SITE 763 HOLE A CORE 1H CORED INTERVAL 0.0-4.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
QUATERNARY	A/G	A/G	Barren		Barren	Chron 1	ρ=70.5 ρ=1.50 V=1.565 ρ=76.3 ρ=1.47 V=1.525	TOC=0.06% $CaCO_3$=86.13% $CaCO_3$=76.47%	1	0.5				*
	N22 - N23	NN20 - NN21							2	1.0				*
									3		VOID			*
									4					
									CC					*

LITHOLOGIC DESCRIPTION

FORAMINIFER NANNOFOSSIL OOZE WITH CLAY

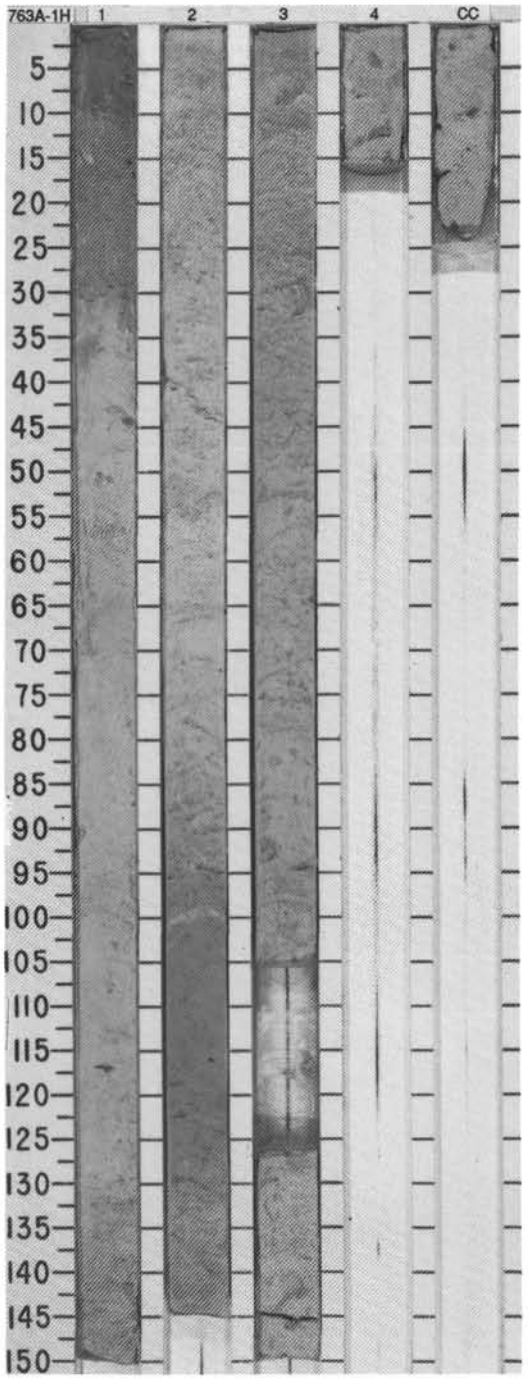
Drilling disturbance is moderate.

Major lithology: FORAMINIFER NANNOFOSSIL OOZE with CLAY, light gray (5Y 7/1) to light brownish gray (10YR 6/2), mottled, structureless. About 25 to 30% foraminifers and about 10 to 25% clay. Calcispheres (1%) are present in Section 3.

Minor lithology: Nannofossil ooze with foraminifers and clay, pinkish gray (7.5YR 7/3 to 7.5YR 6/2), in Section 1, 0-30 cm. Transition toward the major lithology is gradual.

SMEAR SLIDE SUMMARY (%):

	1, 18 M	2, 73 D	3, 71 D	CC, 10 M
COMPOSITION:				
Calcispheres	Tr	Tr	1	—
Clay	20	15	25	10
Fish	Tr	—	—	—
Foraminifers	10	25	28	30
Mica	Tr	Tr	Tr	Tr
Nannofossils	69	60	45	55
Pyrite	—	—	—	5
Quartz	—	—	Tr	—
Spicules	1	—	1	Tr



SITE 763 HOLE A CORE 2H CORED INTERVAL 4.9-14.4 mbsf

TIME-ROCK UNIT: QUATERNARY

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS A/G N22 - N23; NANNOFOSSILS A/G NN19 NN20 - NN21; RADIOLARIANS *C. tuberosa - B. invayinata*; DIATOMS; PALYNOMORPHS Barren

PALEOMAGNETICS: Chron 1

PHYS. PROPERTIES: ρ=68.3 γ=1.549 φ=1.6; ρ=70.1 γ=1.539 φ=1.57; ρ=71.1 γ=1.536 φ=1.55

CHEMISTRY: $CaCO_3$=82.30% TOC=0.04%; $CaCO_3$=85.63%; $CaCO_3$=87.71%

SECTION: 1 2 3 4 5 6 7 CC

METERS: 0.5 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

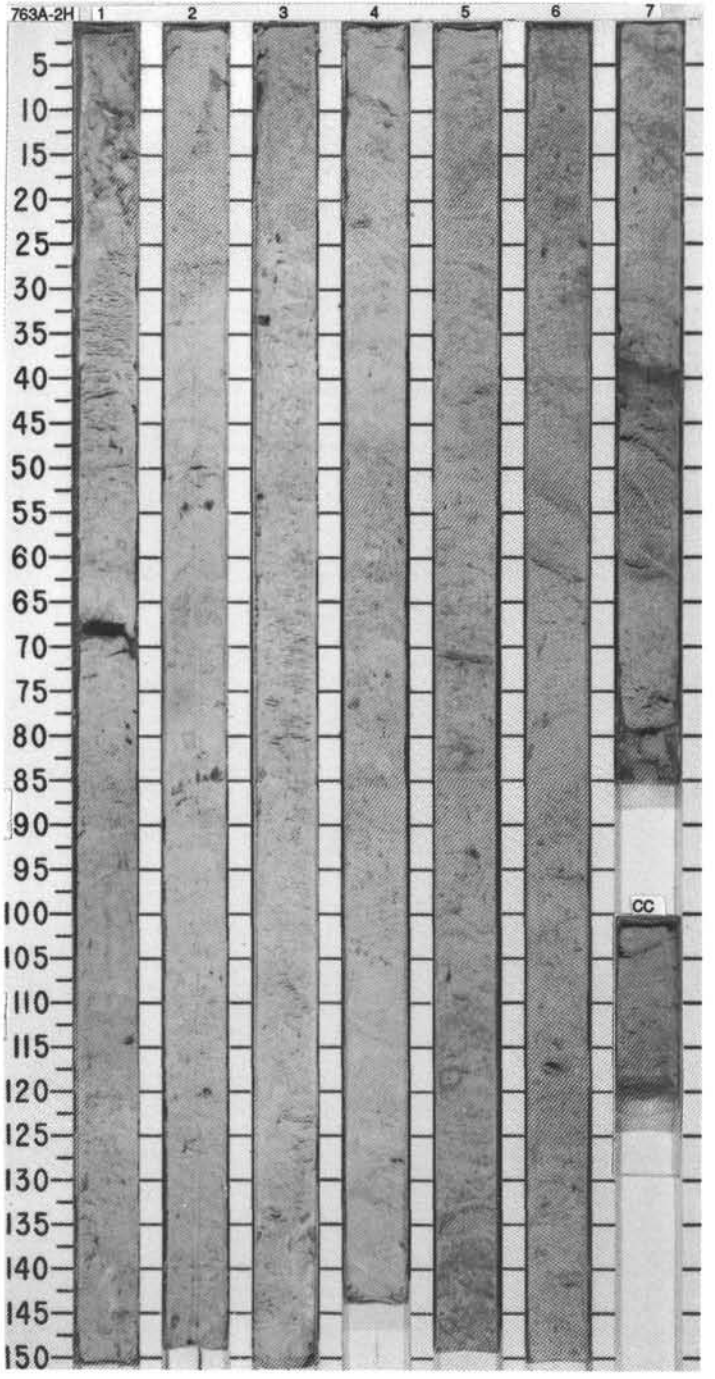
NANNOFOSSIL OOZE WITH FORAMINIFERS AND FORAMINIFER NANNOFOSSIL OOZE

Drilling disturbance is moderate to heavy.

Major lithologies:
NANNOFOSSIL OOZE with FORAMINIFERS and FORAMINIFER NANNOFOSSIL OOZE, light gray (5Y 7/1) and white (5Y 8/1). The percentage of foraminifers estimated according to the smear slides tends to be lower than the real percentage (estimated with binocular or washing) which is between 20 and 30%. Some burrows are visible (especially in Section 5). A few thin drilling disturbed greenish gray diffuse layers are noticed.

SMEAR SLIDE SUMMARY (%):

	1, 77 D	3, 33 D	6, 67 D
COMPOSITION:			
Calcispheres	2	—	2
Clay	3	—	5
Foraminifers	15	5	25
Mica	Tr	Tr	—
Nannofossils	80	88	67
Pyrite	—	7	—
Radiolarians	Tr	Tr	1
Spicules	—	—	Tr



SITE 763 HOLE A CORE 3H CORED INTERVAL 14.4-23.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
QUATERNARY	A/G N22	A/G NN19	MIXED QUATERNARY	UPPER QUATERNARY	Barren		●69.2 |-1.538 ●1.59 ●70.1 |-1.542 ●1.55 |-1.542 ●1.57	●$CaCO_3$=81.97% ●$CaCO_3$=80.55% TOC=0.02%	1 2 3 4 5 6 7 CC	0.5 1.0				

LITHOLOGIC DESCRIPTION

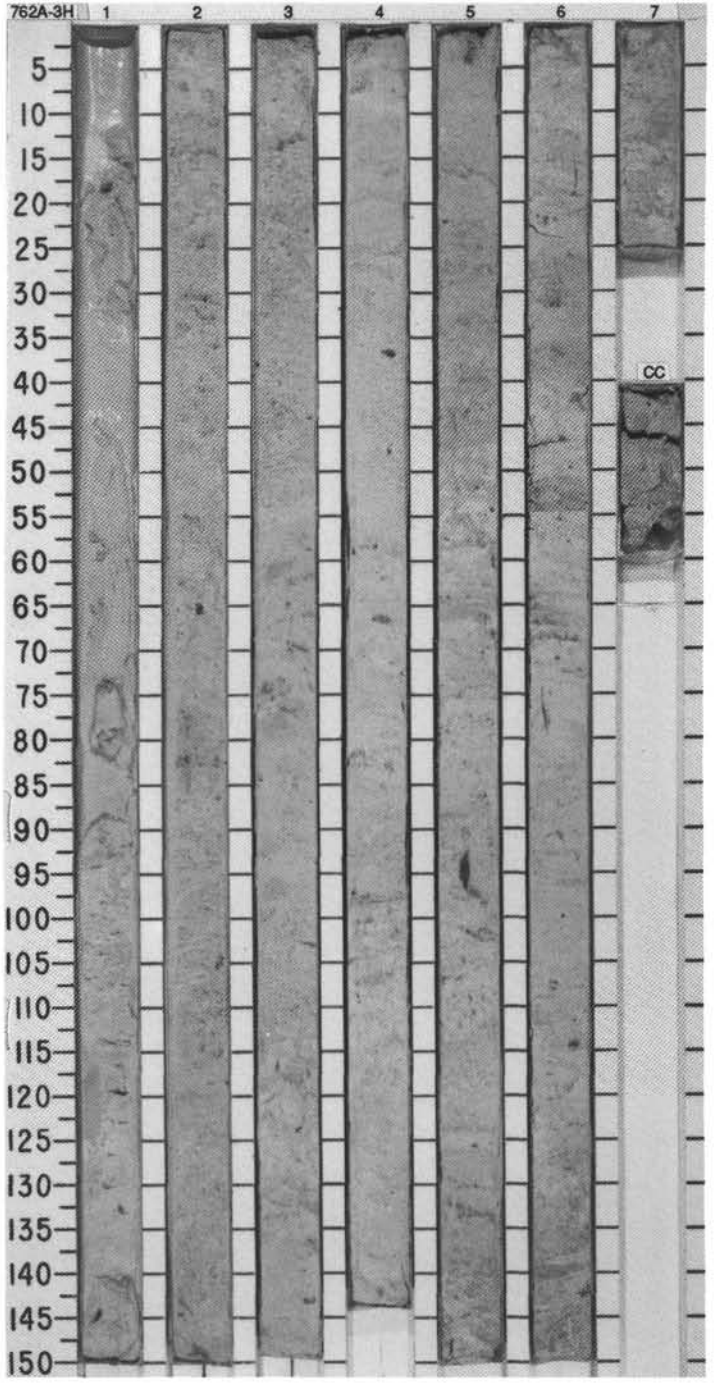
FORAMINIFER NANNOFOSSIL OOZE WITH CLAY

Upper core is soupy, remainder of core shows only minor drilling disturbance.

Major lithology: FORAMINIFER NANNOFOSSIL OOZE WITH CLAY, light gray (5Y 7/1) to light greenish gray (5GY 7/1). The light greenish gray oozes have more clay and quartz, but they are not 10% of the smear slides (although CaCO3 analyses suggest there >10%, hence the name). Light greenish gray mottles (10Y 6/2) are dispersed throughout the core. Sections 2, 4, 5, and 6 have laminations of light greenish gray ooze enriched in clay and quartz alternating with the light gray ooze. Boundaries between laminations are gradational. Patterns appear to be cyclic. Large scale cycles are superimposed on smaller cycles in Section 5. A distinct light olive gray (5Y 6/2) color boundary in Section 6, 52-55 cm. Surface is mottled, suggesting bioturbation, but no distinct burrows are observed.

SMEAR SLIDE SUMMARY (%):

	2, 79 M	2, 114 D	4, 35 D	5, 32 M	6, 53 M
COMPOSITION:					
Accessory minerals	—	1	—	1	—
Calcispheres	1	—	—	—	—
Clay	8	—	2	2	1
Fish	2	1	—	—	1
Foraminifers	40	30	40	40	35
Glass	3	—	2	1	1
Nannofossils	40	60	45	50	55
Opaques	—	2	—	—	—
Quartz	2	—	1	1	3
Radiolarians	2	3	5	3	2
Spicules	2	3	5	2	2



SITE 763 HOLE A CORE 4H CORED INTERVAL 23.9-33.4 mbsf

TIME-ROCK UNIT: QUATERNARY

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: A/G; N22; NANNOFOSSILS: A/G; NN19; RADIOLARIANS: Barren; DIATOMS: Barren; PALYNOMORPHS: Barren

PALEOMAGNETICS: Chron 2; Chron 1

PHYS. PROPERTIES: ●69.5 V=1.548 P=1.59; ●67.2 V=1.567 P=1.65; ●68.2 V=1.574 P=1.75

CHEMISTRY: ●$CaCO_3$=78.14%; ●$CaCO_3$=83.80%; TOC=0.19%; ●$CaCO_3$=82.72%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *; OC

LITHOLOGIC DESCRIPTION

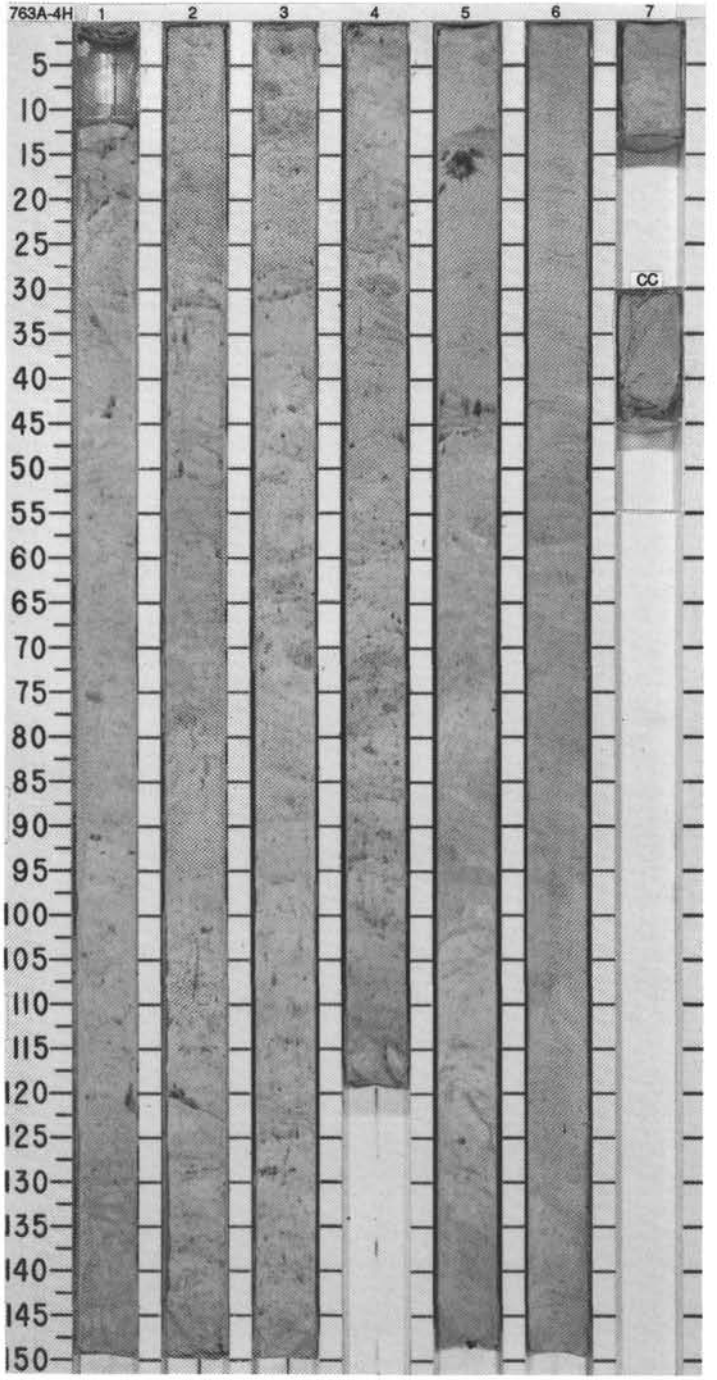
FORAMINIFER NANNOFOSSIL OOZE WITH CLAY

Drilling disturbance is moderate.

Major lithology: FORAMINIFER NANNOFOSSIL OOZE with CLAY, light gray (5Y 7/1). Percent of foraminifers is difficult to estimate (differences between smear slide estimates, sieving and binocular observation). They probably form around 25 to 40% decreasing in abundance in Sections 5, 6, 7, and CC. Some diffuse slightly more greenish (5G 6/1, 5GY 7/1, 5G 7/1) patches or disturbed cm thick layers are present in Sections 1 to 4. Some thinner, slightly more greenish, parallel laminations appear in the upper part of Section 6. This greenish color may be due to an increase in clay content. Bioturbation is minor (Sections 3 and 5) to absent.

SMEAR SLIDE SUMMARY (%):

	1, 93 D	3, 62 D	5, 79 D
COMPOSITION:			
Calcispheres	—	5	1
Clay	1	—	—
Fish	—	—	3
Foraminifers	10	20	10
Nannofossils	84	69	84
Quartz	3	5	2
Radiolarians	1	1	—
Spicules	1	—	—



SITE 763 HOLE A CORE 5H CORED INTERVAL 33.4-42.9 mbsf

TIME-ROCK UNIT: UPPER PLIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: N21 (A/G)
- NANNOFOSSILS: NN18 (A/G)
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: Barren

PALEOMAGNETICS: Chron 2

PHYS. PROPERTIES:
- ρ=69.7 V=1.594 (1,69)
- ρ=67.5 V=1.553 (1,71)
- ρ=68.9 V=1.546 (1,75)

CHEMISTRY:
- $CaCO_3$=83.47% (1,69)
- $CaCO_3$=83.47% (1,71)
- $CaCO_3$=83.47% (1,75)

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: *, W

LITHOLOGIC DESCRIPTION

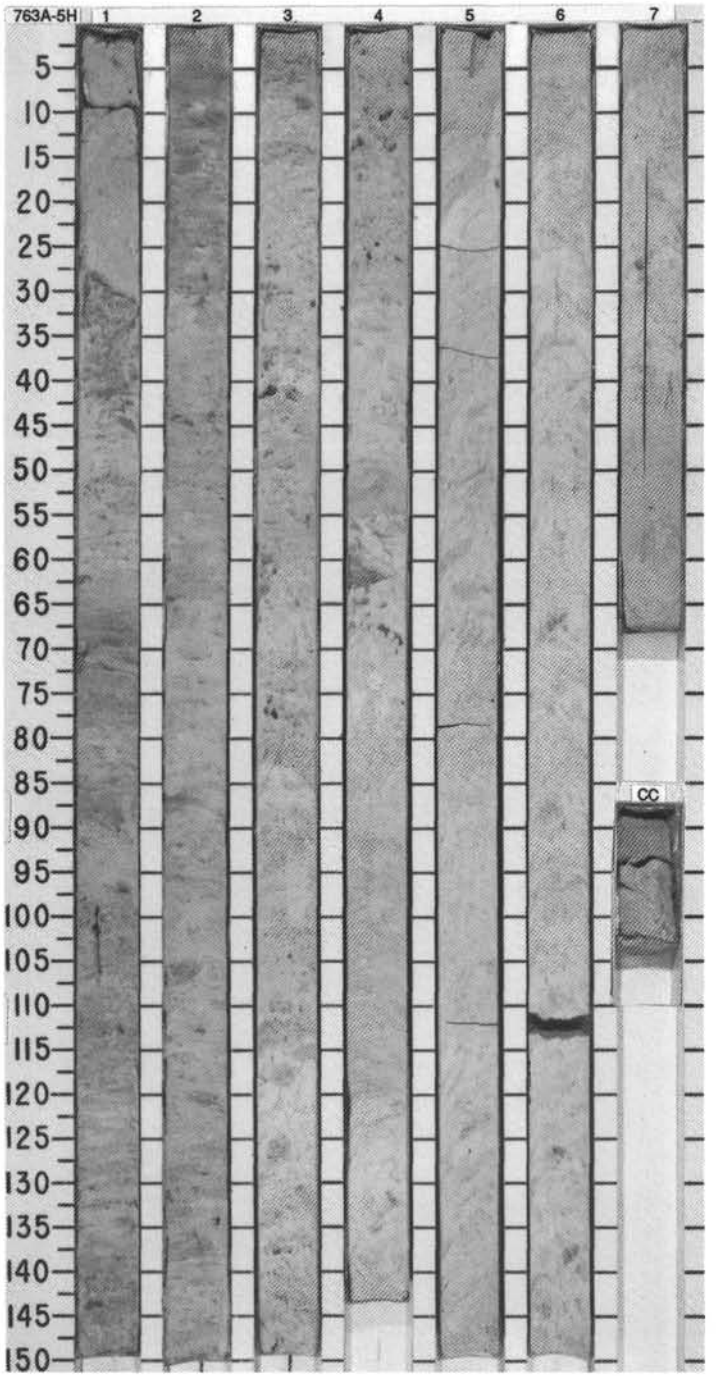
FORAMINIFER NANNOFOSSIL OOZE WITH CLAY

Moderate to severe drilling disturbance.

Major lithology: FORAMINIFER NANNOFOSSIL OOZE with CLAY, light gray (5Y 7/1) to white (5Y 8/1). Light olive gray (5Y 6/2) mottles throughout. Section 3 appears to be transitional between light gray ooze above and white ooze below. Slight alternation of color patterns may be cyclic. Foraminifers visible on the split core surface. Gray spots are drilling grease or amorphous iron sulfide. Layers with higher clay contents are light greenish gray (10Y 6/2, 5GY 7/1), and occur as laminations and spots. Core may have been laminated but drilling has disrupted and distorted original bedding, particularly in Sections 5 and 6.

SMEAR SLIDE SUMMARY (%):

	1, 69 M	2, 52 D	3, 70 D	4, 75 D	5, 75 D	6, 67 M	7, 32 D
COMPOSITION:							
Accessory minerals	1	1	1	1	1	1	Tr
Calcite	—	—	—	—	1	Tr	Tr
Clay	10	2	2	2	4	10	3
Foraminifers	40	46	30	34	30	30	30
Glauconite	Tr	—	—	—	Tr	Tr	—
Mica	Tr	Tr	Tr	1	—	1	1
Nannofossils	46	50	67	60	63	56	65
Opaques	1	—	—	—	—	—	Tr
Quartz	2	Tr	Tr	2	1	2	1



SITE 763 HOLE A CORE 6H CORED INTERVAL 42.9-52.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER PLIOCENE	A/G	N21					●68.1 ▽1.569 ●2.75	●$CaCO_3$=81.22%	1	0.5				*
	A/G	NN16								1.0				
	Barren								2					*
									3					
	Barren						●67.5 ▽1.553 ●2.71	●$CaCO_3$=86.63%	4					*
									5					
							●68.9 ▽1.546 ●2.75	TOC=0.05% ●$CaCO_3$=82.05%	6					*
									7					*
									CC					

LITHOLOGIC DESCRIPTION

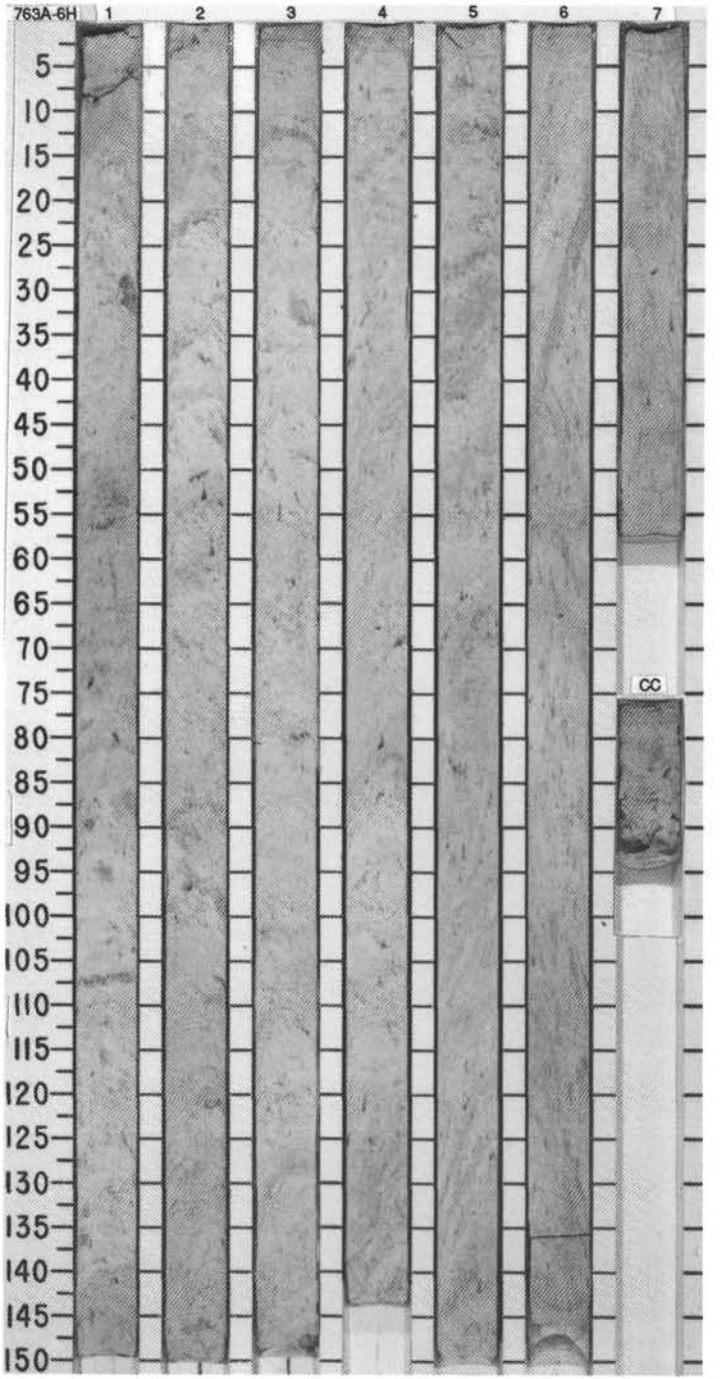
FORAMINIFER NANNOFOSSIL OOZE WITH CLAY AND NANNOFOSSIL OOZE WITH CLAY AND FORAMINIFERS

The lower part of the core, Sections 5, 6, 7, and CC, is strongly disturbed by drilling.

Major lithology: FORAMINIFER NANNOFOSSIL OOZE WITH CLAY and NANNOFOSSIL OOZE WITH CLAY AND FORAMINIFERS, light gray (10Y 7/1). The upper half of Section 1 shows a slightly more greenish color (5Y 8/1 to 5Y 7/1), probably due to increased clay content. About 20 to 35% foraminifers. Calcispheres (1%, Sections 4 and 6) and spicules (2%, Section 4) are present.

SMEAR SLIDE SUMMARY (%):

	1, 32 D	2, 29 D	4, 68 D	6, 66 D	7, 27 D
COMPOSITION:					
Calcispheres	—	—	1	1	—
Clay	3	—	3	5	4
Fish	—	—	1	1	1
Foraminifers	28	20	30	35	35
Glass	—	—	1	—	—
Glauconite	—	—	—	1	—
Mica	Tr	—	1	—	—
Nannofossils	67	79	60	55	59
Opaques	1	1	—	2	—
Quartz	1	—	—	—	1
Radiolarians	—	—	1	—	—
Spicules	—	—	2	—	—



SITE 763 HOLE A CORE 7H CORED INTERVAL 52.4-61.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER PLIOCENE	A/G	N21	A/G	NN16	Barren	Barren	Chron 2	Chron 2A	$\bullet CaCO_3$=82.80%	$\bullet CaCO_3$=84.72%	TOC=0.02% $\bullet CaCO_3$=79.80%	1 2 3 4 5 6 7 CC	0.5 1.0		* * * * OG IW

LITHOLOGIC DESCRIPTION

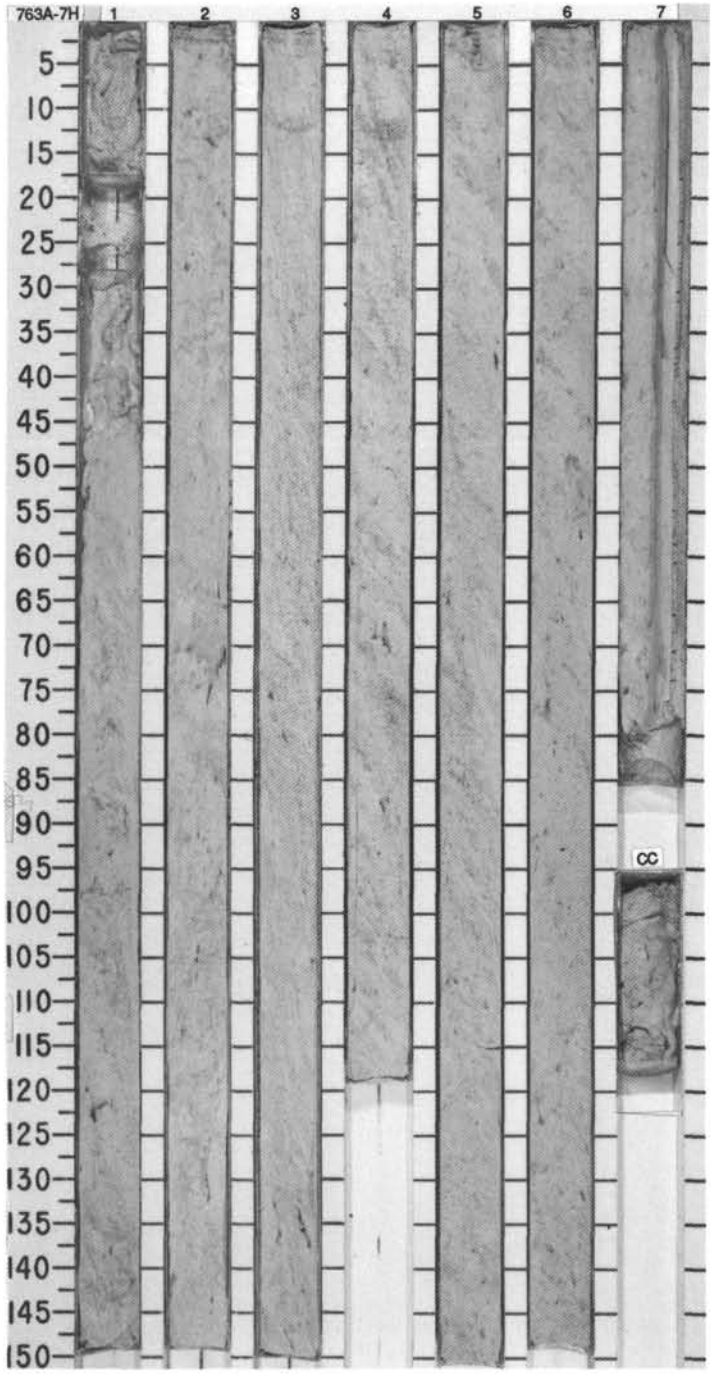
FORAMINIFER NANNOFOSSIL OOZE WITH CLAY

Core is highly disturbed.

Major lithology: FORAMINIFER NANNOFOSSIL OOZE WITH CLAY, light gray (5Y 7/1 to 10Y 7/1). Homogenous, mottled. No primary or secondary sedimentary structures preserved, but vague disrupted laminations suggest core was thinly bedded. In Section 3, 60 cm, a 5 mm wide mottle contains about 3% glauconite.

SMEAR SLIDE SUMMARY (%):

	1, 93 D	3, 60 M	4, 93 D	6, 93 D
COMPOSITION:				
Accessory minerals	—	—	1	—
Calcispheres	—	1	1	—
Clay	3	—	5	5
Fe oxide	—	—	2	2
Fish	—	—	2	—
Foraminifers	25	25	25	25
Glauconite	2	3	—	—
Mica	—	—	2	—
Nannofossils	65	67	60	65
Opaques	2	2	—	—
Pteropod	—	—	—	1
Quartz	2	2	2	2
Zircon	1	—	—	—



SITE 763 HOLE A CORE 8H CORED INTERVAL 61.9-71.4 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER PLIOCENE	A/G	N20 - N19	A/G	Barren		Barren		●CaCO$_3$=84.47%	1	0.5				*
							●ϕ=63.8 V=1.55 P=1.73			1.0				
		NN16					●ϕ=61.7 V=1.6 P=1.72	●CaCO$_3$=83.05%	2					
									3					*
							●ϕ=65.4 V=1.6 P=1.80	TOC=0.01%	4					
								●CaCO$_3$=82.22%	5					*
									6					
									7					
									CC					

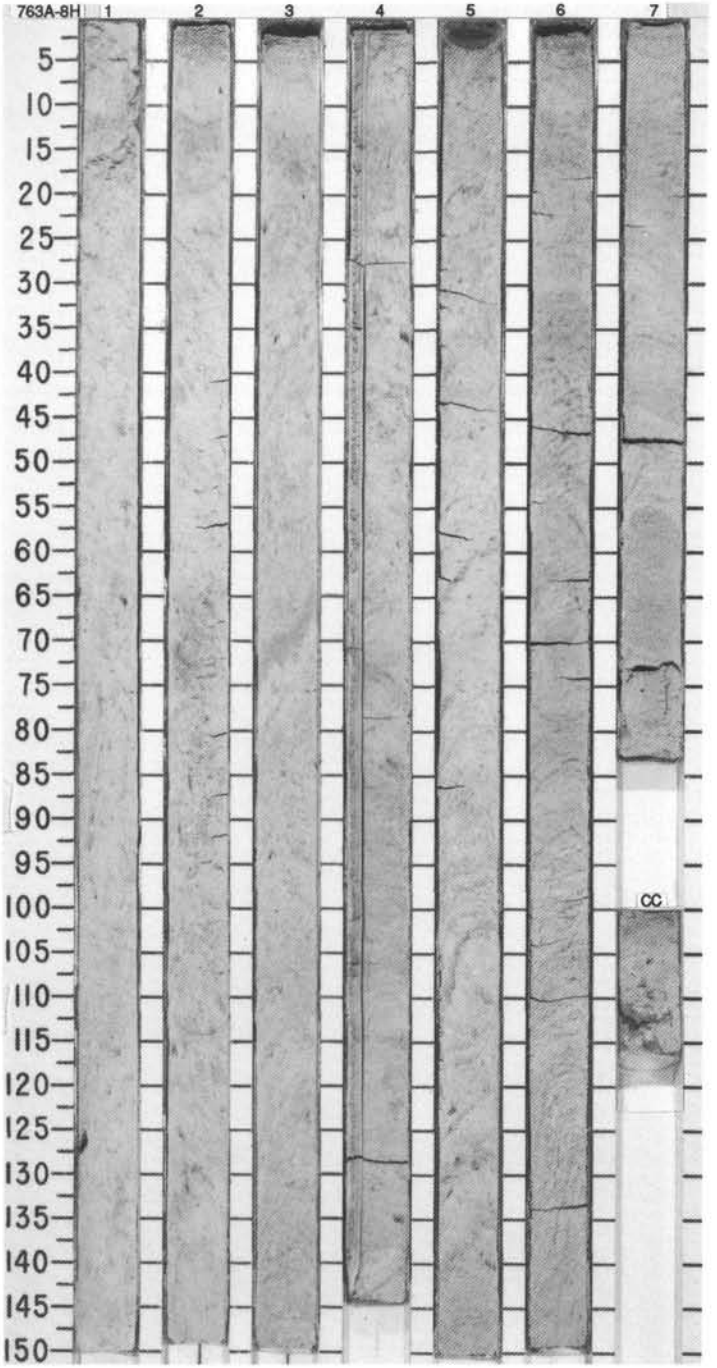
LITHOLOGIC DESCRIPTION

FORAMINIFER NANNOFOSSIL OOZE WITH CLAY AND NANNOFOSSIL OOZE WITH CLAY AND FORAMINIFERS

Major lithologies:
FORAMINIFER NANNOFOSSIL OOZE with CLAY and NANNOFOSSIL OOZE with CLAY and FORAMINIFERS, light greenish gray (10Y 7/1) to very light greenish gray (10Y 8/1) with minor light greenish gray (10 7/1 mottling in Sections 1 and 2, becoming color banded in Sections 2-7. Color bands are light greenish gray (10Y 7/1) to very light greenish gray (10Y 8/1) in Section 3, with an increasing proportion of light gray (5Y 7/1, 5Y 7/2, and 2.5Y 7/2) layers down section, and with occasional light olive gray (5Y 6/2) layers in Section 6 and 7. Black (N2) to very dark gray (N3) flecks are scattered throughout the core and are probably an amorphous form of iron sulfide (pyrite precursor?). Bioturbation apparently decreases down-section as color banded layers become more apparent. Foraminifers range from 20 to 40% of the rock based on smear slide examination with no clear correlation between foraminifer abundance and color.

SMEAR SLIDE SUMMARY (%):

	1, 75 D	3, 75 D	5, 75 D
COMPOSITION:			
Bioclast	1	1	1
Clay	5	5	7
Fe oxide	2	1	1
Foraminifers	40	25	2
Glauconite	Tr	—	—
Nannofossils	51	68	69
Quartz	1	Tr	2



SITE 763 HOLE A CORE 9H CORED INTERVAL 71.4-80.9 mbsf

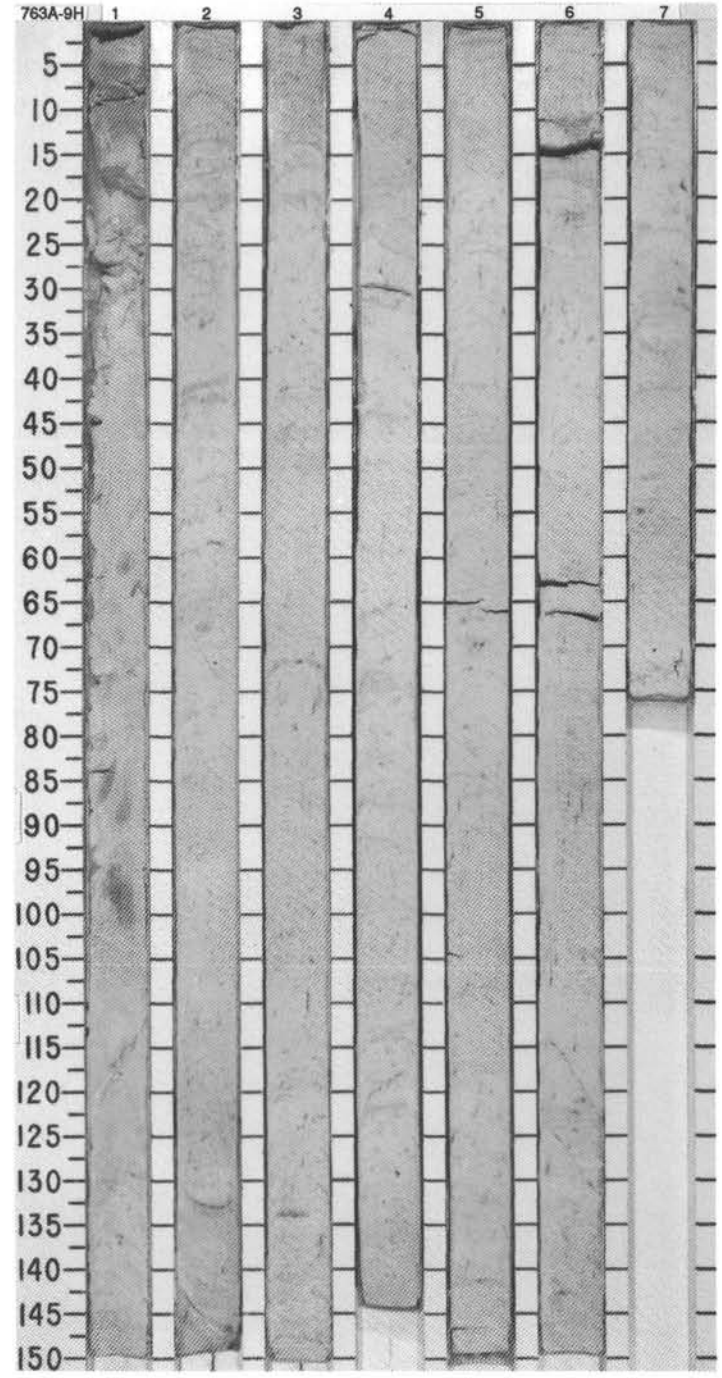
TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
LOWER PLIOCENE	A/G	A/G	Barren				●64.2 ▽1.56 ●71.72 ▽1.67 ●63.9 ▽1.55 ●71.72 ▽1.67 ●63.9 ▽1.535 ●71.72 ▽1.67	●CaCO3 82.88% ●CaCO3 84.30% TOC=0.01% ●CaCO3 85.80%	1 2 3 4 5 6 7	0.5 1.0					FORAMINIFER NANNOFOSSIL OOZE WITH CLAY

Major lithology: FORAMINIFER NANNOFOSSIL OOZE with CLAY, very light gray (10Y 8/1) to white (5Y 8/1). Laminations of pale green (5G 6/2) and light gray (2.5Y 7/2) are observed throughout core, but no cyclic color pattern is present. Halo burrows, Section 2, 35 cm and 131 cm. Pale green and light gray laminations have higher clay content. Foraminifers visible on the split core surface. Minor burrowing.

Minor lithology: Pyrite, as disseminated mottles and wisps of (N5) gray, "hydrotroilite?" observed throughout core. Gray zones also surround burrows. Disseminated pyrite is also observed infilling and replacing foraminifer tests in smear slides.

SMEAR SLIDE SUMMARY (%):

	2, 72 D	3, 72 M	5, 70 D	7, 70 D
COMPOSITION:				
Clay	—	5	4	3
Fe oxide	1	—	1	—
Fish	2	1	—	1
Foraminifers	25	25	25	30
Glauconite	1	2	2	—
Nannofossils	69	65	65	58
Opaques	—	—	—	5
Quartz	1	2	3	3



SITE 763 HOLE A CORE 10H CORED INTERVAL 80.9-90.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER PLIOCENE	A/G	N18												
	A/G	NN12												
	Barren													
	Barren													
Chron 3	Chron 2A						●D=65 P=1.76 V=1.55	●CaCO$_3$=84.47%	1	0.5				*
										1.0				
									2					
							●D=63.7 P=1.73 V=1.5	●CaCO$_3$=87.2%	3				P	
									4					*
														OG
									5					
							●D=62 P=1.73 V=1.56	TOC=0.04% ●CaCO$_3$=85.30%	6					*
									7					
									CC					

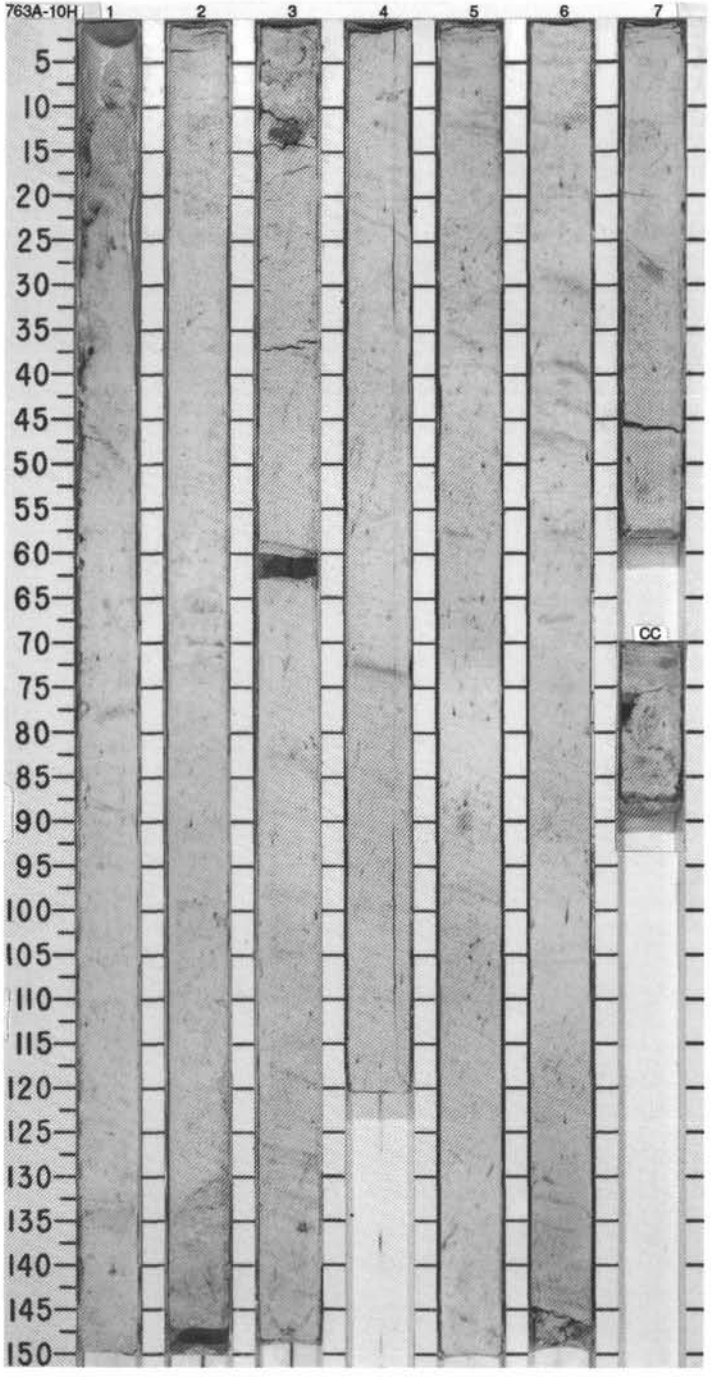
LITHOLOGIC DESCRIPTION

NANNOFOSSIL FORAMINIFER OOZE WITH CLAY AND FORAMINIFER NANNOFOSSIL OOZE WITH CLAY

Major lithologies:
NANNOFOSSIL FORAMINIFER OOZE with CLAY and FORAMINIFER NANNOFOSSIL OOZE with CLAY, color banded with white (5Y 8/1), very light greenish gray (10Y 8/1), and light gray (5Y 7/1, 2.5Y 7/2) layers, and a few thin (< 1 cm) pale green (5G 7/2) layers. Color bands are 20 cm-80 cm thick with white predominant from Sections 1 to Section 3, 97 cm, and very light greenish gray to light gray is predominant from Section 3, 97 cm to Section CC. Black (N2) to dark gray (N4) specks are common, scattered throughout, and a pyrite nodule (2 cm X 4 cm) containing calcareous foraminifer tests occurs in Section 3, 9-11 cm. Bioturbation and color mottling occur locally. Foraminifers range from 30% to 55% and nannofossils from 37% to 62%. Thin (<1 cm thick) layers of pale green (5G 7/2) foraminifer nannofossil ooze with clay (probably with a higher clay content, occur in Section 4, 71-72 cm, with similar thin (< 1 cm) light greenish gray (5GY 7/1) to pale green (5G 7/2) layers occurring in Section 1, 76 cm, 84 cm, and 146 cm; Section 2, 72 cm; Section 3, 56 cm, 118 cm, 126 cm, and 130 cm; and Section 5, 27 cm, 37 cm, and 45 cm.

SMEAR SLIDE SUMMARY (%):

	1, 79 D	3, 140 D	4, 72 M	6, 24 D
COMPOSITION:				
Bioclast	1	1	2	1
Biotite	—	Tr	—	—
Clay	5	5	10	7
Fe Oxide	1	Tr	1	1
Fish	Tr	Tr	Tr	Tr
Foraminifers	30	55	35	45
Glauconite	—	Tr	—	—
Mica	—	—	1	1
Nannofossils	62	37	50	42
Quartz	1	2	1	3



SITE 763 HOLE A CORE 11H CORED INTERVAL 90.4-99.9 mbsf

TIME-ROCK UNIT: UPPER MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: A/G (N17b-N18)
- NANNOFOSSILS: A/G (NN12)
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: Barren

PALEOMAGNETICS: Chron 3

PHYS. PROPERTIES: ϕ=62.3 V=1.54 ρ=1.77; ϕ=61.1 V=1.55 ρ=1.73; ϕ=61 V=1.56 ρ=1.74

CHEMISTRY: $CaCO_3$=86.30%; $CaCO_3$=90.13%; TOC=0.05%; $CaCO_3$=88.63%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

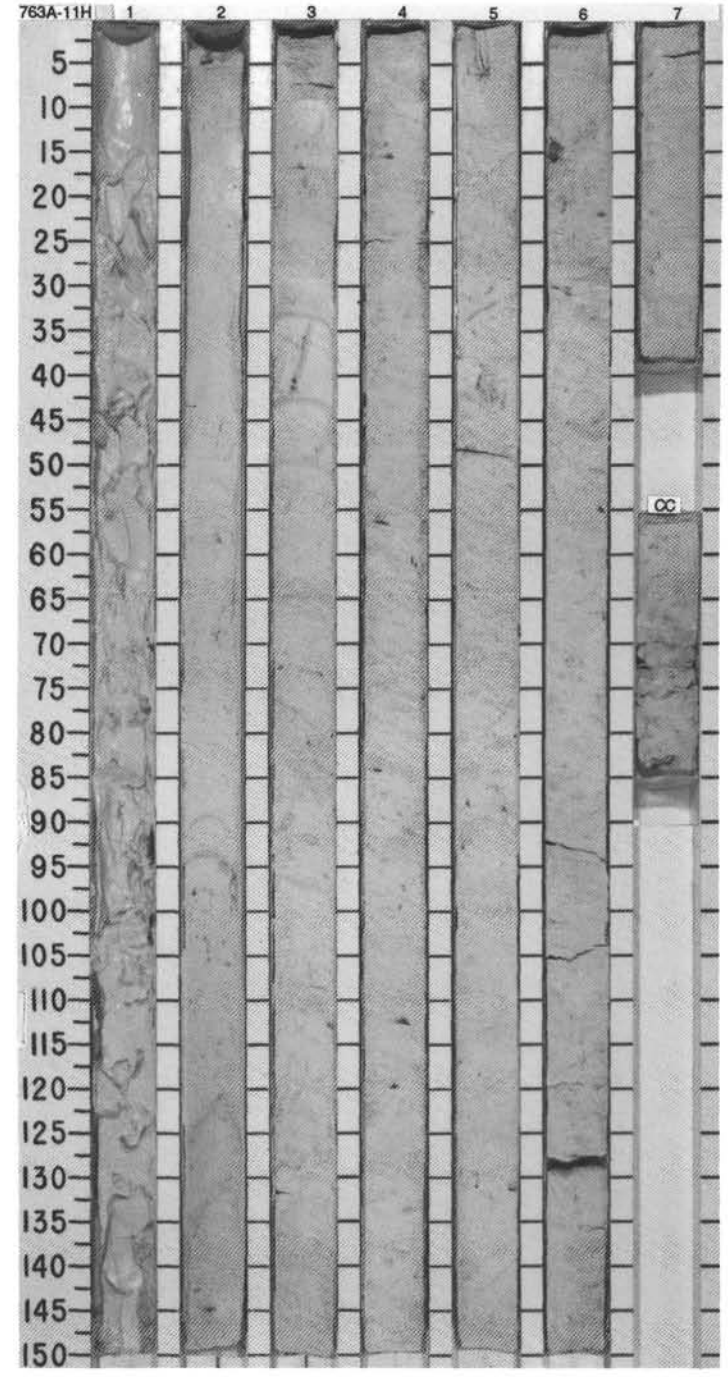
FORAMINIFER NANNOFOSSIL OOZE AND FORAMINIFER NANNOFOSSIL OOZE WITH CLAY

With the exception of Section 1 (soupy), coring disturbance is minor.

Major lithologies:
FORAMINIFER NANNOFOSSIL OOZE with CLAY, light gray (5Y 7/1), very light greenish gray (10Y 8/1), and FORAMINIFER NANNOFOSSIL OOZE white (5Y 8/1) with minor, poorly defined color bands (0.5 mm thick) of light greenish gray (5GY 7/1) and slightly darker versions of the dominant colors. Darker intervals probably have higher clay contents. Bioturbation is moderate in the less disturbed intervals. Amorphous iron sulfide throughout. Pyritized burrow (0.3 X >1 cm) with textured surface in Section 6, 14 cm.

SMEAR SLIDE SUMMARY (%):

	2, 80 D	2, 124 M	3, 80 D	4, 75 D	5, 80 D	6, 75 D
COMPOSITION:						
Bioclast	2	1	Tr	Tr	1	2
Biotite	Tr	—	—	—	—	Tr
Clay	5	5	5	5	5	5
Fe oxide	Tr	Tr	Tr	Tr	Tr	Tr
Fish	—	Tr	—	—	Tr	Tr
Foraminifers	25	30	30	25	20	20
Glauconite	Tr	—	Tr	Tr	—	—
Mica	1	1	1	Tr	1	1
Nannofossils	66	63	63	70	72	71
Quartz	1	Tr	1	Tr	1	1



SITE 763 HOLE A CORE 12H CORED INTERVAL 99.9-109.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER MIOCENE	A/G	A/G	Barren		Barren	Chron 3 / Chron 3A	ρ=1.57 ρ=1.55 ρ=1.57	$CaCO_3$=88.96% $CaCO_3$=91.71% TOC=0.03% $CaCO_3$=85.13%	1 2 3 4 5 6 7 CC	0.5 1.0				* * * *

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE WITH FORAMINIFERS AND NANNOFOSSIL OOZE WITH CLAY AND FORAMINIFERS

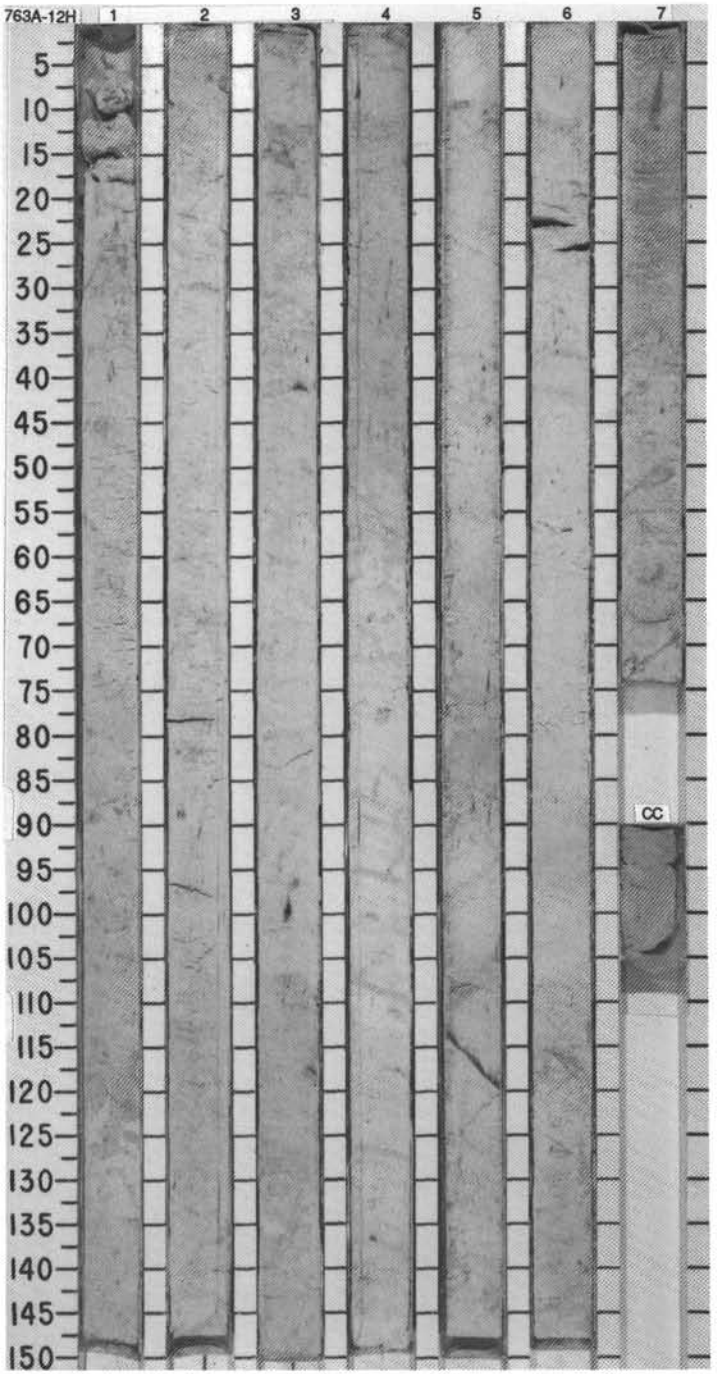
The core is moderately to slightly disturbed by drilling.

Major lithologies:
NANNOFOSSIL OOZE with FORAMINIFERS and NANNOFOSSIL OOZE with CLAY and FORAMINIFERS, white (5Y 8/1), and mottled light gray (5Y 7/1) with light greenish gray shades (5G 7/1) and gray-light gray (N5-N6) blebs. Dark gray (N4) blebs and speckles, smeared out by wire-cutting, consist of very fine-grained iron sulfide (pyrite ?).

Minor lithology: Clayey nannofossil ooze with foraminifers, light gray (5Y 7/1) in Sections 1, 3, 4, and 5. In Section 4, three 1 cm-thick layers are interbedded in the white nannofossil ooze with foraminifers. The boundaries between the two lithologies are gradational and mottled, by burrowing.

SMEAR SLIDE SUMMARY (%):

	1, 73 D	2, 73 D	5, 80 M	7, 40 D
COMPOSITION:				
Clay	—	—	30	—
Foraminifers	20	10	20	15
Mica	Tr	Tr	2	Tr
Nannofossils	80	90	48	85



SITE 763 HOLE A CORE 13H CORED INTERVAL 109.4-118.9 mbsf

TIME-ROCK UNIT: UPPER MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: A/G; N17; A/G; Barren
- NANNOFOSSILS: NN11
- RADIOLARIANS
- DIATOMS
- PALYNOMORPHS: Barren

PALEOMAGNETICS: Chron 4; Chron 3A

PHYS. PROPERTIES: ●59.2 ▽1.75 V=1.56; ●58.9 ▽1.73 V=1.57; ●59 ▽1.76 V=1.56

CHEMISTRY: ●$CaCO_3$=90.30%; ●$CaCO_3$=90.46%; TOC=0.035; ●$CaCO_3$=92.05%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY: VOID

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG

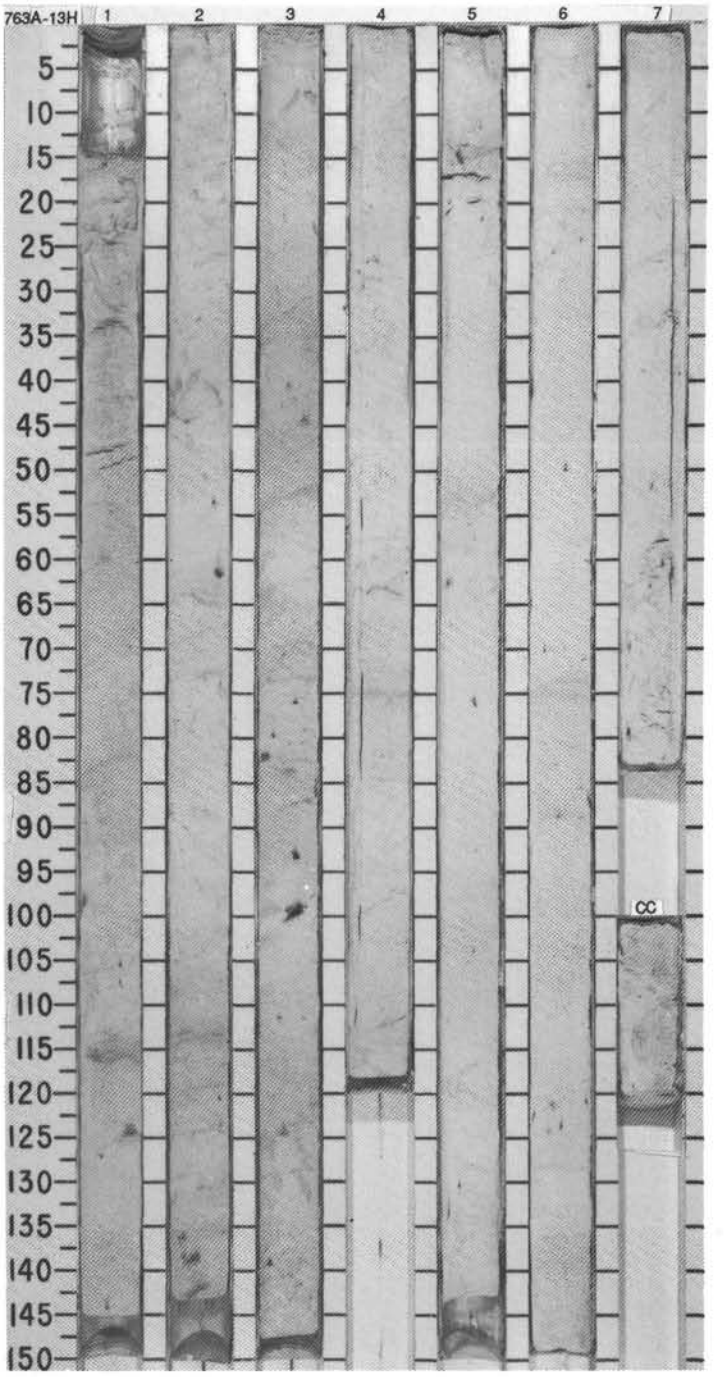
LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE WITH FORAMINIFERS

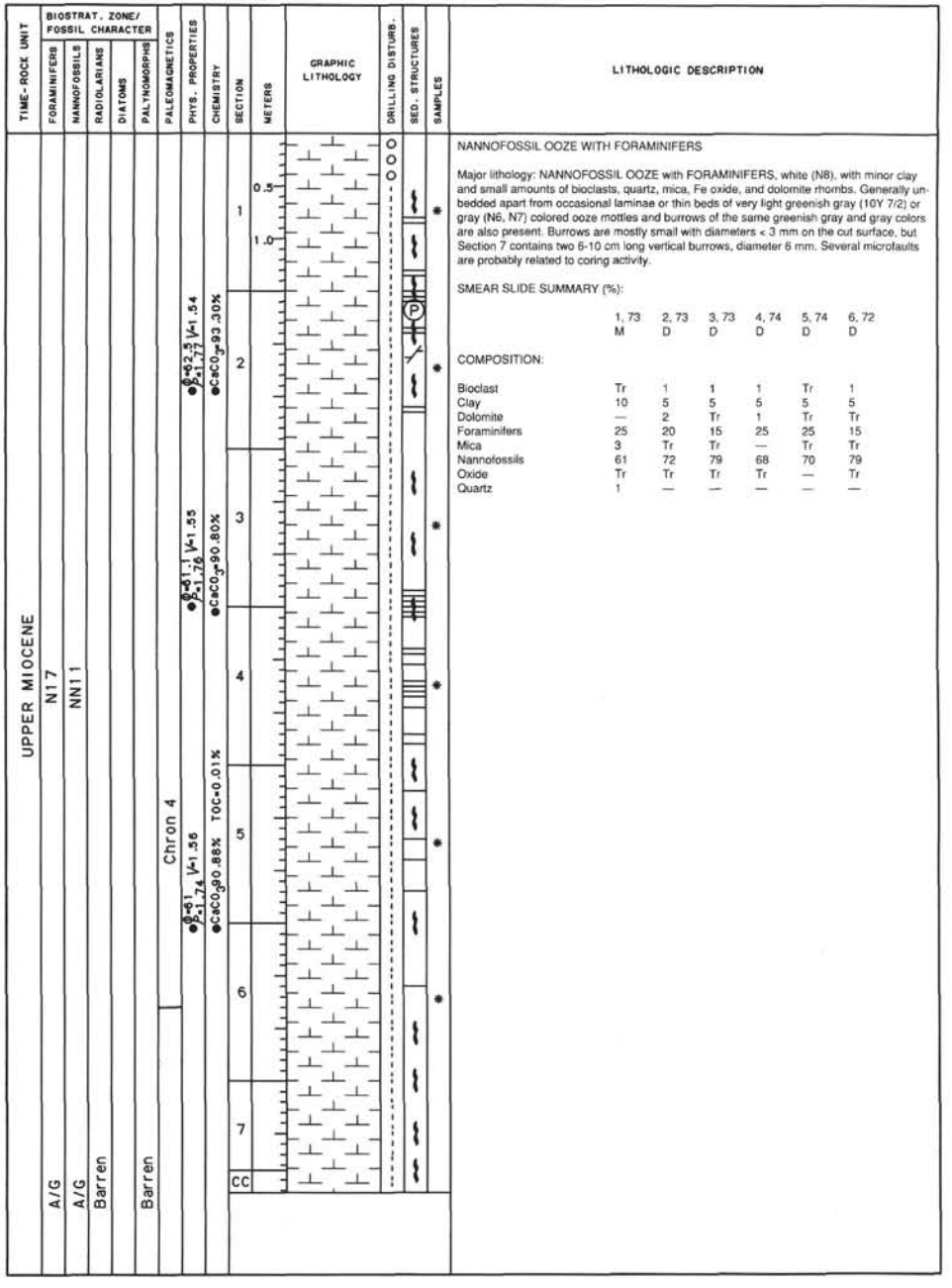
Major lithology: NANNOFOSSIL OOZE WITH FORAMINIFERS, color banded very light greenish gray (10Y 8/1) and white (5Y 8/1) from Section 1 to Section 4, 0 cm, with common mottling, common dark gray (N4) "hydrotriolite?" flecks, and occasional light greenish gray (5GY 7/1) layers (<1 cm). From Section 5, 15 cm, to Section CC, this lithology is white (5Y 8/1) and virtually homogeneous except for rare dark gray (N4) "hydrotriolite?" flecks and occasional thin (<1 cm) pale green (5G 7/2) to light greenish gray (5GY 7/1) layers. Section 4 *appears transitional with white (5Y 8/1) layers predominant over very light greenish gray* layers. Minor lithology: Foraminifer nannofossil ooze, occurs in a light greenish gray (5GY 7/1) layers, approximately 1 cm-thick at Section 1, 16 cm; Section 2, 114, 117, and 121 cm; Section 3, 28-30 and 37-41 cm; Section 4, 60, and 75 cm; Section 5, 11, 14, 98, and 101 cm; Section 6, 16, 18, 21, 74, 76, 128, and 136 cm; and Section 7, 24, 31, 57, and 62 cm.

SMEAR SLIDE SUMMARY (%):

	1, 60 D	2, 114 M	3, 60 D	4, 60 D	5, 60 D	6, 60 D
COMPOSITION:						
Accessory minerals	1	1	Tr	1	Tr	—
Calcite	3	2	1	1	1	1
Clay	5	2	4	4	3	6
Foraminifers	20	30	22	20	20	24
Nannofossils	70	64	73	72	76	68
Opaques	—	Tr	Tr	Tr	Tr	Tr
Quartz	1	1	Tr	2	Tr	1



SITE 763 HOLE A CORE 14H CORED INTERVAL 118.9-128.4 mbsf



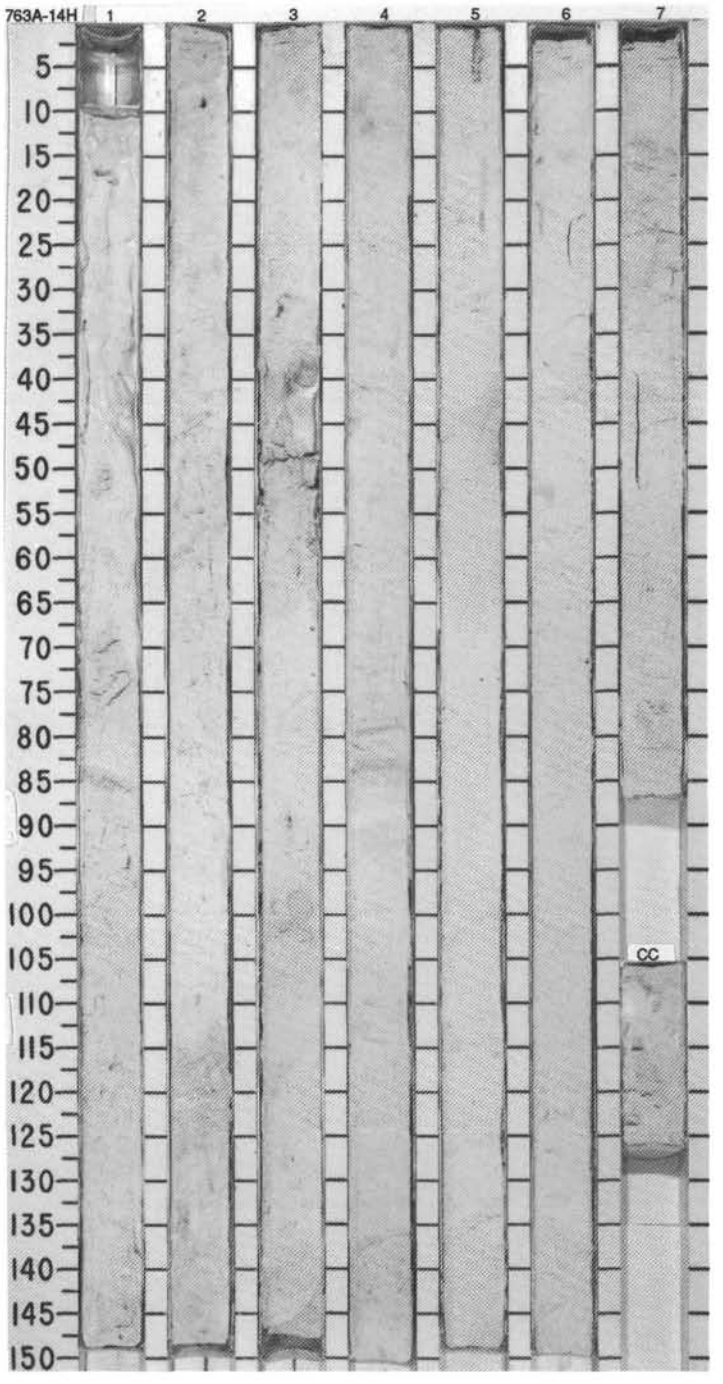
LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE WITH FORAMINIFERS

Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS, white (N8), with minor clay and small amounts of bioclasts, quartz, mica, Fe oxide, and dolomite rhombs. Generally unbedded apart from occasional laminae or thin beds of very light greenish gray (10Y 7/2) or gray (N6, N7) colored ooze mottles and burrows of the same greenish gray and gray colors are also present. Burrows are mostly small with diameters < 3 mm on the cut surface, but Section 7 contains two 6-10 cm long vertical burrows, diameter 6 mm. Several microfaults are probably related to coring activity.

SMEAR SLIDE SUMMARY (%):

	1, 73 M	2, 73 D	3, 73 D	4, 74 D	5, 74 D	6, 72 D
COMPOSITION:						
Bioclast	Tr	1	1	1	Tr	1
Clay	10	5	5	5	5	5
Dolomite	—	2	Tr	1	Tr	Tr
Foraminifers	25	20	15	25	25	15
Mica	3	Tr	Tr	—	Tr	Tr
Nannofossils	61	72	79	68	70	79
Oxide	Tr	Tr	Tr	Tr	—	Tr
Quartz	1	—	—	—	—	—



SITE 763 HOLE A CORE 15H CORED INTERVAL 128.4-137.9 mbsf

TIME-ROCK UNIT: UPPER MIOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: A/G
- NANNOFOSSILS: A/G
- RADIOLARIANS: Barren
- DIATOMS
- PALYNOMORPHS: Barren

PALEOMAGNETICS

PHYS. PROPERTIES: ρ=1.62 at 137.9; ρ=1.62 at 138.3; ρ=1.63 at 140.7

CHEMISTRY: $CaCO_3$=93.13%; $CaCO_3$=92.35%; TOC=0.0%; $CaCO_3$=90.21%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

FORAMINIFERAL NANNOFOSSIL OOZE AND NANNOFOSSIL OOZE WITH FORAMINIFERS

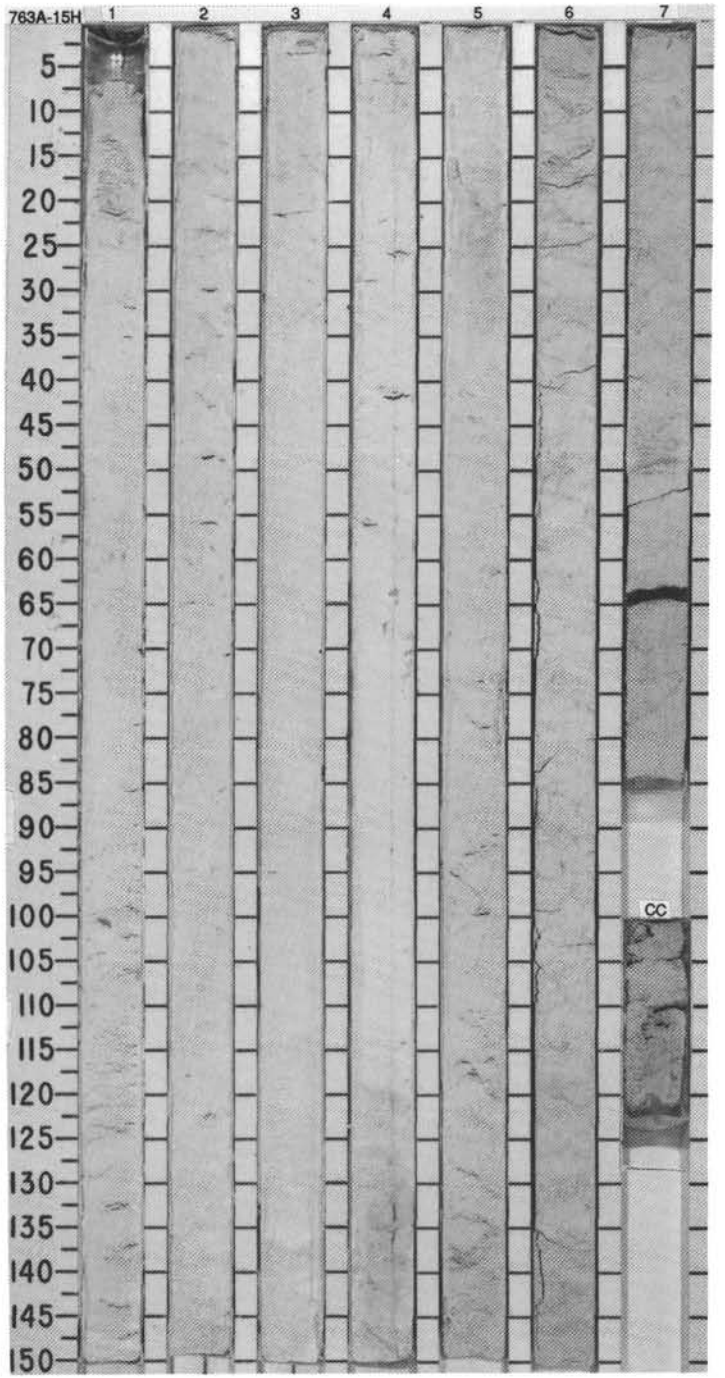
Major lithologies:
NANNOFOSSIL OOZE WITH FORAMINIFERS, white (10YR 8/1), grading into and interbedded with very pale brown (10YR 8/3) FORAMINIFERAL NANNOFOSSIL OOZE.
Towards the base, the content of foraminifers and clay increase as do discoasters and iron oxides, and the pale brown color darkens. Section 6 is bioturbated with abundant pyrite. The color alternation may be related to fluctuating oxidation/reduction conditions.

