INITIAL CORE DESCRIPTIONS

DEEP SEA DRILLING PROJECT

LEG 27

EASTERN INDIAN OCEAN

Prepared for the
NATIONAL SCIENCE FOUNDATION
National Ocean Sediment Coring Program
Under Contract C-482
By the
UNIVERSITY OF CALIFORNIA
Scripps Institution of Oceanography
Prime Contractor for the Project

UNIVERSITY OF CALIFORNIA, SAN DIEGO

BERKELEY · DAVIS · IRVINE · LOS ANGELES · RIVERSIDE · SAN DIEGO · SAN FRANCISCO

SANTA BARBARA · SANTA CRUZ

SCRIPPS INSTITUTION OF OCEANOGRAPHY

POST OFFICE BOX 109
LA JOLLA, CALIFORNIA 92037

September 14, 1973

Dear Colleague:

This document has been printed and distributed by the Deep Sea Drilling Project for the purpose of sample selection by interested earth scientists, sample requests being honored one year after completion of the cruise on which the samples were collected. It is an interim and informal document consisting of site data and sedimentologic and paleontologic data as known six (6) months post-cruise. These data, while completely adequate for almost all sample selection needs, will be subject to possible slight change by the time of issue of the formal cruise report, the corresponding volume of the Initial Reports of the Deep Sea Drilling Project.

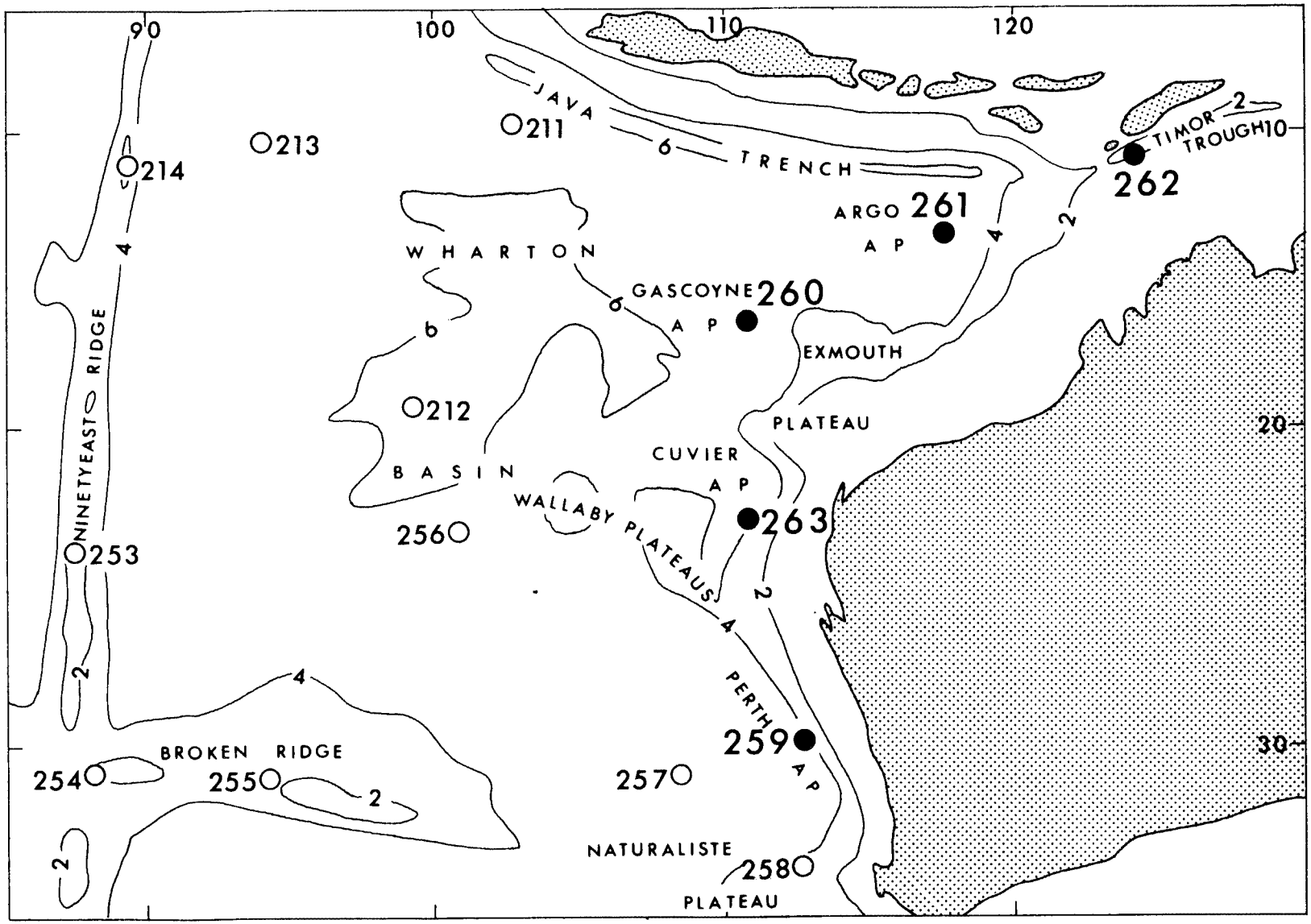
The information contained herein is preliminary and privileged, consequently this document is not to be cited or used as the basis of other publications. Data cited or used in a manuscript will be considered a breach of professional ethics and brought to the attention of the JOIDES Executive Committee for appropriate action.

Thank you for your interest in the Deep Sea Drilling Project.

Sincerely,

N. Terence Edgar
Chief Scientist
Deep Sea Drilling Project

NTE:sks



● Leg 27 Sites
○ Previous Legs

DSDP LEG 27 FREMANTLE, AUSTRALIA TO FREMANTLE, AUSTRALIA
November - December 1972

INITIAL CORE DESCRIPTION (ICD)

DEEP SEA DRILLING PROJECT

LEG 27

NOV. 1, 72 - DEC. 9, 72

A Project Planned by and Carried Out With the Advice of the
JOINT OCEANOGRAPHIC INSTITUTIONS FOR DEEP EARTH SAMPLING (JOIDES)

MEMBER ORGANIZATIONS

Lamont-Doherty Geological Observatory, Columbia University
Rosenstiel School of Marine and Atmospheric Science, University of Miami.
Scripps Institution of Oceanography, University of California
University of Washington
Woods Hole Oceanographic Institution

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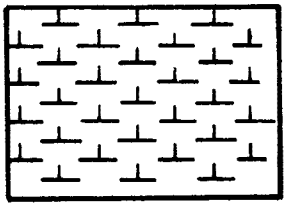
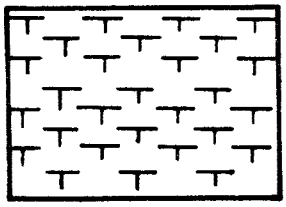
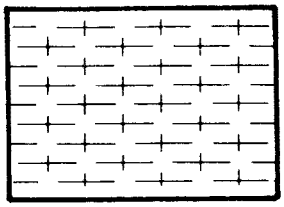
Nannofossil Ooze



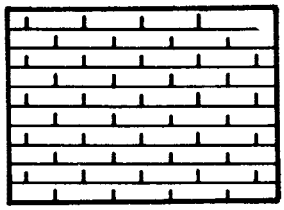
Foraminiferal Ooze



Nanno-Foram or Calcareous Ooze



Nannofossil Chalk



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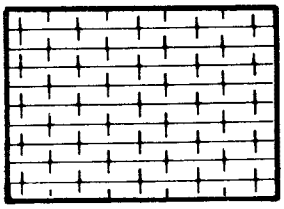

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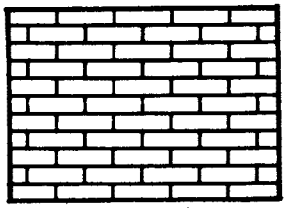
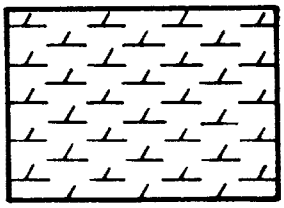
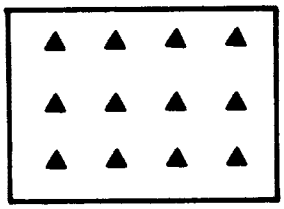


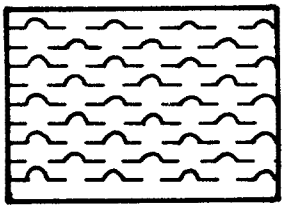
Dolomite



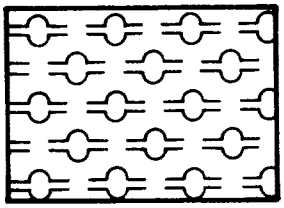
Chert



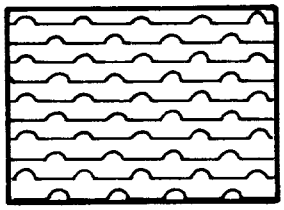
Radiolarian Ooze



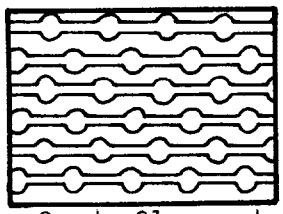
Diatom-Rad or Siliceous Ooze



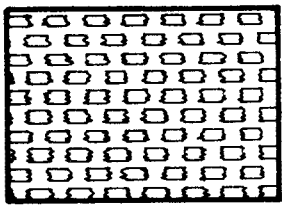
Radiolarite



Silicitite



Micarb Ooze



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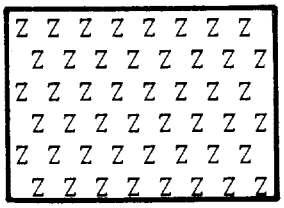
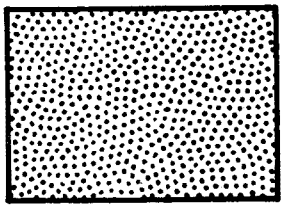
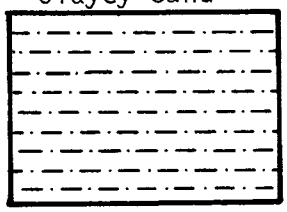


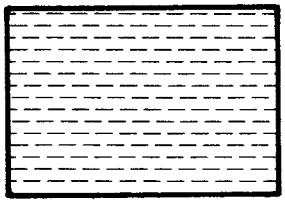
Sand



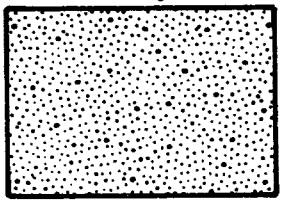
Sandy Clay and Clayey Sand



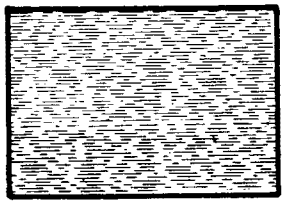
Clay



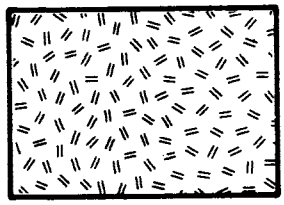
Sandy Silt and Silty Sand



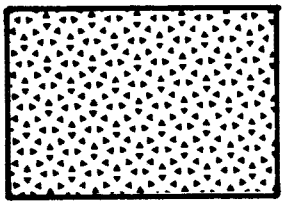
Shale



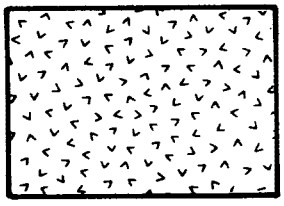
Volcanic Ash



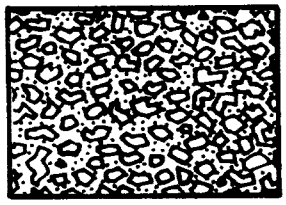
Volcanic Lapilli



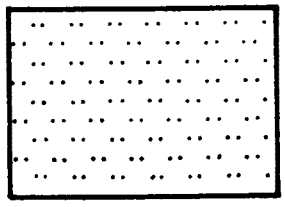
Basic Igneous



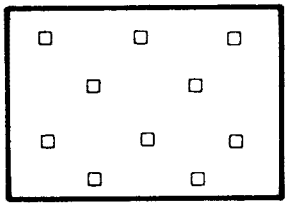
Breccia

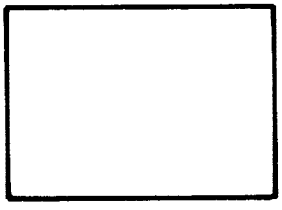


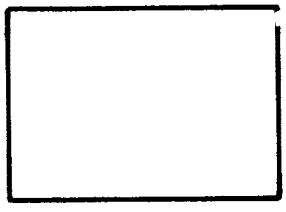
Silt

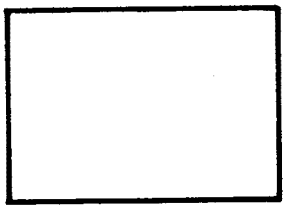


Pyrite









DEEP SEA DRILLING PROJECT

LEG 27 SITE 259

SITE SUMMARY SHEET

POSITION: Latitude: 29°37.05'S Longitude: 112°41.78'E

Water depth (from sea level): 4696 corrected meters (Echo sounding)

Bottom felt at: 4712 meters (drill pipe) Penetration: 346 meters

Number of Holes: 1 Number of Cores: 41

Total length of cored section: 346 meters Total core recovered: 248.75 m

Percentage of core recovery: 71.9%

OLDEST SEDIMENT CORED:

Depth below sea floor: 307.5 meters Nature: Green gray clay

Age: Upper Jurassic to Lower Cretaceous Measured Velocity: 1.C km/sec

BASEMENT:

Depth below sea floor: 35 seconds DT (seismic profiler)

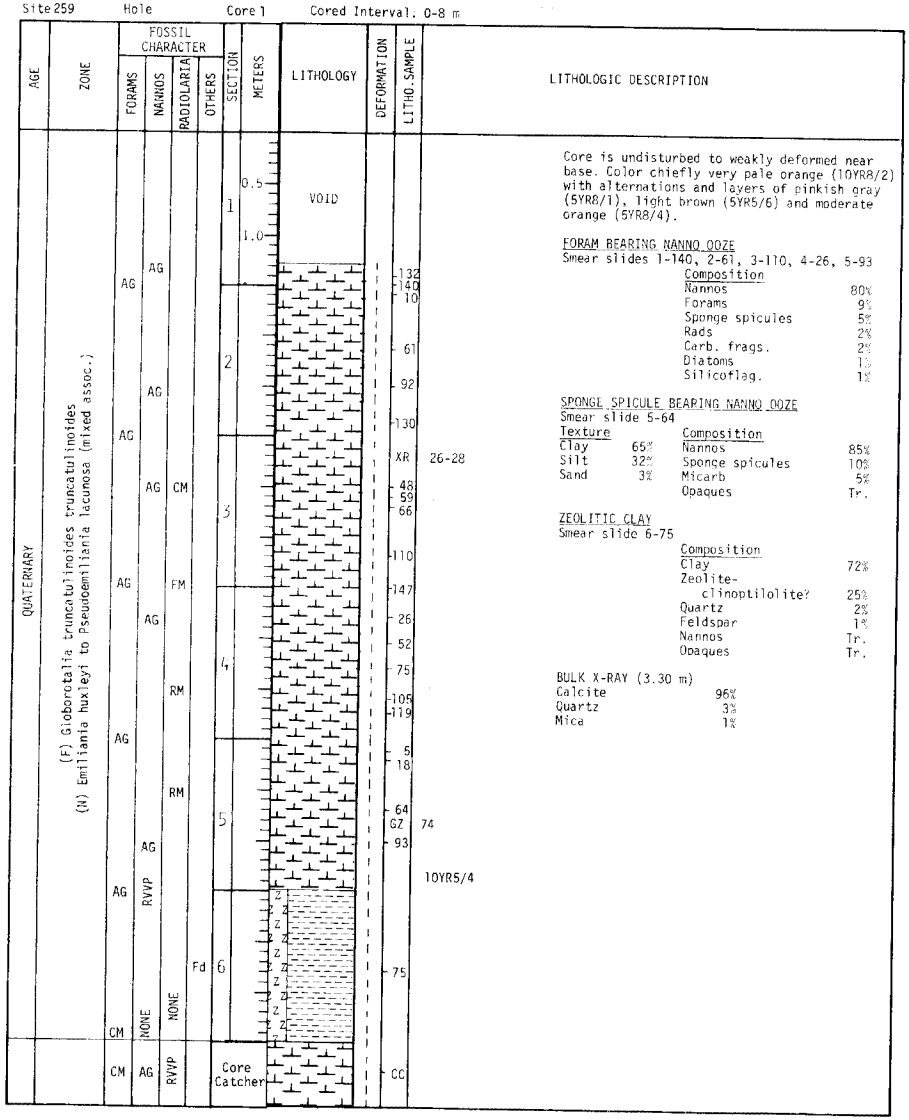
Depth below sea floor: 307.5 meters (drilled)

Inferred velocity to basement: 1.75 km/sec Nature: Altered basalt

PRINCIPAL RESULTS:

Site 259 is situated in 4706 m of water at the foot of the continental slope near the eastern side of the Perth Abyssal Plain. The site is on a slightly elevated area from which Lamont-Doherty Geological Observatory in 1967 recovered a piston core of Paleocene ooze. The site was cored continuously to basalt basement at 307.5 m sub-bottom, and thence 38.5 m into basement, recovering 20 m of basalt. The oldest datable sediment, immediately above the basalt is Upper Jurassic to Lower Cretaceous. Seventy meters of Quaternary, Lower Eocene, and Upper Paleocene brown clay and ooze overlies Albian zeolitic clay, brown clay, and ooze, and Lower Cretaceous green gray zeolitic clay. These sediments overlie, at a depositional contact, gray basaltic breccia that grades downwards into dark gray fine-grained basalt. Of particular interest are the basement age of Upper Jurassic to Lower Cretaceous and the hiatus of the entire Upper Cretaceous and Lower Paleocene.

Site 259 Hole Core 1 Cored Interval: 0-8 m



Core is undisturbed to weakly deformed near base. Color chiefly very pale orange (10YR8/2) with alternations and layers of pinkish gray (5YR8/1), light brown (5YR5/6) and moderate orange (5YR8/4).

FORAM BEARING NANNO OOZE
Smear slides 1-140, 2-61, 3-110, 4-26, 5-93

Composition	
Nannos	80%
Forams	9%
Sponge spicules	5%
Rads	2%
Carb. frags.	2%
Diatoms	1%
Silicoflag.	1%

SPONGE SPICULE BEARING NANNO OOZE
Smear slide 5-64

Texture		Composition	
Clay	65%	Nannos	85%
Silt	32%	Sponge spicules	10%
Sand	3%	Micarb	5%
		Opaques	Tr.

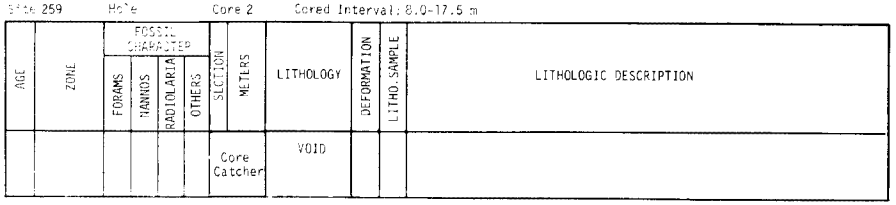
ZEOLITIC CLAY
Smear slide 6-75

Composition	
Clay	72%
Zeolite-clinoptilolite?	25%
Quartz	2%
Feldspar	1%
Nannos	Tr.
Opaques	Tr.

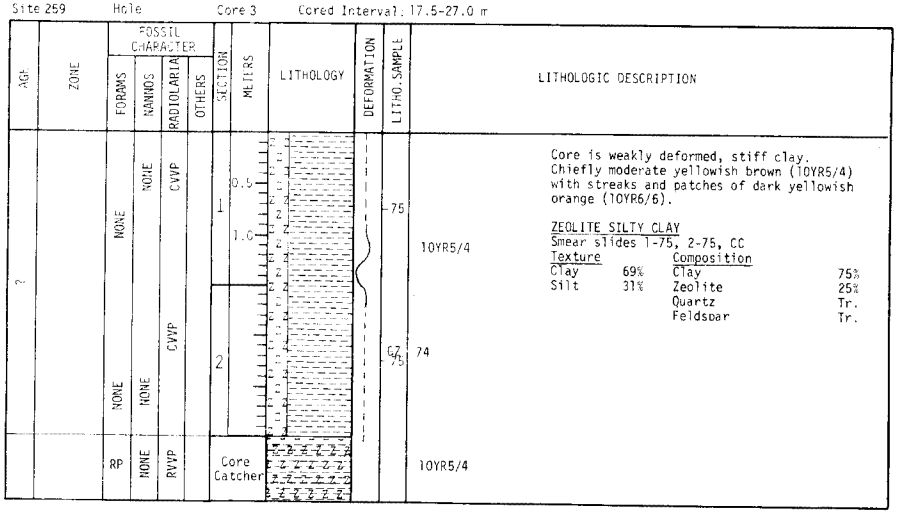
BULK X-RAY (3.30 m)

Calcite	96%
Quartz	3%
Mica	1%

Site 259 Hole Core 2 Cored Interval: 8.0-17.5 m



Site 259 Hole Core 3 Cored Interval: 17.5-27.0 m



Core is weakly deformed, stiff clay. Chiefly moderate yellowish brown (10YR5/4) with streaks and patches of dark yellowish orange (10YR6/6).

ZEOLITE SILTY CLAY
Smear slides 1-75, 2-75, CC

Texture		Composition	
Clay	69%	Clay	75%
Silt	31%	Zeolite	25%
		Quartz	Tr.
		Feldspar	Tr.

Site 259 Hole Core 4 Cored Interval: 27-36.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY 0.4 m zero section	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER EOCENE	(F) G. subbotinae - G. formosa (N) Tribrachiatus orthostylus (N) Discoaster lodoensis (N) Discoaster binodosus	NONE	NONE	FVVP	Fd	1	0.5 1.0			40 75 120	10YR5/4 10YR4/2 10YR4/2
		RP	CM	RVVP	Fd	2		Mdl Dolt	GZ	74 75	10YR5/4
									XR	26-28	10YR5/4
			AM	RVVP	Fd	3		Mn		75	
		FM									10YR7/4
			RP	RVVP	Fd	4		Mn Qz Qz Qz Qz Qz		65 80	
		RM									
				RVVP	Fd	5			GZ	74 75	10YR8/6
		RM	CM								
				RVVP	Fd	6				75	10YR8/6
		FM	AM								
UPPER PALEOCENE (F) G. velascoensis (N) T. contortus		FM	AM	RVVP	Fd	Core Catcher				CC	

Core mostly strongly deformed stiff clay or ooze. Colors chiefly moderate yellowish brown (10YR5/4) with streaks and patches of dark yellowish orange (10YR6/6 and a few patches of dark yellowish brown (10YR4/2). Chiefly pale yellowish orange in lower 2 sections.

ZEOLITE SILTY CLAY
Smear slides 1-40, 3-75, 4-65, 1-75, 1-120

Composition	
Clay	72%
Zeolite	25%
Quartz	1%
Nannos	1%
Micarb	1%
Feldspar	Tr.

MICARB RICH NANNO OOZE
Smear slides 5-75, 6-75, CC

Texture		Composition	
Silt	53%	Nannos	70%
Clay	46%	Micarb	20%
Sand	1%	Clay	10%
		Dolomite rhombs	Tr.

ZEOLITE RICH, MICARB AND NANNO OOZE
Smear slide 2-75

Texture		Composition	
Clay	49%	Nannos	55%
Silt	46%	Micarb	25%
Sand	5%	Zeolite	15%
		Clay	5%
		Iron Oxide	Tr.
		Feldspar	Tr.
		Dolomite rhombs	Tr.

Core contains numerous dark (N1) nodules of zeolite cemented clay.

BULK X-RAY (30.3 m)

Calcite	51%
Clinoptilolite	22%
Quartz	17%
Phillipsite	4%
Mica	3%
Montmorillonite	3%

Site 259 Hole Core 5 Cored Interval: 36.5-46 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER PALEOCENE	(F) Globorotalia velascoensis (N) D. binodosus	?	CM			1	0.5 1.0	VOID		110	10YR7/4
				RVVP	Fd	2			GZ	74 75	10YR7/4
		FM	CM							XR	26-28
				NONE	Fd	3				75	10YR7/4
	(N) T. contortus	FM	CM								
				NONE	Fd	4				75	10YR7/4
	(N) D. multiradiatus	FM	CM								
				RVVP	Fd	5			GZ	10YR8/2 74 75	
		CM	CM								10YR7/4
	(N) D. multiradiatus	CM	CM	RVVP		Core Catcher				CC	10YR7/4

Highly contorted stiff clay and clay nan ooze. Chiefly grayish orange (10YR7/4) wh streaks of dark yellowish orange (10YR6/). Grades to very pale orange (10YR8/2) nea base.

ZEOLITE RICH CLAY
Smear slide 1-110

Composition	
Clay	4%
Zeolite	4%
Nannos	2%

ZEOLITE BEARING OOZE
Smear slides 2-75, 3-75, 4-75, 5-75, CC

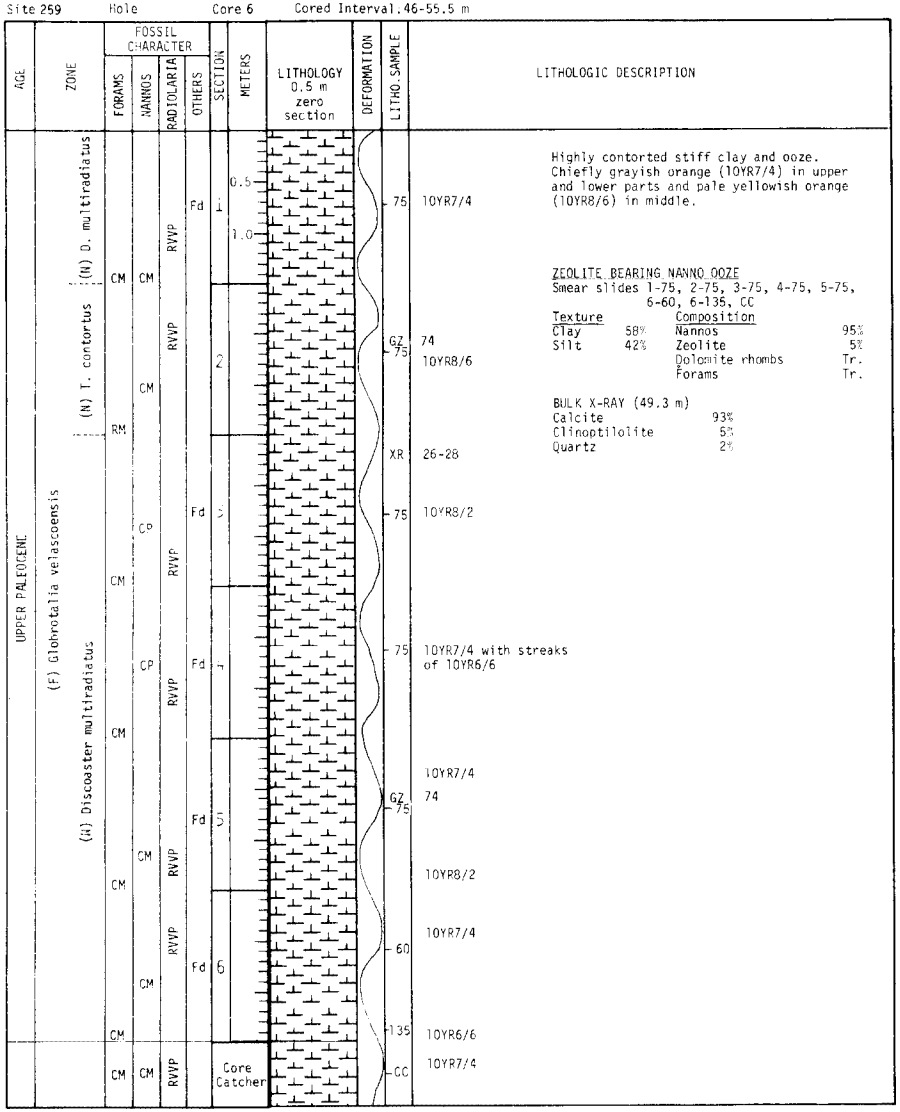
Texture		Composition	
Clay	56%	Nannos	0%
Silt	44%	Zeolite	0%
		Dolomite rhombs	Tr.

Minor dark nodules (N1) at top of core.

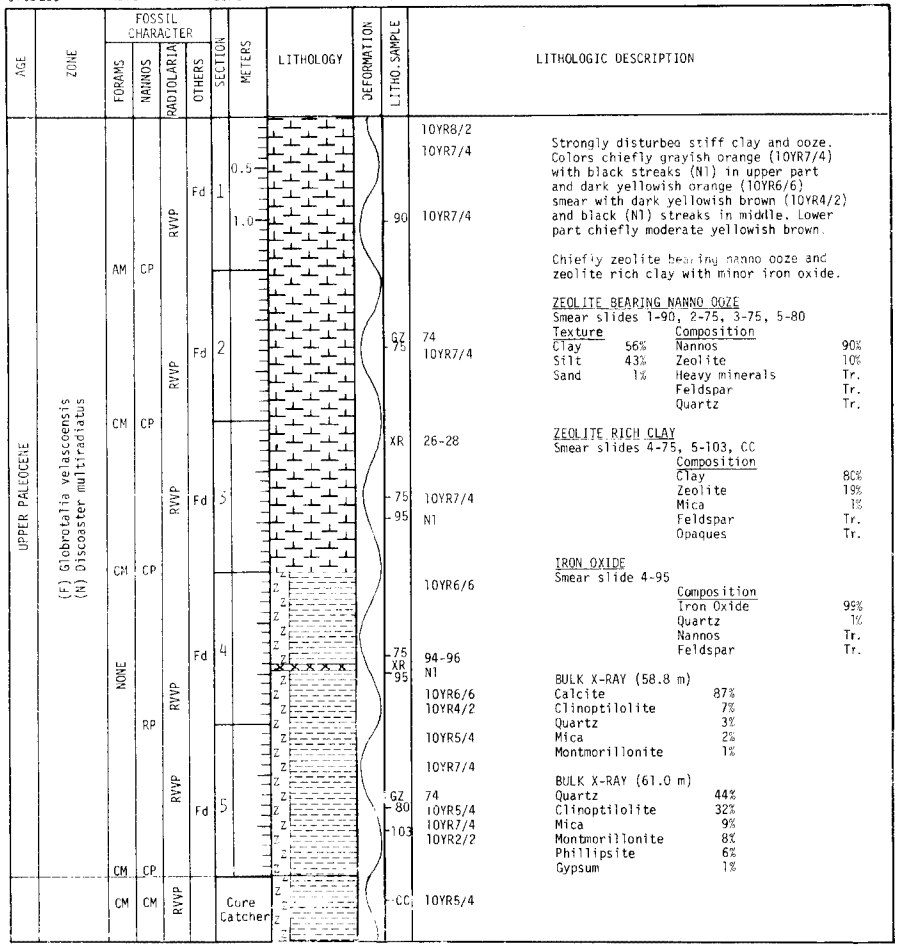
BULK X-RAY (39.8 m)

Calcite	76%
Clinoptilolite	16%
Quartz	4%
Mica	2%
Montmorillonite	2%

Site 259 Hole Core 6 Cored Interval: 46-55.5 m



Site 259 Hole Core 7 Cored Interval: 55.5-65 m



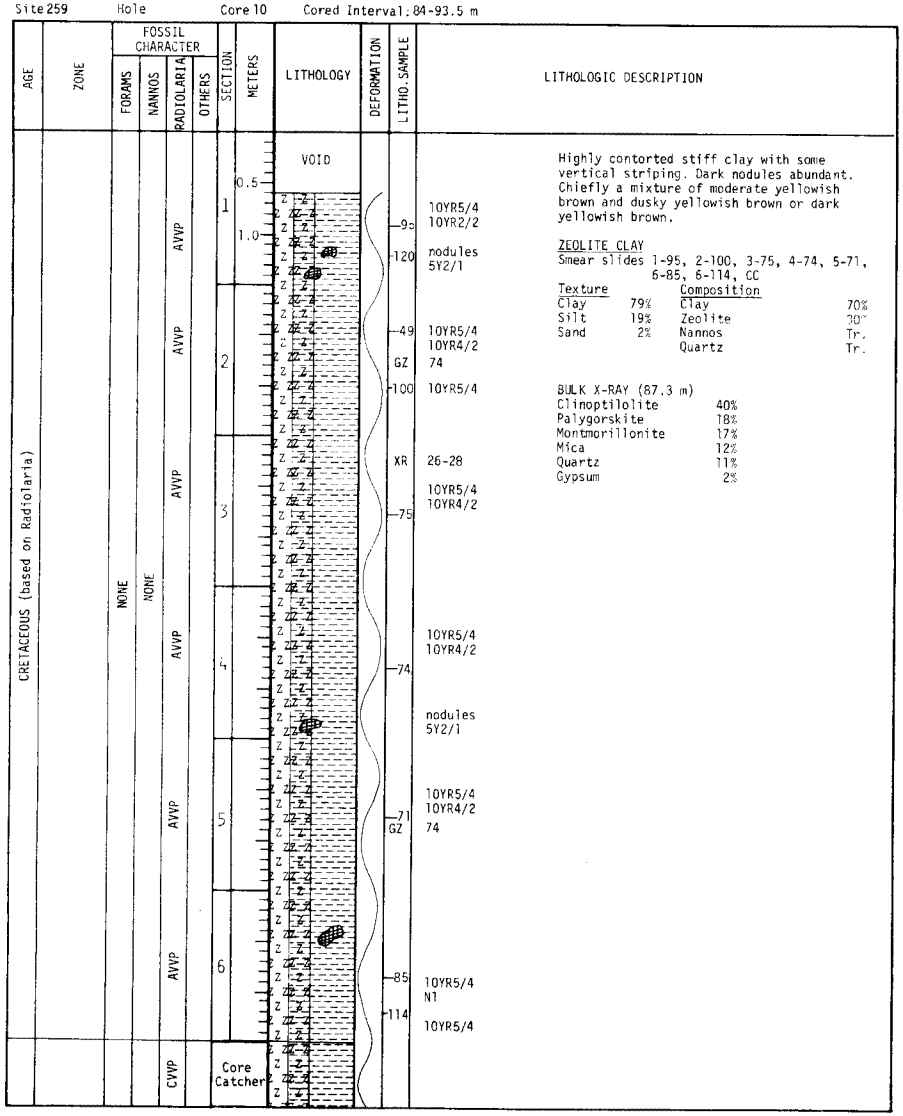
Site 259 Hole Core 8 Cored Interval: 65-74.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER PALEOCENE	(F) G. velascoensis	CM	RP	RVP		1	0.5			10YR4/2	Strongly disturbed stiff clay. Chiefly dark yellowish brown with distorted layers and streaks of grayish orange (10YR7/4) and dusky yellowish brown (10YR2/1).
		RP					1.0			62	
										25	ZEOLITE CLAY Smear slides 2-25, 3-75, 4-75, 5-75, 6-125 Texture: Clay 76%, Silt 24% Composition: Clay 70%, Zeolite 28%, Heavy minerals 1%, Nannos 1%, Quartz & feldspar Tr.
										10YR4/2	
		NONE	NONE	CVVP	Fd	2				GZ 74	BULK X-RAY (68.3 m) Palygorskite 33% Clinoptilolite 21% Mica 13% Cristobalite 12% Quartz 11% Montmorillonite 9% Gypsum 1%
										XR 26-28	
		NONE	NONE	RVVP		3				75 10YR4/2	
		NONE	NONE	FVVP		4				75 10YR4/2	
										nodule	
										28 5YR7/2	
			AP		Fd	5				75	
		RM		FVVP						10YR4/2 & 10YR5/4	
										10YR4/2 & 10YR5/4	
			CP		Fd	6				10YR4/2	
		?		RVVP						125 10YR4/2 & 10YR7/4	
		NONE	CP	RVVP		Core Catcher				CC 10YR4/2	

