SITE 728 HOLE A CORE 1H CORED INTERVAL 1427.8-1437.4 mbsl; 0.0-9.6 mbsf

TIME-ROCK UNIT: PLEISTOCENE-HOLOCENE

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

PALEOMAGNETICS: (Brunhes)

PHYS. PROPERTIES: ϕ-64.3 γ-1.58; ϕ-60.9 γ-1.67; ϕ-57.3 γ-1.75

CHEMISTRY: IC=7.21, OC=1.53; IC=7.26; IC=7.44

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: 1W

LITHOLOGIC DESCRIPTION

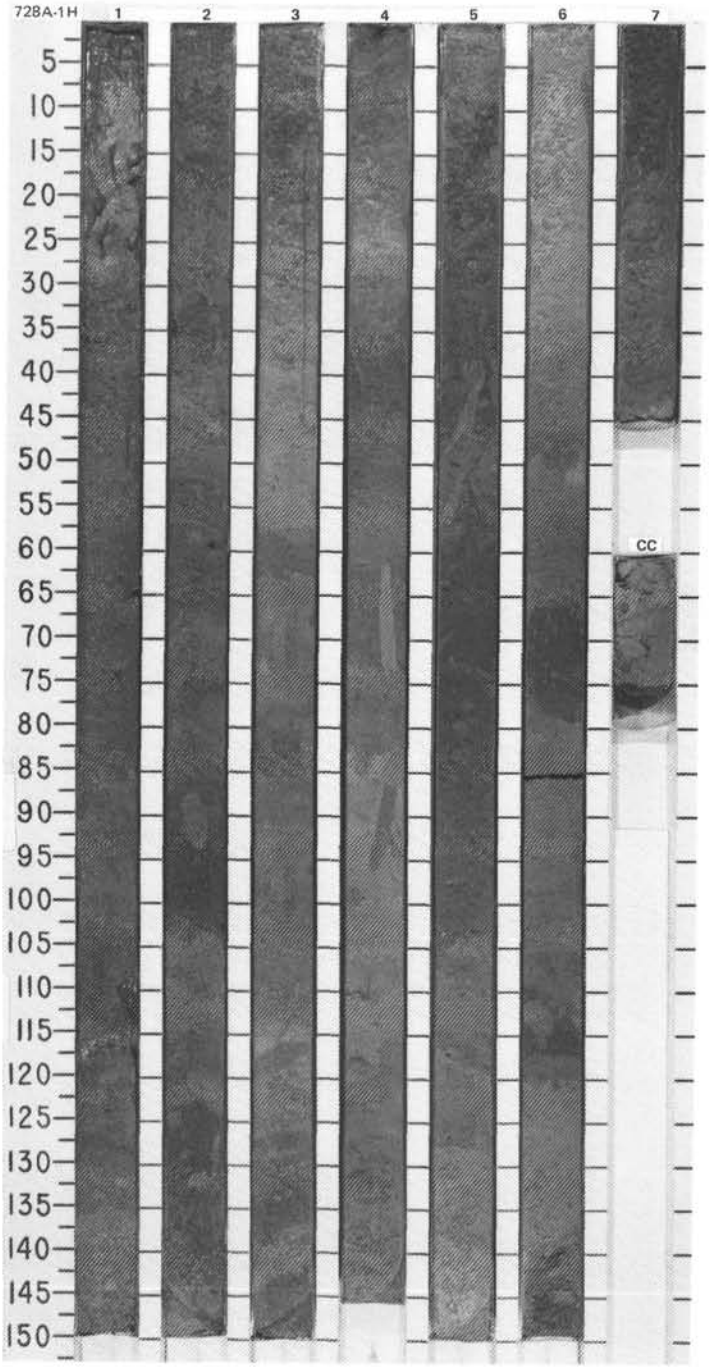
MARLY FORAMINIFER-NANNOFOSSIL OOZE

Section 1, 0-25 cm, soupy; remainder of core is undisturbed.

Major lithologies: MARLY FORAMINIFER-NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/2, 5/3) intervals 20-100 cm thick. Foraminifers and shell fragments abundant on core face.

SMEAR SLIDE SUMMARY (%):

	1, 22 D	2, 80 D
TEXTURE:		
Silt	40	45
Clay	60	55
COMPOSITION:		
Access. Minerals	1	Tr
Clay	20	26
Diatoms	Tr	
Dolomite	Tr	1
Foraminifers	13	10
Inorganic Calcite	20	18
Mica	1	
Nannofossils	40	30
Quartz	5	15



SITE 728 HOLE A CORE 2H CORED INTERVAL 1437.4-1446.9 mbsl; 9.6-19.1 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	N23	NN21			(Brunhes)	●Φ=56.8 γ=1.65	●IC=7.44 OC=0.69	1	0.5 1.0				
		NN20 *Gephyrocapsa oceanica*				●Φ=57.5 γ=1.68	●IC=7.68	2					
	*A/G					●Φ=56.0 γ=1.70	●IC=7.68	3					
	*A/M							4					
	*Barren							5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

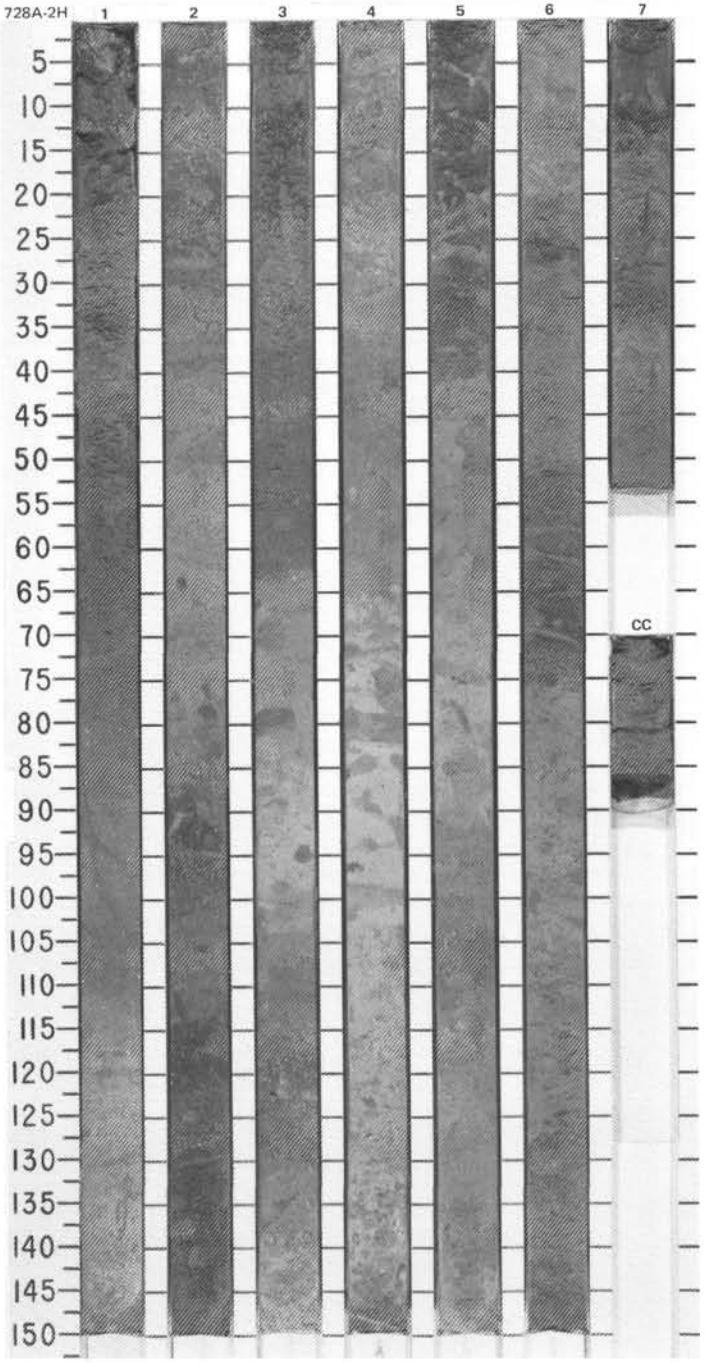
MARLY FORAMINIFER-NANNOFOSSIL OOZE

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

Major lithologies: MARLY FORAMINIFER-NANNOFOSSIL OOZE, mottled olive (5Y 4/3) and light olive gray (5Y 5/2, 5/3) intervals 20-100 cm thick. Foraminifers common on core face. Pyrite flecks visible in lighter layers.

SMEAR SLIDE SUMMARY (%):

	4, 87 D
TEXTURE:	
Silt	30
Clay	70
COMPOSITION:	
Clay	20
Dolomite	Tr
Foraminifers	12
Inorganic Calcite	15
Nannofossils	50
Quartz	3



SITE 728 HOLE A CORE 3H CORED INTERVAL 1446.9-1456.3 mbsl; 19.1-28.5 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: N23; NANNOFOSSILS: NN20 / NN19 *Pseudoemiliania lacunosa*; RADIOLARIANS: *Barren; DIATOMS: *A/G; PALEOMAGNETICS: *A/M (Brunhes)

PHYS. PROPERTIES: ●Φ=52.4 γ=1.80; ●Φ=53.4 γ=1.80; ●Φ=58.2 γ=1.65

CHEMISTRY: ●IC=7.67; IC=6.86 OC=1.04; ●IC=6.95; ●IC=7.49 OC=1.78

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

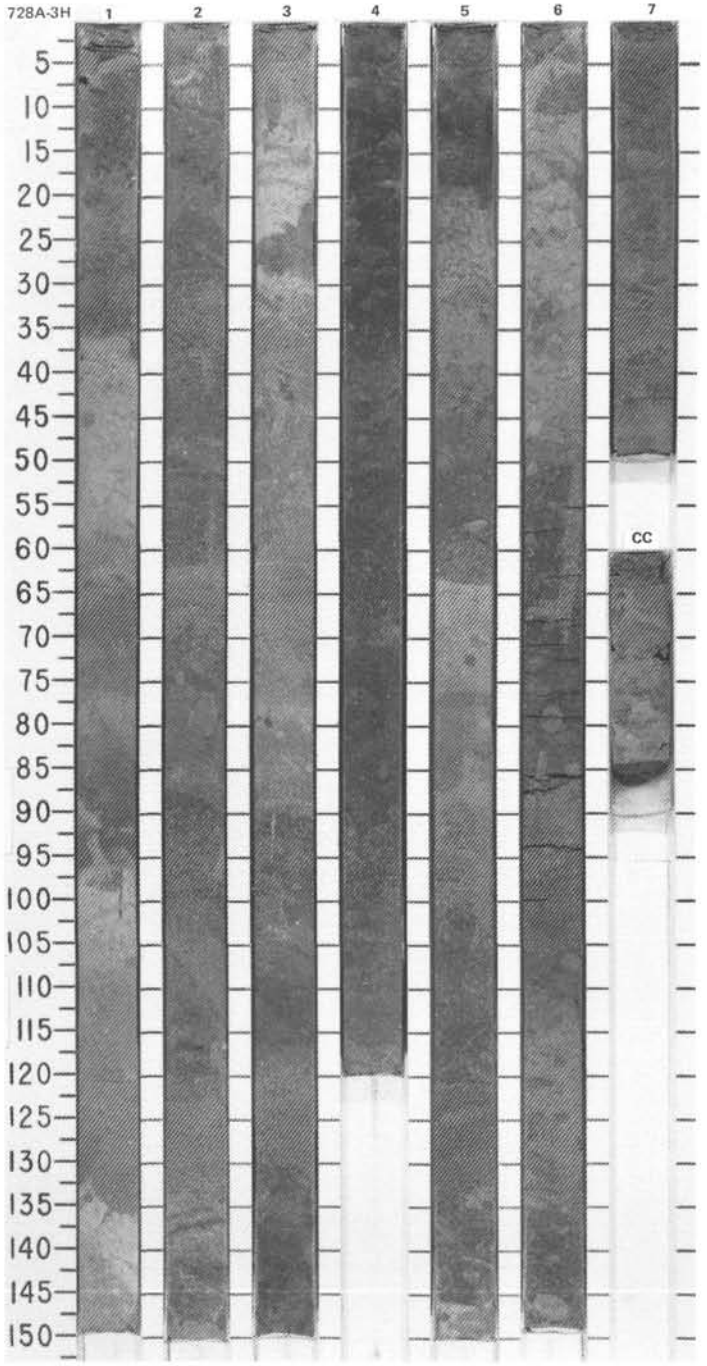
MARLY FORAMINIFER-NANNOFOSSIL OOZE and MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithologies: MARLY FORAMINIFER-NANNOFOSSIL OOZE and MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/2, 5/3) intervals 20-100 cm thick. Foraminifers common on core face.

SMEAR SLIDE SUMMARY (%):

	1, 137 D	5, 10 D
TEXTURE:		
Sand	—	—
Silt	20	40
Clay	80	60
COMPOSITION:		
Clay	17	30
Dolomite	Tr	Tr
Foraminifers	5	10
Inorganic Calcite	10	20
Mica	—	Tr
Nannofossils	65	30
Quartz	3	10



SITE 728 HOLE A CORE 4H CORED INTERVAL 1456.3-1465.8 mbsl; 28.5-38.0 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: N23
- NANNOFOSSILS: NN19 *Pseudoemiliania lacunosa*
- RADIOLARIANS: Barren
- DIATOMS: A/G; A/M

PALEOMAGNETICS: (Brunhes)

PHYS. PROPERTIES: ϕ-64.1 γ-1.62; ϕ-53.7 γ-1.74; ϕ-54.4 γ-1.78

CHEMISTRY: IC-8.48; IC-6.47; IC-6.80; OC-1.19

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

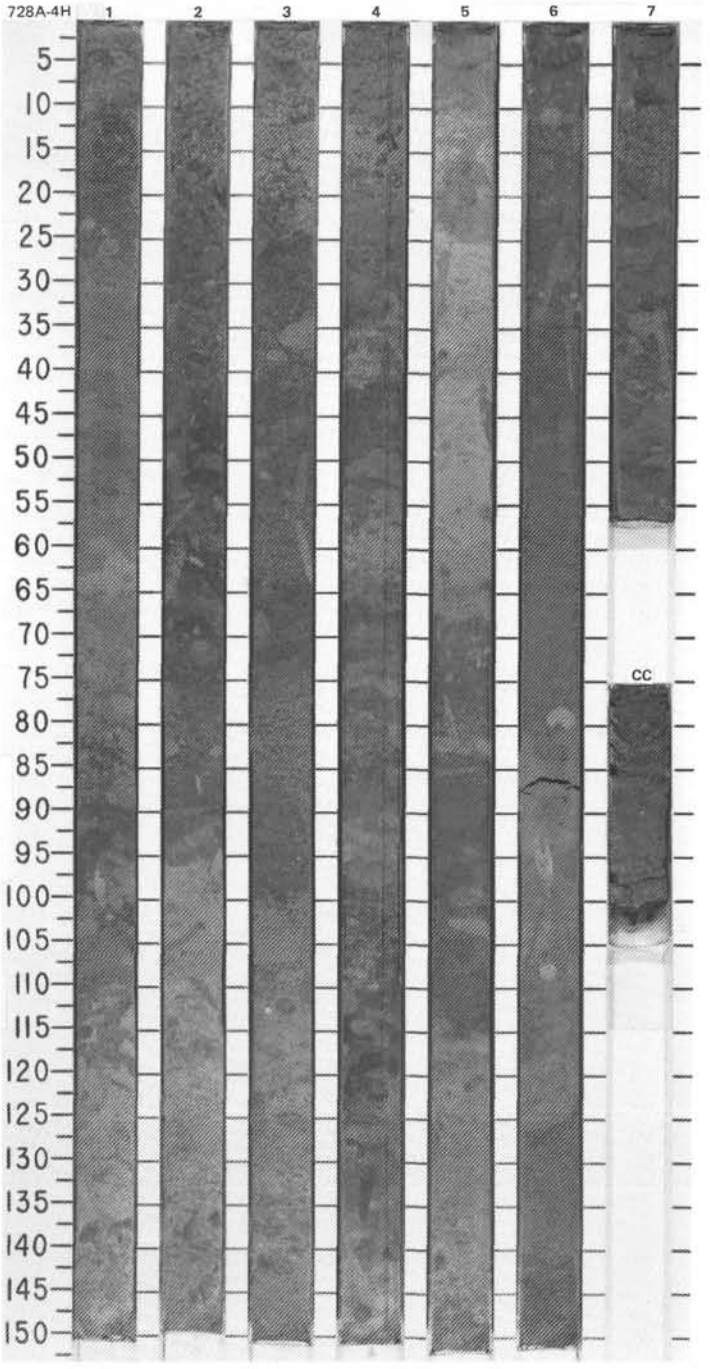
MARLY FORAMINIFER-NANNOFOSSIL OOZE and MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithologies: MARLY FORAMINIFER-NANNOFOSSIL OOZE and MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2, 3/2) and light olive gray (5Y 5/2, 5/3) intervals 20-100 cm thick. Foraminifers common on core face. Color contrast and mottling (bioturbation) increase relative to cores above.

SMEAR SLIDE SUMMARY (%):

	3, 78 D	4, 50 D
TEXTURE:		
Sand	5	5
Silt	15	35
Clay	80	60
COMPOSITION:		
Clay	10	10
Dolomite	—	Tr
Foraminifers	10	20
Inorganic Calcite	20	20
Nannofossils	50	40
Organic Matter	5	—
Quartz	5	10



SITE 728 HOLE A CORE 5H CORED INTERVAL 1465.8-1475.3 mbsl; 38.0-47.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
PLEISTOCENE	* C/M N22	NN19 *Pseudoemiliania lacunosa*	unzoned		● (Jaramillo) ○ (Matuyama)	●ϕ=59.9 γ=1.63 ●ϕ=57.3 γ=1.76 ●ϕ=55.9 γ=1.75	●IC=7.77 OC=1.18 ●IC=7.36 ●IC=6.39	1 2 3 4 5 6 7 CC	0.5 1.0				*

LITHOLOGIC DESCRIPTION

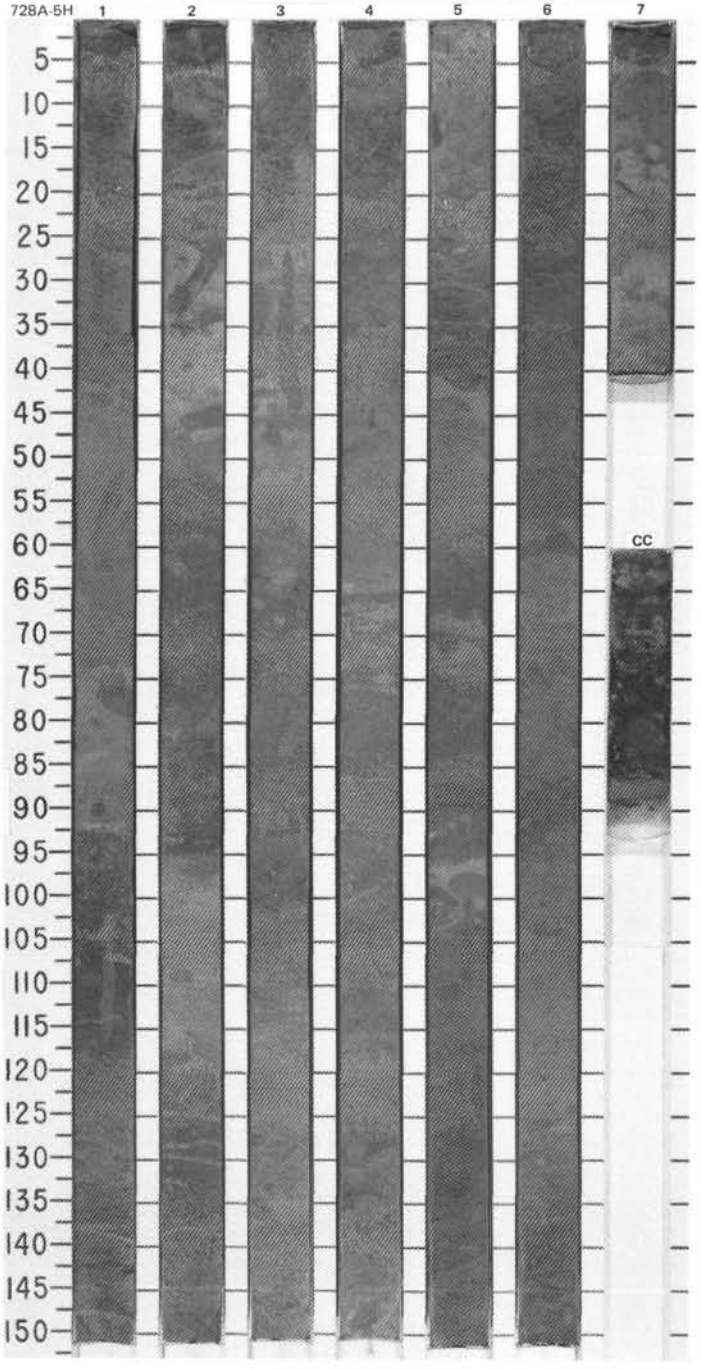
MARLY FORAMINIFER-NANNOFOSSIL OOZE and MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: MARLY FORAMINIFER-NANNOFOSSIL OOZE and MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2, 3/2) and light olive gray (5Y 5/2, 5/3) intervals 20-100 cm thick. Foraminifers common on core face.

SMEAR SLIDE SUMMARY (%):

	3, 60 D	3, 86 D	5, 92 D
TEXTURE:			
Silt	50	45	55
Clay	50	55	45
COMPOSITION:			
Access. minerals	Tr	—	—
Clay	23	35	30
Diatoms	1	1	—
Dolomite	Tr	2	—
Foraminifers	15	10	10
Inorganic calcite	28	25	30
Nannofossils	25	20	10
Quartz	7	5	20
Radiolarians	—	Tr	—
Sponge Spicules	1	2	—



SITE 728 HOLE A CORE 6H CORED INTERVAL 1475.3-1484.8 mbsl; 47.5-57.0 mbsf

TIME-ROCK UNIT: PLEISTOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: *C/G; N22 / *A/M; NN19 *Pseudoemiliania lacunosa* / NANNOFOSSILS / RADIOLARIANS: *R/P; unzoned / DIATOMS

PALEOMAGNETICS: (Matuyama)

PHYS. PROPERTIES: ● Φ=56.1 γ=1.76; ● Φ=57.0 γ=1.72; ● Φ=53.6 γ=1.79

CHEMISTRY: ● IC=5.99 OC=0.88; ● IC=6.24 OC=2.27; ● IC=6.45 OC=2.37; ● IC=6.11 OC=1.81

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

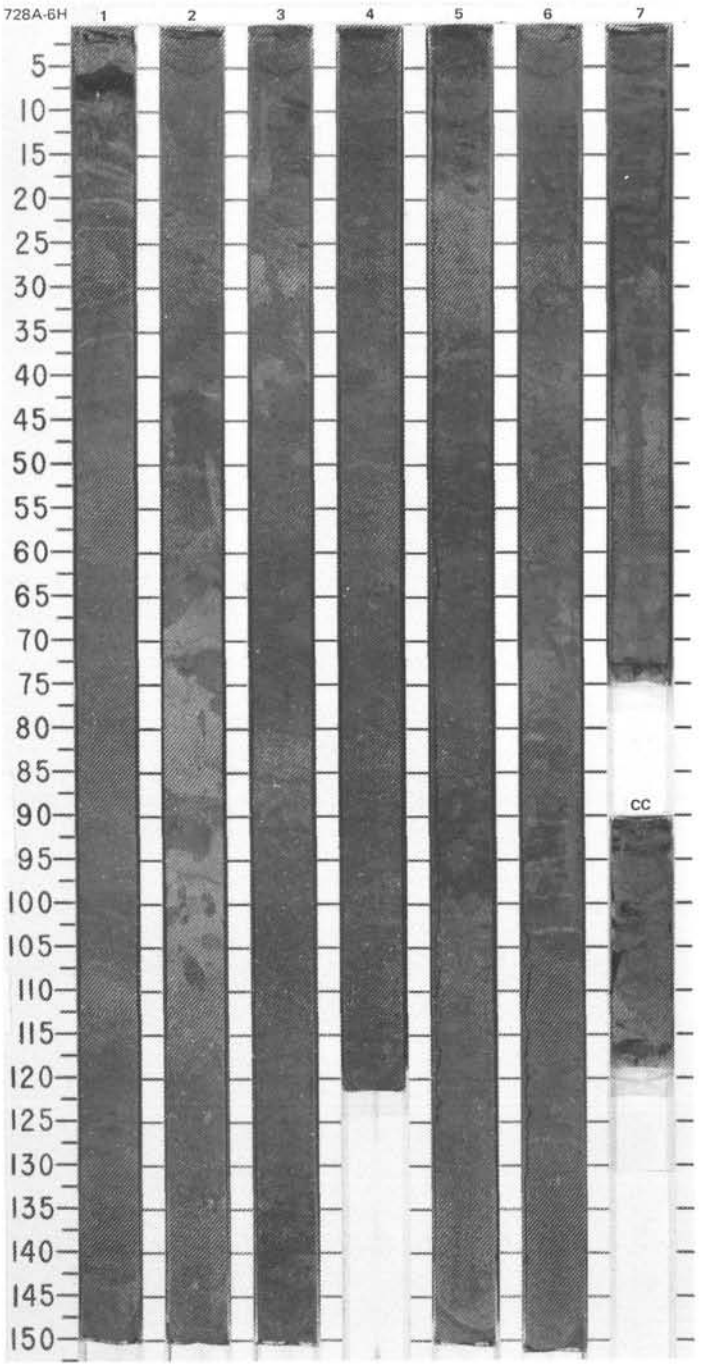
SAMPLES: OG IW

LITHOLOGIC DESCRIPTION

MARLY FORAMINIFER-NANNOFOSSIL OOZE AND MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: MARLY FORAMINIFER-NANNOFOSSIL OOZE and MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/2, 5/3) intervals 20-100 cm thick. Some burrows contain shell fragments.



SITE 728 HOLE A CORE 7H CORED INTERVAL 1484.8-1494.3 mbsl; 57.0-66.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
PLEISTOCENE	*C/G N18 - N21	NN19 *Pseudoemiliania lacunosa*	unzoned		O	ϕ=55.6 γ=1.75	IC=5.91 OC=2.05	1	0.5				*
					O				1.0				
					O	(Matuyama) O		2					
						ϕ=55.3 γ=1.75	IC=5.52 OC=2.26	3					
					O			4					
						ϕ=57.7 γ=1.73	IC=7.98 OC=2.03	5					
PLIOCENE	*A/M NN18				O			6					*
	*R/P							7					
								CC					

LITHOLOGIC DESCRIPTION

MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3) and light olive gray (5Y 5/2, 5/3) intervals 20-100 cm thick. Fewer foraminifers observed in smear slides.

SMEAR SLIDE SUMMARY (%):

	1, 65 D	6, 140 D
TEXTURE:		
Sand	10	5
Silt	25	10
Clay	65	85
COMPOSITION:		
Access. minerals	2	—
Clay	20	10
Dolomite	—	1
Foraminifers	2	3
Inorganic calcite	28	5
Nannofossils	45	75
Quartz	3	6
Radiolarians	Tr	—
Sponge Spicules	Tr	—

SITE 728 HOLE A CORE 8H CORED INTERVAL 1494.3-1503.9 mbsl; 66.5-76.1 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER
- FORAMINIFERS: *R/M: N18 - N21
- NANNOFOSSILS: *A/M: NN16 *Discoaster surculus*; NN17 - NN18
- RADIOLARIANS: *R/P: unzoned
- DIATOMS:

PALEOMAGNETICS: (Gauss); (Matuyama)

PHYS. PROPERTIES: ●ϕ=55.6 γ=1.79; ●ϕ=61.1 γ=1.67; ●ϕ=60.3 γ=1.67

CHEMISTRY: ●IC=4.97 OC=3.08; ●IC=4.11 OC=5.34; ●IC=7.18 OC=1.95

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

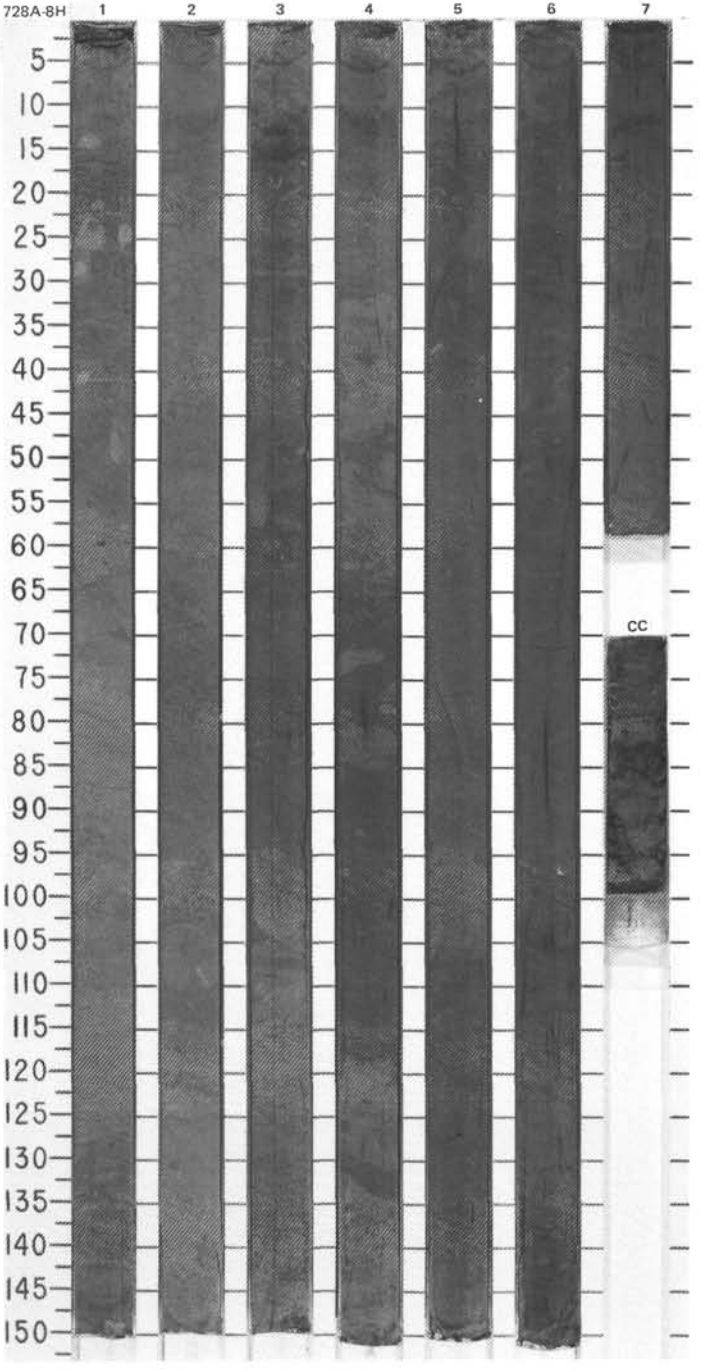
MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2, 3/2) and light olive gray (5Y 5/3) intervals 20-100 cm thick. Foraminifers and shell debris present in mm-scale lenses.

SMEAR SLIDE SUMMARY (%):

	1, 58 D	5, 139 D
TEXTURE:		
Sand	10	—
Silt	15	20
Clay	75	80
COMPOSITION:		
Access. minerals	1	2
Clay	25	20
Dolomite	—	Tr
Feldspar	—	1
Foraminifers	5	1
Inorganic calcite	15	10
Nannofossils	49	60
Quartz	5	6



SITE 728 HOLE A CORE 9H CORED INTERVAL 1503.9-1513.5 mbsl; 76.1-85.7 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *R/M; NANNOFOSSILS *A/M N18 - N21 NN16 *Discoaster surculus*; RADIOLARIANS *C/G *Spongaster penias*; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ●ϕ-58.9 γ-1.75; ●ϕ-62.6 γ-1.67; ●ϕ-63.9 γ-1.63

CHEMISTRY: IC-6.45 OC-3.23; IC-6.14 OC-4.97; IC-5.86 OC-4.81; IC-7.54 OC-3.68

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

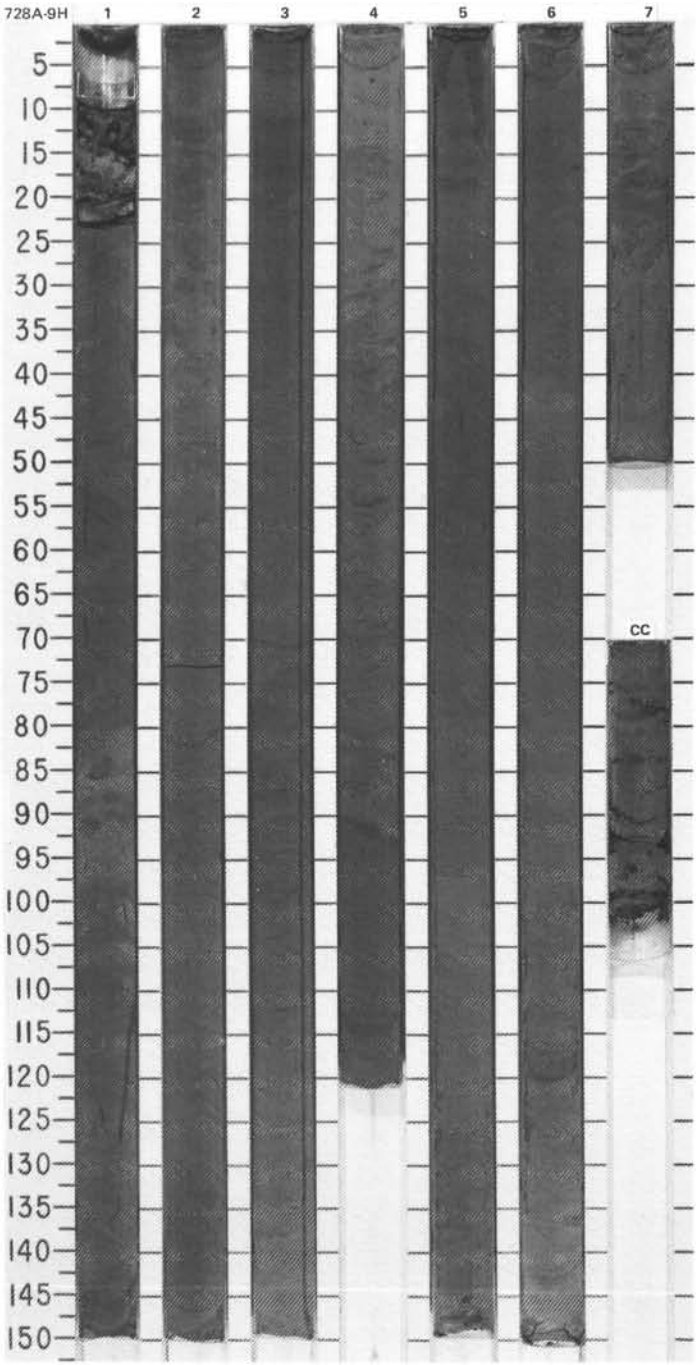
MARLY NANNOFOSSIL OOZE

Section 1, 0-25 cm, disturbed; remainder of core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/2, 4/3). Pteropod fragments common on core face. Pyrite flecks common. Smear slides contain trace amounts of siliceous microfossils.

