SITE 721 HOLE A CORE 1H CORED INTERVAL 1944.8-1954.6 mbsl; 0.0-9.8 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *A/M; *A/G; *C/G
- NANNOFOSSILS: N23; NN20 *G. oceanica* A/G; NN21 *Emiliania huxleyi* A/G
- RADIOLARIANS: ? *Collosphaera tuberosa* *F/M
- DIATOMS

PALEOMAGNETICS: Brunhes

PHYS. PROPERTIES: ϕ=65.4 γ=1.64; ϕ=61.2 γ=1.63; ϕ=66.3 γ=1.55

CHEMISTRY: IC=7.74 OC=0.38; IC=8.30 OC=0.43; IC=9.05 OC=1.01; IC=8.45 OC=0.95; IC=7.74 OC=0.56

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: IW

SAMPLES

LITHOLOGIC DESCRIPTION

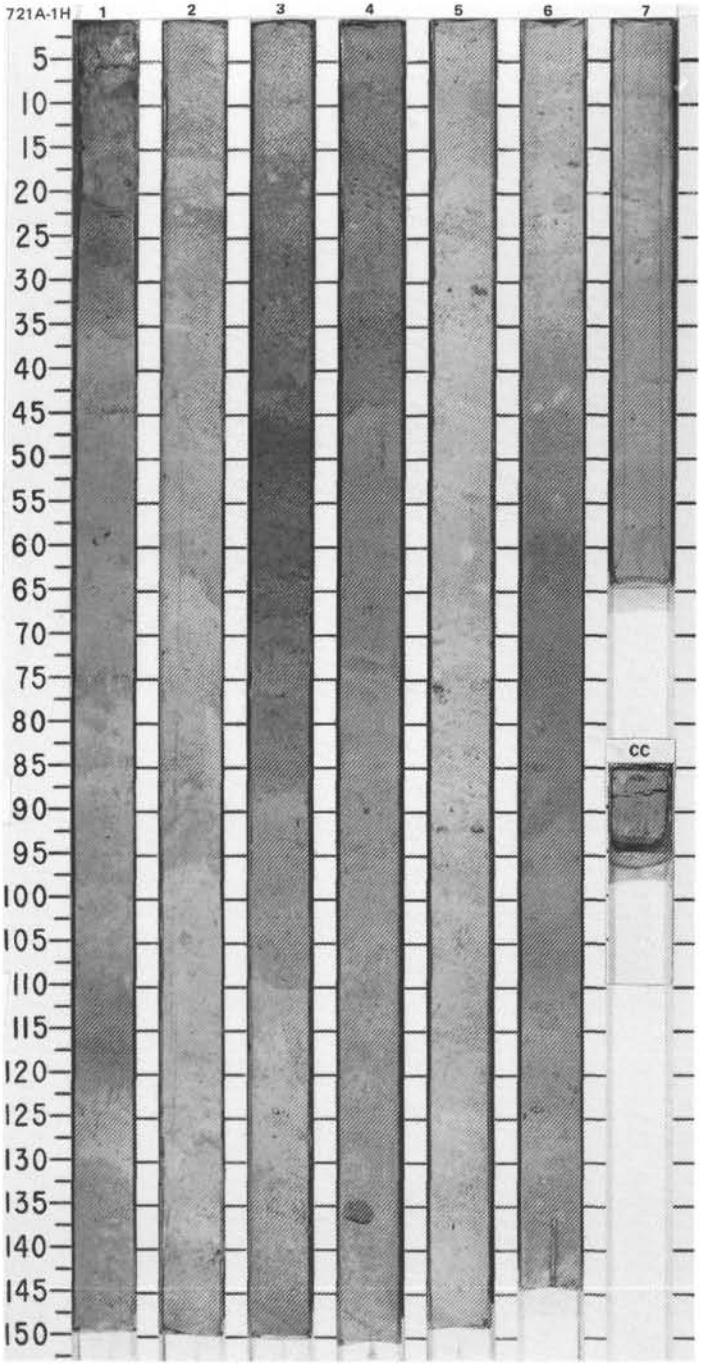
FORAMINIFER-NANNOFOSSIL OOZE

Section 1, 0-6 cm, is slightly disturbed. Remainder of core is undisturbed.

Major lithology: FORAMINIFER-NANNOFOSSIL OOZE. Alternating light and dark bands, light greenish gray (10Y 5/2, 6/2) to olive (5Y 4/3, 4/4). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more *terrigenous clay than do light layers.*

SMEAR SLIDE SUMMARY (%):

	1, 1 D	1, 58 M	2, 115 D	3, 62 M	5, 86 D
TEXTURE:					
Sand	—	10	—	—	—
Silt	25	20	10	25	10
Clay	75	70	90	75	90
COMPOSITION:					
Access. minerals	Tr	5	—	—	Tr
Clay	15	—	25	20	10
Dolomite	Tr	—	—	Tr	Tr
Foraminifers	15	10	5	20	5
Volcanic glass	—	Tr	—	—	—
Inorganic calcite	5	10	—	5	5
Mica	Tr	—	—	—	—
Nannofossils	65	70	65	50	80
Quartz	Tr	5	5	5	Tr
Radiolarians	—	—	Tr	—	—
Sponge spicules	Tr	—	—	—	—



SITE 721 HOLE A CORE 2H CORED INTERVAL 1954.6-1964.3 mbsl; 9.8-19.5 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *A/G; *A/G; *F/M
- NANNOFOSSILS: N23; NN20 *Gephyrocapsa oceanica*; NN19 *P. lacunsa* A/G *
- RADIOLARIANS: *Amphirhopalum ypsilon*
- DIATOMS

PALEOMAGNETICS: Brunhes

PHYS. PROPERTIES: ●ϕ-62.1 γ-1.67; ●ϕ-62.4 γ-1.72; ●ϕ-63.1 γ-1.62

CHEMISTRY: IC-8.31 OC-0.38; IC-8.67 OC-9.60

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

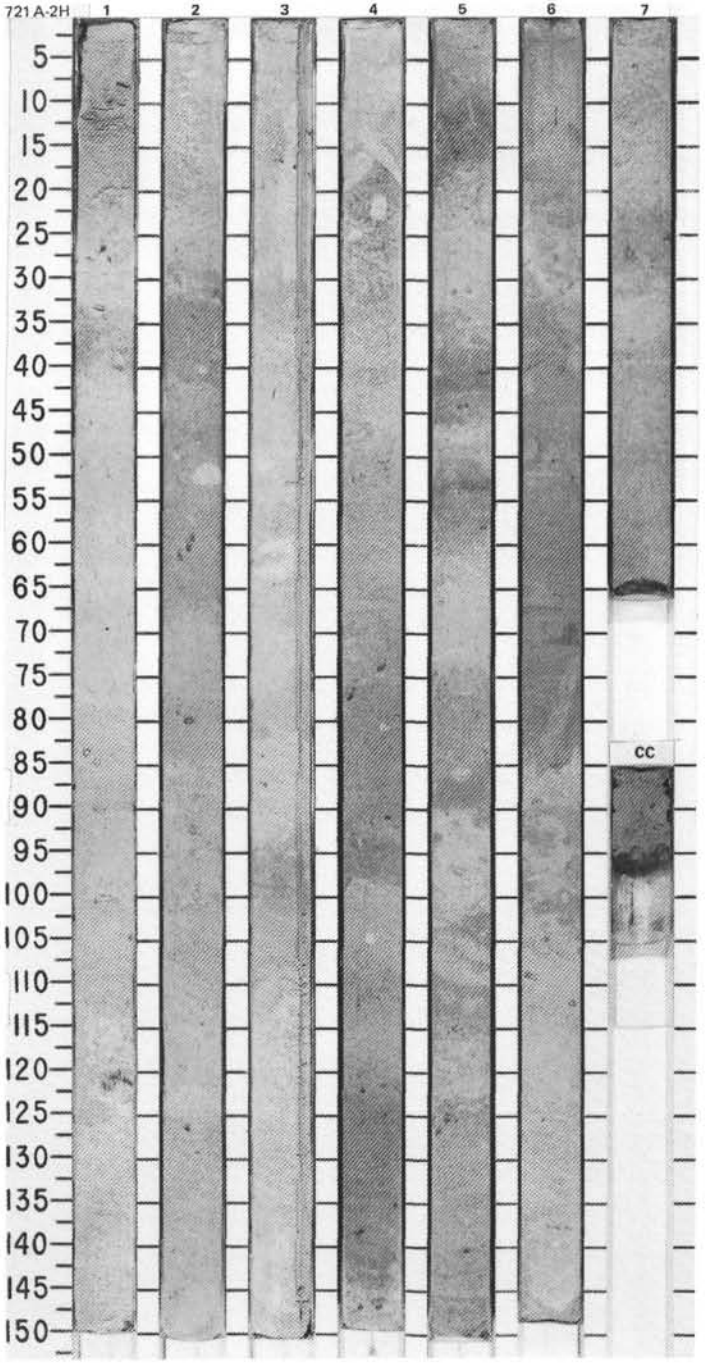
NANNOFOSSIL OOZE

Section 1, 5-15 cm, is slightly disturbed. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light greenish gray (10Y 7/2, 6/2) to dark greenish gray (10Y 5/4, 5/2, 4/2) and olive (5Y 4/4). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous silty clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	1, 70 D	6, 50 D
TEXTURE:		
Sand	—	5
Silt	20	15
Clay	80	80
COMPOSITION:		
Clay	10	5
Dolomite	—	Tr
Foraminifers	Tr	10
Inorganic calcite	5	10
Nannofossils	80	75
Quartz	5	Tr
Radiolarians	—	Tr



SITE 721 HOLE A CORE 3H CORED INTERVAL 1964.3-1974.0 mbsl; 19.5-29.2 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	N23						1	0.5				
	*A/G	NN19 *Pseudoemiliania lacunosa*			•	•			1.0				
	*F/M		*Amphirhopalum ypsilon*		• Brunhes	• ϕ=64.7 γ=1.55	IC=7.74 OC=0.74	2					
					•	• ϕ=59.3 γ=1.59	IC=8.25 OC=0.37	3					
					•	• ϕ=63.8 γ=1.65	IC=6.83 OC=0.30	4					*
					•			5					
								6					*
								7				IW OG	*
								CC					

LITHOLOGIC DESCRIPTION

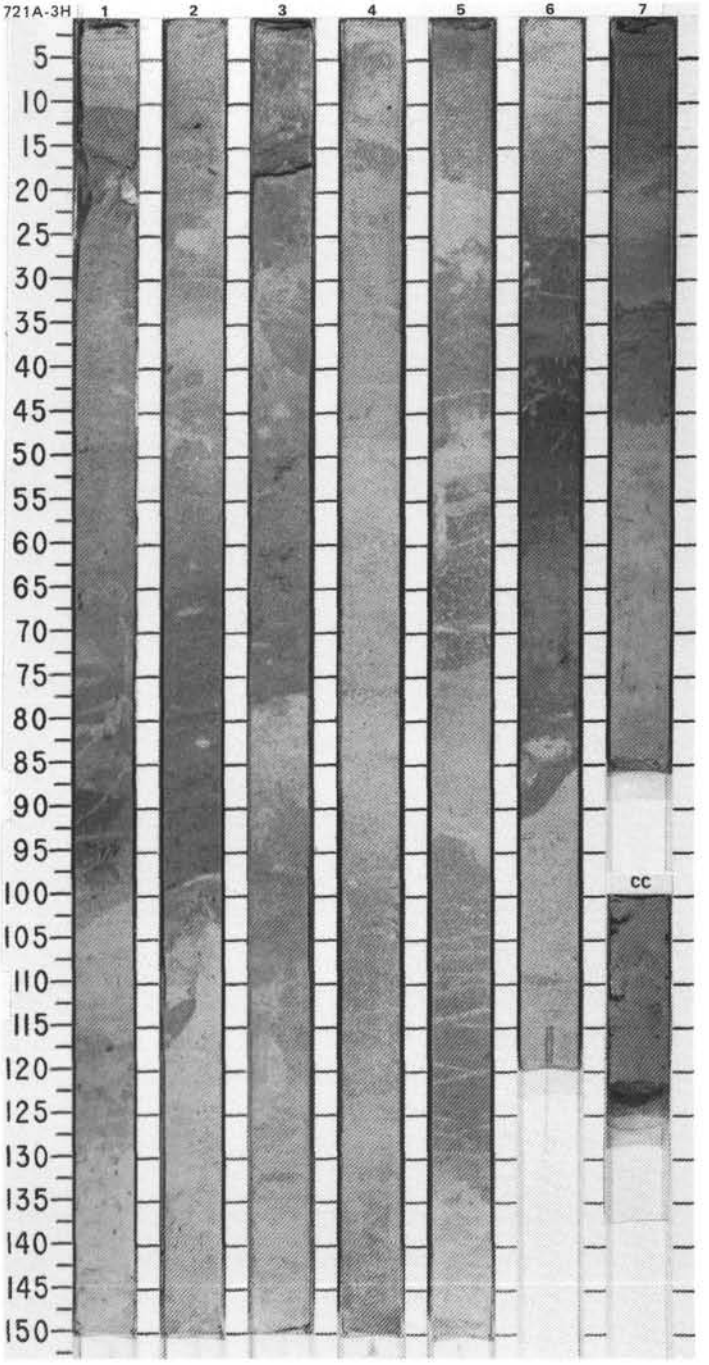
FORAMINIFER-NANNOFOSSIL OOZE

No drilling disturbance.

Major lithology: FORAMINIFER-NANNOFOSSIL OOZE. Alternating light and dark bands of light greenish gray (10Y 5/2, 6/2, 7/2) to olive gray (5Y 5/2) and olive (5Y 5/3). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	4, 72 D	6, 46 M	6, 88 M	7, 32 M
TEXTURE:				
Sand	—	—	—	5
Silt	25	5	40	30
Clay	75	95	60	65
COMPOSITION:				
Access. minerals	Tr	—	—	
Clay	10	20	10	10
Diatoms	—	—	Tr	—
Dolomite	Tr	—	—	Tr
Inorganic calcite	5	5	25	5
Mica	—	—	5	—
Nannofossils	70	60	50	50
Quartz	Tr	—	—	5
Radiolarians	—	—	—	Tr
Silicoflagellates	—	—	—	Tr
Sponge spicules	—	—	—	Tr



SITE 721 HOLE A CORE 4H CORED INTERVAL 1974.0-1983.7 mbsl; 29.2-38.9 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *A/M; N22
- NANNOFOSSILS: *A/G; NN19 *Pseudoemiliania lacunosa*
- RADIOLARIANS: *C/G *A. angulare*; * F/M *Amphirhopalum ypsilon*
- DIATOMS

PALEOMAGNETICS: Jaramillo; Brunhes

PHYS. PROPERTIES: ϕ-63.1 γ-1.64; ϕ-64.0 γ-1.56; ϕ-64.3 γ-1.66

CHEMISTRY: IC=8.08 OC=0.86

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY: VOID 35.1

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

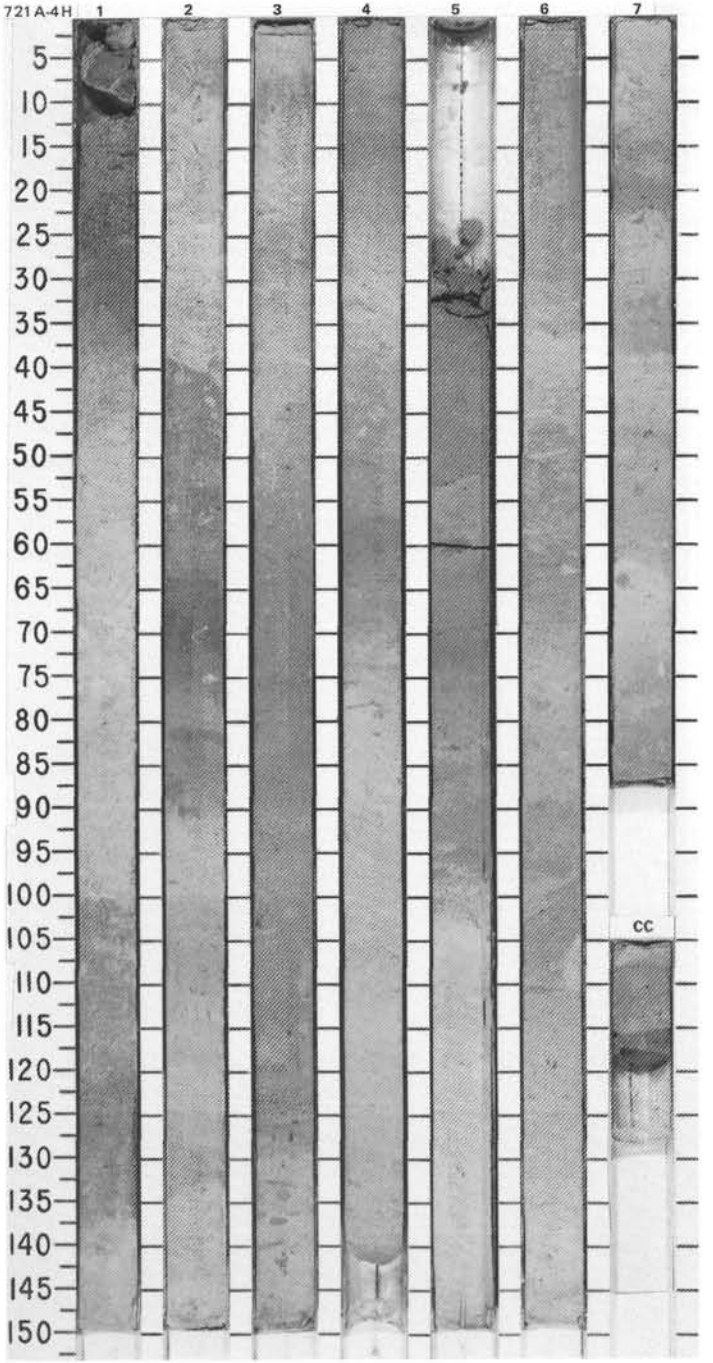
NANNOFOSSIL OOZE

No drilling disturbance. Voids in Section 4, 143-150 cm, and Section 5, 0-30 cm.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to light greenish gray (10Y 5/2, 6/1) to pale olive (5Y 6/4) and olive (5Y 5/3, 5/4). *Slight to moderate burrow-mottling throughout.* Dark layers contain 10-20% more terrigenous clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	1, 80 D	2, 66 D	4, 9 D	5, 52 D	5, 53 D
TEXTURE:					
Sand	—	—	—	—	5
Silt	5	20	10	20	20
Clay	95	80	90	75	80
COMPOSITION:					
Access. minerals	—	Tr	Tr	Tr	
Clay	20	5	12	35	27
Dolomite	3	5	—	5	3
Feldspar	—	—	1	—	—
Foraminifers	5	3	1	10	10
Inorganic calcite	10	10	5	15	10
Mica	—	—	—	Tr	Tr
Nannofossils	60	75	80	30	45
Pteropod	—	—	—	—	Tr
Quartz	2	2	1	5	5
Radiolarians	—	—	Tr	Tr	—
Sponge spicules	—	Tr	Tr	—	—



SITE 721 HOLE A CORE 5H CORED INTERVAL 1983.7-1993.3 mbsl; 38.9-48.5 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/ FOSSIL CHARACTER:
- FORAMINIFERS: *C/P; N22; *A/G; *C/G
- NANNOFOSSILS: NN19 *Pseudoemiliania lacunosa*
- RADIOLARIANS: * C/G *Anthocyrtidium angulare*
- DIATOMS

PALEOMAGNETICS: O O O O
PHYS. PROPERTIES: Matuyama; ●ϕ-62.5 γ-1.69; ●ϕ-65.9 γ-1.59; ●ϕ-62.0 γ-1.67
CHEMISTRY: ●IC=6.74 OC=1.04

SECTION: 1 2 3 4 5 6 7 CC
METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: *

SAMPLES: *

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE

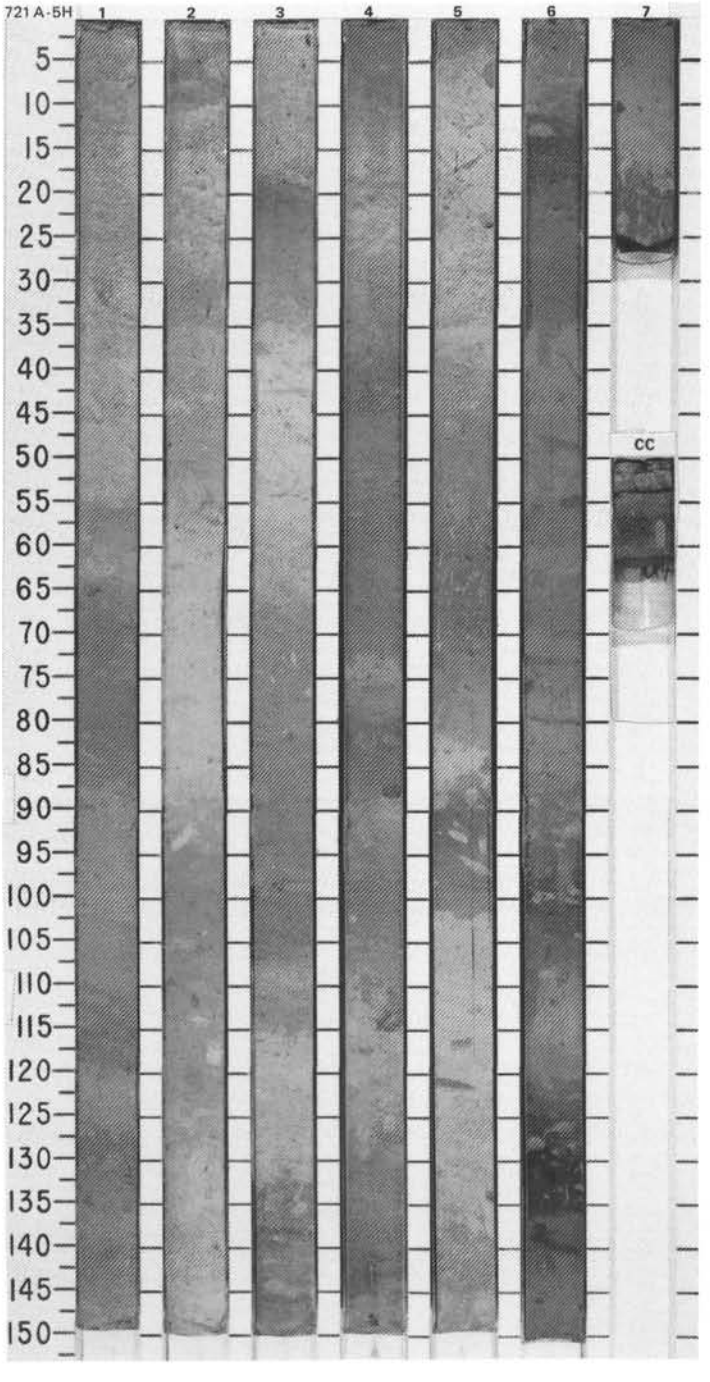
No drilling disturbance.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to light greenish gray (10Y 5/2, 6/2) and olive (5Y 4/3, 5/3). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous components relative to light layers.

Minor lithology: Marly nannofossil ooze, dark olive gray (5Y 3/2), Section 6, 120-135 cm.

SMEAR SLIDE SUMMARY (%):

	5, 27 D	6, 15 D	6, 131 D
TEXTURE:			
Sand	1	1	10
Silt	7	15	35
Clay	92	84	55
COMPOSITION:			
Access. minerals	Tr	Tr	2
Clay	—	13	20
Diatoms	Tr	21	
Dolomite	Tr	—	Tr
Feldspar	—	—	2
Foraminifers	Tr	1	1
Volcanic glass	1	—	Tr
Inorganic calcite	5	10	30
Mica	Tr	1	—
Nannofossils	92	70	35
Quartz	1	Tr	8
Radiolarians	Tr	2	Tr
Silicoflagellates	—	1	—
Sponge spicules	Tr	1	—



SITE 721 HOLE A CORE 6H CORED INTERVAL 1993.3-2002.6 mbsl; 48.5-57.8 mbsf

TIME-ROCK UNIT: PLEISTOCENE / PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: N22; NANNOFOSSILS: NN19 *Pseudoemiliania lacunosa*; RADIOLARIANS: * F/M; DIATOMS: * C/G *Pterocanium prismatium*

PALEOMAGNETICS: * A/M; O; O; Matuyama; O; O; O

PHYS. PROPERTIES: * A/M-P; ●ϕ=62.2 γ=1.68; ●ϕ=60.0 γ=1.69; ●ϕ=61.0 γ=1.71; ●IC=8.73 OC=0.88

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *, *, *, PP, *, OG, IW, *

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE

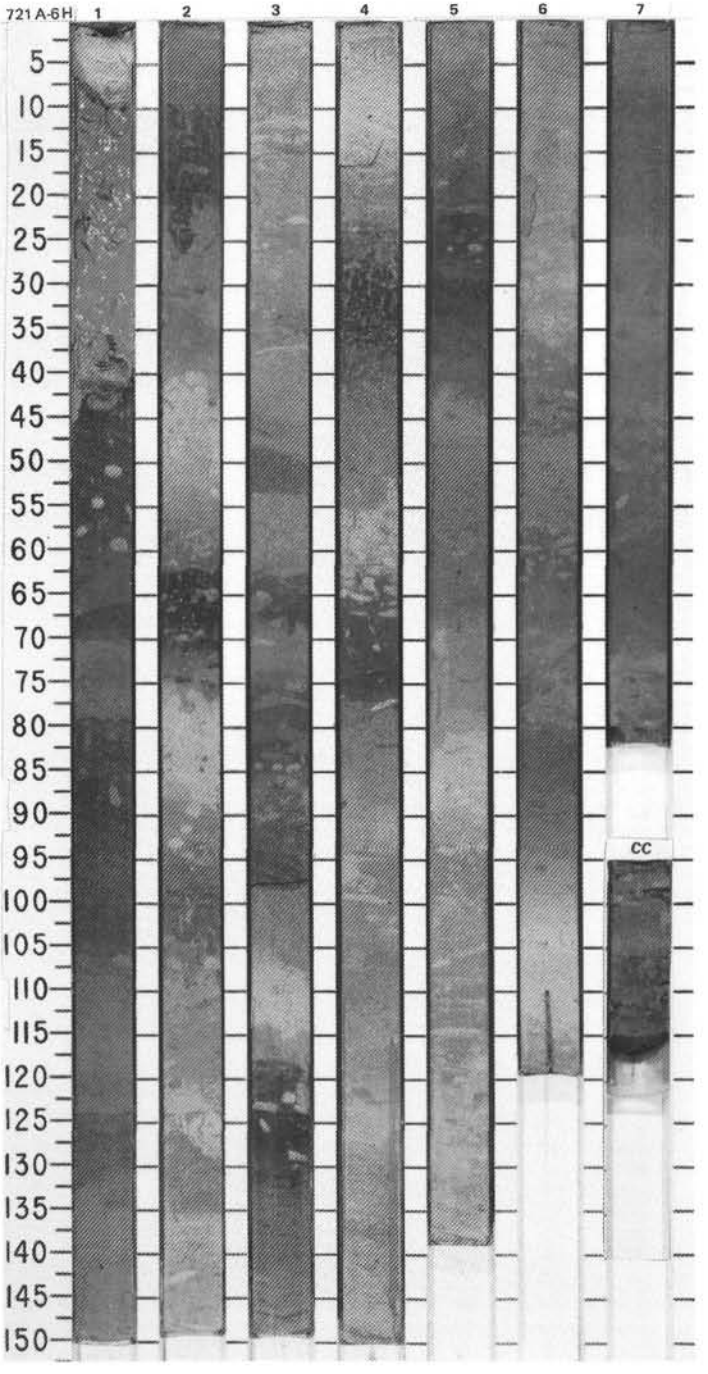
Section 1, 10-40 cm, soupy. Remainder of core undisturbed.

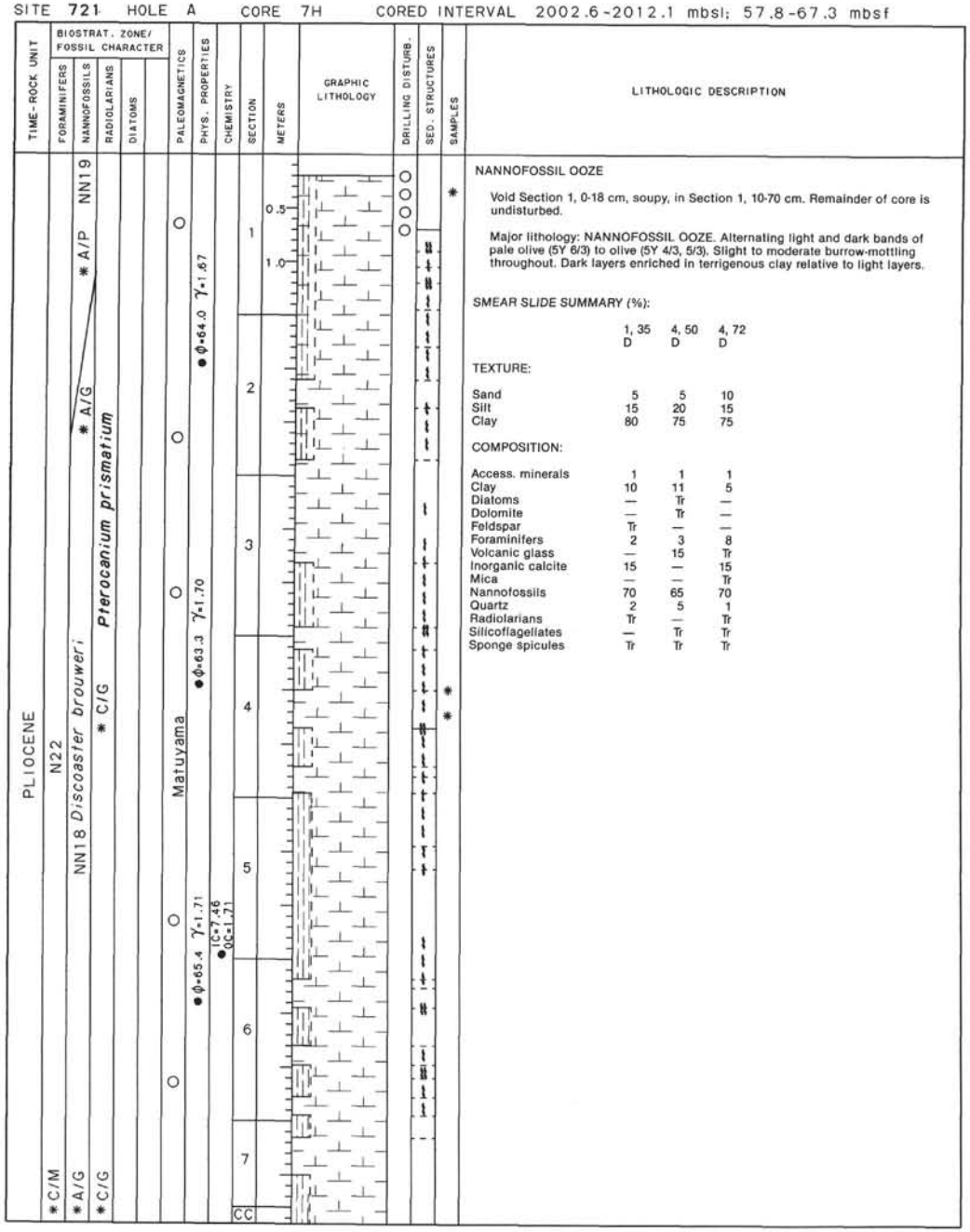
Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to pale olive (5Y 6/3) to olive gray (5Y 5/2, 6/2) and olive (5Y 4/3, 4/4). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous clay than do light layers.

Minor lithology: Foraminifer sand. Concentrated in a layer in Section 1, 69 cm, and in burrows in Section 2, 17, 63, and 66 cm.