SMEAR SLIDE SUMMARY (%):

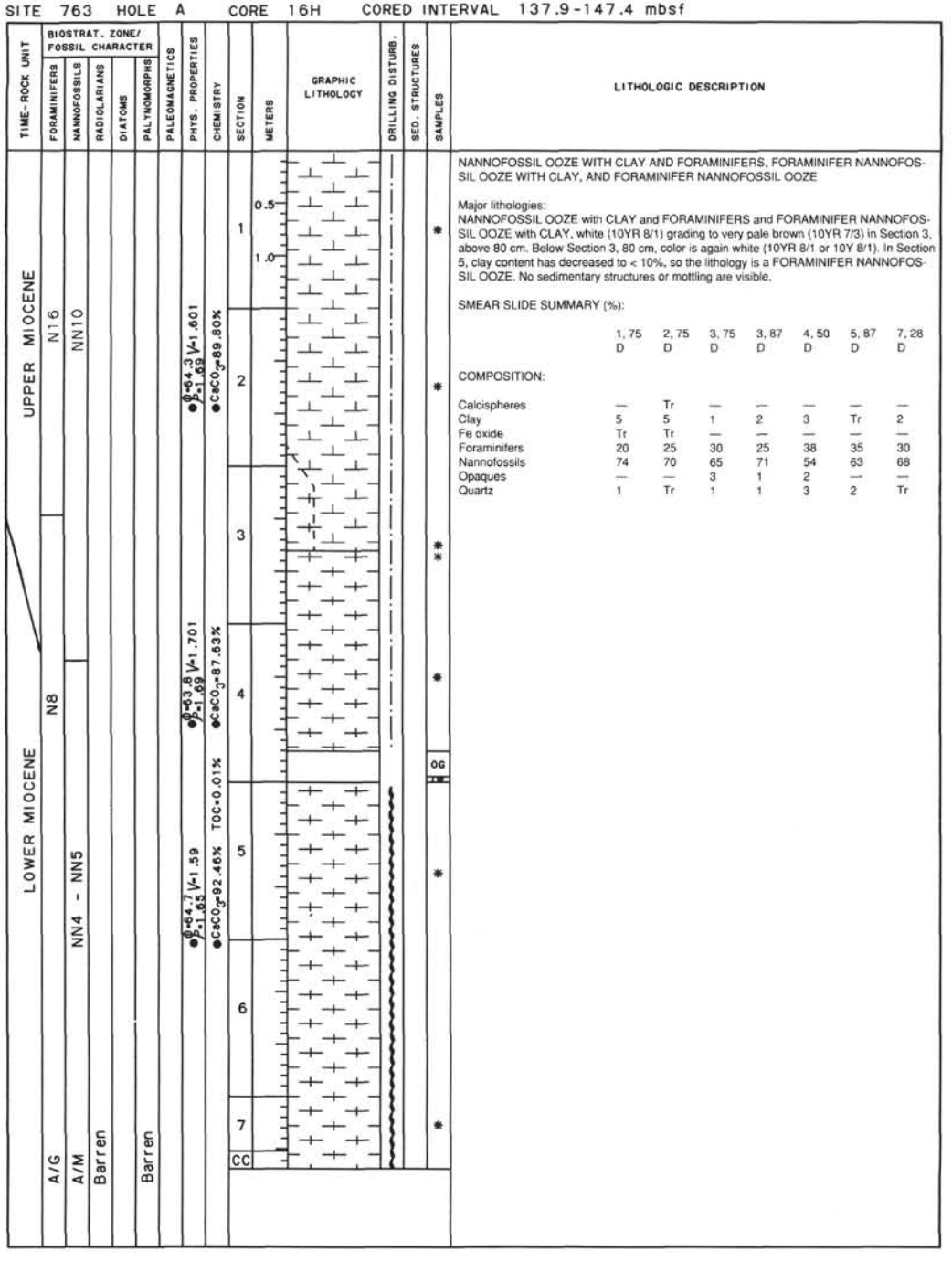
	1, 70 D	2, 70 D	3, 70 M	4, 135 M	5, 20 D
COMPOSITION:					
Accessory minerals	—	—	—	—	—
Bioclast	8	Tr	—	—	5
Clay	2	—	—	—	—
Dolomite	—	—	—	—	—
Fe oxide	Tr	—	—	5	5
Fish	—	—	Tr	Tr	—
Foraminifers	20	25	20	30	30
Mica	—	2	—	—	—
Nannofossils	69	73	79	64	60
Opaques	—	—	—	—	—
Quartz	Tr	—	—	—	—
Radiolarians	1	—	—	—	—
Spicules	—	—	1	1	—

SMEAR SLIDE SUMMARY (%):

	6, 65 D	7, 75 D
COMPOSITION:		
Bioclast	10	—
Fe oxide	1	2
Foraminifers	25	40
Nannofossils	63	58
Spicules	1	—



SITE 763 HOLE A CORE 16H CORED INTERVAL 137.9-147.4 mbsf

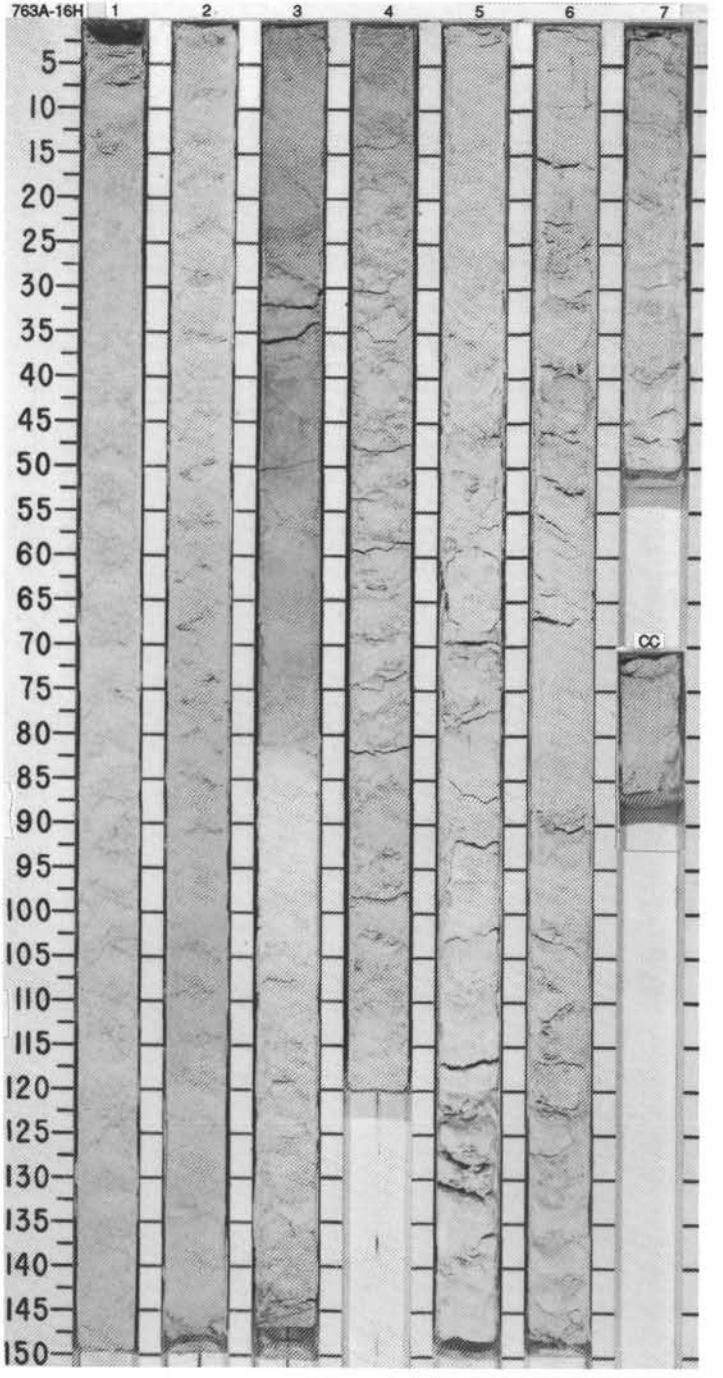


NANNOFOSSIL OOZE WITH CLAY AND FORAMINIFERS, FORAMINIFER NANNOFOSSIL OOZE WITH CLAY, AND FORAMINIFER NANNOFOSSIL OOZE

Major lithologies:
NANNOFOSSIL OOZE with CLAY and FORAMINIFERS and FORAMINIFER NANNOFOSSIL OOZE with CLAY, white (10YR 8/1) grading to very pale brown (10YR 7/3) in Section 3, above 80 cm. Below Section 3, 80 cm, color is again white (10YR 8/1 or 10Y 8/1). In Section 5, clay content has decreased to < 10%, so the lithology is a FORAMINIFER NANNOFOSSIL OOZE. No sedimentary structures or mottling are visible.

SMEAR SLIDE SUMMARY (%):

	1, 75 D	2, 75 D	3, 75 D	3, 87 D	4, 50 D	5, 87 D	7, 28 D
COMPOSITION:							
Calcispheres	—	Tr	—	—	—	—	—
Clay	5	5	1	2	3	Tr	2
Fe oxide	Tr	Tr	—	—	—	—	—
Foraminifers	20	25	30	25	38	35	30
Nannofossils	74	70	65	71	54	63	68
Opaques	—	—	3	1	2	—	—
Quartz	1	Tr	1	1	3	2	Tr



SITE 763 HOLE A CORE 17H CORED INTERVAL 147.4-156.9 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER MIOCENE	A/G N4-N8	A/M NN3	Barren		Barren		ρ=58.2 V=1.68 ρ=62.9 V=1.65	CaCO3=66.72% CaCO3=82.47% TOC=0.0%	1 2 3 4 5 6 7 CC	0.5 1.0	VOID		P	*

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE/CHALK WITH CLAY AND FORAMINIFERS, FORAMINIFER NANNOFOSSIL OOZE/CHALK WITH CLAY, AND CLAYEY FORAMINIFER NANNOFOSSIL 00ZE/CHALK

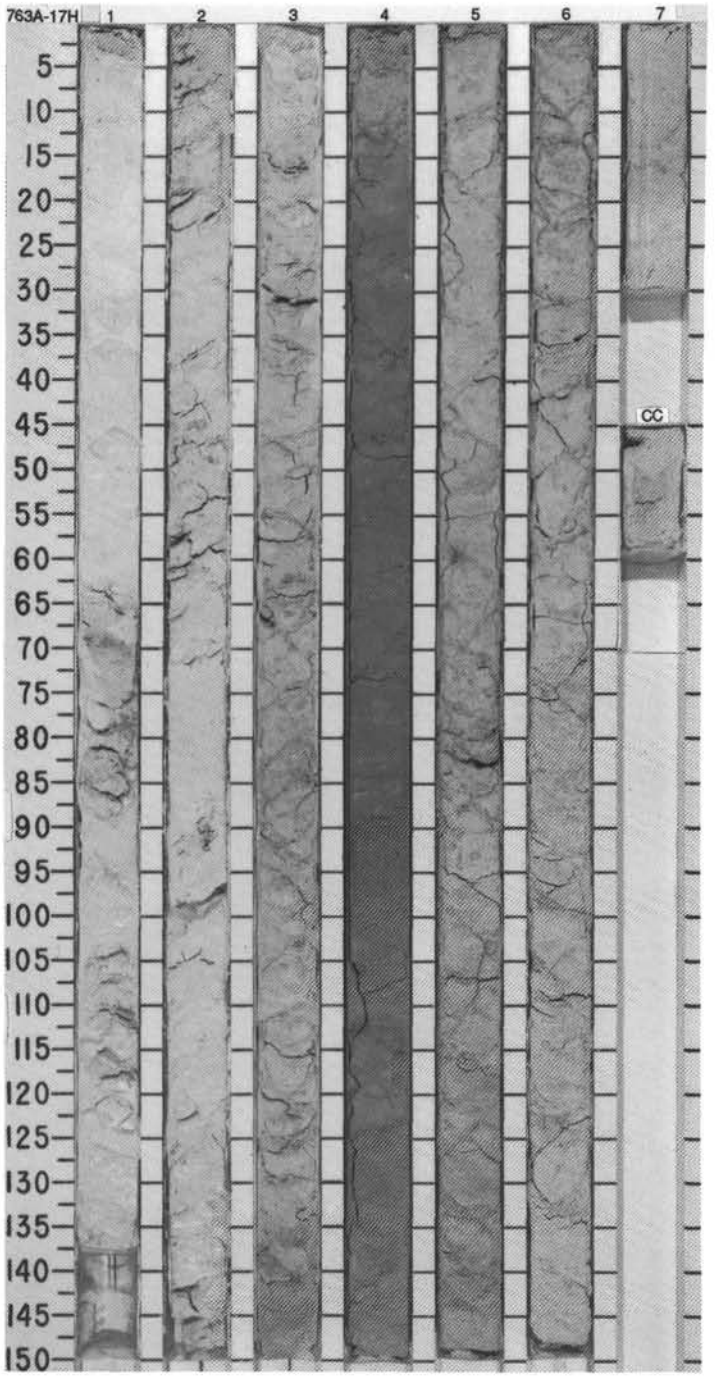
Coring disturbance is moderate with minor drilling biscuits and fracturing.

Major lithologies:
NANNOFOSSIL OOZE/CHALK with CLAY and FORAMINIFERS, FORAMINIFER NANNOFOSSIL OOZE/CHALK, and FORAMINIFER NANNOFOSSIL OOZE/CHALK with CLAY, alternating light greenish gray (10Y 7/2, 5GY 7/1) and white (5Y 8/1). Core is structureless and disturbed by drilling. CLAYEY FORAMINIFER NANNOFOSSIL 00ZE/CHALK, in Section 4, 20-120 cm, olive yellow (2.5Y 6/6) to pale yellow (2.5Y 7/4). Contacts between lithologies are gradational. Section 7 contains a contact between a light greenish gray (10 7/1) nannofossil chalk with foraminifers and clay and a white (5Y 8/1) foraminifer nannofossil chalk.

Minor lithology: Pyrite, disseminated gray wisps at Section 1, 90 cm, and in Section 7.

SMEAR SLIDE SUMMARY (%):

	1, 49 D	2, 112 D	3, 85 D	4, 61 D	5, 75 D	6, 83 D	7, 27 D
COMPOSITION:							
Clay	2	5	15	20	15	20	5
Foraminifers	10	35	10	30	20	20	25
Mica	Tr	Tr	Tr	Tr	Tr	Tr	—
Nannofossils	88	60	75	50	65	60	70
Quartz	Tr	Tr	Tr	Tr	Tr	Tr	—



SITE 763 HOLE A CORE 18H CORED INTERVAL 156.9-166.4 mbsf

TIME-ROCK UNIT: UPPER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: A/G P21 - P22; A/M Barren
- NANNOFOSSILS: N4; NN1 - NN2; NP25
- RADIOLARIANS: Barren
- DIATOMS
- PALYNOMORPHS
- PALEOMAGNETICS
- PHYS. PROPERTIES: ρ=2.62 ρ=2.72 V=1.61; ρ=2.63 ρ=2.72 V=1.64; ρ=2.65 ρ=2.68 V=1.62
- CHEMISTRY: CaCO3=89.05%; CaCO3=88.30%; TOC=0.03%; CaCO3=89.96%
- SECTION: 1, 2, 3, 4, 5, 6, 7, CC
- METERS: 0.5, 1.0
- GRAPHIC LITHOLOGY
- DRILLING DISTURB.
- SED. STRUCTURES: P, P
- SAMPLES: *, *, *, *, *

LITHOLOGIC DESCRIPTION

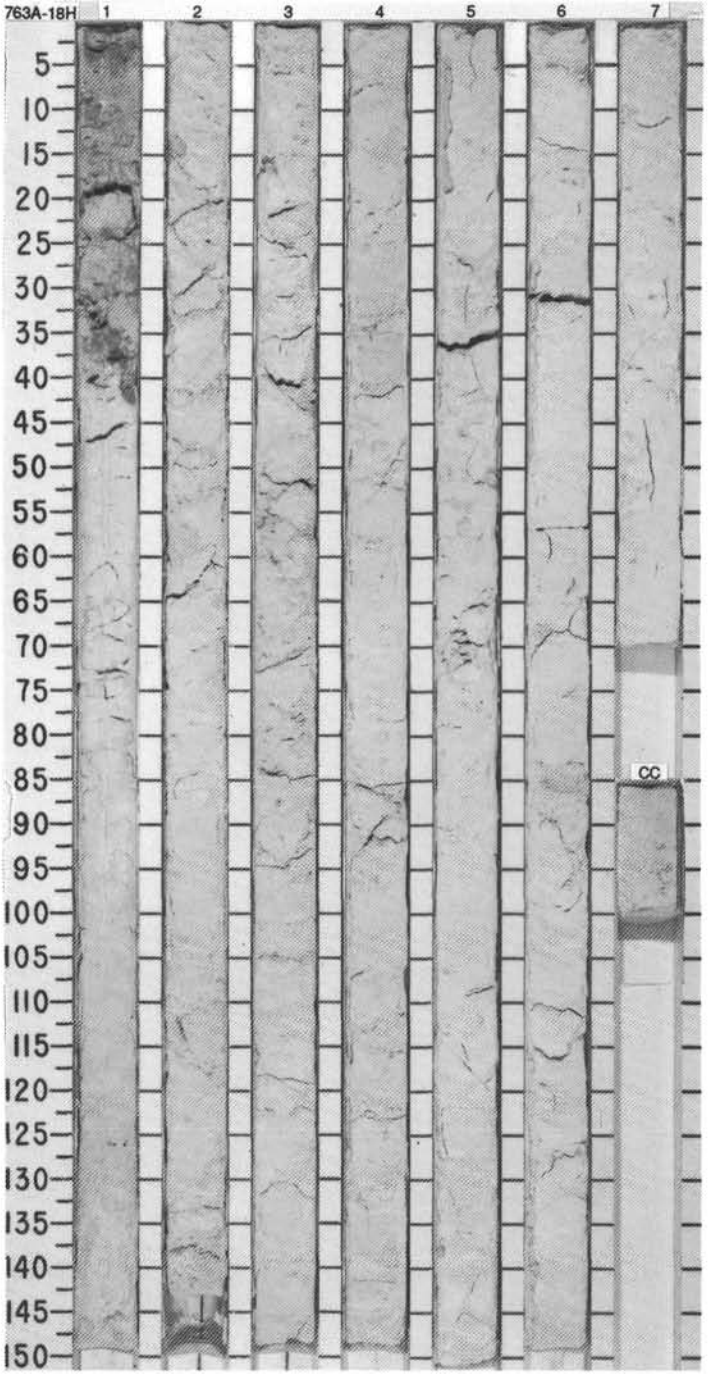
FORAMINIER NANNOFOSSIL OOZE/CHALK WITH CLAY

Major lithology: FORAMINIFER NANNOFOSSIL OOZE/CHALK with CLAY, white (7.5YR 8/0). Very light greenish gray (10Y 8/1-2) is partly dominant color in Section 2; Section 3, 0-108 cm; and Section 4, 25-42 cm. Structureless.

Minor lithologies:
a. Clayey foraminifer nannofossil ooze/chalk, light reddish brown (5YR 6/4), as pieces and fragments in Section 1, 0-45 cm, probably derived from Core 122-763A-17H.
b. Pyrite as grains and small nodules, in Section 6, 80-83 cm, and Section 7, 45-76 cm.

SMEAR SLIDE SUMMARY (%):

	1, 36 M	1, 125 D	3, 10 D	5, 75 D	7, 32 D
COMPOSITION:					
Clay	1	2	1	2	4
Foraminifers	25	30	30	30	30
Nannofossils	70	66	67	64	62
Quartz	4	2	2	3	4
Spicules	Tr	—	—	1	Tr



SITE 763 HOLE A CORE 19H CORED INTERVAL 166.4-175.9 mbsf

TIME-ROCK UNIT: LOWER OLIGOCENE

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: A/G; A/M; Barren. NANNOFOSSILS: P21; NP24; NP23. RADIOLARIANS. DIATOMS. PALYNOMORPHS.

PALEOMAGNETICS

PHYS. PROPERTIES: ●δ=53.7 γ=1.58 ρ=1.76; ●δ=64.6 γ=1.59 ρ=1.72; ●δ=65.9 γ=1.59 ρ=1.79

CHEMISTRY: ●$CaCO_3$=88.21%; ●$CaCO_3$=82.63%; TOC=0.09%; ●$CaCO_3$=77.38%

SECTION: 1 2 3 4 5 6 7 8

METERS: 0.5; 1.0

GRAPHIC LITHOLOGY: VOID; VOID; VOID; VOID; VOID

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OC; TW

LITHOLOGIC DESCRIPTION

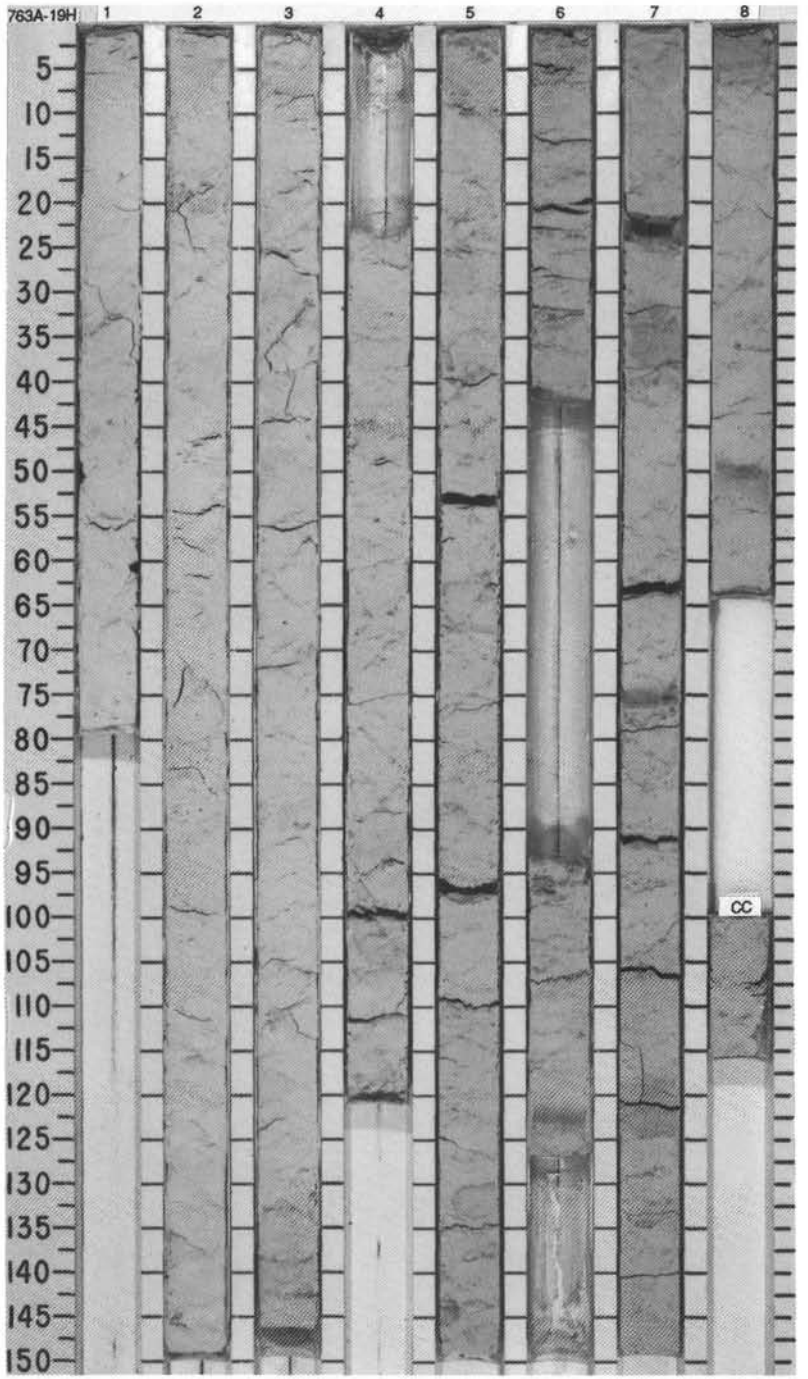
FORAMINIFER NANNOFOSSIL OOZE/CHALK WITH CLAY

Major lithology: FORAMINIFER NANNOFOSSIL OOZE/CHALK with CLAY, white (5Y 8/1), alternating with thinly laminated gray (N6) FORAMINIFER NANNOFOSSIL OOZE/CHALK with CLAY which contain a higher percentage of clay and disseminated pyrite? (marcasite?). Gray layers are 1 to 8 cm thick. Most boundaries between thin gray layers and white layers are gradational. Distinct boundaries occur in Section 5, 62-68 cm; Section 6, 122-124 cm; Section 7, 74-76 cm, 118-122 cm; Section 8, 48-52 cm. Possible color cycles, 30-50 cm thick in 3, 5, 7, and 8.

Minor lithology: White foraminifer nannofossil ooze/chalk with quartz, white (5Y 8/1), in Section 8, 5-47 cm.

SMEAR SLIDE SUMMARY (%):

	1, 44 D	3, 68 D	4, 55 D	7, 77 M	8, 36 D
COMPOSITION:					
Clay	3	2	2	3	—
Foraminifers	35	30	35	35	35
Nannofossils	60	65	60	57	55



SITE 763 HOLE A CORE 20H CORED INTERVAL 175.9-185.4 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER OLIGOCENE	A/G	P18							1	0.5				*
	A/G	NP23								1.0				
		NP22							2					*
	Barren								3					
									4					*
	Barren								5					
									6					*
									7					
									CC					

LITHOLOGIC DESCRIPTION

NANNOFOSSIL OOZE/CHALK WITH FORAMINIFERS WITH CLAY

Major lithology: NANNOFOSSIL OOZE/CHALK WITH CLAY, alternation of white (5Y 8/1) and light greenish gray (10Y 7/2) in an interval of 10-140 cm. Moderately mottled by bioturbation. Pale yellow (5Y 7/3) laminations are present in Section 1, 11 cm and Section 6, 55-75 cm. Cyclic color change is gradational throughout the core.

Minor lithologies:
a. Foraminifer nannofossil ooze/chalk with clay, light greenish gray (10Y 7/2), is observed in Section 3, 92-135 cm, lithologic contacts are gradational.
b. Pyrite, very dark gray (5Y 3/1), grains and nodules (up to 4 mm in diameter) are scattered throughout the core, e.g. in Section 1, 106 cm, and Section 2, 56 cm.

SMEAR SLIDE SUMMARY (%):

	1, 68 D	2, 59 M	3, 125 M	6, 53 D
COMPOSITION:				
Clay	4	2	5	2
Foraminifers	10	20	25	15
Nannofossils	85	63	67	83
Pyrite	—	15	3	—
Quartz	1	Tr	—	Tr

SITE 763 HOLE A CORE 21H CORED INTERVAL 185.4-194.9 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER EOCENE	A/G P17 - P18	A/G NP21	Barren		Barren		ρ=1.602 ρ=1.93 ρ=59.3 ρ=1.83	CaCO3=87.22% CaCO3=90.21% TOC=0.02%	1 2 3 4 5 6 7 CC	0.5 1.0				*

LITHOLOGIC DESCRIPTION

FORAMINIFER NANNOFOSSIL OOZE/CHALK WITH CLAY

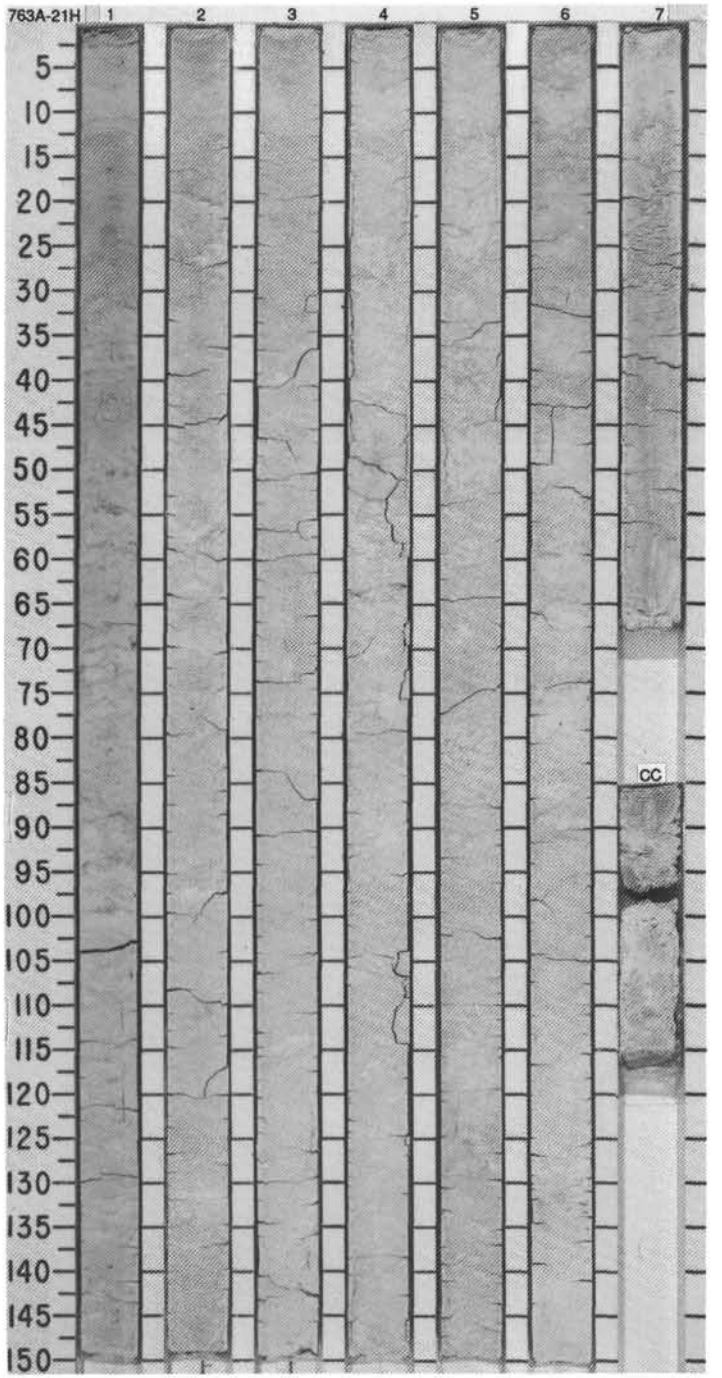
Drilling disturbance is minor except in Section 7 and CC.

Major lithology: FORAMINIFER NANNOFOSSIL OOZE/CHALK, Section 1 shows an upward gradation from white (5Y 8/1) toward light gray (5Y 7/1) then gray (5Y 6/1) and it is mottled and partly bioturbated. Other sections are homogeneous and structureless, all white (5Y 8/1).

SMEAR SLIDE SUMMARY (%):

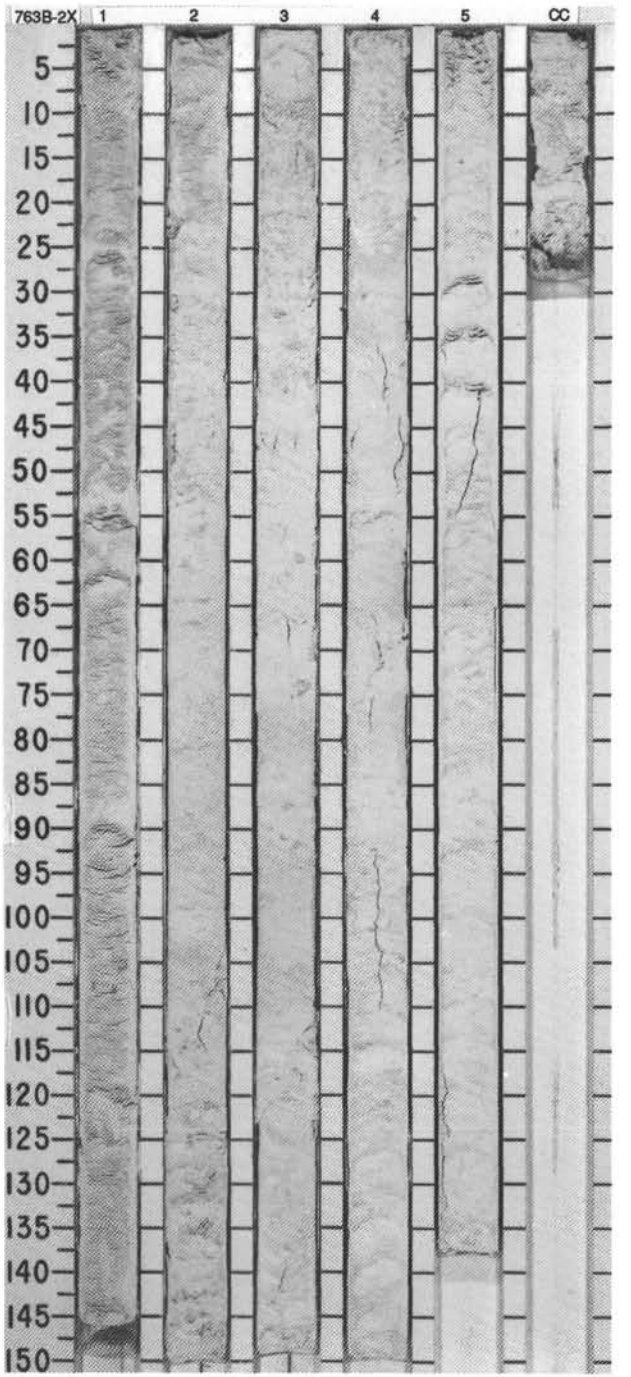
	1, 16 D	1, 139 D	2, 76 D	4, 76 D	6, 76 D
COMPOSITION:					
Accessory minerals	—	—	—	—	1
Clay	5	3	2	3	5
Foraminifers	25	30	25	25	30
Nannofossils	68	60	68	65	60
Pyrite	—	5	3	5	2
Quartz	2	2	2	2	2

CORE 763B-1C NO RECOVERY



SITE 763 HOLE B CORE 2X CORED INTERVAL 190.0-199.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER EOCENE	P17-P18	NP21					●59.8 V=1.54 2.72	●$CaCO_3$=89.5%	1	0.5 1.0				*	NANNOFOSSIL OOZE/CHALK WITH FORAMINIFERS AND NANNOFOSSIL OOZE/ CHALK Major lithologies: NANNOFOSSIL OOZE/CHALK with FORAMINIFERS and NANNOFOSSIL OOZE/CHALK, white (10YR 8/1), homogeneous. The upper section is slightly more foram-rich (10% versus 5% at base). There is little sign of bioturbation or sedimentary structures. Several sections have minor amorphous iron sulfide "smears". SMEAR SLIDE SUMMARY (%): 1, 93 D — 3, 92 D — 5, 92 D COMPOSITION: Foraminifers 10 10 5 Nannofossils 86 85 91 Ostracod — — 1 Quartz — 1 2 Shell debris — — 1 Spicules 4 4 —
	A/G	A/M							2						
									3					*	
							●59.2 V=1.57 2.73	●$CaCO_3$=89.9%	4						
									5					*	
									CC						



SITE 763 HOLE B CORE 3X CORED INTERVAL 199.5-209.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER EOCENE	P16-P17	NP20					●D=58.6 V=1.57 P=1.78	●$CaCO_3$=86.4%	1	0.5 1.0				*
	A/G	A/G	Barren		Barren		●D=58.0 V=1.57 P=1.77	●$CaCO_3$=87.8% TOC=0.0%	2					*
									3					*
							●D=58.4 V=1.57 P=1.78	●$CaCO_3$=89.7%	4					*
									5				OG IW	*
									6					
									CC					

LITHOLOGIC DESCRIPTION

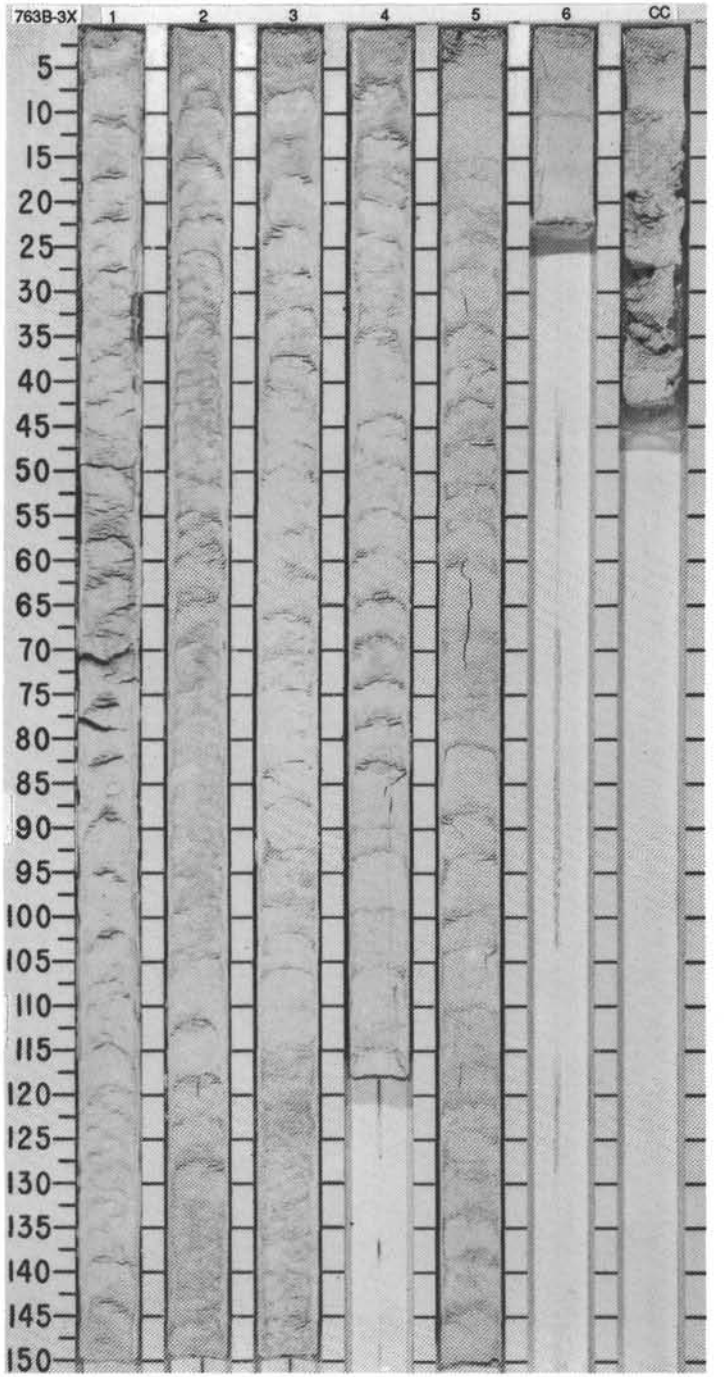
NANNOFOSSIL OOZE/CHALK WITH CLAY

The core is slightly disturbed by drilling.

Major lithology: NANNOFOSSIL OOZE/CHALK, white (10Y 8/1), homogeneous, structureless. Foraminifers are present in trace amounts, up to 1%. Mica is present in trace amounts.

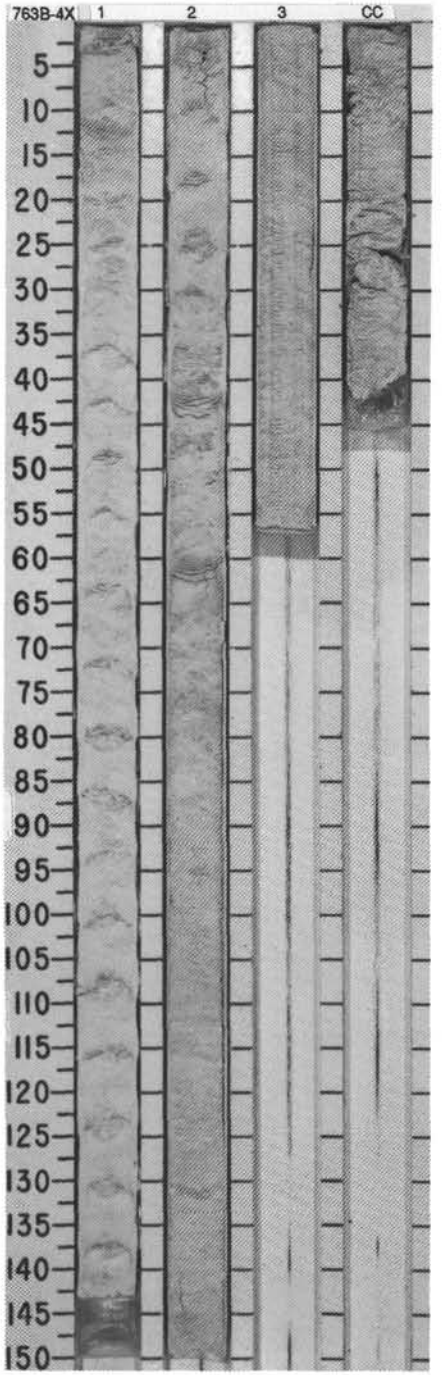
SMEAR SLIDE SUMMARY (%):

	1, 86 D	2, 86 D	3, 86 D	4, 86 D
COMPOSITION:				
Foraminifers	1	Tr	1	2
Mica	*Tr*	*Tr*	*Tr*	—
Nannofossils	99	100	99	98



SITE 763 HOLE B CORE 4X CORED INTERVAL 209.0-218.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER EOCENE	A/G P15 - P16	A/G NP19 - NP20	Barren		Barren		Φ=58.1 ρ=1.80 V=1.57 Φ=58.9 ρ=1.77 V=1.56	CaCO3=87.7% TOC=0.02% CaCO3=86.8%	1 2 3 CC	0.5 1.0			*	*	NANNOFOSSIL OOZE/CHALK WITH CLAY Drilling disturbance is strong (biscuited) in the upper half of the core, and moderate in the lower half. Major lithology: NANNOFOSSIL OOZE/CHALK, very light greenish gray (10Y 8/1). Homogeneous, structureless except for some very diffuse laminations in the lower part of Section 2. About 3-5% foraminifers, ostracods are present (2%, Section 1). SMEAR SLIDE SUMMARY (%): 1, 91 D / 2, 90 D / 3, 33 D COMPOSITION: Clay: Tr / Tr / — Foraminifers: 5 / 3 / 5 Nannofossils: 93 / 95 / 95 Opaques: — / 2 / — Ostracod: 2 / — / Tr Quartz: — / — / Tr



SITE 763 HOLE B CORE 5X CORED INTERVAL 218.5-228.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER EOCENE	A/G P14 - P15	A/M NP18	Barren		Barren		ρ=57.6 V=1.57 Ρ=1.82 ρ=55.5 V=1.58 Ρ=1.80	CaCO3=89.7 TOC=0.01% CaCO3=87.1%	1 2 3 4 CC	0.5 1.0				* * * *

LITHOLOGIC DESCRIPTION

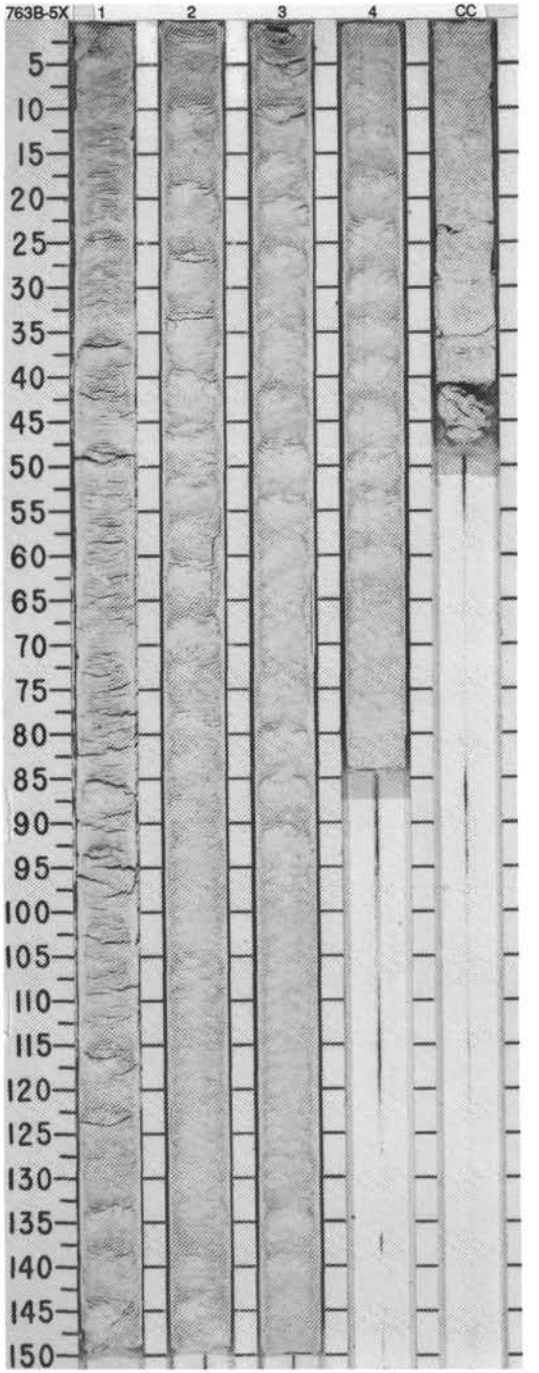
NANNOFOSSIL OOZE/CHALK WITH CLAY

The core is slightly disturbed by drilling.

Major lithology: NANNOFOSSIL OOZE/CHALK with CLAY, homogeneous white (5Y 8/1), structureless. A few layers of stiff ooze are present in Section 4 and CC. Foraminifers are present in amounts of 1-3%. Mica is present in trace amounts to 1%.

SMEAR SLIDE SUMMARY (%):

	1, 78 D	2, 78 D	3, 78 D	CC, 30 D
COMPOSITION:				
Foraminifers	3	1	1	2
Mica	—	1	1	Tr
Nannofossils	97	98	98	98
Quartz	—	—	—	Tr



SITE 763 HOLE B CORE 6X CORED INTERVAL 228.0-237.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE EOCENE	A/G P12													
	A/M NP15	NP15 - NP16												
	Barren													
	Barren													
							●0-57.2 ρ=1.87	●CaCO$_3$=88.1%	6					*
							●0-58.6 ρ=1.85 ψ=1.62	●CaCO$_3$=89.1% TOC=0.02%	4					*
							●0-54.4 ρ=1.84 ψ=1.68	●CaCO$_3$=84.9%	2					*
									1	0.5 / 1.0				*

LITHOLOGIC DESCRIPTION

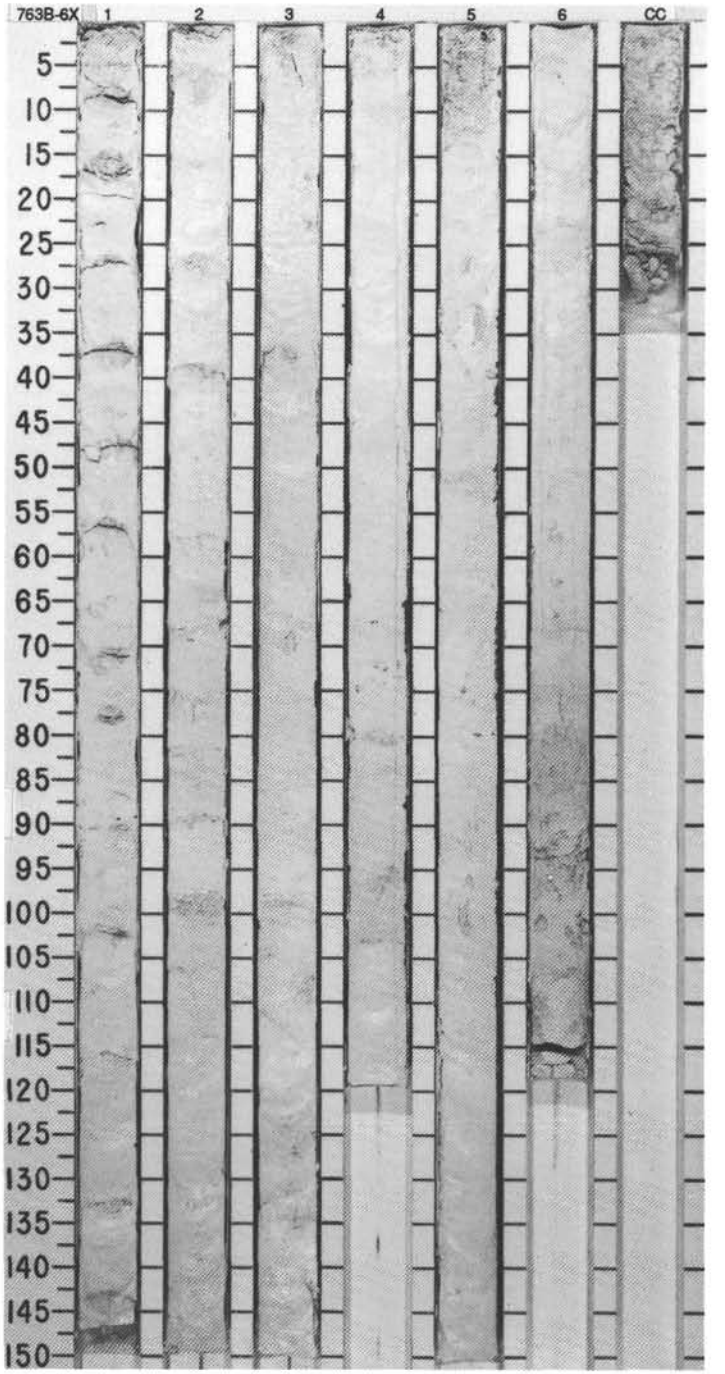
NANNOFOSSIL CHALK WITH CLAY

Coring disturbance is minor.

Major lithology: NANNOFOSSIL CHALK with CLAY, homogeneous white (5Y 8/1), alternating hard and soft layers, otherwise structureless. In Section 1 and 2, 10 cm-thick layers of hard and soft sediment alternate regularly. In Section 3, it is dominantly hard (80%). In Section 4 through CC about 50-60% of the sediments are hard, but the alternation is less regular than in Sections 1 and 2. Foraminifers are present in amounts of 4-10%. Mica is present in trace amounts to 1%.

SMEAR SLIDE SUMMARY (%):

	1, 88 D	2, 69 D	4, 67 D	5, 80 D
COMPOSITION:				
Foraminifers	10	8	5	4
Mica	Tr	Tr	Tr	1
Nannofossils	90	92	95	95
Quartz	Tr	—	—	—



SITE 763 HOLE B CORE 7X CORED INTERVAL 237.5-247.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE EOCENE	P11	NP15					ρ 1.82 V 1.79	CaCO3 88.7% TOC 0.01%	1	0.5 1.0			P	*
	A/M	A/P	Barren		Barren				2				P	*
									CC				P	

LITHOLOGIC DESCRIPTION

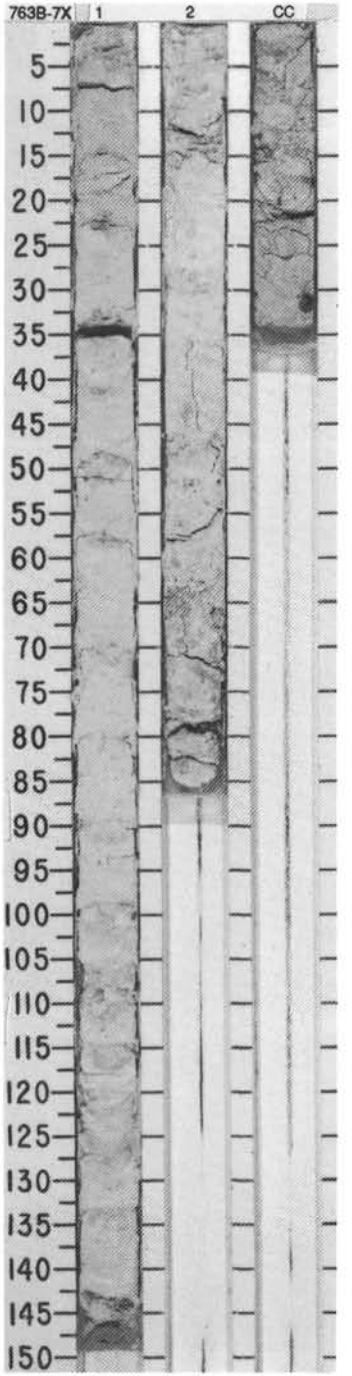
FORAMINIFERAL NANNOFOSSIL CHALK WITH CLAY

Core is moderately disturbed, especially toward the base.

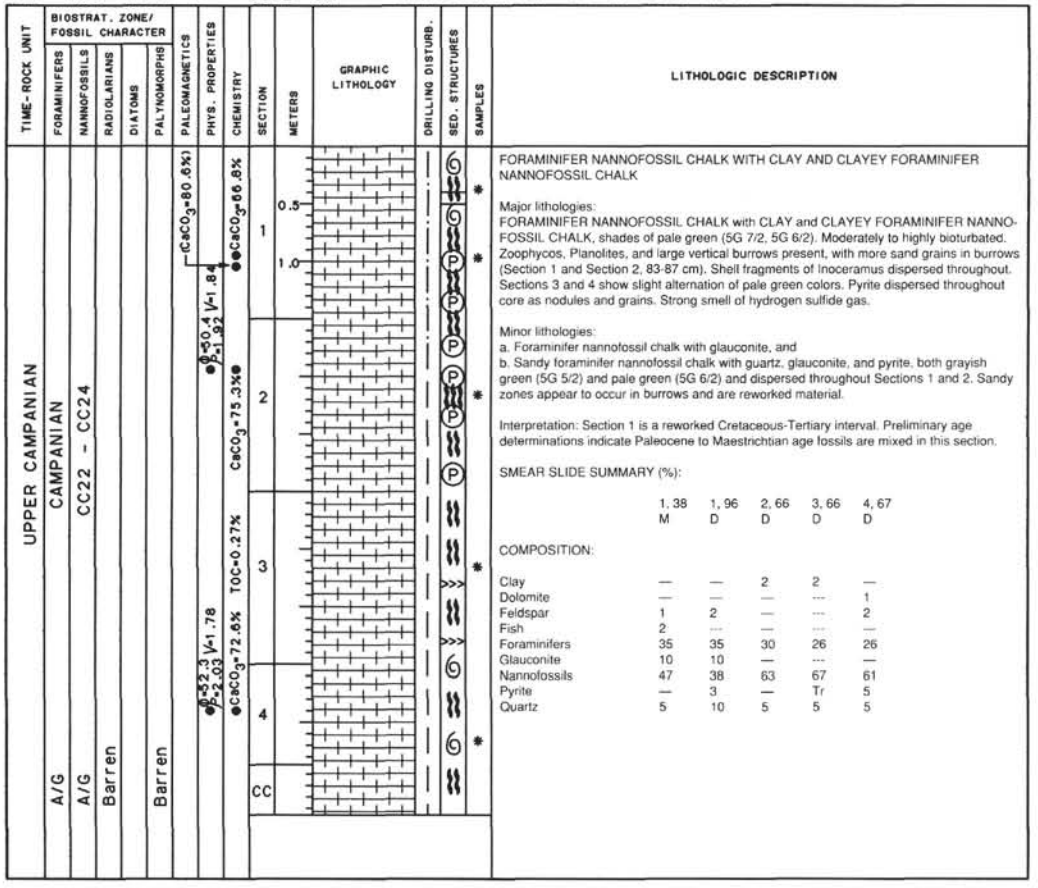
Major lithology: FORAMINIFERAL NANNOFOSSIL CHALK WITH CLAY, light greenish gray (5GY 7/1), homogeneous. Contains several vague laminations and an increase in pyrite towards the base.

SMEAR SLIDE SUMMARY (%):

	1, 80 D	2, 50 D
COMPOSITION:		
Accessory minerals	—	1
Foraminifers	25	30
Nannofossils	70	66
Quartz	3	1
Spicules	2	2



SITE 763 HOLE B CORE 8X CORED INTERVAL 247.0-256.5 mbsf



FORAMINIFER NANNOFOSSIL CHALK WITH CLAY AND CLAYEY FORAMINIFER NANNOFOSSIL CHALK

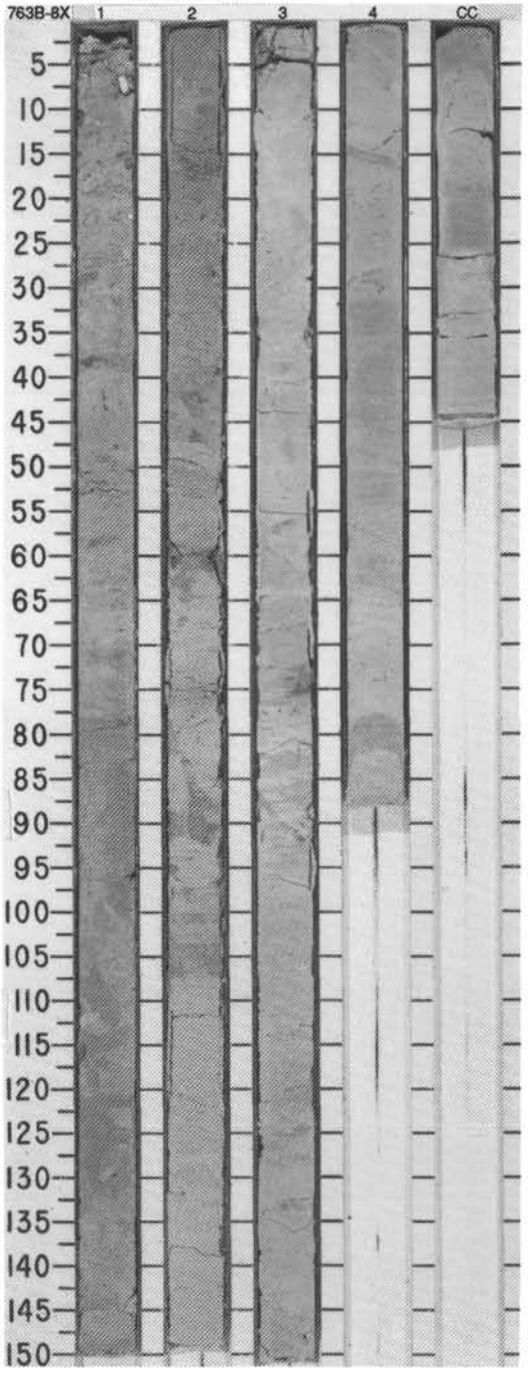
Major lithologies:
FORAMINIFER NANNOFOSSIL CHALK with CLAY and CLAYEY FORAMINIFER NANNOFOSSIL CHALK, shades of pale green (5G 7/2, 5G 6/2). Moderately to highly bioturbated. Zoophycos, Planolites, and large vertical burrows present, with more sand grains in burrows (Section 1 and Section 2, 83-87 cm). Shell fragments of Inoceramus dispersed throughout. Sections 3 and 4 show slight alternation of pale green colors. Pyrite dispersed throughout core as nodules and grains. Strong smell of hydrogen sulfide gas.

Minor lithologies:
a. Foraminifer nannofossil chalk with glauconite, and
b. Sandy foraminifer nannofossil chalk with quartz, glauconite, and pyrite, both grayish green (5G 5/2) and pale green (5G 6/2) and dispersed throughout Sections 1 and 2. Sandy zones appear to occur in burrows and are reworked material.

Interpretation: Section 1 is a reworked Cretaceous-Tertiary interval. Preliminary age determinations indicate Paleocene to Maestrichtian age fossils are mixed in this section.

SMEAR SLIDE SUMMARY (%):

	1, 38 M	1, 96 D	2, 66 D	3, 66 D	4, 67 D
COMPOSITION:					
Clay	—	—	2	2	—
Dolomite	—	—	—	---	1
Feldspar	1	2	—	---	2
Fish	2	---	—	---	—
Foraminifers	35	35	30	26	26
Glauconite	10	10	—	---	—
Nannofossils	47	38	63	67	61
Pyrite	—	3	—	Tr	5
Quartz	5	10	5	5	5



SITE 763 HOLE B CORE 9X CORED INTERVAL 256.5-266.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER CAMPANIAN	A/G	A/G	Barren		Barren		Φ=47.6 V=1.75 ρ=2.05 V=1.85 Φ=47.8 V=1.85 ρ=1.99 V=1.85 Φ=51.2 V=1.76 ρ=2.14	$CaCO_3$=78.5% $CaCO_3$=78.3% TOC=0.03% $CaCO_3$=76.9%	1 2 3 4 5 6 7 CC	0.5 1.0			P P	CC

LITHOLOGIC DESCRIPTION

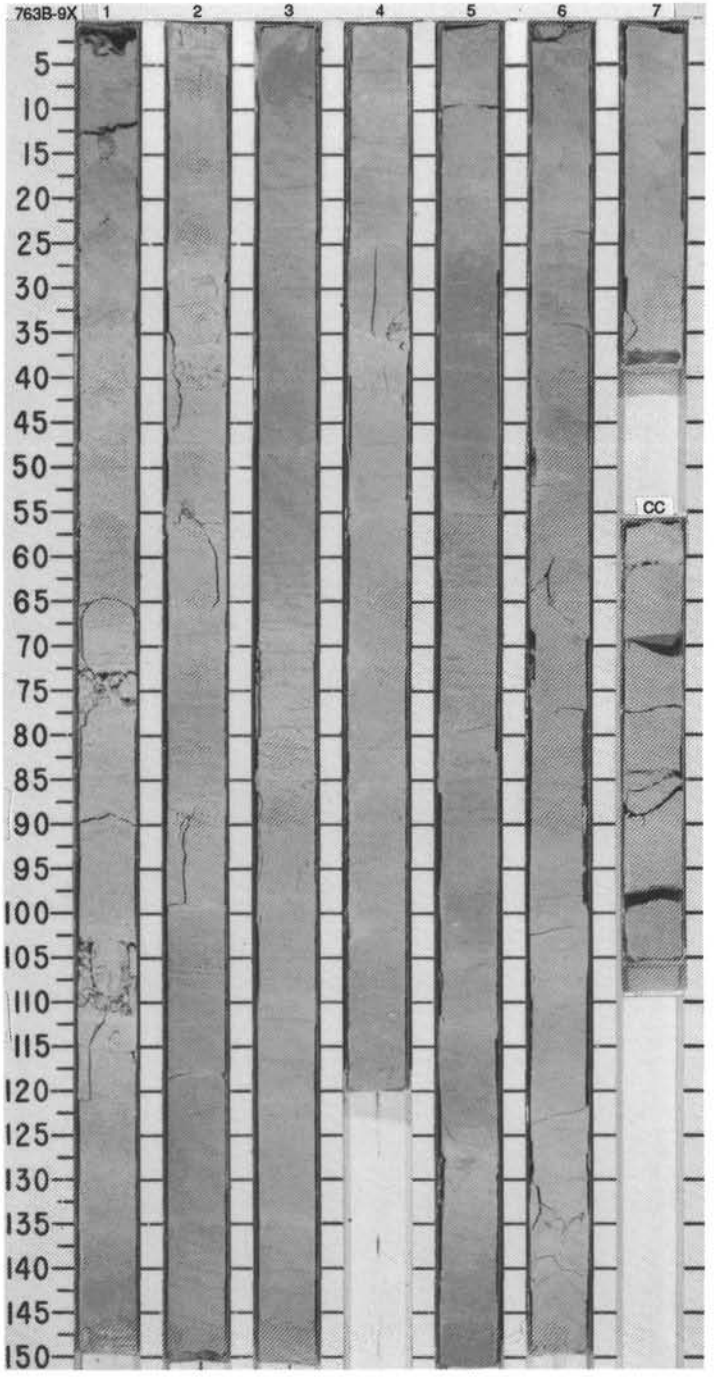
NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY

Major lithology: NANNOFOSSIL CHALK with FORAMINIFERS and CLAY, gradationally interlayered pale green (5G 7/2) and light greenish gray (5G 7/1) beds, which vary between 5 and 65 cm in thickness. Generally structureless and characterized by moderate to strong bioturbation with many identifiable trace fossils such as Zoophycos, Planolites, Chondrites, and minor Teichichnus

Minor lithology: Pyrite grains are scattered throughout the core. Some trace fossils are infilled with pyrite, e.g. Section 4, 20-22 cm, and Section 5, 85-86 cm. Foraminifer tests are also filled with either pyrite or glauconite.

SMEAR SLIDE SUMMARY (%):

	1, 94 D	3, 52 D	5, 131 D
COMPOSITION:			
Clay	Tr	2	Tr
Foraminifers	10	15	10
Nannofossils	90	83	90
Quartz	Tr	Tr	Tr



SITE 763 HOLE B CORE 10X CORED INTERVAL 266.0-275.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER CAMPANIAN	A/G	A/G	CAMPANIAN - MAESTRICHTIAN		Barren		●Φ=52.0 V=1.66 P=2.04	●$CaCO_3$=84.7%	1	0.5 1.0				*
							●Φ=48.2 V=1.85 P=2.04	●$CaCO_3$=82.0% TOC=0.02%	2					
							●Φ=51.6 V=1.85 P=2.08	●$CaCO_3$=79.1%	3					*
									4					
									5					*
									6					
									7					
									CC					

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY

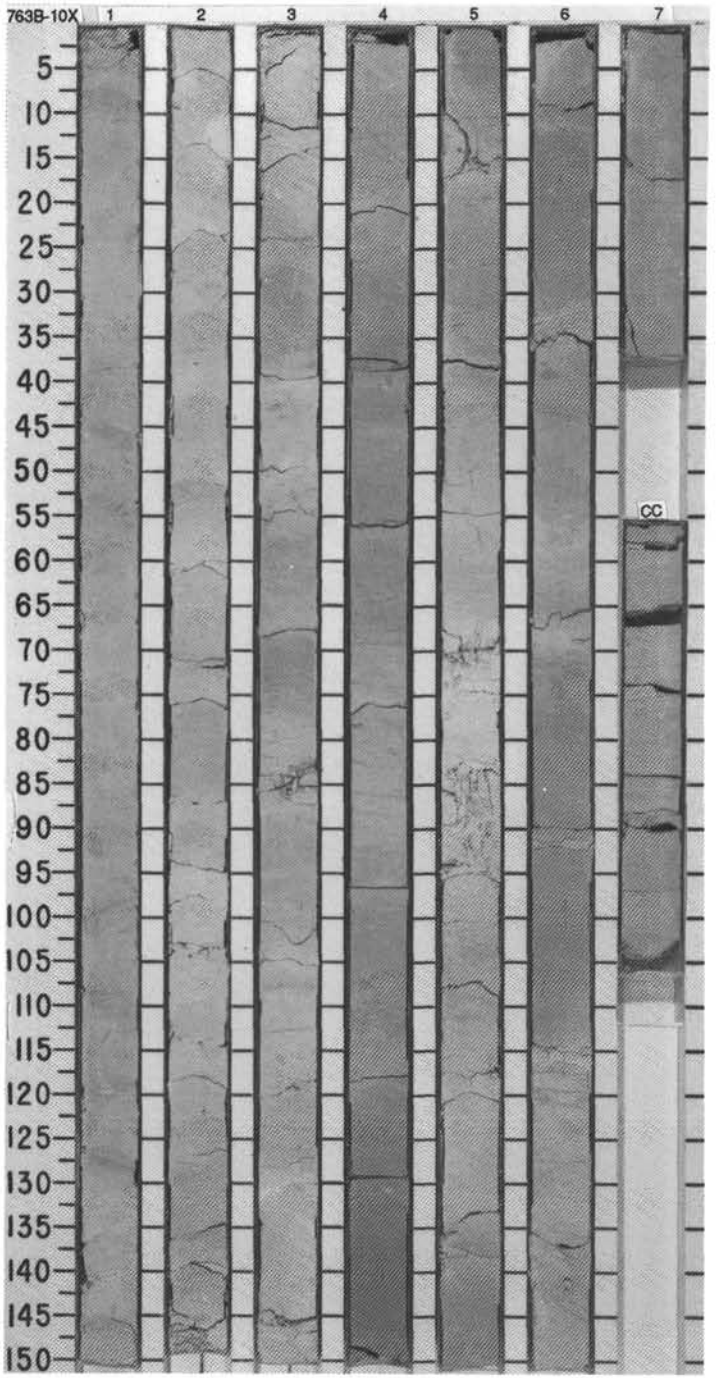
Sections 1 and 2 are strongly disturbed (biscuited) by drilling.

Major lithology: NANNOFOSSIL CHALK WITH FORAMINIFERS and CLAY, strongly bioturbated (Zoophycos, Chondrites, vertical and horizontal burrows). Barely visible cycles with very weak color changes are present: "dark" lithofacies are light greenish gray (5G 7/1) and light lithofacies are between 5G 7/1 and 10Y 8/1 (white). Cycles are about 30 to 50 cm thick: dark and light colors are in the same proportions. Both lithofacies are grouped in the same dominant lithology since the difference is small. Small pyrite crystals are scattered throughout and some foraminifer tests are filled with pyrite.

Minor lithology: Nannofossil chalk, white (10Y 8/1), in Section 5, 65-95 cm, there is a gradual transition to the dominant lithology.

SMEAR SLIDE SUMMARY (%):

	1, 37 D	3, 69 D	5, 78 M
COMPOSITION:			
Clay	2	3	3
Dolomite	—	1	—
Feldspar	1	2	1
Foraminifers	15	25	10
Nannofossils	68	59	84
Opaques	5	7	—
Quartz	4	3	2
Silicoflagellates	5	—	—



SITE 763 HOLE B CORE 11X CORED INTERVAL 275.5-285.0 mbsf

TIME-ROCK UNIT: LOWER CAMPANIAN
BIOSTRAT. ZONE/FOSSIL CHARACTER: UPPER CAMPANIAN; CC18 - CC21
FORAMINIFERS: A/G; A/G
NANNOFOSSILS: A/G; A/G
RADIOLARIANS: Barren
DIATOMS:
PALYNOMORPHS: Barren
PALEOMAGNETICS
PHYS. PROPERTIES: ρ=52.4 V=1.74; ρ=49.0 V=1.72; ρ=1.98; ρ=1.91
CHEMISTRY: ●CaCO3=85.7%; TOC=0.04%; ●CaCO3=89.4%
SECTION: 1, 2, 3, 4, 5, CC
METERS: 0.5, 1.0
GRAPHIC LITHOLOGY
DRILLING DISTURB.
SED. STRUCTURES
SAMPLES

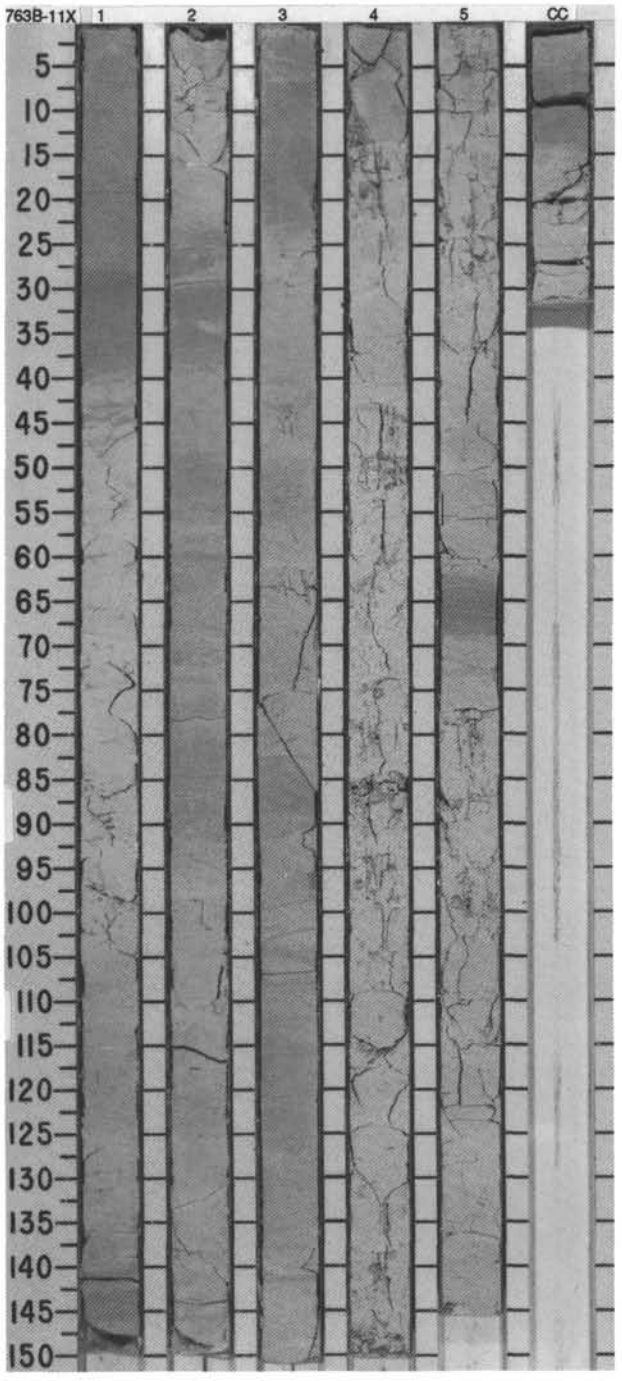
LITHOLOGIC DESCRIPTION

FORAMINIFER NANNOFOSSIL CHALK WITH CLAY AND NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY

Major lithologies:
FORAMINIFER NANNOFOSSIL CHALK with CLAY and NANNOFOSSIL CHALK with FORAMINIFERS and CLAY, light greenish gray (5GY 7/1 and 5G 7/1), alternating and grading into white (5G 8/1) layers. Light greenish gray layers are bioturbated with common horizontal burrows and , rare vertical burrows, and exhibit gradational color variations between 5GY 7/1 and 5G 7/1. White layers (5G 8/1) contain less clay, are heavily disturbed (biscuited) by drilling, and the pieces are structureless except for Zoophycos burrows. Color boundaries are generally gradational.

SMEAR SLIDE SUMMARY (%):

	1, 34 D	2, 9 D	4, 30 D	5, 67 D
COMPOSITION:				
Accessory minerals	1	—	—	—
Clay	2	—	—	5
Dolomite	—	1	1	—
Foraminifers	25	20	30	30
Glauconite	—	1	Tr	—
Nannofossils	70	74	65	60
Opaques	—	4	4	3
Quartz	2	—	—	2



SITE 763 HOLE B CORE 12X CORED INTERVAL 285.0-294.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER CAMPANIAN	A/G	A/G	Barren		Barren		Φ=52.6 V=1.74 ρ=1.94	CaCO3=88.6%	1	0.5 1.0				*
	CAMPANIAN	CC18 - CC21					Φ=51.2 V=1.82 ρ=2.02	TOC=0.02% CaCO3=86.4%	2					
									3					OG TW
									4					*
									CC					

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY

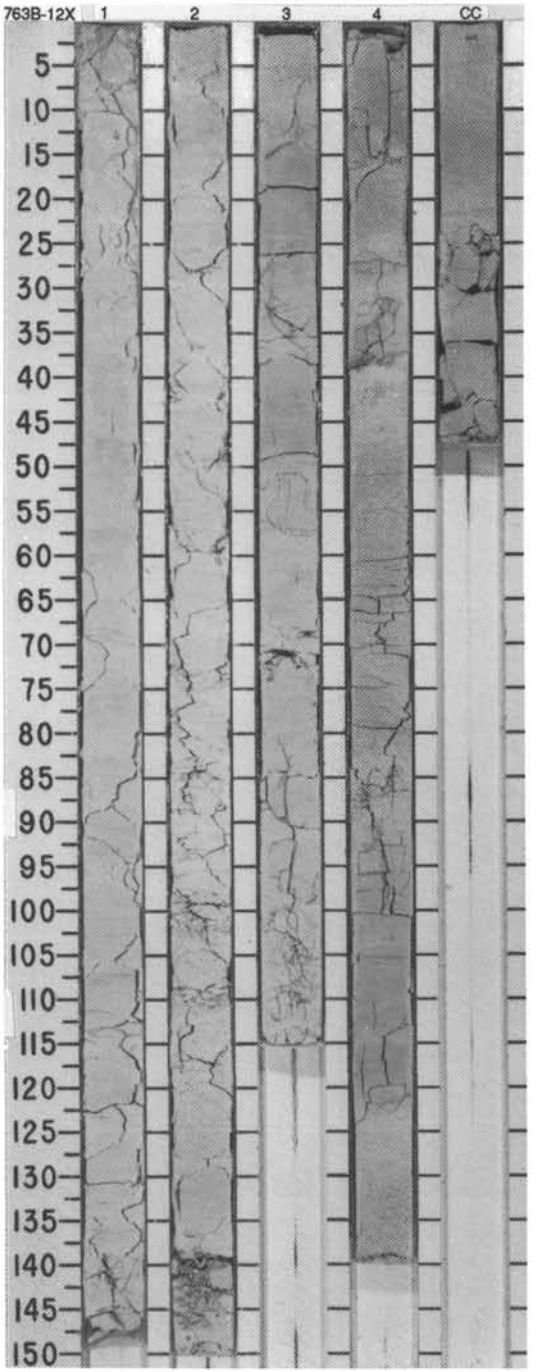
The core is highly disturbed and consists of drilling biscuits and approximately 30% drilling slurry.

Major lithology: NANNOFOSSIL CHALK with FORAMINIFERS and CLAY, light greenish gray (5G 7/1) to pale green (5G 7/2), structureless. Bioturbation is moderate t strong throughout the core with many Zoophycos, Planolites, and Chondrites. Foraminifers are filled with opaque minerals.

Minor lithologies:
a. Recrystallized foraminifers are concentrated in Section 3, 10-16 cm, with many Zophycos, Planolites, and Chondrites.
b. A shell fragment is observed in CC, 20 cm.

SMEAR SLIDE SUMMARY (%):

	1, 58 D	4, 58 D
Clay	3	—
Foraminifers	15	15
Glass	1	1
Nannofossils	78	79
Quartz	2	3
Spicules	8	2



SITE 763 HOLE B CORE 13X CORED INTERVAL 294.5-304.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER CAMPANIAN	A/G	A/G	Barren		Barren		ρ=48.6 ● ψ=1.76 ρ=1.85	●$CaCO_3$=85.5%	1	0.5				*
	CAMPANIAN	CC18 - CC21					ρ=48.2 ψ=1.71 ρ=1.82	TOC=0.03%	1	1.0				
									2					*
									3					*
							ρ=53.7 ψ=1.76 ρ=1.87	●$CaCO_3$=93.3%	4					
									5					*
									6					*
									7					
									CC					

LITHOLOGIC DESCRIPTION

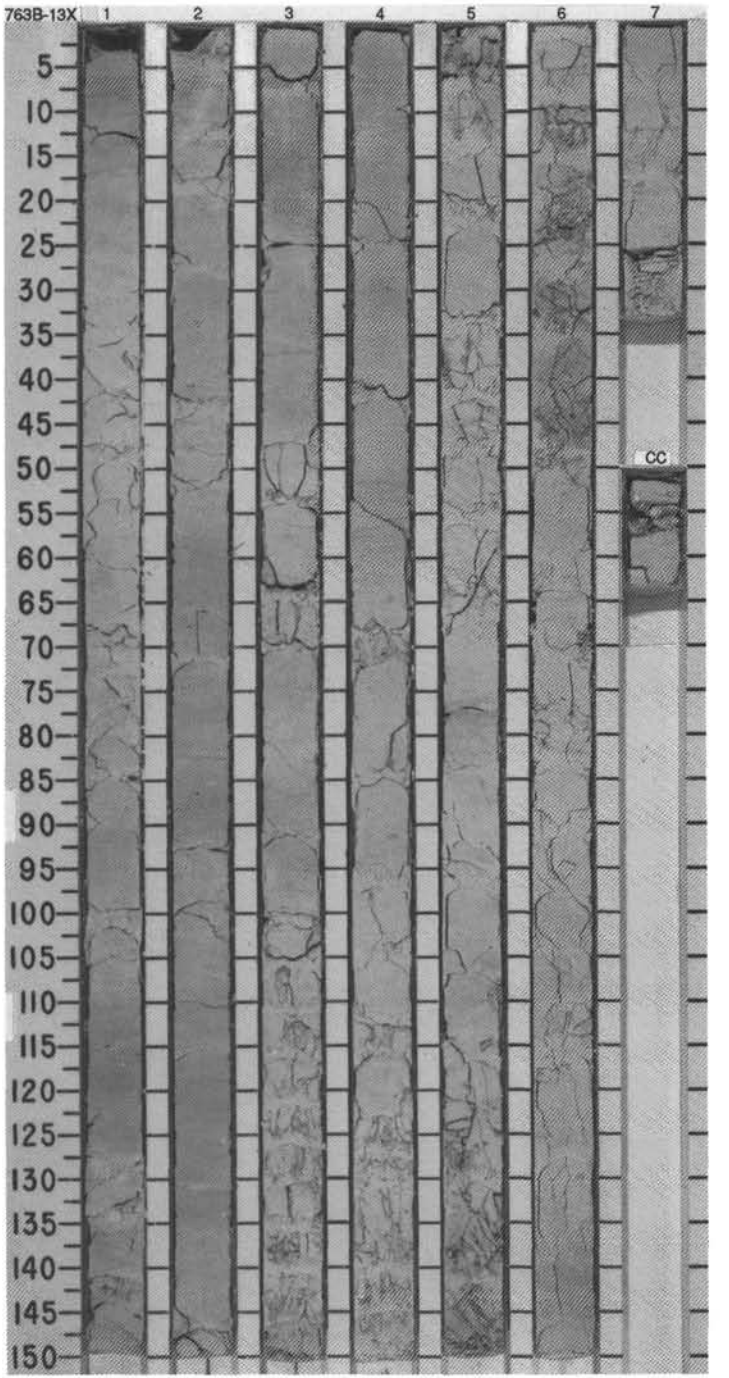
NANNOFOSSIL CHALK WITH FORAMINIFERS

Slightly to extensively biscuited and fractured. The fracturing may have been exacerbated by gas escape.