SMEAR SLIDE SUMMARY (%):

	1, 59 D	4, 6 D
TEXTURE:		
Sand	10	—
Silt	20	10
Clay	70	90
COMPOSITION:		
Access. minerals	2	1
Clay	20	20
Diatoms	—	Tr
Feldspar	2	—
Foraminifers	1	1
Glauconite	Tr	—
Inorganic calcite	15	8
Mica	Tr	—
Nannofossils	50	70
Phosphate	Tr	—
Quartz	10	Tr
Radiolarians	—	Tr
Sponge spicules	—	Tr



SITE 728 HOLE A CORE 10X CORED INTERVAL 1513.5-1523.1 mbsl; 85.7-95.3 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	N18 - N21	NN16 *Discoaster surculus*	*C/G	*C/G *Spongaster pentas*	O (Gauss)	●ϕ=60.8 γ=1.67 ●ϕ=65.8 γ=1.56 ●ϕ=63.4 γ=1.64	●IC=7.26 OC=2.85 ●IC=7.95 OC=3.03 ●IC=6.84 OC=3.23	1 2 3 4 5 6 CC	0.5 1.0				* * PP

LITHOLOGIC DESCRIPTION

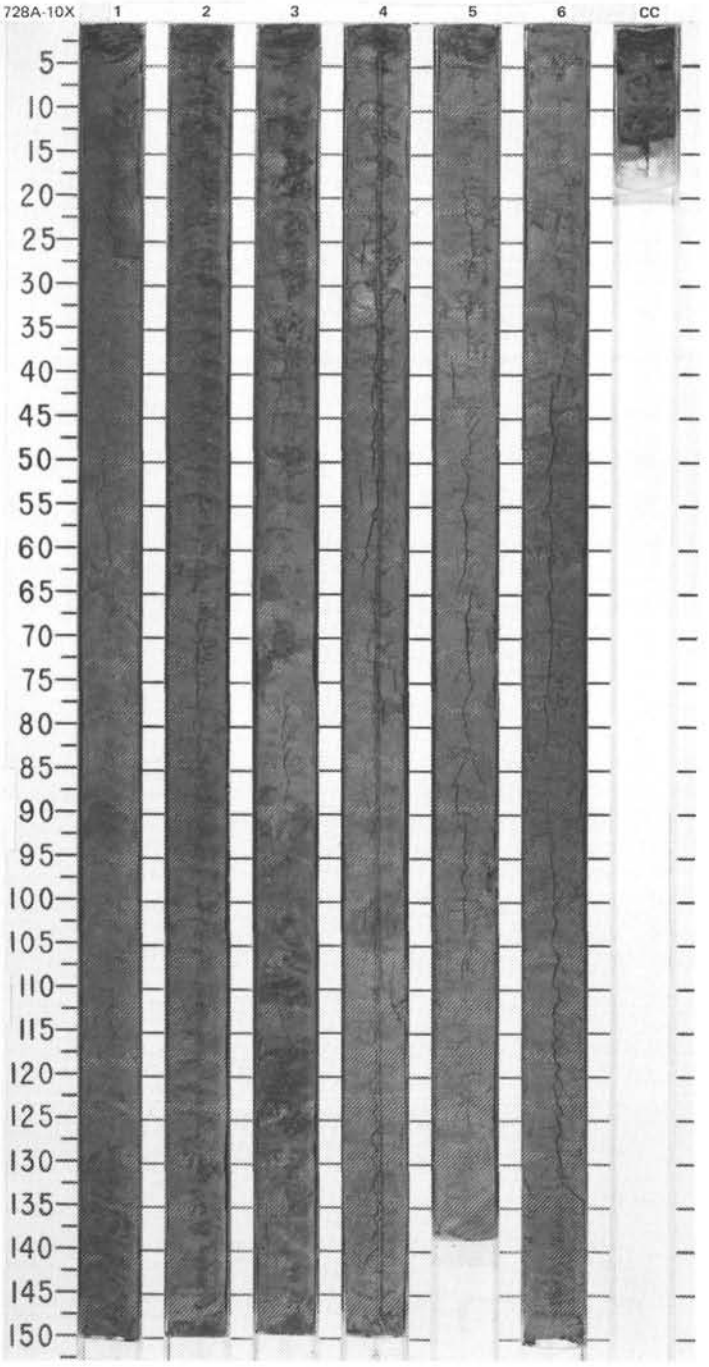
MARLY NANNOFOSSIL OOZE and SILICEOUS-BEARING MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithologies: MARLY NANNOFOSSIL OOZE and SILICEOUS- BEARING MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/2, 5/3) intervals of irregular thickness.

SMEAR SLIDE SUMMARY (%):

	1, 73 D	4, 79 D
TEXTURE:		
Sand	10	
Silt	15	20
Clay	80	70
COMPOSITION:		
Access. minerals	2	1
Clay	20	20
Diatoms	1	2
Feldspar	1	—
Foraminifers	1	5
Volcanic glass	6	—
Inorganic calcite	—	20
Mica	1	—
Nannofossils	60	50
Quartz	3	Tr
Radiolarians	1	1
Silicoflagellates	1	1
Sponge spicules	2	1



SITE 728 HOLE A CORE 11X CORED INTERVAL 1523.1-1532.7 mbsl; 95.3-104.9 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	*R/P N18 - N21				O								
	*A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*			O (Gilbert) O			1	0.5				
	*C/G		*C/M *Spongaster pentas*		O	●ϕ=61.4 γ=1.70	IC=5.57 OC=2.48		1.0				
		NN16			O	●ϕ=59.8 γ=1.71		2					*
					O	●ϕ=56.8 γ=1.76	IC=6.51 OC=2.49	3					
								4					
							IC=6.77 OC=1.43	5					
								6					
								CC					

LITHOLOGIC DESCRIPTION

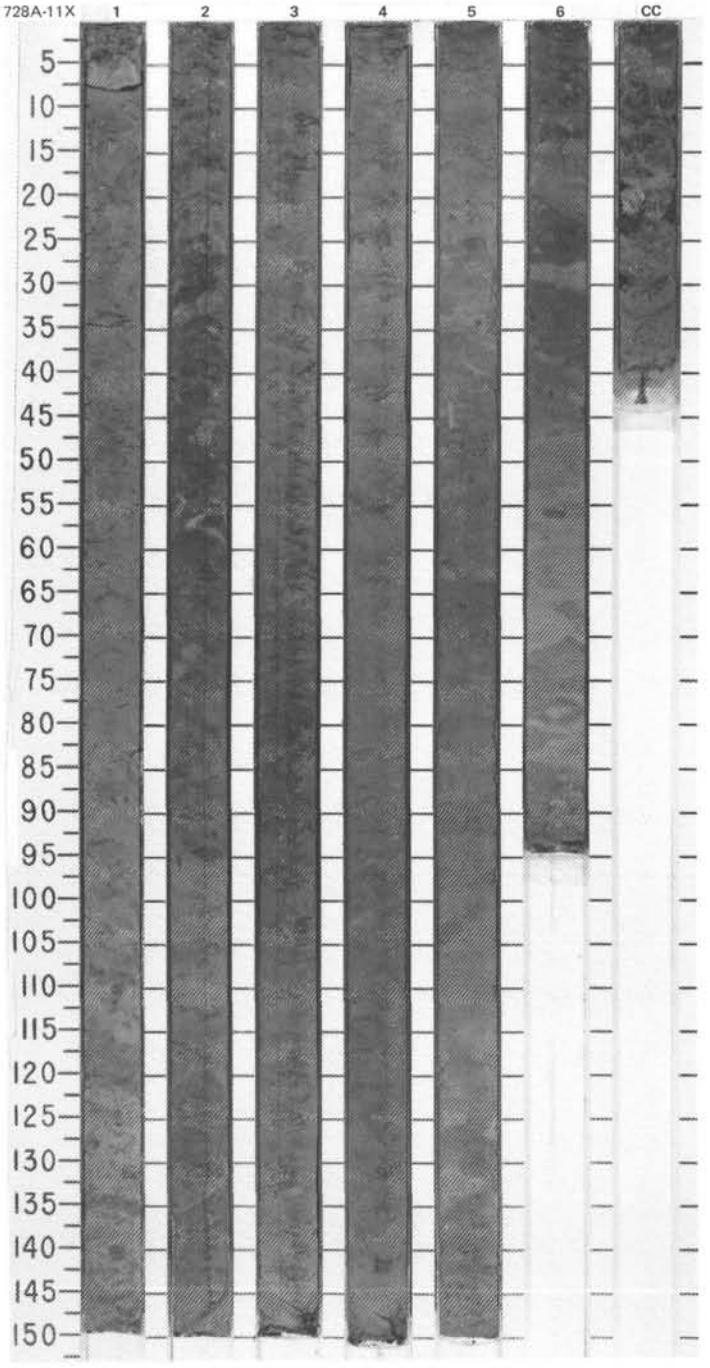
MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2, 3/2) and light olive gray (5Y 5/3) intervals of irregular thickness. Siliceous microfossils present in trace amounts. Mottling (bioturbation) light to moderate.

SMEAR SLIDE SUMMARY (%):

	2, 50 D	5, 20 D
TEXTURE:		
Sand	10	5
Silt	25	15
Clay	65	80
COMPOSITION:		
Access. minerals	2	2
Clay	25	30
Diatoms	—	Tr
Dolomite	Tr	—
Volcanic glass	—	1
Inorganic calcite	23	15
Nannofossils	40	50
Quartz	10	1
Radiolarians	Tr	Tr
Sponge spicules	Tr	1



SITE 728 HOLE A CORE 12X CORED INTERVAL 1532.7-1542.3 mbsl; 104.9-114.5 mbsf

TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: N18 - N21
- NANNOFOSSILS: NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*
- RADIOLARIANS: *Spongaster pentas*
- DIATOMS

PALEOMAGNETICS: O (Gilbert) O O

PHYS. PROPERTIES: ●ϕ-61.9 γ-1.67 ●ϕ-63.7 γ-1.66

CHEMISTRY: ●IC-5.08 ●IC-5.33 OC-2.95 ●IC-5.75 OC-2.75

SECTION: 1, 2, 3, 4, CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: OG IW

SAMPLES: *R/P, *A/G-M, *C/G, *

LITHOLOGIC DESCRIPTION

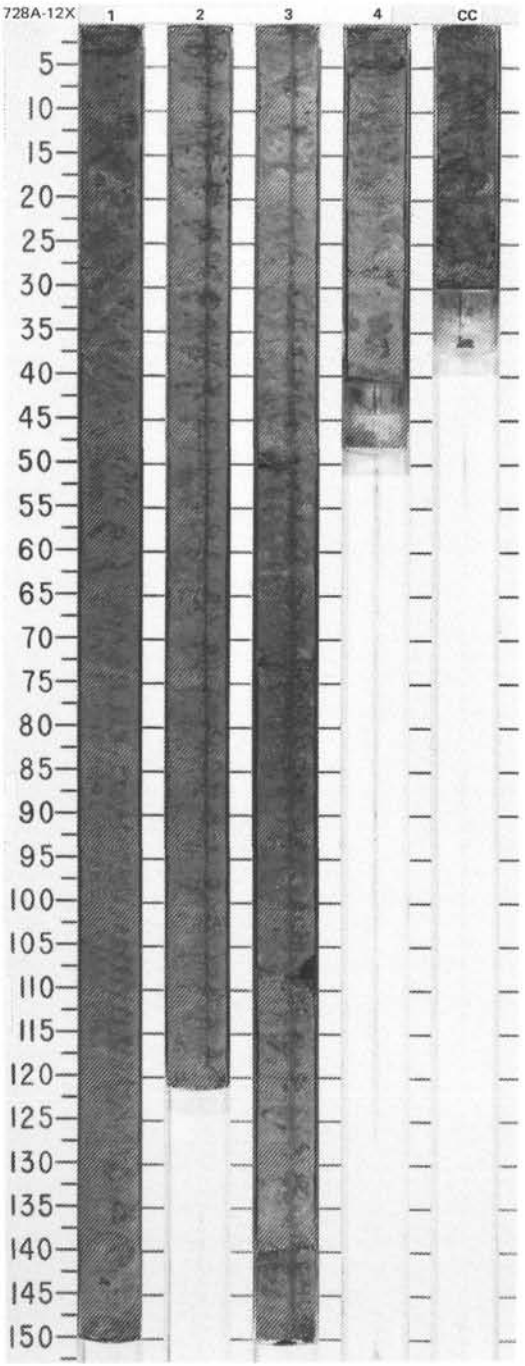
MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	1, 143 D	4, 30 D
TEXTURE:		
Sand	10	5
Silt	30	30
Clay	60	65
COMPOSITION:		
Access. minerals	—	2
Clay	20	20
Diatoms	—	1
Foraminifers	—	3
Inorganic calcite	30	26
Mica	Tr	Tr
Nannofossils	40	45
Quartz	10	3
Radiolarians	—	Tr
Silicoflagellates	Tr	
Sponge spicules	—	Tr



SITE 728 HOLE A CORE 13X CORED INTERVAL 1542.3-1552.0 mbsl; 114.5-124.2 mbsf

TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

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

PALEOMAGNETICS
PHYS. PROPERTIES
CHEMISTRY
SECTION
METERS
GRAPHIC LITHOLOGY
DRILLING DISTURB.
SED. STRUCTURES
SAMPLES

SECTION	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SAMPLES
1	○	● ϕ=63.5 γ=1.61 ●	● IC=7.27 OC=3.21	*
2	○	● ϕ=62.2 γ=1.62	● IC=6.90	
3	○	● ϕ=65.7 γ=1.63	● IC=7.01	
4	○			
5	○			
6	○			
CC	○			

LITHOLOGIC DESCRIPTION

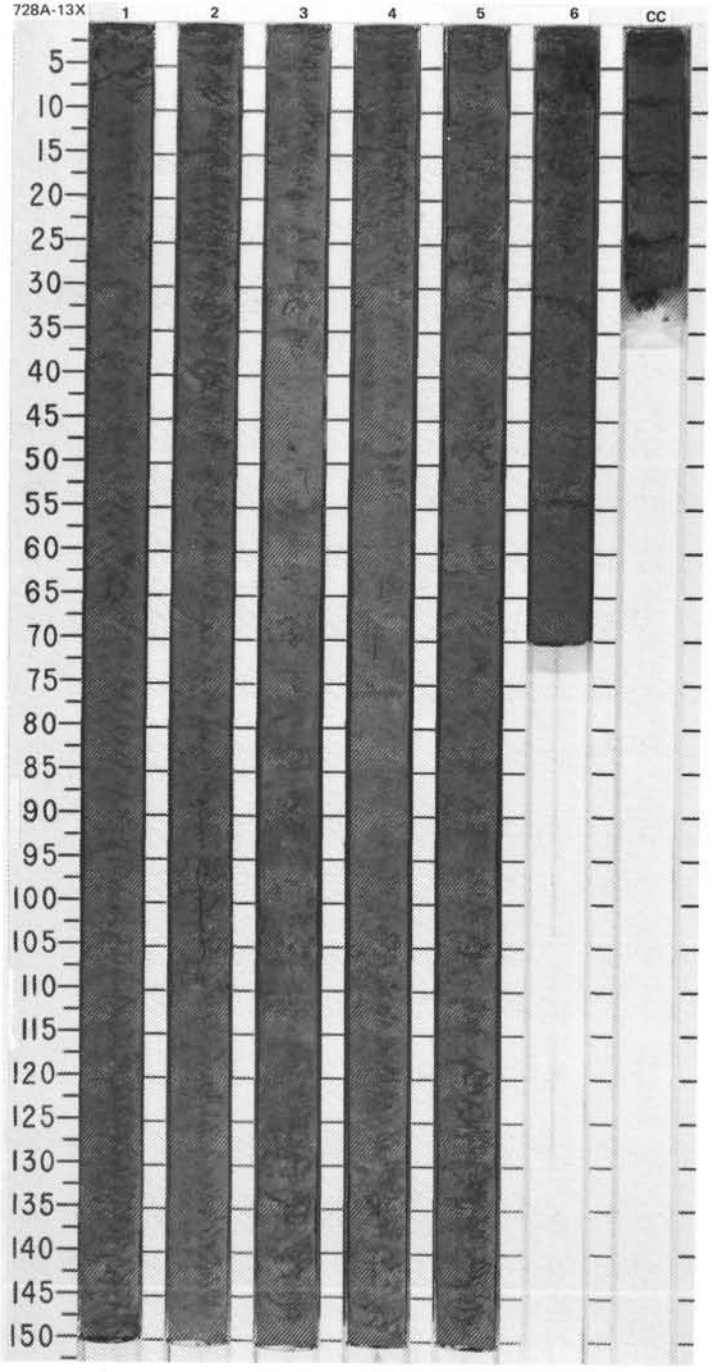
MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3) and light olive gray (5Y 5/3), homogeneous appearance. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	1, 57 D	3, 47 D
TEXTURE:		
Sand	5	—
Silt	15	10
Clay	80	90
COMPOSITION:		
Access. minerals	1	1
Clay	30	20
Diatoms	—	Tr
Foraminifers	1	Tr
Volcanic glass	—	Tr
Inorganic calcite	15	7
Mica	1	1
Nannofossils	50	70
Phosphate	Tr	—
Quartz	2	1
Radiolarians	Tr	Tr
Silicoflagellates	—	Tr
Sponge spicules	Tr	Tr



SITE 728 HOLE A CORE 14X CORED INTERVAL 1552.0-1561.7 mbsl; 124.2-133.9 mbsf

TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

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

PALEOMAGNETICS: O (Cochiti)

PHYS. PROPERTIES: ●ϕ=65.5 γ=1.61; ●ϕ=65.2 γ=1.63; ●ϕ=63.2 γ=1.64

CHEMISTRY: ●IC=7.17; ●IC=6.99; ●IC=7.22, OC=2.41

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *

LITHOLOGIC DESCRIPTION

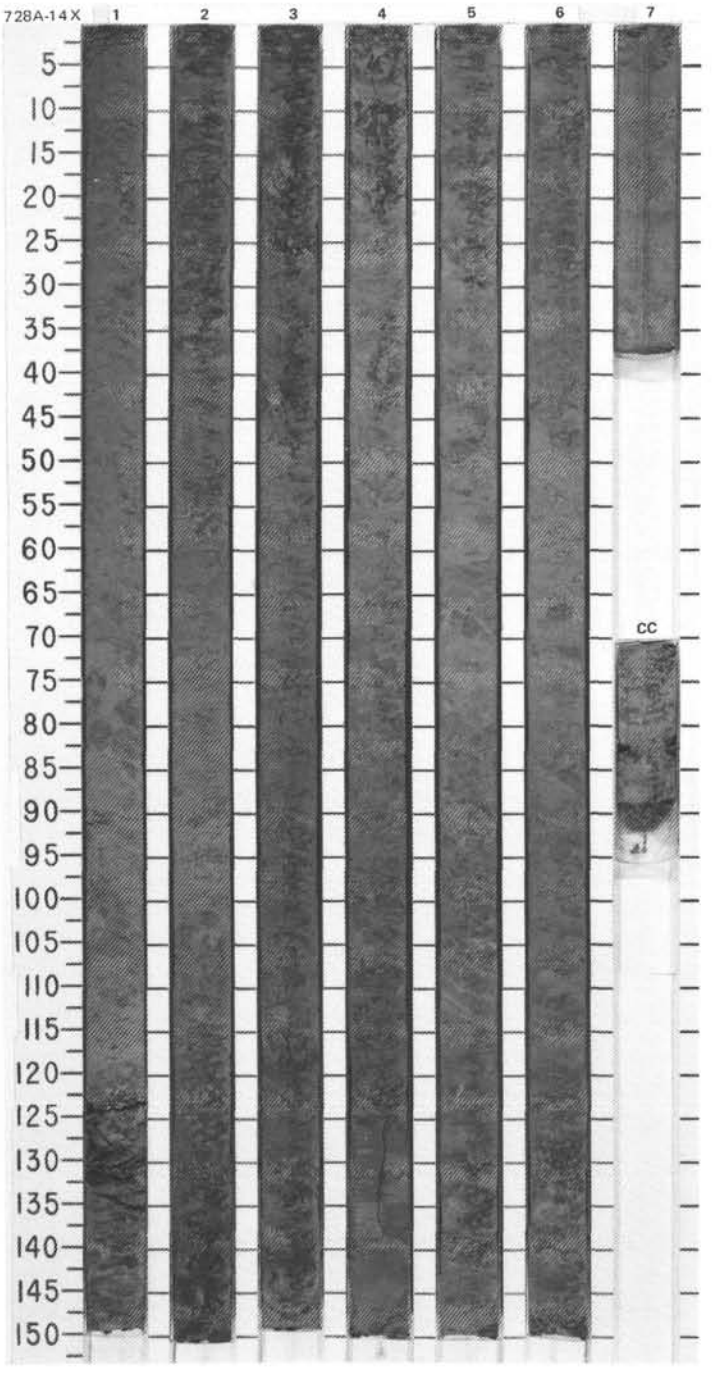
MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/3) intervals of irregular thickness. Siliceous microfossils *present in trace amounts.*

SMEAR SLIDE SUMMARY (%):

	1, 16 D	5, 66 D
TEXTURE:		
Sand	5	—
Silt	25	20
Clay	70	80
COMPOSITION:		
Access. minerals	1	1
Clay	25	20
Diatoms	—	3
Dolomite	—	Tr
Foraminifers	5	—
Inorganic calcite	20	14
Nannofossils	45	60
Quartz	2	Tr
Radiolarians	1	Tr
Sponge spicules	1	2



SITE 728 HOLE A CORE 15X CORED INTERVAL 1561.7-1572.3 mbsl; 143.5-133.9 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
UPPERMOST MIOCENE - PLIOCENE	*R/M	N18 - N21						1	0.5 / 1.0				*
	*A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*			O	ϕ=63.3 γ=1.85	IC=0.41 OC=0.77	2					
	*C/G	C/G • *Spongaster pentas*			O (Gilbert) O	ϕ=66.7 γ=1.53	IC=0.51	3					
					O	ϕ=65.30 γ=1.82	IC=0.78 OC=3.40	4					OG IW
					O	IC=3.74		5					
								6					*
								CC					

LITHOLOGIC DESCRIPTION

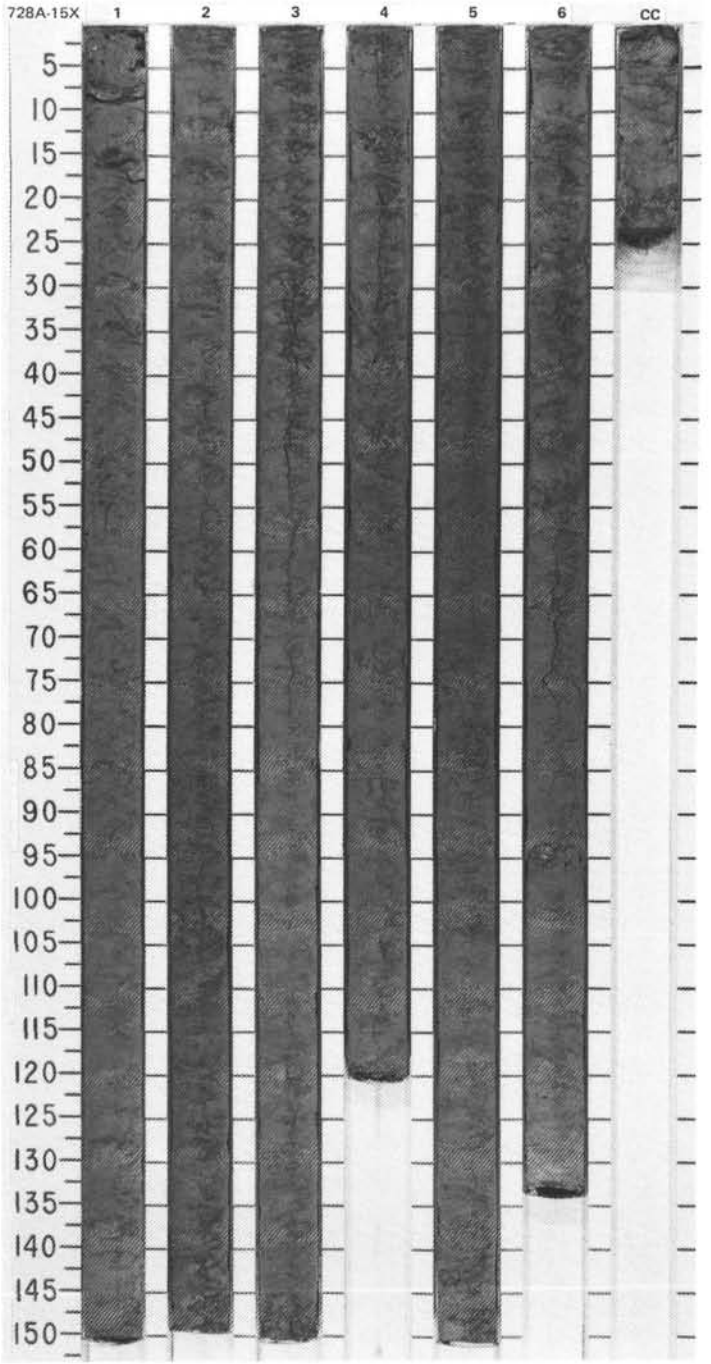
MARLY NANNOFOSSIL OOZE

Section 1, 0-10 cm, is slightly disturbed; remainder of core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/4, 4/3), homogeneous appearance. Siliceous microfossils present, as much as 5%, in smear slides.

SMEAR SLIDE SUMMARY (%):

	1, 119 D	6, 122 D
TEXTURE:		
Sand	5	5
Silt	10	10
Clay	85	85
COMPOSITION:		
Access. minerals	1	1
Clay	25	25
Diatoms	3	3
Dolomite	Tr	—
Feldspar	—	1
Foraminifers	1	—
Inorganic calcite	6	5
Mica	1	Tr
Nannofossils	60	60
Phosphate	Tr	—
Quartz	1	3
Radiolarians	1	1
Silicoflagellates	—	Tr
Sponge spicules	1	1



SITE 728 HOLE A CORE 16x CORED INTERVAL571.3-1580.9 mbsl; 143.5-153.1 mbsf

TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *R/P; *A/M-P; *C/G
- NANNOFOSSILS: N18 - N21; NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*; *C/G *Spongaster pentas*
- RADIOLARIANS
- DIATOMS
- PALEOMAGNETICS: O (Nunivak)
- PHYS. PROPERTIES: ●ϕ=62.9 γ=1.67; ●ϕ=62.8; ●ϕ=65.2 γ=1.61
- CHEMISTRY: ●IC=5.23; ●IC=6.70; ●IC=5.29 OC=3.03
- SECTION: 1, 2, 3, 4, 5, 6, CC
- METERS: 0.5, 1.0
- GRAPHIC LITHOLOGY
- DRILLING DISTURB.
- SED. STRUCTURES
- SAMPLES: *

LITHOLOGIC DESCRIPTION

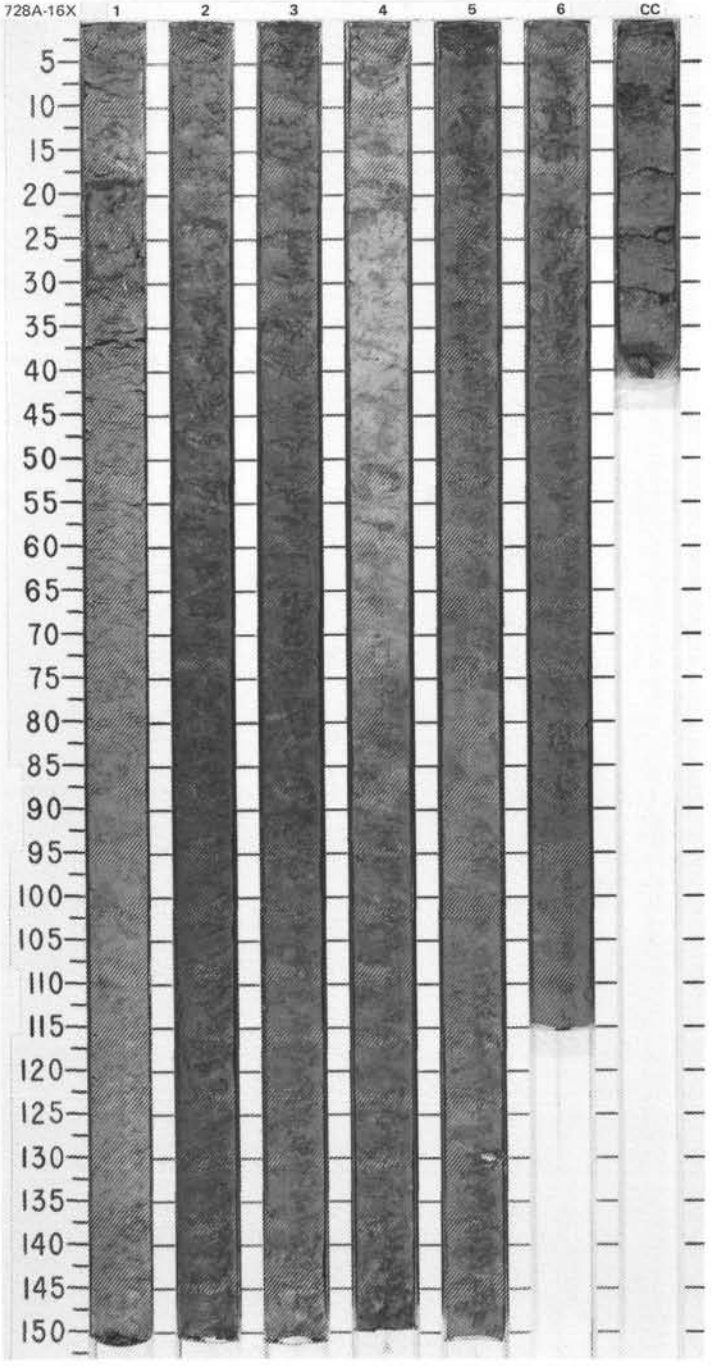
MARLY NANNOFOSSIL OOZE

Section 1, 15-30 cm, is soupy; remainder of core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	2, 18 D	4, 37 D
TEXTURE:		
Sand	10	—
Silt	30	15
Clay	60	85
COMPOSITION:		
Access. minerals	2	2
Clay	25	20
Diatoms	3	Tr
Dolomite	—	Tr
Foraminifers	1	1
Inorganic calcite	12	8
Nannofossils	45	65
Phosphate	Tr	—
Quartz	10	1
Silicoflagellates	Tr	Tr
Sponge spicules	2	3



TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

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

PALEOMAGNETICS: O (Gilbert) O

PHYS. PROPERTIES: ●ϕ=63.3 γ=1.63; ●ϕ=64.8 γ=1.64; ●ϕ=62.7 γ=1.62

CHEMISTRY: ●IC=6.61; ●IC=6.14; ●IC=6.46, OC=3.11

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: *

SAMPLES: *

LITHOLOGIC DESCRIPTION

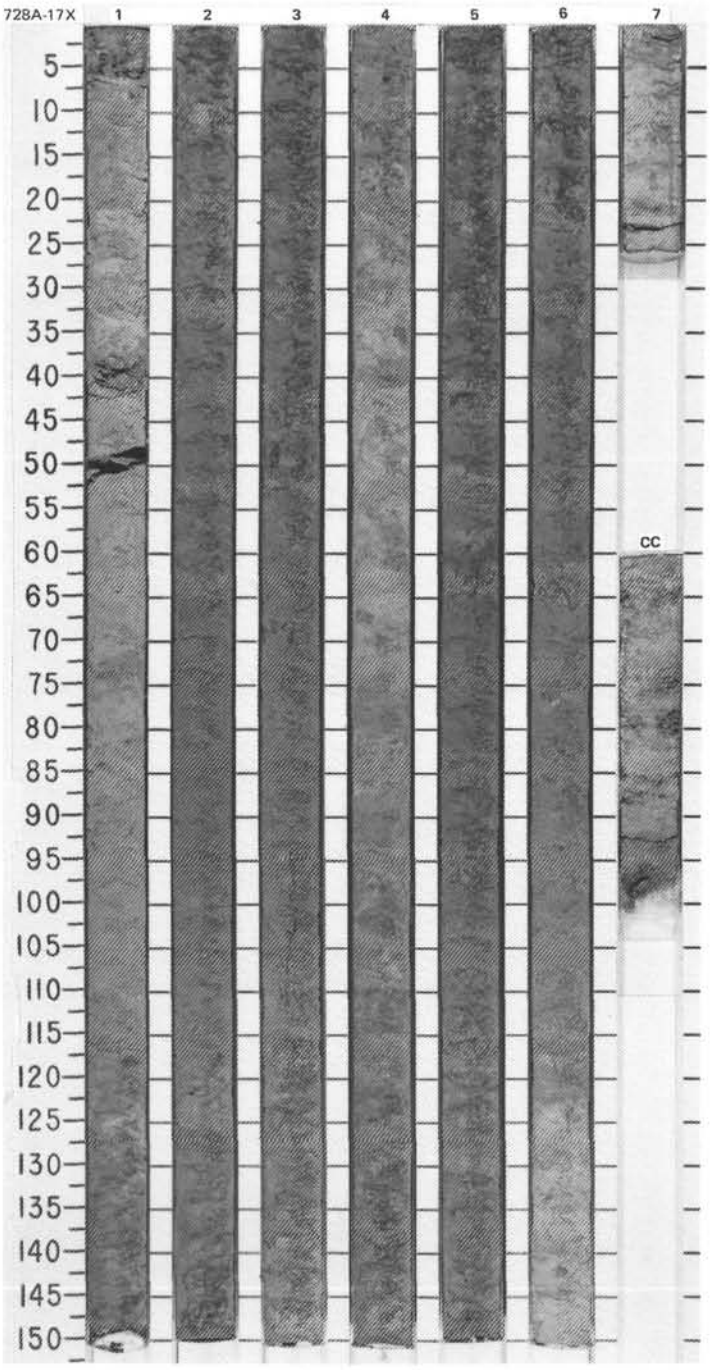
MARLY NANNOFOSSIL OOZE

Section 1 is slightly disturbed; remainder of core is undisturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3) and light olive gray (5Y 5/3) intervals of irregular thickness. Pyrite flecks visible in lighter layers (noted in Section 1). Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	1, 63 D	5, 64 D	6, 131 D
TEXTURE:			
Sand	3	5	5
Silt	15	10	15
Clay	82	85	80
COMPOSITION:			
Access. minerals	Tr	1	2
Clay	20	25	20
Diatoms	2	—	3
Foraminifers	3	2	4
Volcanic glass	8	—	—
Inorganic calcite	—	6	7
Nannofossils	66	60	60
Quartz	2	6	2
Radiolarians	1	—	1
Silicoflagellates	—	—	1
Sponge spicules	2	Tr	—



SITE 728 HOLE A CORE 18X CORED INTERVAL 1590.6-1600.3 mbsl; 162.8-172.5 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
UPPERMOST MIOCENE - PLIOCENE	* R/P	N18 - N21						1	0.5				*
	* A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*			O	O (Gilbert)	O		1.0				
	* C/G		*Spongaster pentas*			●ϕ=65.7 γ=1.62	● IC=7.87 OC=2.16	2					
					●	●ϕ=68.2 γ=1.59	● IC=7.11	3					
					●ϕ=64.7 γ=1.62			4					
					● IC=8.10	IC=8.60 OC=2.78		5					OG IW
								6					*
								CC					

LITHOLOGIC DESCRIPTION

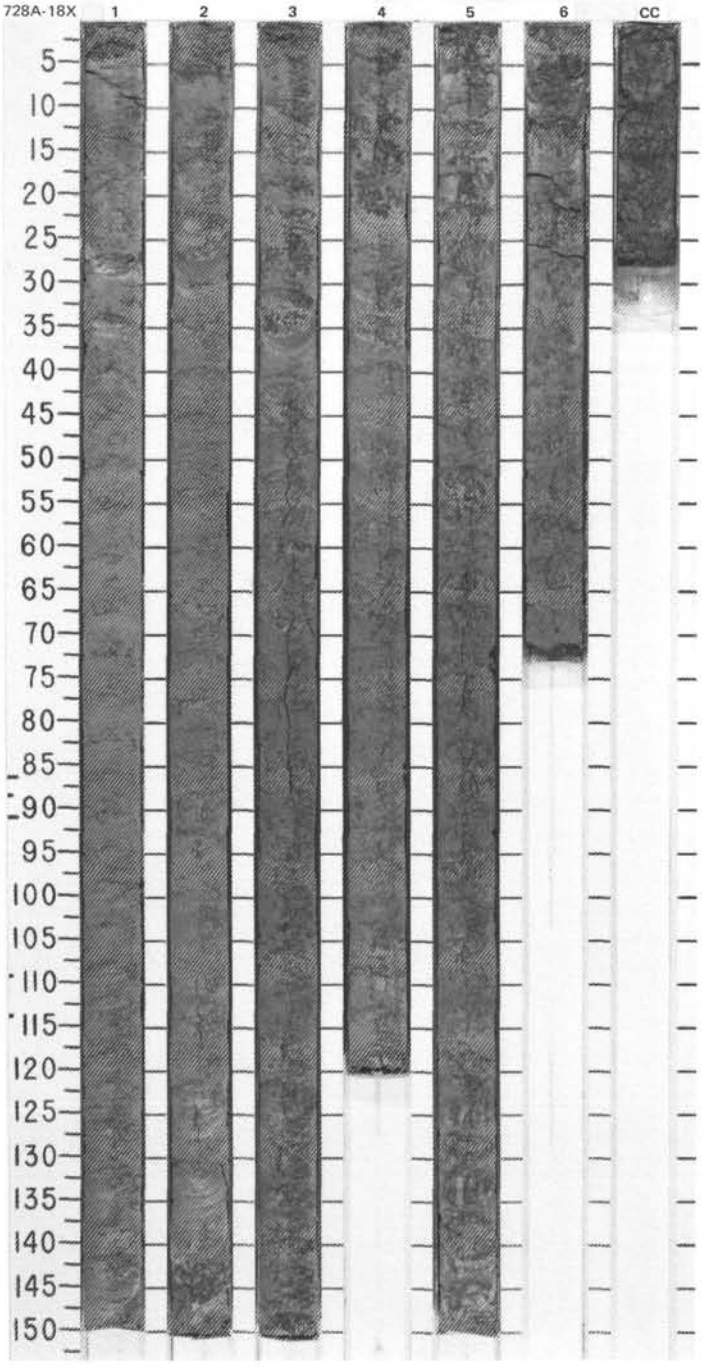
MARLY NANNOFOSSIL OOZE and NANNOFOSSIL OOZE

Entire core is slightly disturbed.