SMEAR SLIDE SUMMARY (%):

	4, 9 D	5, 61 D	7, 65 D
TEXTURE:			
Sand	—	—	15
Silt	20	10	35
Clay	80	90	50
COMPOSITION:			
Clay	—	—	8
Diatoms	—	2	Tr
Dolomite	Tr	Tr	Tr
Feldspar	—	Tr	—
Foraminifers	5	7	15
Inorganic calcite	5	5	25
Mica	10	—	—
Nannofossils	75	80	50
Quartz	5	1	1
Radiolarians	—	2	1
Silicoflagellates	—	1	—
Sponge spicules	—	2	Tr





LITHOLOGIC DESCRIPTION

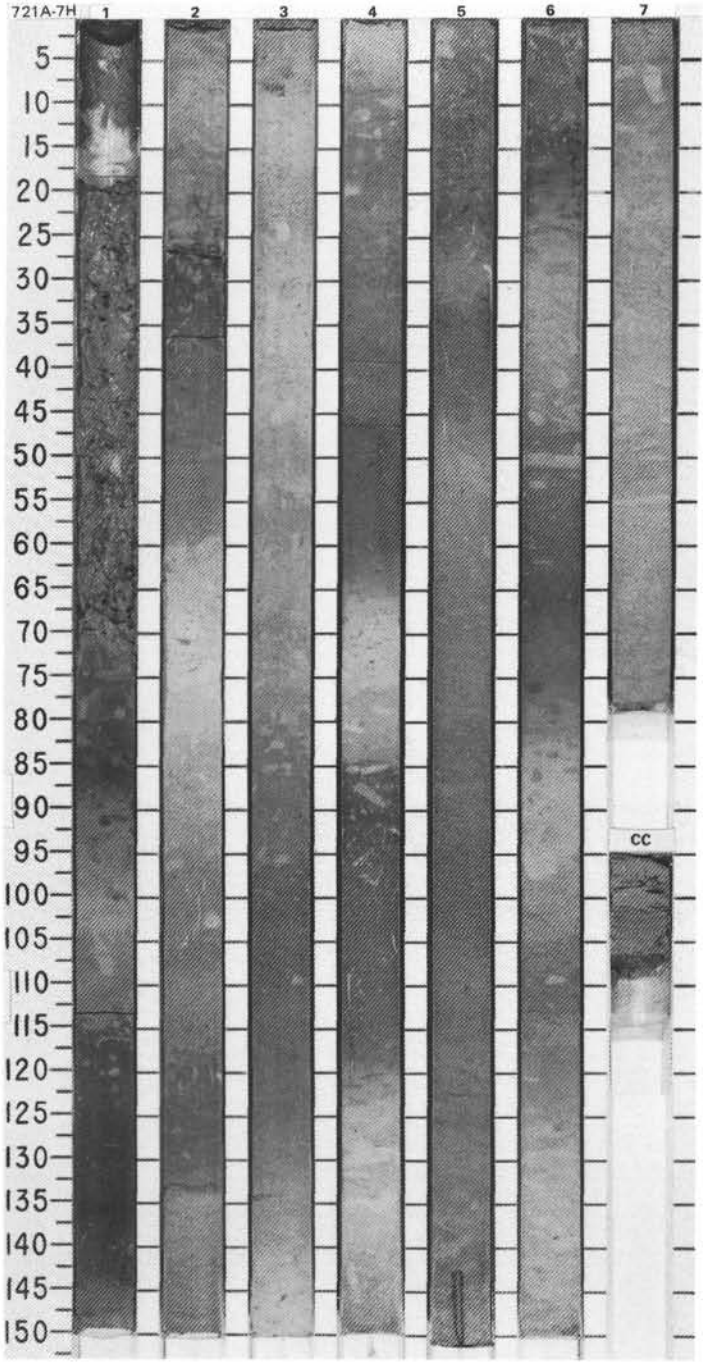
NANNOFOSSIL OOZE

Void Section 1, 0-18 cm, soupy, in Section 1, 10-70 cm. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of pale olive (5Y 6/3) to olive (5Y 4/3, 5/3). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	1, 35 D	4, 50 D	4, 72 D
TEXTURE:			
Sand	5	5	10
Silt	15	20	15
Clay	80	75	75
COMPOSITION:			
Access. minerals	1	1	1
Clay	10	11	5
Diatoms	—	Tr	—
Dolomite	—	Tr	—
Feldspar	Tr	—	—
Foraminifers	2	3	8
Volcanic glass	—	15	Tr
Inorganic calcite	15	—	15
Mica	—	—	Tr
Nannofossils	70	65	70
Quartz	2	5	1
Radiolarians	Tr	—	Tr
Silicoflagellates	—	Tr	Tr
Sponge spicules	Tr	Tr	Tr



SITE 721 HOLE A CORE 8H CORED INTERVAL 2012.1-2021.6 mbsl; 67.3-76.8 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER

FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS
* R/M	NN21		
* A/G	NN18 *Discoaster brouweri*		
* C/G		* C/G	*Prerocanium prismatium*

PALEOMAGNETICS: ○ ○ ○ Matuyama ○ ○

PHYS. PROPERTIES: ● ϕ=58.9 γ=1.69 ● ϕ=58.9 γ=1.69 ● ϕ=63.0 γ=1.68

CHEMISTRY: ● IC=8.48 OC=1.45

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.: ○

SED. STRUCTURES

SAMPLES: * *

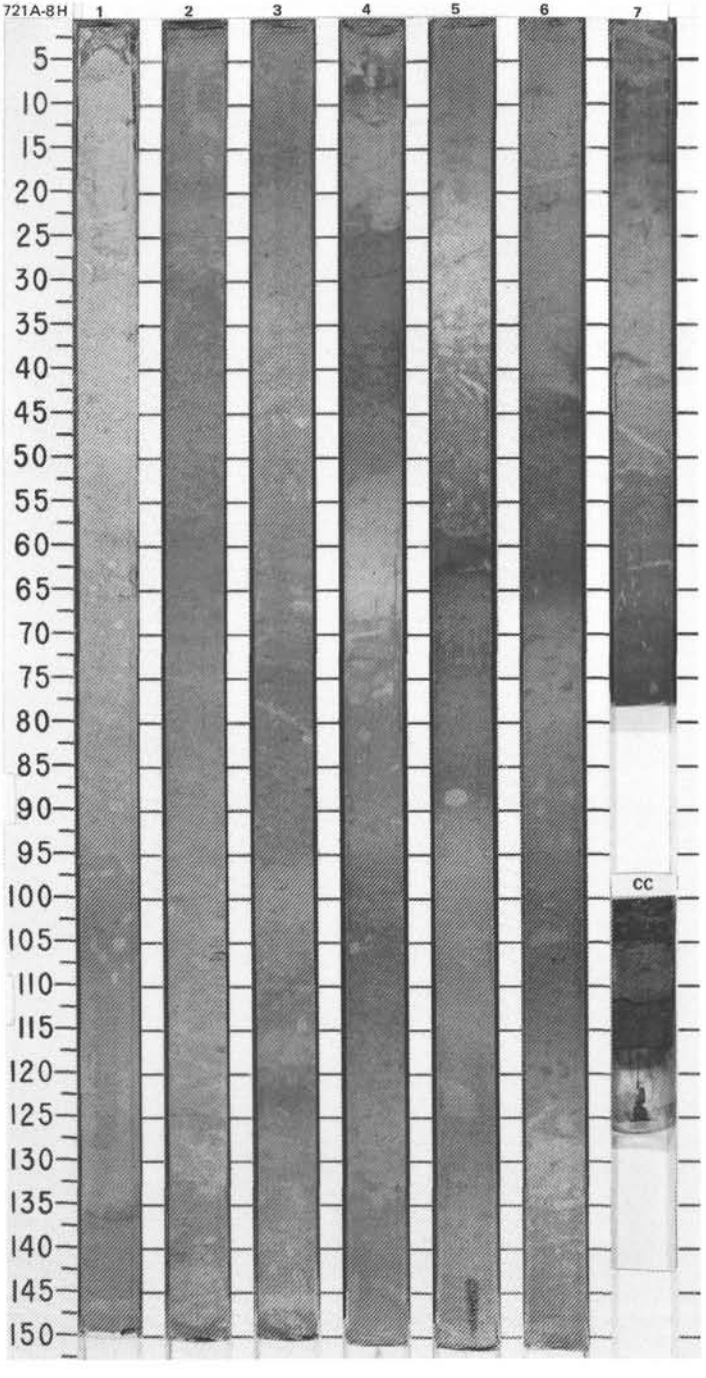
LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE

Section 1, 0-2 cm, soupy. Remainder of core is undisturbed. Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 7/2) to light olive gray (5Y 6/2) and olive (5Y 4/3, 5/3, 4/4). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	4, 60 D	6, 106 D
TEXTURE:		
Sand	—	5
Silt	15	15
Clay	80	85
COMPOSITION:		
Access. minerals	1	Tr
Diatoms	—	1
Feldspar	1	—
Foraminifers	5	—
Volcanic glass	Tr	Tr
Inorganic calcite	10	10
Mica	2	—
Nannofossils	80	84
Quartz	1	2
Radiolarians	Tr	1
Silicoflagellates	Tr	2
Sponge spicules	Tr	—



TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: N21
- NANNOFOSSILS: NN17 *Discoaster pentaradiatus* / NN18
- RADIOLARIANS: *Pterocanium prismatium*
- DIATOMS

PALEOMAGNETICS: Gauss / Matuyama

PHYS. PROPERTIES: ●ϕ=64.3 γ=1.63; ●ϕ=62.4 γ=1.64; ●ϕ=60.0 γ=1.66

CHEMISTRY: *C/M; *A/G; *C/G *S. penias*; * F/M; A/M *

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG, IW

LITHOLOGIC DESCRIPTION

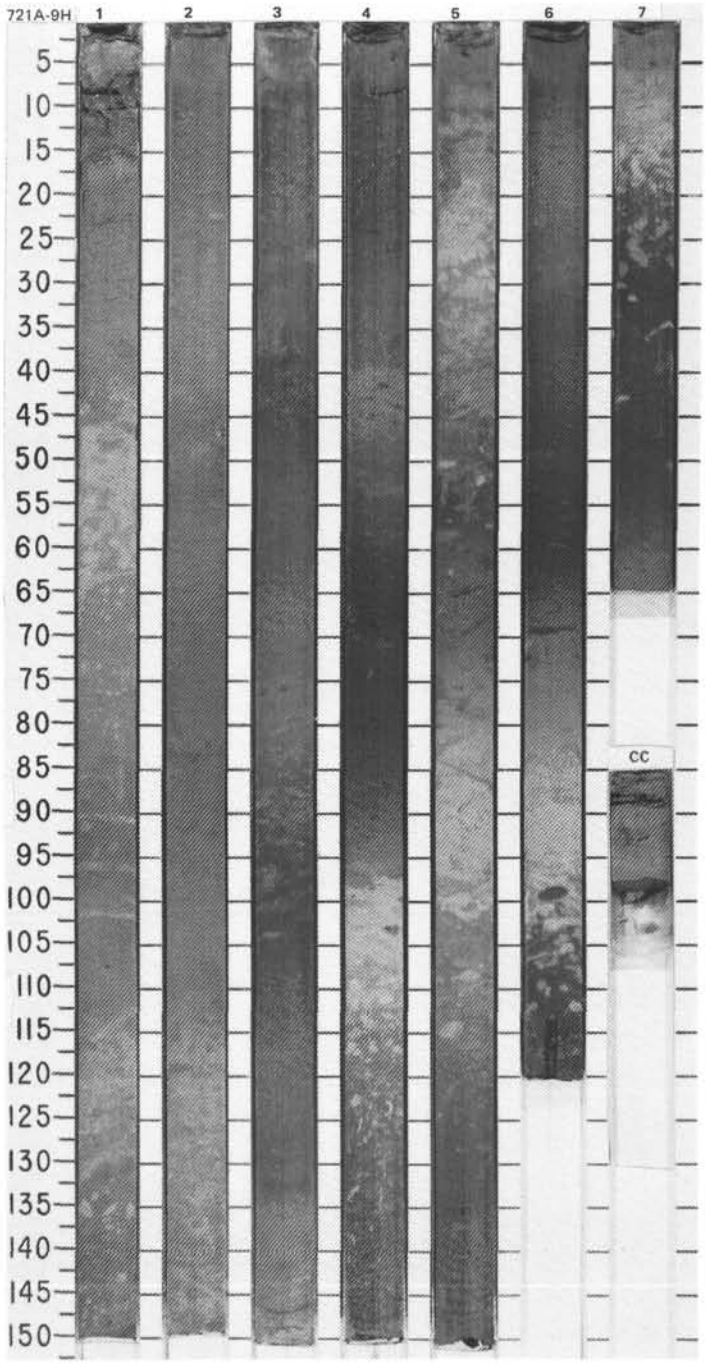
NANNOFOSSIL OOZE

Section 1, 0-7 cm, slightly disturbed, 7-10 cm, soupy. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3, 4/4) and olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	3, 55 D	4, 78 D	5, 91 D
TEXTURE:			
Silt	15	3	5
Clay	85	97	95
COMPOSITION:			
Access. minerals	—	Tr	—
Clay	5	—	3
Diatoms	—	—	Tr
Dolomite	—	Tr	—
Foraminifers	3	3	1
Volcanic glass	—	Tr	Tr
Inorganic calcite	10	2	5
Mica	1	Tr	—
Nannofossils	80	93	90
Pore space	1	—	—
Quart	Tr	1	Tr
Radiolarians	Tr	Tr	Tr
Silicoflagellates	Tr	1	1
Sponge spicules	—	Tr	—



SITE 721 HOLE B CORE 1H CORED INTERVAL 1944.8-1954.2 mbsl: 0.0-9.4 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *A/G; NANNOFOSSILS N23 / NN21 *Emiliania huxleyi* *A/G; RADIOLARIANS *A/G; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ●ϕ-62.2 γ-1.58

CHEMISTRY: ●IC-7.86 OC-1.21; ●IC-8.50 OC-0.43; ●IC-7.78 OC-1.29; ●IC-9.26 OC-0.07

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.: oo

SED. STRUCTURES: o

SAMPLES: *, *, *, IW

LITHOLOGIC DESCRIPTION

FORAMINIFER-NANNOFOSSIL OOZE

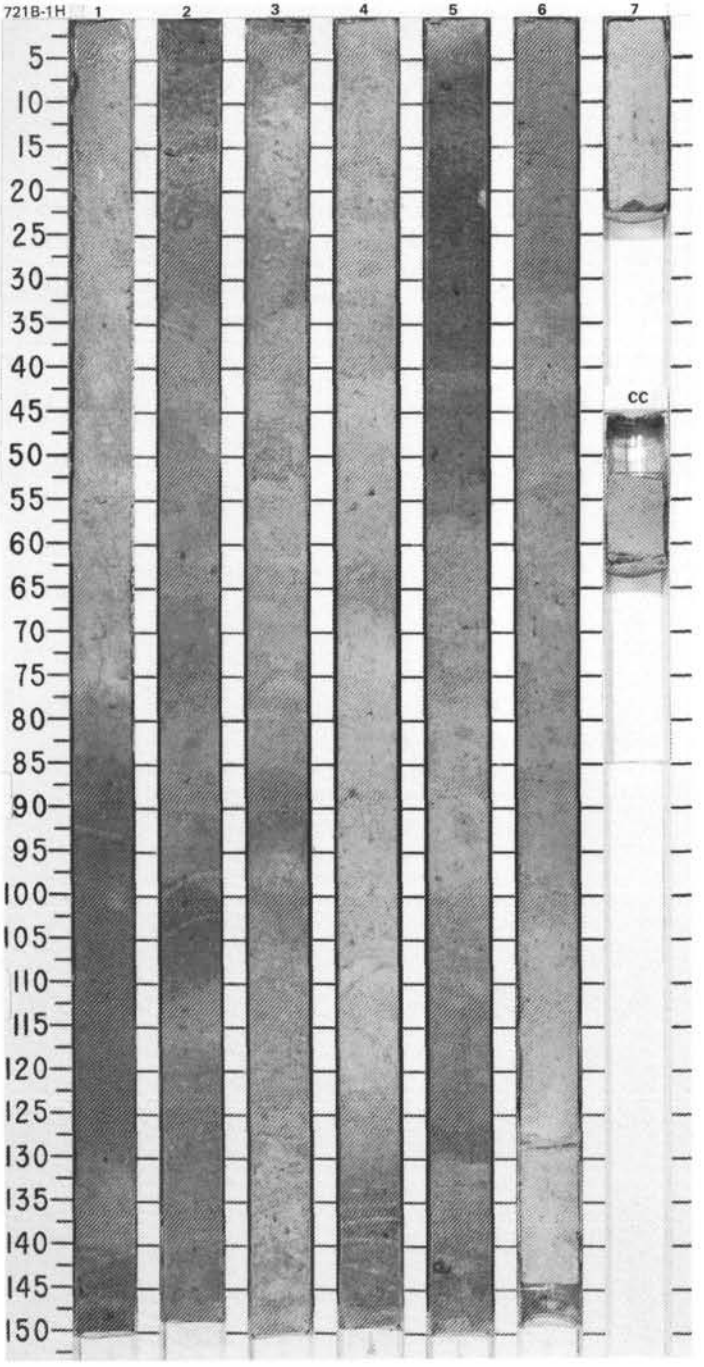
Section 1, 0-5 cm, soupy. Remainder of core is undisturbed.

Major lithology: FORAMINIFER-NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 7/1) to gray (5Y 6/1) to olive (5Y 5/3, 4/4) to olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous clay than do light layers.

Minor lithology: Foraminifer sand. Concentration in burrows in Section 1, 90-91 cm, and Section 6, 58-61 cm.

SMEAR SLIDE SUMMARY (%):

	1, 34 D	1, 130 D	5, 31 D
TEXTURE:			
Sand	20	20	10
Silt	20	15	12
Clay	60	65	78
COMPOSITION:			
Access. minerals	Tr	—	Tr
Clay	—	5	8
Diatoms	Tr	—	—
Feldspar	—	—	Tr
Fish remains	—	Tr	—
Foraminifers	35	20	10
Volcanic glass	Tr	—	Tr
Inorganic calcite	5	10	10
Mica	—	Tr	1
Nannofossils	60	65	70
Quartz	—	Tr	1
Silicoflagellates	Tr	—	—
Sponge spicules	Tr	Tr	Tr



SITE 721 HOLE B CORE 2H CORED INTERVAL 1954.2-1963.9 mbsl; 9.4-19.1 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	* A/G	N23				●ϕ-62.1 γ-1.65	IC=8.87 ●IC=7.36 ●IC=9.37 OC=0.60 OC=1.91 OC=0.46	1 2 3 4 5 6 7 CC	0.5 1.0	VOID 9.45			* * *
	* A/G	NN19 *Pseudoemiliania lacunosa*											

LITHOLOGIC DESCRIPTION

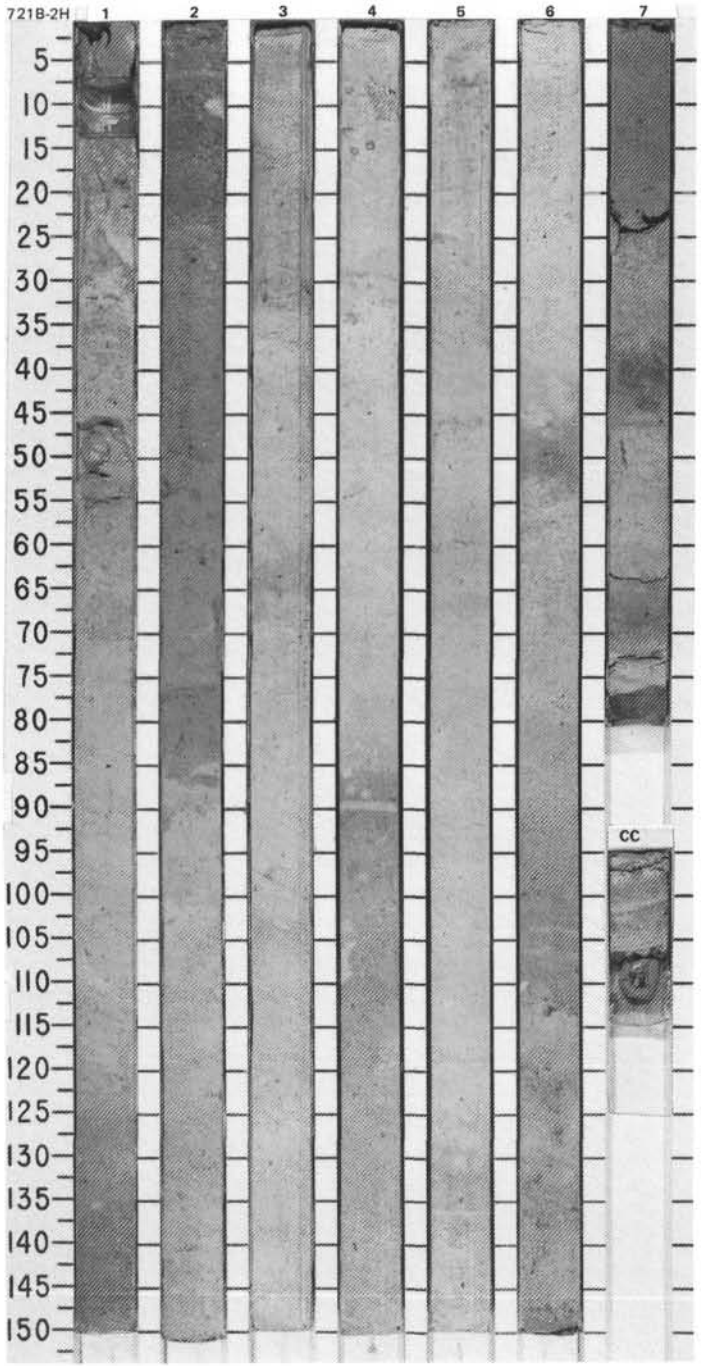
NANNOFOSSIL OOZE

Section 1, 0-7 cm, soupy; 7-12 cm, void; 12-30 cm, very disturbed; and 47-52 cm, soupy. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 7/1, 7/2), light greenish gray (10Y 6/1, 6/2), light olive gray (5Y 6/2), and pale olive (5Y 6/3) to olive (5Y 5/3, 4/4). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous silty clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	1, 84 D	4, 43 D
TEXTURE:		
Sand	10	5
Silt	17	15
Clay	73	80
COMPOSITION:		
Access. minerals	Tr	
Clay	3	
Dolomite	Tr	
Foraminifers	7	5
Volcanic glass	Tr	Tr
Inorganic calcite	20	13
Mica	Tr	1
Nannofossils	70	80
Quartz	Tr	1
Radiolarians	Tr	
Sponge spicules	Tr	



SITE 721 HOLE B CORE 3H CORED INTERVAL 1963.9-1973.6 mbsl; 19.1-28.8 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *A/G; NANNOFOSSILS *A/G; RADIOLARIANS; DIATOMS

N23

NN19 Pseudoemiliania lacunosa

PALEOMAGNETICS

PHYS. PROPERTIES: ●ϕ=61.7 γ=1.71

CHEMISTRY: IC=7.74 OC=0.74

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: *

SAMPLES: *, IW

LITHOLOGIC DESCRIPTION

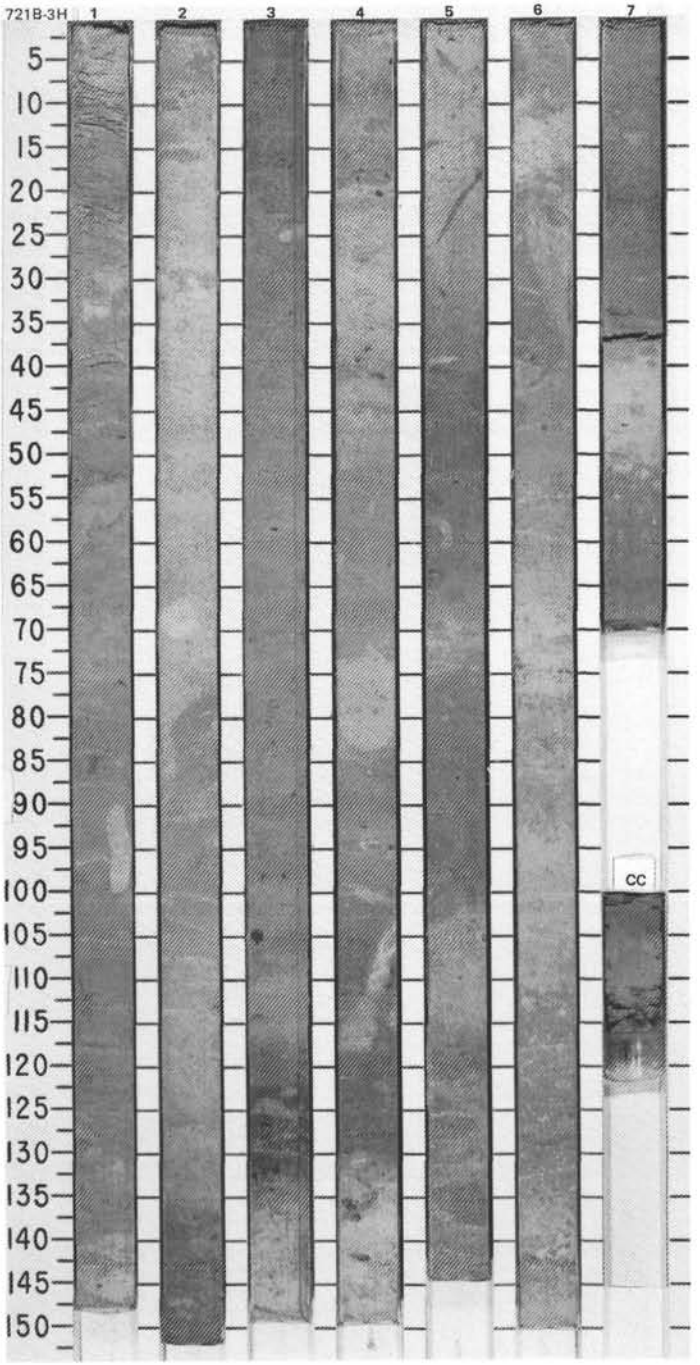
NANNOFOSSIL OOZE

No drilling disturbance.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to pale olive (5Y 6/3) and olive (5Y 5/3). Slight to moderate burrow-mottling throughout. Dark layers are enriched in terrigenous clay compared to light layers. Minor lithology: Foraminifer sand. Concentrated as lags in Section 4, 15-20, 36-42, and 135-145 cm.

SMEAR SLIDE SUMMARY (%):

	3, 57 D	5, 85 D
TEXTURE:		
Sand	5	5
Silt	10	10
Clay	85	85
COMPOSITION:		
Access. minerals	Tr	
Foraminifers	5	5
Volcanic glass	Tr	
Inorganic glass	10	10
Mica	Tr	
Nannofossils	85	85
Radiolarians		Tr
Sponge spicules		Tr



SITE 721 HOLE B CORE 4H CORED INTERVAL 1973.6-1983.3 mbsl; 28.8-38.5 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	*A/G	*A/G			●			1	0.5	VOID 28.92			*
N22									1.0				
NN19 *Pseudoemiliania lacunosa*					Brunhes			2					
					●			3					
					●			4					
					○			5					*
					●			6					
					○			7					
					●			CC					

LITHOLOGIC DESCRIPTION

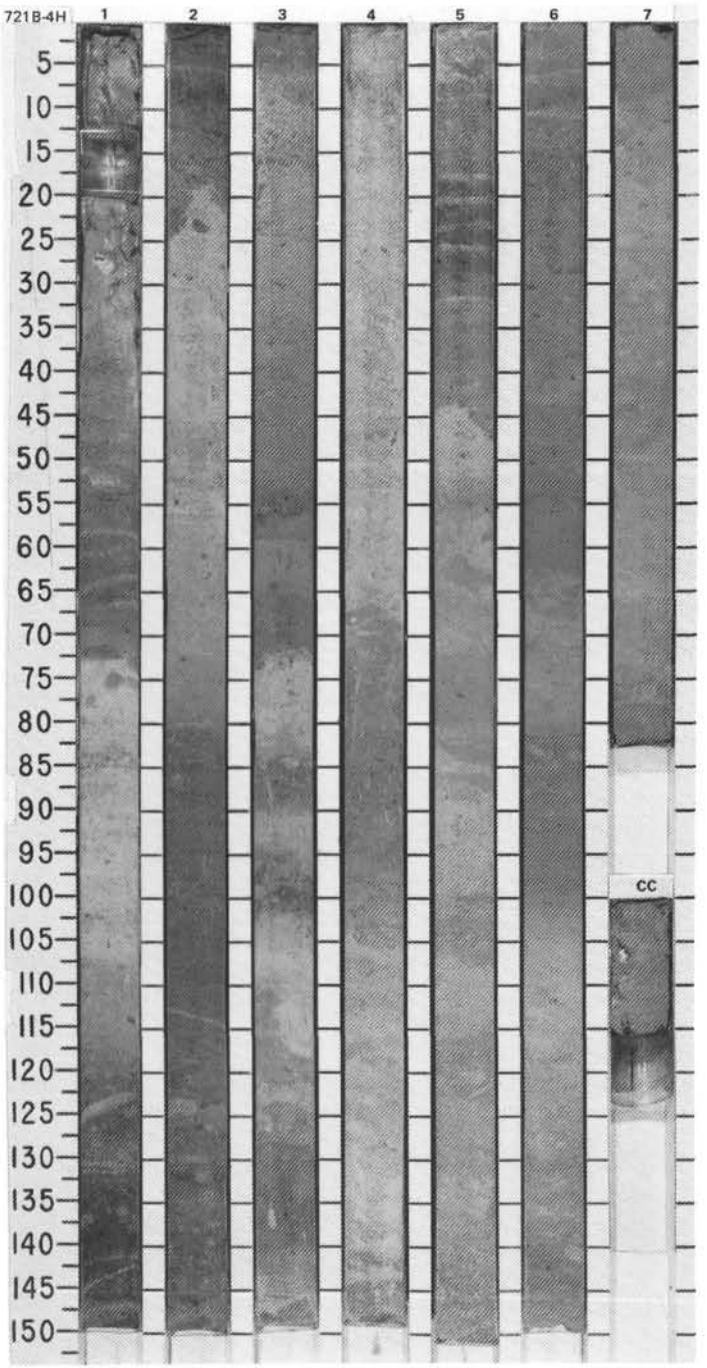
NANNOFOSSIL OOZE

Section 1, 0-30 cm, very disturbed; void in Section 1, 13-20 cm.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 6/1) to light olive gray (5Y 6/2) and olive (5Y 4/3, 5/3, 5/4). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	1, 83 D	5, 50 D
TEXTURE:		
Sand	5	3
Silt	10	7
Clay	85	90
COMPOSITION:		
Access. minerals	Tr	Tr
Dolomite	Tr	
Foraminifers	5	3
Volcanic glass	Tr	
Inorganic calcite	10	7
Mica	Tr	Tr
Nannofossils	85	90
Quartz	Tr	
Radiolarians		Tr
Silicoflagellates	Tr	
Sponge spicules	Tr	Tr



SITE 721 HOLE B CORE 5H CORED INTERVAL 1983.3-1992.9 mbsl; 38.5-48.1 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	*A/G	N22				● Φ=65.0 γ=1.65		1	0.5		○		*
	*A/G	NN19 *Pseudoemiliania lacunosa*			○			2	1.0				
					●			3					
								4					*
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

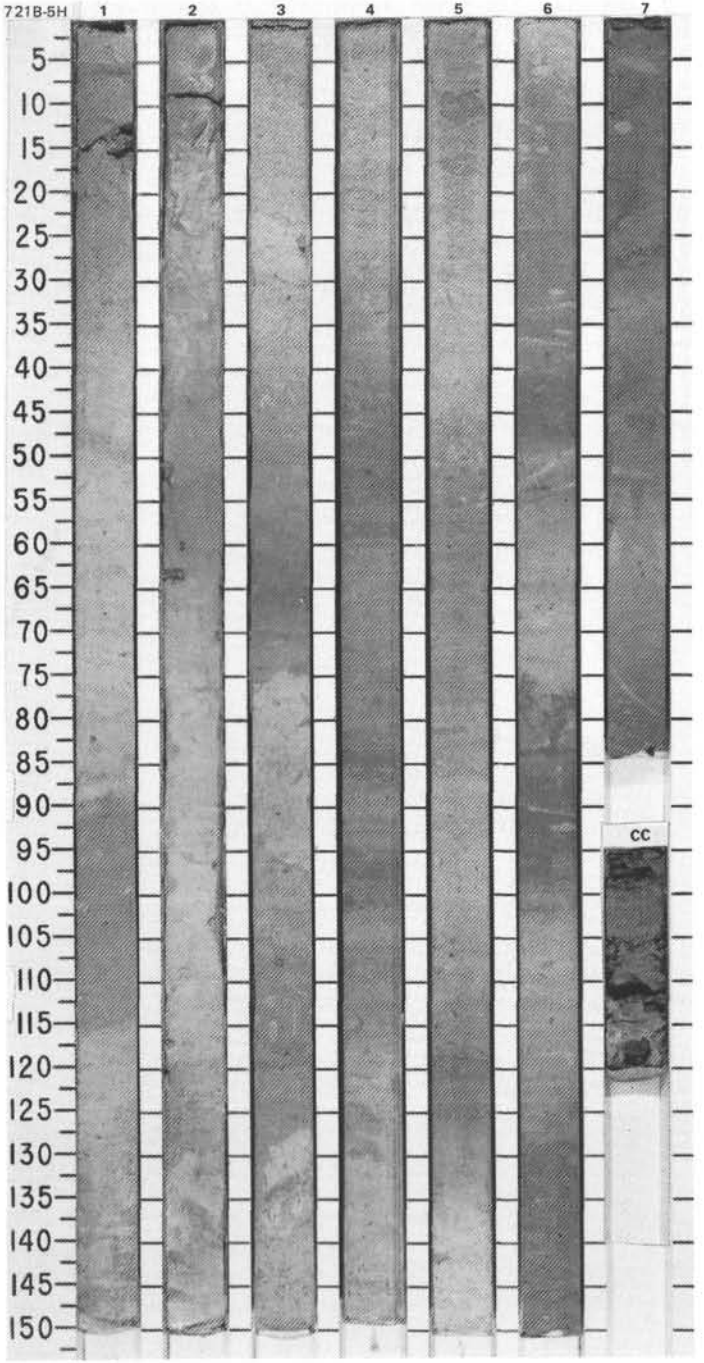
NANNOFOSSIL OOZE

No drilling disturbance.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 7/1, 7/2) and light olive gray (5Y 6/2) to light greenish gray (10Y 6/1) and olive (5Y 5/3). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous components relative to light layers.

SMEAR SLIDE SUMMARY (%):

	1, 67 D	4, 51 D
TEXTURE:		
Sand	1	5
Silt	25	25
Clay	74	70
COMPOSITION:		
Access. minerals	Tr	
Diatoms		Tr
Foraminifers	3	7
Volcanic glass	Tr	
Inorganic calcite	10	8
Nannofossils	85	82
Quartz	2	2
Radiolarians		1
Silicoflagellates		Tr
Sponge spicules		Tr



SITE 721 HOLE B CORE 6H CORED INTERVAL 1992.9-2002.2 mbsl; 48.1-57.4 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: N22; NANNOFOSSILS: NN19 *Pseudoemiliania lacunosa*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ●ϕ=63.3 γ=1.65

CHEMISTRY: * C/P; * A/G

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: *, IW, *

SAMPLES

LITHOLOGIC DESCRIPTION

FORAMINIFER-BEARING NANNOFOSSIL OOZE

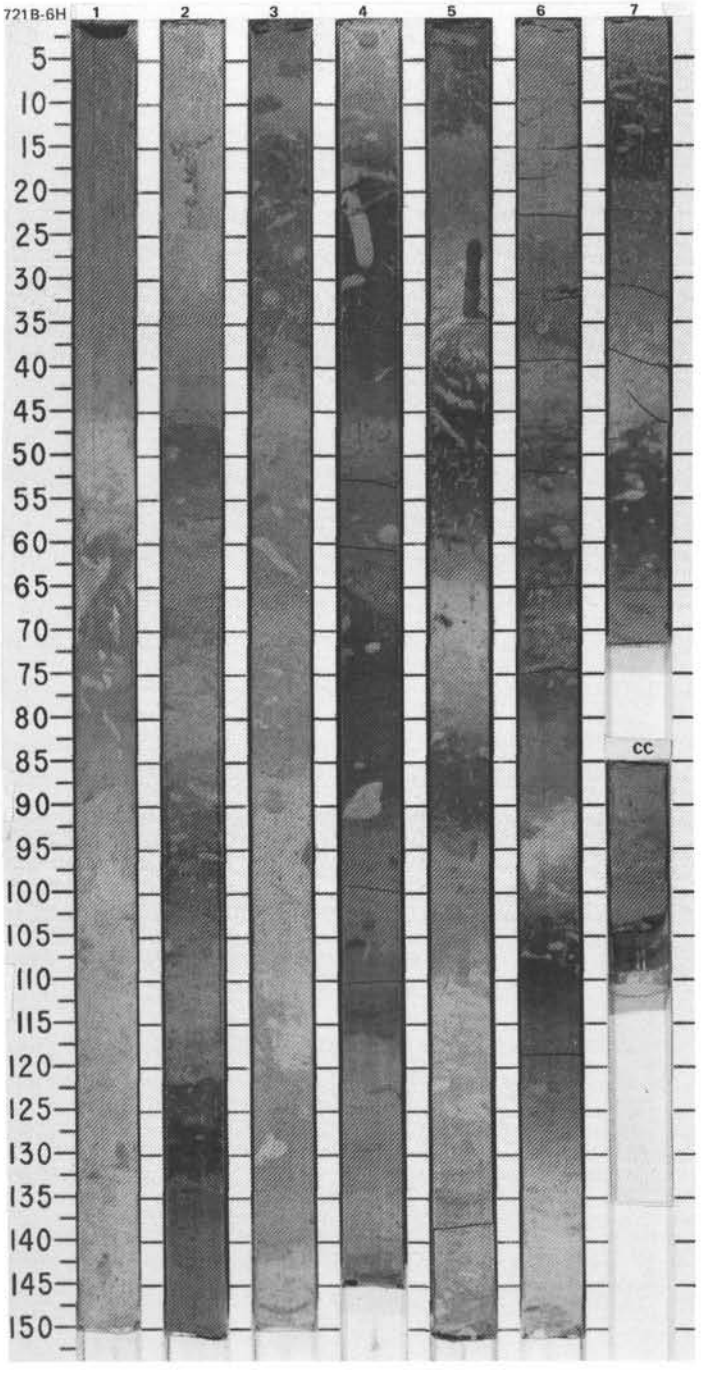
No drilling disturbance.

Major lithology: FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) and pale olive (5Y 6/3) to olive gray (5Y 5/2, 4/2) and olive (5Y 4/3, 5/3). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous clay than do light layers.

Minor lithology: Foraminifer-bearing marly nannofossil ooze, dark olive gray (5Y 3/2), Section 2, 122-132 cm, and Section 7, 6-20 and 35-48 cm.

SMEAR SLIDE SUMMARY (%):

	2, 138 D	5, 69 D
TEXTURE:		
Sand	7	5
Silt	8	14
Clay	85	81
COMPOSITION:		
Access. minerals	1	
Dolomite	Tr	Tr
Foraminifers	7	7
Volcanic glass	1	Tr
Inorganic calcite	3	3
Mica	1	Tr
Nannofossils	80	87
Quartz	2	
Siliceous frag.	5	3



SITE 721 HOLE B CORE 7H CORED INTERVAL 2002.2-2011.7 mbsl; 57.4-66.9 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *F/M; NANNOFOSSILS N22 / NN18 *Discoaster brouweri* *A/G; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ=63.40 γ=1.60

CHEMISTRY

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: * *

LITHOLOGIC DESCRIPTION

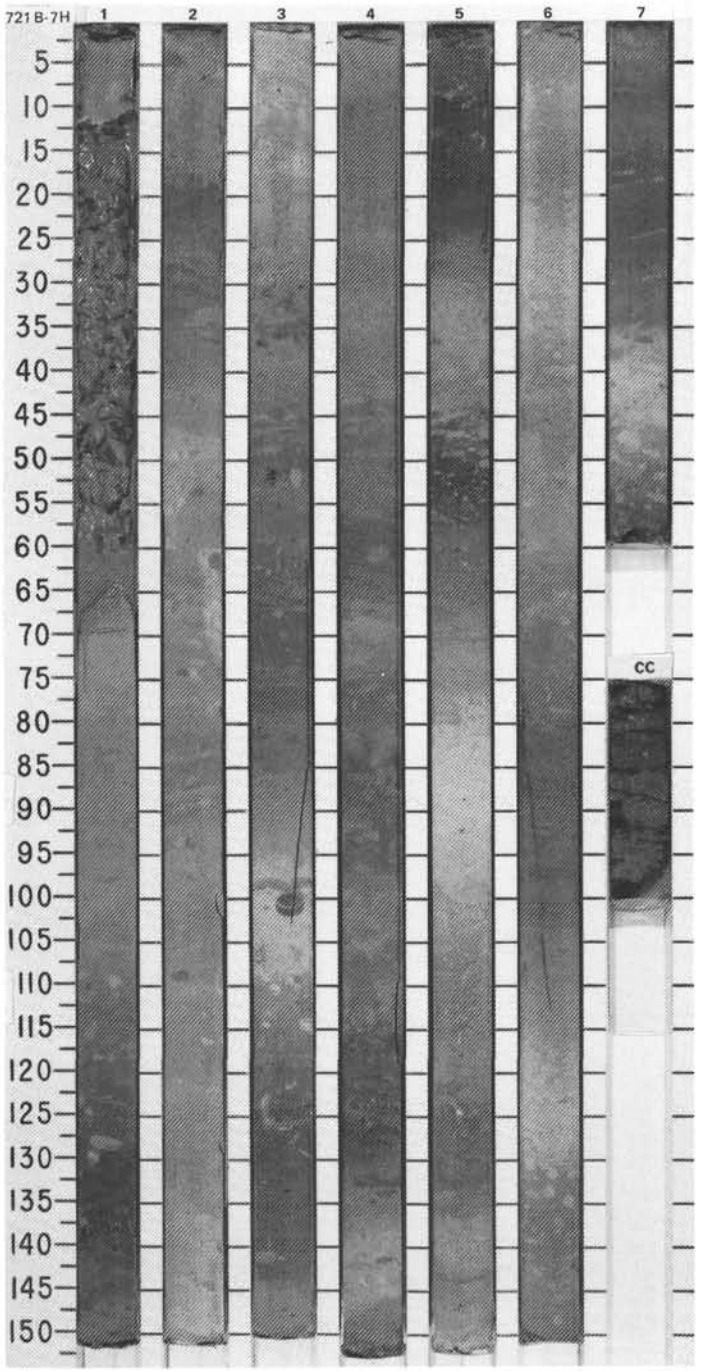
FORAMINIFER-BEARING NANNOFOSSIL OOZE

No drilling disturbance.

