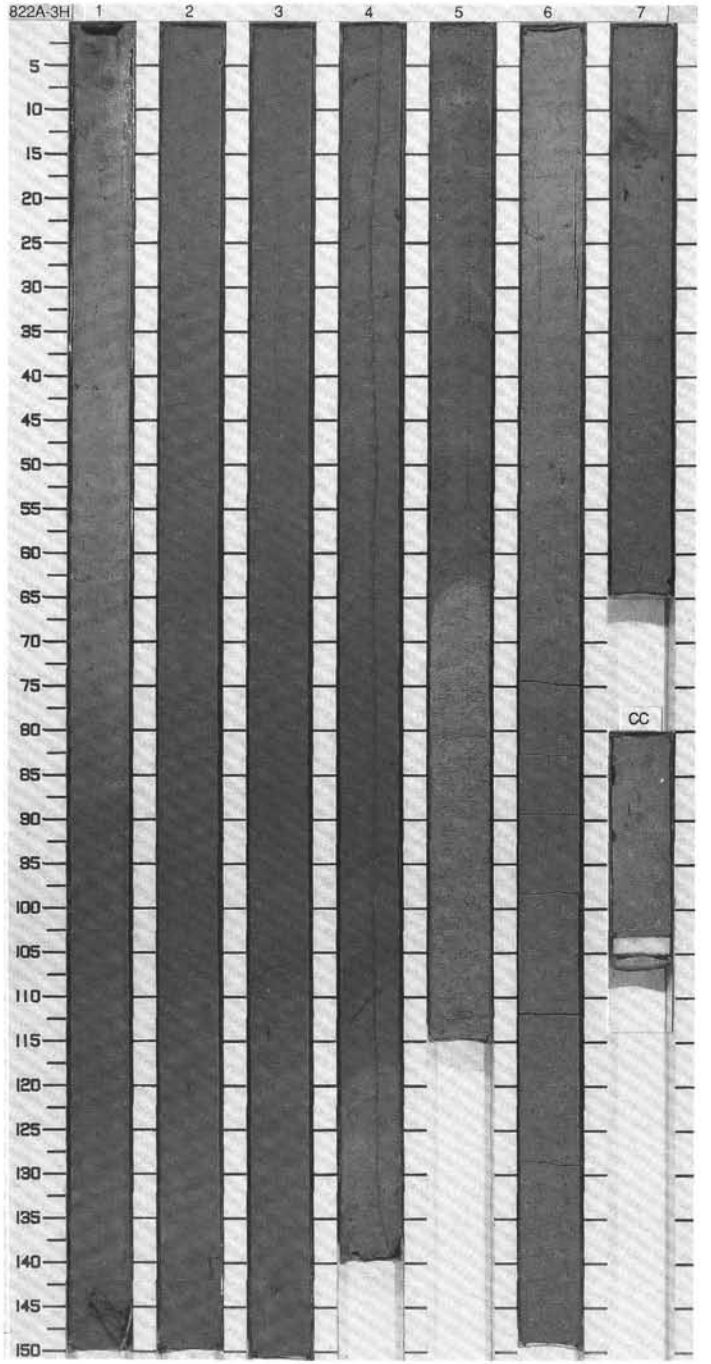
CLAYEY CALCAREOUS MIXED SEDIMENT with BIOCLASTS, NANNOFOSSILS and MICRITE and CLAYEY NANNOFOSSIL OOZE with BIOCLASTS

Major Lithologies: In Sections 2-4: CLAYEY CALCAREOUS MIXED SEDIMENT (MUD) with BIOCLASTS, NANNOFOSSILS and MICRITE is *unlithified but firm, bioturbated and* medium to dark greenish gray (5GY 5/1 and 4/1). In Sections 1 and 5 - 6, greenish gray (10Y 5/1), firm, bioturbated CLAYEY NANNOFOSSIL OOZE with BIOCLASTS has a slightly higher carbonate content. Soft sediment deformation (slumping ?) occurs at the base of Section 4 and top of Section 5.

Minor Lithologies: In upper part of Section 5: light greenish gray (10Y 6/1) NANNOFOSSIL OOZE/MUD with QUARTZ has color banding.

SMEAR SLIDE SUMMARY (%):

	1, 51 D	3, 78 D	5, 85 D
COMPOSITION:			
Bioclast	30	5	35
Calcite	---	20	5
Clay	7	15	6
Foraminifers	2	---	1
Mica	---	---	1
Micrite	30	30	18
Nannofossils	20	20	18
Quartz	5	3	8
Rock fragment	2	1	4
Siliceous sponge spicules	1	Tr	2
Tunicate	3	1	2



SITE 822 HOLE A CORE 4H CORED INTERVAL 19.9-29.4 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER
- FORAMINIFERS: A/M; N22 - N23
- NANNOFOSSILS: A/G; CN14a
- RADIOLARIANS
- DIATOMS

PALEOMAGNETICS: N N N N N N

PHYS. PROPERTIES: ● 57.0% 1.84 ● 58.7% 1.80 ● 58.5% 1.78 ● 59.9% 1.85 ● 55.7% 1.79 ● 59.4% 1.76

CHEMISTRY: ● 78.7% ● 68.3% ● 62.5% ● 57.6% ● 64.8%

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: TW PAL

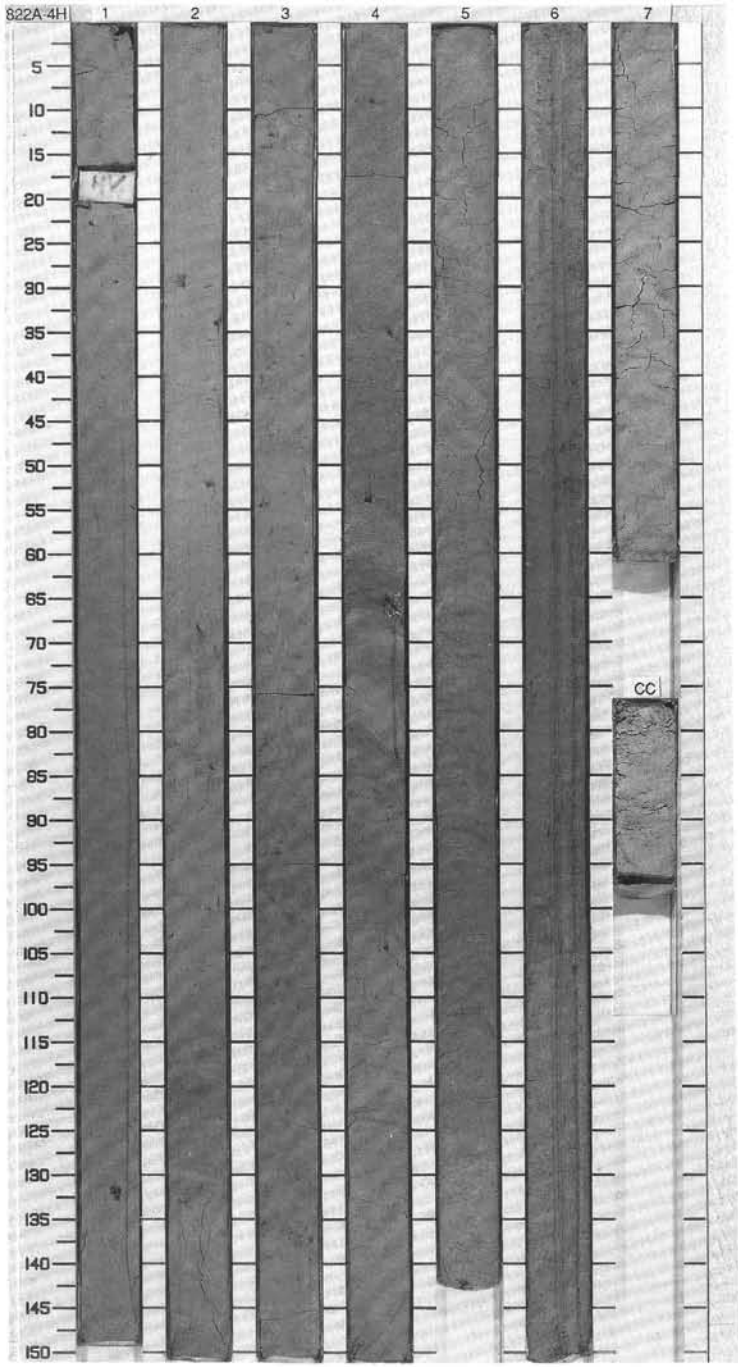
LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE with CLAY and BIOCLASTS and CLAYEY NANNOFOSSIL MIXED SEDIMENT with BIOCLASTS

Major Lithology: Firm, unlithified, gray (5Y 5/1) NANNOFOSSIL OOZE with CLAY and BIOCLASTS. Some burrows are filled with pyritic FORAMINIFERS and BIOCLASTS. Finely laminated and slightly convoluted bedding occurs from 110-150 cm in Section 2 through to Section 5 at the margins of the core. Variegated shades of gray (5Y 6/1 to 7/1) between adjacent laminations may reflect variations in clay content with darker greenish gray laminae being CLAYEY NANNOFOSSIL MIXED SEDIMENT with BIOCLASTS. In Sections 6 and 7, thin bedding is reflected by similar color variations but have higher carbonate contents.

SMEAR SLIDE SUMMARY (%):

	2, 20 D	3, 120 D	7, 34 D
COMPOSITION:			
Bioclast	20	30	20
Clay	10	---	15
Foraminifers	---	Tr	---
Micrite	15	10	10
Nannofossils	40	48	55
Pteropod	2	---	---
Quartz	Tr	2	---
Siliceous sponge spicules	3	Tr	Tr
Spicules	10	10	---



SITE 822 HOLE A CORE 5H CORED INTERVAL 29.4-38.9 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
PLEISTOCENE	A/G N22 - N23	A/G CN14a			N	● 57.1% 1.83	● 59.5%	7		VOID			
					N	● 57.1% 1.80	● 62.0%	6					TW
					N	● 56.8% 1.83	● 71.3%	5					□
					N	● 55.1% 1.86	●	4					
					N	● 56.0% 1.86	● 79.3%	3					*
					N	● 58.2% 1.82	● 77.4%	2					
					N	● 54.1% 1.86	●	1	0.5 / 1.0				*

CC

LITHOLOGIC DESCRIPTION

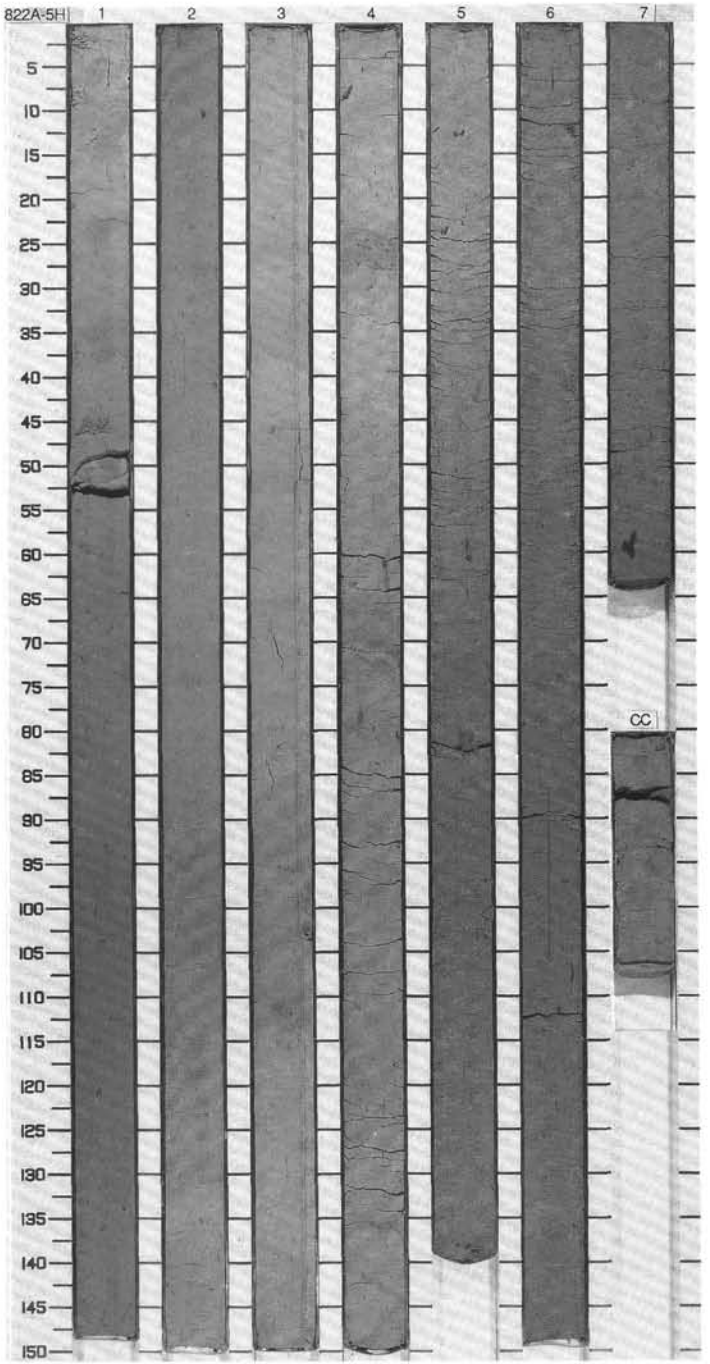
CLAYEY NANNOFOSSIL CALCAREOUS OOZE/MUD with BIOCLASTS

Major Lithology: Firm, unlithified, (shades of) greenish gray (5GY 6/1, 5/1, and 4/1; and, 10Y 5/2 to 4/2), CLAYEY NANNOFOSSIL CALCAREOUS OOZE/MUD with BIOCLASTS. Color changes probably related to variations in carbonate content are abrupt to transitional; the latter best displayed in Section 2, becoming lighter green downward (from 10Y 5/2 to 7/2).

Minor Lithology: In Section 1, a burrow(?) is filled with coarse PACKSTONE containing PTEROPODS, FORAMINIFERS, and other BIOCLASTIC detritus. Monosulphides and pyrite(?) are sparsely disseminated throughout core.

SMEAR SLIDE SUMMARY (%):

	1, 12 D	1, 110 D	3, 80 D	CF 4, 118 M	6, 80 D
COMPOSITION:					
Bioclast	10	30	5	49	20
Calcite	---	---	5	---	10
Carbonate particles	20	---	---	---	---
Clay	---	10	10	---	---
Dolomite	5	---	---	---	---
Feldspar	---	---	1	---	---
Foraminifers	---	---	1	20	Tr
Micrite	10	10	12	---	25
Nannofossils	49	40	58	---	35
Opaques	---	---	---	10	---
Pteropod	---	---	---	5	---
Quartz	1	---	5	15	5
Rock fragment	---	---	1	---	2
Siliceous sponge spicules	---	Tr	Tr	1	2
Spicules	5	10	---	---	---
Tunicate	---	---	2	---	1



SITE 822 HOLE A CORE 6H CORED INTERVAL 38.9-48.4 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
PLEISTOCENE	A/G N22 - N23	A/G CN14a			N	57.6% 1.80	61.1%	1	0.5 1.0				*
					N	55.9% 1.84		2					
					N	53.3% 1.87	67.1%	3					*
					N	56.6% 1.84		4					
					N	54.4% 1.81	74.3	5					*
					N	55.9% 1.85	71.3	6					OG
								CC					PAL

LITHOLOGIC DESCRIPTION

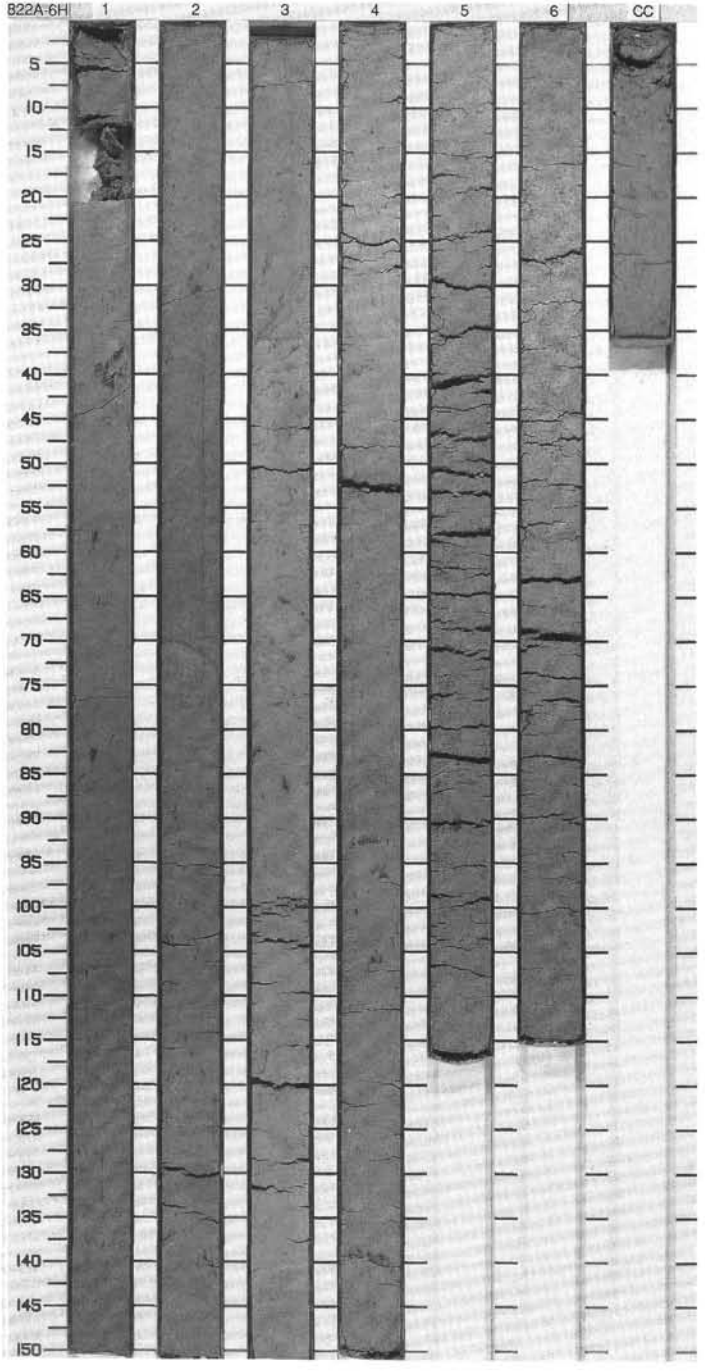
CLAYEY NANNOFOSSIL CALCAREOUS OOZE/MUD with BIOCLASTS and FORAMINIFERS

Major Lithology: Firm, unlithified, greenish gray (light to dark: 5GY 7/1, 6/1 5/1, 10Y 5/2), CLAYEY NANNOFOSSIL OOZE/MUD with BIOCLASTS and FORAMINIFERS. Bioturbated with scattered PTEROPODS and other SHELL FRAGMENTS. Has numerous gas expansion cracks in lower part.

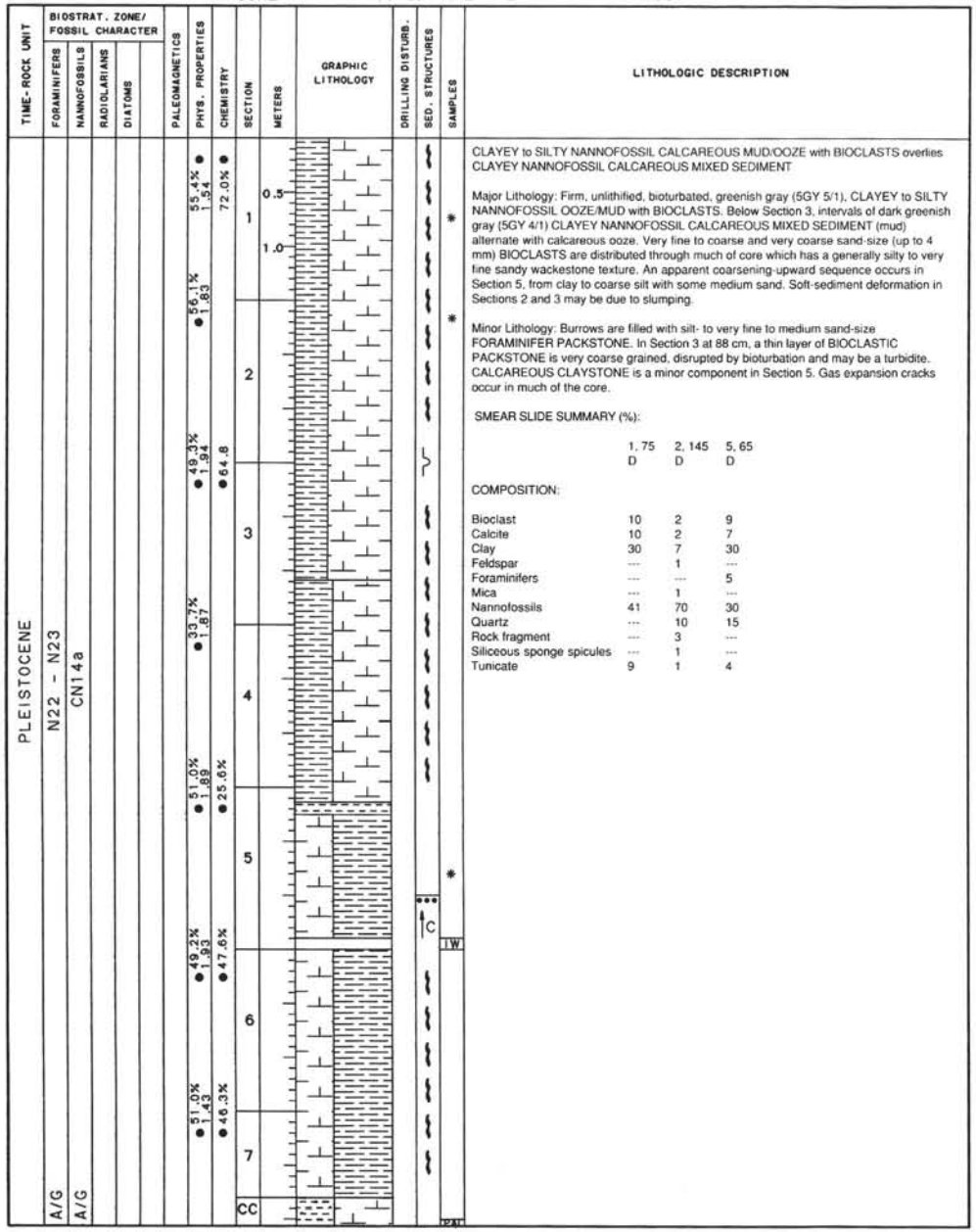
Minor Lithology: Some burrows are filled with FORAMINIFER PACKSTONE having some pyrite-filled grains.

SMEAR SLIDE SUMMARY (%):

	1, 75 D	3, 75 D	4, 90 M
COMPOSITION:			
Bioclast	15	20	30
Calcite	3	4	---
Clay	25	25	20
Dolomite	1	---	---
Foraminifers	10	5	10
Lithic fragments	2	---	---
Nannofossils	37	29	35
Quartz	3	5	---
Tunicate	4	9	5



SITE 822 HOLE A CORE 7H CORED INTERVAL 48.4-57.9 mbsf



LITHOLOGIC DESCRIPTION

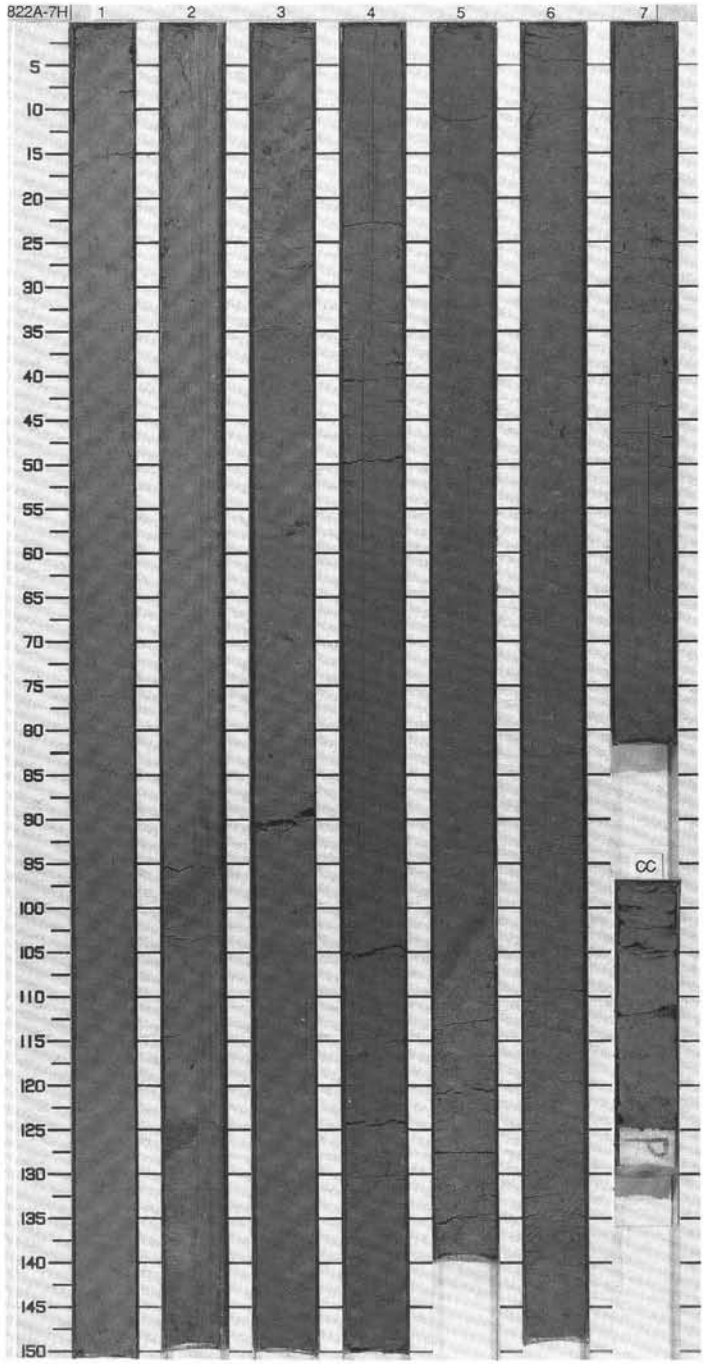
CLAYEY to SILTY NANNOFOSSIL CALCAREOUS MUD/OOZE with BIOCLASTS overlies CLAYEY NANNOFOSSIL CALCAREOUS MIXED SEDIMENT

Major Lithology: Firm, unlithified, bioturbated, greenish gray (5GY 5/1), CLAYEY to SILTY NANNOFOSSIL OOZE/MUD with BIOCLASTS. Below Section 3, intervals of dark greenish gray (5GY 4/1) CLAYEY NANNOFOSSIL CALCAREOUS MIXED SEDIMENT (mud) alternate with calcareous ooze. Very fine to coarse and very coarse sand-size (up to 4 mm) BIOCLASTS are distributed through much of core which has a generally silty to very fine sandy wackestone texture. An apparent coarsening-upward sequence occurs in Section 5, from clay to coarse silt with some medium sand. Soft-sediment deformation in Sections 2 and 3 may be due to slumping.