Major lithologies: MARLY NANNOFOSSIL OOZE and NANNOFOSSIL OOZE, mottled olive gray (5Y 5/3, 5/2). Homogeneous, with little color variation. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	1, 65 D	5, 63 D
TEXTURE:		
Sand	3	—
Silt	12	10
Clay	85	90
COMPOSITION:		
Access. minerals	2	2
Clay	20	20
Diatoms	2	—
Foraminifers	1	Tr
Inorganic calcite	7	6
Mica	—	1
Nannofossils	65	70
Quartz	1	1
Radiolarians	Tr	—
Silicoflagellates	—	1
Sponge spicules	1	Tr



SITE 728 HOLE A CORE 19X CORED INTERVAL 1600.3-1610.0 mbsl; 172.5-182.2 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
UPPERMOST MIOCENE - PLIOCENE	*R/P	N18 - N21						1	0.5				*
	*A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*							1.0				
	*C/G	C/M* *Spongaster pentas*			O (Gilbert) O		IC=6.97	2					
					O	●ϕ=64.8 γ=1.62							
								3					
						●ϕ=62.7 γ=1.67	IC=6.91						
								4					
						●ϕ=64.7 γ=1.62	IC=8.12 IC=8.03						
					● (Sidufjall)			5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

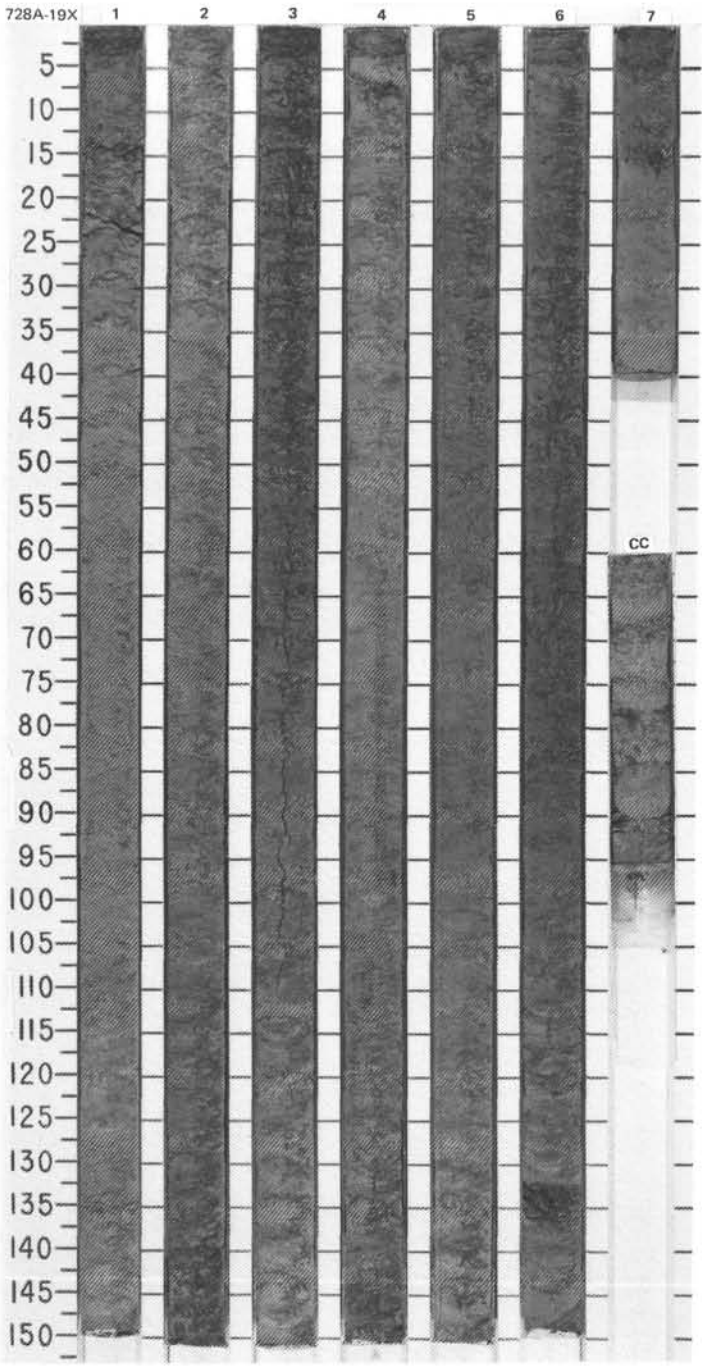
MARLY NANNOFOSSIL OOZE

Core is slightly disturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3) and light olive gray (5Y 5/3). Homogeneous, with little variation in color. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	1, 63 D	6, 122 D
TEXTURE:		
Sand	10	10
Silt	20	35
Clay	70	55
COMPOSITION:		
Access. minerals	—	2
Clay	25	20
Diatoms	Tr	—
Dolomite	1	Tr
Foraminifers	4	1
Glauconite	Tr	Tr
Inorganic calcite	10	20
Mica	—	1
Nannofossils	50	35
Phosphate	—	Tr
Quartz	10	20
Radiolarians	Tr	1
Silicoflagellates	Tr	—
Sponge spicules	Tr	Tr



SITE 728 HOLE A CORE 20X CORED INTERVAL 1610.0-1619.6 mbsl; 182.2-191.8 mbsf

TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

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

PALEOMAGNETICS: (Thvera)

PHYS. PROPERTIES: ϕ-62.9 γ-1.66; ϕ-60.1 γ-1.67; ϕ-63.9 γ-1.53

CHEMISTRY: IC-6.61; IC-4.64; IC-7.11; OC-2.51

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: *

SAMPLES: *

LITHOLOGIC DESCRIPTION

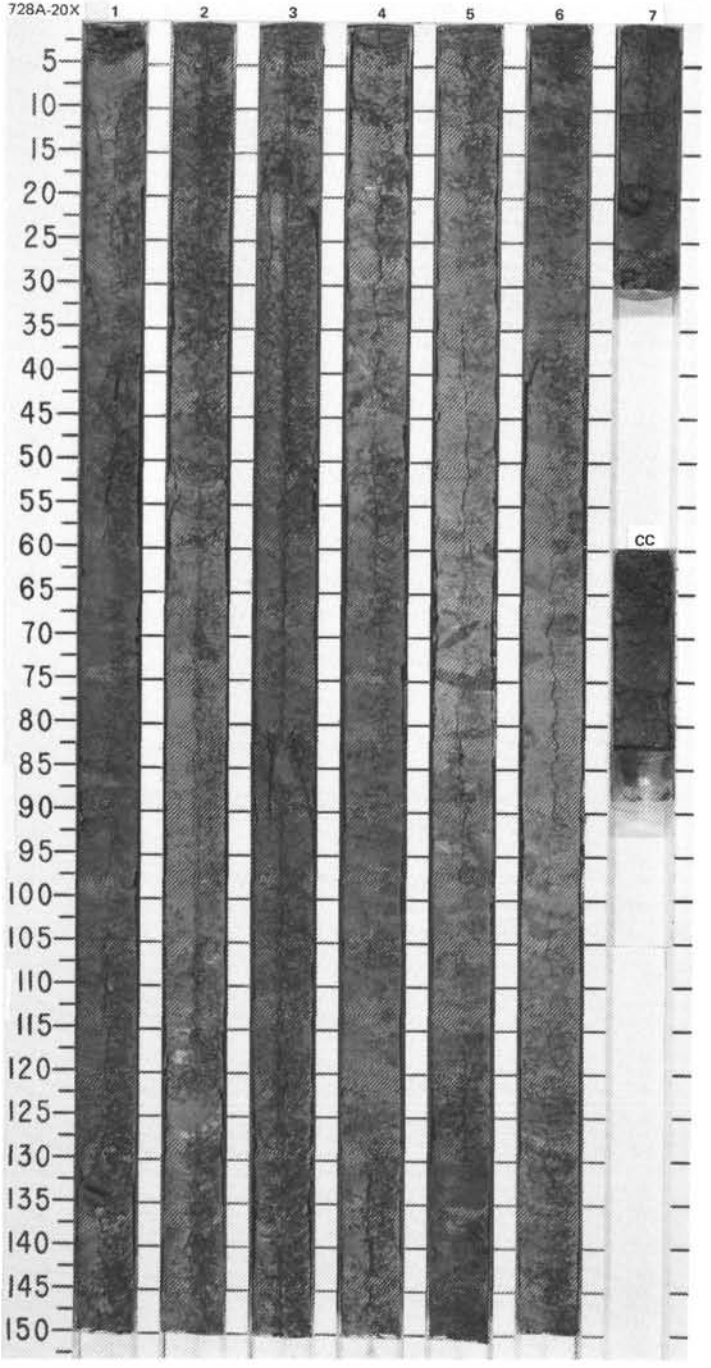
MARLY NANNOFOSSIL OOZE

Core is slightly disturbed.

Major lithology: MARLY NANNOFOSSIL OOZE, mottled olive (5Y 4/3, 4/2, 3/2) and light olive gray (5Y 5/3) intervals of irregular thickness with greater color contrast and mottling relative to cores 117-728A-18X and -19X. Siliceous microfossils present in trace amounts. Darker layers have fewer nannofossils. Calcareous silty clay indicated on one smear slide.

SMEAR SLIDE SUMMARY (%):

	1, 137 D	5, 76 D
TEXTURE:		
Sand	15	5
Silt	30	15
Clay	55	80
COMPOSITION:		
Access. minerals	2	1
Clay	30	25
Foraminifers	1	2
Inorganic calcite	18	15
Mica	1	—
Nannofossils	25	55
Organic debris	5	—
Quartz	20	2
Radiolarians	Tr	—



SITE 728 HOLE A CORE 21X CORED INTERVAL 1619.6-1629.3 mbsl; 191.8-201.5 mbsf

TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

BIOSTRAT. ZONE/ FOSSIL CHARACTER:
- FORAMINIFERS: *R/P — N18 - N21
- NANNOFOSSILS: *A/M — NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*
- RADIOLARIANS: *F/G — F/M* *Spongaster pentas*
- DIATOMS:

PALEOMAGNETICS: ● ● ● ●

PHYS. PROPERTIES: ● ϕ=60.5 γ=1.67 ● ϕ=63.6 γ=1.68 ● ϕ=60.3 γ=1.71

CHEMISTRY: ● IC=7.15 ● IC=5.95 OC=3.11 ● IC=7.15 ● IC=5.17 OC=2.89

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: * * * OC IW *

LITHOLOGIC DESCRIPTION

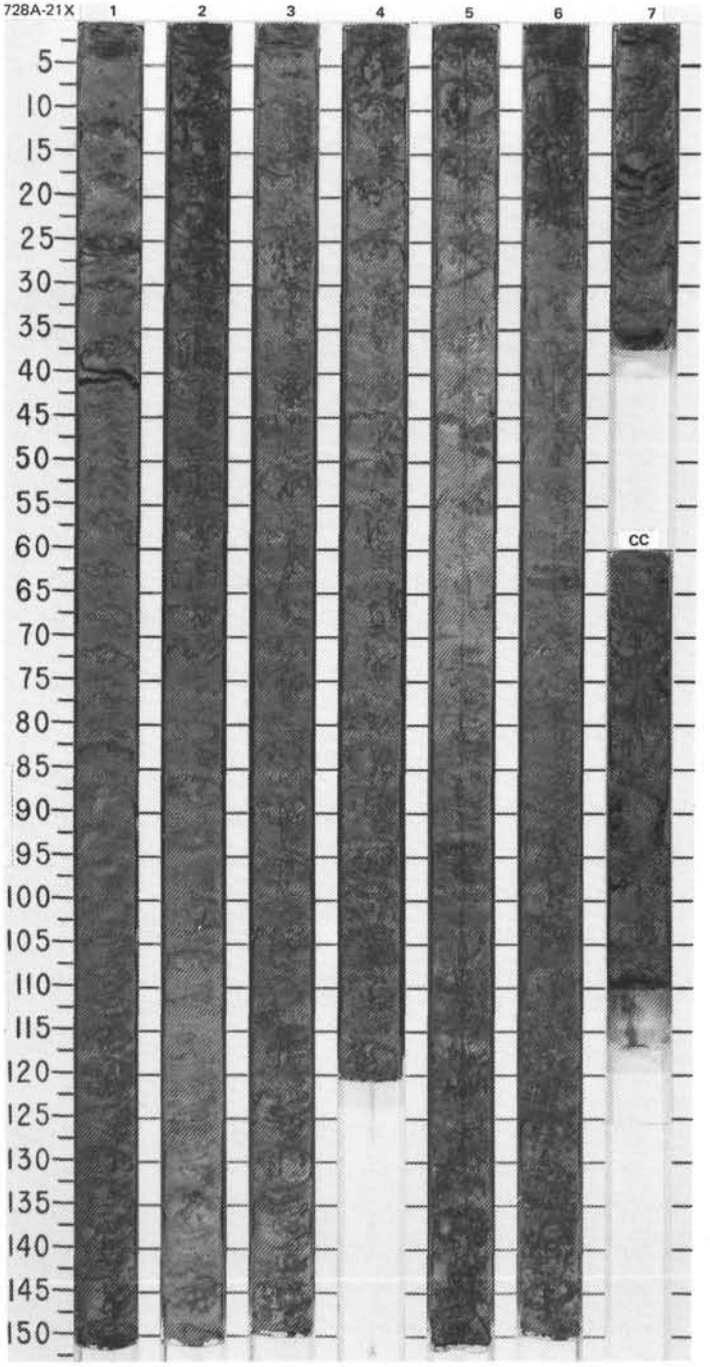
MARLY NANNOFOSSIL OOZE and CALCAREOUS SILTY CLAY

Core is slightly disturbed.

Major lithologies: MARLY NANNOFOSSIL OOZE and CALCAREOUS SILTY CLAY. Dark intervals are interpreted as having less than 30% biogenic carbonate. Mottled olive (5Y 4/3) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	2, 10 D	2, 130 D	5, 59 D
TEXTURE:			
Sand	20	10	
Silt	20	15	10
Clay	60	75	90
COMPOSITION:			
Access. minerals	2	2	1
Clay	35	20	25
Dolomite	1	—	1
Foraminifers	2	1	2
Inorganic calcite	20	15	6
Nannofossils	25	55	65
Phosphate	Tr	—	Tr
Quartz	15	5	Tr
Radiolarians	Tr	—	Tr
Silicoflagellates	—	—	Tr
Sponge spicules	Tr	2	Tr



SITE 728 HOLE A CORE 22X CORED INTERVAL 1629.3-1638.9 mbsl; 201.5-211.1 mbsf

TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

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

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ-59.6 γ-1.69; ● ϕ-66.1 γ-1.63; ● ϕ-60.8 γ-1.69

CHEMISTRY: ● IC-5.21; ● IC-5.26; ● IC-5.02; OC-2.92

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: PP

SAMPLES: *, *

LITHOLOGIC DESCRIPTION

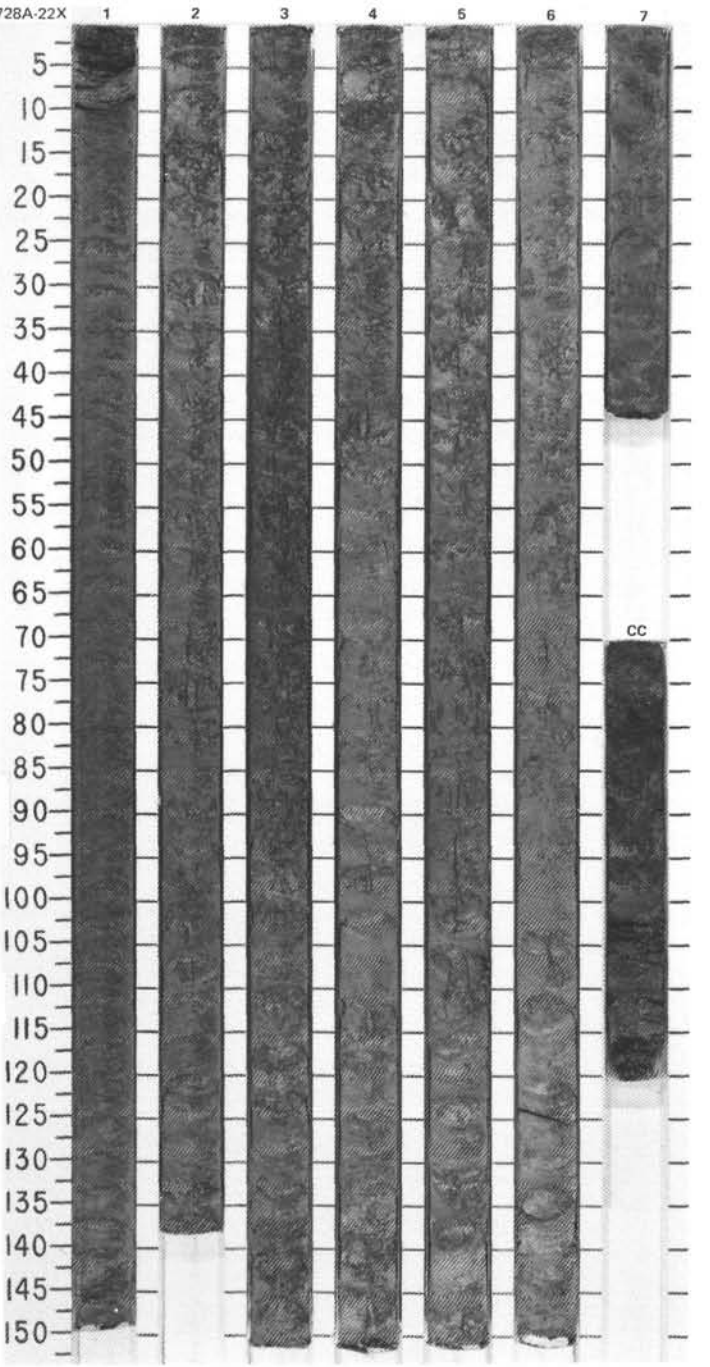
NANNOFOSSIL CHALK

Core is slightly disturbed.

Major lithology: NANNOFOSSIL CHALK, mottled olive (5Y 4/3) and light olive gray (5Y 5/3) intervals of irregular thickness. Siliceous microfossils present in trace amounts. Below this level the nannofossil fraction increases and the silt-sized calcite fraction decreases.

SMEAR SLIDE SUMMARY (%):

	1, 119 D	6, 119 D
TEXTURE:		
Sand	2	—
Silt	10	10
Clay	88	90
COMPOSITION:		
Access. minerals	Tr	Tr
Clay	15	15
Dolomite	Tr	Tr
Inorganic calcite	9	7
Nannofossils	73	75
Quartz	3	3
Radiolarians	Tr	Tr
Silicoflagellates	Tr	Tr
Sponge spicules	Tr	Tr



TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

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

PALEOMAGNETICS: O

PHYS. PROPERTIES: ● ϕ=61.5 γ=1.88; ● ϕ=62.0 γ=1.86; ● ϕ=62.5 γ=1.82

CHEMISTRY: ● IC=5.77; ● IC=7.45; ● IC=7.11 OC=2.87

SECTION: 1 2 3 4 5 6 7

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: * * * *

SAMPLES: *

LITHOLOGIC DESCRIPTION

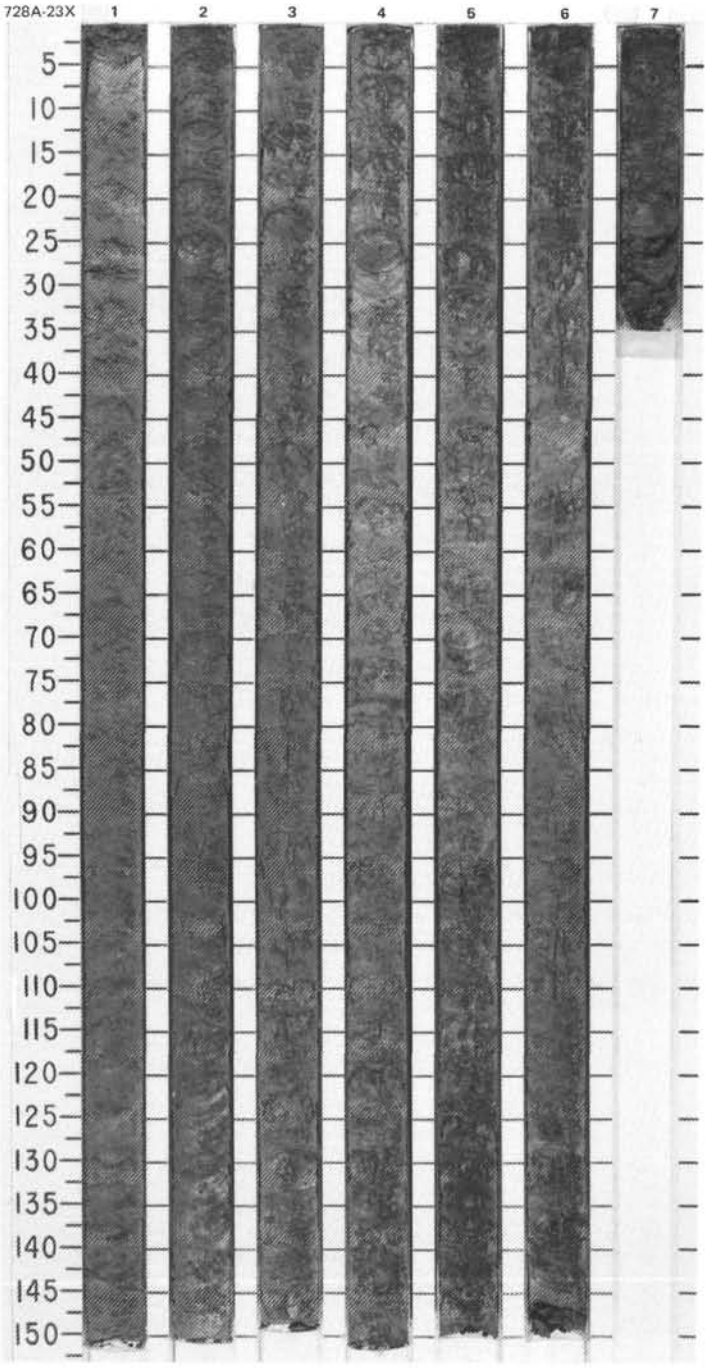
NANNOFOSSIL CHALK

Core is slightly disturbed.

Major lithology: NANNOFOSSIL CHALK, mottled olive (5Y 4/3) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Siliceous microfossils are present in trace amounts. Nannofossil fraction increases and silt-sized inorganic calcite fraction decreases.

SMEAR SLIDE SUMMARY (%):

	1, 21 D	4, 57 D	5, 135 D
TEXTURE:			
Sand	—	—	2
Silt	15	13	15
Clay	85	87	83
COMPOSITION:			
Access. minerals	—	Tr	Tr
Clay	15	12	23
Diatoms	—	Tr	—
Foraminifers	—	—	—
Volcanic glass	Tr	—	
Inorganic calcite	12	11	44
Nannofossils	71	75	60
Quartz	2	2	3
Radiolarians	Tr	Tr	Tr
Silicoflagellates	—	Tr	
Sponge spicules	Tr	Tr	—



SITE 728 HOLE A CORE 24X CORED INTERVAL 1648.6-1658.3 mbsl; 220.8-230.5 mbsf

TIME-ROCK UNIT: UPPERMOST MIOCENE - PLIOCENE

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

PALEOMAGNETICS

PHYS. PROPERTIES: ●ϕ=61.2 γ=4.73 ●IC=8.59 ϕ=64.1 γ=1.67● ●ϕ=62.0 γ=1.70 ●IC=6.97 ●IC=5.83 ϕ=63.4 γ=1.66● IC=7.43 IC=5.47 ●

CHEMISTRY

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OC IW

LITHOLOGIC DESCRIPTION

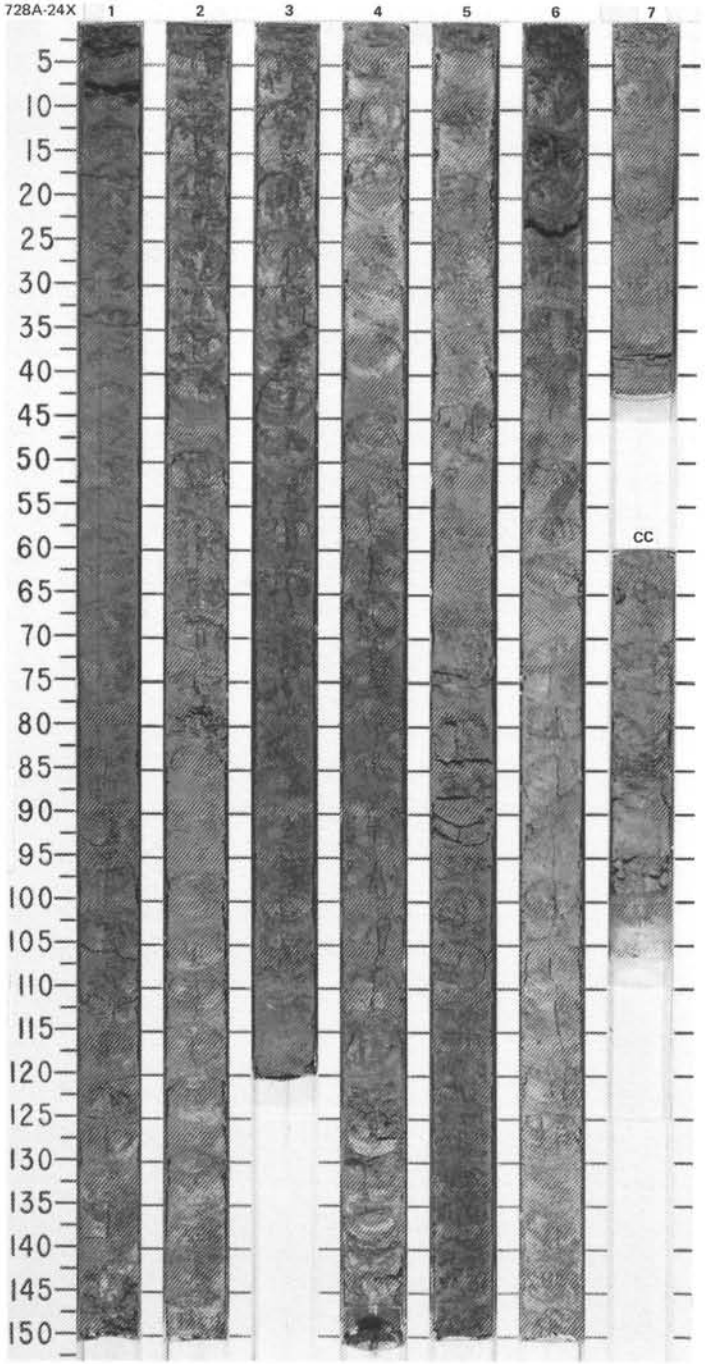
NANNOFOSSIL CHALK

Core is slightly disturbed.

Major lithology: NANNOFOSSIL CHALK, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	2, 20 D	4, 20 D
TEXTURE:		
Sand	10	5
Silt	20	25
Clay	70	70
COMPOSITION:		
Clay	10	20
Diatoms	—	Tr
Foraminifers	5	5
Inorganic calcite	5	15
Nannofossils	75	50
Quartz	Tr	10
Radiolarians	3	Tr
Sponge spicules	2	Tr



SITE 728 HOLE A CORE 25X CORED INTERVAL 1658.3-1667.9 mbsl; 230.5-240.1 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: *R/P N18 - N21; *A/M NN11 *Discoaster quinqueramus*; *F/G R/P•*Stichocorys peregrina*

FORAMINIFERS | NANNOFOSSILS | RADIOLARIANS | DIATOMS | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES

PHYS. PROPERTIES: ● ϕ-57.1 γ-1.77; ● ϕ-58.1 γ-4.73; ● ϕ-60.1 γ-1.74

CHEMISTRY: ● IC-5.69; ● IC-7.50; ● IC-5.43 OC-1.84

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

METERS: 0.5, 1.0

LITHOLOGIC DESCRIPTION

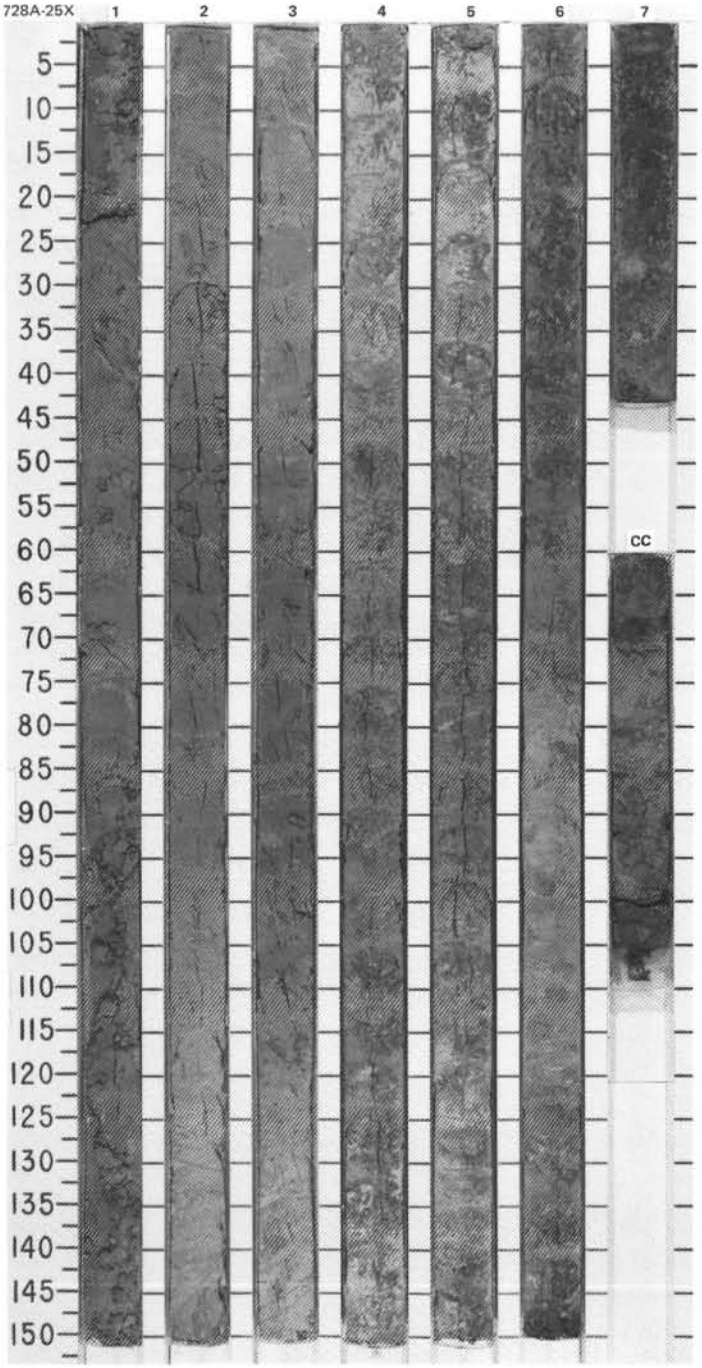
NANNOFOSSIL CHALK

Core is slightly disturbed; some drilling biscuits formed.

Major lithology: NANNOFOSSIL CHALK, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Siliceous microfossils present in trace amounts. Truncated burrows indicate drilling disturbance or microfaults(?).

SMEAR SLIDE SUMMARY (%):

	2, 41 D
TEXTURE:	
Sand	5
Silt	24
Clay	71
COMPOSITION:	
Clay	20
Foraminifers	5
Inorganic calcite	10
Nannofossils	60
Organic debris	3
Quartz	2



SITE 728 HOLE A CORE 26X CORED INTERVAL 1667.9-1677.6 mbsl; 240.1-249.8 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: * R/P; N16-N17
- NANNOFOSSILS: * A/M; NN11 *Discoaster quinqueramus*
- RADIOLARIANS: * C/G; •F/M *Stichocorys peregrina*
- DIATOMS:

PALEOMAGNETICS:

PHYS. PROPERTIES: ● ϕ=51.9 γ=1.86; ● ϕ=57.6 γ=1.72

CHEMISTRY: ● IC=7.31

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

Sections 3-6 are moderately disturbed; remainder of core is slightly disturbed. This is the first core cut with a saw. Biscuits are apparent, with flow between.

Major lithology: NANNOFOSSIL CHALK, mottled olive (5Y 4/3) and light olive gray (5Y 6/2, 5/3, 5/2) that is lighter in color than cores above, intervals of irregular thickness. Mottling is more apparent than in cores above, with *Zoophycos* burrows. Siliceous microfossils present in trace amounts; darker layers have lower nannofossil content. Shell fragments scattered throughout Section 4. Smear slide from olive layer, Section 3, 60 cm, is marly nannofossil chalk.

SMEAR SLIDE SUMMARY (%):

	3, 60 D
TEXTURE:	
Silt	40
Clay	60
COMPOSITION:	
Access. minerals	2
Clay	25
Dolomite	1
Foraminifers	3
Inorganic calcite	18
Nannofossils	30
Quartz	18
Sponge spicules	3

SITE 728 HOLE A CORE 27X CORED INTERVAL 1677.6-1687.3 mbsl; 249.8-259.5 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *R/P — N16 - N17
- NANNOFOSSILS: *A/M — NN11 *Discoaster quinqueramus*
- RADIOLARIANS: *C/G — F/M* *Stichocorys peregrina*
- DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ -56.6 γ-1.74; ● ϕ -55.9 γ-1.78; ● ϕ -58.8 γ-1.74

CHEMISTRY: ● IC-7.03; ● IC-4.26; ● IC-6.81 OC-1.87

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

MARLY NANNOFOSSIL CHALK and NANNOFOSSIL CHALK

Core is slightly to moderately fractured.