Major lithology: FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3, 4/4). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	5, 88 D	6, 96 D
TEXTURE:		
Silt	20	20
Clay	80	80
COMPOSITION:		
Clay	10	
Diatoms		Tr
Foraminifers	10	10
Inorganic calcite	Tr	5
Nannofossils	80	75
Quartz	Tr	5
Radiolarians		



TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *F/M; NANNOFOSSILS N18 - N21; *A/G NN18 *Discoaster brouweri*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ●ϕ=58.8 γ=1.69

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

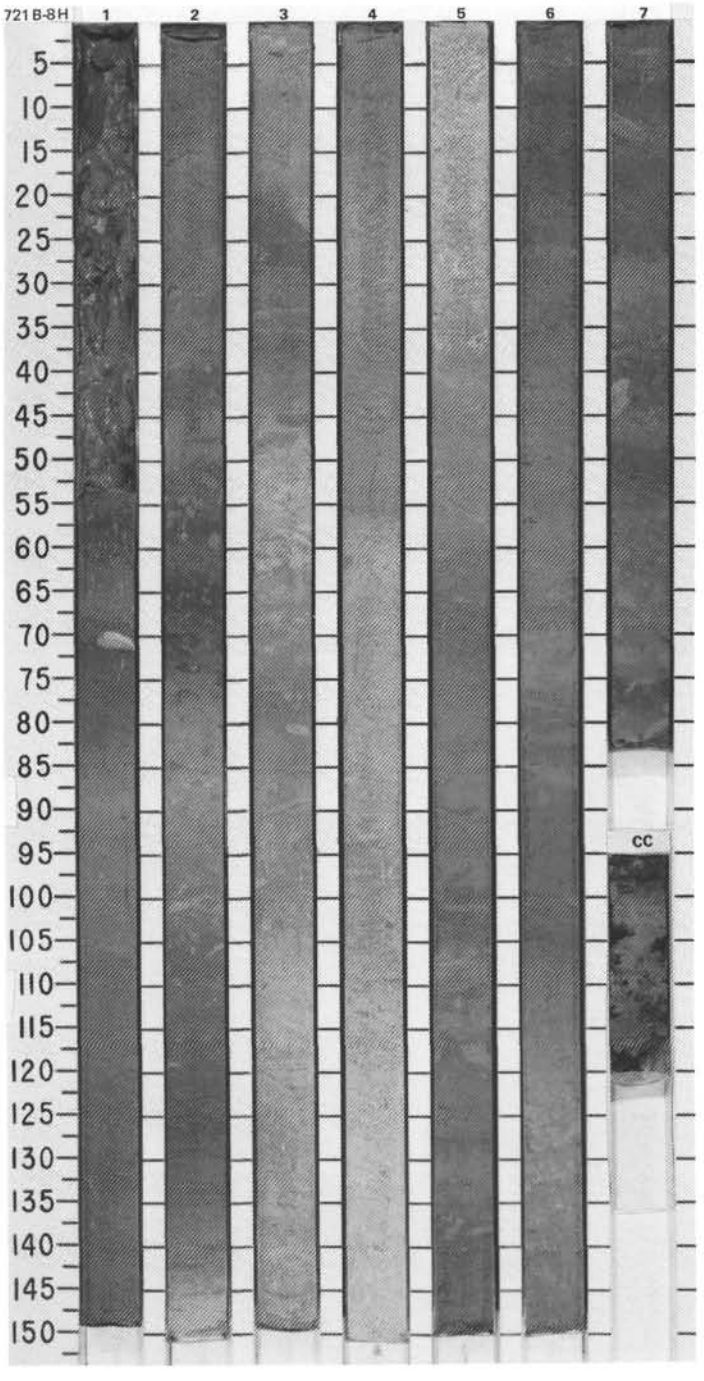
FORAMINIFER-BEARING NANNOFOSSIL OOZE

Section 1, 0-53 cm, very disturbed. Remainder of core is undisturbed.

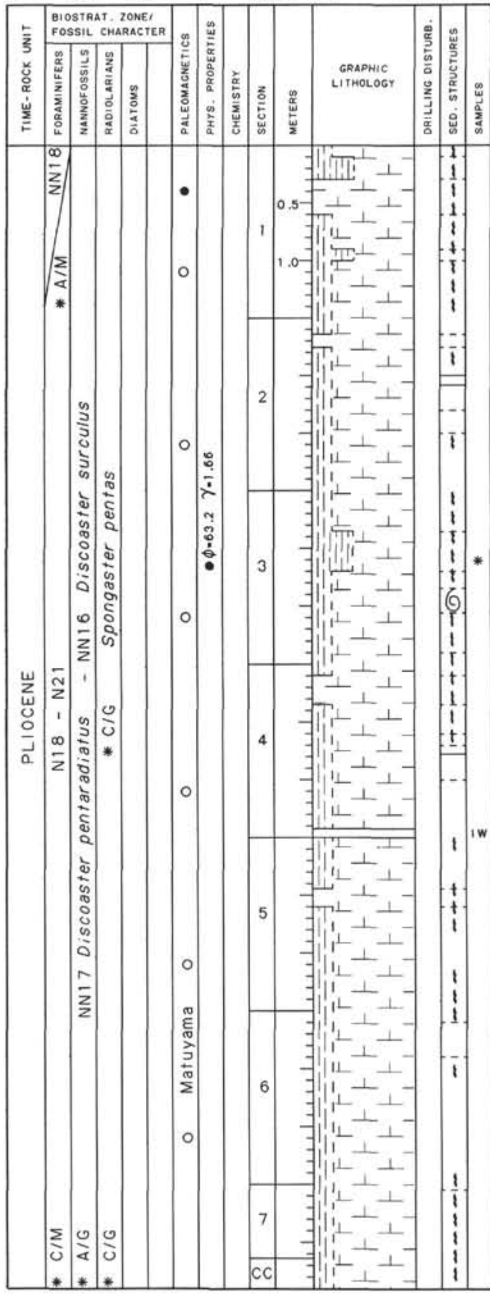
Major lithology: FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 7/1) to light olive gray (5Y 6/2) and olive (5Y 5/4, 5/3, 4/4). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	4, 70 D	6, 30 D
TEXTURE:		
Silt	20	20
Clay	80	80
COMPOSITION:		
Diatoms	3	5
Dolomite		Tr
Foraminifers	9	10
Inorganic calcite	9	Tr
Nannofossils	73	80
Quartz		Tr
Radiolarians	4	5
Silicoflagellates		Tr
Sponge spicules	1	



SITE 721 HOLE B CORE 9H CORED INTERVAL 2021.2-2030.8 mbsl; 76.4-86.0 mbsf



LITHOLOGIC DESCRIPTION

FORAMINIFER-BEARING NANNOFOSSIL OOZE

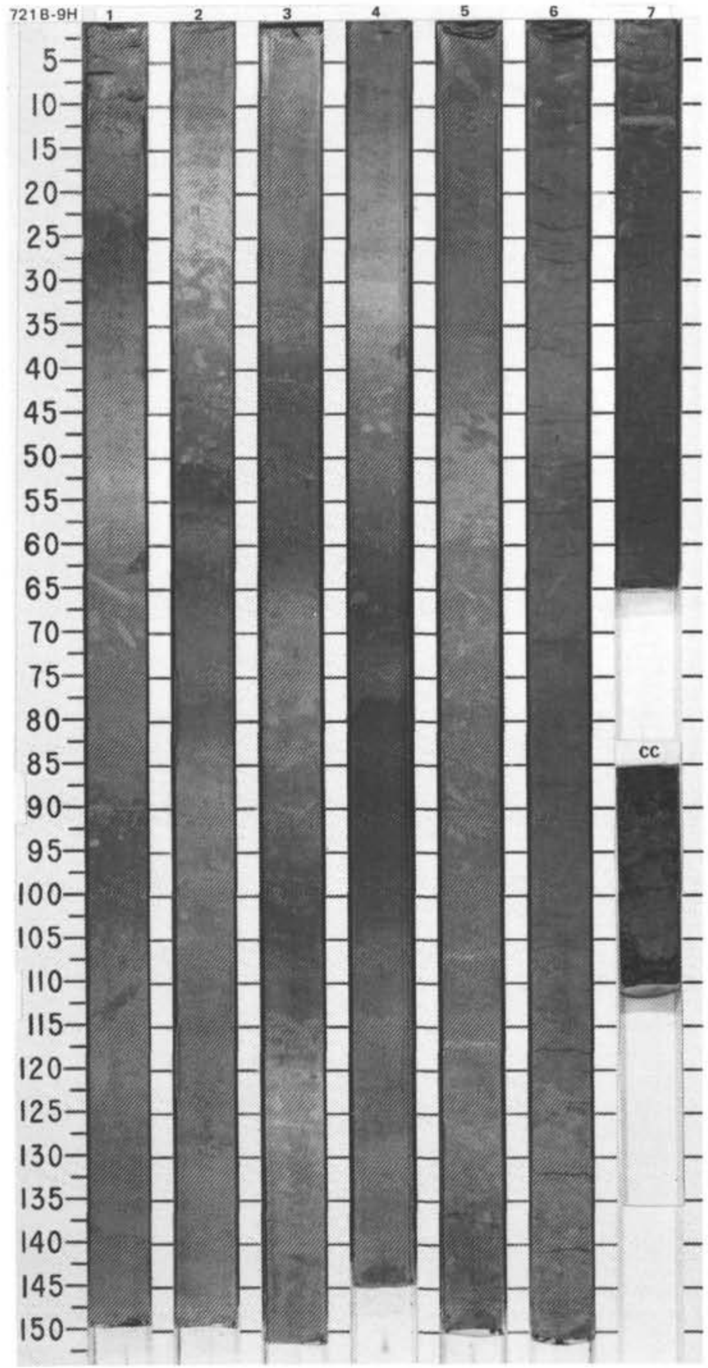
Section 1, 0-7 cm, slightly disturbed, 7-10 cm, soupy. Remainder of core is undisturbed.

Major lithology: *FORAMINIFER-BEARING NANNOFOSSIL OOZE.* Alternating light and dark bands of light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3, 4/4) and olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

Minor lithology: Marly nannofossil ooze, dark olive gray (5Y 3/2). Section 1, 10-28 and 90-100 cm, and Section 3, 35-60 cm. Moderate burrow-mottling.

SMEAR SLIDE SUMMARY (%):

	3, 61 D
TEXTURE:	
Silt	15
Clay	85
COMPOSITION:	
Clay	35
Foraminifers	10
Inorganic calcite	5
Mica	Tr
Nannofossils	40
Radiolarians	Tr
Unspec. minerals	10



SITE 721 HOLE B CORE 10X CORED INTERVAL 2030.8-2040.4 mbsl; 86.0-95.6 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/ FOSSIL CHARACTER:
- FORAMINIFERS: * C/M N18 - N21
- NANNOFOSSILS: * A/G NN16 *Discoaster surculus* - NN17 *Discoaster pentaradiatus*
- RADIOLARIANS: * C/G * F/M *Spongaster pentas*
- DIATOMS

PALEOMAGNETICS: O Gauss

PHYS. PROPERTIES: ●φ-65.6 γ-1.63; ●φ-64.9 γ-1.62; φ-63.1 γ-1.63

CHEMISTRY: IC-9.62, OC-0.96

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE

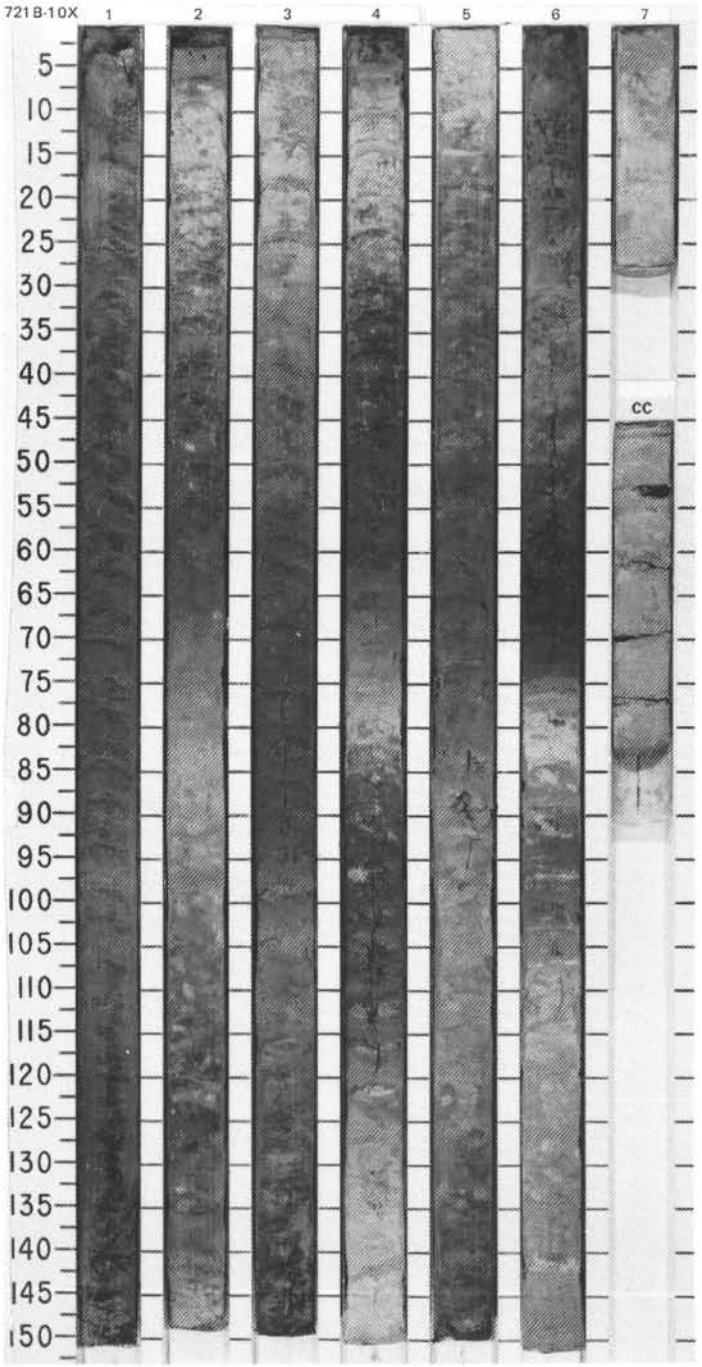
Section 5, 70-105 cm, slightly disturbed. Remainder of core is undisturbed

Major lithology: NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3, 4/4) and olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

Minor lithology: Marly nannofossil ooze, dark olive gray (5Y 3/2). Section 1, 35-72 and 120-150 cm, and Section 6, 43-74 cm. Moderate burrow-mottling.

SMEAR SLIDE SUMMARY (%):

	6, 61 D	6, 81 D
TEXTURE:		
Silt	10	5
Clay	90	95
COMPOSITION:		
Access. minerals	3	
Clay	59	20
Foraminifers	5	10
Inorganic calcite	6	5
Nannofossils	27	65
Quartz		Tr



SITE 721 HOLE B CORE 11X CORED INTERVAL 2040.4-2050.0 mbsl; 95.6-105.2 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS N18 - N21; NANNOFOSSILS NN16 *Discoaster surculus* - NN17 *Discoaster pentaradiatus*; RADIOLARIANS C/G * Spongaster pentas; DIATOMS

PALEOMAGNETICS: ● Gauss ●

PHYS. PROPERTIES: ●ϕ-64.0 γ-1.68 ●ϕ-57.5 γ-1.51 ϕ-71.0 γ-1.78 ●

CHEMISTRY: ● IC-6.88 OC-3.07

SECTION: 1 2 3 4 5 6 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY: VOID 96.01

DRILLING DISTURB.

SED. STRUCTURES: *

SAMPLES

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE

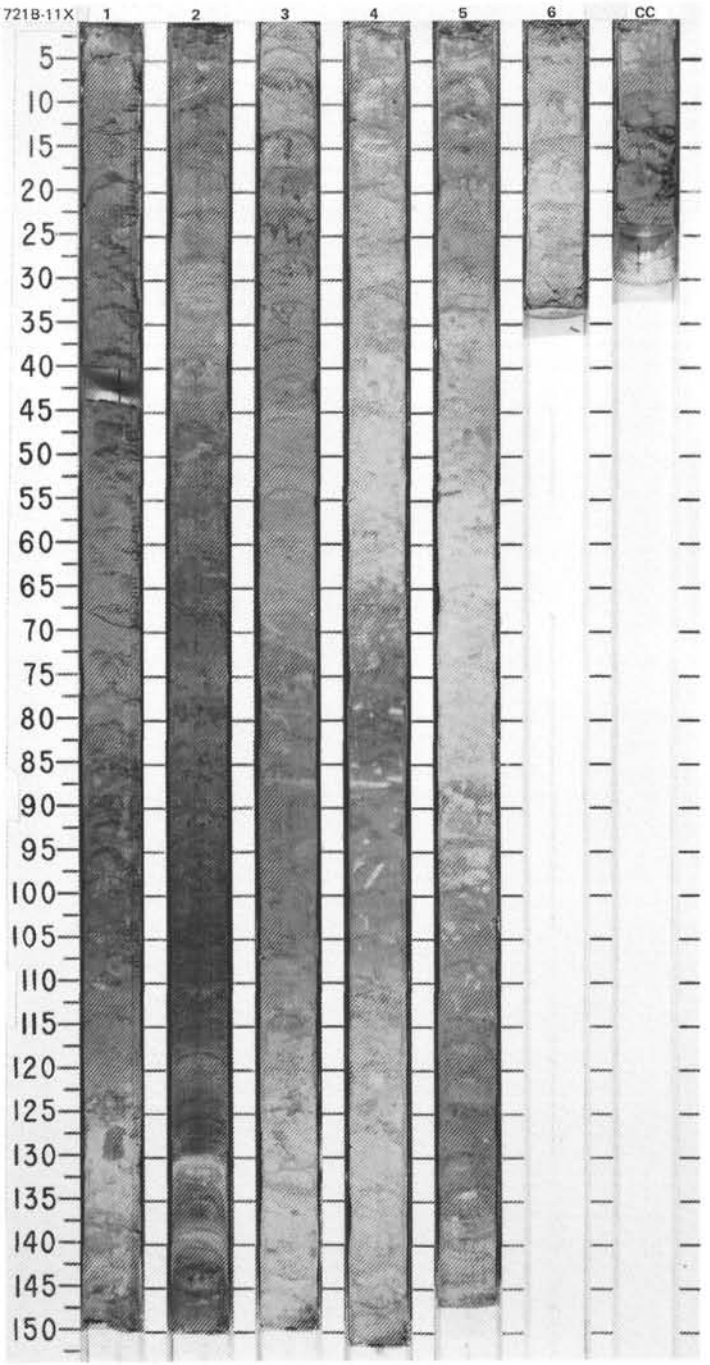
Void in Section 1, 40-43 cm. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3, 4/4) and olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

Minor lithology: Marly nannofossil ooze, dark olive gray (5Y 3/2). Section 2, 122-132 cm.

SMEAR SLIDE SUMMARY (%)

	3, 61 D
TEXTURE:	
Silt	10
Clay	90
COMPOSITION:	
Access. minerals	Tr
Clay	20
Foraminifers	Tr
Inorganic calcite	5
Nannofossils	70
Radiolarians	5



SITE 721 HOLE B CORE 12X CORED INTERVAL 2050.0-2059.6 mbsl; 105.2-114.8 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *C/M N18 - N21
- NANNOFOSSILS: *A/M
- RADIOLARIANS: *C/G *Spongaster pentas*
- DIATOMS:

PALEOMAGNETICS: NN16 *Discoaster surculus* - NN17 *Discoaster pentaradiatus*

PHYS. PROPERTIES: ●Φ-62.4 γ-1.65

CHEMISTRY: IC-8.38 OC-1.56

SECTION: 1, 2, 3, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: * * IW OG

LITHOLOGIC DESCRIPTION

FORAMINIFER-BEARING NANNOFOSSIL OOZE

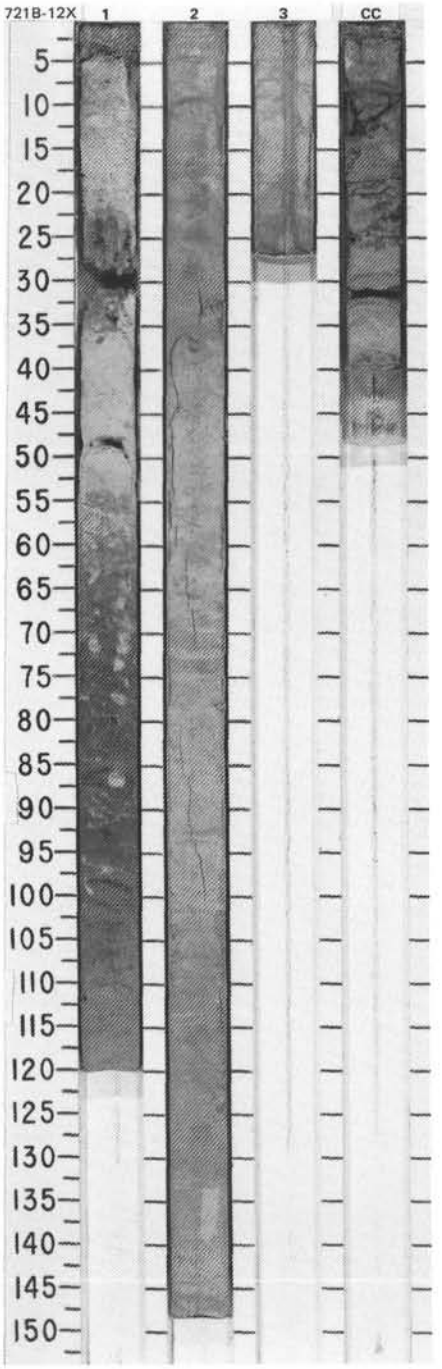
Section 1, 23-34 and 47-48 cm, soupy; 0-120 cm, slightly disturbed; and *28-31 cm, void. Remainder of core is undisturbed.*

Major lithology: FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3, 4/4) and olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

Minor lithology: Marly nannofossil ooze, dark olive gray (5Y 3/2). Section 1, 60-120 cm. Moderate burrow-mottling.

SMEAR SLIDE SUMMARY (%):

	1, 42 D	1, 88 D
TEXTURE:		
Silt	15	35
Clay	85	65
COMPOSITION:		
Clay	15	55
Foraminifers	10	15
Inorganic calcite	5	10
Mica		Tr
Nannofossils	70	15
Quartz	Tr	5
Siliceous frag.	Tr	



SITE 721 HOLE B CORE 13X CORED INTERVAL 2059.6-2069.2 mbsl; 114.8-124.4 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: * C/M; * A/M; * C/G
- NANNOFOSSILS: N18 - N21; NN16 - NN17; NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica* *A/M; * C/G *Spongaster pentas*
- RADIOLARIANS
- DIATOMS

PALEOMAGNETICS: ○ Gilbert ○ ○ ○ ● ◎ ● ● Gauss

PHYS. PROPERTIES: ● ϕ=62.0 γ=1.73; ● ϕ=61.7 γ=1.68; ● ϕ=62.1 γ=1.70

CHEMISTRY: IC=8.03 OC=0.60

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *

LITHOLOGIC DESCRIPTION

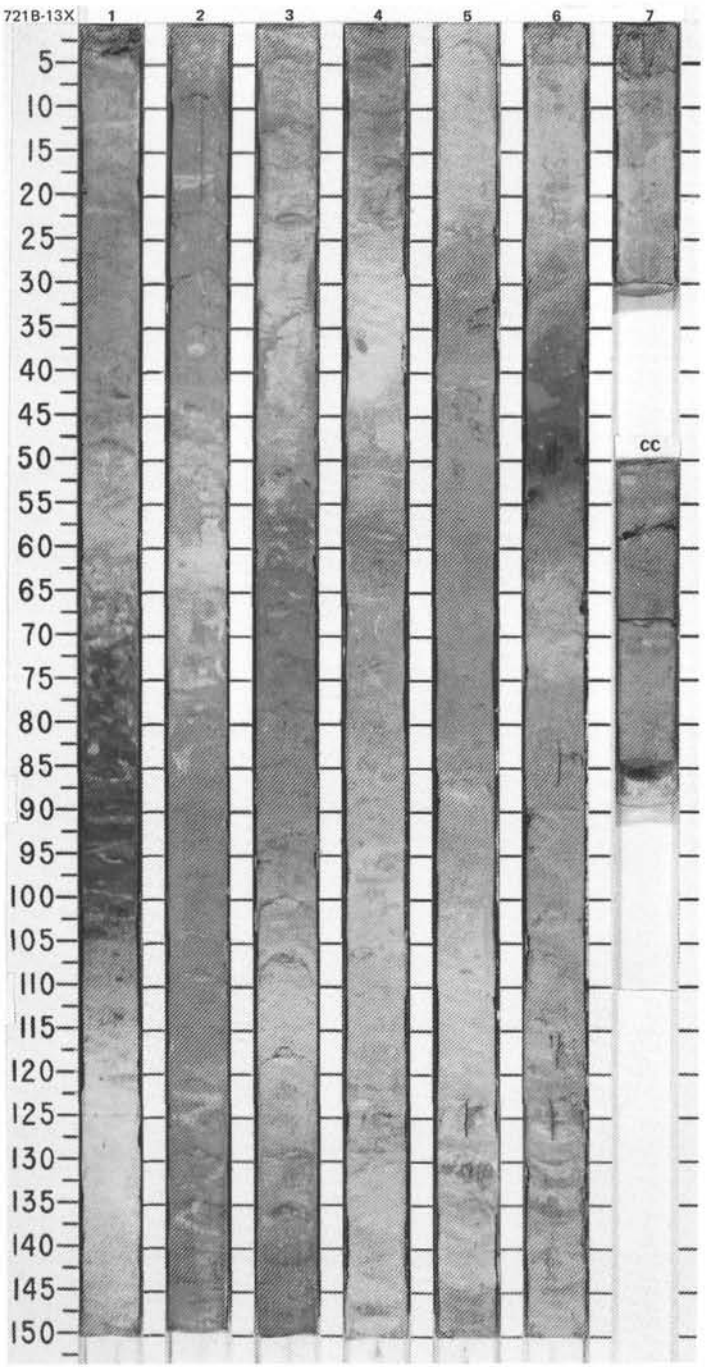
FORAMINIFER-BEARING NANNOFOSSIL OOZE

No drilling disturbance.

Major lithology: FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3, 4/4) and olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	4, 70 D
TEXTURE:	
Silt	10
Clay	90
COMPOSITION:	
Access. minerals	2
Clay	20
Foraminifers	10
Inorganic calcite	3
Mica	Tr
Nannofossils	65
Quartz	Tr



SITE 721 HOLE B CORE 14X CORED INTERVAL 2069.2-2078.9 mbsl; 124.4-134.1 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
PLIOCENE	*C/M	N18 - N21											
	*A/G	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenesta pseudoumbilica*											
	*C/G		*C/G *Spongaster pentas*										
					•								
					O	ϕ=61.7 γ=1.72 •							
					O	• ϕ=61.9 γ=1.68							
					O Gilbert	• ϕ=63.7 γ=1.64	TC=6.38 DC=1.37	1	0.5				
					O			2	1.0				
								3					
								4					*
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

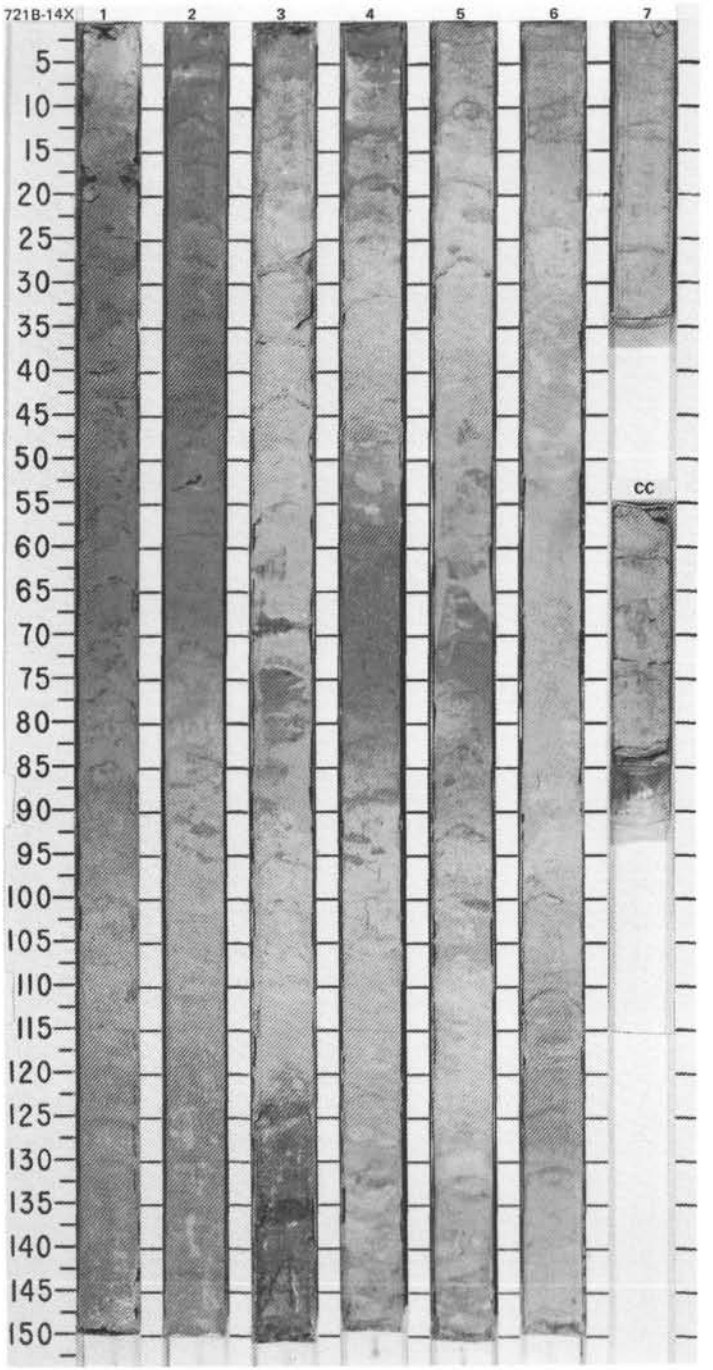
NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE

Minor drilling disturbance Section 1, 10-20 cm.

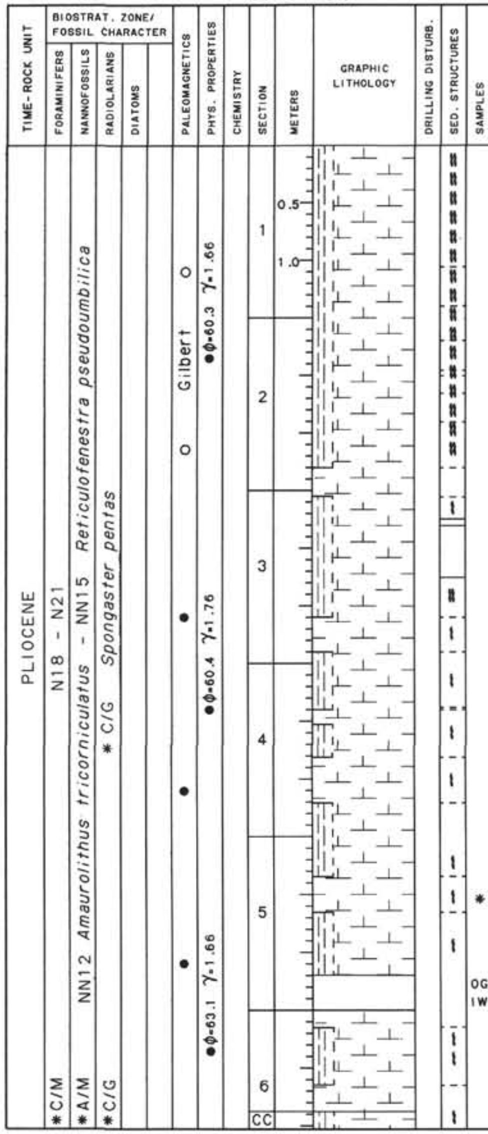
Major lithology: NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating lighter and darker sediments of light greenish gray (10Y 6/2, 6/4) to dark greenish gray (10Y 5/4, 5/2) and olive (5Y 4/3). Banding on a 5-130 cm scale. Minor bioturbation throughout. Dark layers generally have 10-20% more terrigenous silty clay than light layers.

SMEAR SLIDE SUMMARY (%):

	4, 46 D
TEXTURE:	
Silt	20
Clay	80
COMPOSITION:	
Clay	10
Foraminifers	5
Inorganic calcite	Tr
Nannofossils	80
Quartz	Tr
Radiolarians	5



SITE 721 HOLE B CORE 15X CORED INTERVAL



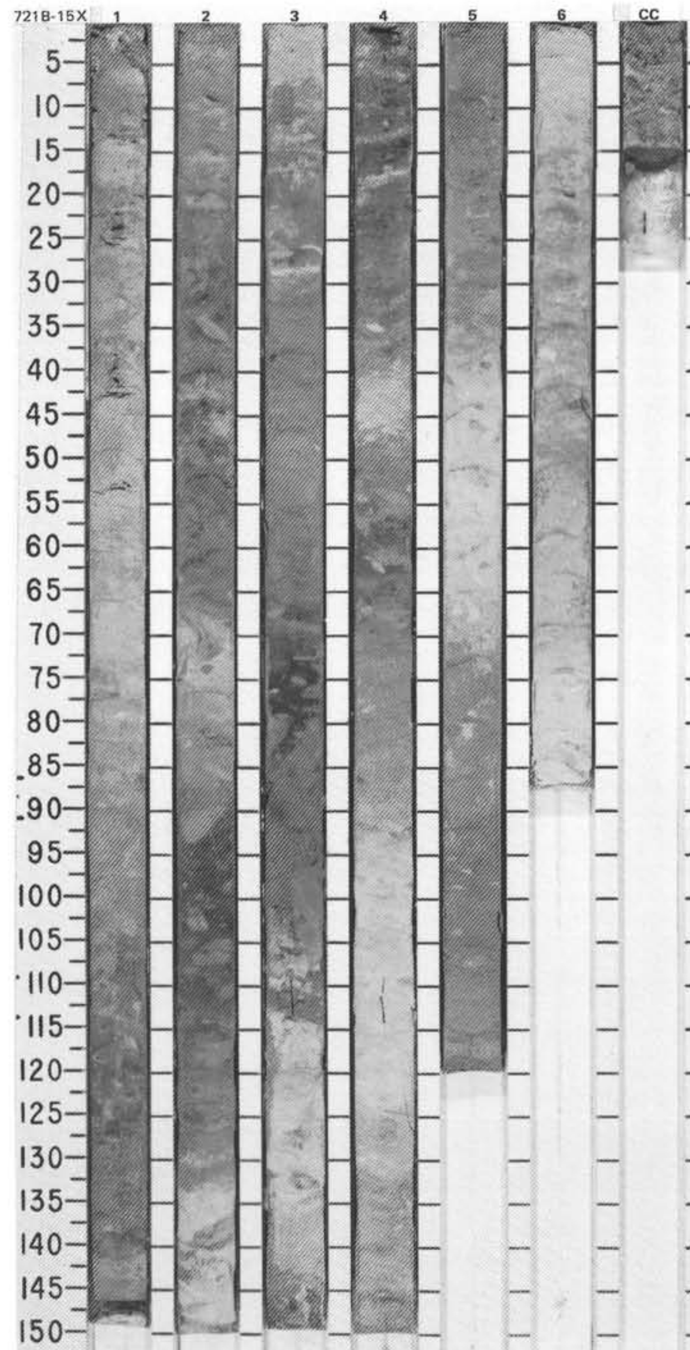
LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE No drilling disturbance.