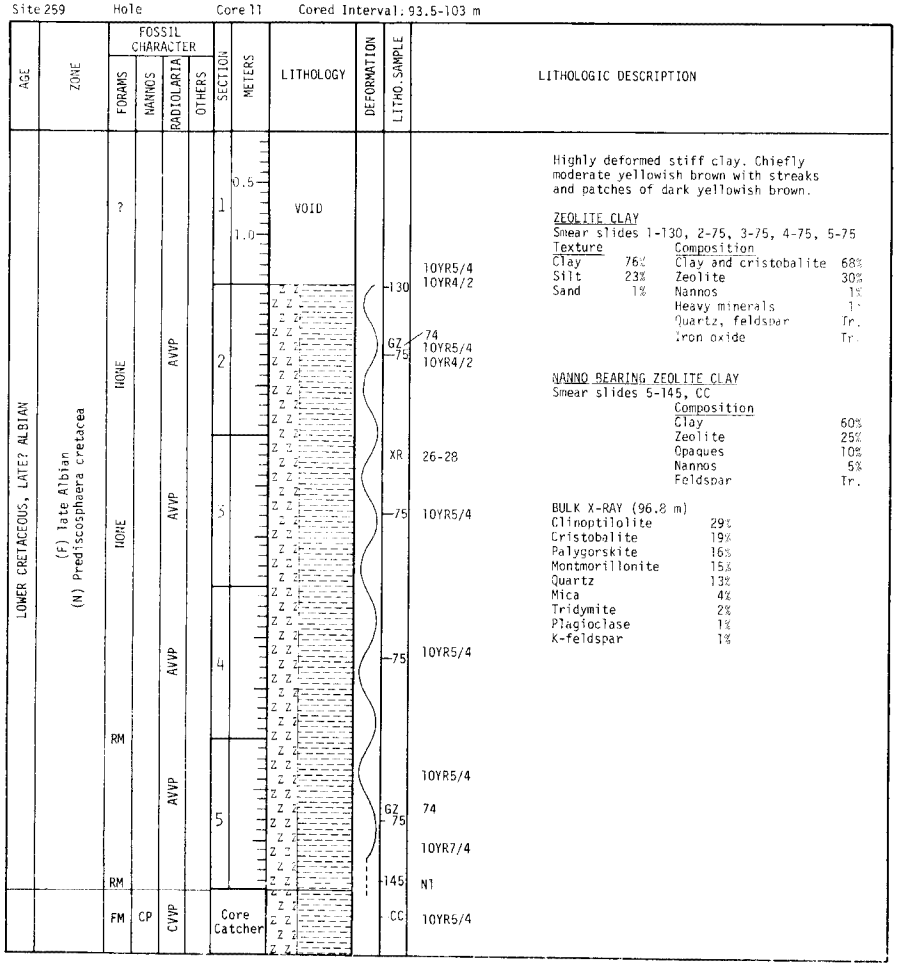
Site 259 Hole Core 9 Cored Interval: 74.5-84

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY 0.5 m zero section	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS (based on Radiolaria)		NONE	NONE	FVVP	Fd	1	0.5			10YR2/2 10YR4/2 10YR7/4	Highly disturbed stiff clay. Color chiefly dusky yellowish brown with smeared layers and patches of dark yellowish brown and grayish orange.
							1.0			75	
										74	ZEOLITE CLAY Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75, CC Texture: Clay 85%, Silt 14%, Sand 1% Composition: Clay 72%, Zeolite 25%, Nannos 3%, Heavy minerals Tr.
										GZ 10YR2/2 10YR4/2 10YR7/4	
						2				75	
										XR 26-28	BULK X-RAY (77.8 m) Palygorskite 31% Clinoptilolite 28% Montmorillonite 18% Quartz 11% Mica 8% Gypsum 2% Plagioclase 2%
										10YR2/2	
						3				75	
						4				75	
										10YR2/2	
						5				GZ 74 75 10YR2/2	
						6				75 10YR2/2 10YR5/4	
						Core Catcher				CC 10YR5/4	

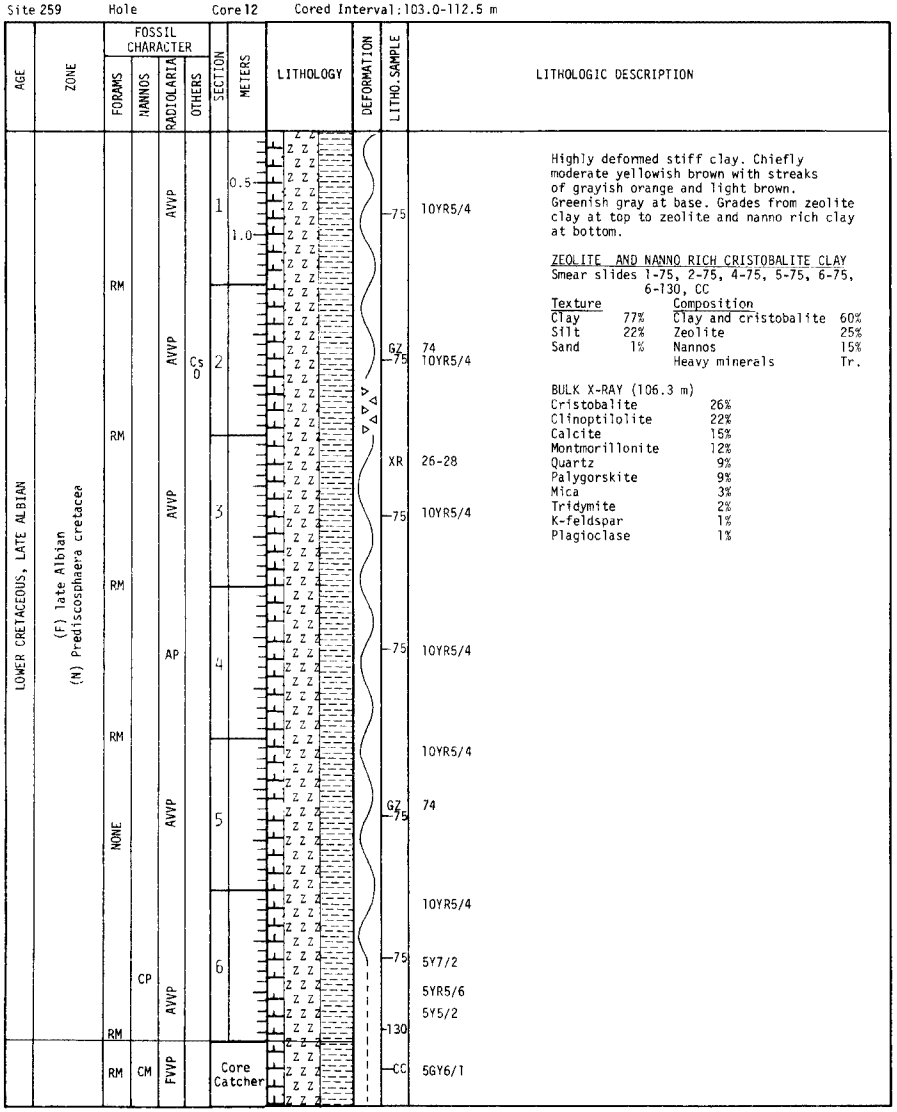
Site 259 Hole Core 10 Cored Interval: 84-93.5 m



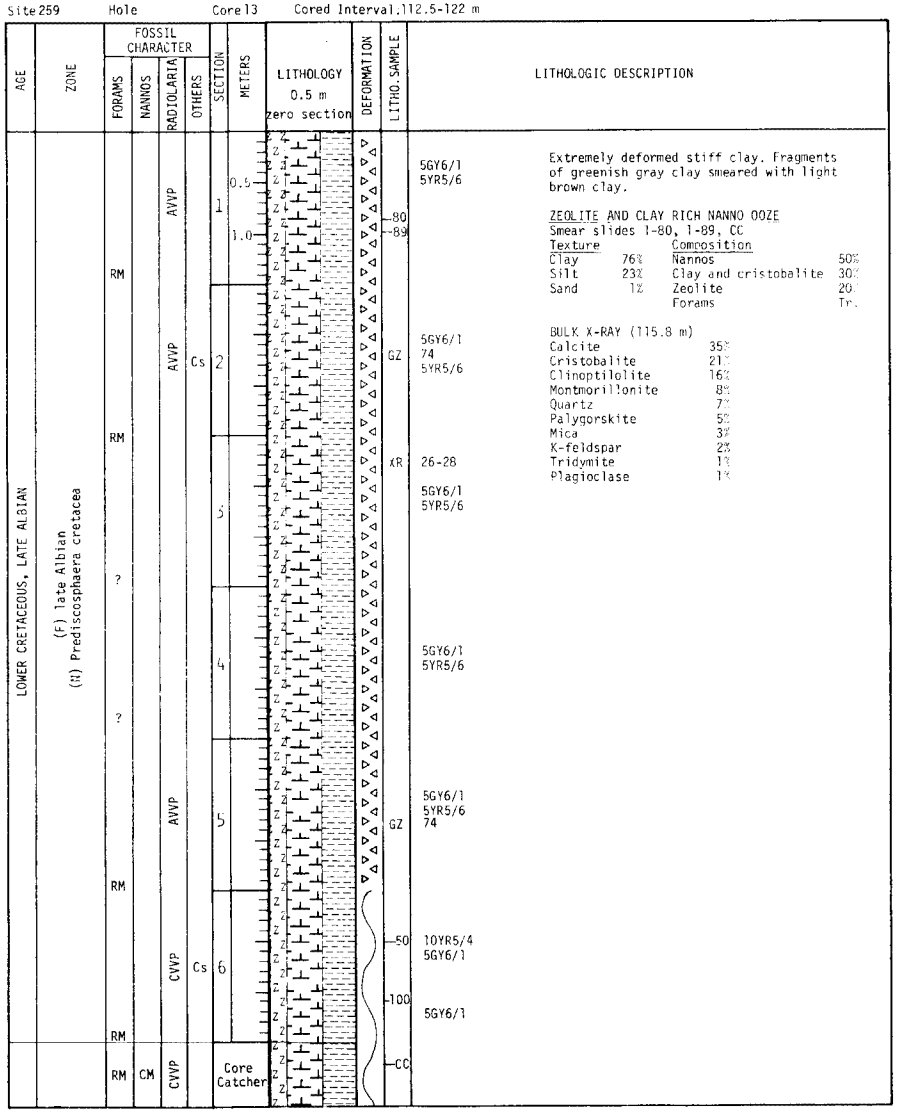
Site 259 Hole Core 11 Cored Interval: 93.5-103 m



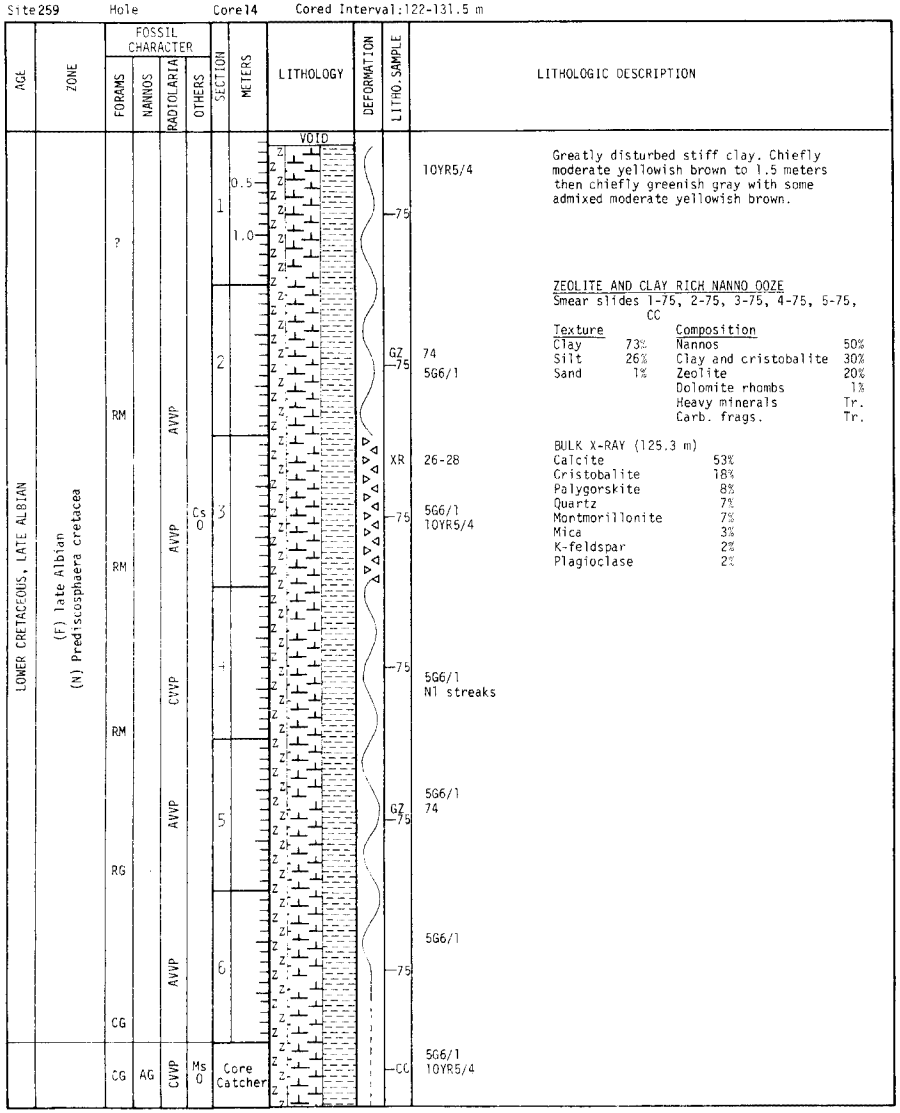
Site 259 Hole Core 12 Cored Interval: 103.0-112.5 m



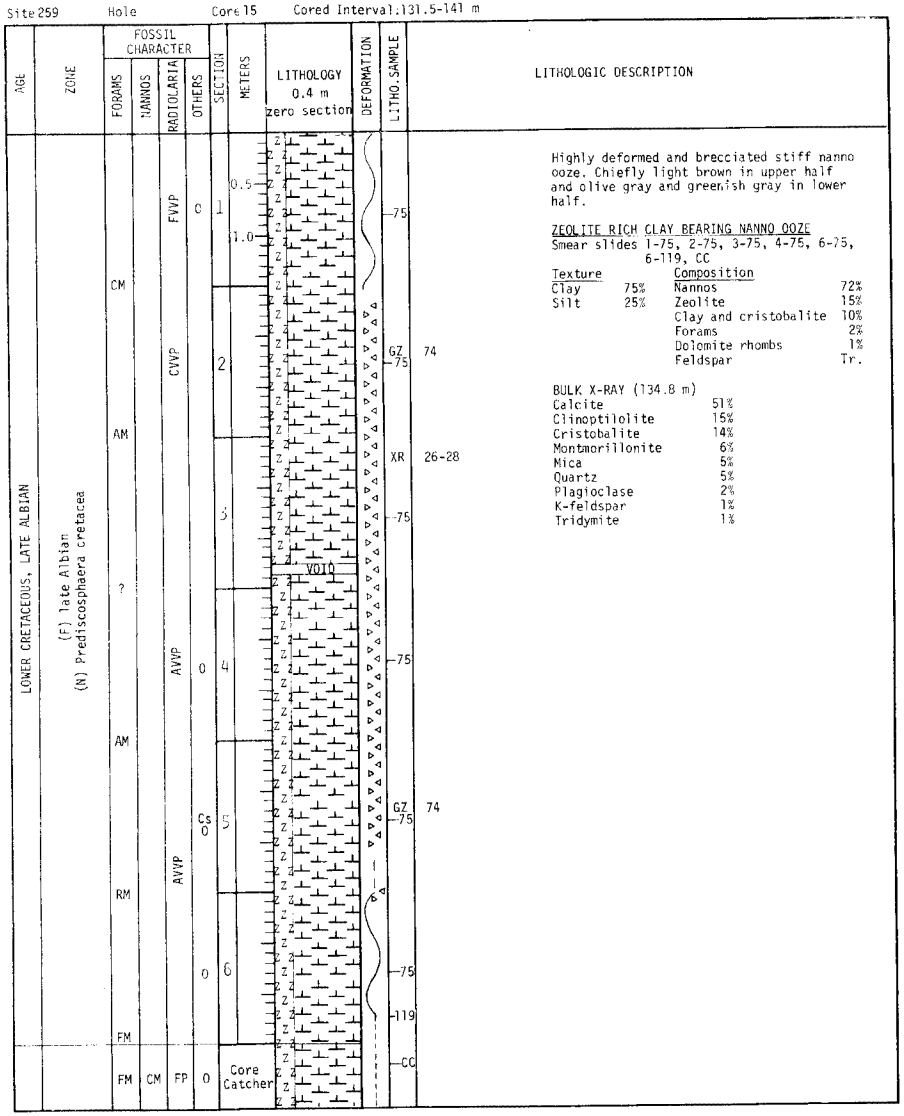
Site 259 Hole Core 13 Cored Interval: 112.5-122 m



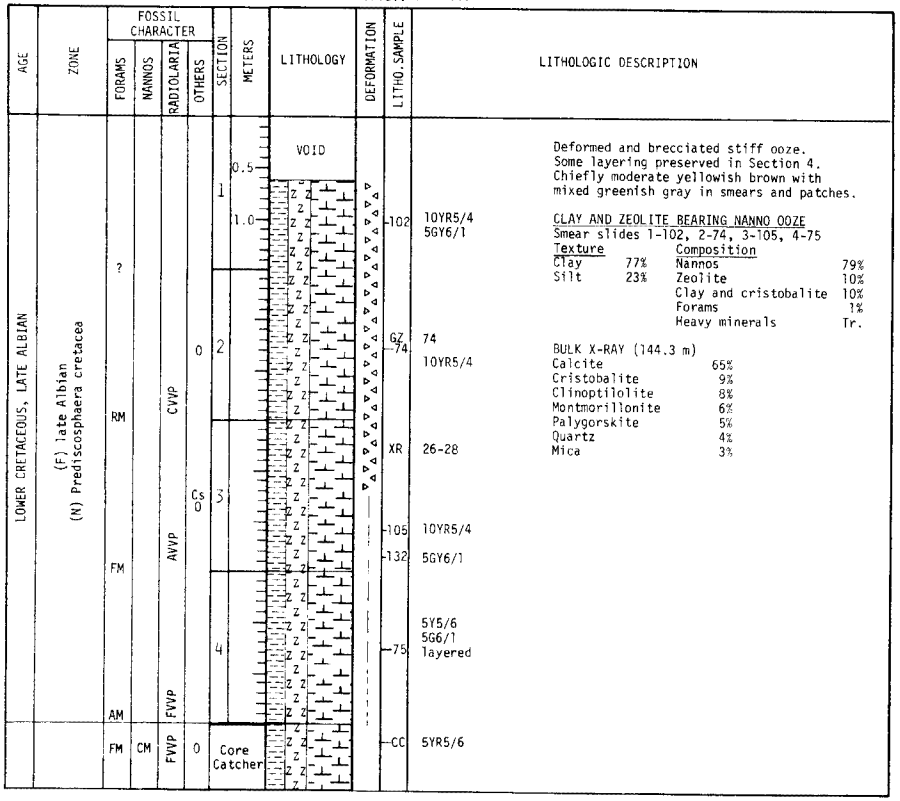
Site 259 Hole Core 14 Cored Interval: 122-131.5 m



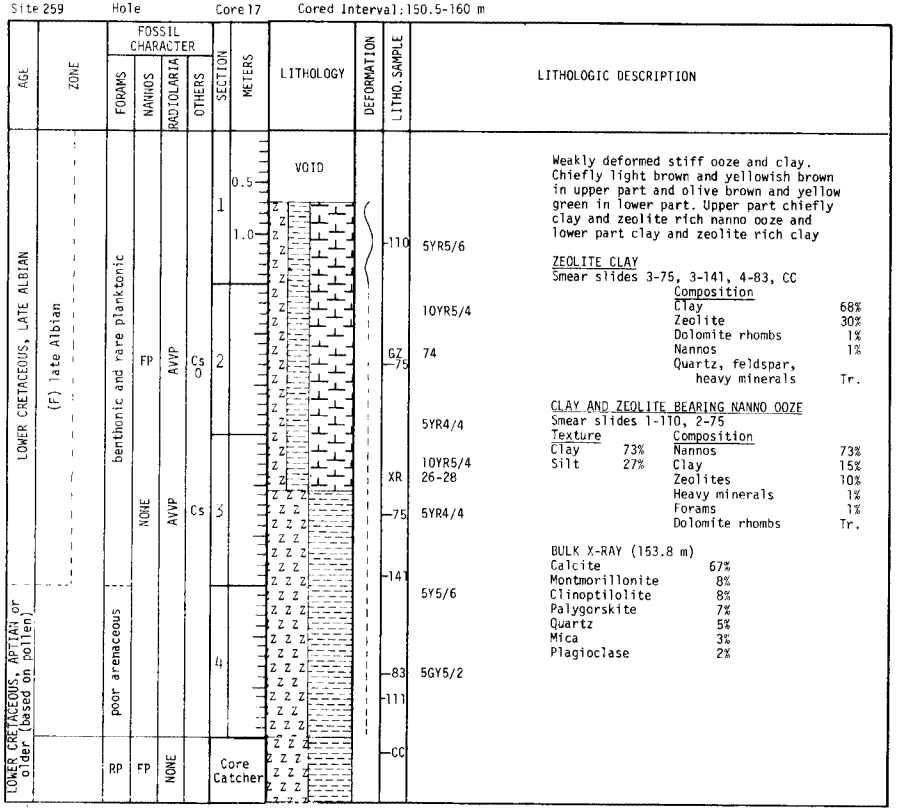
Site 259 Hole Core 15 Cored Interval: 131.5-141 m



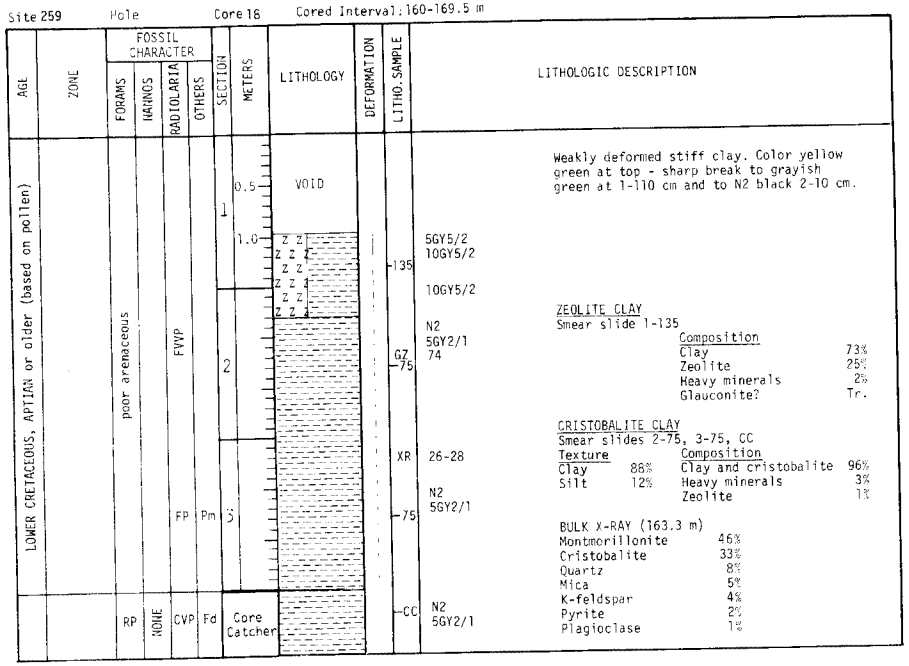
Site 259 Hole Core 16 Cored Interval: 141-150.5 m



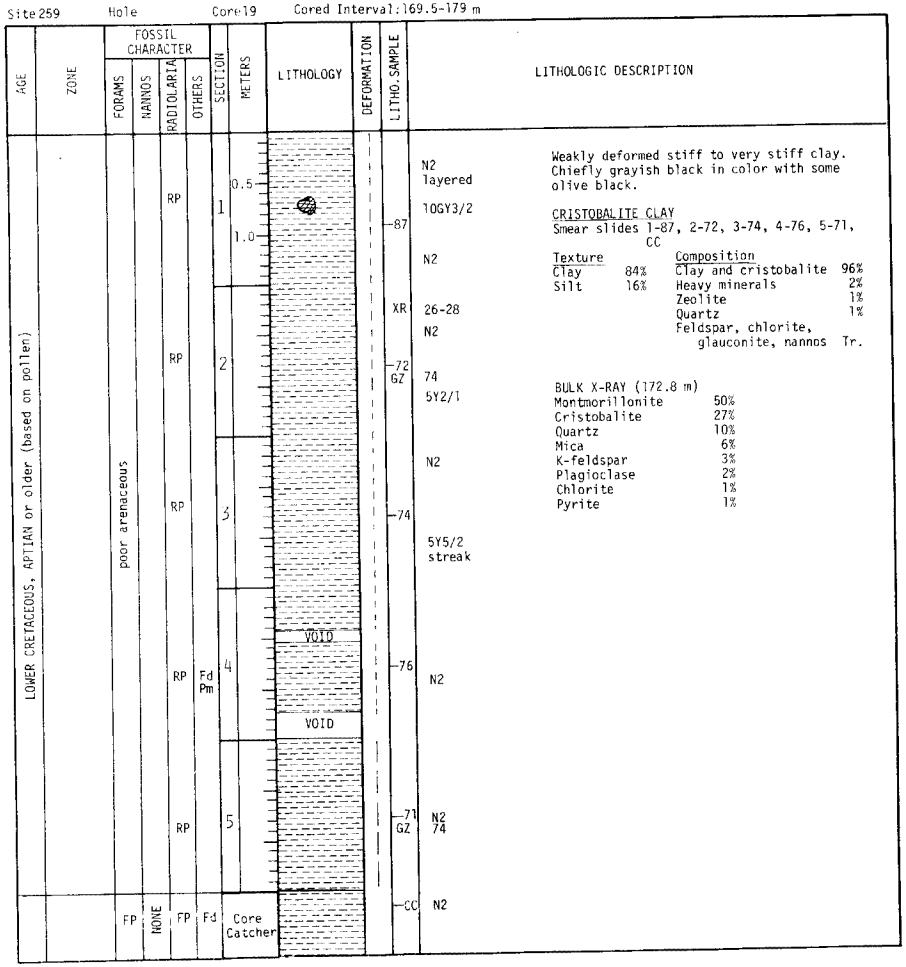
Site 259 Hole Core 17 Cored Interval: 150.5-160 m



Site 259 Hole Core 18 Cored Interval: 160-169.5 m



Site 259 Hole Core 19 Cored Interval: 169.5-179 m



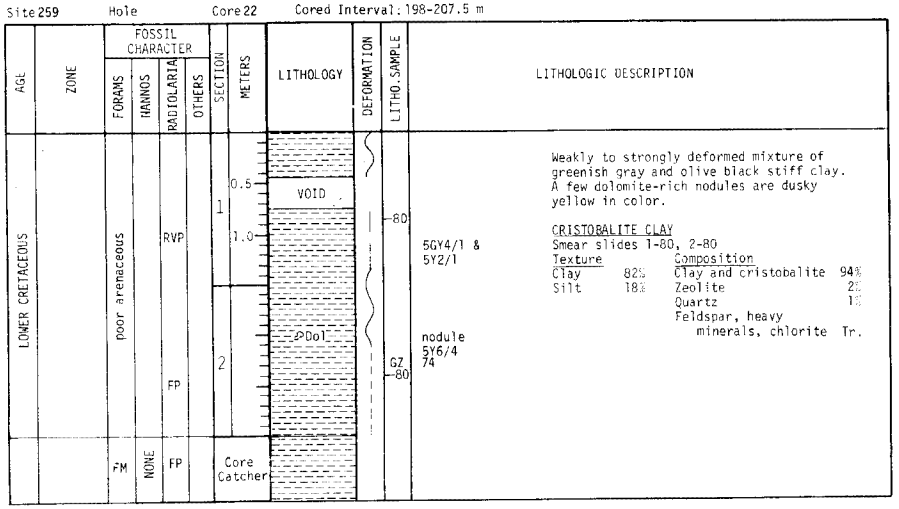
Site 259 Hole Core 20 Cored Interval: 179-188.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS	poor arenaceous			RP		1	0.5 1.0			5GY4/1 & 5Y2/1 75 5Y6/4 clot	Weakly to moderately deformed stiff clay. Alternating layers of dark greenish gray and olive black. CRISTOBALITE CLAY Smear slides 3-75, 4-75, 5-75 Texture: Clay 88%, Silt 12% Composition: Clay and cristobalite 97%, Heavy minerals 2%, Zeolite 1%, Quartz, feldspar, Tr.
				FP		2				GZ 74 75 5GY4/1 5Y2/1	BULK X-RAY (182.3 m) Montmorillonite 38% Cristobalite 23% Quartz 17% Mica 8% K-feldspar 7% Plagioclase 3% Kaolinite 2% Pyrite 1% Chlorite 1%
				FP		3				XR 26-28 75	
				RP	Pm	4				75 5GY4/1 5Y2/1 5Y7/2 nodule	
				RP		5				75 GZ 85 5GY4/1 5Y2/1	
		FP	NONE	FVP		Core Catcher				CC	

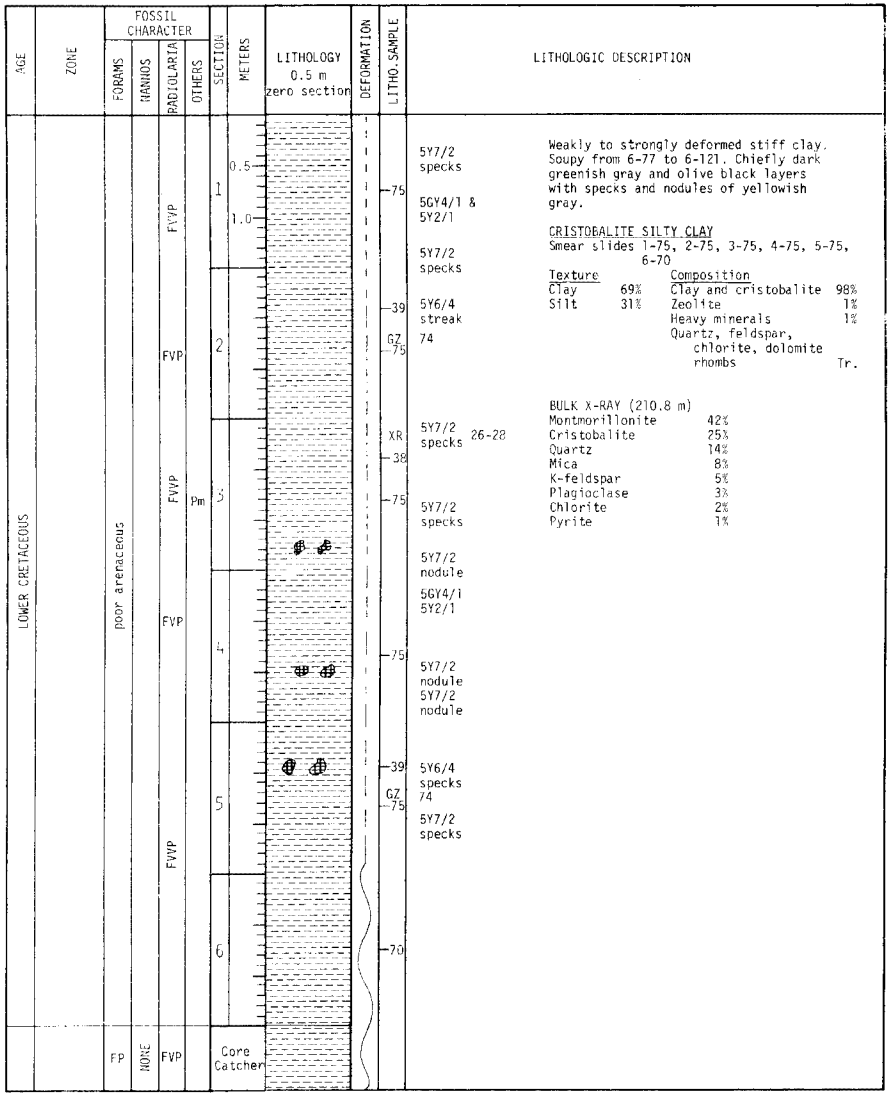
Site 259 Hole Core 21 Cored Interval: 188.5-198 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS	poor arenaceous			RVVP		1	0.5 1.0			5GY4/1 5Y2/1 75	Weakly to strongly disturbed clay - soupy in part. Chiefly interlayered greenish gray and olive black clay. CRISTOBALITE CLAY Smear slides 1-75, 2-75, 3-75, CC Texture: Clay 86%, Silt 14% Composition: Clay and cristobalite 95%, Zeolite 2%, Quartz 1%, Feldspar 1%, Heavy minerals 1%, Chlorite, mica Tr.
				FP		2				5Y7/2 nodule 32 GZ 74 75	BULK X-RAY (191.8 m) Montmorillonite 43% Cristobalite 28% Quartz 12% Mica 7% K-feldspar 5% Plagioclase 3% Kaolinite 1% Chlorite 1%
				FVVP	Fd Pm	3				5Y7/2 specks 15 XR 26-28 GZ 75 74	
						4				5GY4/1 5Y2/1	
						5				GZ 74	
						6		VOID VOID			
		FP	NONE	FP		Core Catcher				CC	

Site 259 Hole Core 22 Cored Interval: 198-207.5 m



Site 259 Hole Core 23 Cored Interval: 207.5-217 m



Site 259 Hole Core 24 Cored Interval: 217-226.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS	poor arenaceous	CM	NONE	CP		1	0.5			18	5Y7/2 nodules
				FVP			1.0			75	
											5Y7/2 specks
				FP		2				GZ 78	74
											5Y7/2 specks
						3				XR	26-28
										75	
											5Y7/2 nodule
											5Y7/2
						4		VOID			
						5					
						Core Catcher					

Moderately to strongly disturbed stiff clay. Chiefly dark greenish gray and olive black with yellowish gray nodules and specks. Nodules are dolomite cemented clay.

CRISTOBALITE CLAY
Smear slides 1-75, 2-78, 3-75, CC

Texture		Composition	
Clay	85%	Clay and cristobalite	97%
Silt	15%	Zeolite	1%
		Quartz	1%
		Heavy minerals	1%
		Feldspar, chlorite	Tr.

BULK X-RAY (220.3 m)

Montmorillonite	38%
Cristobalite	34%
Quartz	11%
Mica	6%
K-feldspar	4%
Plagioclase	4%
Kaolinite	3%

Site 259 Hole Core 25 Cored Interval: 226.5-236 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS	poor arenaceous	CM	NONE	CP		1	0.5				5Y6/4 nodule
				CP			1.0			75	
											5Y7/2 specks
				CP		2				GZ 75	74
										125	
											5GY4/1 & 5Y2/1
				FP	Pm	3				XR	26-28
										90	
						4		VOID		60	
						5					5GY4/1 & 5Y2/1
						6		VOID			
		CM	NONE	CP		Core Catcher					5GY4/1 & 5Y2/1

Weakly to strongly deformed stiff clay. Locally soupy in lower parts. Chiefly dark greenish gray and olive black with specks and nodules of yellowish gray.

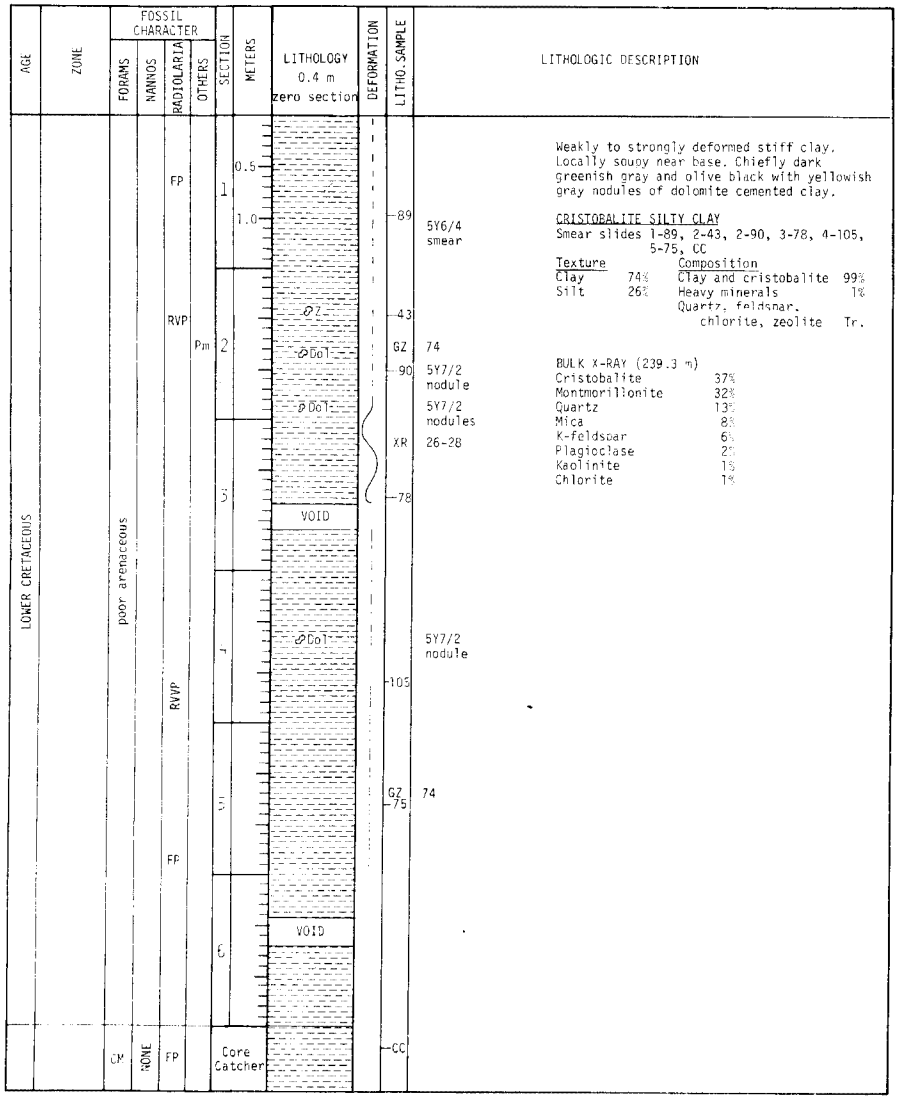
CRISTOBALITE CLAY
Smear slides 1-75, 2-75, 2-125, 3-90, 4-60

Texture		Composition	
Clay	86%	Clay and cristobalite	99%
Silt	14%	Heavy minerals	1%
		Quartz, feldspar, zeolite	Tr.