Major lithologies: MARLY NANNOFOSSIL CHALK and NANNOFOSSIL CHALK, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	1, 67 D	4, 60 D
TEXTURE:		
Silt	25	20
Clay	75	80
COMPOSITION:		
Access. minerals	2	—
Clay	20	19
Diatoms	Tr	—
Dolomite	1	—
Foraminifers	3	10
Inorganic calcite	7	5
Mica	1	—
Nannofossils	56	60
Quartz	7	3
Radiolarians	—	Tr
Sponge spicules	3	3

728A-27X 1 2 3 4 5 6 7

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150

CC

SITE 728 HOLE A CORE 28X CORED INTERVAL 1687.3-1697.0 mbsl; 259.5-269.2 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
MIOCENE	*R/P	N16 - N17	NN11 *Discoaster quinqueramus*	*A/M	*F/G	R/P•*Stichocorys peregrina*								

PALEOMAGNETICS: ϕ-60.5 γ-1.68 ● IC-7.07 ●

PHYS. PROPERTIES: ●ϕ-62.0 γ-1.69 ●ϕ-63.1 γ-1.68

CHEMISTRY: ●IC-7.41 OC-3.33 ●IC-6.74

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

METERS: 0.5, 1.0

LITHOLOGIC DESCRIPTION

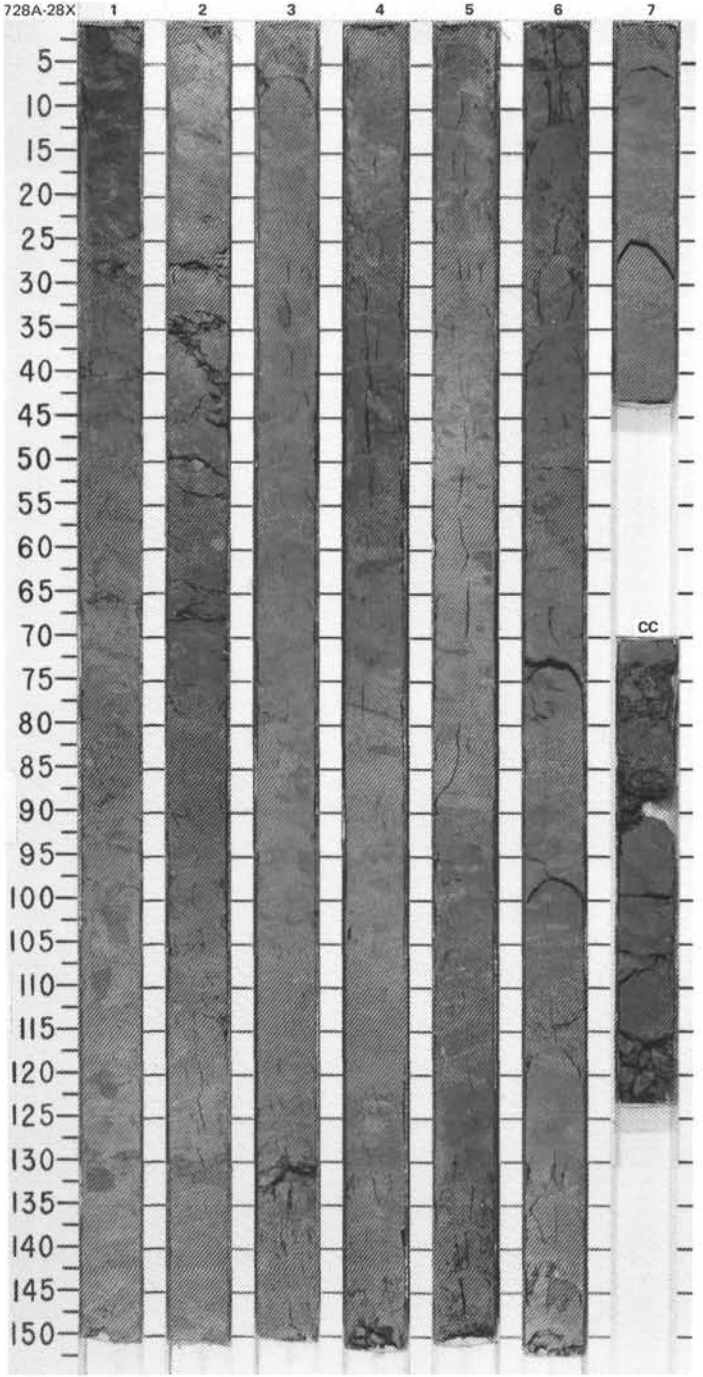
NANNOFOSSIL CHALK

Core is slightly to moderately disturbed.

Major lithology: NANNOFOSSIL CHALK, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

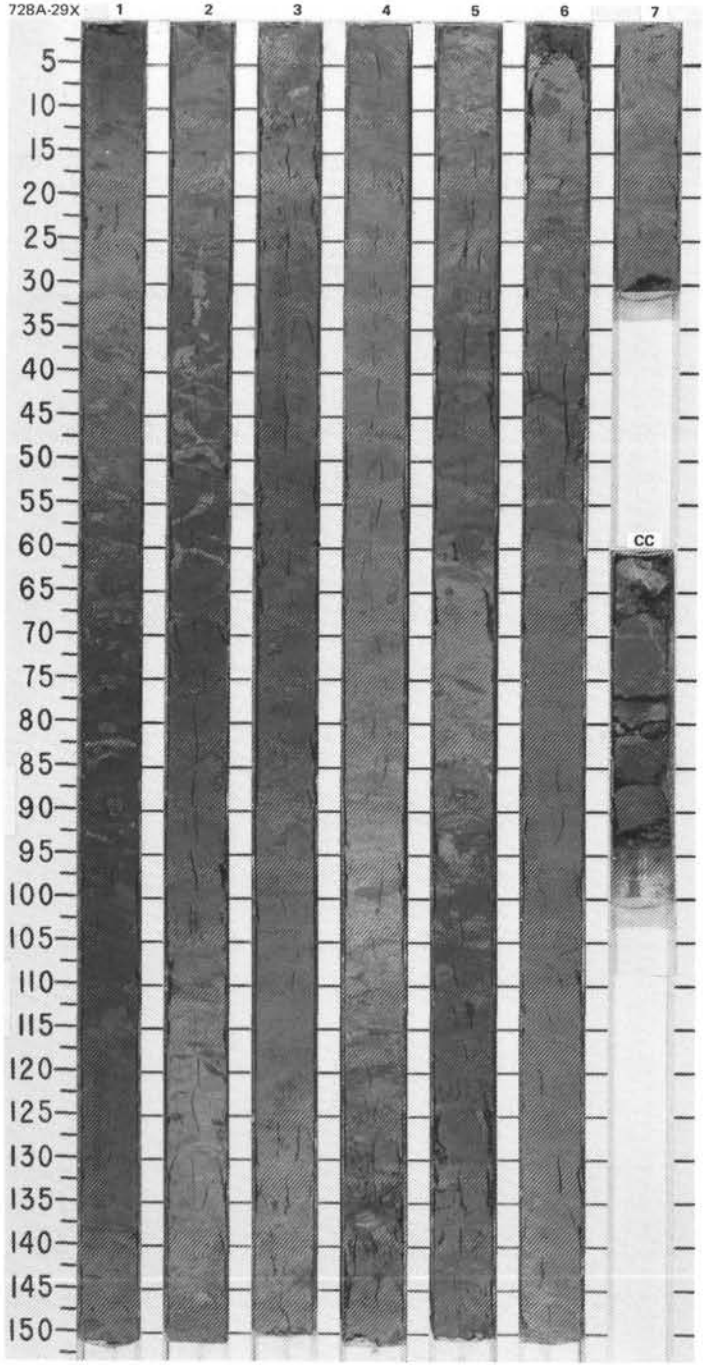
	3, 65 D	5, 140 D
TEXTURE:		
Silt	10	30
Clay	90	70
COMPOSITION:		
Clay	15	20
Diatoms	2	1
Dolomite	Tr	—
Foraminifers	5	2
Inorganic calcite	5	15
Nannofossils	67	55
Quartz	3	3
Radiolarians	Tr	—
Spicules	3	4



SITE 728 HOLE A CORE 29X CORED INTERVAL 1697.0-1706.6 mbsl: 269.2-278.8 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
MIOCENE	*R/P					● ϕ=59.7 γ=1.76	● IC=5.78 CC=2.26	1	0.5					NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK
	N16 - N17								1.0					Core is slightly to moderately disturbed.
	*A/P	NN11 *Discoaster quinqueramus*						2						Major lithologies: NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK, mottled olive (5Y 4/3) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Mottling (bioturbation) is locally intense. Siliceous microfossils present in trace amounts.
	*C/G		C/G+*Stichocorys peregrina*			● ϕ=59.0 γ=1.72	● IC=7.68	3						SMEAR SLIDE SUMMARY (%):
								4					*	TEXTURE:
								5					*	COMPOSITION:
								6						
								7						
								CC						

	4, 85 D	5, 137 D
TEXTURE:		
Silt	25	40
Clay	75	60
COMPOSITION:		
Access. minerals	Tr	—
Clay	15	30
Diatoms	1	3
Dolomite	—	1
Foraminifers	7	3
Inorganic calcite	10	15
Nannofossils	60	36
Quartz	3	10
RadiolariansT	—	Tr
Sponge spicules	4	2



SITE 728 HOLE A CORE 30X CORED INTERVAL 1706.6-1716.3 mbsl; 278.8-288.5 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIOCENE	*R/P N16 - N17	NN11 *Discoaster guingueramus*	*C/G *Stichocorys peregrina*			● ϕ-56.5 γ=1.74	● IC=5.00	1	0.5				
	*A/M								1.0				
	*C/G					● ϕ-55.7 γ=1.74	● IC=5.94 QC=1.70	2					*
								3					
								4					OG IW
								5					*
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

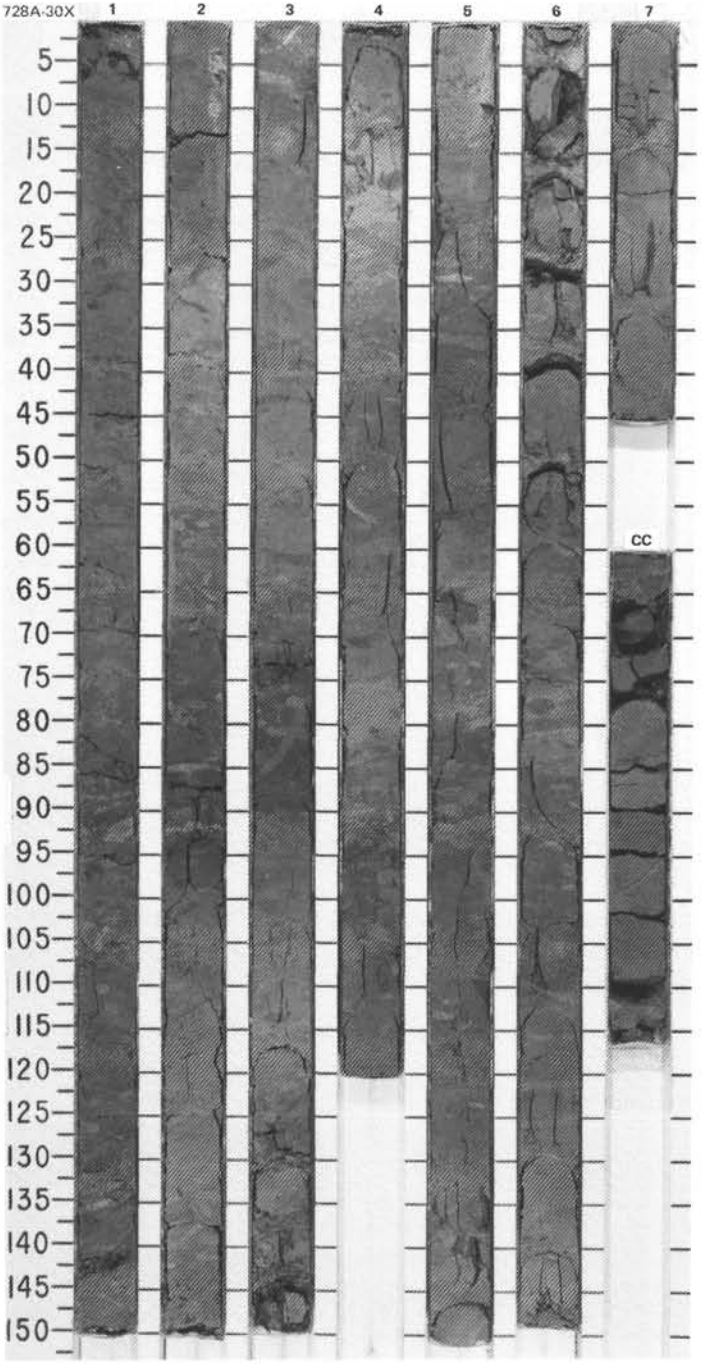
NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK

Core slightly to moderately disturbed.

Major lithologies: NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK, mottled olive (5Y 4/3) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. *Siliceous microfossils present in trace amounts.*

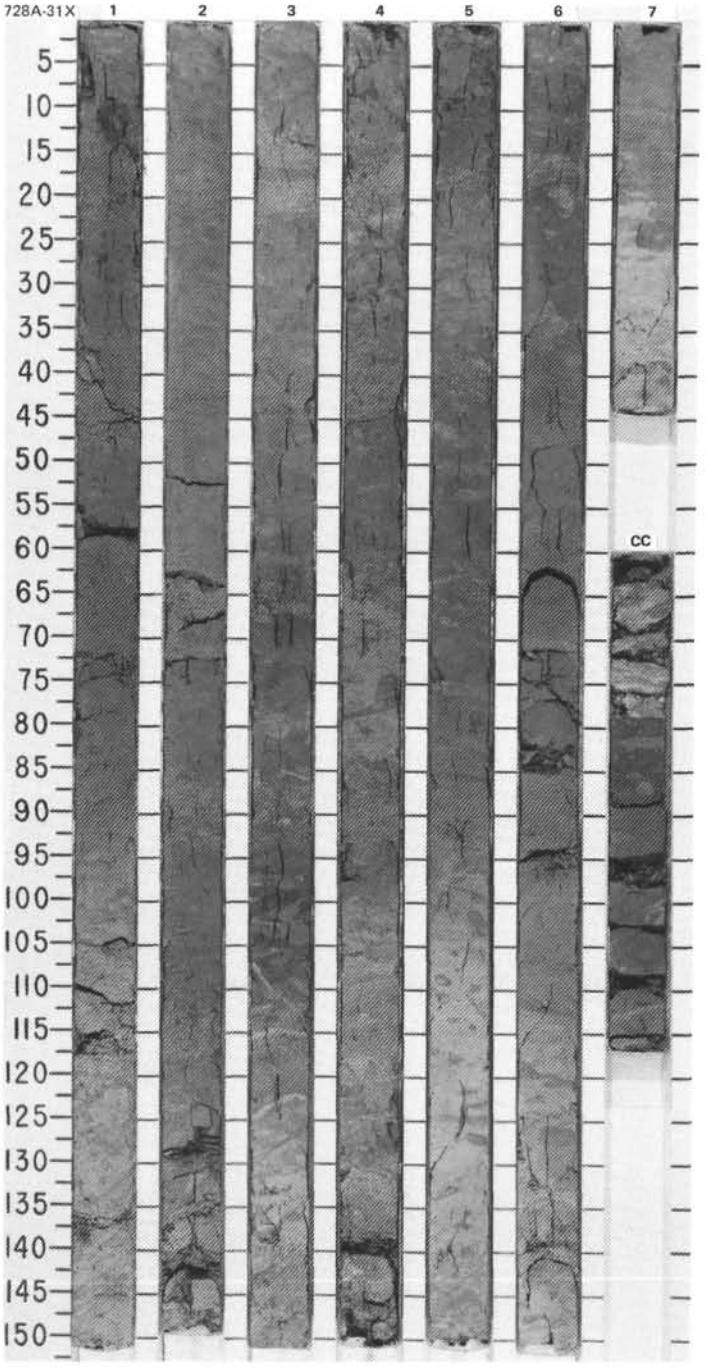
SMEAR SLIDE SUMMARY (%):

	2, 41 D	5, 120 D
TEXTURE:		
Silt	20	40
Clay	80	60
COMPOSITION:		
Clay	20	27
Diatoms	2	—
Foraminifers	3	4
Inorganic calcite	7	15
Mica	1	—
Nannofossils	60	35
Quartz	3	15
Radiolarians	1	—
Sponge spicules	4	3



SITE 728 HOLE A CORE 31X CORED INTERVAL 1716.3-1726.0 mbsl; 288.5-298.2 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
MIOCENE	*R/P	N16 - N17	NN11 *Discoaster quinqueramus*	*C/G *Stichocorys peregrina*		● ϕ=55.5 γ=1.83	● IC=5.19	1	0.5					NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK
	*A/M								1.0					Core is moderately disturbed.
	*F/G			*Didymocyrtis penultima*		● ϕ=59.4 γ=1.73	● IC=4.74 OC=1.74	2						Major lithologies: NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK, mottled olive (5Y 4/3) and light olive gray (5Y 5/3, 5/2) intervals of irregular thickness. Mottling (bioturbation) locally intense. Siliceous microfossils present in trace amounts.
								3						SMEAR SLIDE SUMMARY (%):
								4					*	4, 56 D
								5						TEXTURE:
								6						Silt 30
								7						Clay 70
								CC						COMPOSITION:
														Access. minerals Tr
														Clay 20
														Diatoms Tr
														Dolomite 1
														Foraminifers 3
														Inorganic calcite 12
														Nannofossils 56
														Quartz 5
														Sponge spicules 3



SITE 728 HOLE A CORE 32X CORED INTERVAL 1726.0-1735.6 mbsl; 298.2-307.8 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *R/P N16 - N17; *A/P NN11 *Discoaster quinqueramus*; *C/G *C/G Didymocyrtis penultima* (*Didymocyrtis antepenultima*)
- NANNOFOSSILS
- RADIOLARIANS
- DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ=62.5 γ=1.65; ● ϕ=59.3 γ=

CHEMISTRY: ● IC=5.86; ● IC=4.47 OC=1.02

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: *

SAMPLES: PP

LITHOLOGIC DESCRIPTION

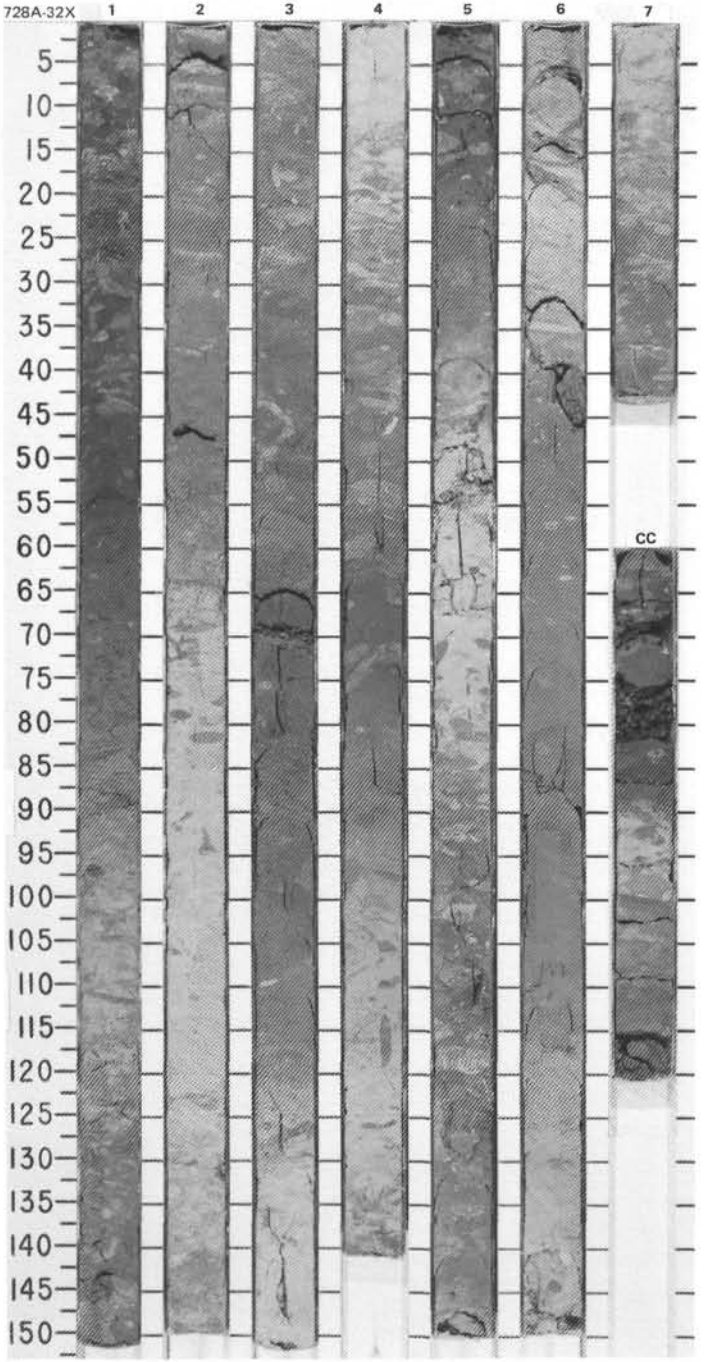
NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK

Core is slightly to moderately disturbed, with evidence of drill flow between firm biscuits.

Major lithologies: NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 6/2, 5/3, 5/2) intervals of irregular thickness. Bioturbation locally intense. Core is generally lighter in color than those above. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	2, 106 D
TEXTURE:	
Silt	15
Clay	85
COMPOSITION:	
Clay	14
Diatoms	3
Foraminifers	5
Inorganic calcite	5
Nannofossils	70
Quartz	1
Radiolarians	Tr
Sponge spicules	2



SITE 728 HOLE A CORE 33X CORED INTERVAL 1735.6-1745.3 mbsl; 307.8-317.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIOCENE	*R/P	N16 - N17						1	0.5				
	*A/M	NN11 *Discoaster quinqueramus*							1.0				
	*C/G		*C/G *Didymocyrtis antepenultima*			● ϕ=57.5 γ=1.74	● IC=5.32	2					
						● ϕ=59.6 γ=1.75	● IC=6.81 OC=1.28	3					OG IW
								4					
								5					
								6					
								7					*
								CC					*

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK

Core is slightly to moderately disturbed. Lower half of Section 6 moderately fractured.

Major lithologies: NANNOFOSSIL CHALK and MARLY NANNOFOSSIL CHALK, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 6/2, 5/3, 5/2) intervals of irregular thickness. Bioturbation is locally intense, with *Chondrites* burrows in Section 7. Siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	3, 20 D	7, 20 D
TEXTURE:		
Silt	20	25
Clay	80	75
COMPOSITION:		
Access. minerals	—	Tr
Clay	20	20
Diatoms	3	4
Dolomite	—	2
Foraminifers	3	4
Inorganic calcite	10	10
Nannofossils	61	51
Quartz	Tr	5
Radiolarians	Tr	Tr
Sponge spicules	3	4

SITE 728 HOLE A CORE 34X CORED INTERVAL 1745.3-1755.0 mbsl; 317.5-327.2 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: *R/P — N16 - N17
- NANNOFOSSILS: *A/P — NN11 *Discoaster quinqueramus*
- RADIOLARIANS: *C/G — *C/G *Didymocyrtis antepenultima*
- DIATOMS

PALEOMAGNETICS
PHYS. PROPERTIES: ●ϕ=56.3 γ=1.78; ●ϕ=67.0 γ=1.59
CHEMISTRY: ●IC=0.47; ●IC=1.78, OC=1.90

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *, *

LITHOLOGIC DESCRIPTION

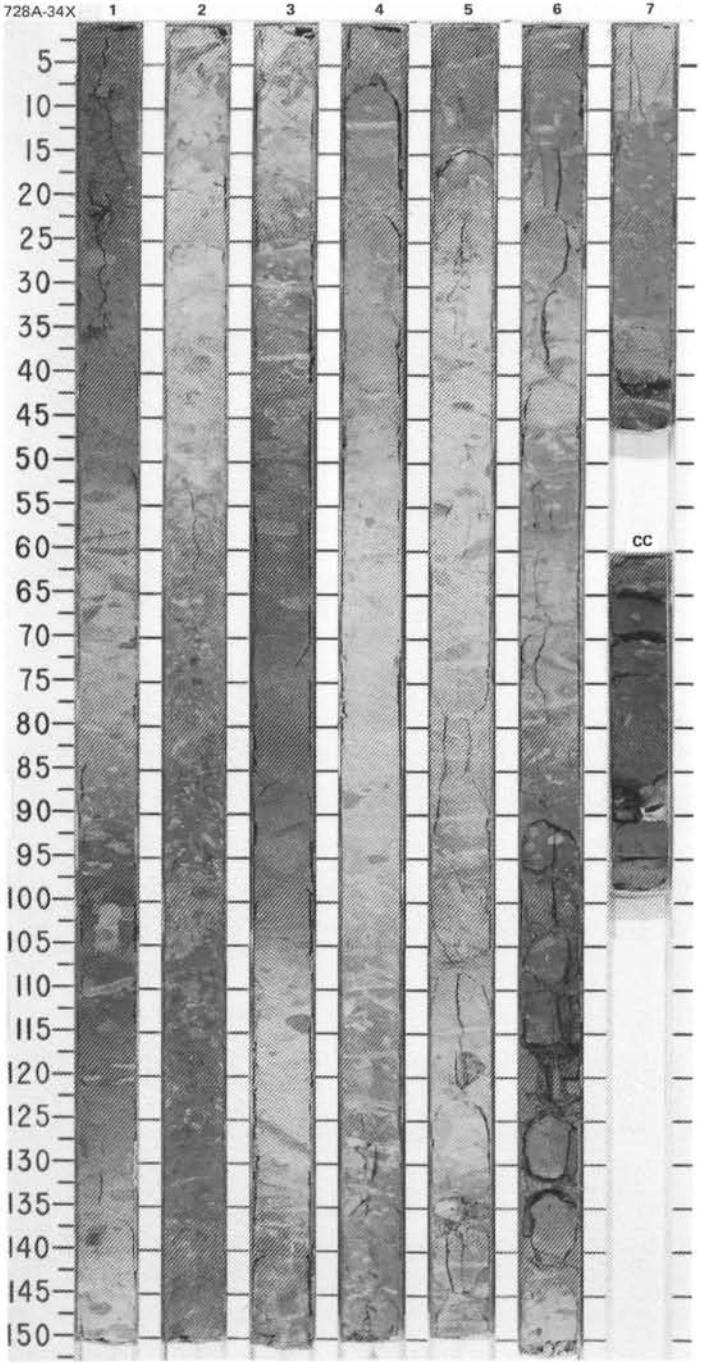
NANNOFOSSIL CHALK and DIATOM-BEARING MARLY NANNOFOSSIL CHALK

Core is slightly to moderately disturbed.

Major lithologies: NANNOFOSSIL CHALK and DIATOM-BEARING MARLY NANNOFOSSIL CHALK, mottled olive (5Y 4/3, 4/2) and light olive gray (5Y 6/2, 5/3, 5/2) intervals of irregular thickness. Beds of lighter color are interpreted as having fewer nannofossils (marly). Bioturbation locally intense, with *Planolites*, *Zoophycos*, and large (greater than 2 cm diameter) burrows observed. Diatom abundance as much as 15%; other siliceous microfossils present in trace amounts.

SMEAR SLIDE SUMMARY (%):

	1, 30 D	4, 70 D
TEXTURE:		
Sand	10	5
Silt	30	5
Clay	60	90
COMPOSITION:		
Clay	10	30
Diatoms	15	—
Foraminifers	Tr	5
Inorganic calcite	5	10
Nannofossils	60	50
Quartz	5	—
Radiolarians	Tr	—
Silicoflagellates	Tr	—
Sponge spicules	5	5



SITE 728 HOLE A CORE 35X CORED INTERVAL 1755.0-1764.6 mbsl; 327.2-336.8 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *R/P; N16 - N17; *A/P; NANNOFOSSILS NN11 *Discoaster quinqueramus*; *C/G; RADIOLARIANS *C/G *Didymocyrtis antepenultima*; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ=64.0 γ=1.61; ● ϕ=60.8 γ=1.70

CHEMISTRY: ● IC=3.45 OC=1.48; ● IC=8.55

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 and DIATOM-BEARING MARLY NANNOFOSSIL CHALK

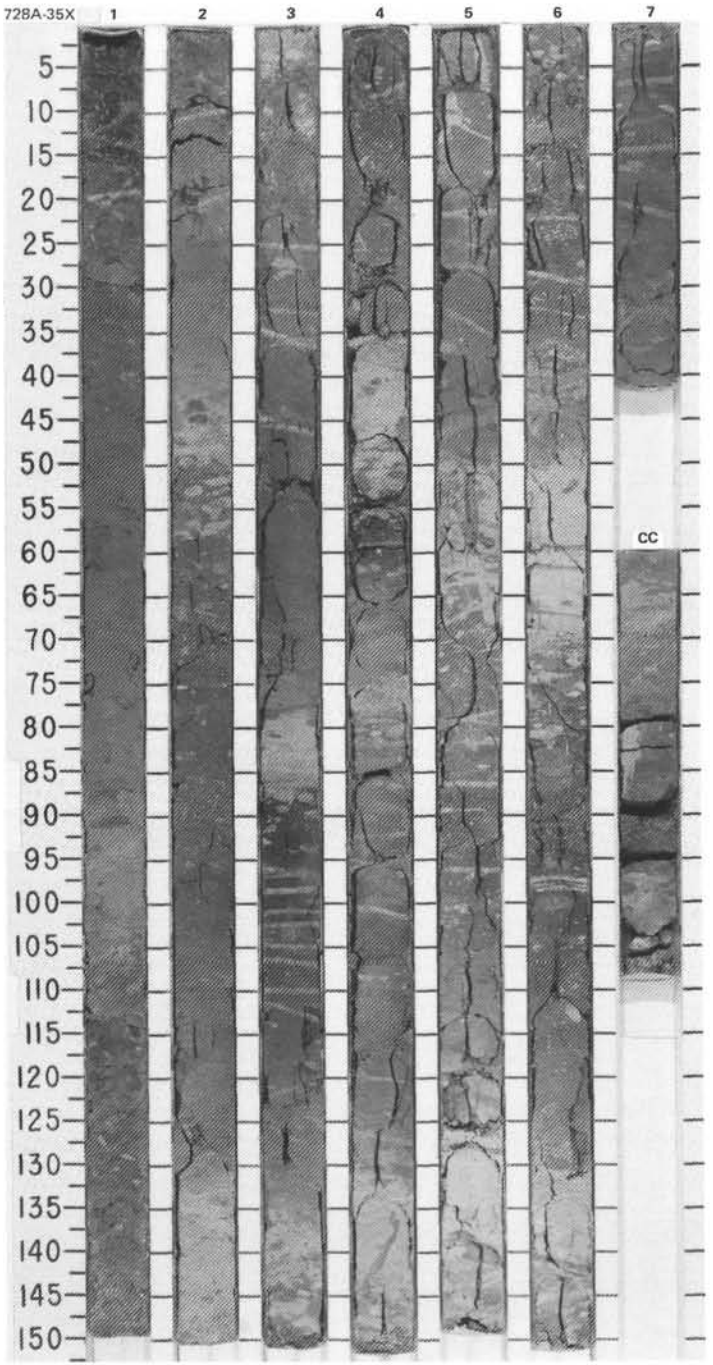
Core is slightly to moderately disturbed. Section 4, 0-60 cm, and Sections 5 and 6 are moderately fractured.

Major lithologies: NANNOFOSSIL CHALK and DIATOM-BEARING MARLY NANNOFOSSIL CHALK, heavily mottled olive (5Y 4/3, 3/2) and light olive gray (5Y 6/2, 5/3, 5/2) intervals of irregular thickness. Darker than cores immediately above. Bioturbation locally intense; *Zoophycos* burrows transect dark beds.

Minor lithology: Clayey calcareous diatomite, occurring in dark interval at Section 1, 140 cm. Dark intervals are interpreted as less calcareous and more diatomaceous.

SMEAR SLIDE SUMMARY (%):

	1, 140 D	2, 140 D
TEXTURE:		
Silt	25	20
Clay	75	80
COMPOSITION:		
Access. minerals	1	Tr
Clay	25	17
Diatoms	40	10
Dolomite	Tr	—
Foraminifers	—	3
Inorganic calcite	7	7
Nannofossils	15	60
Quartz	10	3
Sponge spicules	2	—



SITE 728 HOLE A CORE 36X CORED INTERVAL 1764.6-1774.2 mbsl; 336.8-346.4 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/P N16 - N17	*A/P NN11 *Discoaster quinqueramus*	*C/G *C/G Didymocyrtis antepenultima*			● ϕ=61.0 γ=4.65	● IC=4.34	6					
						● ϕ=65.0 γ=4.63	● IC=6.41 OC=1.56	1 2 3 4 5 7 CC	0.5 1.0				OG IW

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CHALK and DIATOM-BEARING MARLY NANNOFOSSIL CHALK

Core slightly to moderately disturbed.

Major lithologies: NANNOFOSSIL CHALK and DIATOM-BEARING MARLY NANNOFOSSIL CHALK, mottled olive (5Y 4/3) and light olive gray (5Y 6/2, 5/3, 5/2) intervals of irregular thickness. Bioturbation is locally intense.

SMEAR SLIDE SUMMARY (%):

	4, 39 D
TEXTURE:	
Silt	30
Clay	70
COMPOSITION:	
Access. minerals	Tr
Clay	23
Diatoms	35
Foraminifers	3
Inorganic calcite	7
Nannofos	25
Quartz	7
Radiolarians	Tr

SITE 728 HOLE B CORE 1H CORED INTERVAL 1427.8-1429.0 mbsl; 0.0-1.2 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-HOLOCENE		NN21 *Emiliania huxleyi*	* A/G			ϕ-59.8 γ-1.71 ●		1, CC	0.5, 1				* *

LITHOLOGIC DESCRIPTION

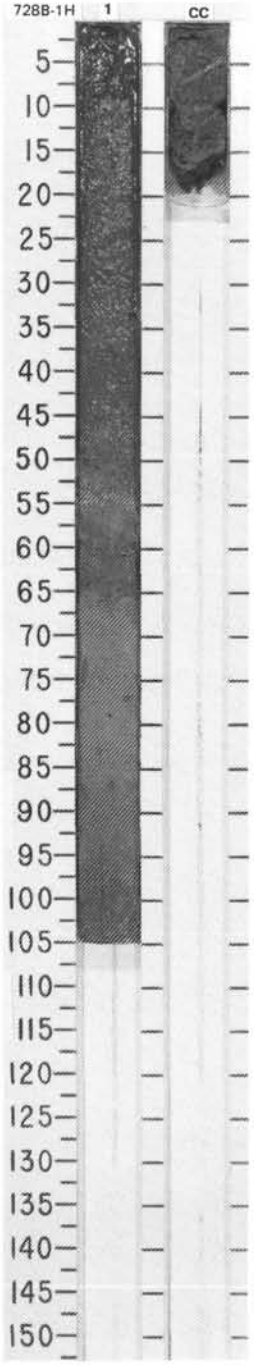
FORAMINIFER OOZE to MARLY FORAMINIFER-NANNOFOSSIL OOZE

Section 1, 0-9 cm, is moderately disturbed; remainder of core is undisturbed.

Major lithology: FORAMINIFER OOZE to MARLY FORAMINIFER-NANNOFOSSIL OOZE, olive (5Y 5/3, 4/4, 4/3) and olive brown (2.5Y 4/4). Slight burrow mottling throughout, *Zoophycos* burrows present. Shell debris is common on core face.