Minor Lithology: Burrows are filled with silt- to very fine to medium sand-size FORAMINIFER PACKSTONE. In Section 3 at 88 cm, a thin layer of BIOCLASTIC PACKSTONE is very coarse grained, disrupted by bioturbation and may be a turbidite. CALCAREOUS CLAYSTONE is a minor component in Section 5. Gas expansion cracks occur in much of the core.

SMEAR SLIDE SUMMARY (%):

	1, 75 D	2, 145 D	5, 65 D
COMPOSITION:			
Bioclast	10	2	9
Calcite	10	2	7
Clay	30	7	30
Feldspar	---	1	---
Foraminifers	---	---	5
Mica	---	1	---
Nannofossils	41	70	30
Quartz	---	10	15
Rock fragment	---	3	---
Siliceous sponge spicules	---	1	---
Tunicate	9	1	4



SITE 822 HOLE A CORE 8H CORED INTERVAL 57.9-67.4 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
PLEISTOCENE	A/G	A/G			N	52.9% 1.90	58.5%	7					
	N22 - N23	CN14a			N	50.3% 1.91	69.6%	6					
					N	50.9% 1.90	68.1%	5					
					N	51.6% 1.84	43.8%	4					
					N	54.6% 1.85	43.8%	3					
					R	53.4% 1.83		2					
					R	51.5% 1.88	46.3%	1	0.5 1.0				PAL

LITHOLOGIC DESCRIPTION

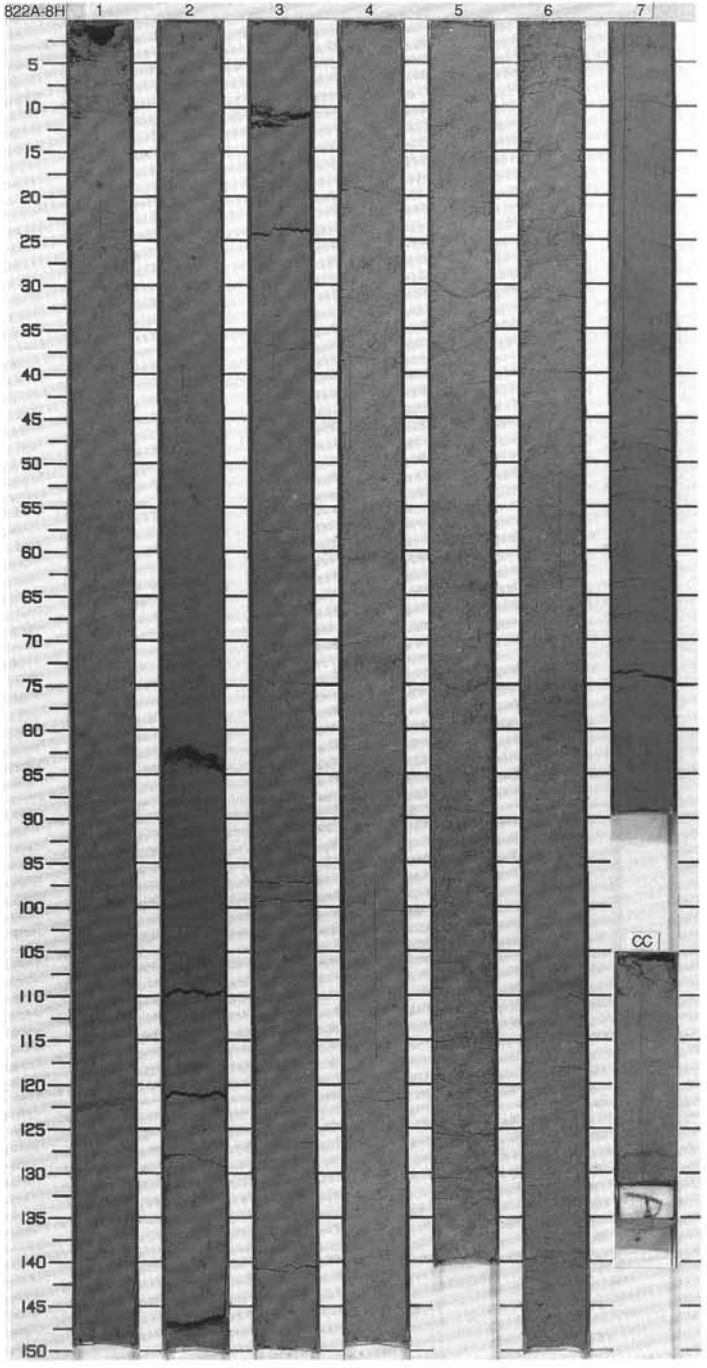
CLAYEY NANNOFOSSIL MIXED SEDIMENT with BIOCLASTS to CLAYEY to SILTY NANNOFOSSIL OOZE/MUD with QUARTZ

Major Lithology: Firm, unlithified, dark to lighter greenish gray (5GY 4/1 and 5/1), CLAYEY NANNOFOSSIL MIXED SEDIMENT with BIOCLASTS. Typically has gradational changes in color. CLAYEY to SILTY NANNOFOSSIL OOZE/MUD with QUARTZ silt occurs in Sections 4, 5, and upper part of 6. Both lithologies are bioturbated. SHELL FRAGMENTS occur in Section 4. Slightly DOLOMITIC in Section 5. Gas expansion cracks are common.

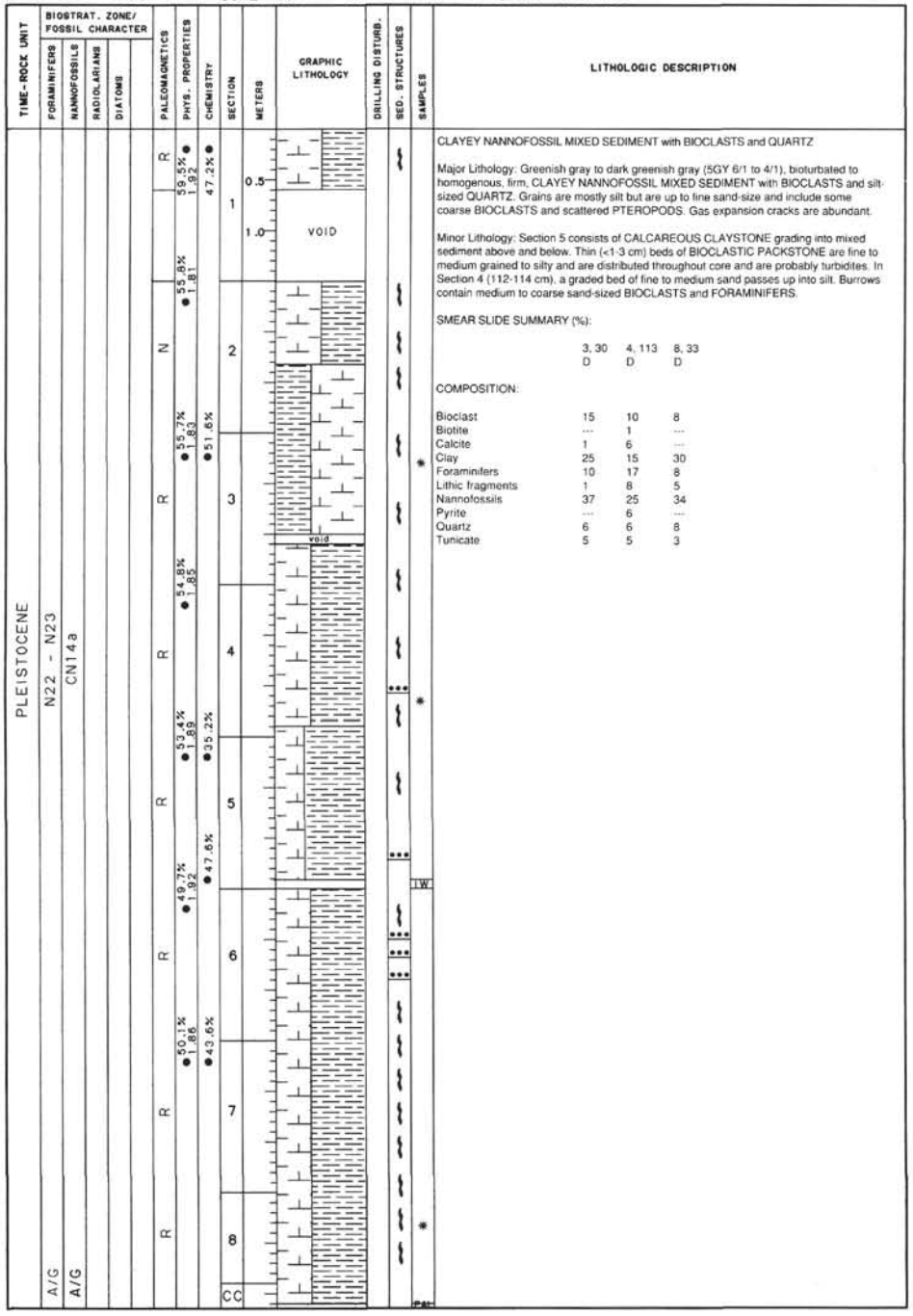
Minor Lithology: In Section 1 at 122-123 cm, a 1 cm thick laminae of FORAMINIFER BIOCLASTIC PACKSTONE is graded from very fine sand to silt. Burrows are filled with sand-size BIOCLASTIC PACKSTONE with some pyritized grains.

SMEAR SLIDE SUMMARY (%):

	1, 123 M	2, 75 D	5, 75 D
COMPOSITION:			
Bioclast	12	10	1
Calcite	10	6	14
Clay	25	29	22
Dolomite	---	---	22
Foraminifers	18	12	10
Lithic fragments	6	8	1
Nannofossils	25	28	22
Pyrite	2	---	---
Quartz	---	5	6
Tunicate	2	1	1



SITE 822 HOLE A CORE 9H CORED INTERVAL 67.4-76.9 mbsf



LITHOLOGIC DESCRIPTION

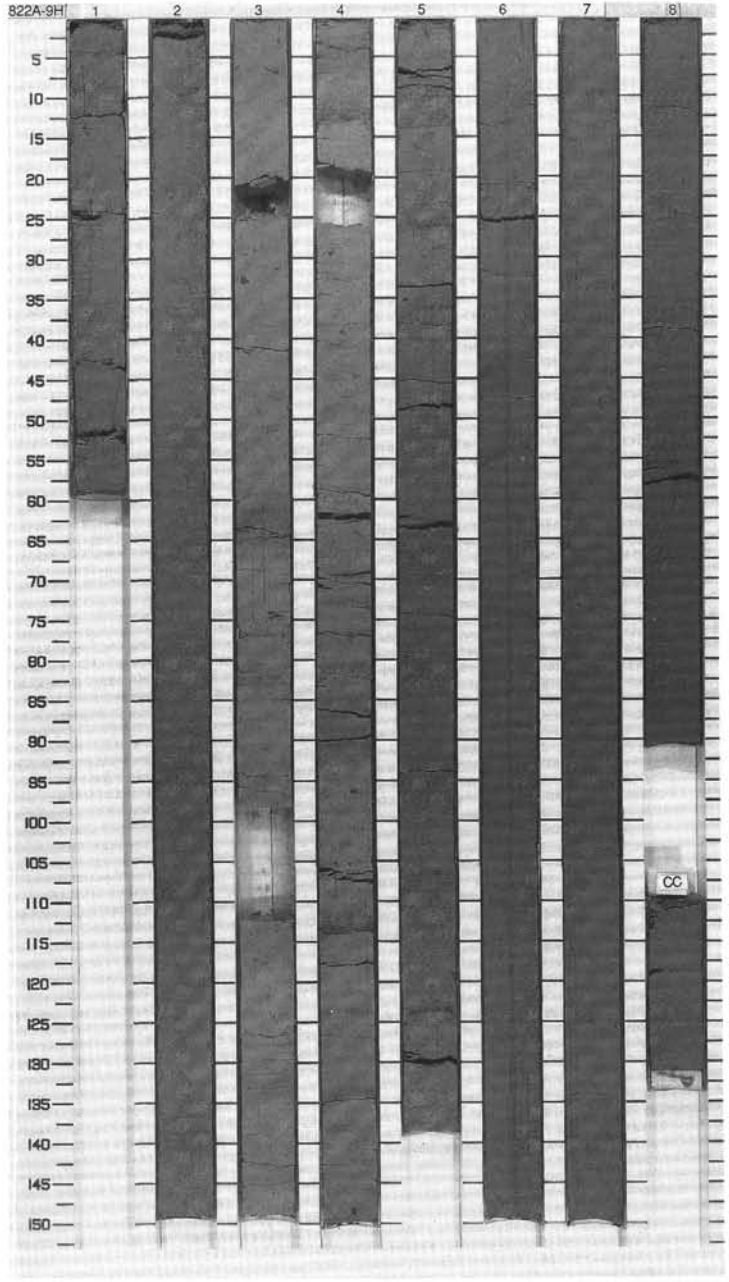
CLAYEY NANNOFOSSIL MIXED SEDIMENT with BIOCLASTS and QUARTZ

Major Lithology: Greenish gray to dark greenish gray (5GY 6/1 to 4/1), bioturbated to homogenous, firm, CLAYEY NANNOFOSSIL MIXED SEDIMENT with BIOCLASTS and silt-sized QUARTZ. Grains are mostly silt but are up to fine sand-size and include some coarse BIOCLASTS and scattered PTEROPODS. Gas expansion cracks are abundant.

Minor Lithology: Section 5 consists of CALCAREOUS CLAYSTONE grading into mixed sediment above and below. Thin (<1-3 cm) beds of BIOCLASTIC PACKSTONE are fine to medium grained to silty and are distributed throughout core and are probably turbidites. In Section 4 (112-114 cm), a graded bed of fine to medium sand passes up into silt. Burrows contain medium to coarse sand-sized BIOCLASTS and FORAMINIFERS.

SMEAR SLIDE SUMMARY (%):

	3, 30 D	4, 113 D	8, 33 D
COMPOSITION:			
Bioclast	15	10	8
Biotite	---	1	---
Calcite	1	6	---
Clay	25	15	30
Foraminifers	10	17	8
Lithic fragments	1	8	5
Nannofossils	37	25	34
Pyrite	---	6	---
Quartz	6	6	8
Tunicate	5	5	3



SITE 822 HOLE A CORE 10H CORED INTERVAL 76.9-86.4 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: N22 - N23 (A/G); NANNOFOSSILS: CN13b (A/G); RADIOLARIANS; DIATOMS

PALEOMAGNETICS: N N N N N N N R

PHYS. PROPERTIES: 51.3% 1.92 | 49.0% 1.87 | 51.2% 1.83 | 53.9% 1.86 | 52.2% 1.91 | 53.5% 1.89 | 53.3% 1.87

CHEMISTRY: 66.5% | 65.9% | 66.6% | 42.2% | 43.7%

SECTION: 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | CC

METERS: 0.5 | 1.0

GRAPHIC LITHOLOGY: VOID

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: TW; PWC

LITHOLOGIC DESCRIPTION

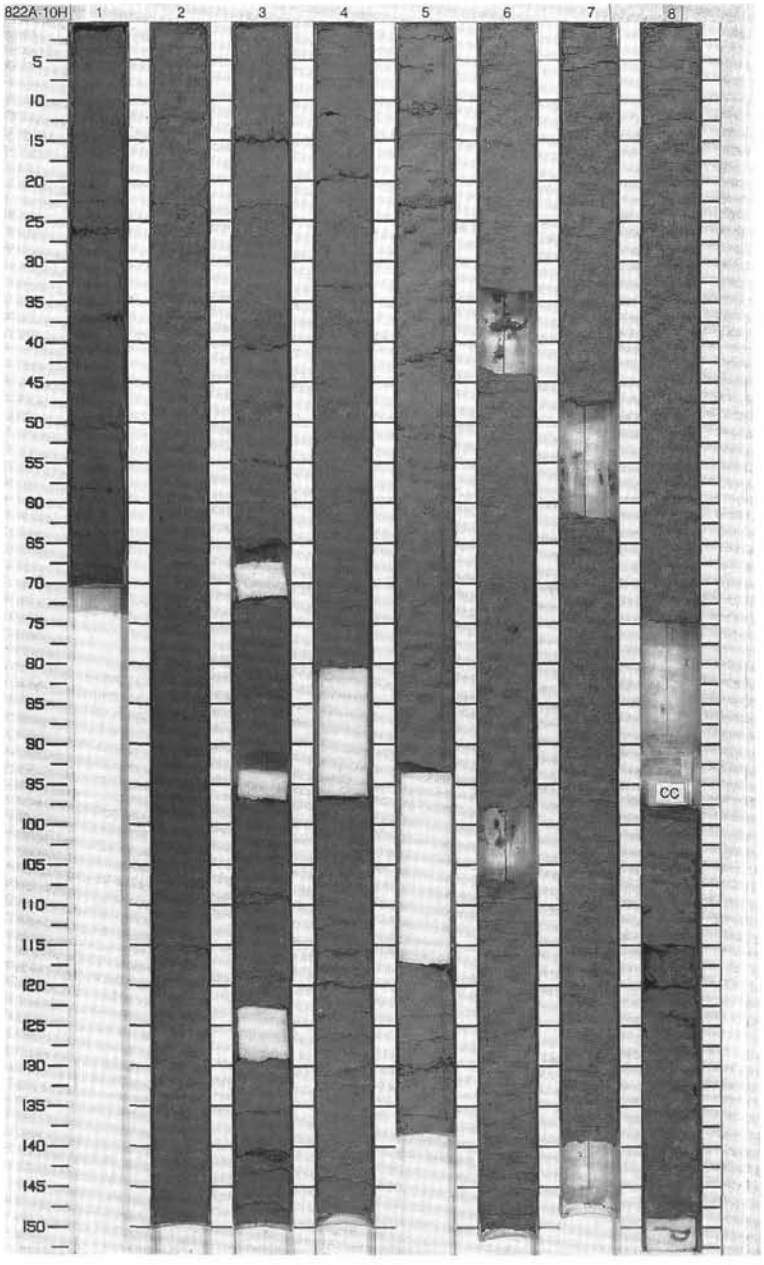
NANNOFOSSIL CLAYEY MIXED SEDIMENT with BIOCLASTS and QUARTZ

Major Lithology: In upper part, greenish gray (5GY 5/1) NANNOFOSSIL CLAYEY MIXED SEDIMENT with silt-sized QUARTZ and BIOCLASTS is firm, bioturbated and generally homogenous. Lower part of core consists of relatively calcareous SILTY to CLAYEY NANNOFOSSIL CALCAREOUS OOZE/MUD with BIOCLASTS and QUARTZ which has a somewhat silter to very fine sandy texture than upper part of core. Gas expansion cracks are common.

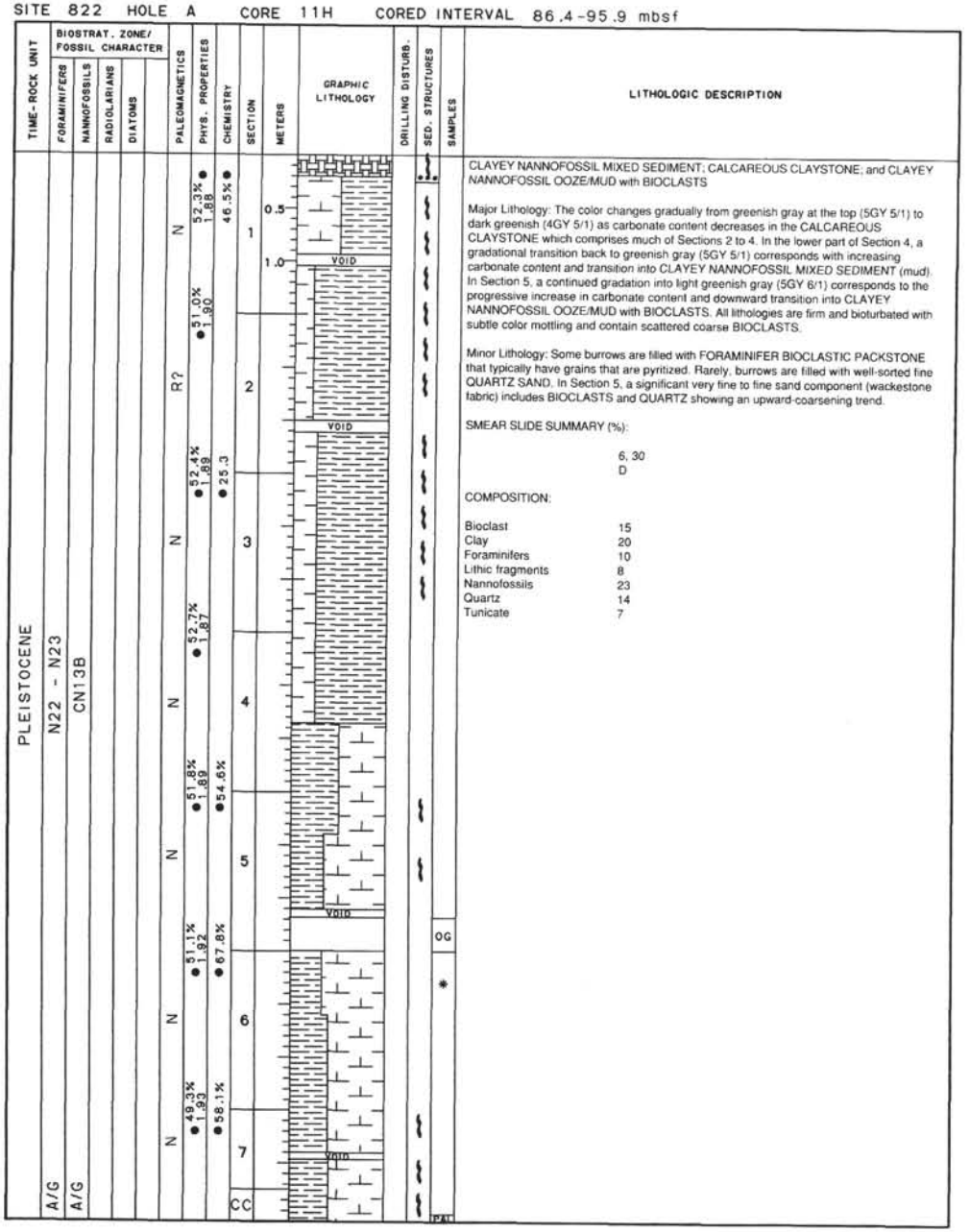
Minor Lithology: Small burrows are filled with pyritic BIOCLASTIC PACKSTONE. In Section 3 (100 cm), well-sorted, relatively pure QUARTZ SAND fills small burrows.

SMEAR SLIDE SUMMARY (%):

	5, 60 D	7, 60 D
COMPOSITION:		
Bioclast	15	10
Calcite		4
Clay	10	25
Foraminifers	15	10
Lithic fragments	15	10
Nannofossils	25	32
Quartz	5	1
Tunicate	10	1



SITE 822 HOLE A CORE 11H CORED INTERVAL 86.4-95.9 mbsf



LITHOLOGIC DESCRIPTION

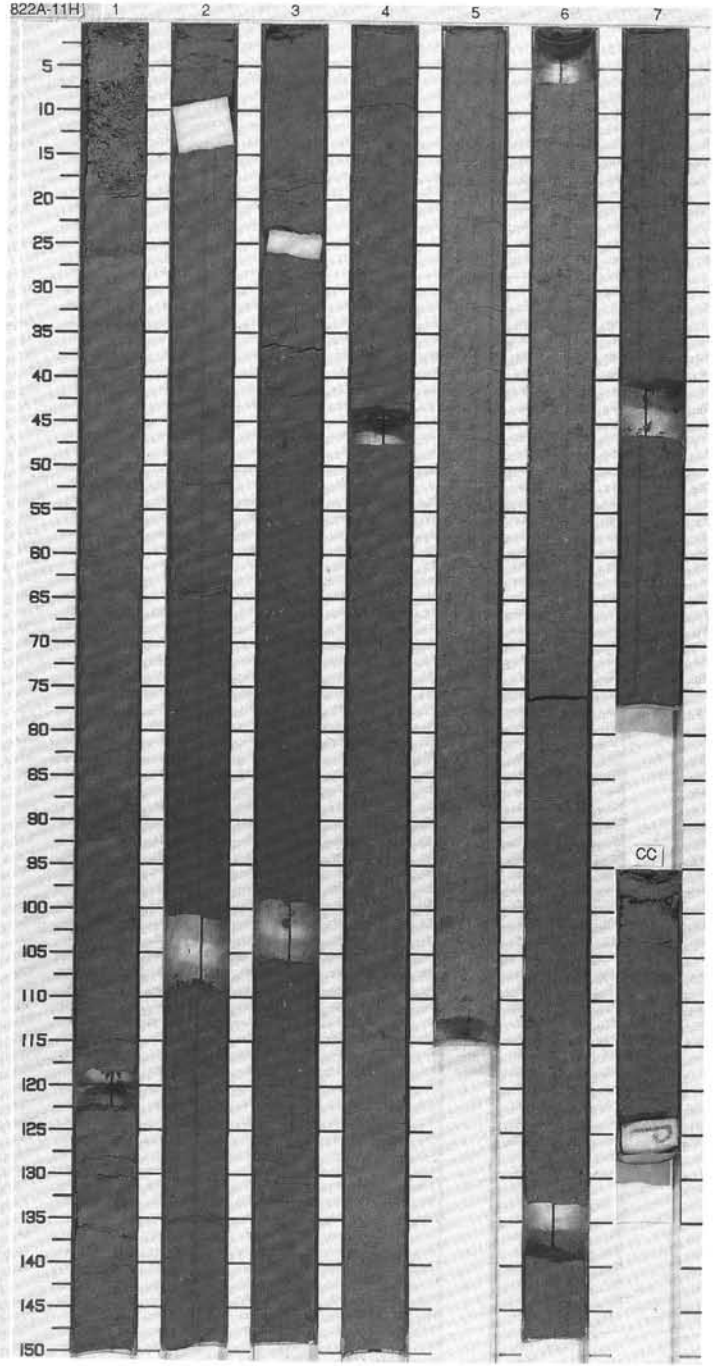
CLAYEY NANNOFOSSIL MIXED SEDIMENT; CALCAREOUS CLAYSTONE; and CLAYEY NANNOFOSSIL OOZE/MUD with BIOCLASTS

Major Lithology: The color changes gradually from greenish gray at the top (5GY 5/1) to dark greenish (4GY 5/1) as carbonate content decreases in the CALCAREOUS CLAYSTONE which comprises much of Sections 2 to 4. In the lower part of Section 4, a gradational transition back to greenish gray (5GY 5/1) corresponds with increasing carbonate content and transition into CLAYEY NANNOFOSSIL MIXED SEDIMENT (mud). In Section 5, a continued gradation into light greenish gray (5GY 6/1) corresponds to the progressive increase in carbonate content and downward transition into CLAYEY NANNOFOSSIL OOZE/MUD with BIOCLASTS. All lithologies are firm and bioturbated with subtle color mottling and contain scattered coarse BIOCLASTS.