Major lithology: NANNOFOSSIL CHALK with FORAMINIFERS, very pale greenish gray (5G 8/1) to light greenish gray. Color zonation obvious in some sections, but in general is poorly defined. Where present, color couplets vary from 30 to 50 cm thick. Pyrite blebs, dominantly <0.5 mm in diameter, occur throughout the core and are concentrated in burrows. Foraminifers make up 15-25% of the chalk, and other common components are clay and pyrite: traces of zeolite, quartz, sponge spicules, opaque minerals, dolomite rhombs, ostracods, and bioclasts occur in some strata. Burrowing varies from intense to slight, and subhorizontal burrows are more widespread than vertical burrows. Burrow diameter, on the cut surface, is 1-5 mm. Zoophycos, 2-3 mm in diameter, is common in the upper half of the core. Inoceramus prisms occur at Section 3, 103 and 111 cm.

SMEAR SLIDE SUMMARY (%):

	1, 60 D	2, 60 D	3, 60 D	5, 60 D	5, 110 D
COMPOSITION:					
Accessory minerals	—	—	—	—	3
Bioclasts	Tr	Tr	—	—	—
Clay	3	5	—	1	3
Dolomite	Tr	Tr	Tr	—	—
Foraminifers	15	20	20	25	21
Nannofossils	81	73	75	73	70
Opaques	—	—	3	—	—
Ostracods	Tr	—	—	—	—
Pyrite	1	2	—	—	
Quartz	—	—	Tr	—	1
Spicules	—	—	2	—	1
Zeolite	—	Tr	—	1	1



SITE 763 HOLE B CORE 14X CORED INTERVAL 304.0-313.5 mbsf

LOWER CAMPANIAN	TIME-ROCK UNIT
A/G CAMPANIAN	FORAMINIFERS
A/G CC18 - CC21	NANNOFOSSILS
Barren	RADIOLARIANS
	DIATOMS
Barren	PALYNOMORPHS
	PALEOMAGNETICS
ρ=55.0 V=1.76 ρ=1.85	PHYS. PROPERTIES
CaCO3=91.7% CaCO3=90.9% TOC=0.01% ρ=55.1 V=1.67 ρ=1.84 ρ=53.0 V=1.69 ρ=1.90 CaCO3=88.6%	CHEMISTRY
CC 5 4 3 2 1	SECTION
1.0 0.5	METERS
	GRAPHIC LITHOLOGY
	DRILLING DISTURB.
P P	SED. STRUCTURES
* * * *	SAMPLES

BIOSTRAT. ZONE/ FOSSIL CHARACTER

LITHOLOGIC DESCRIPTION

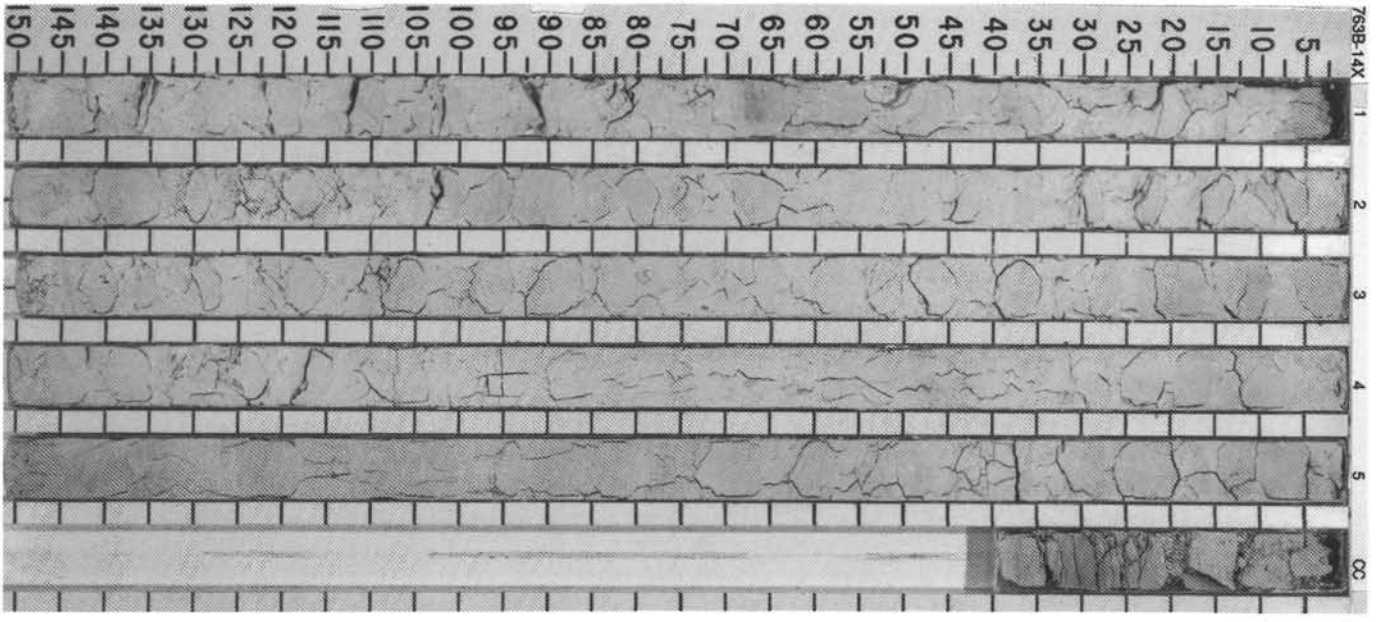
FORAMINIFER NANNOFOSSIL CHALK

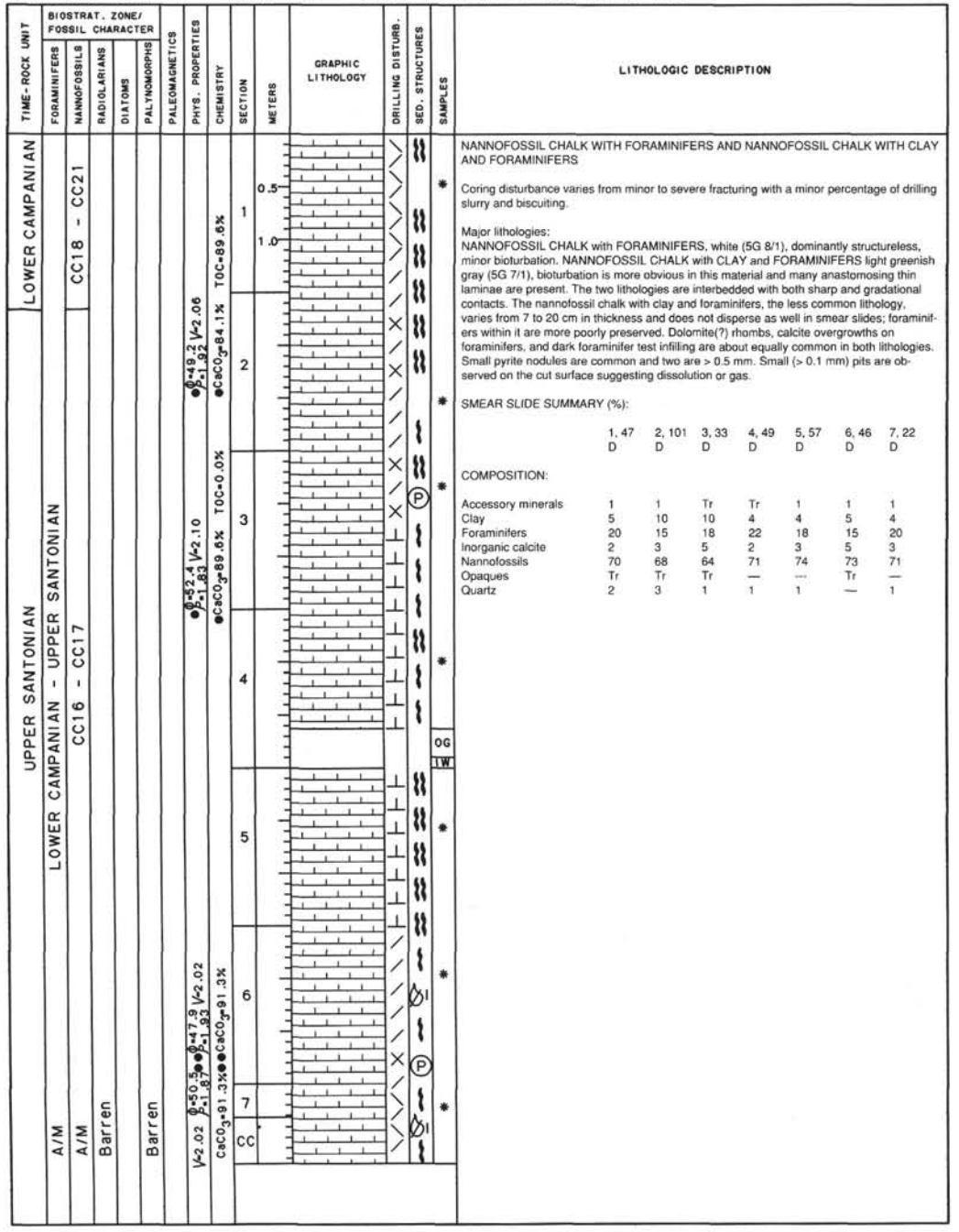
Core is heavily disturbed by drilling, with approximately 50% drilling slurry.

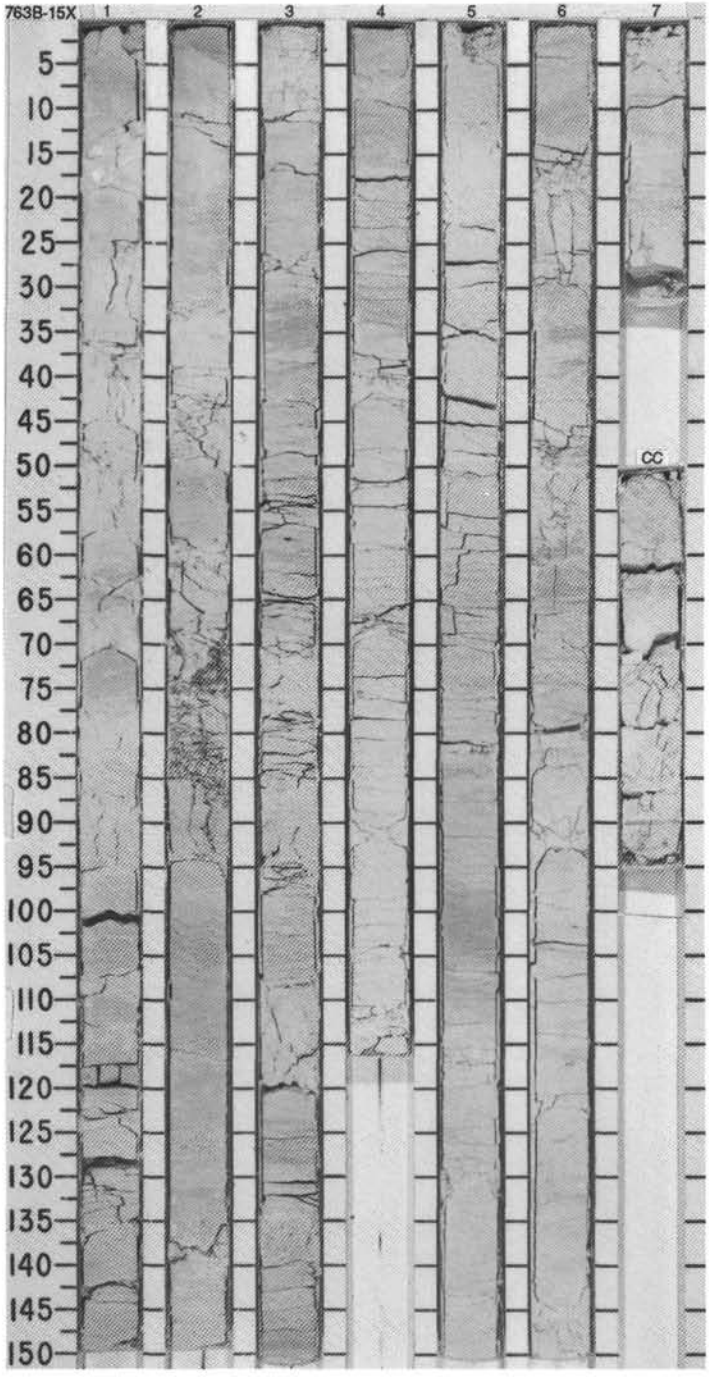
Major lithology: FORAMINIFER NANNOFOSSIL CHALK, white (5G 8/1) to light greenish gray (5G 7/1) with gradation between colors. Lighter colored pieces are generally structureless except for Zoophycos burrows and rare, fine-grained pyrite filled burrows (Section 3, 71 and 139 cm). Darker intervals are bioturbated with horizontal and vertical burrows and minor anastomosing pressure-solution surfaces (Section CC, 27-32 cm).

SMEAR SLIDE SUMMARY (%):

	1, 65 D	2, 65 D	4, 95 D	5, 121 D
COMPOSITION:				
Clay	4	3	1	2
Dolomite	—	—	1	2
Foraminifers	35	35	35	35
Glauconite	—	Tr.	—	—
Nannofossils	57	58	60	58
Opaques	3	3	3	3
Quartz	—	1	—	—
Zeolite	1	—	—	—




TIME-ROCK UNIT
UPPER SANTONIAN
LOWER CAMPANIAN
BIOSTRAT. ZONE/ FOSSIL CHARACTER
FORAMINIFERS
A/M
LOWER CAMPANIAN - UPPER SANTONIAN
NANNOFOSSILS
A/M
CC16 - CC17
CC18 - CC21
RADIOLARIANS
Barren
DIATOMS
PALYNOMORPHS
Barren
PALEOMAGNETICS
PHYS. PROPERTIES
CHEMISTRY
SECTION
METERS
GRAPHIC LITHOLOGY
DRILLING DISTURB.
SED. STRUCTURES
SAMPLES
LITHOLOGIC DESCRIPTION
NANNOFOSSIL CHALK WITH FORAMINIFERS AND NANNOFOSSIL CHALK WITH CLAY AND FORAMINIFERS
Coring disturbance varies from minor to severe fracturing with a minor percentage of drilling slurry and biscuiting.
Major lithologies:
NANNOFOSSIL CHALK with FORAMINIFERS, white (5G 8/1), dominantly structureless, minor bioturbation. NANNOFOSSIL CHALK with CLAY and FORAMINIFERS light greenish gray (5G 7/1), bioturbation is more obvious in this material and many anastomosing thin laminae are present. The two lithologies are interbedded with both sharp and gradational contacts. The nannofossil chalk with clay and foraminifers, the less common lithology, varies from 7 to 20 cm in thickness and does not disperse as well in smear slides; foraminifers within it are more poorly preserved. Dolomite(?) rhombs, calcite overgrowths on foraminifers, and dark foraminifer test infilling are about equally common in both lithologies. Small pyrite nodules are common and two are > 0.5 mm. Small (> 0.1 mm) pits are observed on the cut surface suggesting dissolution or gas.
SMEAR SLIDE SUMMARY (%):
1, 47 D
2, 101 D
3, 33 D
4, 49 D
5, 57 D
6, 46 D
7, 22 D
COMPOSITION:
Accessory minerals 1 1 Tr Tr 1 1 1
Clay 5 10 10 4 4 5 4
Foraminifers 20 15 18 22 18 15 20
Inorganic calcite 2 3 5 2 3 5 3
Nannofossils 70 68 64 71 74 73 71
Opaques Tr Tr Tr — — Tr —
Quartz 2 3 1 1 1 — 1
CC
OG
LW


763B-15X
1
2
3
4
5
6
7
CC

SITE 763 HOLE B CORE 16X CORED INTERVAL 323.0-332.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER SANTONIAN	A/M	CC14 - CC15	Barren		Barren		●Ø=48.3 V=1.90 P=1.96 ●Ø=47.5 V=2.02 P=1.95 ●Ø=43.9 V=1.89 P=2.01	●$CaCO_3$=89.2% ●$CaCO_3$=89.1% ●$CaCO_3$=87.4%	1 2 3 4 5 6 CC	0.5 1.0				

LITHOLOGIC DESCRIPTION

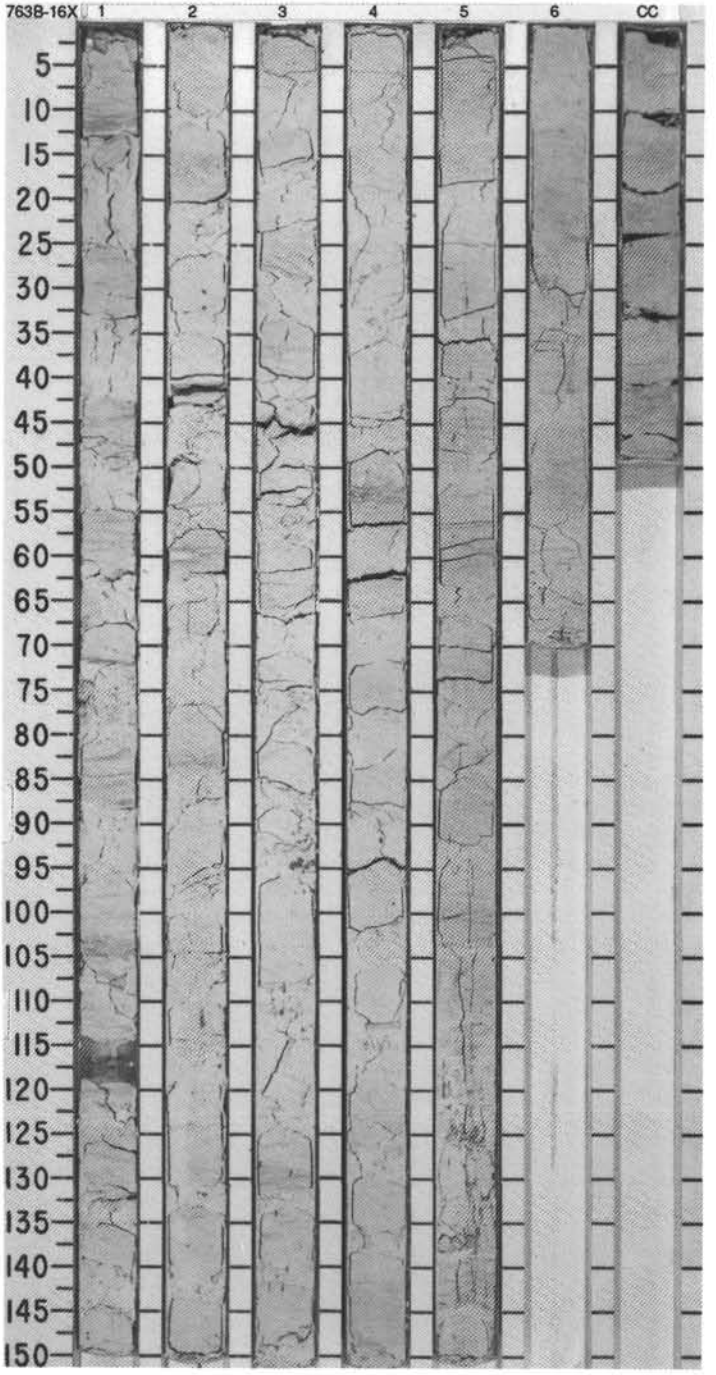
NANNOFOSSIL CHALK AND NANNOFOSSIL CHALK WITH CLAY

The core is intensely disturbed by drilling. Small drilling biscuits, 5-10 cm long, occur within drilling slurry intervals 5-10 cm long, so that the percentage of "real" sediment in the core ranges from 40 to 60%.

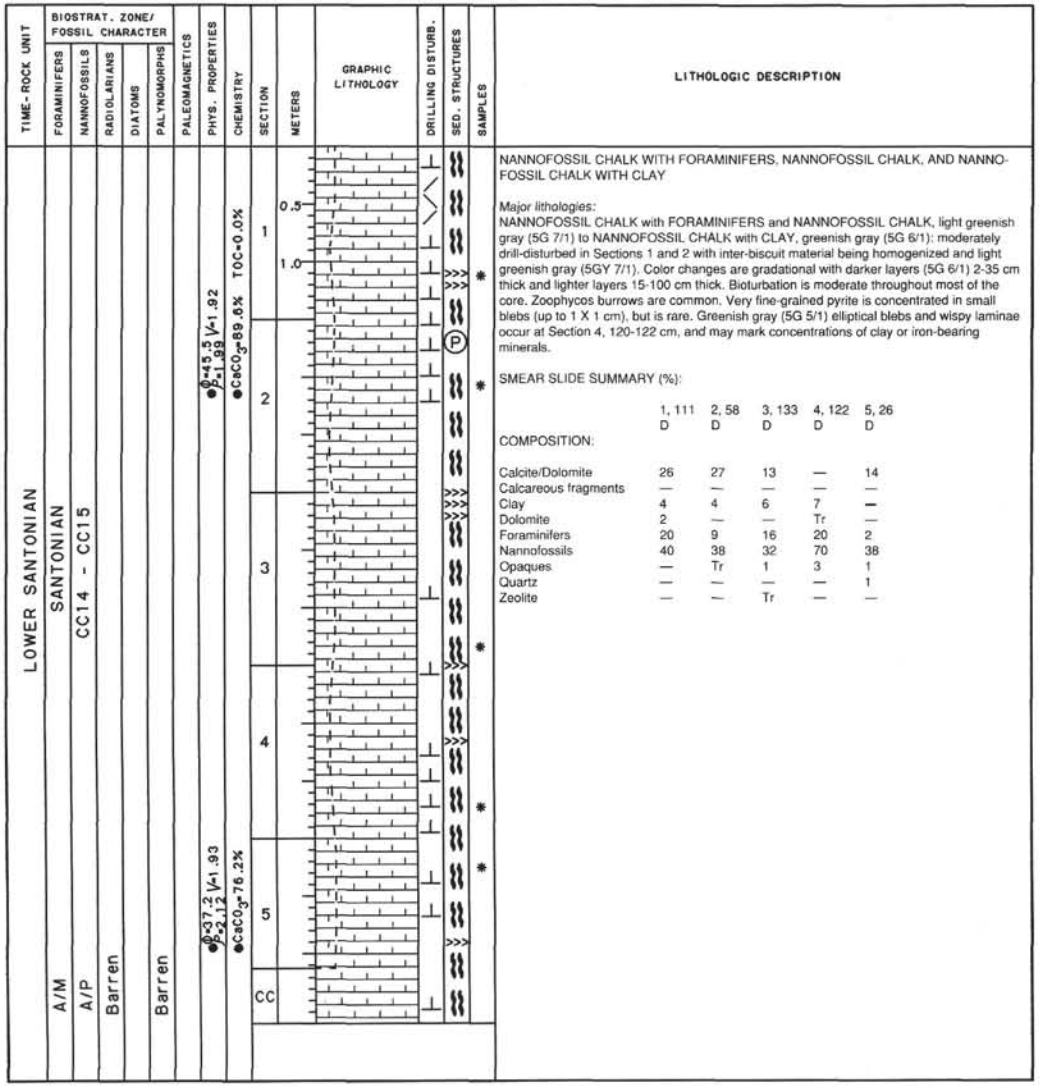
Major lithologies:
NANNOFOSSIL CHALK and NANNOFOSSIL CHALK with CLAY, greenish white (5G 8/1), intensely bioturbated throughout. Vertical and horizontal, burrows mimic layering. Zoophycos burrows in Section 5. Foraminifers are present in amounts of 2-10%. Mica is commonly present in trace amounts, and clay does not exceed 5%. Microstylolite horizons occur at regular intervals of 30-50 cm. They are clay-rich and darker in color than the surrounding chalk (light greenish gray, 5G 7/1, and greenish gray, 5G 6/1). Pyrite nodules, 1-5 mm across, occur throughout the core and are concentrated in Section 2, 110-120 cm. Two pyrite-filled vertical burrows, 10 cm long and 2 mm across, are present in Section 5, 20-40 cm.

SMEAR SLIDE SUMMARY (%):

	1, 84 D	2, 125 D	4, 16 D	5, 100 M	5, 103 D
COMPOSITION:					
Clay	5	5	5	80	7
Foraminifers	3	2	10	—	7
Mica	Tr	Tr	Tr	1	Tr
Nannofossils	92	93	85	19	86
Quartz	—	—	—	Tr	—



SITE 763 HOLE B CORE 17X CORED INTERVAL 332.5-342.0 mbsf



LITHOLOGIC DESCRIPTION

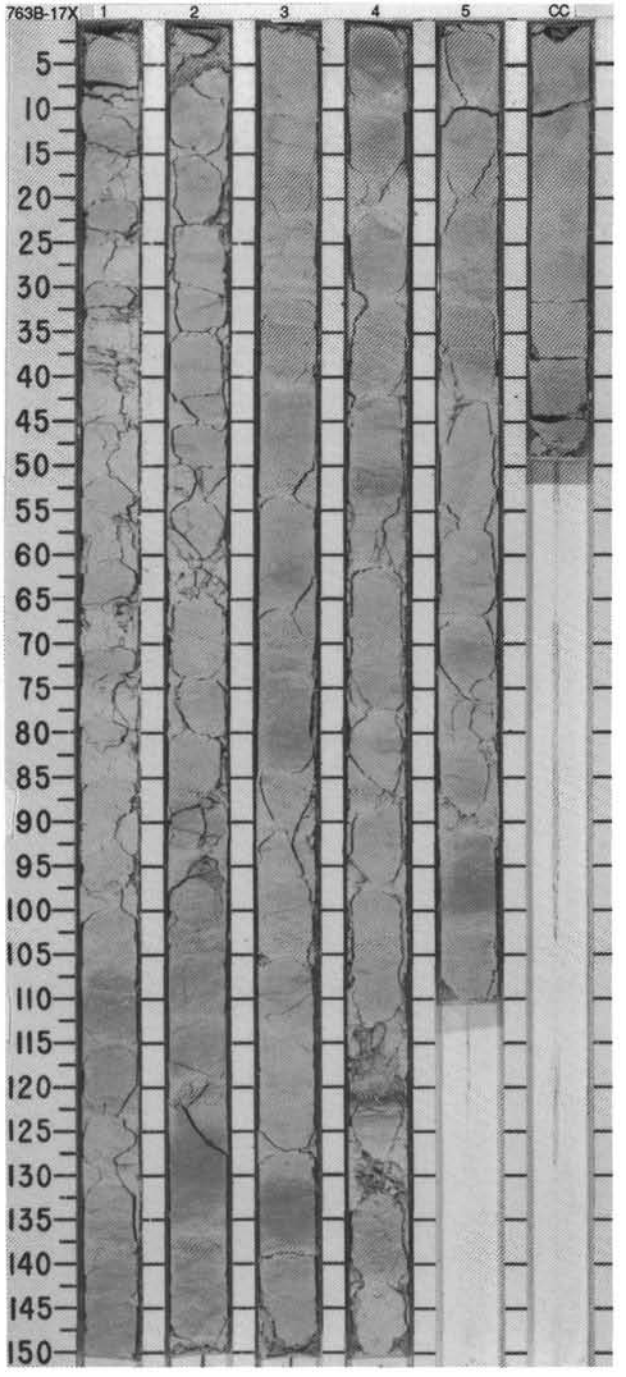
NANNOFOSSIL CHALK WITH FORAMINIFERS, NANNOFOSSIL CHALK, AND NANNOFOSSIL CHALK WITH CLAY

Major lithologies:

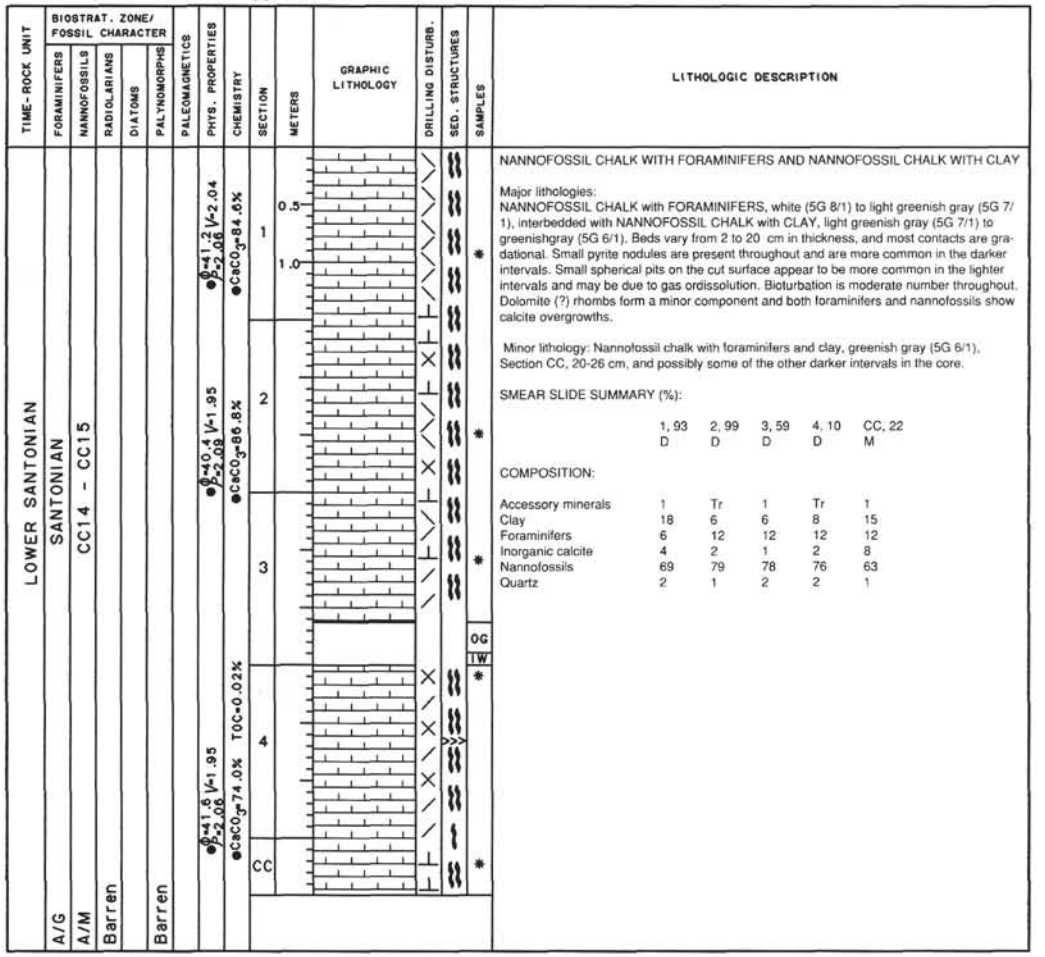
NANNOFOSSIL CHALK with FORAMINIFERS and NANNOFOSSIL CHALK, light greenish gray (5G 7/1) to NANNOFOSSIL CHALK with CLAY, greenish gray (5G 6/1): moderately drill-disturbed in Sections 1 and 2 with inter-biscuit material being homogenized and light greenish gray (5GY 7/1). Color changes are gradational with darker layers (5G 6/1) 2-35 cm thick and lighter layers 15-100 cm thick. Bioturbation is moderate throughout most of the core. Zoophycos burrows are common. Very fine-grained pyrite is concentrated in small blebs (up to 1 X 1 cm), but is rare. Greenish gray (5G 5/1) elliptical blebs and wispy laminae occur at Section 4, 120-122 cm, and may mark concentrations of clay or iron-bearing minerals.

SMEAR SLIDE SUMMARY (%):

	1, 111 D	2, 58 D	3, 133 D	4, 122 D	5, 26 D
COMPOSITION:					
Calcite/Dolomite	26	27	13	—	14
Calcareous fragments	—	—	—	—	—
Clay	4	4	6	7	—
Dolomite	2	—	—	Tr	—
Foraminifers	20	9	16	20	2
Nannofossils	40	38	32	70	38
Opaques	—	Tr	1	3	1
Quartz	—	—	—	—	1
Zeolite	—	—	Tr	—	—



SITE 763 HOLE B CORE 18X CORED INTERVAL 342.0-351.5 mbsf



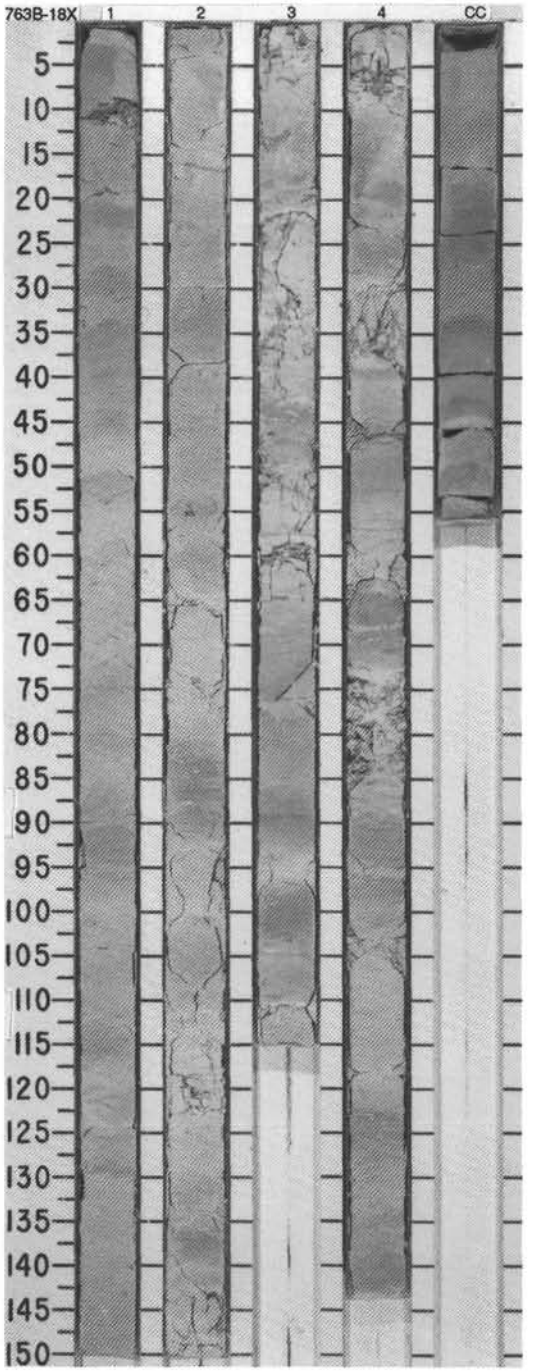
NANNOFOSSIL CHALK WITH FORAMINIFERS AND NANNOFOSSIL CHALK WITH CLAY

Major lithologies:
NANNOFOSSIL CHALK with FORAMINIFERS, white (5G 8/1) to light greenish gray (5G 7/1), interbedded with NANNOFOSSIL CHALK with CLAY, light greenish gray (5G 7/1) to greenishgray (5G 6/1). Beds vary from 2 to 20 cm in thickness, and most contacts are gradational. Small pyrite nodules are present throughout and are more common in the darker intervals. Small spherical pits on the cut surface appear to be more common in the lighter intervals and may be due to gas ordissolution. Bioturbation is moderate number throughout. Dolomite (?) rhombs form a minor component and both foraminifers and nannofossils show calcite overgrowths.

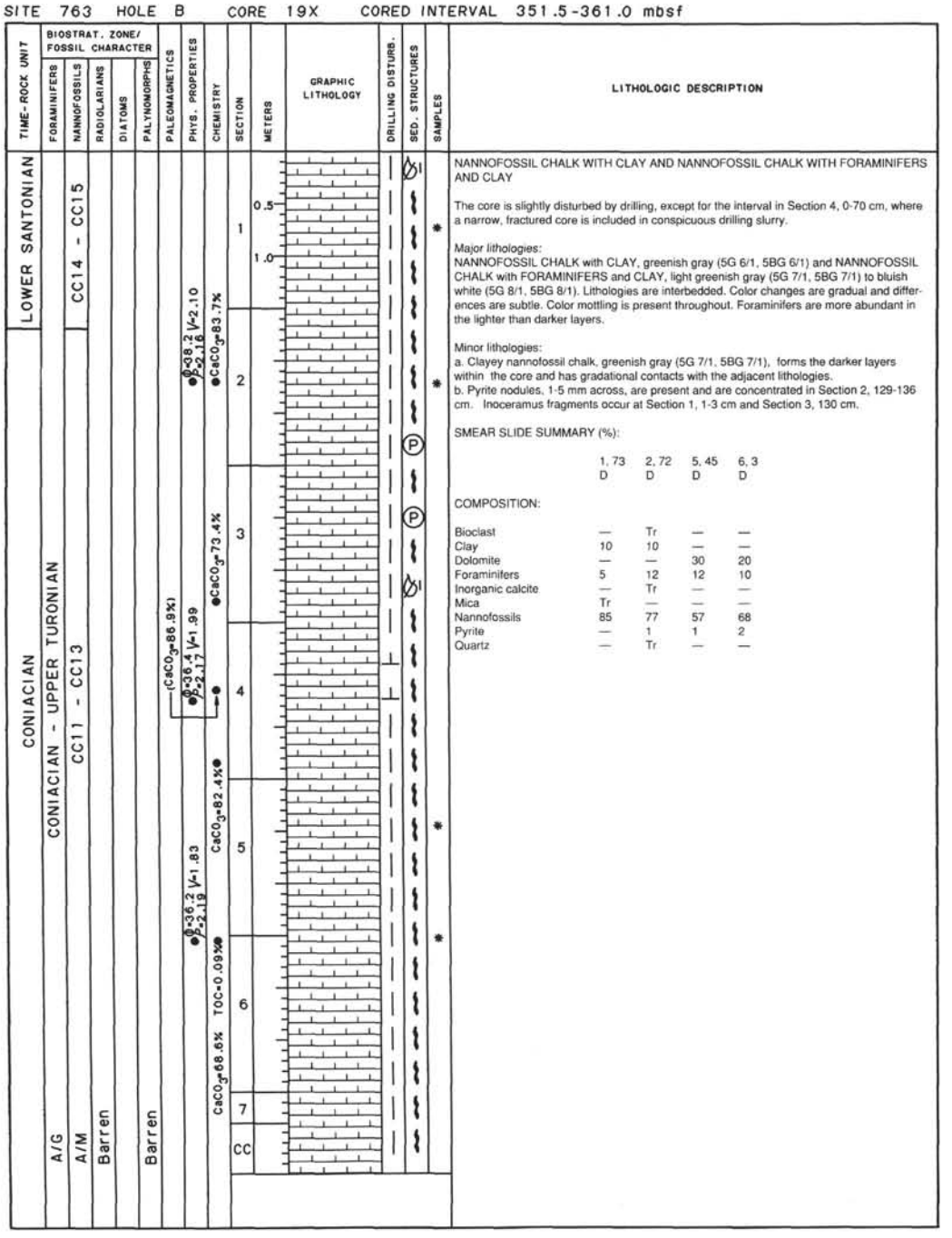
Minor lithology: Nannofossil chalk with foraminifers and clay, greenish gray (5G 6/1), Section CC, 20-26 cm, and possibly some of the other darker intervals in the core.

SMEAR SLIDE SUMMARY (%):

	1, 93 D	2, 99 D	3, 59 D	4, 10 D	CC, 22 M
COMPOSITION:					
Accessory minerals	1	Tr	1	Tr	1
Clay	18	6	6	8	15
Foraminifers	6	12	12	12	12
Inorganic calcite	4	2	1	2	8
Nannofossils	69	79	78	76	63
Quartz	2	1	2	2	1



SITE 763 HOLE B CORE 19X CORED INTERVAL 351.5-361.0 mbsf



NANNOFOSSIL CHALK WITH CLAY AND NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY

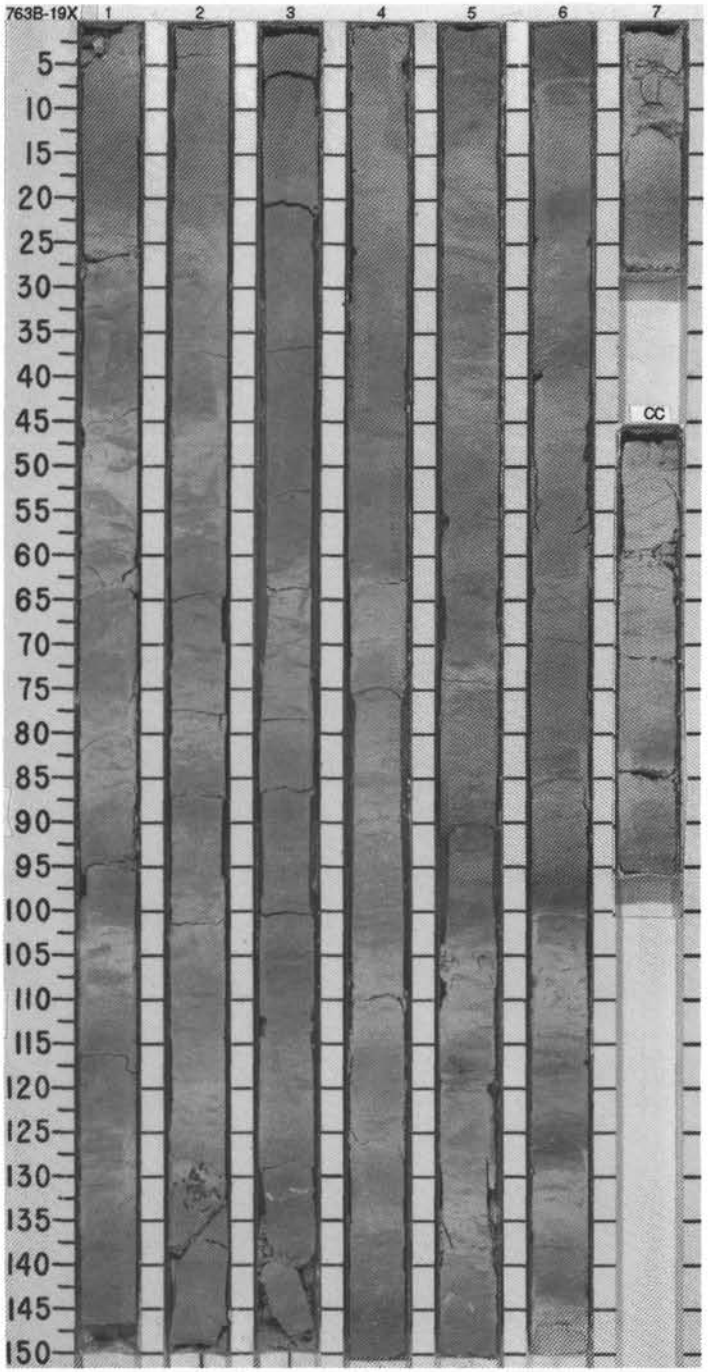
The core is slightly disturbed by drilling, except for the interval in Section 4, 0-70 cm, where a narrow, fractured core is included in conspicuous drilling slurry.

Major lithologies:
NANNOFOSSIL CHALK with CLAY, greenish gray (5G 6/1, 5BG 6/1) and NANNOFOSSIL CHALK with FORAMINIFERS and CLAY, light greenish gray (5G 7/1, 5BG 7/1) to bluish white (5G 8/1, 5BG 8/1). Lithologies are interbedded. Color changes are gradual and differences are subtle. Color mottling is present throughout. Foraminifers are more abundant in the lighter than darker layers.

Minor lithologies:
a. Clayey nannofossil chalk, greenish gray (5G 7/1, 5BG 7/1), forms the darker layers within the core and has gradational contacts with the adjacent lithologies.
b. Pyrite nodules, 1-5 mm across, are present and are concentrated in Section 2, 129-136 cm. Inoceramus fragments occur at Section 1, 1-3 cm and Section 3, 130 cm.

SMEAR SLIDE SUMMARY (%):

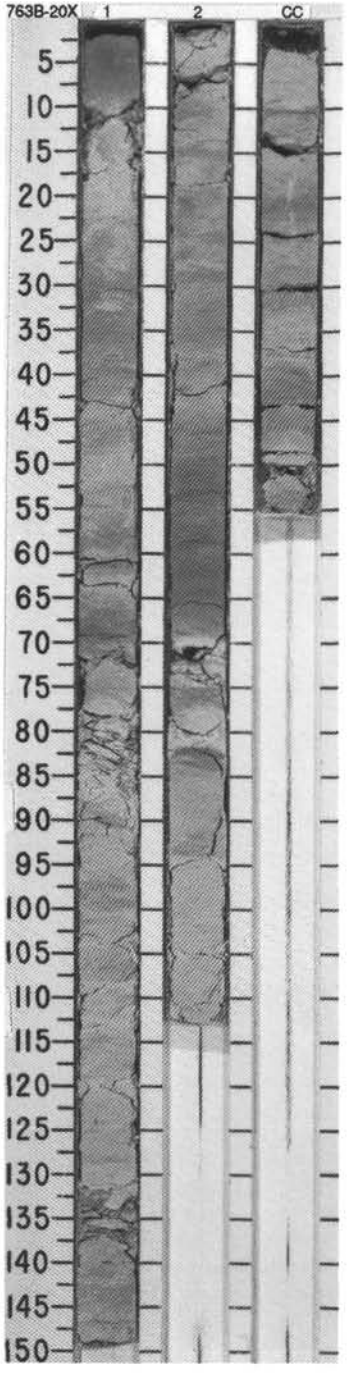
	1, 73 D	2, 72 D	5, 45 D	6, 3 D
COMPOSITION:				
Bioclast	—	Tr	—	—
Clay	10	10	—	—
Dolomite	—	—	30	20
Foraminifers	5	12	12	10
Inorganic calcite	—	Tr	—	—
Mica	Tr	—	—	—
Nannofossils	85	77	57	68
Pyrite	—	1	1	2
Quartz	—	Tr	—	—



SITE 763 HOLE B CORE 20X CORED INTERVAL 361.0-370.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER TURONIAN - CONIACIAN	A/M CONIACIAN - UPPER TURONIAN	A/M CC11 - CC13	Barren		Barren	($CaCO_3$=66.2%) ($CaCO_3$=83.4%)	V=1.89 @39.1 R=2.11 V=1.94 @39.4 R=2.13	$CaCO_3$=84.0%	1	0.5 1.0				*	NANNOFOSSIL CHALK WITH FORAMINIFERS AND CLAY AND CLAYEY NANNOFOSSIL CHALK Core disturbance is moderate with biscuits throughout. Major lithologies: NANNOFOSSIL CHALK with FORAMINIFERS and CLAY, light greenish gray (5GY 7/1), and CLAYEY NANNOFOSSIL CHALK, pale green (5G 6/2). Interbedded, with gradational contacts. Bioturbation is heavy, but decreases slightly downward. In several locations such as Section 2, 50-80 cm, original lamination is preserved. Bioturbation consists primarily of horizontal burrows with Zoophycos, and Planolites. SMEAR SLIDE SUMMARY (%):
									2					*	
									CC						

	1, 125 D	2, 51 M
COMPOSITION:		
Accessory minerals	1	1
Clay	8	15
Dolomite	3	—
Feldspar	—	1
Foraminifers	15	5
Nannofossils	71	77
Quartz	2	1



SITE 763 HOLE B CORE 21X CORED INTERVAL 370.5-380.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER TURONIAN	TURONIAN (*H. helvetica*)	CC11 - CC13	Barren		Barren		●Φ=39.6 V=1.71 P=2.23 ●Φ=39.0 V=1.91 P=2.22	$CaCO_3$=53.7% $CaCO_3$=77.6% TOC=0.03% $CaCO_3$=50.2%	1 2 CC	0.5 1.0				* *

LITHOLOGIC DESCRIPTION

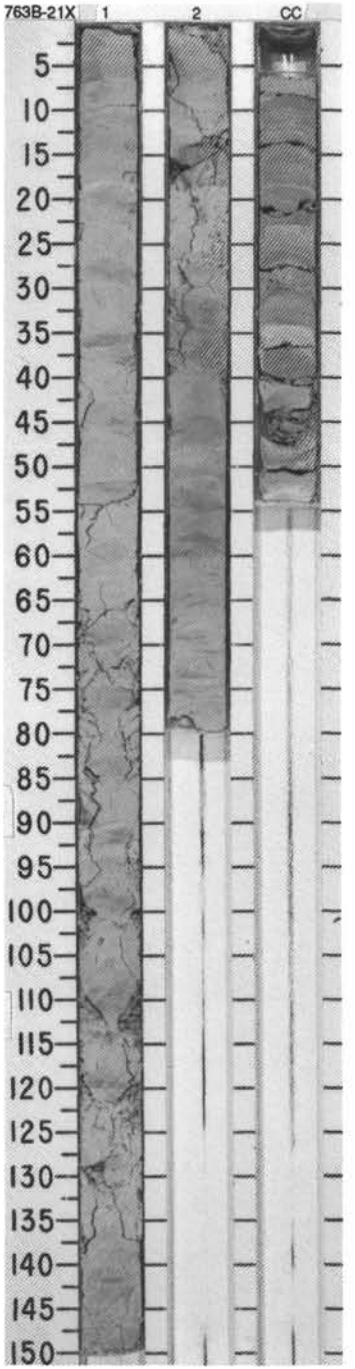
NANNOFOSSIL CHALK WITH CLAY AND CLAYEY NANNOFOSSIL CHALK

The core is heavily biscuited, with 40-50% drilling slurry.

Major lithologies:
NANNOFOSSIL CHALK with CLAY, light greenish gray (5G 7/1) and CLAYEY NANNOFOSSIL CHALK, greenish gray (5G 6/1). The strong disturbance of the (core drilling biscuits) has obliterated all evidence of possible cyclicity. Foraminifers are present but *minor. Very fine pyrite crystals are scattered in Sections 2 and CC.*

SMEAR SLIDE SUMMARY (%):

	1, 75 D	CC, 40 D
COMPOSITION:		
Carbonate grains	—	7
Clay	10	15
Dolomite	Tr	—
Foraminifers	7	5
Nannofossils	80	70
Opaques	3	3



SITE 763 HOLE B CORE 22X CORED INTERVAL 380.0-389.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER TURONIAN	A/M LOWER TURONIAN (*W. archaeocretacea*)	A/M CC11-CC13	LOWER TURONIAN / UPPER CENOMANIAN (*O. somphedia*)		Barren		ρ=2.43 ρ=2.01 V=1.74 ϕ=62.5 ϕ=2.28	$CaCO_3$=75.6% $CaCO_3$=57.0% TOC=0.20%	1 2 CC	0.5 1.0				* *

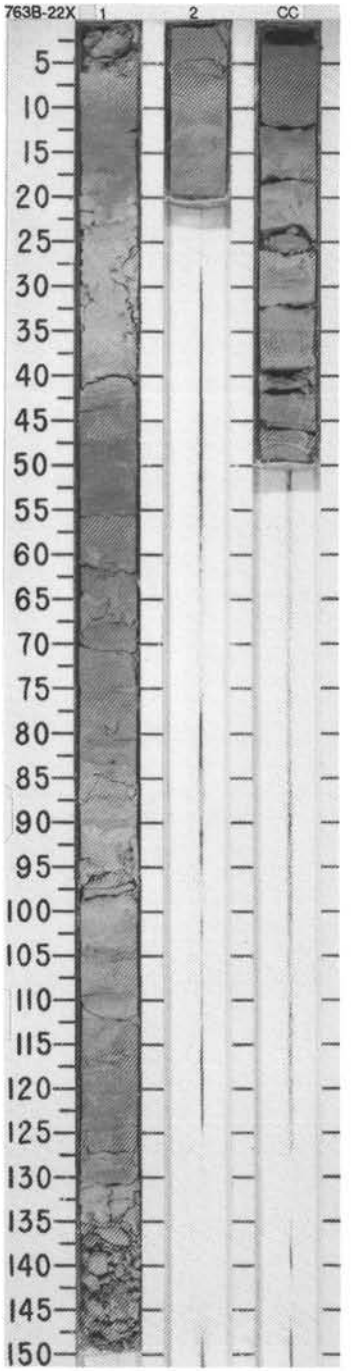
LITHOLOGIC DESCRIPTION

NANNOFOSSIL CHALK WITH CLAY AND CLAYEY NANNOFOSSIL CHALK

Major lithologies:
NANNOFOSSIL CHALK WITH CLAY and CLAYEY NANNOFOSSIL CHALK, slightly darker than the previous core (mixed light greenish gray [5G 7/1] to greenish gray [5G 6/1] to grayish green [5G 5/2]). Cyclicity in Section 1, with three darker intervals (grayish green dominant) separated by two lighter intervals (light greenish gray dominant), each about 20 cm thick. Contacts are gradational, and all are bioturbated. The base of the core is more homogeneous (grayish green). Very fine pyrite crystals are scattered throughout.

SMEAR SLIDE SUMMARY (%):

	1, 56 D	CC, 7 D
COMPOSITION:		
Carbonate grains	2	7
Clay	17	15
Dolomite	1	Tr
Foraminifers	2	3
Nannofossils	78	75
Quartz	—	Tr



SITE 763 HOLE B CORE 23X CORED INTERVAL 389.5-399.0 mbsf

TIME-ROCK UNIT: UPPER CENOMANIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: C/G — UPPER CENOMANIAN (*R. cushmani*)
- NANNOFOSSILS: A/G — CC9-CC10
- RADIOLARIANS: Barren
- DIATOMS
- PALYNOMORPHS: Barren

PALEOMAGNETICS

PHYS. PROPERTIES: Φ=46.9 V=1.75 ρ=1.98; V=1.88

CHEMISTRY: $CaCO_3$=59.1% TOC=0.20%; Φ=40.4 ρ=2.01; V=1.88; $CaCO_3$=61.3%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

CLAYEY NANNOFOSSIL CHALK AND NANNOFOSSIL CLAYSTONE

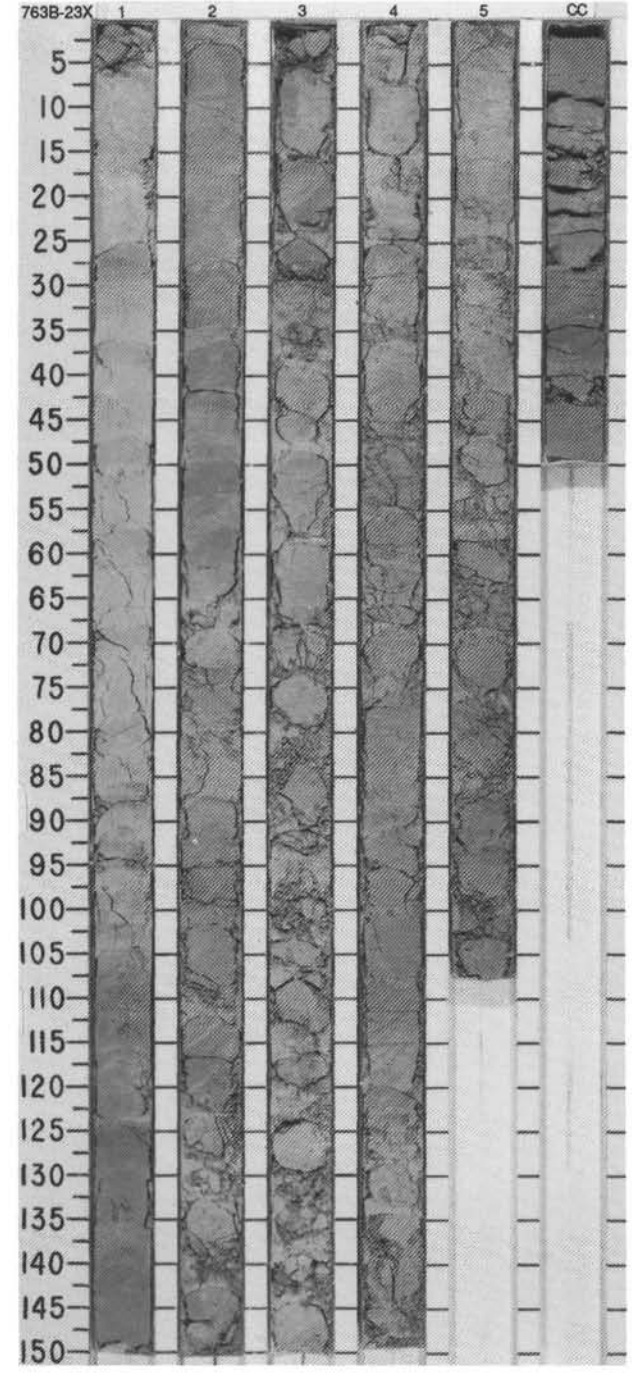
The core is slightly to strongly disturbed by drilling. In Section 1, small drilling biscuits, 3-5 cm long are included in drilling slurry intervals,7-10 cm long, so that the percentage of undisturbed rock in the section ranges from 30 to 40%.

Major lithologies:
CLAYEY NANNOFOSSIL CHALK, light greenish gray (5G 7/1), and NANNOFOSSIL CLAYSTONE, greenish gray (5G 6/1). Cyclic color differences and changes in composition are extremely subtle. Mica is present in trace amounts (up to 3%) in the most clay-rich lithologies. Scattered dolomite rhombs were noted. Both lithologies are intensely bioturbated. Either vertical or horizontal burrows are present, and these latter mimic layering. Burrows are filled with gray (5Y 5/1) claystone with nannofossils.

Minor lithology: Quartzose, cemented very fine sandstone to siltstone, greenish gray (5G 6/1), poorly sorted, 2 cm thick layer in Section 3, 28-30 cm.

SMEAR SLIDE SUMMARY (%):

	1, 49 D	2, 119 D	3, 28 M	4, 140 M
COMPOSITION:				
Clay	20	55	—	75
Dolomite	—	Tr	—	—
Foraminifers	2	2	Tr	—
Mica	Tr	Tr	2	3
Nannofossils	78	43	—	22
Quartz	—	—	98	—



SITE 763 HOLE B CORE 24X CORED INTERVAL 399.0-408.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
CENOMANIAN	CENOMANIAN undifferentiated	CC9-CC10	Barren		Barren		ϕ=55.2 ρ=1.82 ϕ=57.0 ν=1.65 ρ=1.82 ϕ=54.7 ρ=1.79	CaCO3=51.2 CaCO3=50.8% TOC=0.31% CaCO3=45.5%	1 2 3 4 5 6 7 CC	0.5 1.0			P	* OG IW

LITHOLOGIC DESCRIPTION

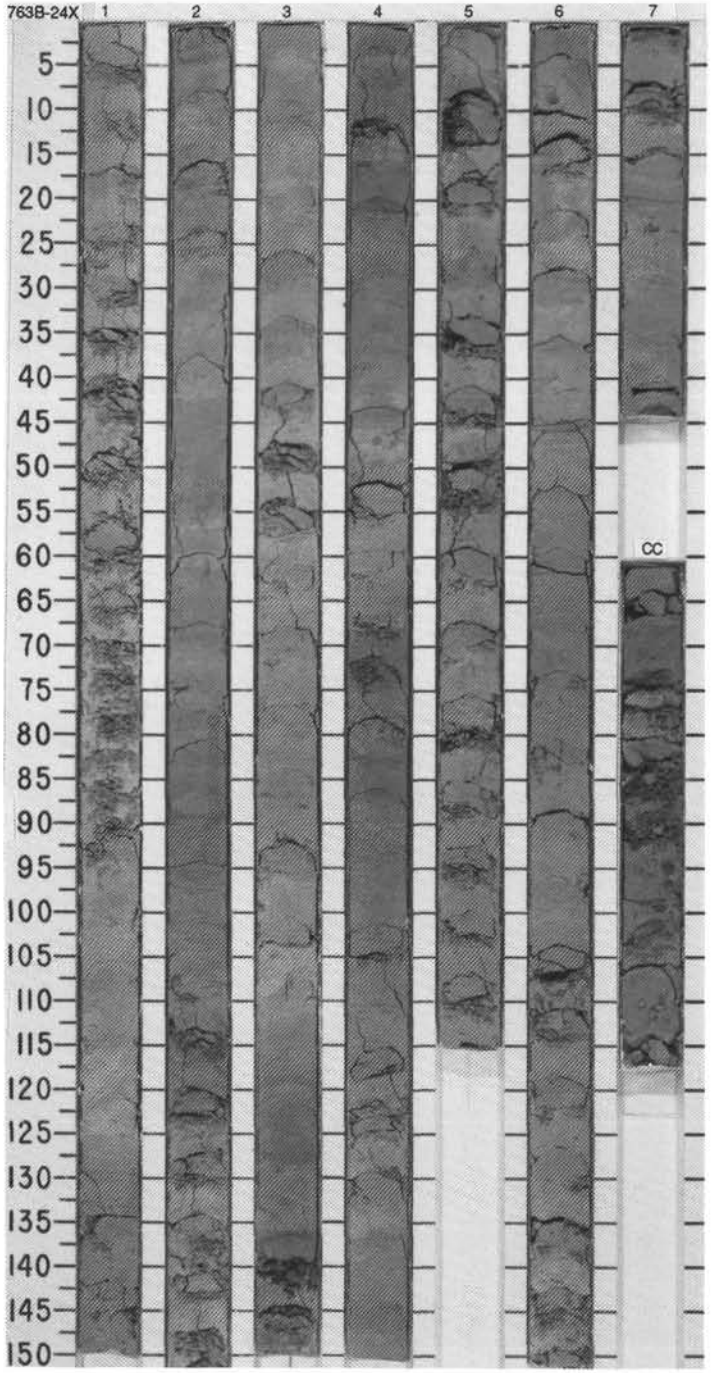
CLAYEY NANNOFOSSIL CHALK, CLAYEY NANNOFOSSIL CHALK WITH ZEOLITES, AND NANNOFOSSIL CLAYSTONE

Core is highly disturbed and biscuited.

Major lithologies:
CLAYEY NANNOFOSSIL CHALK and CLAYEY NANNOFOSSIL CHALK with ZEOLITES, light greenish gray (5Y 7/1, 5GY 7/1) with NANNOFOSSIL CLAYSTONE, gray (N5, 5Y 5/1). Moderately bioturbated chalk fragments. Teichichnus in Section 2, 52-57 cm, and Section 6, 75 cm, Planolites common, Chondrites rare (Section 2, 60-61 cm). Minor color alternation in Section 4. Some parallel laminations in fragments, e.g. Section 3, 115 cm. Clinoptilolite (zeolite) identified in smear slides. Color becomes darker gray and darker light greenish gray in the downhole direction.

SMEAR SLIDE SUMMARY (%):

	1, 101 D	3, 130 M	5, 78 D	7, 24 D
COMPOSITION:				
Clay	35	45	30	30
Foraminifers	10	5	10	3
Nannofossils	44	40	43	45
Quartz	3	5	2	2
Zeolite	8	5	15	15
Pyrite	---	---	---	5



SITE 763 HOLE B CORE 25X CORED INTERVAL 408.5-418.0 mbsf

TIME-ROCK UNIT: LOWER CENOMANIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: CENOMANIAN undifferentiated
- NANNOFOSSILS: CC9-CC10
- RADIOLARIANS: A/G
- DIATOMS: Barren
- PALYNOMORPHS: R/M

PALEOMAGNETICS: UPPER ALBIAN - CENOMANIAN

PHYS. PROPERTIES: ●ϕ=52.1 ψ=1.69; ●ϕ=51.4 ψ=1.74; ●ϕ=51.8 ψ=1.81; ●ϕ=52.2 ψ=1.86; ●ψ=1.71

CHEMISTRY: ●$CaCO_3$=25.7%; ●$CaCO_3$=33.4%; $CaCO_3$=24.7% TOC=0.18%●

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

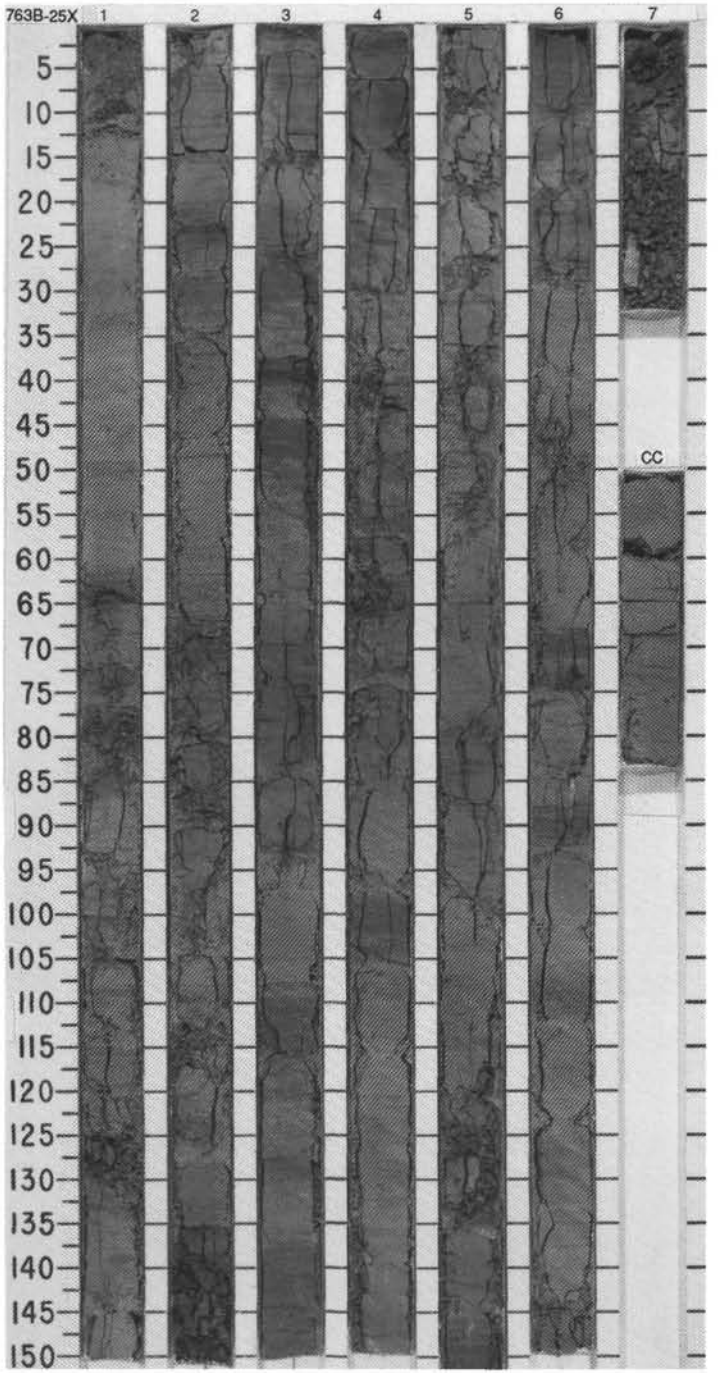
NANNOFOSSIL CLAYSTONE WITH PYRITE AND ZEOLITES

Major lithology: NANNOFOSSIL CLAYSTONE with PYRITE and ZEOLITES, greenish gray (5G 6/1) and very dark greenish gray (10Y 3/1). 5-145 cm thick beds show gradational contacts. The darker beds contain more clay than the lighter beds and locally include parallel laminae, e.g. Section 6, 70-150 cm. Bioturbation is moderate to strong throughout the core with many identifiable trace fossils such as Zoophycos, Planolites, Chondrites, and Teichichnus.

Minor lithologies:
a. Claystone with chalk, very dark greenish gray (10Y 3/1), gradational contacts with other lithologies. In general <5 cm thick, identified on the basis of $CaCO_3$ analyses.
b. Pyrite grains occur throughout the core and a nodule occurs in Section 3, 36-38 cm. Belemnite fragment in Section 5, 65-67 cm.

SMEAR SLIDE SUMMARY (%):

	1, 40 D	3, 111 D	5, 61 D	6, 108 D
COMPOSITION:				
Clay	5	10	12	10
Fish	—	—	—	2
Foraminifers	10	5	3	7
Glauconite	2	2	2	—
Nannofossils	57	52	64	56
Pyrite	6	10	7	7
Quartz	1	—	—	—
Silicoflagellates	1	—	—	—
Zeolite	18	20	12	15



SITE 763 HOLE B CORE 26X CORED INTERVAL 418.0-427.5 mbsf

TIME-ROCK UNIT: UPPER ALBIAN — LOWER CENOMANIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: Barren; NANNOFOSSILS: A/G; CC9-CC10; RADIOLARIANS: Barren; DIATOMS: Barren; PALYNOMORPHS

PALEOMAGNETICS

PHYS. PROPERTIES

CHEMISTRY: $CaCO_3$=30.2% TOC=0.26%; $CaCO_3$=25.7%; ϕ=53.8, ρ=1.81; ϕ=56.3, ρ=1.71; $CaCO_3$=43.0%; $CaCO_3$=26.7%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

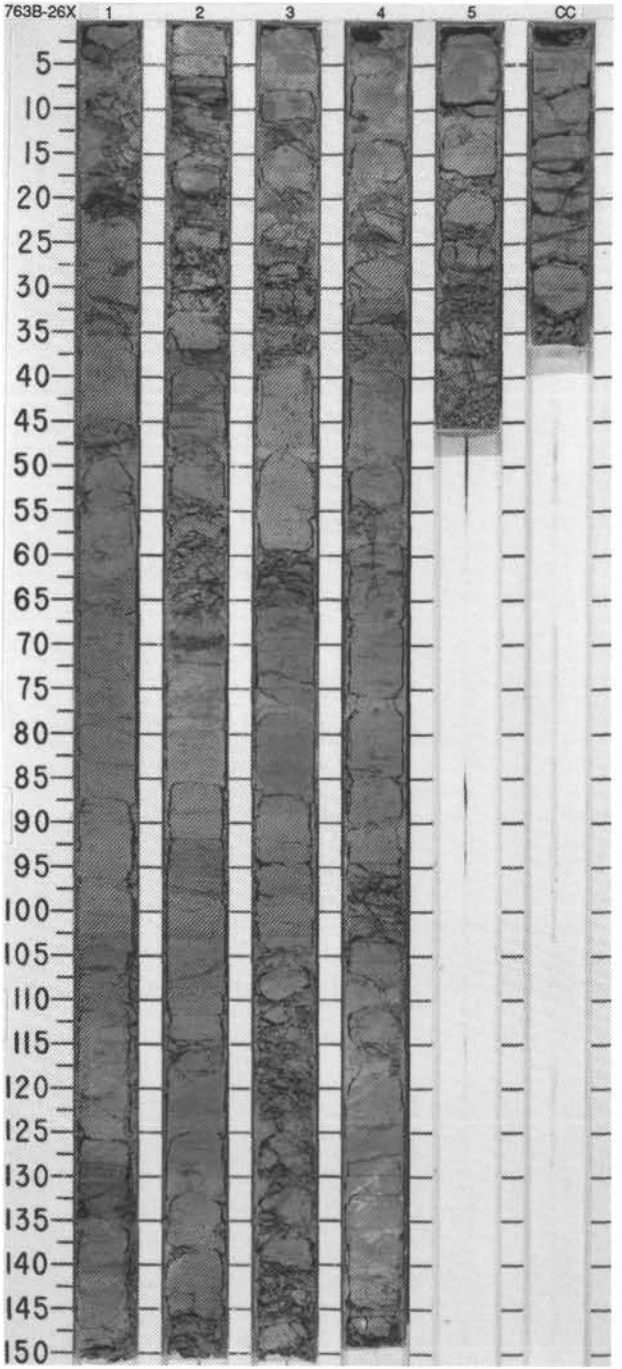
LITHOLOGIC DESCRIPTION

NANNOFOSSIL CLAYSTONE WITH ZEOLITES

Major lithology: NANNOFOSSIL CLAYSTONE with ZEOLITES, greenish gray (5GY 5/1 to 5GY 6/1), dark greenish gray (5GY 4/1), and dark gray (N4). Bioturbation is common, with dominantly horizontal and minor vertical burrows, Zoophycos and Chondrites. Darker, more clay-rich layers, occur in 3 to 8 cm thick layers (about 2 to 3 per section) showing gradational contacts with the lighter colored sediments. Drilling disturbance is severe to moderate.

SMEAR SLIDE SUMMARY (%):

	1, 130 M	2, 112 D	4, 85 D
COMPOSITION:			
Carbonate grains	7	—	3
Clay	14	9	9
Foraminifers	3	11	1
Nannofossils	65	63	75
Opaques	2	7	2
Quartz	—	Tr	Tr
Zeolite	9	9	9



SITE 763 HOLE B CORE 27X CORED INTERVAL 427.5-437.0 mbsf

LITHOLOGIC DESCRIPTION

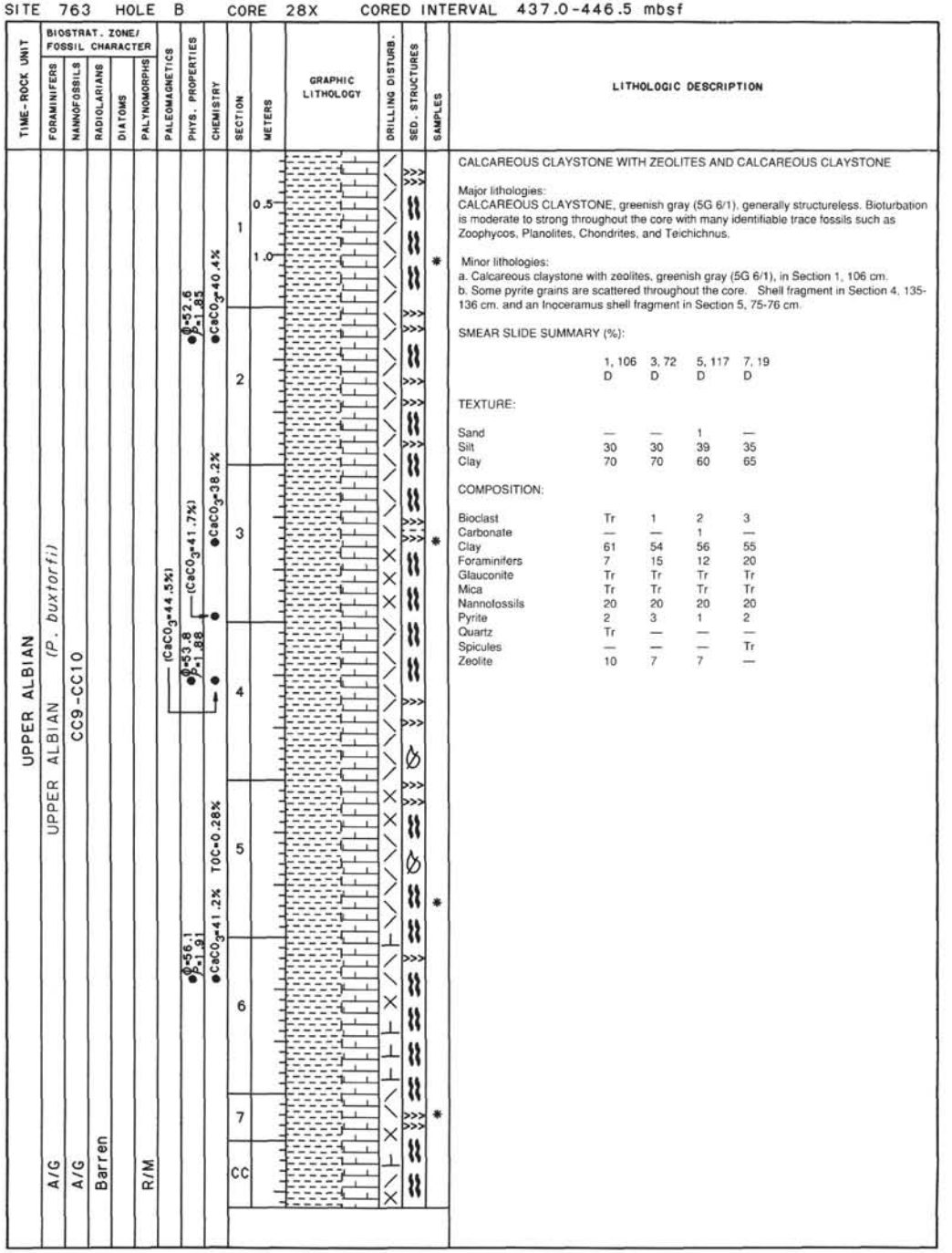
NANNOFOSSIL CLAYSTONE WITH ZEOLITES

Major lithology: NANNOFOSSIL CLAYSTONE *with* ZEOLITES, *light greenish gray* (5G 7/1) to greenish gray (5G 6/1). Bioturbated where preserved. Planolites common, Zoophycos common to rare. Disseminated pyrite (marcasite) throughout. Pyrite nodules common in Sections 4-6. Small belemnite, Section 5, 90 cm.