SMEAR SLIDE SUMMARY (%):

	1, 36 D	1, 78 D
TEXTURE:		
Sand	80	40
Silt	10	25
Clay	10	35
COMPOSITION:		
Access. minerals	2	2
Clay	10	15
Foraminifers	70	25
Inorganic calcite	—	25
Nannofossils	15	25
Phosphate	Tr	—
Quartz	3	8
Sponge spicules	Tr	—



SITE 728 HOLE B CORE 2H CORED INTERVAL 1429.0-1438.5 mbsl; 1.2-10.7 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
PLEISTOCENE	*A/G	NN20 *Gephyrocapsa oceanica*				● Φ=58.4 γ=1.74		1	0.5		—	6	
									1.0				
								2				6	
													*
								3					
								4					
								5				6	*
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

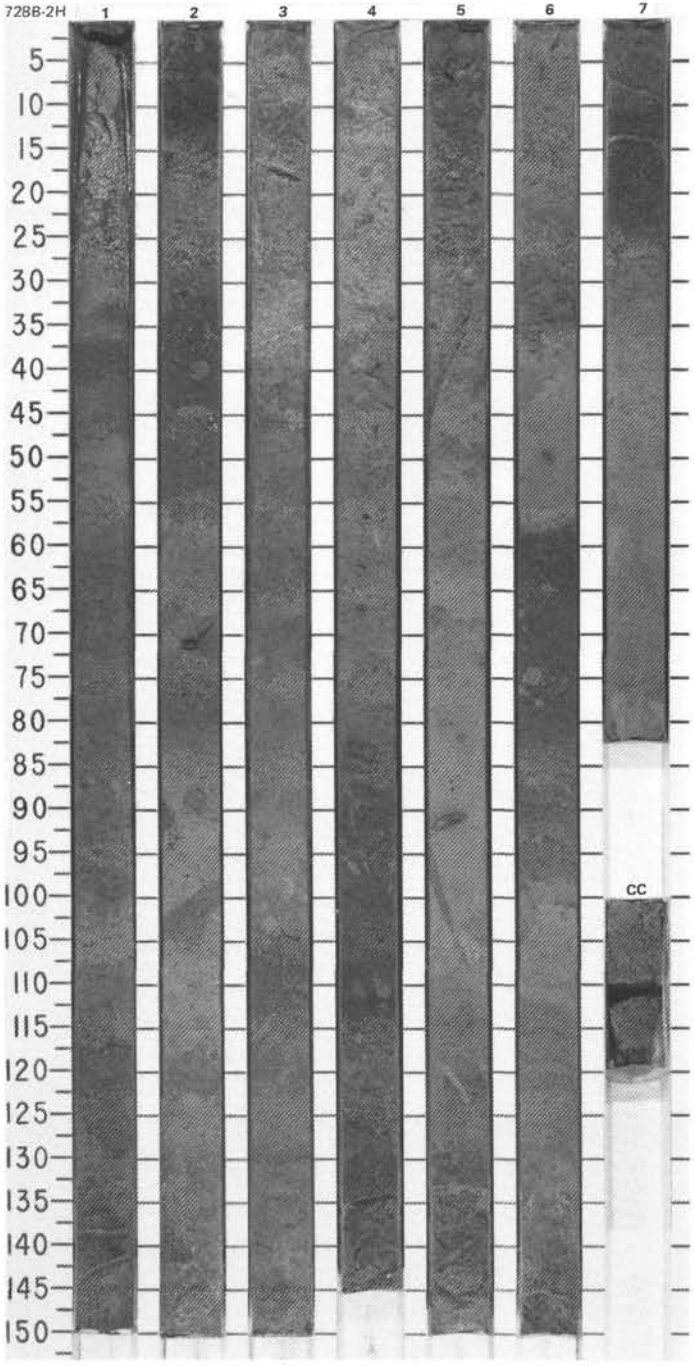
MARLY FORAMINIFER-NANNOFOSSIL OOZE

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

Major lithology: MARLY FORAMINIFER-NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3) and light greenish gray (10Y 5/2). Alternation of lighter and darker layers, 20-100 cm thick. Slight burrow mottling. Shells and shell debris are present on core face.

SMEAR SLIDE SUMMARY (%):

	2, 96 D	5, 7 D
TEXTURE:		
Sand	10	35
Silt	30	25
Clay	60	40
COMPOSITION:		
Access. minerals	2	3
Clay	15	10
Dolomite	—	1
Feldspar	Tr	—
Foraminifers	20	35
Inorganic calcite	10	11
Nannofossils	45	30
Quartz	8	10



SITE 728 HOLE B CORE 3H CORED INTERVAL 1438.5-1447.9 mbsl; 10.7-20.1 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	NN19 *Pseudoemiliania lacunosa*				● ϕ=1.1 γ=1.71		1	0.5				
									1.0				
								2					*
								3					
								4					*
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

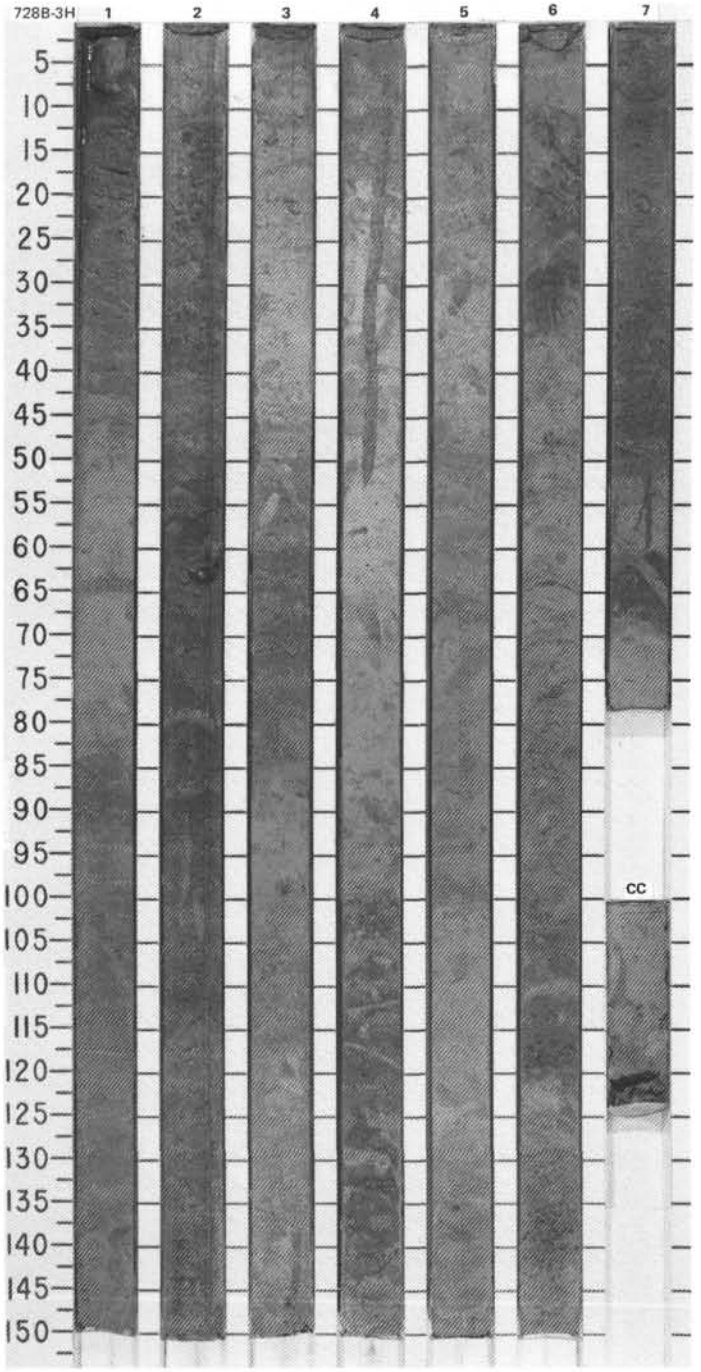
CALCITIC MARLY NANNOFOSSIL OOZE to NANNOFOSSIL OOZE

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

Major lithology: CALCITIC MARLY NANNOFOSSIL OOZE to NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3), olive gray (5Y 5/2), and light greenish gray (10Y 5/2, 6/2). Alternation of lighter and darker layers, 20-100 cm thick. Dark layers have more terrigenous silty clay than lighter layers. Slight burrow mottling; large burrow from Section 3, 130 cm, to Section 4, 50 cm. Shell debris present on core face.

SMEAR SLIDE SUMMARY (%):

	2, 11 D	4, 61 D
TEXTURE:		
Sand	5	—
Silt	20	20
Clay	75	80
COMPOSITION:		
Access. minerals	2	Tr
Clay	20	10
Dolomite	Tr	Tr
Feldspar	1	—
Foraminifers	2	4
Inorganic calcite	15	15
Nannofossils	55	70
Quartz	5	1



SITE 728 HOLE B CORE 4H CORED INTERVAL 1447.9-1457.4 mbsl; 20.1-29.6 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	NN19 *Pseudoemiliania lacunosa*				●ϕ=58.4 γ=1.73		1	0.5				*
								1	1.0				
								2					
								3					*
								4					
								5					IW
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

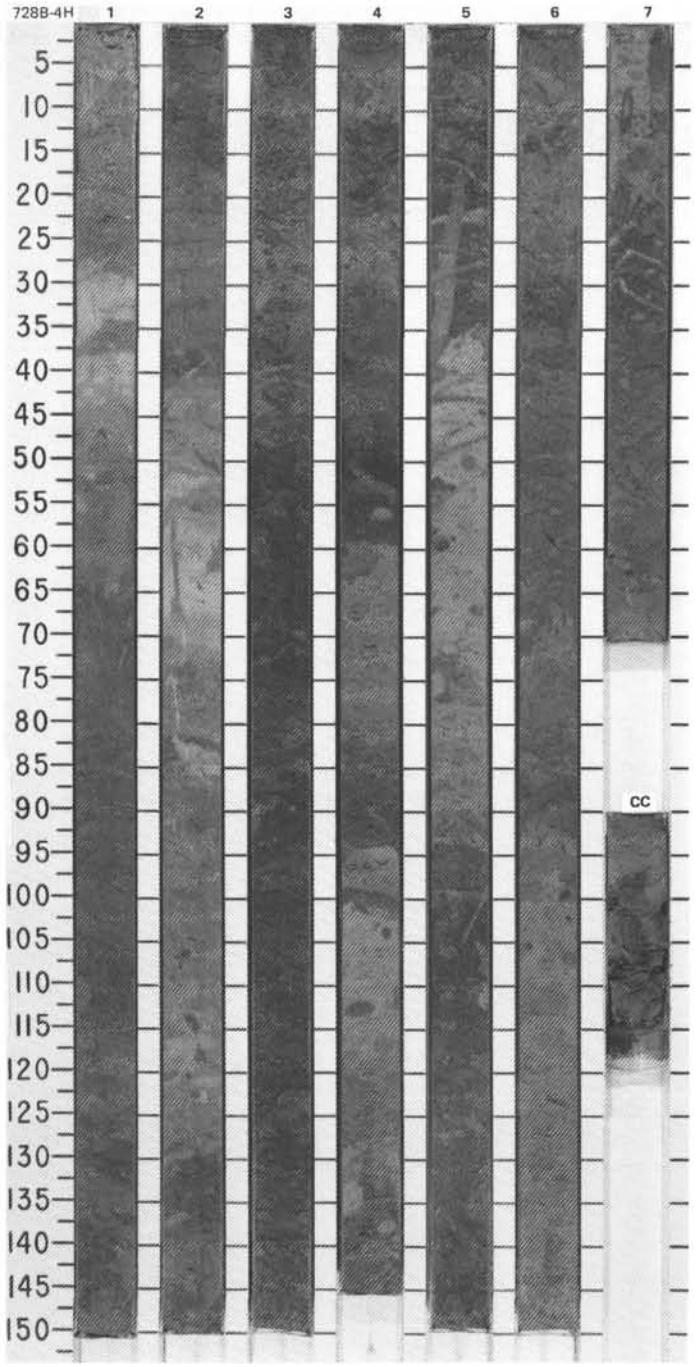
CALCITIC MARLY CALCAREOUS OOZE to NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: CALCITIC MARLY CALCAREOUS OOZE to NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3), light olive gray (5Y 6/2), and light greenish gray (10Y 5/2). Alternation of lighter and darker layers, 20-100 cm thick. Slight to moderate burrow mottling *Planolites* burrows common in Section 2. Shell debris present on core face in Section 6.

SMEAR SLIDE SUMMARY (%):

	2, 65 D	3, 65 D
TEXTURE:		
Sand	5	35
Silt	15	25
Clay	80	40
COMPOSITION:		
Access. minerals	22	
Clay	15	20
Dolomite	—	1
Foraminifers	5	15
Volcanic glass	Tr	—
Inorganic calcite	8	20
Nannofossils	65	20
Quartz	5	22



SITE 728 HOLE B CORE 5H CORED INTERVAL 1457.4-1466.9 mbsl; 29.6-39.1 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/M	NN19 *Pseudoemiliania lacunosa*				● ϕ=56.6 γ=4.79		1	0.5				
									1.0				
								2					
								3					
								4					*
								5					*
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

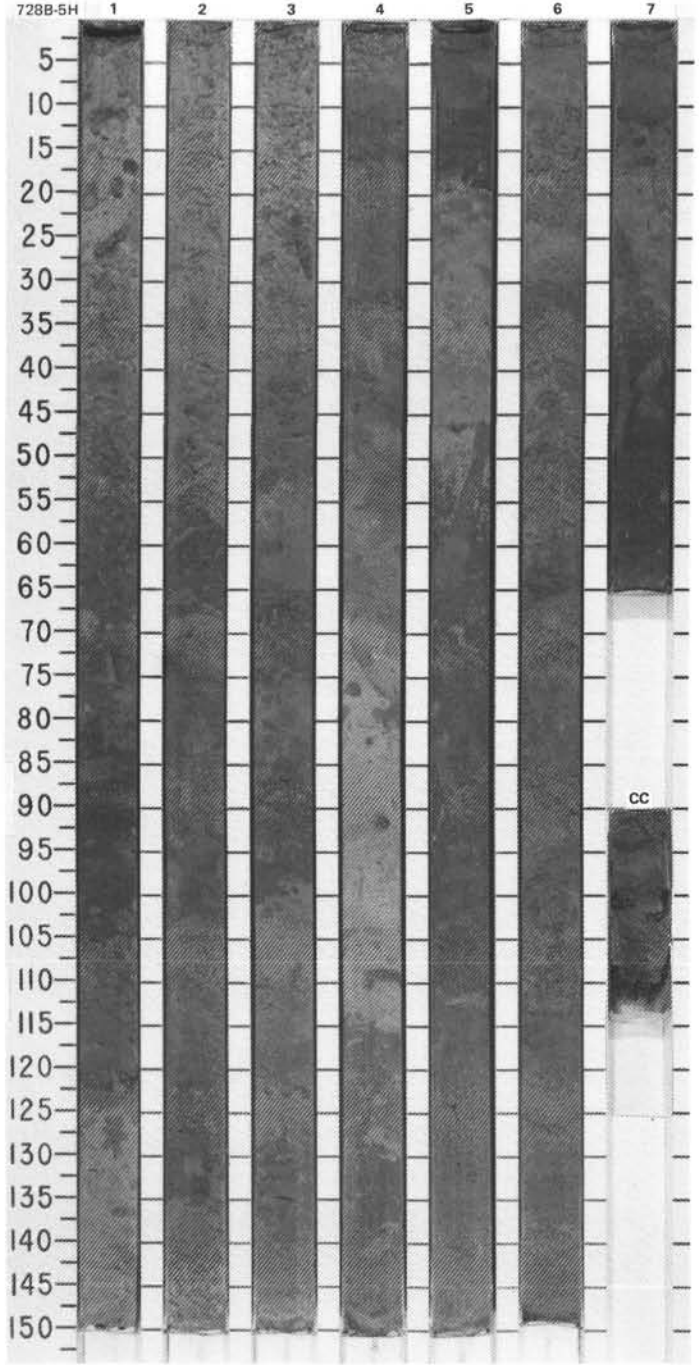
CALCITIC MARLY NANNOFOSSIL OOZE

Entire core is undisturbed.

Major lithology: CALCITIC MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3), olive gray (5Y 5/2), and light greenish gray (10Y 5/2). Alternation of lighter and darker layers, 20-100 cm thick. Slight to moderate burrow mottling. Shell debris present on core face.

SMEAR SLIDE SUMMARY (%):

	4, 84 D	5, 130 D
TEXTURE:		
Sand	5	15
Silt	25	15
Clay	70	70
COMPOSITION:		
Access. minerals	—	1
Clay	20	25
Dolomite	—	Tr
Foraminifers	5	2
Volcanic glass	—	Tr
Inorganic calcite	20	20
Nannofossils	50	40
Organic debris	—	Tr
Quartz	3	12



SITE 728 HOLE B CORE 6H CORED INTERVAL 1466.9-1476.4 mbsl: 39.1-48.6 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/M	NN19 *Pseudoemiliania lacunosa*				● ϕ=58.6 γ=1.73		1, 2, 3, 4, 5, 6, 7, CC	0.5, 1.0				*

LITHOLOGIC DESCRIPTION

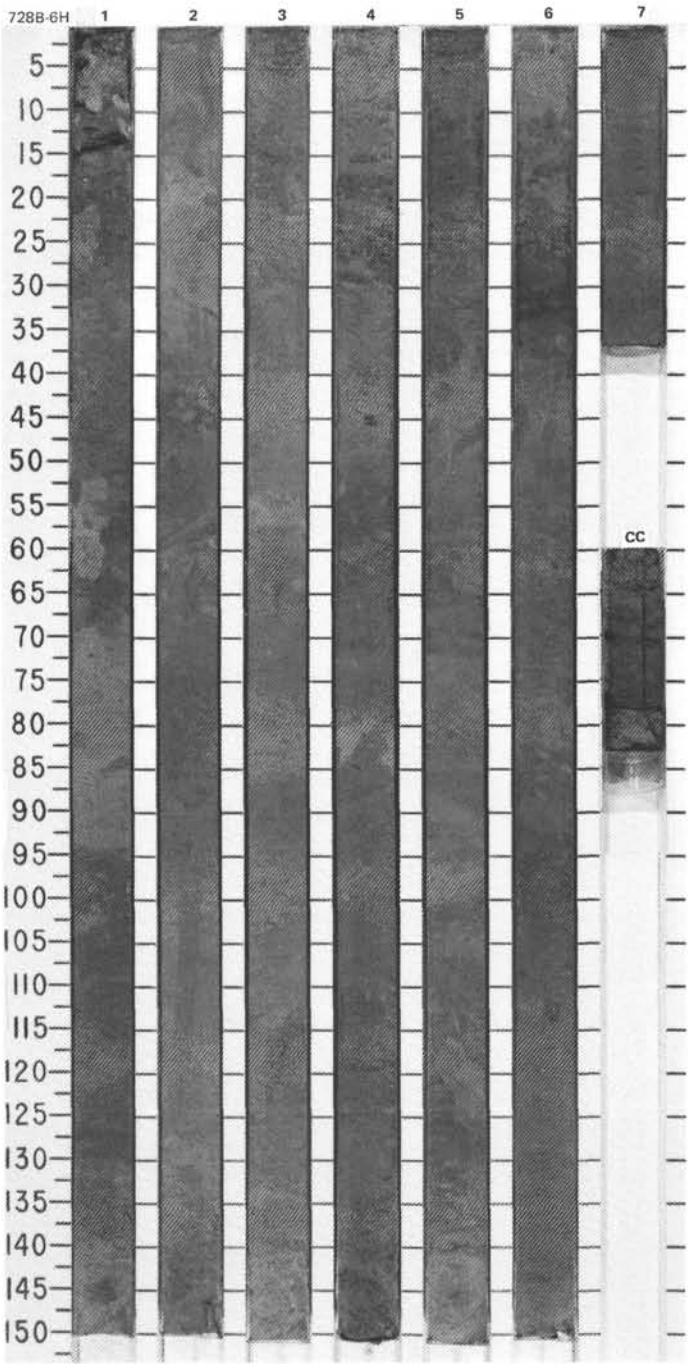
CALCITIC MARLY NANNOFOSSIL OOZE to NANNOFOSSIL SILTY CLAY

Section 1, 0-3 cm, is soupy; remainder of core is undisturbed.

Major lithology: CALCITIC MARLY NANNOFOSSIL OOZE to NANNOFOSSIL SILTY CLAY, olive (5Y 4/3, 5/3), olive gray (5Y 4/2), and light greenish gray (10Y 5/2). Alternation of lighter and darker layers, 20-100 cm thick. Darker layers contain more terrigenous silty clay than lighter layers. Slight to moderate burrow mottling. Foraminifers common on core face and concentrated in mm-scale lenses.

SMEAR SLIDE SUMMARY (%):

	1, 71 D	5, 16 D
TEXTURE:		
Sand	20	20
Silt	25	30
Clay	55	50
COMPOSITION:		
Access. minerals	2	2
Clay	20	25
Dolomite	—	1
Foraminifers	5	4
Volcanic glass	1	—
Inorganic calcite	27	38
Nannofossils	40	25
Organic debris	Tr	—
Quartz	5	5
Shell debris	—	Tr



SITE 728 HOLE B CORE 7H CORED INTERVAL 1467.4-1485.9 mbsl; 48.6-58.10 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/M	NN19 *Pseudoemiliania lacunosa*				● ϕ-58.1 γ-1.69		1 2 3 4 5 6 7 CC	0.5 1.0				* IW *

LITHOLOGIC DESCRIPTION

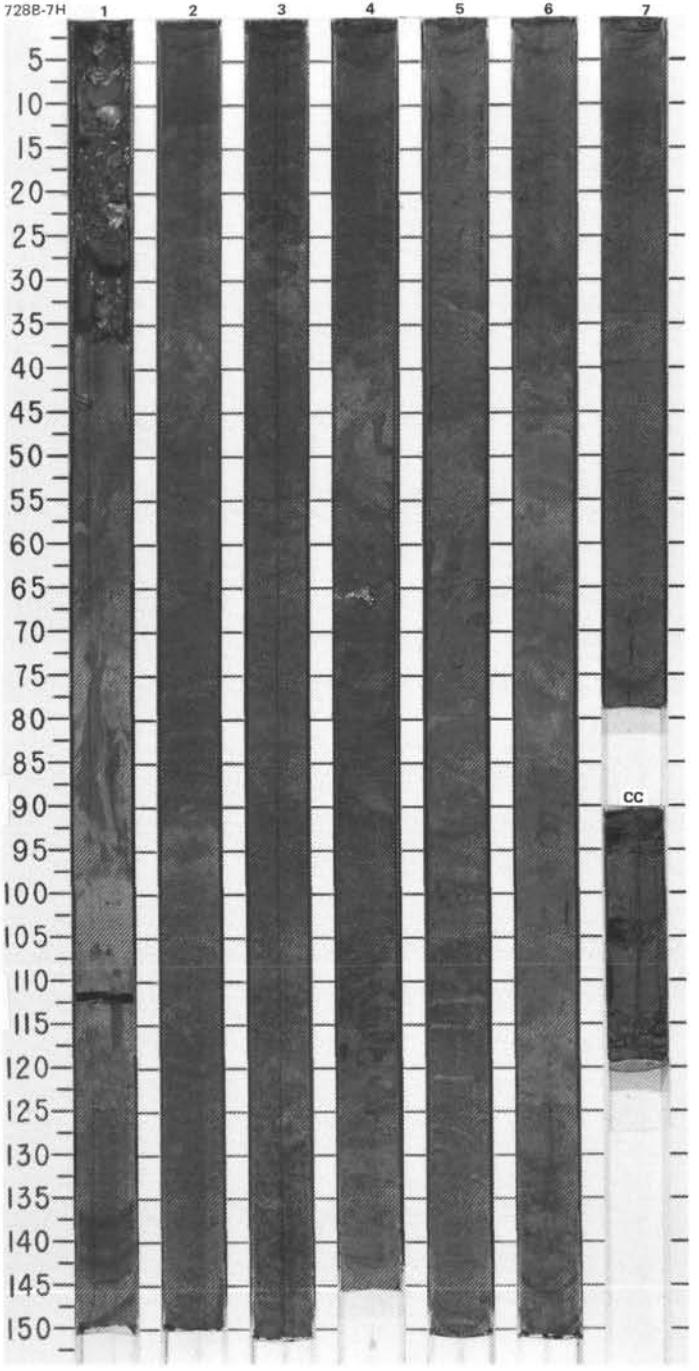
FORAMINIFER-BEARING CALCITIC MARLY NANNOFOSSIL OOZE

Section 1, 0-100 cm, is disturbed by pore-water sampler: 0-35 cm soupy, 35-100 cm moderate disturbance. Remainder of core is undisturbed.

Major lithology: FORAMINIFER-BEARING CALCITIC MARLY NANNOFOSSIL OOZE, olive (5Y 4/3), pale yellow (5Y 7/3), and light greenish gray (10Y 5/2). Alternation of lighter and darker layers, 20-100 cm thick. Slight to moderate burrow mottling. Shell debris present on core face.

SMEAR SLIDE SUMMARY (%):

	1, 100 D	5, 21 D
TEXTURE:		
Sand	15	20
Silt	20	30
Clay	65	50
COMPOSITION:		
Access. minerals	2	1
Clay	25	25
Dolomite	1	1
Feldspar	—	1
Foraminifers	7	12
Inorganic calcite	20	15
Mica	—	Tr
Nannofossils	40	25
Quartz	5	20



SITE 728 HOLE B CORE 8H CORED INTERVAL 1485.9-1495.5 mbsl; 58.1-67.7 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER
- FORAMINIFERS: *A/M
- NANNOFOSSILS: NN18 *Discoaster brouweri*
- RADIOLARIANS
- DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ=67.5 74.73

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *, *

LITHOLOGIC DESCRIPTION

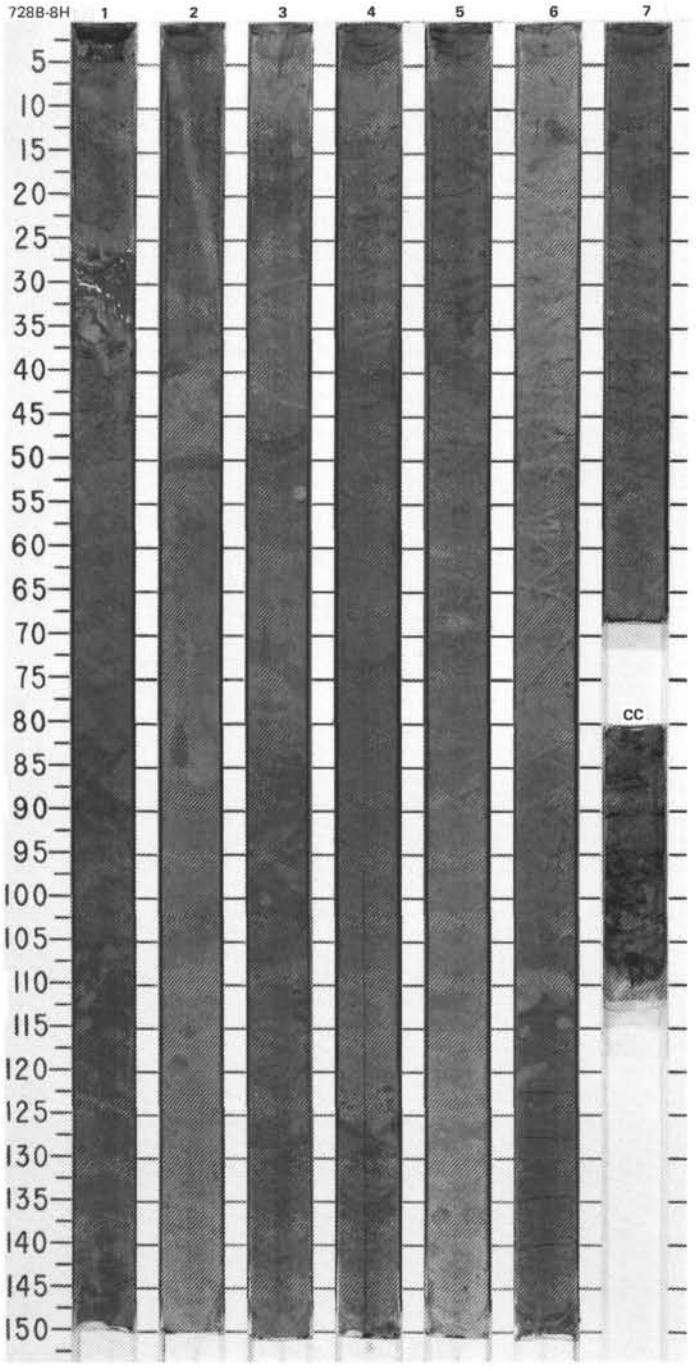
FORAMINIFER-BEARING MARLY NANNOFOSSIL OOZE to CALCITIC MARLY NANNOFOSSIL OOZE

Section 1, 0-4 and 22-39 cm, is highly disturbed. Remainder of core is undisturbed.

Major lithology: FORAMINIFER-BEARING MARLY NANNOFOSSIL OOZE to CALCITIC MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3, 4/4) and olive gray (5Y 4/2). Darker layers have more silty clay than lighter layers.

SMEAR SLIDE SUMMARY (%):

	1, 118 D	5, 142 D
TEXTURE:		
Sand	10	5
Silt	30	15
Clay	60	80
COMPOSITION:		
Access. minerals	1	1
Clay	25	20
Dolomite	Tr	—
Foraminifers	1	6
Inorganic calcite	17	8
Mica	1	—
Nannofossils	35	60
Quartz	20	5



SITE 728 HOLE B CORE 9H CORED INTERVAL 1495.5-1505.1 mbsl; 67.7-77.3 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	NN17 *Discoaster pentaradiatus*				● ϕ-59.9 γ-1.69		1 2 3 4 5 6 7 CC	0.5 1.0				* * *

LITHOLOGIC DESCRIPTION

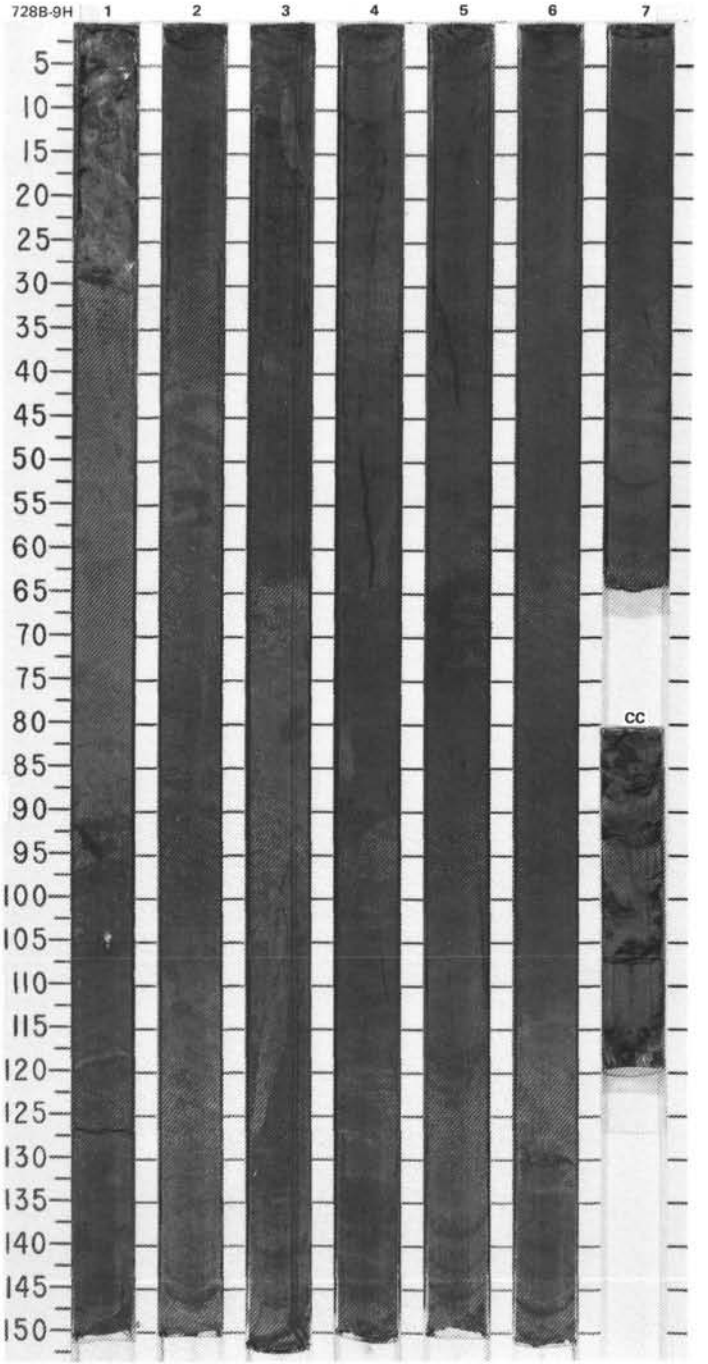
CALCITIC MARLY NANNOFOSSIL OOZE and NANNOFOSSIL SILTY CLAY

Section 1, 0-31 cm, is highly disturbed. Remainder of core is undisturbed.

Major lithology: CALCITIC MARLY NANNOFOSSIL OOZE, olive (5Y 4/3), alternating with a dark olive gray (5Y 3/2) nannofossil silty clay. Foraminifers common on core face. Bioturbation is minor.

SMEAR SLIDE SUMMARY (%):

	1, 93 M	3, 22 D	6, 22 D
TEXTURE:			
Sand	40	10	15
Silt	20	40	20
Clay	40	50	65
COMPOSITION:			
Access. minerals	4	2	2
Clay	40	25	20
Dolomite	Tr	1	1
Feldspar	3	1	—
Foraminifers	—	—	2
Inorganic calcite	6	45	20
Mica	—	—	2
Nannofossils	—	25	45
Organic debris	5	—	—
Quartz	40	1	10
Sponge spicules	—	—	Tr



SITE 728 HOLE B CORE 10X CORED INTERVAL 1505.4-1514.7 mbsl; 77.3-86.9 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*				● ϕ=62.4 γ=1.85		1	0.5				*
								1	1.0				
								2					
								3					
								4					
								5					1W
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

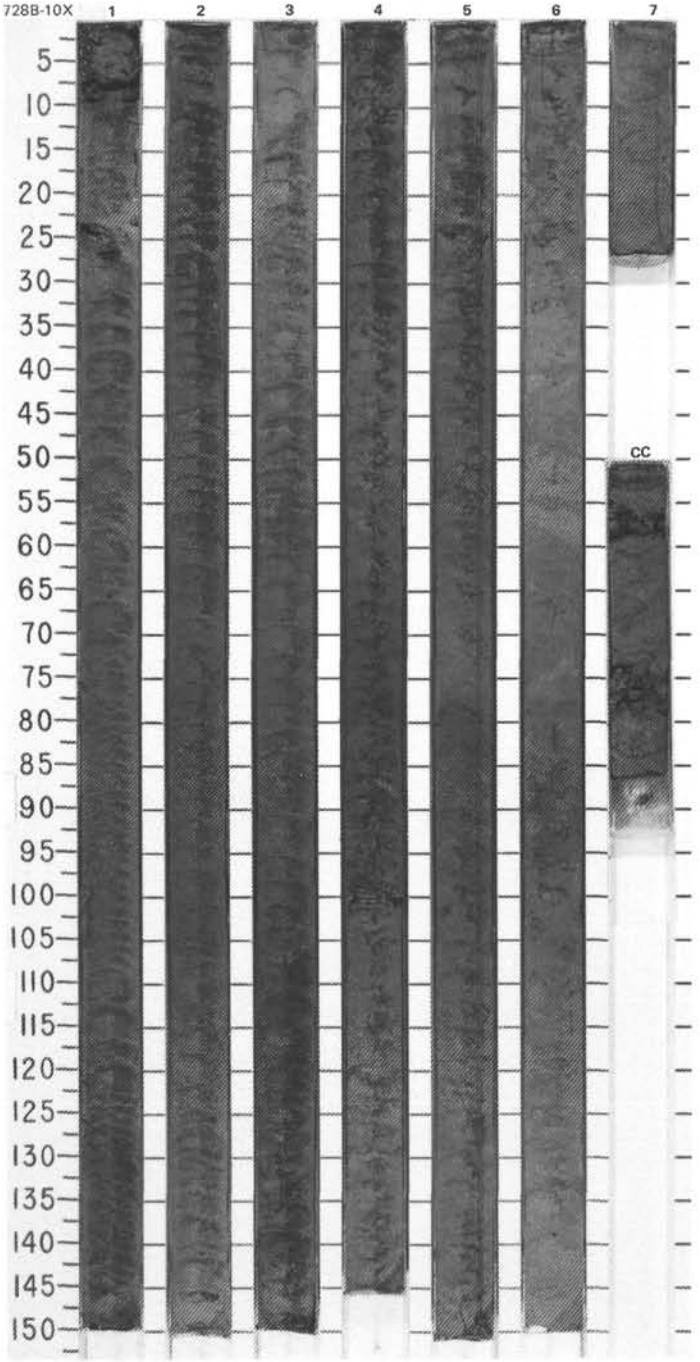
CALCITIC MARLY NANNOFOSSIL OOZE

Section 1, 0-8 cm, is highly disturbed. Remainder of core has minor disturbance and some biscuiting.