Minor Lithology: Some burrows are filled with FORAMINIFER BIOCLASTIC PACKSTONE that typically have grains that are pyritized. Rarely, burrows are filled with well-sorted fine QUARTZ SAND. In Section 5, a significant very fine to fine sand component (wackestone fabric) includes BIOCLASTS and QUARTZ showing an upward-coarsening trend.

SMEAR SLIDE SUMMARY (%):

	6, 30 D
COMPOSITION:	
Bioclast	15
Clay	20
Foraminifers	10
Lithic fragments	8
Nannofossils	23
Quartz	14
Tunicate	7



SITE 822 HOLE A CORE 12X CORED INTERVAL 95.9-105.7 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
PLEISTOCENE	A/G N22 - N23	A/G CN13a			R R UNCERTAIN POLARTIY N N	● 51.0% 1.89 ● 52.7% 1.89 ● 53.8% 1.87 ● 54.8% 1.87 ● 55.8% 1.91	● 47.9% ● 46.6% ● 48.6%	1 2 3 4 5 6 CC	0.5 1.0				*

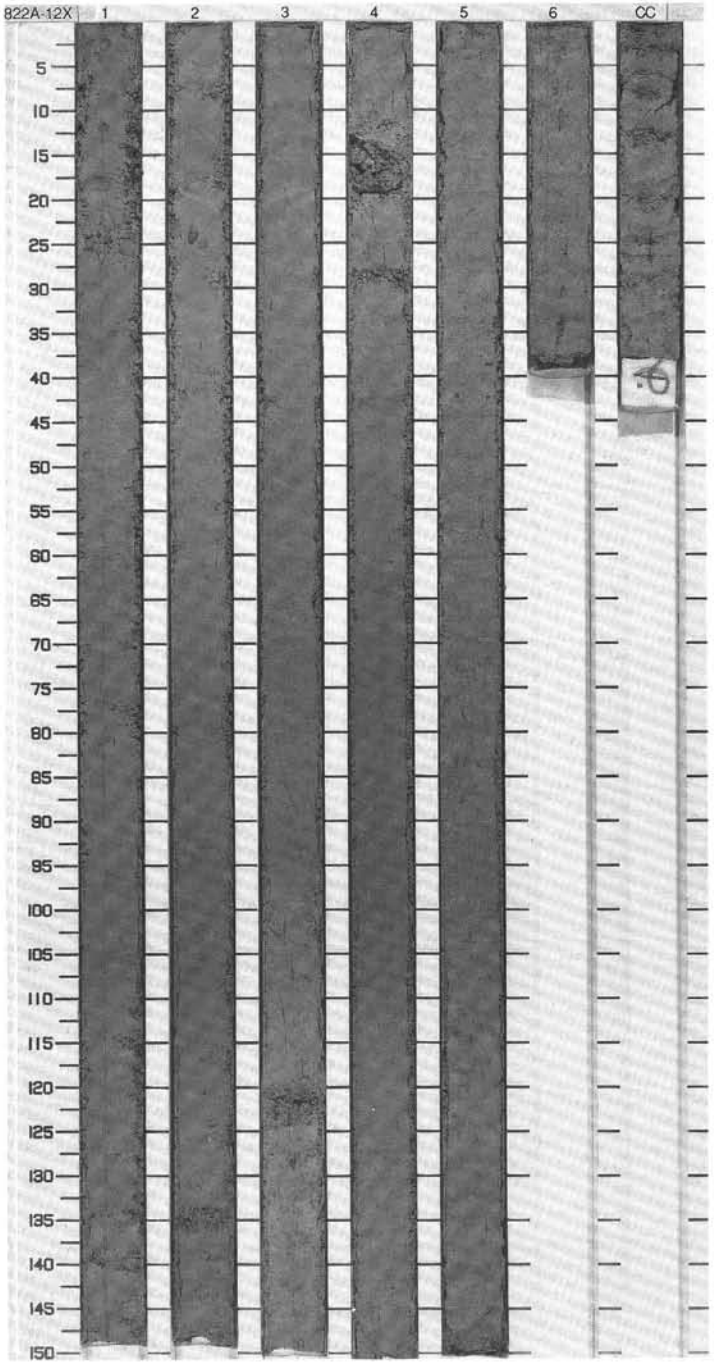
LITHOLOGIC DESCRIPTION

SILTY NANNOFOSSIL CLAYEY MIXED SEDIMENT

Major Lithology: Greenish gray (5GY 5/1), firm and unlithified, SILTY NANNOFOSSIL CLAYEY MIXED SEDIMENT. Contains minor QUARTZ SILT and scattered BIOCLASTS and local slightly lithified patches. Monosulphides are sparsely distributed throughout core. Drilling biscuits and general increase in drilling disturbance are present.

SMEAR SLIDE SUMMARY (%):

	1, 60 D
COMPOSITION:	
Calcite	3
Clay	27
Micrite	15
Nannofossils	25
Quartz	15
Tunicate	5
Volcanic ash	7



SITE 822 HOLE A CORE 13X CORED INTERVAL 105.7-115.4 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
PLEISTOCENE	A/G	A/G			UNCERTAIN POLARTIY	● 56.2% 1.83 ● 55.1% 1.84 ● 54.2% 1.89 ● 49.6% 1.93 ● 47.4% 1.96	● 68.8% ● 66.7% ● 54.1%	1 2 3 4 5	0.5 1.0				OG PAL

N22 - N23

CN13d

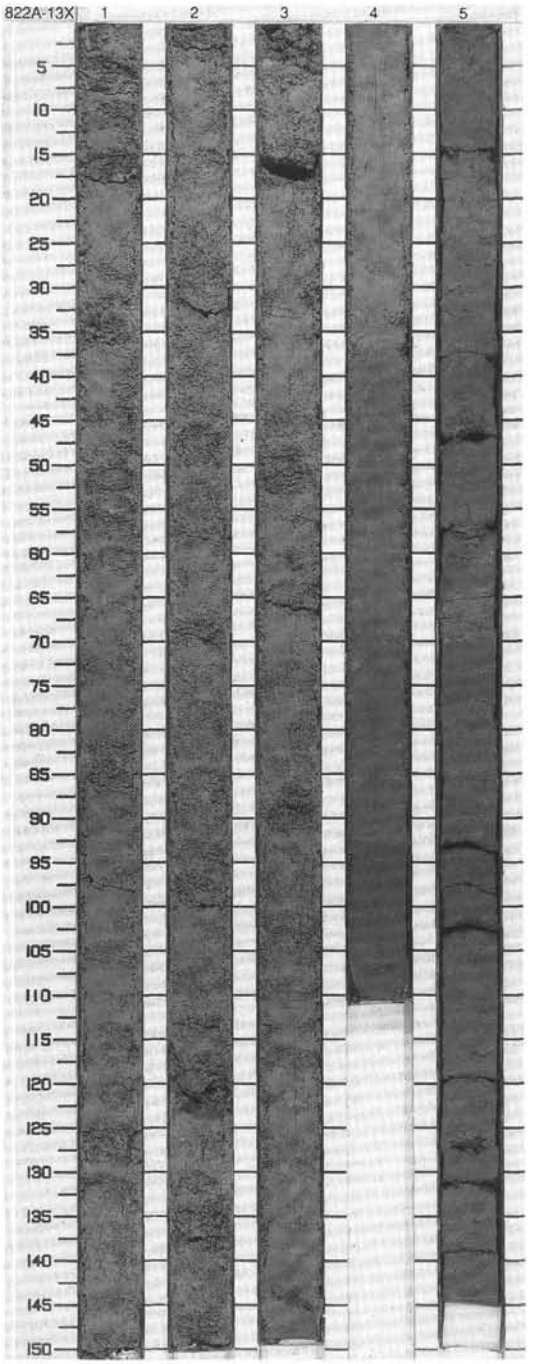
LITHOLOGIC DESCRIPTION

CLAYEY and SILTY NANNOFOSSIL MIXED SEDIMENT

Major Lithology: Greenish gray (5GY 6/1), SILTY and CLAYEY NANNOFOSSIL MIXED SEDIMENT (silty to sandy mudstone). Contains considerable terrigenous sediment including mostly QUARTZ but with MICA, FELDSPAR, LITHIC FRAGMENTS in a CLAY matrix. PTEROPODS are common throughout. Highly disturbed by drilling; sedimentary textures and structures are not preserved. Section 5 fell out of the core barrel and was reassembled.

SMEAR SLIDE SUMMARY (%):

	3, 115 D
COMPOSITION:	
Bioclast	10
Calcite	6
Clay	20
Feldspar	1
Foraminifers	1
Lithic fragments	15
Nannofossils	20
Quartz	10
Tunicate	8



SITE 822 HOLE A CORE 14X CORED INTERVAL 115.4-125.0 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	A/G CN13d			N R?	● 54.4% 1.84 ●	● 34.2%	1	0.5 1.0				
					N R?	● 51.4% 1.87		2					
					N	● 51.9% 1.91	● 68.1%	3					
					N	● 50.9% 1.91		4		VOID			
					N	● 48.0% 1.94	● 21.7% ● 21.2%	5					OG
							● 41.7%	CC					

LITHOLOGIC DESCRIPTION

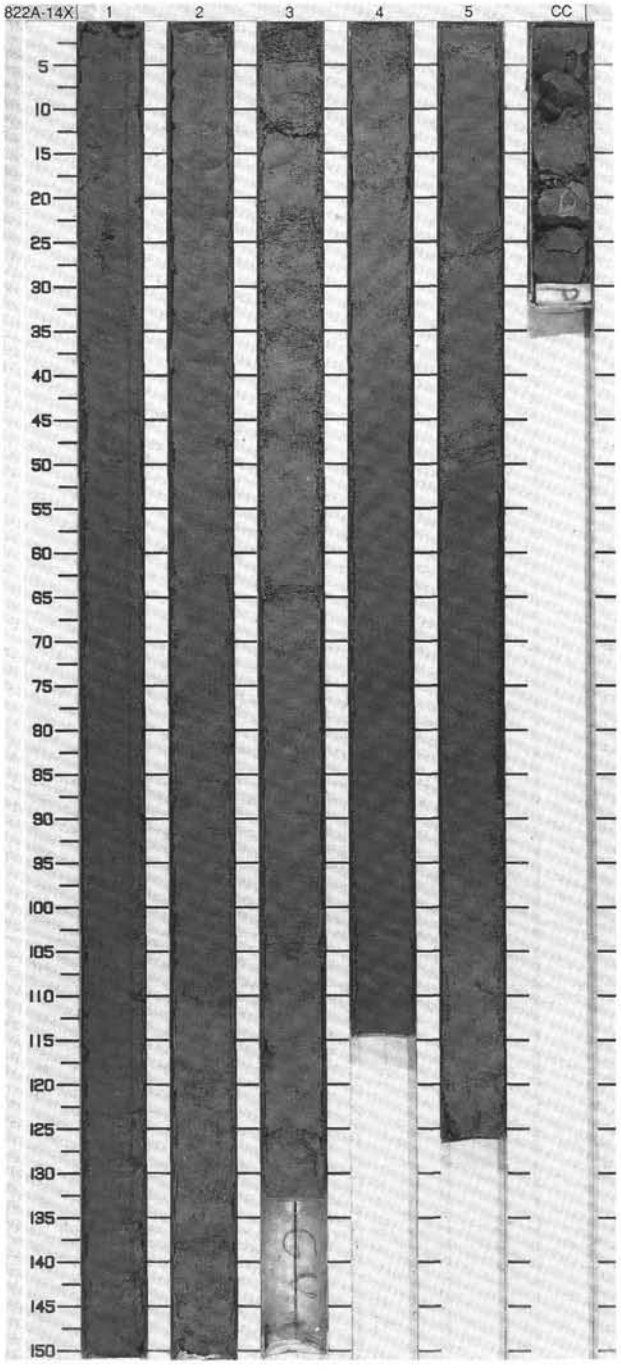
NANNOFOSSIL CALCAREOUS CLAYSTONE and BIOCLASTIC WACKESTONE with CLAY, NANNOFOSSILS AND QUARTZ

Major Lithology: NANNOFOSSIL CALCAREOUS CLAYSTONE at top and base is greenish gray (5GY 5/1) to lighter greenish gray (10Y 5/2), firm and generally unlithified. In Sections 3-4, light greenish gray (5GY 6/1) BIOCLASTIC WACKESTONE with CLAY, NANNOFOSSILS and QUARTZ is very fine grained and mostly semi-lithified.

Minor Lithology: In the lower part of Section 4, NANNOFOSSIL BIOCLASTIC CLAYEY MIXED SEDIMENT contains FORAMINIFERS and QUARTZ. Semi-lithified intervals represent about 40% of the core.

SMEAR SLIDE SUMMARY (%):

	3, 80 D	4, 66 D
COMPOSITION:		
Apatite	---	1
Bioclast	25	25
Calcite	4	6
Clay	15	13
Feldspar	---	1
Foraminifers	---	10
Micrite	20	---
Nannofossils	18	22
Quartz	13	10
Tunicate	2	6



SITE 822 HOLE A CORE 15X CORED INTERVAL 125.0-134.6 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
PLEISTOCENE	A/G N22 - N23	A/G CN13d			R R R? N? N	● 49.8% 1.85 ● 50.2R 1.93 ● 53.3% 1.87 ● 50.2% 1.91 ● 48.6% 1.89	● 40.9% ● 34.5% 65.7% ●	1 2 3 4 5 CC	0.5 1.0	VOID VOID			PAL *

LITHOLOGIC DESCRIPTION

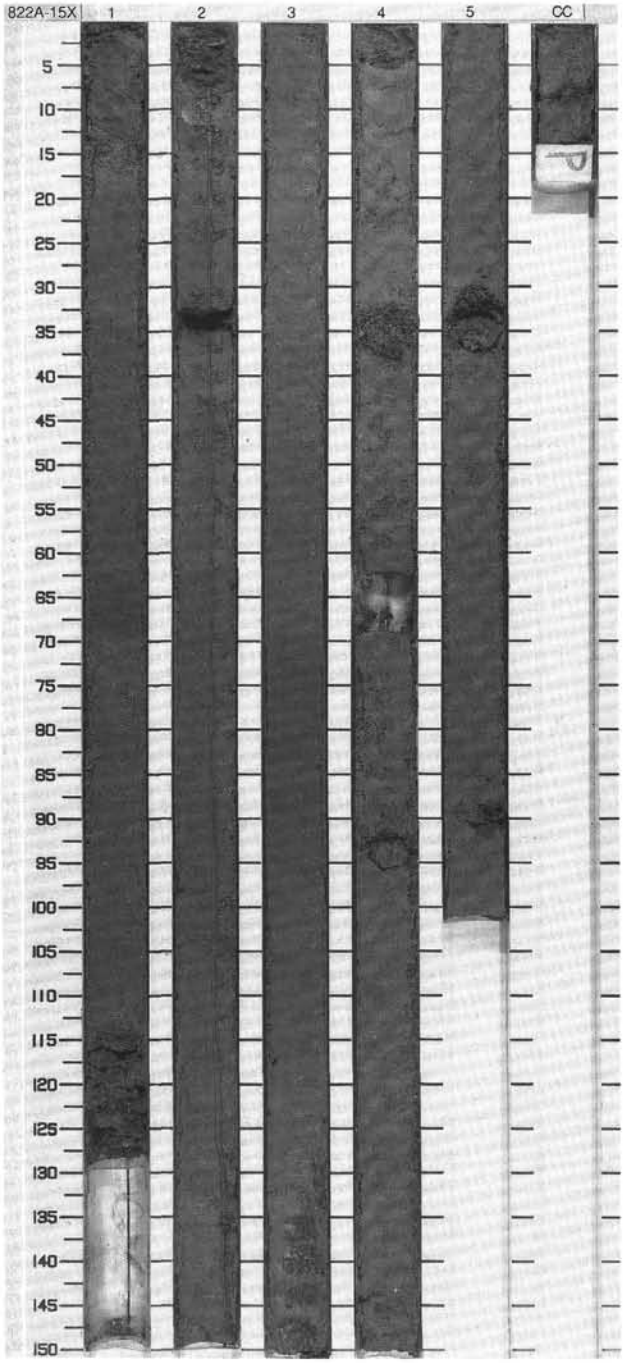
NANNOFOSSIL CALCAREOUS CLAYEY OOZE/MUD overlies NANNOFOSSIL CALCAREOUS CLAYSTONE

Major Lithology: In upper part (Sections 1 and 2), NANNOFOSSIL CALCAREOUS CLAYEY OOZE/MUD with scattered silt to very fine sand-size BIOCLASTS and QUARTZ is greenish gray (5GY-5/1). In the lower part of the core, NANNOFOSSIL CALCAREOUS CLAYSTONE is slightly darker greenish gray (5GY 4/1 to 5/1) and contains scattered BIOCLASTS and PTEROPODS. Contains considerable silt and very fine sand, becoming slightly coarser grained toward the base. Most of core is firm and well compacted with local semi-lithified chalky patches. Mottled and heavily bioturbated. Darker colored intervals (4/1) are approximately 50-75 cm thick. Moderate to strong drilling disturbance.

Minor Lithology: Burrows are locally filled with BIOCLASTIC or FORAMINIFER PACKSTONE or are pyritized concretions.

SMEAR SLIDE SUMMARY (%):

	5, 14 D
Bioclast	20
Carbonate particles	15
Clay	20
Feldspar	Tr
Foraminifers	Tr
Micrite	10
Nannofossils	20
Quartz	15
Siliceous sponge spicules	Tr
Tunicate	Tr



SITE 822 HOLE A CORE 16X CORED INTERVAL 134.6-144.3 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
PLEISTOCENE	A/G	N22 - N23	A/G	CN13b	R?	N	R	N	● 52.8% 1.94	● 53.9% 1.92	● 56.3% 1.81	● 50.6% 1.86	● 54.4%	● 55.4%	1 2 3 4 CC	0.5 1.0			* TW PAL

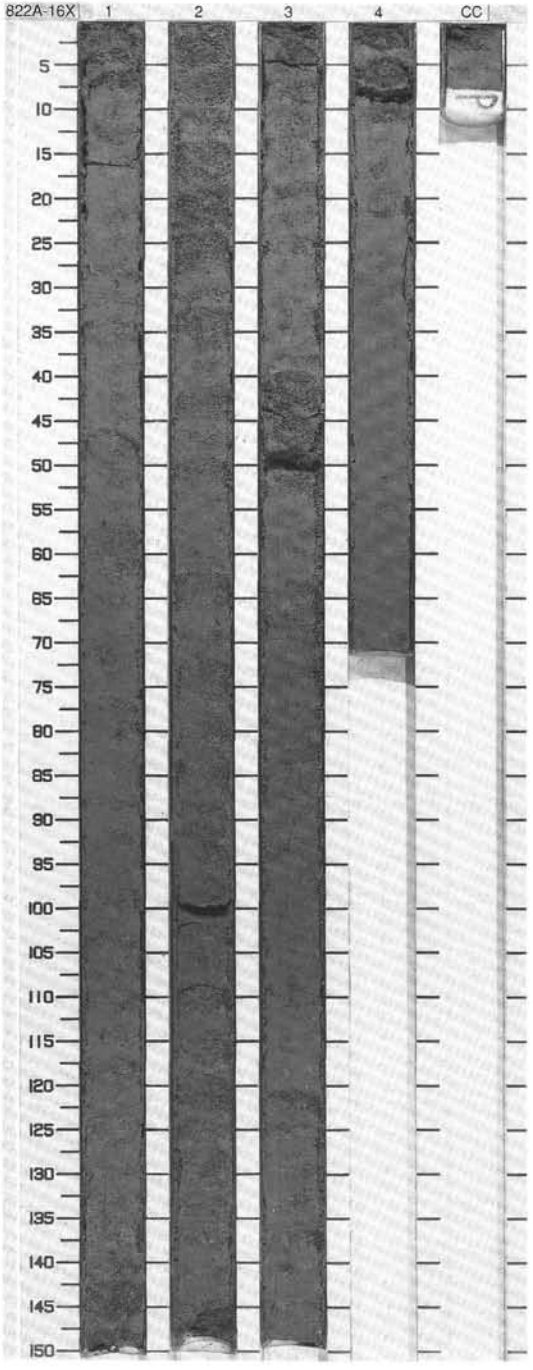
LITHOLOGIC DESCRIPTION

CLAYEY and SILTY NANNOFOSSIL MIXED SEDIMENT with QUARTZ and BIOCLASTS

Major Lithology: Greenish gray (5GY 5/1), partially lithified, CLAYEY and SILTY NANNOFOSSIL MIXED SEDIMENT with QUARTZ and BIOCLASTS. Faintly laminated with possible soft sediment deformation (slump fold) at base. Moderate to strong drilling disturbance. Pyritic concretions occur in small burrows.

SMEAR SLIDE SUMMARY (%):

	2, 60 D
COMPOSITION:	
Bioclast	30
Clay	20
Foraminifers	3
Micrite	15
Nannofossils	15
Quartz	10
Spicules	5
Tunicate	Tr



SITE 822 HOLE A CORE 17X CORED INTERVAL 144.3-154.0 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	A/G CN13b			N R?	44.8% 20.2	40.8%	1	0.5 1.0				
					N	45.3% 20.2		2					
					N	45.0% 1.86	38.7%	3					
					N	47.8% 1.98		4					
					N	44.9% 2.03	35.4	5				*	
					N	44.0% 2.04	35.9	6					OG IW
								7		VOID			
								CC					PAL

LITHOLOGIC DESCRIPTION

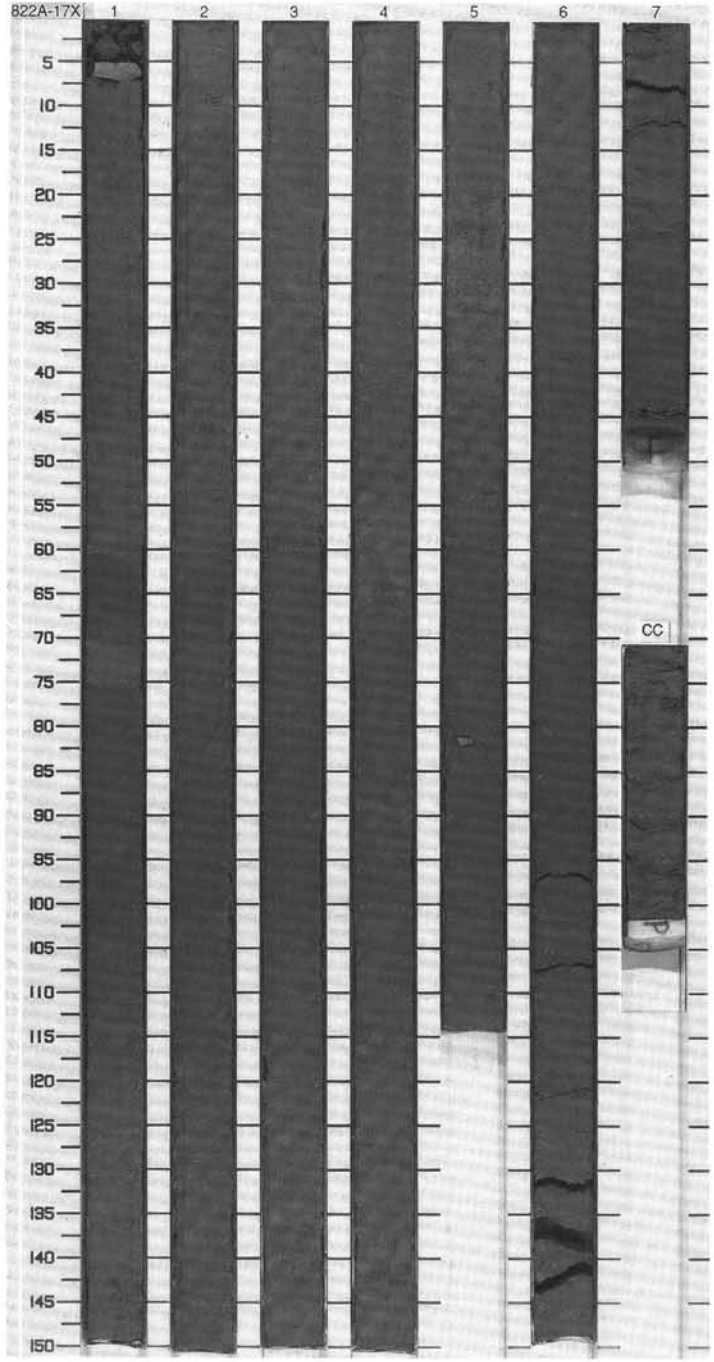
QUARTZOSE CALCAREOUS CLAYSTONE with BIOCLASTS

Major Lithology: Greenish gray (10Y 4/1 and 5Y 5/1), very firm and dry. QUARTZOSE CALCAREOUS CLAYSTONE with BIOCLASTS. Silty to sandy burrow fills contain BIOCLASTIC PACKSTONE. Abrupt to transitional changes in color throughout the core form thin to medium bedded units. Homogeneous to slightly mottled with scattered large BIOCLASTS. Becomes coarser grained in the lower part. Moderate drilling disturbance locally and in lower half.