SMEAR SLIDE SUMMARY (%):

	1, 66 D	3, 145 D	5, 33 D	CC, 40 D
COMPOSITION:				
Accessory minerals	3	2	3	3
Clay	29	25	25	30
Foraminifers	3	5	5	5
Glass	—	Tr	—	—
Glauconite	5	3	1	2
Nannofossils	36	32	44	37
Opaques	5	10	7	10
Quartz	—	3	2	2
Spicules	—	—	2	1
Zeolite	19	20	10	10

SITE 763 HOLE B CORE 28X CORED INTERVAL 437.0-446.5 mbsf



LITHOLOGIC DESCRIPTION

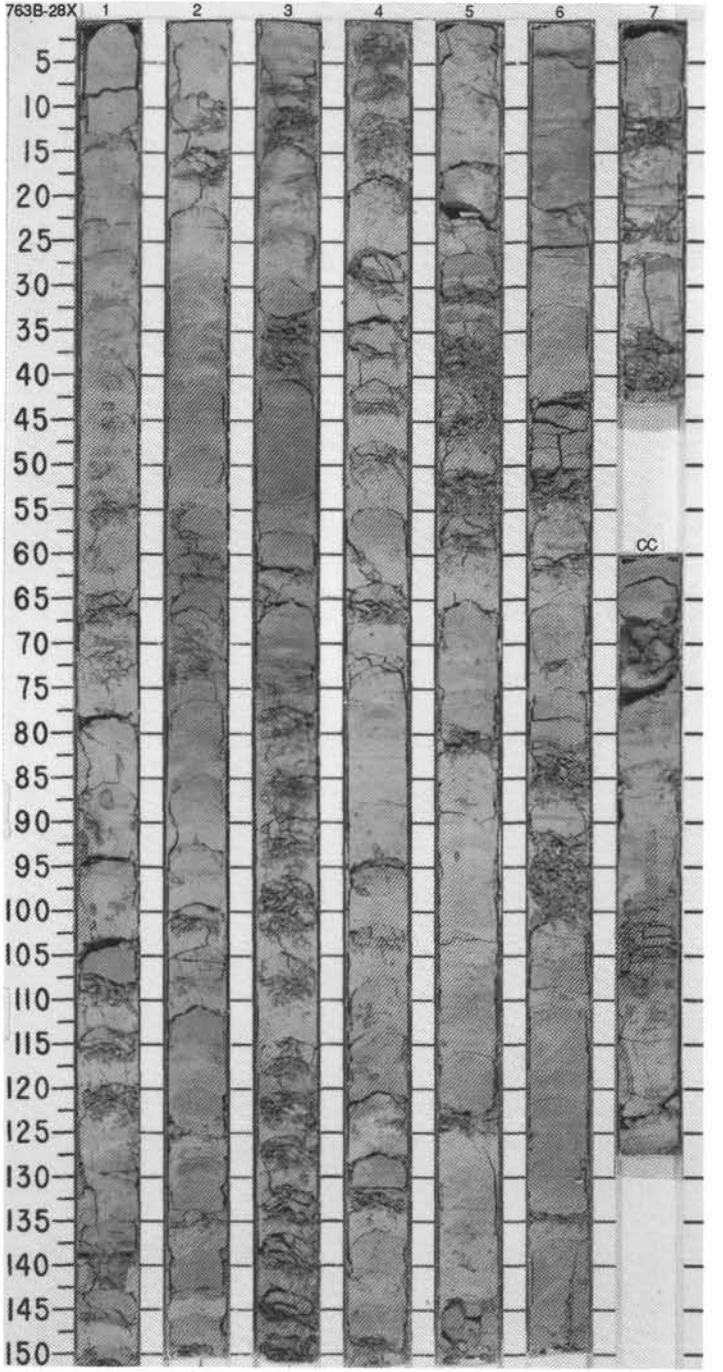
CALCAREOUS CLAYSTONE WITH ZEOLITES AND CALCAREOUS CLAYSTONE

Major lithologies:
CALCAREOUS CLAYSTONE, greenish gray (5G 6/1), generally structureless. Bioturbation is moderate to strong throughout the core with many identifiable trace fossils such as Zoophycos, Planolites, Chondrites, and Teichichnus.

Minor lithologies:
a. Calcareous claystone with zeolites, greenish gray (5G 6/1), in Section 1, 106 cm.
b. Some pyrite grains are scattered throughout the core. Shell fragment in Section 4, 135-136 cm, and an Inoceramus shell fragment in Section 5, 75-76 cm.

SMEAR SLIDE SUMMARY (%):

	1, 106 D	3, 72 D	5, 117 D	7, 19 D
TEXTURE:				
Sand	—	—	1	—
Silt	30	30	39	35
Clay	70	70	60	65
COMPOSITION:				
Bioclast	Tr	1	2	3
Carbonate	—	—	1	—
Clay	61	54	56	55
Foraminifers	7	15	12	20
Glauconite	Tr	Tr	Tr	Tr
Mica	Tr	Tr	Tr	Tr
Nannofossils	20	20	20	20
Pyrite	2	3	1	2
Quartz	Tr	—	—	—
Spicules	—	—	—	Tr
Zeolite	10	7	7	—



SITE 763 HOLE B CORE 29X CORED INTERVAL 446.5-456.0 mbsf

TIME-ROCK UNIT: UPPER ALBIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: A/G; ALBIAN undifferentiated
- NANNOFOSSILS: A/G; CC9-CC10
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: Barren

PALEOMAGNETICS:

PHYS. PROPERTIES: ϕ=51.5 ρ=1.93 V=1.64; ϕ=52.8 ρ=1.86; ϕ=51.2 ρ=1.94

CHEMISTRY: ●$CaCO_3$=38.8%; ●$CaCO_3$=44.7%; ●$CaCO_3$=40.8% TOC=0.26%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

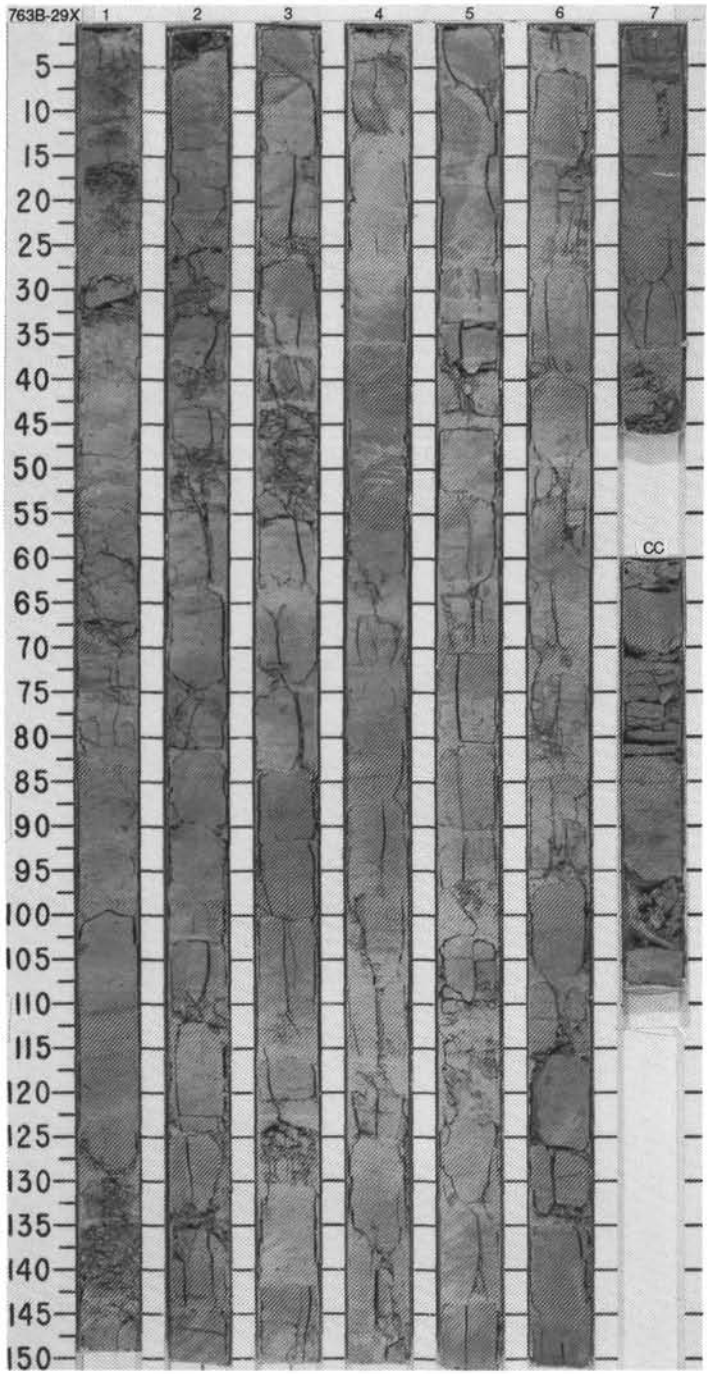
LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE

Major lithology: CALCAREOUS CLAYSTONE, greenish gray (5G 6/1 and 5G 5/1). Moderately to highly bioturbated. Zoophycos, common, Planolites, abundant, and Chondrites and Teichichnus rare. Fine laminations due to predominant horizontal burrowers. Disseminated pyrite (marcasite) grains in Section 3-6. Inoceramus fragments in Section 5, 141 cm; Section 6, 50, 53, 135, and 145 cm; Section 7, 37 cm; and CC, 32 cm. No cyclic pattern recognized, although slight color variations are observed in Sections 4 and 5.

SMEAR SLIDE SUMMARY (%):

	1, 89 D	3, 75 D	5, 76 D	7, 22 D
TEXTURE:				
Silt	13	16	12	3
Clay	87	84	88	97
COMPOSITION:				
Bioclast	3	1	1	1
Biotite	—	1	—	---
Clay	58	50	65	67
Dolomite	1	—	5	—
Fish	Tr	—	—	---
Foraminifers	10	5	5	3
Glauconite	—	Tr	Tr	Tr
Mica	Tr	1	—	Tr
Nannofossils	20	35	20	20
Plant	Tr	—	—	---
Pyrite	1	2	1	2
Zeolite	7	5	3	7



SITE 763 HOLE B CORE 30X CORED INTERVAL 456.0-465.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE ALBIAN / UPPER ALBIAN	ALBIAN undifferentiated	CC9-CC10	Barren		Barren		●ρ=51.5 Ps=1.91	●CaCO3=36.4%	1	0.5 1.0			P	
	A/G	A/G					●ρ=50.0 Vp=1.76 Ps=1.82	●CaCO3=36.9% TOC=0.17%	2				P	
		CC8					●ρ=48.6 Vp=1.77 Ps=1.82	●CaCO3=40.2%	3				P	*
									4				P	OG W
									5				P	*
									6				P	
									7				P	*
									CC				P	

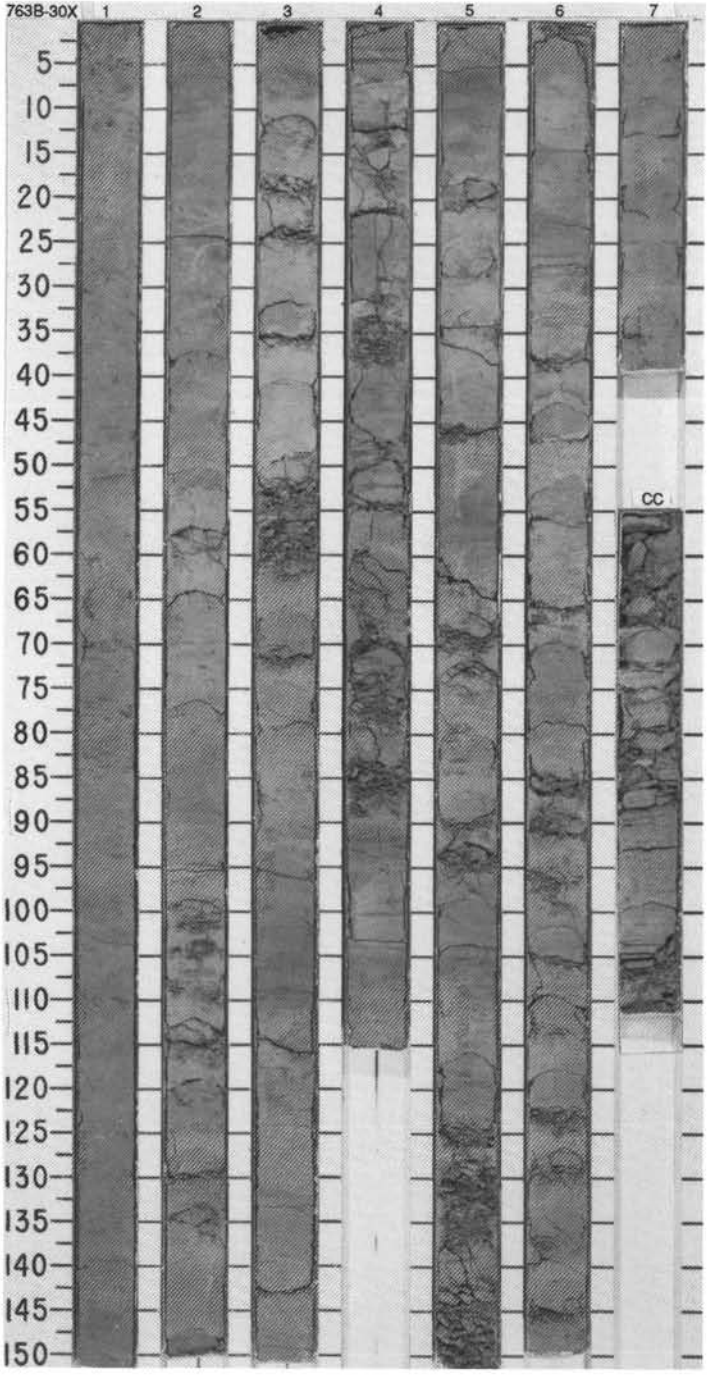
LITHOLOGIC DESCRIPTION

NANNOFOSSIL CLAYSTONE WITH ZEOLITES

Core is moderately disturbed with biscuiting and fracturing. Biscuits tend to fracture while the intrabiscuit slurry is "intact". Major lithology: NANNOFOSSIL CLAYSTONE with ZEOLITES, greenish gray (5G 6/1, minor 5G 7/1) with gray (N5 and N6) burrow fillings. Identifiable burrows include Zoophycos, Planolites, and Chondrites. Most burrows show excellent preservation. Slight evidence of parallel bedding. Inoceramus fragments, commonly fragmented into powder, are present. In smear slides, clinoptilolite forms as much as 20% of the rock, and dolomite rhombs and pyrite(?) hexahedrons are present.

SMEAR SLIDE SUMMARY (%):

	1, 125 D	3, 84 D	5, 105 D	7, 20 D
TEXTURE:				
Silt	32	40	38	39
Clay	68	60	62	61
COMPOSITION:				
Accessory minerals	—	—	2	—
Bioclast	5	—	—	—
Carbonate grains	6	—	—	—
Clay	43	41	41	47
Dolomite	—	4	—	—
Foraminifers	5	6	3	3
Mica	—	2	2	—
Nannofossils	26	26	28	27
Opaques	2	5	5	1
Quartz	Tr	1	1	2
Zeolite	13	15	18	20



SITE 763 HOLE B CORE 31X CORED INTERVAL 465.5-475.0 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE ALBIAN	ALBIAN undifferentiated	CC8	LOWER CRETACEOUS		R/P	($CaCO_3$=28.9%)	Φ=50.6 ρ=1.82 V=1.72	$CaCO_3$=31.5%	1	0.5 1.0			*	
	A/G	A/G							2				*	
							Φ=52.0 ρ=1.85 V=1.73	$CaCO_3$=29.2%	3				*	
							Φ=52.3 ρ=1.84 V=1.76	TOC=0.22% $CaCO_3$=26.7%	4					
									5				*	
									6				*	
									7					
									CC					

LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE

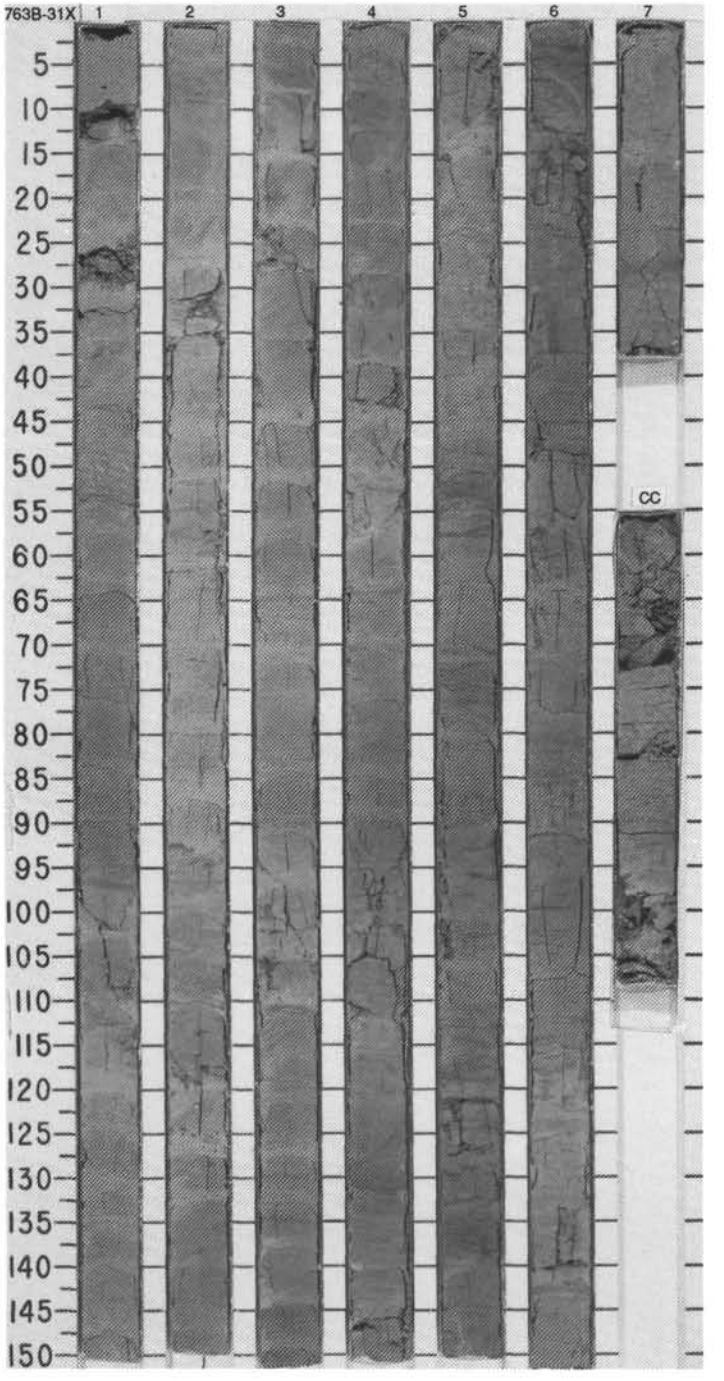
Slightly to moderately disturbed by biscuiting and fracturing.

Major lithology: CALCAREOUS CLAYSTONE, greenish gray, (5G 5/1). Contains common bioclasts and pyrite and some quartz, dolomite rhombs, glauconite, muscovite, and biotite in various combinations. Pyrite is generally very fine grained but is coarse, and silt-sized in Section 5, 75 cm, and nodules up to 5 mm across are also present. Bioturbation slight to moderate and includes Zoophycos, Planolites, and Chondrities types and less common vertical burrows.

Minor lithology: Claystone with bioclasts, light greenish gray (5Y 6/2). Contains common nannofossils, foraminifers, zeolite, and pyrite and traces of quartz and mica. Bioclasts are abraded prisms of Inoceramus, Section 6, 120-150 cm; Section 7, 0-16 cm.

SMEAR SLIDE SUMMARY (%):

	1, 80 D	2, 75 D	3, 80 D	5, 61 D	5, 75 D	6, 130 M
TEXTURE:						
Silt	10	19	20	15	26	10
Clay	90	81	80	85	74	90
COMPOSITION:						
Bioclast	5	5	1	1	1	20
Biotite	Tr	Tr	Tr	—	—	—
Clay	70	57	55	60	51	60
Dolomite	Tr	1	Tr	—	Tr	—
Fe oxide	Tr	—	—	—	—	—
Foraminifers	7	10	10	10	10	3
Glauconite	—	Tr	Tr	—	Tr	Tr
Mica	—	1	1	5	—	Tr
Nannofossils	10	15	20	17	20	10
Pyrite	1	3	3	2	10	2
Quartz	Tr	Tr	—	—	Tr	Tr
Fe oxides	7	8	10	5	8	5



SITE 763 HOLE B CORE 32X CORED INTERVAL 475.0-484.5 mbsf

TIME-ROCK UNIT: MIDDLE ALBIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: A/G
- NANNOFOSSILS: A/G
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: R/P
- PALEOMAGNETICS:
- PHYS. PROPERTIES:
- CHEMISTRY:

ALBIAN undifferentiated

CC8

PALEOMAGNETICS: ●D=51.2 I=1.73 ●D=47.3 I=1.81 ●D=44.3 I=1.87

PHYS. PROPERTIES: ●J=1.86 ●J=1.80 ●J=1.82

CHEMISTRY: ●$CaCO_3$=24.6% ●$CaCO_3$=57.3% TOC=0.13% ●$CaCO_3$=46.5% ●$CaCO_3$=41.7%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

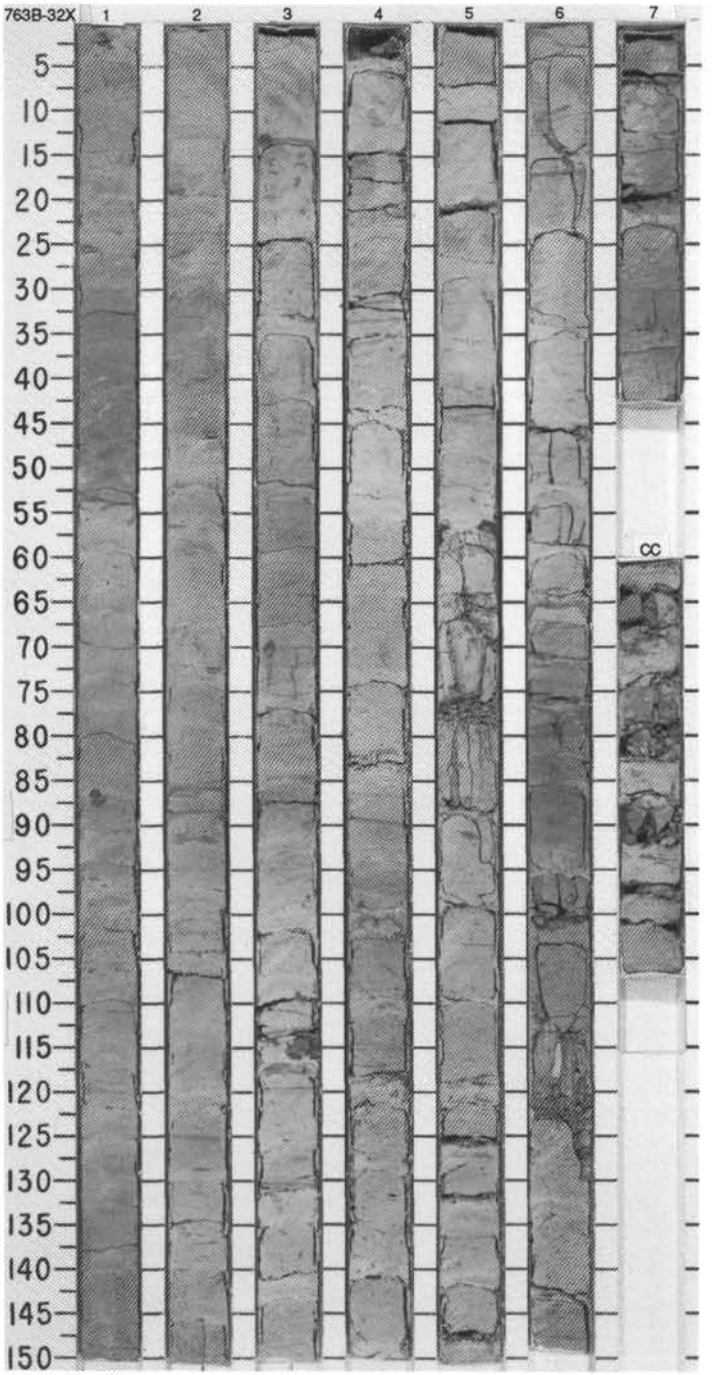
CALCAREOUS CLAYSTONE WITH ZEOLITES, ZEOLITE CALCAREOUS CLAYSTONE, AND CLAYEY CHALK

Core is moderately disturbed by drilling with drill biscuits (3-15 cm thick) alternating with mixed inter-biscuit drilling slurry (2-5 cm thick).

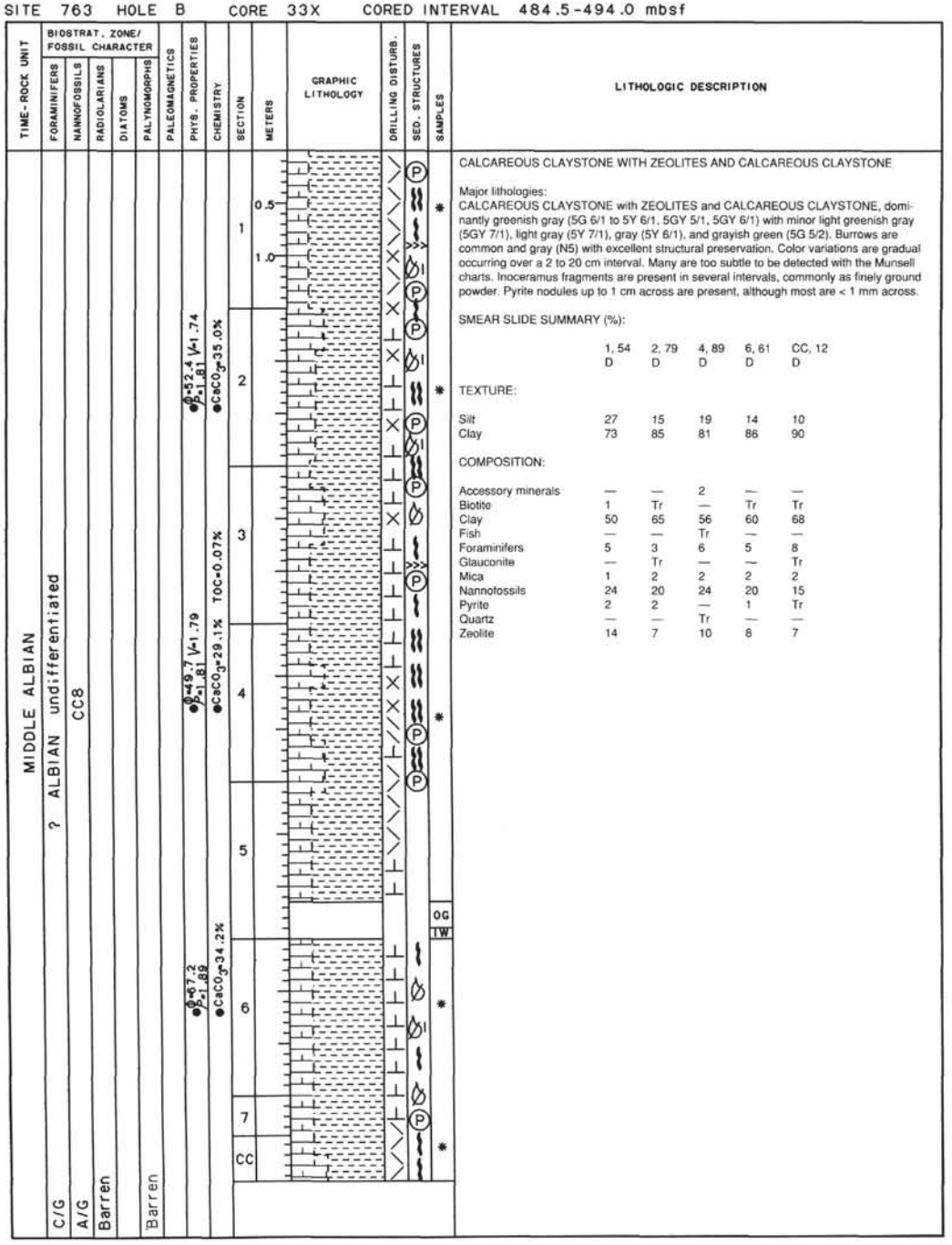
Major lithologies:
CALCAREOUS CLAYSTONE with ZEOLITES and ZEOLITE CALCAREOUS CLAYSTONE, greenish gray (5G 6/1 to 5GY 6/1 with minor 5G 5/1), and CLAYEY CHALK, light greenish gray (5G 7/1 to 5GY 7/1) with minor gray (N5-N6) to dark gray (N4) burrows. Gray (N5-N6) burrows, Chondrites and Planolites are abundant in Sections 1-4, with less common Zoophycos. In Sections 5-CC, burrows are less abundant with Zoophycos, Chrondrites, and minor Planolites. Mottled sections with no identifiable trace fossils occur in some biscuits and increase in abundance in Sections 5-CC. Color banding with gradational boundaries occurs in Sections 6-7. Pyrite nodules and disseminated pyrite fill burrows up to 1 X 2 cm (on cut surface).

SMEAR SLIDE SUMMARY (%):

	1, 40 D	2, 82 D	3, 47 D	5, 37 D	6, 32 D
TEXTURE:					
Silt	—	—	—	4	3
Clay	100	100	100	96	97
COMPOSITION:					
Biotite	—	—	—	—	Tr
Calcite	1	Tr	Tr	Tr	Tr
Clay	63	62	60	58	63
Dolomite	Tr	—	—	—	—
Fish	—	—	—	Tr	Tr
Foraminifers	Tr	Tr	Tr	Tr	Tr
Mica	Tr	Tr	Tr	2	2
Nannolossils	10	10	15	20	15
Opaques	—	Tr	Tr	Tr	Tr
Plant	Tr	Tr	—	Tr	—
Pyrite	Tr	Tr	—	Tr	Tr
Quartz	Tr	Tr	Tr	Tr	Tr
Zeolite	26	28	25	20	20
Zircon	—	—	—	Tr	—



SITE 763 HOLE B CORE 33X CORED INTERVAL 484.5-494.0 mbsf



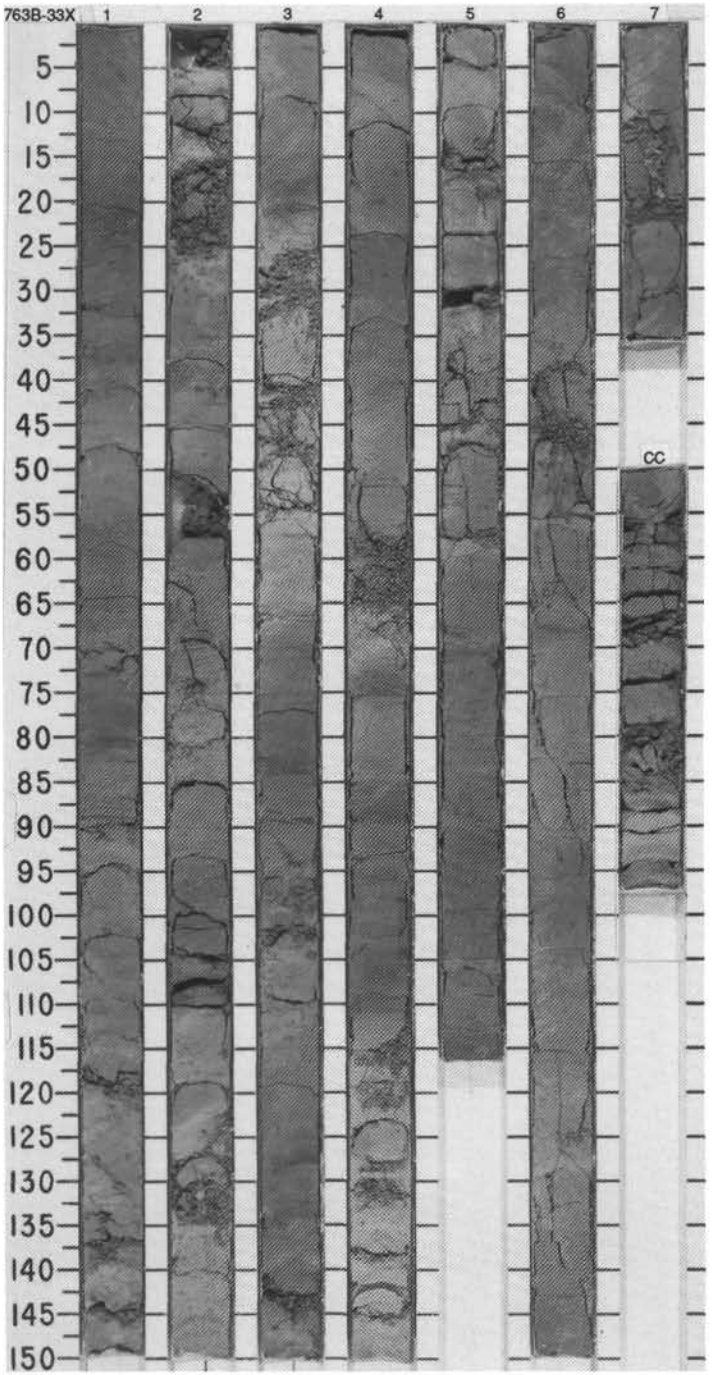
LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE WITH ZEOLITES AND CALCAREOUS CLAYSTONE

Major lithologies:
CALCAREOUS CLAYSTONE with ZEOLITES and CALCAREOUS CLAYSTONE, dominantly greenish gray (5G 6/1 to 5Y 6/1, 5GY 5/1, 5GY 6/1) with minor light greenish gray (5GY 7/1), light gray (5Y 7/1), gray (5Y 6/1), and grayish green (5G 5/2). Burrows are common and gray (N5) with excellent structural preservation. Color variations are gradual occurring over a 2 to 20 cm interval. Many are too subtle to be detected with the Munsell charts. Inoceramus fragments are present in several intervals, commonly as finely ground powder. Pyrite nodules up to 1 cm across are present, although most are < 1 mm across.

SMEAR SLIDE SUMMARY (%):

	1, 54 D	2, 79 D	4, 89 D	6, 61 D	CC, 12 D
TEXTURE:					
Silt	27	15	19	14	10
Clay	73	85	81	86	90
COMPOSITION:					
Accessory minerals	—	—	2	—	—
Biotite	1	Tr	—	Tr	Tr
Clay	50	65	56	60	68
Fish	—	—	Tr	—	—
Foraminifers	5	3	6	5	8
Glauconite	—	Tr	—	—	Tr
Mica	1	2	2	2	2
Nannofossils	24	20	24	20	15
Pyrite	2	2	—	1	Tr
Quartz	—	—	Tr	—	—
Zeolite	14	7	10	8	7



SITE 763 HOLE B CORE 34X CORED INTERVAL 494.0-503.5 mbsf

TIME-ROCK UNIT: LOWER and MIDDLE ALBIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: ?ALBIAN undifferentiated; NANNOFOSSILS: CC8; RADIOLARIANS: Barren; DIATOMS; PALYNOMORPHS: M/P

PALEOMAGNETICS

PHYS. PROPERTIES: ●P=2.0 V=1.52 ρ=1.90; ●P=0.7 V=1.80 ρ=1.90; V=1.72 ρ=1.92 P=49.8

CHEMISTRY: ●$CaCO_3$=49.0%; ●$CaCO_3$=36.1%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

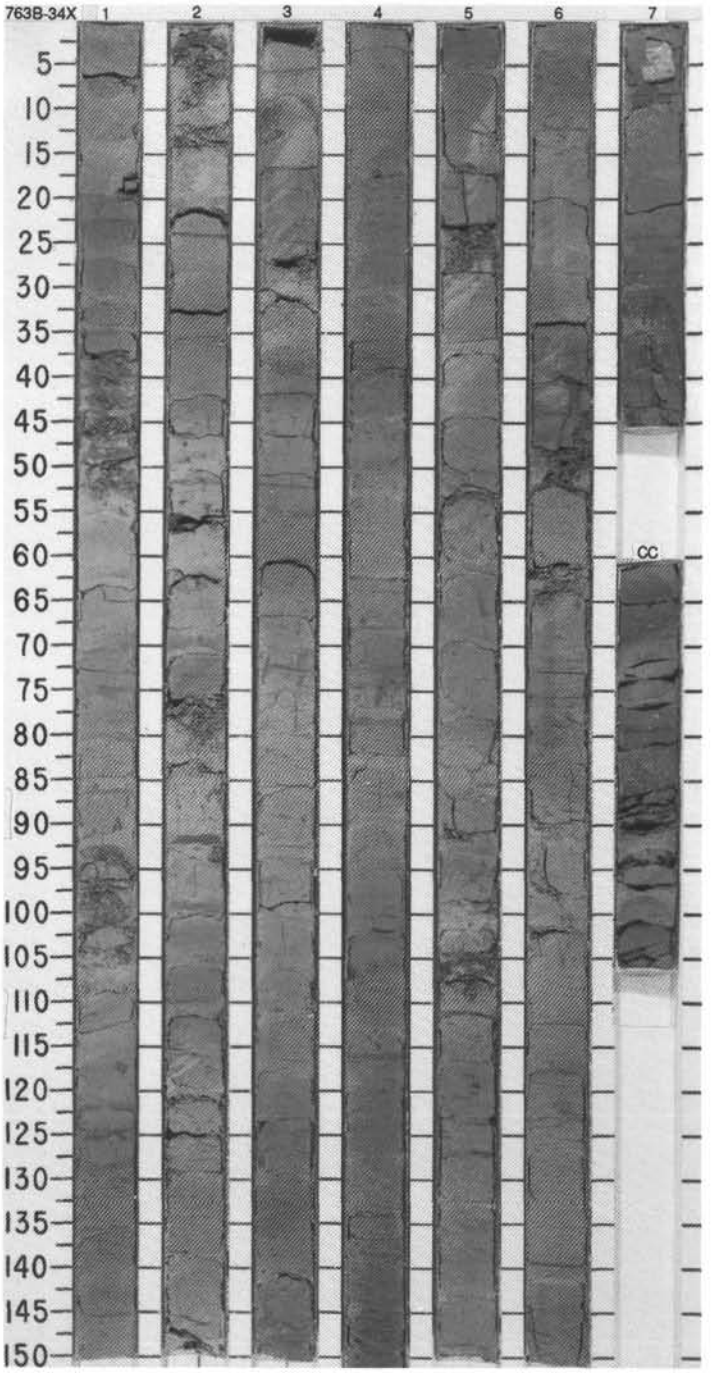
NANNOFOSSIL CLAYSTONE WITH ZEOLITES AND NANNOFOSSIL CLAYSTONE

The core is intensely to slightly disturbed by drilling. Drilling biscuits are developed throughout the core but longer, slightly fractured intervals occur in Sections 4, 6, and 7.

Major lithologies:
NANNOFOSSIL CLAYSTONE with ZEOLITES and NANNOFOSSIL CLAYSTONE, dominantly greenish gray (5G 6/1, 5G 5/1, 5GY 5/1), color variations are subtle and cyclic, reflecting changing carbonate contents. The core is intensely bioturbated throughout. Planolites, Chondrites, and minor Zoophycos burrows are present. Burrows are filled with greenish gray and dark gray (N4) claystone and gray (N5), pyrite-rich claystone. In Sections 6, 7, and CC, bioturbation is less intense and parallel lamination is preserved. Laminae consist of alternating lighter and darker colors. Pyrite nodules are present throughout the core, commonly accompanied by fine-grained pyrite disseminated in the sediment.

SMEAR SLIDE SUMMARY (%):

	1, 28 D	3, 57 D	6, 43 M	7, 29 D
TEXTURE:				
Silt	12	20	10	2
Clay	88	80	90	98
COMPOSITION:				
Accessory minerals	—	—	—	2
Carbonate grains	5	5	5	—
Clay	40	36	54	41
Foraminifers	7	3	3	—
Mica	Tr	1	Tr	—
Nannofossils	25	35	20	40
Opaques	10	10	5	2
Quartz	3	2	3	3
Spicules	—	—	—	2
Zeolite	10	8	10	10



SITE 763 HOLE B CORE 35X CORED INTERVAL 503.5-513.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER and MIDDLE ALBIAN	?ALBIAN undifferentiated	CC8					ρ=43.6 V=1.94 P=2.04	$CaCO_3$=59.5%	1	0.5				
	A/G	A/G	Barren	Barren	Barren					1.0				
									2					
							ρ=49.5 V=1.83 P=1.95	$CaCO_3$=33.7%	3					
							ρ=47.1 V=1.84 P=1.97	$CaCO_3$=27.2% TOC=0.05%	4					
									5					
									6					
									CC					

LITHOLOGIC DESCRIPTION

NANNOFOSSIL CLAYSTONE

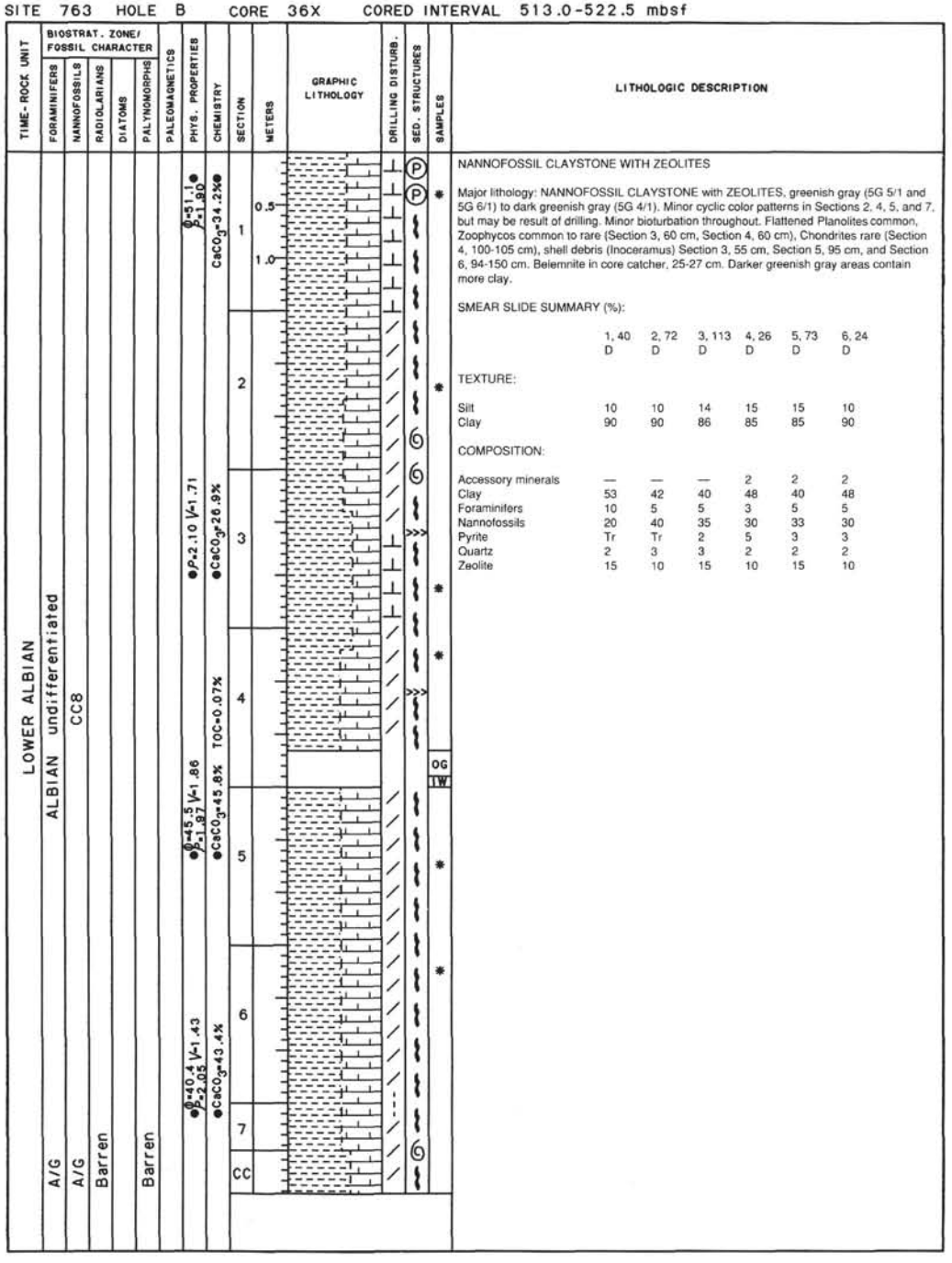
Major lithology: NANNOFOSSIL CLAYSTONE, *dark to light greenish gray* (5GY 5/1 to 5G 6/1). Calcareous components are dominantly nannofossils with few foraminifers. Other components are zeolites, opaques (mostly pyrite), and dolomite. Core disturbance is moderate with biscuiting, but most sections are intact. The core shows no obvious trends except alternating clay-carbonate rich intervals. Some have original laminations present but most are heavily bioturbated.

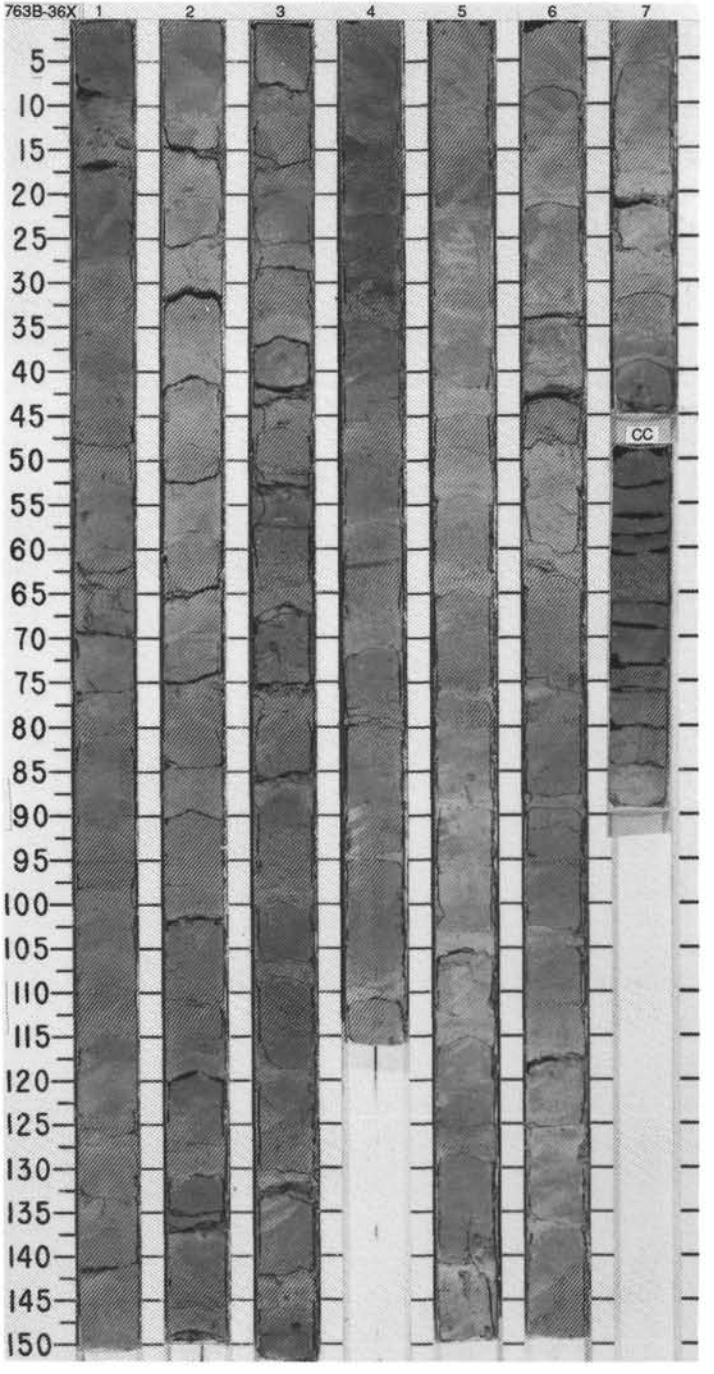
Minor lithology: Clayey chalk, light greenish gray (5GY 7/1), gradational boundaries, in Section 2, 102-127 cm.

SMEAR SLIDE SUMMARY (%):

	2, 117 M	3, 57 D	5, 44 D	6, 24 D
TEXTURE:				
Silt	10	10	10	10
Clay	90	90	90	90
COMPOSITION:				
Carbonate grains	18	4	—	1
Clay	25	45	60	45
Foraminifers	—	3	Tr	—
Mica	Tr	Tr	Tr	Tr
Nannofossils	55	40	30	35
Opaques	2	2	2	7
Quartz	—	1	Tr	Tr
Zeolite	—	5	8	12
Dolomite	Tr	Tr	Tr	Tr

SITE 763 HOLE B CORE 36X CORED INTERVAL 513.0-522.5 mbsf





SITE 763 HOLE B CORE 37X CORED INTERVAL 522.5-532.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER ALBIAN	R/G ALBIAN - APTIAN													
	A/P CC7	CC8												
	C/P		*A. umbilicata* (Albian)											
	Barren													

PHYS. PROPERTIES: ●θ-42.6 V-1.96 ρ-2.03; ●θ-43.8 V-1.89 ρ-2.00; ●θ-38.5 V-2.00 ρ-2.06

CHEMISTRY: ●$CaCO_3$-39.4%; ●$CaCO_3$-74.7%; TOC-0.07%; ●$CaCO_3$-64.0%

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

METERS: 0.5, 1.0

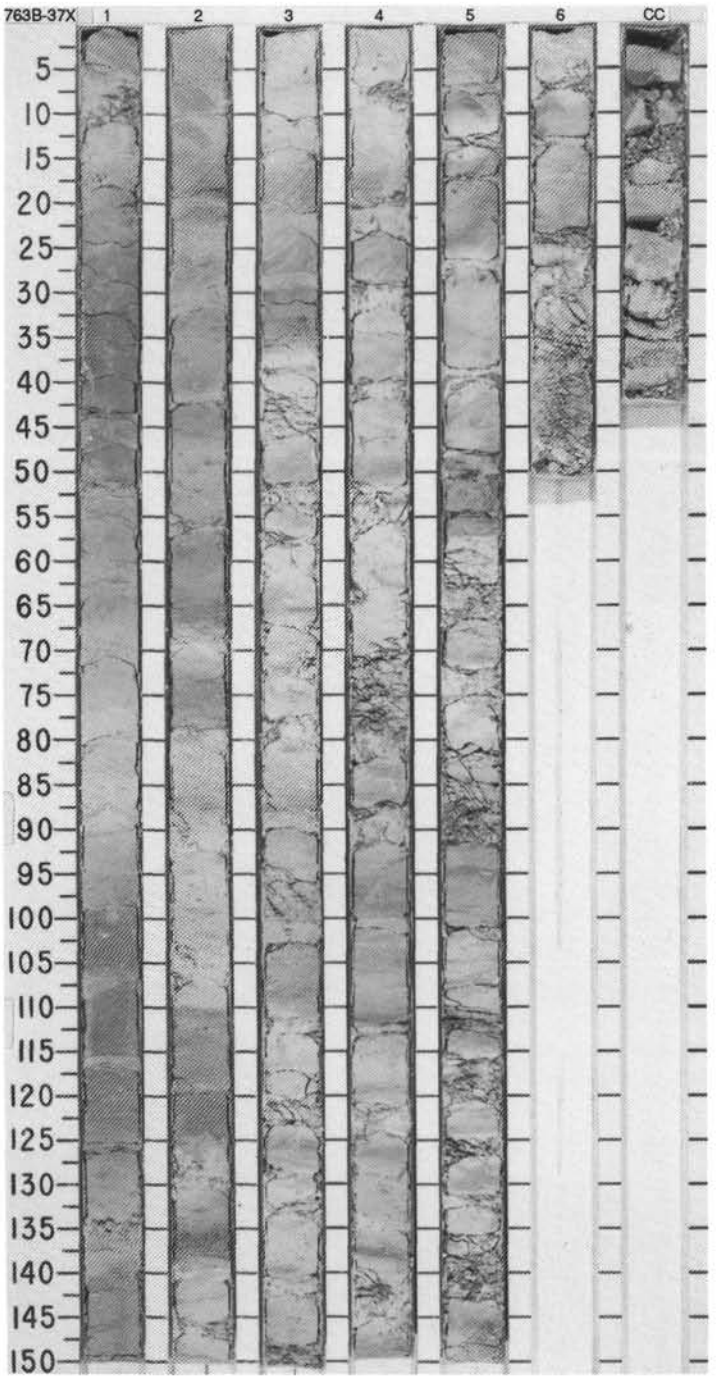
LITHOLOGIC DESCRIPTION

NANNOFOSSIL CLAYSTONE WITH ZEOLITES AND CLAYEY CHALK WITH ZEOLITES

Major lithologies:
NANNOFOSSIL CLAYSTONE with ZEOLITES, greenish gray (5G 6/1, 5BG 6/1), and CLAYEY CHALK with ZEOLITES, light greenish gray (5G 7/1). Cyclic sedimentation pattern throughout Section 5 with couplets 15-60 cm thick. Darker shades of greenish gray have more clay content. Moderately to highly bioturbated. Planolites abundant, Zoophycos rare (Section 3, 40 and 124 cm). Teichichnus, Section 4, 41-44 cm, and Chondrites, rare. Vertical branching burrow, Section 4, 34-37 cm. Most burrows oriented parallel to bedding. Belemnite, Section 4, 4 cm. Pyrite grains, Section 3, 144 cm, Section 4, 60 cm.

SMEAR SLIDE SUMMARY (%):

	1, 83 D	3, 33 D	5, 97 D
TEXTURE:			
Sand	—	—	5
Silt	10	10	10
Clay	90	90	85
COMPOSITION:			
Clay	50	49	50
Foraminifers	2	3	2
Glauconite	—	—	3
Nannofossils	36	35	30
Opaques	—	—	2
Quartz	2	3	3
Zeolite	10	10	10



SITE 763 HOLE B CORE 38X CORED INTERVAL 532.0-541.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER ALBIAN	F/M	ALBIAN - APTIAN	CC7	LOWER CRETACEOUS			($CaCO_3$=29.9%)							
	A/G						I=1.86 ρ=2.48.3							
	C/P				Barren			TOC=0.14%	1	0.5				*
								$CaCO_3$=53.5%		1.0				*
									CC					

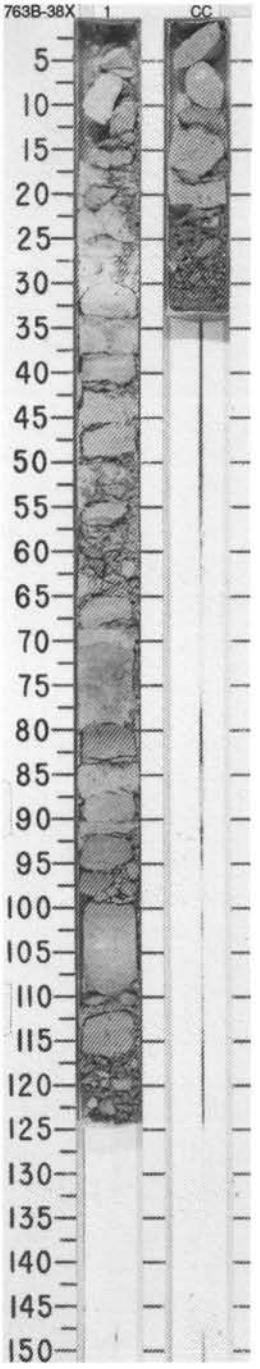
LITHOLOGIC DESCRIPTION

LIMESTONE WITH GLAUCONITE AND CLAY AND NANNOFOSSIL SILTY CLAYSTONE WITH GLAUCONITE

Major lithologies:
LIMESTONE WITH GLAUCONITE AND CLAY, greenish gray (5GY 6/1) to light greenish gray (5GY 7/1), nearly structureless. Some chalky, transitionalintervals are present. NANNOFOSSIL SILTY CLAYSTONE WITH GLAUCONITE, greenish gray (5GY 6/1), includes a few thin (1 to 2 cm), laminae.

SMEAR SLIDE SUMMARY (%):

	1, 79 M	1, 103 D
COMPOSITION:		
Carbonate particles	—	48
Clay	48	20
Foraminifers	5	2
Glauconite	12	8
Mica	Tr	—
Nannofossils	25	15
Opaques	5	5
Quartz	5	2



SITE 763 HOLE B CORE 39X CORED INTERVAL 541.5-551.0 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE APTIAN - LOWER ALBIAN	A/G	ALBIAN - APTIAN CC7	BERRIASIAN - MIDDLE ALBIAN		A/G	($CaCO_3$=44.0%)	($CaCO_3$=56.4%)	$CaCO_3$=16.2%	1	0.5				*
							V=1.82 P=2.70	TOC=0.06%		1.0				*
							0-48.4 1.97 0-26.7 1.85		2					*
									CC					*

LITHOLOGIC DESCRIPTION

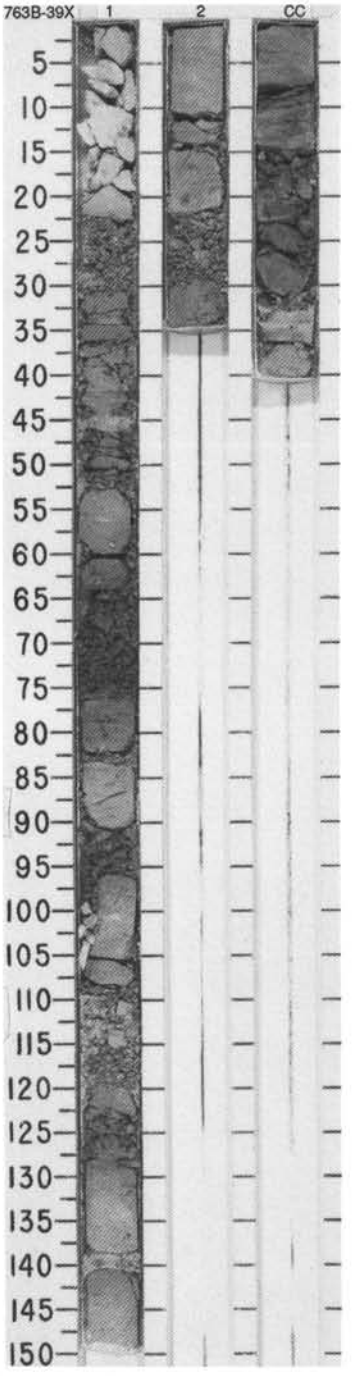
CLAYEY CHALK AND NANNOFOSSIL CLAYSTONE

Core is highly disturbed and brecciated by drilling.

Major lithologies:
CLAYEY CHALK and NANNOFOSSIL CLAYSTONE, light gray (5Y 7/1), greenish gray (5GY 6/1) to dark greenish gray (5BG 4/1). Bioturbation moderate in preserved pieces; color change, but there is no cyclic pattern. Minor lithology: Pelagic limestone (recrystallized nannofossil claystone ?), gray (N4) to light gray (5Y 7/1), in Section 1 (0-20 cm, 95-105 cm) and Section 2 (0-10 cm).

SMEAR SLIDE SUMMARY (%):

	1, 56 D	1, 100 M	CC, 11 D
TEXTURE:			
Sand	—	—	10
Silt	10	10	10
Clay	90	90	80
COMPOSITION:			
Accessory minerals	Tr	—	—
Carbonate, recrystallized	—	33	—
Clay	73	57	50
Foraminifers	5	—	5
Glauconite	2	—	2
Nannofossils	15	10	39
Opaques	2	—	2
Quartz	3	—	2



SITE 763 HOLE B CORE 40X CORED INTERVAL 551.0-560.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE APTIAN - LOWER ALBIAN	Barren	A/M CC7	Barren		R/P		V=1.92 ● D=50.9 ▷=1.80 V=2.01 ● D=47.4 ▷=1.93	$CaCO_3$=26.7% TOC=0.31% ● $CaCO_3$=44.5%	1 2 CC	0.5 1.0				*

LITHOLOGIC DESCRIPTION

CALCAREOUS CLAYSTONE

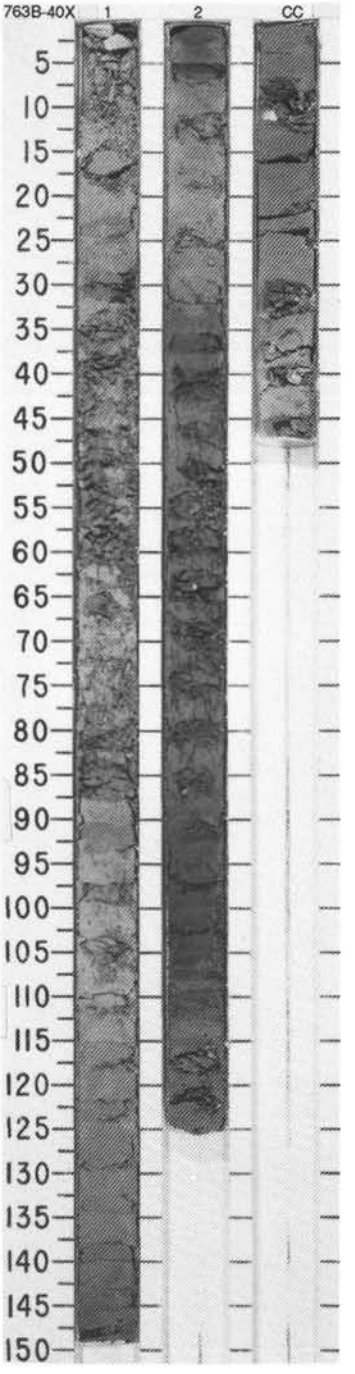
Heavily biscuited to heavily fractured.

Major lithology: CALCAREOUS CLAYSTONE, light greenish gray (5Y 7/1) to greenish gray (5Y 6/1, 5GY 5/1) and dark gray (N4). Contains some mica and bioclasts and traces of pyrite, glauconite, biotite, zeolites, and dolomite rhombs.

Minor lithology: Recrystallized nannofossil claystone (pelagic limestone), ligh gray (5Y 7/1), Section 1, 1-10 cm, probably from overlying core.

SMEAR SLIDE SUMMARY (%):

	1, 92 D	2, 102 D	CC, 36 D
TEXTURE:			
Silt	5	25	6
Clay	95	75	94
COMPOSITION:			
Bioclasts	2	4	2
Biotite	—	Tr	Tr
Clay	46	70	59
Dolomite	—	—	Tr
Feldspar	—	Tr	—
Fish	—	1	—
Foraminifers	20	—	10
Glauconite	Tr	5	Tr
Mica	—	1	3
Nannofossils	30	2	25
Pyrite	2	2	1
Quartz	—	15	—
Zeolite	Tr	Tr	Tr
Dolomite	---	---	Tr



SITE 763 HOLE B CORE 41X CORED INTERVAL 560.5-570.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE APTIAN - LOWER ALBIAN	Barren	CC7 C/P	LOWER CRETACEOUS A/P		Barren	($CaCO_3$=0.8% TOC=0.16%)	ρ=2.21 ρ=40.1 ρ=2.06	$CaCO_3$=17.4% $CaCO_3$=41.5%	1 2 CC	0.5 1.0		X	X	* * *

LITHOLOGIC DESCRIPTION

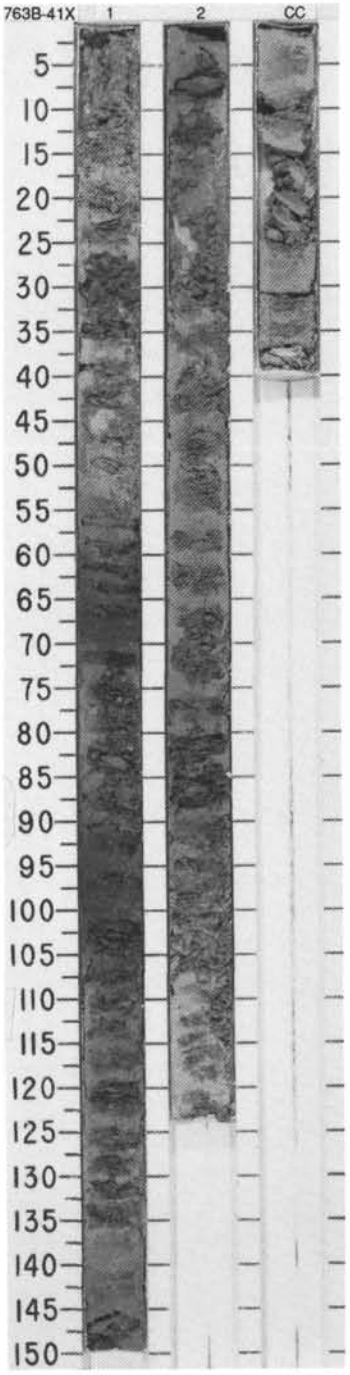
CLAYSTONE WITH SILT AND NANNOFOSSILS AND NANNOFOSSIL CLAYSTONE WITH SILT AND SAND

Core is almost completely brecciated and all structures are destroyed.

Major lithologies:
CLAYSTONE with SILT and NANNOFOSSILS, green gray (5G 6/1, 5G 5/1). Section 2 and CC contain NANNOFOSSIL CLAYSTONE with SILT and SAND, greenish gray (5G 5/1) and dark greenish gray (5BG 4/1) pyrite and glauconite are common in smear slides. Shell fragments are dispersed throughout Section 1.

SMEAR SLIDE SUMMARY (%):

	1, 66 D	1, 83 D	2, 87 D
TEXTURE:			
Sand	5	5	20
Silt	10	10	10
Clay	85	85	70
COMPOSITION:			
Clay	45	38	34
Foraminifers	3	3	3
Glauconite	5	5	8
Biotite	1	2	—
Nannofossils	28	35	25
Opaques	10	10	—
Pyrite	—	—	10
Quartz	3	2	15
Zeolite	5	5	5



SITE 763 HOLE B CORE 42X CORED INTERVAL 570.0-579.5 mbsf

TIME-ROCK UNIT: LOWER APTIAN ?

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: Barren
- NANNOFOSSILS: Barren
- RADIOLARIANS: C/P
- DIATOMS: LOWER CRETACEOUS undifferentiated
- PALYNOMORPHS: R/P
- PALEOMAGNETICS: *M. testudinaria - O. operculata*

PHYS. PROPERTIES: ρ=47.2 / 2.06; ρ=46.7 / 2.04 V=1.46

CHEMISTRY: $CaCO_3$=1.3% TOC=0.10%; $CaCO_3$=15.9% TOC=0.20%; $CaCO_3$=0.4%

SECTION: 1 2 3 4 5 6 7 8 CC

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY: VOID

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG, TW

LITHOLOGIC DESCRIPTION

CLAYSTONE WITH SILT, QUARTZ SILTSTONE WITH CLAY AND ZEOLITES, SILTY CLAYSTONE WITH QUARTZ AND ZEOLITES, SANDY CLAYEY SILTSTONE WITH QUARTZ, FELDSPAR, AND ZEOLITES

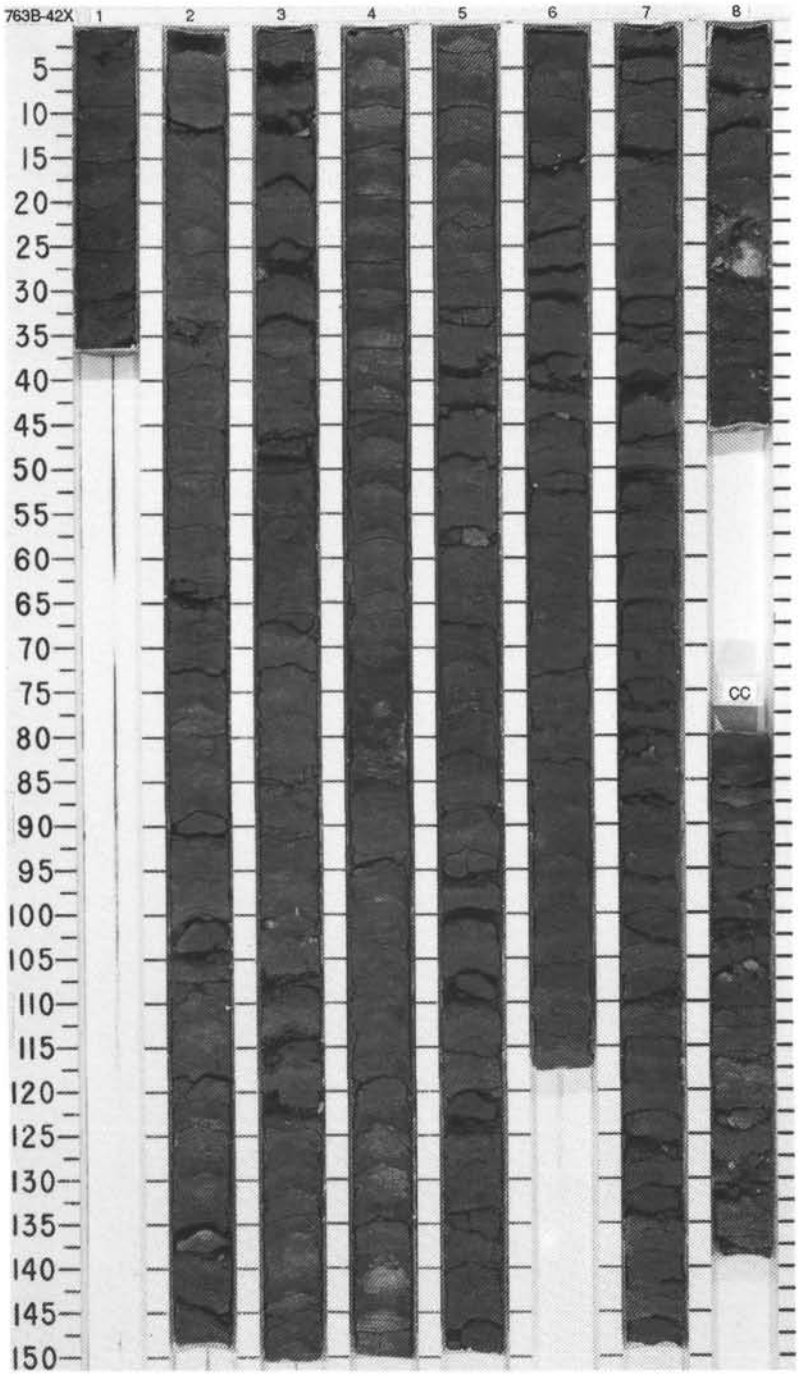
Core is highly disturbed by drilling and contains an extra section due to gas expansion.

Major lithologies:
CLAYSTONE with SILT, dark greenish gray (5BG 4/1), interbedded with QUARTZ SILTSTONE, SILTY CLAYSTONE, and SANDY CLAYEY SILTSTONE, dark greenish gray (5BG 4/1), (See smear slides for additional modifiers). Where preserved, fragments show sand and silt laminations. Minor horizontal bioturbation, Planolites is common. Pyrite and glauconite disseminated throughout core. Calcareous zone, Section 4, 73-80 cm. Calcareous nodule, Section 8, 25-30 cm. Gas expansion fractures throughout.

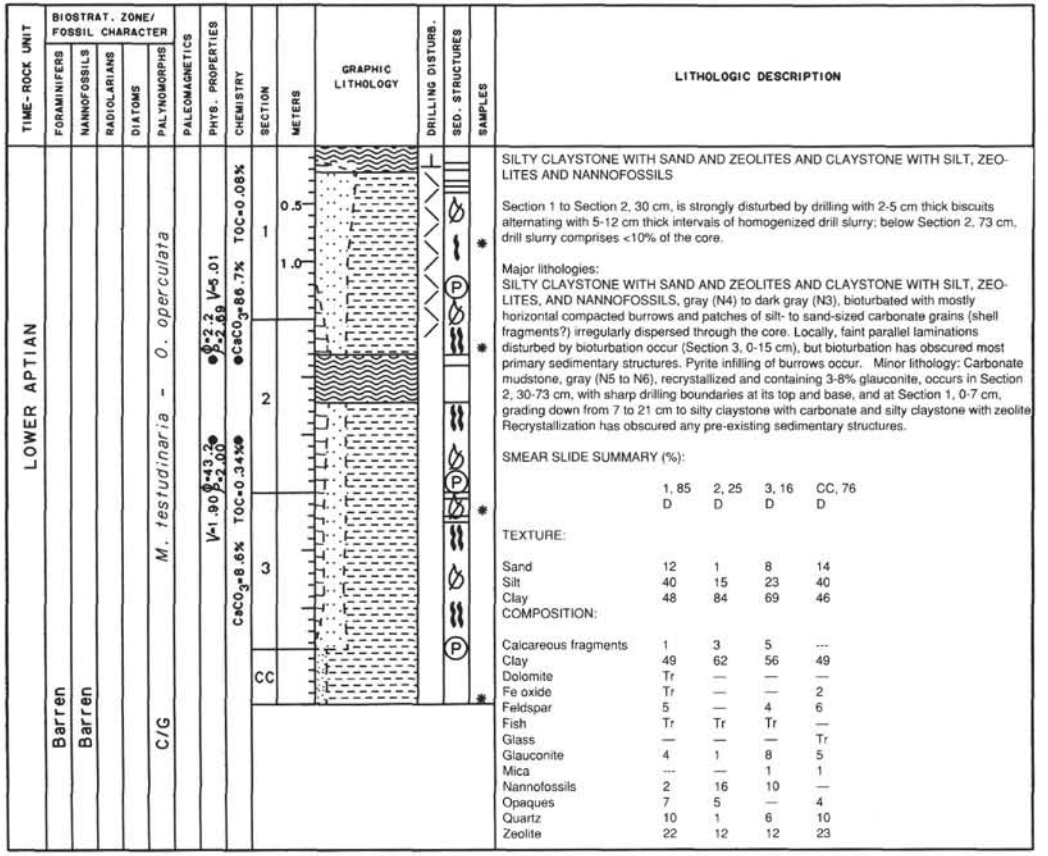
Interpretation: Angular sand-size quartz, feldspar mixed with silts and clays and angular glauconite laminations suggest current activity and transport of coarser grained materials to deposition site. The angularity suggests a near source or possibly reworking of underlying units.

SMEAR SLIDE SUMMARY (%):

	1, 23 D	2, 82 D	4, 141 D	5, 11 D	8, 40 D	CC, 54 D
TEXTURE:						
Sand	—	10	10	30	20	25
Silt	17	75	70	35	50	45
Clay	83	15	20	35	30	30
COMPOSITION:						
Altered grains	—	—	—	—	—	20
Bioclast	Tr	—	—	—	—	—
Biotite	Tr	2	2	Tr	Tr	Tr
Clay	83	15	20	35	30	30
Feldspar	—	30	20	15	20	10
Fish	Tr	—	—	—	—	—
Glauconite	2	3	10	10	8	3
Mica	—	—	3	3	—	2
Pyrite	3	2	2	5	2	2
Quartz	5	36	36	25	30	33
Zeolite	7	12	7	7	10	Tr



SITE 763 HOLE B CORE 43X CORED INTERVAL 579.5-589.0 mbsf



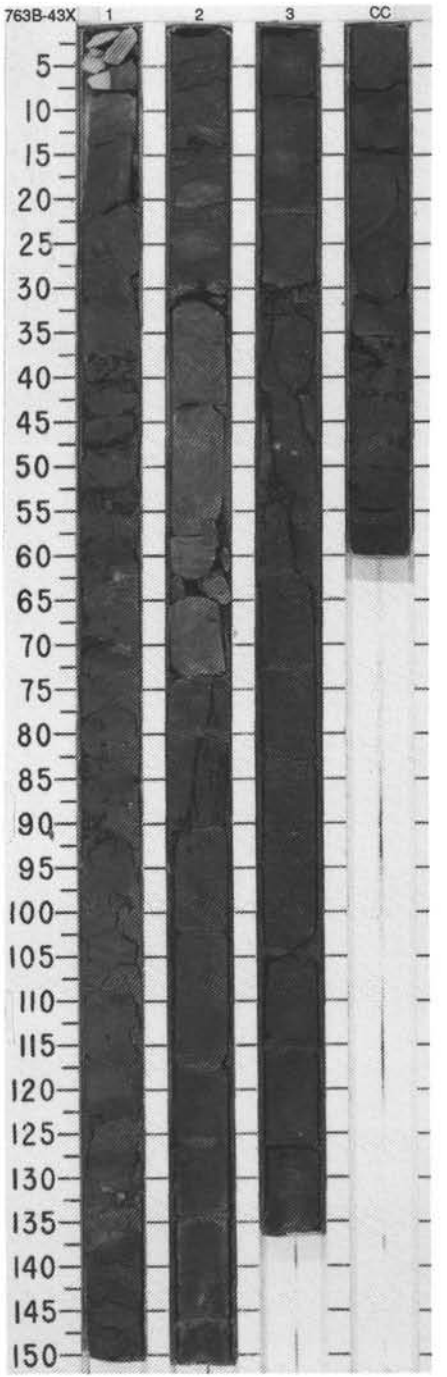
SILTY CLAYSTONE WITH SAND AND ZEOLITES AND CLAYSTONE WITH SILT, ZEOLITES AND NANNOFOSSILS

Section 1 to Section 2, 30 cm, is strongly disturbed by drilling with 2-5 cm thick biscuits alternating with 5-12 cm thick intervals of homogenized drill slurry; below Section 2, 73 cm, drill slurry comprises <10% of the core.

Major lithologies:
SILTY CLAYSTONE WITH SAND AND ZEOLITES AND CLAYSTONE WITH SILT, ZEOLITES, AND NANNOFOSSILS, gray (N4) to dark gray (N3), bioturbated with mostly horizontal compacted burrows and patches of silt- to sand-sized carbonate grains (shell fragments?) irregularly dispersed through the core. Locally, faint parallel laminations disturbed by bioturbation occur (Section 3, 0-15 cm), but bioturbation has obscured most primary sedimentary structures. Pyrite infilling of burrows occur. Minor lithology: Carbonate mudstone, gray (N5 to N6), recrystallized and containing 3-8% glauconite, occurs in Section 2, 30-73 cm, with sharp drilling boundaries at its top and base, and at Section 1, 0-7 cm, grading down from 7 to 21 cm to silty claystone with carbonate and silty claystone with zeolite. Recrystallization has obscured any pre-existing sedimentary structures.