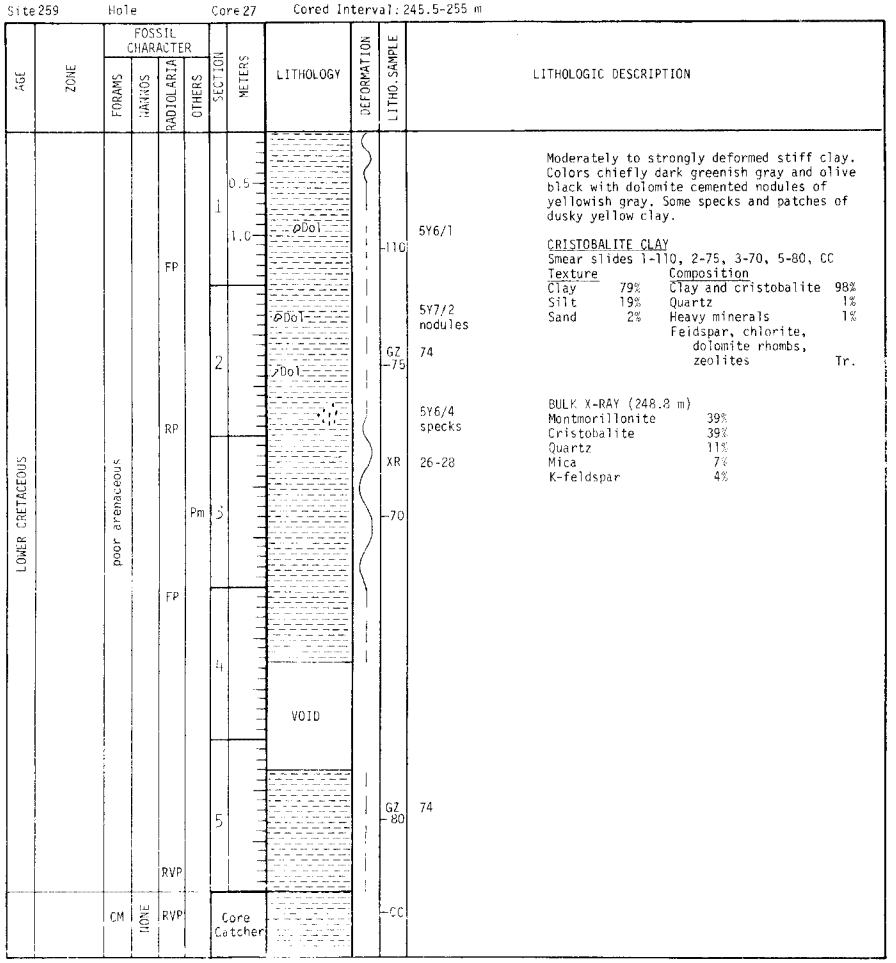
BULK X-RAY (229.8 m)

Montmorillonite	38%
Cristobalite	38%
Quartz	9%
Mica	5%
K-feldspar	4%
Gypsum	3%
Plagioclase	2%
Kaolinite	1%
Halite	Tr.

Site 259 Hole Core 26 Cored Interval: 236-245.5 m



Site 259 Hole Core 27 Cored Interval: 245.5-255 m



Site 259 Hole Core 28 Cored Interval: 255-264.5 m

AGE: LOWER CRETACEOUS
ZONE: poor arenaceous
FOSSIL CHARACTER: FORAMS: CM; NANNOS: NONE; RADIOLARIA: RP; OTHERS: Pm

SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
1	0.5				Weakly to moderately deformed stiff clay. Chiefly dark greenish gray and olive black in color with streaks and nodules of very light gray and yellowish gray.
				55	N8 streak
	1.0				5Y7/2 specks
		Dol			
2				70	
				GZ	74
					CRISTOBALITE CLAY Smear slides 1-55, 2-70, 3-75, 4-75, 6-70 Texture: Clay 77%, Silt 23% Composition: Clay and cristobalite 98%; Quartz 1%; Heavy minerals 1%; Feldspar, chlorite, zeolites Tr.
					BULK X-RAY (258.3 m) Montmorillonite 40% Cristobalite 34% Quartz 15% Mica 7% K-feldspar 4%
				XR	26-28
					5Y5/2 streak
3				75	
		Dol			N8 nodule
		Dol			
4					5GY4/1
5		Dol			5Y7/2 nodule
		VOID			
6		VOID			
		Dol		70	N8 nodule
					N8 specks
Core Catcher					

Site 259 Hole Core 29 Cored Interval: 264.5-274 m

AGE: LOWER CRETACEOUS
ZONE: poor arenaceous
FOSSIL CHARACTER: FORAMS: CM; NANNOS: NONE; RADIOLARIA: RVP; OTHERS: Pm

SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
1	0.5				Weakly to strongly deformed stiff clay with dolomite-cemented nodules. Chiefly dark greenish gray and olive black with yellowish gray and very light gray nodules.
	1.0	Dol			5Y7/2 nodule
				GZ 75	74
2					QUARTZ AND CRISTOBALITE RICH CLAY Smear slides 2-75, 3-45, CC Texture: Clay 78%, Silt 22% Composition: Clay and cristobalite 97%; Quartz 1%; Feldspar 1%; Heavy minerals 1%; Chlorite, dolomite rhombs, zeolite Tr.
		Dol			5Y7/2 nodule
		Dol			N8
				XR	26-28
		Dol		45	nodule
3				52	10YR5/4 nodule
					BULK X-RAY (267.8 m) Montmorillonite 52% Quartz 20% Cristobalite 14% Mica 11% K-feldspar 3%
4					
5		VOID			
6					
Core Catcher				CC	

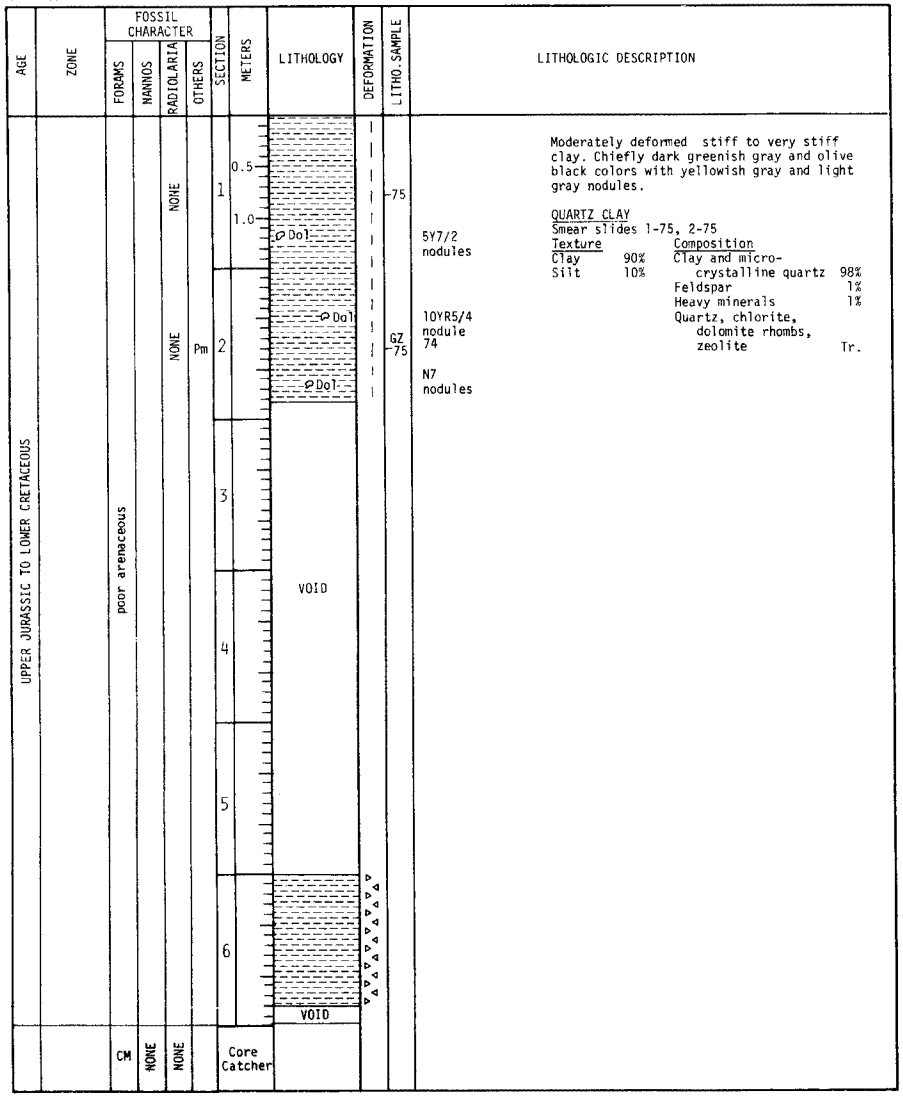
Site 259 Hole Core 30 Cored Interval: 274-283.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS	poor arenaceous			RVVP		1	0.5	Dol		10YR5/4 nodule	Weakly to moderately disturbed stiff clay with dolomite-cemented nodules. Colors chiefly dark greenish gray and olive black with moderate yellowish brown nodules.
							1.0	Dol		70 10YR5/4 nodule	
				RVVP		2		Dol		GZ 74 N8 10YR5/4 nodules 95	QUARTZ CLAY Smear slides 1-70, 2-95, 3-83, 4-75, 5-75, 6-75, CC Texture: Clay 90%, Silt 10% Composition: Clay and micro-crystalline quartz 98%; Quartz grains 1%; Heavy minerals 1%; Feldspar, chlorite, dolomite rhombs, zeolite Tr.
								Dol		N8 nodule	
				RVVP	Pm	3		VOID		XR 59-61 83	BULK X-RAY (277.6 m) Montmorillonite 50% Quartz 42% Mica 4% K-feldspar 4%
				RVVP		4				75	
				RVVP		5				GZ 74 75	
				NONE		6				75	
		CM	NONE	NONE		Core Catcher				CC	

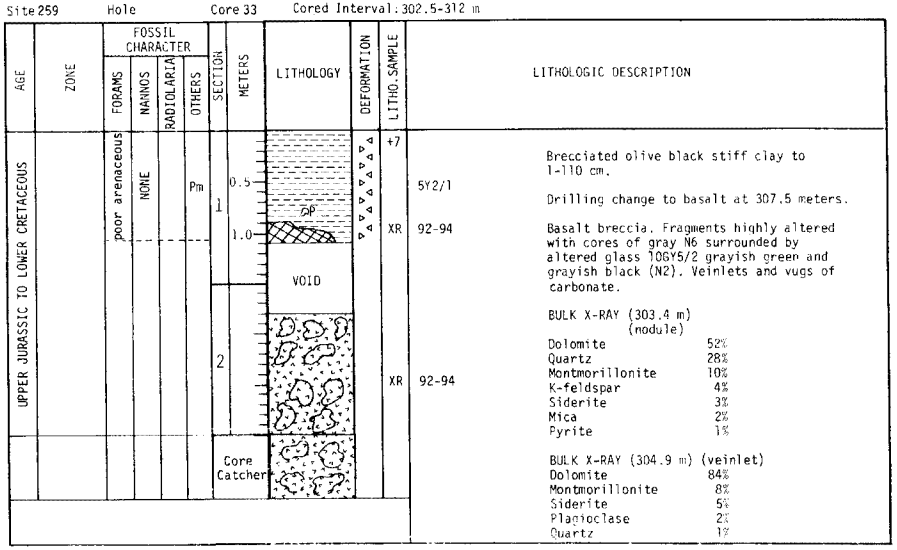
Site 259 Hole Core 31 Cored Interval: 283.5-293 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, lower part (based on pollen)	(Pm) Crybelosporites stylosus	poor arenaceous		RVVP		1	0.5	Dol		N7 nodule	Weakly to moderately deformed stiff to very stiff clay. Color chiefly dark greenish gray and olive black with nodules of moderate yellowish brown and light gray.
							1.0			75	
				RVVP		2		Dol		GZ 74 75	QUARTZ CLAY Smear slides 1-75, 2-75, 3-75, 4-75, CC Texture: Clay 93%, Silt 7% Composition: Clay and micro-crystalline quartz 97%; Quartz grains 1%; Feldspar 1%; Heavy minerals 1%; Chlorite, dolomite rhombs, zeolite T.
				RVVP	Pm	3		Dol		10YR5/4 nodules XR 26-28 75	BULK X-RAY (286.8 m) Quartz 52% Montmorillonite 40% Mica 4% K-feldspar 4%
				RVVP		4				75	
				RVVP		5		VOID		5Y5/2 nodule	
						6		VOID			
		CM	NONE	NONE		Core Catcher				CC	

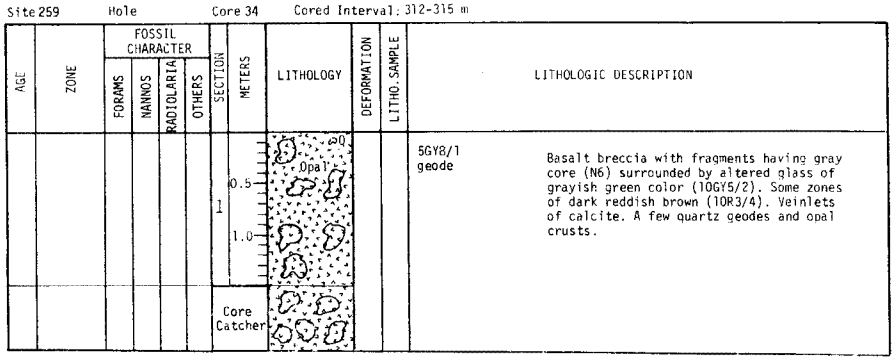
Site 259 Hole Core 32 Cored Interval: 293-302.5 m



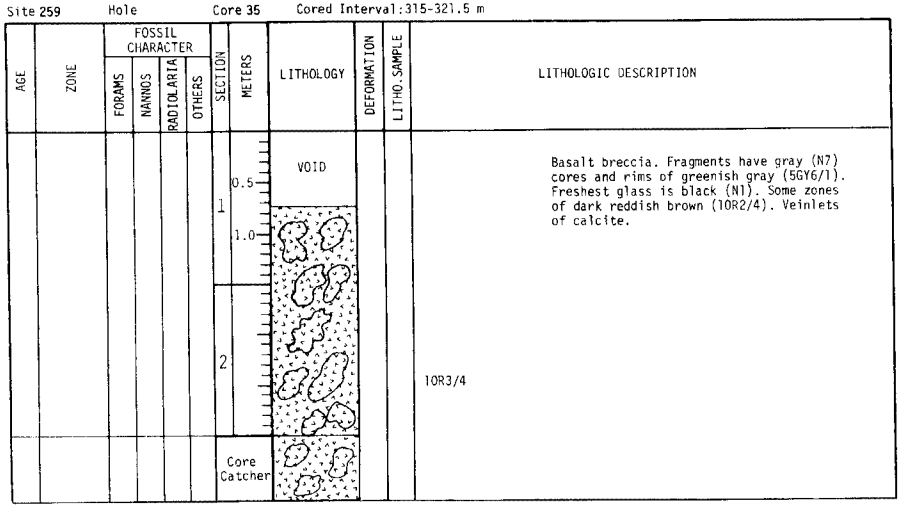
Site 259 Hole Core 33 Cored Interval: 302.5-312 m



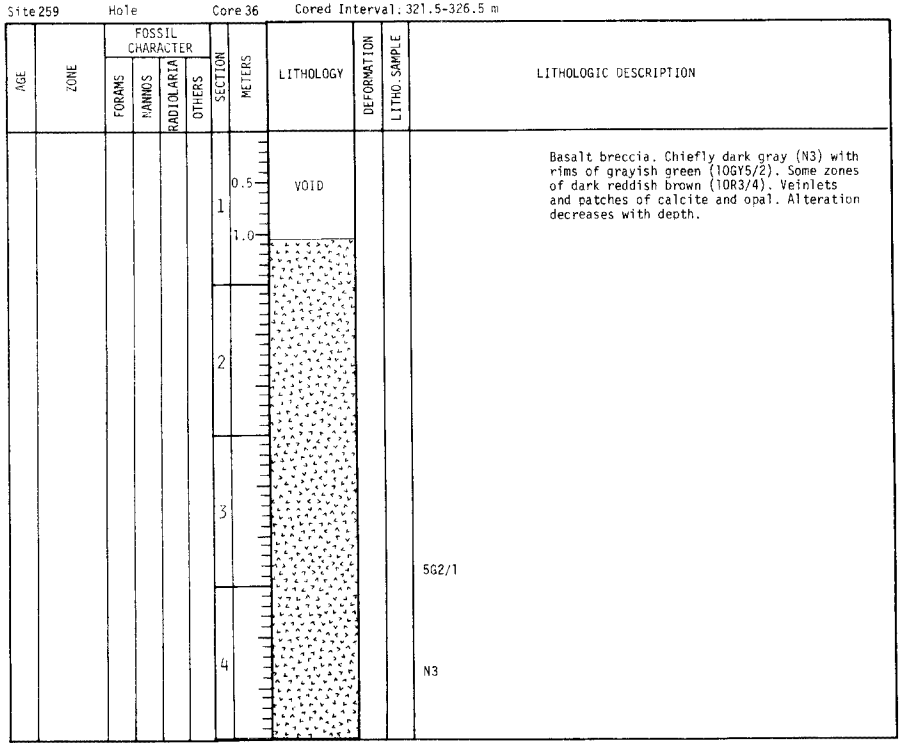
Site 259 Hole Core 34 Cored Interval: 312-315 m



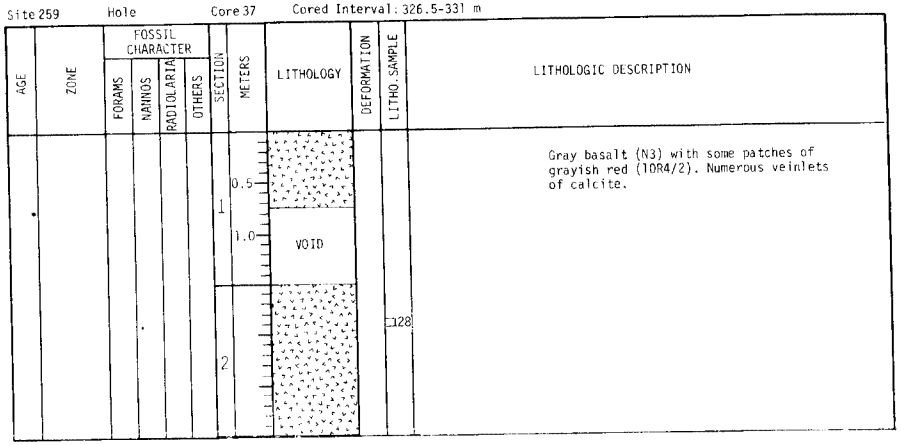
Site 259 Hole Core 35 Cored Interval: 315-321.5 m



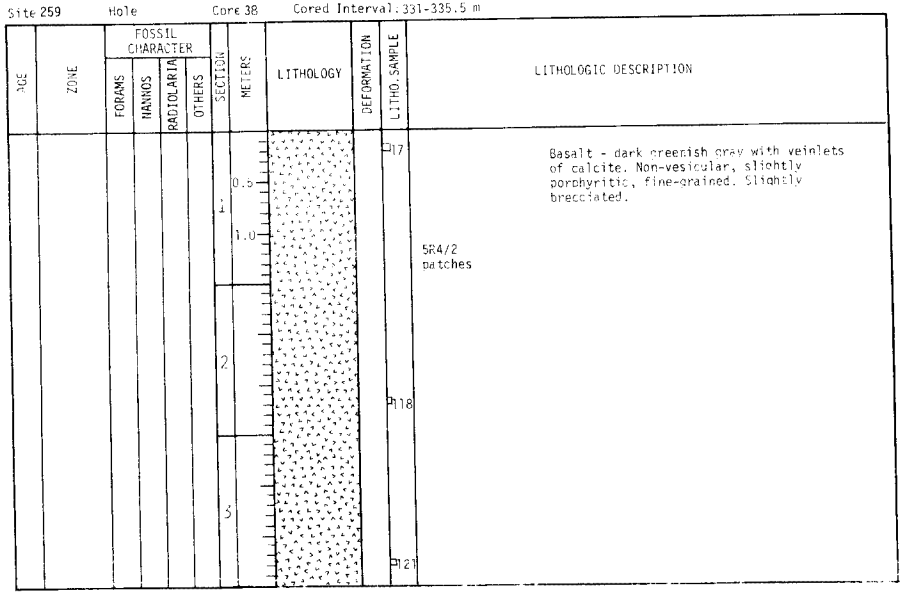
Site 259 Hole Core 36 Cored Interval: 321.5-326.5 m



Site 259 Hole Core 37 Cored Interval: 326.5-331 m



Site 259 Hole Core 38 Cored Interval: 331-335.5 m



Site 259 Hole Core 39 Cored Interval: 335.5-337 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5, 1.0	P		85	Basalt - dark greenish gray (5GY4/1) with veinlets of calcite. Fine-grained, non-porphyritic. Rare pyrite crystals in cavities. A few reddish zones (5R4/2).

Site 259 Hole Core 40 Cored Interval: 337-340.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5, 1.0	VOID		140	Basalt. Dark greenish gray (5GY4/1) with veinlets of carbonate. Non-vesicular, fine-grained, non-porphyritic.
						2		VOID			
						Core Catcher		NOT CORED			

Site 259 Hole Core 41 Cored Interval: 340.5-346 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5, 1.0	VOID			Basalt. Medium light gray (N6) medium grained with a few plagioclase phenocrysts. Microvesicular. Calcite and chlorite(?) veinlets. A few red zones (5R4/2).
						2					
						3					
						Core Catcher		NOT CORED			

DEEP SEA DRILLING PROJECT

LEG 27 SITE 260

SITE SUMMARY SHEET

POSITION: Latitude: 16°8.67'S Longitude: 110°17.92'E

Water depth (from sea level): 5702 corrected maters (Echo sounding)

Bottom felt at: 5709 meters (drill pipe) Penetration: 331 meters

Number of Holes: 1 Number of Cores: 20

Total length of cored section: 169.5 meters Total core recovered: 56.7 m

Percentage of core recovery: 33.5%

OLDEST SEDIMENT CORED:

Depth below sea floor: 323 meters Nature: Gray olive clay

Age: Lower Cretaceous Measured Velocity: 1.6 km/sec

BASEMENT:

Depth below sea floor: 0.38 seconds DT (seismic profiler)

Depth below sea floor: 323 meters (drilled)

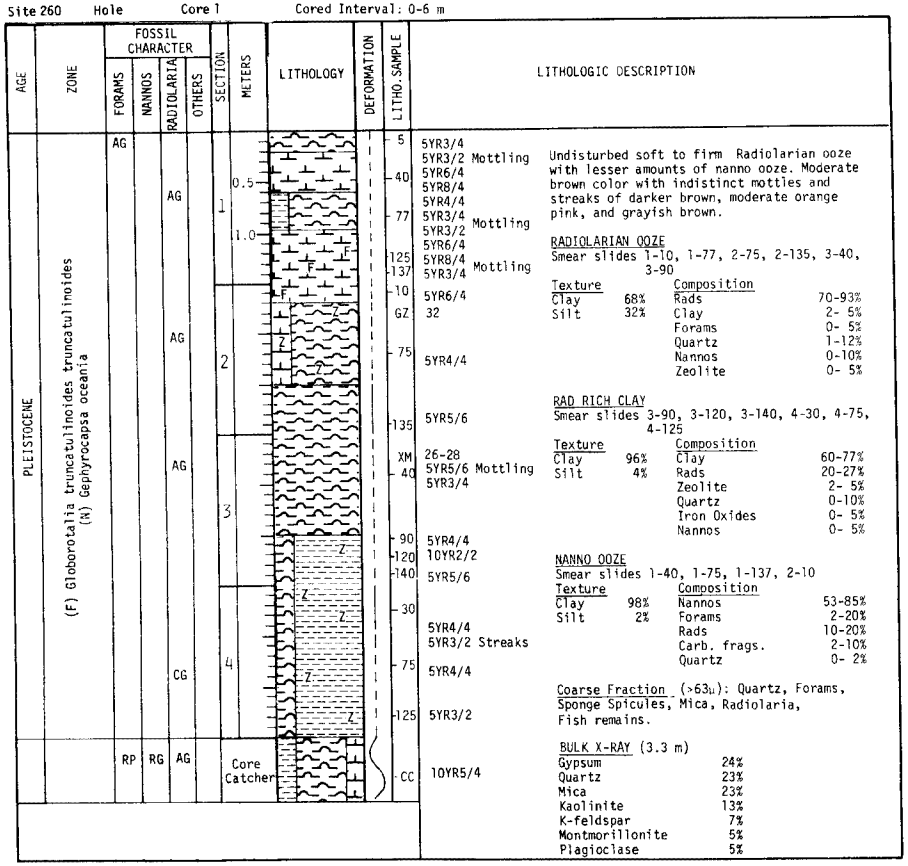
Inferred velocity to basement: 1.7 km/sec Nature: Basalt

PRINCIPAL RESULTS:

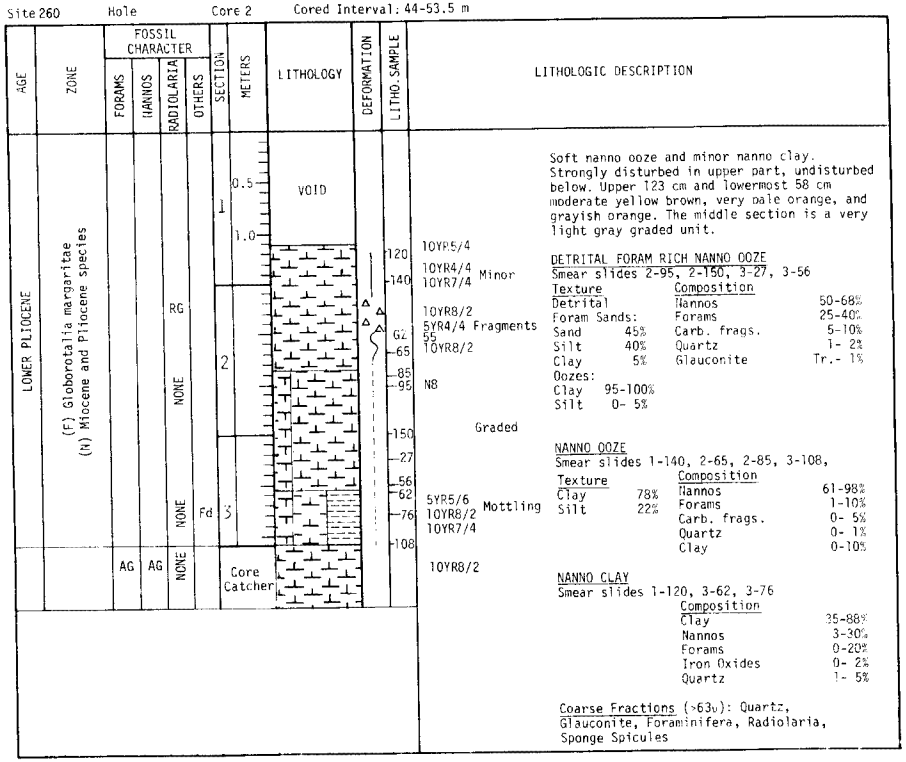
Site 260 is situated at a depth of 5709 m in the Gascoyne Abyssal Plain at the foot of the Exmouth Plateau. Quaternary to Upper Paleocene well-stratified brown nannoplankton foraminiferal and radiolarian ooze with clay, most of which has been redeposited by turbidity currents, unconformably overlies an acoustically transparent layer of Upper Cretaceous and Albian brown zeolitic clay, Albian nannoplankton ooze and clay, and basal Lower Cretaceous radiolarian and nannoplankton ooze. Acoustic basement, 9 m of which was penetrated and only 1 m recovered, before drilling difficulties intervened, is a fresh coarse-grained basalt, suggesting a sill, but absence of any sign of baking in the immediately overlying sediment makes this suggestion uncertain.

Of particular interest at this site are the basement age of Lower Cretaceous and the Upper Paleocene age of the calcareous turbidites. Since the transparent (Cretaceous) layer is structurally high at this site, older calcareous turbidites must be expected in the area.

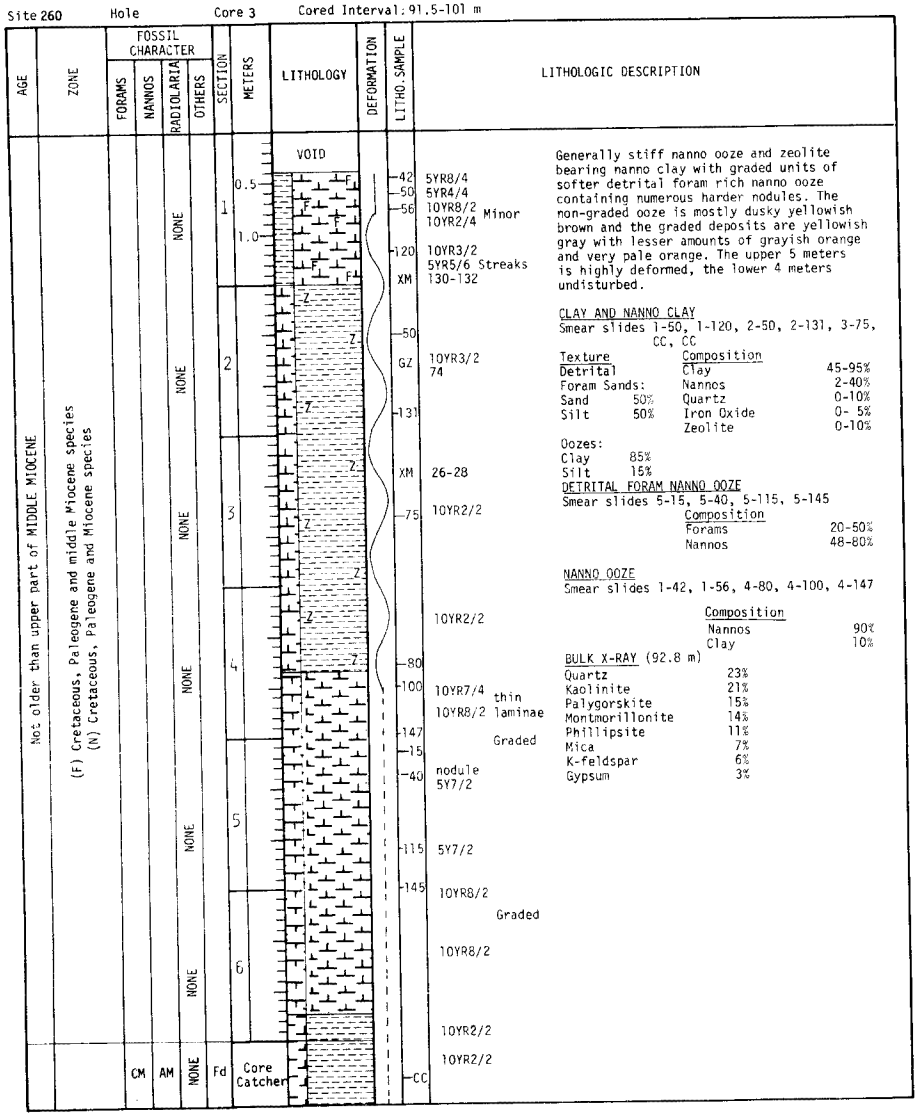
Site 260 Hole Core 1 Cored Interval: 0-6 m



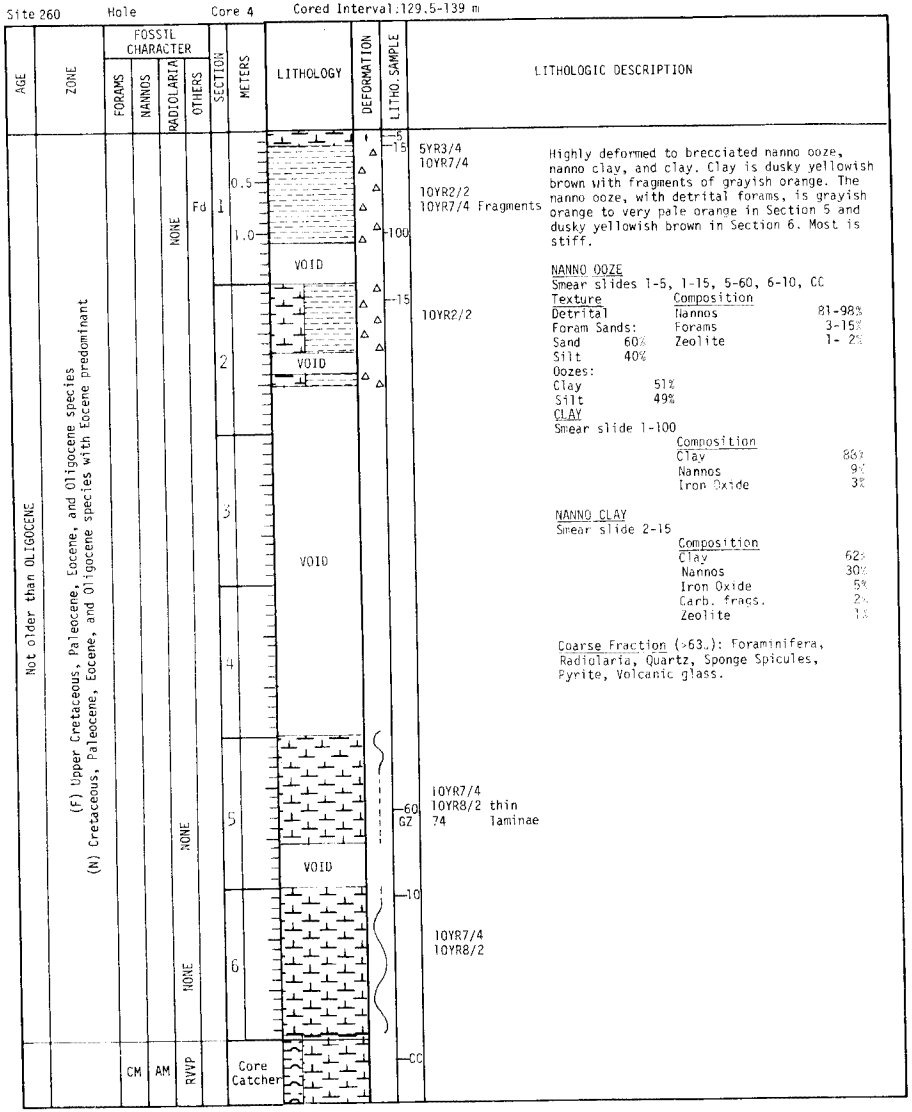
Site 260 Hole Core 2 Cored Interval: 44-53.5 m



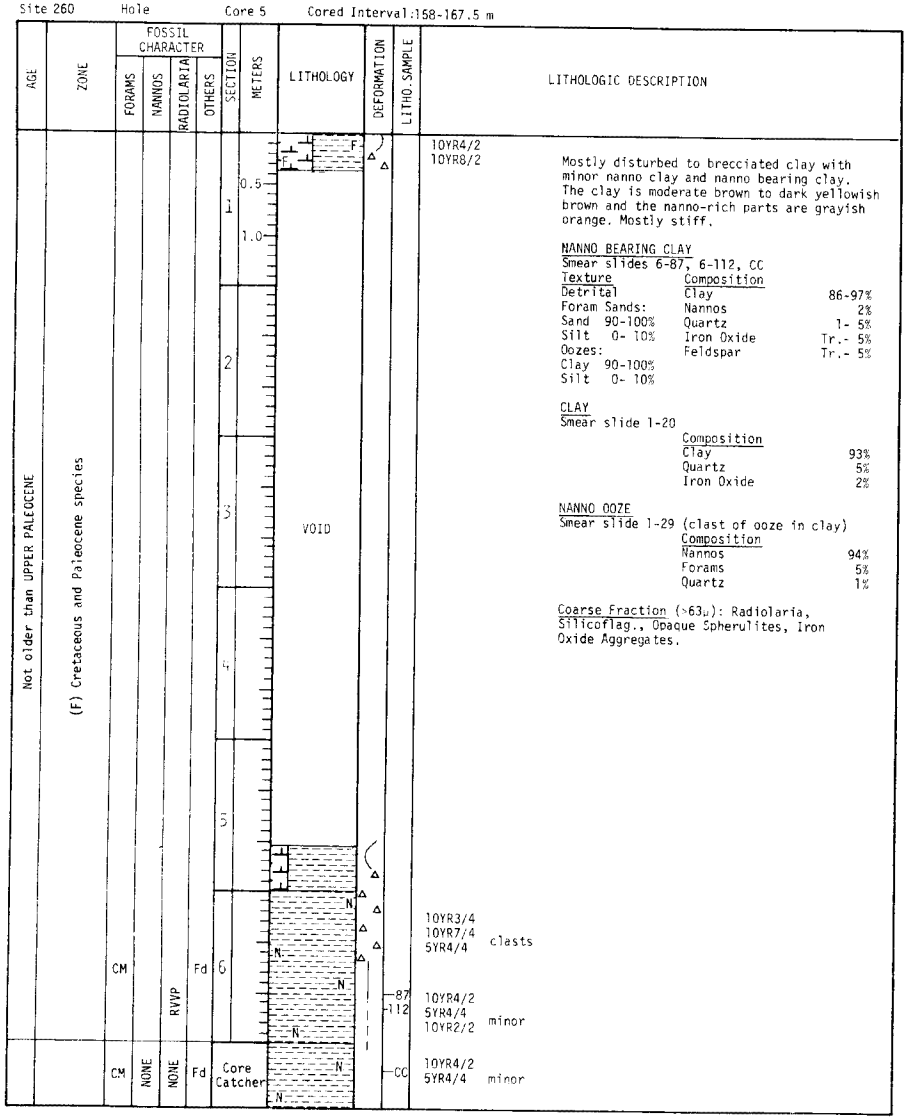
Site 260 Hole Core 3 Cored Interval: 91.5-101 m



Site 260 Hole Core 4 Cored Interval: 129.5-139 m



Site 260 Hole Core 5 Cored Interval:158-167.5 m



10YR4/2
10YR8/2

Mostly disturbed to brecciated clay with minor nanno clay and nanno bearing clay. The clay is moderate brown to dark yellowish brown and the nanno-rich parts are grayish orange. Mostly stiff.