Major lithology: NANNOFOSSIL OOZE. Alternating lighter and darker bands of light olive gray (5Y 6/2) and light gray (5Y 7/1) to olive gray (5Y 5/2) and olive (5Y 5/3, 4/3, 4/4). Banding on the 10-100 cm scale. Bioturbation absent to moderate. Dark layers generally have 10-20% more terrigenous silty clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	5, 54 D
TEXTURE:	
Silt	10
Clay	90
COMPOSITION:	
Inorganic calcite	2
Nannofossils	90
Radiolarians	3
Unspec. minerals	5



SITE 721 HOLE B CORE 16X CORED INTERVAL 2088.6-2098.3 mbsl; 143.8-153.5 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
PLIOCENE													
*C/M	N18 - N21												
*A/M		NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenesta pseudoumbilica*											
*C/G			* C/G *Spongaster pentas*										
					O								
								1	0.5				
									1.0				
					O	O							
								2					
					O	O	Gilbert						
								3					
								4					
					O								
								5					
								6					
								7					
								CC					

PALEOMAGNETICS: ● ϕ=63.5 γ=1.68

PHYS. PROPERTIES: ● ϕ=61.7 γ=1.65; ● ϕ=61.1 γ=1.72

CHEMISTRY: ● TC=7.78 OC=0.70

SAMPLES: *

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE

Moderate drilling disturbance, CC.

Major lithology: NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating lighter and darker bands of light gray (5Y 7/1, 7/2) to pale olive (5Y 6/3) and olive (5Y 5/3, 5/4, 4/3, 4/4). Banding on a 20-150 cm scale. Bioturbation absent to moderate. Dark layers generally have 10-20% more terrigenous silty clay than do light layers.

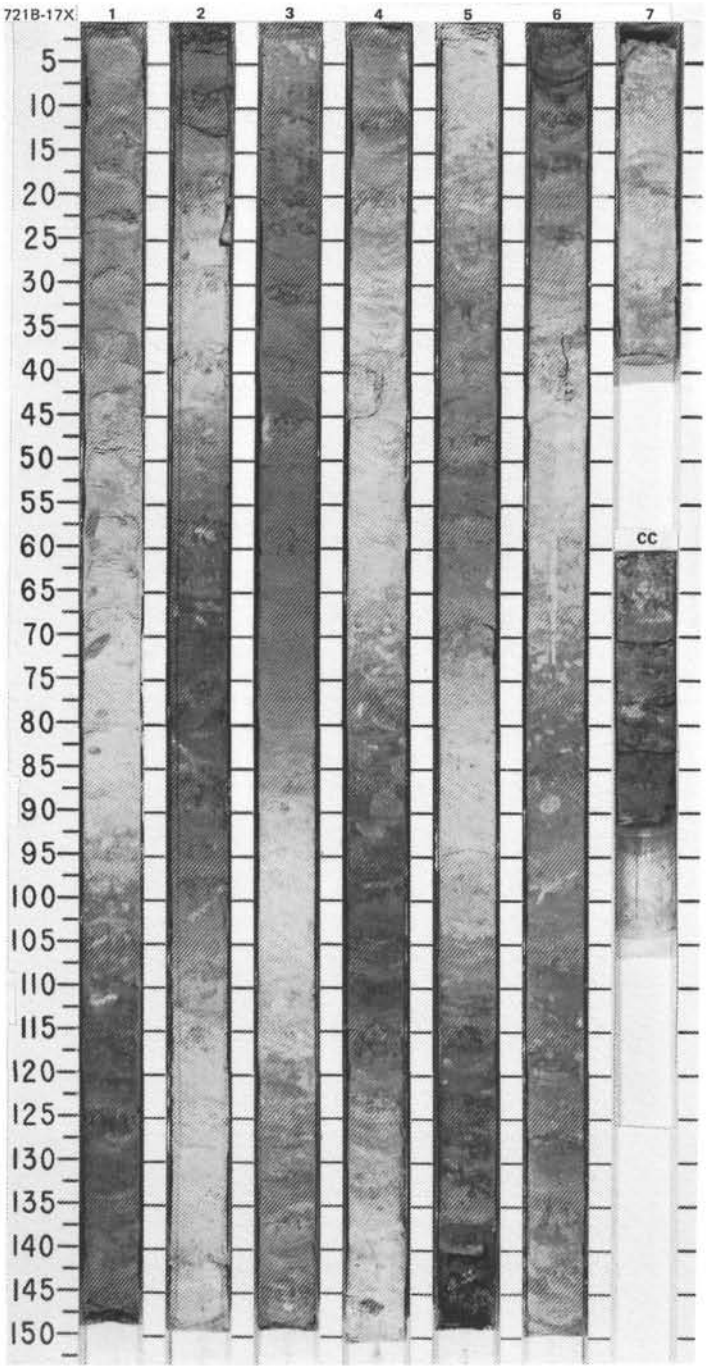
SMEAR SLIDE SUMMARY (%):

	3, 8 D
TEXTURE:	
Silt	10
Clay	90
COMPOSITION:	
Access. minerals	5
Clay	10
Diatoms	Tr
Foraminifers	10
Inorganic calcite	Tr
Mica	Tr
Nannofossils	75
Radiolarians	Tr

SITE 721 HOLE B CORE 17X CORED INTERVAL 2098.3-2108.0 mbsl; 153.5-163.2 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
PLIOCENE	*C/M	N18 - N21												
	*A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*												
	*C/G		* C/G	*Stichocorys peregrina*										
					• Sidufall	• Gilbert								
								1	0.5					NANNOFOSSIL CHALK
									1.0					Drilling disturbance absent.
								2						Major lithology: NANNOFOSSIL CHALK. Alternating lighter and darker bands range from light gray (5Y 7/1), gray (5Y 6/1), and olive (5Y 5/3, 4/3), to olive gray (5Y 5/2). Banding is on the 10-150 cm scale, often mottled at the contacts. Gradational contacts. Bioturbation absent to minor. Dark layers generally have 10-20% more terrigenous silty clay than do light layers.
								3						
								4						
								5						
								6						
								7						
								CC						

721B-17X 1 2 3 4 5 6 7



SITE 721 HOLE B CORE 18X CORED INTERVAL 2108.0-2117.7 mbsl; 163.2-172.9 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/ FOSSIL CHARACTER:
- FORAMINIFERS: N18 - N21 *F/M
- NANNOFOSSILS: NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenesta pseudoumbilica* *A/G
- RADIOLARIANS: * C/G *Stichocorys peregrina* *C/G
- DIATOMS:

PALEOMAGNETICS: O; ● Thvera; ●

PHYS. PROPERTIES: ●Φ=62.6 γ=1.65; ●Φ=63.3 γ=1.68; ●Φ=63.5 γ=1.66

CHEMISTRY: ● IC=6.77 OC=1.49

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: * OG IW *

LITHOLOGIC DESCRIPTION

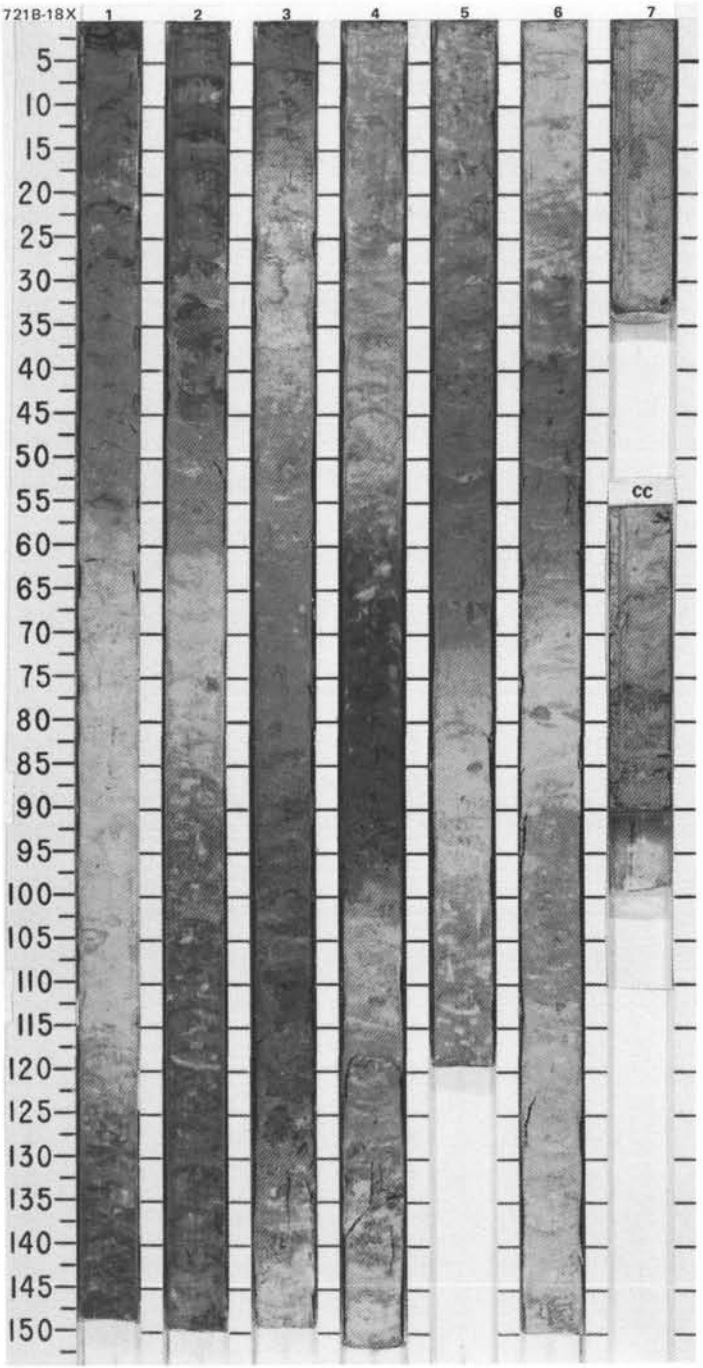
NANNOFOSSIL CHALK to FORAMINIFER-BEARING NANNOFOSSIL CHALK

Early stages of drilling biscuits; some splitting disturbance.

Major lithology: NANNOFOSSIL CHALK to FORAMINIFER-BEARING NANNOFOSSIL CHALK. Alternating lighter and darker bands on a 10-70 cm scale, light gray (5Y 7/1), gray (5Y 6/1), light olive gray (5Y 6/2), and pale olive (5Y 6/3) to olive (5Y 5/3, 4/3). Bioturbation absent to moderate. Dark layers generally have 10-20% more terrigenous silty clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	1, 84 D	6, 45 D
TEXTURE:		
Sand	5	5
Silt	10	10
Clay	85	85
COMPOSITION:		
Access. minerals		1
Diatoms	Tr	Tr
Foraminifers	5	3
Volcanic glass		Tr
Inorganic calcite	10	10
Mica	Tr	Tr
Nannofossils	85	85
Quartz	Tr	1
Radiolarians	Tr	Tr
Silicoflagellates	Tr	Tr
Sponge spicules	Tr	Tr



SITE 721 HOLE B CORE 19X CORED INTERVAL 2117.7-2127.4 mbsl; 172.9-182.6 mbsf

TIME-ROCK UNIT: MIOCENE / PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER

	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS
	*F/M	N18 - N21		
	*A/M	NN11 *Discoaster quinqueramus*	*A/M NN12 *Amaurolithus tricorniculatus*	
	*C/G		* C/G NN15 *Reticulofenestra pseudoumbilica*	

PALEOMAGNETICS: O O O O Gilbert

PHYS. PROPERTIES: ●ϕ=63.7 γ=1.63; ●ϕ=61.0 γ=1.71; ●ϕ=63.4 γ=1.62

CHEMISTRY: IC=7.26, OC=1.97

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *, *, *, *

LITHOLOGIC DESCRIPTION

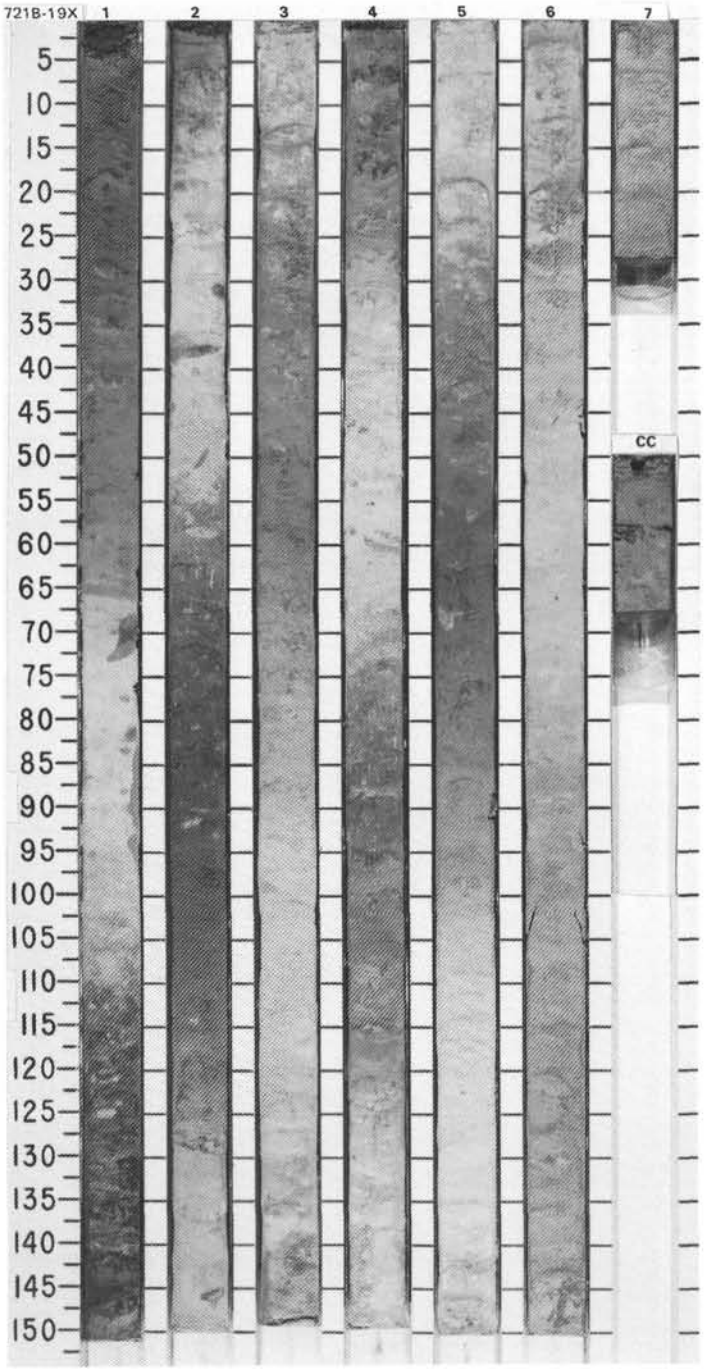
NANNOFOSSIL CHALK

Undisturbed core.

Major lithology: NANNOFOSSIL CHALK. Alternating lighter and darker bands range from light gray (5Y 7/1), light olive gray (5Y 6/2), and pale olive (5Y 6/3) to olive (5Y 5/4, 7/3, 5/3). Bioturbation absent to moderate. Light layers generally have 10-20% less terrigenous silty clay than do dark layers.

SMEAR SLIDE SUMMARY (%):

	2, 85 D	4, 55 D	6, 65 D
TEXTURE:			
Sand		2	2
Silt	10	8	8
Clay	90	90	90
COMPOSITION:			
Access. minerals	1	Tr	Tr
Foraminifers	Tr	2	2
Volcanic glass			Tr
Inorganic calcite	8	7	7
Mica		Tr	Tr
Nannofossils	90	90	90
Quartz	Tr		Tr
Radiolarians	Tr	Tr	Tr
Silicoflagellates	1	1	1
Sponge spicules	Tr		



SITE 721 HOLE B CORE 20X CORED INTERVAL 2127.4-2137.1 mbsl; 182.6-192.3 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: N18 - N21
- NANNOFOSSILS: NN11 *Discoaster quinqueramus*
- RADIOLARIANS: C/G ✱ *Stichocorys peregrina*
- DIATOMS:

PALEOMAGNETICS: O

PHYS. PROPERTIES: O Gilbert

CHEMISTRY: O

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

● ϕ=58.6 γ=1.69
● IC=7.31 OC=0.92
● ϕ=62.4 γ=1.66
● ϕ=61.6 γ=1.70

LITHOLOGIC DESCRIPTION

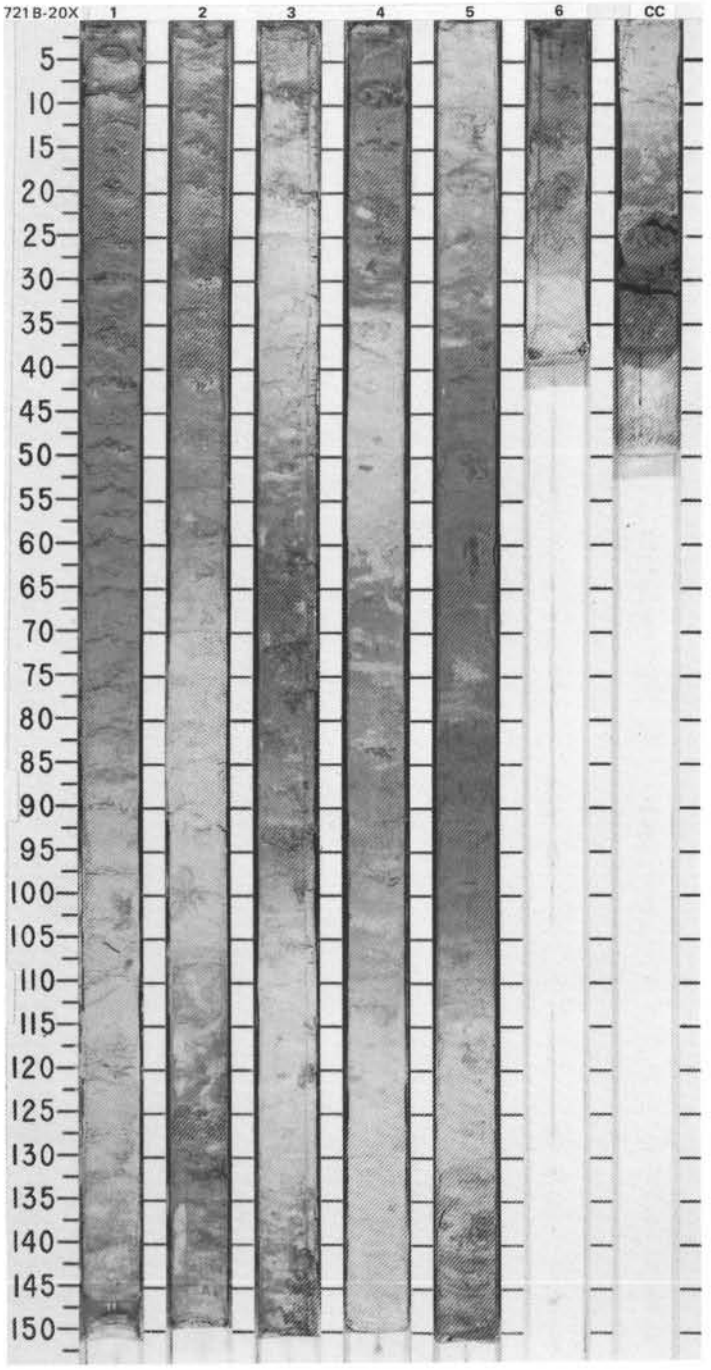
NANNOFOSSIL CHALK to FORAMINIFER-BEARING NANNOFOSSIL CHALK

Slightly disturbed, Section 6, 0-30 cm; very disturbed CC, 20-30 cm.

Major lithology: NANNOFOSSIL CHALK to FORAMINIFER-BEARING NANNOFOSSIL CHALK. Alternating lighter and darker layers. Colors range from light gray (5Y 7/1), light olive gray (5Y 6/2), and pale olive (5Y 6/3), to olive (5Y 5/4, 4/4). Banding on a scale of 10-70 cm. Bioturbation, absent to moderate, shows up as mottling over gradational contacts. Light layers generally have 10-20% less terrigenous silty clay than do dark layers.

SMEAR SLIDE SUMMARY (%):

	3, 115 D	4, 12 D
TEXTURE:		
Sand	5	
Silt	5	20
Clay	90	80
COMPOSITION:		
Access. minerals	Tr	1
Diatoms	Tr	
Dolomite		Tr
Foraminifers	5	
Volcanic glass	Tr	
Inorganic calcite	5	15
Mica	Tr	Tr
Nannofossils	90	80
Quartz	Tr	Tr
Radiolarians	Tr	Tr
Silicoflagellates	Tr	4
Sponge spicules	Tr	Tr



SITE 721 HOLE B CORE 21X CORED INTERVAL 2137.1-2146.8 mbsl; 192.3-202.0 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
MIOCENE	*C/M N18 - N21	*A/G NN11 *Discoaster quinqueramus*	*C/G *Stichocorys peregrina*		O	● ϕ=61.1 γ=1.66	● IC=8.63 OC=0.28	1	0.5 1.0				
					O			2					*
								3					
								CC					

LITHOLOGIC DESCRIPTION

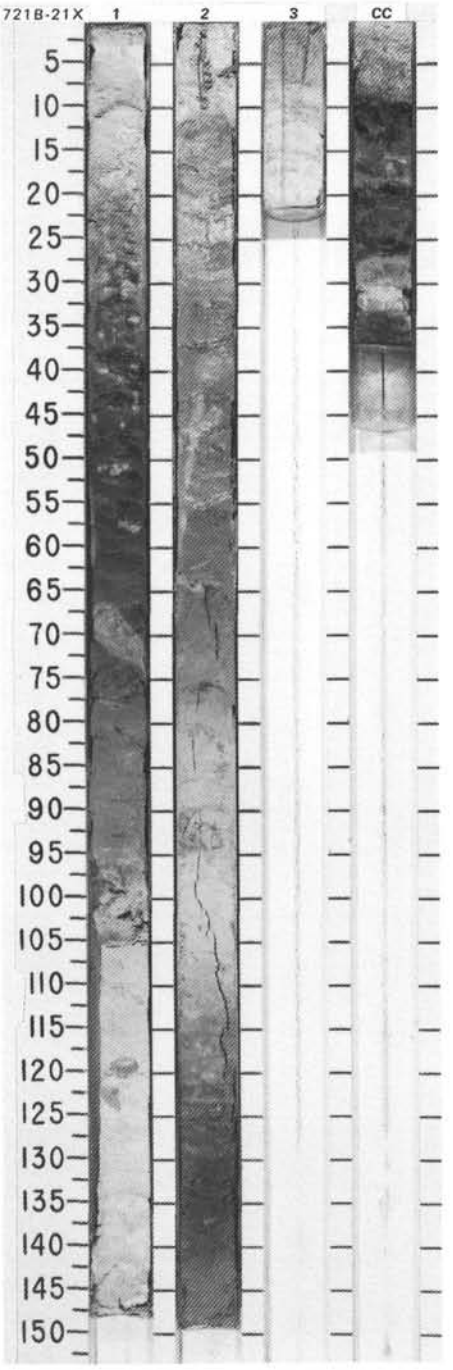
NANNOFOSSIL CHALK

Slightly disturbed, Section 1, 95-105 cm; Section 3, CC, 10-25 cm.

Major lithology: NANNOFOSSIL CHALK. Alternating lighter and darker layers. Colors range from light gray (5Y 7/1) and olive gray (5Y 5/2) to olive gray (5Y 5/3, 4/3, 5/4). Layering is on a scale of 15-50 cm. Bioturbation absent to strong. Contacts mottled by bioturbation. Light layers generally have 10-20% less terrigenous silty clay than do dark layers.

SMEAR SLIDE SUMMARY (%):

	2, 35 D
TEXTURE:	
Silt	10
Clay	90
COMPOSITION:	
Access. minerals	Tr
Volcanic glass	Tr
Inorganic calcite	9
Mica	1
Nannofossils	90
Quartz	Tr
Radiolarians	Tr
Silicoflagellates	Tr



SITE 721 HOLE B CORE 22X CORED INTERVAL 2146.8-2156.5 mbsl; 202.0-211.7 mbsf

TIME-ROCK UNIT: *C/M; *A/G; *C/G

BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS: N16 - N17; NANNOFOSSILS: NN11 *Discoaster quinqueramus*; RADIOLARIANS: * C/G *Stichocorys peregrina*; DIATOMS

PALEOMAGNETICS: • Chronozone 5 • • O O O Gilbert

PHYS. PROPERTIES: • ϕ=58.6 γ=1.75 • ϕ=61.7 γ=1.72 • ϕ=63.2 γ=1.69

CHEMISTRY: IC=9.06 OC=0.78

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.: O

SED. STRUCTURES

SAMPLES: OG IW *

LITHOLOGIC DESCRIPTION

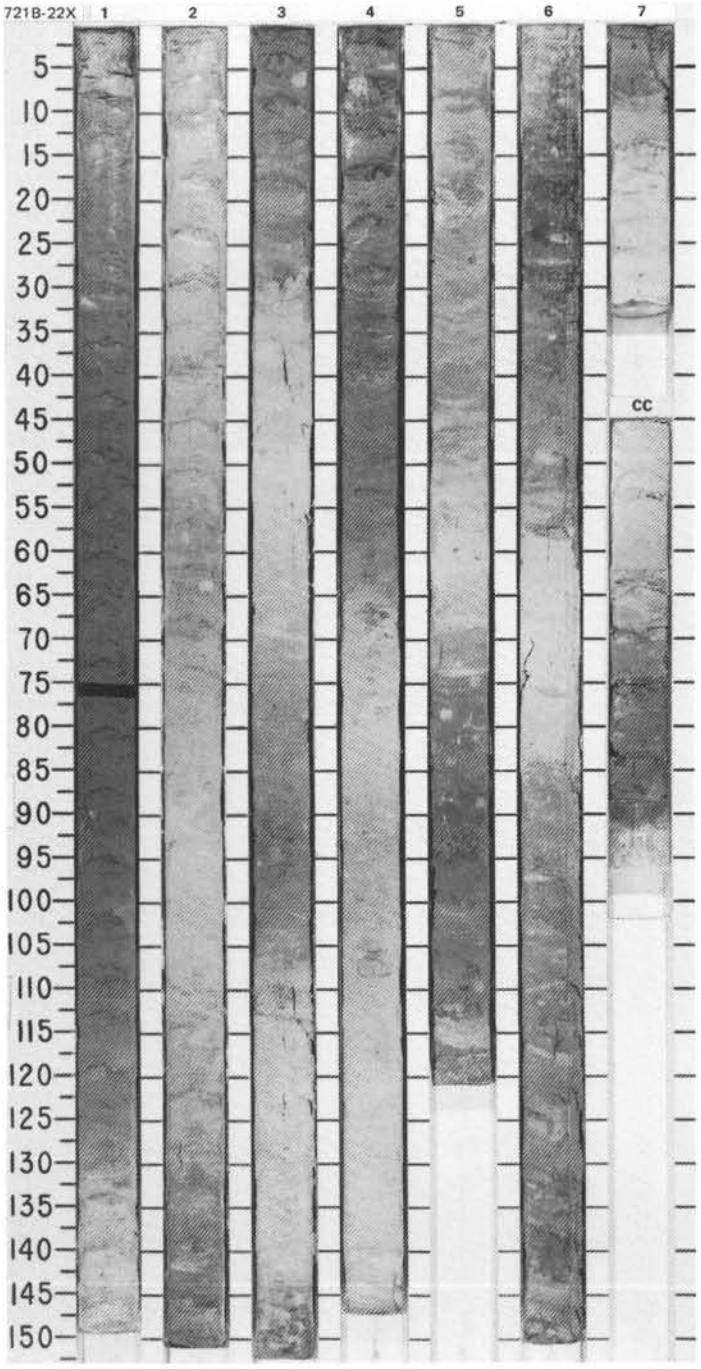
NANNOFOSSIL CHALK

Undisturbed core.

Major lithology: NANNOFOSSIL CHALK. Alternating lighter and darker layers. Colors range from light gray (5Y 7/1) and light olive gray (5Y 5/4, 4/4, 4/3) to live gray (5Y 4/2). Layers range from 20-130 cm. Bioturbation absent to moderate, causing mottled gradational contacts. Light layers generally have 10-20% less terrigenous silty clay than the dark layers.

SMEAR SLIDE SUMMARY (%):

	7, 28 D
TEXTURE:	
Sand	2
Silt	8
Clay	90
COMPOSITION:	
Diatoms	Tr
Foraminifers	2
Inorganic calcite	3
Nannofossils	85
Silicoflagellates	10
Sponge spicules	Tr



SITE 721 HOLE B CORE 23X CORED INTERVAL 2156.5-2166.1 mbsl; 211.7-221.3 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIOCENE	N16 - N17	NN11 *Discoaster quinqueramus*	*Stichocorys peregrina*		● ● ○	γ=1.74 ● φ=57.3		1 2 3 4 CC	0.5 1.0				PP *
	* C/M	* A/M C/G *	* C/G										

BIOSTRAT. ZONE/ FOSSIL CHARACTER

LITHOLOGIC DESCRIPTION

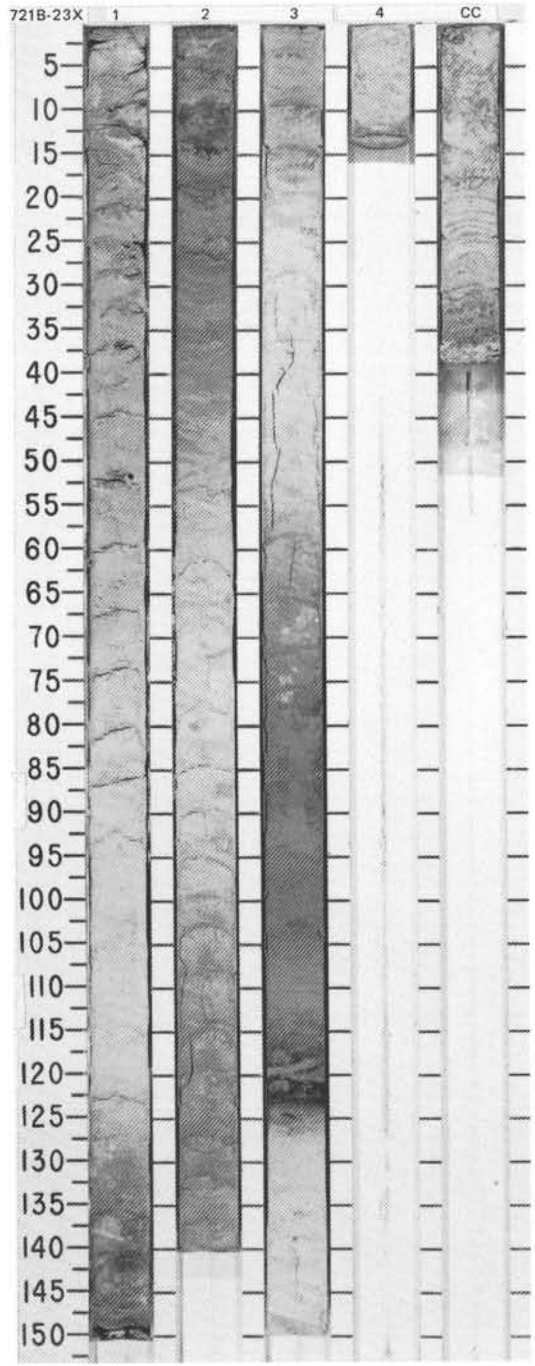
NANNOFOSSIL CHALK

CC disturbed, 0-20 cm.

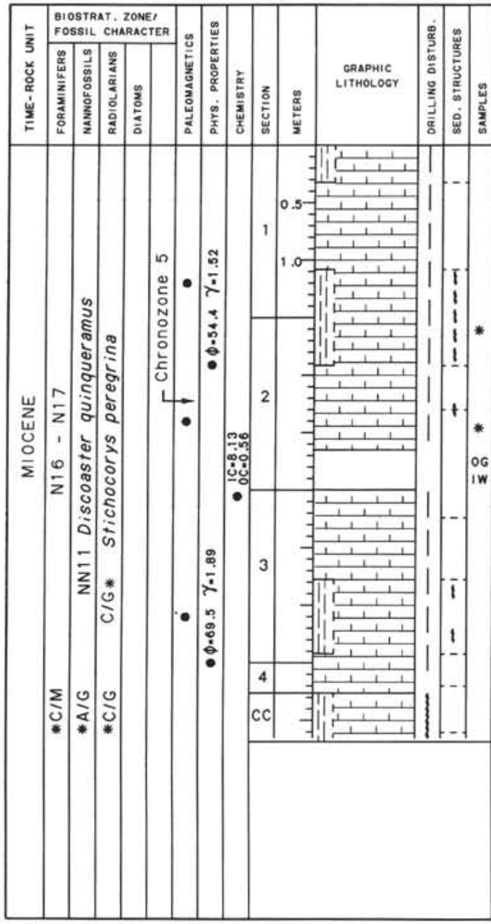
Major lithology: NANNOFOSSIL CHALK. Alternating light and dark layers. Color ranges from light gray (5Y 7/1, 7/2), pale olive (5Y 6/3), and olive (5Y 5/3, 4/3) to very dark gray (5Y 3/1). Layers range from 10-70 cm thick. Bioturbation ranges from absent to moderate; mottling over gradational contacts. Light layers generally have 10-20% less terrigenous silty clay than do dark layers.

SMEAR SLIDE SUMMARY (%):

	3, 135 D
TEXTURE:	
Sand	1
Silt	5
Clay	94
COMPOSITION:	
Access. minerals	Tr
Dolomite	Tr
Foraminifers	Tr
Inorganic calcite	5
Mica	Tr
Nannofossils	85
Silicoflagellates	10
Sponge spicules	Tr



SITE 721 HOLE B CORE 24X CORED INTERVAL 2166.1-2175.3 mbsl; 221.3-230.5 mbsf



LITHOLOGIC DESCRIPTION

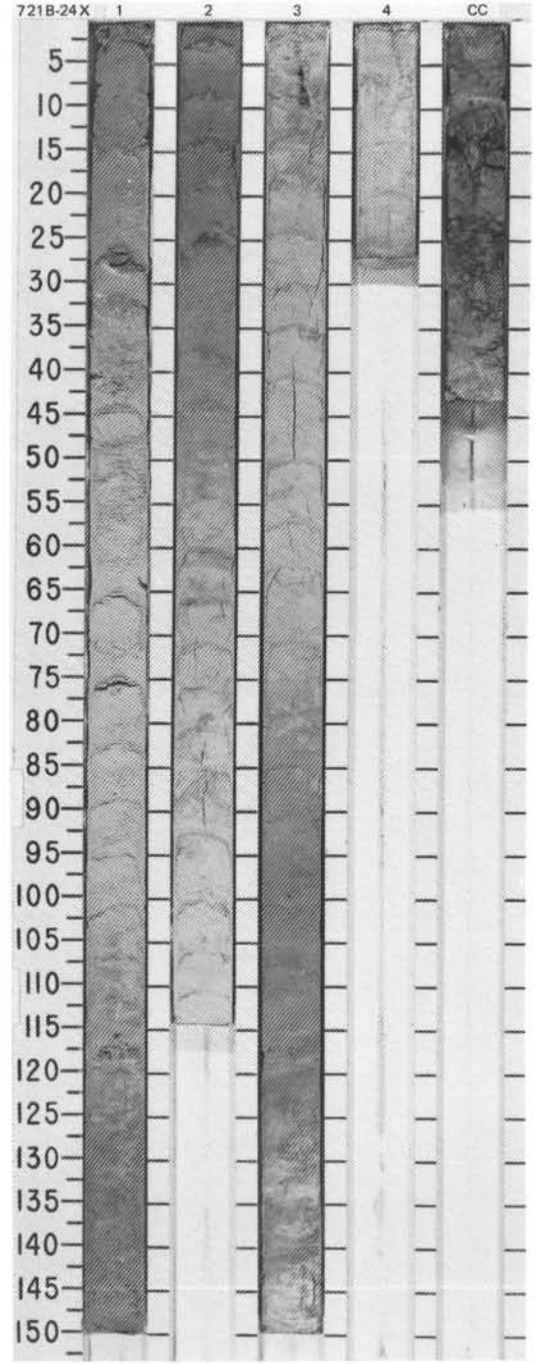
NANNOFOSSIL CHALK

Drilling biscuits forming; slightly disturbed throughout. CC very disturbed.