SMEAR SLIDE SUMMARY (%):

	1, 85 D	2, 25 D	3, 16 D	CC, 76 D
TEXTURE:				
Sand	12	1	8	14
Silt	40	15	23	40
Clay	48	84	69	46
COMPOSITION:				
Calcareous fragments	1	3	5	---
Clay	49	62	56	49
Dolomite	Tr	—	—	—
Fe oxide	Tr	—	—	2
Feldspar	5	—	4	6
Fish	Tr	Tr	Tr	—
Glass	—	—	—	Tr
Glauconite	4	1	8	5
Mica	---	—	1	1
Nannofossils	2	16	10	—
Opaques	7	5	—	4
Quartz	10	1	6	10
Zeolite	22	12	12	23



SITE 763 HOLE B CORE 44X CORED INTERVAL 589.0-598.5 mbsf

TIME-ROCK UNIT: LOWER APTIAN
BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: APTIAN - ALBIAN; NANNOFOSSILS: CC7; RADIOLARIANS: Barren; DIATOMS; PALYNOMORPHS: C/G
PALEOMAGNETICS: C/G
PHYS. PROPERTIES: ρ=43.4 V=1.60; ρ=48.6 V=1.56; ρ=42.9 V=1.60
CHEMISTRY: $CaCO_3$=6.0% TOC=0.58%; $CaCO_3$=6.2% TOC=0.54%; $CaCO_3$=4.0% TOC=0.30%
SECTION: 1, 2, 3, 4, 5, 6, 7, CC
METERS: 0.5, 1.0
GRAPHIC LITHOLOGY
DRILLING DISTURB.
SED. STRUCTURES
SAMPLES

M. testudinaria - O. operculata

LITHOLOGIC DESCRIPTION

ZEOLITIC SILTY CLAYSTONE AND CLAYSTONE WITH ZEOLITES AND CALCAREOUS FRAGMENTS

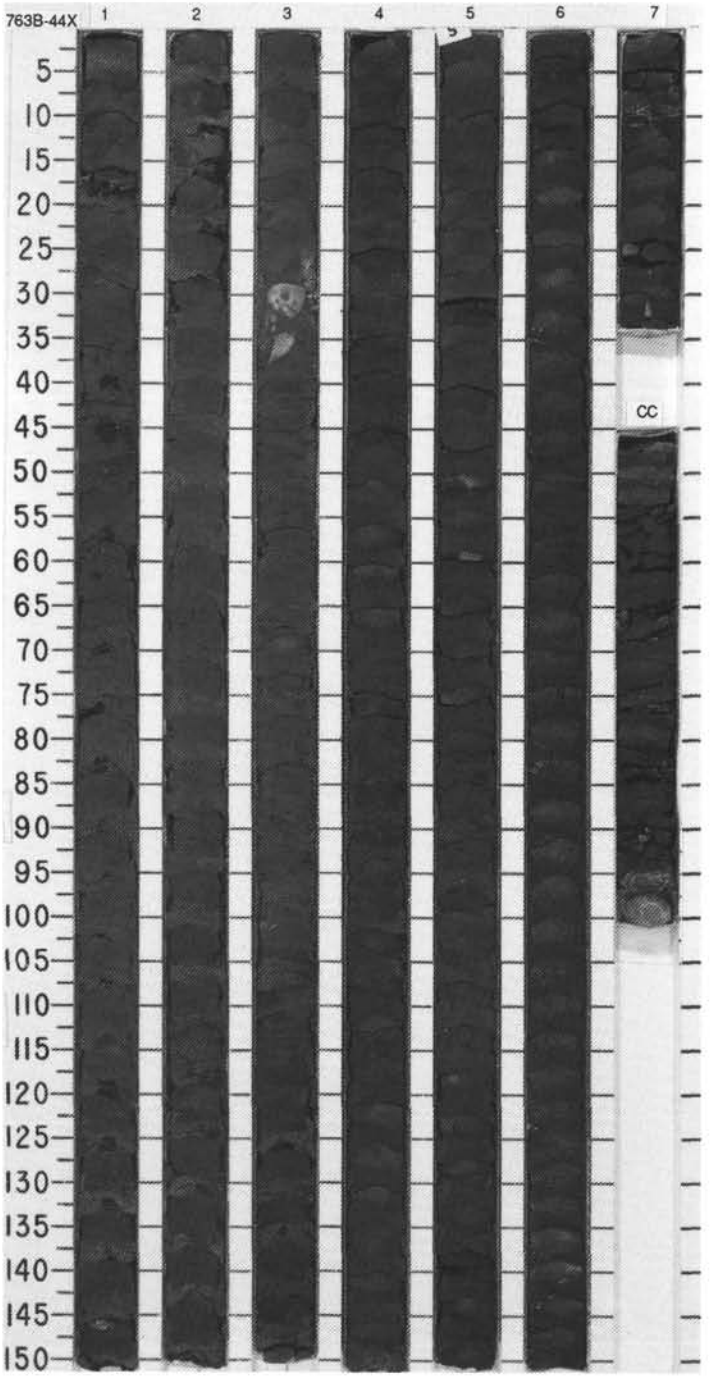
The core is intensely biscuited.

Major lithology: ZEOLITIC SILTY CLAYSTONE, very dark gray (N3) to black (N2), very faintly laminated in parts, partly massive and slightly bioturbated. Ammonite shell debris is present in Section 7, 5-10 cm. Locally, noncarbonate pellets are present in amounts as much as 10-12%. These pellets give a whitish color to the cut surface of the core and, where present, enhance the visibility of laminations. Claystone with zeolites and calcareous fragments, black (N3), contains calcareous pellets, in Sections 6 through CC.

Minor lithologies:
a. Carbonate nodules, gray (5Y 5/1), composed of calcite, dolomite and/or siderite are present in Section 3, 29-36 cm. Another fragment, 2 cm wide, gray (5Y 6/1) at Section 1, 145 cm. In CC, 50-55 cm, a separtian concretion with concentric and radial cemented fractures. Cement in fractures is fibrous.
b. Pyrite is present as small (1-2 mm) nodules, or is finely disseminated.

SMEAR SLIDE SUMMARY (%):

	1, 59 D	2, 67 D	3, 31 M	4, 123 D	CC, 29 D
TEXTURE:					
Silt	37	39	—	44	20
Clay	63	61	—	56	80
COMPOSITION:					
Biotite	Tr	Tr	—	Tr	Tr
Calcareous fragments	3	1	100	10	12
Clay	61	58	—	52	77
Feldspar	—	—	—	Tr	Tr
Glauconite	Tr	Tr	—	—	Tr
Mica	2	1	—	Tr	—
Nannofossils	3	5	—	8	3
Opaques	1	2	—	1	1
Plant	—	1	—	—	—
Pyrite	2	3	—	1	2
Quartz	2	1	—	Tr	Tr
Zeolite	26	28	—	28	5



SITE 763 HOLE B CORE 45X CORED INTERVAL 598.5-608.0 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER APTIAN	?	CC7	Barren		*M. testudinaria* - *O. operculata*		ϕ=46.0 ρ=1.95 V=1.62 ϕ=46.9 ρ=1.94 V=1.30	TOC=1.04% $CaCO_3$=3.4% TOC=1.33% $CaCO_3$=1.8%	1 2 3 4 CC	0.5 1.0				OG IW

LITHOLOGIC DESCRIPTION

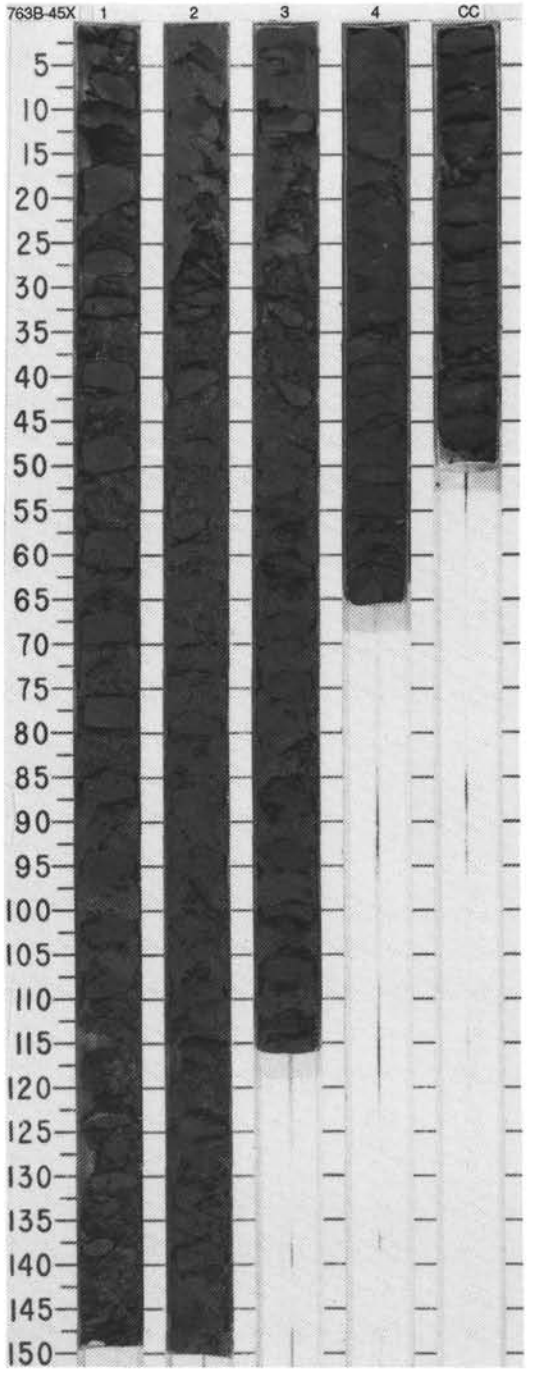
CLAYSTONE WITH SILT

Core is completely disrupted by biscuiting with only one-third of recovery being actual rock.

Major lithology: CLAYSTONE with SILT, black (N2), contains 5-10% zeolites, some quartz and pyrite, and traces of nannofossils, bioclasts, biotite, glauconite, and muscovite. At some levels, finely disseminated calcareous bioclasts are visible in hand specimen. No bedding is apparent and burrowing is rare consisting of burrows less than 2 mm in diameter on cut surface.

SMEAR SLIDE SUMMARY (%):

	1, 86 D	2, 86 D	4, 52 D	CC, 41 D
TEXTURE:				
Silt	16	12	18	9
Clay	84	88	82	91
COMPOSITION:				
Bioclasts	—	Tr	1	—
Biotite	1	Tr	2	1
Clay	84	88	83	91
Glauconite	Tr	Tr	Tr	Tr
Mica	—	—	—	Tr
Nannofossils	3	1	1	Tr
Pyrite	2	3	3	2
Quartz	Tr	3	2	1
Zeolite	10	5	5	5



SITE 763 HOLE B CORE 46X CORED INTERVAL 608.0-617.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
LOWER APTIAN	?	CC7	Barren		*M. testudinaria - M. operculata*	C/M	●D=43.3 ρ=1.98 V=1.46 ●D=46.1 ρ=1.98 V=1.38	●$CaCO_3$=1.3% TOC=1.77% ●$CaCO_3$=0.7% TOC=0.87%	1 2 3 4 5 6 7 8 CC	0.5 1.0	VOID			* * * * * *

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE, SILTY CLAYSTONE WITH ZEOLITES, AND CLAYSTONE WITH SILT

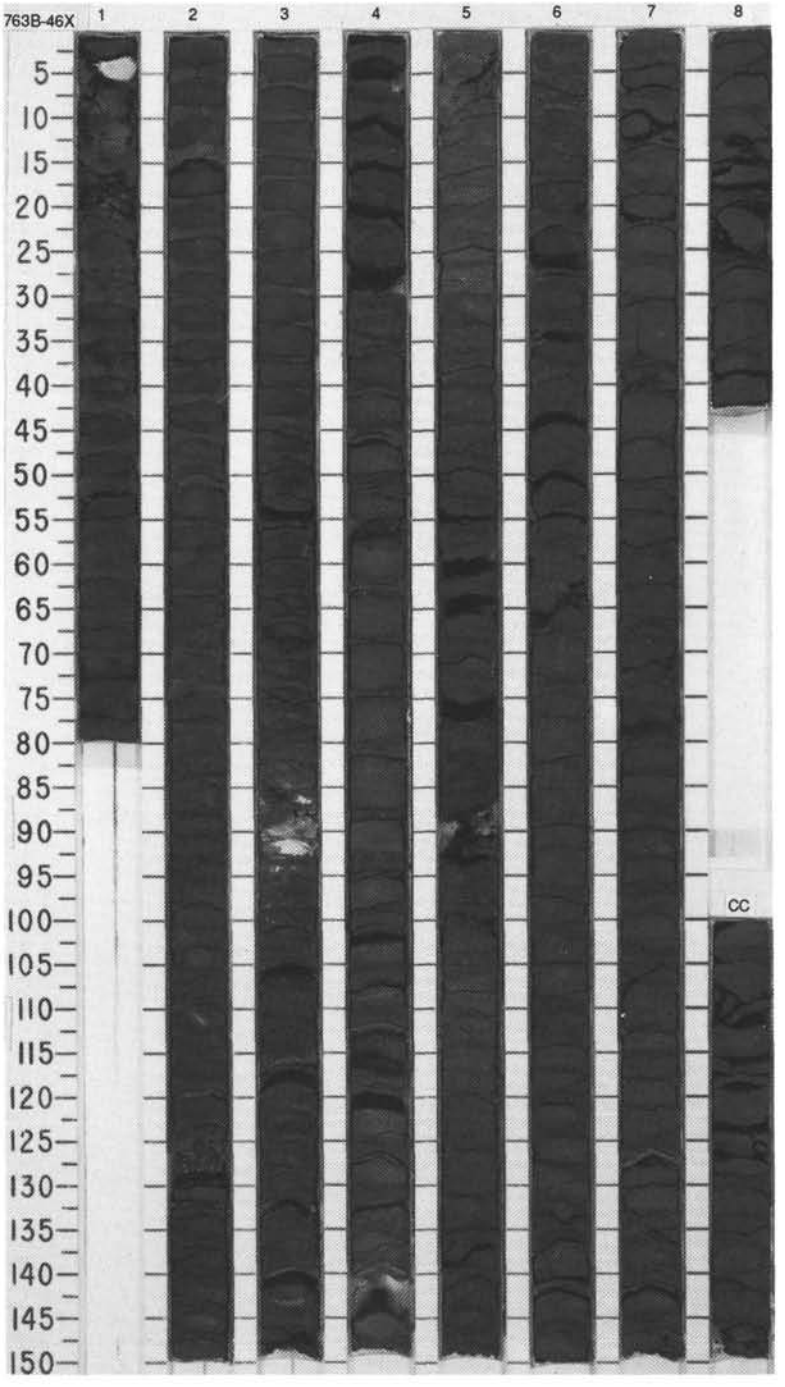
The core is intensely biscuited.

Major lithologies:
CLAYSTONE and CLAYSTONE with ZEOLITE, black (N0, N2, 5Y 2.5/1, 5Y 2/1) and very dark gray (5Y 3/1), very faintly laminated, locally massive and slightly bioturbated. The claystone may contain zeolites in amounts up to 12%, quartz (3-7%), locally feldspar, mica (trace amounts to 1%), plus accessory minerals such as biotite, glauconite, pyrite and opaques totaling 6-7%. Locally, non-carbonate pellets are present, in amounts as much as 10-12%. These pellets give a whitish color to the cut surface of the core and, where laminae.

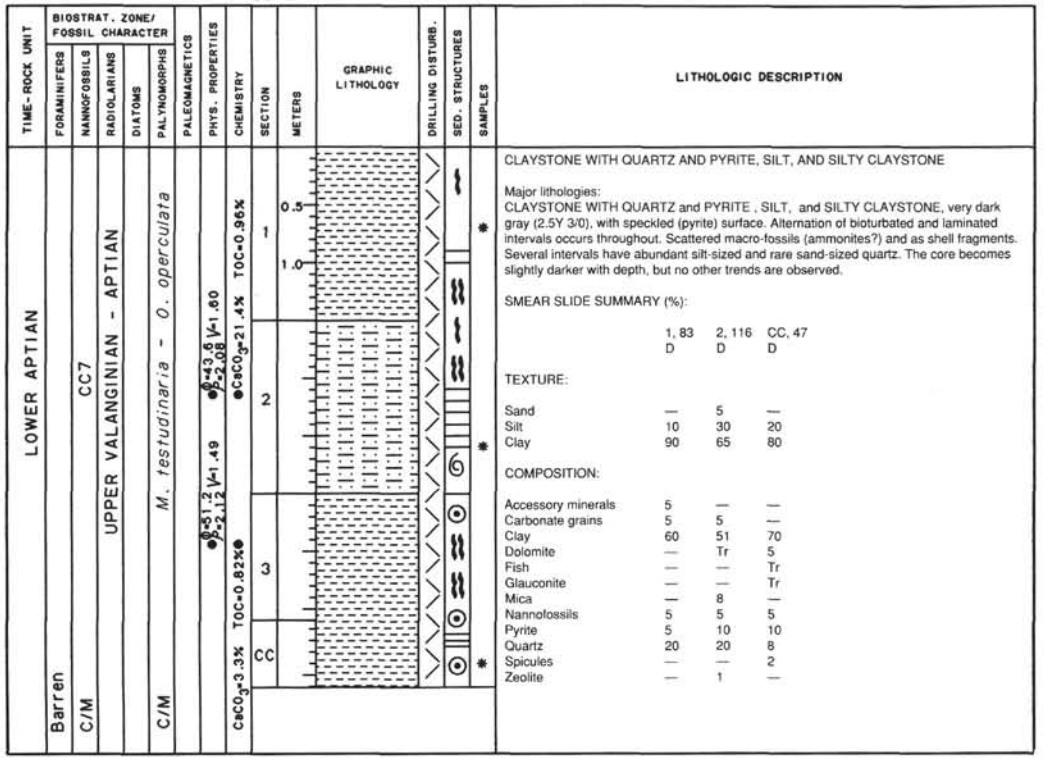
Minor lithologies:
a. Calcite-cemented sandstone, in Section 1, 1-6 cm.
b. "Waxy" clay, sepiolite?, in Section 3, 85-95 cm.

SMEAR SLIDE SUMMARY (%):

	1, 44 D	3, 91 M	4, 97 D	5, 28 D	7, 34 D
TEXTURE:					
Silt	28	—	27	10	13
Clay	72	100	73	90	87
COMPOSITION:					
Altered grains	10	—	—	—	—
Bioclast	—	—	Tr	Tr	—
Biotite	1	—	1	Tr	—
Clay	72	100	73	90	87
Feldspar	5	—	—	—	—
Fish	—	—	—	1	—
Glauconite	3	—	1	Tr	1
Mica	1	—	—	Tr	—
Plant	Tr	—	3	—	1
Pyrite	3	—	3	4	5
Quartz	5	—	7	5	3
Zeolite	—	—	12	—	3



SITE 763 HOLE B CORE 47X CORED INTERVAL 617.5-622.5 mbsf

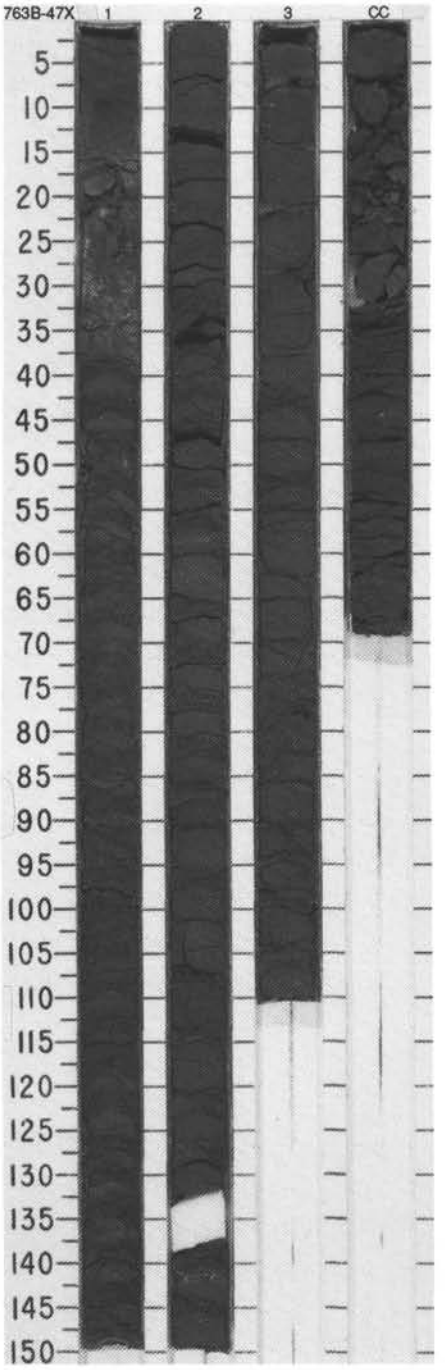


CLAYSTONE WITH QUARTZ AND PYRITE, SILT, AND SILTY CLAYSTONE

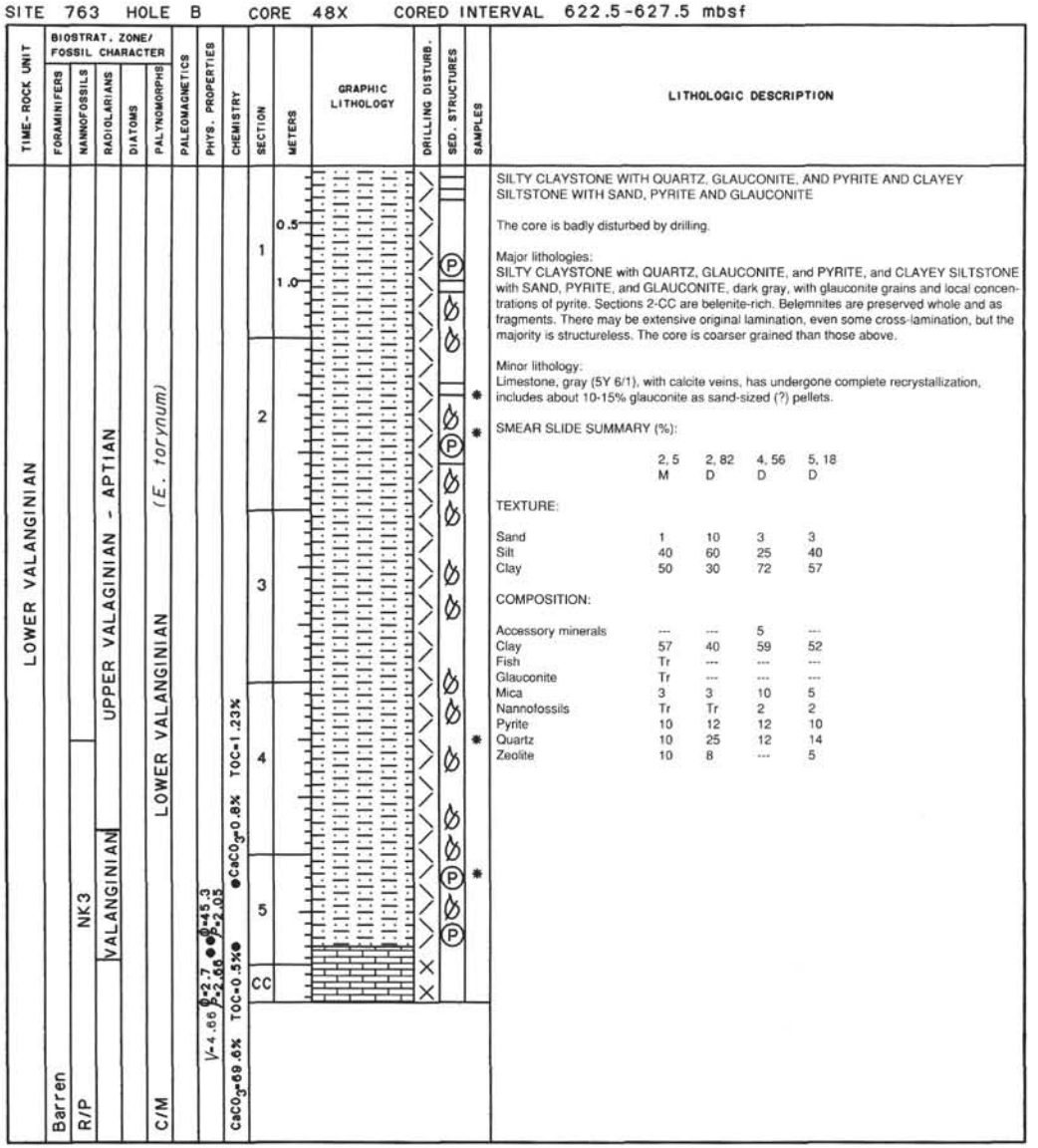
Major lithologies:
CLAYSTONE WITH QUARTZ and PYRITE , SILT, and SILTY CLAYSTONE, very dark gray (2.5Y 3/0), with speckled (pyrite) surface. Alternation of bioturbated and laminated intervals occurs throughout. Scattered macro-fossils (ammonites?) and as shell fragments. Several intervals have abundant silt-sized and rare sand-sized quartz. The core becomes slightly darker with depth, but no other trends are observed.

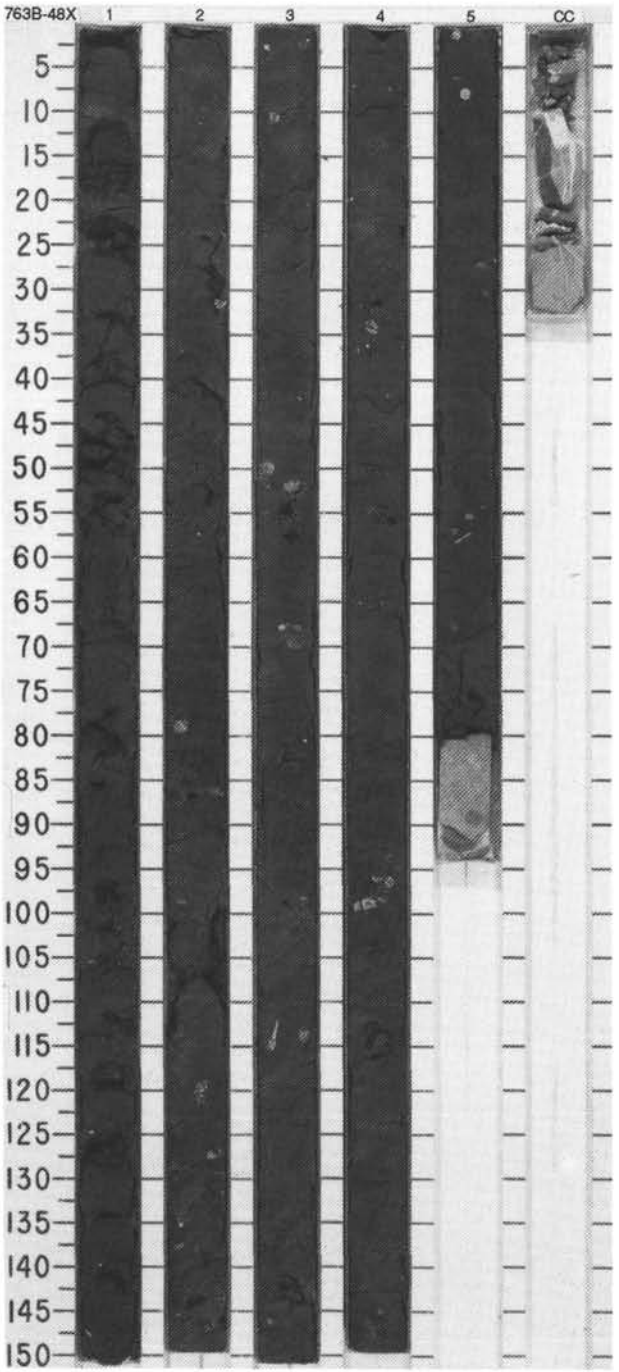
SMEAR SLIDE SUMMARY (%):

	1, 83 D	2, 116 D	CC, 47 D
TEXTURE:			
Sand	—	5	—
Silt	10	30	20
Clay	90	65	80
COMPOSITION:			
Accessory minerals	5	—	—
Carbonate grains	5	5	—
Clay	60	51	70
Dolomite	—	Tr	5
Fish	—	—	Tr
Glauconite	—	—	Tr
Mica	—	8	—
Nannofossils	5	5	5
Pyrite	5	10	10
Quartz	20	20	8
Spicules	—	—	2
Zeolite	—	1	—

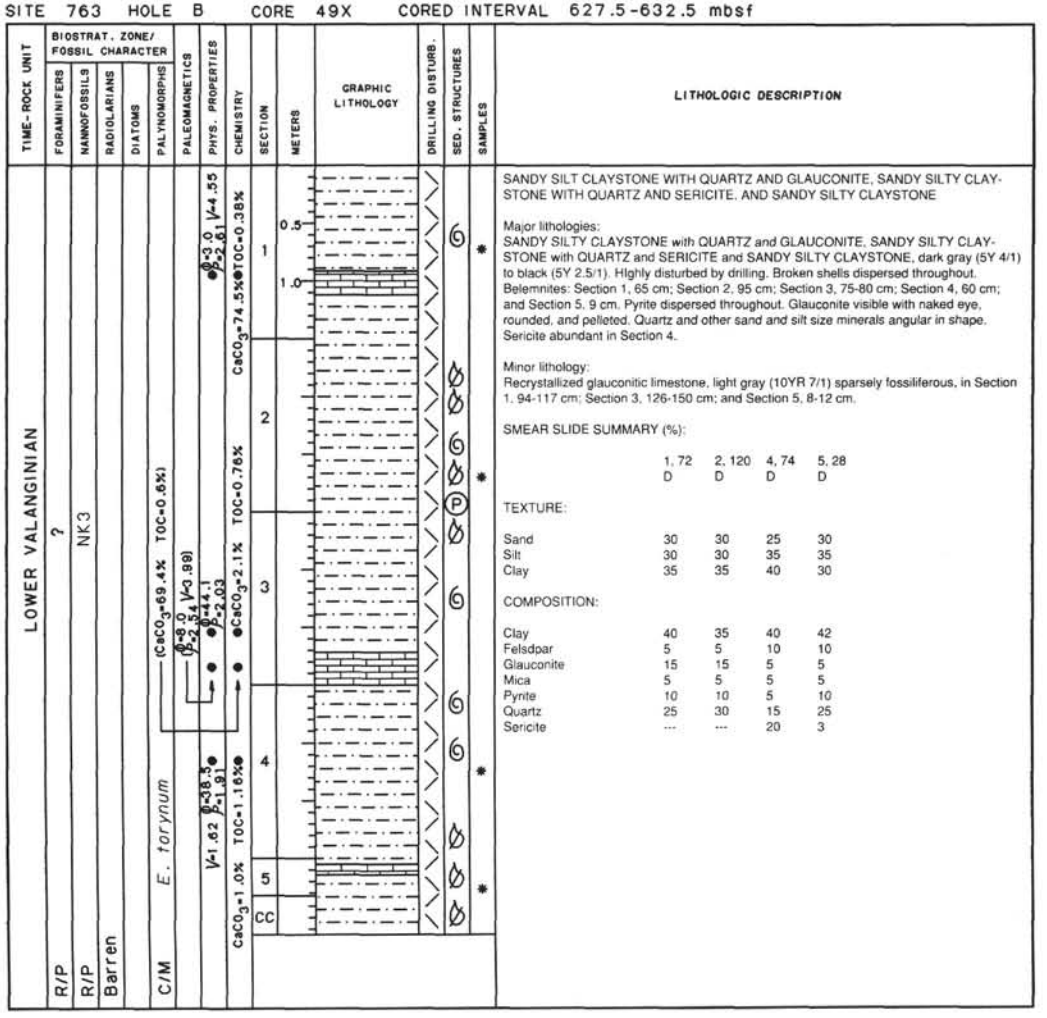


SITE 763 HOLE B CORE 48X CORED INTERVAL 622.5-627.5 mbsf





SITE 763 HOLE B CORE 49X CORED INTERVAL 627.5-632.5 mbsf



LITHOLOGIC DESCRIPTION

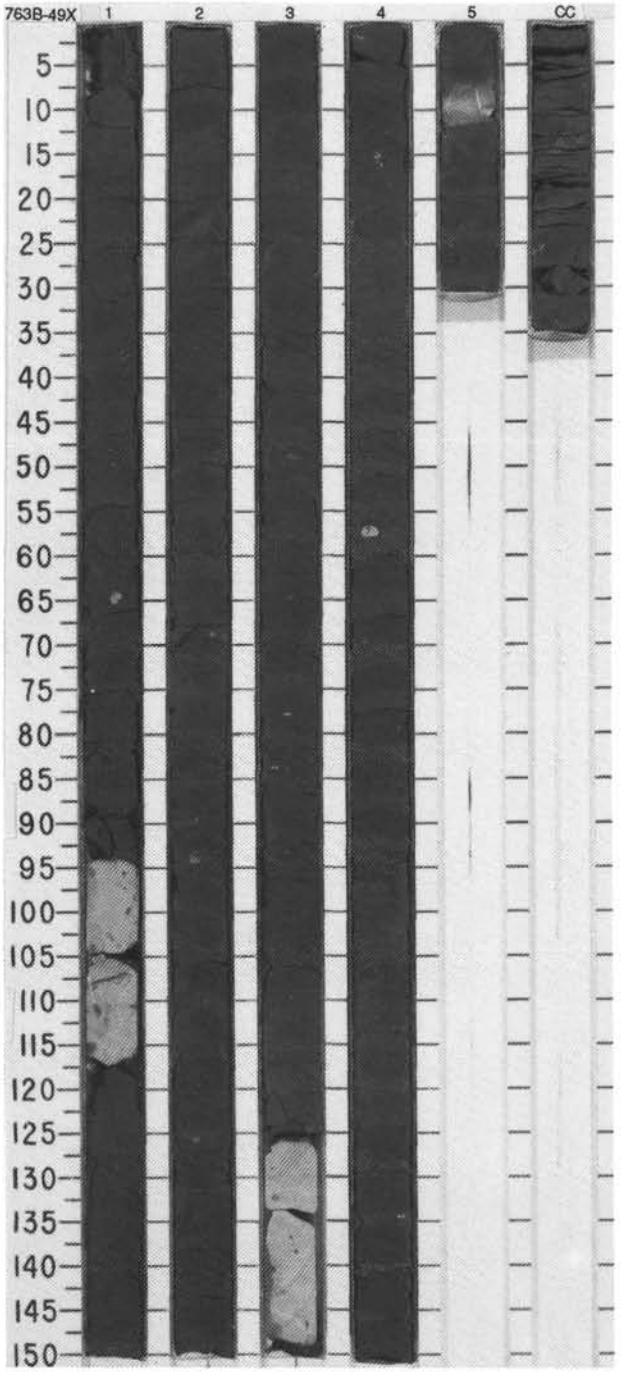
SANDY SILT CLAYSTONE WITH QUARTZ AND GLAUCONITE, SANDY SILTY CLAYSTONE WITH QUARTZ AND SERICITE, AND SANDY SILTY CLAYSTONE

Major lithologies:
SANDY SILTY CLAYSTONE with QUARTZ and GLAUCONITE, SANDY SILTY CLAYSTONE with QUARTZ and SERICITE and SANDY SILTY CLAYSTONE, dark gray (5Y 4/1) to black (5Y 2.5/1). Highly disturbed by drilling. Broken shells dispersed throughout. Belemnites: Section 1, 65 cm; Section 2, 95 cm; Section 3, 75-80 cm; Section 4, 60 cm; and Section 5, 9 cm. Pyrite dispersed throughout. Glauconite visible with naked eye, rounded, and pelleted. Quartz and other sand and silt size minerals angular in shape. Sericite abundant in Section 4.

Minor lithology:
Recrystallized glauconitic limestone, light gray (10YR 7/1) sparsely fossiliferous, in Section 1, 94-117 cm; Section 3, 126-150 cm; and Section 5, 8-12 cm.

SMEAR SLIDE SUMMARY (%):

	1, 72 D	2, 120 D	4, 74 D	5, 28 D
TEXTURE:				
Sand	30	30	25	30
Silt	30	30	35	35
Clay	35	35	40	30
COMPOSITION:				
Clay	40	35	40	42
Felsdpar	5	5	10	10
Glauconite	15	15	5	5
Mica	5	5	5	5
Pyrite	10	10	5	10
Quartz	25	30	15	25
Sericite	---	---	20	3



SITE 763 HOLE B CORE 50X CORED INTERVAL 632.5-637.5 mbsf

TIME-ROCK UNIT: BERRIASIAN - LOWER VALANGINIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: ?; NANNOFOSSILS: R/M; RADIOLARIANS: Barren; DIATOMS: Barren; PALYNOMORPHS: C/P *B. reticulatum - E. torynum*

PALEOMAGNETICS

PHYS. PROPERTIES: Φ=41.3, ρ=2.13; Φ=38.1, ρ=2.25; Φ=38.0, ρ=2.16

CHEMISTRY: $CaCO_3$=1.7% TOC=1.01%; $CaCO_3$=2.0% TOC=1.02%; $CaCO_3$=2.7% TOC=0.9%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG, IW

LITHOLOGIC DESCRIPTION

SANDY SILTY CLAYSTONE WITH QUARTZ AND GLAUCONITE, SANDY SILTY CLAYSTONE WITH QUARTZ, SANDY CLAYEY SILTSTONE WITH QUARTZ, AND SILTY CLAYSTONE WITH SAND

Highly disturbed by drilling.

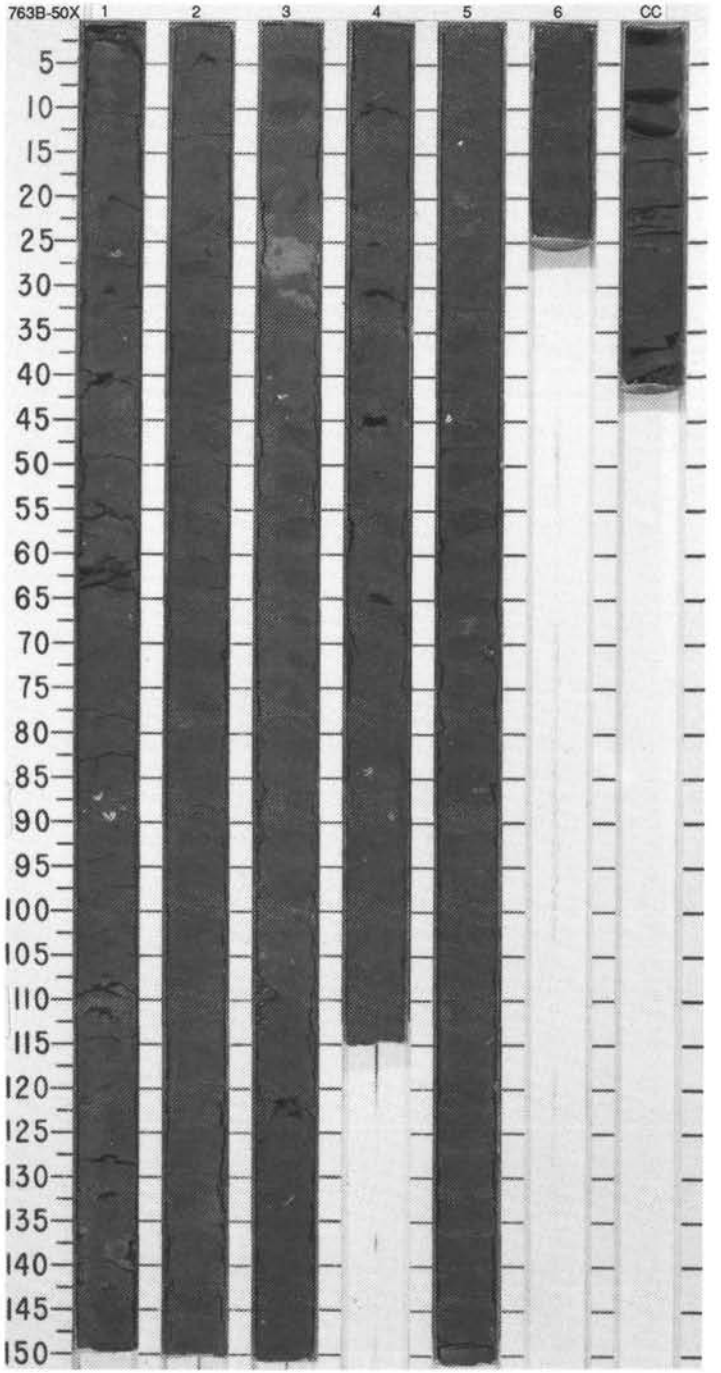
Major lithologies:
SANDY SILTY CLAYSTONE with QUARTZ and GLAUCONITE, SANDY SILTY CLAYSTONE WITH QUARTZ, SANDY CLAYEY SILTSTONE with QUARTZ, and SILTY CLAYSTONE with SAND, dark gray (5Y 4/1) to black (5Y 2.5/1). Pyrite disseminated throughout core and increases in abundance in Sections 4 and 5. Sand-size glauconite grains (rounded) abundant in Sections 1-4 and decreases through Sections 5, 6, and CC. Belemnite fossils, Section 1, 26 cm, 60-62 cm, 84 cm; Section 3, 42 cm; Section 4, 18 cm, 90, and 94 cm; Section 5, 44 cm. Mytilus? pelecypod shell, Section 4, 83-85 cm.

Minor lithology: Calcareous concretions, light gray (5Y 7/1), chalky and recrystallized in part, in Section 1, 135-138 cm; Section 3, 20-30 cm, 105-109 cm.

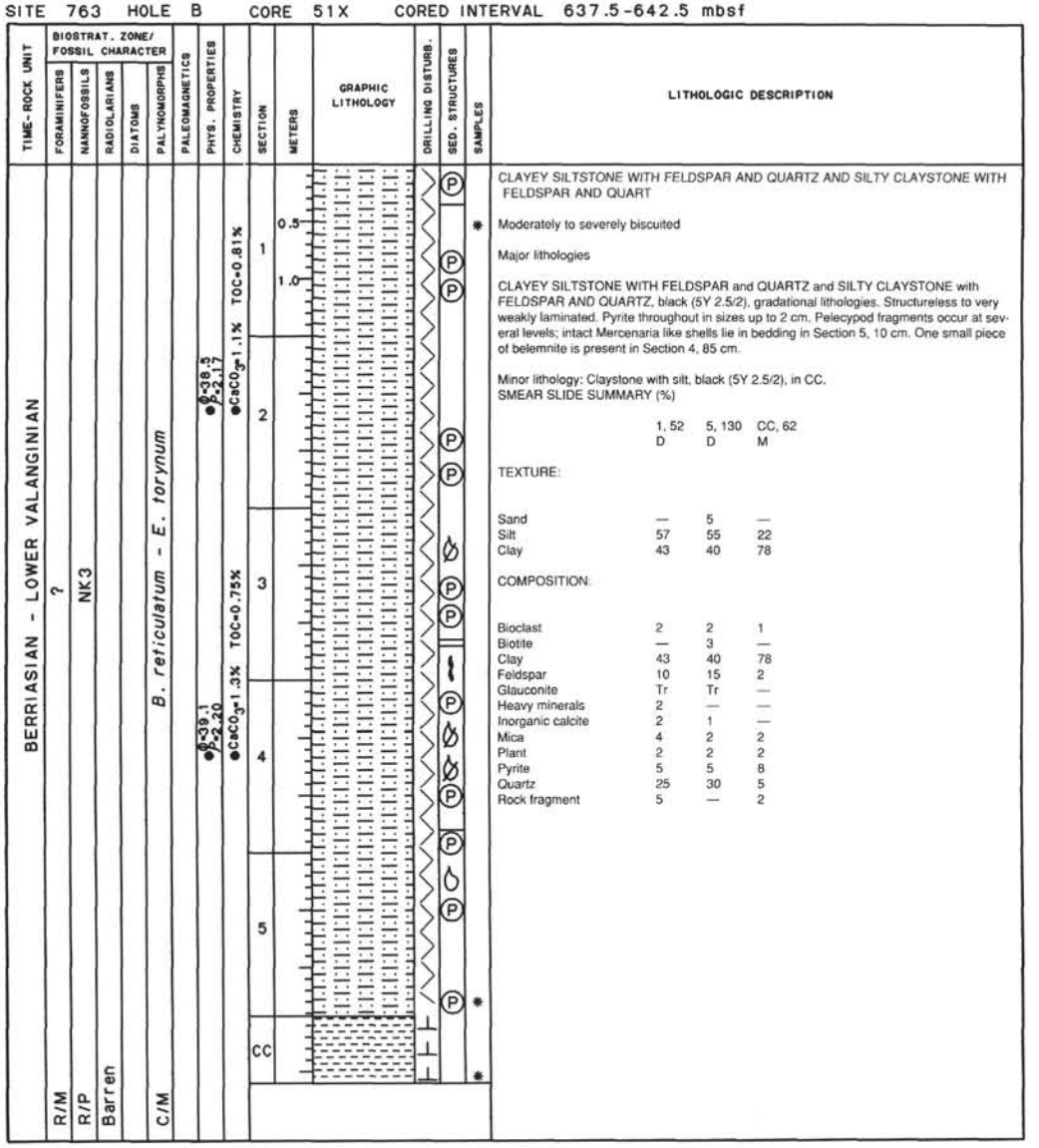
Interpretation: The abundance of sand-size particles decreases with depth. Upper four sections have equal amounts of sand, silt, and clay. Sections 5, 6, and CC have less sand and glauconite. Sand and silt particles are angular.

SMEAR SLIDE SUMMARY (%):

	1, 75 D	3, 119 D	4, 69 D	5, 100 D	CC, 28 D
TEXTURE:					
Sand	25	30	30	25	20
Silt	35	35	35	35	35
Clay	40	35	30	40	45
COMPOSITION:					
Accessory minerals	—	—	—	—	2
Bioclasts	---	---	3	---	---
Clay	40	40	44	40	37
Feldspar	10	10	10	10	10
Glauconite	15	10	3	5	3
Mica	5	5	5	5	7
Pyrite	10	10	5	5	10
Quartz	20	25	25	20	25
Rock fragment	—	—	5	5	5
Zircon	—	—	—	—	1



SITE 763 HOLE B CORE 51X CORED INTERVAL 637.5-642.5 mbsf



CLAYEY SILTSTONE WITH FELDSPAR AND QUARTZ AND SILTY CLAYSTONE WITH FELDSPAR AND QUART

Moderately to severely biscuited

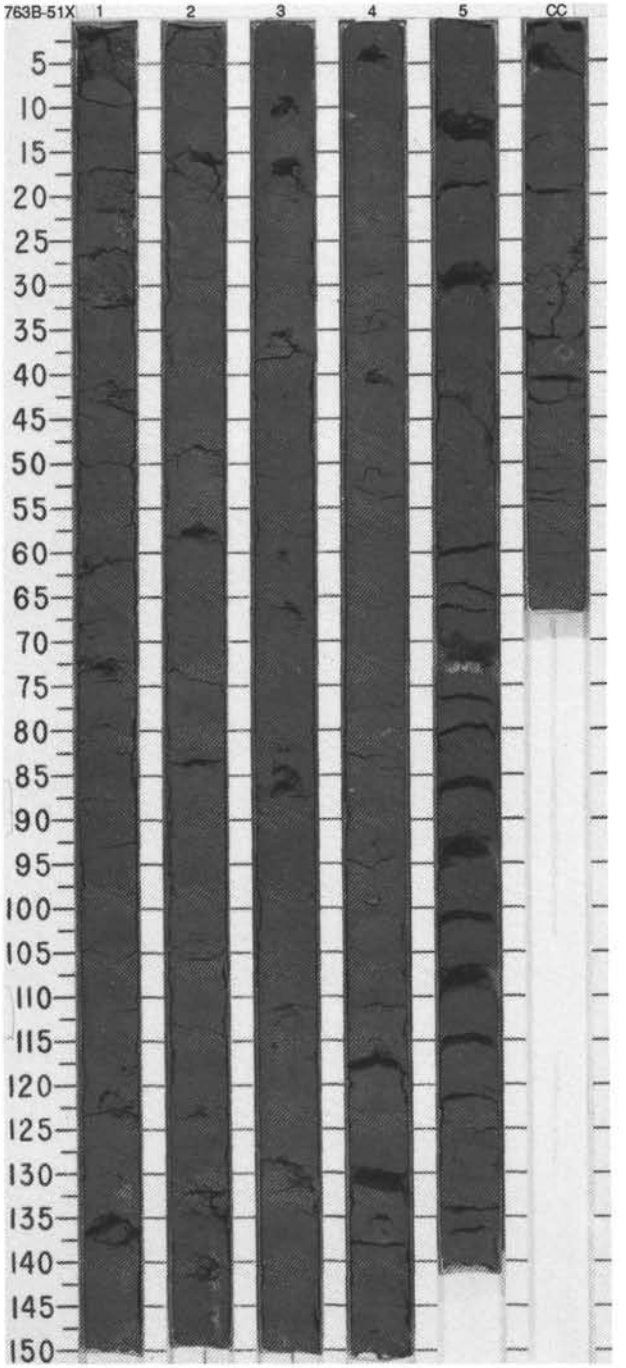
Major lithologies

CLAYEY SILTSTONE WITH FELDSPAR and QUARTZ and SILTY CLAYSTONE with FELDSPAR AND QUARTZ, black (5Y 2.5/2), gradational lithologies. Structureless to very weakly laminated. Pyrite throughout in sizes up to 2 cm. Pelecypod fragments occur at several levels; intact Mercenaria like shells lie in bedding in Section 5, 10 cm. One small piece of belemnite is present in Section 4, 85 cm.

Minor lithology: Claystone with silt, black (5Y 2.5/2), in CC.
SMEAR SLIDE SUMMARY (%)

	1, 52 D	5, 130 D	CC, 62 M
TEXTURE:			
Sand	—	5	—
Silt	57	55	22
Clay	43	40	78
COMPOSITION:			
Bioclast	2	2	1
Biotite	—	3	—
Clay	43	40	78
Feldspar	10	15	2
Glauconite	Tr	Tr	—
Heavy minerals	2	—	—
Inorganic calcite	2	1	—
Mica	4	2	2
Plant	2	2	2
Pyrite	5	5	8
Quartz	25	30	5
Rock fragment	5	—	2

CORE 763B-52X NO RECOVERY



SITE 763 HOLE B CORE 53X CORED INTERVAL 647.5-648.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
BERRIASIAN - LOWER VALANGINIAN	Barren	NK3	Barren	C/M	*B. reticulatum - E. torynum*		V=3.68 $\frac{\phi=6.3}{\rho=2.57}$	$CaCO_3$=66.5% TOC=0.57%	1	0.5			P	*
	R/M									1.0			P	
													P	
									2		VOID			*
									CC		VOID			

LITHOLOGIC DESCRIPTION

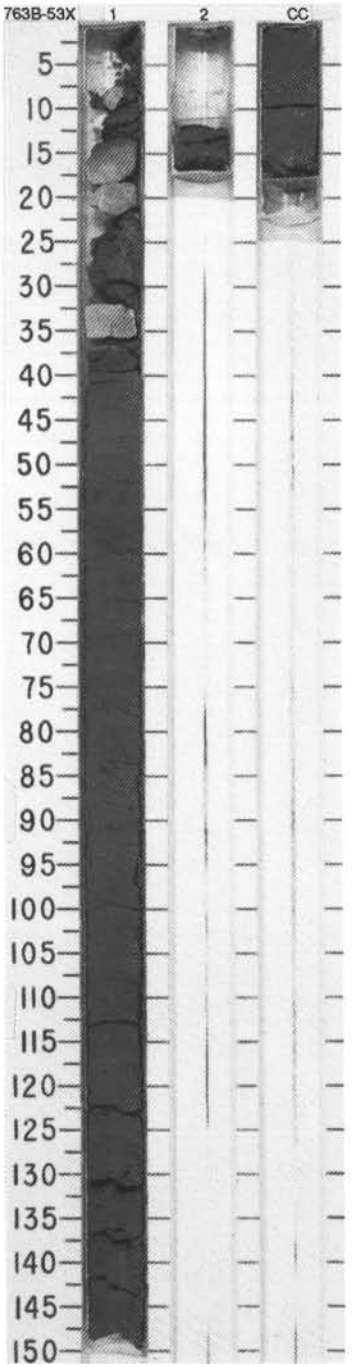
SILTY CLAYSTONE WITH SAND AND SILTY/SANDY CARBONATE MUDSTONE

Drilling disturbance appears to have mixed components and to have destroyed sedimentary structures.

Major lithologies.
SILTY CLAYSTONE with SAND, dark gray (5Y 4/1 to N4) to very dark gray (5Y 3/1to N3), with abundant quartz grains and common disseminated pyrite (silt to fine sand-sized) and pyritefram boids (clots of pyrite grains generally less than 5 mm diameter). Section 1, 36-117 cm, contains a much lower proportion of sand grains than Section 1, 117-150 cm, and Sections 2 and CC, but these intervals all appear to be disturbed by drilling. SILTY/SANDY CARBONATE MUDSTONE, light brownish gray (2.5Y 6/2), occurs in four pieces in Section 1, 0-36 cm. One piece, at 11-16 cm, shows a gradation from calcareous silty sandstone or sandy siltstone to silty/sandy carbonate mudstone. This lithology is massive and structure-less with abundant angular to sub-angular quartz grains and some sand-sized glauconite grains.

SMEAR SLIDE SUMMARY (%):

	1, 77 D	1, 143 D
TEXTURE:		
Sand	10	17
Silt	25	35
Clay	65	48
COMPOSITION:		
Calcite/Dolomite	2	2
Carbonate grains	25	35
Clay	55	39
Epidote	Tr	---
Feldspar	5	7
Glauconite	4	1
Mica	1	5
Nannofossils	Tr	Tr
Opaques	3	---
Plant	2	1
Pyrite	6	10
Quartz	10	15
Zeolite	2	---



SITE 763 HOLE B CORE 54X CORED INTERVAL 648.5-653.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
BERRIASIAN - LOWER VALANGINIAN	?				*B. reticulatum* - *E. torynum*		γ=4.16 ϕ=8.2 ρ=2.67	$CaCO_3$=65.7% TOC=0.52%	1 CC	0.5 1.0			P P	* * *

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE WITH QUARTZ, CLAYEY SILTSTONE WITH QUARTZ, AND LIMESTONE

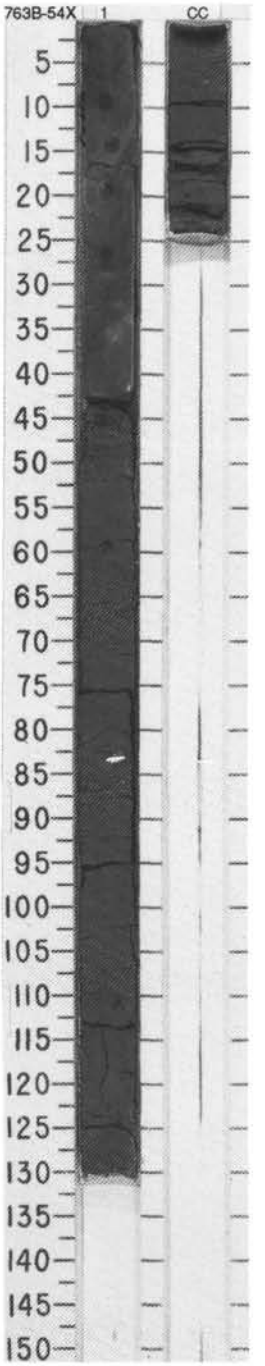
Little drilling disturbance apart from minor biscuiting and some pseudo-laminations caused by *core rotation*.

Major lithologies:
SILTY CLAYSTONE with QUARTZ and CLAYEY SILTSTONE with QUARTZ, very dark gray (5Y 3/1). Disseminated pyrite, with grains up to 3 mm in diameter, is common. Bedding is massive, no distinct burrow types. LIMESTONE, dark olive gray (5Y 3/2), finely recrystalized and probably pelagic with calcite veins, vein diameters from 0 to 2 cm. Moderately bioturbated with burrows 0.5-1 cm across.

Minor lithology:
Sandy clayey siltstone with quartz and feldspar, very dark gray (5Y 3/1), Section 1, 104-125 cm. No bedding or bioturbation is visible.

SMEAR SLIDE SUMMARY (%):

	1, 72 D	1, 123 M	CC, 20 D
TEXTURE:			
Sand	---	25	---
Silt	47	45	64
Clay	53	30	36
COMPOSITION:			
Bioclasts	Tr	Tr	2
Carbonate	1	---	3
Clay	1	---	3
Feldspar	10	24	36
Foraminifers	Tr	Tr	---
Glauconite	---	1	---
Heavy minerals	Tr	1	3
Nannofossils	Tr	---	---
Plant	Tr	1	1
Pyrite	5	7	8
Quartz	20	35	25
Rock fragment	5	---	---
Sericite	Tr	---	---
Zeolite	Tr	---	---



CORE 763C-1C NO RECOVERY

SITE 763 HOLE C CORE 2R CORED INTERVAL 385.0-394.5 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER CENOMANIAN - LOWER TURONIAN														
UPPER CENOMANIAN	CENOMANIAN													
	A/M	A/P							1	0.5				*
	A/M	CC9-CC10								1.0				*
	Barren								2					
					Barren				3					*
									4					
									5					*
									CC					

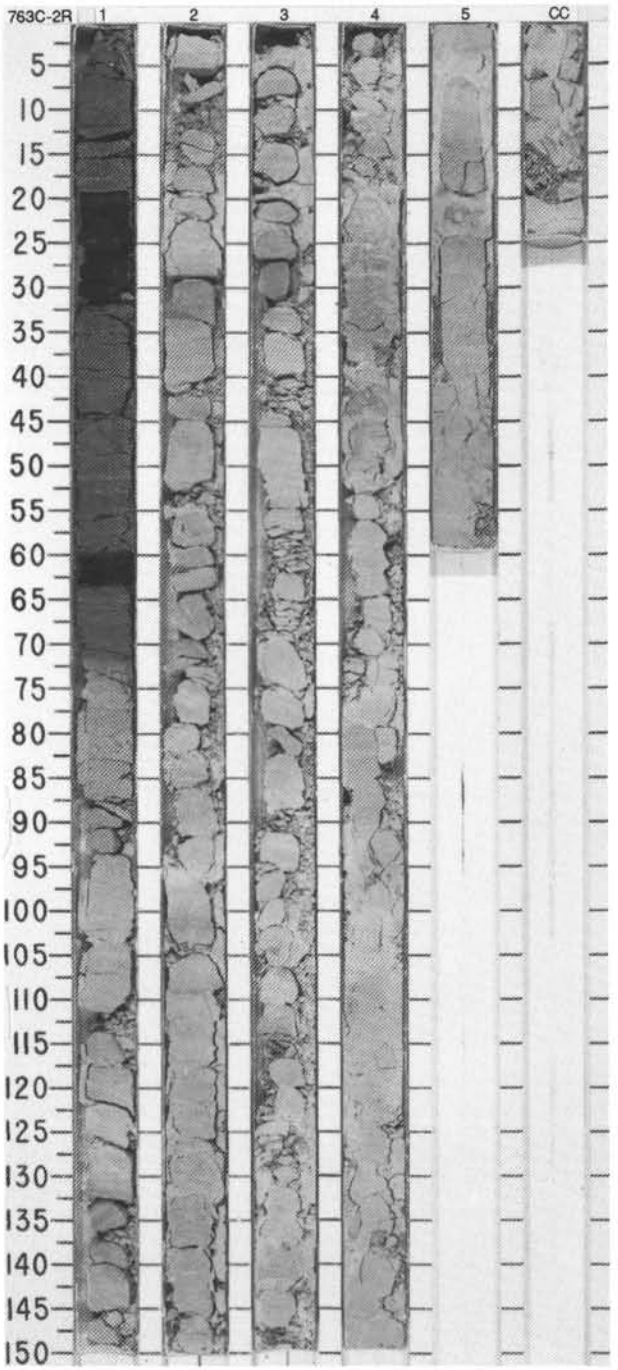
NANNOFOSSIL CLAYSTONE WITH ZEOLITES AND SILT AND NANNOFOSSIL CLAYSTONE WITH SILT

Major lithologies:
NANNOFOSSIL CLAYSTONE with ZEOLITES and SILT and NANNOFOSSIL CLAYSTONE WITH SILT, greenish gray (5G 6/1 and 5G 7/1), Section 1, 72 cm, through core catcher. Minor bioturbation throughout. Minor pyrite stains.

Minor lithologies:
a. Claystone with zeolites, black (2.5Y 2/0), Section 1, 18-31 cm and 58-63 cm. Interlayered with silty zeolitic claystone.
b. Silty zeolitic claystone, ark greenish gray (5G 4/1), Section 1, 0-18 cm, 31-58 cm, and 62-72 cm.

SMEAR SLIDE SUMMARY (%):

	1, 8 M	1, 27 M	1, 102 D	3, 48 D	5, 26 D
TEXTURE:					
Silt	25	20	20	—	20
Clay	75	80	80	—	80
COMPOSITION:					
Accessory minerals	—	—	3	—	—
Clay	61	73	42	35	45
Feldspar	—	2	—	—	2
Foraminifers	—	—	—	4	3
Glauconite	—	—	—	—	1
Hornblende	3	—	—	—	—
Mica	2	5	1	—	—
Nannofossils	—	—	42	50	27
Opaques	7	5	3	5	—
Plant	—	Tr	—	—	Tr
Quartz	2	5	2	1	2
Zeolite	25	10	3	5	20



CORE 763C-3C NO RECOVERY

SITE 763 HOLE C CORE 4R CORED INTERVAL 645.1-654.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER BERRIASIAN	?	NK3	Barren		*B. reticulatum*		V=3.38 ρB=8.7 ρ=2.74	$CaCO_3$=65.1%	1					

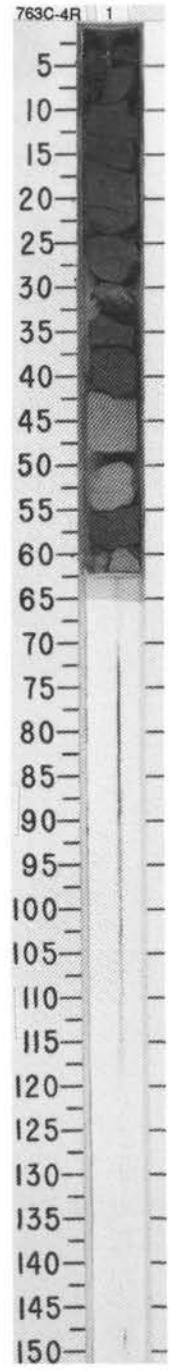
LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE WITH SAND AND RECRYSTALLIZED PELAGIC LIMESTONE

Major lithologies:
SILTY CLAYSTONE with SAND, very dark gray (5Y 3/1), alternating with RECRYSTALLIZED PELAGIC LIMESTONE, light gray (5Y 7/1), 40-52 cm and 59-62 cm. No structures preserved. Calcareous concretion at 25 cm and large molluscs shell (recrystallized) at 28-31 cm. Pyrite and angular quartz, feldspar and mica in smear slides.

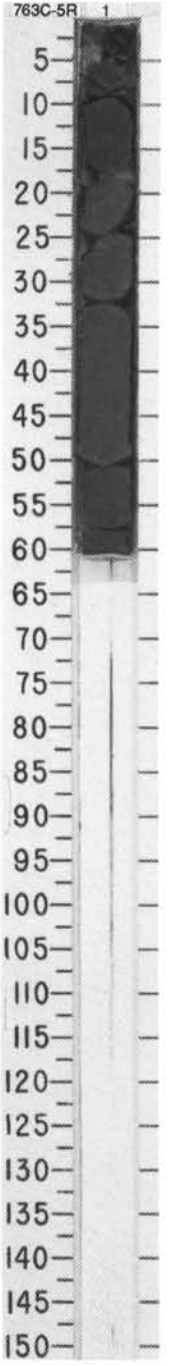
SMEAR SLIDE AND THIN SECTION SUMMARY (%):

	1, 25 M	1, 42 D	1, 57 D
TEXTURE:			
Sand	—	—	10
Silt	—	—	25
Clay	—	—	65
COMPOSITION:			
Calcite	—	50	—
Carbonate recrystallized	70	—	—
Chert	—	—	3
Clay	—	30	49
Feldspar	3	—	10
Glass	—	—	3
Mica	5	—	5
Opaques (pyrite)	10	5	10
Quartz	10	15	15
Chert	—	—	3

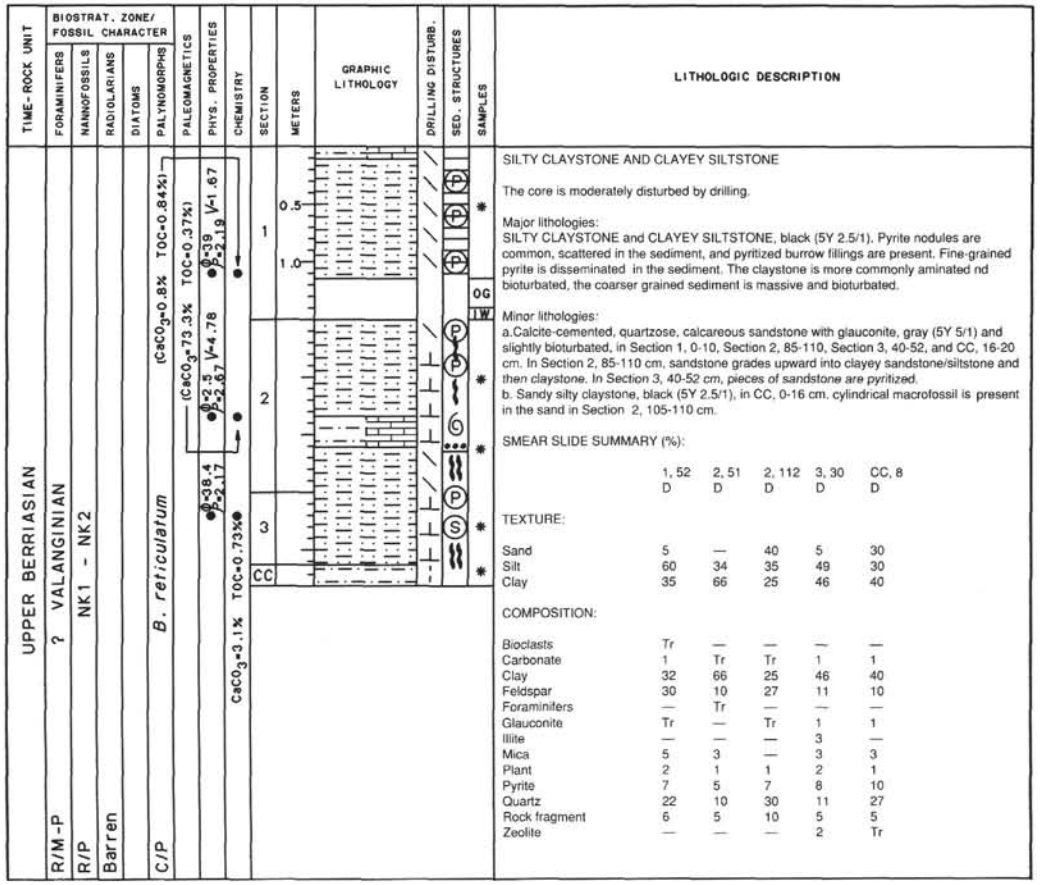


SITE 763 HOLE C CORE 5R CORED INTERVAL 654.6-660.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
UPPER BERRIASIAN	R/M-P ? VALANGINIAN	R/P ?	Barren		C/P *B. reticulatum*		ρ-1.67 ρ-2.19	$CaCO_3$=2.0% TOC-0.96%	1				P	*	SILTY CLAYSTONE WITH SAND, QUARTZ, AND FELDSPAR Drill disturbance is moderate. Major lithology: SILTY CLAYSTONE with SAND, QUARTZ, and FELDSPAR, dark olive gray (5Y 3/2), structureless, with disseminated pyrite (silt to very fine sand-sized) and two clusters of pyrite grains up to 2 mm diameter. Primary sedimentary structures are intact. Feldspars are moderately altered feldspar. SMEAR SLIDE SUMMARY (%): 1, 53 D TEXTURE: Sand 15 Silt 30 Clay 55 COMPOSITION: Calcite/Dolomite 8 Calcareous fragments 3 Clay 47 Feldspar 11 Glauconite 1 Mica 4 Opaques 8 Plant 2 Quartz 16



SITE 763 HOLE C CORE 6R CORED INTERVAL 660.6-665.6 mbsf



LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE AND CLAYEY SILTSTONE

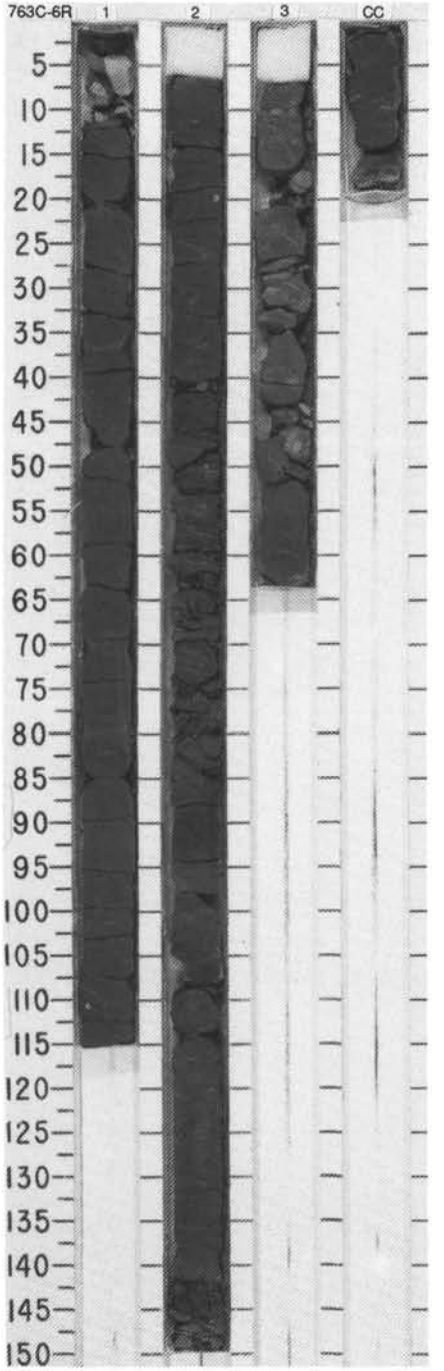
The core is moderately disturbed by drilling.

Major lithologies:
SILTY CLAYSTONE and CLAYEY SILTSTONE, black (5Y 2.5/1). Pyrite nodules are common, scattered in the sediment, and pyritized burrow fillings are present. Fine-grained pyrite is disseminated in the sediment. The claystone is more commonly aminated nd bioturbated, the coarser grained sediment is massive and bioturbated.

Minor lithologies:
a.Calcite-cemented, quartzose, calcareous sandstone with glauconite, gray (5Y 5/1) and slightly bioturbated, in Section 1, 0-10, Section 2, 85-110, Section 3, 40-52, and CC, 16-20 cm. In Section 2, 85-110 cm, sandstone grades upward into clayey sandstone/siltstone and then claystone. In Section 3, 40-52 cm, pieces of sandstone are pyritized.
b. Sandy silty claystone, black (5Y 2.5/1), in CC, 0-16 cm. cylindrical macrofossil is present in the sand in Section 2, 105-110 cm.

SMEAR SLIDE SUMMARY (%):

	1, 52 D	2, 51 D	2, 112 D	3, 30 D	CC, 8 D
TEXTURE:					
Sand	5	—	40	5	30
Silt	60	34	35	49	30
Clay	35	66	25	46	40
COMPOSITION:					
Bioclasts	Tr	—	—	—	—
Carbonate	1	Tr	Tr	1	1
Clay	32	66	25	46	40
Feldspar	30	10	27	11	10
Foraminifers	—	Tr	—	—	—
Glauconite	Tr	—	Tr	1	1
Illite	—	—	—	3	—
Mica	5	3	—	3	3
Plant	2	1	1	2	1
Pyrite	7	5	7	8	10
Quartz	22	10	30	11	27
Rock fragment	6	5	10	5	5
Zeolite	—	—	—	2	Tr



SITE 763 HOLE C CORE 7R CORED INTERVAL 665.6-670.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER BERRIASIAN	R/M-P	Barren NK1 - NK2 A/P	Barren		C/P *B. reticulatum*		●37.7 ▽1.67 ●2.23	$CaCO_3$=1.6% ●TOC=1.07%	1	0.5 1.0			P	# *
									2				P	*

LITHOLOGIC DESCRIPTION

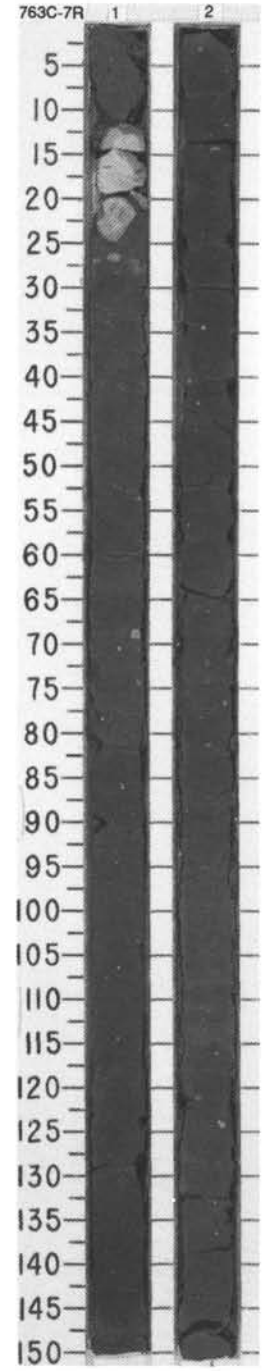
SILTY CLAYSTONE WITH SAND AND QUARTZ AND SILTY CLAYSTONE WITH QUARTZ

Major lithologies:
SILT CLAYSTONE with SAND and QUARTZ and SILTY CLAYSTONE with QUARTZ,very dark gray (5Y 3/1), structureless or bioturbated with common small, horizontal blebs (<1 X 3 mm) giving a sense of parallel laminations. Pyrite is common throughout, as silt to fine sand-sized, disseminated grains ,and as pyrite or marcasite spherical to sub-rounded nodules up to 1 cm diameter.

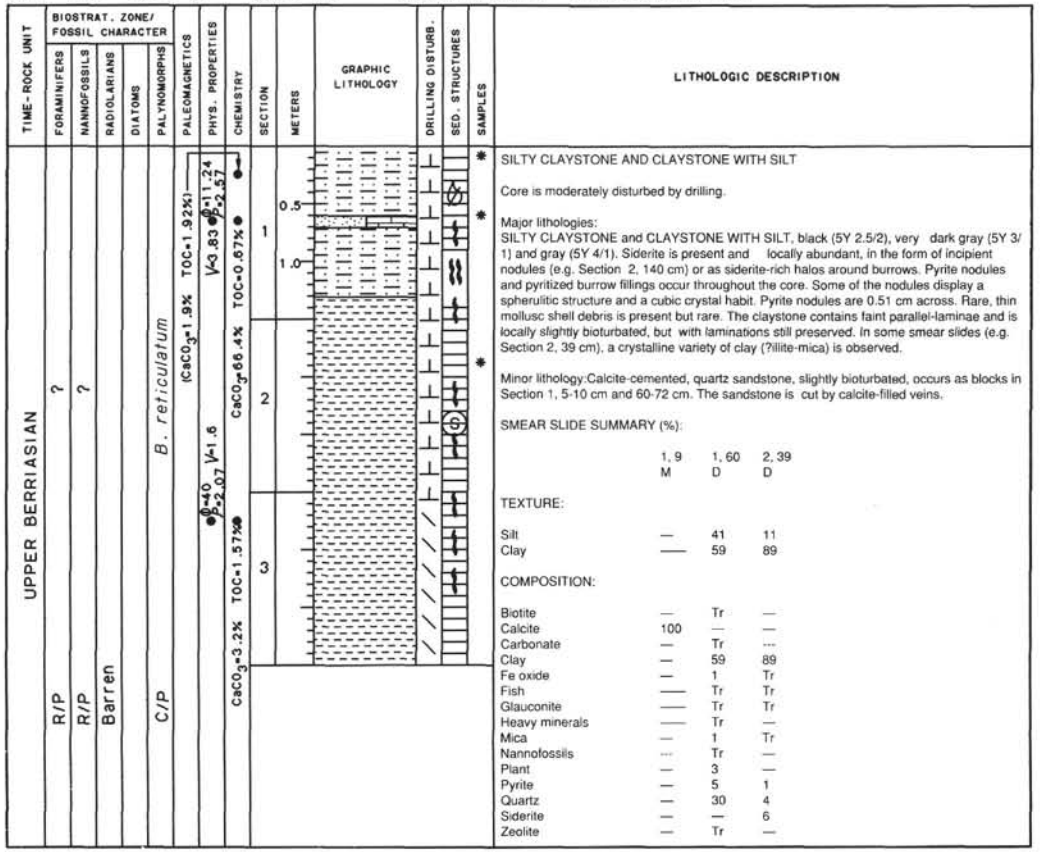
Minor lithologies:
a. Calcite-cemented sandstone or silty sandstone, gray (2.5Y 6/1), fine-grained and moderately to poorly sorted ontaining a 1 X 4 m, light gray (2.5Y 7/2) claystone rip-up clast, occurs as 3 pieces (up to 5 cm diameter) in Section 1, 10-24 cm.
b. Siderite or carbonate mudstone, light gray m(2.5Y 7/2), occurs as an elliptical nodule, 1 X 2 cm, in Section 1, 27-28 cm.

SMEAR SLIDE AND THIN SECTION SUMMARY (%):

	1, 5 D	1, 17 M	1, 18 M	1, 70 D	2, 70 D
TEXTURE:					
Sand	10	—	—	15	5
Silt	25	—	—	35	29
Clay	65	—	—	50	66
COMPOSITION:					
Calcite/Dolomite	6	—	—	—	2
Carbonate grains	4	—	—	3	3
Cement	—	30	—	—	—
Clay	57	—	—	55	60
Feldspar	6	10	—	5	5
Glauconite	—	—	—	1	—
Mica	2	—	—	3	1
Nannofossils	Tr	—	—	—	Tr
Opaques	5	—	—	7	5
Plant	2	—	—	3	3
Quartz	10	60	—	15	13
Rock fragment	7	—	—	8	8
Zircon	—	—	—	Tr	—



SITE 763 HOLE C CORE 8R CORED INTERVAL 670.6-675.6 mbsf



SILTY CLAYSTONE AND CLAYSTONE WITH SILT

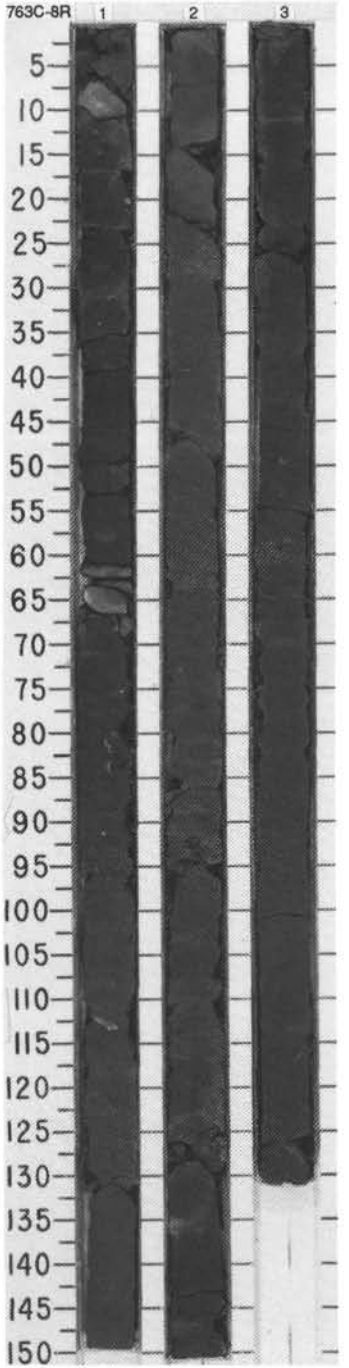
Core is moderately disturbed by drilling.