Minor Lithology: In Sections 4 and 5, thin beds of BIOCLASTIC NANNOFOSSIL MIXED SEDIMENT with QUARTZ silt and very fine sand are lighter colored greenish gray (5GY 5/1). Silty BIOCLASTIC PACKSTONE with QUARTZ burrow fills are lighter colored than the surrounding sediment.

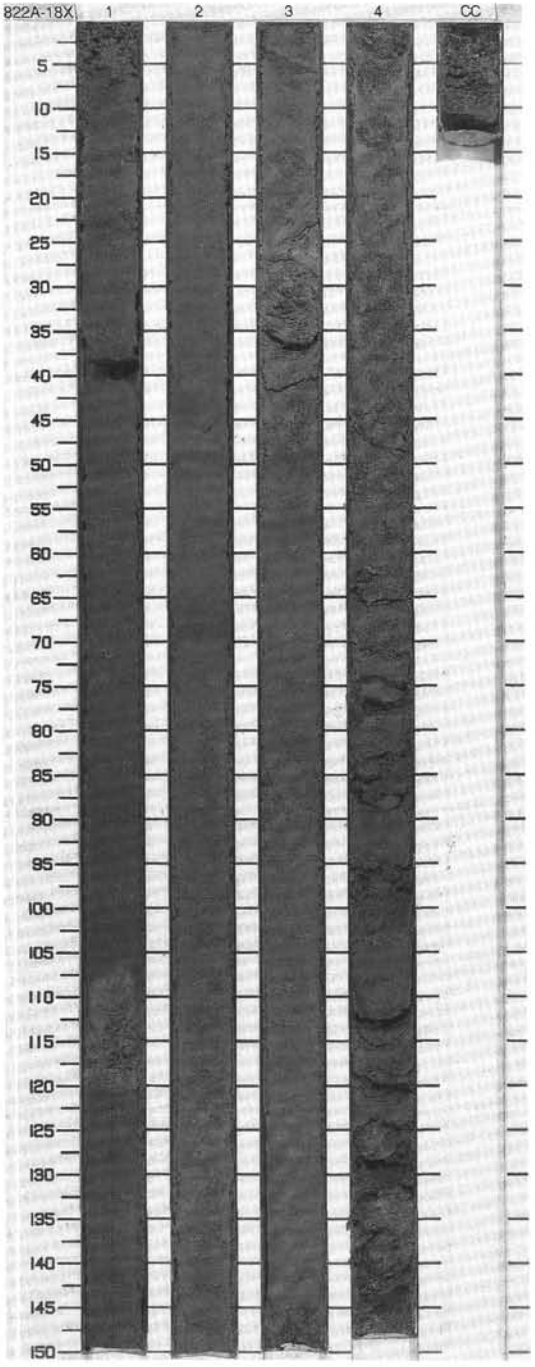
SMEAR SLIDE SUMMARY (%):

	4, 80 D	5, 34 D
COMPOSITION:		
Bioclast	30	30
Clay	20	10
Dolomite	3	---
Feldspar	2	---
Foraminifers	Tr	Tr
Micrite	10	---
Nannofossils	15	30
Quartz	20	20
Rock fragment	Tr	---
Siliceous sponge spicules	---	5
Spicules	---	5



SITE 822 HOLE A CORE 18X CORED INTERVAL 154.0-163.7 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
PLEISTOCENE	C/G N22 - N23	A/G CN13B			N	48.6% 2.03	39.3%	1	0.5 1.0	VOID				SILTY CALCAREOUS CLAYSTONE with NANNOFOSSILS and BIOCLASTS; and CLAYEY CALCAREOUS CHALK to MIXED SEDIMENT with NANNOFOSSILS and BIOCLASTS Major Lithology: In upper part, dark greenish gray (5y 4/1), moderately lithified, SILTY CALCAREOUS CLAYSTONE with NANNOFOSSILS and BIOCLASTS. In lower part, SILTY and CLAYEY CALCAREOUS CHALK to MIXED SEDIMENT with NANNOFOSSILS and BIOCLASTS. Drilling disturbance is common throughout the core. SMEAR SLIDE SUMMARY (%): 1, 111 D COMPOSITION: Bioclast Tr Inorganic calcite 60 Quartz 40 Spicules Tr
					N	49.7% 2.00		2						
					N	47.6% 2.08	59.7%	3						
					N	43.1% 2.08		4						
								CC					SMT	



SITE 822 HOLE A CORE 19X CORED INTERVAL 163.7-173.3 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
PLEISTOCENE	F/G	CN13B			R?	48.1% 1.95	45.6%	1	0.5				*
	N22 - N23					52.2% 1.99			1.0				*
	A/G				R?	47.9% 1.99	33.2%	2					
					R?	48.5% 1.81		3					*
					R?			4					
								CC					

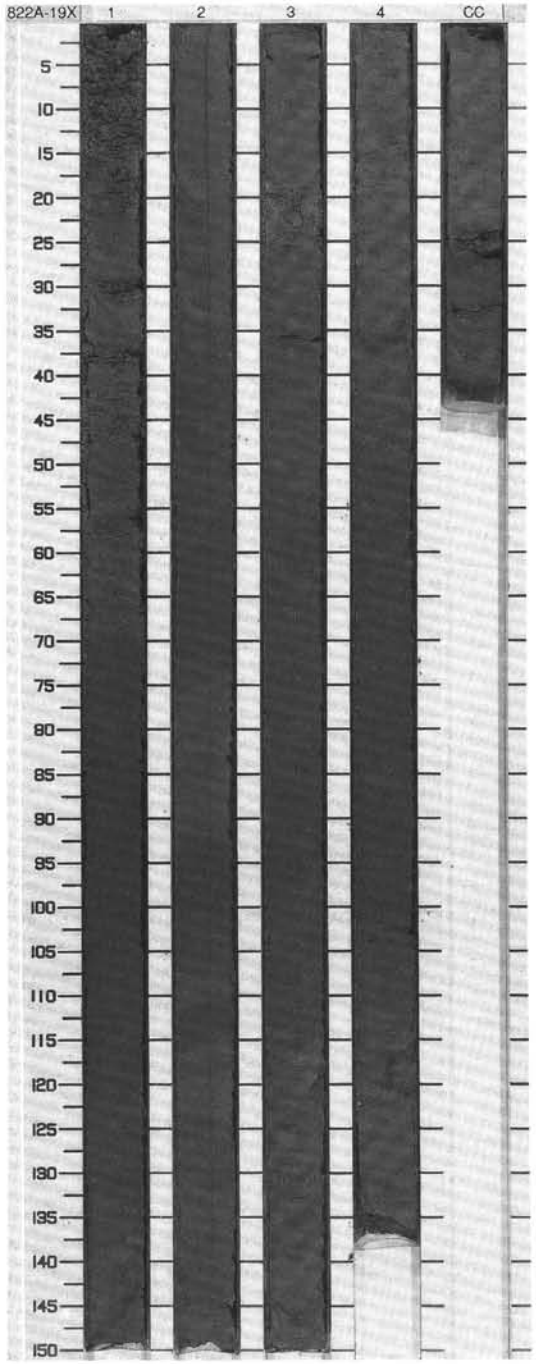
SILTY CALCAREOUS CLAYSTONE with NANNOFOSSILS and BIOCLASTS

Major Lithology: Dark greenish gray (5GY 4/1), moderately lithified, SILTY CALCAREOUS CLAYSTONE with NANNOFOSSILS and BIOCLASTS.

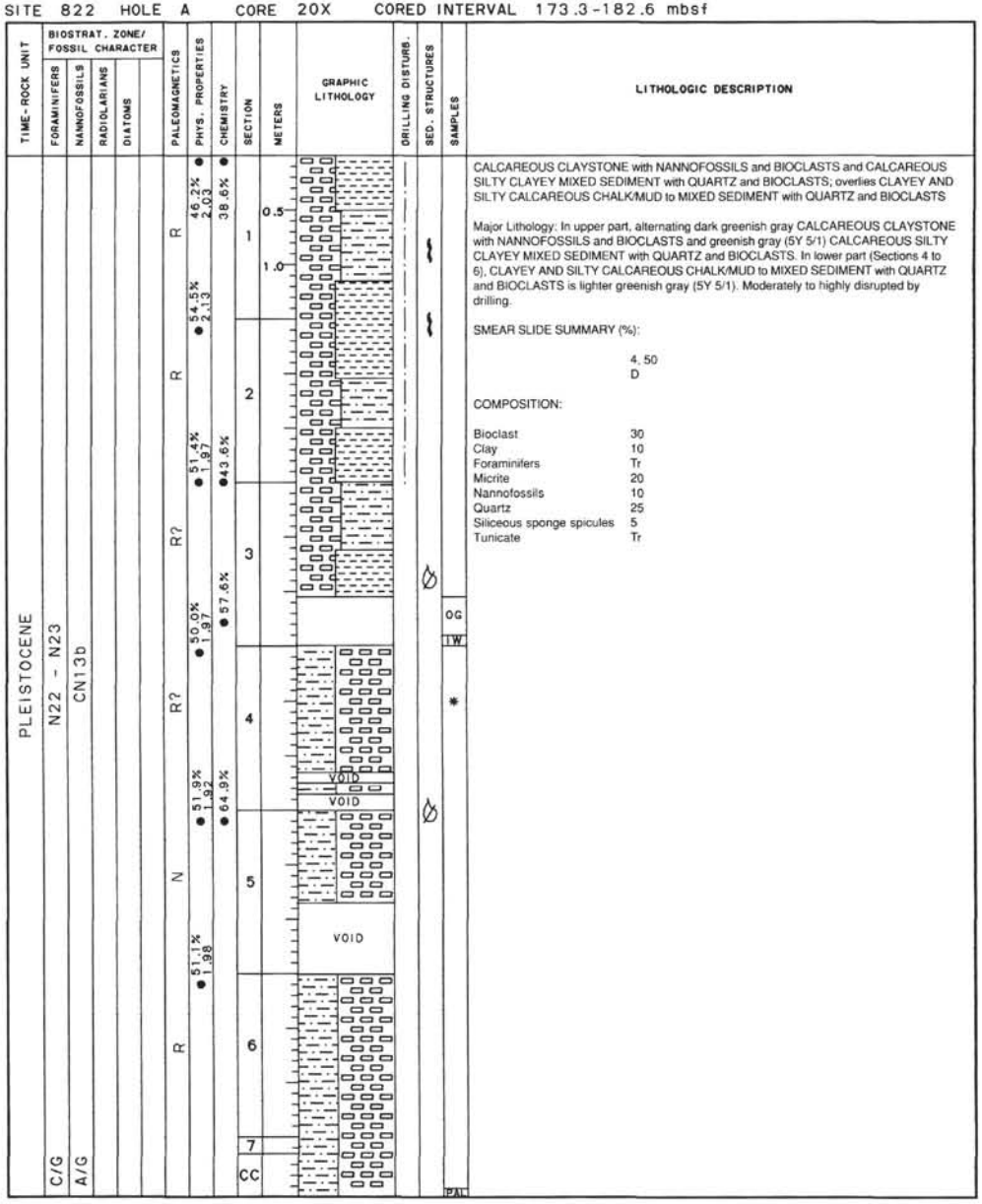
Minor Lithology: Greenish gray (5GY 5/1), moderately lithified CLAYEY and SILTY NANNOFOSSIL MIXED SEDIMENT with BIOCLASTS and QUARTZ. This lithology forms thin interbeds in Sections 2-4 and locally fills burrows.

SMEAR SLIDE SUMMARY (%):

	1, 6 D	1, 44 D	3, 10 D
COMPOSITION:			
Bioclast	20	20	25
Carbonate particles	---	10	5
Clay	20	10	15
Dolomite	---	Tr	Tr
Inorganic calcite	25	---	---
Micrite	---	---	5
Nannofossils	15	15	15
Quartz	20	35	30
Siliceous sponge spicules	---	5	5
Tunicate	---	5	Tr



SITE 822 HOLE A CORE 20X CORED INTERVAL 173.3-182.6 mbsf

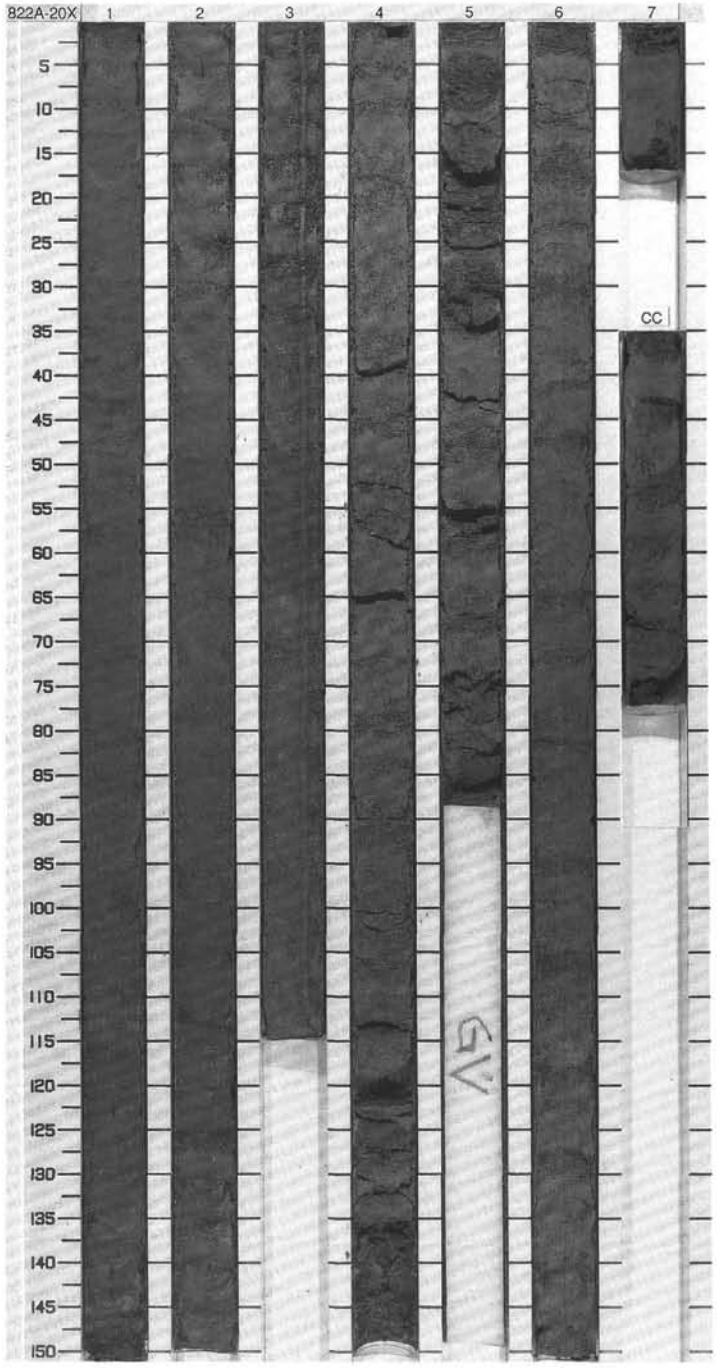


CALCAREOUS CLAYSTONE with NANNOFOSSILS and BIOCLASTS and CALCAREOUS SILTY CLAYEY MIXED SEDIMENT with QUARTZ and BIOCLASTS; overlies CLAYEY AND SILTY CALCAREOUS CHALK/MUD to MIXED SEDIMENT with QUARTZ and BIOCLASTS

Major Lithology: In upper part, alternating dark greenish gray CALCAREOUS CLAYSTONE with NANNOFOSSILS and BIOCLASTS and greenish gray (5Y 5/1) CALCAREOUS SILTY CLAYEY MIXED SEDIMENT with QUARTZ and BIOCLASTS. In lower part (Sections 4 to 6), CLAYEY AND SILTY CALCAREOUS CHALK/MUD to MIXED SEDIMENT with QUARTZ and BIOCLASTS is lighter greenish gray (5Y 5/1). Moderately to highly disrupted by drilling.

SMEAR SLIDE SUMMARY (%):

	4, 50 D
COMPOSITION:	
Bioclast	30
Clay	10
Foraminifers	Tr
Micrite	20
Nannofossils	10
Quartz	25
Siliceous sponge spicules	5
Tunicate	Tr



SITE 822 HOLE A CORE 21X CORED INTERVAL 182.6-192.2 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
PLEISTOCENE	A/G N22 - N23	A/G CN13b			R	52.5% 1.87; 50.9% 1.90; 53.1% 1.91; 48.8% 1.96; 52.7% 1.89; 51.4% 1.92	39.2%; 48.5%	1; 2; 3; 4; 5; 6; CC	0.5; 1.0	VOID			PAL

LITHOLOGIC DESCRIPTION

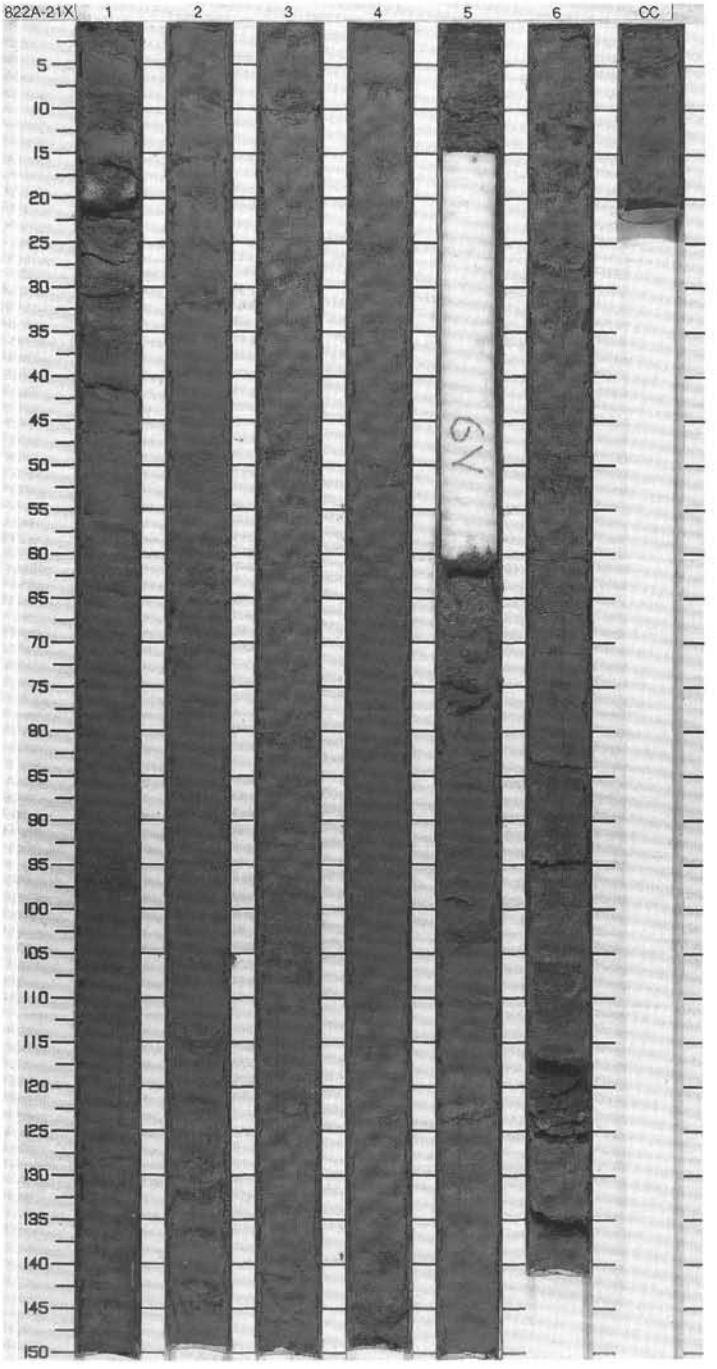
CLAYEY MIXED SEDIMENT with BIOCLASTS

Major Lithology: Greenish gray (5Y 5/1), moderately lithified, CLAYEY MIXED SEDIMENT with BIOCLASTS and minor QUARTZ. Very homogeneous and slightly lithified and highly disturbed by drilling.

Minor Lithology: CALCAREOUS PACKSTONE with BIOCLASTS, NANNOFOSSILS and CLAY occurs in very thin beds and as burrow fill in Sections 4 and 6. BIOCLASTS increase downcore in Section 6.

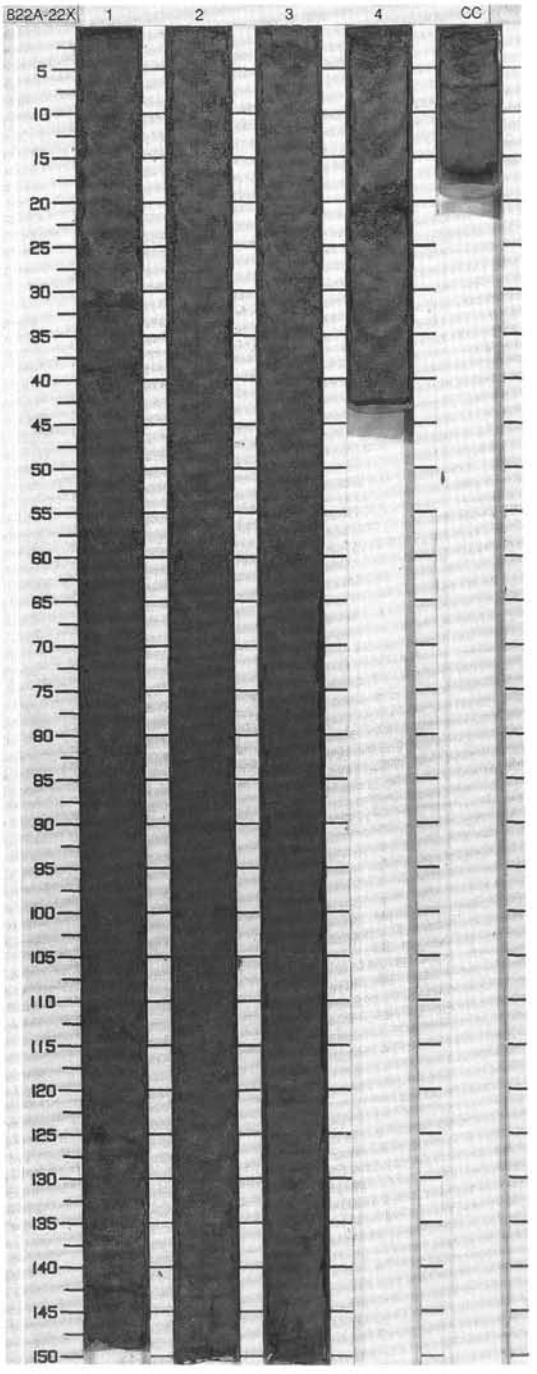
SMEAR SLIDE SUMMARY (%):

	4, 15 D
COMPOSITION:	
Bioclast	30
Carbonate particles	8
Clay	15
Foraminifers	2
Micrite	10
Nannofossils	20
Quartz	5
Siliceous sponge spicules	Tr
Spicules	10



SITE 822 HOLE A CORE 22X CORED INTERVAL 192.2-201.5 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	N22 - N23 (A/G)	CN13b (A/G)			R			1	0.5				*	CLAYEY MIXED SEDIMENT with BIOCLASTS and NANNOFOSSILS
									1.0					Major Lithology: Dark greenish gray (5GY 4/1), moderately to well lithified CLAYEY MIXED SEDIMENT with BIOCLASTS and NANNOFOSSILS.
														SMEAR SLIDE SUMMARY (%):
														1, 15 D
														COMPOSITION:
					R			2						Bioclast 20
														Clay 20
														Foraminifers 2
														Nannofossils 25
														Quartz 20
														Siliceous sponge spicules 3
														Spicules 10
								3						
								4						
								CC					PAL	



SITE 822 HOLE A CORE 23X CORED INTERVAL 201.5-211.2 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
PLEISTOCENE	A/G	N22 - N23	CN13b		R	R?	25.9%	4					
					R	R?	52.2% 1.94	3					
							25.9% 26.9%						
							50.1% 1.97	2					
						R?	44.5% 1.93	1	0.5				*
							42.6%		1.0				
								CC					PAL

LITHOLOGIC DESCRIPTION

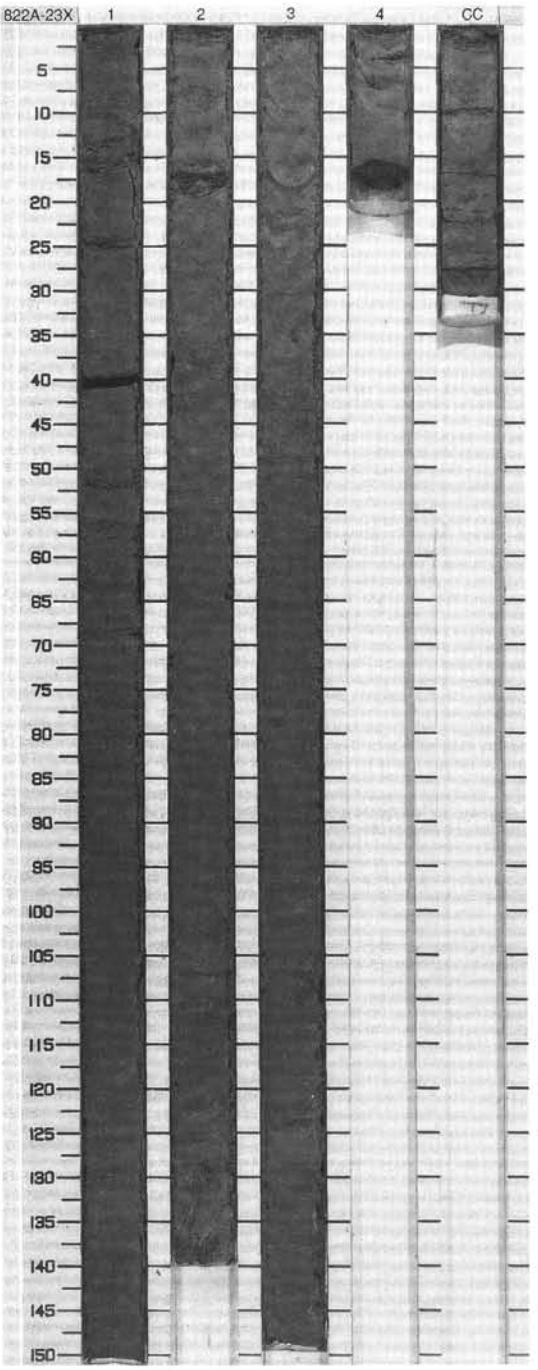
CALCAREOUS CLAYSTONE with BIOCLASTS and NANNOFOSSILS

Major Lithology: Dark gray (N4/), moderately lithified, CALCAREOUS CLAYSTONE with BIOCLASTS and NANNOFOSSILS, showing smooth surfaces when cut.