NANNO BEARING CLAY
Smear slides 6-87, 6-112, CC

Texture		Composition	
Detrital		Clay	86-97%
Foram Sands:		Nannos	2%
Sand	90-100%	Quartz	1- 5%
Silt	0- 10%	Iron Oxide	Tr.- 5%
Oozes:		Feldspar	Tr.- 5%
Clay	90-100%		
Silt	0- 10%		

CLAY
Smear slide 1-20

Composition	
Clay	93%
Quartz	5%
Iron Oxide	2%

NANNO OOZE
Smear slide 1-29 (clast of ooze in clay)

Composition	
Nannos	94%
Forams	5%
Quartz	1%

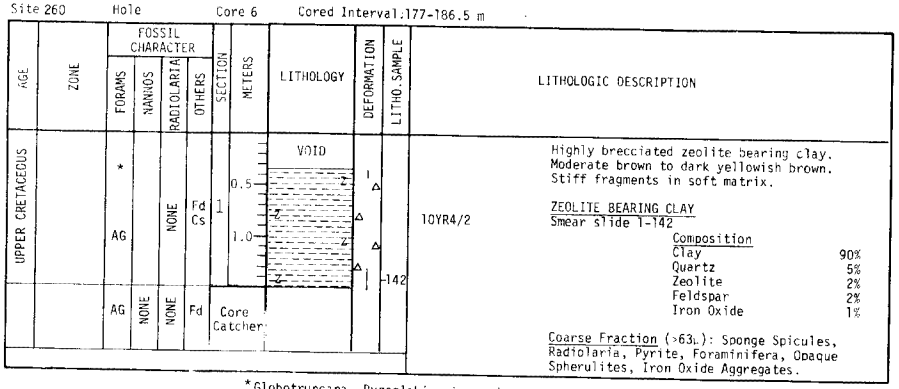
Coarse Fraction (>63μ): Radiolaria, Silicoflag., Opaque Spherulites, Iron Oxide Aggregates.

10YR3/4
10YR7/4
5YR4/4 clasts

10YR4/2
5YR4/4
10YR2/2 minor

10YR4/2
5YR4/4 minor

Site 260 Hole Core 6 Cored Interval:177-186.5 m



10YR4/2

Highly brecciated zeolite bearing clay. Moderate brown to dark yellowish brown. Stiff fragments in soft matrix.

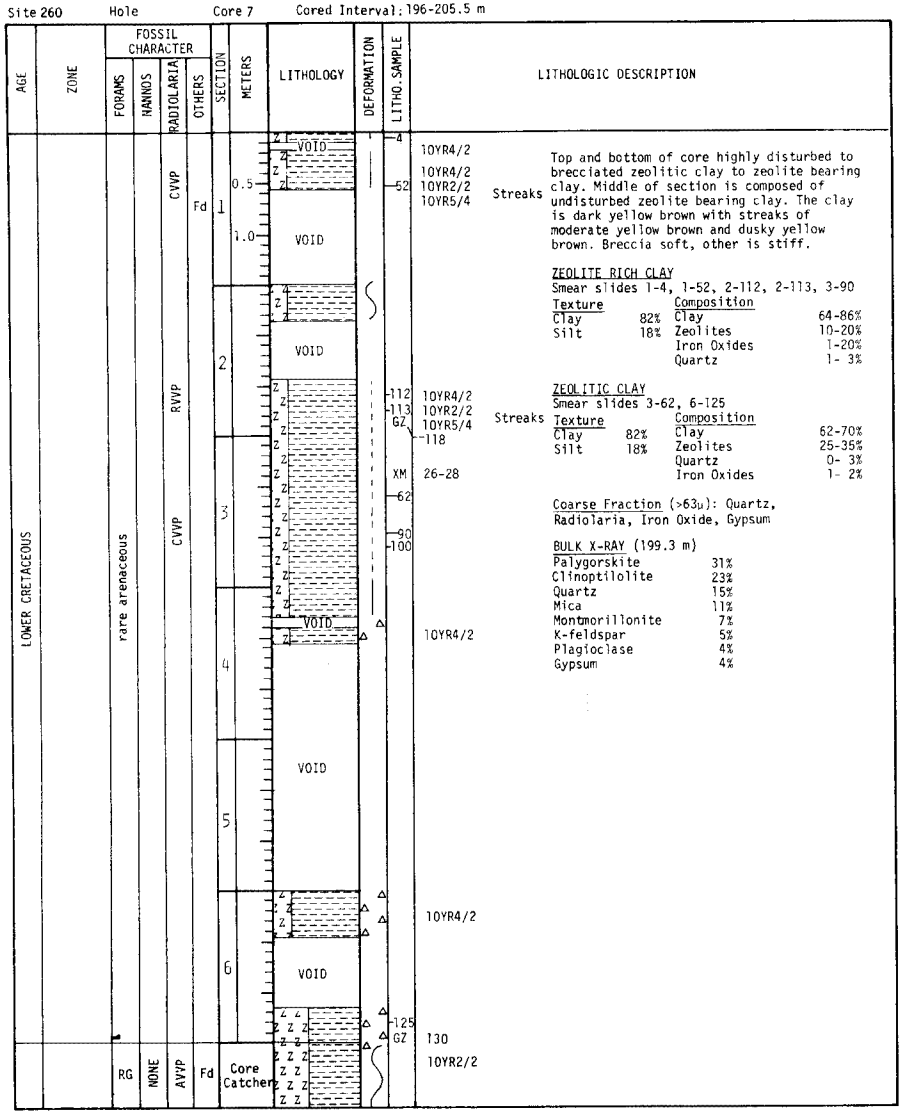
ZEOLITE BEARING CLAY
Smear slide 1-142

Composition	
Clay	90%
Quartz	5%
Zeolite	2%
Feldspar	2%
Iron Oxide	1%

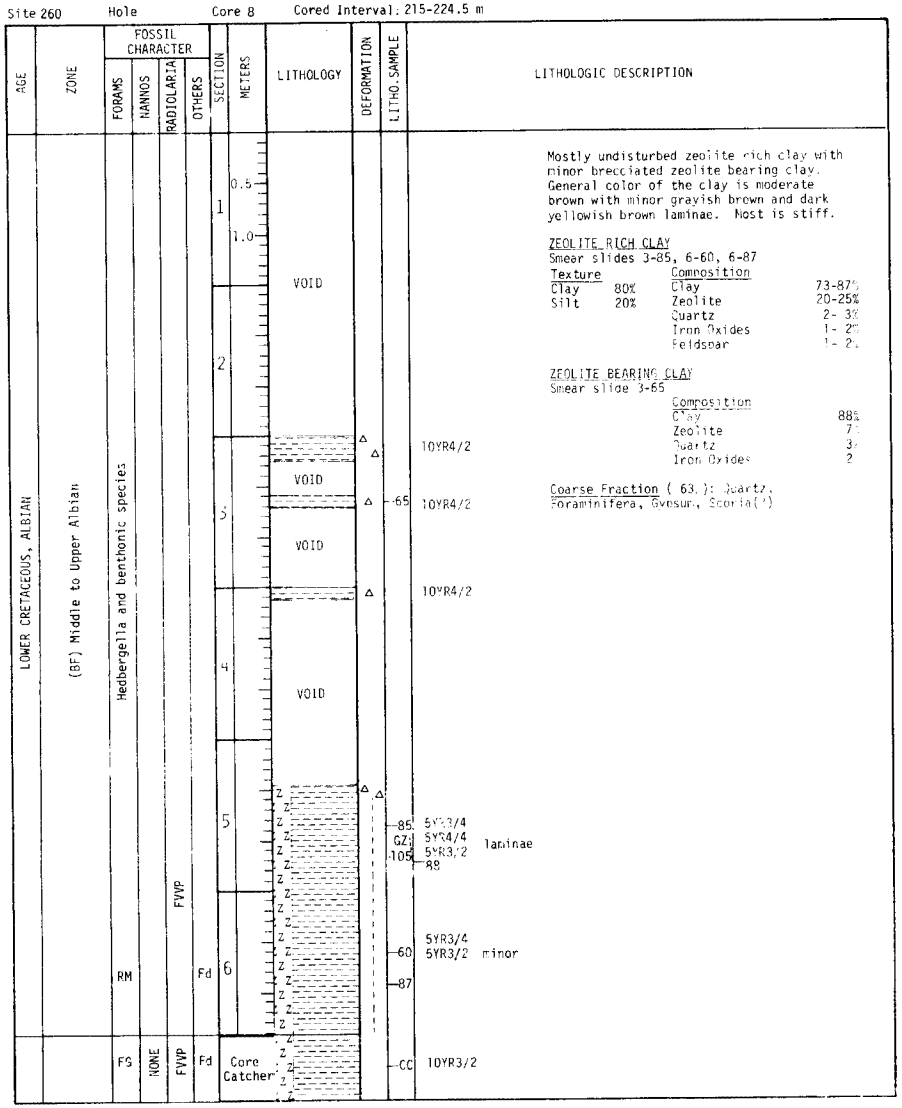
Coarse Fraction (>63μ): Sponge Spicules, Radiolaria, Pyrite, Foraminifera, Opaque Spherulites, Iron Oxide Aggregates.

*Globotruncana, Rugoglobigerina and arenaceous species

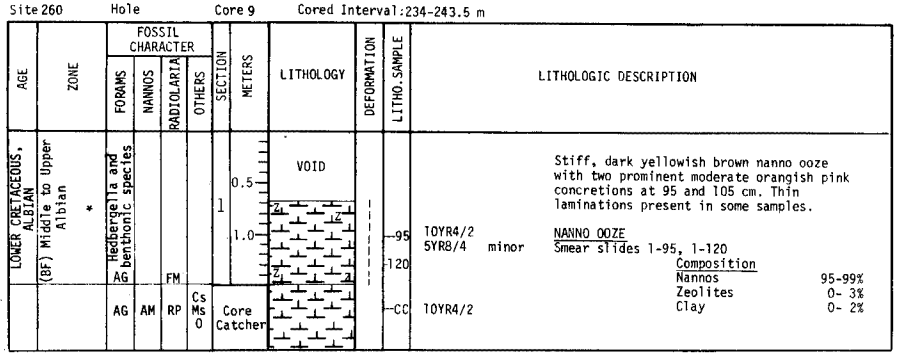
Site 260 Hole Core 7 Cored Interval: 196-205.5 m



Site 260 Hole Core 8 Cored Interval: 215-224.5 m

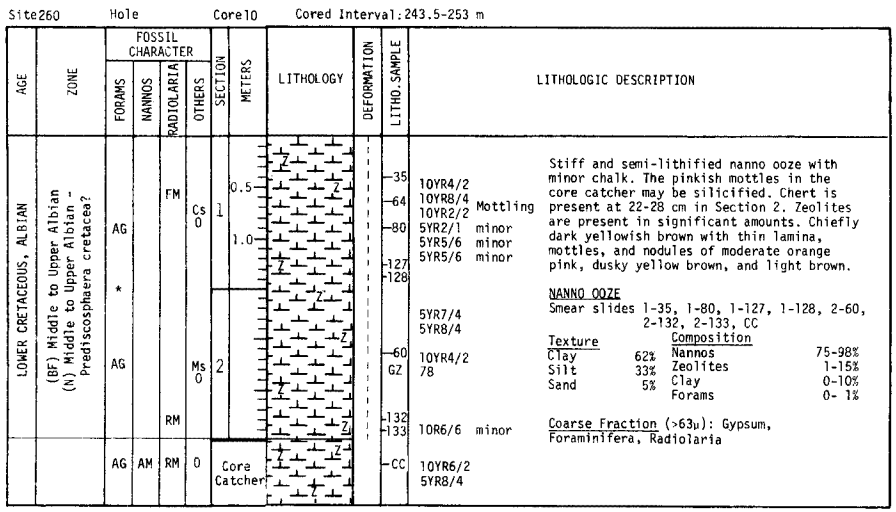


Site 260 Hole Core 9 Cored Interval: 234-243.5 m



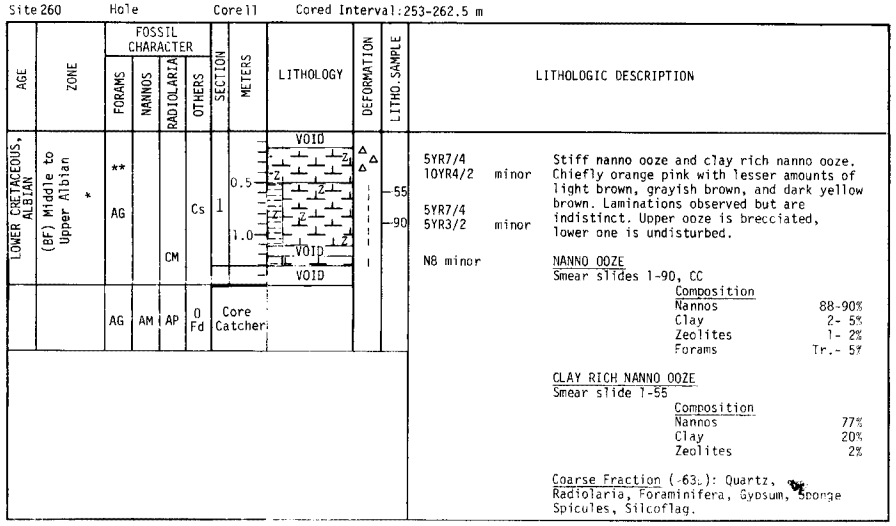
*(N) Middle to Upper Albian - Prediscosphaera cretacea?

Site 260 Hole Core 10 Cored Interval: 243.5-253 m



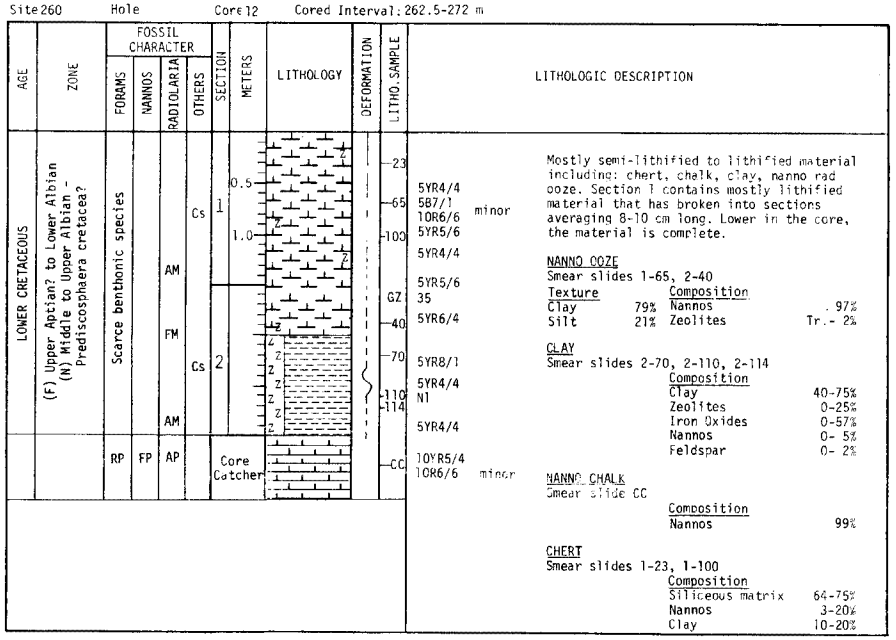
*Hedbergella and benthonic species

Site 260 Hole Core 11 Cored Interval: 253-262.5 m



*(N) Middle to Upper Albian - Prediscosphaera cretacea?
**Hedbergella and benthonic species

Site 260 Hole Core 12 Cored Interval: 262.5-272 m



Site 260 Hole Core 13 Cored Interval: 272-281.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE
LOWER CRETACEOUS	(F) Upper Aptian? to Lower Albian (N) Not older than Aptian			AM	Cs	1	0.5, 1.0			70, 107
		CM	AM	CP		Core Catcher				CC

5YR3/4
10YR6/2
5G5/2
5Y5/2
5GY5/2

Indurated nanno ooze (chalk) and stiff nanno rad ooze. Colors generally greenish but browns and yellowish browns present. Disturbance is slight.

NANNO RAD OOZE
Smear slide 1-70

Composition	
Radiolaria	50%
Nannos	30%
Clay	20%

CHALK

Composition	
Nannos	93%
Zeolites	7%

Site 260 Hole Core 14 Cored Interval: 281.5-291 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE
LOWER CRETACEOUS		NONE		NONE		1	0.5, 1.0	VOID		82, 118
		NONE	AP	RVVP		Core Catcher				

10Y4/2

Greenish gray lithified nodules set in a matrix of semi-lithified material of the same color. Laminations in nodules traced into matrix in one sample indicating they have not been disturbed.

RAD OOZE
Smear slide 1-118

Composition	
Radiolaria	92%
Nannos	2%
Clay	5%

ZEOLITE AND NANNO RICH CLAY
Smear slide 1-82

Clay	73%
Nannos	10%
Zeolites	10%
Quartz	3%
Feldspar	3%

NANNO CHALK
Smear slide CC

Nannos	95%
Clay	3%
Zeolites	2%

Coarse Fraction (>63μ): Gypsum, Iron Oxide Aggregates.

Site 260 Hole Core 15 Cored Interval: 291-300.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE
LOWER CRETACEOUS	(F) Upper Aptian? to Lower Albian	CM		FVVP	Fd	1	0.5, 1.0	VOID		115
						2				45, 85, 132
				AVVP		3				100
						4				130
		CM	AP	FVVP	Cs	Core Catcher				CC

10Y4/2
5G6/1
GZ 74
5G6/1
26-28 XM
5G6/1
5G4/1 minor
5G6/1
5G6/1
5B5/1

Stiff to semi-lithified greenish gray nanno ooze and nanno rich clay. Mostly laminated to thinly laminated with faint mottling present locally. Micro scale mottles and cross laminations are present in Section 2. Section 4 has numerous well-laminated nodules with lamina traceable into the matrix.

NANNO OOZE
Smear slides 2-45, 2-85, 2-132, 4-30, 4-130, CC

Texture		Composition	
Clay	79%	Nannos	82-98%
Silt	21%	Clay	0-10%
		Zeolites	1- 2%

CLAY
Smear slides 3-30, 3-100

Composition	
Nannos	5-20%
Clay	77-90%
Zeolites	2%

Coarse Fraction (>63μ): Gypsum, Foraminifera, Radiolaria, Iron Oxide Aggregates

BULK X-RAY (294.3 m)

Quartz	74%
Montmorillonite	14%
Mica	6%
K-feldspar	3%
Calcite	3%

Site 260 Hole Core 16 Cored Interval: 300.5-310 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE
LOWER CRETACEOUS		NONE		AVP		1	0.5, 1.0	VOID		70
						2				9, 40, 109, 143, 149
		NONE	NONE	FVVP		Core Catcher				CC

5G4/1
5G5/2
GZ 74
10YR4/2
10R4/2 chert
10Y4/2 clay

Greenish gray clay, semi-lithified and nodular in upper part and stiff in lower part. Two thin zones of rad rich clay and rad ooze at 16 and 150 cm of Section 2.

CLAY
Smear slides 1-70, 2-40, 2-109, 2-143, CC

Texture		Composition	
Clay	78%	Clay	88-97%
Silt	22%	Radiolaria	Tr.-10%
		Iron Oxide	1- 3%
		Chlorite	0-10%

RAD OOZE
Smear slides 2-9, 2-149

Composition	
Radiolaria	100%

Site 260 Hole Core 17 Cored Interval: 310-319.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS	(F) Upper Aptian? to Lower Albian (N) Not older than middle Albian	scarce benthonic		AVP		1	0.5	VOID		-35	Greenish gray nanno rad ooze grading downward into moderate brown nanno ooze. The upper ooze is stiff but the lower one is a mixture of well indurated and soupy material. Chert was found at 80 cm and in the core catcher.
				FVVP			1.0			-52	5G6/1
											Gradual color change
										-95	5YR4/4
										-135	5YR4/4
		RG	AM	FVVP		Core Catcher					10R4/2

NANNO OOZE
Smear slides 1-35, 1-95, 1-135

Composition	
Nannos	97-99%
Radiolaria	0- 2%
Iron Oxide	0- 2%
Zeolites	0- 1%

NANNO RAD OOZE
Smear slide 1-52

Composition	
Radiolaria	60%
Nannos	40%

CHERT

Site 260 Hole Core 18 Cored Interval: 319.5-322.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS	(F) Upper Aptian? to Lower Albian (N) Not older than middle Albian	scarce benthonic		CVVP		1	0.5	VOID		-135	Moderate stiff nanno ooze changing downward to a semi-lithified dark red brown clay. Angular fragments of chert indicate upper part has been brecciated in drilling. The red clay is quite calcareous; the green zones are essentially non-calcareous. Basalt with abundant fractures filled with calcite and chlorite(?) begins at 127 cm of Section 2.
							1.0				5YR4/4
				AP		2				-20	
				AP						-77	5YR2/3 rep.
		FG	AP	FVP						-94	10Y5/2
										-101	
										-113	10G4/2 minor
										-123	
						Core Catcher					5Y2/1

NANNO OOZE
Smear slides 1-135, 2-20, 2-123

Composition	
Nannos	73-90%
Clay	5-20%
Zeolites	0- 2%
Iron Oxide	3- 5%

CLAY AND RAD CLAY
Smear slides 2-77, 2-94

Composition	
Clay	70-79%
Radiolaria	0-30%
Iron Oxide	0-20%

BASALT
Fresh, fine- to medium-grained, olive black basalt. Chloritic alteration along fractures. Some calcite veinlets have formed in the fractures.

Site 260 Hole Core 19 Cored Interval: 323.5-329 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						Core Catcher		VOID			

Site 260 Hole Core 20 Cored Interval: 329-332 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
							0.5			5Y2/1	BASALT Fresh, fine- to medium-grained olive black basalt. Chloritic alteration along fractures. Some calcite veinlets have formed in the fractures.

DEEP SEA DRILLING PROJECT

LEG 27 SITE 261

SITE SUMMARY SHEET

POSITION: Latitude: 12°56.83'S Longitude: 117°53.56'E

Water depth (from sea level): 5667 corrected meters (Echo sounding)

Bottom felt at: 5687 meters (drill pipe) Penetration: 579.5 meters

Number of Holes: 1 Number of Cores: 39

Total length of cored section: 342 meters Total core recovered: 125.8 m

Percentage of core recovery: 36.78%

OLDEST SEDIMENT CORED:

Depth below sea floor: 532 meters Nature: Nanno claystone

Age: Upper Jurassic (Oxfordian) Measured Velocity: 1.7 to 2.0 km/sec

BASEMENT:

Depth below sea floor: 0.61 seconds DT (seismic profiler)

Depth below sea floor: 47 meters (drilled)

Inferred velocity to basement: 1.74 km/sec Nature: Top 10 m a sill, the rest oceanic pillow basalt

PRINCIPAL RESULTS:

Site 261 is situated at a depth of 5667 m in the northeast Argo Abyssal Plain, about 200 km distant from the foot of the Scott Plateau. Seismic profiles of Lamont-Doherty Geological Observatory show, as at Site 260, two principal layers: a flat-lying well-stratified surface sequence, unconformably overlying a transparent layer that is draped over acoustic basement. Only the upper part of the well-stratified layer is present at this site, and it consists of Quaternary radiolarian clay and Lower Pliocene to Upper Miocene displaced carbonate oozes. The transparent layer comprises Upper Cretaceous brown and gray claystone, and basal Jurassic (Oxfordian) brown nannoplankton claystone. Beneath baked and discolored sediments is a 10 m thick sill of fresh coarse-grained basalt, which overlies a complex of finer-grained and highly altered basalt and pillow basalt breccia. Altogether 47.5 m of basalt was penetrated for a recovery of 29 m. The most important result is the age of the basal sediment of Oxfordian, which makes this the oldest dated sediment in the Indian Ocean.

Site 261 Hole Core 1 Cored Interval: 0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
QUATERNARY	(N) Emiliania huxleyi?	RM	RG	AG		Core Catcher				CC 5GY4/1	Soft, dark greenish gray clay, rich in diatoms and radiolaria

RADIOLARIA AND DIATOM RICH CLAY
Smear slide CC

Composition	
Clay	60%
Radiolaria	20%
Diatoms	14%
Silicoflag.	3%
Sponge Spicules	2%
Fe Oxides	1%
Nannos	Tr.
Quartz; Carb.	Tr.
Volcanic Glass	Tr.

Site 261 Hole Core 2 Cored Interval: 9.5-19.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
QUATERNARY		NONE				1	0.5	VOID		116 5Y6/1 130 10YR6/2 145 10R6/2 150 5YR6/4 25 10R2/2 26 10YR6/2 5G6/1 5Y6/1 GZ 74 5Y5/2 125 5Y6/1	Light brown and greenish gray clay, variable in color, also including dusky red and medium bluish gray. No visible lithological changes accompany these color changes. The clay is rich in Radiolaria throughout and also in Diatoms at the bottom and at the top. Volcanic ash up to 15% is present at the base of Section 1. Slight to moderate deformation is present throughout.
							1.0				
						2					
		NONE	NONE	AG		Core Catcher				CC 10YR6/2	

RAD RICH CLAY
Smear slides 1-116, 1-130, 1-145, 1-150, 2-25, 2-26, 2-125, CC

Texture		Composition	
Clay	80%	Clay	60-87%
Silt	20%	Rads	10-20%
		Diatoms	2-14%
		Volcanic Glass	Tr.-15%
		Sponge Spicules, Silicoflag.	Tr.- 2%
		Fe Oxides	Tr.- 1%
		Opaques, Carb. Frag., Nannos, Quartz, and Feldspar	Tr.

Site 261 Hole Core 3 Cored Interval: 47.5-57 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
Not older than LOWER PLIOCENE	(F) Globorotalia margaritae (lower Pliocene) (N) Reticulofenestra pseudoumbilica (lower Pliocene)			NONE		1	0.5	VOID		105 5Y8/1 113 5N5 115 5Y5/2 145 5Y8/1	Predominantly stiff greenish gray clay, rich in nannos and also foraminifera in one sample. However, some samples, e.g. at 1-115, are almost devoid of these fossils. There is considerable variation in color in the bluish gray, olive gray and yellowish gray range. Detrital foraminifera are conspicuous at one level and clays devoid of carbonate occur at two levels.
							1.0				
						2				5GY6/1 GZ 74 114 115 3N3 5G6/1 148 5GY6/1 5 5G6/1 XR 26-28 43 5GY7/1 48 5GY6/1	
						3				5B6/1 5B7/1 5B6/1 95 5Y8/1 5GY6/1 140 5Y5/1	
						4				5Y5/1 5Y7/1 40 5Y8/1 67 5Y6/1 5GY5/1 90 5G7/1 5B8/1 106 5GY5/1 123 5B6/1 124 5Y8/2 137 146	
		AP	AM	NONE		Core Catcher				CC 5Y8/1	

NANNO OOZE
Smear Slides 1-113, 1-115, 1-145, 3-95, 4-40, 4-67, 4-106, 4-123, 4-146

Texture		Composition	
Clay	84%	Nannos	85-90%
Silt	16%	Clay	10-15%
		Quartz	2- 5%
		Feldspar	Tr.- 3%
		Heavy Minerals, Fe Oxides, Dolomite, and Carb. Frag.	Tr.

NANNO RICH TO NANNO BEARING CLAY
Smear slides 2-115, 4-90

Composition	
Clay	85-90%
Nannos	5-15%

DETRITAL FORAM NANNO OOZE
Smear slides 4-123, 4-124

Composition	
Nannos	50-60%
Forams	40-50%

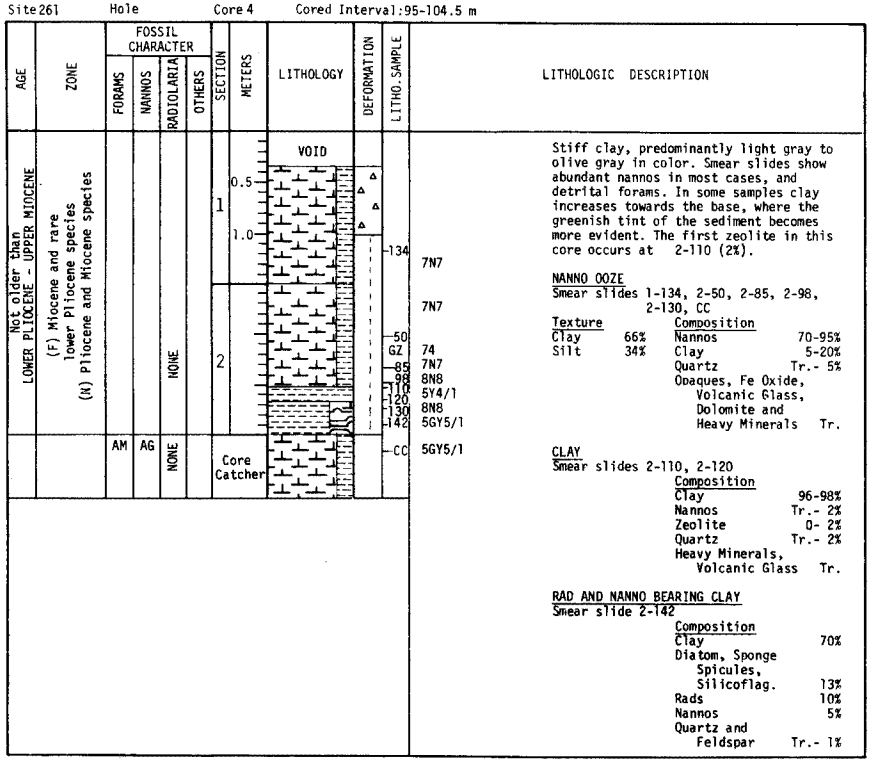
CLAY
Smear slides 3-140, 4-137

Composition	
Clay	98%
Nannos	1%

BULK X-RAY (50.8 m)

Calcite	68%
Mica	10%
Montmorillonite	10%
Kaolinite	7%
Quartz	5%

Site 261 Hole Core 4 Cored Interval: 95-104.5 m



Stiff clay, predominantly light gray to olive gray in color. Smear slides show abundant nannos in most cases, and detrital forams. In some samples clay increases towards the base, where the greenish tint of the sediment becomes more evident. The first zeolite in this core occurs at 2-110 (2%).

NANNO OOZE
Smear slides 1-134, 2-50, 2-85, 2-98, 2-130, CC

Texture		Composition	
Clay	66%	Nannos	70-95%
Silt	34%	Clay	5-20%
		Quartz	Tr.- 5%
		Opaques, Fe Oxide, Volcanic Glass, Dolomite and Heavy Minerals	Tr.

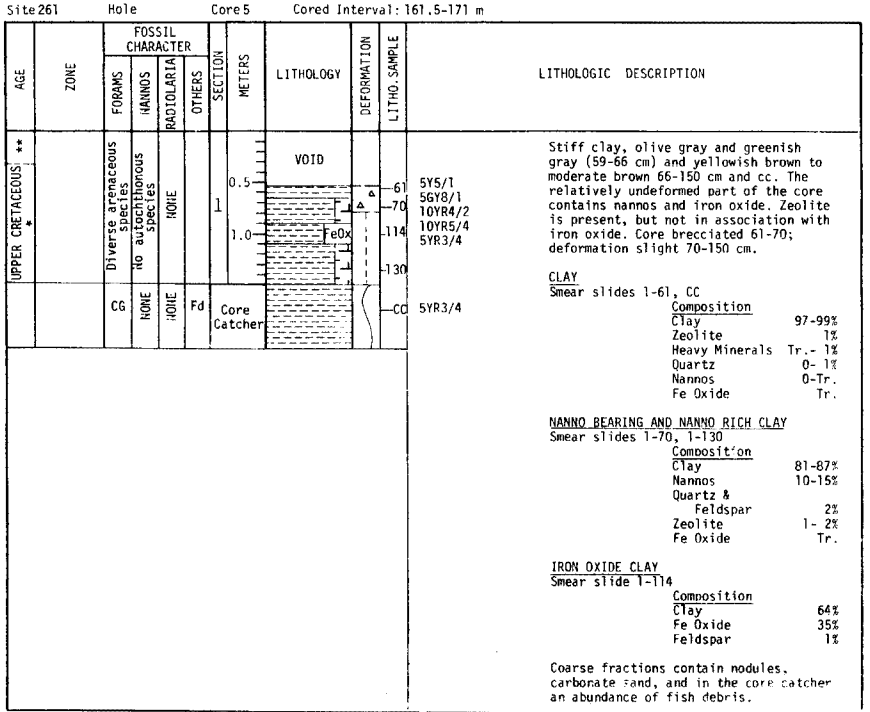
CLAY
Smear slides 2-110, 2-120

Composition	
Clay	96-98%
Nannos	Tr.- 2%
Zeolite	0- 2%
Quartz	Tr.- 2%
Heavy Minerals, Volcanic Glass	Tr.

RAD AND NANNO BEARING CLAY
Smear slide 2-142

Composition	
Clay	70%
Diatom, Sponge Spicules, Silicoflag.	13%
Rads	10%
Nannos	5%
Quartz and Feldspar	Tr.- 1%

Site 261 Hole Core 5 Cored Interval: 161.5-171 m



Stiff clay, olive gray and greenish gray (59-66 cm) and yellowish brown to moderate brown 66-150 cm and cc. The relatively undeformed part of the core contains nannos and iron oxide. Zeolite is present, but not in association with iron oxide. Core brecciated 61-70; deformation slight 70-150 cm.

CLAY
Smear slides 1-61, CC

Composition	
Clay	97-99%
Zeolite	1%
Heavy Minerals	Tr.- 1%
Quartz	0- 1%
Nannos	0-Tr.
Fe Oxide	Tr.

NANNO BEARING AND NANNO RICH CLAY
Smear slides 1-70, 1-130

Composition	
Clay	81-87%
Nannos	10-15%
Quartz & Feldspar	2%
Zeolite	1- 2%
Fe Oxide	Tr.

IRON OXIDE CLAY
Smear slide 1-114

Composition	
Clay	64%
Fe Oxide	35%
Feldspar	1%

Coarse fractions contain nodules, carbonate sand, and in the core catcher an abundance of fish debris.