Major lithology: CALCITIC MARLY NANNOFOSSIL OOZE, olive (5Y 4/3) and olive gray (5Y 4/2). Foraminifers common on core face. Bioturbation is slight to moderate. Shell debris present but sparse.

SMEAR SLIDE SUMMARY (%):

	1, 64 D
TEXTURE:	
Sand	10
Silt	20
Clay	70
COMPOSITION:	
Access. minerals	2
Clay	20
Dolomite	1
Foraminifers	4
Inorganic calcite	13
Nannofossils	50
Quartz	10
Sponge spicules	Tr



SITE 728 HOLE B CORE 11X CORED INTERVAL 1514.7-1524.3 mbsl; 86.9-96.5 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		NN16 *Discoaster surculus*				● ϕ 86.2 γ 4.81		1 2 3 4 5 6 CC	0.5 1.0				* *

LITHOLOGIC DESCRIPTION

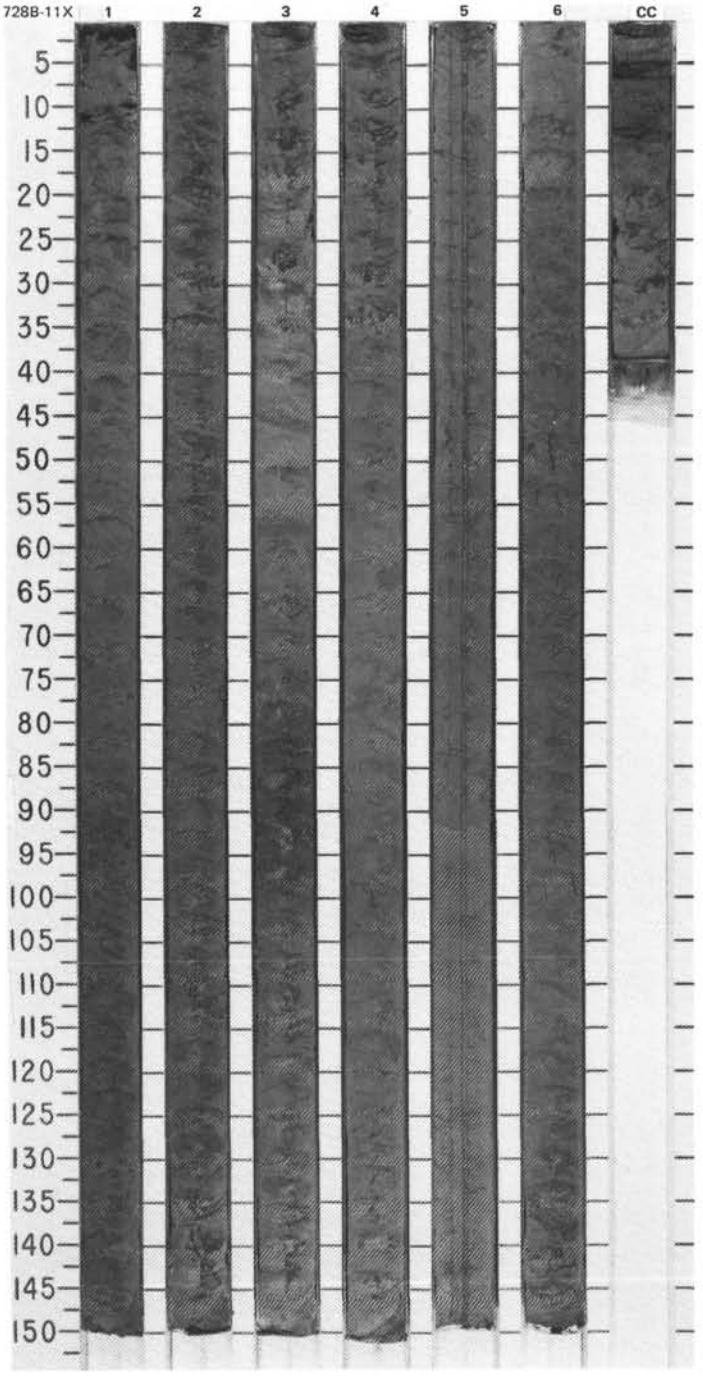
CALCITIC MARLY NANNOFOSSIL OOZE

Section 1, 0-10 cm, is highly disturbed. Remainder of core has minor disturbance and some biscuiting.

Major lithology: CALCITIC MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3) and olive gray (5Y 4/2). Foraminifers common on core face. Bioturbation is slight to moderate. Shell debris present but sparse.

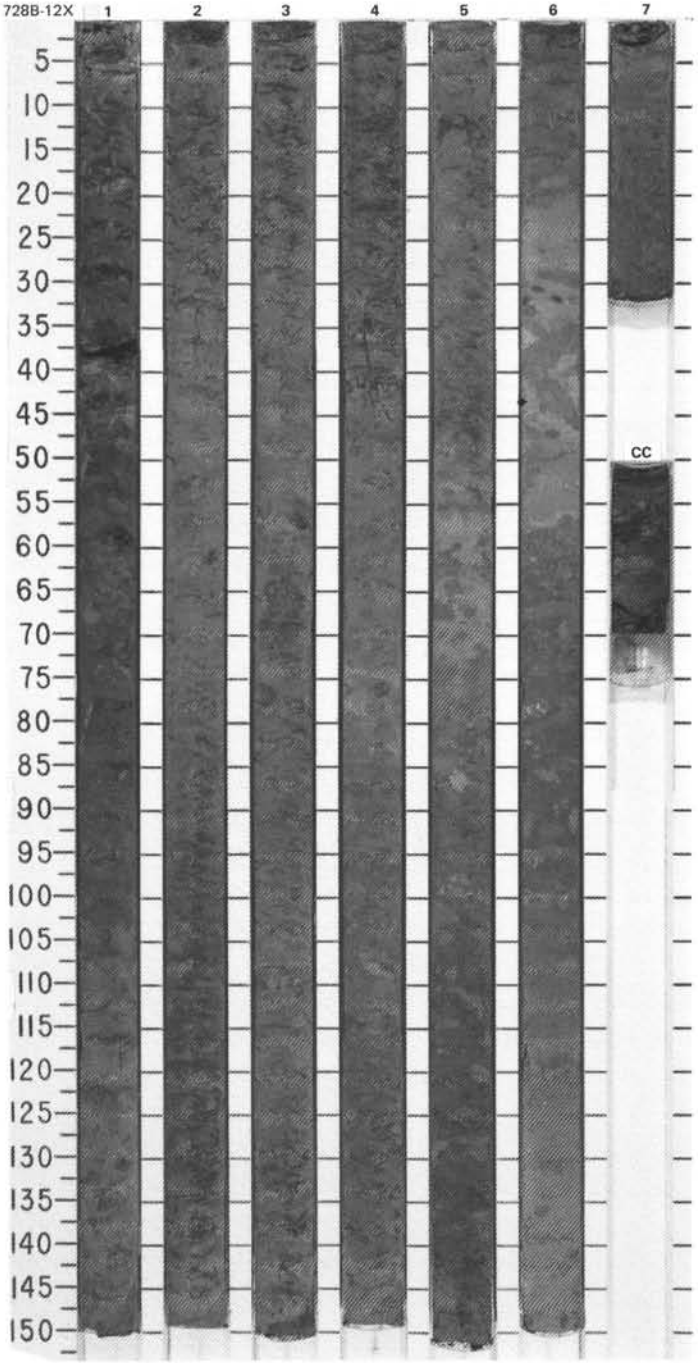
SMEAR SLIDE SUMMARY (%):

	3, 89 D	4, 67 D
TEXTURE:		
Sand	10	10
Silt	35	15
Clay	55	75
COMPOSITION:		
Access. minerals	2	2
Clay	20	25
Feldspar	3	—
Foraminifers	—	4
Inorganic calcite	20	15
Nannofossils	35	50
Quartz	20	2
Radiolarians 1	—	—
Sponge spicules 1	—	—



SITE 728 HOLE B CORE 12X CORED INTERVAL 1524.3-1533.9 mbsl; 96.5-106.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
PLIOCENE	*A/G	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ-62.2 γ-1.62		1	0.5					CALCITIC MARLY NANNOFOSSIL OOZE to NANNOFOSSIL CALCITIC SILTY CLAY
									1.0					Void in Section 1, 36-37 cm. Remainder of core has minor disturbance and some biscuiting.
								2					*	Major lithology: CALCITIC MARLY NANNOFOSSIL OOZE to NANNOFOSSIL CALCITIC SILTY CLAY, olive (5Y 4/3) and olive gray (5Y 4/2) to dark olive gray (5Y 3/2). Dark layers have more terrigenous silty clay than the light layers. Bioturbation is slight to absent.
								3						SMEAR SLIDE SUMMARY (%):
								4						2, 85 D
								5						TEXTURE:
								6						Silt 40 Clay 60
								7						COMPOSITION:
								CC						Access. minerals 2 Dolomite 5 Foraminifers 2 Inorganic calcite 30 Mica 30 Nannofossils 20 Quartz 10 Sponge spicules 1



SITE 728 HOLE B CORE 13X CORED INTERVAL 1533.9-1543.6 mbsl; 106.1-115.8 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
PLIOCENE	*A/G	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ=65.3 γ=1.62		1, 2, 3, 4, 5, 6, 7, CC	0.5, 1.0				*

LITHOLOGIC DESCRIPTION

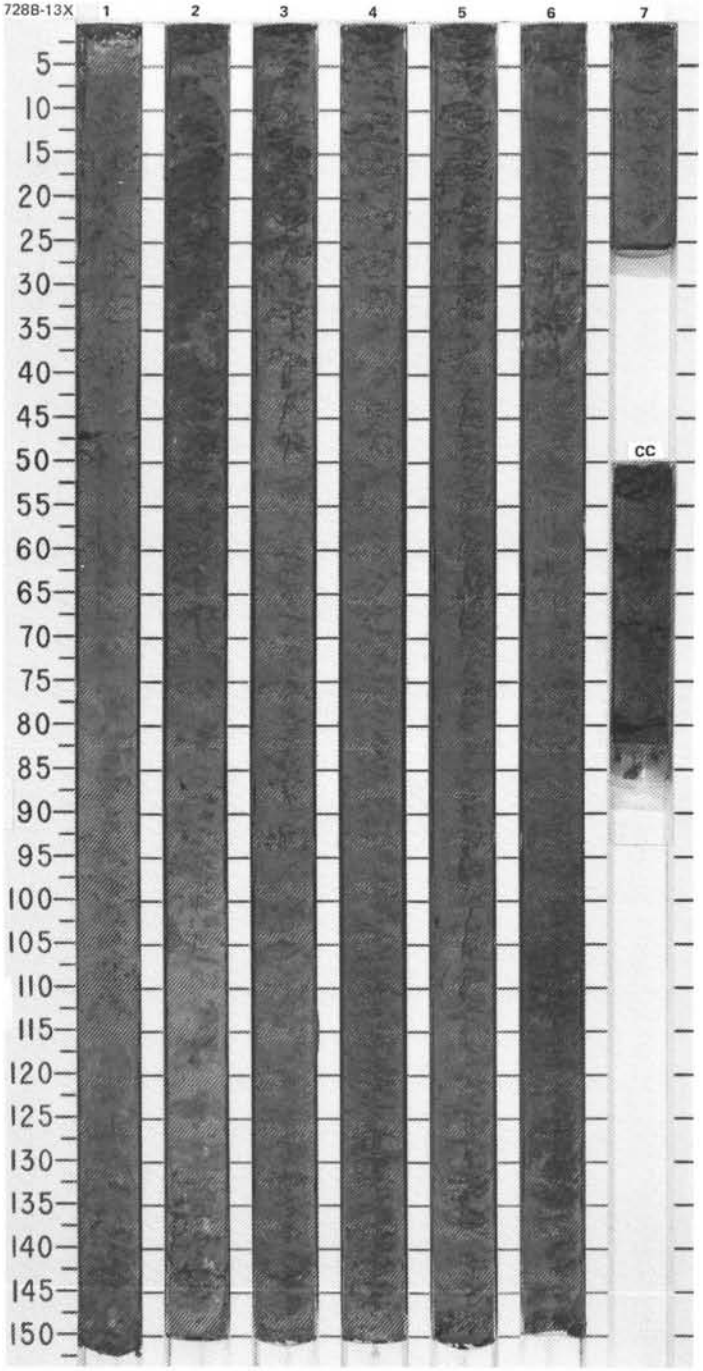
MARLY NANNOFOSSIL OOZE

Section 1, 0-115 cm, is disturbed by *in situ* water sampler. Remainder of core has minor disturbance and some biscuiting.

Major lithology: MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3) and dark olive gray (5Y 3/2). Bioturbation is slight to absent.

SMEAR SLIDE SUMMARY (%):

	4, 10 D
TEXTURE:	
Silt	30
Clay	70
COMPOSITION:	
Access. minerals	5
Clay	30
Foraminifers	Tr
Inorganic calcite	20
Mica	Tr
Nannofossils	40
Organic debris	Tr
Quartz	5



SITE 728 HOLE B CORE 14X CORED INTERVAL 1543.6-1553.3 mbsl; 115.8-125.5 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/G	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				●ϕ=64.3 γ=1.60		1	0.5				*
									1.0				
								2					
								3					
								4					
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

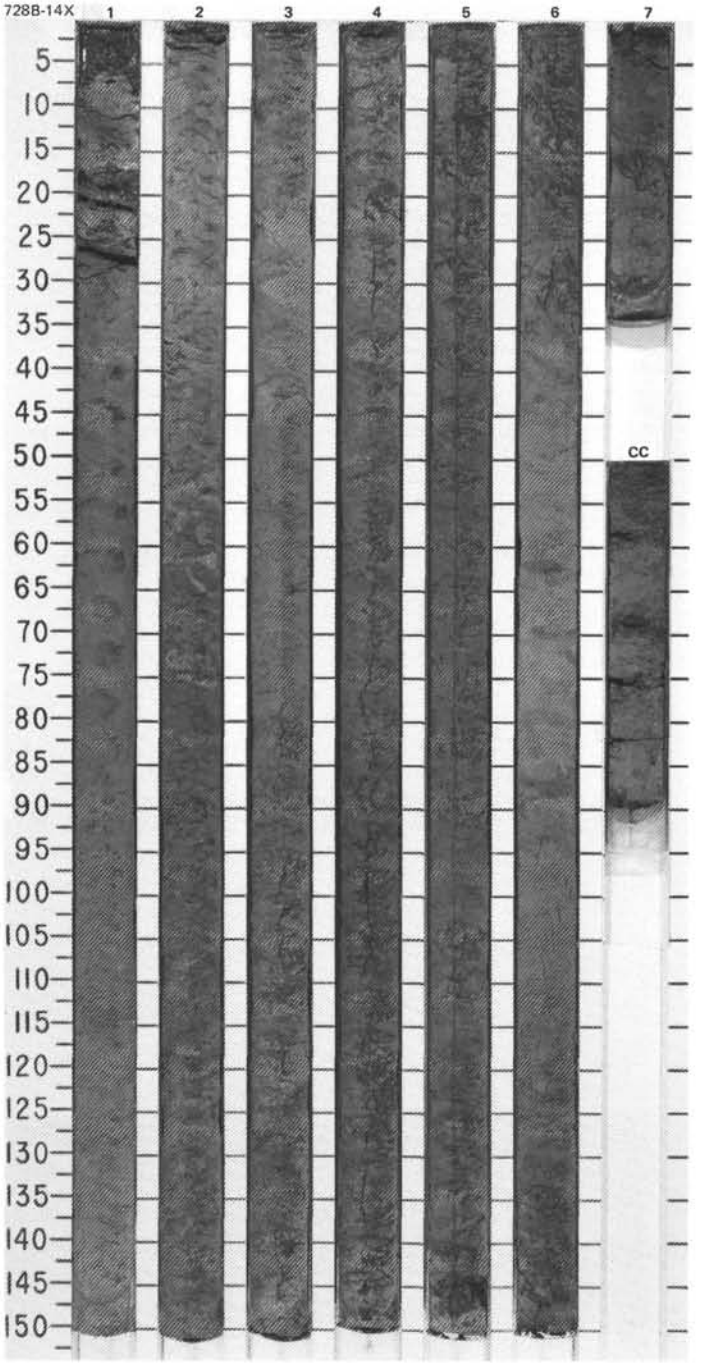
MARLY NANNOFOSSIL OOZE

Section 1, 0-5 cm, is soupy; Section 1, 18-28 cm, has cm-scale cracks. Remainder of core has slight to moderate disturbance, and biscuiting is common.

Major lithology: MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3). Bioturbation slight to absent. Shell fragments present but sparse.

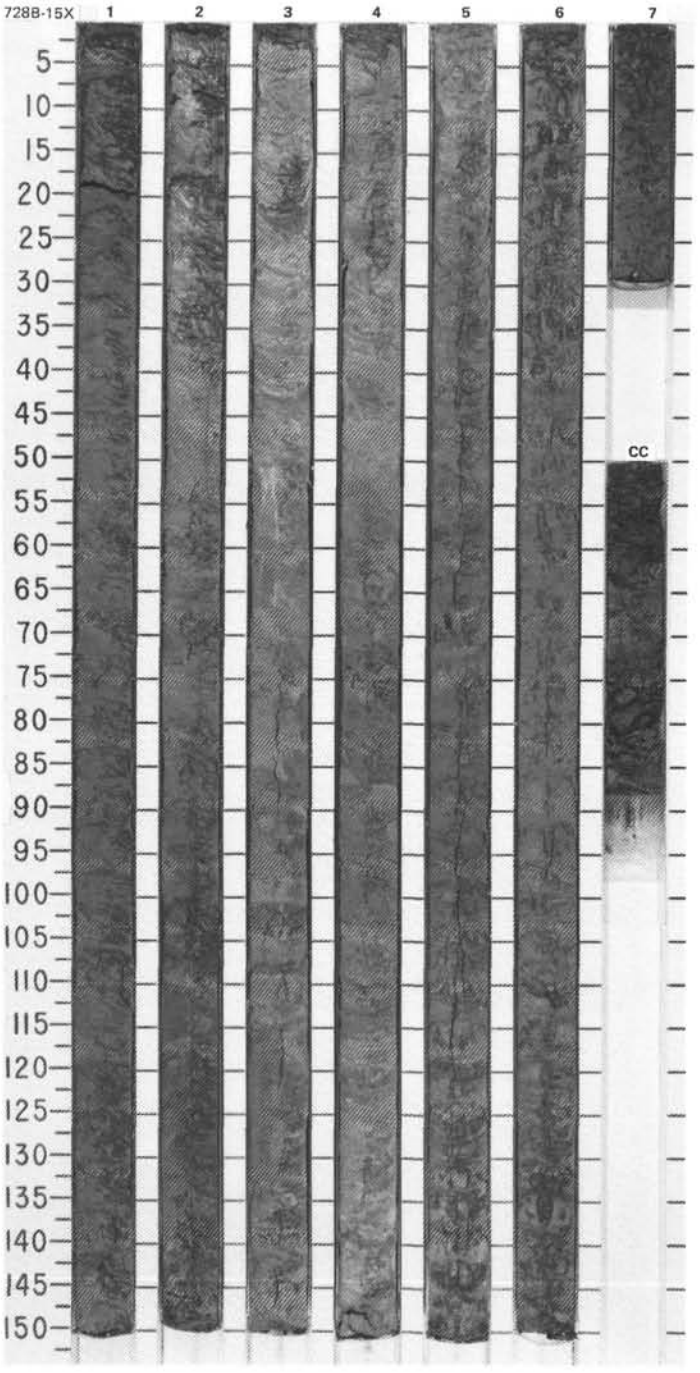
SMEAR SLIDE SUMMARY (%):

	3, 130 D
TEXTURE:	
Silt	30
Clay	70
COMPOSITION:	
Access. minerals	5
Clay	38
Diatoms	2
Dolomite	Tr
Foraminifers	3
Inorganic calcite	10
Nannofossils	35
Quartz	5
Radiolarians	Tr
Silicoflagellates	Tr
Sponge spicules	2



SITE 728 HOLE B CORE 15X CORED INTERVAL 1553.3-1562.9 mbsl; 125.5-135.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
PLIOCENE	*A/G	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*						1, 2, 3, 4, 5, 6, 7, CC	0.5, 1.0				*	MARLY NANNOFOSSIL OOZE Slight to moderate drilling disturbance. Major lithology: MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3). Bioturbation slight to absent. Shark's tooth found at Section 5, 69 cm. SMEAR SLIDE SUMMARY (%): 2, 100 D TEXTURE: Silt 45 Clay 55 COMPOSITION: Access. minerals 5 Clay 24 Diatoms Tr Dolomite 1 Foraminifers 3 Inorganic calcite 15 Mica Tr Nannofossils 35 Organic debris 5 Quartz 10 Sponge spicules 2



SITE 728 HOLE B CORE 16X CORED INTERVAL 1562.9-1572.5 mbsl; 135.1-144.7 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
PLIOCENE	*A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ=64.1 γ=1.62		1	0.5				
								2	1.0				
								3					
								4					
								5					
								6					
								CC					

LITHOLOGIC DESCRIPTION

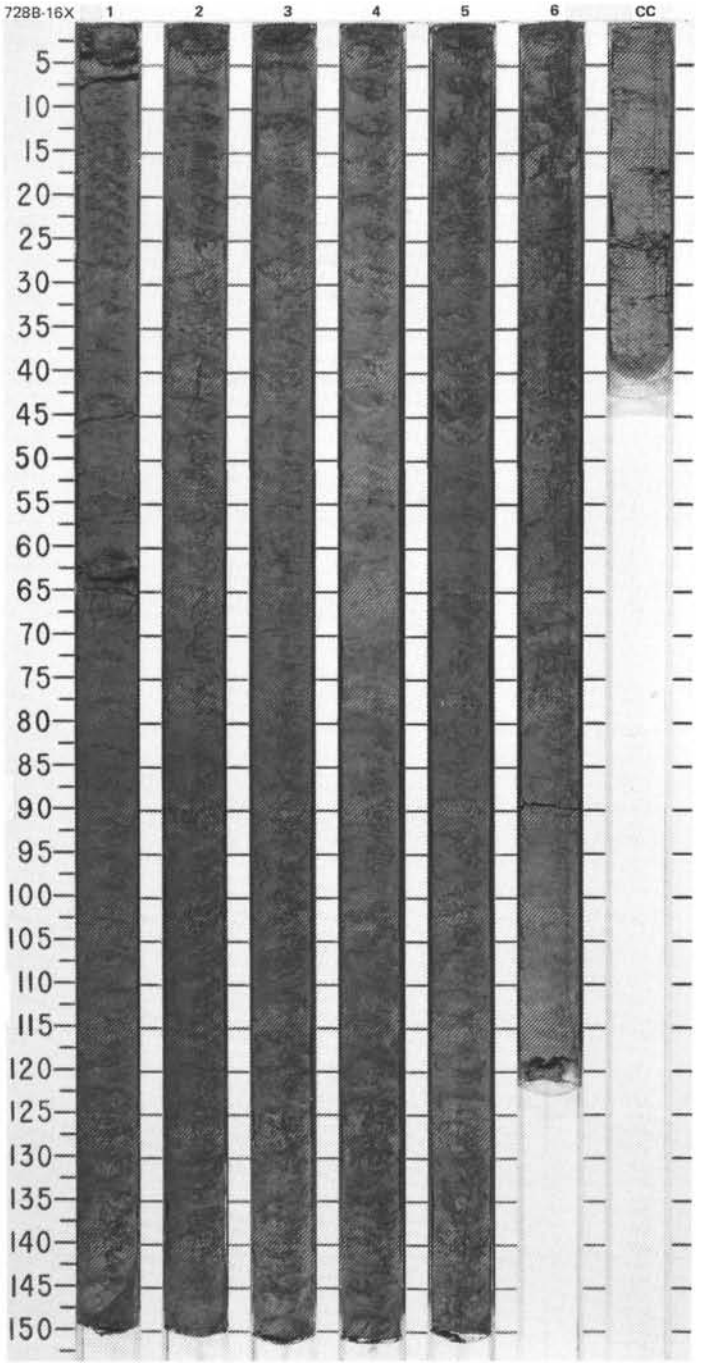
MARLY NANNOFOSSIL OOZE

Section 1 contains cm-scale cracks. Remainder of core has minor disturbance and some biscuiting.

Major lithology: MARLY NANNOFOSSIL OOZE, olive (5Y 4/3) and olive gray (5Y 5/2). Bioturbation is slight to absent.

SMEAR SLIDE SUMMARY (%):

	3, 130 D	6, 139 D
TEXTURE:		
Silt	30	
Clay	70	
COMPOSITION:		
Access. minerals	2	2
Clay	35	20
Diatoms	Tr	—
Dolomite	Tr	—
Foraminifers	2	3
Inorganic calcite	7	10
Mica	Tr	—
Nannofossils	45	60
Organic debris	Tr	—
Pyrite	5	—
Quartz	3	3
Radiolarians	Tr	1
Silicoflagellates	Tr	—
Sponge spicules	1	1



SITE 728 HOLE B CORE 17X CORED INTERVAL 1572.5-1582.2 mbsl; 144.7-154.4 mbsf

TIME-ROCK UNIT	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*			● ϕ=67.3 γ=4.65		1 2 3 4 5 6 CC	0.5 1.0				* *

LITHOLOGIC DESCRIPTION

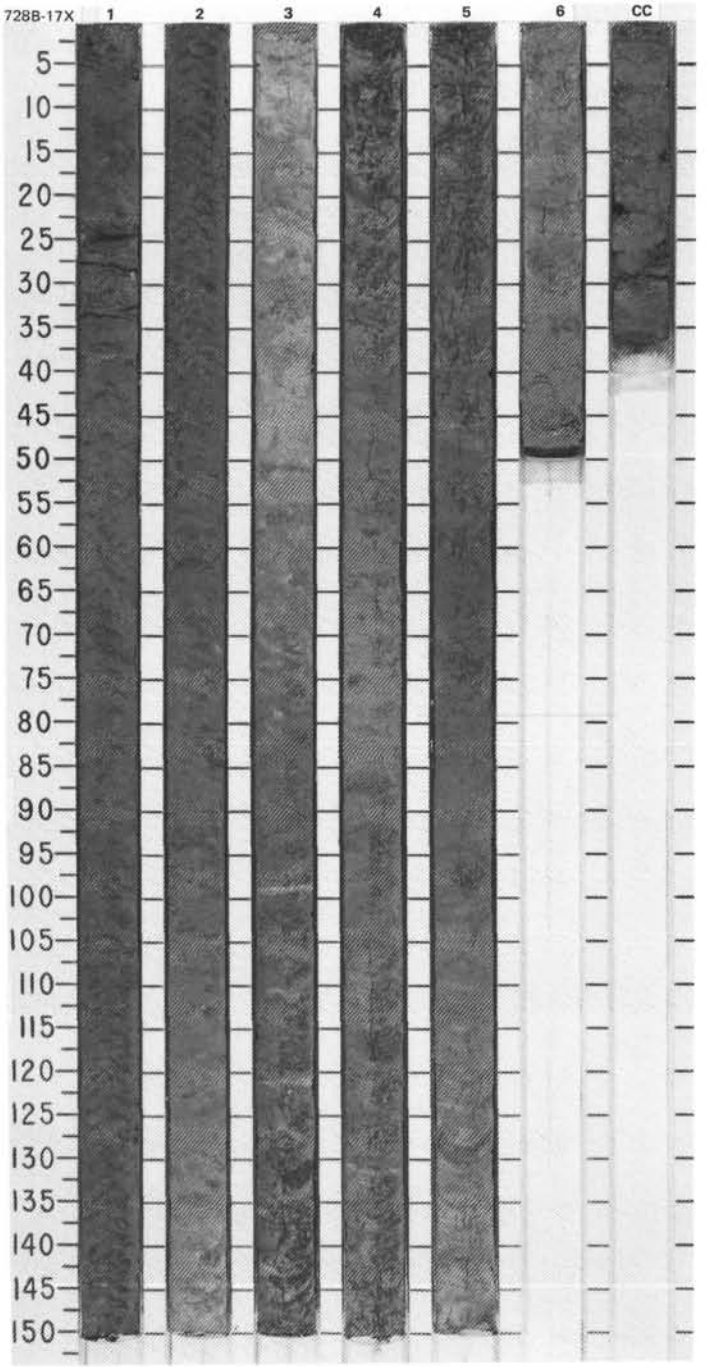
MARLY NANNOFOSSIL OOZE

Moderate disturbance and some biscuiting.

Major lithology: MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3) and olive gray (5Y 5/2). Bioturbation is slight to absent. Rare occurrence of diatoms.

SMEAR SLIDE SUMMARY (%):

	1, 40 D	3, 40 D
TEXTURE:		
Silt	40	40
Clay	60	60
COMPOSITION:		
Access. minerals	3	5
Clay	34	19
Diatoms	5	2
Dolomite	1	1
Foraminifers	4	2
Inorganic calcite	10	15
Mica	Tr	—
Nannofossils	35	50
Pyrite	2	—
Quartz	3	3
Radiolarians	Tr	Tr
Silicoflagellates	Tr	Tr
Sponge spicules	3	3



SITE 728 HOLE B CORE 18X CORED INTERVAL 1582.2-1591.9 mbsl; 154.4-164.1 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	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ=63.9 γ=1.62		1	0.5 1.0				*
								2					
								3					
								4					
								5					*
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

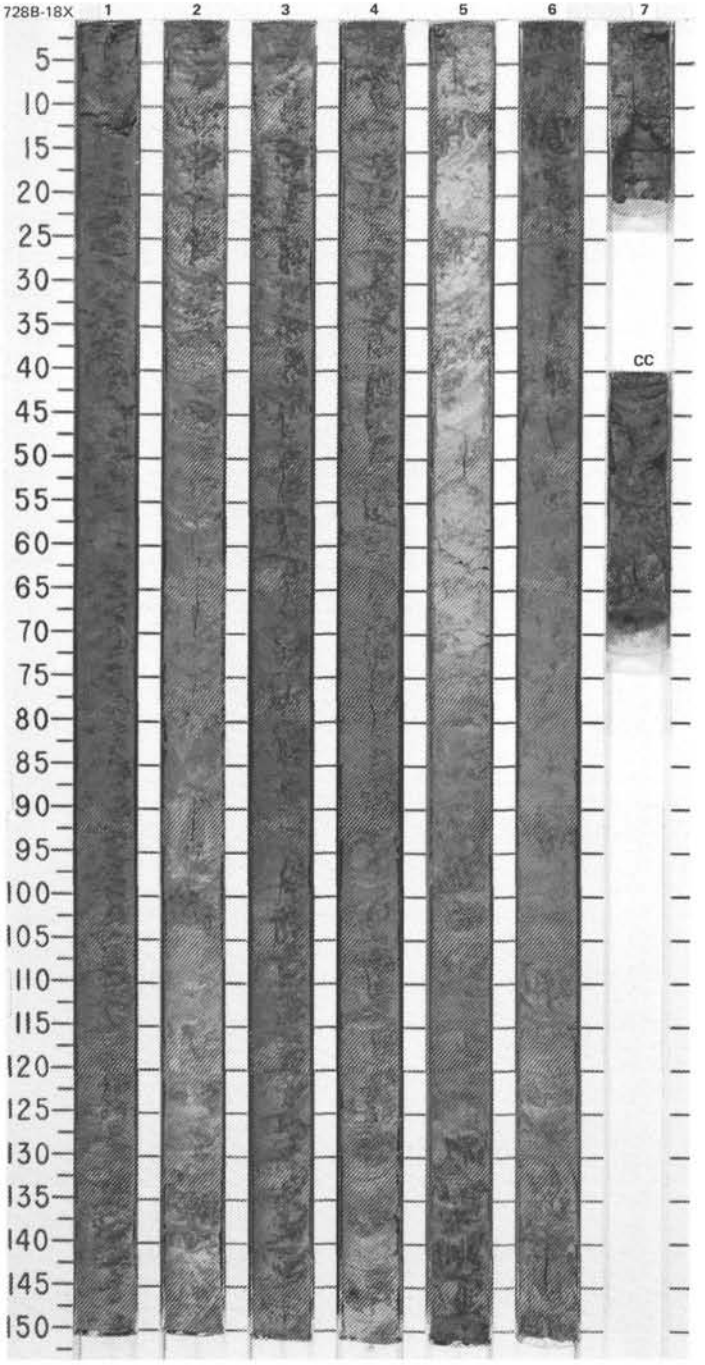
MARLY NANNOFOSSIL OOZE

Section 1, 0-100 cm, disturbed by *in situ* water sampler. Remainder of core has minor disturbance and some biscuiting.

Major lithology: MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3) and olive gray (5Y 5/2). Bioturbation is slight to absent.