Minor Lithology: Dark gray (5Y 4/1) CALCAREOUS CLAYEY MIXED SEDIMENT with QUARTZ in upper half of Section 1.

SMEAR SLIDE SUMMARY (%):

	1, 8 D	3, 63 D
COMPOSITION:		
Bioclast	25	15
Carbonate particles	3	15
Clay	20	25
Dolomite	2	---
Foraminifers	5	Tr
Nannofossils	25	15
Quartz	15	10
Siliceous sponge spicules	5	---
Silt	---	15
Spicules	---	5



SITE 822 HOLE A CORE 24X CORED INTERVAL 211.2-220.9 mbsf

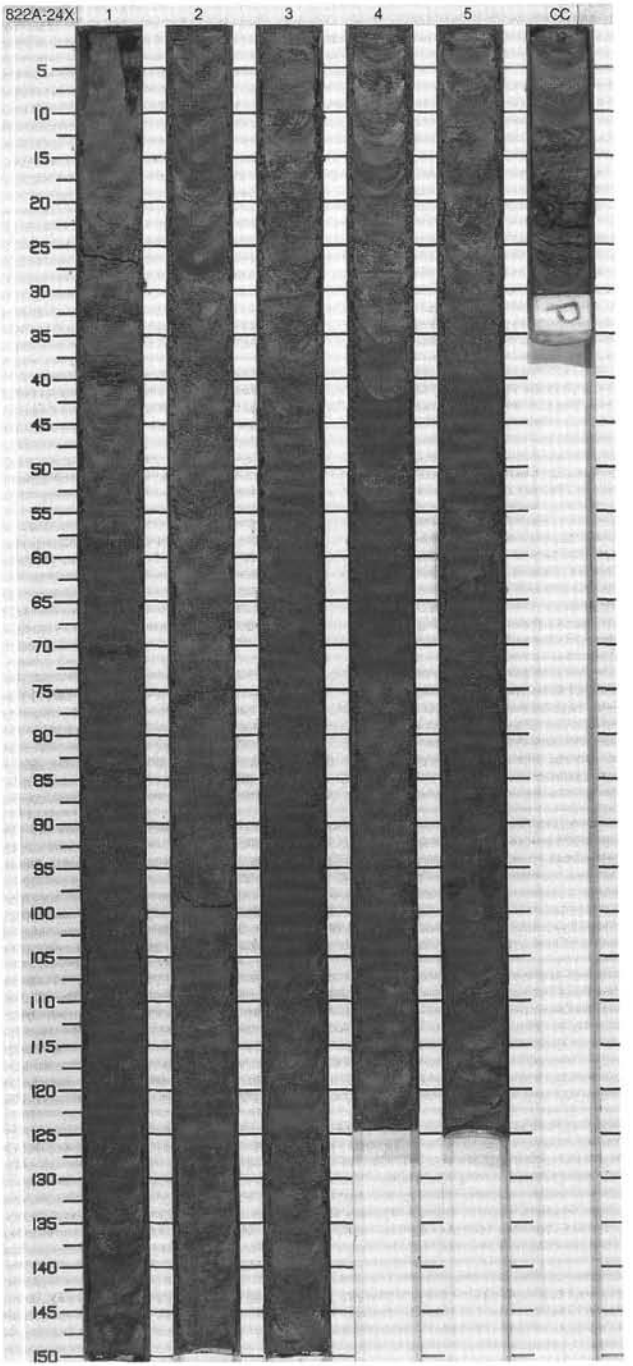
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
PLEISTOCENE	C/G	N22 - N23	A/G	CN13B	R	R	27.1%	1	0.5				
						N	50.2% 1.84		1.0				
					R		49.5% 1.99	2					
						R	49.5% 2.07	3					
					R		51.1% 1.06	4					
							46.3%						
					R		48.6% 1.97	5					CG
							37.5%	CC					TAL

LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE with BIOCLASTS and QUARTZ

Major Lithology: Dark gray (10Y 4/1), moderately lithified CALCAREOUS CLAYSTONE with BIOCLASTS and QUARTZ.

Minor Lithology: Gray (10Y 5/1), moderately lithified, CLAYEY MIXED SEDIMENT with QUARTZ. In Section 1, 2, 3 and 4, this lithology alternates with the major lithology in beds *from 10-20 cm thick.*



SITE 822 HOLE A CORE 25X CORED INTERVAL 220.9-230.5 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
PLEISTOCENE	F/G N22 - N23	CN13B			R	47.4% 2.03	32.9%	1	0.5				
					R	50.8% 2.03			1.0				
					R	51.4% 1.98	29.5%	2					*
					R	47.7% 2.01	41.7%	3					
					R			4		VOID			
					R	46.7% 1.86		5					*
								6					
								CC					PAL

LITHOLOGIC DESCRIPTION

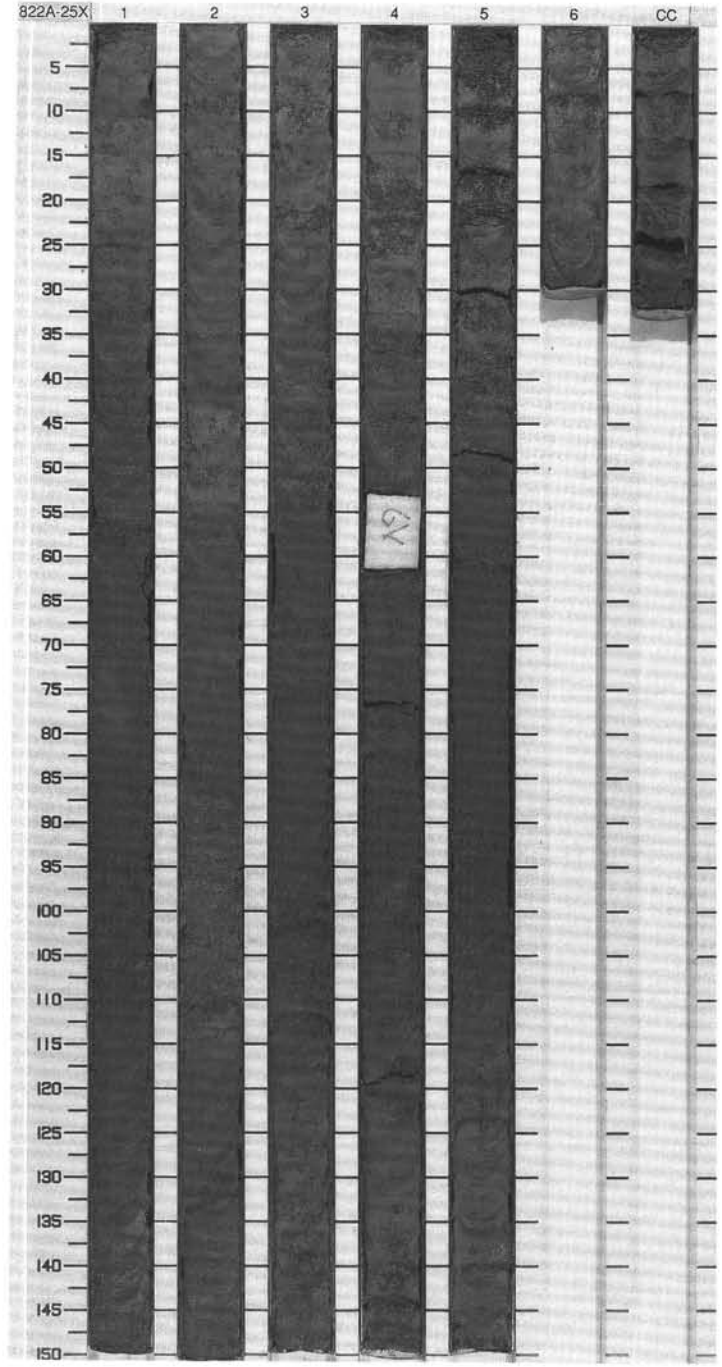
CALCAREOUS CLAYSTONE with BIOCLASTS and NANNOFOSSILS

Major Lithology: Dark greenish gray (5Y 4/1), slightly bioturbated, moderately lithified. CALCAREOUS CLAYSTONE with BIOCLASTS, NANNOFOSSILS and variable QUARTZ.

Minor Lithology: Greenish gray (5Y 5/1) BIOCLASTIC CLAYEY MIXED SEDIMENT with NANNOFOSSILS, occurs as thin interbeds (10-20 cm) within the major lithology (at 74-83 and 102-103 in Section 1, at 44-60, 87-114 in Section 2, 73-75 in Section 3, and 17-37 in Section 4).

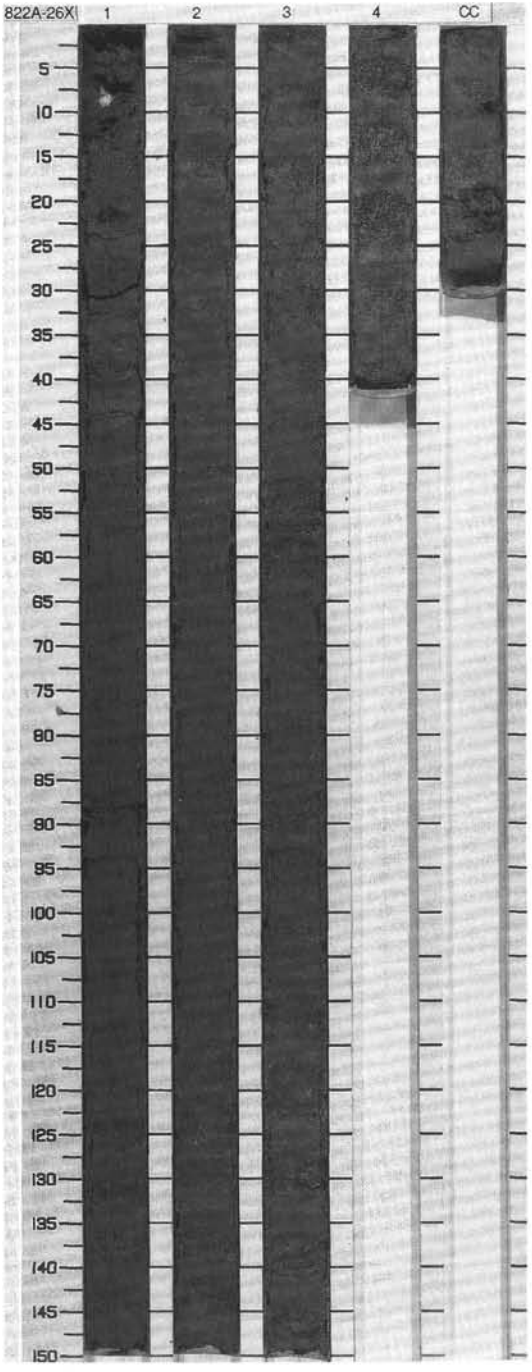
SMEAR SLIDE SUMMARY (%):

	2, 93 D	5, 80 D
COMPOSITION:		
Bioclast	30	15
Clay	20	25
Feldspar	---	2
Foraminifers	5	3
Mica	---	2
Micrite	5	---
Nannofossils	10	15
Quartz	5	20
Rock fragment	20	16
Spicules	2	2
Tunicate	3	Tr



SITE 822 HOLE A CORE 26X CORED INTERVAL 230.5-240.2 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
PLEISTOCENE	N22 - N23	CN13b			R?	51.6% 1.98	35.7%	1	0.5					CALCAREOUS CLAYSTONE to CALCAREOUS CLAYEY MIXED SEDIMENT with BIOCLASTS Major Lithology: Greenish gray (5Y 4/1), monotonous CALCAREOUS CLAYSTONE to CALCAREOUS CLAYEY MIXED SEDIMENT with BIOCLASTS. Highly disturbed by drilling.
	F/G	C/M			R?	52.3% 1.88			1.0					
					R?	43.5% 1.40	45.6%	2						
					R?	47.3% 1.99		3						
								4						
								CC					PAL	



SITE 822 HOLE A CORE 27X CORED INTERVAL 240.2-249.8 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
PLEISTOCENE	N22 - N23	CN13b			R?	45.3% 2.03	27.2%	1	0.5				
									1.0	VOID			
					R?	48.2% 1.97		2					
					R?	48.2% 2.01	31.2%	3					
					R?	47.4% 2.04		4				Ø	
					R?	42.8% 2.05	30.2%	5				*	
					R?	44.1% 2.00	29.6%	6				TW	
										VOID			
	R/G	C/G						7					
								CC					PAL

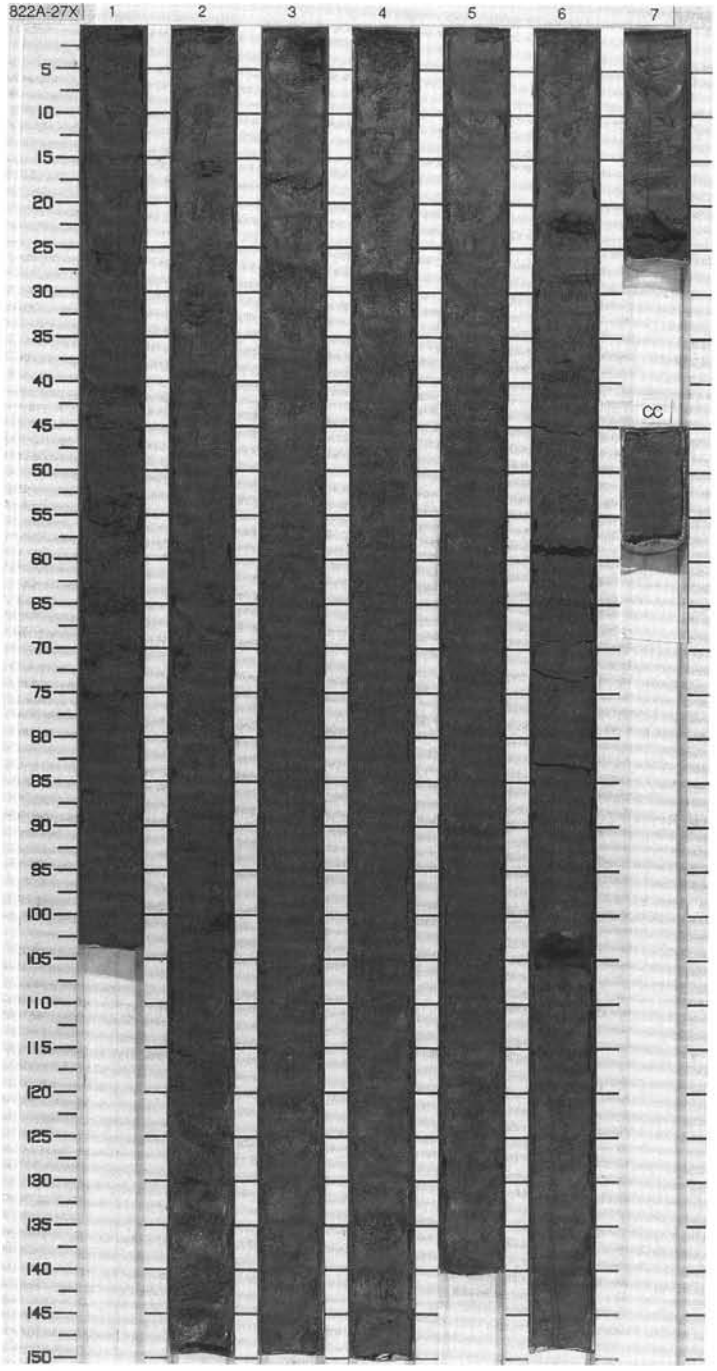
LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE with NANNOFOSSILS, BIOCLASTS and QUARTZ.

Major Lithology: Dark gray (5Y 4/1), moderately lithified, CALCAREOUS CLAYSTONE with NANNOFOSSILS, BIOCLASTS and local QUARTZ. PTEROPODS occur throughout. Moderately disturbed by drilling with biscuits.

SMEAR SLIDE SUMMARY (%):

	5, 81 D
COMPOSITION:	
Bioclast	20
Clay	35
Foraminifers	5
Nannofossils	15
Quartz	25
Tunicate	Tr



SITE 822 HOLE A CORE 28X CORED INTERVAL 249.8-259.5 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
PLEISTOCENE	R/G	N22 - N23	CN13b	F/G	R?	R?	R?	R?	R?	1 2 3 4 CC	0.5 1.0		OG ** PAL

	PHYS. PROPERTIES	CHEMISTRY
R?	48.7% 1.97	17.5%
R?	45.0% 2.03	
R?	47.2% 1.95	1.66%
R?	49.7% 1.99	

LITHOLOGIC DESCRIPTION

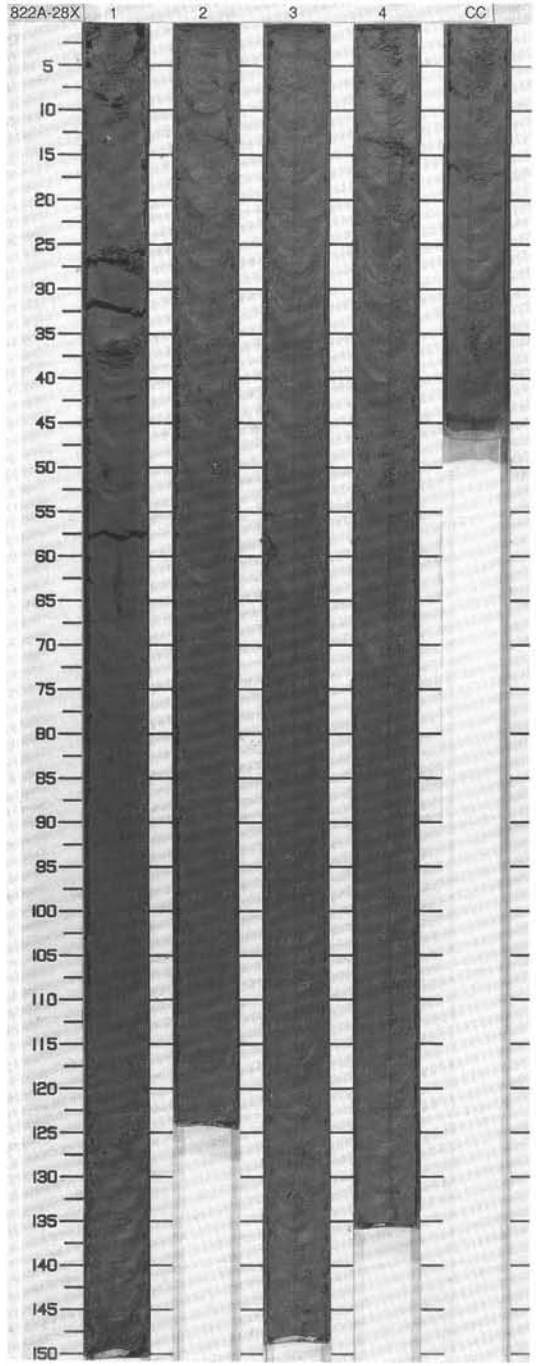
CLAYSTONE with CARBONATE and QUARTZ

Major Lithology: Dark gray (5Y 4/1), moderately to well lithified, homogeneous CLAYSTONE with CARBONATE and minor QUARTZ. Very low carbonate content. Carbonate particles are mainly DETRITAL CALCITE and BIOCLASTS. Moderately disturbed by drilling with biscuits.

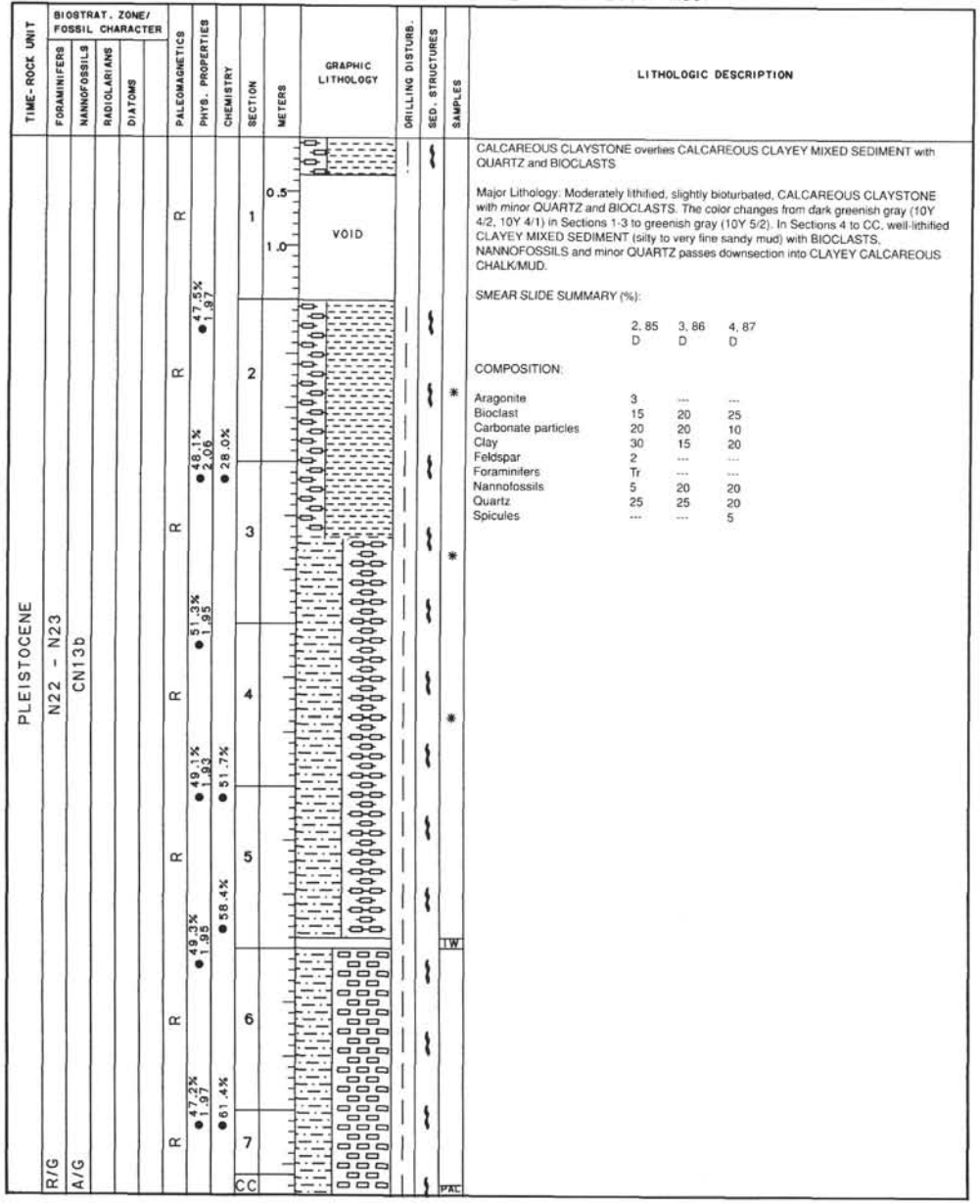
Minor Lithology: Two 10 cm thick layers of green (10Y 5/2) CLAYEY MIXED SEDIMENT with BIOCLASTS, NANNOFOSSILS and QUARTZ occur in Section 4 from 46-56 cm and 69-79 cm.