*(probably Senonian based on Forams)
**Not older than LOWER PLIOCENE - UPPER MIOCENE

Site 261 Hole Core 6 Cored Interval: 171-180.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER CRETACEOUS (probably Senonian based on Forams)	Diverse arenaceous species			NONE		1	0.5			90	5YR3/4 with mottlings of 5YR3/2 and 5YR4/4
				NONE		2	1.0		GZ	74	5YR3/2 with mottlings of 5YR3/4 and patches of 5YR5/6
				NONE		3			XR	26-28 66	5YR3/2 with mottlings of 5YR3/4 and 5YR5/6
				NONE		4				75	5YR3/2 with occasional patches of 5YR5/6
				NONE		5			GZ	75	5YR3/2 with mottlings of 5YR5/6 74
				NONE		6				75	5YR3/2 with mottlings of 5YR5/6
		CG	NONE	NONE	Fd	Core Catcher				CC	5YR3/2

Strongly deformed, uniform and compact, stiff clay, which is uniform in color throughout, grayish brown predominating, with light brown mottlings. The nanno content is low except in the core catcher. Only one section (No. 4) shows no nannos. There is a zeolite content of 1-2% except in sections 1 and 4. Fish debris is unusually abundant in coarse washings from the core catcher.

QUARTZ RICH CLAY
Smear slides 1-90, 4-75, 6-75

Texture		Composition	
Clay	90%	Clay and Micro-crystalline Quartz	97-99%
Silt	10%	Nannos	0- 2%
		Heavy Minerals	Tr.- 1%
		Feldspar	Tr.- 1%
		Zeolite	0- 1%
		Fe Oxide	0- 1%

NANNO RICH AND NANNO BEARING CLAY
Smear slides 3-66, 5-75, CC

Texture		Composition	
Clay	90%	Clay	73-93%
Silt	10%	Nannos	5-20%
		Feldspar	0- 3%
		Zeolite	1- 2%
		Fe Oxide	Tr.- 1%
		Heavy Minerals	Tr.- 1%

BULK X-RAY (174.8 m)

Palygorskite	35%
Montmorillonite	18%
Quartz	16%
Mica	12%
K-feldspar	11%
Gypsum	3%
Chlorite	2%
Plagioclase	2%
Kaolinite	1%

Site 261 Hole Core 7 Cored Interval: 180.5-190 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER CRETACEOUS (probably Senonian based on Forams)	Diverse arenaceous species			NONE		1	0.5			75	5YR3/4 to 5YR3/2 with mottlings of 5YR5/6
				NONE		2	1.0		GZ	30 74 75	5YR3/2 with mottlings of 5YR3/4 and 5YR5/6
				NONE		3			XR	75	5YR3/4 26-28 5YR3/4 with mottlings of 5YR3/4 and 5YR5/6
		AG	NONE	NONE	Fd	Core Catcher				CC	5YR3/2

Strongly deformed, stiff clay. The predominant color is grayish brown, with frequent mottlings of very light brown and light brown. This color difference does not seem to accompany any lithological difference. Zeolite (1-3%) is present. In only one smear slide does the $CaCO_3$ content approach zero. Foraminifera, Radiolaria and fish debris are present in coarse washings from the CC.

QUARTZ AND K-FELDSPAR RICH CLAY
Smear slides 2-30, 2-75, 3-75

Texture		Composition	
Clay	90%	Clay and Micro-crystalline Quartz and K-feldspar	96-99%
Silt	10%	Nannos	Tr.- 2%
		Zeolite	Tr.- 2%
		Fe Oxide	Tr.- 1%
		Dolomite, Heavy Minerals, Feldspar	Tr.

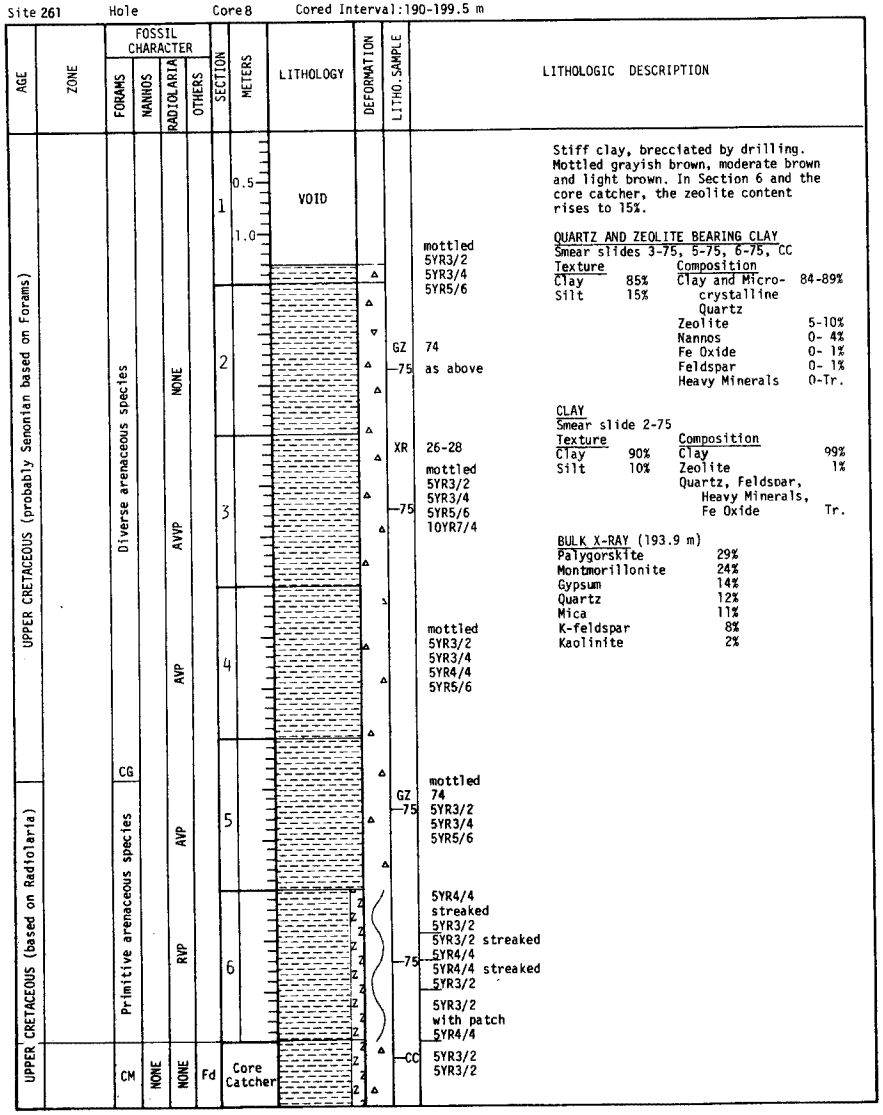
NANNO BEARING CLAY
Smear slides 1-75, CC

Composition	
Clay	88-93%
Nannos	5%
Zeolite	1- 3%
Fe Oxide	Tr.- 4%
Feldspar	Tr.- 1%
Heavy Minerals	0-Tr.

BULK X-RAY (184.4 m)

K-feldspar	25%
Palygorskite	23%
Mica	15%
Montmorillonite	14%
Quartz	14%
Gypsum	5%
Kaolinite	4%

Site 261 Hole Core 8 Cored Interval: 190-199.5 m



LITHOLOGIC DESCRIPTION

Stiff clay, brecciated by drilling. Mottled grayish brown, moderate brown and light brown. In Section 6 and the core catcher, the zeolite content rises to 15%.

QUARTZ AND ZEOLITE BEARING CLAY
Smear slides 3-75, 5-75, 6-75, CC

Texture		Composition	
Clay	85%	Clay and Micro-crystalline Quartz	84-89%
Silt	15%	Zeolite	5-10%
		Nannos	0- 4%
		Fe Oxide	0- 1%
		Feldspar	0- 1%
		Heavy Minerals	0-Tr.

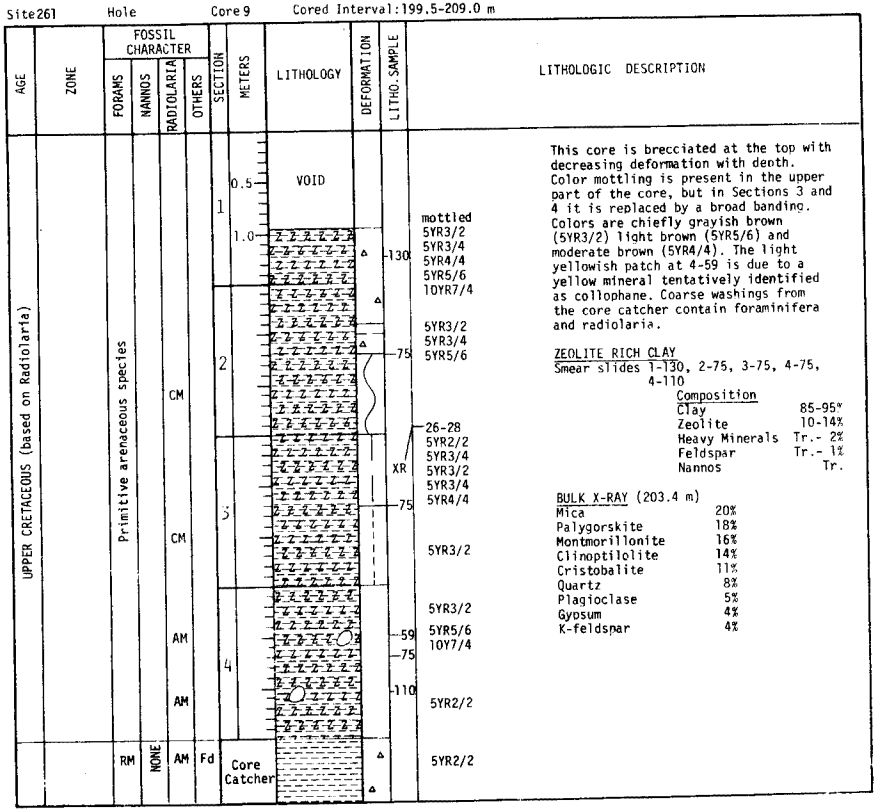
CLAY
Smear slide 2-75

Texture		Composition	
Clay	90%	Clay	99%
Silt	10%	Zeolite	1%
		Quartz, Feldspar, Heavy Minerals, Fe Oxide	Tr.

BULK X-RAY (193.9 m)

Palygorskite	29%
Montmorillonite	24%
Gypsum	14%
Quartz	12%
Mica	11%
K-feldspar	8%
Kaolinite	2%

Site 261 Hole Core 9 Cored Interval: 199.5-209.0 m



LITHOLOGIC DESCRIPTION

This core is brecciated at the top with decreasing deformation with deoth. Color mottling is present in the upper part of the core, but in Sections 3 and 4 it is replaced by a broad banding. Colors are chiefly grayish brown (5YR3/2) light brown (5YR5/6) and moderate brown (5YR4/4). The light yellowish patch at 4-59 is due to a yellow mineral tentatively identified as collophane. Coarse washings from the core catcher contain foraminifera and radiolaria.

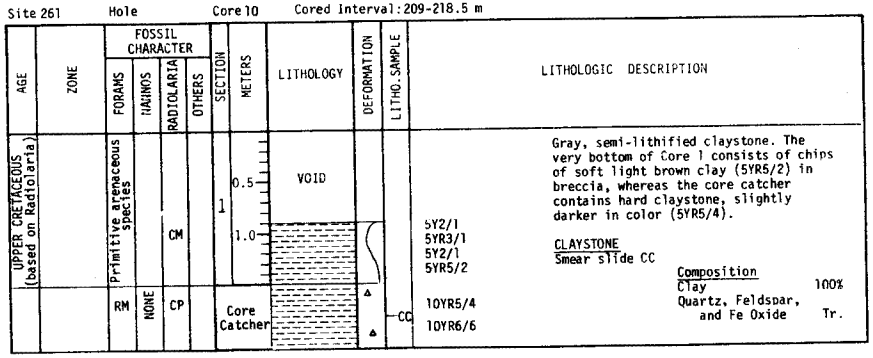
ZEOLITE RICH CLAY
Smear slides 1-130, 2-75, 3-75, 4-75, 4-110

Composition	
Clay	85-95*
Zeolite	10-14%
Heavy Minerals	Tr.- 2%
Feldspar	Tr.- 1%
Nannos	Tr.

BULK X-RAY (203.4 m)

Mica	20%
Palygorskite	18%
Montmorillonite	16%
Clinoptilolite	14%
Cristobalite	11%
Quartz	8%
Plagioclase	5%
Gypsum	4%
K-feldspar	4%

Site 261 Hole Core 10 Cored Interval: 209-218.5 m



LITHOLOGIC DESCRIPTION

Gray, semi-lithified claystone. The very bottom of Core 1 consists of chips of soft light brown clay (5YR5/2) in breccia, whereas the core catcher contains hard claystone, slightly darker in color (5YR5/4).

CLAYSTONE
Smear slide CC

Composition	
Clay	100%
Quartz, Feldspar, and Fe Oxide	Tr.

Site 261 Hole Core 11 Cored Interval: 218.5-228 m

AGE	ZONE	FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER? CRETACEOUS		Primitive arenaceous species				1	0.5 1.0	VOID		6N6 3N3 2N2 7N7 4N4	Dark gray claystone. Thin (1 mm) alternations of light gray and dark gray clay in rapidly lensing beds. Transverse burrows, about 0.8 cm in diameter and filled with limonitic siltstone, color dark yellowish orange (10YR6/6) occur in core catcher. CLAYSTONE Smear slide CC Composition Clay 99% Heavy Minerals 1%
		RP	NONE			Core Catcher				CC 5G4/1 5GY3/2 10Y4/2	

Site 261 Hole Core 12 Cored Interval: 228-237.5 m

AGE	ZONE	FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER CRETACEOUS (based on Radiolaria)		Primitive arenaceous species		AG		1	0.5 1.0	VOID		10 5Y2/1 5GY3/2 4N4	Dark gray, semi-lithified claystone. In the bottom 18 cm of Section 2, the dark gray claystone is speckled and laminated with light colored inclusions. CLAYSTONE Smear slide 2-10, CC Composition Clay 96-99% Feldspar 0-2% Quartz 0-1% Nannos 0-Tr.
						2				XR 26-28 3N3 5GY4/1 3N3 5GY3/2 5GY4/1 6N6 4N4	BULK X-RAY (232.7 m) Rhodonite 59% Cristobalite 25% Montmorillonite 8% Gypsum 3% Mica 3% Quartz 2%
		RM	NONE	AG		Core Catcher				CC 5G4/1 5GY5/2 5GY3/2 3N3	

Site 261 Hole Core 13 Cored Interval: 234.5-247 m

AGE	ZONE	FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
*		RP **	NONE	CM	Fd	Core Catcher				CC 5GY4/1	Dark greenish gray, semi-lithified claystone. CLAYSTONE Smear slide CC Composition Clay 99% Carbonate 1% Heavy Minerals Tr.

*UPPER CRETACEOUS (based on Radiolaria)
**Primitive arenaceous species

Site 261 Hole Core 14 Cored Interval: 247-256.5 m

AGE	ZONE	FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS		NONE		FP		1	0.5 1.0			5GY4/1 5Y4/1 5YR2/1 70 71 5YR2/1 4N4 5GY4/1 3N3	Semi-lithified claystone, generally dark greenish gray in color. Drilling breccia occurs 50-70 cm. CLAYSTONE Smear slides 1-70, 1-71, CC Composition Clay 90-99% ?Opal 0-10% Feldspar Tr.- 2% Heavy Minerals Tr.- 1% Zeolite, Quartz, and Carbonate Tr.
			NONE	FP	Fd	Core Catcher				CC 5GY4/1	

Site 261 Hole Core 15 Cored Interval: 256.5-266.0 m

AGE	ZONE	FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS		NONE		AG		1	0.5 1.0			3N3 2N2 33 3N3 2N2 5GY4/1	Semi-lithified claystone, predominantly dark gray in color with light gray speckles and streaks. Some sections of the core are brecciated. CLAYSTONE Smear slides 1-33, CC Composition Clay 100% Feldspar, Carbonate, Heavy Minerals, and Micro. nodules Tr.
			NONE	CM		Core Catcher				CC1 3N3 CC2	CALCAREOUS CLAYSTONE Smear slide CC Composition Clay 50% Calc. Frag. 50%

Site 261 Hole Core 16 Cored Interval: 266-275.5 m

AGE	ZONE	FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS		NONE		AM	Pm	1	0.5 1.0	VOID		3N3 2N2 3N3 4N4 100 5G6/1	Semi-lithified claystone, predominantly dark gray in color. Some of the core is brecciated. CLAYSTONE Smear slide 1-100, CC Composition Clay 88-98% Carb. Frag. 0-10% Heavy Minerals 1-2% Feldspar 0-1%
			NONE	CVP		Core Catcher				CC 5G4/1 2N2	

Site 261 Hole Core 17 Cored Interval = 275.5-285 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS		NONE	NONE	CVVP		Core Catcher				CC	4N4 1N1 Semi-stiff clay; dark gray and black in color. CLAYSTONE

Site 261 Hole Core 18 Cored Interval = 285.0-294.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER CRETACEOUS (based on Radiolaria)						1	0.5 1.0	VOID		122-3 126 128-9	5Y4/1 5GY3/2 4N4 5N5
		NONE	NONE	CP		Core Catcher				CC	5Y3/1

Stiff clay, dark greenish gray and medium gray in color. Slightly calcareous.

CLAY
Smear slides 1-122, 1-123, 1-126, 1-128, 1-129, CC

Composition	
Clay	90-100%
Carb. Frag.	0- 10%
Heavy Minerals	Tr.- 1%
Feldspar	0- 1%
Quartz, Dolomite, Nannos, ?Opal, and ?Cristobalite	Tr.

Site 261 Hole Core 19 Cored Interval: 304-313.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER? CRETACEOUS				NONE		1	0.5 1.0	VOID (Barite)		4N4-3N3	
						2				75 5N5 4N4 5GY4/1	
						3				XR 75 GZ	33-35 4N4 90 5G4/1
				RVVP		4				64 75	4N4-3N3
				RP		5				4N4-3N3 39 GZ 75	8N8 74 4N4-3N3
				CP		6					
		NONE	NONE	FP		Core Catcher				CC	4N4

Semi-lithified claystone, predominantly medium dark gray in color, with intercalated dark laminations. Darker color probably due to greater content of organic carbon. In Section 1 (117-122) there is a dense mineralized nodule, possibly barite.

QUARTZ CLAYSTONE
Smear slides 2-75, 3-75, 4-75, 5-39, 5-75.

Texture		Composition	
Clay	87%	Clay and Micro-crystalline Quartz	98-99%
Silt	13%	Feldspar	1%
		Heavy Minerals	1%
		?Chlorite, Carbonate, and Nannos	Tr.

DETRITAL CALCAREOUS CLAYEY SAND
Smear slide 4-64

Composition	
Carbonate	60%
Clay	40%
Heavy Minerals	Tr.

BULK X-RAY (307.3 m)

Quartz	56%
Montmorillonite	28%
Mica	9%
K-feldspar	4%
Gypsum	3%

Site 261 Hole Core 20 Cored Interval: 313.5-323.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE
CRETACEOUS		Primitive arenaceous species		FVVP		1	0.5	VOID		125
							1.0			137
						2				XR
										75
										GZ
		RM	NONE	NONE		Core Catcher				CC

3N3 4N4 5G4/1 28-30 5N5 5YR4/1 4N4 5G5/1 81 5N5 5G6/1 5YR3/4 5YR4/1 5YR3/4 5G5/1 10YR3/2 5G4/1

Semi-lithified claystone. Predominant color is dark gray; becoming brownish gray below 2-100.

QUARTZ CLAYSTONE
Smear slides 1-137, 2-75, CC

Texture		Composition	
Clay	86%	Clay and Micro-crystalline Quartz	98-100%
Silt	14%	Heavy Minerals	Tr.- 1%
		Feldspar	0- 1%
		Carbonate	0- Tr.
		Nannos	0- Tr.

BULK X-RAY (315.3 m)

Quartz	55%
Montmorillonite	27%
Mica	8%
K-feldspar	7%
Gypsum	3%

Site 261 Hole Core 21 Cored Interval: 332.5-342.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE
UPPER CRETACEOUS (based on Radiolaria)		NONE		AVVP		1	0.5	VOID		XR
							1.0			125
				CP		2				5
										76
				RP		3				75
										XR
		NONE	NONE	AVVP		Core Catcher				CC

57-59 4YR5/2 5G4/1 5YR3/4 5G4/1 5Y4/1 5YR3/4 5G7/1-5YR5/1 5YR3/4 5BG6/2 5YR4/2 5BG5/2 5YR4/2 4N4 5YR4/1 5Y6/1 5YR4/1 5G5/2 5B5/1 5Y8/1-9N9 5YR3/4 5YR4/1 5G5/1 5YR3/4 5YR4/1 4N4 5Y6/1 142-144 3N3 10R2/2 4N4

Semi-lithified claystone, predominantly brown, but containing sections which are dark gray, greenish gray and light gray. In the lower half of Section 1 the light gray matrix contains black streaks whereas in Section 3, the brown core is streaked with white. Nodule of limestone at 2-76.

QUARTZ CLAYSTONE
Smear slide 1-125, 2-5, 2-76, 3-75.

Composition	
Clay and Micro-crystalline Quartz	98-100%
Heavy Minerals	Tr.- 1%
Nannos	0- 1%
Feldspar	Tr.
Chlorite	0- Tr.
Silica	0- Tr.

RAD RICH CLAY
Smear slide CC

Composition	
Clay	80%
Rads	20%

BULK X-RAY (336.9 m)

Quartz	74%
Montmorillonite	15%
K-feldspar	6%
Mica	5%

BULK X-RAY (342.1 m)

Quartz	89%
Montmorillonite	8%
Mica	3%

Site 261 Hole Core 22 Cored Interval: 342.0-351.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE
UPPER CRETACEOUS (based on Radiolaria)		NONE		AVVP		1	0.5			75
							1.0			GZ
				FP		2				75
						3				XR
				FVP						70
										37
				AVP		4				75
				CP		5				GZ
										75
		NONE	NONE	AP	Fd	Core Catcher				CC

5YR4/1 4N4 5YR4/1 5G5/1 5YR3/1 5YR4/2-3N3 5YR3/4 4N4 5YR4/2 4N4 5YR4/2 5N5 10G4/2 5YR3/2 74 5N5 5YR5/1 5YR4/2 5Y6/1 5B5/1 4N4 5G5/1 26-28 4N4 5N5 5YR4/2 5B6/1 5N5 4N4 5N5 10G5/2 5N5 5Y4/1 4N4 5N5 5N5 5YR5/1 74 5N5 3N3 4N4

Semi-lithified claystone. Predominantly dark gray, with a distinct brownish tinge in Sections 1 and 2. Areas with dark streaks occur throughout this core. The carbonate-rich interval 4 (34-41) is crushed, in contrast to the firmness of other parts of the core.

QUARTZ CLAYSTONE
Smear slides 1-75, 2-75, 3-70, 4-75, 5-75, CC

Texture		Composition	
Clay	86%	Clay and Micro-crystalline Quartz	97-100%
Silt	14%	Heavy Minerals	Tr.- 1%
		Feldspar	0- Tr.
		Nannos	0- Tr.

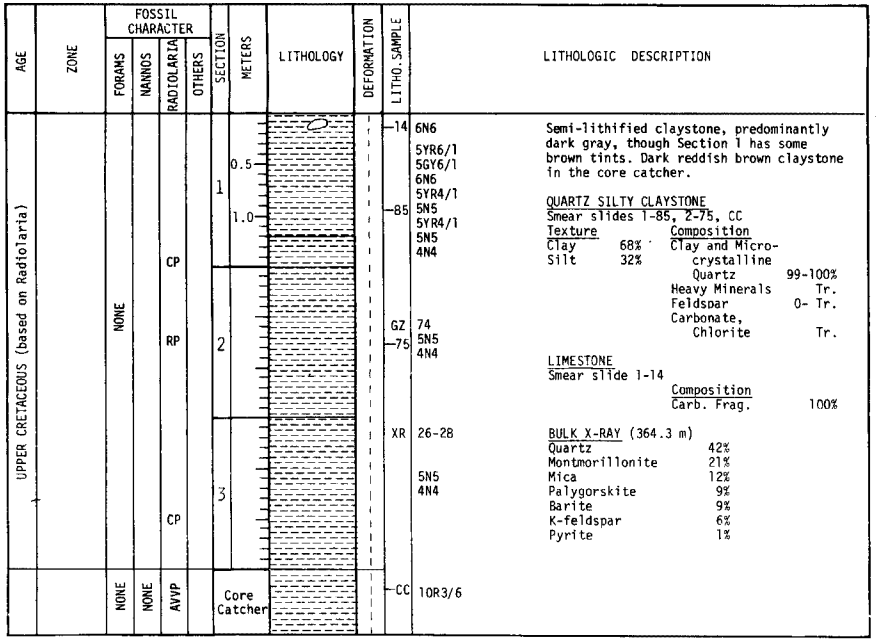
CALCAREOUS MUDSTONE
Smear slide 4-37

Composition	
Clay	50%
Carbonate frag.	50%

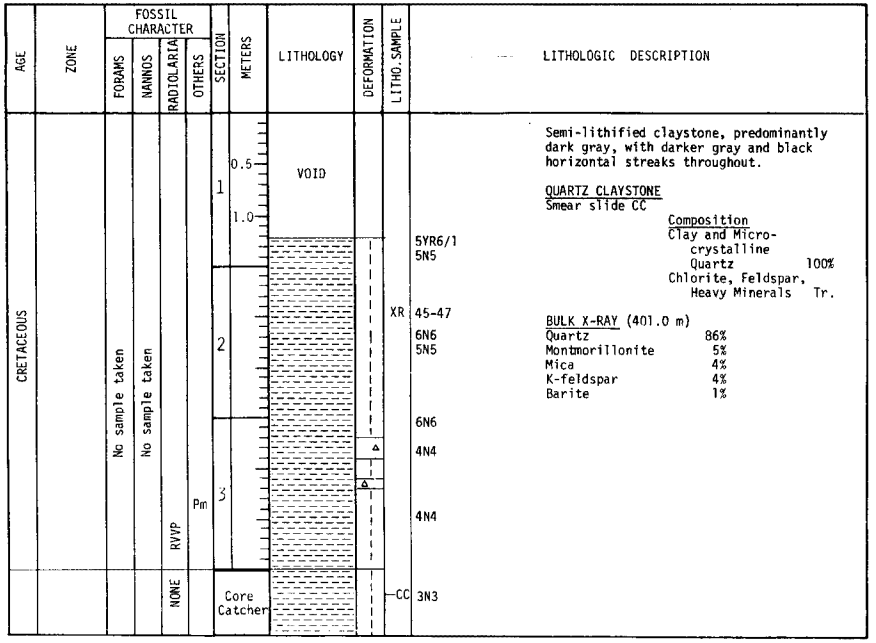
BULK X-RAY (345.3 m)

Quartz	82%
Montmorillonite	10%
Mica	4%
K-feldspar	2%
Gypsum	2%

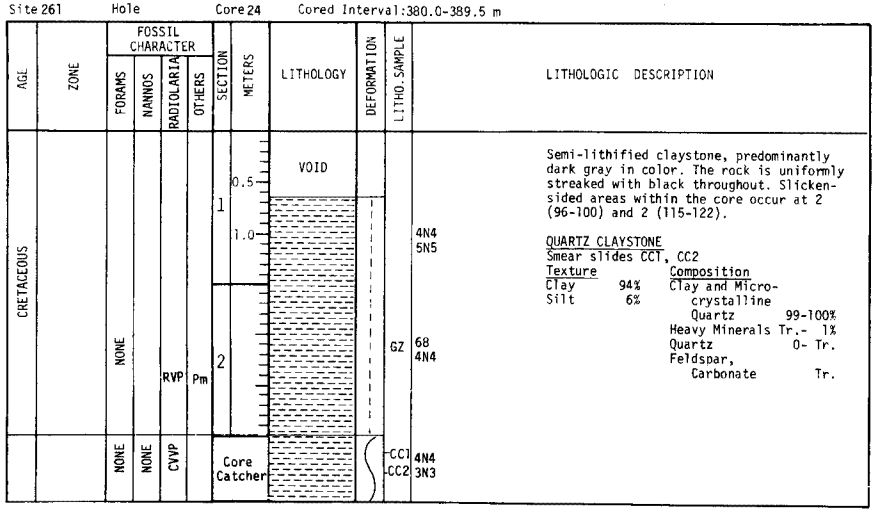
Site 261 Hole Core 23 Cored Interval: 361.0-370.5 m



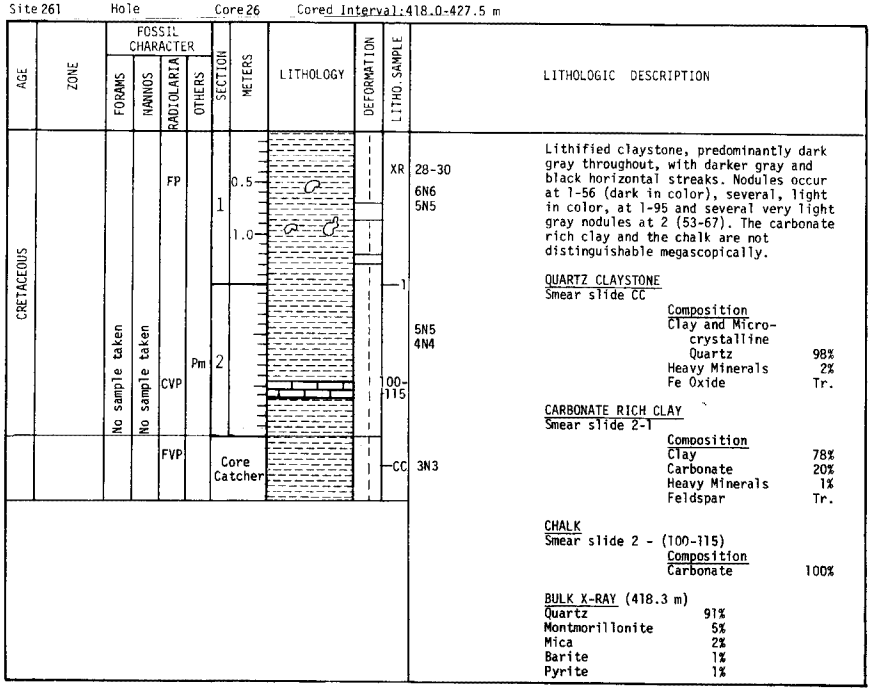
Site 261 Hole Core 25 Cored Interval: 399.0-408.5 m



Site 261 Hole Core 24 Cored Interval: 380.0-389.5 m



Site 261 Hole Core 26 Cored Interval: 418.0-427.5 m



Site 261 Hole Core 27 Cored Interval: 437.0-446.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS		NONE		FP		1	0.5			XR	5B7/2 5YR4/4 27-29 5B7/2 5YR4/4 5B7/2 5YR4/4 10R3/6 5B7/2 10R5/2 10R3/6
				CVP		2	1.0			GZ	104 10R3/6
		NONE	RP	FVP		Core Catcher				CC1 CC2	10R4/6

Semi-lithified claystone, predominantly reddish brown in color. The only departures from brown are a few intervals of pale blue claystone, up to 5 cm in length.

QUARTZ CLAYSTONE
Smear slides CC1, CC2

Texture		Composition	
Clay	85%	Clay and Micro-crystalline Quartz	98-99%
Silt	15%	Fe Oxide	0- 1%
		?Barite	1%
		Dolomite	Tr.
		Heavy Minerals	0- Tr.
		Mica	0- Tr.

BULK X-RAY (437.3 m)

Quartz	83%
Montmorillonite	6%
Hematite	4%
Mica	4%
Barite	2%
K-feldspar	1%

Site 261 Hole Core 28 Cored Interval: 446.5-456.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS		Very scarce arenaceous species		RVVP		1	0.5	VOID			5YR6/4 to 5YR4/4 with patches 5B7/1
				AVVP		2				XR	10R5/6 5YR7/2 5R3/4 5YR4/4 5B5/1 with patches 5B8/2 92-95 5BG6/2 8N8
				CVVP						YR	5YR4/4 predom. 26-29 patches of 5BG6/2 8N8 5YP6/4
		RM	AP	CP		Core Catcher					5YR4/4 5B7/1 5YR3/4

Claystone and stiff clay. In Section 1 the interval 100-113 is harder than elsewhere (it is lithified) and a darker brown color. Calcareous below 3-65 cm.

CLAYSTONE AND QUARTZ CLAYSTONE

BULK X-RAY (448.9 m)

Montmorillonite	93%
Quartz	6%
Calcite	1%

BULK X-RAY (449.8 m)

Quartz	86%
Montmorillonite	8%
Mica	3%
Barite	2%
K-feldspar	1%

Site 261 Hole Core 29 Cored Interval: 465.5-475.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS		Frequent arenaceous species		CP		1	0.5	VOID			Semi-lithified moderate brown claystone with intercalations (0-9 cm) of pale gray and pale blue and dark gray. Calcareous 2 (0-21), (39-60), (95-102); 3 (0-24), (31-60, particularly 52-55), (66-80), (90-150).
				AP		2	1.0				QUARTZ CLAYSTONE
				AVP		3				XR	26-28
		FM	AP	CP	Fd	Core Catcher				CC	10R4/2

NANNO CLAYSTONE
Smear slide CC

Composition	
Clay	65%
Nannos	35%
Dolomite, Heavy Minerals, Feldspar, Quartz	Tr.

BULK X-RAY (468.9 m)

Quartz	80%
Montmorillonite	13%
Hematite	3%
Barite	2%
Mica	2%

Site 261 Hole Core 30 Cored Interval: 484.5-494.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS	Frequent arenaceous species			FVVP		1	0.5	VOID			Semi-lithified claystone. Color is predominantly moderate brown with patches and streaks of light brown and light bluish gray. There is no calcareous material in Section 1; Sections 2, 3 & 4 are calcareous throughout.
							1.0				5YR4/4
											Streaks 10G6/2
											5YR4/4
				RVVP		2					5YR4/4
											5BG6/2
											5YR4/4 streaked 5BG6/2
				CVVP		3				XR	26-28 5YR4/4
											5BG7/1 5YR6/4
						4					5YR6/4 5YR7/2
				NONE							
		CM	RP	NONE	Fd	Core Catcher				CC	5YR3/4

CLAYSTONE
Smear slide CC

Composition	
Clay	88%
Barite	10%
Feldspar	2%

BULK X-RAY (487.8 m)

Calcite	65%
Quartz	21%
Montmorillonite	6%
Mica	3%
Hematite	3%
K-feldspar	2%

Site 261 Hole Core 31 Cored Interval: 503.5-513.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER JURASSIC? TITHONIAN? (based on Nannos)	(N) First occurrence of P. embergeri	Frequent arenaceous and calcareous species		NONE		1	0.5	VOID			Semi-lithified claystone, predominantly moderate brown; moderate reddish brown in core catcher. The brown color is broken by occasional streaks and patches of pale blue green and light gray. The following intervals are calcareous: 2 (107-150), 3 (0-59), 4 (55-106), 5 (90-150).
							1.0				5YR4/4
											5YR3/4
											5BG6/2
						2					5YR3/4
											5YR6/4
											5YR5/4
											5BG7/2
											5YR6/4
										XR	26-28
						3					5YR4/4
											5YR3/4
											5BG6/2
										53	5R3/4 mottled 7N7
						4				XR	53-55
											8N8
											8N8
											5YR3/4
											5BG6/2
											5YR3/4
											5BG6/2
											10R3/6
											5BG6/2
											10R3/6
											5BG6/2
				RVVP		5					5BG6/2
											10R3/6
											10R4/6
		CM	AM	NONE	Cs	Core Catcher					10R4/6

CLAYSTONE
Smear slide 4-53

Composition	
Clay	98%
Heavy Minerals	2%
Quartz, Feldspar, Fe Oxide	Tr.