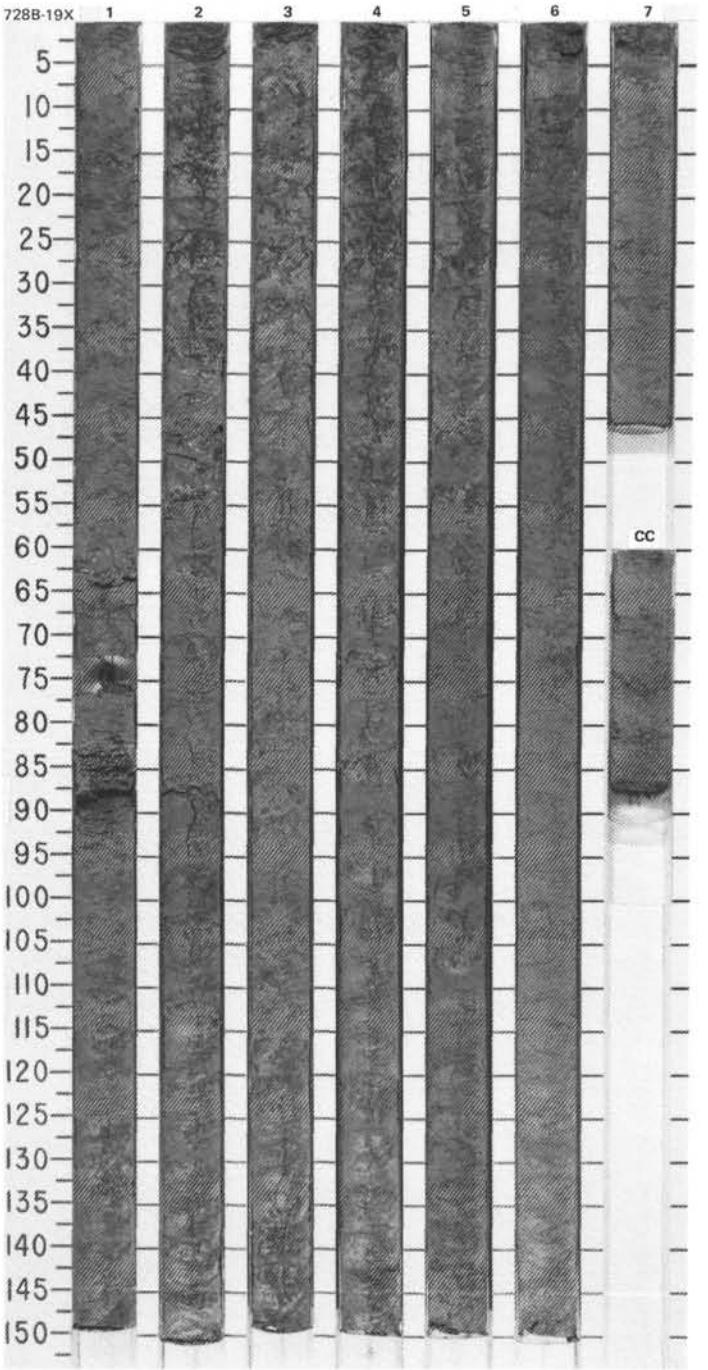
SMEAR SLIDE SUMMARY (%):

	1, 20 D	5, 50 D
TEXTURE:		
Silt	30	20
Clay	70	80
COMPOSITION:		
Access. minerals	5	5
Clay	33	18
Diatoms	Tr	Tr
Dolomite	Tr	2
Foraminifers	5	2
Inorganic calcite	15	10
Mica	Tr	Tr
Nannofossils	40	60
Quartz	Tr	3
Radiolarians	Tr	—
Sponge spicules	2	Tr



SITE 728 HOLE B CORE 19X CORED INTERVAL 1591.9-1601.6 mbsl; 164.1-173.8 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	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ=62.4 γ=1.69		1 2 3 4 5 6 7 CC	0.5 1.0 VOID				*	MARLY NANNOFOSSIL OOZE Void at Section 1, 70-75 cm. Remainder of core has minor disturbance and some biscuiting. Major lithology: MARLY NANNOFOSSIL OOZE, olive (5Y 4/4, 5/3). Bioturbation *is slight to absent. Some layers indurated.* SMEAR SLIDE SUMMARY (%): 1, 50 D TEXTURE: Silt 25 Clay 75 COMPOSITION: Access. minerals 5 Clay 17 Diatoms 1 Foraminifers 5 Inorganic calcite 10 Nannofossils 60 Quartz Tr Radiolarians Tr Silicoflagellates Tr Sponge spicules 2



SITE 728 HOLE B CORE 20X CORED INTERVAL 1601.6-1611.3 mbsl; 173.8-183.5 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	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ-61.8 γ-1.63		1	0.5				
									1.0				
								2					
								3					*
								4					
								5					
								6					
								CC					

LITHOLOGIC DESCRIPTION

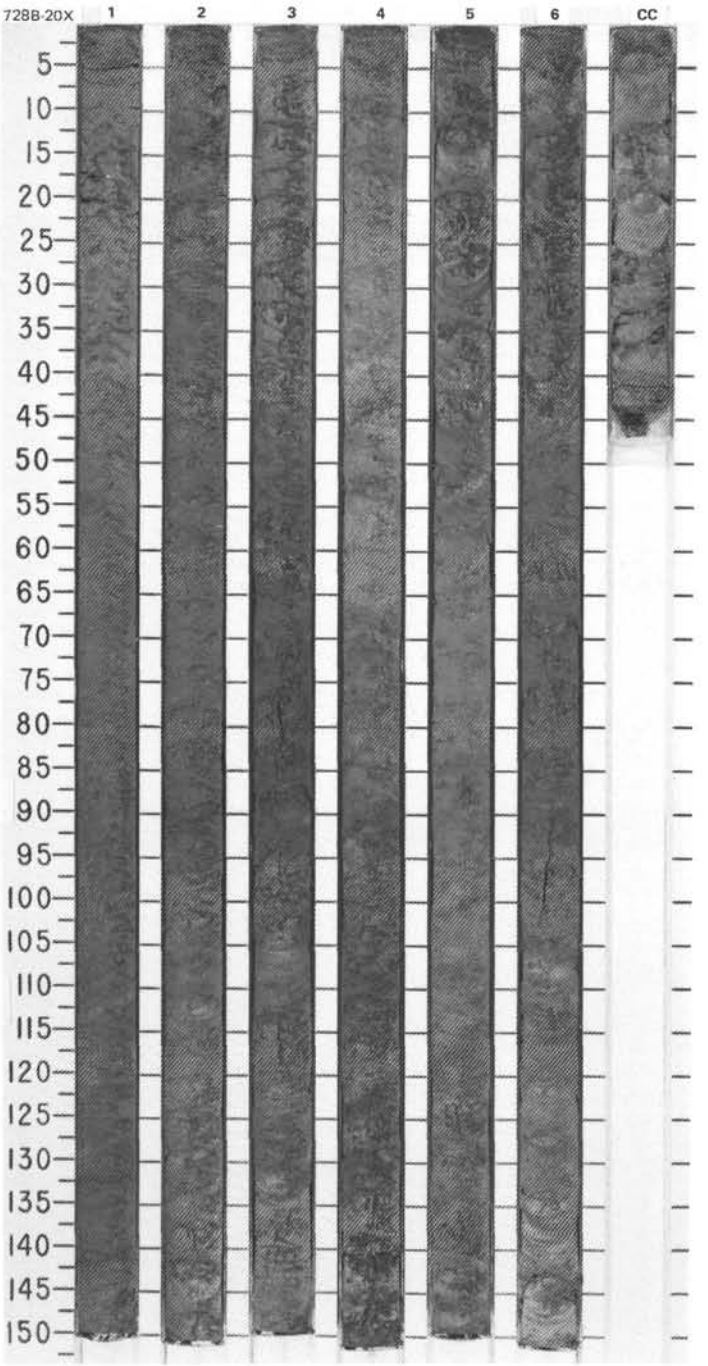
MARLY NANNOFOSSIL OOZE

Slightly disturbed, with some biscuiting.

Major lithology: MARLY NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3). Bioturbation is slight to absent. Some sections indurated.

SMEAR SLIDE SUMMARY (%):

	3, 30 D
TEXTURE:	
Silt	35
Clay	65
COMPOSITION:	
Access. minerals	5
Clay	17
Diatoms	Tr
Dolomite	Tr
Feldspar	Tr
Foraminifers	5
Inorganic calcite	15
Mica	Tr
Nannofossils	50
Quartz	5
Radiolarians	Tr
Silicoflagellates	Tr
Sponge spicules	3



SITE 728 HOLE B CORE 21X CORED INTERVAL 1611.3-1621.0 mbsl; 183.5-193.2 mbsf

TIME-ROCK UNIT: PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *A/M; NANNOFOSSILS NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ●ϕ-59.8 γ-1.65

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

MARLY NANNOFOSSIL OOZE and DIATOM-BEARING NANNOFOSSIL OOZE

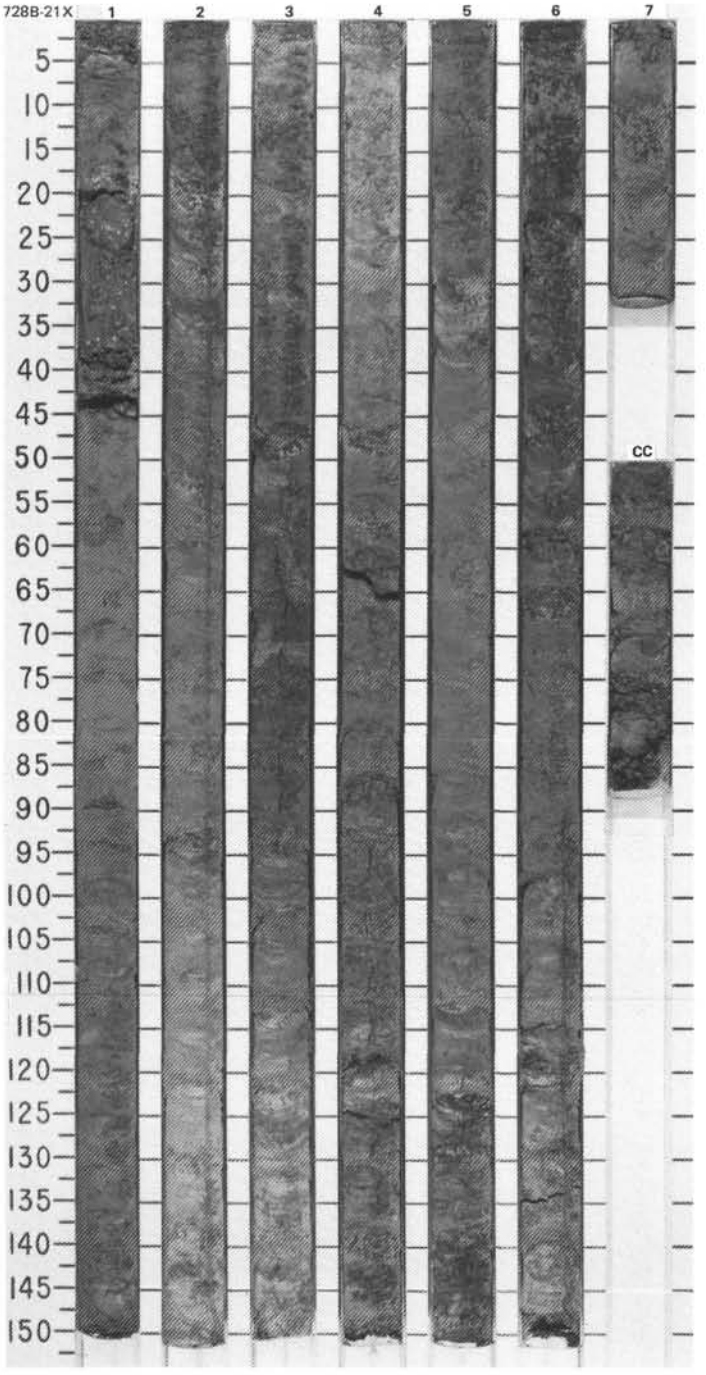
Section 1, 20-45 cm, is soupy. Remainder of core has minor disturbance and biscuiting.

Major lithologies: MARLY NANNOFOSSIL OOZE and DIATOM-BEARING NANNOFOSSIL OOZE, olive (5Y 4/3, 5/3). Bioturbation slight to absent.

Minor lithology: NANNOFOSSIL CLAYEY SILT, dark olive gray (5Y 3/2). Slight to moderate bioturbation.

SMEAR SLIDE SUMMARY (%):

	2, 75 D	3, 75 M
TEXTURE:		
Sand	—	2
Silt	30	53
Clay	70	45
COMPOSITION:		
Access. minerals	5	7
Clay	13	28
Diatoms	10	—
Dolomite	Tr	Tr
Feldspar	—	2
Foraminifers	3	3
Inorganic calcite	5	20
Mica	—	Tr
Nannofossils	60	20
Pyrite	—	3
Quartz	2	15
Radiolarians	1	—
Silicoflagellates	Tr	—
Sponge spicule	1	2



SITE 728 HOLE B CORE 22X CORED INTERVAL 1621.0-1630.6 mbsl; 193.2-202.8 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
PLIOCENE	*A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ=41.8 γ=1.64		1	0.5				
								1	1.0				
								2					
								3					
								4					*
								5					
								6					
								7					
								CC					

LITHOLOGIC DESCRIPTION

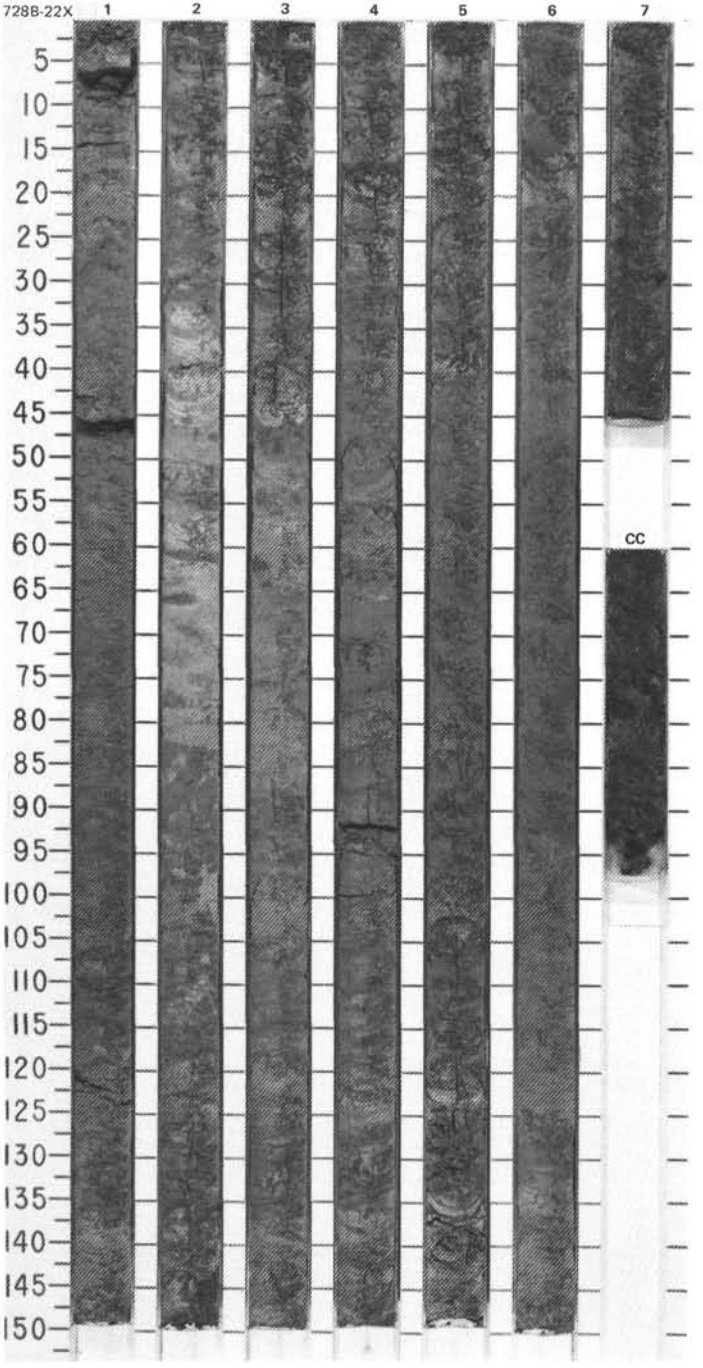
MARLY NANNOFOSSIL CHALK

Section 1, 0-7 cm, is disturbed. Remainder of core is slightly to moderately disturbed.

Major lithology: MARLY NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3) and light olive gray (5Y 6/2). Bioturbation slight to absent; *Zoophycos* burrows present.

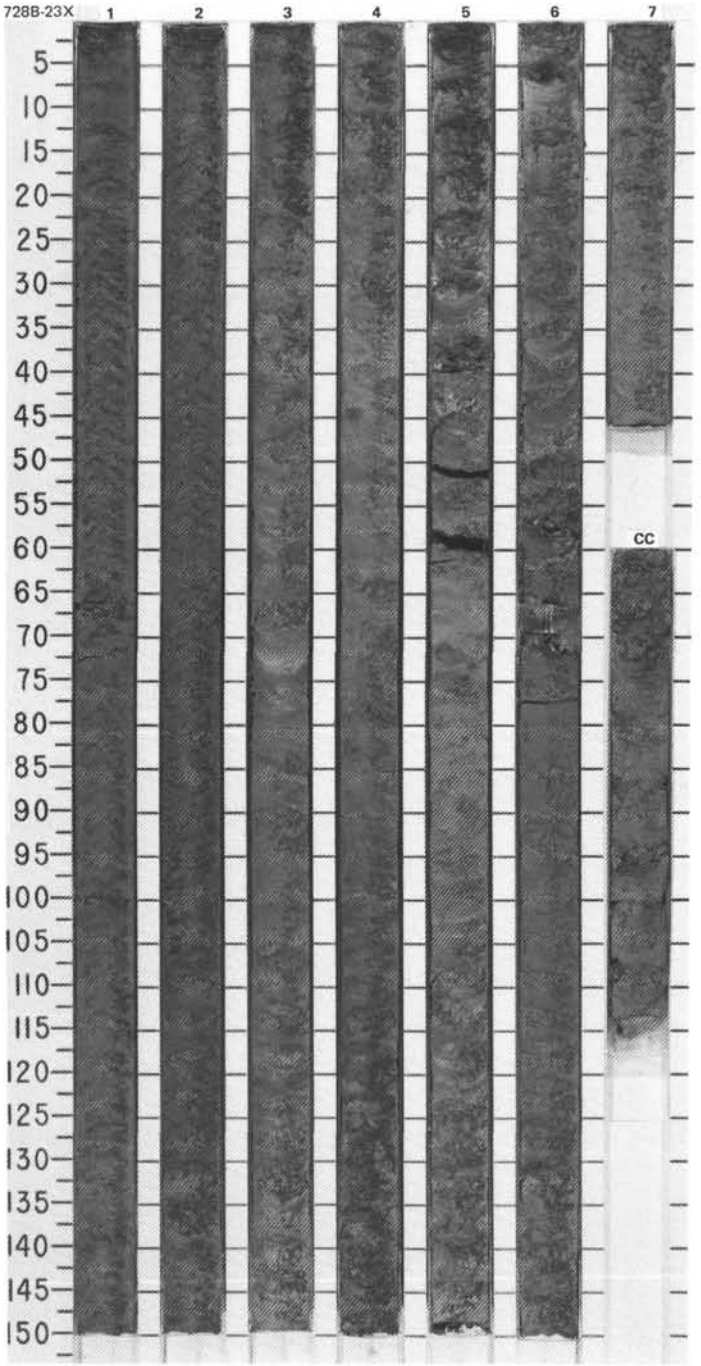
SMEAR SLIDE SUMMARY (%):

	4, 70 D
TEXTURE:	
Silt	15
Clay	85
COMPOSITION:	
Clay	25
Diatoms	3
Feldspar	Tr
Foraminifers	5
Inorganic calcite	8
Nannofossils	55
Quartz	2
Sponge spicules	2



SITE 728 HOLE B CORE 23X CORED INTERVAL 1630.6-1640.3 mbsl; 202.8-212.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
PLIOCENE	*A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ-62.6 γd .84		1 2 3 4 5 6 7 CC	0.5 1.0 VOID 210.95				*	MARLY NANNOFOSSIL CHALK Slightly to moderately disturbed. Major lithology: MARLY NANNOFOSSIL CHALK, olive (5Y 4/3). Bioturbation slight to absent. SMEAR SLIDE SUMMARY (%): 2, 70 D TEXTURE: Silt 5 Clay 95 COMPOSITION: Clay 30 Diatoms Tr Foraminifers 3 Inorganic calcite 5 Nannofossils 60 Quartz 2 Radiolarians Tr



SITE 728 HOLE B CORE 24X CORED INTERVAL 1640.3-1650.5 mbsl; 212.5-222.2 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
PLIOCENE	*A/M	NN12 *Amaurolithus tricorniculatus* - NN15 *Reticulofenestra pseudoumbilica*				● ϕ=52.4 741.67		1 2 3 4 5 6 7 CC	0.5 1.0	VOID 212.5		6	*

LITHOLOGIC DESCRIPTION

MARLY NANNOFOSSIL CHALK

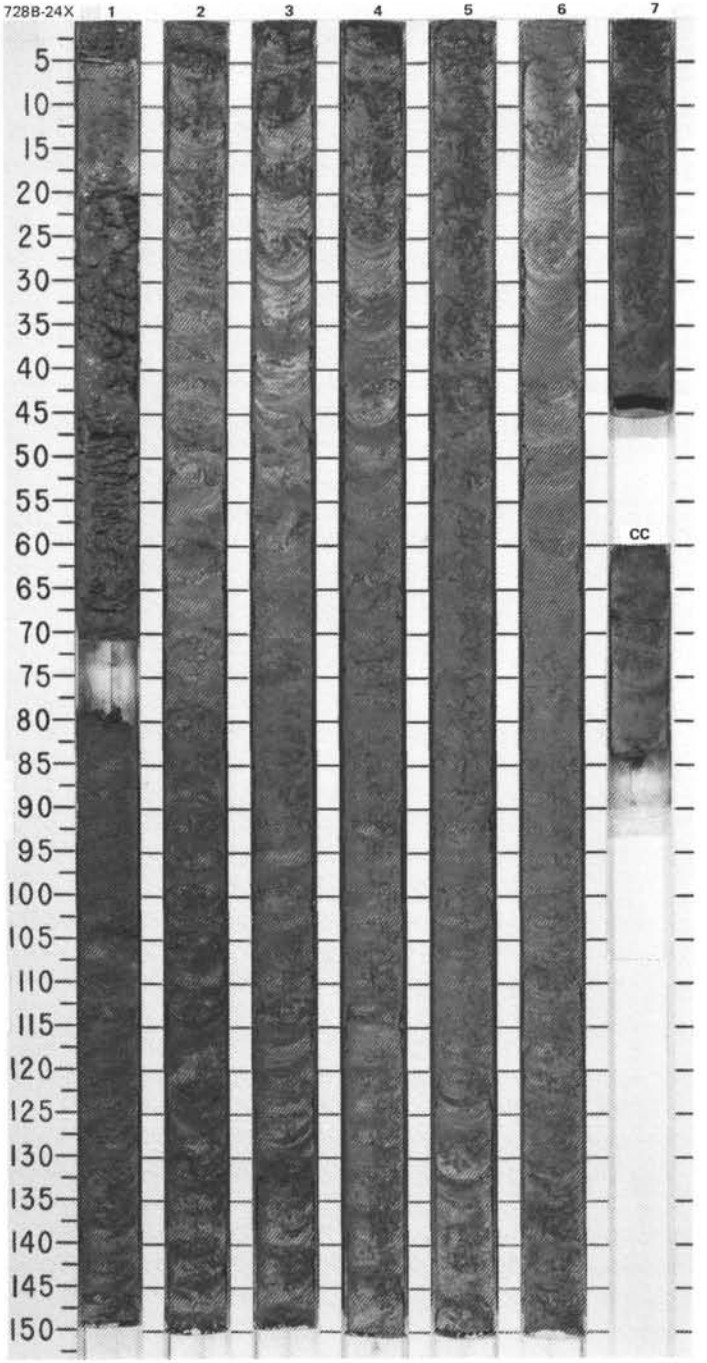
Section 1, 0-70 cm, is heavily disturbed. Void in Section 1, 70-80 cm. Remainder of core is slightly to moderately disturbed.

Major lithology: MARLY NANNOFOSSIL CHALK, olive (5Y 4/3) and olive gray (5Y 6/2). Bioturbation slight to absent.

Minor lithology: Nannofossil silty clay, dark olive gray (5Y 3/2), in Section 1, 56-150 cm.

SMEAR SLIDE SUMMARY (%):

	4, 65 D
TEXTURE:	
Silt	25
Clay	75
COMPOSITION:	
Diatoms	Tr
Foraminifers	5
Inorganic calcite	10
Mica	30
Nannofossils	48
Quartz	5
Sponge spicules	2



SITE 728 HOLE B CORE 25X CORED INTERVAL 1650.0-1659.6 mbsl; 222.2-231.8 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	*A/M	NN11 *Discoaster quinqueramus*				●ϕ=59.1 γ=1.73		1, 2, 3, 4, 5, 6, 7, CC	0.5, 1.0				*

LITHOLOGIC DESCRIPTION

MARLY CALCITIC NANNOFOSSIL CHALK

Section 1, 0-75 cm, is very disturbed. Void at Section 1, 55-57 cm. Remainder of core is slightly to moderately disturbed and fractured.

Major lithology: MARLY CALCITIC NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3) and olive gray (5Y 5/2). Bioturbation slight to moderate.

SMEAR SLIDE SUMMARY (%):

	2, 142 D
TEXTURE:	
Silt	35
Clay	65
COMPOSITION:	
Clay	29
Foraminifers	3
Inorganic calcite	20
Nannofossils	35
Quartz	10
Sponge spicules	1

SITE 728 HOLE B CORE 26X CORED INTERVAL 1659.6-1669.3 mbsl; 231.8-241.5 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
MIOCENE	*A/M	NN11 *Discoaster quinqueramus*				● ϕ-61.1 γ-1.66		1 2 3 4 5 CC	0.5 1.0				*

LITHOLOGIC DESCRIPTION

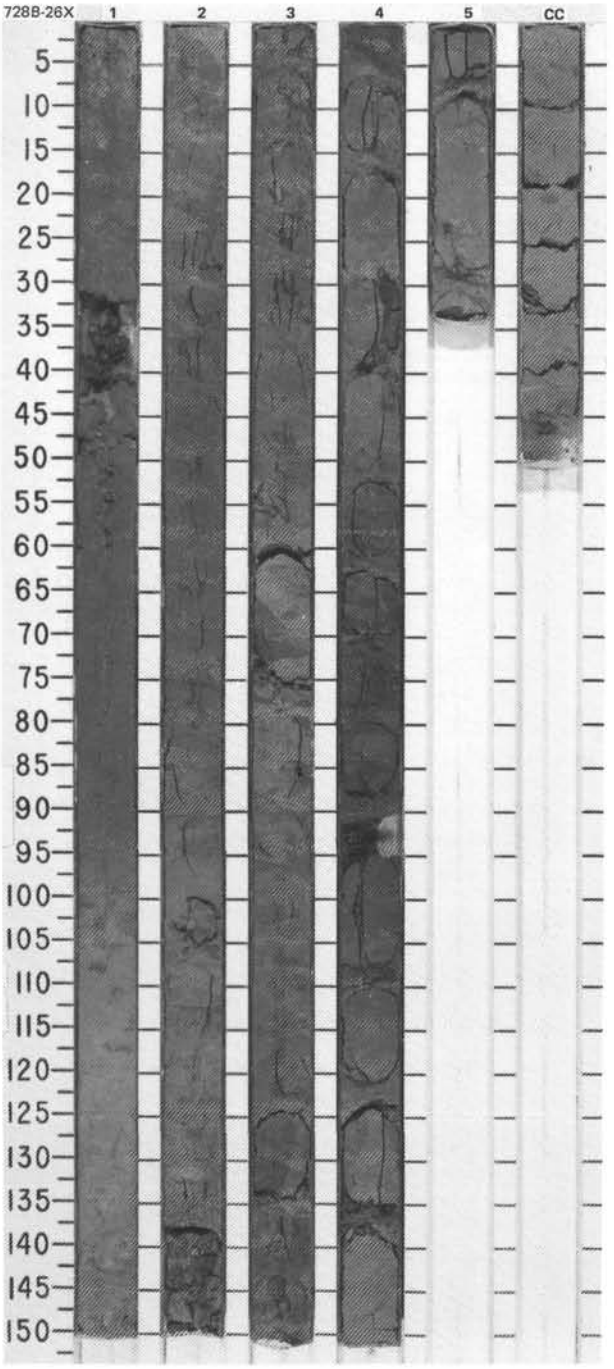
MARLY NANNOFOSSIL CHALK

Section 1, 0-110 cm, is disturbed by *in situ* water sampler. Remainder of core is moderately disturbed and fractured.

Major lithology: MARLY NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3) and olive gray (5Y 5/2). Bioturbation slight to moderate.

SMEAR SLIDE SUMMARY (%):

	3, 80 D
TEXTURE:	
Silt	35
Clay	65
COMPOSITION:	
Access. minerals	5
Clay	12
Diatoms	1
Dolomite	2
Feldspar	Tr
Foraminifers	7
Inorganic calcite	15
Nannofossils	50
Quartz	6
Radiolarians	Tr
Sponge spicules	2



SITE 728 HOLE B CORE 27X CORED INTERVAL 1669.3-1697.0 mbsl; 241.5-251.2 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *A/M; NANNOFOSSILS NN11 *Discoaster quinqueramus*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ-58.1 74.69

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

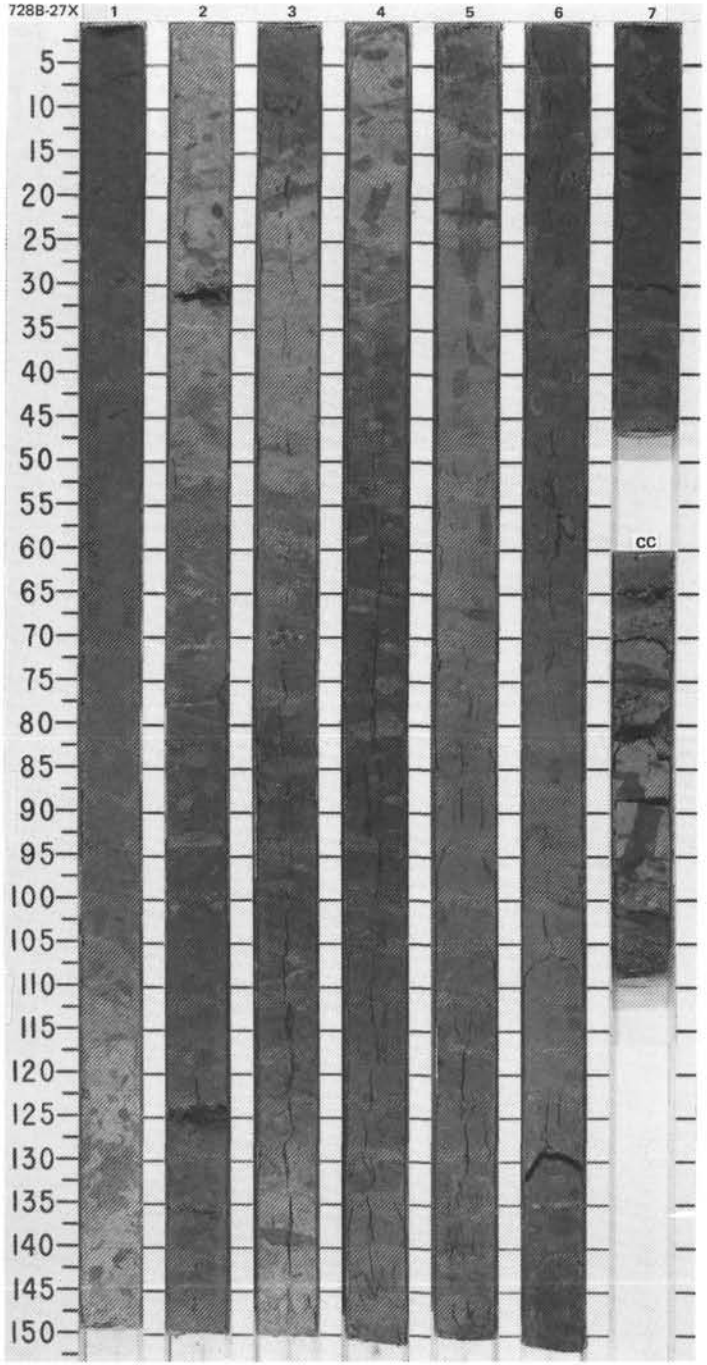
MARLY NANNOFOSSIL CHALK

Section 2, 123-124 cm, is one-half filled. Remainder of core is moderately disturbed.

Major lithology: MARLY NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3), light olive gray (5Y 6/2), olive gray (5Y 5/2), and dark olive gray (5Y 3/2). Alternating light and dark layers approximately 1 m thick. Bioturbation slight to moderate.

SMEAR SLIDE SUMMARY (%):

	3, 40 D	4, 90 D
TEXTURE:		
Sand	10	20
Silt	20	20
Clay	70	60
COMPOSITION:		
Access. minerals	Tr	2
Clay	30	20
Diatoms	—	Tr
Dolomite	Tr	Tr
Foraminifers	8	8
Inorganic calcite	10	20
Nannofossils	45	40
Organic debris	2	5
Quartz	5	5
Radiolarians	—	Tr
Sponge spicules	Tr	Tr



SITE 728 HOLE B CORE 28X CORED INTERVAL 1679.0-1688.6 mbsl; 2512.2-260.8 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: * A/M; NANNOFOSSILS: NN11 *Discoaster quinqueramus*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● Φ -58.9 γ -1.72

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.: *

SED. STRUCTURES: *

SAMPLES: *

LITHOLOGIC DESCRIPTION

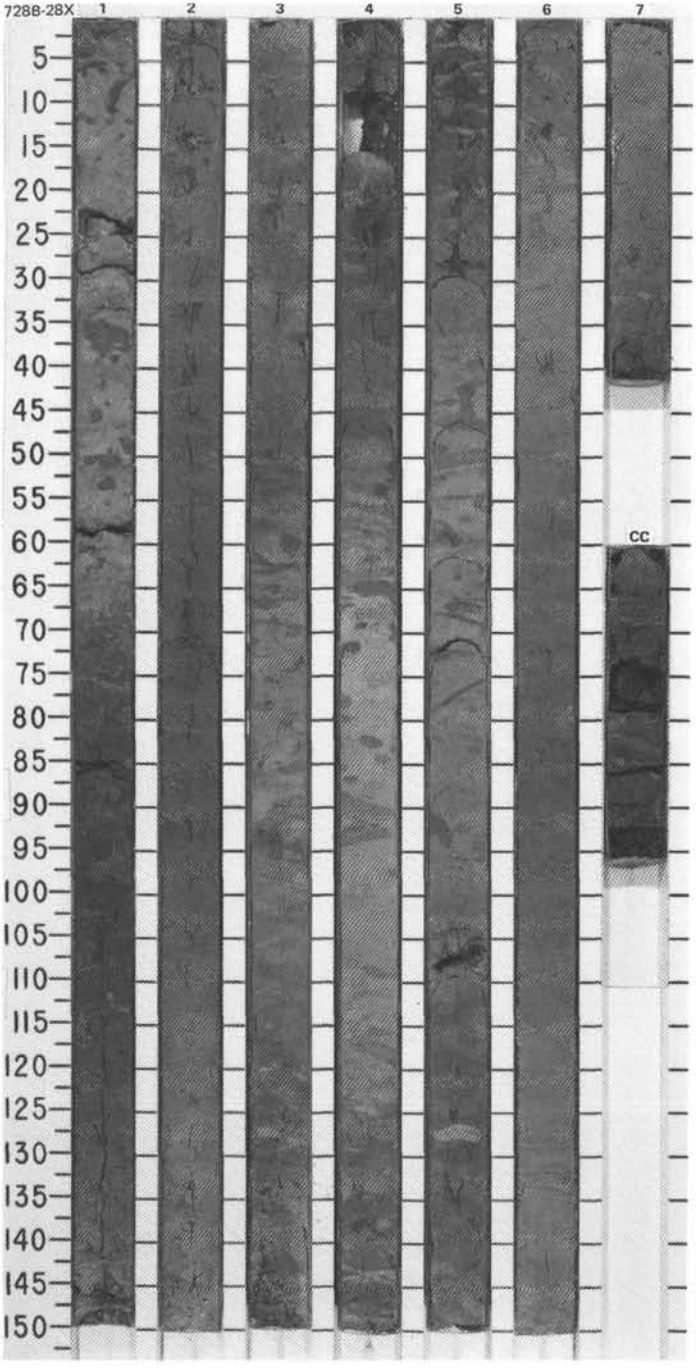
MARLY NANNOFOSSIL CHALK

Slight to moderate fracturing and drilling disturbance.

Major lithology: MARLY NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3), olive gray (5Y 5/2, 4/2), and pale olive (5Y 6/3). Dark layers have more terrigenous silty clay than light layers. Bioturbation slight to moderate; *Zoophycos* burrows common.