Major lithology: NANNOFOSSIL CHALK. Alternating light and dark layers. Color ranges from light gray (5Y 7/1), light olive gray (5Y 6/2), and pale olive (5Y 6/3) to olive (5Y 4/3, 5/3). Bioturbation absent to minor. Dark layers generally have 10-20% more terrigenous silty clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	2, 11 D	2, 96 D
TEXTURE:		
Sand	Tr	
Silt	5	10
Clay	95	90
COMPOSITION:		
Access. minerals		Tr
Diatoms	Tr	
Foraminifers	5	Tr
Inorganic calcite	3	2
Nannofossils	92	88
Quartz	Tr	Tr
Radiolarians	Tr	Tr
Silicoflagellates	Tr	10
Sponge spicules		Tr



SITE 721 HOLE B CORE 25X CORED INTERVAL 2175.3-2184.9 mbsl; 230.5-240.1 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *C/M N16 - N17
- NANNOFOSSILS: *A/G NN11 *Discoaster quinqueramus*
- RADIOLARIANS: *C/G *
- DIATOMS: *C/G *Didymocyrtis penultima*

PALEOMAGNETICS: • • • • • Chronozone 5

PHYS. PROPERTIES: • ϕ=61.3 γ=1.75 • ϕ=59.8 γ=1.71 • ϕ=60.2 γ=1.66

CHEMISTRY: • IC=8.56 OC=0.37

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *

LITHOLOGIC DESCRIPTION

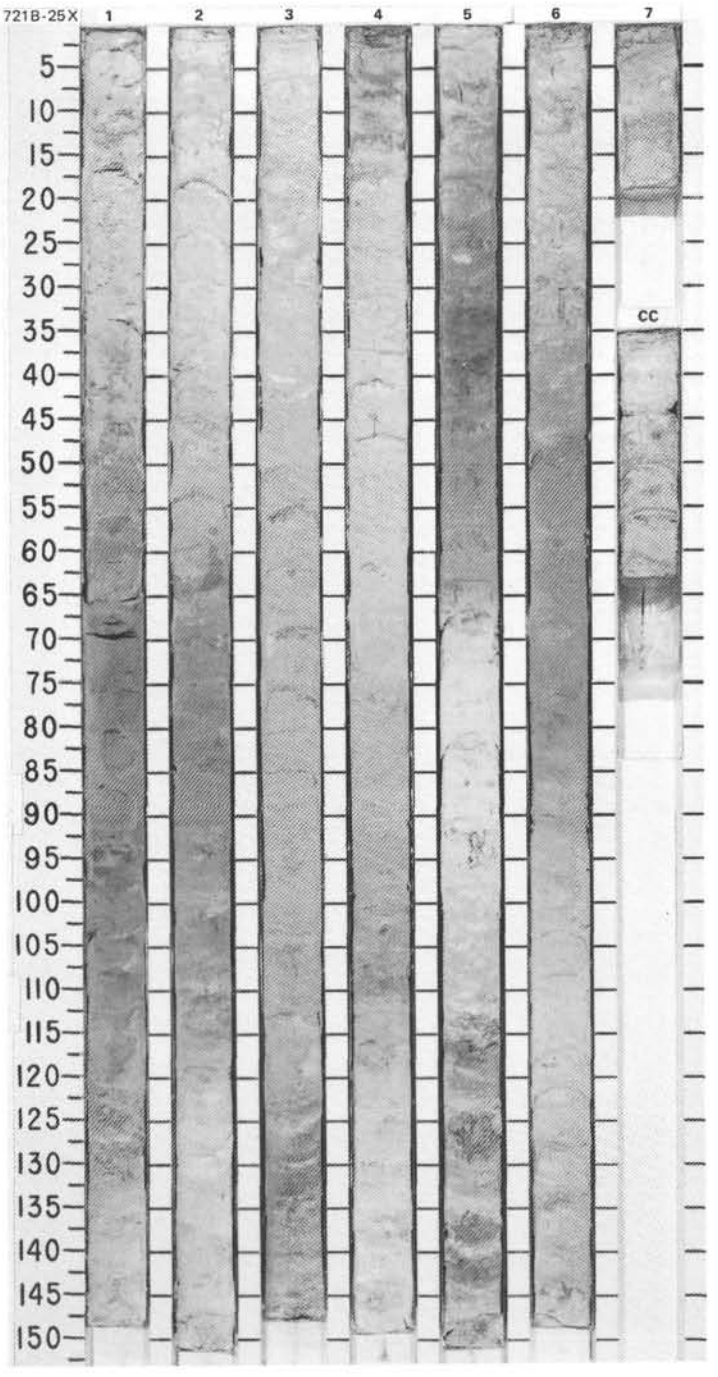
NANNOFOSSIL CHALK to FORAMINIFER-BEARING NANNOFOSSIL CHALK

Drilling biscuits throughout; slightly disturbed.

Major lithology: NANNOFOSSIL CHALK to FORAMINIFER-BEARING NANNOFOSSIL CHALK. Alternating light and dark layers. Colors range from light gray (5Y 7/1), gray (5Y 6/1), light olive gray (5Y 6/2), and pale olive (5Y 6/3), to olive (5Y 5/3). Light layers generally have less terrigenous silty clay than do *dark layers*.

SMEAR SLIDE SUMMARY (%):

	1, 91 D	5, 85 D
TEXTURE:		
Sand		1
Silt	15	20
Clay	85	79
COMPOSITION:		
Diatoms	Tr	
Dolomite	Tr	
Foraminifers		5
Volcanic glass	Tr	Tr
Inorganic calcite	10	5
Mica	Tr	
Nannofossils	85	85
Quartz	Tr	2
Radiolarians	Tr	1
Silicoflagellates	5	2
Sponge spicules	Tr	Tr



SITE 721 HOLE B CORE 26X CORED INTERVAL 2184.9-2194.6 mbsl; 240.1-249.8 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
MIOCENE	N16 - N17	NN11 *Discoaster quinqueramus*	*C/G * C/G	*Didymocyrtis penultima*	O	● ϕ=64.9 γ=1.62	● ϕ=61.2 γ=1.67	IC=5.80 OC=0.22	1 2 3 4 CC	0.5 1.0			* *

LITHOLOGIC DESCRIPTION

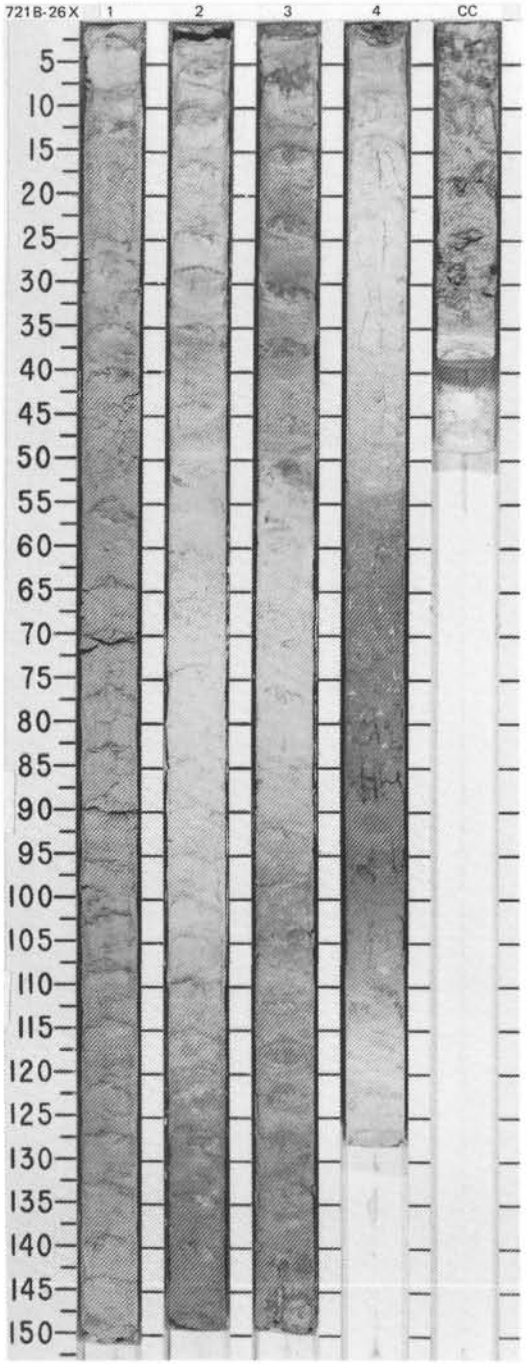
NANNOFOSSIL CHALK

Drilling biscuits throughout; slightly disturbed.

Major lithology: NANNOFOSSIL CHALK. Alternating light and dark layers, ranging from light olive gray (5Y 6/2) to light gray (5Y 7/1) for light layers, and olive (5Y 5/3) to pale olive (5Y 6/3) for dark layers. Light layers generally have *less terrigenous silty clay than do dark layers.*

SMEAR SLIDE SUMMARY (%):

	2, 59 D	4, 11 D
TEXTURE:		
Silt	5	5
Clay	95	95
COMPOSITION:		
Diatoms	Tr	Tr
Foraminifers	Tr	5
Volcanic glass		Tr
Inorganic calcite	3	2
Mica	Tr	Tr
Nannofossils	95	93
Quartz		Tr
Radiolarians		Tr
Siliceoflagellates	2	Tr
Sponge spicules	Tr	



SITE 721 HOLE B CORE 27X CORED INTERVAL 2194.6-2204.4mbsl; 249.8-259.6 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
MIOCENE	N16 - N17	NN11 *Discoaster quinqueramus*	* C/G hiatus *Didymocyris penultima*		O	●ϕ=60.6 γ=1.61 ●ϕ=65.3 γ=1.58	IC=8.19 UC=0.25	1 2 3 4 5 CC	0.5 1.0	vdm 25/21			* OG IW
*C/M													
*A/M													
*C/G													

LITHOLOGIC DESCRIPTION

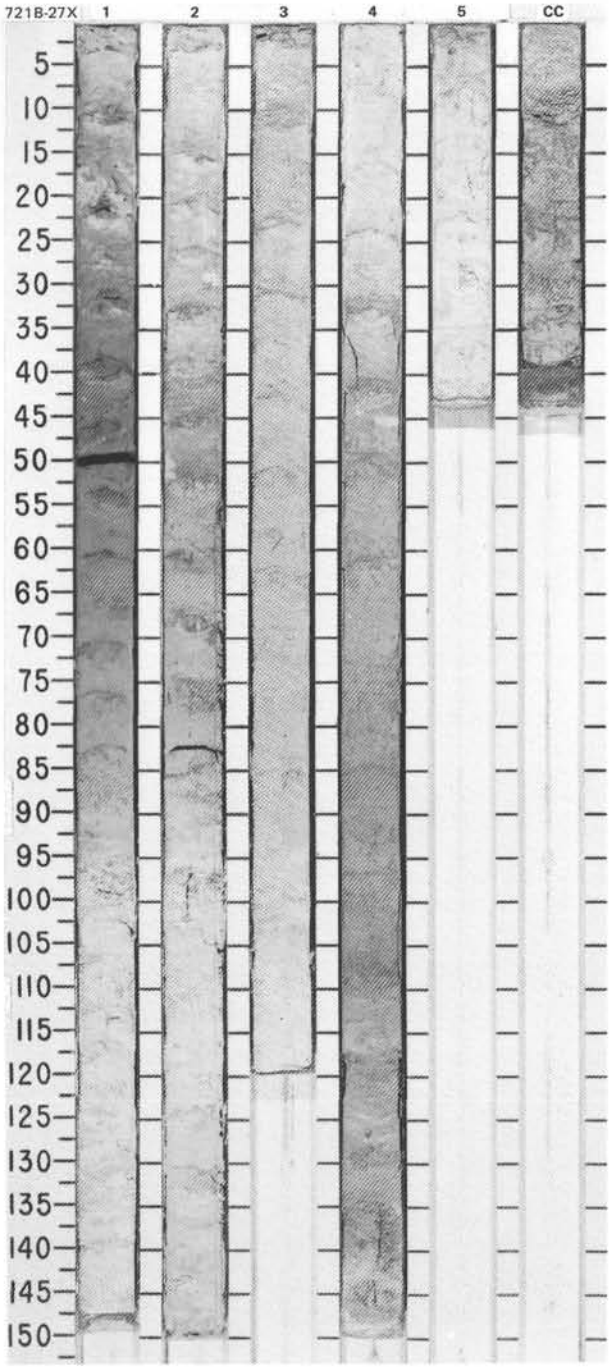
NANNOFOSSIL CHALK

Section 1, 0-2 and 15-21 cm, soupy; void in Section 1, 48-50 cm; drilling biscuits throughout; slightly disturbed.

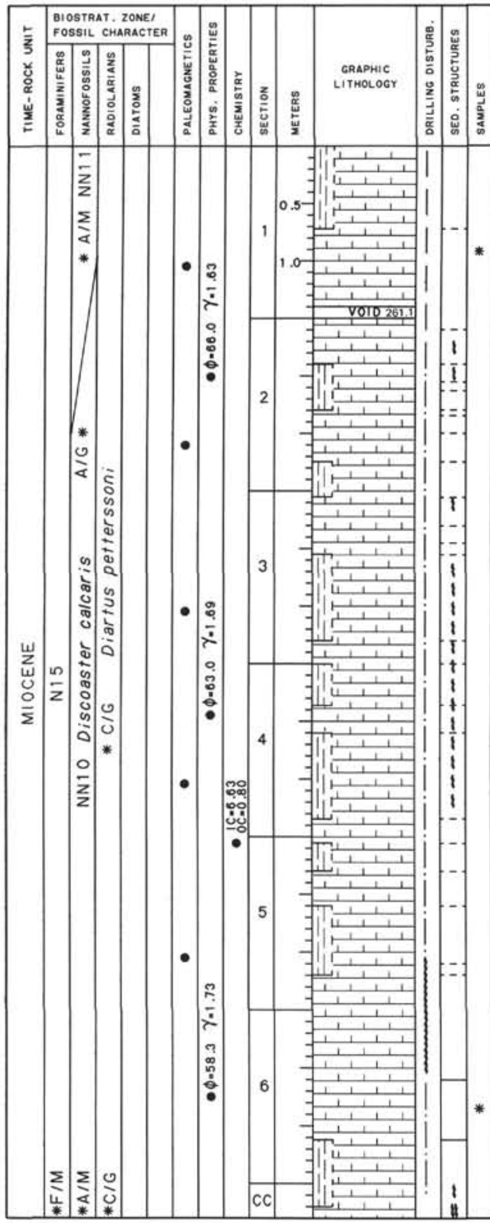
Major lithology: NANNOFOSSIL CHALK. Alternating light and dark layers, ranging from light olive gray (5Y 6/2) to light gray (5Y 7/1) for light layers, and olive (5Y 5/3) to olive gray (5Y 5/2) for dark layers. Light layers generally have less terrigenous silty clay than do dark layers.

SMEAR SLIDE SUMMARY (%):

	3, 113 D	4, 104 D
TEXTURE:		
Silt	3	10
Clay	97	90
COMPOSITION:		
Access. minerals		Tr
Diatoms	Tr	Tr
Foraminifers	3	
Inorganic calcite	3	4
Nannofossils	94	90
Quartz	Tr	Tr
Radiolarians	Tr	Tr
Silicoflagellates	Tr	1
Sponge spicules	Tr	5



SITE 721 HOLE B CORE 28X CORED INTERVAL 2204.4-2214.2 mbsl; 259.6-269.4 mbsf



LITHOLOGIC DESCRIPTION

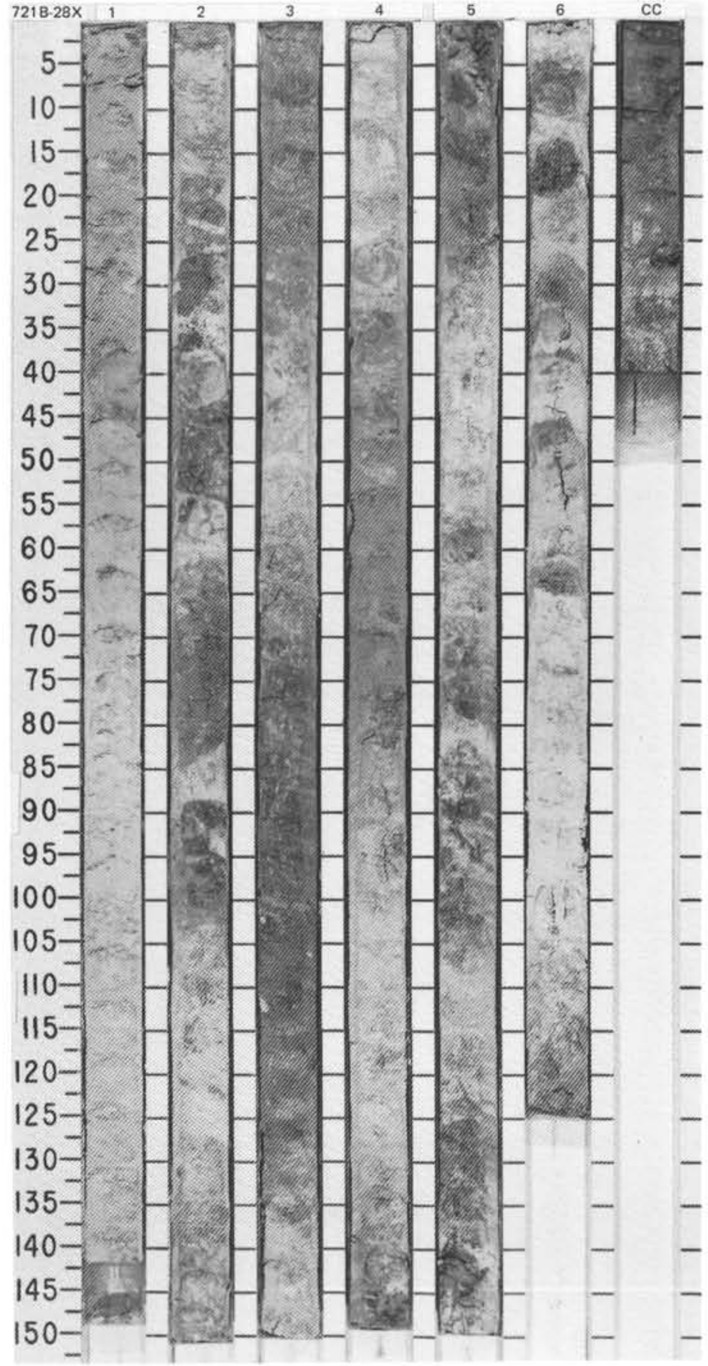
NANNOFOSSIL CHALK

Void in Section 1, 140-150 cm; drilling biscuits throughout; slightly disturbed.

Major lithology: NANNOFOSSIL CHALK. Alternating light and dark layers, ranging from light olive gray (5Y 6/2) and light gray (5Y 7/1) to white (5Y 8/1) for light layers, and olive (5Y 5/3, 4/3) and pale olive (5Y 6/3) to olive gray (5Y 4/2, 5/2) for dark layers. Light layers generally have 10-20% less terrigenous silty clay than do dark layers.

SMEAR SLIDE SUMMARY (%):

	1, 91	6, 85
	D	D
TEXTURE:		
Sand	5	
Silt	5	
Clay	90	100
COMPOSITION:		
Access. minerals	Tr	
Diatoms	Tr	Tr
Foraminifers	Tr	
Inorganic calcite	7	
Mica	Tr	
Nannofossils	90	100
Radiolarians	1	
Silicoflagellates	2	Tr
Sponge spicules	Tr	Tr



SITE 721 HOLE B CORE 29X CORED INTERVAL 2214.2-2224.0 mbsl; 269.4-279.2 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: N15; NANNOFOSSILS: F/M * NN10 *Discoaster calcaris*; RADIOLARIANS: A/M * *Diartus petterssoni*; DIATOMS: C/G *

PALEOMAGNETICS: O

PHYS. PROPERTIES: ● ϕ 61.9 γ 1.68

CHEMISTRY: ● IC 7.46 OC 0.43

SECTION: 1, 2, 3, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY: VOID 276.6

DRILLING DISTURB.

SED. STRUCTURES: ?

SAMPLES: *

LITHOLOGIC DESCRIPTION

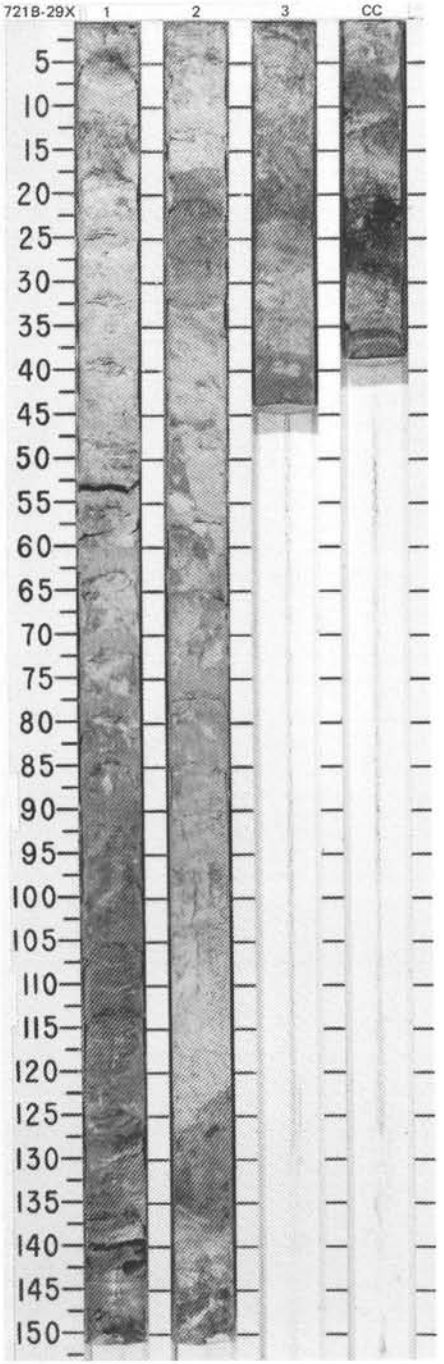
NANNOFOSSIL CHALK

Void in Section 1, 143-150 cm; possible wash in Section 1, 0-4 cm; drilling biscuits throughout; slightly disturbed.

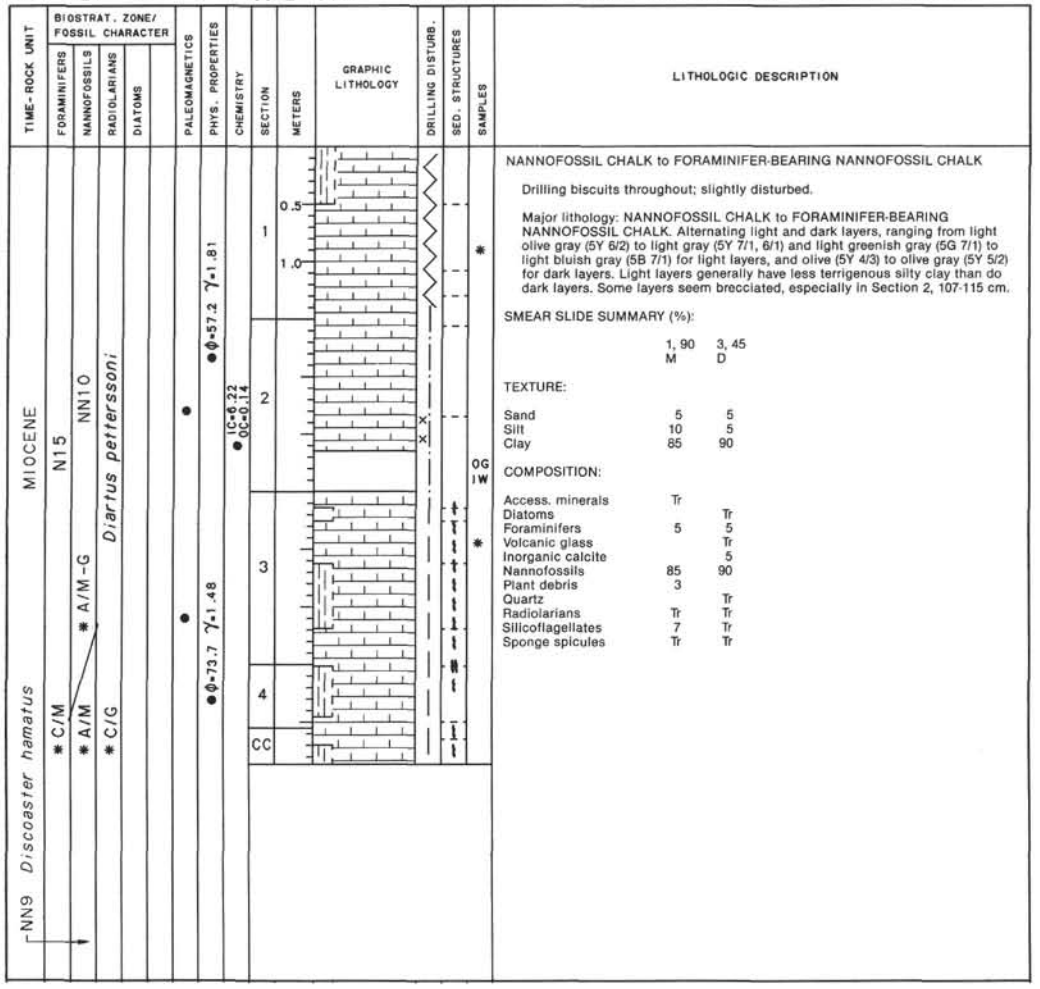
Major lithology: NANNOFOSSIL CHALK. Alternating light and dark layers, ranging from light olive gray (5Y 6/2) and light gray (5Y 7/1) to white (5Y 8/1) for light layers, and olive (5Y 5/3, 4/3) and pale olive (5Y 6/3) to olive gray (5Y 5/2, 4/2) for dark layers. Light layers generally have 10-20% less terrigenous silty clay than do dark layers.

SMEAR SLIDE SUMMARY (%):

	1, 26 D
TEXTURE:	
Sand	2
Silt	8
Clay	90
COMPOSITION:	
Diatoms	Tr
Foraminifers	Tr
Inorganic calcite	10
Nannofossils	90
Radiolarians	Tr
Silicoflagellates	Tr
Sponge spicules	Tr



SITE 721 HOLE B CORE 30X CORED INTERVAL 2224.0-2233.8 mbsl; 279.2-289.0 mbsf



LITHOLOGIC DESCRIPTION

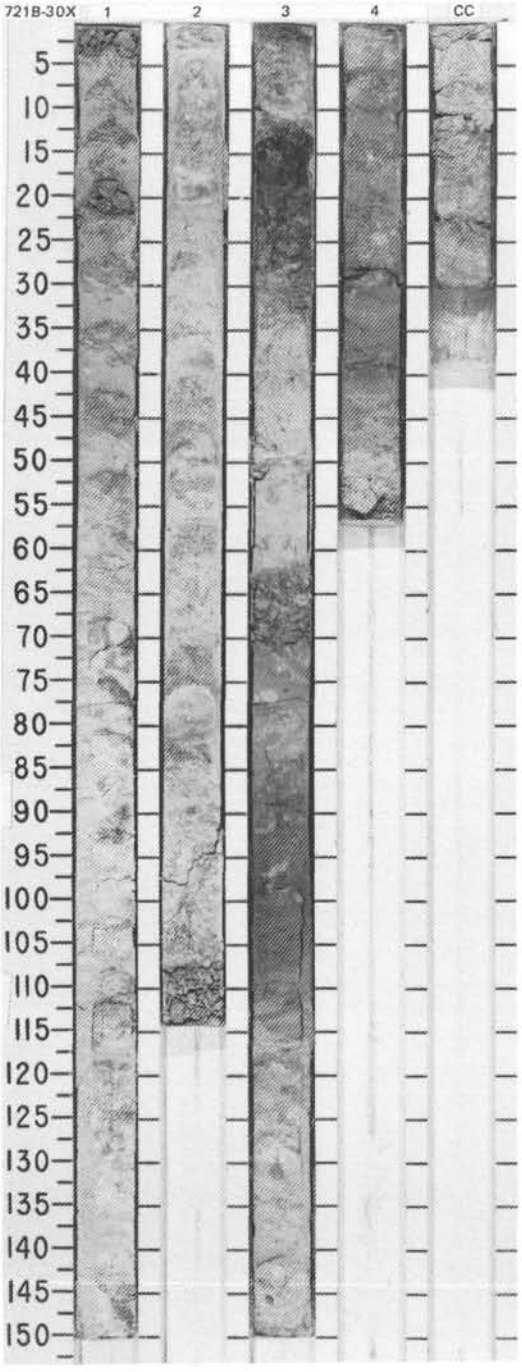
NANNOFOSSIL CHALK to FORAMINIFER-BEARING NANNOFOSSIL CHALK

Drilling biscuits throughout; slightly disturbed.

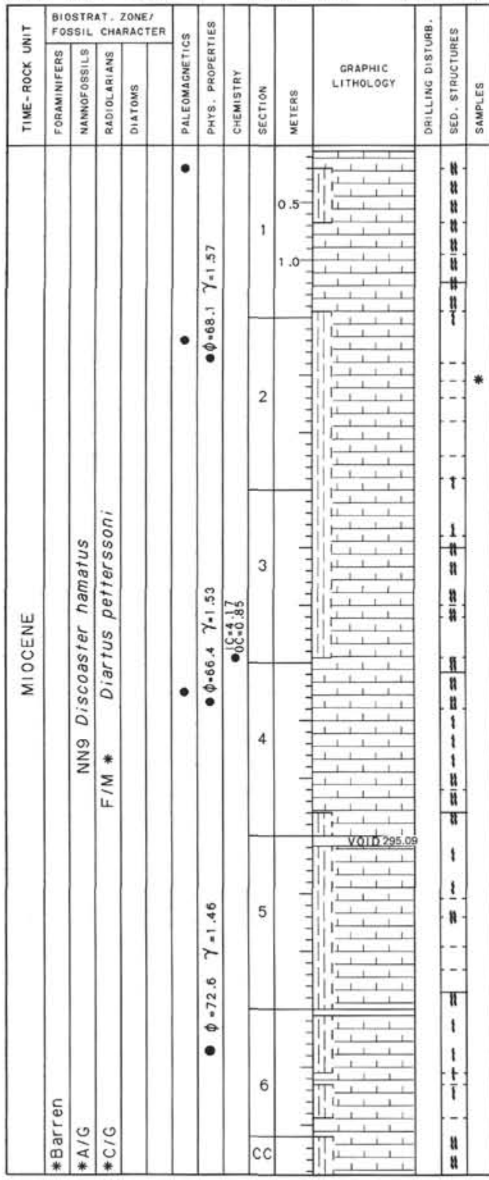
Major lithology: NANNOFOSSIL CHALK to FORAMINIFER-BEARING NANNOFOSSIL CHALK. Alternating light and dark layers, ranging from light olive gray (5Y 6/2) to light gray (5Y 7/1, 6/1) and light greenish gray (5G 7/1) to light bluish gray (5B 7/1) for light layers, and olive (5Y 4/3) to olive gray (5Y 5/2) for dark layers. Light layers generally have less terrigenous silty clay than do dark layers. Some layers seem brecciated, especially in Section 2, 107-115 cm.

SMEAR SLIDE SUMMARY (%):

	1, 90 M	3, 45 D
TEXTURE:		
Sand	5	5
Silt	10	5
Clay	85	90
COMPOSITION:		
Access. minerals	Tr	
Diatoms		Tr
Foraminifers	5	5
Volcanic glass		Tr
Inorganic calcite		5
Nannofossils	85	90
Plant debris	3	
Quartz		Tr
Radiolarians	Tr	Tr
Silicoflagellates	7	Tr
Sponge spicules	Tr	Tr



SITE 721 HOLE B CORE 31X CORED INTERVAL 2233.8-2243.6 mbsl; 289.0-298.8 mbsf



LITHOLOGIC DESCRIPTION

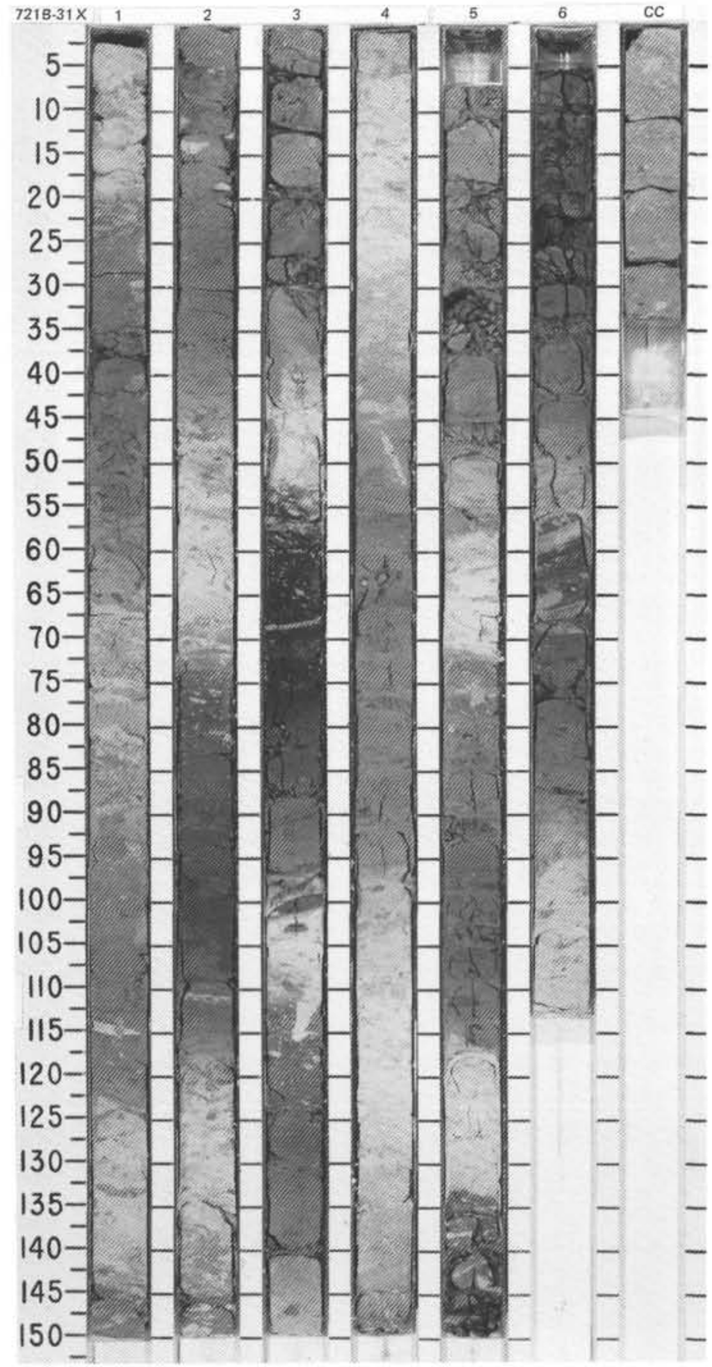
SILICEOUS-BEARING FORAMINIFER-NANNOFOSSIL CHALK to NANNOFOSSIL CHALK

Voids in Section 1, 0-2 cm, Section 5, 0-6 cm, and Section 6, 0-6 cm. Drilling biscuits throughout; slightly disturbed.

Major lithology: SILICEOUS-BEARING FORAMINIFER-NANNOFOSSIL CHALK to NANNOFOSSIL CHALK. Alternating light and dark layers ranging from light olive gray (5Y 6/2) and light gray (5Y 7/1) to light greenish gray (5GY 7/1) for light layers, and olive (5Y 5/3, 4/3, 5/4) to pale olive (5Y 6/3, 6/4) and olive gray (5Y 5/2) for dark layers. Dark layers generally have more terrigenous silty clay and siliceous microfossils than do light layers.