BULK X-RAY (506.8 m)

Quartz	47%
Calcite	24%
Montmorillonite	14%
Mica	7%
K-feldspar	5%
Barite	3%

BULK X-RAY (508.5 m)

Montmorillonite	98%
Quartz	2%

Site 261 Hole Core 32 Cored Interval: 522.5-532.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER JURASSIC, PRE-TITHONIAN (based on Nannos)	(N) Below the P. embergeri appearance	Frequent arenaceous and calcareous species		NONE	NONE	1	0.5	VOID			Semi-lithified claystone, predominantly dark moderate brown in color, with short intercalations of grayish red, dusky red, light gray. The following sections are calcareous: Section 1, Section 2 (weakly 100-150) (strongly 0-100), Section 3 throughout, Section 4 throughout. Nodules are present 3-13, 3 (66-68), 3-100, 3 (120-123), 3-147. Biogenic sedimentary structures are present in the interval 2 (56-74) and a burrow at 4-148.
							1.0			5YR3/4	
						2				5YR3/4	
										10R4/2	
										8N8	
										10R4/6	
										5YR6/4	
										5YR4/4	
										5YR3/4	
						3				5YR3/4	
										5YR3/2	
									XR	26-28	
						4				5YR3/4	
										5YR3/2	
										10R3/6	
									-135	5R3/4	
									XR	10R3/6	
		CM	AM	NONE	Cs Ms	Core Catcher			-CC1	141-143	
									-CC2		

NANNO RICH QUARTZ CLAYSTONE
Smear slides 4-135, CC1, CC2

Composition	
Clay and Micro-crystalline Quartz	33-80%
Nannos	20-65%
Feldspar	Tr.- 1%
Heavy Minerals	0- 1%

BULK X-RAY (525.8 m)

Quartz	35%
Montmorillonite	27%
Calcite	12%
Mica	11%
Hematite	8%
K-feldspar	7%

BULK X-RAY (528.4 m)

Calcite	53%
Quartz	18%
K-feldspar	8%
Hematite	8%
Montmorillonite	7%
Mica	6%

Site 261 Hole Core 33 Cored Interval: 532.0-534.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER JURASSIC, OXFORDIAN (based on Nannos)	(N) OXFORDIAN	Frequent arenaceous and calcareous species			Ms O Cs	1	0.5			10R3/6	Semi-lithified nanno claystone, dark reddish brown in color, forms 0-20 cm of Section 1. Below the claystone is basalt. The upper 18 cm of the basalt is weathered, and calcified shale is cemented to it.
		CM	AP				1.0			10Y4/2	
						Core Catcher				10Y4/2	

NANNO CLAYSTONE

BASALT

Site 261 Hole Core 34 Cored Interval: 534.0-541.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5	VOID			Basalt, containing some decomposed patches and calcite veins.
							1.0			10Y4/2	BASALT
										Vein 10YR8/2	
						2					
						3					
										10Y4/2	

Site 261 Hole Core 35 Cored Interval: 541.5-551.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5				10Y4/2
							1.0				calcite vein 5R3/4
											10Y4/2
						2					Basalt, containing calcite veins. The surface texture of the rock suggests slight decomposition and possibly a grain size coarser than that occurring elsewhere in the basalt. A finer-textured and seemingly fresher basalt occurs in Section 2 (117-150). In Section 3 the basalt contains dusky red calcite and white calcite veins and some limestone breccia. In the lower part of this core - below 4-111 and all of Section 5 and the core catcher. The core consists of soft breccia, which is almost certainly drilling breccia, containing fresh chips of basalt and pink clay and fragments of calcite in a brown clay matrix.
						3					BASALT
											LIMESTONE
						4					BRECCIA
											10Y4/2
											5YR3/4
						5					5YR3/4
						Core Catcher					5YR3/4

Site 261 Hole Core 36 Cored Interval: 551.0-552.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5	VOID			10Y4/2 calcite 10R5/4
							1.0				Fourteen pieces of basalt, dark greenish gray in color.
											BASALT

Site 261 Hole Core 37 Cored Interval: 552.5-560.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5	VOID			10Y4/2 10YR4/2 10G4/2
							1.0				Eight pieces of basalt and decomposed basalt in Section 1. Eleven pieces in Section 2 and seventeen pieces in Section 3. The basalt is weathered to a fine grained hard yellowish brown rock, and also to a grayish green mineral. There are numerous calcite-filled cracks in the basalt.
						2					BASALT
						3					DECOMPOSED BASALT

Site 261 Hole Core 38 Cored Interval: 560.5-570.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5	VOID			The basalt in this core is largely decomposed to a yellowish brown fine grained rock and a green waxy mineral. Numerous calcite veins are present.
							1.0				BASALT
											DECOMPOSED BASALT
											10YR4/2
						2					10YR3/2 10G4/2
											10Y4/2
						3					5R3/4
						4					colors repeat
						5					

Site 261 Hole Core 39 Cored Interval: 570.0-579.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
						1	0.5				10Y4/2 10YR4/2 10G4/2
											Fresh and decomposed basalt, containing inclusions of green secondary mineral and veins of calcite.
											BASALT

DEEP SEA DRILLING PROJECT

LEG 27 SITE 262

SITE SUMMARY SHEET

POSITION: Latitude: 10°52.19'S Longitude: 123°50.78'E

Water depth (from sea level): 2298 corrected meters (Echo sounding)

Bottom felt at: 2315 meters (drill pipe) Penetration: 442 meters

Number of Holes: 1 Number of Cores: 47

Total length of cored section: 442 meters Total core recovered: 365.5 m

Percentage of core recovery: 82.69

OLDEST SEDIMENT CORED:

Depth below sea floor: 442 meters Nature: Calcarenite

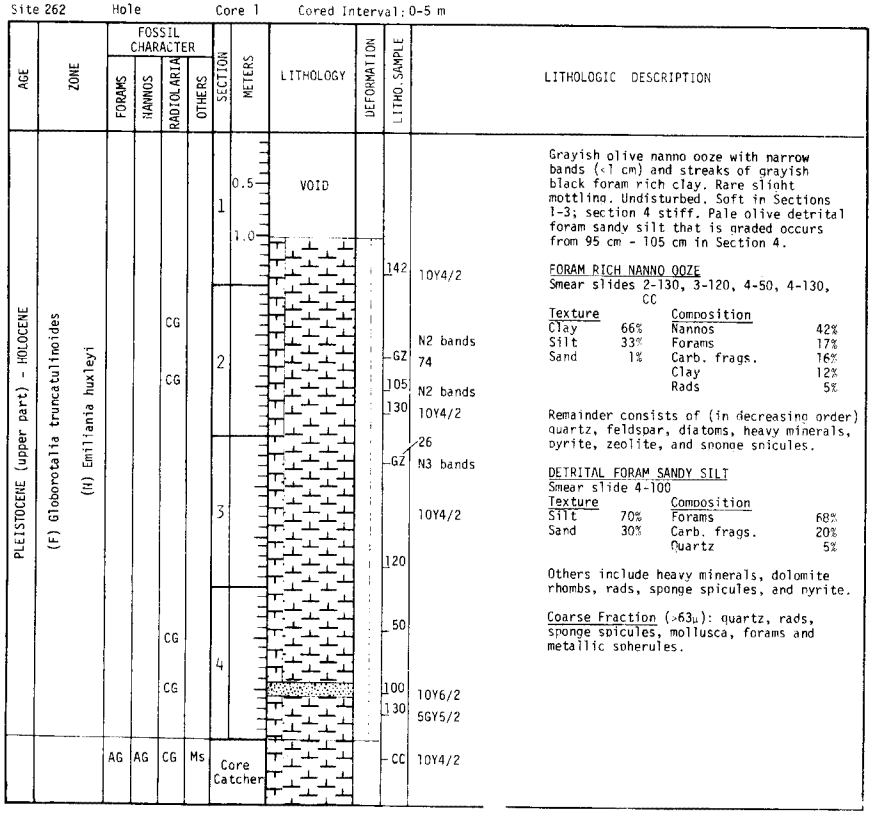
Age: Pliocene Measured Velocity: - -

BASEMENT: Not reached

PRINCIPAL RESULTS:

Site 262 near the axis of the western part of the Timor Trough, penetrated a wedge of flat-lying sediments that thickens towards Timor and overlies a north-dipping sequence from the southern flank of the Trough. The sediments comprise 414 m of Quaternary and Upper Pliocene planktonic ooze overlying 13 m of Upper Pliocene shallow marine foraminiferal dolomitic mud and 15 m (to total depth) of Upper Pliocene very shallow marine dolomitic shell calcarenite. The salinity of the interstitial water in the sediments increases downward to a measured recorded value of 53 parts per thousand, and is interpreted as possibly indicating a salt body a short distance below.

Site 262 Hole Core 1 Cored Interval: 0-5 m



Grayish olive nanno ooze with narrow bands (<1 cm) and streaks of grayish black foram rich clay. Rare slight mottling. Undisturbed. Soft in Sections 1-3; section 4 stiff. Pale olive detrital foram sandy silt that is graded occurs from 95 cm - 105 cm in Section 4.

FORAM RICH NANNO OOZE
Smear slides 2-130, 3-120, 4-50, 4-130, CC

Texture		Composition	
Clay	66%	Nannos	42%
Silt	33%	Forams	17%
Sand	1%	Carb. frags.	16%
		Clay	12%
		Rads	5%

Remainder consists of (in decreasing order) quartz, feldspar, diatoms, heavy minerals, pyrite, zeolite, and sponge spicules.

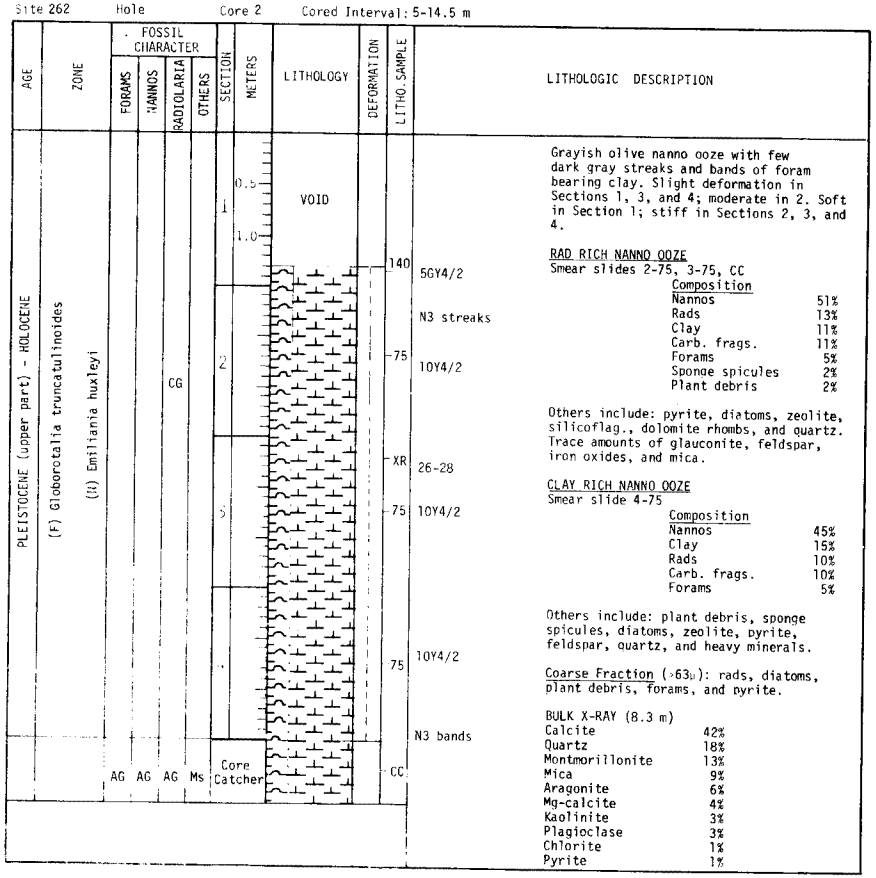
DETRITAL FORAM SANDY SILT
Smear slide 4-100

Texture		Composition	
Silt	70%	Forams	68%
Sand	30%	Carb. frags.	20%
		Quartz	5%

Others include heavy minerals, dolomite rhombs, rads, sponge spicules, and pyrite.

Coarse Fraction (>63μ): quartz, rads, sponge spicules, mollusca, forams and metallic spherules.

Site 262 Hole Core 2 Cored Interval: 5-14.5 m



Grayish olive nanno ooze with few dark gray streaks and bands of foram bearing clay. Slight deformation in Sections 1, 3, and 4; moderate in 2. Soft in Section 1; stiff in Sections 2, 3, and 4.

RAD RICH NANNO OOZE
Smear slides 2-75, 3-75, CC

Composition	
Nannos	51%
Rads	13%
Clay	11%
Carb. frags.	11%
Forams	5%
Sponge spicules	2%
Plant debris	2%

Others include: pyrite, diatoms, zeolite, silicoflag., dolomite rhombs, and quartz. Trace amounts of glauconite, feldspar, iron oxides, and mica.

CLAY RICH NANNO OOZE
Smear slide 4-75

Composition	
Nannos	45%
Clay	15%
Rads	10%
Carb. frags.	10%
Forams	5%

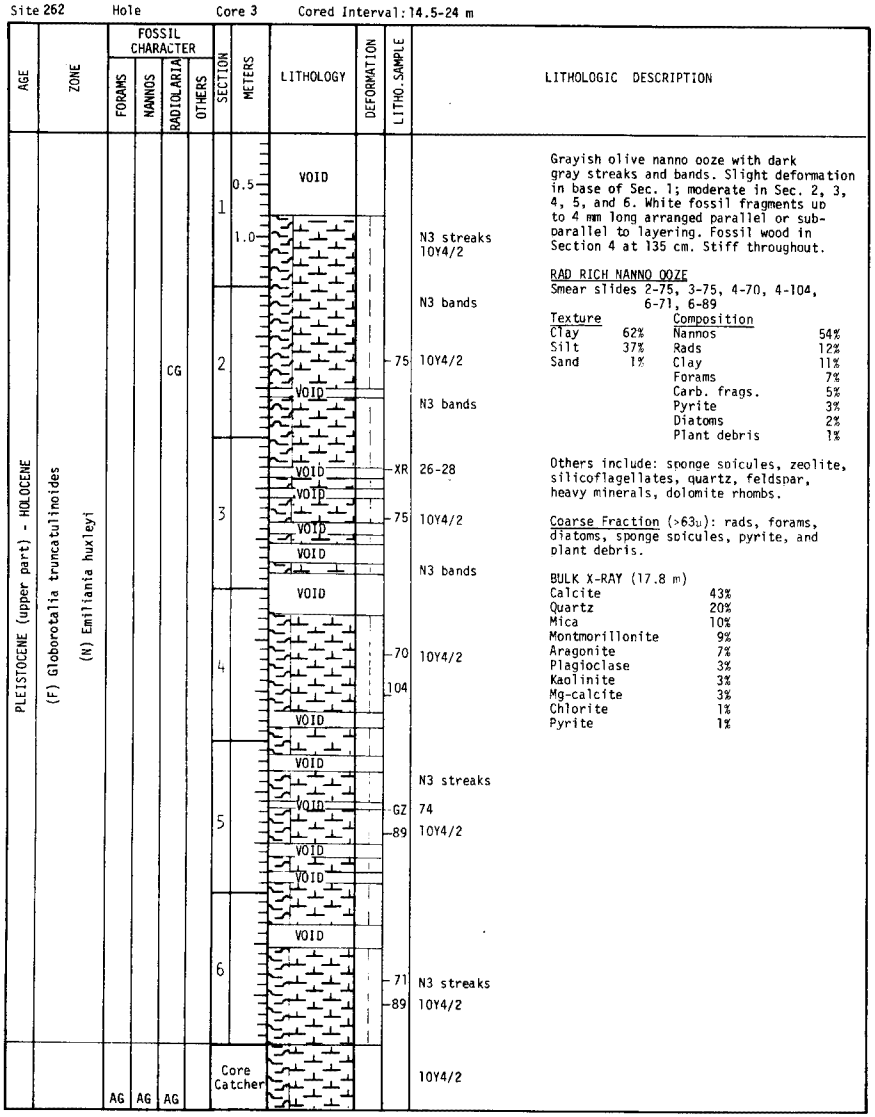
Others include: plant debris, sponge spicules, diatoms, zeolite, pyrite, feldspar, quartz, and heavy minerals.

Coarse Fraction (>63μ): rads, diatoms, plant debris, forams, and pyrite.

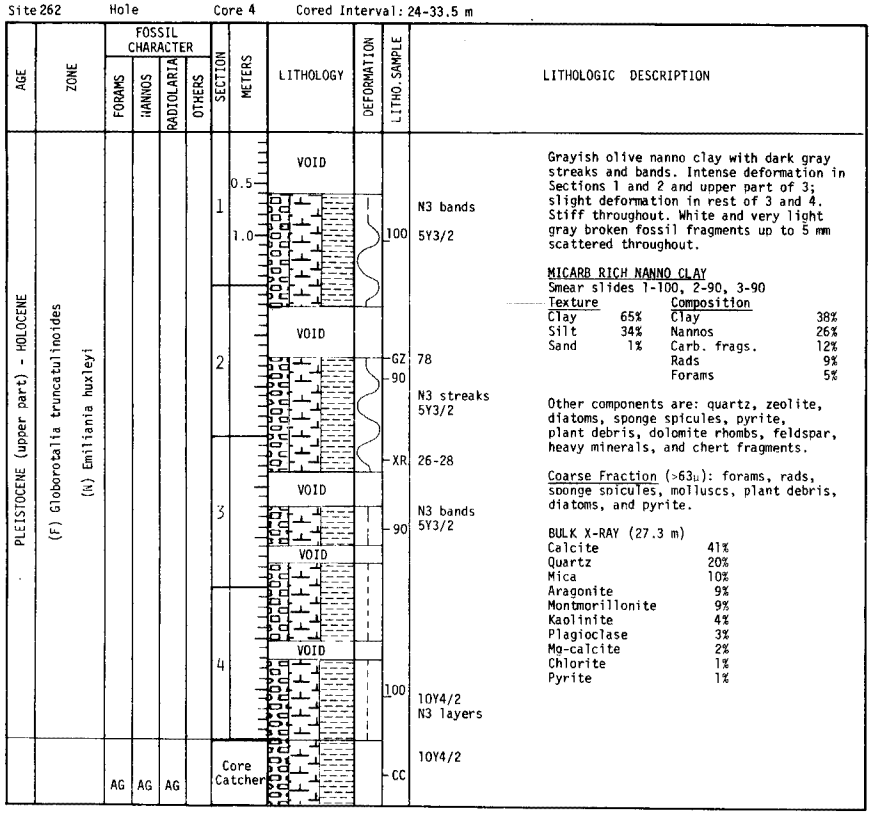
BULK X-RAY (8.3 m)

Calcite	42%
Quartz	18%
Montmorillonite	13%
Mica	9%
Aragonite	6%
Mg-calcite	4%
Kaolinite	3%
Plagioclase	3%
Chlorite	1%
Pyrite	1%

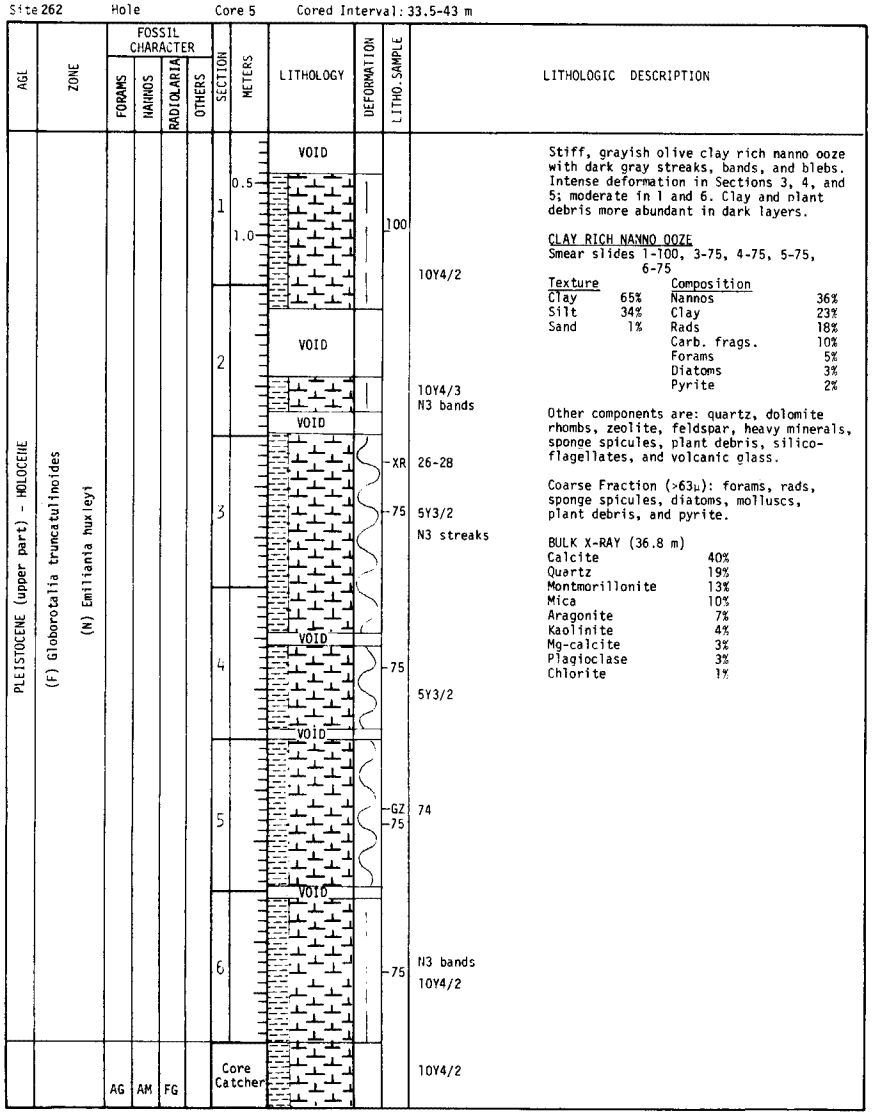
Site 262 Hole Core 3 Cored Interval: 14.5-24 m



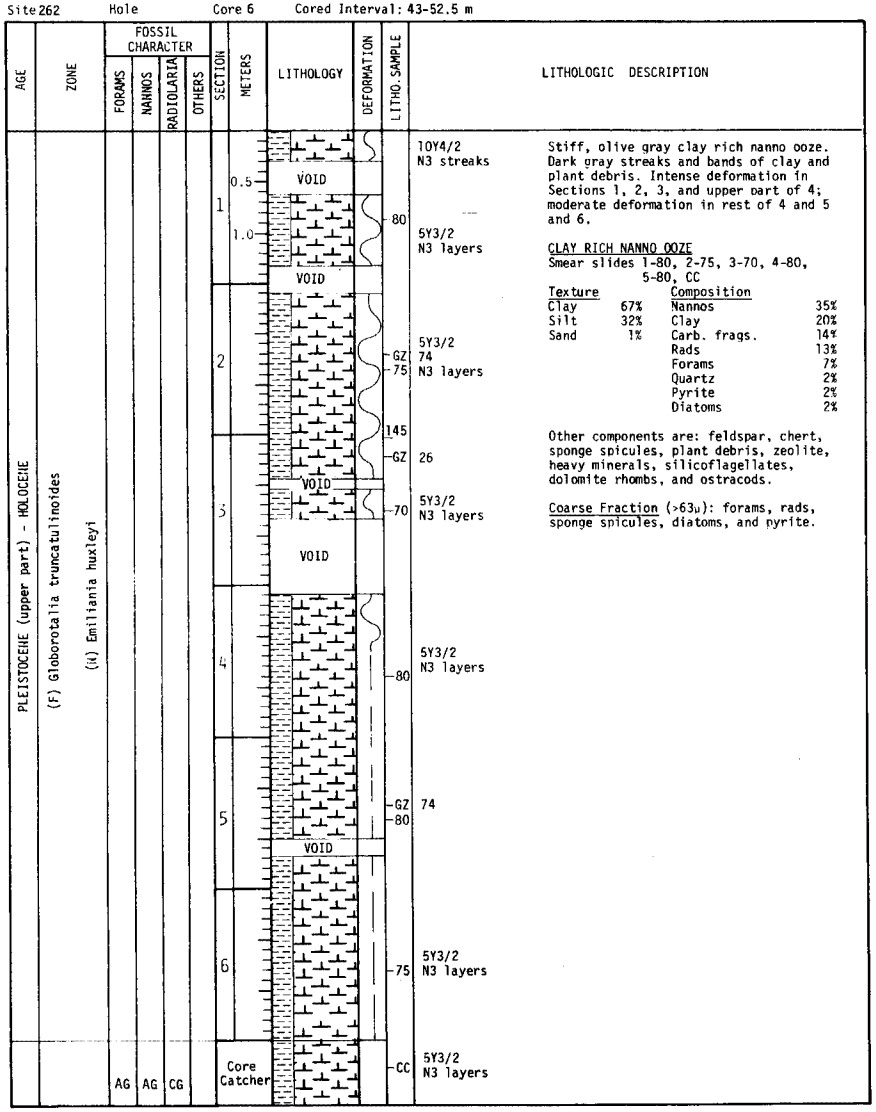
Site 262 Hole Core 4 Cored Interval: 24-33.5 m



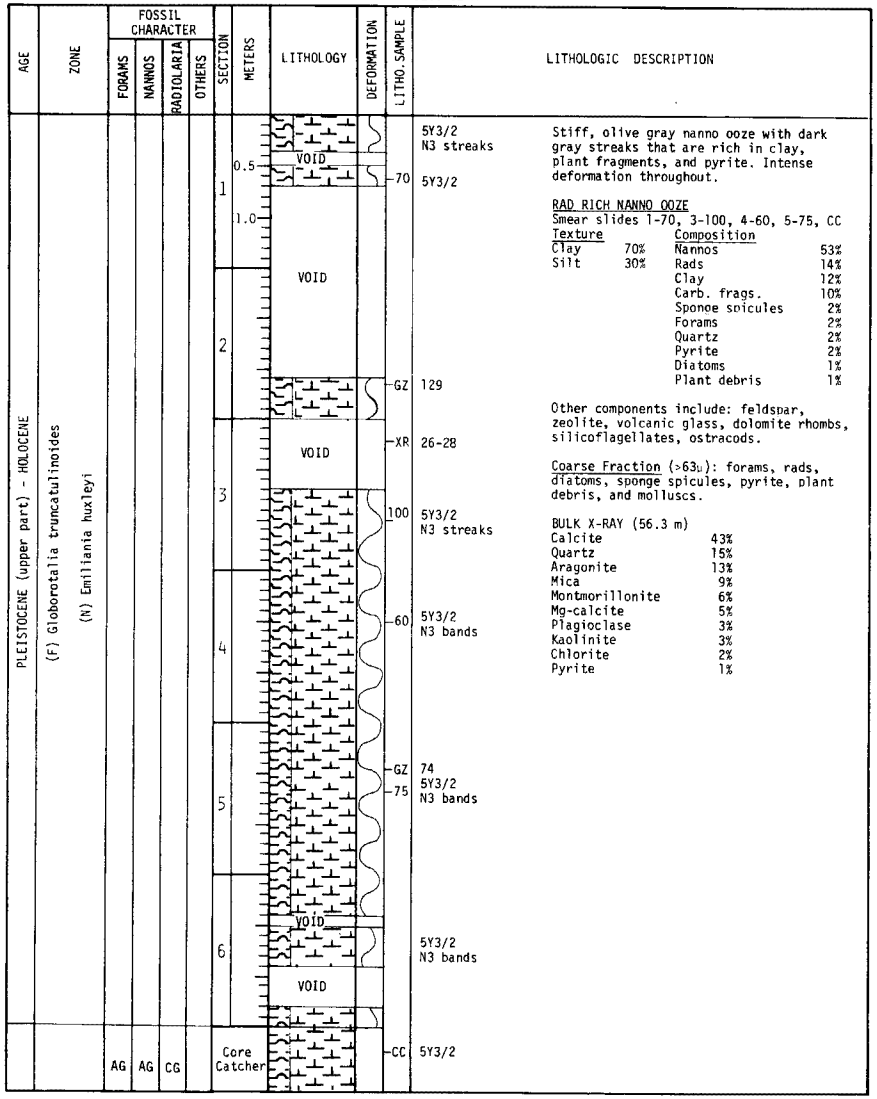
Site 262 Hole Core 5 Cored Interval: 33.5-43 m



Site 262 Hole Core 6 Cored Interval: 43-52.5 m



Site 262 Hole Core 7 Cored Interval: 52.5-62 m



Stiff, olive gray nanno ooze with dark gray streaks that are rich in clay, plant fragments, and pyrite. Intense deformation throughout.

RAD RICH NANNO OOZE
Smear slides 1-70, 3-100, 4-60, 5-75, CC

Texture		Composition	
Clay	70%	Nannos	53%
Silt	30%	Rads	14%
		Clay	12%
		Carb. frags.	10%
		Sponge spicules	2%
		Forams	2%
		Quartz	2%
		Pyrite	2%
		Diatoms	1%
		Plant debris	1%

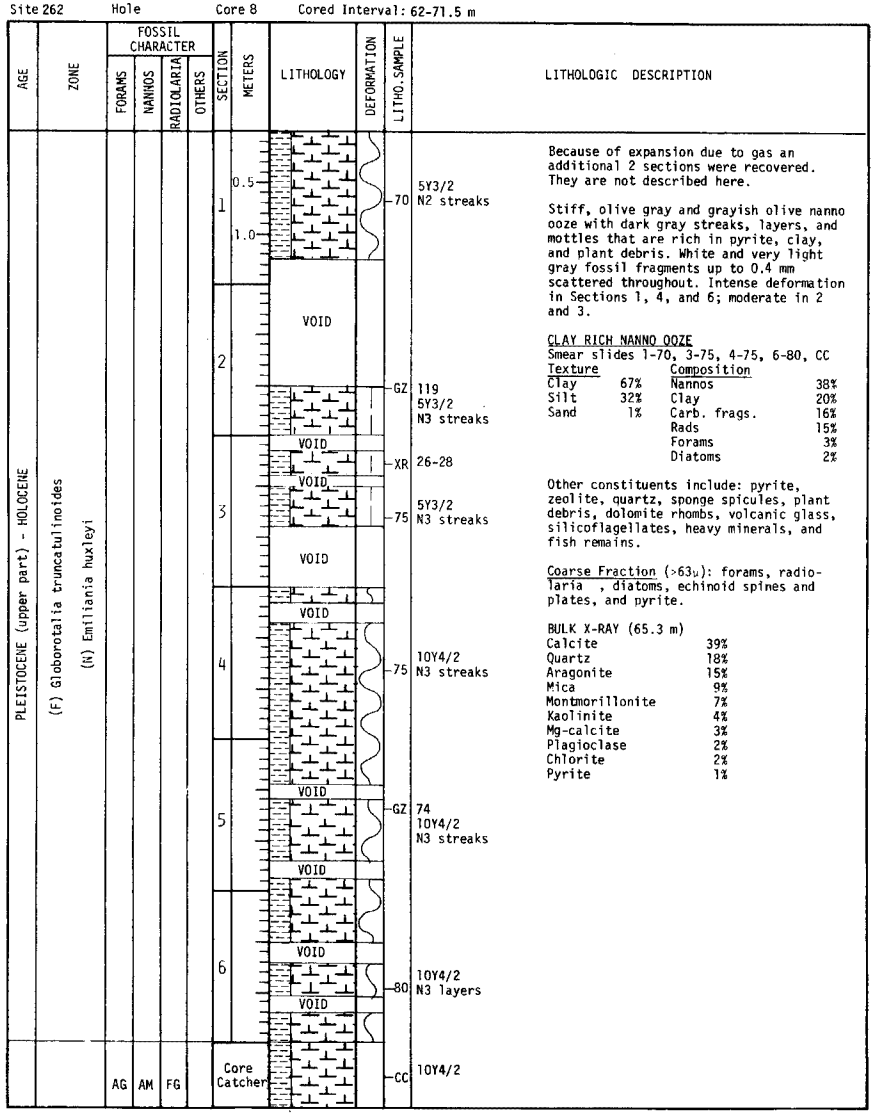
Other components include: feldspar, zeolite, volcanic glass, dolomite rhombs, silicoflagellates, ostracods.

Coarse Fraction (>63μ): forams, rads, diatoms, sponge spicules, pyrite, plant debris, and molluscs.

BULK X-RAY (56.3 m)

Calcite	43%
Quartz	15%
Aragonite	13%
Mica	9%
Montmorillonite	6%
Mg-calcite	5%
Plagioclase	3%
Kaolinite	3%
Chlorite	2%
Pyrite	1%

Site 262 Hole Core 8 Cored Interval: 62-71.5 m



Because of expansion due to gas an additional 2 sections were recovered. They are not described here.

Stiff, olive gray and grayish olive nanno ooze with dark gray streaks, layers, and mottles that are rich in pyrite, clay, and plant debris. White and very light gray fossil fragments up to 0.4 mm scattered throughout. Intense deformation in Sections 1, 4, and 6; moderate in 2 and 3.

CLAY RICH NANNO OOZE
Smear slides 1-70, 3-75, 4-75, 6-80, CC

Texture		Composition	
Clay	67%	Nannos	38%
Silt	32%	Clay	20%
Sand	1%	Carb. frags.	16%
		Rads	15%
		Forams	3%
		Diatoms	2%

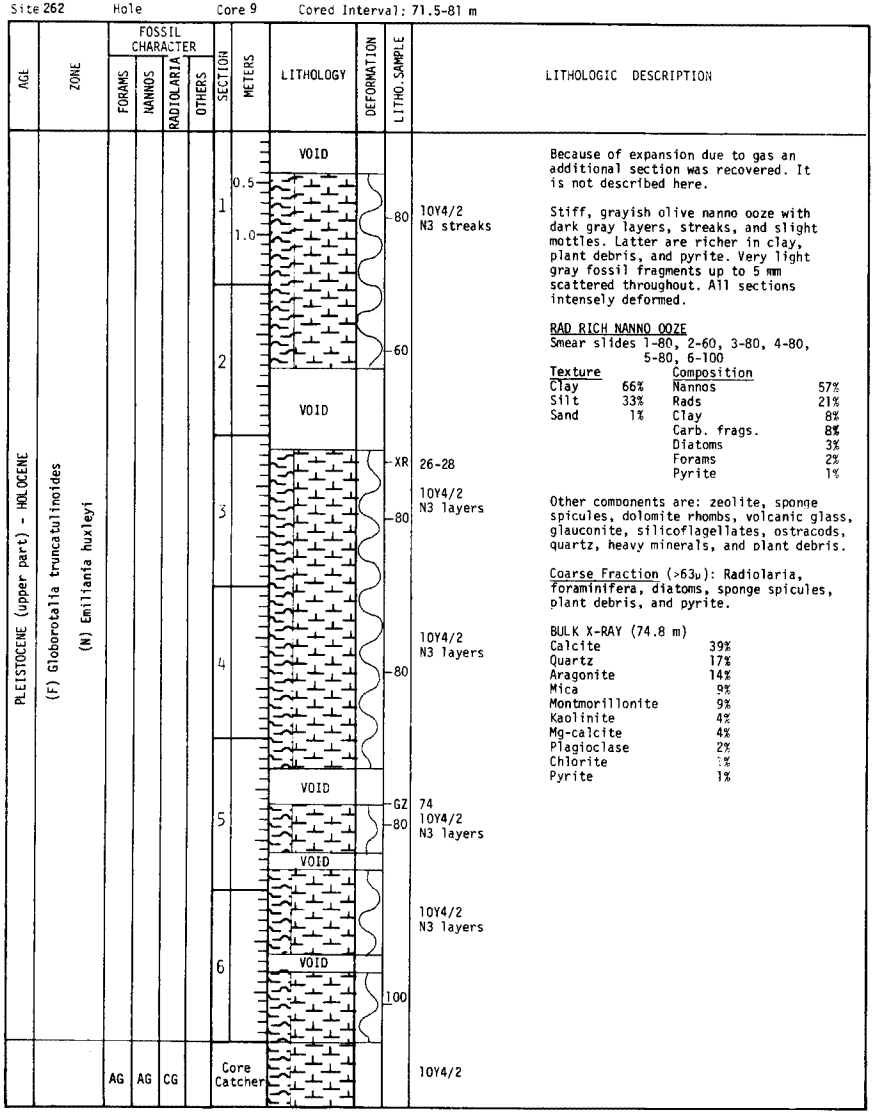
Other constituents include: pyrite, zeolite, quartz, sponge spicules, plant debris, dolomite rhombs, volcanic glass, silicoflagellates, heavy minerals, and fish remains.

Coarse Fraction (>63μ): forams, radiolaria , diatoms, echinoid spines and plates, and pyrite.