Major lithologies:
SILTY CLAYSTONE and CLAYSTONE WITH SILT, black (5Y 2.5/2), very dark gray (5Y 3/1) and gray (5Y 4/1). Siderite is present and locally abundant, in the form of incipient nodules (e.g. Section 2, 140 cm) or as siderite-rich halos around burrows. Pyrite nodules and pyritized burrow fillings occur throughout the core. Some of the nodules display a spherulitic structure and a cubic crystal habit. Pyrite nodules are 0.51 cm across. Rare, thin mollusc shell debris is present but rare. The claystone contains faint parallel-laminae and is locally slightly bioturbated, but with laminations still preserved. In some smear slides (e.g. Section 2, 39 cm), a crystalline variety of clay (?illite-mica) is observed.

Minor lithology:Calcite-cemented, quartz sandstone, slightly bioturbated, occurs as blocks in Section 1, 5-10 cm and 60-72 cm. The sandstone is cut by calcite-filled veins.

SMEAR SLIDE SUMMARY (%):

	1, 9 M	1, 60 D	2, 39 D
TEXTURE:			
Silt	—	41	11
Clay	—	59	89
COMPOSITION:			
Biotite	—	Tr	—
Calcite	100	—	—
Carbonate	—	Tr	---
Clay	—	59	89
Fe oxide	—	1	Tr
Fish	—	Tr	Tr
Glauconite	—	Tr	Tr
Heavy minerals	—	Tr	—
Mica	—	1	Tr
Nannofossils	---	Tr	—
Plant	—	3	—
Pyrite	—	5	1
Quartz	—	30	4
Siderite	—	—	6
Zeolite	—	Tr	—



SITE 763 HOLE C CORE 9R CORED INTERVAL 675.6-685.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
UPPER BERRIASIAN	Barren	Barren	Barren		C/P *B. reticulatum* ($CaCO_3$=65.5% TOC=0.37%)		ϕ=36.2 ρ=2.16 V=1.56 ϕ=39.1 ρ=2.15 V=4.09 ϕ=41.4 ρ=2.15 V=1.67 ϕ=41.4 ρ=2.15	$CaCO_3$=3.8% TOC=1.04% $CaCO_3$=6.1% TOC=0.67% $CaCO_3$=7.4% TOC=0.62%	1 2 3 4 5 6 CC	0.5 1.0				* * * * * *

LITHOLOGIC DESCRIPTION

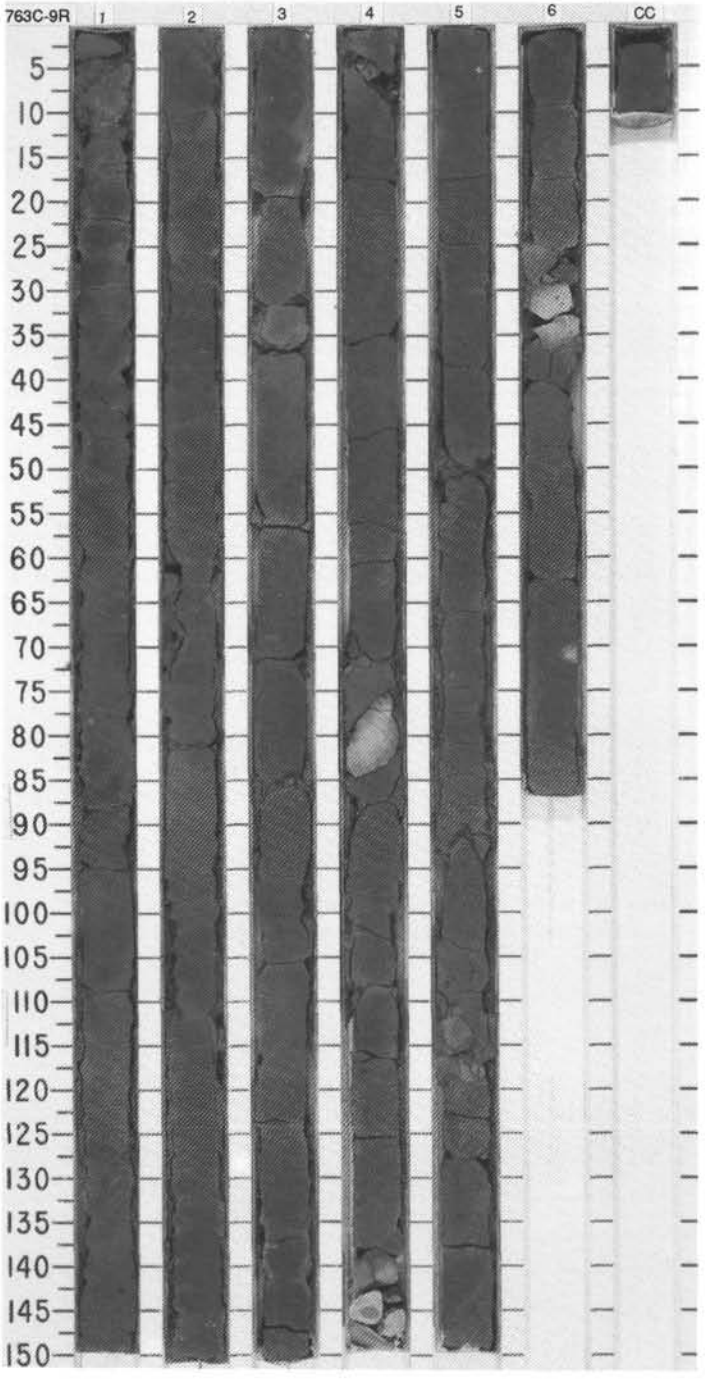
SILTY CLAYSTONE WITH QUARTZ, AUTHIGENIC CARBONATE, AND PYRITE AND CLAYEY SILTSTONE WITH QUARTZ, AUTHIGENIC CARBONATE, AND PYRITE

Major lithologies:
SILTY CLAYSTONE with QUARTZ, AUTHIGENIC CARBONATE, and PYRITE and CLAYEY SILTSTONE with QUARTZ, AUTHIGENIC CARBONATE, and PYRITE black (5Y 2.5/1) to gray (5Y 5/1). Belemnites, molluscan debris, glauconite, pyrite, and plant remains are visible in some hand specimens.Dominantly subhorizontal, but some vertical burrows, <2 mm diameter on the cut surface, are common.

Minor lithology: Carbonate (siderite?) concretions, dark gray (5Y 4/1) to olive gray (5Y 5/2) replace the silty claystone in some intervals. They are brecciated, and finely and coarsely burrowed.

SMEAR SLIDE SUMMARY (%):

	1, 7 D	2, 37 D	3, 110 D	4, 118 D	5, 80 D	6, 42 D
TEXTURE						
Sand	1	8	1	5	5	5
Silt	39	50	39	65	55	50
Clay	60	42	60	30	40	45
COMPOSITION:						
Accessory minerals	—	1	—	—	—	—
Biotite	2	3	5	5	4	2
Carbonate, authigenic	20	12	12	20	10	7
Clay	49	47	53	35	44	52
Feldspar	5	5	—	—	—	—
Glauconite	4	Tr	Tr	15	5	Tr
Mica	—	—	2	—	2	2
Opaques(pyrite)	5	5	10	10	15	15
Quartz	15	25	18	15	20	20
Plant debris	2	3	5	5	5	2



SITE 763 HOLE C CORE 10R CORED INTERVAL 685.1-694.6 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: Barren
- NANNOFOSSILS: Barren
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: C/P

D. lobispinosum - B. reticulatum

PALEOMAGNETICS

PHYS. PROPERTIES:
- ●Φ=38.59 V=1.65 ρ=2.16
- ●Φ=41.8 ρ=2.10
- ●Φ=41.3 ρ=2.18

CHEMISTRY:
- ●$CaCO_3$=3.4% TOC=0.43%
- ●$CaCO_3$=4.1% TOC=0.78%
- ●$CaCO_3$=4.7% TOC=0.80%
- ●$CaCO_3$=3.8% TOC=0.84%
- ●$CaCO_3$=61.4% TOC=0.41% V=3.46 ρ=2.52

SECTION: 1 2 3 4 5 6 7

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: S, P

SAMPLES: OG, IW

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE

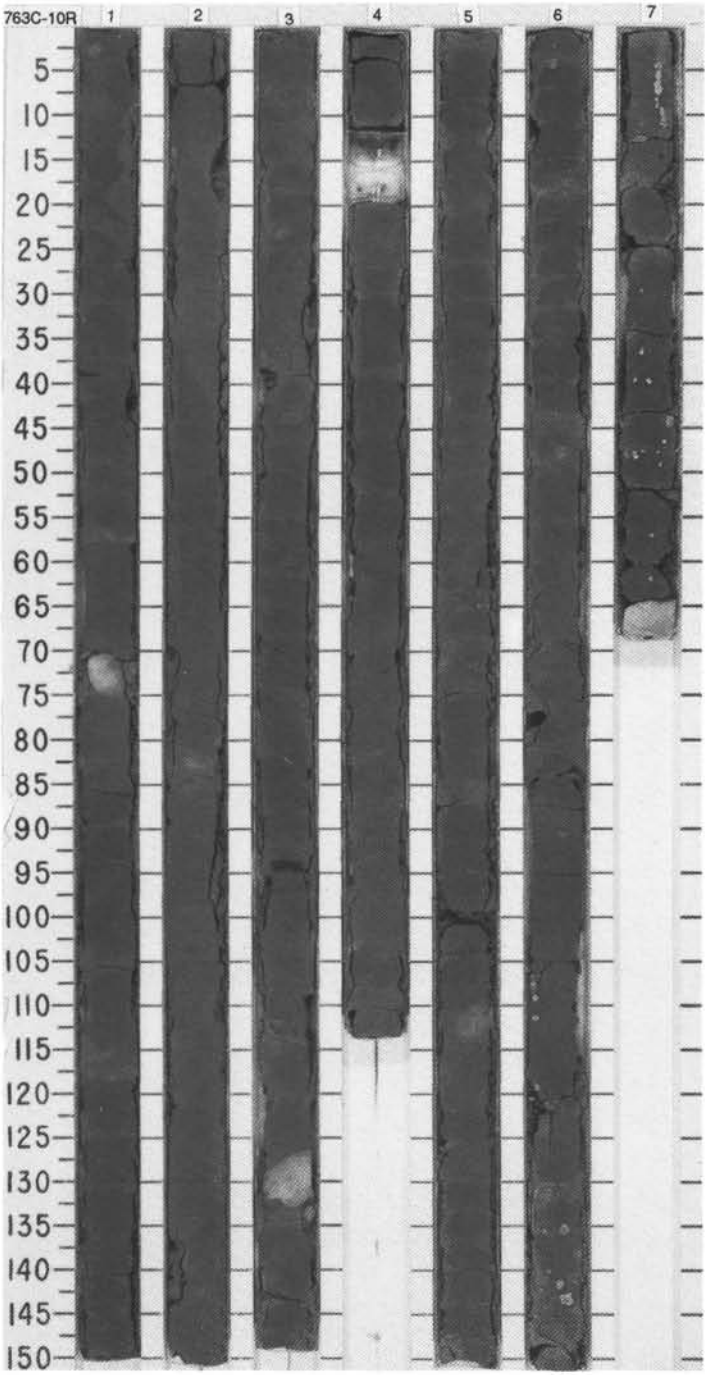
Drilling disturbance is weak to moderate

Major lithology: SILTY CLAYSTONE, dark olive gray (5G 3/2), with rare small horizontal burrows which may give a laminated appearance (e.g. Section 7). Quartz is abundant in the upper part of the core (20-30%, Sections 1 to 4). Authigenic mica-illite is abundant and glauconite may also be present (Section 7). Numerous pyrite nodules, approximately 1 cm in diameter, are scattered in the lower part (Sections 6 and 7).

Minor lithologies:
a. Carbonate (siderite), olive gray (5Y 5/2), with diffuse, gradational contacts is present, commonly associated with strong bioturbation, and forms hard carbonate nodules (Sections 1, 3, and 7).
b. Silty claystone with sand, dark olive gray (5Y 3/2), with abundant horizontal burrows and minor laminae.

SMEAR SLIDE SUMMARY (%):

	1, 93 D	4, 85 D	5, 110 M	6, 93 D	7, 12 D
TEXTURE:					
Sand	5	5	—	5	15
Silt	40	30	—	35	25
Clay	55	60	—	60	60
COMPOSITION:					
Carbonate, authigenic	7	5	10	—	—
Clay	55	60	—	60	60
Feldspar	—	—	3	—	—
Glauconite	—	—	—	—	13
Mica	—	5	80	15	10
Pyrite	8	10	2	20	10
Quartz	30	20	5	5	7



SITE 763 HOLE C CORE 11R CORED INTERVAL 694.6-704.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE - UPPER BERRIASIAN	R/M ?	Barren	Barren		C/P *D. lobispinosum - B. reticulatum*		●37.7 ▽1.61 ●2.23	●$CaCO_3$=0.85 TOC=0.89%	1	0.5 1.0			S P P S P	* * *
									2					

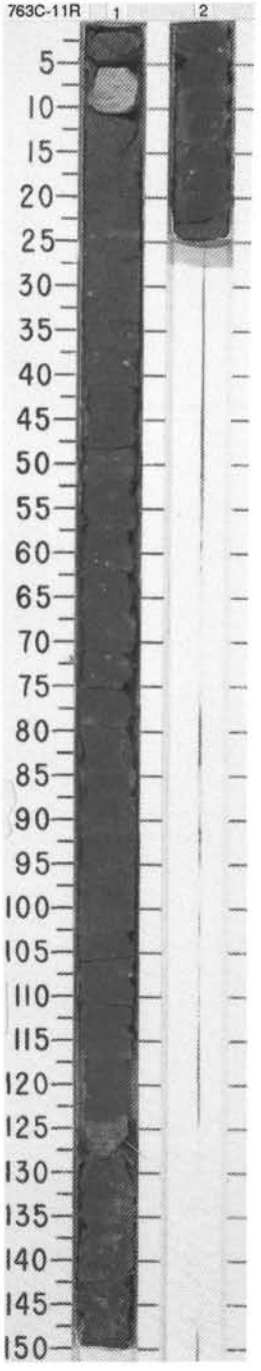
LITHOLOGIC DESCRIPTION

QUARTZ CLAYSTONE WITH SILT AND SILTY QUARTZ CLAYSTONE

Major lithologies:
QUARTZ CLAYSTONE with SILT and SILTY QUARTZ CLAYSTONE, dark gray (5Y 4/1), overall a silty claystone with sections becoming sideritized. The entire core appears to be bioturbated but this best seen where sideritized and extensive Chondrites traces are found. Some sections contain macrofossils including bivalves and shell fragments. Glauconite is present but not abundant. Pyriteis common throughout the core in aggregations up to 1.5 cm in size. The core is broken into pieces by drilling but otherwise well-preserved. No obvious trends occur within thecore or with the underlying cores.
Minor lithology: Siderite claystone, light olive gray (5Y 6/2), bioturbated, both sharp and gradational contacts in Section 1, 5-10 and 124-128 cm. Contains concentrations of up to 40% recrystallized carbonate.

SMEAR SLIDE SUMMARY (%):

	1, 18 D	1, 124 M	2, 11 D
TEXTURE:			
Sand	—	—	5
Silt	15	5	30
Clay	85	95	65
COMPOSITION:			
Accessory minerals	2	5	5
Bioclasts	1	—	Tr
Clay	66	40	58
Mica	—	—	2
Pyrite	3	4	5
Quartz	25	8	25
Siderite	—	40	—
Zeolite	3	3	5
Feldspar	Tr	—	Tr



SITE 763 HOLE C CORE 12R CORED INTERVAL 704.1-713.6 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE - UPPER BERRIASIAN	Barren / R/P / Barren	NK1 - NK2			*D. lobispinosum* - *B. reticulatum* C/P		$(CaCO_3$=39.5% TOC=0.02%)	$CaCO_3$=2.2% TOC=0.80%	1, 2	0.5, 1.0				

LITHOLOGIC DESCRIPTION

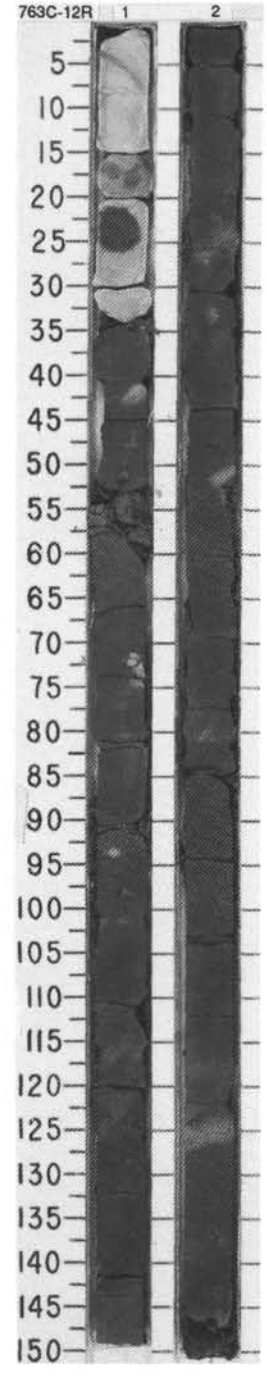
CLAYSTONE WITH SILT AND CALCITE-CEMENTED QUARTZ SANDSTONE

Major lithologies:
CLAYSTONE with SILT, dark gray (5Y 4/1), bioturbated, sideritized claystone with relatively low silt and sand content. Siderite seems more prevalent in the bioturbated intervals which average about 1 m apart and can be seen on the surface of siderite nodules. In other intervals, burrows are elongated into laminae. Several large (3-5 mm) quartz grains are in the base of Section 2. Glauconite in Section 2, 0-50 cm. Siderite may show a minorincrease over the last few cores (Cores 122-763C-10R to 12R). CALCITE-CEMENTED QUARTZ SANDSTONE, light gray (5Y 7/1), 30 cm interval of quartz-cemented sandstone with few features other than minor bioclasts (?bivalves).

Minor lithology: Siderite concretions, pale olive (5Y 6/3), with well-preserved bioturbation structures. Concretions range from approximately 1-3, cm in width and have both sharp and gradational boundaries. Their location is shown in the sedimentary structures column.

SMEAR SLIDE AND THIN SECTION SUMMARY (%):

	1, 10 D	1, 46 D	1, 95 D	2, 18 D
TEXTURE:				
Sand	—	5	5	10
Silt	—	10	9	15
Clay	—	85	86	75
COMPOSITION:				
Accessory minerals	—	5	—	7
Cement	30	—	—	—
Clay	—	85	90	75
Feldspar	10	—	—	—
Mica	—	3	—	3
Opaques	5	—	—	—
Pyrite	—	2	5	5
Quartz	50	5	5	10
Rock fragment	3	—	—	—



SITE 763 HOLE C CORE 13R CORED INTERVAL 713.6-723.1 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: Barren
- NANNOFOSSILS: R/P
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: C/P

PALEOMAGNETICS: *D. lobispinosum - B. reticulatum*

PHYS. PROPERTIES: ●Ø-36.8 V=1.76 P-2.16; ●Ø-16 V=3.37 P-2.82; ●Ø-34.5 V=1.64 P-2.17

CHEMISTRY: $CaCO_3$=3.7%●TOC=0.90%; $CaCO_3$=62.6%●TOC=0.27%; $CaCO_3$=8.3%●TOC=0.74%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG, LW

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE AND CLAYSTONE WITH SAND AND SILT

Major lithology: SILTY CLAYSTONE and CLAYSTONE with SAND and SILT, dark olive gray (5Y 3/2 to 5Y 3/2), strongly bioturbated. Burrows are mainly of Chondrities-type and are difficult to see in the dominant lithology where they are mainly horizontal due to strong compaction. Glauconite is present and may be abundant insome intervals (e.g. top of Sections 2 and 3). Shell fragments are rare.

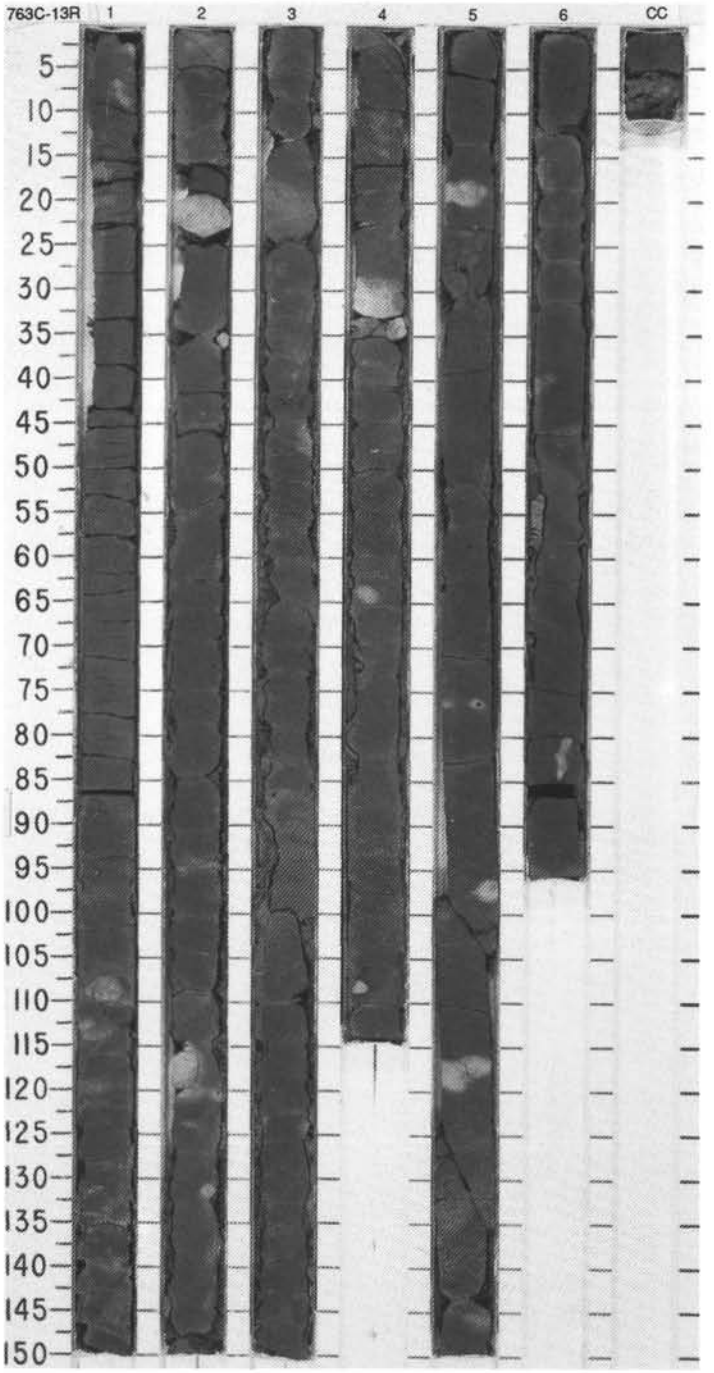
Minor lithology:

a. Carbonate (siderite?) nodules, brown (5Y 7/3), are common.They show numerous small burrows (Chondrities-type) well-preserved and not compacted. This suggests a differential ompaction between the nodules and the dominant lithology, and thus an early diagenesis for the nodules.

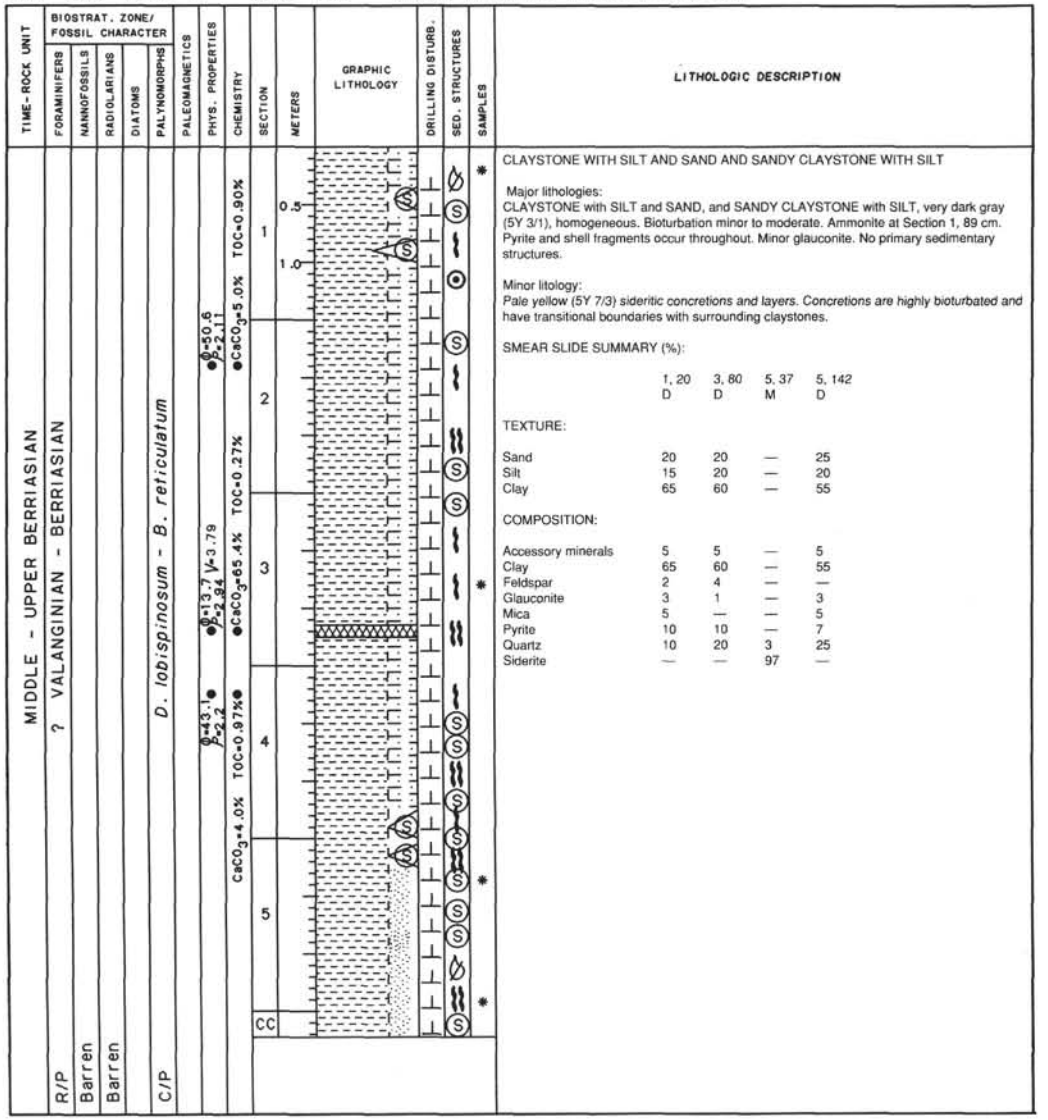
b. Sandy claystone with silt, very dark gray (5Y 3/1), weakly laminated, in CC, 0-7 cm.

SMEAR SLIDE SUMMARY (%):

	1, 67 D	3, 58 D	6, 41 M	CC, 5 D
TEXTURE:				
Sand	15	5	3	25
Silt	20	25	10	10
Clay	65	70	87	65
COMPOSITION:				
Accessory minerals	5	—	—	5
Carbonate grains	5	8	—	5
lay	65	70	87	65
Feldspar	—	2	3	—
Mica	4	—	—	—
Nannofossils	1	—	—	—
Pyrite	10	15	—	5
Quartz	10	5	10	20



SITE 763 HOLE C CORE 14R CORED INTERVAL 723.1-732.6 mbsf



LITHOLOGIC DESCRIPTION

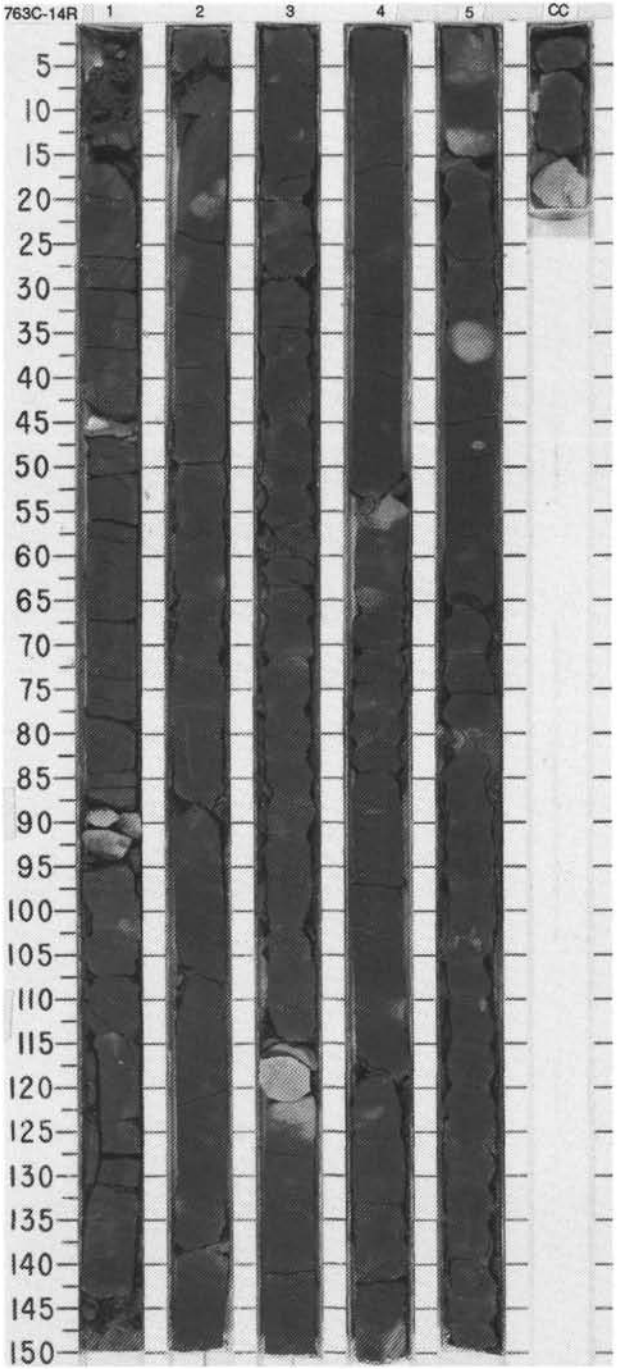
CLAYSTONE WITH SILT AND SAND AND SANDY CLAYSTONE WITH SILT

Major lithologies:
CLAYSTONE with SILT and SAND, and SANDY CLAYSTONE with SILT, very dark gray (5Y 3/1), homogeneous. Bioturbation minor to moderate. Ammonite at Section 1, 89 cm. Pyrite and shell fragments occur throughout. Minor glauconite. No primary sedimentary structures.

Minor litology:
Pale yellow (5Y 7/3) sideritic concretions and layers. Concretions are highly bioturbated and have transitional boundaries with surrounding claystones.

SMEAR SLIDE SUMMARY (%):

	1, 20 D	3, 80 D	5, 37 M	5, 142 D
TEXTURE:				
Sand	20	20	—	25
Silt	15	20	—	20
Clay	65	60	—	55
COMPOSITION:				
Accessory minerals	5	5	—	5
Clay	65	60	—	55
Feldspar	2	4	—	—
Glauconite	3	1	—	3
Mica	5	—	—	5
Pyrite	10	10	—	7
Quartz	10	20	3	25
Siderite	—	—	97	—



SITE 763 HOLE C CORE 15R CORED INTERVAL 732.6-742.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE - UPPER BERRIASIAN	?	Barren	Barren		*D. lobispinosum - B. reticulatum*	C/P	●Φ-38.9 ●ρ-2.17 ●Φ-36.6 ●ρ-2.29	$CaCO_3$=2.8% ●TOC=0.87% ●$CaCO_3$=5.3% TOC=0.76%	1 2 3 4 CC	0.5 1.0				* * *

LITHOLOGIC DESCRIPTION

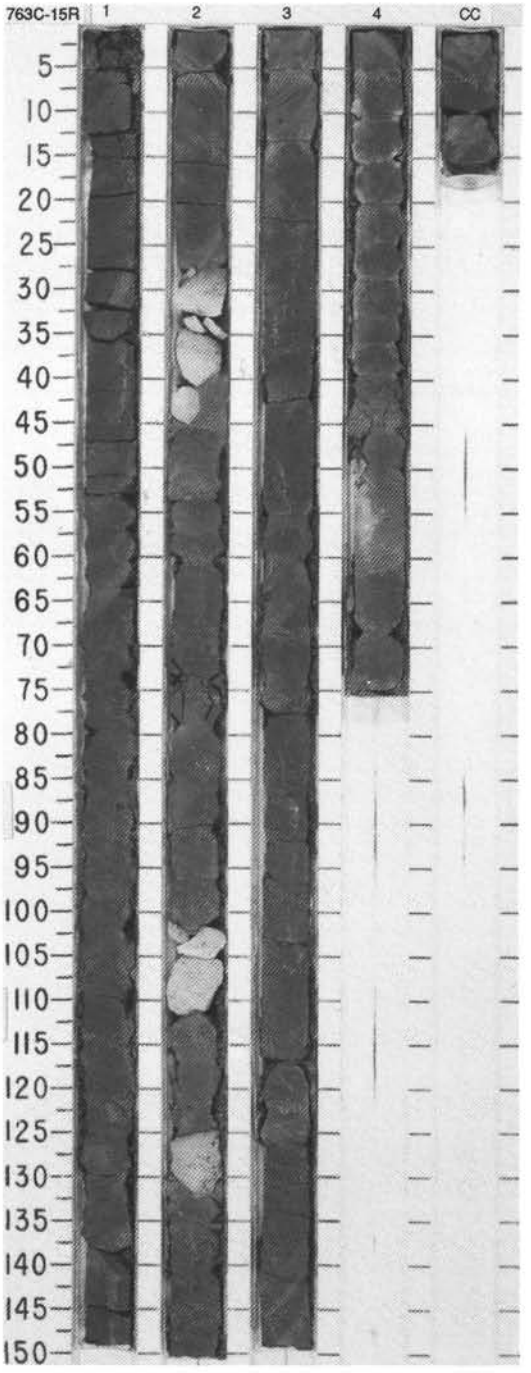
SANDY CLAYSTONE WITH SILT, SILTY CLAYSTONE WITH SAND, AND CLAYSTONE WITH SAND AND SILT

Major lithologies:
SANDY CLAYSTONE with SILT, SILTY CLAYSTONE with SAND and SILT, very dark gray (5Y 3/1), poorly sorted and weakly to moderately bioturbated. Parallel laminations are locally distinct. Grain size decreases down core. Small shell fragments are commonly included. Fine to medium grain sized glauconite is present throughout the core.

Minor lithologies:
a. Siderite nodules or layers, pale yellow (5Y 7/3), show strong bioturbation with Chondrites and other types of burrows. Parallel laminations are also locally distinct in Section 2, 20-55 cm.
b. Pyrite grains are observed throughout the core.

SMEAR SLIDE AND THIN SECTION SUMMARY (%):

	1, 112 D	2, 105 M	3, 18 D	4, 63 D
TEXTURE:				
Sand	30	—	20	10
Silt	15	—	25	15
Clay	55	—	55	75
COMPOSITION:				
Accessory minerals	2	—	3	2
Calcite	—	15	—	—
Clay	55	69	55	75
Dolomite	—	5	—	—
Feldspar	5	—	5	3
Glauconite	3	3	2	—
Mica	5	1	—	—
Opaques	—	3	—	—
Plant	—	2	—	—
Pyrite	10	—	10	5
Quartz	20	2	25	15



SITE 763 HOLE C CORE 16R CORED INTERVAL 742.1-751.6 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN
BIOSTRAT. ZONE/FOSSIL CHARACTER: ? VALANGINIAN - BERRIASIAN; NJK - NK1
FORAMINIFERS: R/G
NANNOFOSSILS: R/M
RADIOLARIANS: Barren
DIATOMS:
PALYNOMORPHS: C/P
PALEOMAGNETICS: *D. lobispinosum* - *B. reticulatum*
PHYS. PROPERTIES: (CaCO3=2.1% TOC=0.97%) ●0-37.4 ▽1.79 ●2-2.18 ●0-40.8 ●2-2.16
CHEMISTRY: CaCO3=4.2%●TOC=0.78% CaCO3=2.3%●TOC=0.82% CaCO3=1.85%●TOC=0.90% ●CaCO3=6.1 TOC=0.60%
SECTION: CC, 7, 6, 5, 4, 3, 2, 1
METERS: 0.5, 1.0
GRAPHIC LITHOLOGY: VOID
DRILLING DISTURB.
SED. STRUCTURES
SAMPLES: OG, TW

LITHOLOGIC DESCRIPTION

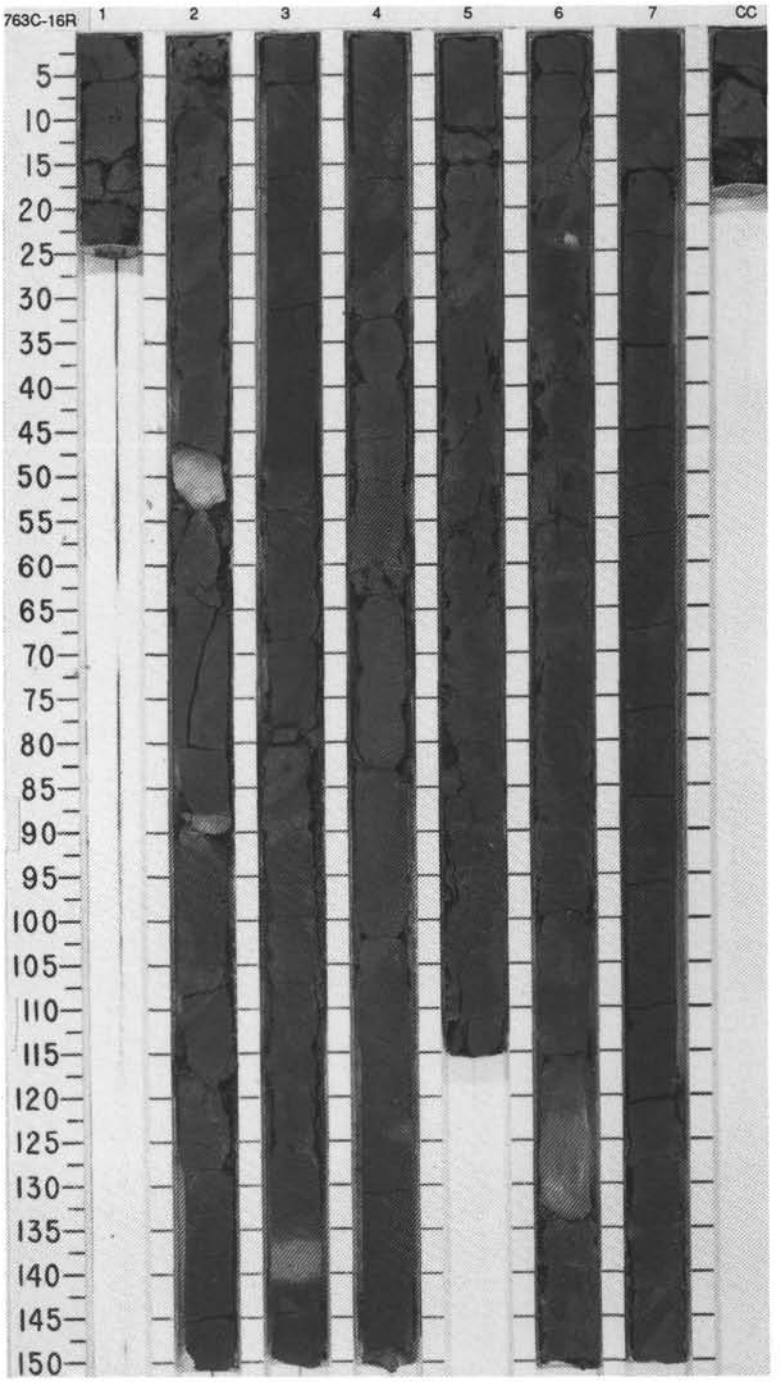
SILTY CLAYSTONE AND CLAYSTONE WITH SAND AND SILT

Major lithologies:
SILTY CLAYSTONE and CLAYSTONE with SAND and SILT, very dark gray (10Y 3/1), weakly to moderaltely bioturbated with some Chrondrites and minor Planolites burrows, and locally show weak lamination.Many small shell fragments and some pyrite and glauconite grains are present throughout the core.

Minor lithologies:
a. Siderite nodules and/or layers (2-10 cm thick), pale yellow (5Y 7/3), intercalated. In Section 6, 122-132 cm, the siderite layers show normal grading and contain some medium-sized sand grains at the base. Strong bioturbation is distinct in the siderite nodules and/or layers.
b. Some pyrite nodules (1-10 mm in diameter) in Sections 1, 2, 4, and 7.
c. A plant fragment (coal) is intercalated in Section 3, 117 cm.

SMEAR SLIDE SUMMARY (%):

	1, 10 D	3, 138 D	5, 37 M	6, 125 D
TEXTURE:				
Sand	7	—	10	—
Silt	28	—	15	—
Clay	65	—	75	—
COMPOSITION:				
Accessory minerals	5	—	2	—
Carbonate grains	2	—	5	—
Clay	65	—	75	—
Feldspar	—	—	5	—
Mica	5	—	—	—
Pyrite	5	—	—	—
Quartz	15	3	10	3
Siderite	—	97	—	97



SITE 763 HOLE C CORE 17R CORED INTERVAL 751.6-761.1 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: R/G
- NANNOFOSSILS: R/M
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: C/P

PALEOMAGNETICS: *D. lobispinosum - B. reticulatum*

PHYS. PROPERTIES: ●D=38.6 V=1.3; ρ=2.28 ●D=46.4 V=1.31; ρ=2.11

CHEMISTRY: ●$CaCO_3$=6.3% TOC=0.79% ●$CaCO_3$=12.9% TOC=0.90%

SECTION: 1 2 3 4 5 6 7

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY: VOID

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

SILTY QUARTZ CLAYSTONE WITH SAND

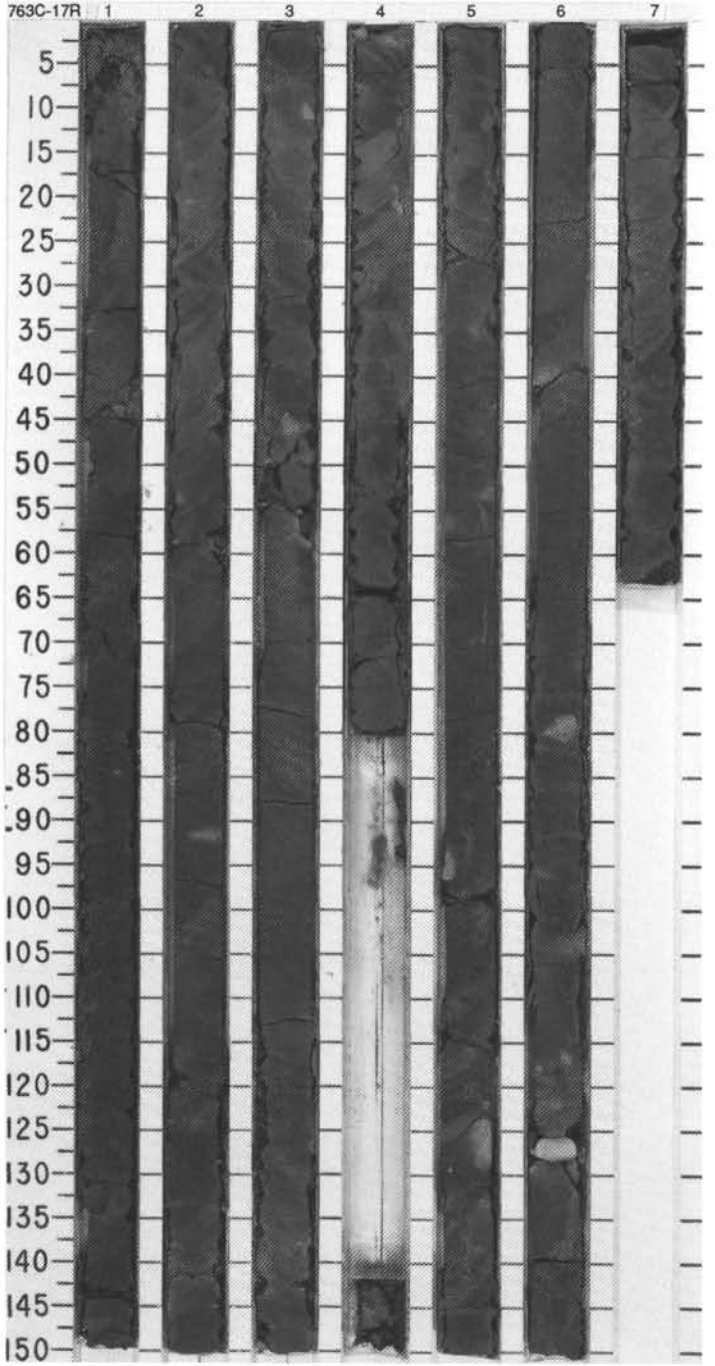
Drilling disturbance moderate to minor.

Major lithology: SILTY QUARTZ CLAYSTONE with SAND, very dark gray (5Y 3/1). Pyrite grains dispersed throughout, but minor in abundance. Small fragile shell fragments throughout core. Bioturbation minor to moderate, especially noticeable around siderite burrows, zones, and concretions. Sand size quartz grains visible with naked eye.

Minor lithology: Pale yellow (5Y 7/3) siderite concretions, mottles found throughout the core. Location of sideritic concretions zones shown in the sedimentary structures column on barrel sheet. Interpretation: Sideritic zones are highly bioturbated suggesting that biogenic activity may be involved in the production of siderite mottles, with concretions and nodules following. Sideritic zones may also indicate sedimentation rates.

SMEAR SLIDE SUMMARY (%):

	1, 79 D	3, 80 D	5, 81 D	6, 80 M
TEXTURE:				
Sand	20	20	25	—
Silt	25	30	30	—
Clay	55	50	45	—
COMPOSITION:				
Accessory minerals	1	—	—	2
Clay	50	46	44	—
Feldspar	10	10	10	—
Mica	5	5	5	—
Opaques	2	7	8	—
Plant	2	2	3	—
Quartz	30	25	30	3
Rock fragment	—	5	—	—
Siderite	—	—	—	95



SITE 763 HOLE C CORE 18R CORED INTERVAL 761.1-770.6 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: ?
- NANNOFOSSILS: NJK - NK1
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: *D. lobispinosum - B. reticulatum*

PALEOMAGNETICS: R/M; R/G; F/P

PHYS. PROPERTIES: ●0-35.5 ρ=2.18; ●0-36.6 V=1.45 ρ=2.19; ●0-35.4 V=1.39 ρ=2.24

CHEMISTRY: ●TOC=0.63% ●$CaCO_3$=4.9% TOC=0.63% ●$CaCO_3$=4.1% TOC=0.63% ●$CaCO_3$=3.05% ●TOC=0.76%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE WITH QUARTZ SAND AND SILTY CLAYSTONE

Minimal drilling disturbance.

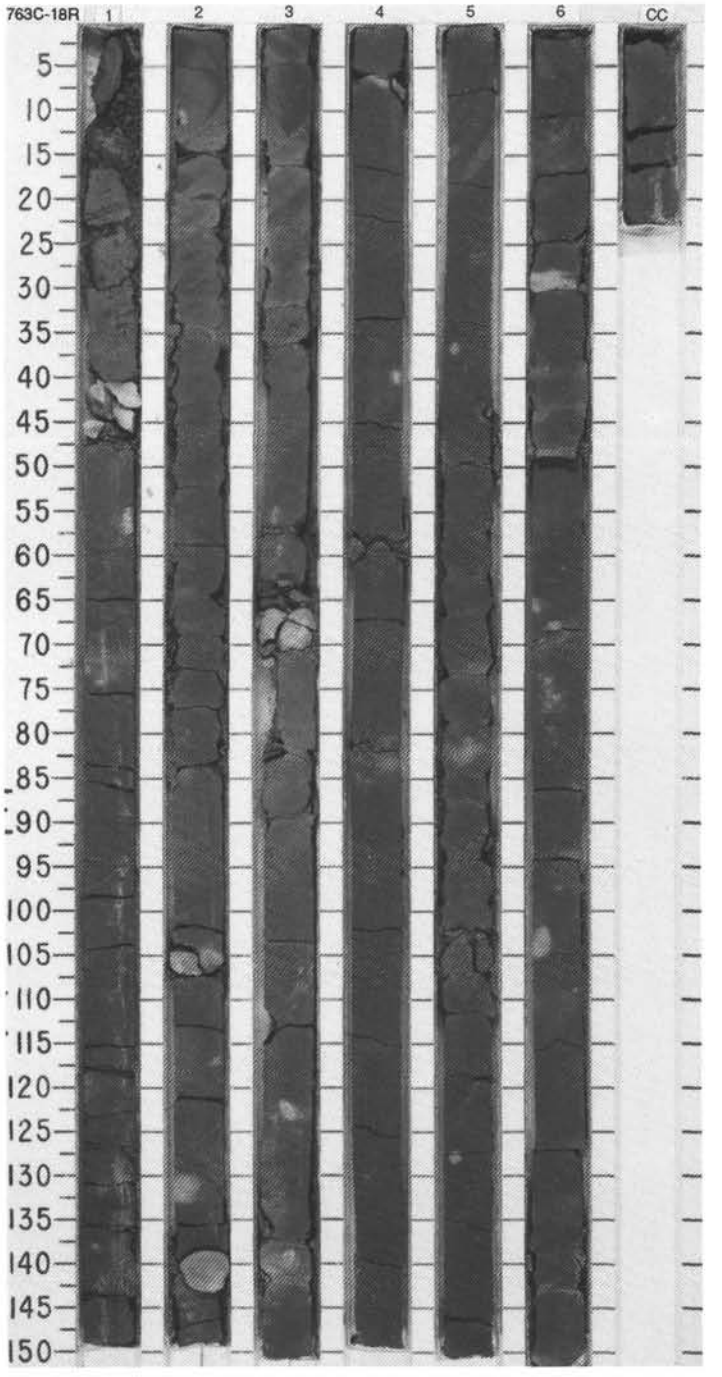
Major lithologies:
SILTY CLAYSTONE with QUARTZ SAND and SILTY CLAYSTONE, very dark gray (5Y 3/1). Sections 4-6 contain gray (5Y 5/1) carbonate-rich mottles. Quartz sand is subangular and as coarse as 4 mm. Coarse sand occurs as dispersed grains in Section 1, 120-150 cm; Section 4; Section 5, 0-40 cm; and Section 6, 0-10 cm. Shell fragments are common (including a belemnite in Section 5, 45 cm). Glauconite is rare except in Section 6, 0-18 cm. Other Fine burrows are widespread and some are pyrite-filled. The burrows are particularly evident in carbonate mottles and concretions. In Sections 4-6 the mottles are gray (5Y 3/1). There is no evidence of bedding.

Minor lithology:Carbonate concretions, light olive gray (5Y 6/2) to gray (5Y 5/1), in Sections 1-3.

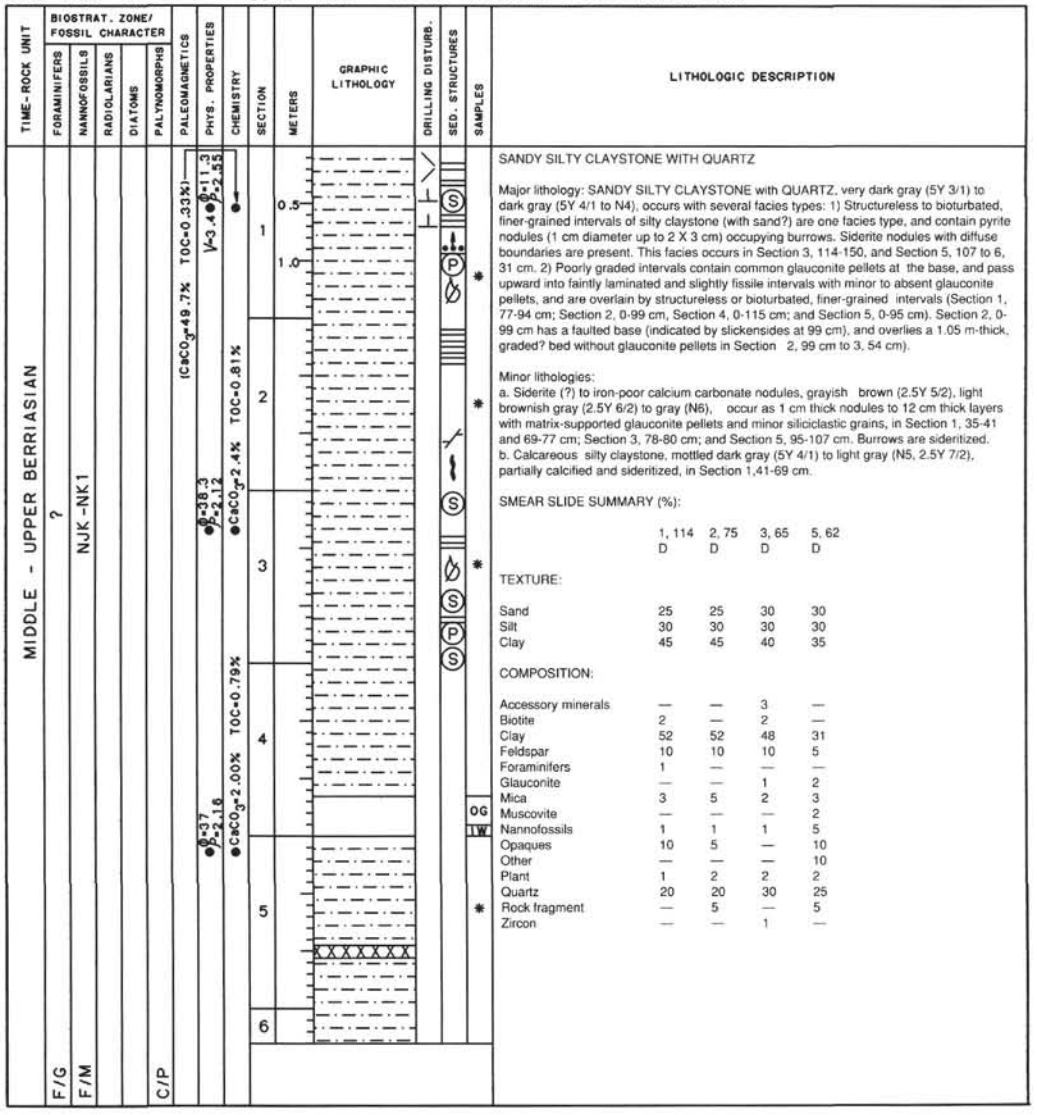
Interpretation: The very mixed grain size suggests mass transport down the delta front.

SMEAR SLIDE SUMMARY (%):

	1, 65 D	2, 80 D	4, 80 D	6, 80 D
TEXTURE:				
Sand	15	25	25	20
Silt	30	30	25	30
Clay	55	45	50	50
COMPOSITION:				
Accessory minerals	—	3	3	—
Clay	52	42	56	49
Feldspar	—	10	5	5
Hypersthene	1	1	—	1
Kyanite	1	—	—	—
Biotite	5	3	2	2
Muscovite	Tr	3	3	3
Nannofossils	—	Tr	—	1
Plant	3	1	3	1
Pyrite	—	—	—	8
Quartz	30	30	20	25
Authigenic carbonate	—	—	—	5



SITE 763 HOLE C CORE 19R CORED INTERVAL 770.6-780.1 mbsf



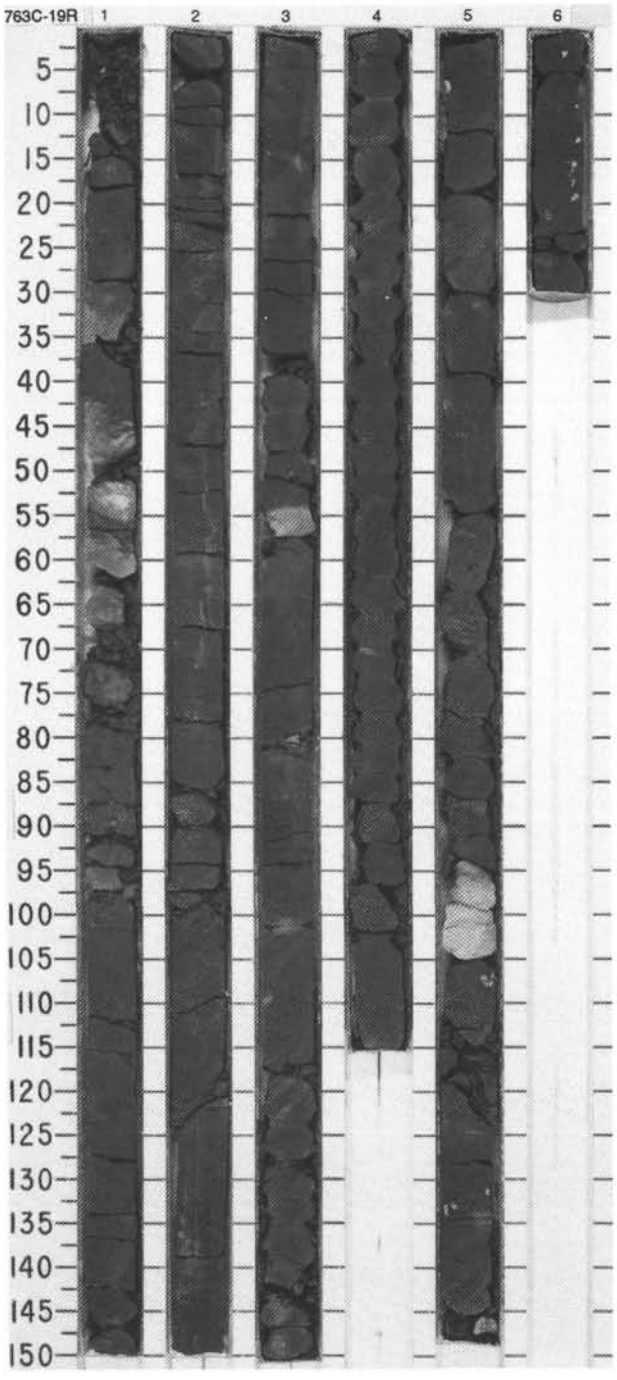
SANDY SILTY CLAYSTONE WITH QUARTZ

Major lithology: SANDY SILTY CLAYSTONE with QUARTZ, very dark gray (5Y 3/1) to dark gray (5Y 4/1 to N4), occurs with several facies types: 1) Structureless to bioturbated, finer-grained intervals of silty claystone (with sand?) are one facies type, and contain pyrite nodules (1 cm diameter up to 2 X 3 cm) occupying burrows. Siderite nodules with diffuse boundaries are present. This facies occurs in Section 3, 114-150, and Section 5, 107 to 6, 31 cm. 2) Poorly graded intervals contain common glauconite pellets at the base, and pass upward into faintly laminated and slightly fissile intervals with minor to absent glauconite pellets, and are overlain by structureless or bioturbated, finer-grained intervals (Section 1, 77-94 cm; Section 2, 0-99 cm, Section 4, 0-115 cm; and Section 5, 0-95 cm). Section 2, 0-99 cm has a faulted base (indicated by slickensides at 99 cm), and overlies a 1.05 m-thick, graded? bed without glauconite pellets in Section 2, 99 cm to 3, 54 cm).

Minor lithologies:
a. Siderite (?) to iron-poor calcium carbonate nodules, grayish brown (2.5Y 5/2), light brownish gray (2.5Y 6/2) to gray (N6), occur as 1 cm thick nodules to 12 cm thick layers with matrix-supported glauconite pellets and minor siliciclastic grains, in Section 1, 35-41 and 69-77 cm; Section 3, 78-80 cm; and Section 5, 95-107 cm. Burrows are sideritized.
b. Calcareous silty claystone, mottled dark gray (5Y 4/1) to light gray (N5, 2.5Y 7/2), partially calcified and sideritized, in Section 1,41-69 cm.

SMEAR SLIDE SUMMARY (%):

	1, 114 D	2, 75 D	3, 65 D	5, 62 D
TEXTURE:				
Sand	25	25	30	30
Silt	30	30	30	30
Clay	45	45	40	35
COMPOSITION:				
Accessory minerals	—	—	3	—
Biotite	2	—	2	—
Clay	52	52	48	31
Feldspar	10	10	10	5
Foraminifers	1	—	—	—
Glauconite	—	—	1	2
Mica	3	5	2	3
Muscovite	—	—	—	2
Nannofossils	1	1	1	5
Opaques	10	5	—	10
Other	—	—	—	10
Plant	1	2	2	2
Quartz	20	20	30	25
Rock fragment	—	5	—	5
Zircon	—	—	1	—



SITE 763 HOLE C CORE 20R CORED INTERVAL 780.1-789.6 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN; LOWER CRETACEOUS; NJK - NK1; Barren; *D. lobispinosum - B. reticulatum*

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS R/G; NANNOFOSSILS F/M; RADIOLARIANS; DIATOMS; PALYNOMORPHS F/P

PALEOMAGNETICS

PHYS. PROPERTIES: ●Φ=34.1 ▽=1.75 ρ=2.2; ●Φ=35.4 ▽=1.74 ρ=2.1.7; ▽=5.1 ●Φ=0.4 ρ=2.69

CHEMISTRY: ●$CaCO_3$=4.3% TOC=0.85%; $CaCO_3$=1.4% ●TOC=0.80%; $CaCO_3$=38.0% ●TOC=0.01%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE, SILTSTONE WITH CLAY, AND CLAYSTONE WITH SILT

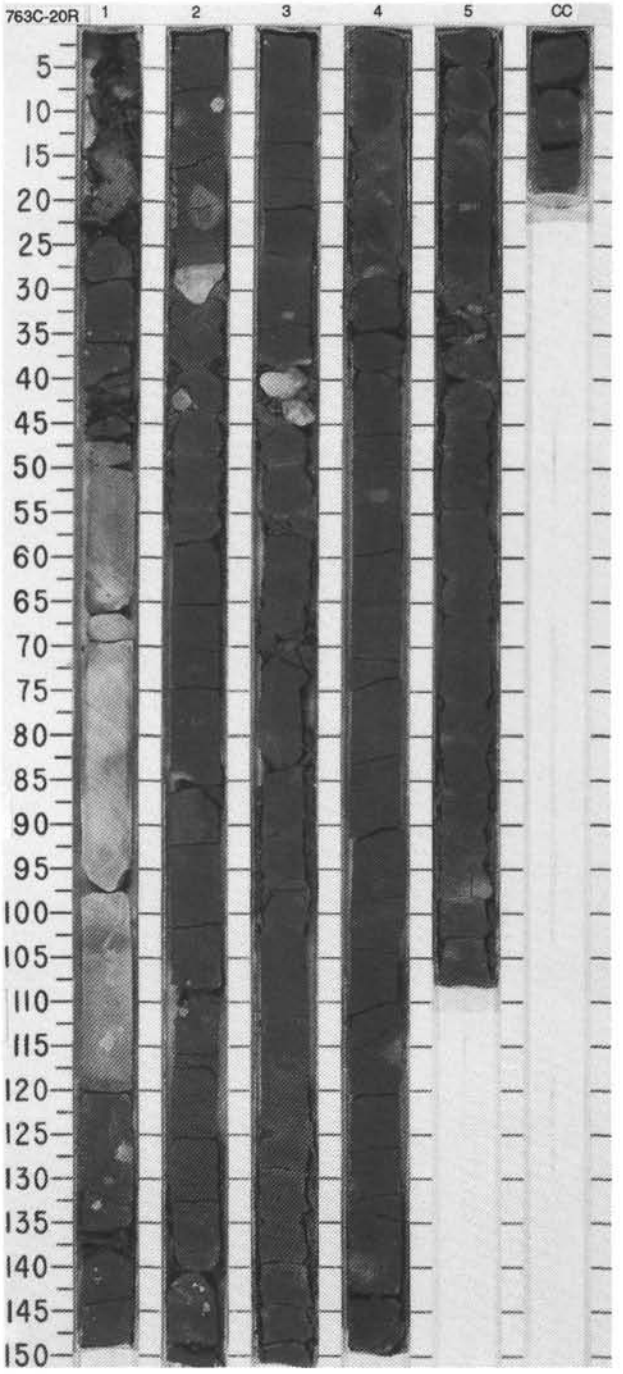
The core is slightly to moderately disturbed by drilling.

Major lithologies:
SILTY CLAYSTONE, SILTSTONE with CLAY, and CLAYSTONE with SILT, dark gray (5Y 3/1), gradational contacts, distinct lithologic boundaries are not present. Sediments are *commonly massive or slightly laminated. Locally, there are intervals of increased burrowing* (1-1.5 mm tubes). The siderite nodules commonly preserve such burrows. It is possible that some of the faint laminations are derived from compaction of horizontally burrowed sediment (pseudolamination). Thin-shelled mollusc fragments (?ammonites) occur throughout the sediment.

Minor lithologies:
a. Calcite-cemented medium-grained quartz sandstone, in Section 1, 45-100 cm, very dark gray (5Y 3/1). Average grain size of the sand is 300 microns. From 100-120 cm, the sandstone becomes progressively richer in clay (clayey sandstone and sandstone with clay) and finer-grained (clayey siltstone), and grades downward to silty claystone.
b. Clayey limestone, in Section 2, 30-35 cm an Section 3, 37-42 cm, in blocks, probably partly sideritized, and intensely bioturbated.
c. Siderite, nodules, sideritized burrow fillings and siderite-rich blebs and bands, 1-5 cm across, are common with siderite content up to 75%. Some of the siderite nodules are associated with pyrite, olive (5Y 5/3), olive gray (5Y 5/2), and dark gray (5Y 4/1). Location shown in sedimentary structures column.

SMEAR SLIDE SUMMARY (%):

	1, 129 D	2, 27 M	3, 32 D	4, 53 D	5, 20 D
TEXTURE:					
Sand	—	—	—	5	1
Silt	42	—	20	75	34
Clay	58	—	80	20	65
COMPOSITION:					
Accessory minerals	—	1	—	—	—
Bioclast	2	3	1	—	—
Biotite	1	—	Tr	2	Tr
Carbonate, authigenic	5	71	Tr	10	3
Clay	58	10	76	20	62
Feldspar	2	—	3	15	7
Foraminifers	—	—	Tr	1	—
Glauconite	—	Tr	Tr	2	1
Heavy minerals	—	—	—	2	—
Hypersthene	—	—	—	Tr	—
Mica	7	5	3	10	5
Nannofossils	2	—	1	—	Tr
Plant	3	1	3	3	5
Pyrite	10	5	5	10	7
Quartz	8	4	7	25	10
Sericite	—	—	1	—	—
Zeolite	2	—	—	—	—



SITE 763 HOLE C CORE 21R CORED INTERVAL 789.6-799.1 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS ?; NANNOFOSSILS ?; RADIOLARIANS; DIATOMS; PALYNOMORPHS *D. lobispinosum - B. reticulatum*

PALEOMAGNETICS: R/G; R/P

PHYS. PROPERTIES: Φ=34.2 V=1.7; ρ=2.2; Φ=35.1 V=1.77; ρ=2.2; Φ=33.9 V=1.8; ρ=2.19

CHEMISTRY: $CaCO_3$=5.4% TOC=0.86%; $CaCO_3$=4.8% TOC=0.78%; $CaCO_3$=2.3% TOC=0.61%; $CaCO_3$=2.7%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE, SILTY CLAYSTONE WITH QUARTZ, AND CLAYEY SILTSTONE WITH QUARTZ

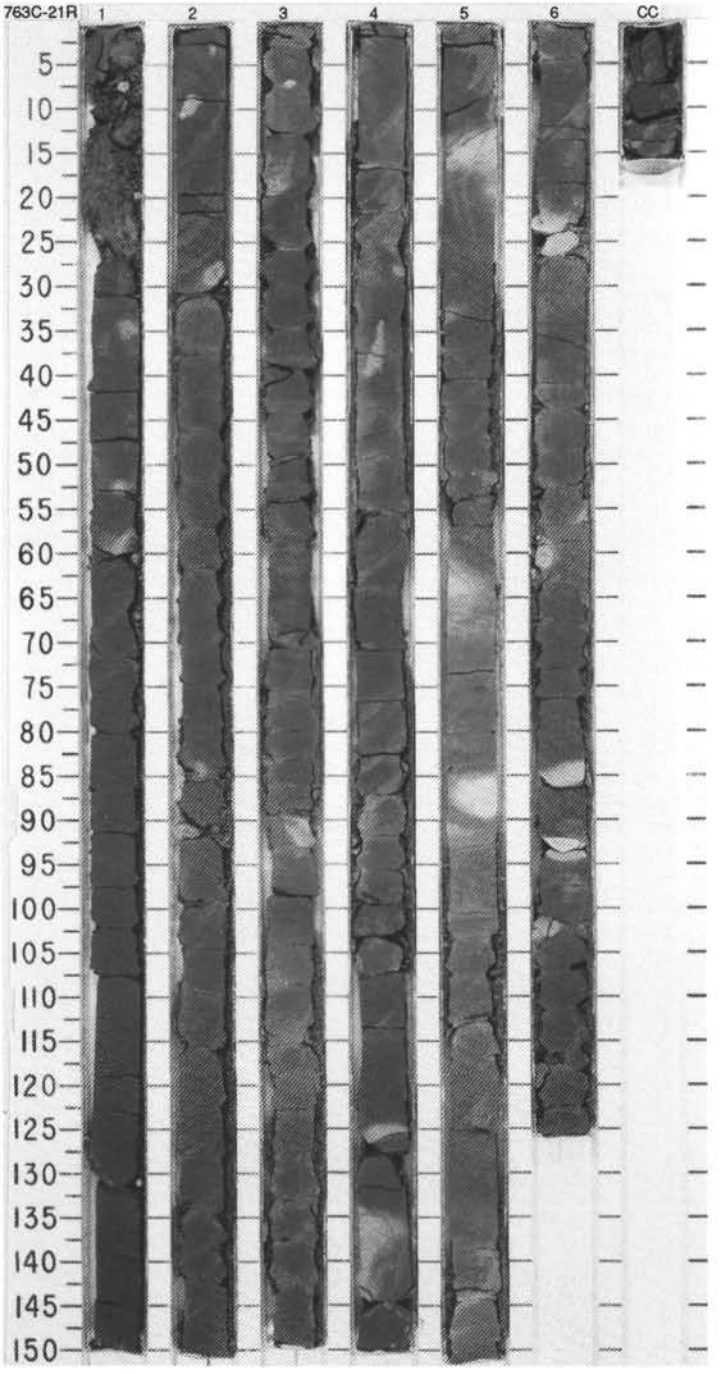
Coring disturbance is minimal.

Major lithology: SILTY CLAYSTONE, SILTY CLAYSTONE with QUARTZ, and CLAYEY SILTSTONE with QUARTZ, very dark gray (5Y 3/1). Minor color and grain size variations are present. The coarsest interval, (still silty claystone), is in Section 3, 58-68 cm. Areas near the siderite-rich layers are lighter and these can extend for several cm. Small, thin-shelled, shell fragments are present over cm thick intervals. In Section 5, 14-16 cm, a shell fragment occurs in a siderite nodule. At Section 1, 132 cm, a 1 cm thick burrow cast (siderite?) has a fine iron sulfide coating. Bioturbation is present, but the amount is difficult to discern because it is more obvious in the lighter/darker than the darker layers.

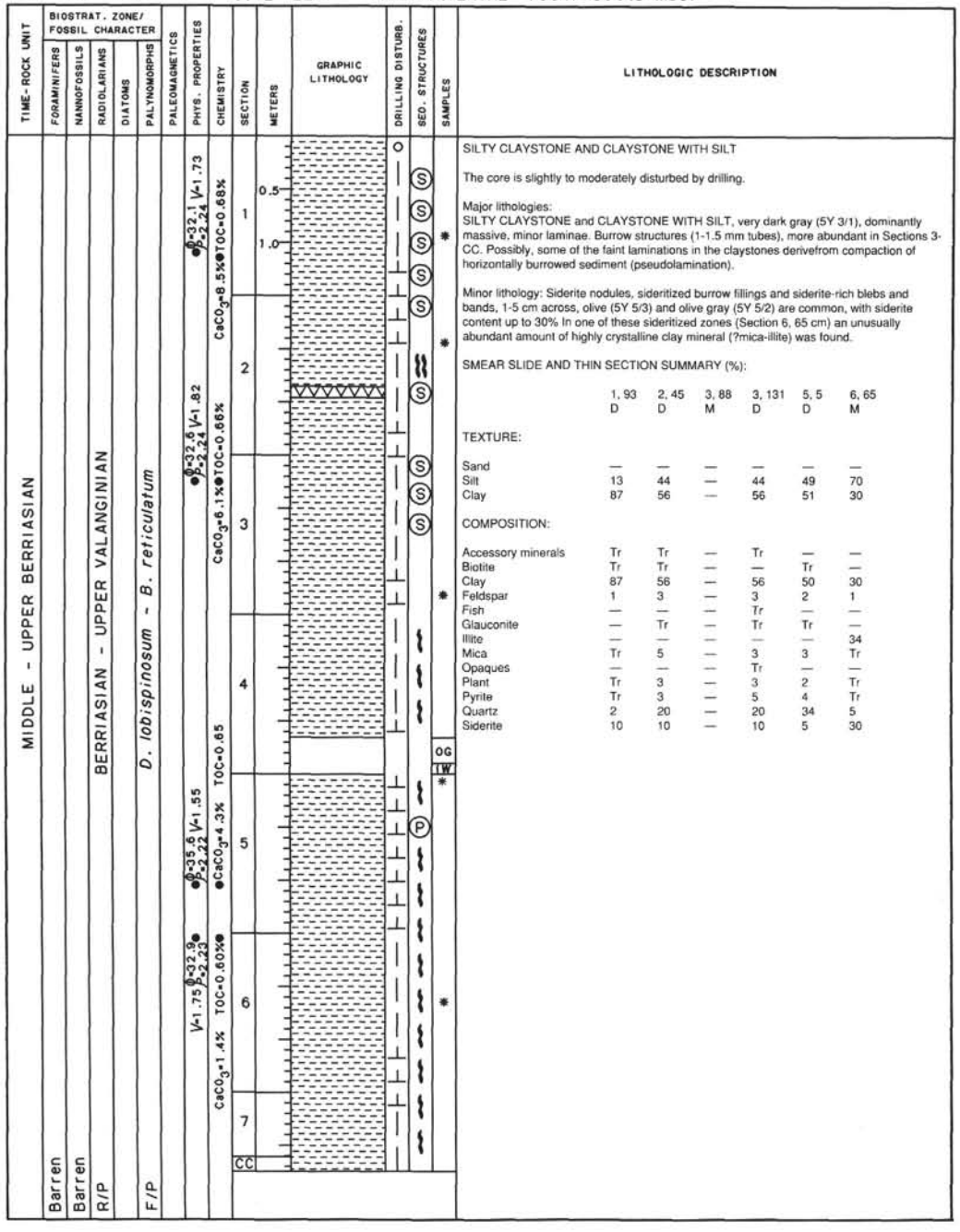
Minor lithologies:
a. Siderite, pale olive (5Y 6/4), predominantly as concretions, commonly showing well-preserved burrow structures. Contacts with over and underlying sediment are both ,sharp and gradational. In general, the greater the apparent bioturbation, the more gradational the contact. Concretions range from 1 cm wide and rounded to layers several cm thick, and to elongated several cm wide burrows.
b. Pyrite in ,cm wide nodules, predominantly in the brecciated interval in Section 1, 0-30 cm, possibly downhole contamination.

SMEAR SLIDE SUMMARY (%):

	1, 47 D	2, 47 D	3, 47 D	4, 72 D	5, 63 M	6, 95 M
TEXTURE:						
Sand	—	5	2	—	—	—
Silt	25	60	36	30	—	—
Clay	75	35	62	70	—	—
COMPOSITION:						
Accessory minerals	Tr	—	—	—	—	—
Bioclast	—	Tr	—	Tr	—	—
Biotite	Tr	1	—	2	—	—
Siderite	3	5	2	10	84	91
Clay	71	35	61	69	10	5
Feldspar	2	10	7	2	1	—
Glauconite	Tr	5	5	1	—	—
Heavy minerals	Tr	—	—	—	—	—
Mica	1	5	5	8	3	2
Nannofossils	—	Tr	Tr	Tr	—	—
Plant	1	1	2	1	Tr	Tr
Pyrite	4	10	5	3	1	2
Quartz	18	25	10	3	1	—
Rock fragment	—	3	3	—	—	—



SITE 763 HOLE C CORE 22R CORED INTERVAL 799.1-808.6 mbsf



LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE AND CLAYSTONE WITH SILT

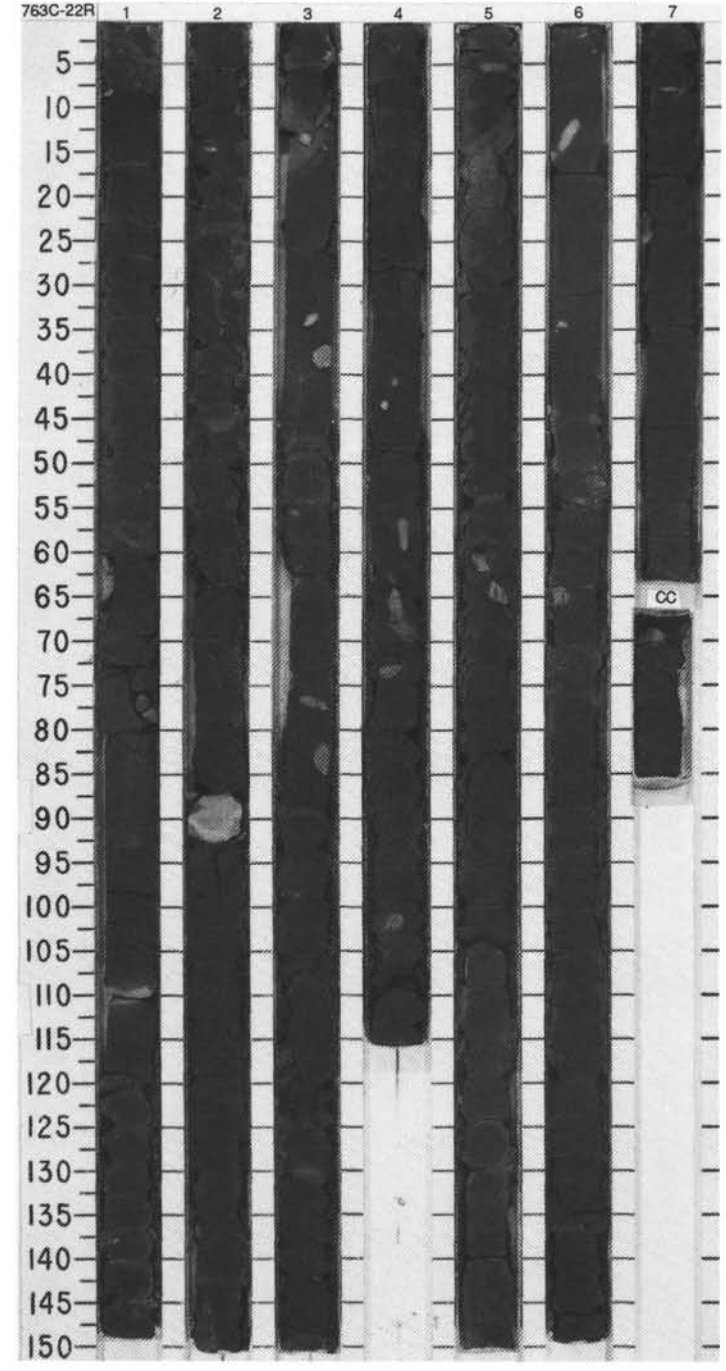
The core is slightly to moderately disturbed by drilling.