SMEAR SLIDE SUMMARY (%):

	2, 60
	D
TEXTURE:	
Silt	5
Clay	95
COMPOSITION:	
Cement	15
Clay	10
Diatoms	3
Foraminifers	Tr
Nannofossils	70
Quartz	Tr
Radiolarians	2



SITE 721 HOLE B CORE 32X CORED INTERVAL 2243.6-2253.2 mbsl; 298.8-308.4 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *R/M; N15; NANNOFOSSILS *A/M; NN9 *Discoaster hamatus*; RADIOLARIANS *C/G; DIATOMS *C/G *Diartus pettersoni*

PALEOMAGNETICS

PHYS. PROPERTIES: ϕ-73.8 γ-1.52; ϕ-75.0 γ-1.44; ϕ-73.4 γ-1.40

CHEMISTRY: IC-3.59, OC-1.47

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

SILICEOUS-BEARING NANNOFOSSIL CHALK

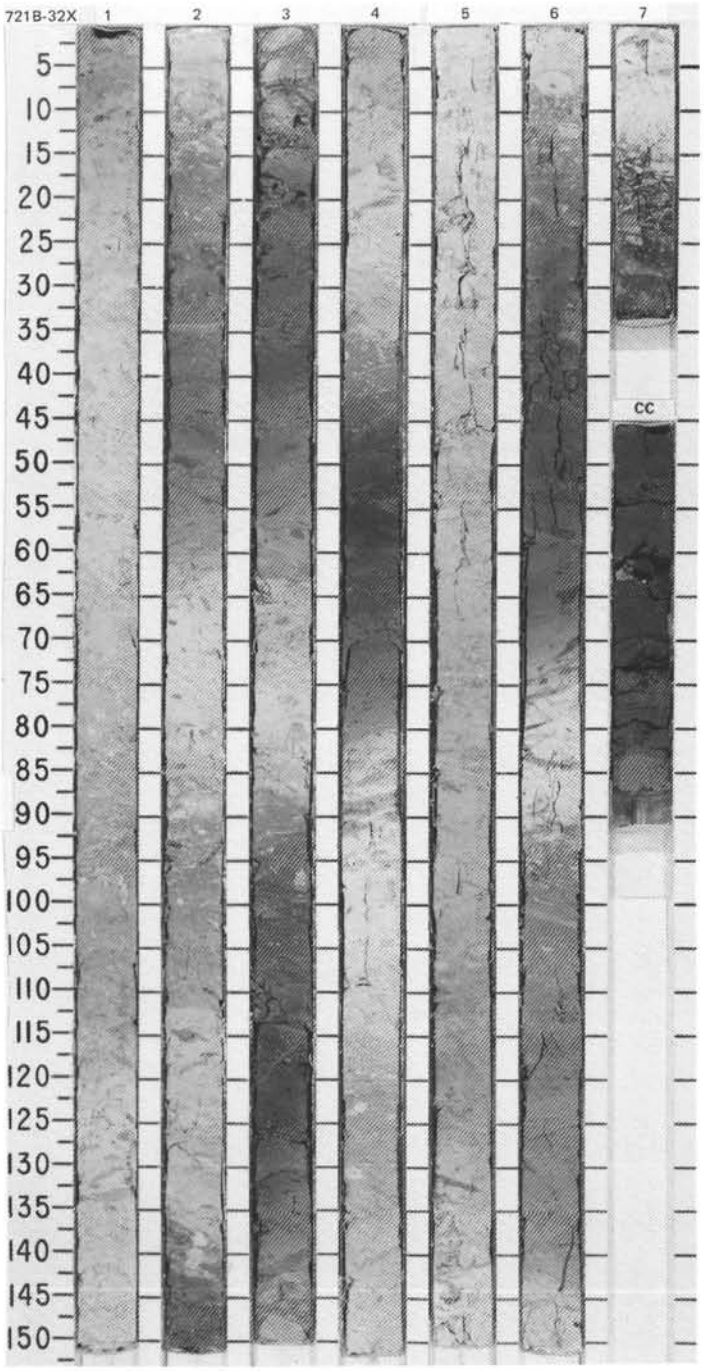
Drilling biscuits throughout; slightly disturbed.

Major lithology: SILICEOUS-BEARING NANNOFOSSIL CHALK. Alternating light and dark layers ranging from light gray (5Y 7/1) for light layers to olive (5Y 5/3) for dark layers. Dark layers enriched in terrigenous silty clay and siliceous microfossil compared to light layers. Zoophycos and Chondrites burrows present.

Minor lithology: Diatomaceous nannofossil chalk associated with olive (5Y 4/3, 4/4) layers.

SMEAR SLIDE SUMMARY (%):

	3, 124 D	4, 68 D	CC, 21 D
TEXTURE:			
Silt	20	20	30
Clay	80	80	70
COMPOSITION:			
Access. minerals			1
Clay	Tr		30
Diatoms	20	20	20
Dolomite			Tr
Foraminifers		Tr	Tr
Inorganic calcite	Tr		5
Nannofossils	80	80	40
Quartz	Tr	Tr	Tr
Silicoflagellates		Tr	3
Sponge spicules			1



SITE 721 HOLE B CORE 33X CORED INTERVAL 2253.2-2262.8 mbsl; 308.4-318.0 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
MIOCENE	N7 - N8 (NN8)	NN5 *Sphenolithus heteromorphus*	No age diagnostic taxa			ϕ=68.1 γ=1.57 ϕ=49.4 γ=1.99	IC=3.06 OC=1.60	1 2 CC	0.5 1.0				OG IW
*C/G													
*A/P	A/P	A/P NN9											
*R/P													

LITHOLOGIC DESCRIPTION

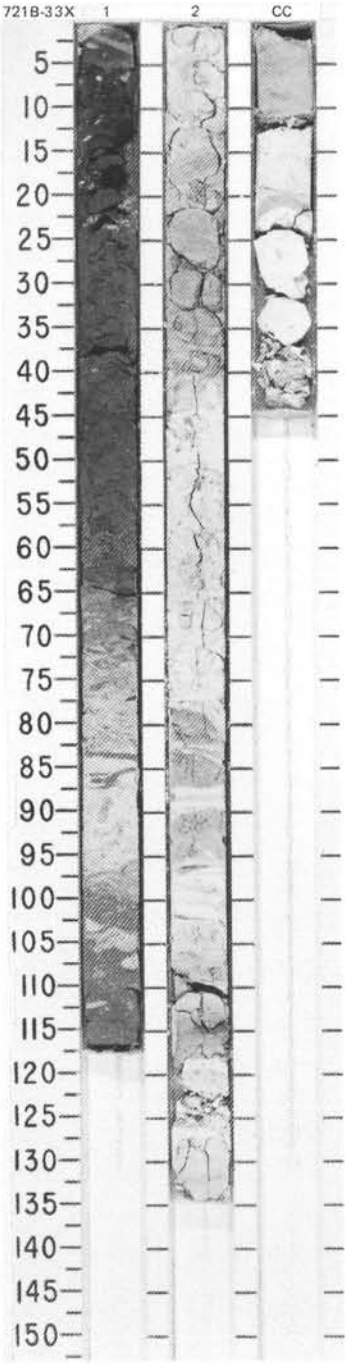
DIATOMACEOUS NANNOFOSSIL CHALK to NANNOFOSSIL CHALK

Drilling biscuits throughout; moderately disturbed.

Major lithology:
a. Diatomaceous nannofossil chalk, in Section 1. Alternating light and dark layers, ranging from light gray (5Y 7/1) for light layers to olive (5Y 5/3) for dark layers. Dark layers are enriched in terrigenous silty clay and siliceous microfossils compared to light layers.
b. Nannofossil chalk, light greenish gray (5BG 7/1) to greenish gray (5G 6/1), in Section 2 and CC. Slight to moderate burrow-mottling. Transition from lithologic Units II to III is located at the base of Section 1.

SMEAR SLIDE SUMMARY (%):

	2, 126 M
TEXTURE:	
Clay	100
COMPOSITION:	
Diatoms	Tr
Dolomite	Tr
Foraminifers	Tr
Inorganic calcite	Tr
Nannofossils	100
Quartz	Tr
Radiolarians	Tr
Silicoflagellates	Tr
Sponge spicules	Tr



SITE 721 HOLE B CORE 34X CORED INTERVAL 2262.8-2272.5 mbsl; 318.0-327.7 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
MIOCENE	* R/M	* A/P	* R/P		● ϕ=50.7 γ=1.93	● ϕ=52.0 γ=1.98	● IC=10.81 OC=0.00	1 2 3 4 5 CC	0.5 1.0				*

LITHOLOGIC DESCRIPTION

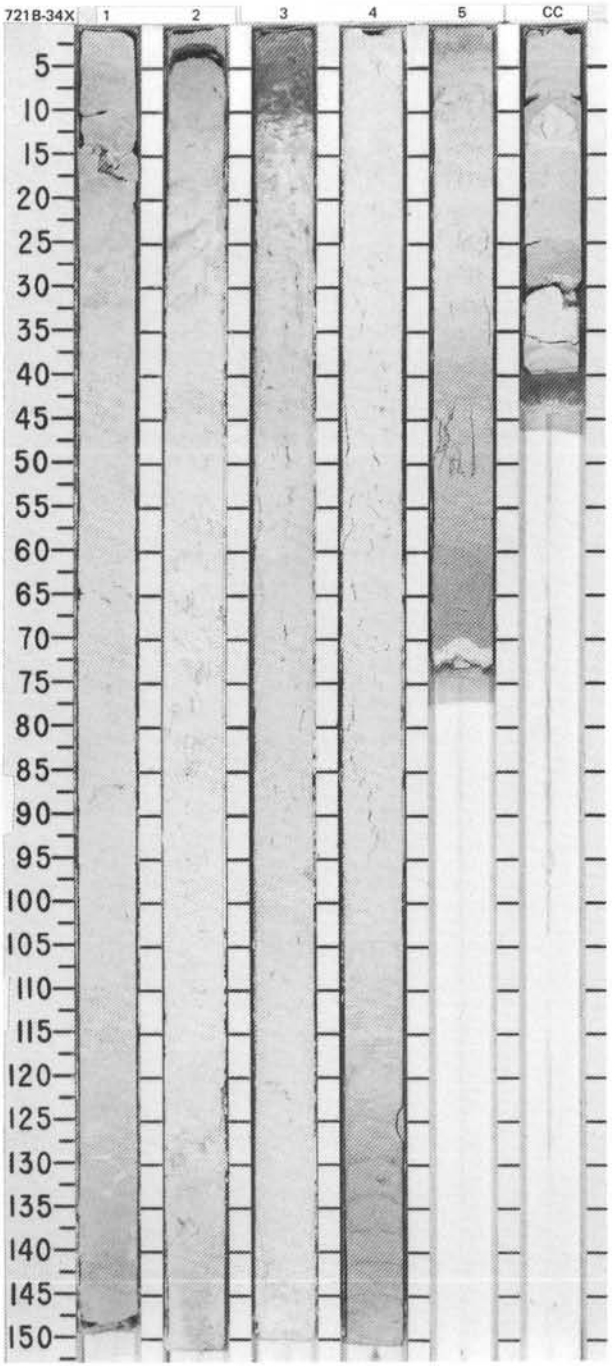
NANNOFOSSIL CHALK

Drilling biscuits present throughout. Slight to moderate disturbance.

Major lithology: NANNOFOSSIL CHALK. White (2.5Y 8/0) and light greenish gray (5BG 7/1) to greenish gray (5G 6/1, 5/1). Slight to moderate burrow-mottling.

SMEAR SLIDE SUMMARY (%):

	4, 56 D
TEXTURE:	
Clay	100
COMPOSITION:	
Clay	20
Dolomite	Tr
Foraminifers	3
Inorganic calcite	Tr
Mica	Tr
Nannofossils	77
Radiolarians	Tr



SITE 721 HOLE B CORE 35X CORED INTERVAL 2272.5-2282.2 mbsl; 327.7-337.4 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
MIOCENE	* R/G	N7 - N8				● ϕ=51.4 γ=1.98	IC=4.06 OC=3.00	1	0.5		O		
	*A/P	NN4 *Helicosphaera ampliaperta* - NN5 *Sphenolithus heteromorphus*							1.0				
			* R/P	No age diagnostic taxa		● ϕ=49.5 γ=1.97		2					
								3					IW *
								4					
								CC					

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CHALK

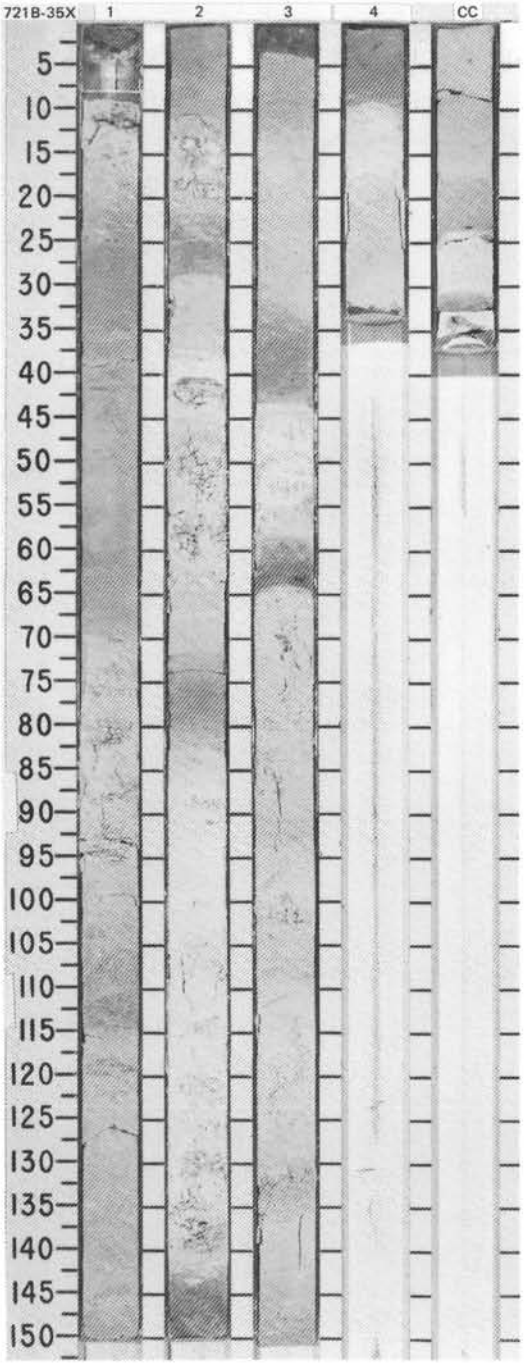
Void in Section 1, 0-8 cm. Drilling biscuits present throughout. Slight to moderate disturbance.

Major lithology: NANNOFOSSIL CHALK. Alternating light and dark layers of white (2.5Y 8/0), light greenish gray (5BG 7/1), and light bluish gray (5B 7/1) to greenish gray (5G 6/1, 5/1). Slight to moderate burrow-mottling.

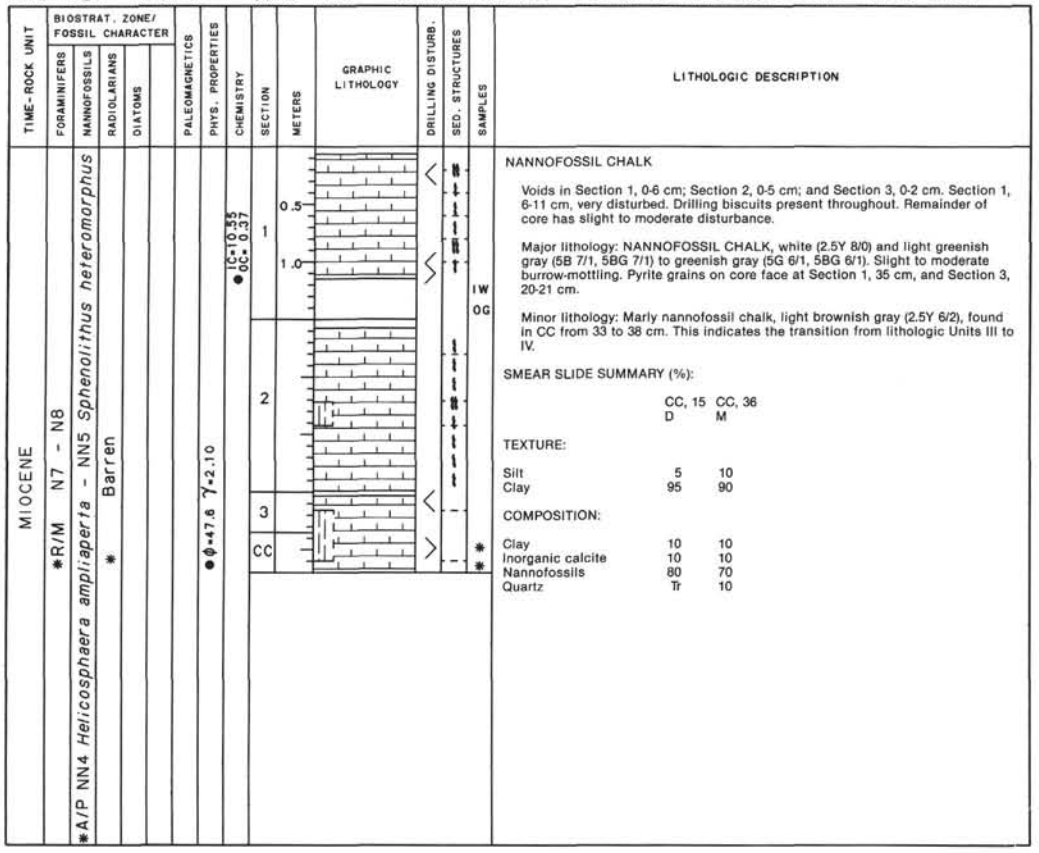
Minor lithology: Calcareous silty claystone. Greenish gray (5BG 5/1) layers in Section 3.

SMEAR SLIDE SUMMARY (%):

	3, 1 D
TEXTURE:	
Silt	30
Clay	70
COMPOSITION:	
Clay	10
Feldspar	10
Foraminifers	Tr
Inorganic calcite	30
Nannofossils	10
Quartz	40



SITE 721 HOLE B CORE 36X CORED INTERVAL 2282.2-2291.8 mbsl; 337.4-347.0 mbsf



NANNOFOSSIL CHALK

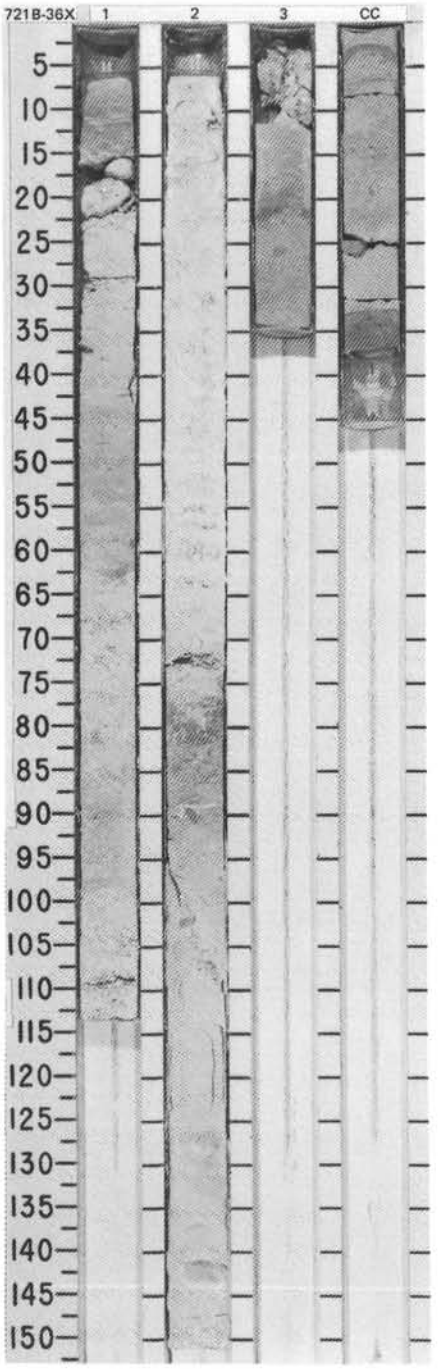
Voids in Section 1, 0-6 cm; Section 2, 0-5 cm; and Section 3, 0-2 cm. Section 1, 6-11 cm, very disturbed. Drilling biscuits present throughout. Remainder of core has slight to moderate disturbance.

Major lithology: NANNOFOSSIL CHALK, white (2.5Y 8/0) and light greenish gray (5B 7/1, 5BG 7/1) to greenish gray (5G 6/1, 5BG 6/1). Slight to moderate burrow-mottling. Pyrite grains on core face at Section 1, 35 cm, and Section 3, 20-21 cm.

Minor lithology: Marly nannofossil chalk, light brownish gray (2.5Y 6/2), found in CC from 33 to 38 cm. This indicates the transition from lithologic Units III to IV.

SMEAR SLIDE SUMMARY (%):

	CC, 15 D	CC, 36 M
TEXTURE:		
Silt	5	10
Clay	95	90
COMPOSITION:		
Clay	10	10
Inorganic calcite	10	10
Nannofossils	80	70
Quartz	Tr	10



SITE 721 HOLE B CORE 37X CORED INTERVAL 2291.8-2301.4 mbsl; 347.0-356.6 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: Barren; NN4 *Helicosphaera ampliaperta* - NN5 *Sphenolithus heteromorphus*; Barren

FORAMINIFERS: *

NANNOFOSSILS: *

RADIOLARIANS: *

DIATOMS:

PALEOMAGNETICS:

PHYS. PROPERTIES: ●ϕ=48.6 γ=2.00 ●ϕ=44.4 γ=2.09 ϕ=52.8 γ=1.95 ●

CHEMISTRY: IC=0.83 OC=0.07

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: * * *

SAMPLES

LITHOLOGIC DESCRIPTION

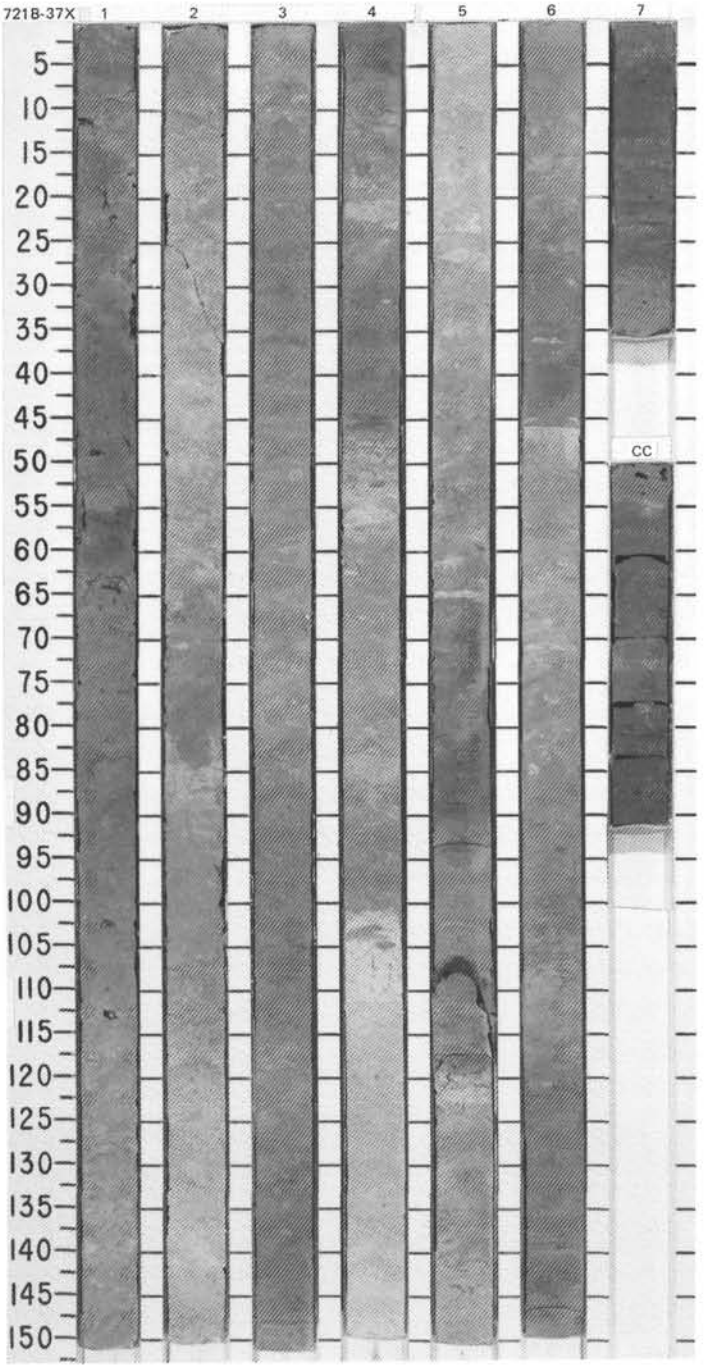
NANNOFOSSIL CHALK, MARLY NANNOFOSSIL CHALK, CALCAREOUS SILTY CLAYSTONE, and SILTY CLAYSTONE

Moderate drilling disturbance. Drilling biscuits common.

Major lithology: Interbedded NANNOFOSSIL CHALK, MARLY NANNOFOSSIL CHALK, CALCAREOUS SILTY CLAYSTONE, and SILTY CLAYSTONE. Sequences grade from greenish gray (5GY 5/1, 5G 5/1) SILTY CLAYSTONE with sharp contacts at the base to yellowish brown (10YR 5/4), dark yellowish brown (10YR 4/4), olive (5Y 4/3), and olive gray (5Y 5/2) SILTY CLAYSTONE and CALCAREOUS SILTY CLAYSTONE to light gray (10YR 7/1) MARLY NANNOFOSSIL CHALK and NANNOFOSSIL CHALK. Slight mottling in the CHALK and CALCAREOUS SILTY CLAYSTONE.

SMEAR SLIDE SUMMARY (%):

	1, 110 D	4, 44 D	6, 44 D
TEXTURE:			
Silt	5	20	20
Clay	95	80	80
COMPOSITION:			
Access. minerals		5	
Clay	15	15	15
Dolomite		Tr	
Feldspar		10	
Foraminifers		Tr	
Gypsum	5	5	
Inorganic calcite	10	35	30
Mica		Tr	
Nannofossils	70	5	35
Quartz		25	20



SITE 721 HOLE B CORE 38X CORED INTERVAL 2301.4-2311.1 mbsl; 356.6-366.3 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER
- FORAMINIFERS: *Barren
- NANNOFOSSILS: *A/M; NN4 *Helicosphaera ampliaperta* - NN5 *Sphenolithus heteromorphus*
- RADIOLARIANS: *R/P; No age diagnostic taxa
- DIATOMS

PALEOMAGNETICS
PHYS. PROPERTIES: ●ϕ=41.6 γ=2.08; ●ϕ=36.1 γ=2.72; ●ϕ=50.7 γ=1.98
CHEMISTRY
SECTION: 1, 2, 3, 4, 5, 6, CC
METERS: 0.5, 1.0
GRAPHIC LITHOLOGY
DRILLING DISTURB.
SED. STRUCTURES
SAMPLES

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CHALK, MARLY NANNOFOSSIL CHALK, CALCAREOUS SILTY CLAYSTONE, and SILTY CLAYSTONE

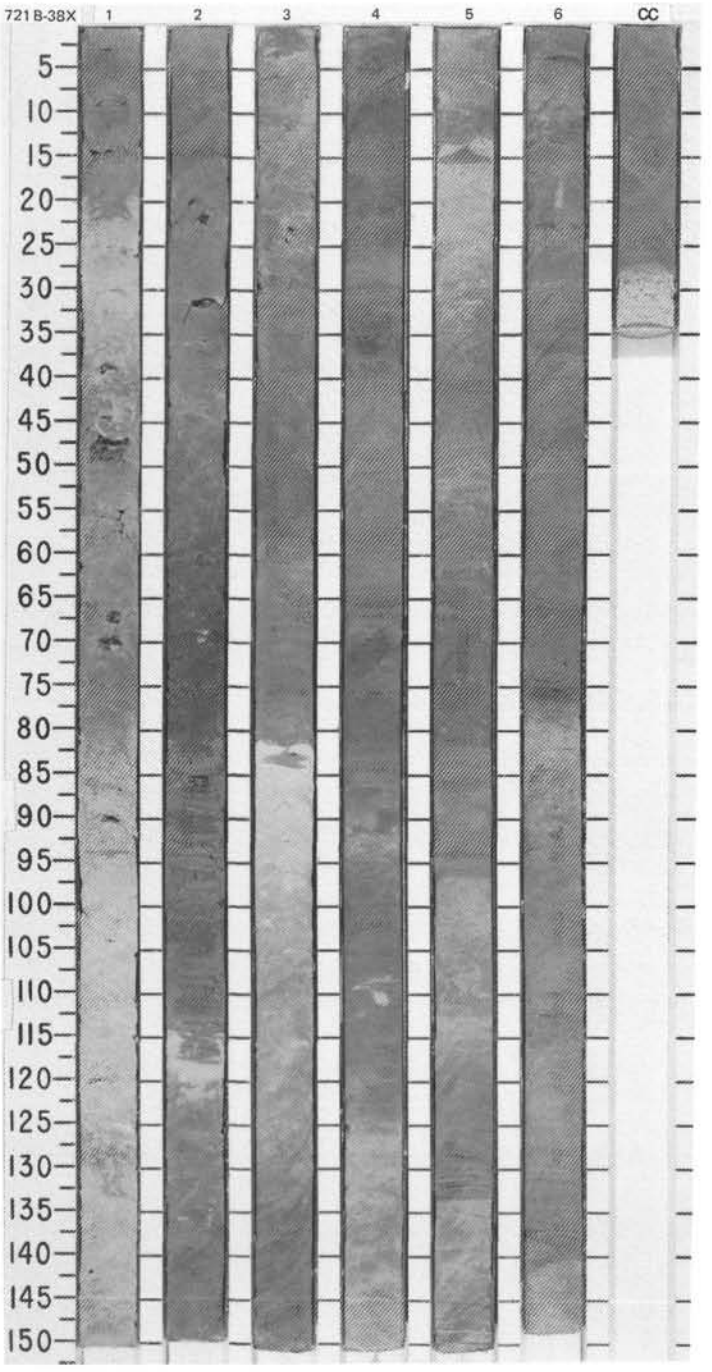
Moderate drilling disturbance. Drilling biscuits common.

Major lithology: Interbedded NANNOFOSSIL CHALK, MARLY NANNOFOSSIL CHALK, CALCAREOUS SILTY CLAYSTONE, and SILTY CLAYSTONE. Sequences grade from greenish gray (5GY 5/1, 5G 5/1) SILTY CLAYSTONE with sharp contacts at the base to grayish brown (10YR 5/2), brown (10YR 5/3), dark brown (10YR 3/3), and olive (5Y 4/3, 5/3) SILTY CLAYSTONE and CALCAREOUS SILTY CLAYSTONE to light gray (10YR 7/1) marly NANNOFOSSIL CHALK and NANNOFOSSIL CHALK. Slight mottling in the CHALK and CALCAREOUS SILTY CLAYSTONE. Millimeter-sized layers of pyrite grains common between 83 and 150 cm in Section 5.

SMEAR SLIDE SUMMARY (%):

	1, 11 D	1, 104 D	2, 73 M	3, 93 D	6, 113 M
TEXTURE:					
Silt	20	1	20	5	50
Clay	80	99	80	95	50
COMPOSITION:					
Access. minerals			5	Tr	5
Clay	70	10	50	25	35
Dolomite	Tr			Tr	Tr
Foraminifers				Tr	
Volcanic glass	Tr				
Inorganic calcite	10	3	10	5	10
Nannofossils	10	80	25	65	Tr
Pyrite	Tr	Tr			
Quartz	10	2	10	5	50

CORE 117-721B-39X NO RECOVERY



SITE 721 HOLE B CORE 40X CORED INTERVAL 2320.7-2330.4 mbsl; 375.9-385.6 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER
- FORAMINIFERS: *Barren
- NANNOFOSSILS: *C/M — NN3 *Sphenolithus belemnos*
- RADIOLARIANS: *R/P — No age diagnostic taxa
- DIATOMS

PALEOMAGNETICS
- ● ϕ=43.2 γ=2.08
- ● ϕ=43.4 γ=2.06
- ● ϕ=38.5 γ=2.11

PHYS. PROPERTIES

CHEMISTRY
- ● IC=0.50 OC=0.06

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG, IW

LITHOLOGIC DESCRIPTION

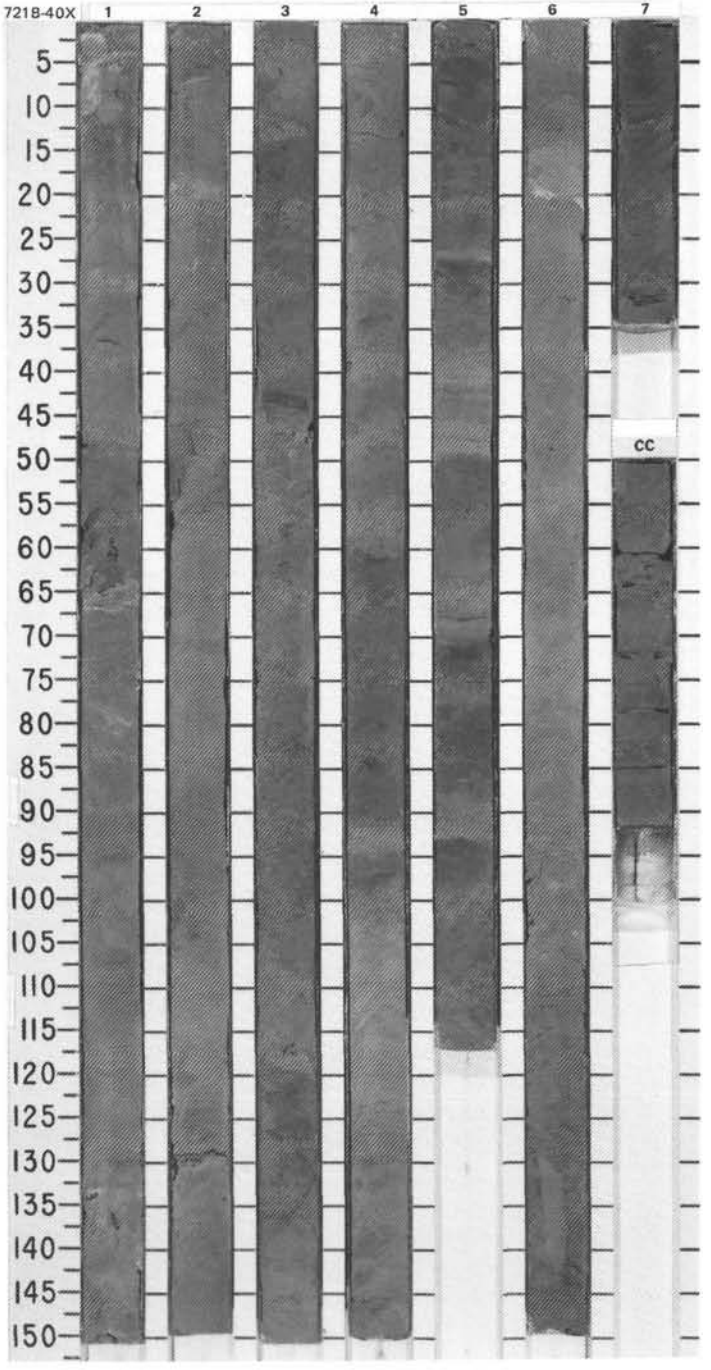
CALCAREOUS SILTY CLAYSTONE, SILTY CLAYSTONE, and CLAYEY SILTSTONE

Moderate drilling disturbance. Drilling biscuits common.

Major lithology: Interbedded CALCAREOUS SILTY CLAYSTONE, SILTY CLAYSTONE, and CLAYEY SILTSTONE. Sequences grade from black (10YR 2.5/1), dark bluish gray (5B 4/1), dark gray (N 4/0), and dark brown (10YR 3/3) SILTY CLAYSTONE and some coarser CLAYEY SILTSTONE with sharp contacts at the base to grayish brown (10YR 5/2), dark brown (10YR 4/3), and olive (5Y 4/3) SILTY CLAYSTONE and CALCAREOUS SILTY CLAYSTONE. Slight mottling in the SILTY CLAYSTONE.