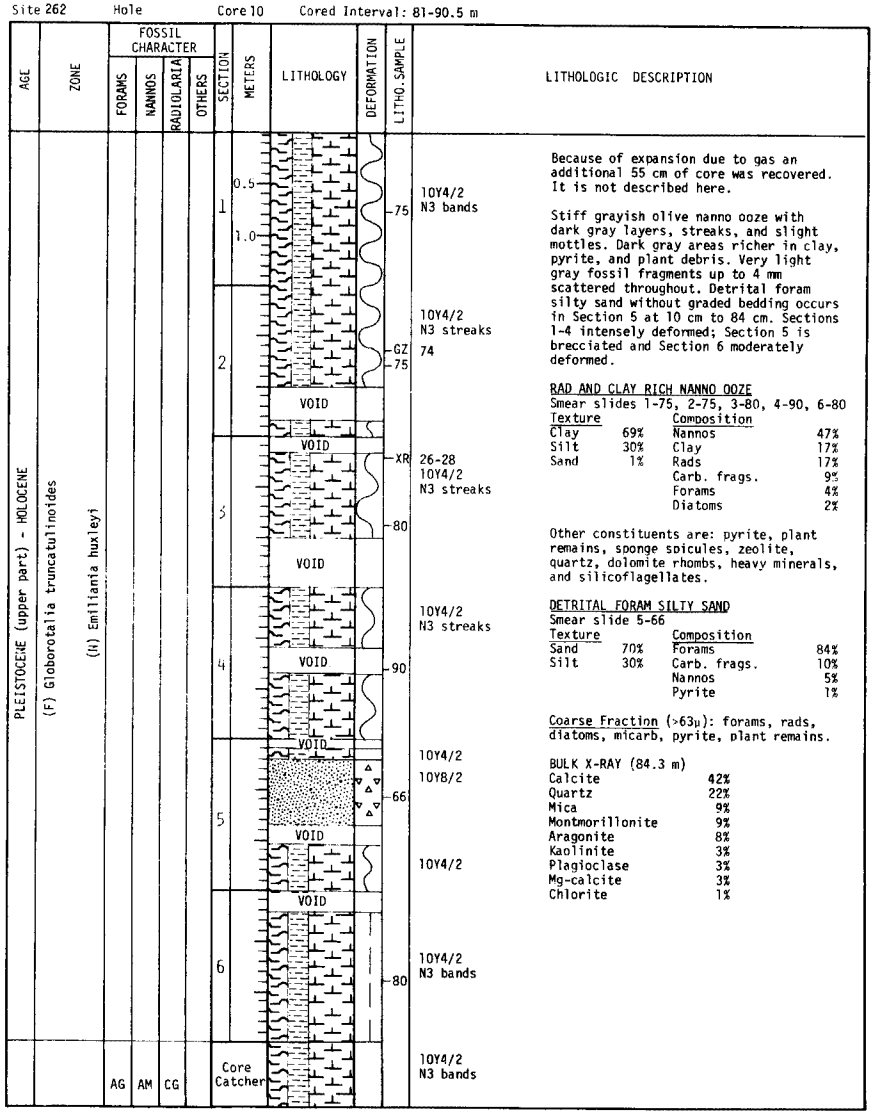
BULK X-RAY (65.3 m)

Calcite	39%
Quartz	18%
Aragonite	15%
Mica	9%
Montmorillonite	7%
Kaolinite	4%
Mg-calcite	3%
Plagioclase	2%
Chlorite	2%
Pyrite	1%

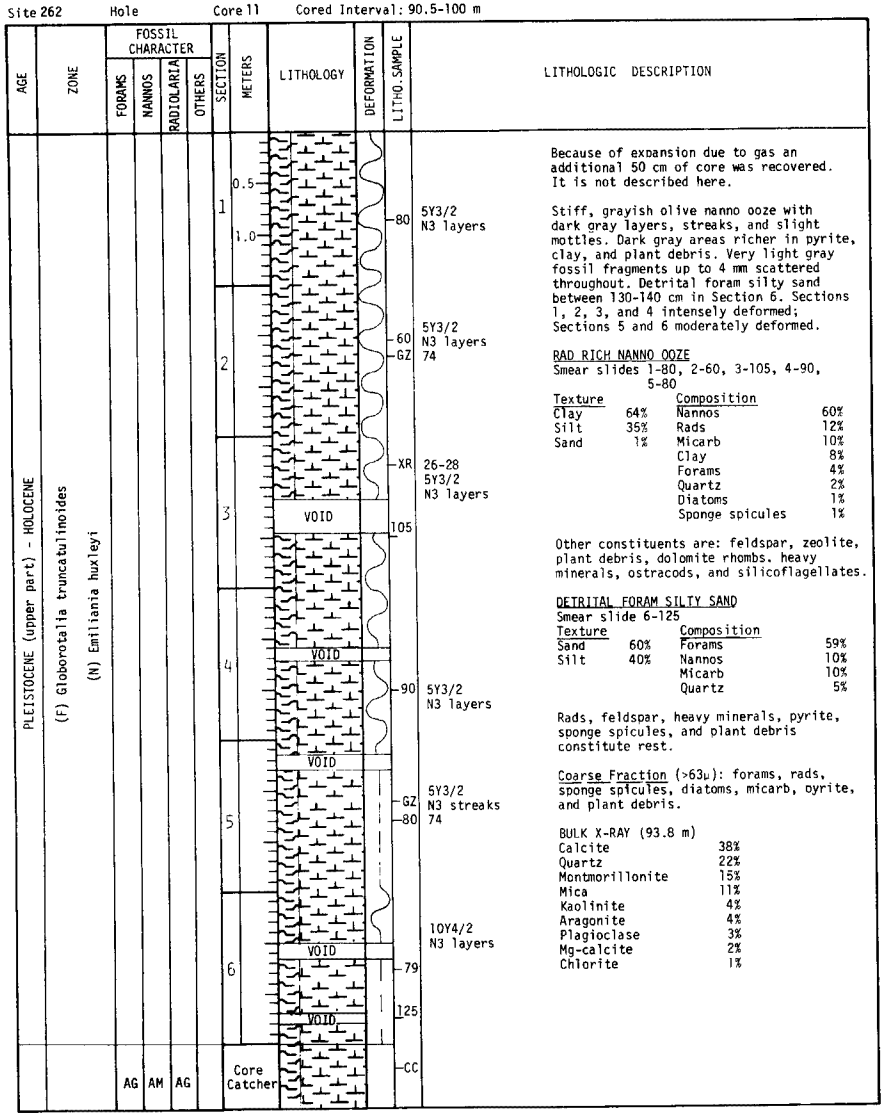
Site 262 Hole Core 9 Cored Interval: 71.5-81 m



Site 262 Hole Core 10 Cored Interval: 81-90.5 m



Site 262 Hole Core 11 Cored Interval: 90.5-100 m



Because of expansion due to gas an additional 50 cm of core was recovered. It is not described here.

Stiff, grayish olive nanno ooze with dark gray layers, streaks, and slight mottles. Dark gray areas richer in pyrite, clay, and plant debris. Very light gray fossil fragments up to 4 mm scattered throughout. Detrital foram silty sand between 130-140 cm in Section 6. Sections 1, 2, 3, and 4 intensely deformed; Sections 5 and 6 moderately deformed.

RAD RICH NANNO OOZE
Smear slides 1-80, 2-60, 3-105, 4-90, 5-80

Texture		Composition	
Clay	64%	Nannos	60%
Silt	35%	Rads	12%
Sand	1%	Micarb	10%
		Clay	8%
		Forams	4%
		Quartz	2%
		Diatoms	1%
		Sponge spicules	1%

Other constituents are: feldspar, zeolite, plant debris, dolomite rhombs. heavy minerals, ostracods, and silicoflagellates.

DETRITAL FORAM SILTY SAND
Smear slide 6-125

Texture		Composition	
Sand	60%	Forams	59%
Silt	40%	Nannos	10%
		Micarb	10%
		Quartz	5%

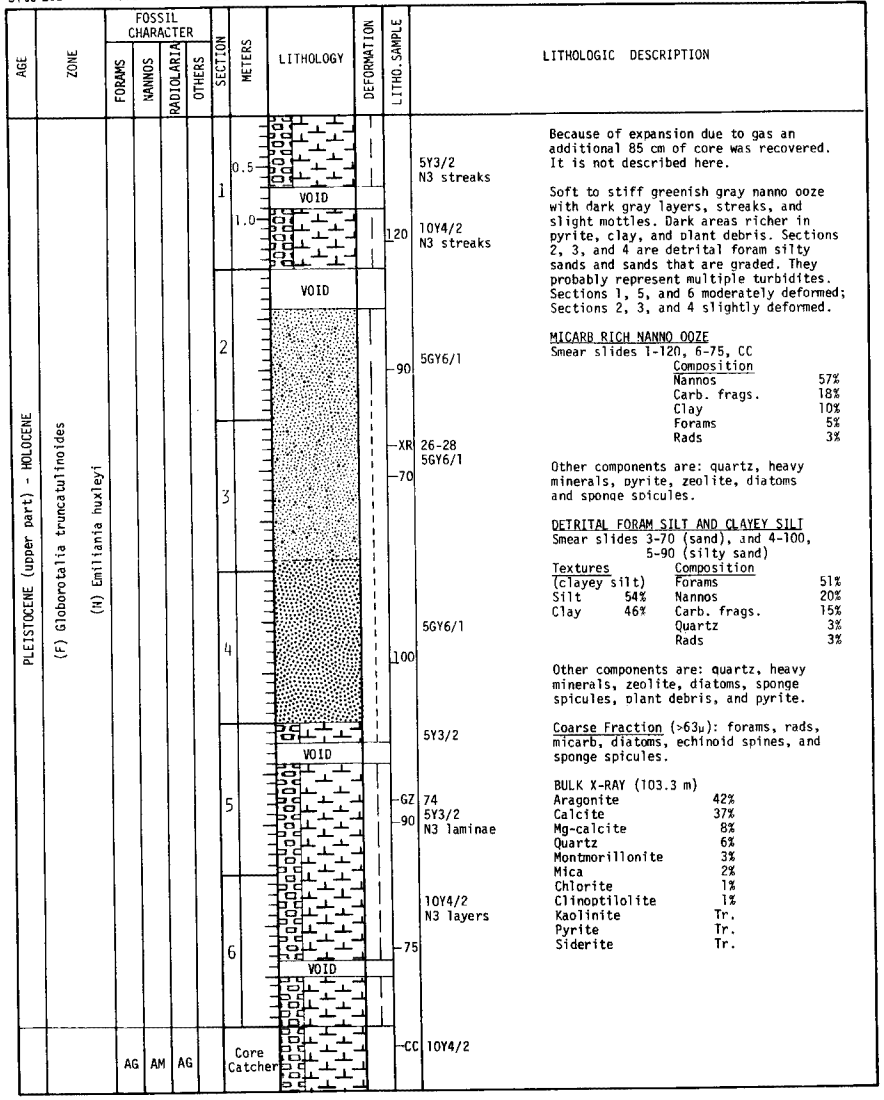
Rads, feldspar, heavy minerals, pyrite, sponge spicules, and plant debris constitute rest.

Coarse Fraction (>63μ): forams, rads, sponge spicules, diatoms, micarb, pyrite, and plant debris.

BULK X-RAY (93.8 m)

Calcite	38%
Quartz	22%
Montmorillonite	15%
Mica	11%
Kaolinite	4%
Aragonite	4%
Plagioclase	3%
Mg-calcite	2%
Chlorite	1%

Site 262 Hole Core 12 Cored Interval: 100-109.5 m



Because of expansion due to gas an additional 85 cm of core was recovered. It is not described here.

Soft to stiff greenish gray nanno ooze with dark gray layers, streaks, and slight mottles. Dark areas richer in pyrite, clay, and plant debris. Sections 2, 3, and 4 are detrital foram silty sands and sands that are graded. They probably represent multiple turbidites. Sections 1, 5, and 6 moderately deformed; Sections 2, 3, and 4 slightly deformed.

MICARB RICH NANNO OOZE
Smear slides 1-120, 6-75, CC

Composition	
Nannos	57%
Carb. frags.	18%
Clay	10%
Forams	5%
Rads	3%

Other components are: quartz, heavy minerals, pyrite, zeolite, diatoms and sponge spicules.

DETRITAL FORAM SILT AND CLAYEY SILT
Smear slides 3-70 (sand), and 4-100, 5-90 (silty sand)

Textures		Composition	
(clayey silt)		Forams	51%
Silt	54%	Nannos	20%
Clay	46%	Carb. frags.	15%
		Quartz	3%
		Rads	3%

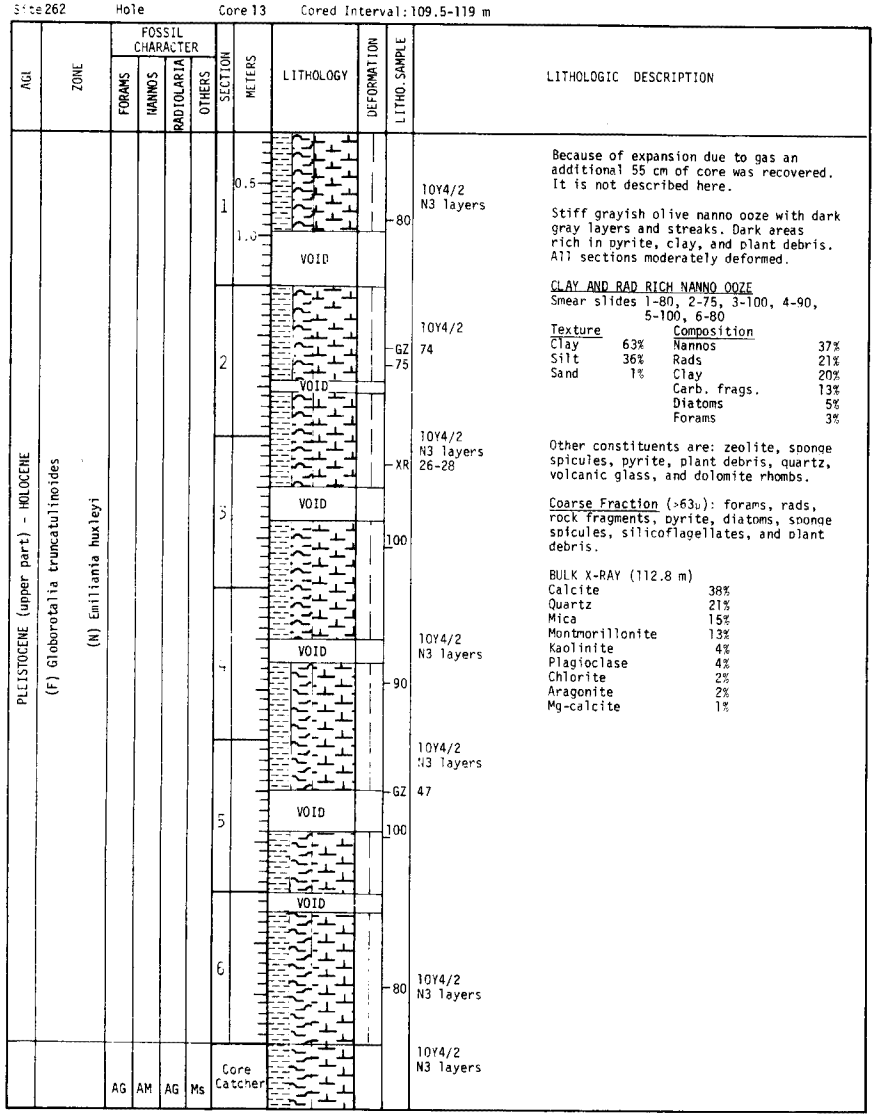
Other components are: quartz, heavy minerals, zeolite, diatoms, sponge spicules, plant debris, and pyrite.

Coarse Fraction (>63μ): forams, rads, micarb, diatoms, echinoid spines, and sponge spicules.

BULK X-RAY (103.3 m)

Aragonite	42%
Calcite	37%
Mg-calcite	8%
Quartz	6%
Montmorillonite	3%
Mica	2%
Chlorite	1%
Clinoptilolite	1%
Kaolinite	Tr.
Pyrite	Tr.
Siderite	Tr.

Site 262 Hole Core 13 Cored Interval: 109.5-119 m



Because of expansion due to gas an additional 55 cm of core was recovered. It is not described here.

Stiff grayish olive nanno ooze with dark gray layers and streaks. Dark areas rich in pyrite, clay, and plant debris. All sections moderately deformed.

CLAY AND RAD RICH NANNO OOZE
Smear slides 1-80, 2-75, 3-100, 4-90, 5-100, 6-80

Texture		Composition	
Clay	63%	Nannos	37%
Silt	36%	Rads	21%
Sand	1%	Clay	20%
		Carb. frags.	13%
		Diatoms	5%
		Forams	3%

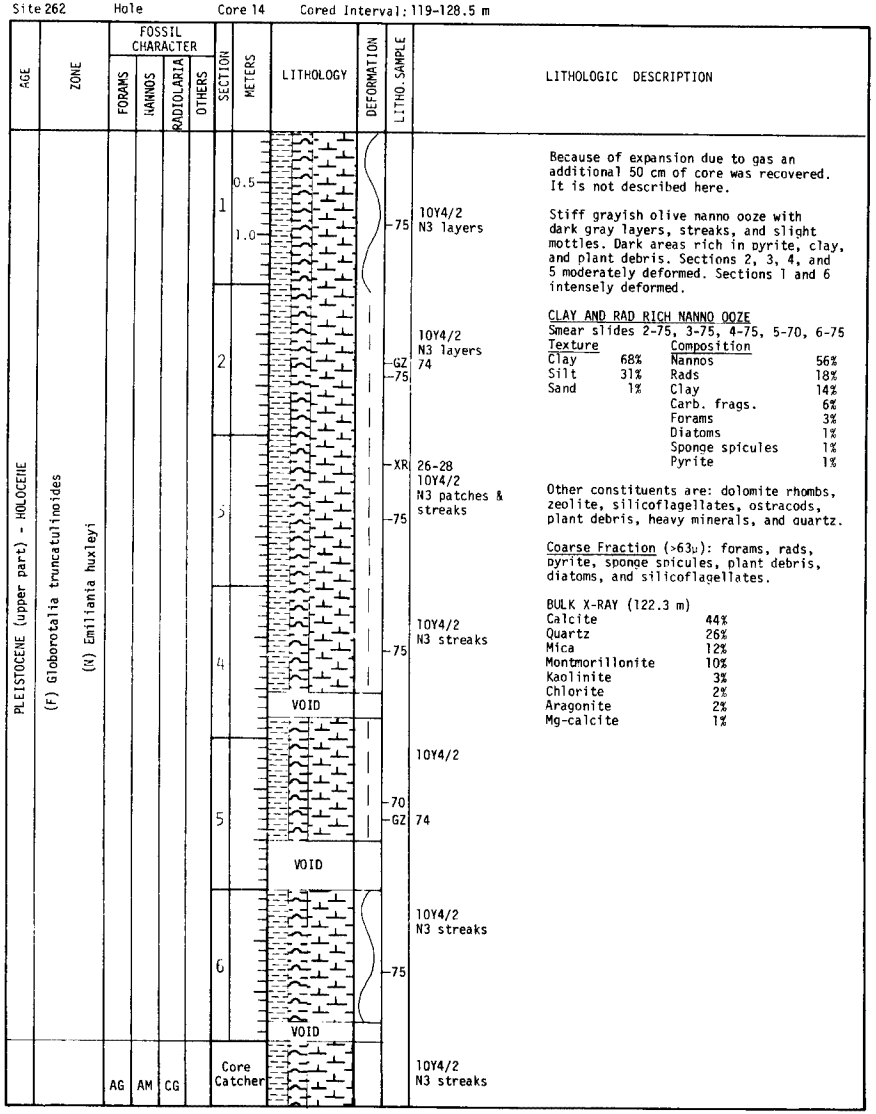
Other constituents are: zeolite, sponge spicules, pyrite, plant debris, quartz, volcanic glass, and dolomite rhombs.

Coarse Fraction (>63μ): forams, rads, rock fragments, pyrite, diatoms, sponge spicules, silicoflagellates, and plant debris.

BULK X-RAY (112.8 m)

Calcite	38%
Quartz	21%
Mica	15%
Montmorillonite	13%
Kaolinite	4%
Plagioclase	4%
Chlorite	2%
Aragonite	2%
Mg-calcite	1%

Site 262 Hole Core 14 Cored Interval: 119-128.5 m



Because of expansion due to gas an additional 50 cm of core was recovered. It is not described here.

Stiff grayish olive nanno ooze with dark gray layers, streaks, and slight mottles. Dark areas rich in pyrite, clay, and plant debris. Sections 2, 3, 4, and 5 moderately deformed. Sections 1 and 6 intensely deformed.

CLAY AND RAD RICH NANNO OOZE
Smear slides 2-75, 3-75, 4-75, 5-70, 6-75

Texture		Composition	
Clay	68%	Nannos	56%
Silt	31%	Rads	18%
Sand	1%	Clay	14%
		Carb. frags.	6%
		Forams	3%
		Diatoms	1%
		Sponge spicules	1%
		Pyrite	1%

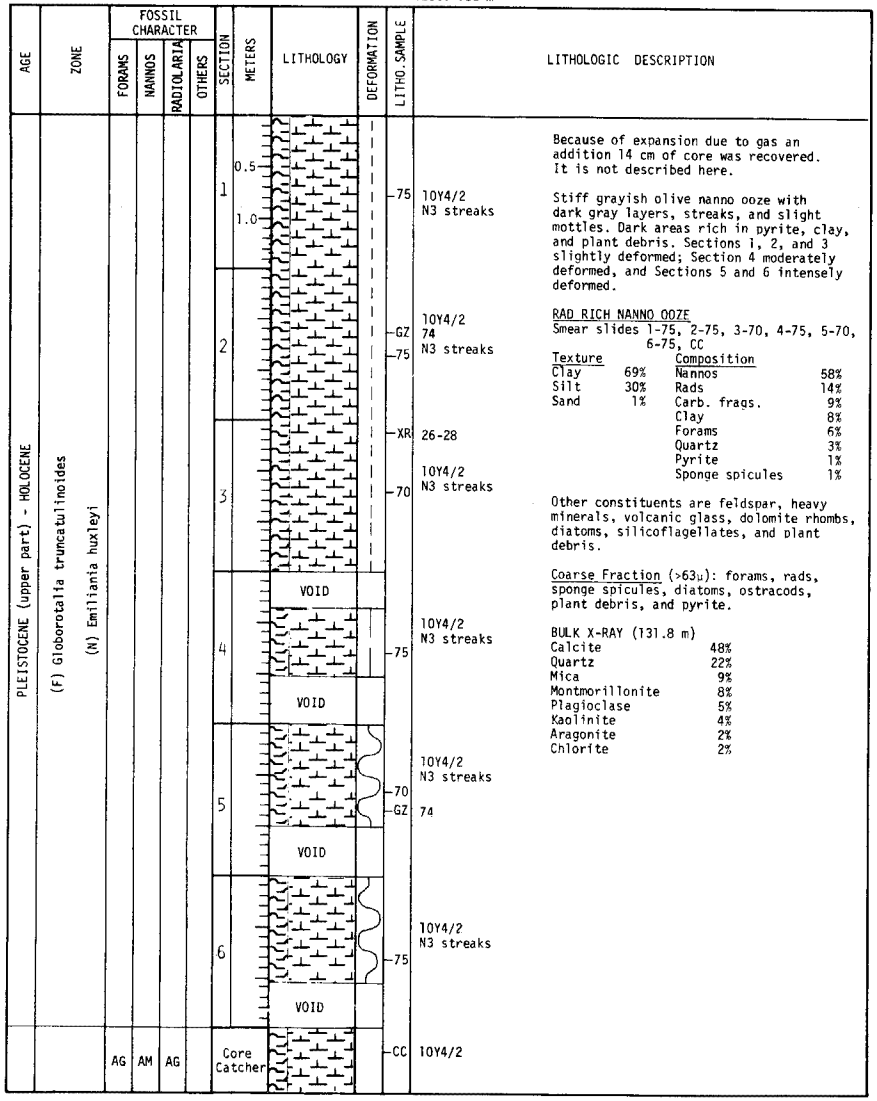
Other constituents are: dolomite rhombs, zeolite, silicoflagellates, ostracods, plant debris, heavy minerals, and quartz.

Coarse Fraction (>63μ): forams, rads, pyrite, sponge spicules, plant debris, diatoms, and silicoflagellates.

BULK X-RAY (122.3 m)

Calcite	44%
Quartz	26%
Mica	12%
Montmorillonite	10%
Kaolinite	3%
Chlorite	2%
Aragonite	2%
Mg-calcite	1%

Site 262 Hole Core 15 Cored Interval: 128.5-138 m



Because of expansion due to gas an addition 14 cm of core was recovered. It is not described here.

Stiff grayish olive nanno ooze with dark gray layers, streaks, and slight mottles. Dark areas rich in pyrite, clay, and plant debris. Sections 1, 2, and 3 slightly deformed; Section 4 moderately deformed, and Sections 5 and 6 intensely deformed.

RAD RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-70, 4-75, 5-70, 6-75, CC

Texture		Composition	
Clay	69%	Nannos	58%
Silt	30%	Rads	14%
Sand	1%	Carb. frags.	9%
		Clay	8%
		Forams	6%
		Quartz	3%
		Pyrite	1%
		Sponge spicules	1%

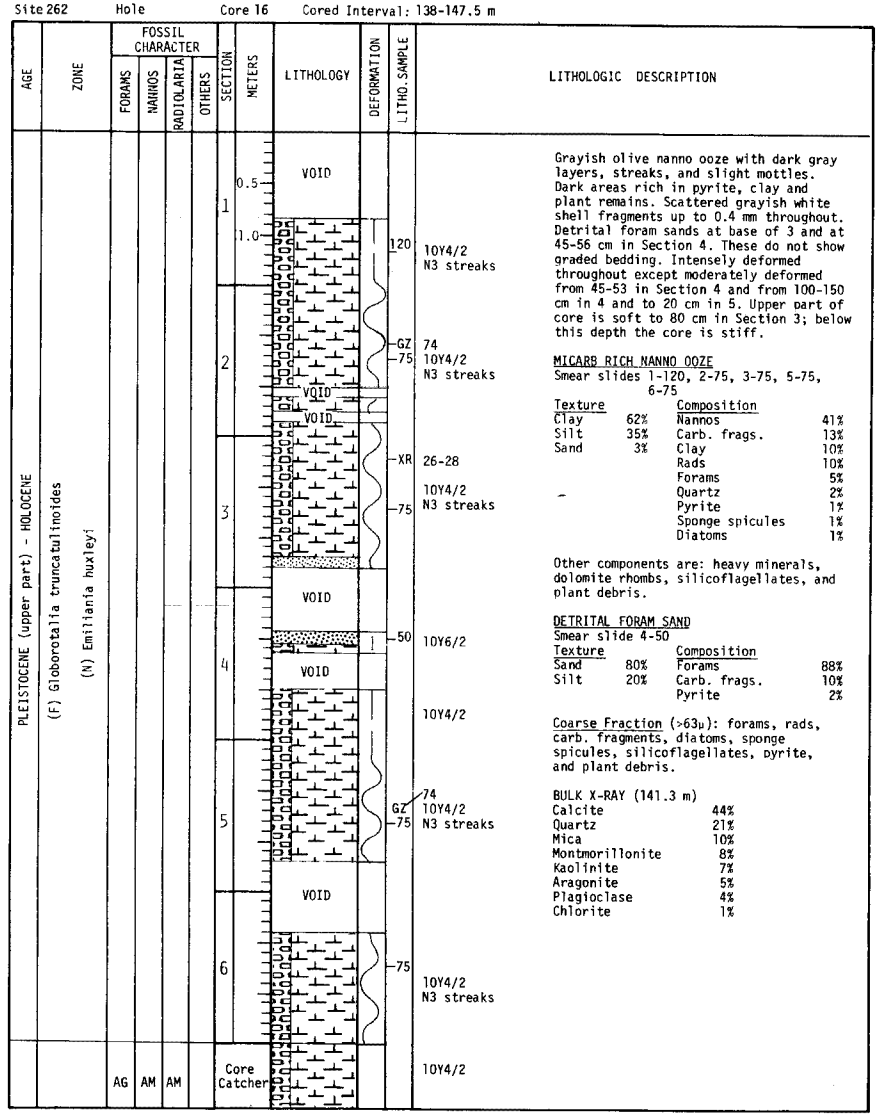
Other constituents are feldspar, heavy minerals, volcanic glass, dolomite rhombs, diatoms, silicoflagellates, and plant debris.

Coarse Fraction (>63μ): forams, rads, sponge spicules, diatoms, ostracods, plant debris, and pyrite.

BULK X-RAY (131.8 m)

Calcite	48%
Quartz	22%
Mica	9%
Montmorillonite	8%
Plagioclase	5%
Kaolinite	4%
Aragonite	2%
Chlorite	2%

Site 262 Hole Core 16 Cored Interval: 138-147.5 m



Grayish olive nanno ooze with dark gray layers, streaks, and slight mottles. Dark areas rich in pyrite, clay and plant remains. Scattered grayish white shell fragments up to 0.4 mm throughout. Detrital foram sands at base of 3 and at 45-56 cm in Section 4. These do not show graded bedding. Intensely deformed throughout except moderately deformed from 45-53 in Section 4 and from 100-150 cm in 4 and to 20 cm in 5. Upper part of core is soft to 80 cm in Section 3; below this depth the core is stiff.

MICARB RICH NANNO OOZE
Smear slides 1-120, 2-75, 3-75, 5-75, 6-75

Texture		Composition	
Clay	62%	Nannos	41%
Silt	35%	Carb. frags.	13%
Sand	3%	Clay	10%
		Rads	10%
		Forams	5%
		Quartz	2%
		Pyrite	1%
		Sponge spicules	1%
		Diatoms	1%

Other components are: heavy minerals, dolomite rhombs, silicoflagellates, and plant debris.

DETRITAL FORAM SAND
Smear slide 4-50

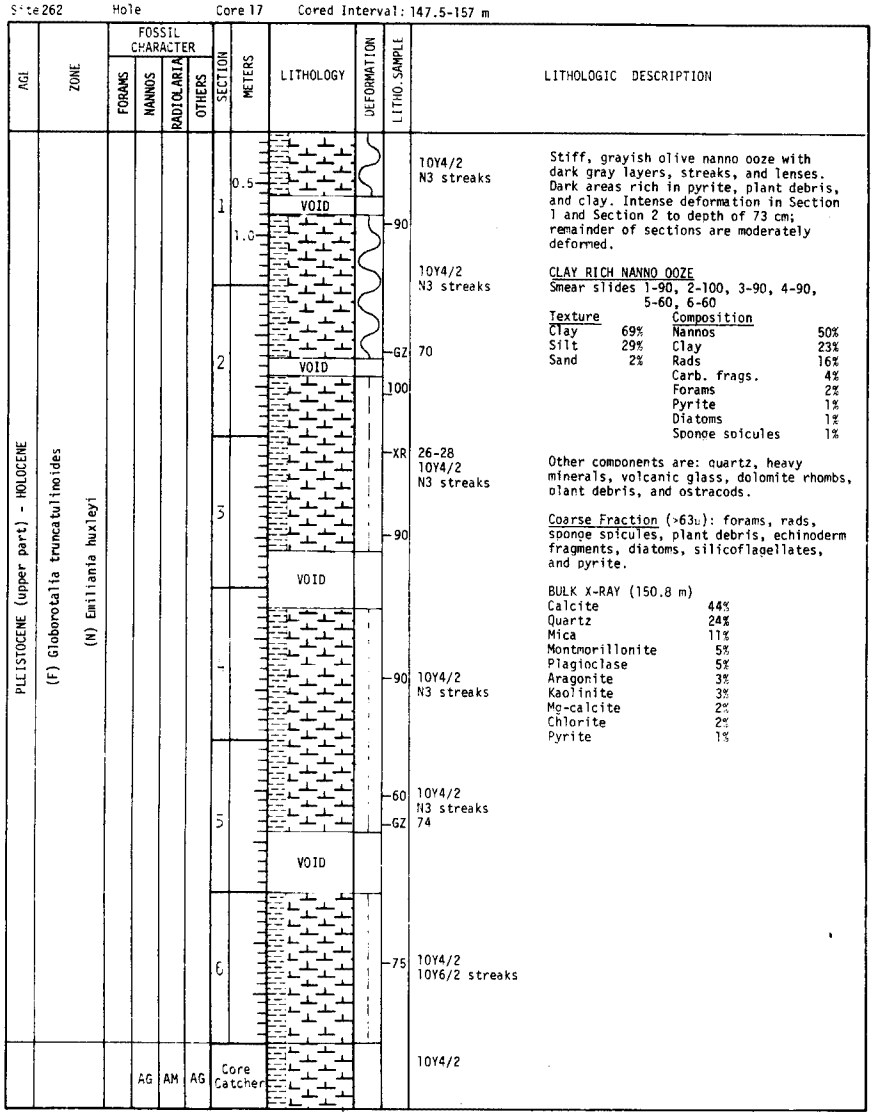
Texture		Composition	
Sand	80%	Forams	88%
Silt	20%	Carb. frags.	10%
		Pyrite	2%

Coarse Fraction (>63μ): forams, rads, carb. fragments, diatoms, sponge spicules, silicoflagellates, pyrite, and plant debris.

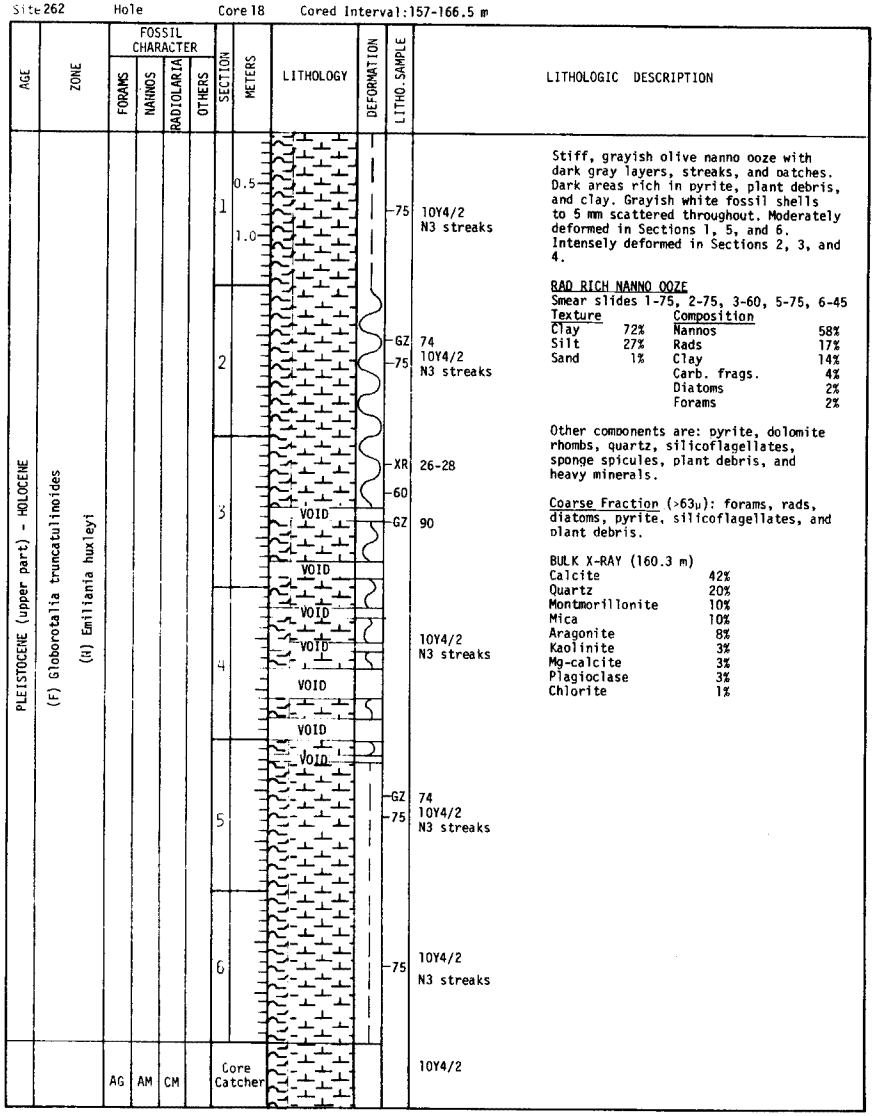
BULK X-RAY (141.3 m)

Calcite	44%
Quartz	21%
Mica	10%
Montmorillonite	8%
Kaolinite	7%
Aragonite	5%
Plagioclase	4%
Chlorite	1%

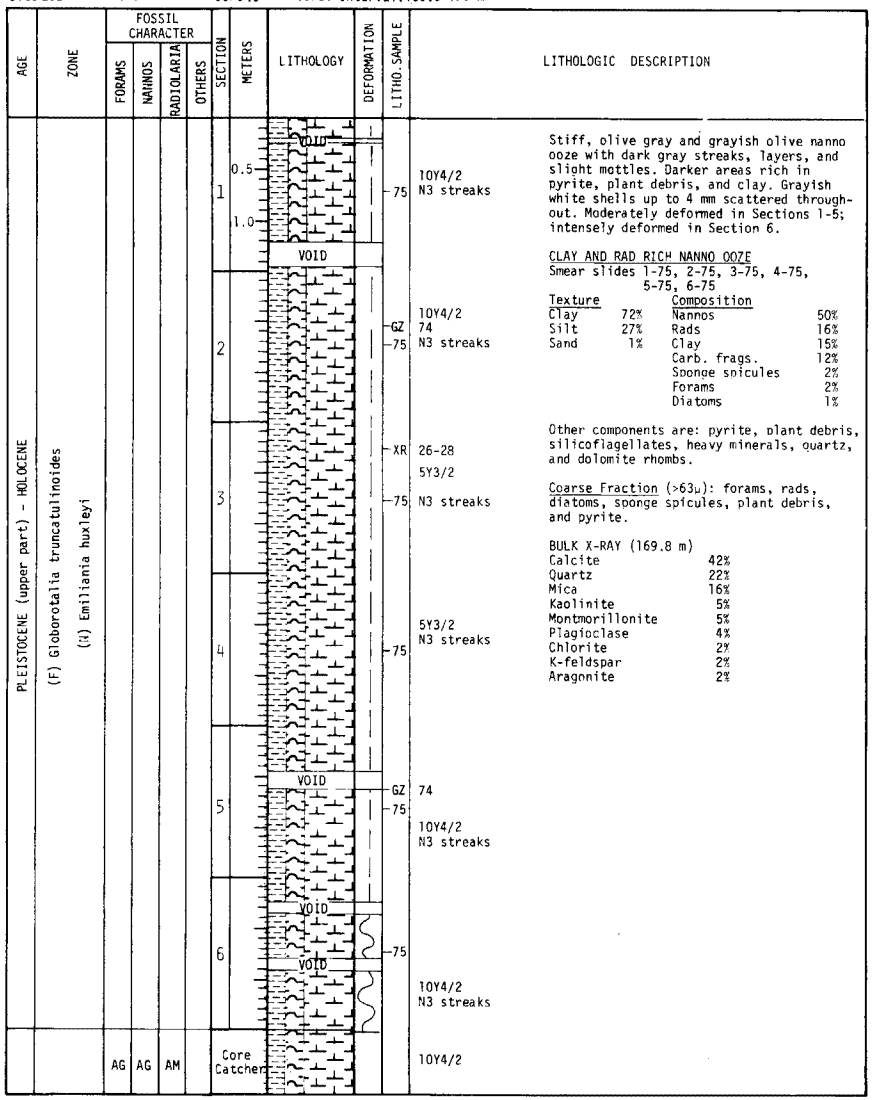
Site 262 Hole Core 17 Cored Interval: 147.5-157 m



Site 262 Hole Core 18 Cored Interval: 157-166.5 m



Site 262 Hole Core 19 Cored Interval: 166.5-176 m



Stiff, olive gray and grayish olive nanno ooze with dark gray streaks, layers, and slight mottles. Darker areas rich in pyrite, plant debris, and clay. Grayish white shells up to 4 mm scattered throughout. Moderately deformed in Sections 1-5; intensely deformed in Section 6.