SMEAR SLIDE SUMMARY (%):

	4, 44 D	4, 48 D
COMPOSITION:		
Bioclast	10	20
Clay	25	25
Glauconite	---	Tr
Inorganic calcite	20	---
Nannofossils	10	30
Quartz	30	25
Spicules	5	---



SITE 822 HOLE A CORE 29X CORED INTERVAL 259.5-269.1 mbsf



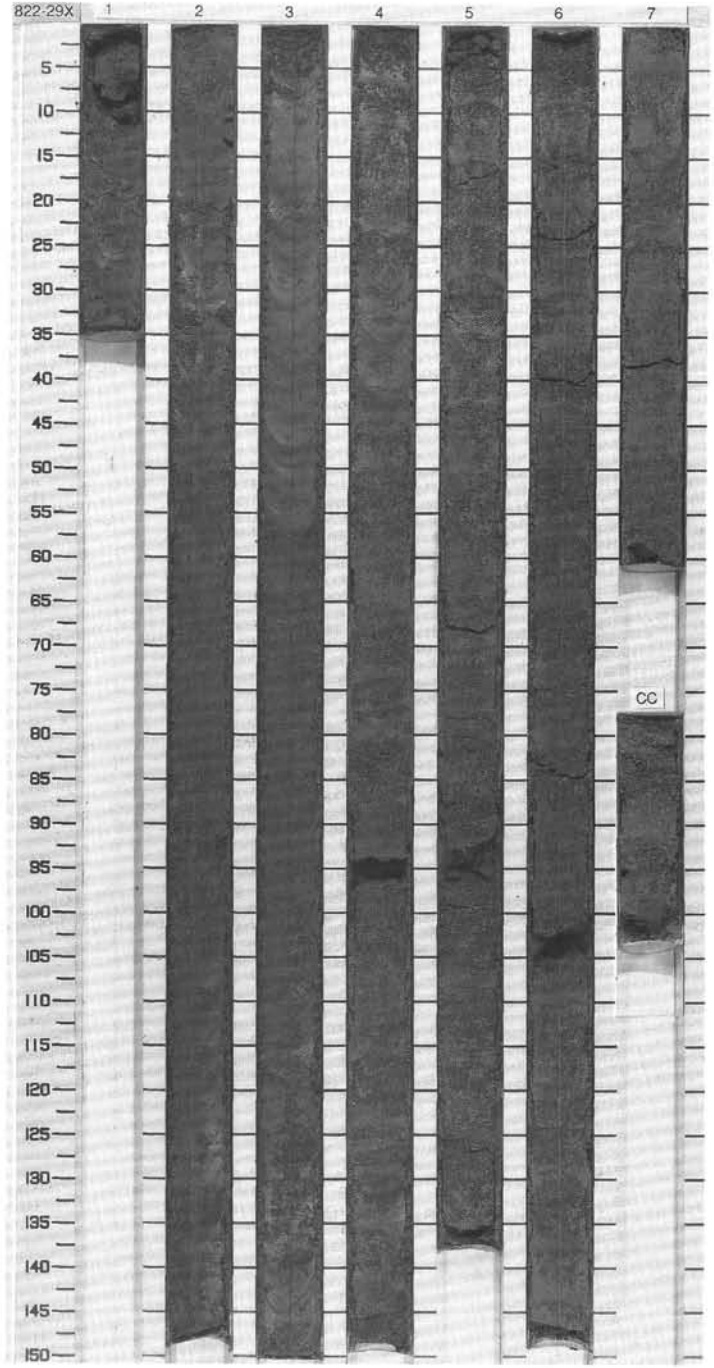
LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE overlies CALCAREOUS CLAYEY MIXED SEDIMENT with QUARTZ and BIOCLASTS

Major Lithology: Moderately lithified, slightly bioturbated, CALCAREOUS CLAYSTONE *with minor QUARTZ and BIOCLASTS. The color changes from dark greenish gray* (10Y 4/2, 10Y 4/1) in Sections 1-3 to greenish gray (10Y 5/2). In Sections 4 to CC, well-lithified CLAYEY MIXED SEDIMENT (silty to very fine sandy mud) with BIOCLASTS, NANNOFOSSILS and minor QUARTZ passes downsection into CLAYEY CALCAREOUS CHALK/MUD.

SMEAR SLIDE SUMMARY (%):

	2, 85 D	3, 86 D	4, 87 D
COMPOSITION:			
Aragonite	3	---	---
Bioclast	15	20	25
Carbonate particles	20	20	10
Clay	30	15	20
Feldspar	2	---	---
Foraminifers	Tr	---	---
Nannofossils	5	20	20
Quartz	25	25	20
Spicules	---	---	5



SITE 822 HOLE A CORE 30X CORED INTERVAL 269.1-278.8 mbsf

LITHOLOGIC DESCRIPTION

CLAYEY MIXED SEDIMENT and CALCAREOUS CLAYSTONE with QUARTZ, BIOCLASTS and NANNOFOSSILS

Major Lithology: Dark green (10Y 4/2), partially lithified, SILTY CALCAREOUS CLAYSTONE in the lower part. In Section 1, SILTY and CLAYEY MIXED SEDIMENT contains QUARTZ, BIOCLASTS and NANNOFOSSILS. The rest of the core consists of less calcareous CLAYSTONE containing similar components. Planar laminations occur from 145-148 cm in Section 6.

SMEAR SLIDE SUMMARY (%):

	3, 60 D
COMPOSITION:	
Bioclast	20
Carbonate particles	15
Clay	20
Feldspar	2
Nannofossils	15
Quartz	25
Rock fragment	3

SITE 822 HOLE A CORE 31X CORED INTERVAL 278.8-288.4 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
PLEISTOCENE	F/G	N22 - N23			R	44.8% 2.05	34.8%	1	0.5				
	A/G	CN13b							1.0	VOID			
					R	45.0% 1.96		2					
					R	42.5% 2.01	41.3%	3		VOID			
					R	43.3% 2.01		4		VOID			
					R	45.7% 2.09	31.7%	5					
					R	41.6% 2.05		6					
					R	45.0% 2.00	33.1%	7					
								8					
								CC					PAL

LITHOLOGIC DESCRIPTION

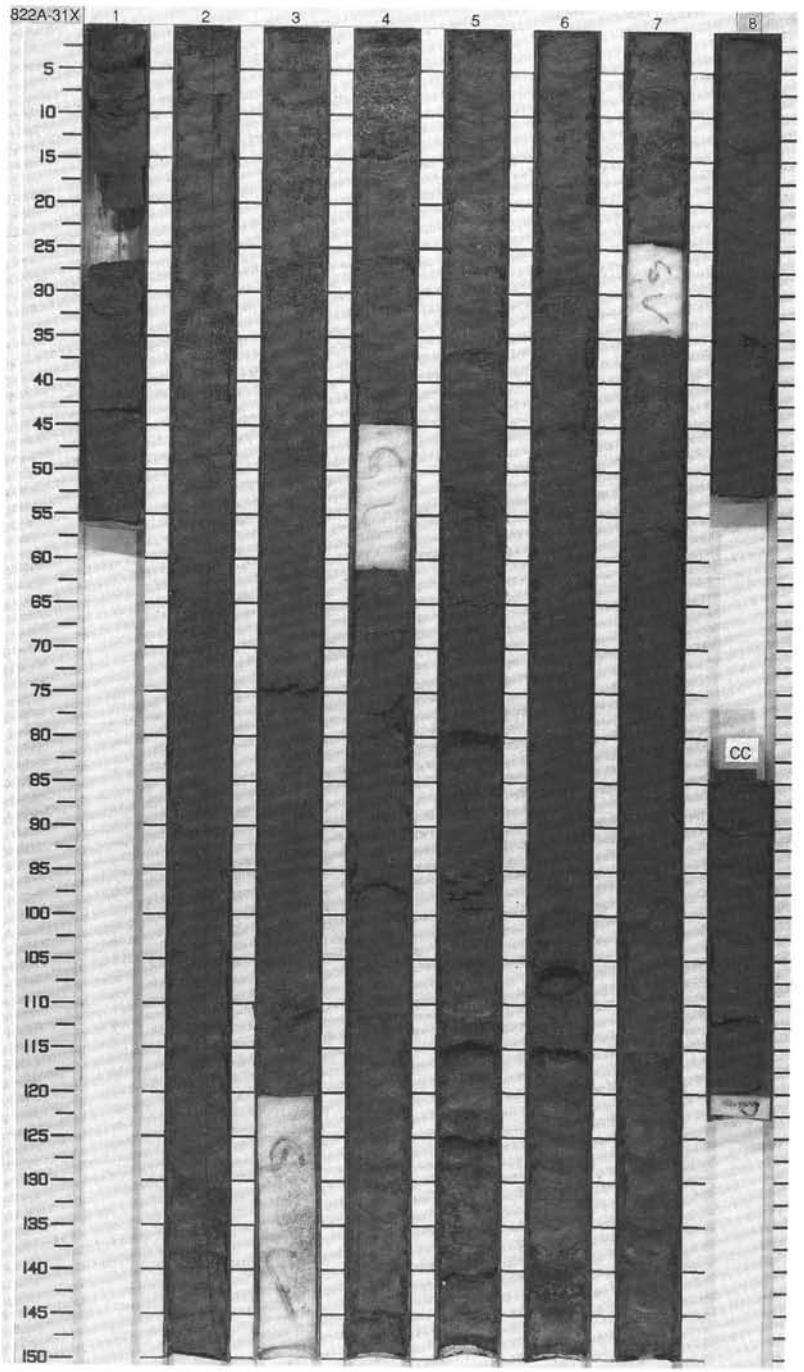
CALCAREOUS CLAYSTONE with BIOCLASTS, NANNOFOSSILS and QUARTZ

Major Lithology: Dark to intermediate greenish gray (5GY 4/1 to 5/1), moderately well-lithified and well-compacted CALCAREOUS CLAYSTONE with BIOCLASTS, NANNOFOSSILS and minor (8-9%) QUARTZ silt.

Minor Lithology: Very thin graded beds (<1-5 cm) of very fine sandy to silty CLAYEY BIOCLASTIC MIXED SEDIMENT with QUARTZ occur in Sections 2 and 3. Similar sediment also fills burrows and a 15 cm thick soupy interval at the top of Section 4.

SMEAR SLIDE SUMMARY (%):

	CF 3, 30 M	3, 92 D	7, 70 D
COMPOSITION:			
Apatite	---	---	1
Bioclast	73	10	9
Calcite	---	5	2
Clay	---	40	41
Glass	---	9	---
Micrite	---	10	16
Nannofossils	---	10	5
Quartz	25	15	16
Spicules	2	1	---
Tunicate	---	Tr	1
Volcanic ash	---	---	9



SITE 822 HOLE A CORE 32X CORED INTERVAL 288.4-298.1 mbsf

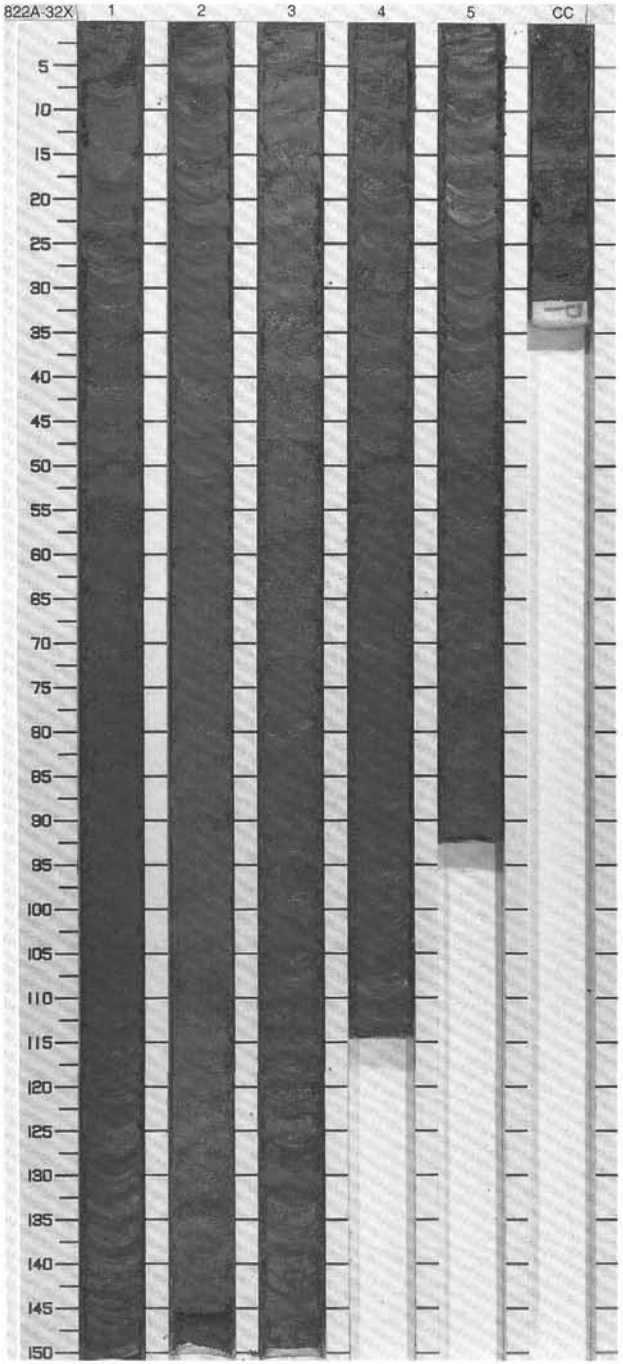
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
PLEISTOCENE	C/G N22 - N23	C/G CN13b			R	42.3% 2.05	26.8%	1	0.5				
					R	43.2% 2.05			1.0				
					R	44.5% 2.00	23.8%	2					*
					R	44.9% 2.03		3					
					R		33.9%	4					OG
					R		30.5%	5					
								CC					PAL

CALCAREOUS CLAYSTONE with MICRITE and QUARTZ SILT

Major lithology: Dark greenish gray (5GY 4/1), partially lithified, CALCAREOUS CLAYSTONE with MICRITE and QUARTZ silt (8%). Scattered BIOCLASTS throughout. Also has local black, pyritic (?) patches and a 1 cm thick very fine sand to silt layer in Section 5.

SMEAR SLIDE SUMMARY (%):

	2, 54 D
COMPOSITION:	
Bioclast	2
Clay	58
Micrite	10
Nannofossils	5
Quartz	25



SITE 822 HOLE A CORE 33X CORED INTERVAL 298.1-307.8 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
PLEISTOCENE	C/G N22 - N23	C/G CN13b			R R R R R?	45.5% 2.03; 45.3% 2.02; 44.7% 2.02; 41.8% 2.07; 46.6% 1.99; 42.2% 2.02; 45.1% 2.04	25.8%; 41.7%; 52.1%; 47.6%	1 2 3 4 5 6 7 CC	0.5 1.0	VOID VOID VOID			* * PAL

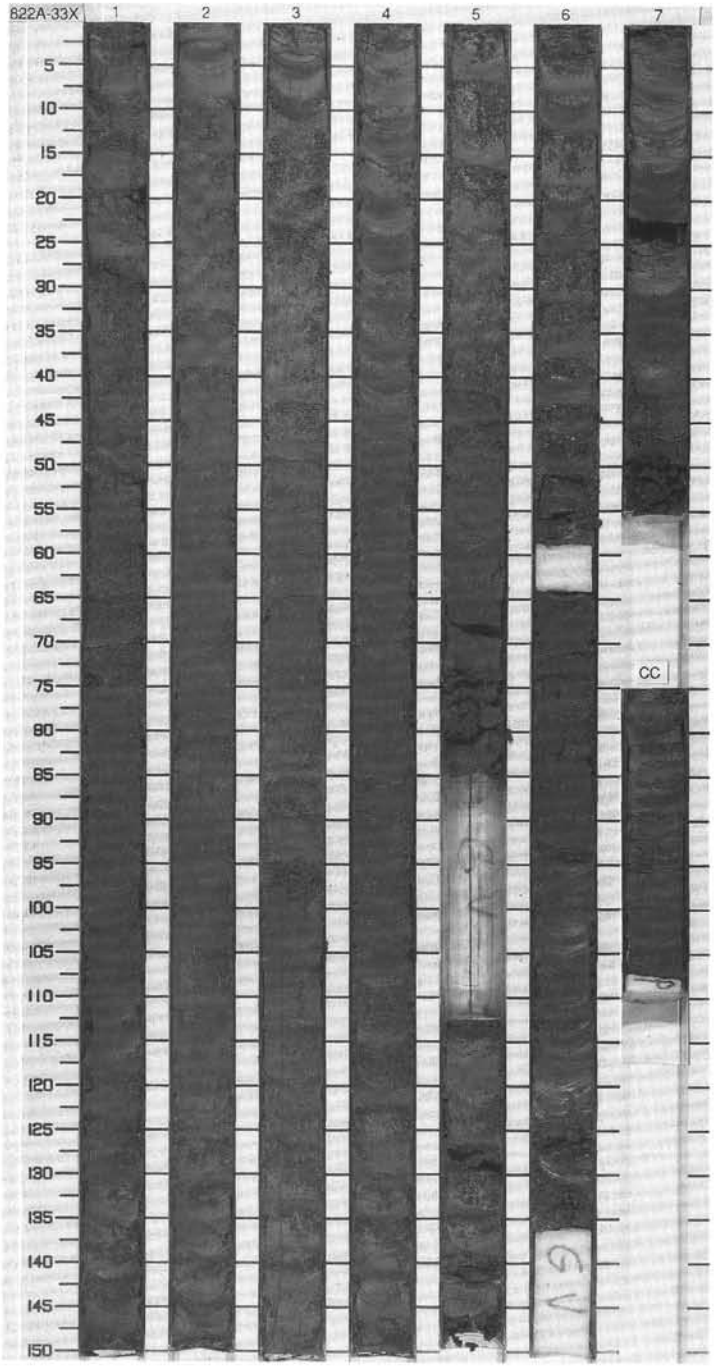
LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYEY MIXED SEDIMENT with NANNOFOSSILS and QUARTZ and CALCAREOUS CLAYSTONE with NANNOFOSSILS

Major Lithology: In upper part, alternating dark greenish gray to greenish gray (5GY 4/1 to 5/1), CALCAREOUS CLAYEY MIXED SEDIMENT with NANNOFOSSILS and minor QUARTZ (7%-8%). In the lower part (Sections 6 and 7), homogeneous, dark gray (5Y 4/1), partially lithified, CALCAREOUS CLAYSTONE with NANNOFOSSILS is less calcareous.

SMEAR SLIDE SUMMARY (%):

	1, 89 D	3, 88 D
COMPOSITION:		
Bioclast	7	---
Calcite	---	5
Clay	55	55
Foraminifers	3	3
Nannofossils	12	15
Quartz	20	20
Spicules	3	2



SITE 822 HOLE A CORE 34X CORED INTERVAL 307.8-317.5 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
PLEISTOCENE	C/G N22 - N23	A/G CN13a			R	45.0% ● 2.01	34.5% ●	1	0.5				
					R	● 49.0% 1.94			1.0				
						● 48.1% 2.00	● 37.8%	2					*
					R			3					
						● 44.3% 2.02		4					
								CC					PAL

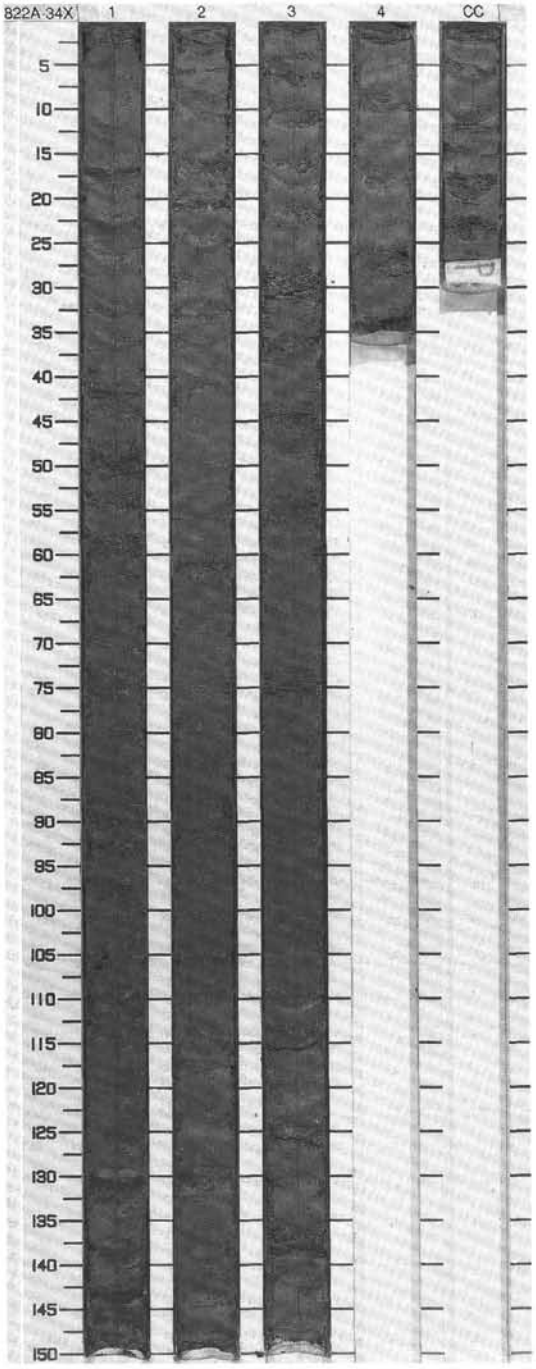
LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE with NANNOFOSSILS and QUARTZ

Major Lithology: Greenish gray (5GY 5/1). Partially lithified, slightly bioturbated, CALCAREOUS CLAYSTONE with NANNOFOSSILS and minor QUARTZ.

SMEAR SLIDE SUMMARY (%):

	2, 74 D
COMPOSITION:	
Calcite	7
Clay	55
Foraminifers	Tr
Nannofossils	20
Quartz	15
Spicules	3



SITE 822 HOLE A CORE 35X CORED INTERVAL 317.5-327.0 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	N22 - N23	A/G	CN13a	R	R	R	1	0.5				
									1.0				
								2					
								3					
					R			4					OG
								5					
								CC					PAL

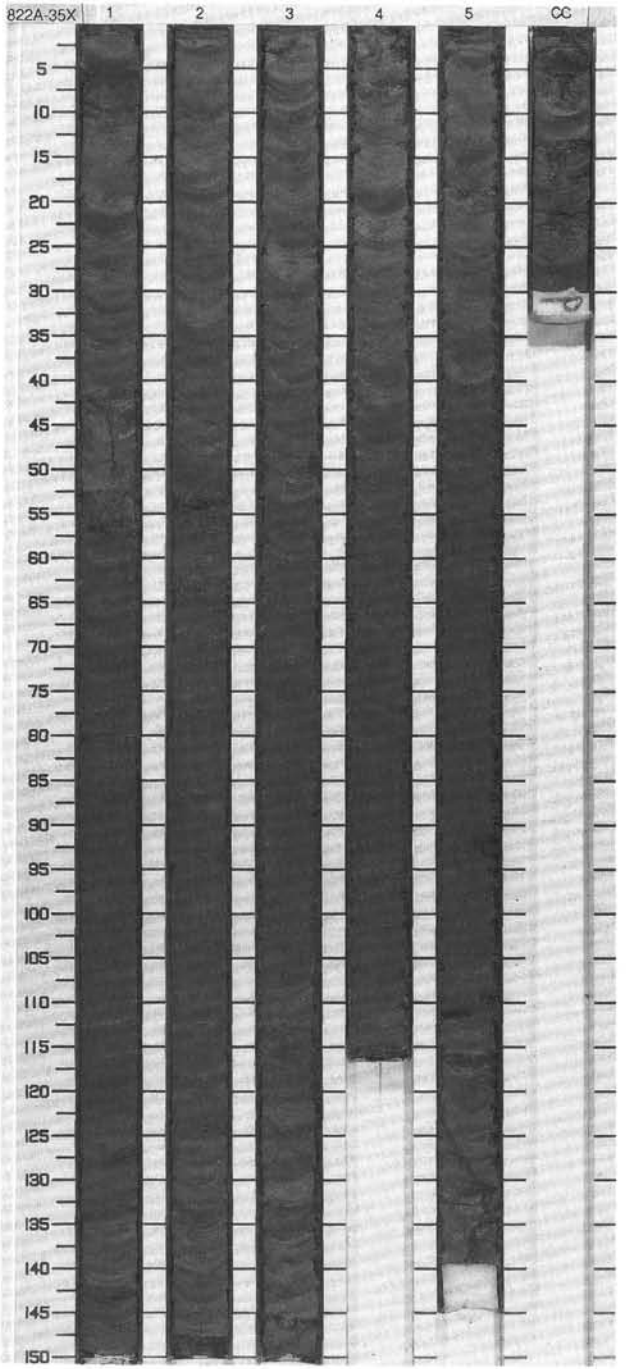
LITHOLOGIC DESCRIPTION

NANNOFOSSIL CLAYSTONE with QUARTZ to CLAYSTONE with NANNOFOSSILS and QUARTZ

Major Lithology: Alternating greenish gray (5GY 5/1), partially lithified and slightly bioturbated, NANNOFOSSIL CLAYSTONE with minor QUARTZ (7%) and dark greenish gray (5GY 4/1) CLAYSTONE with NANNOFOSSILS and QUARTZ. Small burrows filled with pyrite are common.