Major lithologies:
SILTY CLAYSTONE and CLAYSTONE WITH SILT, very dark gray (5Y 3/1), dominantly massive, minor laminae. Burrow structures (1-1.5 mm tubes), more abundant in Sections 3-CC. Possibly, some of the faint laminations in the claystones derivefrom compaction of horizontally burrowed sediment (pseudolamination).

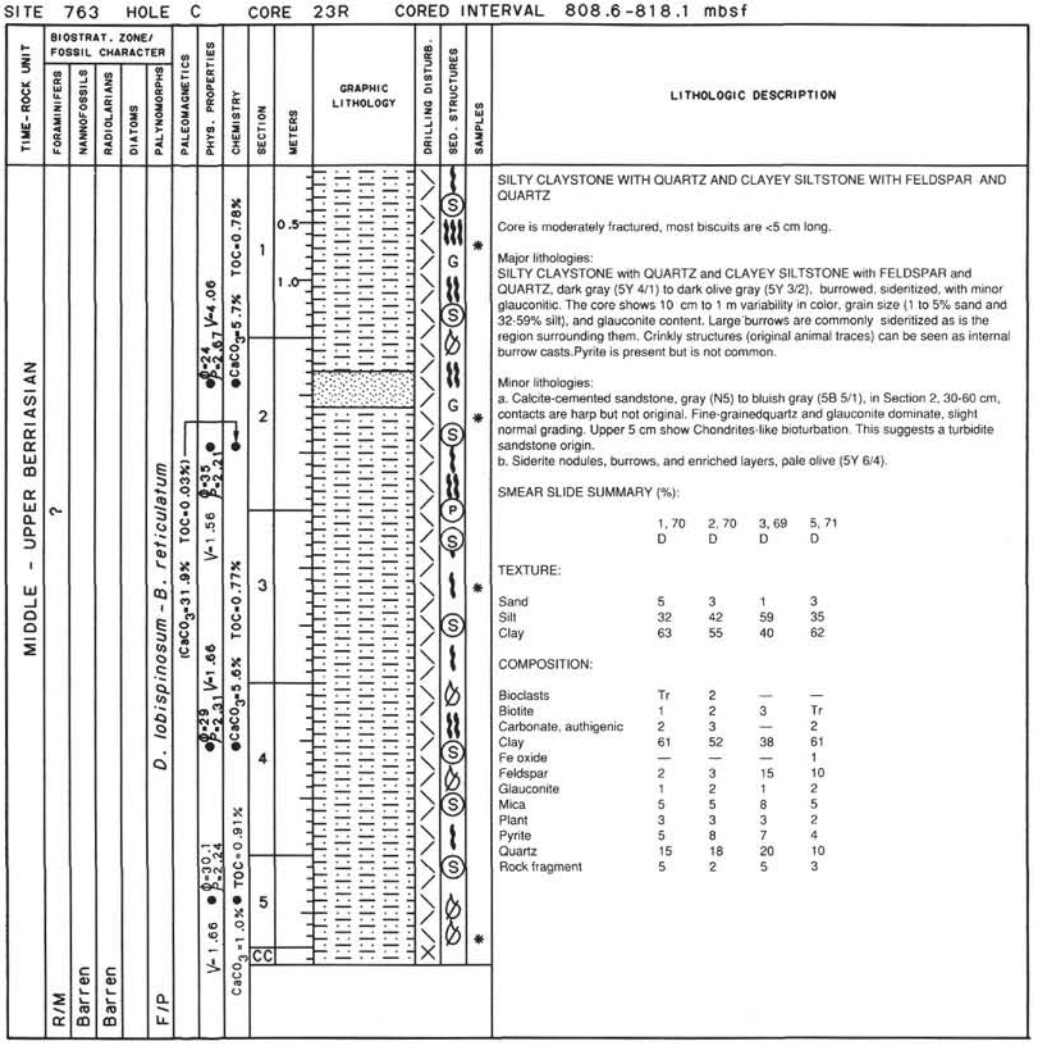
Minor lithology: Siderite nodules, sideritized burrow fillings and siderite-rich blebs and bands, 1-5 cm across, olive (5Y 5/3) and olive gray (5Y 5/2) are common, with siderite content up to 30% In one of these sideritized zones (Section 6, 65 cm) an unusually abundant amount of highly crystalline clay mineral (?mica-illite) was found.

SMEAR SLIDE AND THIN SECTION SUMMARY (%):

	1, 93 D	2, 45 D	3, 88 M	3, 131 D	5, 5 D	6, 65 M
TEXTURE:						
Sand	—	—	—	—	—	—
Silt	13	44	—	44	49	70
Clay	87	56	—	56	51	30
COMPOSITION:						
Accessory minerals	Tr	Tr	—	Tr	—	—
Biotite	Tr	Tr	—	—	Tr	—
Clay	87	56	—	56	50	30
Feldspar	1	3	—	3	2	1
Fish	—	—	—	Tr	—	—
Glauconite	—	Tr	—	Tr	Tr	—
Illite	—	—	—	—	—	34
Mica	Tr	5	—	3	3	Tr
Opaques	—	—	—	Tr	—	—
Plant	Tr	3	—	3	2	Tr
Pyrite	Tr	3	—	5	4	Tr
Quartz	2	20	—	20	34	5
Siderite	10	10	—	10	5	30



SITE 763 HOLE C CORE 23R CORED INTERVAL 808.6-818.1 mbsf



LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE WITH QUARTZ AND CLAYEY SILTSTONE WITH FELDSPAR AND QUARTZ

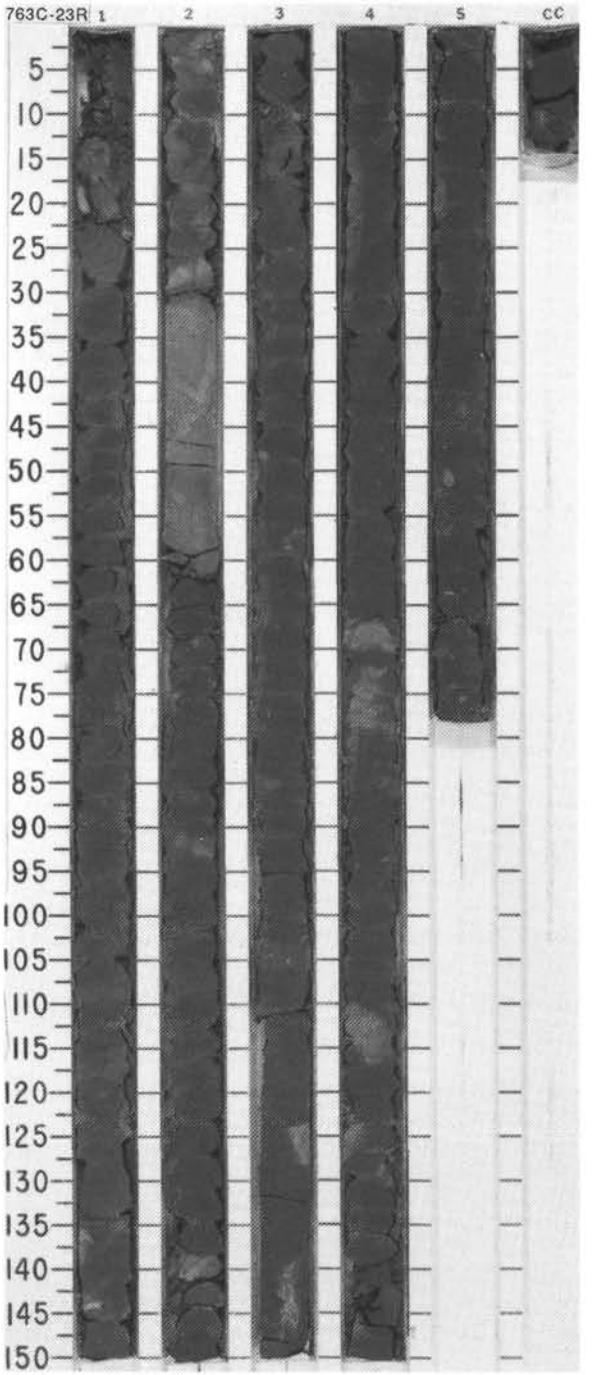
Core is moderately fractured, most biscuits are <5 cm long.

Major lithologies:
SILTY CLAYSTONE with QUARTZ and CLAYEY SILTSTONE with FELDSPAR and QUARTZ, dark gray (5Y 4/1) to dark olive gray (5Y 3/2), burrowed, sideritized, with minor glauconitic. The core shows 10 cm to 1 m variability in color, grain size (1 to 5% sand and 32-59% silt), and glauconite content. Large burrows are commonly sideritized as is the region surrounding them. Crinkly structures (original animal traces) can be seen as internal burrow casts. Pyrite is present but is not common.

Minor lithologies:
a. Calcite-cemented sandstone, gray (N5) to bluish gray (5B 5/1), in Section 2, 30-60 cm, contacts are harp but not original. Fine-grainedquartz and glauconite dominate, slight normal grading. Upper 5 cm show Chondrites-like bioturbation. This suggests a turbidite sandstone origin.
b. Siderite nodules, burrows, and enriched layers, pale olive (5Y 6/4).

SMEAR SLIDE SUMMARY (%):

	1, 70 D	2, 70 D	3, 69 D	5, 71 D
TEXTURE:				
Sand	5	3	1	3
Silt	32	42	59	35
Clay	63	55	40	62
COMPOSITION:				
Bioclasts	Tr	2	—	—
Biotite	1	2	3	Tr
Carbonate, authigenic	2	3	—	2
Clay	61	52	38	61
Fe oxide	—	—	—	1
Feldspar	2	3	15	10
Glauconite	1	2	1	2
Mica	5	5	8	5
Plant	3	3	3	2
Pyrite	5	8	7	4
Quartz	15	18	20	10
Rock fragment	5	2	5	3



SITE 763 HOLE C CORE 24R CORED INTERVAL 818.1-827.6 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: ?; NANNOFOSSILS: Barren; RADIOLARIANS: Barren; DIATOMS: F/P; PALYNOMORPHS: *D. lobispinosum - B. reticulatum*

PALEOMAGNETICS

PHYS. PROPERTIES: ●Ø=51.7 V=1.86 P=2.58; ●Ø=31.6 V=1.8 P=2.23; ●Ø=31.4 V=1.82 P=2.21

CHEMISTRY: ●$CaCO_3$=25.5% TOC=0.75%; ●$CaCO_3$=3.8% TOC=0.94%; ●$CaCO_3$=2.9% TOC=0.84%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

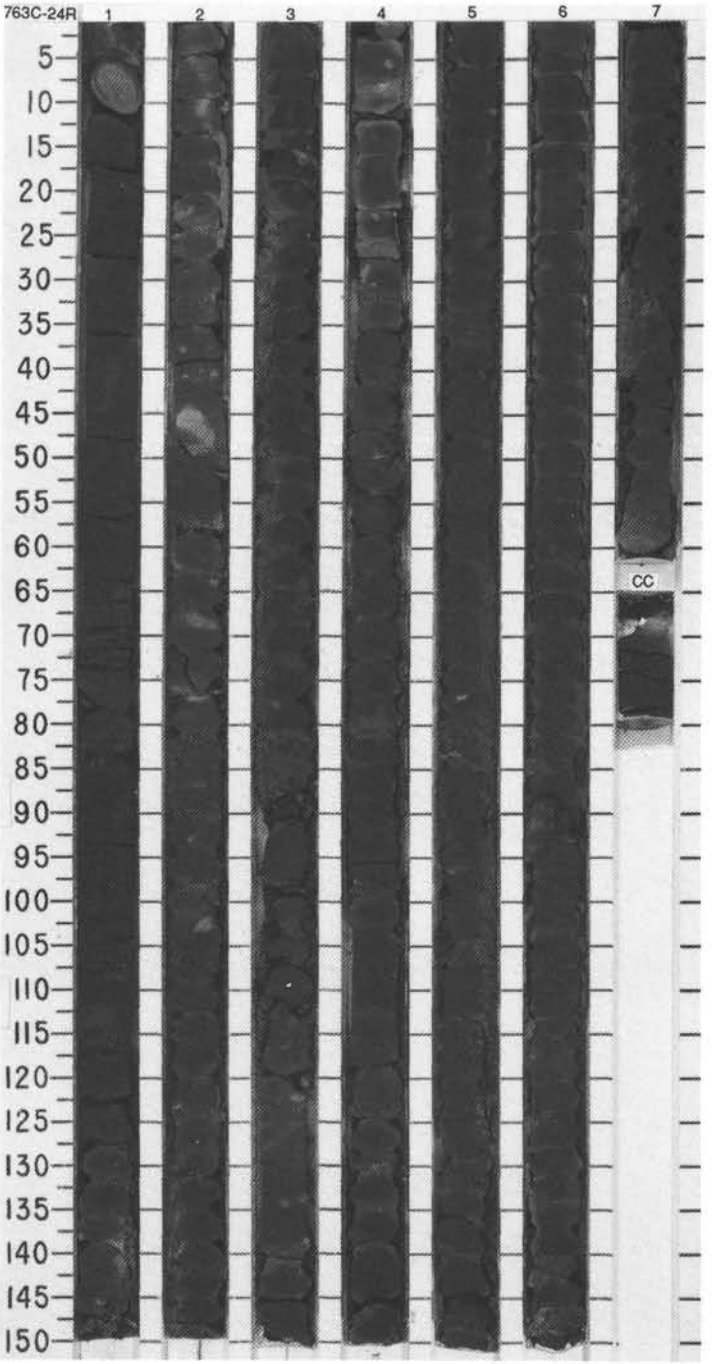
SILTY CLAYSTONE AND CLAYSTONE WITH SILT.

Major lithologies:
SILTY CLAYSTONE and CLAYSTONE with SILT, very dark gray (5Y 3/1). Bioturbation is not obvious but may exist (Chondrites). Gastropod shell fragments are present.

Minor lithologies:
a. Calcite-cemented quartz sandstone in Section 1, 5-10 cm, moderately sorted.
b. Carbonate (siderite?) nodules, olive gray (5Y 5/2), are common in Section 2 and rare in Sections 3, 4, and 5. Carbonate in nodules prevents compaction of sediment.

SMEAR SLIDE SUMMARY (%):

	1, 102 D	3, 65 D	5, 35 D	7, 18 D
TEXTURE:				
Sand	5	10	5	5
Silt	20	30	15	15
Clay	75	60	80	80
COMPOSITION:				
Accessory minerals	—	2	2	3
Clay	75	60	80	80
Feldspar	—	5	—	2
Glauconite	—	3	—	—
Mica	3	—	—	2
Pore space	2	—	—	—
Pyrite	5	5	3	—
Quartz	15	25	15	13



SITE 763 HOLE C CORE 25R CORED INTERVAL 827.6-837.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE - UPPER BERRIASIAN	?				D. lobispinosum - B. reticulatum		●P=2.33 V=1.84 ●P=2.7 V=2.77 ●P=2.19 V=1.86 ●P=30 ●CaCO3=1.9% TOC=1.32%		1 2 3 4 5 6 7	0.5 1.0				*
	R/M				F/P									
	Barren													
	Barren													

LITHOLOGIC DESCRIPTION

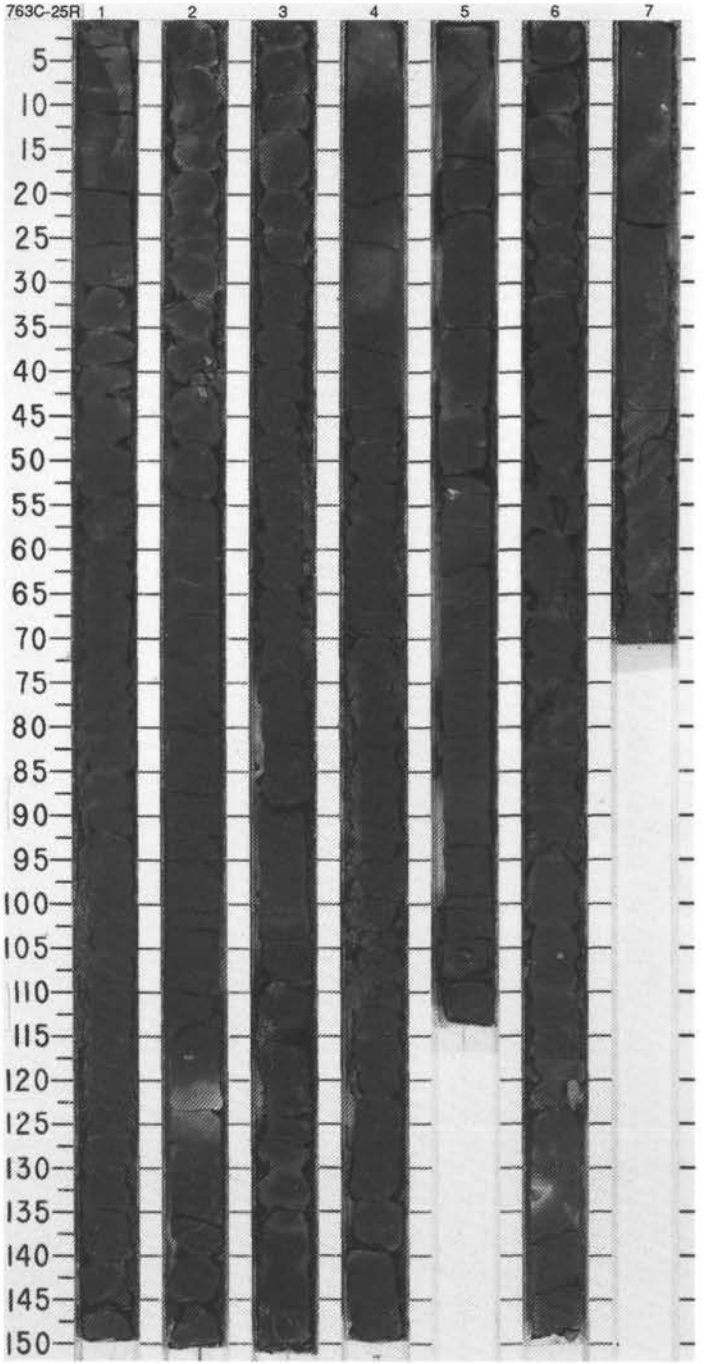
CLAYSTONE WITH SILT AND SILTY CLAYSTONE

Core is moderately to highly fractured.

Major lithologies:
CLAYSTONE with SILT and SILTY CLAYSTONE, dark gray (5Y 4/1), homogeneous, with minor alternations in silt content, bioturbation, pyrite, siderite, and color. Two macrofossils (one is a belemnite) and less than five major sideritic burrows are present. There are also few pyrite nodules, but pyrite "specks" are abundant. Glauconite is also rare. Clay minerals near the base are dominated by illite.

SMEAR SLIDE SUMMARY (%):

	1, 110 D	3, 122 D	6, 136 D	7, 62 D
TEXTURE:				
Sand	5	5	7	5
Silt	30	20	20	10
Clay	65	75	73	85
COMPOSITION:				
Accessory minerals	2	2	2	—
Clay	65	75	73	85
Feldspar	3	3	2	—
Glauconite	2	1	—	1
Mica	—	—	3	—
Pyrite	3	5	3	2
Quartz	25	15	17	12



SITE 763 HOLE C CORE 26R CORED INTERVAL 837.1-846.6 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: Barren; NANNOFOSSILS: Barren; RADIOLARIANS: Barren; DIATOMS; PALYNOMORPHS: R/P

PALEOMAGNETICS: *D. lobispinosum - B. reticulatum*

PHYS. PROPERTIES

CHEMISTRY: (CaCO3=58.66% TOC=0.33%); ●37.6 γ=1.39 ρ=2.23; ●35.7 γ=1.33 ρ=2.23; ●CaCO3=4.2%; ●CaCO3=3.3% TOC=1.01%; ●5.1 ●15.4 ρ=2.9

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES: (S), (P), (P), (P)

SAMPLES: *, **, *

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE

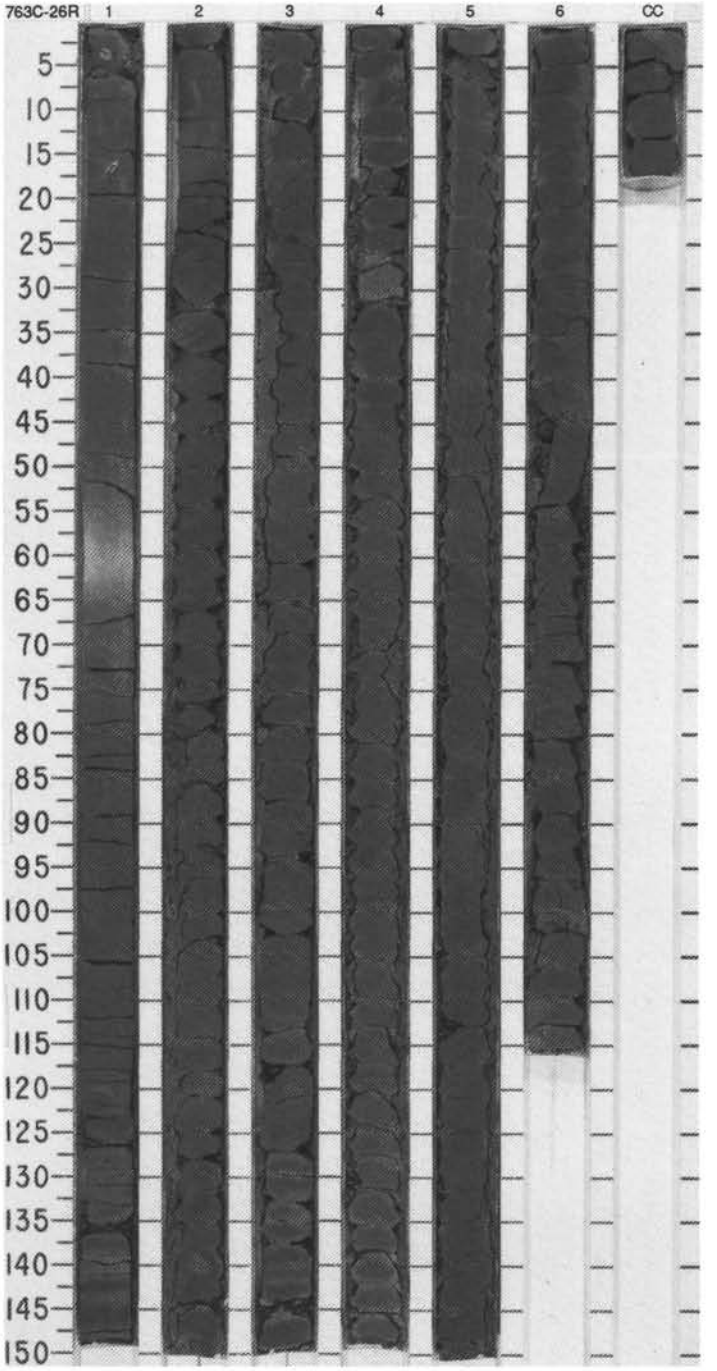
Core is composed mainly of drilling biscuits.

Major lithology: SILTY CLAYSTONE, very dark gray (5Y 3/1), moderately bioturbated with many small burrows arranged parallel to bedding which show weak lamination. Many small molluscan shell fragments and pyrite grains are present throughout the core.

Minor lithologies:
a. Siderite layer, olive gray (5Y 4/2), with gradational contacts in Section 1, 54-68 cm. Siderite burrows are observed in Section 1, 4-20 cm.
b. Small pyrite nodules (1-2 mm in diameter) and a pyrite burrow in Section 3, 25-26 cm and 85-90 cm, respectively. A pyrite layer (1-2 mm thick) in Section 4, 31-32 cm.
c. Montmorillonitic claystone of volcanic ash origin, intercalated in Section 4, 128-131 cm.

SMEAR SLIDE SUMMARY (%):

	1, 32 D	2, 141 D	4, 27 M	4, 29 M	5, 78 D
TEXTURE:					
Sand	10	5	—	5	10
Silt	35	25	50	10	30
Clay	55	70	50	85	60
COMPOSITION:					
Accessory minerals	—	—	—	—	3
Biotite	2	—	—	—	—
Carbonate	—	10	—	—	5
Clay	59	49	—	—	55
Feldspar	3	10	2	2	5
Mica	5	4	—	—	7
Montmorillinite	—	—	—	90	—
Nannofossils	2	—	—	—	1
Pyrite	5	5	—	5	5
Plant debris	5	—	—	—	—
Quartz	16	15	—	—	4



SITE 763 HOLE C CORE 27R CORED INTERVAL 846.6-856.1 mbsf

TIME-ROCK UNIT	FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE - UPPER BERRIASIAN	Barren	Barren	Barren		F/P		●D=33.8 P=2.24 V=L38 ●D=35.6 P=2.23	●$CaCO_3$=3.3% TOC=0.81% ●$CaCO_3$=6.0% TOC=0.96% ●$CaCO_3$=2.1% TOC=0.84%	1 2 3 4 5 6 7 CC	0.5 1.0				* * * *

D. lobispinosum - B. reticulatum

LITHOLOGIC DESCRIPTION

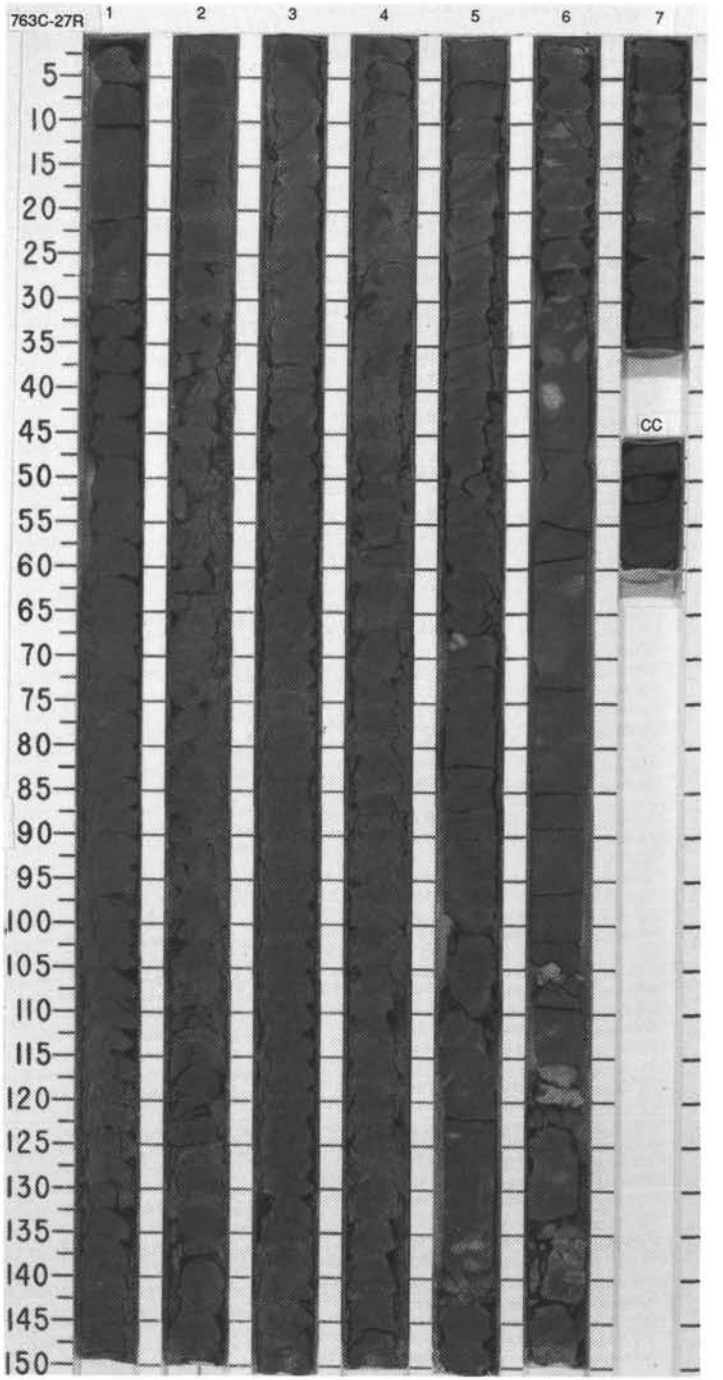
SILTY CLAYSTONE AND CLAYSTONE WITH SILT

Major lithologies:
SILTY CLAYSTONE and CLAYSTONE with SILT, very dark gray (5Y 3/1), structureless or showing barely visible small horizontal burrows, which when compacted gives an appearance of horizontal lamination.

Minor lithologies:
a. Carbonate (siderite?) nodules, light olive gray (5Y 6/2), diffuse, in Sections 5 and 6, associated with bioturbation (large burrows and Chondrites). Sharp boundaries occur in two nodules at Section 5, 70 and 103 cm.
b. Carbonate layer in Section 6, 104-106 cm. Its lower boundary with claystone is bioturbated and it is partly recrystallized to calcite.

SMEAR SLIDE SUMMARY (%):

	1, 66 D	3, 85 D	5, 92 D	5, 139 M
TEXTURE:				
Sand	5	5	5	—
Silt	10	30	15	—
Clay	85	65	80	—
COMPOSITION:				
Accessory minerals	—	3	—	—
Clay	85	65	76	—
Feldspar	—	5	5	—
Gilauconite	—	2	3	—
Mica	3	—	—	—
Pyrite	2	—	2	—
Quartz	10	25	14	3
Siderite	—	—	—	97



SITE 763 HOLE C CORE 28R CORED INTERVAL 856.1-856.6 mbsf

TIME-ROCK UNIT: MIDDLE - UPPER BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: C/P; *D. lobispinosum - B. reticulatum*

FORAMINIFERS: Barren

NANNOFOSSILS: Barren

RADIOLARIANS: Barren

DIATOMS

PALYNOMORPHS

PALEOMAGNETICS

PHYS. PROPERTIES: ϕ-35.9 / ρ-2.3 / V-1.95; ϕ-33.8 / ρ-2.26; ϕ-34.3 / ρ-2.25 / V-1.34

CHEMISTRY: $CaCO_3$=3.4% TOC=0.98%; $CaCO_3$=2.3% TOC=1.00%; $CaCO_3$=9.6% TOC=1.11%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG, IW

LITHOLOGIC DESCRIPTION

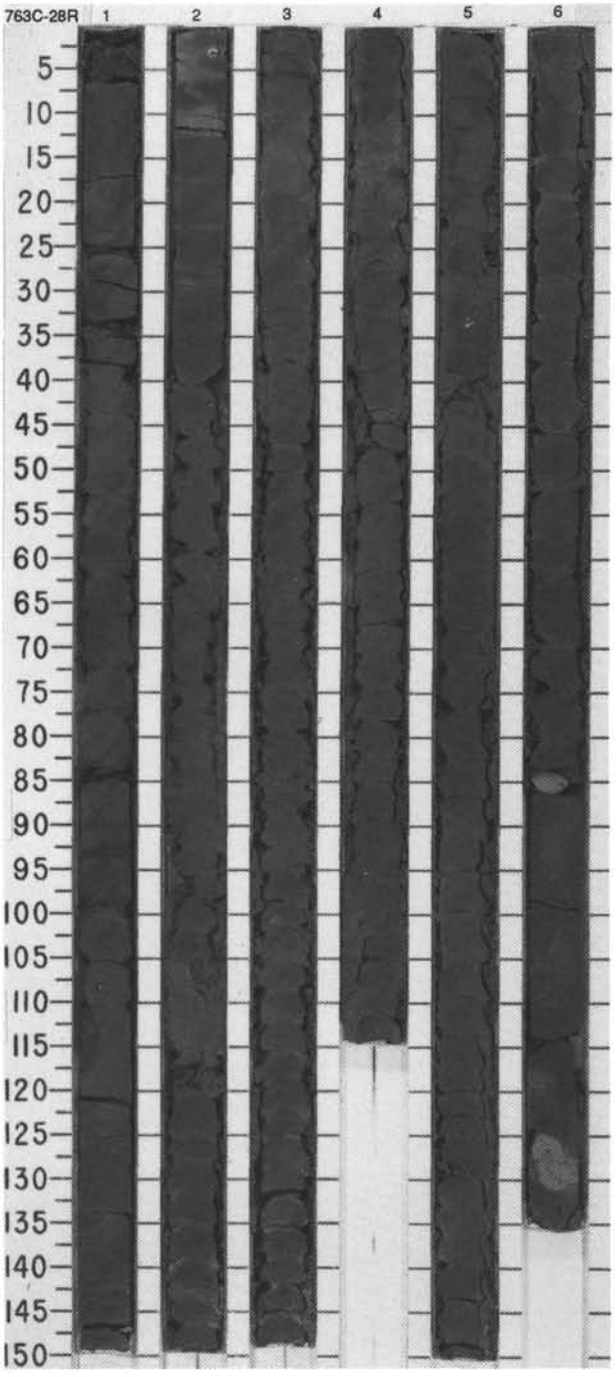
CLAYSTONE WITH SILT AND CLAYSTONE WITH SILT AND SAND

Major lithologies:
CLAYSTONE with SILT and CLAYSTONE with SILT AND SAND, very dark gray (5Y 3/1). Minor pyrite grains and small broken shells scattered throughout. Pyrite nodules, Section 1, 70 and 75 cm. Belemnites, Section 2, 3 cm; Section 3, 85 and 100-101 cm; Section 5, 33 cm. Minor bioturbation, but may be masked by dark structureless nature of rocks. Fine laminations observed in Section 6, 100-125 cm.

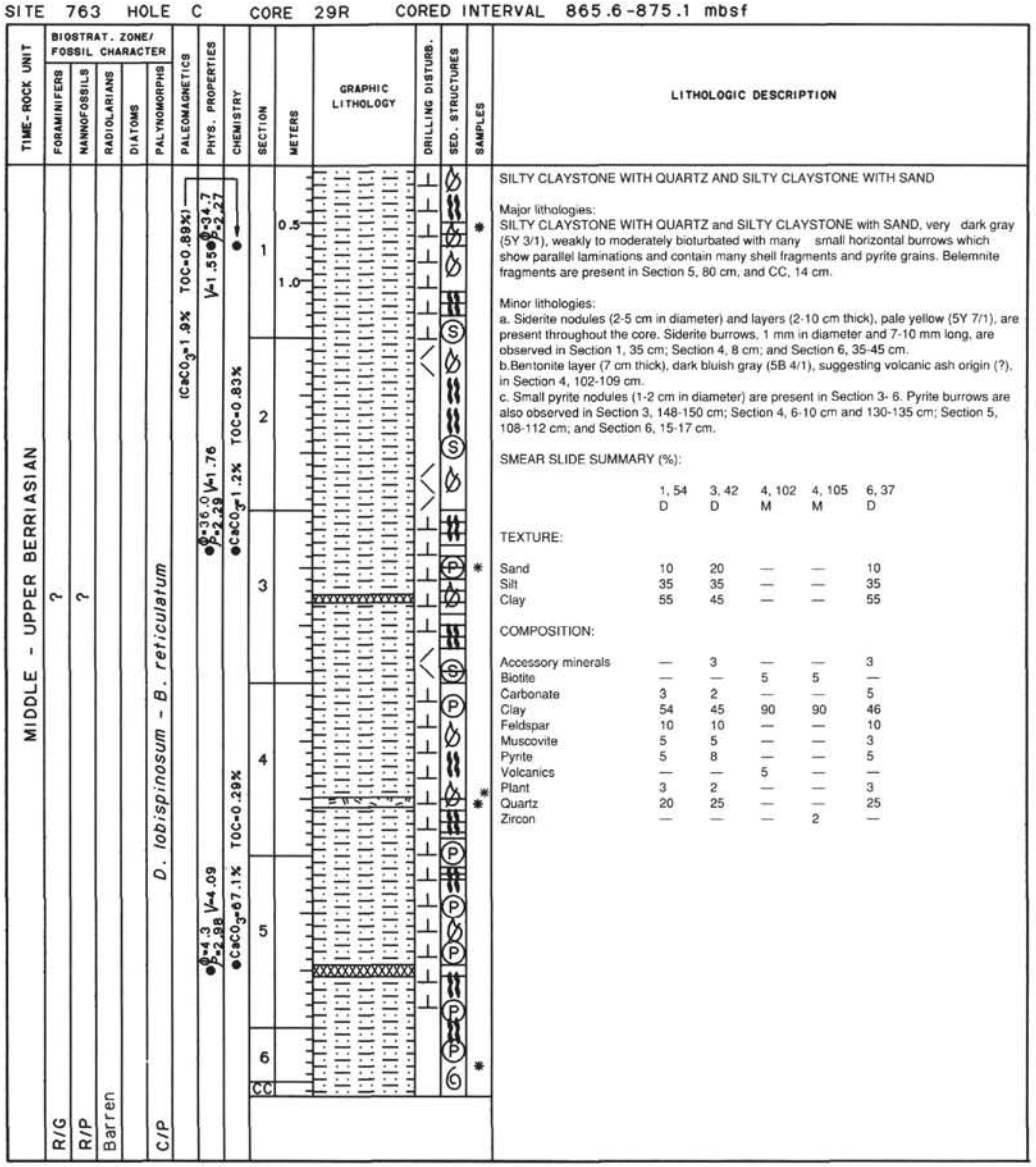
Minor lithology: Carbonate (siderite?) nodules, light gray 5Y 7/1), Section 6, 85-87 cm and 126-130 cm. Highly bioturbated. Gradational boundary and internally zoned.

SMEAR SLIDE SUMMARY (%):

	1, 18 D	3, 77 D	5, 61 D	6, 120 D
TEXTURE:				
Sand	5	5	10	5
Silt	15	20	10	10
Clay	80	75	80	85
COMPOSITION:				
Accessory minerals	2	—	—	1
Clay	80	75	78	80
Feldspar	3	5	3	—
Glauconite	—	2	2	—
Mica	—	—	—	3
Plant	—	—	—	2
Pyrite	5	3	5	3
Quartz	10	15	12	10
Hypersthene	—	—	—	1



SITE 763 HOLE C CORE 29R CORED INTERVAL 865.6-875.1 mbsf



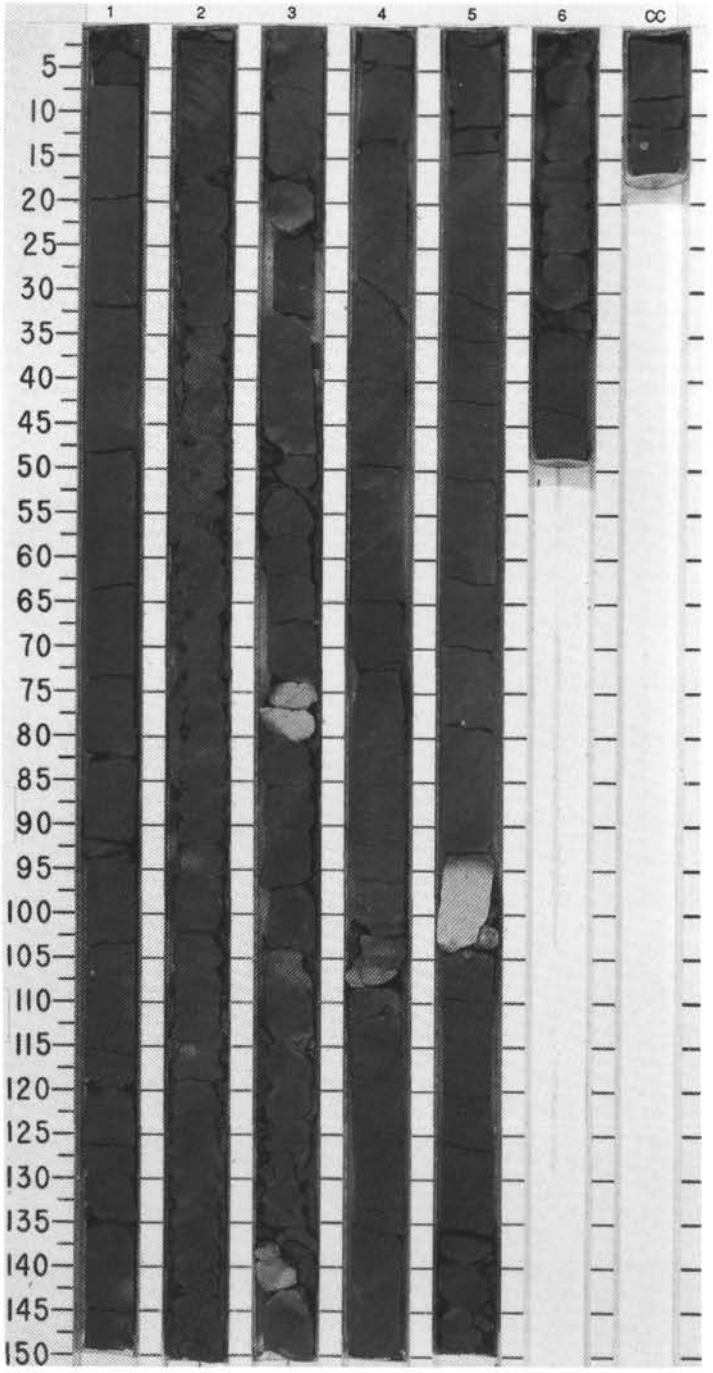
SILTY CLAYSTONE WITH QUARTZ AND SILTY CLAYSTONE WITH SAND

Major lithologies:
SILTY CLAYSTONE WITH QUARTZ and SILTY CLAYSTONE with SAND, very dark gray (5Y 3/1), weakly to moderately bioturbated with many small horizontal burrows which show parallel laminations and contain many shell fragments and pyrite grains. Belemnite fragments are present in Section 5, 80 cm, and CC, 14 cm.

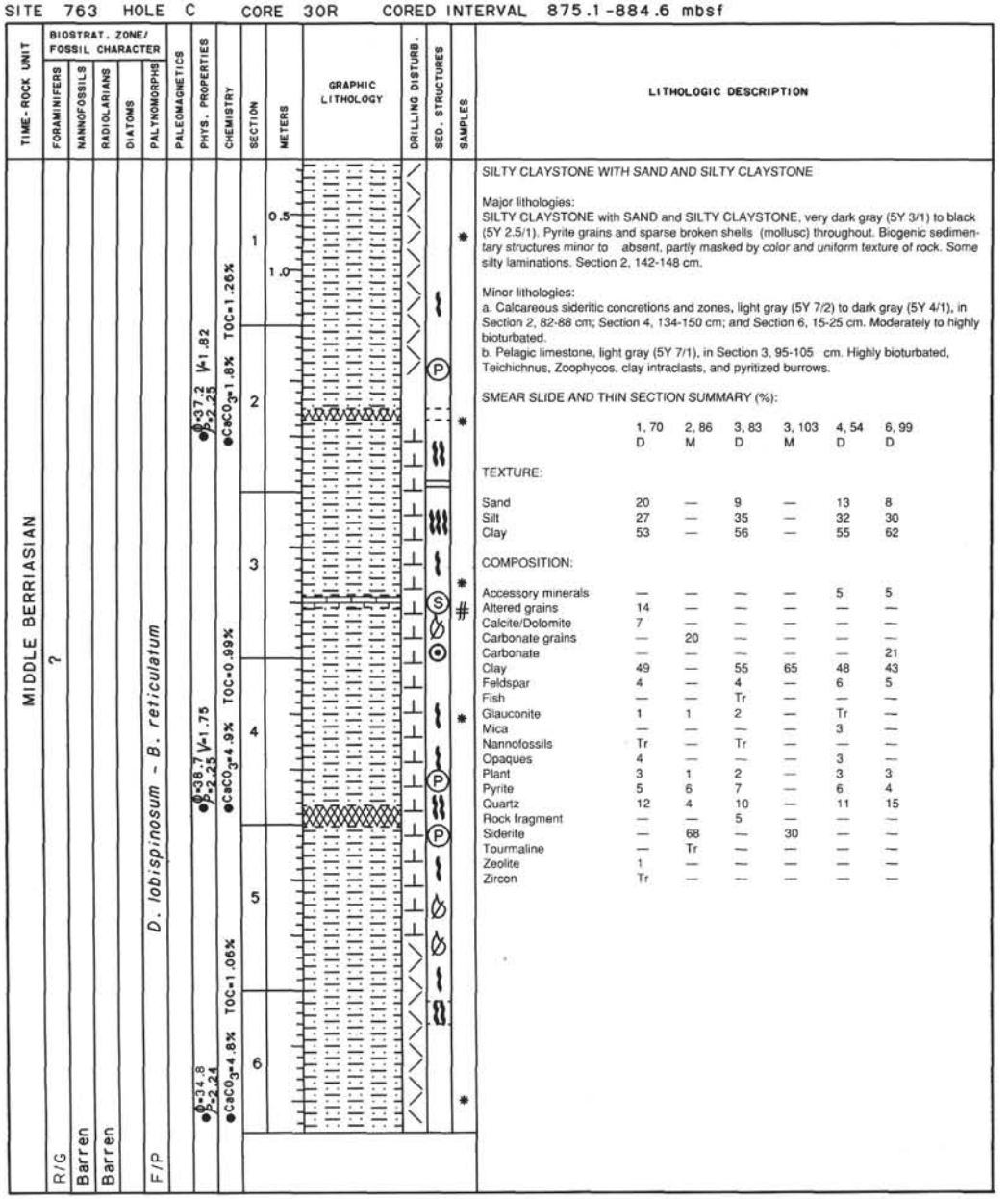
Minor lithologies:
a. Siderite nodules (2-5 cm in diameter) and layers (2-10 cm thick), pale yellow (5Y 7/1), are present throughout the core. Siderite burrows, 1 mm in diameter and 7-10 mm long, are observed in Section 1, 35 cm; Section 4, 8 cm; and Section 6, 35-45 cm.
b. Bentonite layer (7 cm thick), dark bluish gray (5B 4/1), suggesting volcanic ash origin (?), in Section 4, 102-109 cm.
c. Small pyrite nodules (1-2 cm in diameter) are present in Section 3- 6. Pyrite burrows are also observed in Section 3, 148-150 cm; Section 4, 6-10 cm and 130-135 cm; Section 5, 108-112 cm; and Section 6, 15-17 cm.

SMEAR SLIDE SUMMARY (%):

	1, 54 D	3, 42 D	4, 102 M	4, 105 M	6, 37 D
TEXTURE:					
Sand	10	20	—	—	10
Silt	35	35	—	—	35
Clay	55	45	—	—	55
COMPOSITION:					
Accessory minerals	—	3	—	—	3
Biotite	—	—	5	5	—
Carbonate	3	2	—	—	5
Clay	54	45	90	90	46
Feldspar	10	10	—	—	10
Muscovite	5	5	—	—	3
Pyrite	5	8	—	—	5
Volcanics	—	—	5	—	—
Plant	3	2	—	—	3
Quartz	20	25	—	—	25
Zircon	—	—	—	2	—



SITE 763 HOLE C CORE 30R CORED INTERVAL 875.1-884.6 mbsf



LITHOLOGIC DESCRIPTION

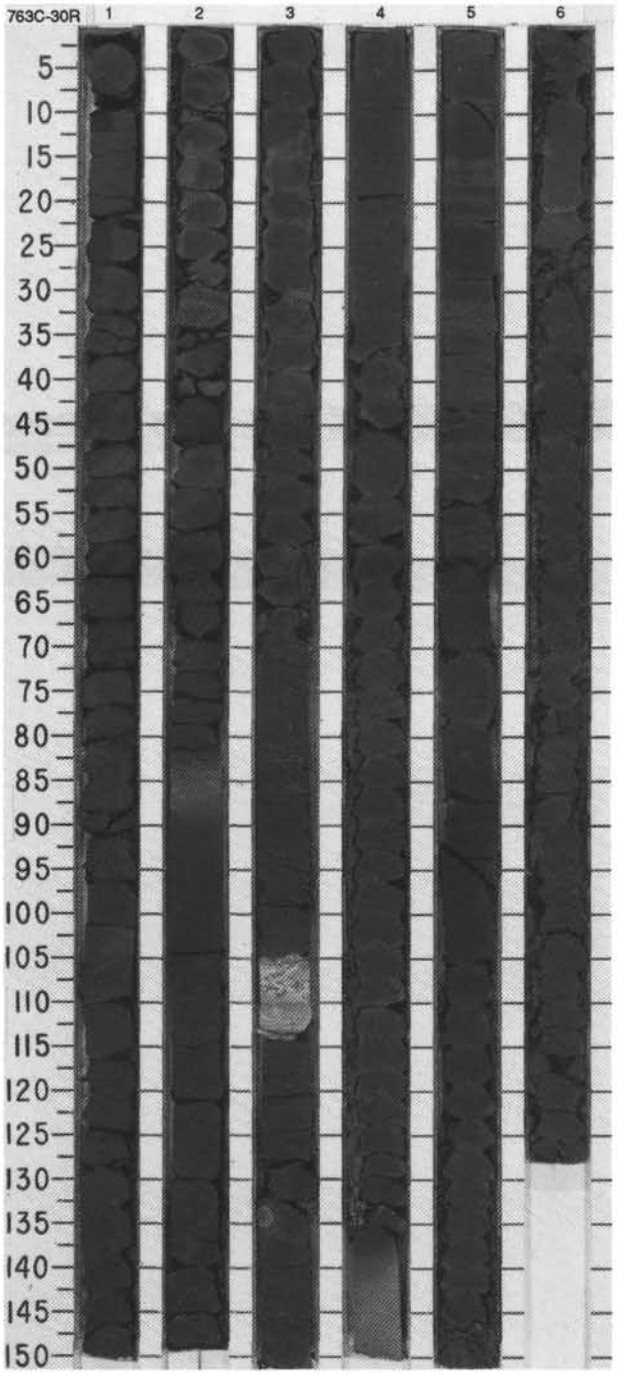
SILTY CLAYSTONE WITH SAND AND SILTY CLAYSTONE

Major lithologies:
SILTY CLAYSTONE with SAND and SILTY CLAYSTONE, very dark gray (5Y 3/1) to black (5Y 2.5/1). Pyrite grains and sparse broken shells (mollusc) throughout. Biogenic sedimentary structures minor to absent, partly masked by color and uniform texture of rock. Some silty laminations. Section 2, 142-148 cm.

Minor lithologies:
a. Calcareous sideritic concretions and zones, light gray (5Y 7/2) to dark gray (5Y 4/1), in Section 2, 82-88 cm; Section 4, 134-150 cm; and Section 6, 15-25 cm. Moderately to highly bioturbated.
b. Pelagic limestone, light gray (5Y 7/1), in Section 3, 95-105 cm. Highly bioturbated, Teichichnus, Zoophycos, clay intraclasts, and pyritized burrows.

SMEAR SLIDE AND THIN SECTION SUMMARY (%):

	1, 70 D	2, 86 M	3, 83 D	3, 103 M	4, 54 D	6, 99 D
TEXTURE:						
Sand	20	—	9	—	13	8
Silt	27	—	35	—	32	30
Clay	53	—	56	—	55	62
COMPOSITION:						
Accessory minerals	—	—	—	—	5	5
Altered grains	14	—	—	—	—	—
Calcite/Dolomite	7	—	—	—	—	—
Carbonate grains	—	20	—	—	—	—
Carbonate	—	—	—	—	—	21
Clay	49	—	55	65	48	43
Feldspar	4	—	4	—	6	5
Fish	—	—	Tr	—	—	—
Glauconite	1	1	2	—	Tr	—
Mica	—	—	—	—	3	—
Nannofossils	Tr	—	Tr	—	—	—
Opaques	4	—	—	—	3	—
Plant	3	1	2	—	3	3
Pyrite	5	6	7	—	6	4
Quartz	12	4	10	—	11	15
Rock fragment	—	—	5	—	—	—
Siderite	—	68	—	30	—	—
Tourmaline	—	Tr	—	—	—	—
Zeolite	1	—	—	—	—	—
Zircon	Tr	—	—	—	—	—



SITE 763 HOLE C CORE 31R CORED INTERVAL 884.6-894.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE BERRIASIAN	F/M	Barren	Barren		C/P		ρ=32.2 V=1.76 ρ=2.22	$CaCO_3$=2.2% TOC=1.01%	1	0.5				*
							ρ=32.4 V=1.77 ρ=2.2	$CaCO_3$=2.7% TOC=0.98%	2	1.0				
									3					*
LOWER CRETACEOUS VALANGINIAN - BERRIASIAN					*D. lobispinosum - B. reticulatum*				4					
							ρ=30.6 V=2.02 ρ=2.25	$CaCO_3$=4.0% TOC=0.93%	5					*
									6					OG IW
									7					*
									CC					

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE AND SILTY CLAYSTONE WITH QUARTZ SAND

Core is moderately to highly fragmented and biscuited.

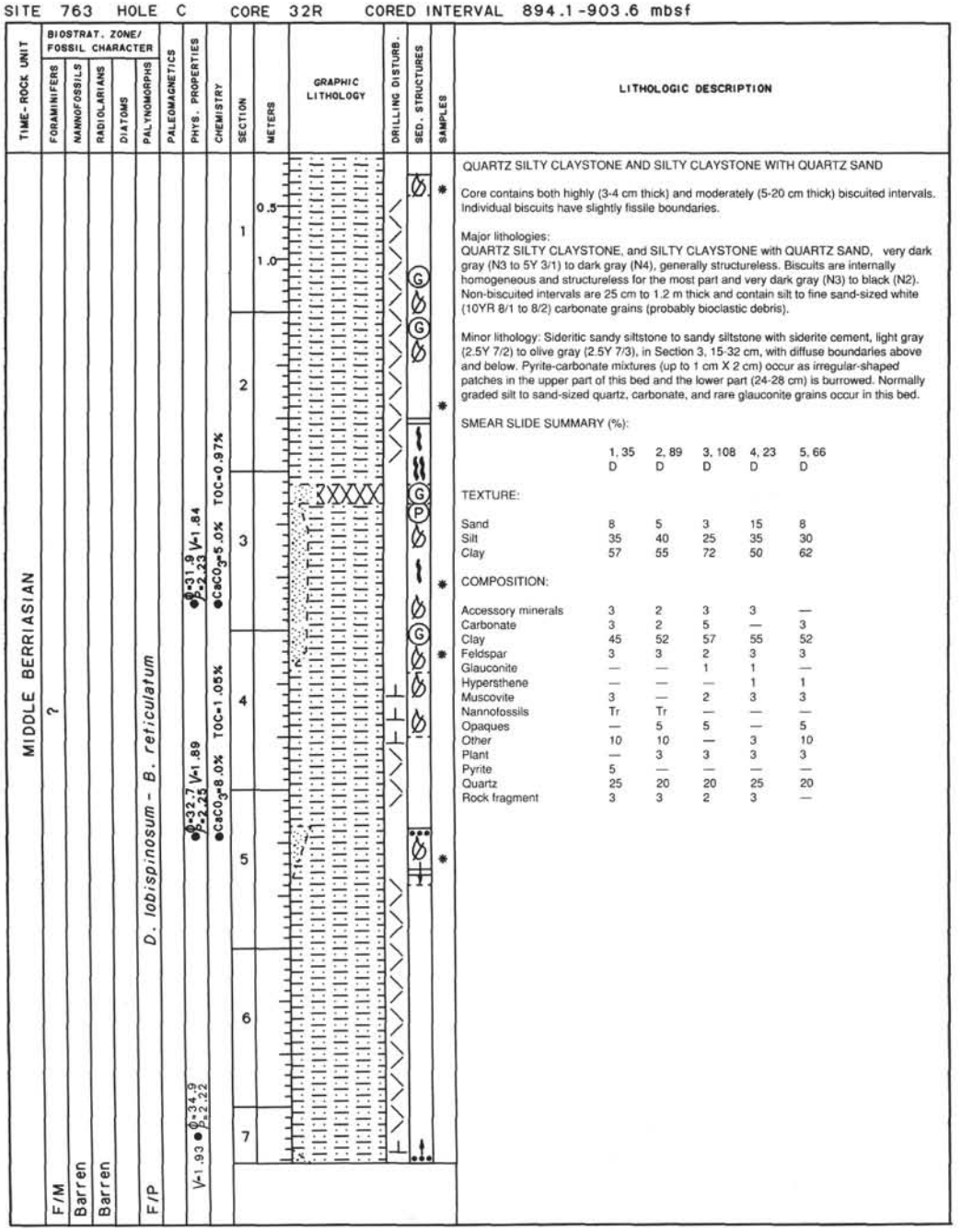
Major lithologies:
SILTY CLAYSTONE and SILTY CLAYSTONE with QUARTZ SAND, dark gray (5Y 4/1) to very dark gray (5Y 3/1). In hand specimen, scattered, very fine molluscan fragments occur at some levels in all sections. Fine burrows, both pyrite-filled and plain,are common in Section 5, but rare elsewhere and are generally associated with shell debris.

Minor lithology: Carbonate concretions, gray (5Y 5/1), replace the silty claystone at two Levels; they are fine-grained and do not contain burrows.

SMEAR SLIDE SUMMARY (%):

	1, 79 D	3, 80 D	5, 28 D	7, 26 D
TEXTURE:				
Sand	20	10	5	10
Silt	35	35	35	35
Clay	45	55	60	55
COMPOSITION:				
Accessory minerals	—	—	3	3
Carbonate	3	3	3	4
Clay	45	48	55	55
Feldspar	5	5	5	3
Glauconite	—	—	—	Tr
Hypersthene	1	—	—	—
Mica	1	—	—	—
Muscovite	3	3	—	—
Nannofossils	2	1	1	—
Opaques	5	—	5	3
Other	15	12	5	10
Plant	3	3	3	4
Pyrite	—	5	—	—
Quartz	15	20	20	15
Rock fragment	—	—	—	3

SITE 763 HOLE C CORE 32R CORED INTERVAL 894.1-903.6 mbsf



LITHOLOGIC DESCRIPTION

QUARTZ SILTY CLAYSTONE AND SILTY CLAYSTONE WITH QUARTZ SAND

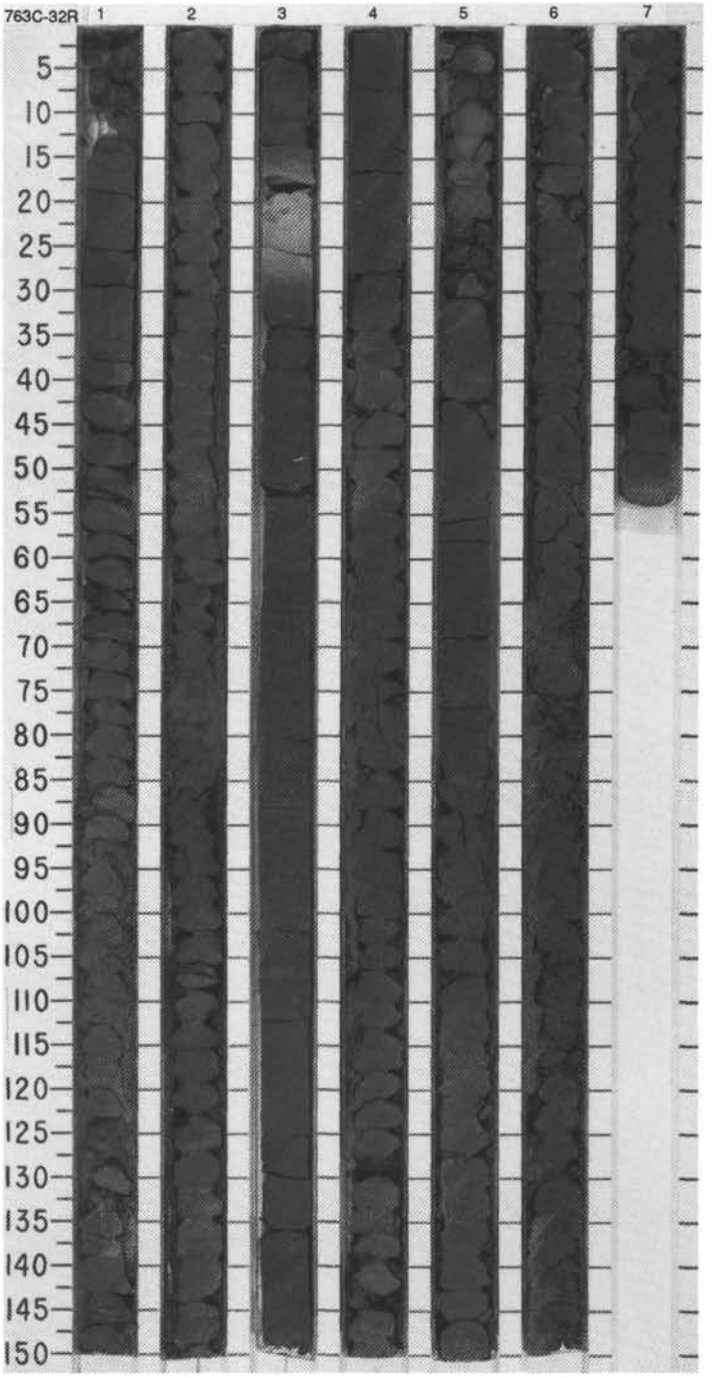
Core contains both highly (3-4 cm thick) and moderately (5-20 cm thick) biscuited intervals. Individual biscuits have slightly fissile boundaries.

Major lithologies:
QUARTZ SILTY CLAYSTONE, and SILTY CLAYSTONE with QUARTZ SAND, very dark gray (N3 to 5Y 3/1) to dark gray (N4), generally structureless. Biscuits are internally homogeneous and structureless for the most part and very dark gray (N3) to black (N2). Non-biscuited intervals are 25 cm to 1.2 m thick and contain silt to fine sand-sized white (10YR 8/1 to 8/2) carbonate grains (probably bioclastic debris).

Minor lithology: Sideritic sandy siltstone to sandy siltstone with siderite cement, light gray (2.5Y 7/2) to olive gray (2.5Y 7/3), in Section 3, 15-32 cm, with diffuse boundaries above and below. Pyrite-carbonate mixtures (up to 1 cm X 2 cm) occur as irregular-shaped patches in the upper part of this bed and the lower part (24-28 cm) is burrowed. Normally graded silt to sand-sized quartz, carbonate, and rare glauconite grains occur in this bed.

SMEAR SLIDE SUMMARY (%):

	1, 35 D	2, 89 D	3, 108 D	4, 23 D	5, 66 D
TEXTURE:					
Sand	8	5	3	15	8
Silt	35	40	25	35	30
Clay	57	55	72	50	62
COMPOSITION:					
Accessory minerals	3	2	3	3	—
Carbonate	3	2	5	—	3
Clay	45	52	57	55	52
Feldspar	3	3	2	3	3
Glauconite	—	—	1	1	—
Hypersthene	—	—	—	1	1
Muscovite	3	—	2	3	3
Nannofossils	Tr	Tr	—	—	—
Opaques	—	5	5	—	5
Other	10	10	—	3	10
Plant	—	3	3	3	3
Pyrite	5	—	—	—	—
Quartz	25	20	20	25	20
Rock fragment	3	3	2	3	—



SITE 763 HOLE C CORE 33R CORED INTERVAL 903.6-913.1 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE BERRIASIAN	?	R/M	Barren	Barren	R/P *D. lobispinosum - B. reticulatum*		●33.5 V=1.89 ●2.30 ●35.7 V=1.77 ●2.23	●C_{carb}=4.2% TOC=0.86% ●C_{carb}=2.5% TOC=1.48%	1 2 3 4 5 CC	0.5 1.0				* * * * *

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE

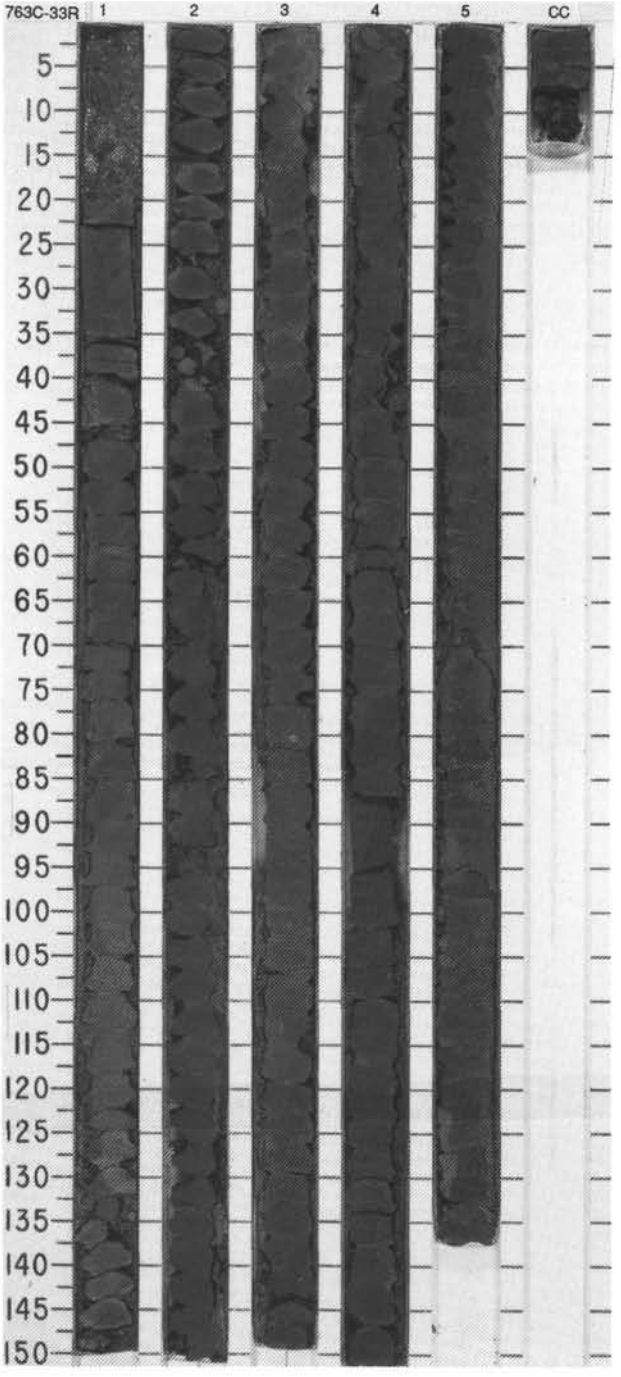
Core is highly biscuited.

Major lithology: SILTY CLAYSTONE, very dark gray (5Y 3/1), structureless, locally bioturbated. Sediments are probablyextensively bioturbated throughout the core, but it is barely evident except for pyritized zones. Lamination derives largely from compaction of horizontally bioturbated sediment. Fine-grained pyrite enrichments are present in burrow fillings in Sections 3 and 4.Fine-grained pyrite and siderite occur in the sediment in amounts of 2-7% and 2-10%, respectively. Plant material is commonly present in amounts of 7-10%. Scattered thin-shelled mollusc fragments occur in Sections 1, 2, and 4.

Minor lithology: Sideritic or siderite-rich burrow fillings, light olive gray (5Y 6/2), are present in Section 3, 2 and 80 cm.

SMEAR SLIDE SUMMARY (%):

	1, 49 D	2, 49 D	3, 49 D	4, 49 D	5, 49 D
TEXTURE:					
Silt	37	36	52	46	27
Clay	63	64	48	54	73
COMPOSITION:					
Accessory minerals	—	Tr	—	—	—
Bioclast	—	—	—	—	—
Biotite	Tr	Tr	Tr	—	Tr
Clay	63	64	48	51	73
Feldspar	—	Tr	2	2	—
Fish	—	Tr	Tr	Tr	—
Foraminifers	—	—	—	—	—
Glauconite	Tr	Tr	Tr	Tr	Tr
Heavy minerals	—	—	Tr	Tr	—
Mica	2	Tr	4	Tr	2
Nannofossils	—	—	—	—	—
Opaques	1	2	—	—	—
Plant	7	10	7	7	3
Pyrite	5	5	2	10	2
Quartz	20	16	30	30	15
Siderite	2	3	7	—	5
Zeolite	—	—	—	—	—



SITE 763 HOLE C CORE 34R CORED INTERVAL 913.1-922.6 mbsf

TIME-ROCK UNIT: MIDDLE BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS A/G; NANNOFOSSILS R/P; RADIOLARIANS Barren; DIATOMS; PALYNOMORPHS R/P

PALEOMAGNETICS

PHYS. PROPERTIES

CHEMISTRY

SECTION

METERS

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

D. lobispinosum – B. reticulatum

● ϕ=31.6 V=1.57
ρ=2.25

● ϕ=30.2 V=1.62
ρ=2.33

● $CaCO_3$=1.5% TOC=1.23%

Sections 1–6, CC; OG

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE

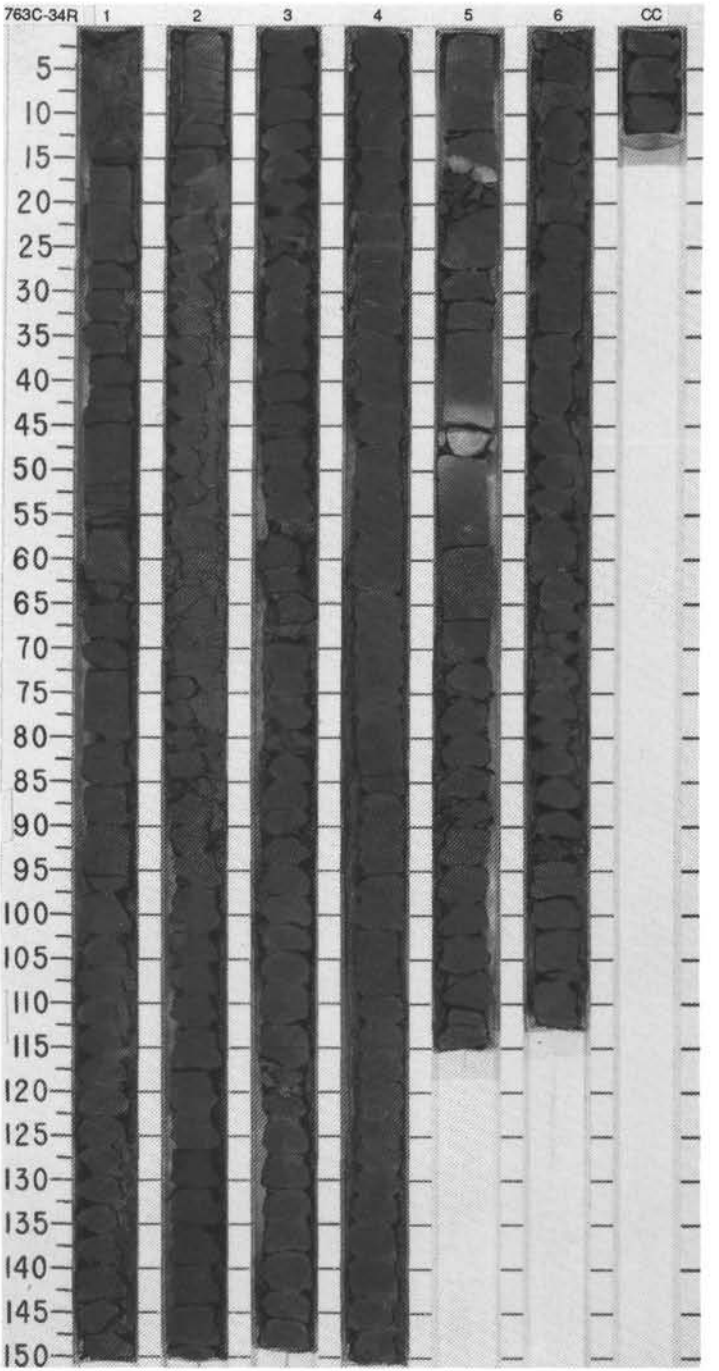
The core is extensively biscuited.

Major lithology: SILTY CLAYSTONE, very dark gray (5Y 3/1), dominantly structureless, locally bioturbated and laminated. Sediments are probably extensively bioturbated throughout he core, but bioturbation is barely evident because of the lack of color contrasts. Lamination derives largely from compaction of horizontally burrowed sediment. Fine-grained pyrite and siderite occur in the sediment, in amounts of 5-10% and 1-5% respectively. Plant debris is present in amounts of 3-4%. Scattered thin-shelled mollusc fragments occurs throughout, and, in particular, in Section 1, 142 cm, and Section 6, 97 cm. A Dentalium shell (mollusc) is present in Section 4, 97 cm. A belemnite rostrum is present in Section 5, 56 cm.

Minor lithologies:
Siderite, light olive gray (5Y 6/2), intensely bioturbated, in Section 5, 40-50 cm. The boundaries with the surrounding claystone are gradational. Sideritic nodules and burrow fillings, in Section 3, 120 cm; Section 4, 25-35 cm; Section 5, 15 cm; and Section 6, 60 cm.

SMEAR SLIDE SUMMARY (%):

	1, 51 D	3, 51 D	3, 145 D	5, 51 M	6, 29 D
TEXTURE:					
Sand	5	5	5	10	5
Silt	40	38	68	70	25
Clay	55	57	27	20	70
COMPOSITION:					
Altered grains	—	5	—	—	—
Bioclast	—	—	1	—	—
Biotite	—	1	—	—	1
Carbonate	1	2	2	22	5
Clay	54	55	35	20	67
Fe oxide	—	2	1	—	—
Feldspar	10	10	20	25	5
Glauconite	2	1	2	Tr	Tr
Kyanite	Tr	—	—	—	—
Mica	5	4	5	—	3
Nannofossils	—	—	—	—	Tr
Plant Pyrite	7	7	5	10	5
Quartz	15	10	20	20	10
Rock Fragment	3	—	5	—	—
Zircon	Tr	—	—	Tr	—



SITE 763 HOLE C CORE 35R CORED INTERVAL 922.6-932.1 mbsf

TIME-ROCK UNIT: MIDDLE BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: F/M ?; R/G ?; C/P TITHONIAN - BERRIASIAN - PYRITIZED; R/P *D. lobispinosum - B. reticulatum*

PALEOMAGNETICS; PHYS. PROPERTIES: ϕ=29.8 ρ=2.24 V=1.90; ϕ=30.2 ρ=2.27 V=1.86; ϕ=28.7 ρ=2.25

CHEMISTRY: $CaCO_3$=2.9% TOC=1.16%; $CaCO_3$=8.00%; $CaCO_3$=3.5% TOC=1.11%

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

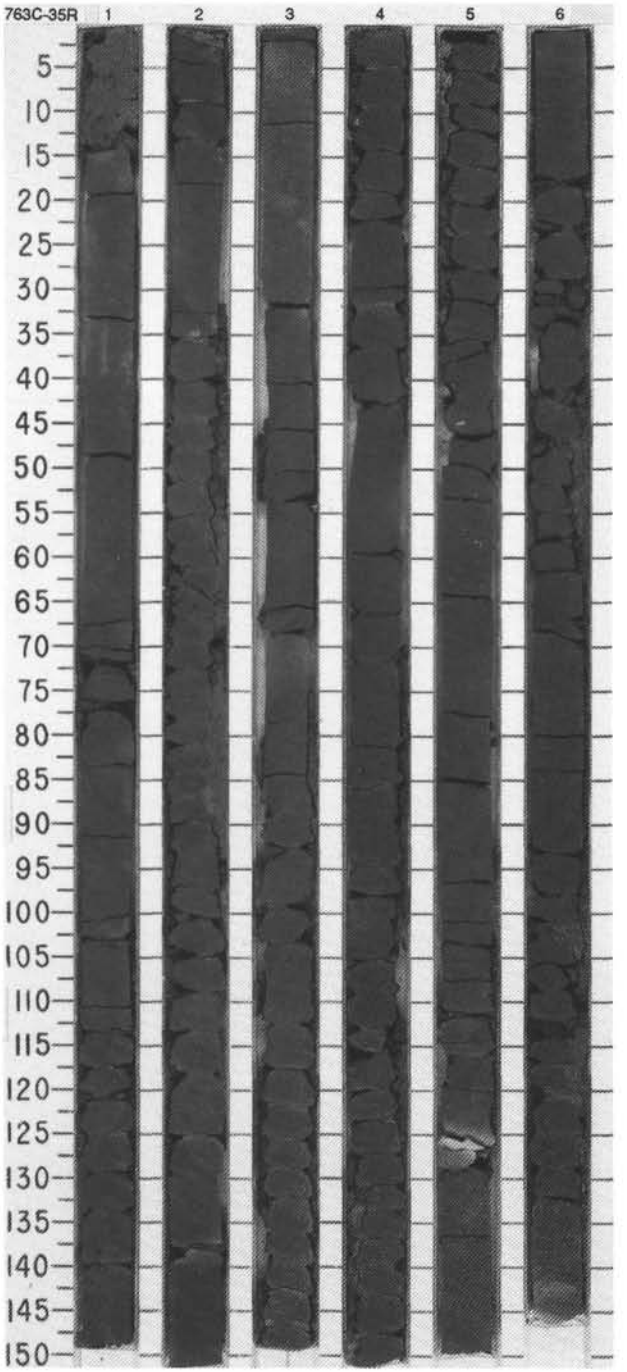
LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE AND CLAYSTONE WITH SILT

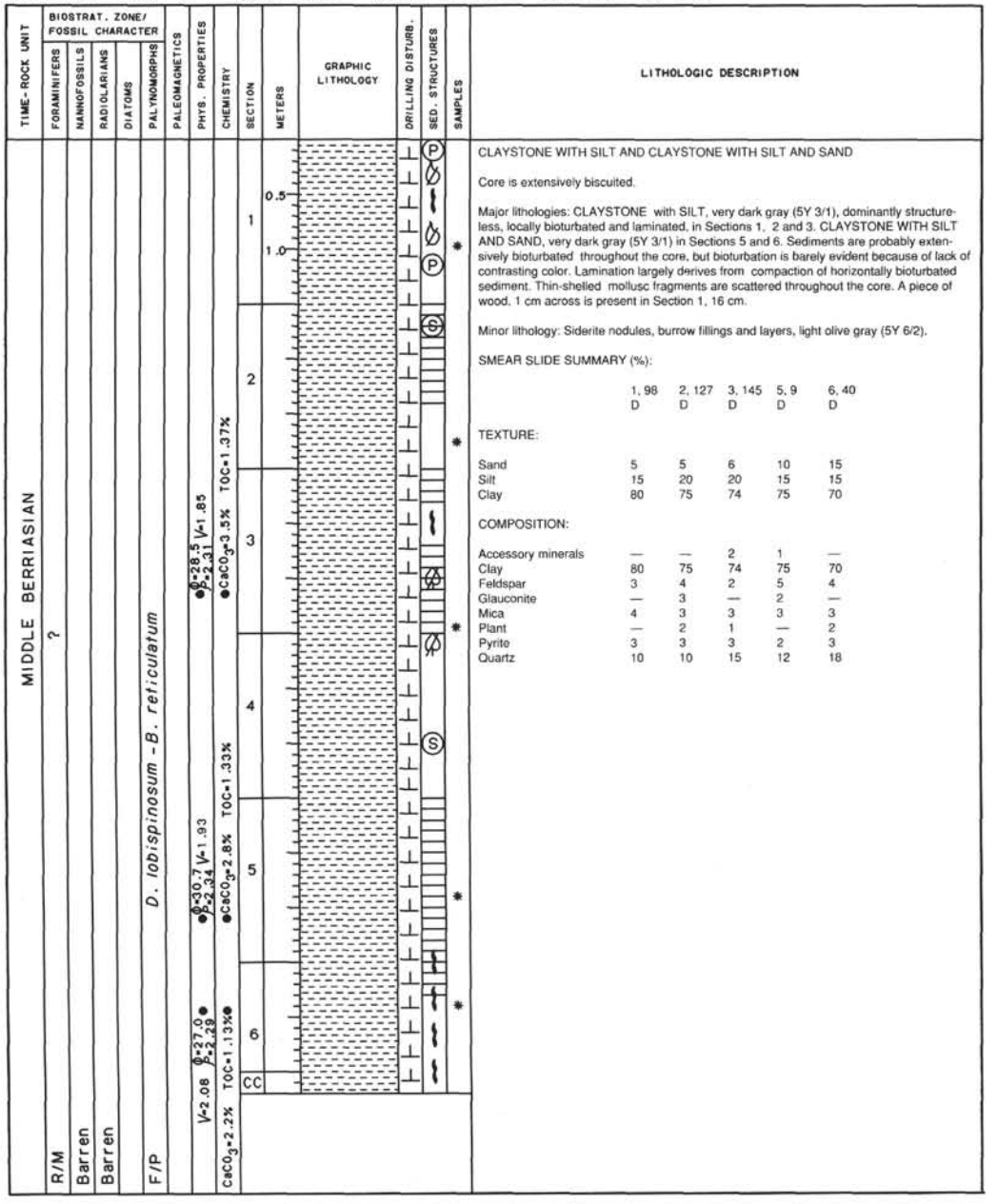
Major lithologies:
SILTY CLAYSTONE and CLAYSTONE with SILT, very dark gray (5Y 3/1). The core alternates between lighter and darker gray claystone with lighter intervals more calcareous and others more sideritic. Several intervals appear to fine upward, and coarser grain size appears correlated to amount of biscuiting and carbonate content (coarser, carbonate-rich are less biscuited). Many intervals contain shell fragments while a few contain belemnites and large sideritic burrows with crinkly walls. Pyrite is common infilling burrows and finely disseminated.