SMEAR SLIDE SUMMARY (%):

	5, 57 M	6, 15 M
TEXTURE:		
Silt	30	40
Clay	70	60
COMPOSITION:		
Access. minerals	Tr	5
Clay	65	52
Dolomite	Tr	3
Inorganic calcite	15	10
Nannofossils	5	5
Quartz	15	25



SITE 721 HOLE B CORE 41X CORED INTERVAL 2330.4-2340.0 mbsl; 385.6-395.2 mbsf

TIME-ROCK UNIT: *Barren

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS ?; NANNOFOSSILS *A/M; RADIOLARIANS *R/P; DIATOMS No age diagnostic taxa

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ=45.70 γ=2.01; ● ϕ=45.40 γ=1.96; ● ϕ=50.40 γ=2.09

CHEMISTRY: ● IC=4.86 OC=0.19

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: * *

SAMPLES: PP

LITHOLOGIC DESCRIPTION

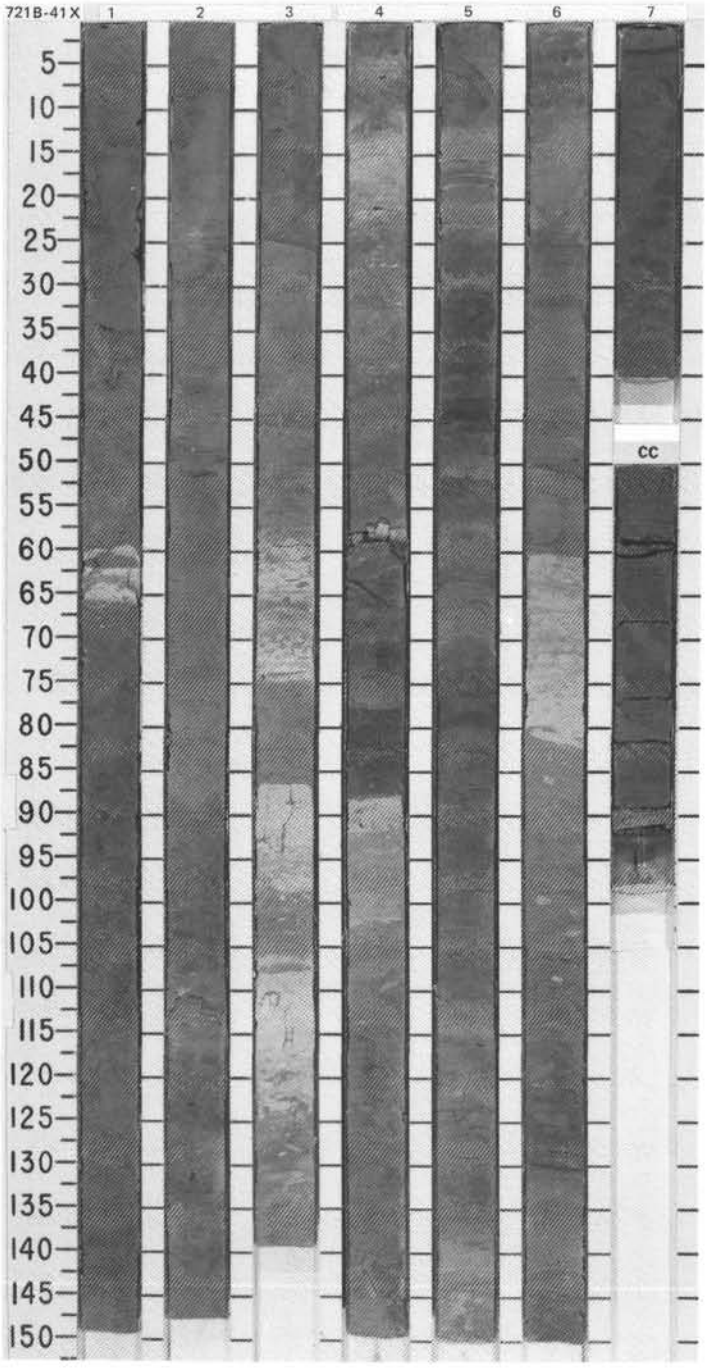
NANNOFOSSIL CHALK, CALCAREOUS SILTY CLAYSTONE, SILTY CLAYSTONE, and CLAYEY SILTSTONE

Moderate drilling disturbance. Drilling biscuits common.

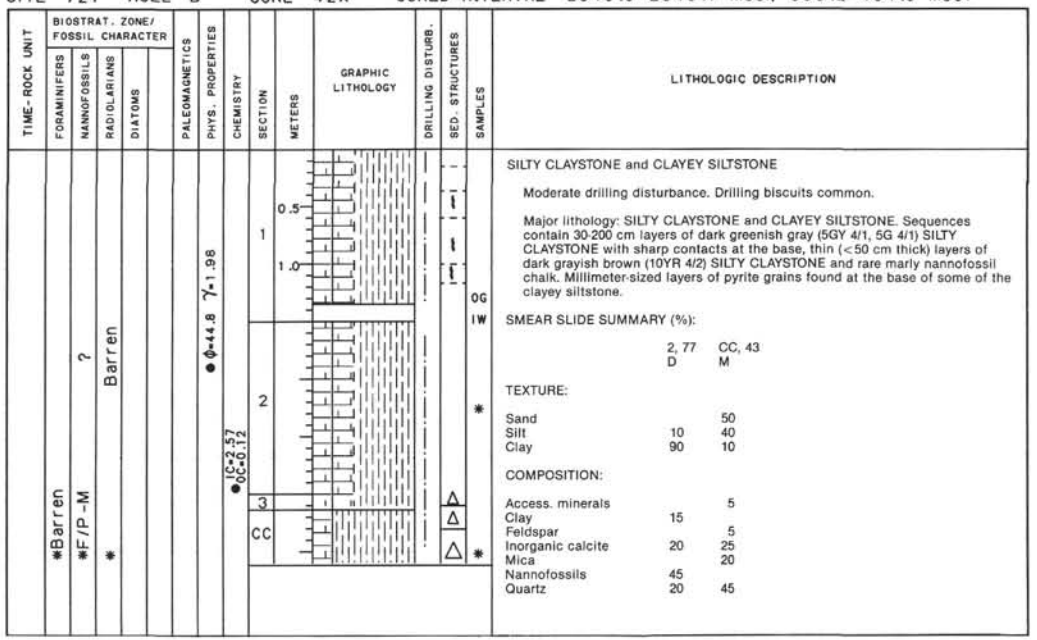
Major lithology: Interbedded NANNOFOSSIL CHALK, CALCAREOUS SILTY CLAYSTONE, SILTY CLAYSTONE, and CLAYEY SILTSTONE. Sequences grade from dark greenish gray (5G 4/1), greenish gray (5GY 5/1, 5G 5/1), and dark gray (N 4/0) SILTY CLAYSTONE and CLAYEY SILTSTONE with sharp contacts at the base, to grayish brown (10YR 5/2), brown (10YR 5/3), dark grayish brown (10YR 4/2), and olive gray (5Y 4/2) SILTY CLAYSTONE and CALCAREOUS SILTY CLAYSTONE to light gray (10YR 7/0) NANNOFOSSIL CHALK. Slight mottling in the CHALK and CALCAREOUS SILTY CLAYSTONE. Millimeter-sized layers of pyrite grains found in Section 6 and in the CC. FORAMINIFER SAND at 87-88 cm in Section 3.

SMEAR SLIDE SUMMARY (%):

	3, 74 M	3, 89 D
TEXTURE:		
Sand	10	
Silt	50	
Clay	40	100
COMPOSITION:		
Cement		10
Clay		10
Foraminifers	60	10
Inorganic calcite	Tr	Tr
Nannofossils	40	70
Quartz		Tr



SITE 721 HOLE B CORE 42X CORED INTERVAL 2340.0-2349.7 mbsl; 395.2-404.9 mbsf



LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE and CLAYEY SILTSTONE

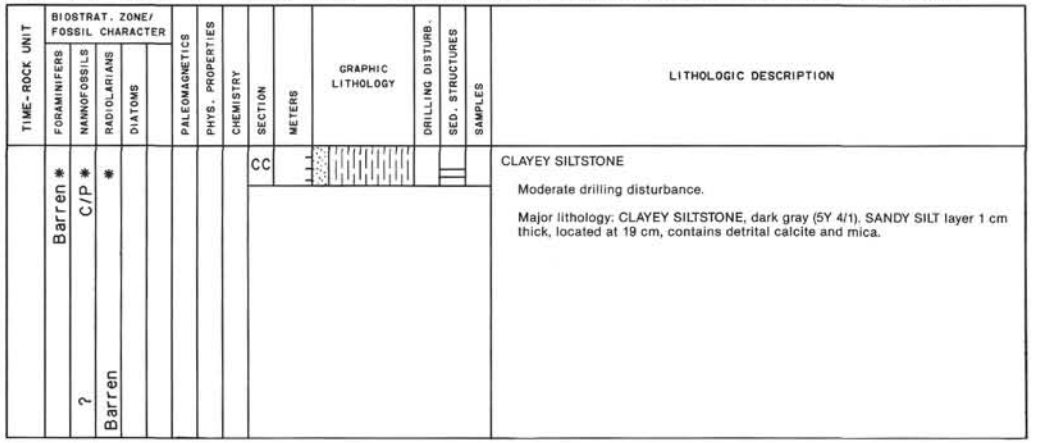
Moderate drilling disturbance. Drilling biscuits common.

Major lithology: SILTY CLAYSTONE and CLAYEY SILTSTONE. Sequences contain 30-200 cm layers of dark greenish gray (5GY 4/1, 5G 4/1) SILTY CLAYSTONE with sharp contacts at the base, thin (<50 cm thick) layers of dark grayish brown (10YR 4/2) SILTY CLAYSTONE and rare marly nannofossil chalk. Millimeter-sized layers of pyrite grains found at the base of some of the clayey siltstone.

SMEAR SLIDE SUMMARY (%):

	2, 77 D	CC, 43 M
TEXTURE:		
Sand		50
Silt	10	40
Clay	90	10
COMPOSITION:		
Access. minerals		5
Clay	15	
Feldspar		5
Inorganic calcite	20	25
Mica		20
Nannofossils	45	
Quartz	20	45

SITE 721 HOLE B CORE 43X CORED INTERVAL 2349.7-2359.3 mbsl; 404.9-414.5 mbsf

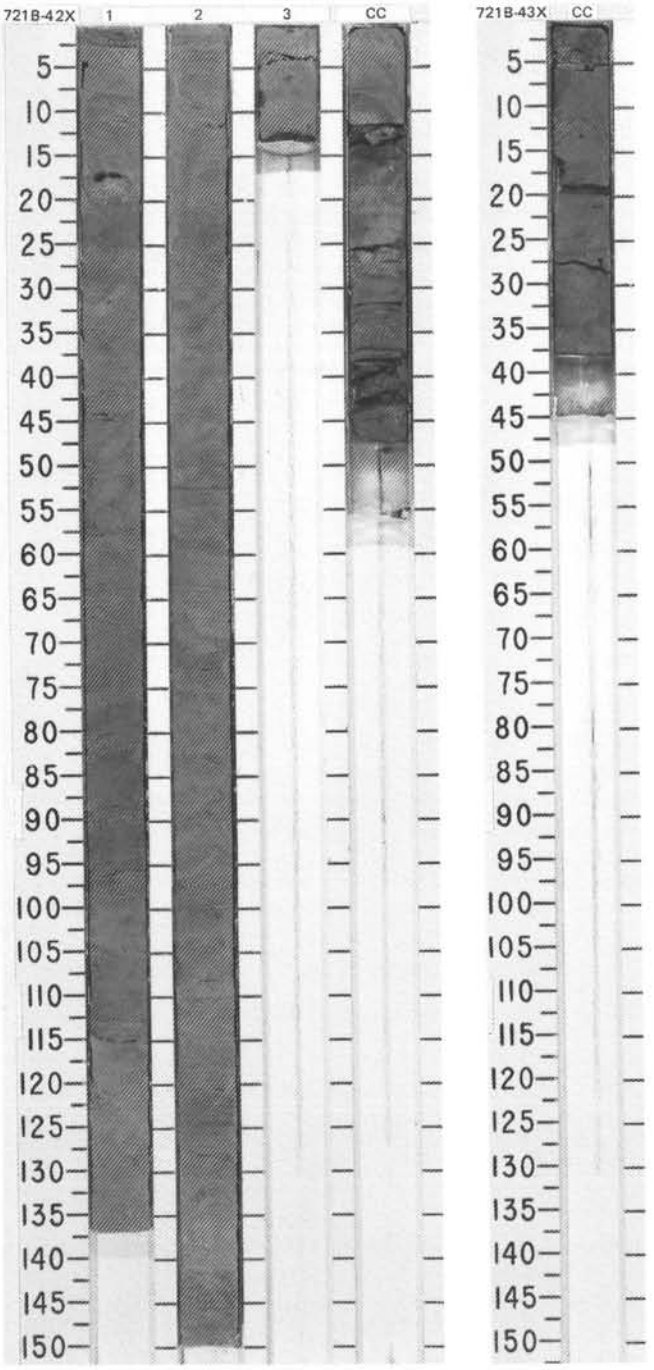


LITHOLOGIC DESCRIPTION

CLAYEY SILTSTONE

Moderate drilling disturbance.

Major lithology: CLAYEY SILTSTONE, dark gray (5Y 4/1). SANDY SILT layer 1 cm thick, located at 19 cm, contains detrital calcite and mica.



SITE 721 HOLE B CORE 44X CORED INTERVAL 2359.3-2369.0 mbsl; 414.5-424.2 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

*Barren
*Barren
*Barren

ϕ=42.1 γ=2.04
ϕ=46.0 γ=1.98
ϕ=45.8 γ=1.97
C1=1.31
C2=0.11

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

OG
IW

LITHOLOGIC DESCRIPTION

CLAYSTONE, SILTY CLAYSTONE, CLAYEY SILTSTONE, and SILTY SANDSTONE

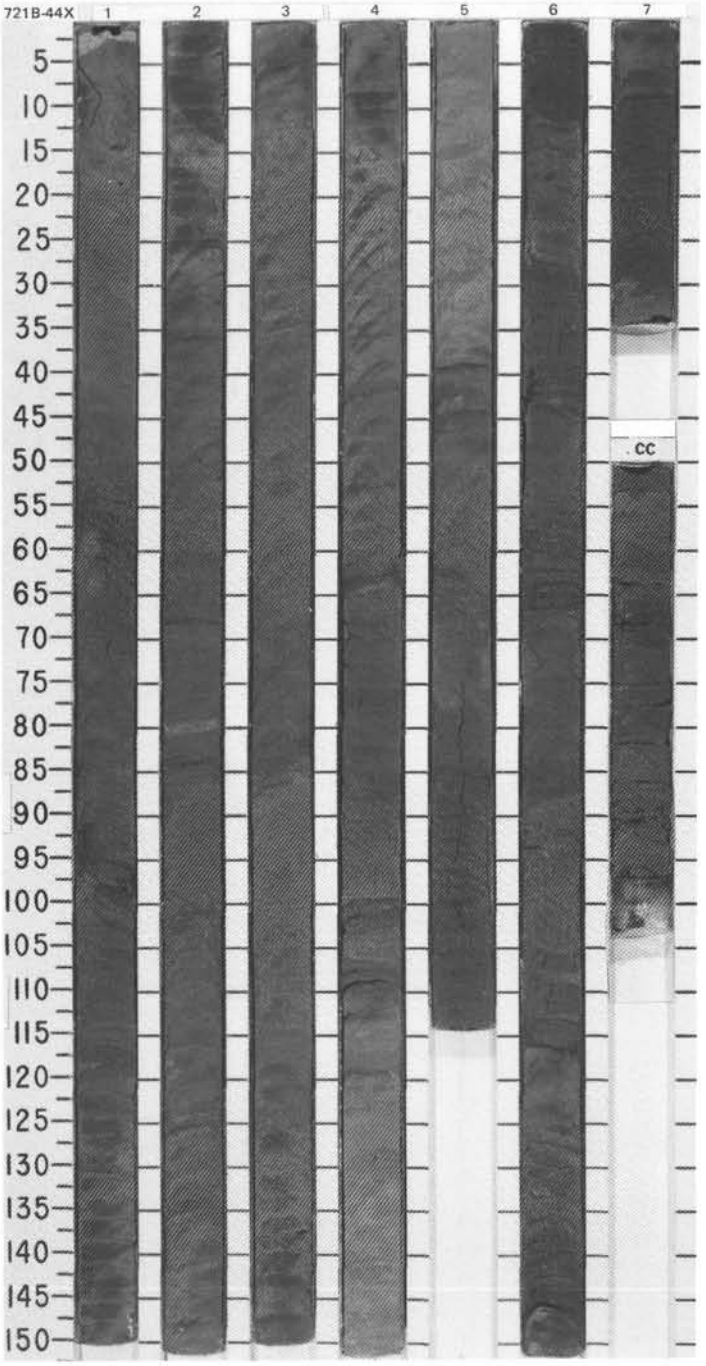
Moderate drilling disturbance. Drilling biscuits common.

Major lithology: Interbedded CLAYSTONE, SILTY CLAYSTONE, CLAYEY SILTSTONE, and SILTY SANDSTONE, dark reddish gray (5YR 4/2). Sequences appear to fine upward. Foraminifer sand concentrated at 0-11 cm in Section 6.

Minor lithology: CALCAREOUS CLAYSTONE, light greenish gray (5G 7/1) to light gray (5Y 6/1). Slight to moderate mottling.

SMEAR SLIDE SUMMARY (%):

	1, 106 D	4, 127 D	5, 103 D
TEXTURE:			
Sand			50
Silt	30	15	30
Clay	70	85	20
COMPOSITION:			
Access. minerals	2	1	5
Clay	70	75	20
Dolomite	Tr		
Feldspar	2		10
Volcanic glass	1		10
Inorganic calcite	10	10	12
Mica		Tr	3
Nannofossils	Tr	10	
Quartz	15	1	40
Silicoflagellates	Tr	3	



SITE 721 HOLE C CORE 1H CORED INTERVAL 1944.8-1948.4 mbsl; 0.0-3.6 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	NN21 *Emiliania huxleyi*						1	0.5				*
								1	1.0				
								2					
								3					*
								CC					

LITHOLOGIC DESCRIPTION

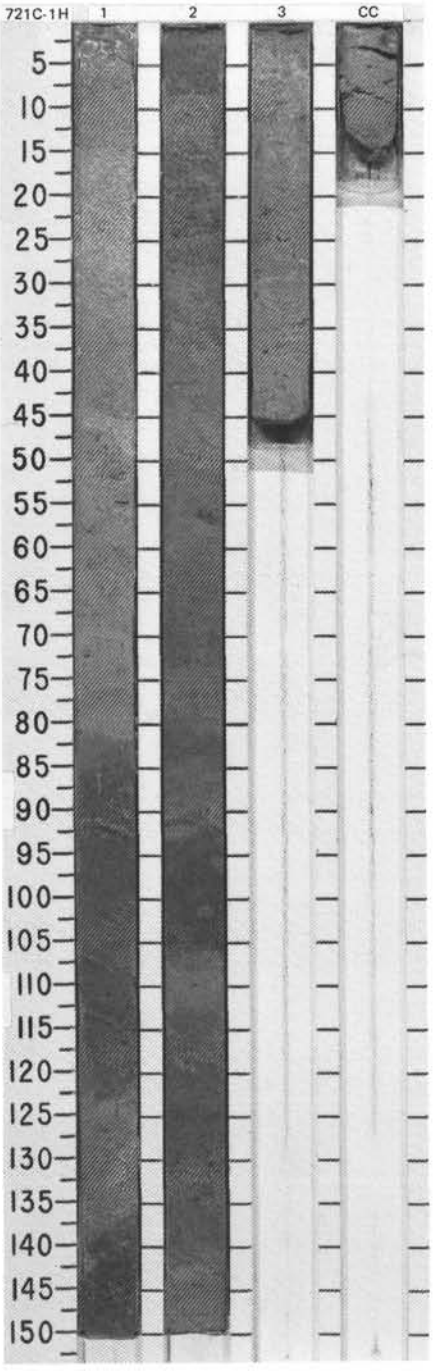
FORAMINIFER-NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE

Section 1, 0-5 cm, and the CC are highly disturbed. Remainder of core is undisturbed.

Major lithology: FORAMINIFER-NANNOFOSSIL OOZE to FORAMINIFER-BEARING NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 6/1) to olive (5Y 4/3, 5/3). Slight to moderate burrow-mottling throughout. Dark layers contain more terrigenous clay than do light layers.

SMEAR SLIDE SUMMARY (%):

	1, 24 D	3, 24 D
TEXTURE:		
Sand	35	10
Silt	15	20
Clay	50	70
COMPOSITION:		
Access. minerals		1
Diatoms	Tr	Tr
Dolomite	Tr	
Feldspar		1
Foraminifers	35	15
Inorganic calcite	15	11
Nannofossils	50	70
Quartz	Tr	2
Radiolarians	Tr	Tr
Sponge spicules	Tr	Tr



SITE 721 HOLE C CORE 2H CORED INTERVAL 1948.4-1958.1 mbsl; 3.6-13.3 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	NN20 *Gephyrocapsa oceanica*						1, 2, 3, 4, 5, 6, 7, CC	0.5, 1.0				*

LITHOLOGIC DESCRIPTION

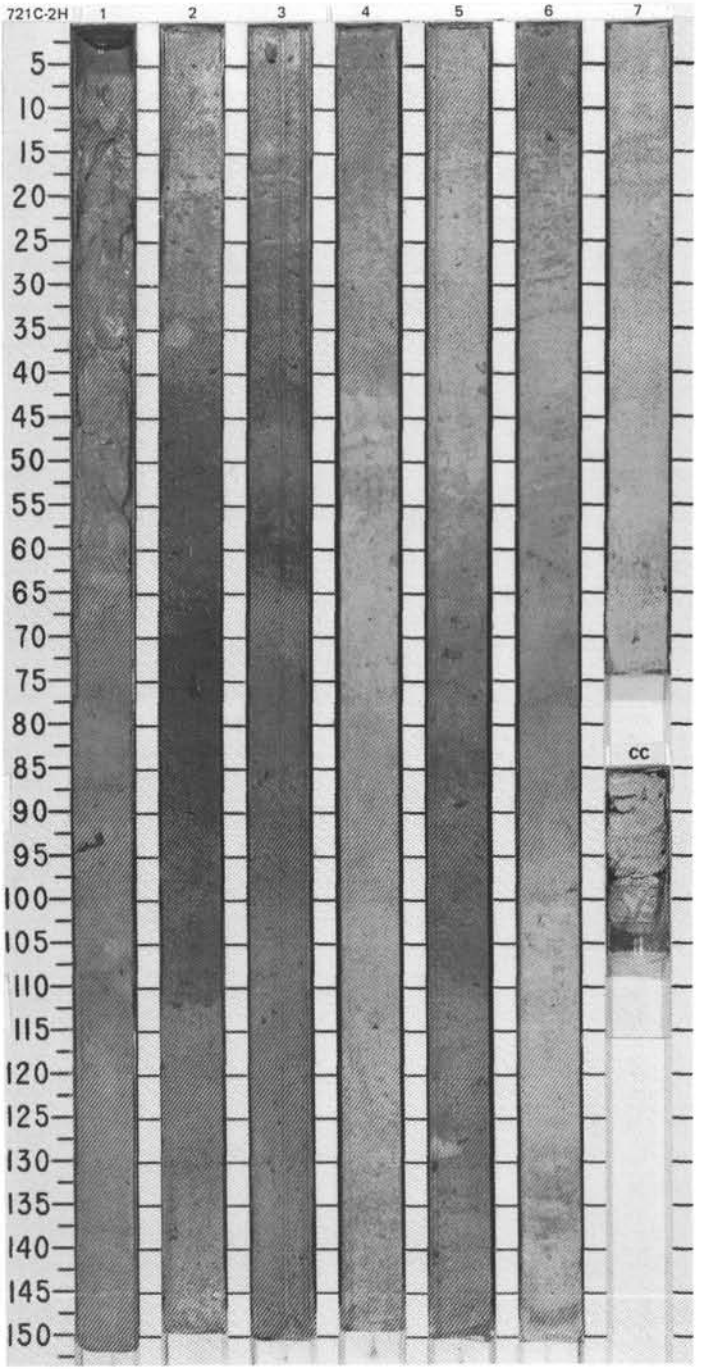
NANNOFOSSIL OOZE

Section 1, 0-61 cm, is very disturbed. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light gray (5Y 7/1, 6/1), light olive gray (5Y 6/2), and pale olive (5Y 6/3), to olive (5Y 4/3, 5/3). Slight to moderate burrow-mottling throughout. Dark layers contain more terrigenous silty clay than do light layers. Black pyrite spots seen throughout, especially as burrow linings.

SMEAR SLIDE SUMMARY (%):

	2, 86 D	4, 67 D
TEXTURE:		
Sand	10	10
Silt	20	15
Clay	70	75
COMPOSITION:		
Access. minerals	Tr	Tr
Diatoms		1
Foraminifers	10	7
Volcanic glass	Tr	Tr
Inorganic calcite	20	17
Nannofossils	70	75
Quartz	Tr	Tr
Radiolarians	Tr	Tr
Sponge spicules	Tr	



SITE 721 HOLE C CORE 3H CORED INTERVAL 1958.1-1967.8 mbsl; 13.3-23.0 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	NN19 *Pseudoemiliania lacunosa*						1	0.5				*
									1.0				
								2					
								3					*
								4					
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

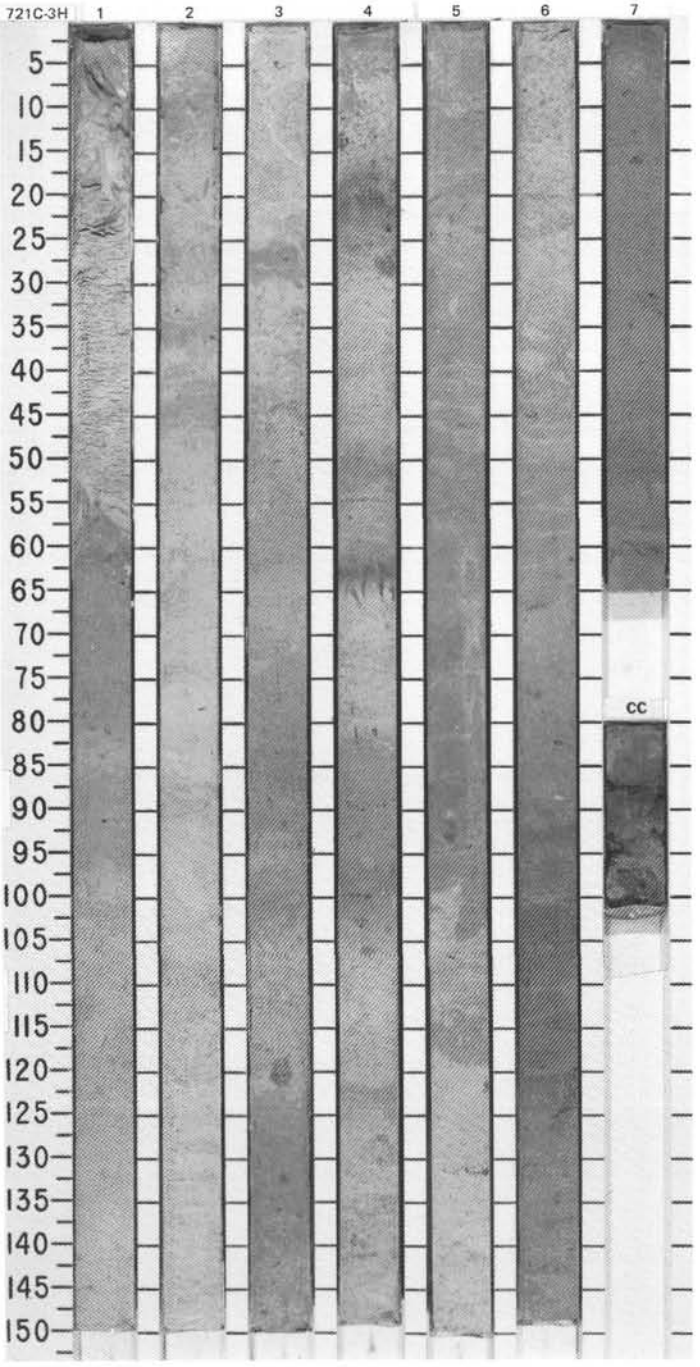
NANNOFOSSIL OOZE

Section 1, 0-15 cm, soupy; 15-57 cm, stretched and moderately disturbed. Remainder of core undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 7/1) and light olive gray (5Y 6/2) to olive (5Y 5/3, 4/3, 5/4, 4/4). Slight to moderate burrow-mottling throughout. Dark layers contain more terrigenous silty clay than do light layers. Foraminifers visible on core face.

SMEAR SLIDE SUMMARY (%):

	1, 90 D	3, 4 D
TEXTURE:		
Sand	1	1
Silt	9	9
Clay	90	90
COMPOSITION:		
Access. minerals	Tr	Tr
Dolomite	Tr	
Foraminifers	1	1
Volcanic glass	Tr	
Inorganic calcite	9	9
Mica		Tr
Nannofossils	90	90
Quartz	Tr	Tr
Sponge spicules	Tr	



SITE 721 HOLE C CORE 4H CORED INTERVAL 1967.8-1977.5 mbsl; 23.0-32.7 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	* A/G	NN19 *Pseudoemiliania lacunosa*						1 2 3 4 5 6 7 CC	0.5 1.0	VOID 23.15			* *	

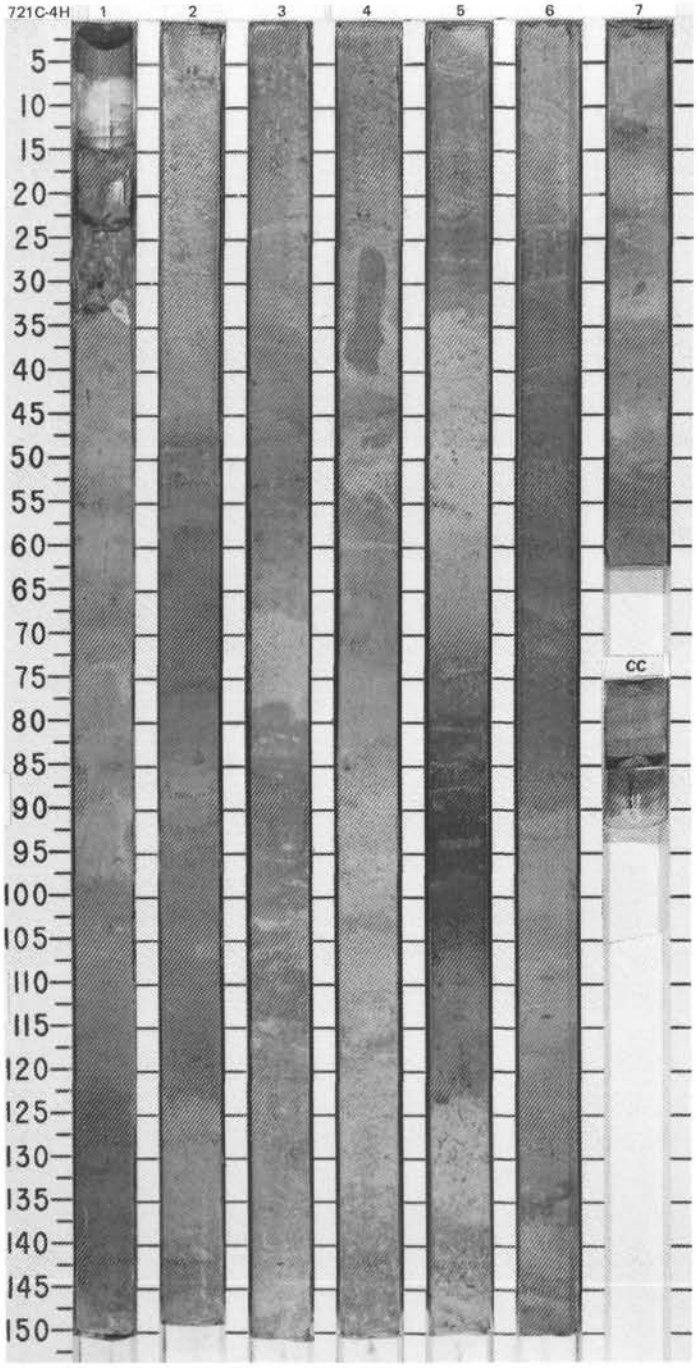
NANNOFOSSIL OOZE

Void 0-13 cm, in Section 1. Section 1, 13-30 cm, soupy and moderately disturbed. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light olive gray (5Y 6/2), light greenish gray (5GY 7/1, 10Y 6/2), light gray (5Y 6/1), pale olive (5Y 6/3), and olive (5Y 5/3, 5/4, 4/3), to olive gray (5Y 5/2, 4/2). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous silty clay than do light layers. Some burrows lined with black pyrite grains.

SMEAR SLIDE SUMMARY (%):

	1, 127 D	5, 49 D
TEXTURE:		
Sand	20	
Silt	15	15
Clay	65	85
COMPOSITION:		
Access. minerals	1	Tr
Diatoms	10	
Feldspar		Tr
Foraminifers	10	Tr
Volcanic glass		Tr
Inorganic calcite	10	14
Mica		Tr
Nannofossils	65	85
Quartz	Tr	1
Radiolarians	Tr	
Silicoflagellates	1	
Sponge spicules	3	Tr



SITE 721 HOLE C CORE 5H CORED INTERVAL 1977.5-1987.2 mbsl; 32.7-42.4 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	NN19 *Pseudoemiliania lacunosa*						1 2 3 4 5 6 7 CC	0.5 1.0				* *

LITHOLOGIC DESCRIPTION

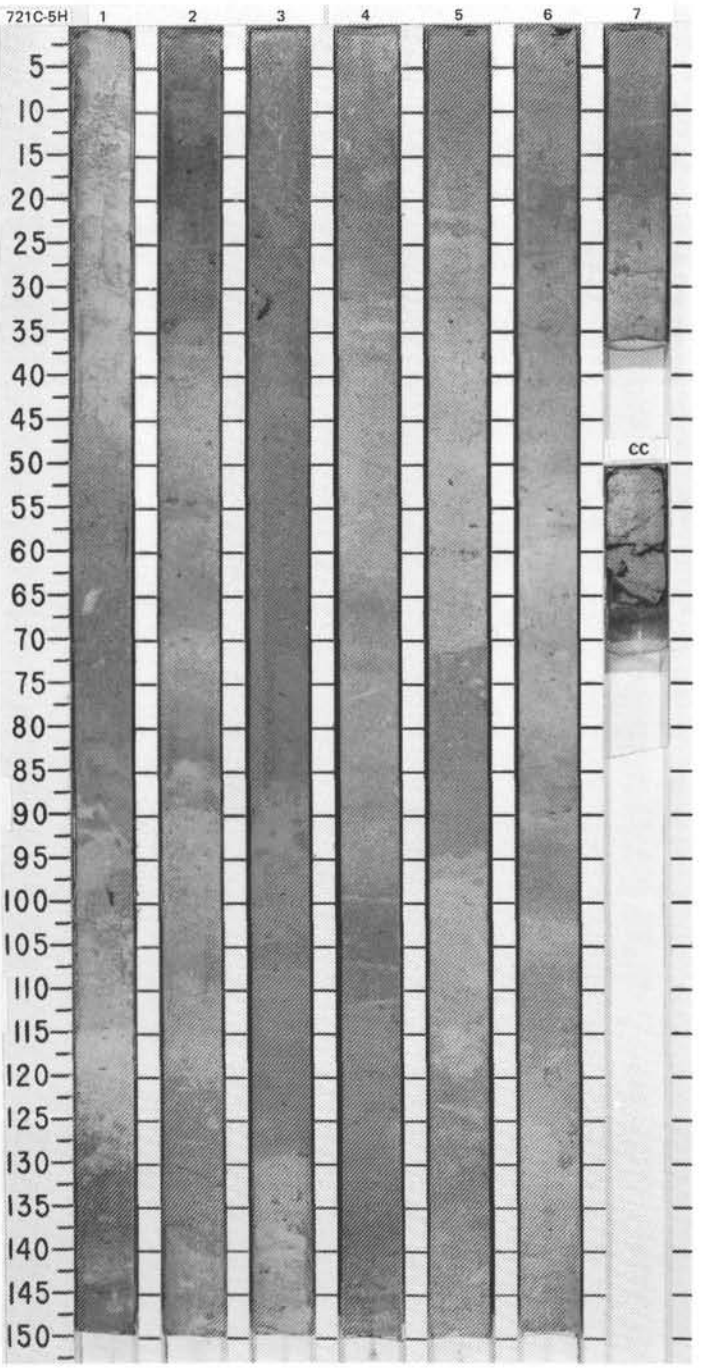
NANNOFOSSIL OOZE

No drilling disturbance.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light greenish gray (5GY 7/1, 10Y 6/2), light gray (5Y 7/2), and light olive gray (5Y 6/2) to olive gray (5Y 5/2), pale olive (5Y 6/3), and olive (5Y 4/3, 5/3). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous components relative to light layers. Foraminifers visible on core face.