SMEAR SLIDE SUMMARY (%):

	2, 120 D
COMPOSITION:	
Bioclast	5
Clay	55
Foraminifers	3
Nannofossils	25
Quartz	10
Spicules	2



SITE 822 HOLE A CORE 36X CORED INTERVAL 327.0-336.0 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	N22 - N23	A/G	CN12d	N	● 45.6% 2.02		6					
					R	● 45.0% 2.02	● 41.7%	5					
					R	● 46.3% 1.97	● 59.6%	4		VOID			*
					R	● 46.7% 1.90		3		VOID			
						● 49.4% 1.96		2					
						● 45.9% 1.98	26.6%	1	0.5 / 1.0				
								CC					PAT

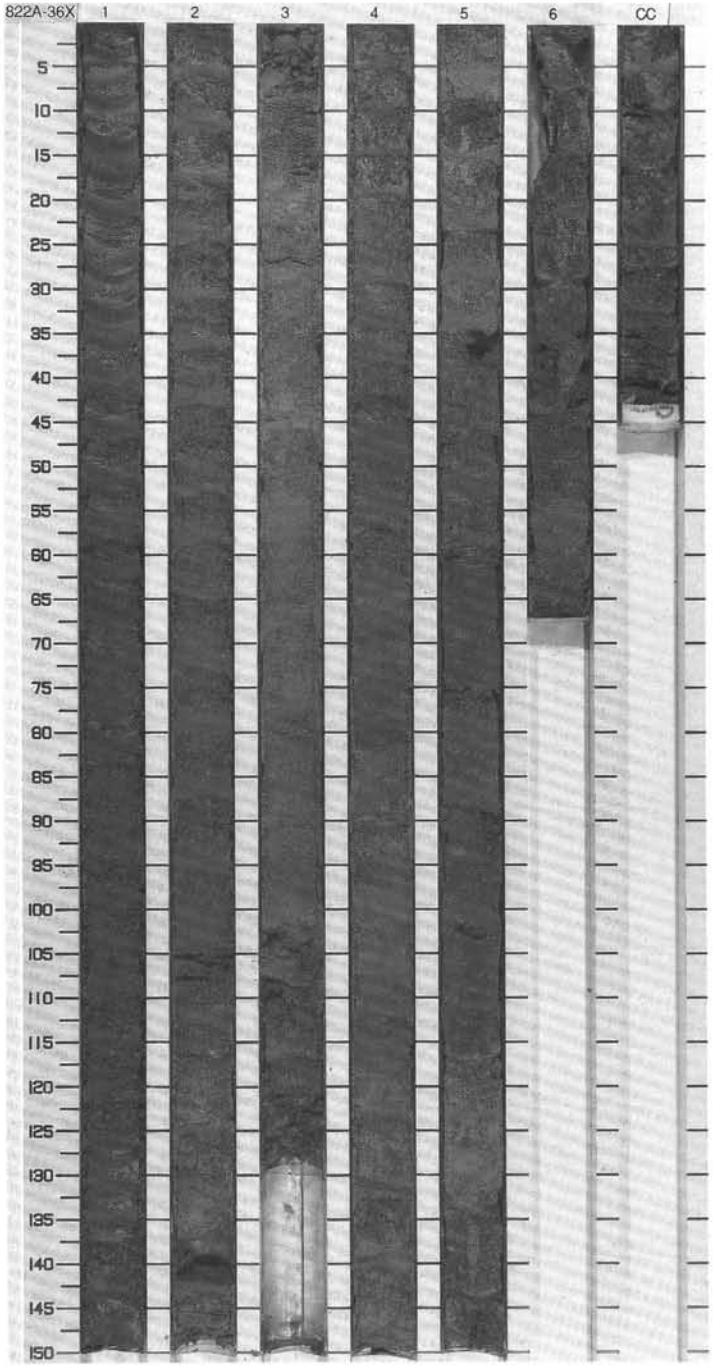
LITHOLOGIC DESCRIPTION

CLAYSTONE with NANNOFOSSILS and QUARTZ to NANNOFOSSIL MIXED SEDIMENT with QUARTZ

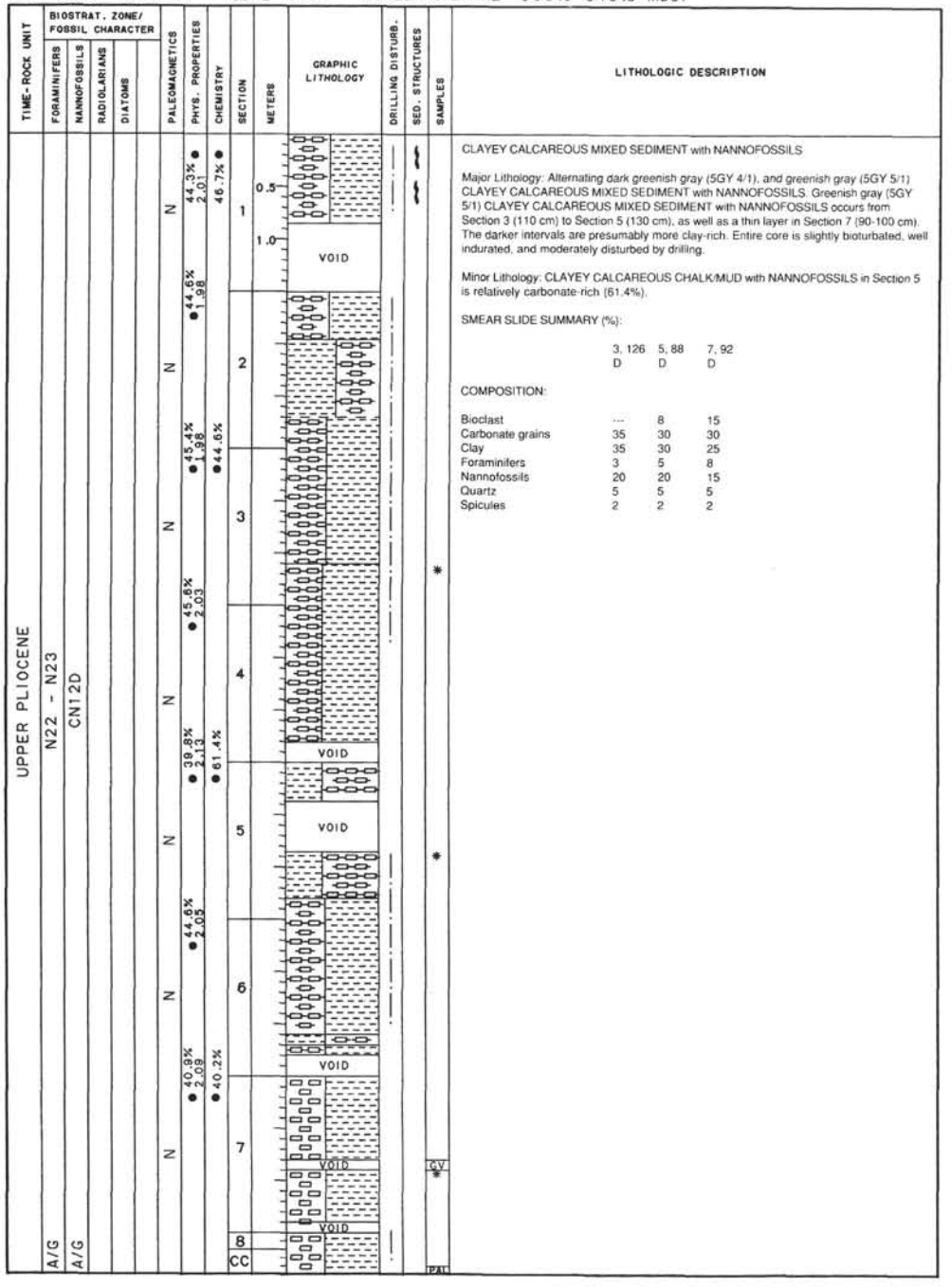
Major Lithology: Alternating dark greenish gray (5GY 4/1) CLAYSTONE with NANNOFOSSILS and QUARTZ and greenish gray (5GY 5/1) NANNOFOSSIL MIXED SEDIMENT (mud) with minor (7%) QUARTZ silt. Layers are 1-2 m thick. The sediment is well-compacted to partially lithified and slightly bioturbated.

SMEAR SLIDE SUMMARY (%):

	4, 67 D
COMPOSITION:	
Bioclast	8
Calcite	2
Clay	50
Foraminifers	2
Nannofossils	25
Quartz	10
Spicules	3



SITE 822 HOLE A CORE 37X CORED INTERVAL 336.0-346.3 mbsf



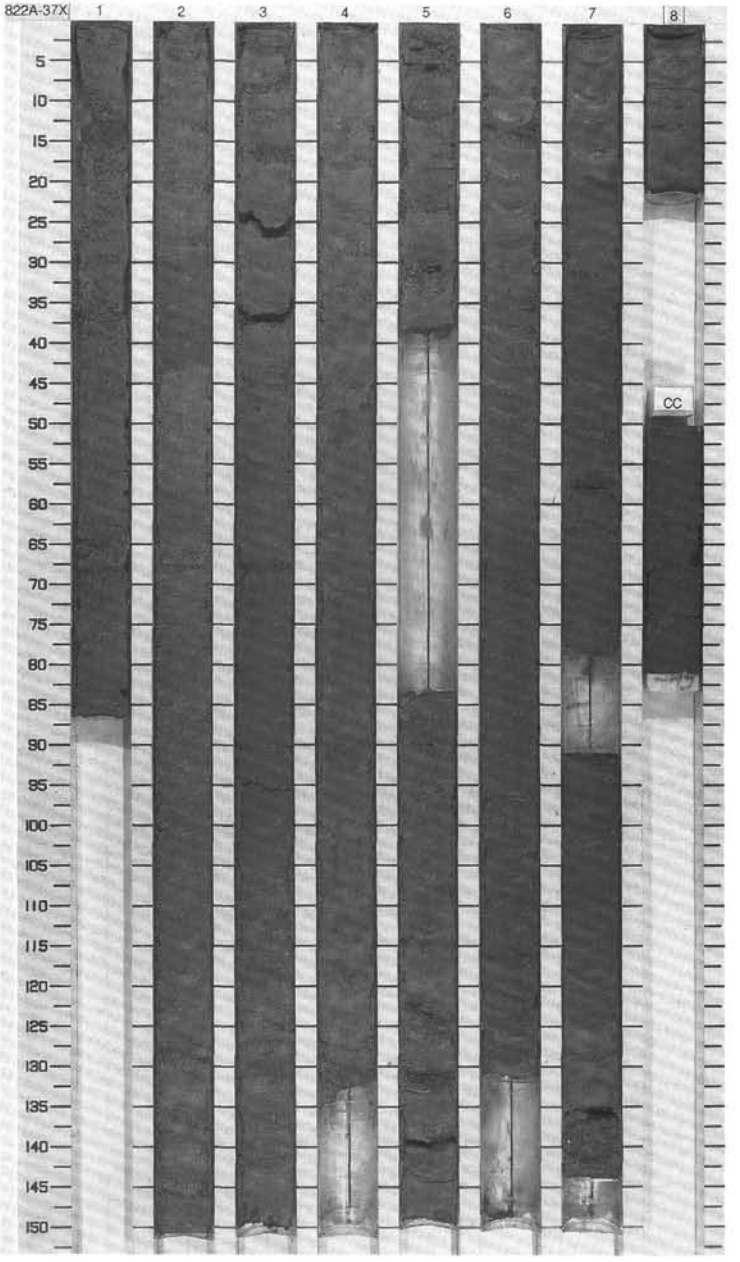
CLAYEY CALCAREOUS MIXED SEDIMENT with NANNOFOSSILS

Major Lithology: Alternating dark greenish gray (5GY 4/1), and greenish gray (5GY 5/1) CLAYEY CALCAREOUS MIXED SEDIMENT with NANNOFOSSILS. Greenish gray (5GY 5/1) CLAYEY CALCAREOUS MIXED SEDIMENT with NANNOFOSSILS occurs from Section 3 (110 cm) to Section 5 (130 cm), as well as a thin layer in Section 7 (90-100 cm). The darker intervals are presumably more clay-rich. Entire core is slightly bioturbated, well indurated, and moderately disturbed by drilling.

Minor Lithology: CLAYEY CALCAREOUS CHALK/MUD with NANNOFOSSILS in Section 5 is relatively carbonate-rich (61.4%).

SMEAR SLIDE SUMMARY (%):

	3, 126 D	5, 88 D	7, 92 D
COMPOSITION:			
Bioclast	---	8	15
Carbonate grains	35	30	30
Clay	35	30	25
Foraminifers	3	5	8
Nannofossils	20	20	15
Quartz	5	5	5
Spicules	2	2	2



SITE 822 HOLE A CORE 38X CORED INTERVAL 346.3-355.9 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
UPPER PLIOCENE	A/G N22 - N23	A/G CN12d			UNCERTAIN POLARITY	56.7% 1.80; 47.6% 1.80; 48.7% 2.01; 46.1% 1.91; 46.4% 2.04	53.1%; 53.6%; 49.9%; 23.7%	1 2 3 4 5 6 CC	0.5 1.0				OG IW PAL

LITHOLOGIC DESCRIPTION

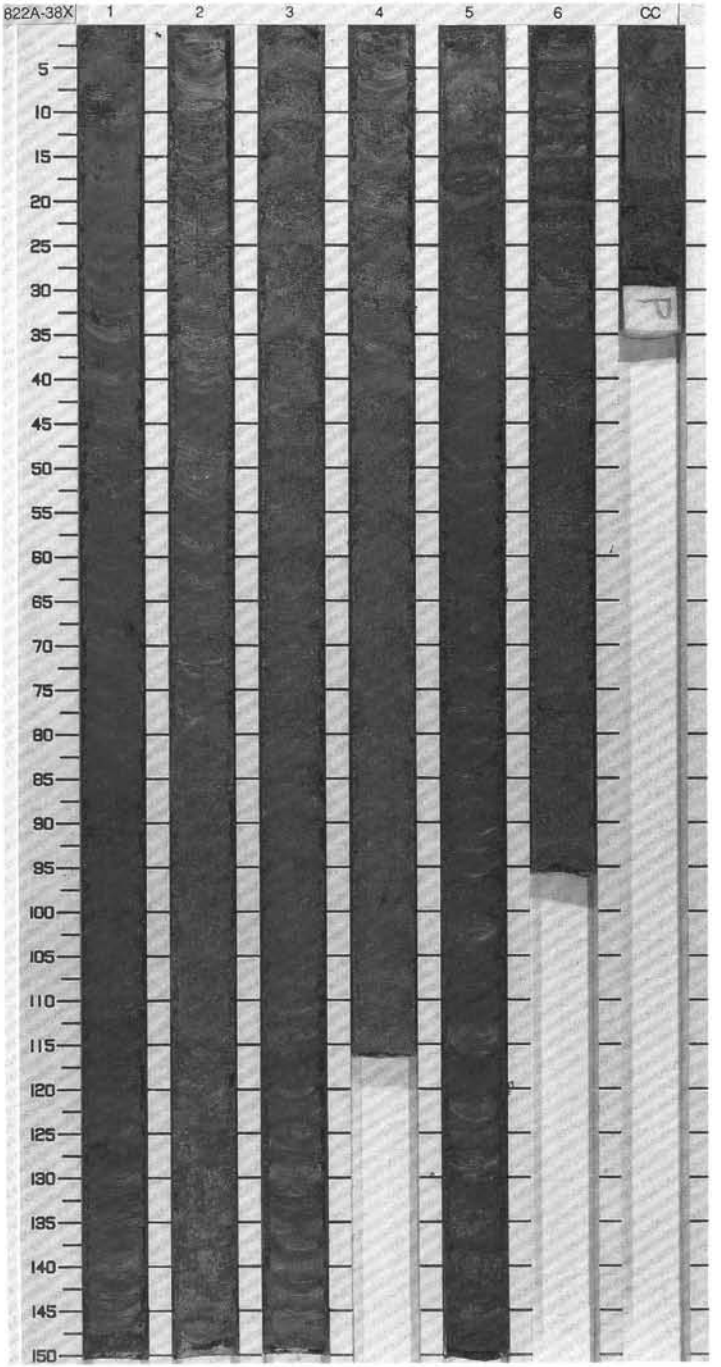
CLAYEY CALCAREOUS MIXED SEDIMENT with BIOCLASTS and QUARTZ

Major Lithology: Dark gray (5Y 4/1) CLAYEY CALCAREOUS MIXED SEDIMENT (mud) with BIOCLASTS and minor QUARTZ (7%). Variable amounts of ROCK FRAGMENTS and BIOCLASTS.

Minor Lithology: Very dark gray (10Y 3/1) NANNOFOSSIL CLAYSTONE with BIOCLASTS and minor QUARTZ occurs in Section 1 from 15 cm in Section 5 to 40 cm in Section 6.

SMEAR SLIDE SUMMARY (%):

	3, 81 D	5, 67 D
COMPOSITION:		
Bioclast	27	15
Clay	25	40
Feldspar	4	---
Foraminifers	5	---
Nannofossils	8	35
Quartz	30	10
Spicules	Tr	Tr
Tunicate	Tr	---



SITE 822 HOLE A CORE 39X CORED INTERVAL 355.9-365.5 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 PLIOCENE	A/G	A/G			R?	● 47.7% 1.85%	● 31.9%	5					
					R	● 47.8% 1.98	● 40.8%	4					
	N22 - N23	CN12d			R	● 46.3% 2.01	● 40.8%	3					
					?	● 47.0% 1.91		2					
					N	48.7% ● 1.96	43.1% ●	1	0.5 1.0			*	
								CC					PAL

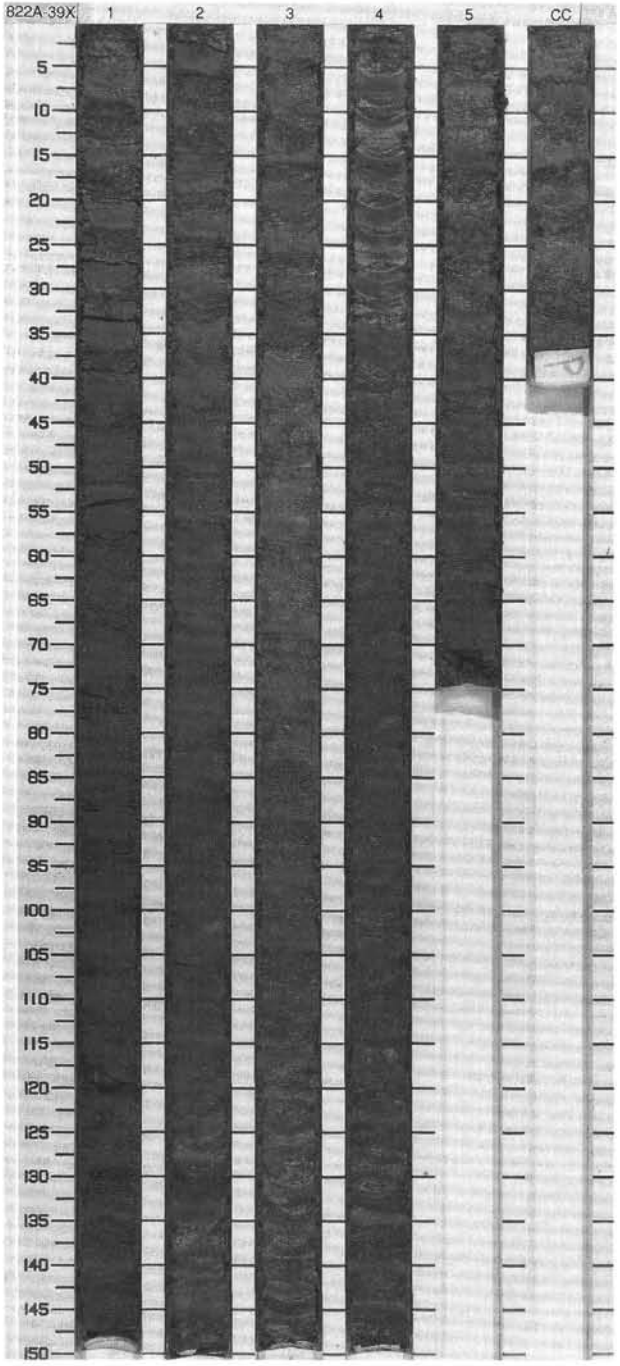
LITHOLOGIC DESCRIPTION

CALCAREOUS NANNOFOSSIL MIXED SEDIMENT with BIOCLASTS and CALCAREOUS CLAYSTONE with NANNOFOSSILS and BIOCLASTS

Major Lithology: Greenish gray (5GY 5/1) CALCAREOUS NANNOFOSSIL MIXED SEDIMENT (mud) with BIOCLASTS in upper part. In the lower part, darker greenish gray (10Y 4/1) CALCAREOUS CLAYSTONE also contains NANNOFOSSILS and BIOCLASTS.

SMEAR SLIDE SUMMARY (%):

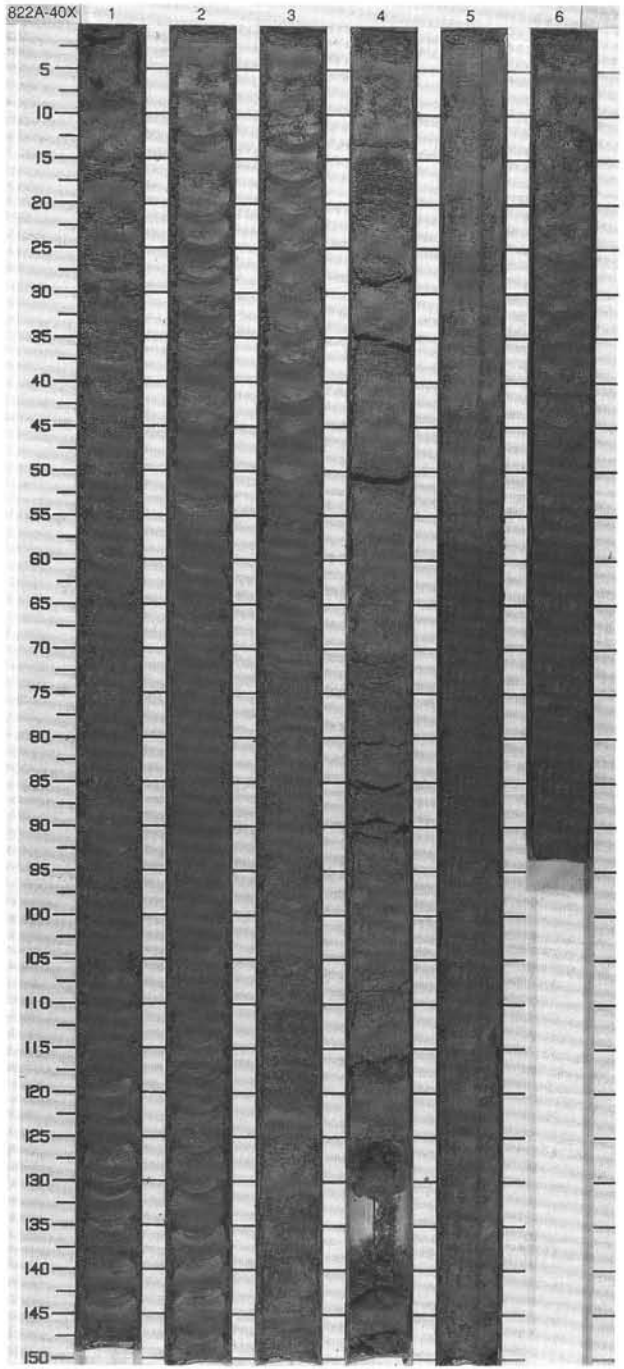
	1, 72 D	3, 66 D
COMPOSITION:		
Bioclast	20	20
Clay	35	35
Nannofossils	25	25
Quartz	20	20
Spicules	Tr	Tr
Tunicate	Tr	Tr



SITE 822 HOLE A CORE 40X CORED INTERVAL 365.5-375.1 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
UPPER PLIOCENE	A/G	N22 - N23	C/G	CN12d	R	R?	R?	R?	R?	R?	1	0.5	1.0	2	3	4	5	6					PAL	NANNOFOSSIL CLAYSTONE with BIOCLASTS and QUARTZ overlies CLAYEY CALCAREOUS MIXED SEDIMENT with NANNOFOSSILS, BIOCLASTS and QUARTZ Major Lithology: Dark greenish gray (10Y 4/1) to very dark gray (10Y 3/1), very monotonous NANNOFOSSIL CLAYSTONE with BIOCLASTS and QUARTZ in Sections 1-3 and 6. Greenish gray (5GY 5/1) CLAYEY CALCAREOUS MIXED SEDIMENT with NANNOFOSSILS, BIOCLASTS and QUARTZ in Sections 4 and 5.

46.2% 2.07 | 49.6% 2.07 | 53.9% 2.01 | 48.9% 2.08 | 49.1% 2.08 | 54.5% 2.04 | 53.9% | 33.5% | 39.8% | VOID



SITE 822 HOLE A CORE 41X CORED INTERVAL 375.1-384.8 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
UPPER PLIOCENE	A/G	N22 - N23			N?	● 55.5% 1.84	● 49.0%	4					*
					?	● 51.0% 1.90		3		VOID			
					R?	● 51.4% 1.98	● 38.4%	2					
	C/G	CN12d			R?	● 51.9% 1.87		1	0.5				
						● 48.7% 2.03	● 58.7%		1.0	VOID			
					N?			CC					

LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE and CLAYSTONE with QUARTZ, NANNOFOSSILS and BIOCLASTS

Major Lithology: Dark greenish gray (10Y 4/1 to 5/1), firm to slightly lithified CLAYSTONE with QUARTZ, NANNOFOSSILS and BIOCLASTS in the upper and lower part. In Sections 2-3, darker greenish gray (5GY 3/1) CALCAREOUS CLAYSTONE has slightly less carbonate.

SMEAR SLIDE SUMMARY (%):

	4, 64 D
COMPOSITION:	
Bioclast	15
Clay	35
Nannofossils	30
Quartz	20
Spicules	Tr

SITE 822 HOLE A CORE 42X CORED INTERVAL 384.8-394.5 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 PLIOCENE	A/G	A/G			R	53.3% 1.87	49.5%	1	0.5				
	N22 - N23	CN12d				49.6% 1.90			1.0				
					R	51.8% 1.84	45.8 %	2					
						52.9% 1.93		3					*
					R	49.7% 1.91	41.9%	4		VOID			□
					UNCERTAIN POLARTIY	47.2% 2.02		5		VOID			
								6					□
								7		VOID			
								CC					PAL

LITHOLOGIC DESCRIPTION

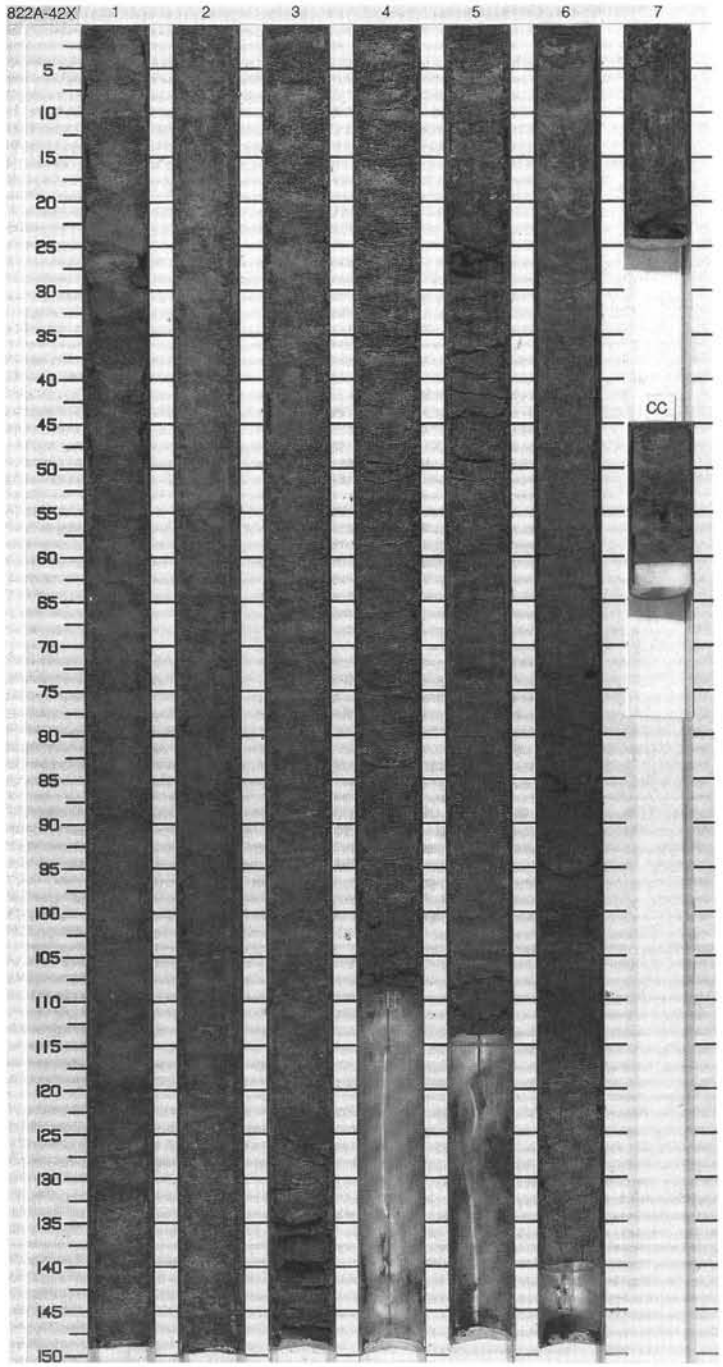
NANNOFOSSIL CLAYEY MIXED SEDIMENT with BIOCLASTS and QUARTZ

Major Lithology: Dark gray (5Y 4/1), very monotonous and firm NANNOFOSSIL CLAYEY MIXED SEDIMENT (mud) with BIOCLASTS and QUARTZ.