SMEAR SLIDE SUMMARY (%):

	1, 43 D	1, 133 D
TEXTURE:		
Sand	—	5
Silt	10	35
Clay	90	60
COMPOSITION:		
Access. minerals	Tr	2
Clay	20	20
Dolomite	Tr	1
Feldspar	—	2
Foraminifers	2	—
Inorganic calcite	4	20
Nannofossils	70	40
Quartz	1	15
Radiolarians	1	—
Sponge spicules	2	Tr



SITE 728 HOLE B CORE 29X CORED INTERVAL 1688.6-1698.3 mbsl; 260.8-270.5 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
MIOCENE	*A/M	NN11 *Discoaster quinqueramus*				● ϕ-53.3 γ-4.80		1, 2, 3, 4, 5, 6, 7, CC	0.5, 1.0				*

LITHOLOGIC DESCRIPTION

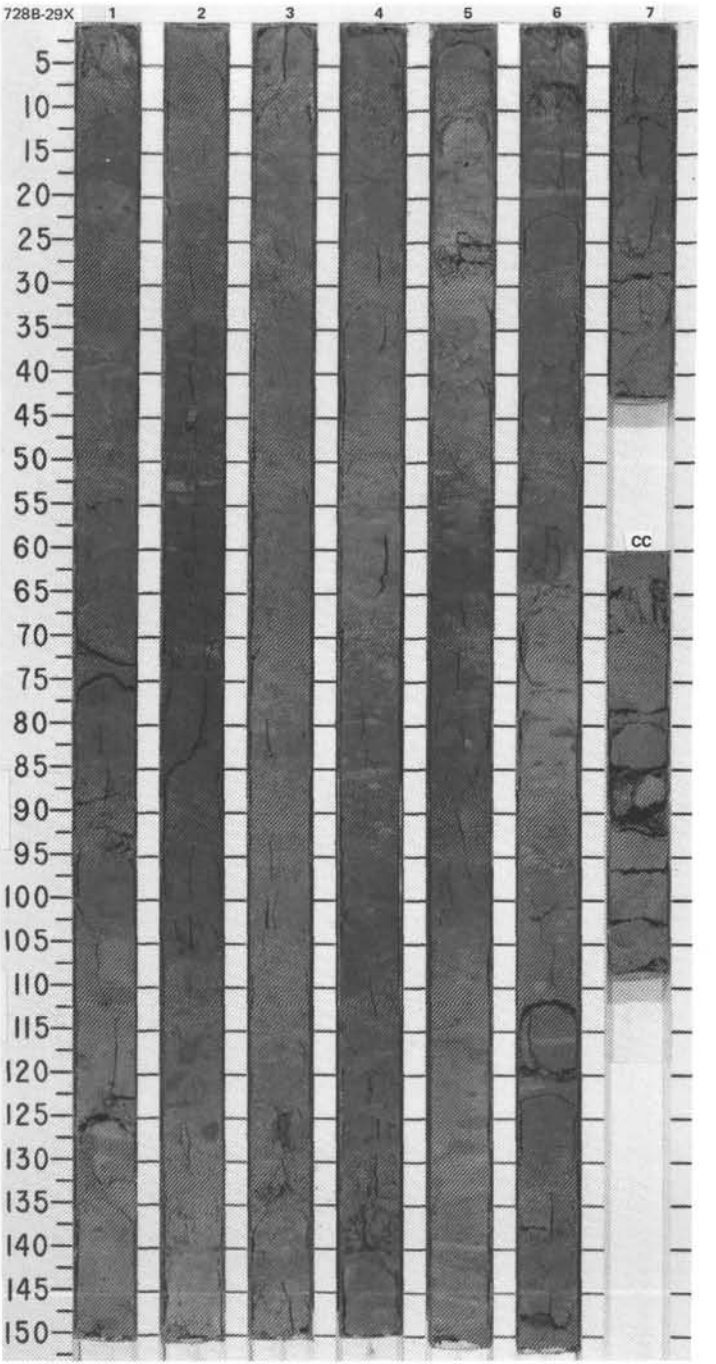
CALCITIC MARLY NANNOFOSSIL CHALK

Slightly to moderately disturbed and fractured.

Major lithology: CALCITIC MARLY NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3) and pale olive (5Y 6/3). Bioturbation slight to moderate; *Zoophycos* and *Chondrites* burrows common.

SMEAR SLIDE SUMMARY (%):

	1, 116 D	2, 45 D
TEXTURE:		
Sand	15	20
Silt	20	30
Clay	65	50
COMPOSITION:		
Access. minerals	1	2
Clay	20	25
Dolomite	1	Tr
Feldspar	—	1
Foraminifers	—	Tr
Inorganic calcite	20	20
Mica	—	2
Nannofossils	46	35
Phosphate	Tr	Tr
Quartz	10	15
Radiolarians	Tr	Tr
Silicoflagellates	Tr	Tr
Sponge spicules	2	—



SITE 728 HOLE B CORE 30X CORED INTERVAL 1698.3-1708.0 mbsl; 270.5-280.2 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *A/M; NANNOFOSSILS NN11 *Discoaster quinqueramus*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ 60.8 γ 1.82

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *, *

LITHOLOGIC DESCRIPTION

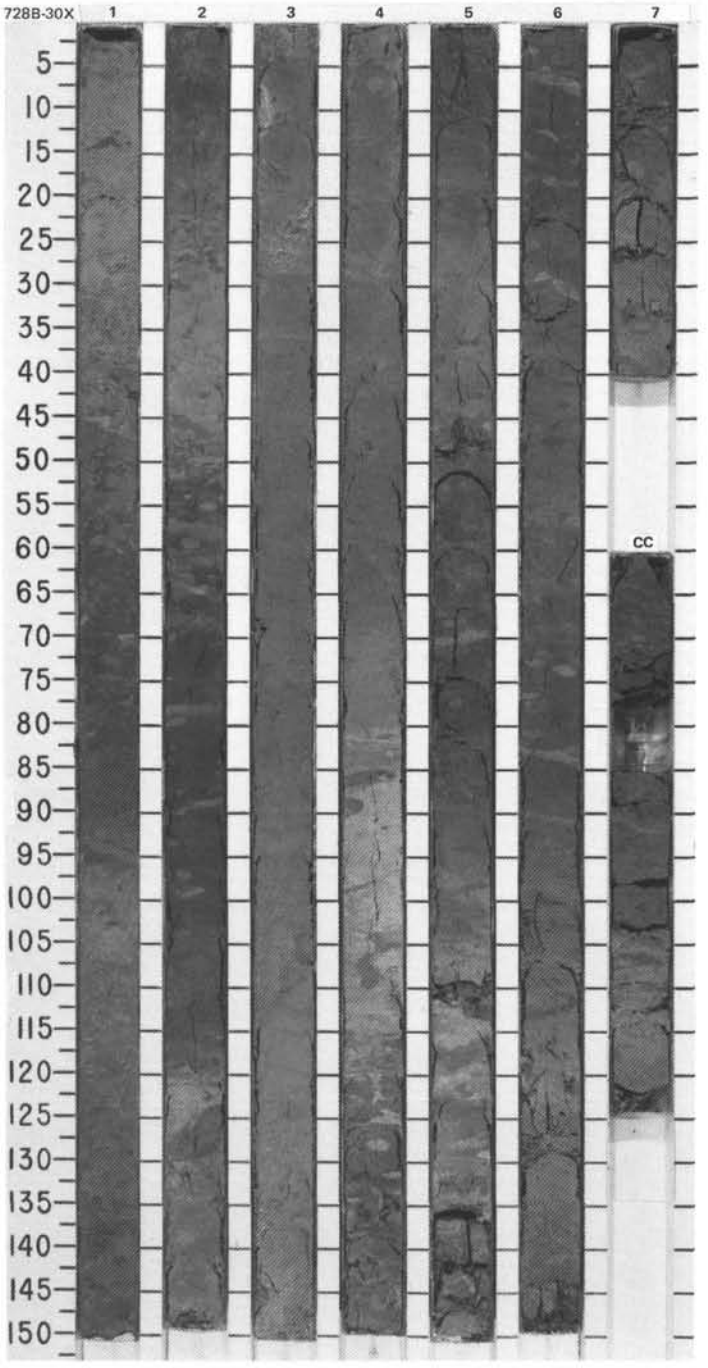
CALCITIC MARLY NANNOFOSSIL CHALK and SILICA-BEARING NANNOFOSSIL CHALK

Slightly to moderately fractured. Void at 17-24 cm in CC.

Major lithologies:
a. CALCITIC MARLY NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3) and pale olive (5Y 6/3). Bioturbation slight to moderate.
b. SILICA-BEARING NANNOFOSSIL CHALK, olive gray (5Y 5/2) and light olive gray (5Y 6/2). Moderately to heavily bioturbated; *Zoophycos* burrows present.

SMEAR SLIDE SUMMARY (%):

	2, 94 D	4, 90 D
TEXTURE:		
Sand	15	5
Silt	35	15
Clay	50	80
COMPOSITION:		
Access. minerals	2	1
Clay	20	20
Diatoms	1	2
Dolomite	1	1
Feldspar	3	—
Foraminifers	Tr	2
Inorganic calcite	10	9
Mica	1	—
Nannofossils	30	60
Quartz	30	2
Radiolarians	Tr	Tr
Silicoflagellates	Tr	—
Sponge spicules	2	3



SITE 728 HOLE B CORE 31X CORED INTERVAL 1708.0-1717.6 mbsl; 280.2-289.8 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIOCENE	*A/M	NN11 *Discoaster quinqueramus*				●ϕ-59.5 γ-1.72		1 2 3 4 5 6 7 CC	0.5 1.0				* *

LITHOLOGIC DESCRIPTION

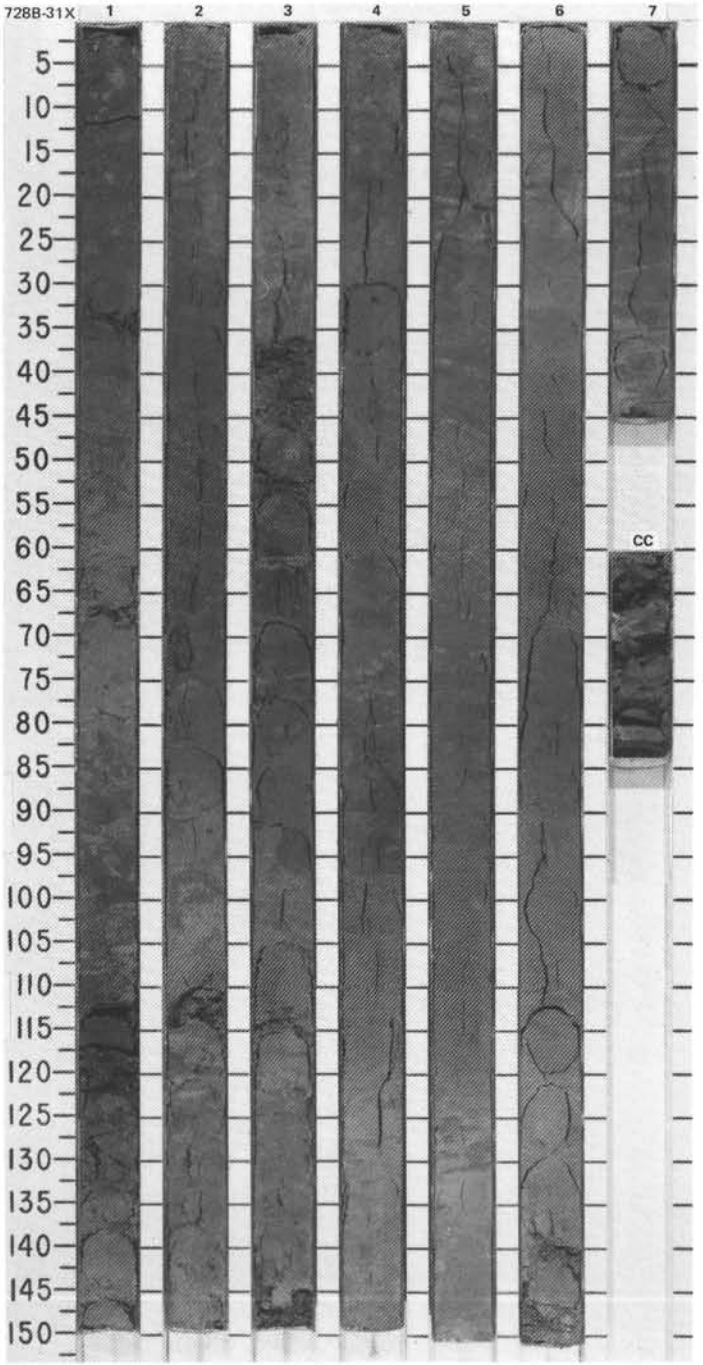
CALCITIC MARLY NANNOFOSSIL CHALK and SILICA-BEARING NANNOFOSSIL CHALK

Moderately to heavily fractured.

Major lithologies:
a. CALCITIC MARLY NANNOFOSSIL CHALK, olive (5Y 4/3). Bioturbation slight to moderate.
b. SILICA-BEARING NANNOFOSSIL CHALK, olive gray (5Y 5/2) and olive (5Y 5/3). Moderately to heavily bioturbated; *Zoophycos* burrows present.

SMEAR SLIDE SUMMARY (%):

	1, 76 D	4, 32 D
TEXTURE:		
Sand	5	15
Silt	15	30
Clay	80	55
COMPOSITION:		
Access. minerals	2	2
Clay	20	20
Diatoms	—	Tr
Feldspar	—	3
Foraminifers	1	1
Volcanic glass	—	Tr
Inorganic calcite	7	17
Mica	Tr	—
Nannofossils	55	35
Quartz	10	20
Radiolarians	Tr	Tr
Silicoflagellates	1	Tr
Sponge spicules	3	2



SITE 728 HOLE B CORE 32X CORED INTERVAL 1717.6-1727.3 mbsl; 289.8-299.5 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
MIOCENE	*A/M	NN11 *Discoaster quinqueramus*				● ϕ-56.1 γ-1.78		1 2 3 4 5 6 7 CC	0.5 1.0				* *

LITHOLOGIC DESCRIPTION

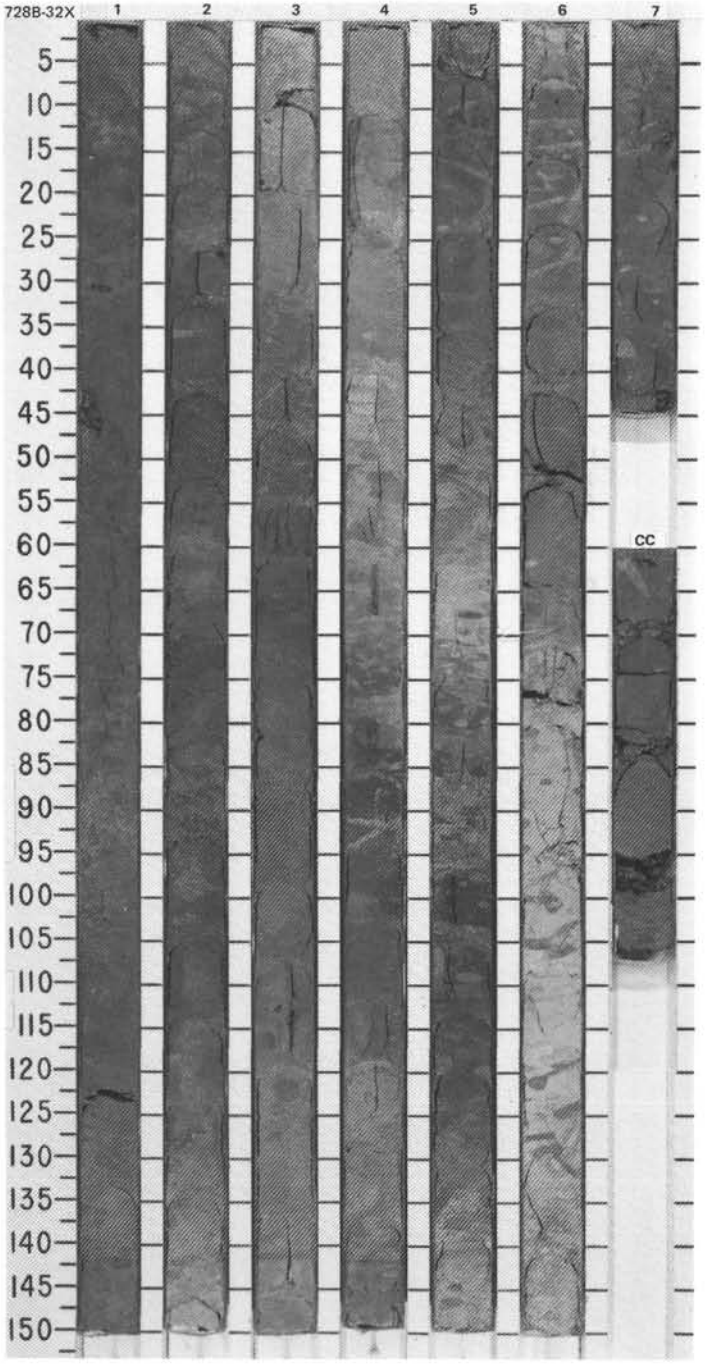
CALCITIC MARLY NANNOFOSSIL CHALK and NANNOFOSSIL CHALK

Slightly to moderately fractured.

Major lithologies:
a. *CALCITIC MARLY NANNOFOSSIL CHALK*, olive (5Y 4/3, 5/3) and olive gray (5Y 5/2). Bioturbation slight to moderate; *Zoophycos* and *Chondrites* burrows common.
b. NANNOFOSSIL CHALK, light gray (5Y 7/2) and light olive gray (5Y 6/2). Moderately bioturbated; *Planolites* burrows present.

SMEAR SLIDE SUMMARY (%):

	1, 75 D	6, 93 D
TEXTURE:		
Sand	10	—
Silt	30	10
Clay	60	90
COMPOSITION:		
Access. minerals	1	1
Carbonate	—	Tr
Clay	22	15
Diatoms	1	1
Dolomite	1	—
Foraminifers	2	—
Inorganic calcite	16	—
Nannofossils	41	80
Quartz	14	1
Radiolarians	1	1
Shell debris	Tr	—
Silicoflagellates	—	1
Sponge spicules	1	Tr



SITE 728 HOLE B CORE 33X CORED INTERVAL 1727.3-1737.0 mbsl; 299.5-309.2 mbsf

TIME-ROCK UNIT: UPPER MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *A/M; NANNOFOSSILS NN11 *Discoaster quinqueramus*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ-58.6 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

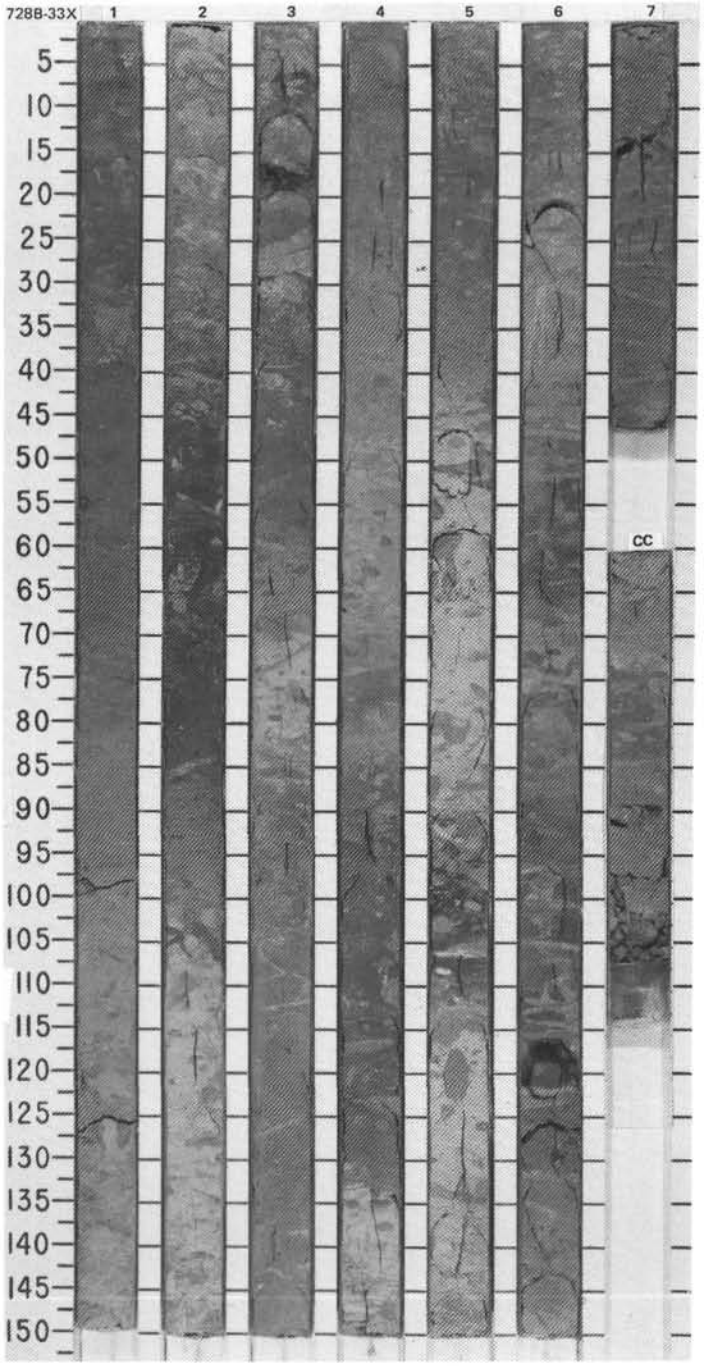
MARLY CALCITIC NANNOFOSSIL CHALK

Moderately to heavily fractured.

Major lithology: MARLY CALCITIC NANNOFOSSIL CHALK, olive (5Y 4/3), olive gray (5Y 5/2, 4/2), and light olive gray (5Y 6/2). Bioturbation minor.

SMEAR SLIDE SUMMARY (%):

	2, 78 D	5, 69 D
TEXTURE:		
Sand	30	—
Silt	15	10
Clay	55	90
COMPOSITION:		
Access. minerals	2	—
Clay	20	15
Diatoms	1	—
Foraminifers	—	2
Inorganic calcite	10	3
Nannofossils	35	80
Organic debris	5	—
Quartz	25	—
Radiolarians	1	Tr
Rock fragments	Tr	—
Sponge spicules	1	Tr



SITE 728 HOLE B CORE 34X CORED INTERVAL 1737.0-1746.6 mbsl; 309.2-318.8 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *A/M; NANNOFOSSILS NN11 *Discoaster quinqueramus*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS

PHYS. PROPERTIES: ● ϕ=61.5 74.69

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

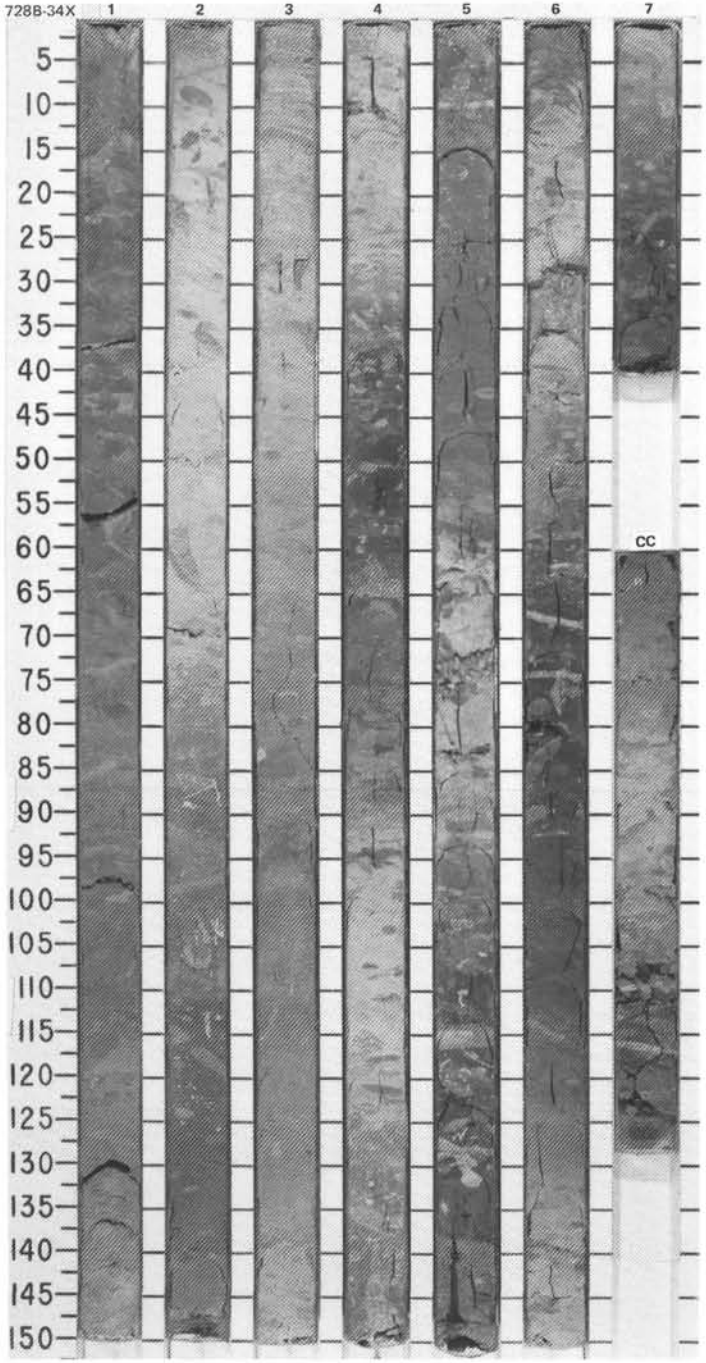
MARLY NANNOFOSSIL CHALK and SILICA-BEARING NANNOFOSSIL CHALK

Slightly to moderately fractured.

Major lithologies:
a. MARLY NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3). Bioturbation slight to moderate.
b. SILICA-BEARING NANNOFOSSIL CHALK, olive gray (5Y 5/2) and light olive gray (5Y 6/2). Slightly to moderately bioturbated; *Zoophycos* burrows present.

SMEAR SLIDE SUMMARY (%):

	2, 44 D	5, 134 D
TEXTURE:		
Sand	—	10
Silt	15	30
Clay	85	60
COMPOSITION:		
Access. minerals	Tr	2
Clay	20	25
Diatoms	1	1
Feldspar	—	2
Foraminifers	4	—
Inorganic calcite	5	4
Nannofossils	65	35
Organic debris	—	5
Quartz	1	25
Radiolarians	1	—
Silicoflagellates	1	—
Sponge spicules	2	1



SITE 728 HOLE B CORE 35X CORED INTERVAL 1746.6-1756.3 mbsl; 318.8-328.5 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS *A/M; NANNOFOSSILS NN11 *Discoaster quinqueramus*; RADIOLARIANS; DIATOMS

PALEOMAGNETICS; PHYS. PROPERTIES ● ϕ59.5 74.80; CHEMISTRY

SECTION 1–7; METERS 0.5, 1.0

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

LITHOLOGIC DESCRIPTION

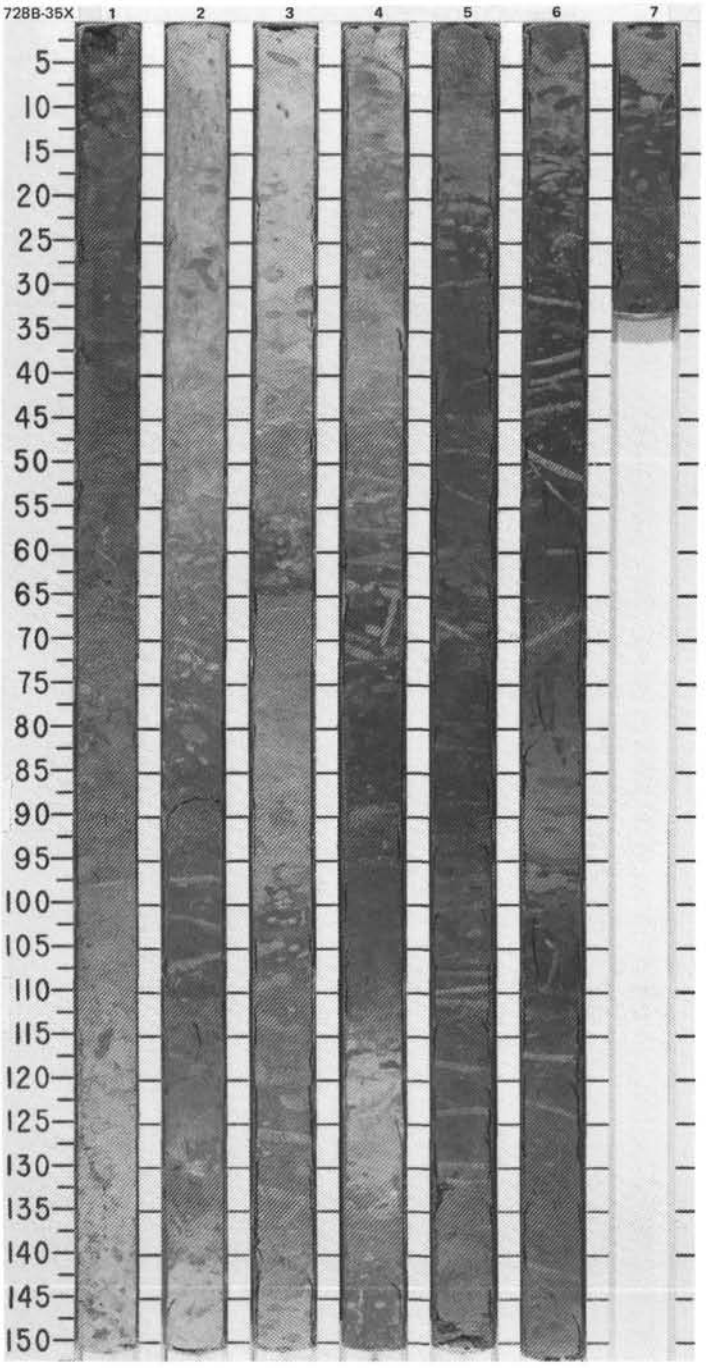
MARLY NANNOFOSSIL CHALK and SILICA-BEARING NANNOFOSSIL SILTY CLAY

Slightly to moderately fractured.

Major lithologies:
a. MARLY NANNOFOSSIL CHALK, olive (5Y 4/3, 5/3). Bioturbation slight to moderate.
b. SILICA-BEARING NANNOFOSSIL SILTY CLAY, olive gray (5Y 5/2) and light olive gray (5Y 6/2). Bioturbation slight to moderate.

SMEAR SLIDE SUMMARY (%):

	3, 8 D	5, 41 D
TEXTURE:		
Sand	—	40
Silt	15	20
Clay	85	40
COMPOSITION:		
Access. minerals	—	4
Clay	20	20
Diatoms	Tr	3
Dolomite	Tr	—
Foraminifers	2	—
Inorganic calcite	8	14
Mica	—	3
Nannofossils	65	20
Quartz	1	35
Radiolarians	—	3
Sponge spicules	1	1



SITE 728 HOLE B CORE 36X CORED INTERVAL 1756.3-1765.9 mbsl; 328.5-338.1 mbsf

TIME-ROCK UNIT: MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS; NANNOFOSSILS: NN11 *Discoaster quinqueramus*; RADIOLARIANS; DIATOMS: *A/M

PALEOMAGNETICS

PHYS. PROPERTIES: ●ϕ=59.6 γ=1.70

CHEMISTRY

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

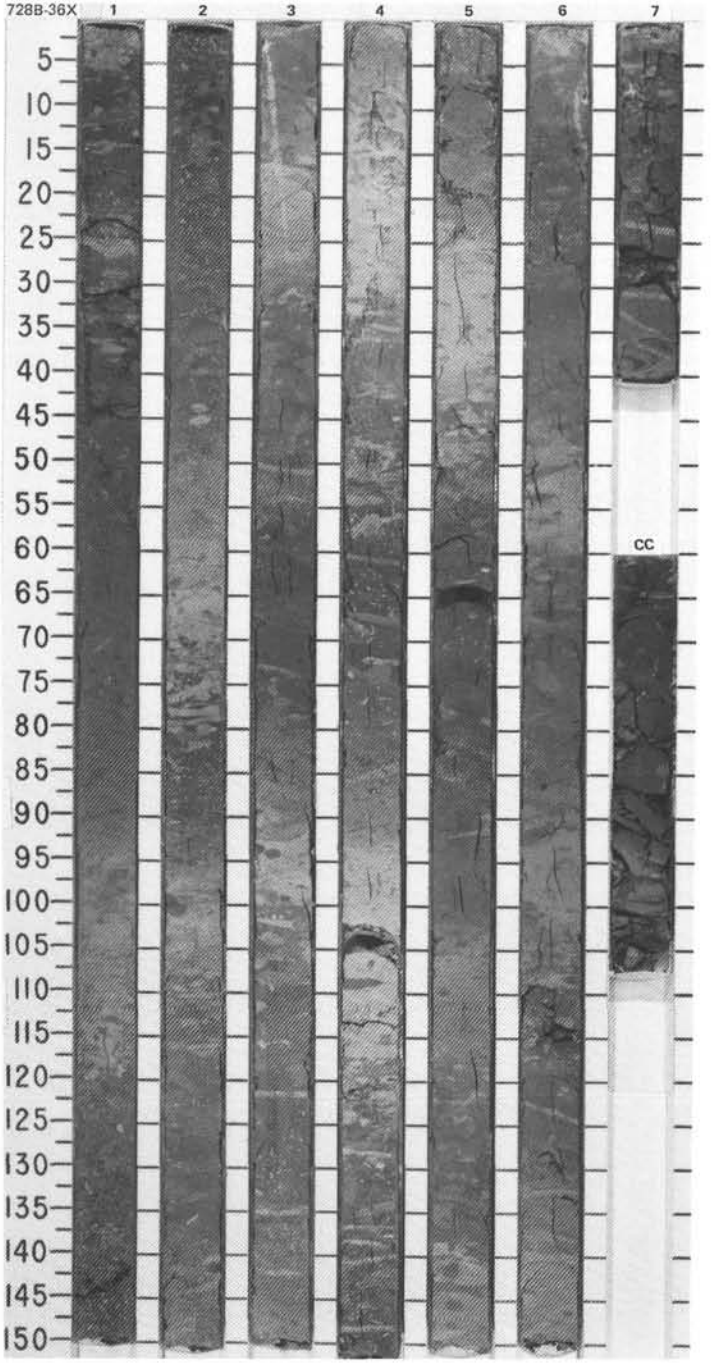
MARLY NANNOFOSSIL CHALK and DIATOMACEOUS MARLY NANNOFOSSIL CHALK

Slightly to moderately fractured.

Major lithologies:
a. MARLY NANNOFOSSIL CHALK, light olive gray (5Y 6/2) and olive gray (5Y 5/2). Bioturbation slight to moderate.
b. DIATOMACEOUS MARLY NANNOFOSSIL CHALK, olive (5Y 4/3) and olive gray (5Y 4/2). Slightly to heavily bioturbated; *Zoophycos* burrows present.

SMEAR SLIDE SUMMARY (%):

	1, 51 D	3, 98 D
TEXTURE:		
Sand	15	—
Silt	35	10
Clay	50	90
COMPOSITION:		
Access. minerals	2	—
Clay	25	20
Diatoms	10	—
Dolomite	1	—
Foraminifers	Tr	1
Inorganic calcite	10	6
Nannofossils	35	70
Quartz	15	1
Radiolarians	—	1
Silicoflagellates	1	—
Sponge spicules	1	1



SITE 728 HOLE B CORE 37X CORED INTERVAL 1765.9-1775.5 mbsl; 338.1-317.7 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIOCENE	*A/M	NN11 Discoaster quinqueramus				● ϕ -61.8 γ -1.69		1 2 3 4 5 6 7 CC	0.5 1.0				*

LITHOLOGIC DESCRIPTION

DIATOMACEOUS NANNOFOSSIL SILTY CLAY, alternating with MARLY NANNOFOSSIL CHALK and NANNOFOSSIL CHALK

Slightly to moderately fractured.

Major lithologies:
a. DIATOMACEOUS NANNOFOSSIL SILTY CLAY, olive (5Y 4/3, 5/3). Bioturbation slight to moderate.
b. Alternation of MARLY NANNOFOSSIL CHALK and NANNOFOSSIL CHALK, olive gray (5Y 5/2) and light olive gray (5Y 6/2) to light gray (5Y 7/2). Slightly to moderately bioturbated; Chondrites and *Planolites* burrows present.

SMEAR SLIDE SUMMARY (%):

	1, 33 D	6, 138 D
TEXTURE:		
Sand	20	—
Silt	35	10
Clay	45	90
COMPOSITION:		
Access. minerals	2	Tr
Clay	25	20
Diatoms	12	1
Dolomite	1	—
Inorganic calcite	8	8
Nannofossils	20	70
Organic debris	5	—
Quartz	25	1
Radiolarians	2	Tr
Sponge spicules	—	Tr