SMEAR SLIDE SUMMARY (%):

	2, 16 D	5, 32 D
TEXTURE:		
Sand	1	
Silt	14	15
Clay	85	85
COMPOSITION:		
Access. minerals	Tr	Tr
Diatoms	Tr	
Dolomite	Tr	
Foraminifers	1	Tr
Volcanic glass		Tr
Inorganic calcite	13	15
Mica	1	Tr
Nannofossils	85	85
Radiolarians	Tr	
Sponge spicules		Tr



SITE 721 HOLE C CORE 6H CORED INTERVAL

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	NN19 Pseudoemiliania lacunosa						1, 2, 3, 4, 5, 6, 7, CC	0.5, 1.0				*

LITHOLOGIC DESCRIPTION

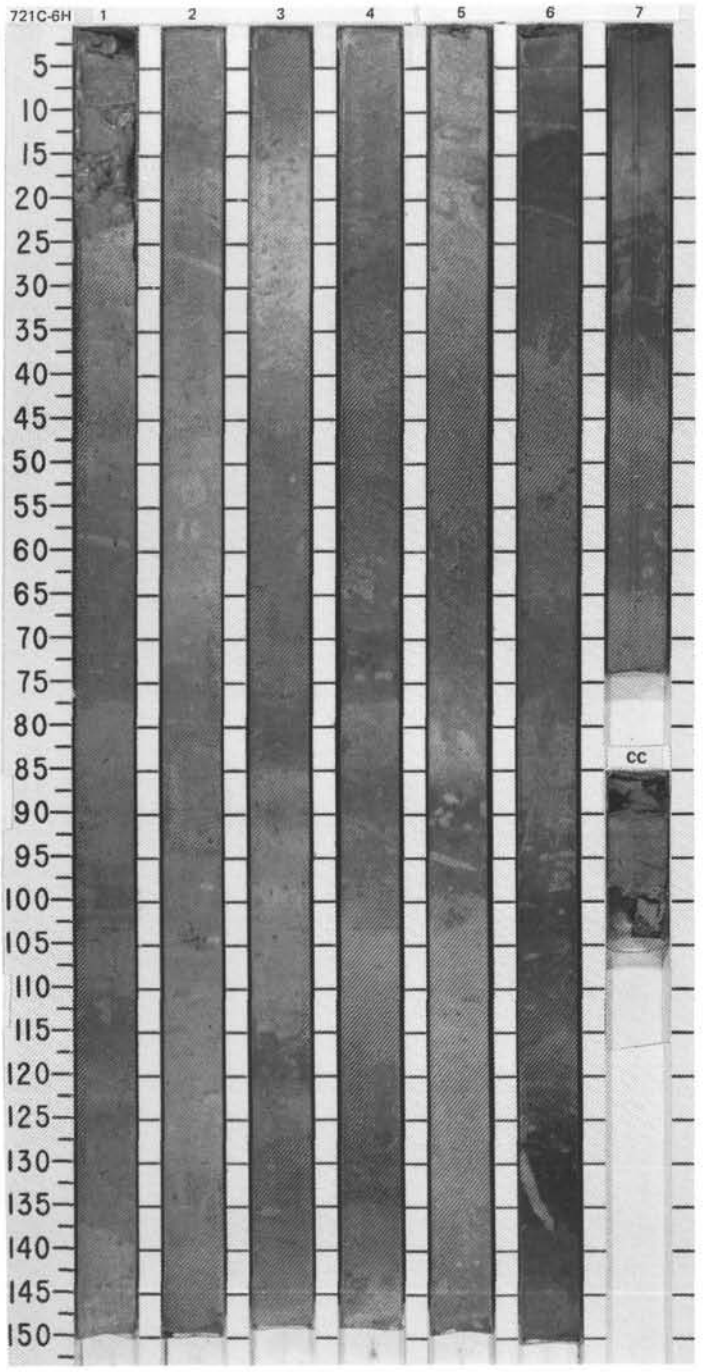
NANNOFOSSIL OOZE

Section 1, 0-20 cm, highly disturbed. Remainder of core undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light gray (5Y 6/1) and olive gray (5Y 6/2) to olive gray (5Y 5/2) and olive (5Y 4/3, 4/4, 5/4, 5/3)). Slight to moderate burrow-mottling throughout. Dark layers contain 10-20% more terrigenous silty clay than do light layers. Foraminifers visible on core face.

SMEAR SLIDE SUMMARY (%):

	4, 40 D	5, 115 D
TEXTURE:		
Sand	5	
Silt	15	15
Clay	80	85
COMPOSITION:		
Access. minerals		Tr
Clay	5	10
Diatoms	Tr	
Dolomite		Tr
Feldspar	Tr	
Foraminifers	5	5
Inorganic calcite	Tr	10
Nannofossils	80	74
Quartz	5	1
Radiolarians	5	Tr
Silicoflagellates	Tr	
Sponge spicules		Tr



SITE 721 HOLE C CORE 7H CORED INTERVAL 1996.8-2006.1 mbsl; 52.0-61.3 mbsl;

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	NN19 *Pseudoemiliania lacunosa*						1 2 3 4 5 6 7 CC	0.5 1.0				* *

LITHOLOGIC DESCRIPTION

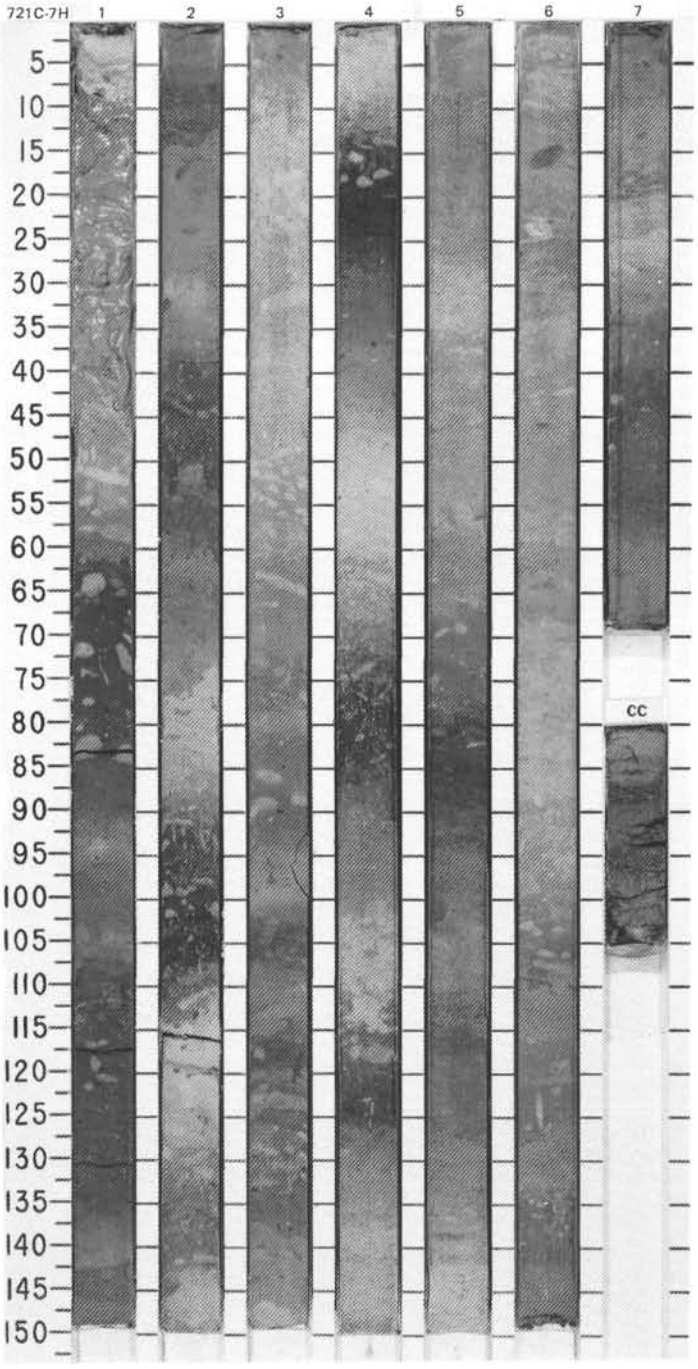
FORAMINIFER-NANNOFOSSIL OOZE to NANNOFOSSIL OOZE

Section 1, 10-45 cm, soupy. Remainder of core is undisturbed.

Major lithology: FORAMINIFER-NANNOFOSSIL OOZE to NANNOFOSSIL OOZE. Alternating light and dark bands, light greenish gray (10Y 6/2) and light gray (5Y 7/1) to olive gray (5Y 5/2, 4/2) and olive (5Y 4/3, 5/3, 5/4). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous silty clay relative to light layers.

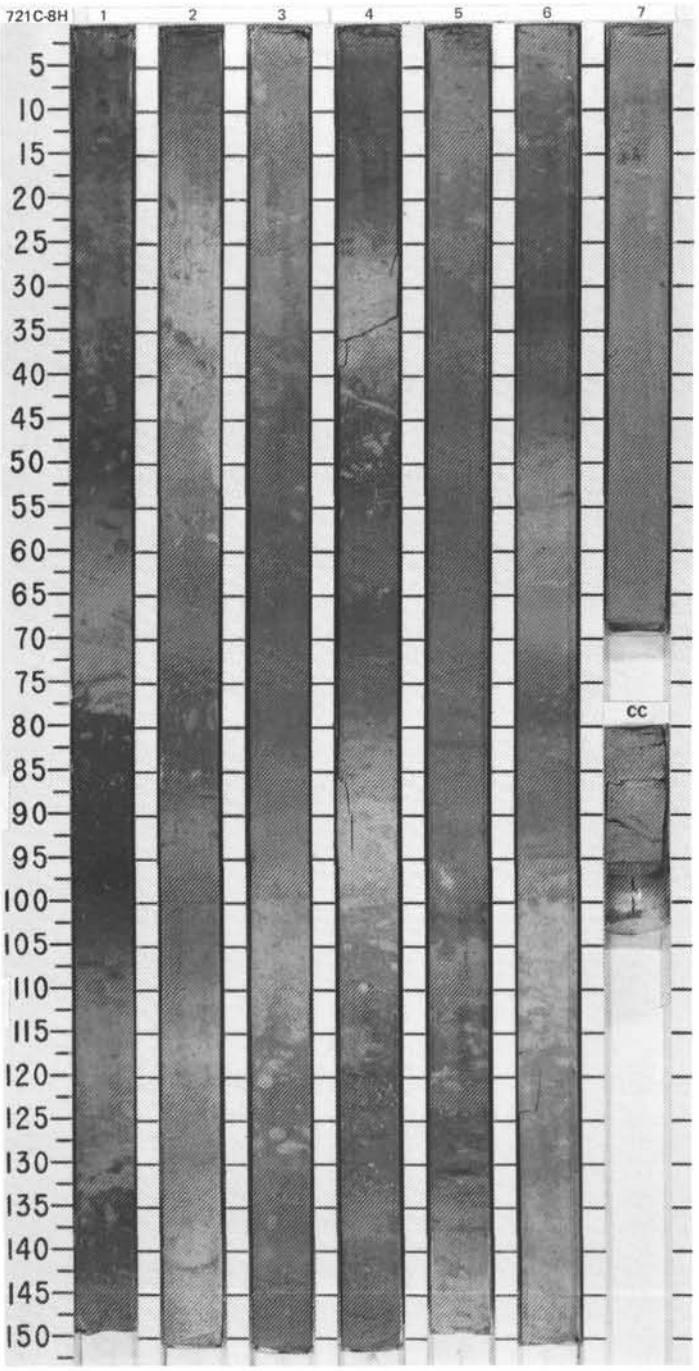
SMEAR SLIDE SUMMARY (%):

	3, 90 D	6, 77 D
TEXTURE:		
Sand	10	15
Silt	20	30
Clay	70	55
COMPOSITION:		
Access. minerals		2
Clay	10	15
Feldspar	Tr	
Foraminifers	10	15
Gypsum		Tr
Inorganic calcite	Tr	3
Mica	Tr	
Nannofossils	70	65
Quartz	10	
Radiolarians	Tr	
Silicoflagellates	Tr	



SITE 721 HOLE C CORE 8H CORED INTERVAL 2006.1-2015.6 mbsl; 61.3-70.8 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
PLIOCENE	*A/M	NN18 *Discoaster brouweri*						1	0.5					NANNOFOSSIL OOZE
									1.0					No drilling disturbance.
								2						Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light olive gray (5Y 6/2) and pale olive (5Y 6/3) to olive gray (5Y 5/2, 4/2) and olive (5Y 4/3, 5/3, 4/4). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous silty clay relative to light layers.
								3						SMEAR SLIDE SUMMARY (%): 6, 60 D
								4						TEXTURE: Sand 5; Silt 30; Clay 65
								5						COMPOSITION: Access. minerals Tr; Clay 20; Foraminifers 15; Gypsum Tr; Inorganic calcite 5; Nannofossils 60; Radiolarians Tr
								6					*	
								7						
								CC						



SITE 721 HOLE C CORE 9H CORED INTERVAL 2015.6-2025.1 mbsl; 70.8-80.3 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
PLIOCENE	* A/G	NN16 *Discoaster surculus* - NN17 *Discoaster pentaradiatus*						1	0.5				
									1.0				
								2					
								3					*
								4					
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

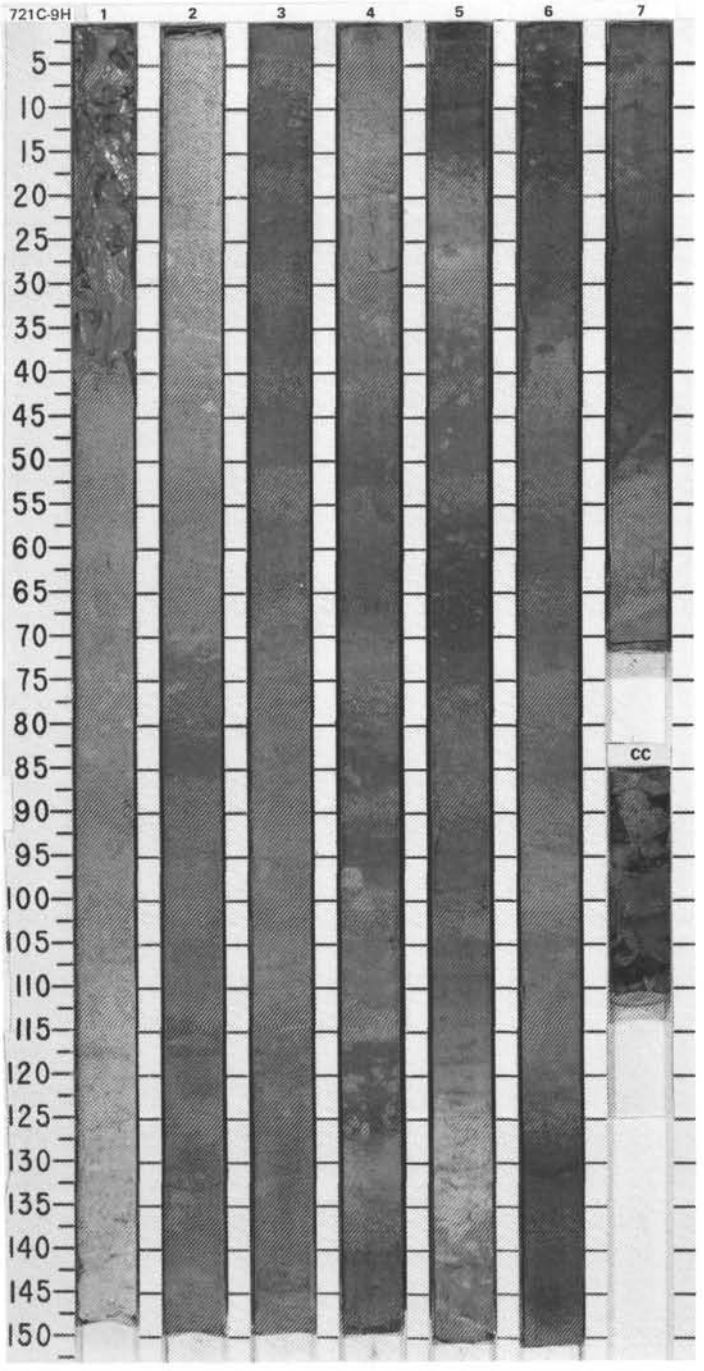
NANNOFOSSIL OOZE

Section 1, 0-38 cm, soupy. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light *gray (5Y 7/1), pale yellow (5Y 7/3), and light olive gray (5Y 6/2) to olive* (5Y 4/3, 5/3, 4/4) and olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	3, 60 D
TEXTURE:	
Silt	20
Clay	80
COMPOSITION:	
Clay	10
Diatoms	5
Foraminifers	Tr
Inorganic calcite	Tr
Nannofossils	85
Quartz	Tr



SITE 721 HOLE C CORE 10H CORED INTERVAL 2025.1-2034.7 mbsl; 80.3-89.9 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
PLIOCENE	* A/M	NN16 *Discoaster surculus* - NN17 *Discoaster pentaradiatus*						1, 2, 3, 4, 5, 6, 7, CC	0.5, 1.0				*

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE

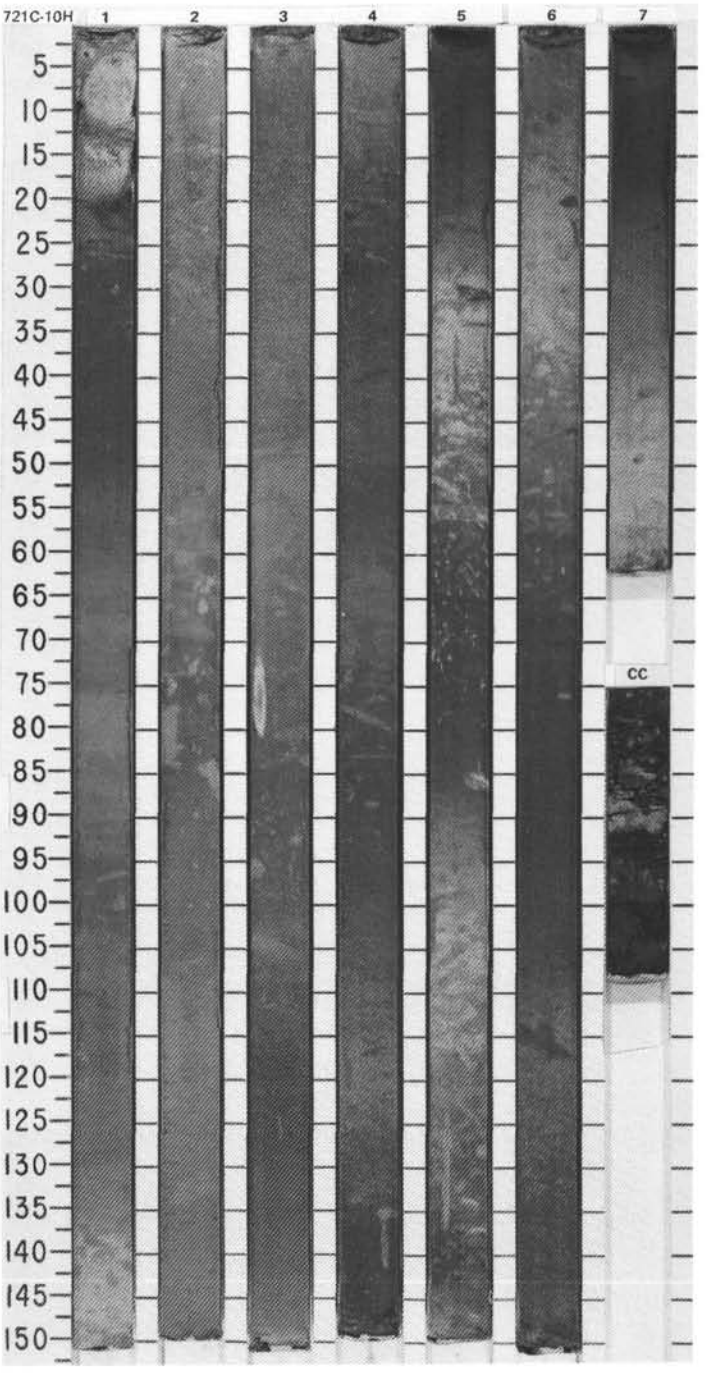
Section 1, 0-20 cm, moderately disturbed. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, pale olive (5Y 6/3) to olive (5Y 4/3, 5/3, 5/4) and olive gray (5Y 4/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous clay relative to light layers.

Minor lithology: Marly nannofossil ooze, dark olive gray (5Y 3/2), in Section 4, 148-150 cm; Section 5, 0-25 cm; Section 7, 10-35 cm; and CC.

SMEAR SLIDE SUMMARY (%):

	4, 100 D
TEXTURE:	
Silt	50
Clay	50
COMPOSITION:	
Clay	30
Inorganic calcite	20
Nannofossils	40
Quartz	10



SITE 721 HOLE C CORE 11X CORED INTERVAL 2034.7-2044.3 mbsl; 89.9-99.5 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
PLIOCENE	*A/M	NN16 *Discoaster surculus* - NN17 *Discoaster pentaradiatus*						1, 2, 3, 4, 5, CC	0.5, 1.0				*

LITHOLOGIC DESCRIPTION

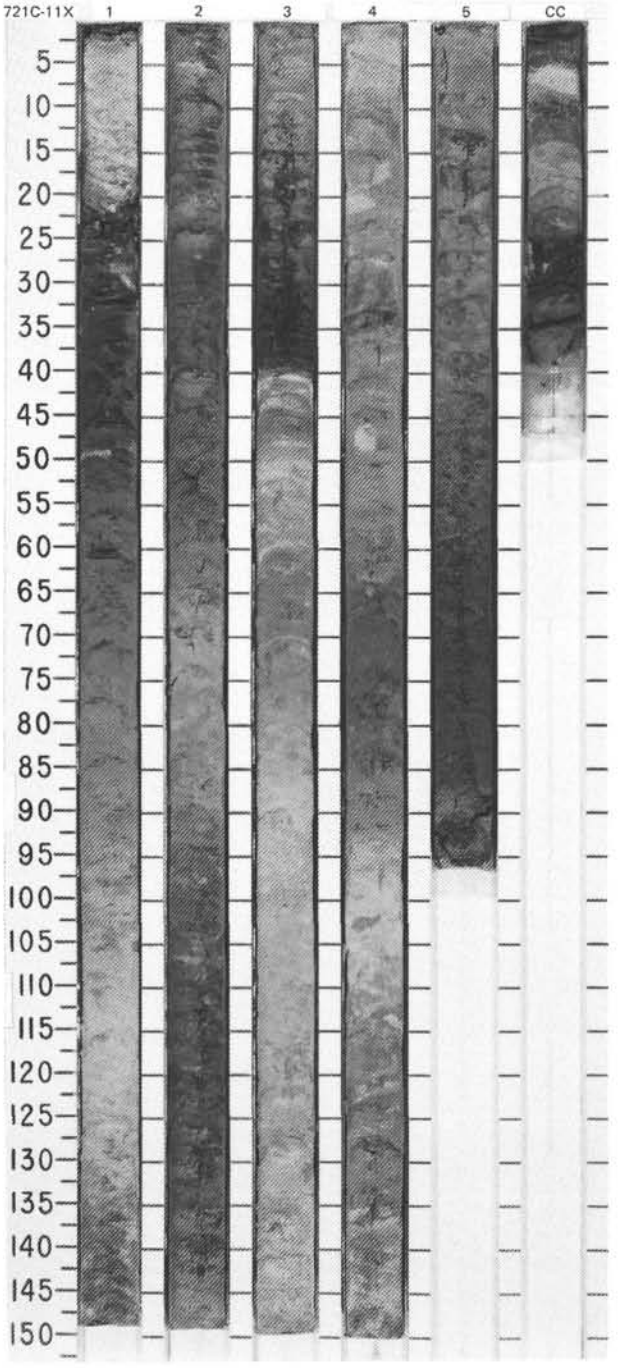
NANNOFOSSIL OOZE

Section 1, 0-23 cm, moderately disturbed. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light olive gray (5Y 6/2) and pale olive (5Y 6/3) to olive (5Y 4/3, 5/3, 5/4, 4/4). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous silty clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	3, 100 D
TEXTURE:	
Silt	20
Clay	80
COMPOSITION:	
Clay	10
Diatoms	5
Inorganic calcite	5
Mica	Tr
Nannofossils	80
Quartz	Tr



SITE 721 HOLE C CORE 12X CORED INTERVAL 2044.3-2053.9 mbsl; 99.5-109.1 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
PLIOCENE	* A/M	NN15 *Reticulofenestra pseudoumbilica*						1	0.5				*
									1.0				
								2					
								3					
								4					
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

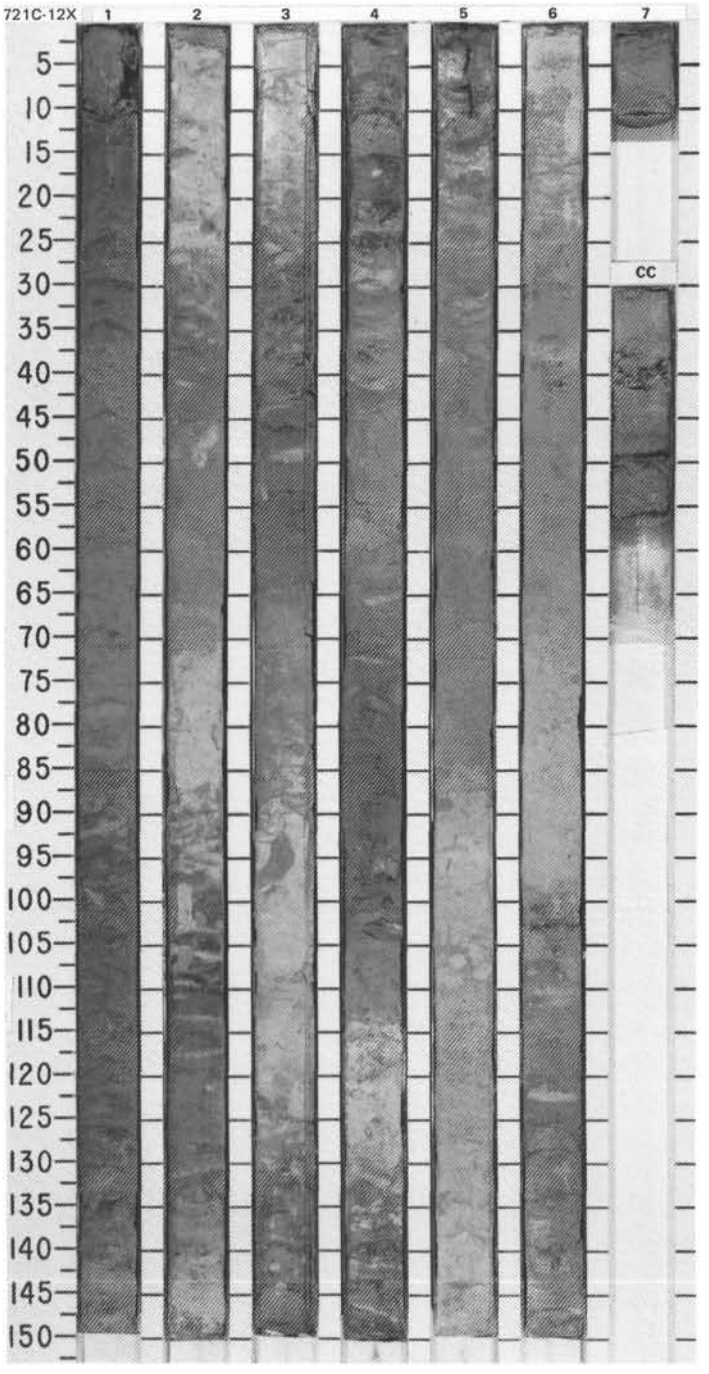
NANNOFOSSIL OOZE

Section 1, 0-10 cm, very disturbed. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light olive gray (5Y 6/2) and pale olive (5Y 6/3) to olive (5Y 4/3, 5/3, 4/4). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous silty clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	1, 60 D
TEXTURE:	
Sand	5
Silt	15
Clay	80
COMPOSITION:	
Clay	10
Foraminifers	5
Inorganic calcite	Tr
Mica	Tr
Nannofossils	85
Quartz	Tr



SITE 721 HOLE C CORE 13X CORED INTERVAL 2053.9-2063 mbsl; 109.1-118.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	BIOSTRAT. ZONE/ FOSSIL CHARACTER: NANNOFOSSILS	BIOSTRAT. ZONE/ FOSSIL CHARACTER: RADIOLARIANS	BIOSTRAT. ZONE/ FOSSIL CHARACTER: DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
PLIOCENE		NN15 *Reticulofenestra pseudoumbilica*						1 2 3 4 5 CC	0.5 1.0				*
	*A/G-M												

LITHOLOGIC DESCRIPTION

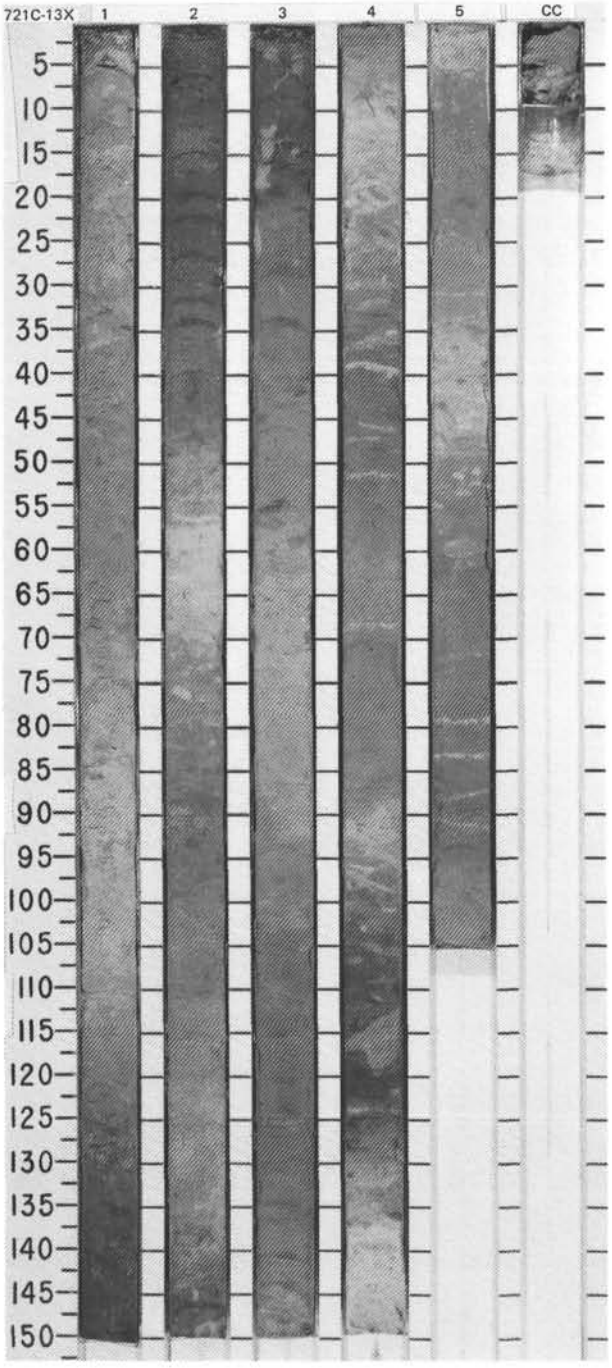
NANNOFOSSIL OOZE

Section 1, 0-5 cm, and Section 2, 0-50 cm, moderately disturbed. Remainder of core is undisturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light gray (5Y 6/1) and light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3) and olive gray (5Y 5/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous silty clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	4, 70 D
TEXTURE:	
Silt	20
Clay	80
COMPOSITION:	
Clay	10
Foraminifers	Tr
Inorganic calcite	5
Mica	Tr
Nannofossils	85
Quartz	Tr



SITE 721 HOLE C CORE 14X CORED INTERVAL 2063.5-2073.1 mbsl; 118.7-128.3 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
PLIOCENE	*A/G-M	NN14 *Discoaster asymmetricus* - NN15 *Reticulofenestra pseudoumbilica*						1	0.5				
									1.0				
								2					
								3					
								4					*
								5					
								CC					

LITHOLOGIC DESCRIPTION

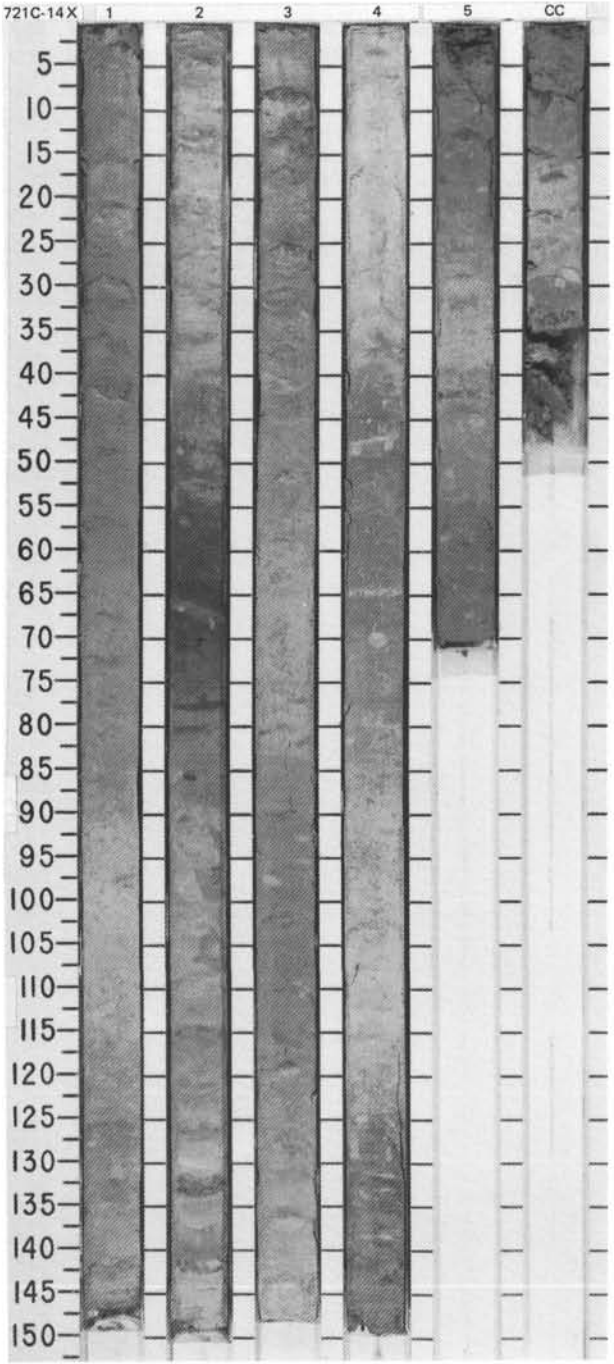
NANNOFOSSIL OOZE

Voids in Section 1, 146-150 cm, and Section 2, 149-150 cm. Most of core slightly to moderately disturbed.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands, light gray (5Y 7/1), light olive gray (5Y 6/2), and pale olive (5Y 6/3) to olive (5Y 4/3, 5/3) and olive gray (5Y 5/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous silty clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	4, 60 D
TEXTURE:	
Silt	10
Clay	90
COMPOSITION:	
Clay	10
Diatoms	10
Dolomite	Tr
Foraminifers	Tr
Inorganic calcite	5
Mica	Tr
Nannofossils	75
Quartz	Tr
Radiolarians	Tr



SITE 721 HOLE C CORE 15X CORED INTERVAL 2073.1-2082.8 mbsl; 128.3-138.0 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
PLIOCENE	* A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*						1	0.5		O		
									1.0				
								2					*
								3					
								4					*
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE

Core is slightly to moderately disturbed throughout.

Major lithology: NANNOFOSSIL OOZE. Alternating light and dark bands of light gray (5Y 7/1, 6/1) and light olive gray (5Y 6/2) to olive (5Y 4/3, 5/3) and olive gray (5Y 5/2). Slight to moderate burrow-mottling throughout. Dark layers enriched in terrigenous silty clay relative to light layers.

SMEAR SLIDE SUMMARY (%):

	2, 80 D	4, 80 D
TEXTURE:		
Silt	15	20
Clay	85	80
COMPOSITION:		
Clay	10	10
Diatoms	10	Tr
Foraminifers	Tr	5
Inorganic calcite	Tr	5
Mica	Tr	Tr
Nannofossils	80	75
Quartz	Tr	5
Radiolarians	Tr	Tr