Minor Lithology: Dark greenish gray (5Y 4/1), CLAYEY BIOCLASTIC PACKSTONE with FORAMINIFERS occurs in Section 4 at 100-110 cm and in Section 6 at 72-79 cm.

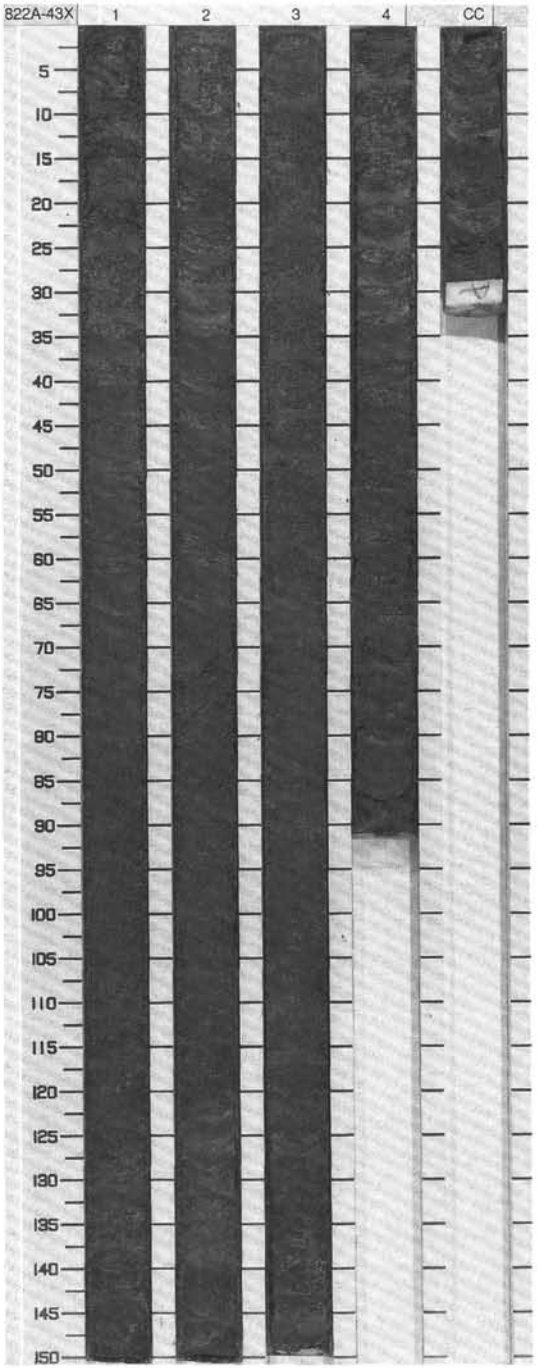
SMEAR SLIDE SUMMARY (%):

	3, 78 D	CF 4, 105 D	CF 6, 75 D
COMPOSITION:			
Bioclast	15	55	65
Clay	35	---	---
Foraminifers	5	45	35
Nannofossils	30	---	---
Quartz	15	---	---
Spicules	Tr	---	---



SITE 822 HOLE A CORE 43X CORED INTERVAL 394.5-400.0 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
UPPER PLIOCENE	F/G N22 - N23	C/G CN12c			UNCERTAIN POLARITY	●47.4% 2.01 ●42.6% 2.14 ●47.3% 1.98 ●48.1% 2.01 ●32.2% ●28.2%		1 2 3 4 CC	0.5 1.0				PAL	NANNOFOSSIL CLAYSTONE with BIOCLASTS and QUARTZ Major Lithology: Very dark gray (10Y 4/1), firm NANNOFOSSIL CLAYSTONE with BIOCLASTS and QUARTZ.



SITE 822 HOLE A CORE 44X CORED INTERVAL 400.0-404.9 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
UPPER PLIOCENE	F/G N22 - N23	C/G CN12c			N? N? N? N? N?	● 41.3% 2.09 ● 41.3% 2.10 ● 37.9% 2.13 ● 36.8% 2.11 ● 39.8% 2.11	33.2% ● 32.2% ● 34.7% 34.7% ●	1 2 3 4 5 6 CC	0.5 1.0				OG IW

LITHOLOGIC DESCRIPTION

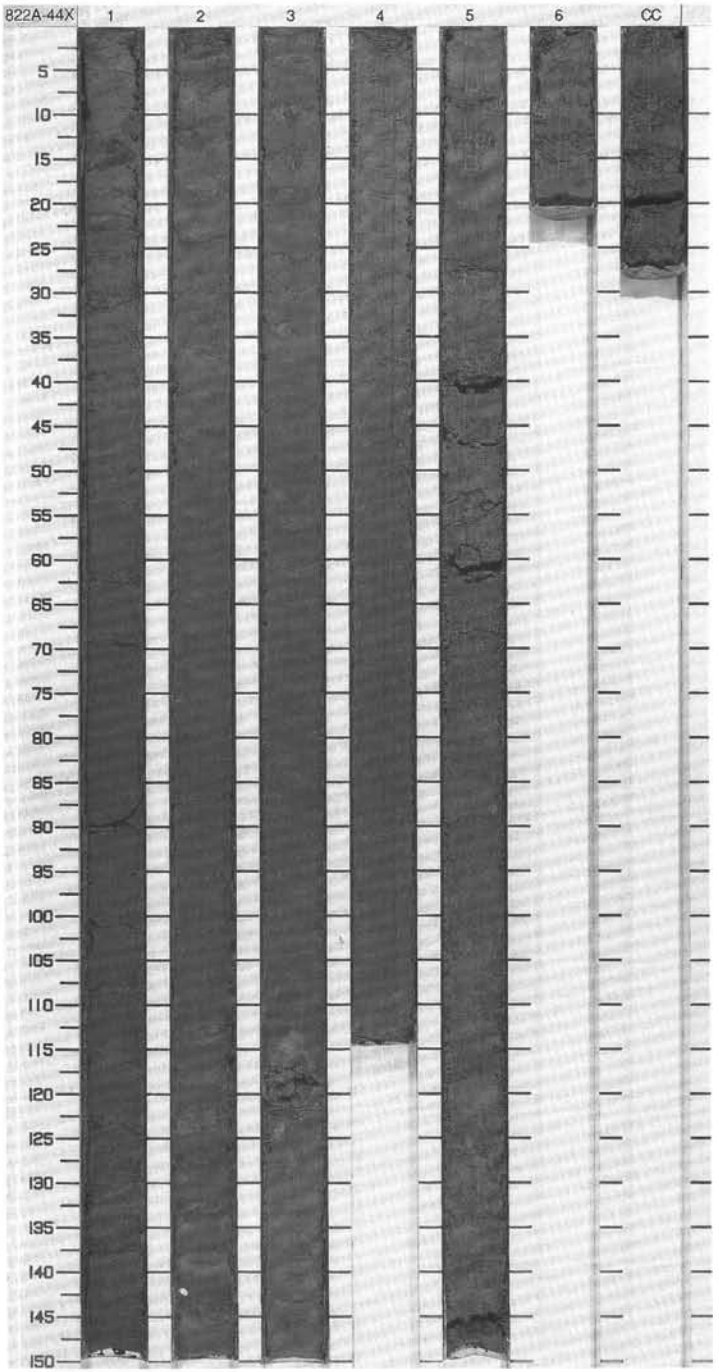
SILTY CLAYSTONE with QUARTZ, BIOCLASTS and NANNOFOSSILS

Major Lithology: Greenish gray (10Y 4/2) to dark greenish gray (5GY 4/1), partially lithified, SILTY CLAYSTONE with QUARTZ, BIOCLASTS and NANNOFOSSILS.

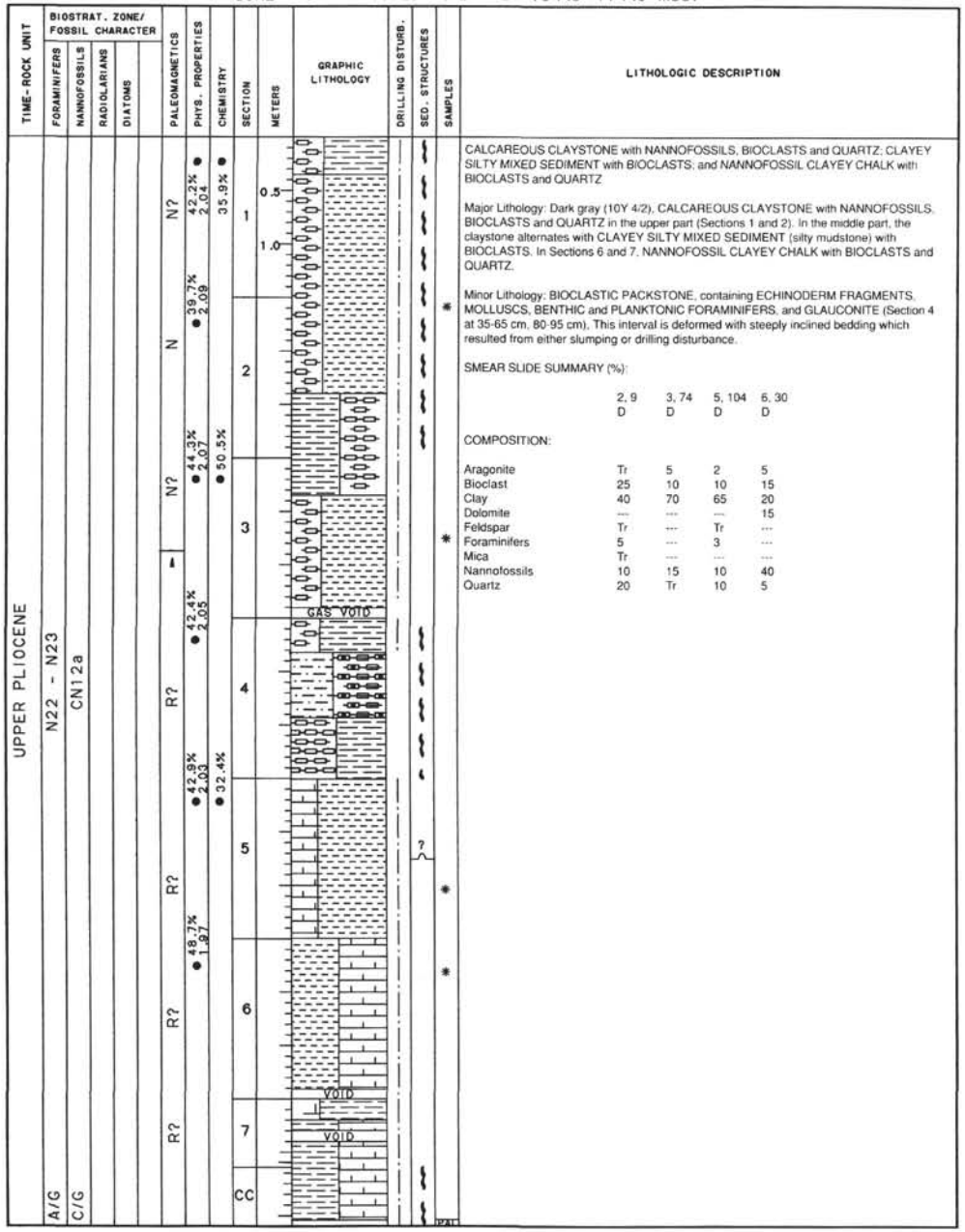
Minor Lithology: Olive gray, chalky, DOLOMITIC SILTY MIXED SEDIMENT with a very homogeneous texture occurs from Section 5 at 20 cm to CC. A layer of light greenish gray (5Y 6/1), fine grained DOLOMITIC CHALK occurs in Section 3 at 115-120 cm.

SMEAR SLIDE SUMMARY (%):

	2, 38 D	3, 118 D	5, 49 D
COMPOSITION:			
Aragonite	Tr	---	---
Bioclast	20	---	15
Calcite	---	65	---
Carbonate particles	10	---	---
Clay	25	---	10
Dolomite	---	30	30
Feldspar	5	---	---
Foraminifers	Tr	---	5
Nannofossils	10	---	10
Quartz	30	5	15
Rock fragment	---	---	15



SITE 822 HOLE A CORE 45X CORED INTERVAL 404.9-414.6 mbsf



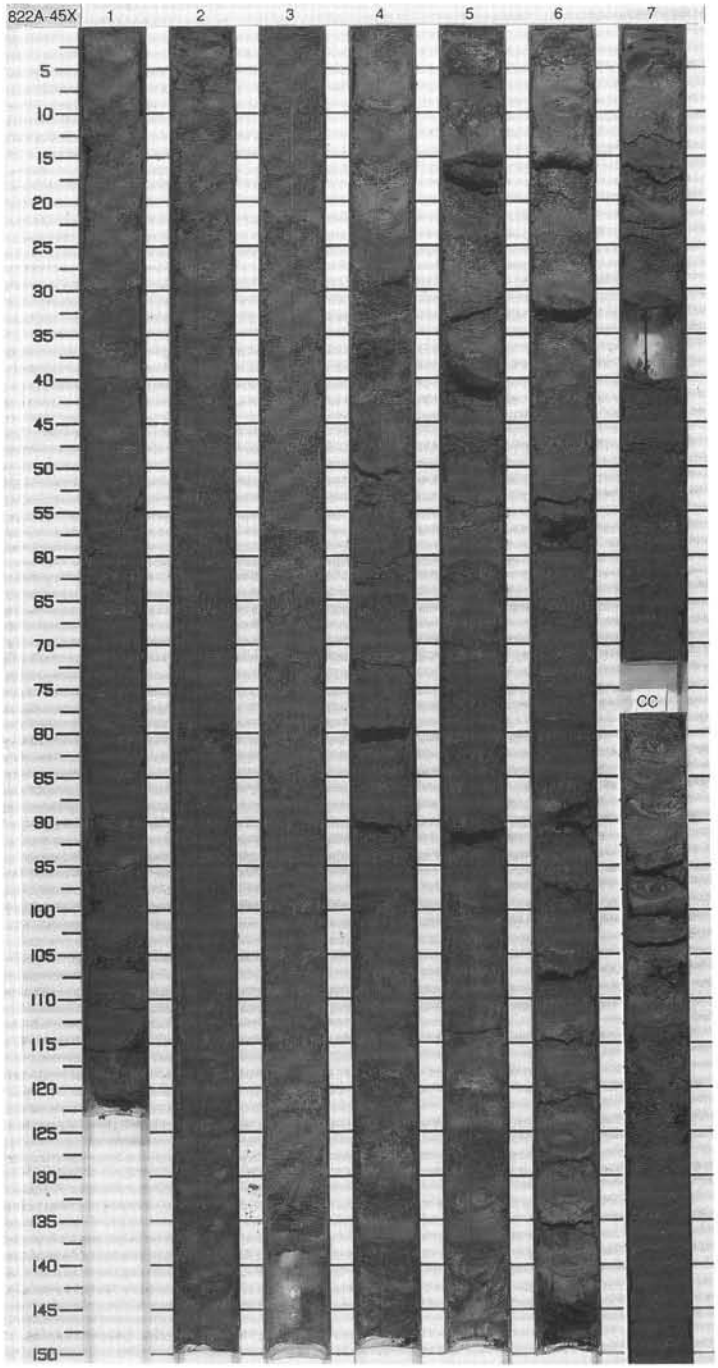
CALCAREOUS CLAYSTONE with NANNOFOSSILS, BIOCLASTS and QUARTZ; CLAYEY SILTY MIXED SEDIMENT with BIOCLASTS; and NANNOFOSSIL CLAYEY CHALK with BIOCLASTS and QUARTZ

Major Lithology: Dark gray (10Y 4/2), CALCAREOUS CLAYSTONE with NANNOFOSSILS, BIOCLASTS and QUARTZ in the upper part (Sections 1 and 2). In the middle part, the claystone alternates with CLAYEY SILTY MIXED SEDIMENT (silty mudstone) with BIOCLASTS. In Sections 6 and 7, NANNOFOSSIL CLAYEY CHALK with BIOCLASTS and QUARTZ.

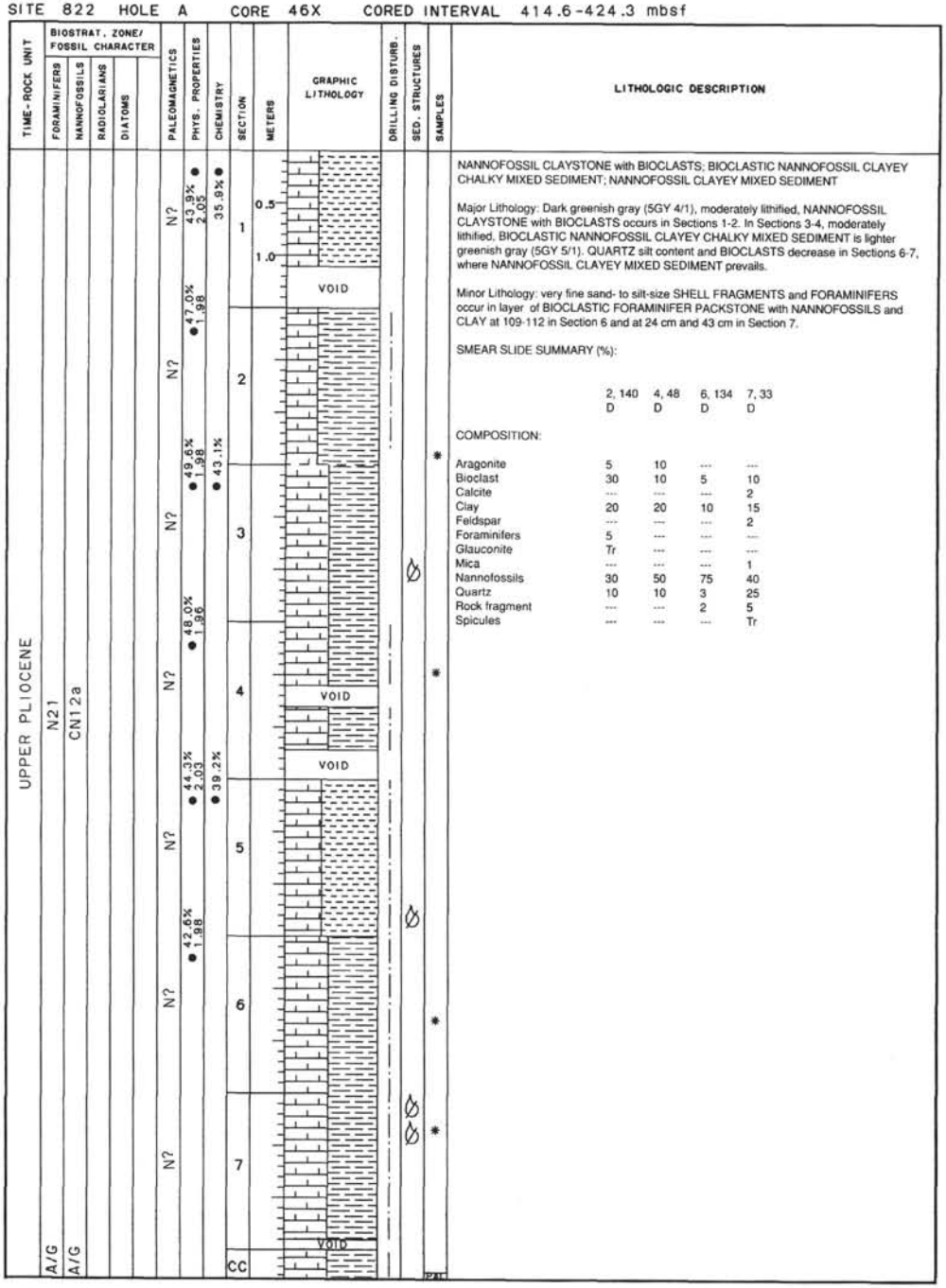
Minor Lithology: BIOCLASTIC PACKSTONE, containing ECHINODERM FRAGMENTS, MOLLUSCS, BENTHIC and PLANKTONIC FORAMINIFERS, and GLAUCONITE (Section 4 at 35-65 cm, 80-95 cm). This interval is deformed with steeply inclined bedding which resulted from either slumping or drilling disturbance.

SMEAR SLIDE SUMMARY (%):

	2, 9 D	3, 74 D	5, 104 D	6, 30 D
COMPOSITION:				
Aragonite	Tr	5	2	5
Bioclast	25	10	10	15
Clay	40	70	65	20
Dolomite	---	---	---	15
Feldspar	Tr	---	Tr	---
Foraminifers	5	---	3	---
Mica	Tr	---	---	---
Nannofossils	10	15	10	40
Quartz	20	Tr	10	5



SITE 822 HOLE A CORE 46X CORED INTERVAL 414.6-424.3 mbsf



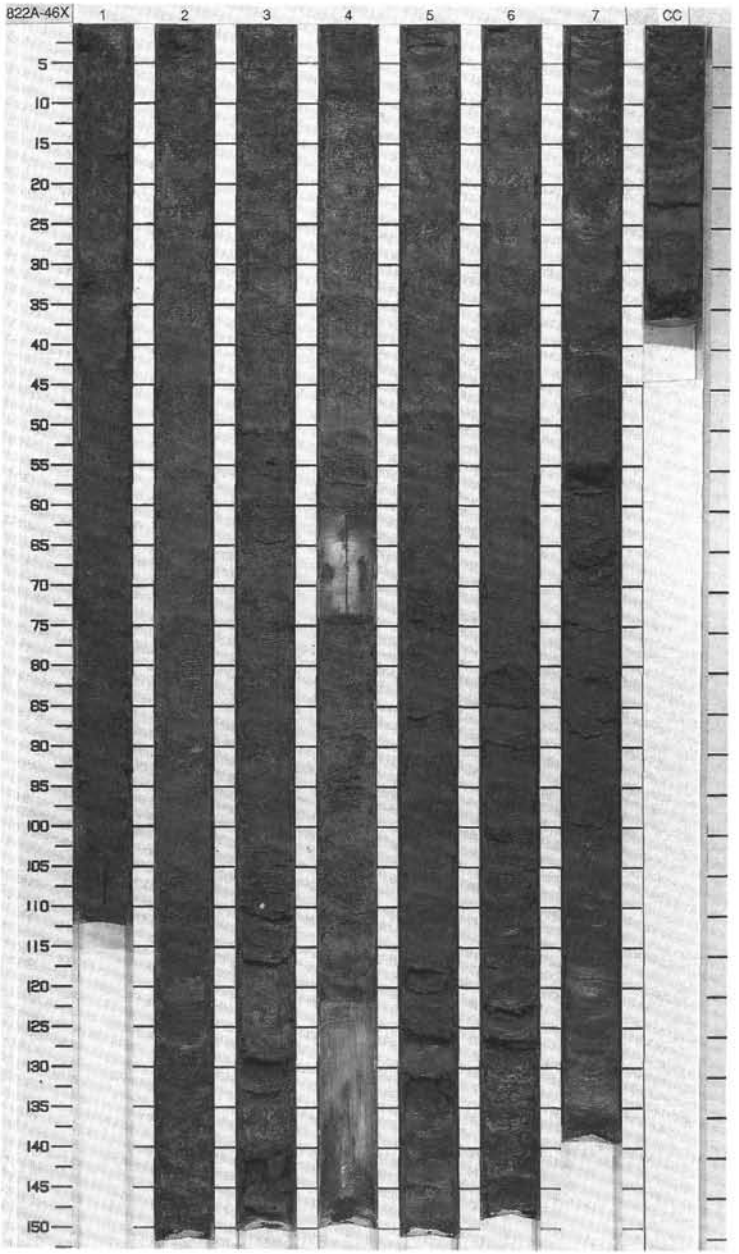
NANNOFOSSIL CLAYSTONE with BIOCLASTS; BIOCLASTIC NANNOFOSSIL CLAYEY CHALKY MIXED SEDIMENT; NANNOFOSSIL CLAYEY MIXED SEDIMENT

Major Lithology: Dark greenish gray (5GY 4/1), moderately lithified, NANNOFOSSIL CLAYSTONE with BIOCLASTS occurs in Sections 1-2. In Sections 3-4, moderately lithified, BIOCLASTIC NANNOFOSSIL CLAYEY CHALKY MIXED SEDIMENT is lighter greenish gray (5GY 5/1). QUARTZ silt content and BIOCLASTS decrease in Sections 6-7, where NANNOFOSSIL CLAYEY MIXED SEDIMENT prevails.

Minor Lithology: very fine sand- to silt-size SHELL FRAGMENTS and FORAMINIFERS occur in layer of BIOCLASTIC FORAMINIFER PACKSTONE with NANNOFOSSILS and CLAY at 109-112 in Section 6 and at 24 cm and 43 cm in Section 7.

SMEAR SLIDE SUMMARY (%):

	2, 140 D	4, 48 D	6, 134 D	7, 33 D
COMPOSITION:				
Aragonite	5	10	---	---
Bioclast	30	10	5	10
Calcite	---	---	---	2
Clay	20	20	10	15
Feldspar	---	---	---	2
Foraminifers	5	---	---	---
Glauconite	Tr	---	---	---
Mica	---	---	---	1
Nannofossils	30	50	75	40
Quartz	10	10	3	25
Rock fragment	---	---	2	5
Spicules	---	---	---	Tr



SITE 822 HOLE A CORE 47X CORED INTERVAL 424.3-433.9 mbsf