SMEAR SLIDE SUMMARY (%):

	1, 38 D	2, 82 D	3, 22 D
TEXTURE:			
Sand	—	5	5
Silt	33	10	30
Clay	67	85	65
COMPOSITION:			
Accessory minerals	Tr	—	—
Biotite	Tr	—	—
Carbonate	3	—	—
Clay	67	85	65
Feldspar	4	—	5
Fish	Tr	—	—
Glauconite	Tr	1	—
Mica	4	—	3
Plant	2	1	2
Pyrite	4	3	5
Quartz	16	10	20



SITE 763 HOLE C CORE 36R CORED INTERVAL 932.1-941.6 mbsf



CLAYSTONE WITH SILT AND CLAYSTONE WITH SILT AND SAND

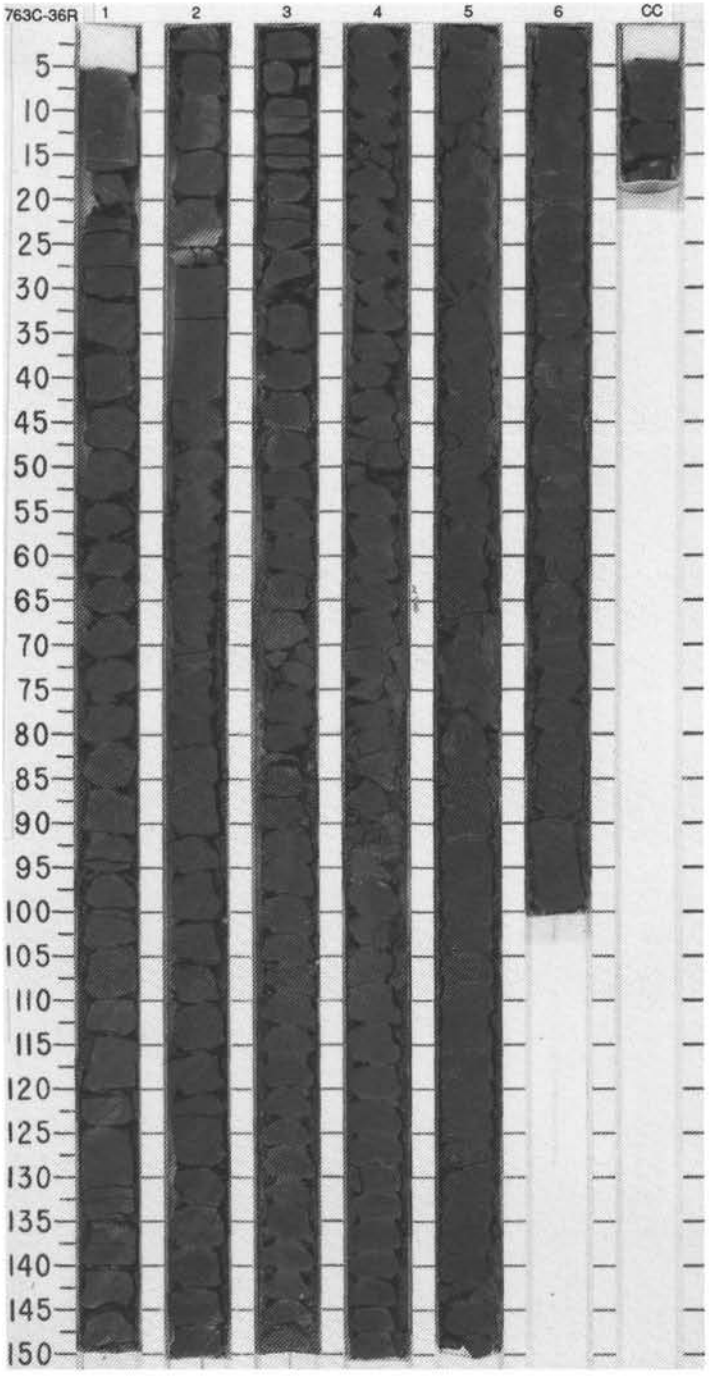
Core is extensively biscuited.

Major lithologies: CLAYSTONE with SILT, very dark gray (5Y 3/1), dominantly structureless, locally bioturbated and laminated, in Sections 1, 2 and 3. CLAYSTONE WITH SILT AND SAND, very dark gray (5Y 3/1) in Sections 5 and 6. Sediments are probably extensively bioturbated throughout the core, but bioturbation is barely evident because of lack of contrasting color. Lamination largely derives from compaction of horizontally bioturbated sediment. Thin-shelled mollusc fragments are scattered throughout the core. A piece of wood, 1 cm across is present in Section 1, 16 cm.

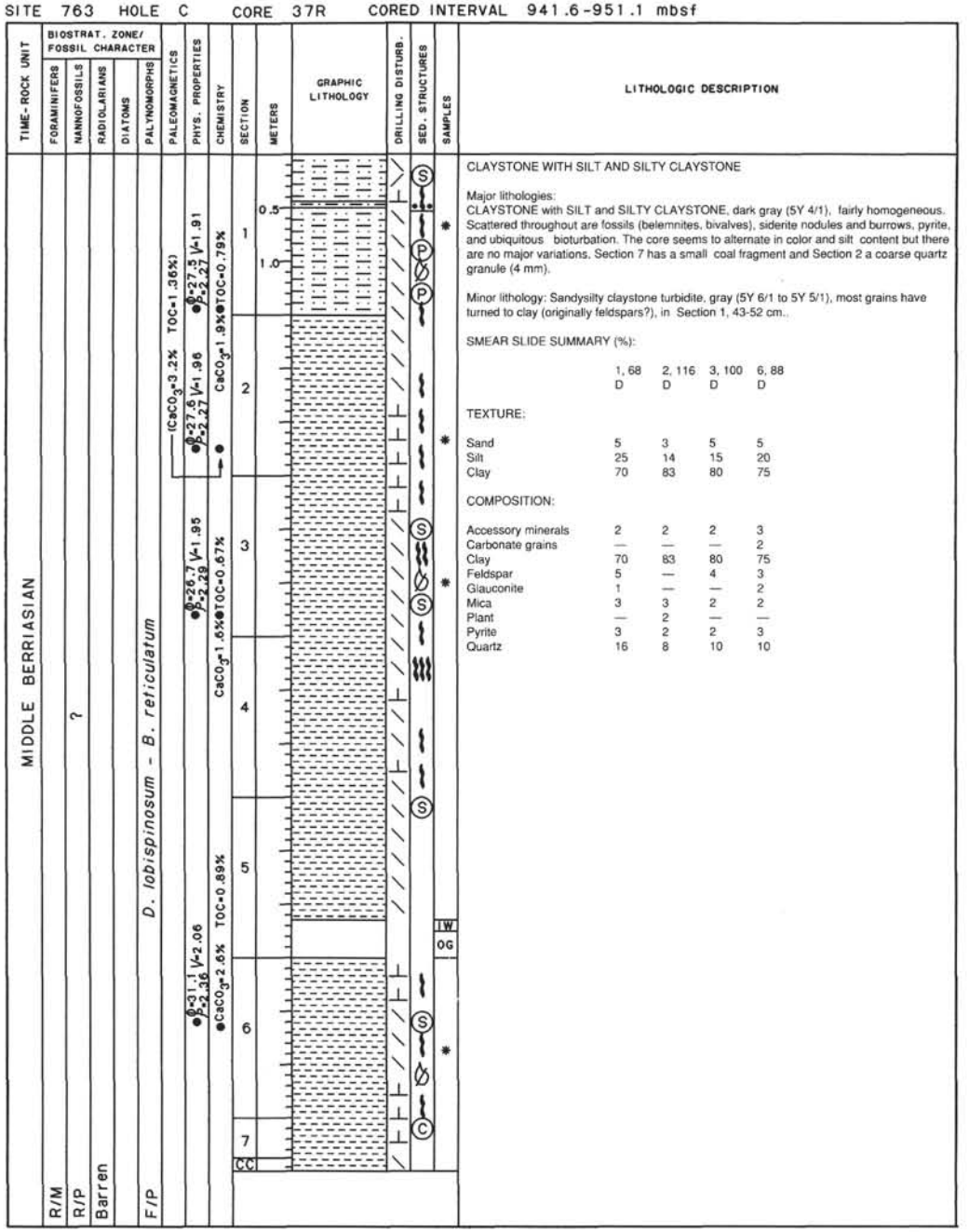
Minor lithology: Siderite nodules, burrow fillings and layers, light olive gray (5Y 6/2).

SMEAR SLIDE SUMMARY (%):

	1, 98 D	2, 127 D	3, 145 D	5, 9 D	6, 40 D
TEXTURE:					
Sand	5	5	6	10	15
Silt	15	20	20	15	15
Clay	80	75	74	75	70
COMPOSITION:					
Accessory minerals	—	—	2	1	—
Clay	80	75	74	75	70
Feldspar	3	4	2	5	4
Glauconite	—	3	—	2	—
Mica	4	3	3	3	3
Plant	—	2	1	—	2
Pyrite	3	3	3	2	3
Quartz	10	10	15	12	18



SITE 763 HOLE C CORE 37R CORED INTERVAL 941.6-951.1 mbsf



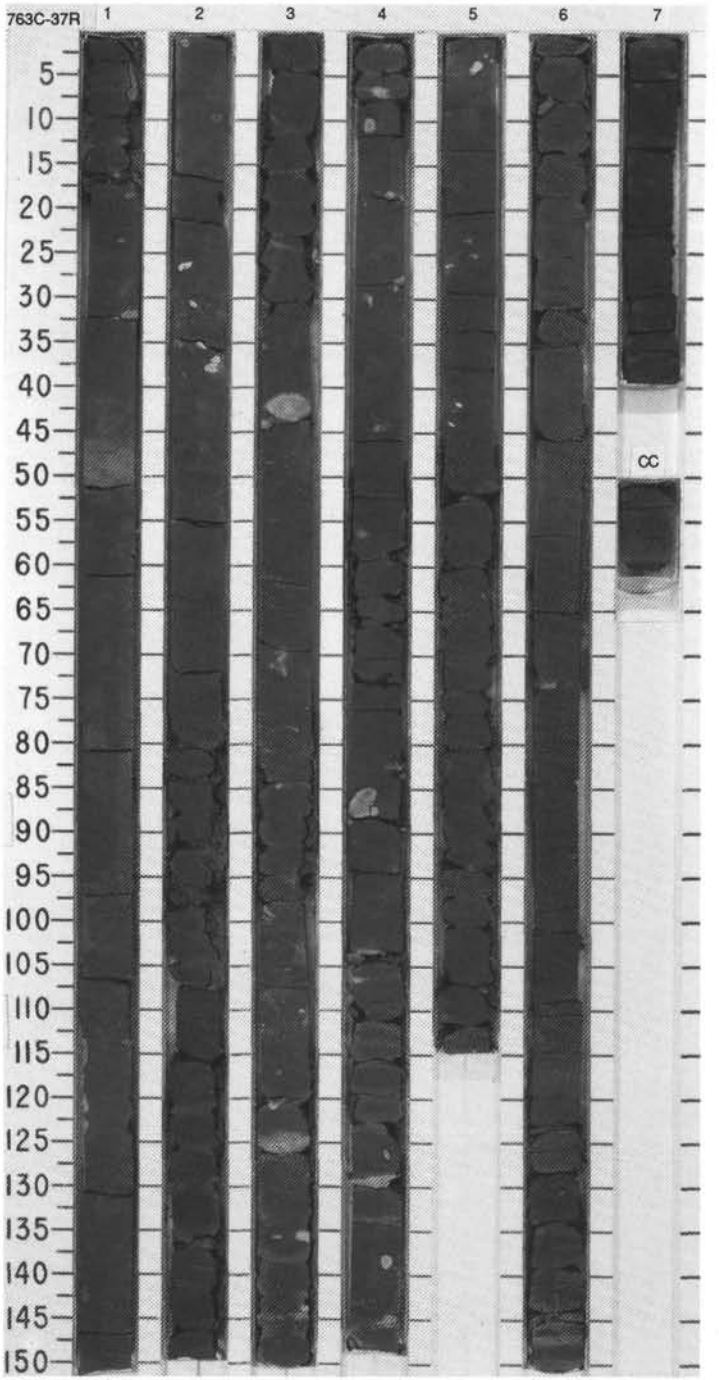
CLAYSTONE WITH SILT AND SILTY CLAYSTONE

Major lithologies:
CLAYSTONE with SILT and SILTY CLAYSTONE, dark gray (5Y 4/1), fairly homogeneous. Scattered throughout are fossils (belemnites, bivalves), siderite nodules and burrows, pyrite, and ubiquitous bioturbation. The core seems to alternate in color and silt content but there are no major variations. Section 7 has a small coal fragment and Section 2 a coarse quartz granule (4 mm).

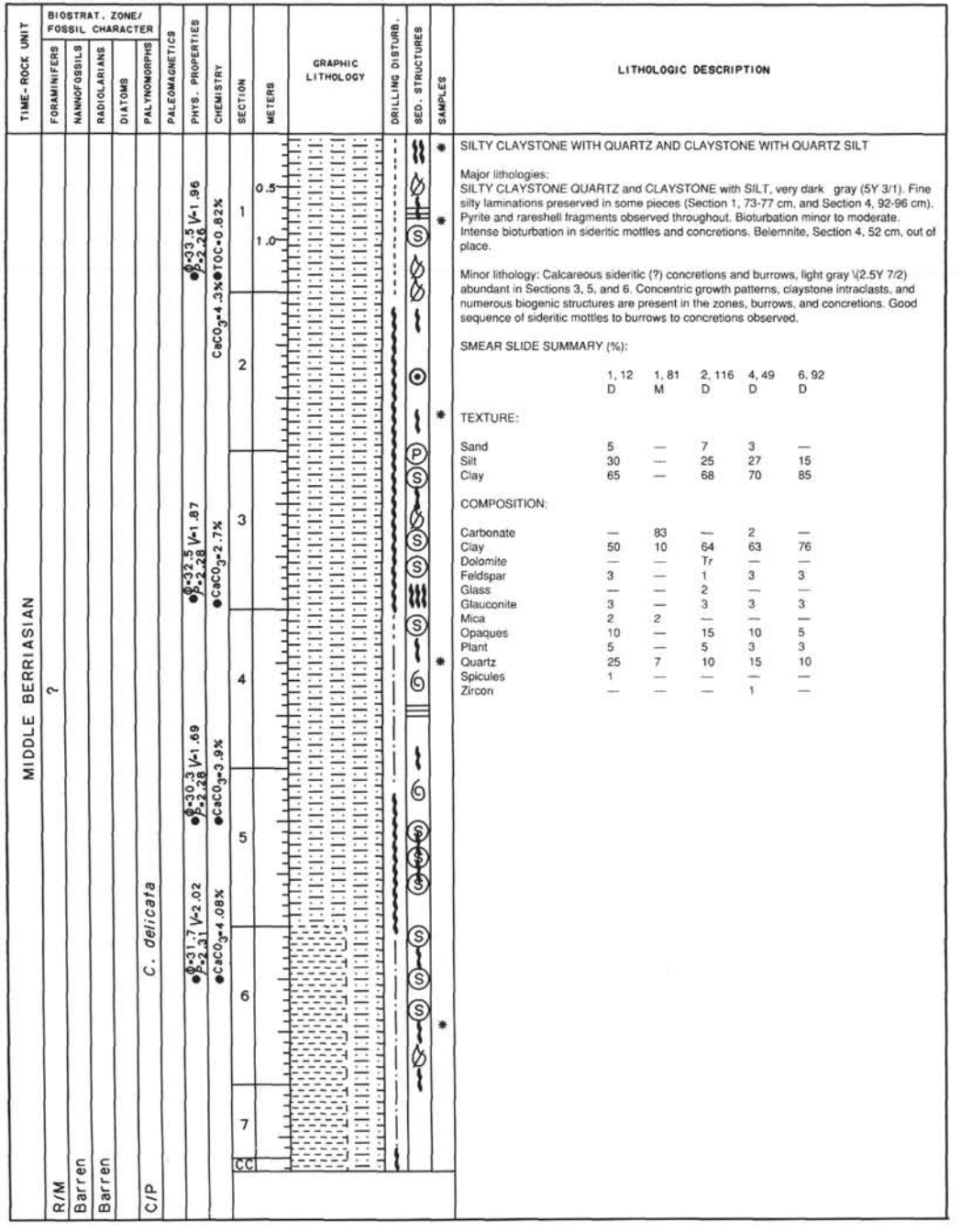
Minor lithology: Sandysilty claystone turbidite, gray (5Y 6/1 to 5Y 5/1), most grains have turned to clay (originally feldspars?), in Section 1, 43-52 cm..

SMEAR SLIDE SUMMARY (%):

	1, 68 D	2, 116 D	3, 100 D	6, 88 D
TEXTURE:				
Sand	5	3	5	5
Silt	25	14	15	20
Clay	70	83	80	75
COMPOSITION:				
Accessory minerals	2	2	2	3
Carbonate grains	—	—	—	2
Clay	70	83	80	75
Feldspar	5	—	4	3
Glauconite	1	—	—	2
Mica	3	3	2	2
Plant	—	2	—	—
Pyrite	3	2	2	3
Quartz	16	8	10	10



SITE 763 HOLE C CORE 38R CORED INTERVAL 951.1-960.6 mbsf



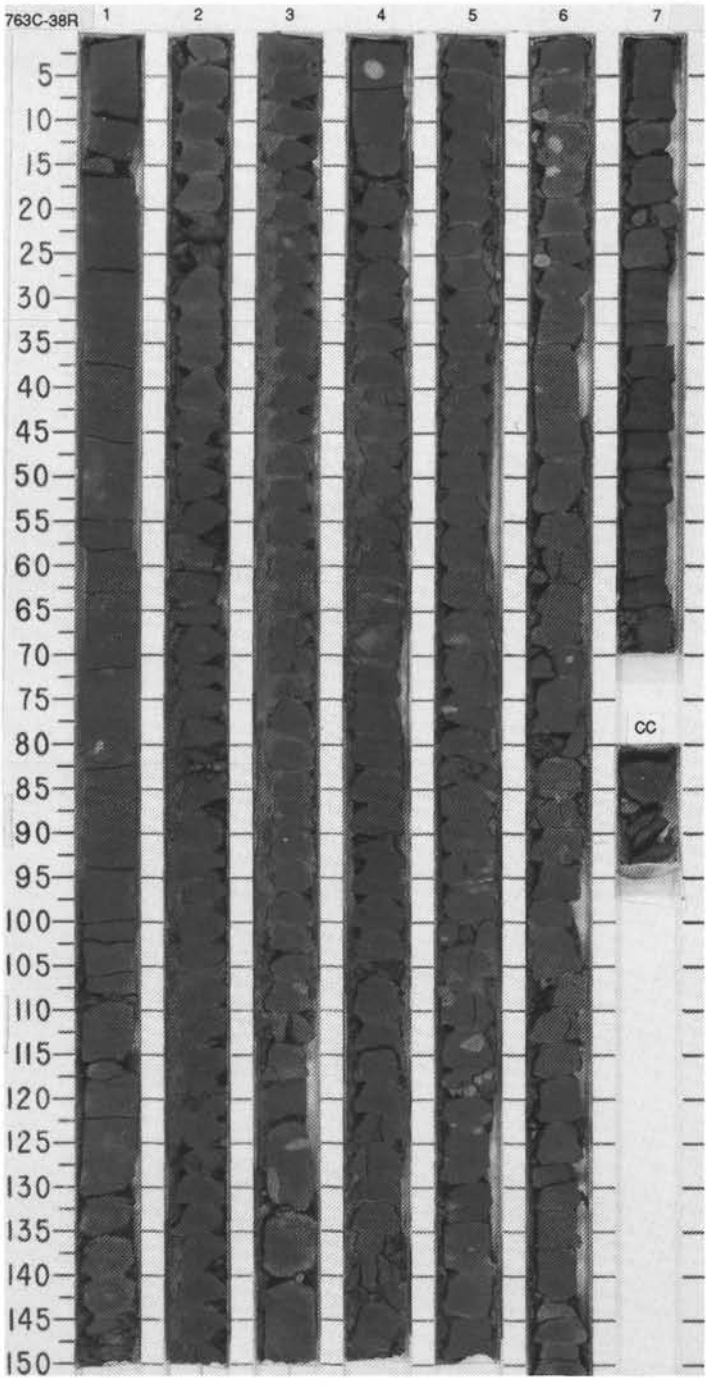
SILTY CLAYSTONE WITH QUARTZ AND CLAYSTONE WITH QUARTZ SILT

Major lithologies:
SILTY CLAYSTONE QUARTZ and CLAYSTONE with SILT, very dark gray (5Y 3/1). Fine silty laminations preserved in some pieces (Section 1, 73-77 cm, and Section 4, 92-96 cm). Pyrite and rareshell fragments observed throughout. Bioturbation minor to moderate. Intense bioturbation in sideritic mottles and concretions. Belemnite, Section 4, 52 cm, out of place.

Minor lithology: Calcareous sideritic (?) concretions and burrows, light gray \(2.5Y 7/2) abundant in Sections 3, 5, and 6. Concentric growth patterns, claystone intraclasts, and numerous biogenic structures are present in the zones, burrows, and concretions. Good sequence of sideritic mottles to burrows to concretions observed.

SMEAR SLIDE SUMMARY (%):

	1, 12 D	1, 81 M	2, 116 D	4, 49 D	6, 92 D
TEXTURE:					
Sand	5	—	7	3	—
Silt	30	—	25	27	15
Clay	65	—	68	70	85
COMPOSITION:					
Carbonate	—	83	—	2	—
Clay	50	10	64	63	76
Dolomite	—	—	Tr	—	—
Feldspar	3	—	1	3	3
Glass	—	—	2	—	—
Glauconite	3	—	3	3	3
Mica	2	2	—	—	—
Opaques	10	—	15	10	5
Plant	5	—	5	3	3
Quartz	25	7	10	15	10
Spicules	1	—	—	—	—
Zircon	—	—	—	1	—



SITE 763 HOLE C CORE 39R CORED INTERVAL 960.6-970.1 mbsf

TIME-ROCK UNIT: MIDDLE BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: ?, R/M
- NANNOFOSSILS: Barren
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: C/P
- PALEOMAGNETICS:
- PHYS. PROPERTIES: ●Φ=36.8 ρ=2.32; ●Φ=33.8 ρ=2.21; ●Φ=33.1 ρ=2.19
- CHEMISTRY: ●$CaCO_3$=3.5%; TOC=1.04%; ●$CaCO_3$=3.95; ●$CaCO_3$=4.7%
- SECTION: 1, 2, 3, 4, 5, 6, CC
- METERS: 0.5, 1.0
- GRAPHIC LITHOLOGY
- DRILLING DISTURB.
- SED. STRUCTURES
- SAMPLES

LITHOLOGIC DESCRIPTION

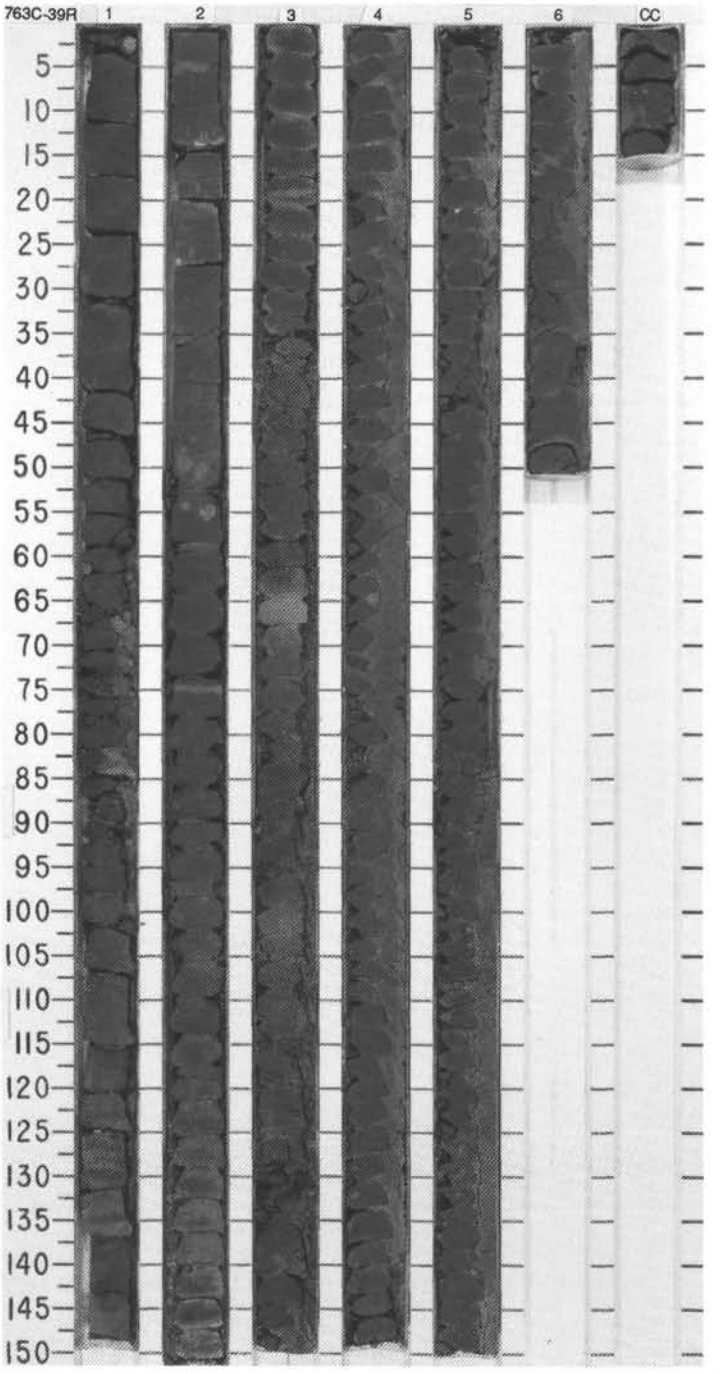
CLAYSTONE WITH SAND AND SILT AND SILTY CLAYSTONE

Major lithologies:
CLAYSTONE with SAND and SILT and SILTY CLAYSTONE, very dark gray (5Y 3/1), generally structureless, but locally includes weak lamination. Small shell fragments and pyrite grains common throughout the core. Bioturbation is weak to moderate. Belemnite fragment is observed in Section 5, 88 cm.

Minor lithologies:
a. Sideritic layers (2-5 cm thick), pale yellow (5Y 8/3), are intercalated in Section 2, 73-76 cm, and Section 3, 63-67 and 98-103 cm. Sideritic burrows are also observed in Section 1, 10-15 and 90-92 cm; Section 2, 12-13, 25-35, and 48-60 cm; and Section 5, 20-22 cm.
b. Small pyrite nodules (1-2 cm in diameter) are observed in Section 2, 6-7 cm; Section 3, 36-40 and 85-92 cm; and Section 4, 40-47 and 141-145 cm. Small pyrite burrows (1mm in diameter and 3-5 mm long) are also observed in Section 4, 40-45 cm, and Section 5, 95-100 cm.

SMEAR SLIDE SUMMARY (%):

	1, 44 D	2, 13 M	3, 67 M	6, 15 D
TEXTURE:				
Sand	10	—	—	—
Silt	15	3	—	28
Clay	75	97	—	72
COMPOSITION:				
Accessory minerals	1	—	—	—
Clay	75	97	—	72
Feldspar	5	—	1	5
Glauconite	—	2	—	2
Mica	3	—	—	3
Plant	—	—	—	2
Pyrite	2	—	—	3
Quartz	14	1	4	13
Siderite	—	—	95	—



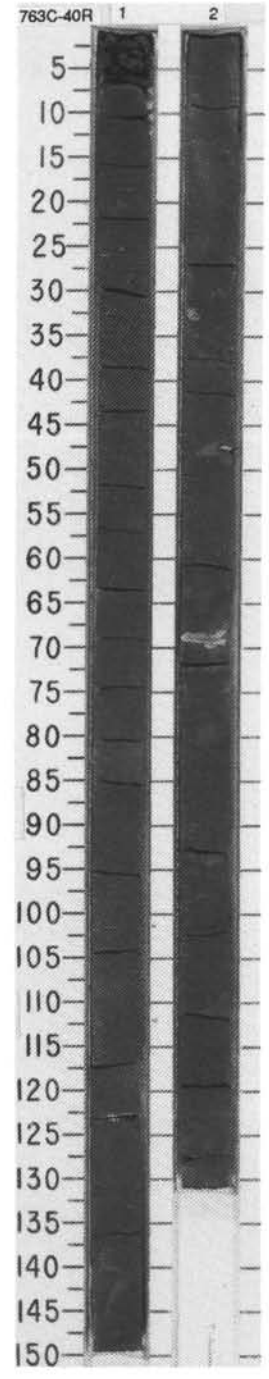
SITE 763 HOLE C CORE 40R CORED INTERVAL 970.1-979.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES	LITHOLOGIC DESCRIPTION
MIDDLE BERRIASIAN	?				C. *delicata*		●ρ=30.7 Ψ=1.82 ○ρ=2.28 ●$CaCO_3$=4.0%		1 2	0.5 1.0			P S S P	* *	SILTY CLAYSTONE AND CLAYSTONE WITH SILT
	R/M	Barren	Barren		C/P										

Major lithologies:
SILTY CLAYSTONE and CLAYSTONE with SILT, very dark gray (5Y 3/1). The core consists of two sections. In both sections, silty claystone is predominant although intricately intermingled with claystone with silt. Fossil fragments (including belemnite), pyrite nodules or burrow fills, slight bioturbation, and poorly defined laminations are observable.

SMEAR SLIDE SUMMARY (%):

	1, 83 M	2, 95 D
TEXTURE:		
Sand	5	5
Silt	30	15
Clay	65	80
COMPOSITION:		
Accessory minerals	5	—
Clay	65	80
Feldspar	5	3
Glauconite	—	1
Mica	5	3
Plant	—	2
Pyrite	—	3
Quartz	20	8



SITE 763 HOLE C CORE 41R CORED INTERVAL 979.6-989.1 mbsf

TIME-ROCK UNIT: MIDDLE BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: ? / R/M
- NANNOFOSSILS: Barren
- RADIOLARIANS: Barren
- DIATOMS:
- PALYNOMORPHS: *C. delicata* / C/P

PALEOMAGNETICS

PHYS. PROPERTIES: ●Φ=33.6 V=1.70; ρ=2.23 / ●Φ=33.9 V=1.57; ρ=2.32 / ●Φ=33.0 V=1.66; ρ=2.32

CHEMISTRY: ●$CaCO_3$=3.7% / ●$CaCO_3$=4.4% / ●$CaCO_3$=2.5%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES: OG, TW

LITHOLOGIC DESCRIPTION

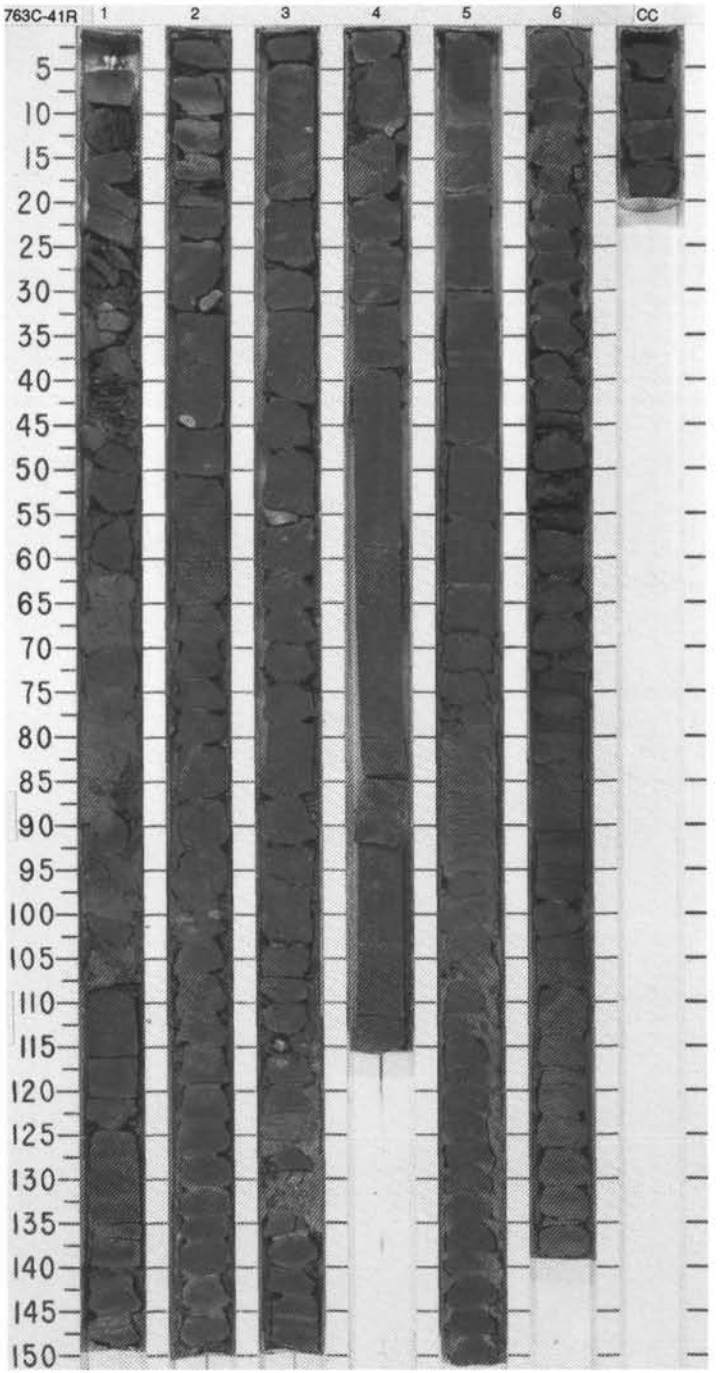
SILTY CLAYSTONE WITH QUARTZ

Major lithology:
SILTY CLAYSTONE with QUARTZ, very dark gray (5Y 3/1) to black (5Y 2.5/1). Bioturbation moderate to minor. Small silty laminations or partings (e.g. core catcher, 8-10 cm, 18-20 cm). Pyrite nodules, in Section 1, 62 cm, Section 3, 22 cm. Scattered shells in Section 5, upper 86 cm. Mollusc shell fragments (pelecypod), Section 6, 54 cm.

Minor lithology: Calcareous sideritized (?) burrows and concretions, gray (5Y 7/2). Burrows are 1.5 X 2 cm with concentric growth (Section 3, 115 cm). Mottles observed in sideritic zones.

SMEAR SLIDE SUMMARY (%):

	1, 112 D	3, 36 D	5, 60 D	6, 65 D
TEXTURE:				
Sand	3	7	3	3
Silt	30	40	35	40
Clay	67	53	62	57
COMPOSITION:				
Carbonate	—	3	2	—
Clay	65	42	55	47
Feldspar	3	5	3	3
Garnet	1	—	—	—
Glass	—	Tr	—	3
Glauconite	4	3	4	3
Mica	—	2	2	2
Opaques	—	7	—	10
Plant	5	3	7	5
Pyrite	8	—	6	—
Quartz	12	35	20	27
Rock fragment	1	—	—	—



SITE 763 HOLE C CORE 42R CORED INTERVAL 989.1-998.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE BERRIASIAN	?				*C. delicata*		ϕ=40.0 ρ=2.16 ϕ=30.2 ρ=2.31 V=1.63 ϕ=31.6 ρ=2.25	CaCO3=2.5% CaCO3=4.8% TOC=1.04% CaCO3=2.7%	1 2 3 4 5 CC	0.5 1.0				* *
	R/P	Barren	Barren		F/P									

LITHOLOGIC DESCRIPTION

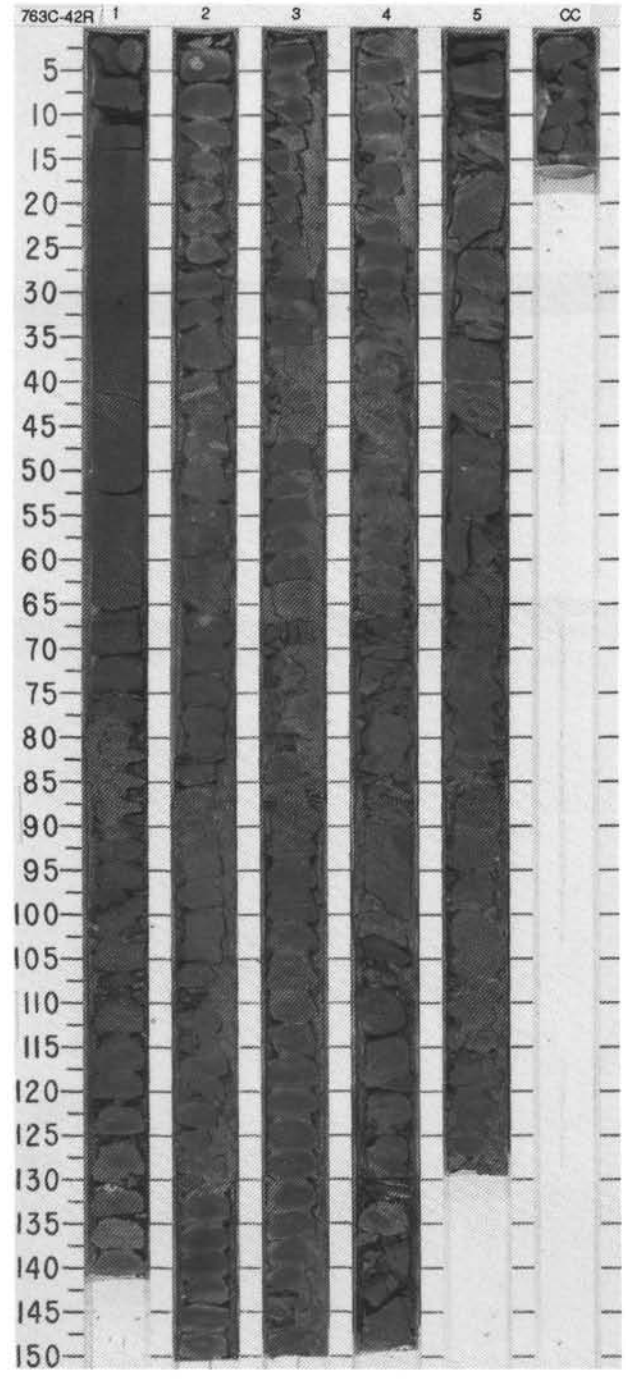
SILTY CLAYSTONE

The core consists mainly of 2-3 cm thick drilling biscuits.

Major lithology:
SILTY CLAYSTONE, very dark gray (5Y 3/1), weakly bioturbated with many pyrite grains throughout the core. Sideritic horizontla burrows, pale yellow (5Y 8/3), are common. Minor laminations are locally observed in Section 2, 36-150 cm, and Section 5, 60-70 cm. Small molluscan shell fragments are also contained in the core. Some belemnite fragments are observed at Section 1, 6 and 75 cm, and Section 3, 8 and 28 cm.

SMEAR SLIDE SUMMARY (%):

	1, 59 D	3, 100 D	5, 39 D
TEXTURE:			
Sand	5	5	—
Silt	30	35	40
Clay	65	60	60
COMPOSITION:			
Accessory minerals	2	3	—
Biotite	—	—	—
Carbonate	3	2	2
Clay	50	56	69
Feldspar	5	3	3
Garnet	1	—	1
Glauconite	3	—	—
Mica	—	—	3
Muscovite	—	3	—
Opaques	—	5	3
Other	10	10	5
Plant	3	3	3
Pyrite	3	—	—
Quartz	20	15	10
Zeolite	—	—	—
Zircon	—	—	1



SITE 763 HOLE C CORE 43R CORED INTERVAL 998.6-1008.1 mbsf

TIME-ROCK UNIT: MIDDLE BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER: FORAMINIFERS: ?; NANNOFOSSILS: C/G; RADIOLARIANS: Barren; DIATOMS: Barren; PALYNOMORPHS: C. delicata; F/P

PALEOMAGNETICS

PHYS. PROPERTIES: ϕ=29.9, ρ=2.24; ϕ=30.2, V=1.78, ρ=2.32; ϕ=29.3, V=2.16, ρ=2.31

CHEMISTRY: $CaCO_3$=4.3% TOC=0.83%; $CaCO_3$=1.9%; $CaCO_3$=4.6%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE AND SILTY CLAYSTONE WITH QUARTZ

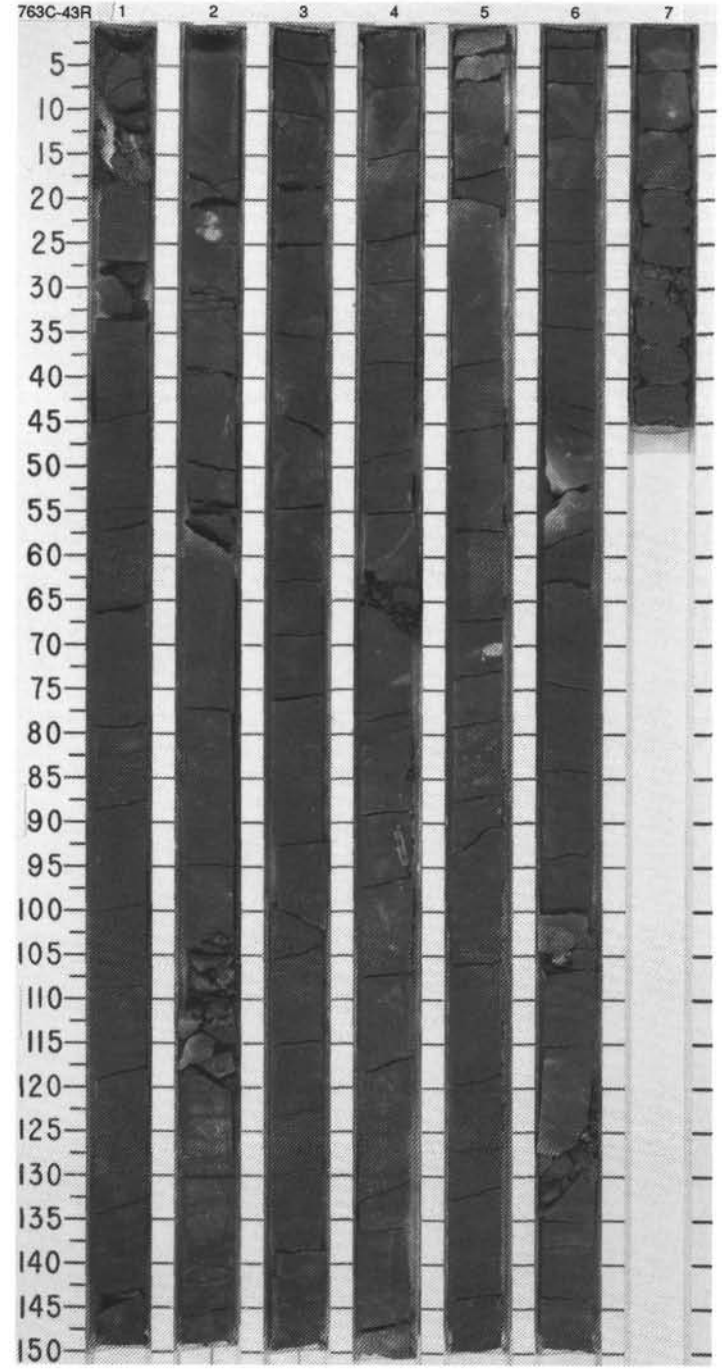
Core shows only minor drilling disturbance.

Major lithologies: SILTY CLAYSTONE and SILTY CLAYSTONE with QUARTZ, very dark gray (5Y 3/1). Scattered shells, pyrite grains, and pyritized burrows present. Belemnites, Section 2, 53 cm; Section 3, 11 cm; Section 4, 90-95 cm (sideritized); and Section 5, 117 cm. Wispy (faint) laminations and parting surfaces present throughout. Texturally these laminations appear to have more silt. Laminations may be a result of biogenic activity.

Minor lithology: Sideritized (?) concretions, burrows (e.g. Section 3, 50 cm), and layers, medium gray (5Y 6/1) to light gray (5Y 7/2) Layers, Section 4, 145-150 cm; Section 5, 0-5 cm; Section 6, 45-60 cm and 114-125 cm. Sideritized intervals intensely bioturbated, transitional boundaries.

SMEAR SLIDE AND THIN SECTION SUMMARY (%):

	1, 80 D	2, 80 D	4, 80 D	5, 1 M	5, 80 D
TEXTURE:					
Sand	2	5	3	—	5
Silt	28	33	32	—	30
Clay	70	62	65	—	65
COMPOSITION:					
Altered grains	—	—	5	—	3
Bioclast	Tr	1	3	—	Tr
Biotite	Tr	1	—	—	1
Carbonate	3	2	1	15	9
Clay	70	61	60	75	58
Fe oxide	Tr	—	—	—	—
Feldspar	7	10	8	—	9
Foraminifers	—	—	—	—	Tr
Glauconite	—	Tr	—	—	Tr
Hypersthene	Tr	—	—	—	—
Mica	4	2	3	—	3
Opaques	—	—	—	3	—
Plant	3	—	3	2	2
Pyrite	3	6	2	—	4
Quartz	8	15	12	5	11
Rock fragment	2	2	3	—	—



SITE 763 HOLE C CORE 44R CORED INTERVAL 1008.1-1017.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE BERRIASIAN	?				*C. delicata*		●ϕ=28.6 V=2.08 ●ρ=2.28 ●ϕ=30.7 V=1.81 ●ρ=2.27 ●ϕ=27.1 V=2.21 ●ρ=2.30	●$CaCO_3$=2.2% ●$CaCO_3$=4.5% ●$CaCO_3$=5.2%	1 2 3 4 5 6 7 CC	0.5 1.0				OG

LITHOLOGIC DESCRIPTION

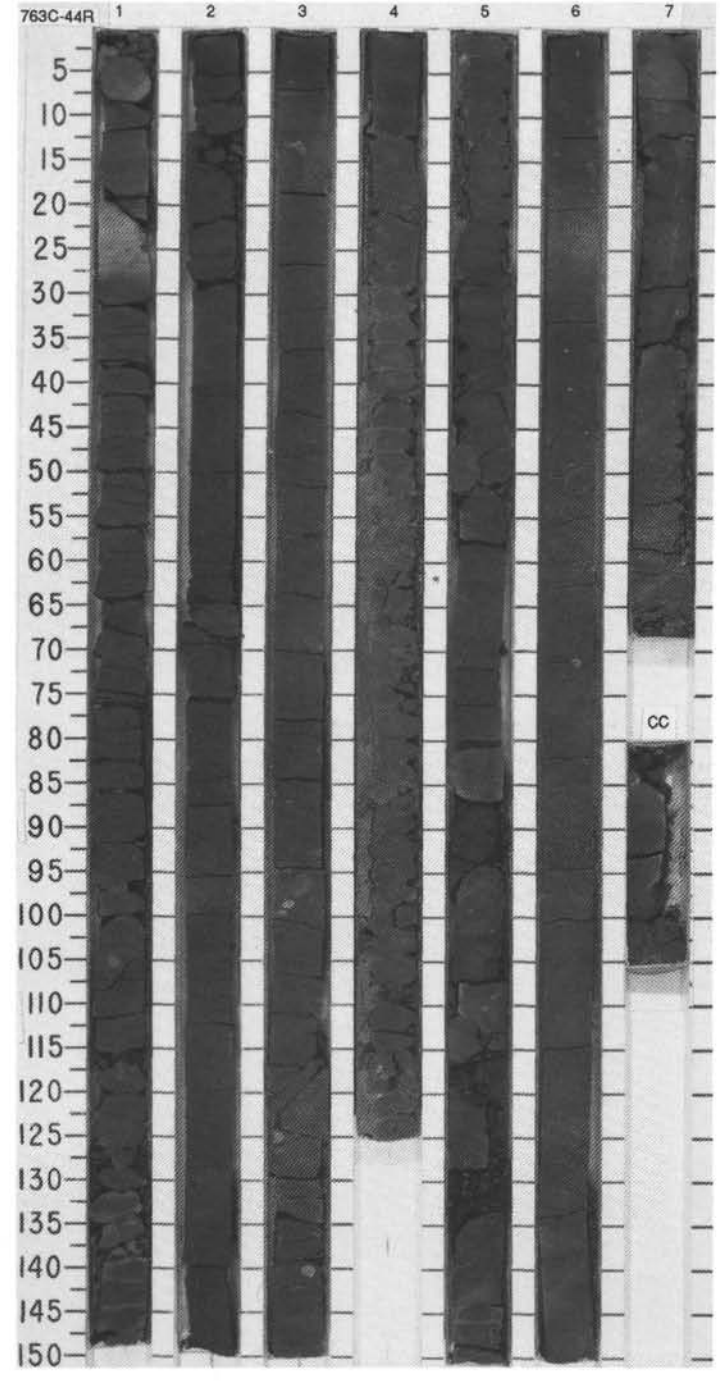
SILTY CLAYSTONE AND SILTY CLAYSTONE WITH SAND

Major lithologies:
SILTY CLAYSTONE and SILTY CLAYSTONE with SAND, very dark gray (5Y 3/1), weakly to moderately bioturbated and contains some weak lamination. Pyrite grains are present throughout the core. Belemnite fragment is observed in Section 1, 116-118 cm.

Minor lithologies:
a.Siderltic horizontal burrows, 1-2 cm in diameter, are present in Section 1, 104-106 cm; Section 2, 82 and 143 cm; Section 3, 10-145 cm; Section 6, 38-82 cm; and Section 7, 60-61 cm.
b. Sideritic layers, pale yellow (5Y 8/3), in Section 1, 18-28 cm (with minor synsedimentary deformation), and Section 6, 17-27 cm. c. Small pyrite nodules (about 1mm indiameter) and pyrite burrows are present in Section 4, 40-43 cm, and Section 5, 100-105 cm, respectively.

SMEAR SLIDE SUMMARY (%):

	1, 60 D	3, 70 D	5, 79 D	7, 41 D
TEXTURE:				
Sand	8	10	15	5
Silt	35	35	35	30
Clay	57	55	50	65
COMPOSITION:				
Accessory minerals	—	3	3	3
Carbonate	2	—	2	3
Clay	51	57	49	56
Feldspar	3	3	5	3
Glass	—	—	3	—
Glauconite	2	—	—	—
Mica	3	—	—	2
Muscovite	—	—	5	5
Opaques	—	5	5	—
Other	10	10	10	10
Plant	3	2	3	3
Pyrite	5	—	—	5
Quartz	20	20	15	10
Zircon	1	—	—	—



SITE 763 HOLE C CORE 45R CORED INTERVAL 1017.6-1027.1 mbsf

TIME-ROCK UNIT: MIDDLE BERRIASIAN

BIOSTRAT. ZONE/FOSSIL CHARACTER:
- FORAMINIFERS: F/G; ?
- NANNOFOSSILS: R/P; ?
- RADIOLARIANS: Barren
- DIATOMS
- PALYNOMORPHS: F/P; *C. delicata*

PALEOMAGNETICS

PHYS. PROPERTIES:
- ρ=24.5 V=2.15 / 2.31
- ρ=27.7 V=2.14 / 2.27
- ρ=30.7 V=1.82 / 2.28

CHEMISTRY:
- $CaCO_3$=2.3%
- $CaCO_3$=2.3%
- $CaCO_3$=2.3%

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

METERS: 0.5, 1.0

GRAPHIC LITHOLOGY

DRILLING DISTURB.

SED. STRUCTURES

SAMPLES

LITHOLOGIC DESCRIPTION

SILTY CLAYSTONE WITH QUARTZ

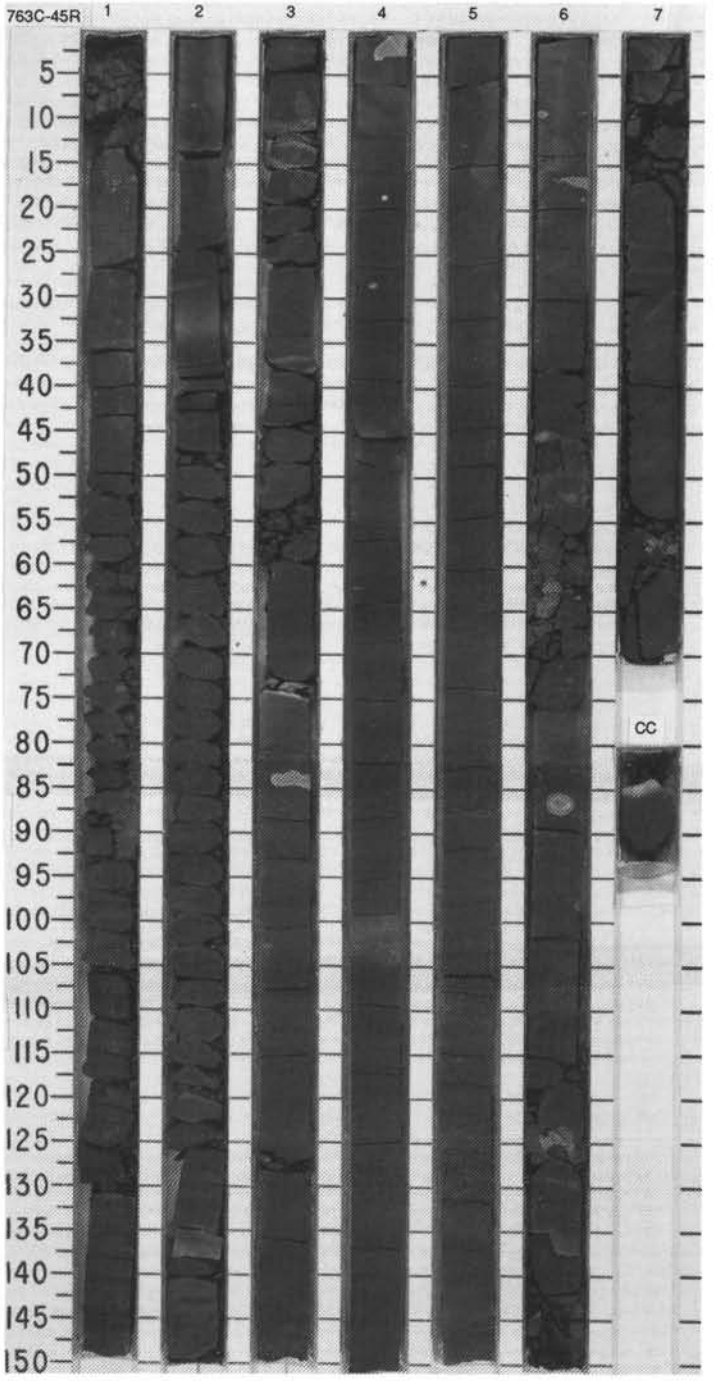
Minimal drilling disturbance.

Major lithology:
SILTY CLAYSTONE with QUARTZ, VERY DARK GRAY (5Y 3/1). Contains common feldspar and altered grains which were probably mostly feldspar. Finely disseminated shelly debris and fine pyritized burrows occur together at many levels. Pale olive (5Y 6/3) carbonate burrows and concretions with 1-2 cm diameters are common. The concretions probably formed around burrows early in diagenesis as shelly partings are bent around them. One vertical burrow is 10 cm long (Section 6, 60-69 cm). Belemnite is present at Section 5, 127 cm.

Minor lithology:
Siderite (?) replacing claystone, olive (5Y 5/3), Section 2, 30-34 cm, and Section 4, 100-104 cm.

SMEAR SLIDE SUMMARY (%):

	1, 104 D	3, 103 D	4, 54 D	4, 104 D
TEXTURE:				
Sand	10	10	5	—
Silt	35	30	35	—
Clay	55	60	60	—
COMPOSITION:				
Accessory minerals	2	—	3	—
Altered Grains	—	5	—	—
Biotite	1	—	—	—
Carbonate	6	3	4	—
Clay	54	57	52	—
Foraminifers	—	1	1	2
Glass	—	—	Tr	—
Glauconite	2	—	—	—
Hypersthene	—	—	2	—
Mica	—	3	Tr	—
Muscovite	3	—	—	—
Opaques	5	5	5	5
Other	8	—	10	—
Plant	3	2	3	3
Quartz	15	20	15	5
Siderite	—	—	—	85



SITE 763 HOLE C CORE 46R CORED INTERVAL 1027.1-1036.6 mbsf

TIME-ROCK UNIT	BIOSTRAT. ZONE/ FOSSIL CHARACTER: FORAMINIFERS	NANNOFOSSILS	RADIOLARIANS	DIATOMS	PALYNOMORPHS	PALEOMAGNETICS	PHYS. PROPERTIES	CHEMISTRY	SECTION	METERS	GRAPHIC LITHOLOGY	DRILLING DISTURB.	SED. STRUCTURES	SAMPLES
MIDDLE BERRIASIAN	F/M	?							1	0.5			S	*
	R/P	?								1.0				
	Barren								2				S	
					C. delicata								S	*
	F/P								3				S	
													S	
													S	*
									4				S	
													S	
													S	*
									5				S	
													S	

LITHOLOGIC DESCRIPTION

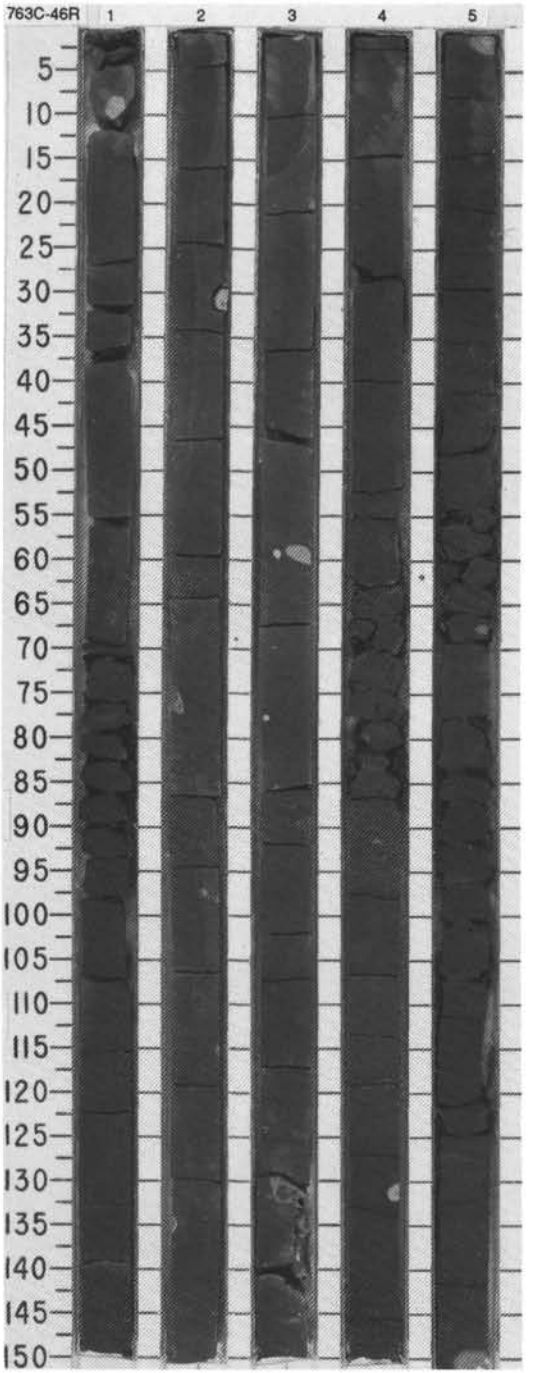
CLAYSTONE WITH SALT AND SILTY CLAYSTONE

Core shows only minor drilling disturbance.

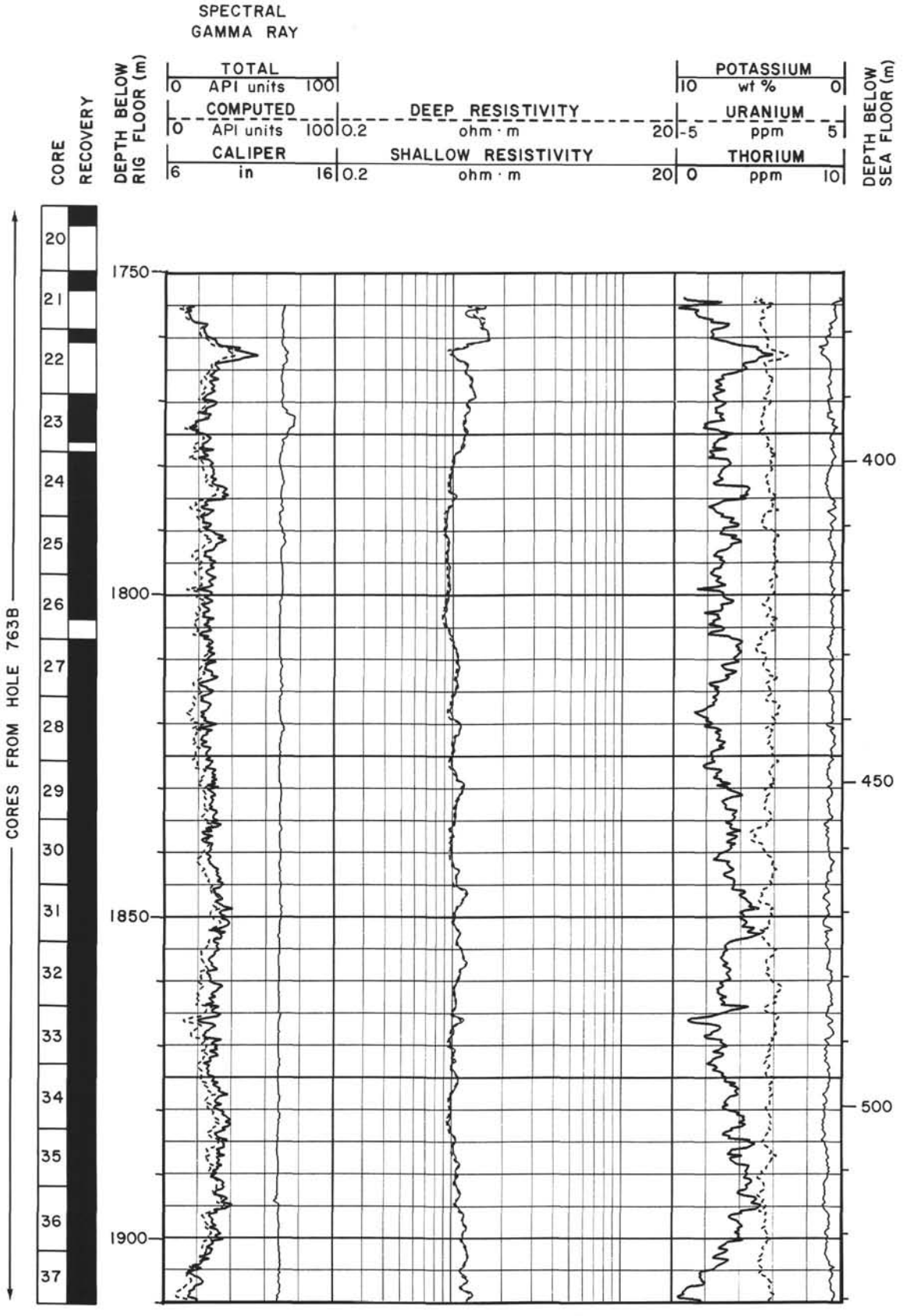
Major lithologies:
CLAYSTONE with SILT and minor SILTY CLAYSTONE, homogeneous very dark gray (5Y 3/1). Crude parallel lamination derives from compaction of horizontally burrowed sediment ("pseudo-lamination"). Large sideritic(?) burrows, 13 cm in diameter, are common through the core. Thin-shelled mollusc debris is present, but rare.

SMEAR SLIDE SUMMARY (%):

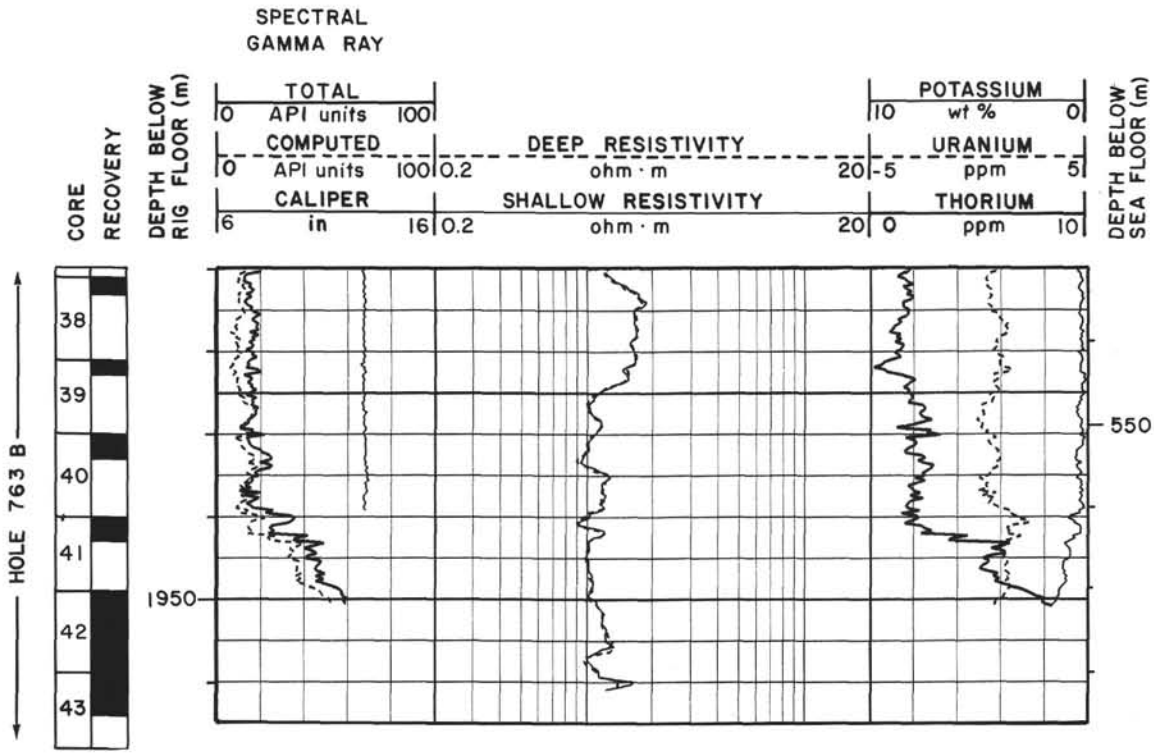
	1, 161 D	2, 82 D	3, 127 D	5, 22 D
TEXTURE:				
Silt	17	15	16	32
Clay	83	85	84	68
COMPOSITION:				
Accessory minerals	Tr	---	Tr	---
Altered grains	5	5	5	5
Biotite	Tr	Tr	---	---
	Tr	---	---	---
Clay	83	83	84	68
Feldspar	1	1	2	4
Fish	---	---	---	Tr
Glauconite	Tr	Tr	Tr	Tr
Mica	1	1	2	3



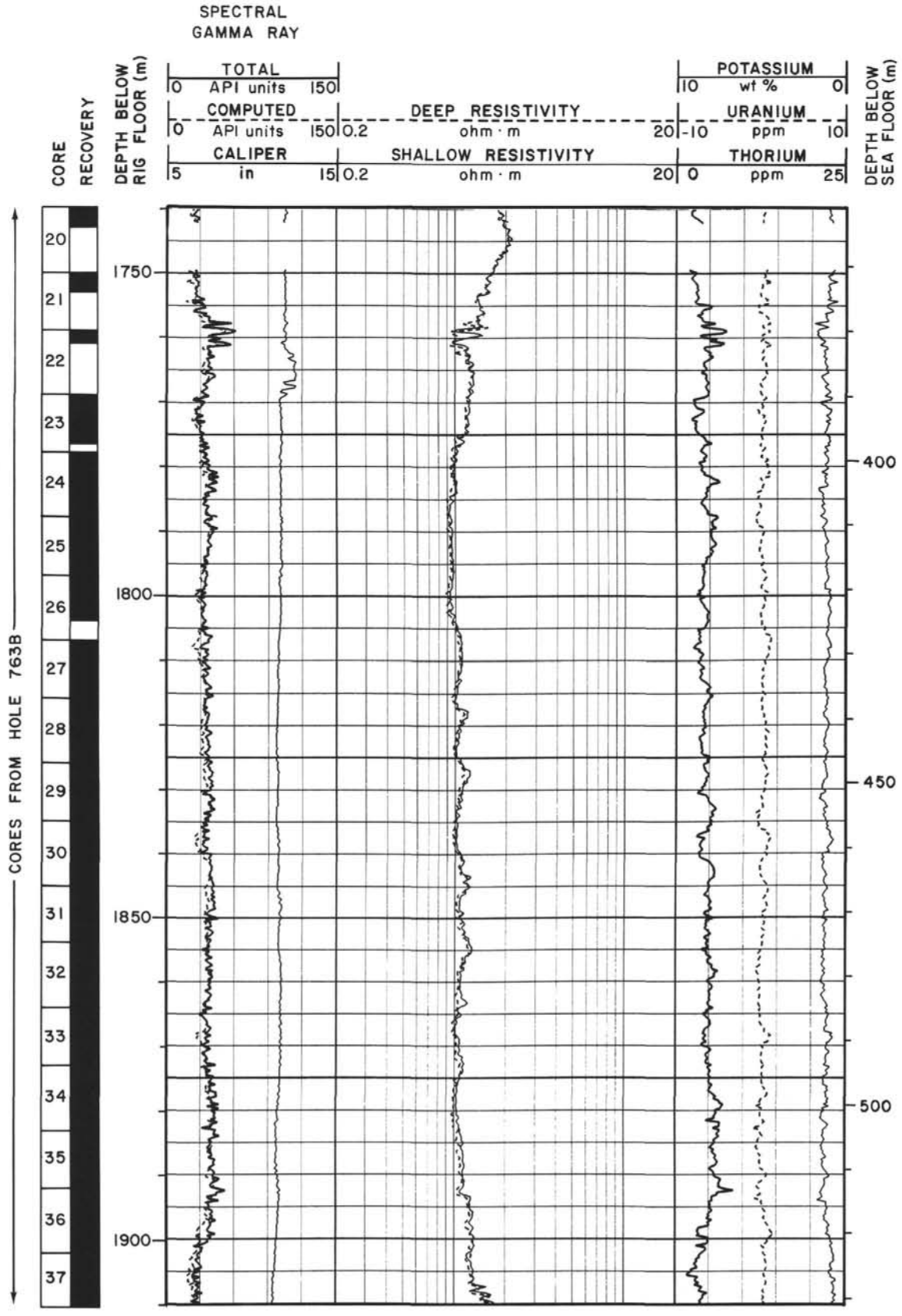
Summary Log for Site 763B



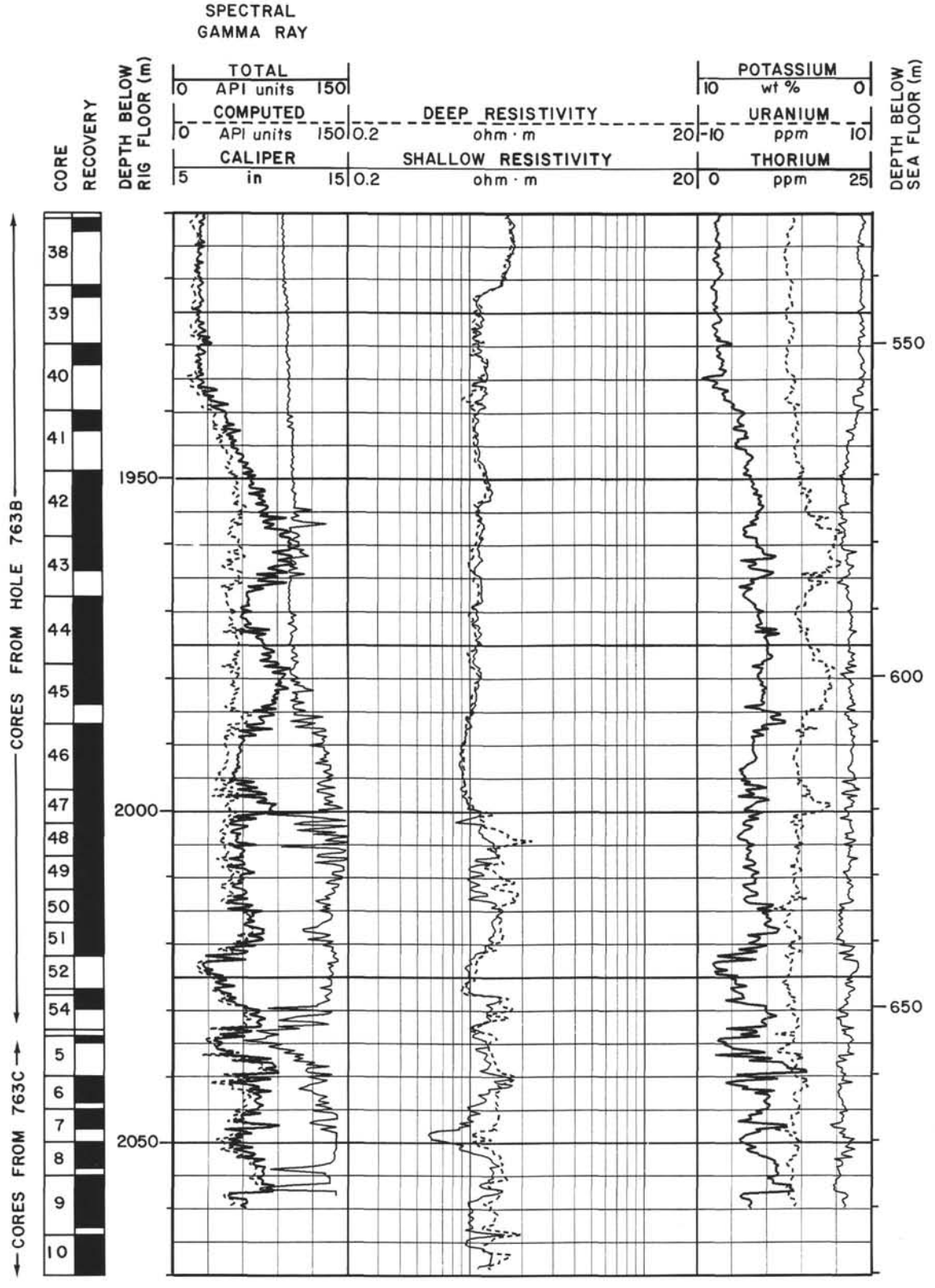
Summary Log for Site 763B (continued)



Summary Log for Site 763C



Summary Log for Site 763C (continued)



Summary Log for Site 763C (continued)