CLAY AND RAD RICH NANNO OOZE

Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Clay	72%	Nannos	50%
Silt	27%	Rads	16%
Sand	1%	Clay	15%
		Carb. frags.	12%
		Sponge spicules	2%
		Forams	2%
		Diatoms	1%

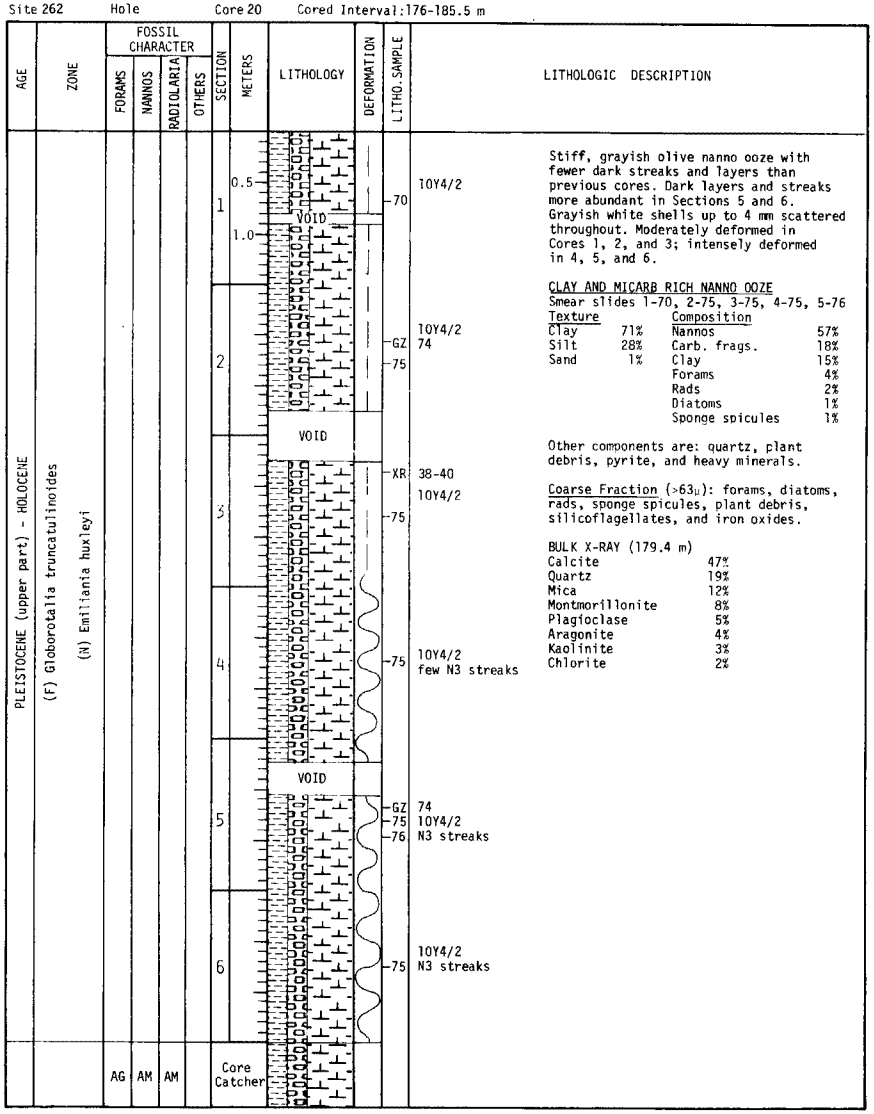
Other components are: pyrite, plant debris, silicoflagellates, heavy minerals, quartz, and dolomite rhombs.

Coarse Fraction (>63μ): forams, rads, diatoms, sponge spicules, plant debris, and pyrite.

BULK X-RAY (169.8 m)

Calcite	42%
Quartz	22%
Mica	16%
Kaolinite	5%
Montmorillonite	5%
Plagioclase	4%
Chlorite	2%
K-feldspar	2%
Aragonite	2%

Site 262 Hole Core 20 Cored Interval: 176-185.5 m



Stiff, grayish olive nanno ooze with fewer dark streaks and layers than previous cores. Dark layers and streaks more abundant in Sections 5 and 6. Grayish white shells up to 4 mm scattered throughout. Moderately deformed in Cores 1, 2, and 3; intensely deformed in 4, 5, and 6.

CLAY AND MICARB RICH NANNO OOZE

Smear slides 1-70, 2-75, 3-75, 4-75, 5-76

Texture		Composition	
Clay	71%	Nannos	57%
Silt	28%	Carb. frags.	18%
Sand	1%	Clay	15%
		Forams	4%
		Rads	2%
		Diatoms	1%
		Sponge spicules	1%

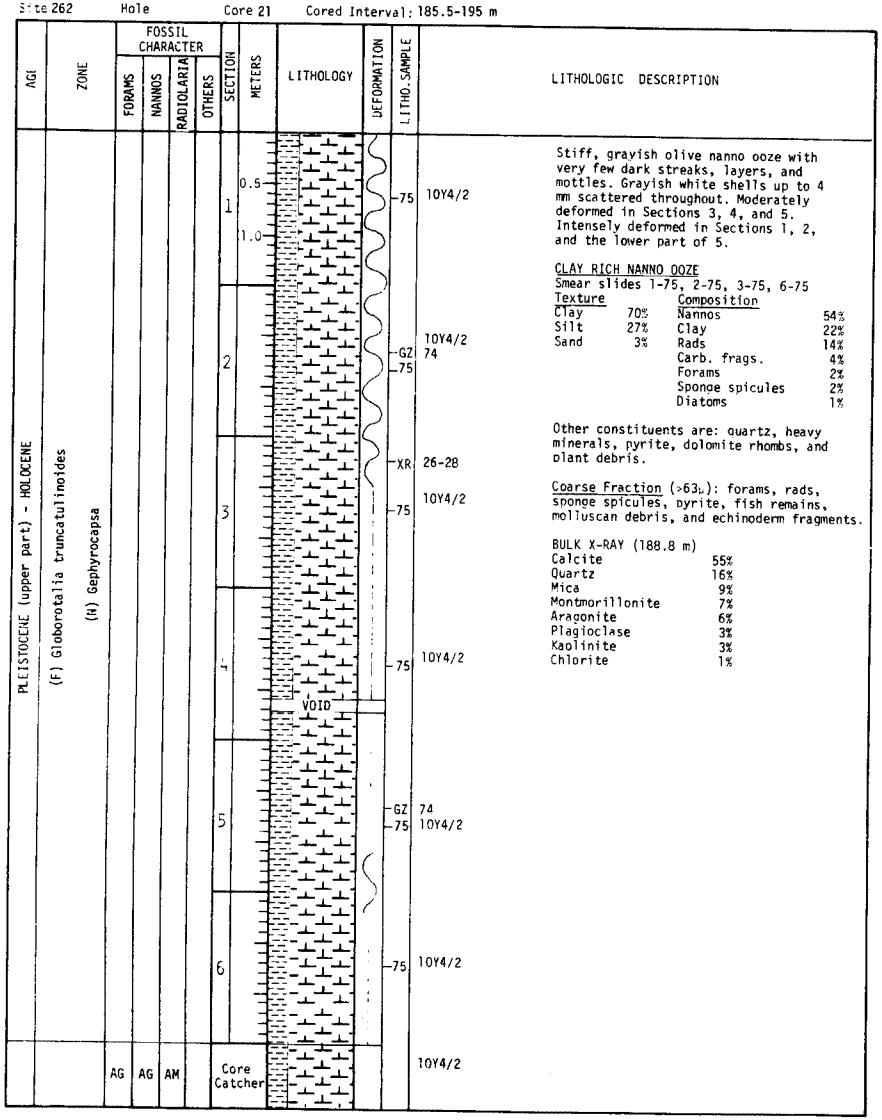
Other components are: quartz, plant debris, pyrite, and heavy minerals.

Coarse Fraction (>63μ): forams, diatoms, rads, sponge spicules, plant debris, silicoflagellates, and iron oxides.

BULK X-RAY (179.4 m)

Calcite	47%
Quartz	19%
Mica	12%
Montmorillonite	8%
Plagioclase	5%
Aragonite	4%
Kaolinite	3%
Chlorite	2%

Site 262 Hole Core 21 Cored Interval: 185.5-195 m



Stiff, grayish olive nanno ooze with very few dark streaks, layers, and mottles. Grayish white shells up to 4 mm scattered throughout. Moderately deformed in Sections 3, 4, and 5. Intensely deformed in Sections 1, 2, and the lower part of 5.

CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 6-75

Texture		Composition	
Clay	70%	Nannos	54%
Silt	27%	Clay	22%
Sand	3%	Rads	14%
		Carb. frags.	4%
		Forams	2%
		Sponge spicules	2%
		Diatoms	1%

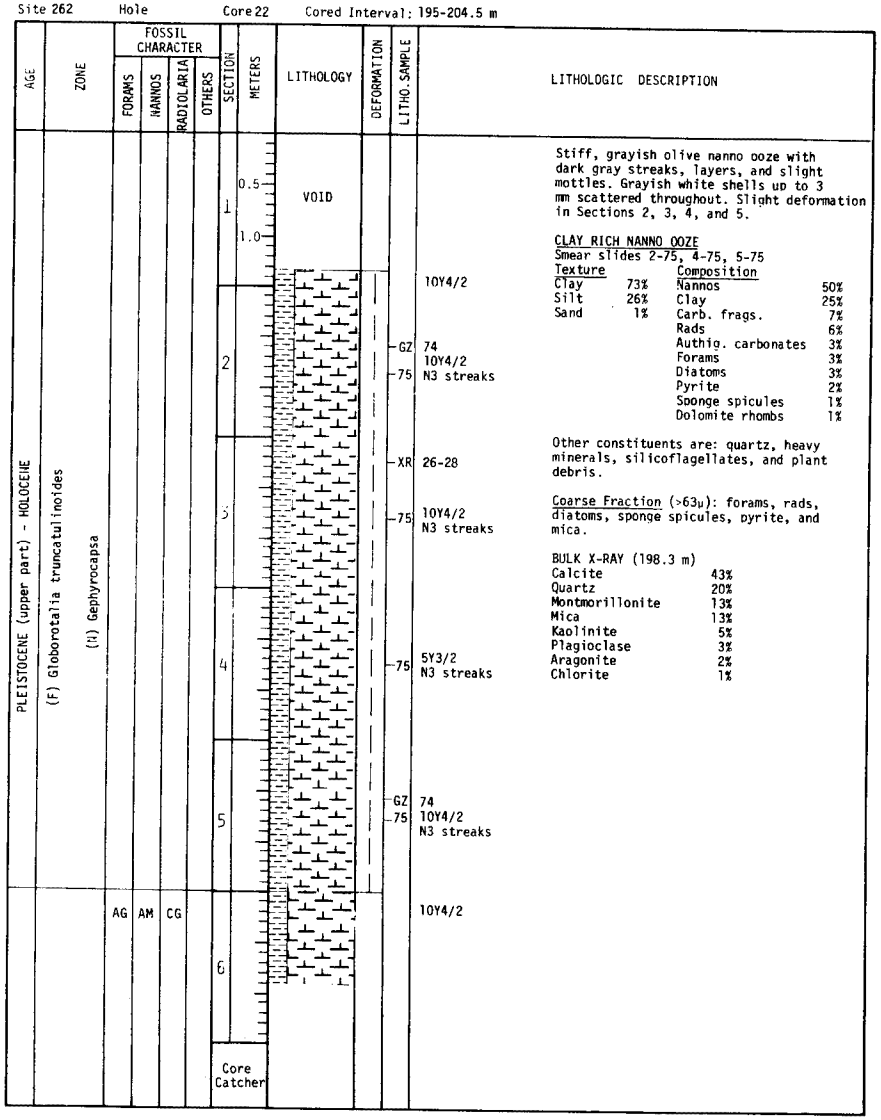
Other constituents are: quartz, heavy minerals, pyrite, dolomite rhombs, and plant debris.

Coarse Fraction (>63μ): forams, rads, sponge spicules, pyrite, fish remains, molluscan debris, and echinoderm fragments.

BULK X-RAY (188.8 m)

Calcite	55%
Quartz	16%
Mica	9%
Montmorillonite	7%
Aragonite	6%
Plagioclase	3%
Kaolinite	3%
Chlorite	1%

Site 262 Hole Core 22 Cored Interval: 195-204.5 m



Stiff, grayish olive nanno ooze with dark gray streaks, layers, and slight mottles. Grayish white shells up to 3 mm scattered throughout. Slight deformation in Sections 2, 3, 4, and 5.

CLAY RICH NANNO OOZE
Smear slides 2-75, 4-75, 5-75

Texture		Composition	
Clay	73%	Nannos	50%
Silt	26%	Clay	25%
Sand	1%	Carb. frags.	7%
		Rads	6%
		Authig. carbonates	3%
		Forams	3%
		Diatoms	3%
		Pyrite	2%
		Sponge spicules	1%
		Dolomite rhombs	1%

Other constituents are: quartz, heavy minerals, silicoflagellates, and plant debris.

Coarse Fraction (>63μ): forams, rads, diatoms, sponge spicules, pyrite, and mica.

BULK X-RAY (198.3 m)

Calcite	43%
Quartz	20%
Montmorillonite	13%
Mica	13%
Kaolinite	5%
Plagioclase	3%
Aragonite	2%
Chlorite	1%

Site 262 Hole Core 23 Cored Interval: 204.5-214 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
PLEISTOCENE (upper part) - HOLOCENE	(F) Globorotalia truncatulinoides (N) Gephyrocapsa	AG	AG	CM		1	0.5	VOID		75	10Y4/2 N3 layers
							1.0				
						2				GZ 74	
										75	10Y4/2 N3 layers
						3				XR	26-28
										75	10Y4/2
						4				75	10Y4/2
						5				GZ 74	
										75	10Y4/2
						6				75	10Y4/2
						Core Catcher		VOID			10Y4/2

Stiff, grayish and green nanno ooze with few dark gray streaks and layers. Slight deformation throughout.

CLAY NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Clay	74%	Nannos	60%
Silt	25%	Clay	27%
Sand	1%	Carb. frags.	5%
		Forams	3%
		Rads	3%

Other constituents are pyrite, diatoms, silicoflagellates, volcanic glass, heavy minerals, quartz, chlorite, dolomite rhombs, plant debris.

Coarse Fraction (>63μ): forams, rads, sponge spicules, silicoflagellates, molluscs, plant debris, pyrite, and mica.

BULK X-RAY (207.8 m)

Calcite	58%
Quartz	13%
Mica	11%
Montmorillonite	10%
Aragonite	3%
Kaolinite	2%
Plagioclase	2%
Chlorite	1%

Site 262 Hole Core 24 Cored Interval: 214-223.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
PLEISTOCENE (upper part) - HOLOCENE	(F) Globorotalia truncatulinoides (N) Gephyrocapsa	AG	AM	AM		1	0.5			75	10Y4/2
							1.0				
						2				GZ 74	10Y4/2 N3 streaks
										75	
						3				XR	26-28
										75	10Y4/2 10Y6/2 mottles
						4				75	10Y4/2
						5				75	10Y4/2
						6				75	10Y4/2 with 10Y6/2 bands
						Core Catcher					10Y4/2

Stiff, grayish olive and pale olive nanno ooze with few dark gray bands and streaks. Moderate deformation in Sections 1, 2, 5, and 6; intense deformation in Sections 3 and 4. Shell fragments up to 4 mm scattered throughout.

CLAY RICH NANNO OOZE
Smear slides 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Clay	72%	Nannos	67%
Silt	25%	Clay	23%
Sand	3%	Carb. frags.	3%
		Forams	2%
		Diatoms	1%
		Rads	1%
		Pyrite	1%

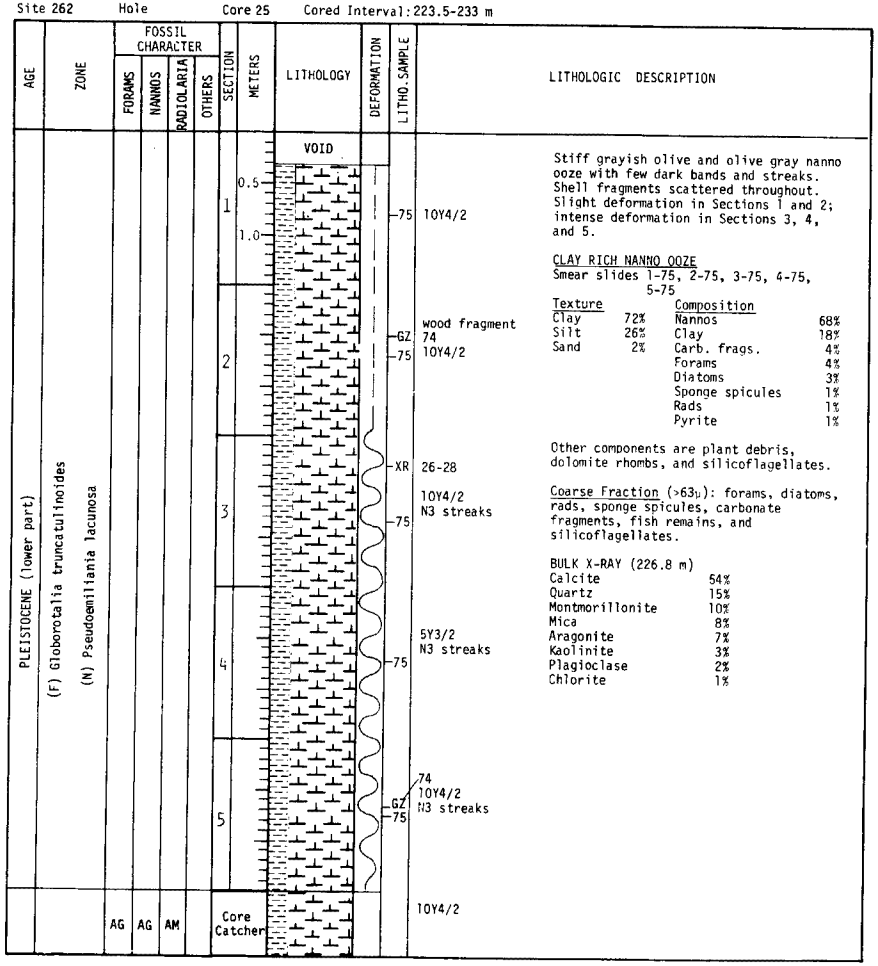
Other components are: sponge spicules, dolomite rhombs, chlorite, quartz, heavy minerals, silicoflagellates, and plant debris.

Coarse Fraction (>63μ): forams, diatoms, rads, sponge spicules, pyrite, plant debris, and echinoderm fragments.

BULK X-RAY (217.3 m)

Calcite	55%
Quartz	16%
Mica	9%
Aragonite	7%
Montmorillonite	6%
Plagioclase	3%
Kaolinite	2%
Chlorite	2%

Site 262 Hole Core 25 Cored Interval: 223.5-233 m



Stiff grayish olive and olive gray nanno ooze with few dark bands and streaks. Shell fragments scattered throughout. Slight deformation in Sections 1 and 2; intense deformation in Sections 3, 4, and 5.

CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75

Texture		Composition	
Clay	72%	Nannos	68%
Silt	26%	Clay	18%
Sand	2%	Carb. frags.	4%
		Forams	4%
		Diatoms	3%
		Sponge spicules	1%
		Rads	1%
		Pyrite	1%

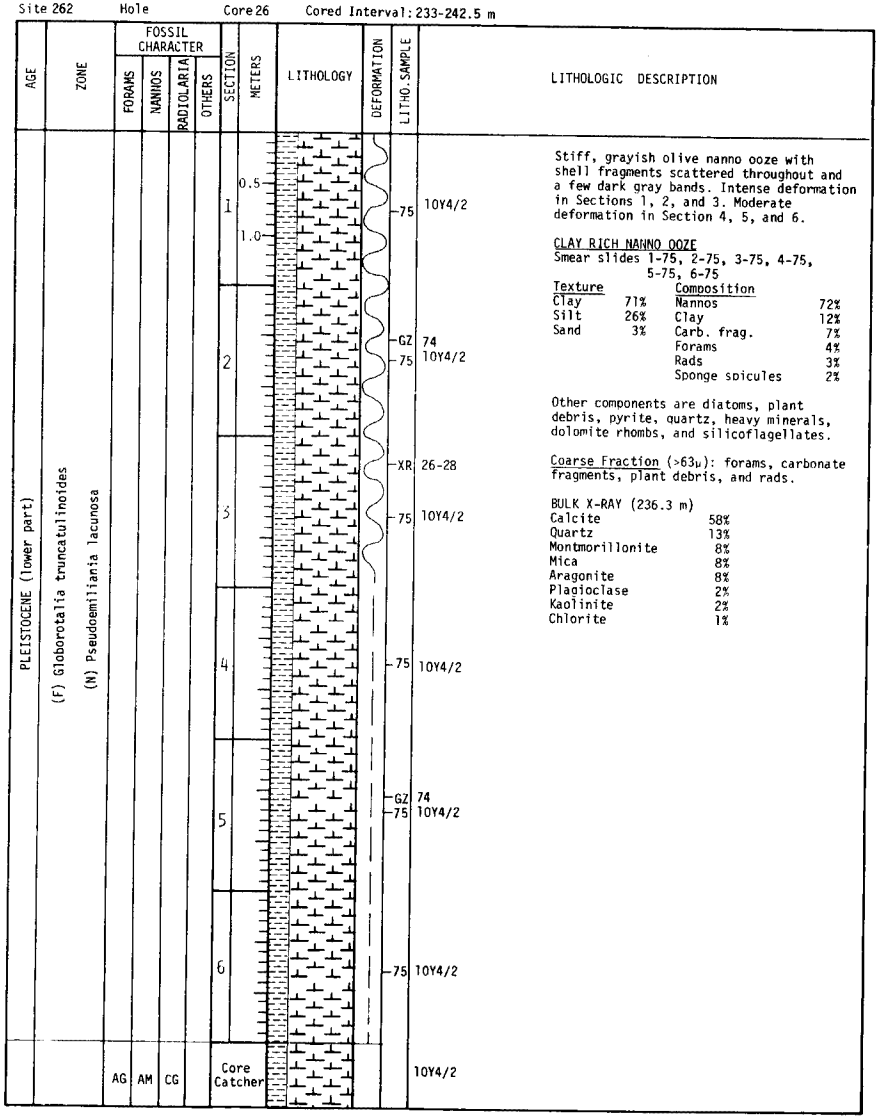
Other components are plant debris, dolomite rhombs, and silicoflagellates.

Coarse Fraction (>63μ): forams, diatoms, rads, sponge spicules, carbonate fragments, fish remains, and silicoflagellates.

BULK X-RAY (226.8 m)

Calcite	54%
Quartz	15%
Montmorillonite	10%
Mica	8%
Aragonite	7%
Kaolinite	3%
Plagioclase	2%
Chlorite	1%

Site 262 Hole Core 26 Cored Interval: 233-242.5 m



Stiff, grayish olive nanno ooze with shell fragments scattered throughout and a few dark gray bands. Intense deformation in Sections 1, 2, and 3. Moderate deformation in Section 4, 5, and 6.

CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Clay	71%	Nannos	72%
Silt	26%	Clay	12%
Sand	3%	Carb. frag.	7%
		Forams	4%
		Rads	3%
		Sponge spicules	2%

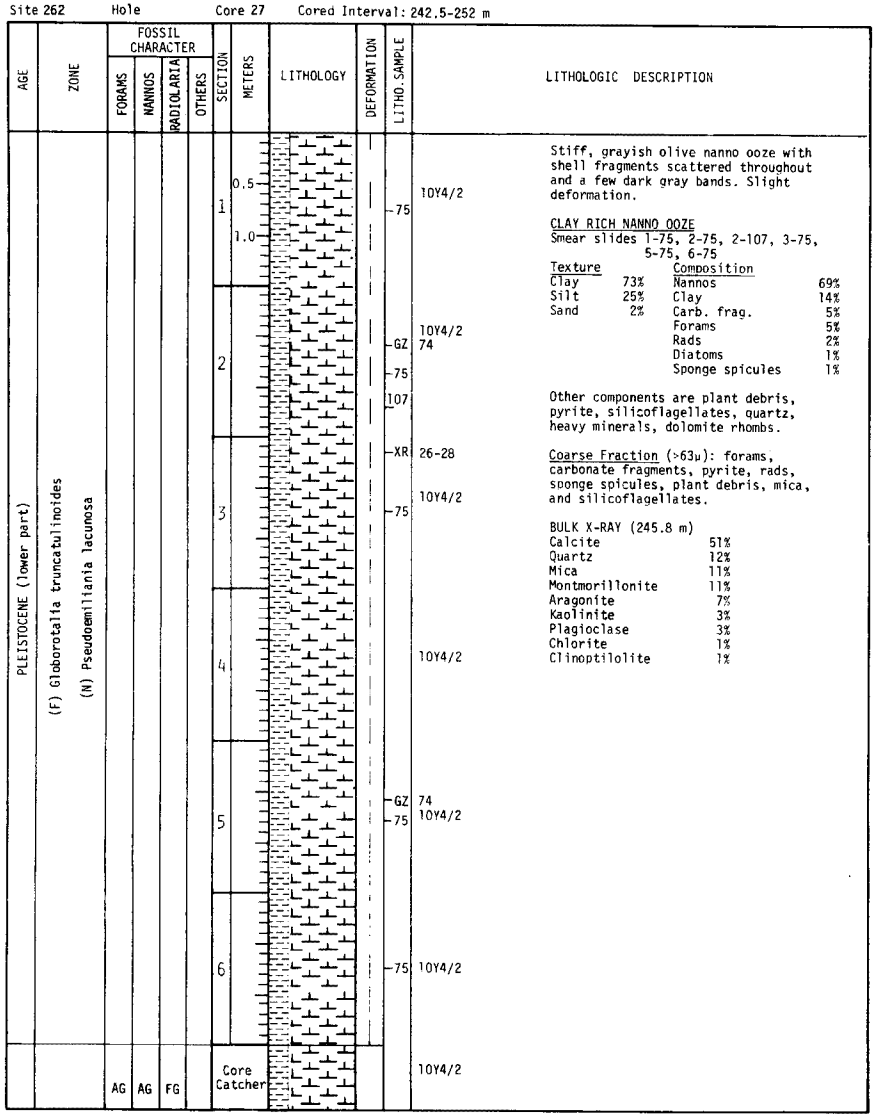
Other components are diatoms, plant debris, pyrite, quartz, heavy minerals, dolomite rhombs, and silicoflagellates.

Coarse Fraction (>63μ): forams, carbonate fragments, plant debris, and rads.

BULK X-RAY (236.3 m)

Calcite	58%
Quartz	13%
Montmorillonite	8%
Mica	8%
Aragonite	8%
Plagioclase	2%
Kaolinite	2%
Chlorite	1%

Site 262 Hole Core 27 Cored Interval: 242.5-252 m



Stiff, grayish olive nanno ooze with shell fragments scattered throughout and a few dark gray bands. Slight deformation.

CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 2-107, 3-75, 5-75, 6-75

Texture		Composition	
Clay	73%	Nannos	69%
Silt	25%	Clay	14%
Sand	2%	Carb. frag.	5%
		Forams	5%
		Rads	2%
		Diatoms	1%
		Sponge spicules	1%

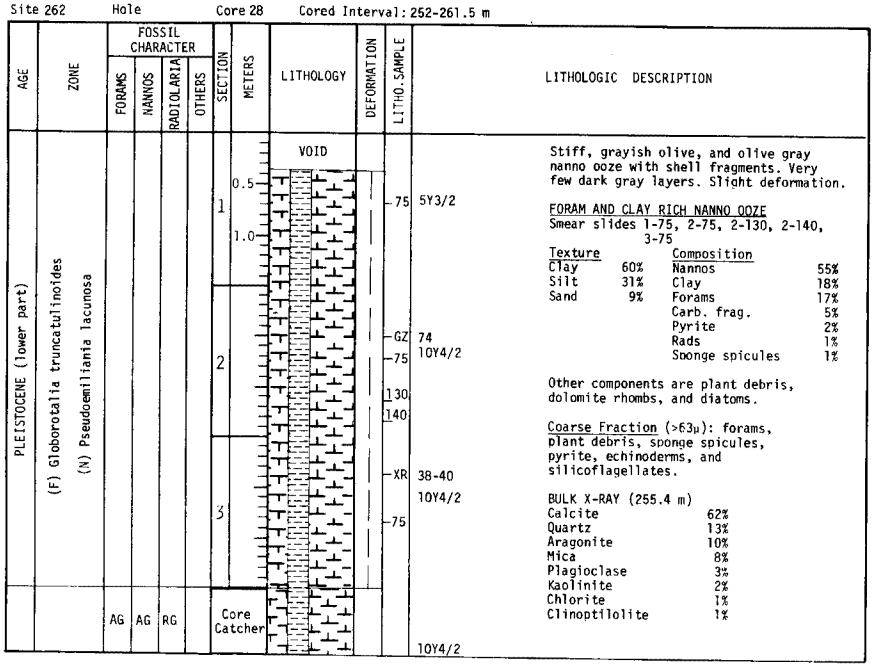
Other components are plant debris, pyrite, silicoflagellates, quartz, heavy minerals, dolomite rhombs.

Coarse Fraction (>63μ): forams, carbonate fragments, pyrite, rads, sponge spicules, plant debris, mica, and silicoflagellates.

BULK X-RAY (245.8 m)

Calcite	51%
Quartz	12%
Mica	11%
Montmorillonite	11%
Aragonite	7%
Kaolinite	3%
Plagioclase	3%
Chlorite	1%
Clinoptilolite	1%

Site 262 Hole Core 28 Cored Interval: 252-261.5 m



Stiff, grayish olive, and olive gray nanno ooze with shell fragments. Very few dark gray layers. Slight deformation.

FORAM AND CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 2-130, 2-140, 3-75

Texture		Composition	
Clay	60%	Nannos	55%
Silt	31%	Clay	18%
Sand	9%	Forams	17%
		Carb. frag.	5%
		Pyrite	2%
		Rads	1%
		Sponge spicules	1%

Other components are plant debris, dolomite rhombs, and diatoms.

Coarse Fraction (>63μ): forams, plant debris, sponge spicules, pyrite, echinoderms, and silicoflagellates.

BULK X-RAY (255.4 m)

Calcite	62%
Quartz	13%
Aragonite	10%
Mica	8%
Plagioclase	3%
Kaolinite	2%
Chlorite	1%
Clinoptilolite	1%

Site 262 Hole Core 29 Cored Interval: 261.5-271 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
PLEISTOCENE (lower part)	(F) Globorotalia truncatulinoides (N) Pseudoemiliania lacunosa	AG	AG	RG		1	0.5 1.0			75	10Y4/2
						2				GZ 74 75 96	10Y4/2 white
						3				XR 69 75	18-20 10Y4/2 white
						4				75	5GY6/1
						5				GZ 75	10Y4/2 with 5GY6/1 mottles 74
						6				75	10Y4/2
						Core Catcher					10Y4/2

Stiff, grayish olive nanno ooze with slight mottles of greenish gray nanno ooze. Few dark gray bands. Shell fragments scattered throughout. Ash beds in Sections 2 and 3 are white.

CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Clay	71%	Nannos	60%
Silt	24%	Clay	17%
Sand	5%	Forams	11%
		Carb. frag.	8%
		Sponge spicules	2%
		Pyrite	1%

Other components are rads, diatoms, silicoflagellates, heavy minerals, plant debris, and volcanic ash.

VOLCANIC ASH
Smear slides 2-96, 3-69

Texture		Composition	
Sand	70%	Glass	99%
Silt	30%		

Other minerals are hypersthene, hornblende, and opaques.

Coarse Fraction (>63μ): forams, pyrite, silicoflagellates, plant debris, molluscan debris, echinoderm fragments, and fish remains.

BULK X-RAY (264.7 m)

Calcite	72%
Aragonite	9%
Quartz	5%
Mica	4%
Montmorillonite	3%
Ca-dolomite	3%
Kaolinite	2%
K-feldspar	2%

Site 262 Hole Core 30 Cored Interval: 271-280.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
PLEISTOCENE (lower part)	(F) Globorotalia truncatulinoides (N) Pseudoemiliania lacunosa					1	0.5 1.0			75	10Y6/2
						2				GZ 74 75	10Y4/2 10Y6/2 mottles
						3				XR 75	39-41 10Y4/2
						4				75	10Y4/2
						5				GZ 75	10Y4/2 74
		AG	AG	NONE		Core Catcher					10Y4/2

Stiff, grayish olive nanno ooze with pale olive mottles. Grayish white shells scattered throughout. Slightly deformed.

CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75

Texture		Composition	
Clay	55%	Nannos	63%
Silt	34%	Clay	16%
Sand	11%	Forams	11%
		Carb. frag.	8%

Other components are quartz, heavy minerals, pyrite, dolomite rhombs, rads, sponge spicules, and plant debris.

Coarse Fraction (>63μ): forams, plant debris, sponge spicules, pyrite, echinoderm fragments, silicoflagellates, and fish remains.

BULK X-RAY (274.4 m)

Calcite	63%
Aragonite	20%
Mica	6%
Quartz	5%
Montmorillonite	3%
Plagioclase	1%
Kaolinite	1%
Chlorite	1%

Site 262 Hole Core 31 Cored Interval: 280.5-290 m

AGE: PLEISTOCENE (lower part)

ZONE: (F) Globorotalia truncatulinoides / (N) Pseudoemiliania lacunosa

FOSSIL CHARACTER: FORAMS: AG; NANNOS: AG; RADIOLARIA: NONE; OTHERS: AG

SECTION / METERS / LITHOLOGY / DEFORMATION / LITHO.SAMPLE

Section	Meters	Litho.Sample
1	0.5	5GY6/1
	1.0	
2		GZ 74
		75 5GY6/1
3		XR 13-15
		75 5GY6/1 mottles in 10Y4/2 groundmass
4		75 10Y4/2
5		10Y4/2
		GZ 74
		75
6		75
		10Y4/2
Core Catcher		5Y3/2
		10Y5/2

LITHOLOGIC DESCRIPTION

VOID

Grayish olive nanno ooze with greenish gray mottles. Soft in SEctions 1, 2, and 3; stiff in Sections 4, 5, 6. Drilling breccia in Sections 1, 2, and 3; intensely deformed in Sections 4, 5, and 6. Calcareous shells throughout.

CLAY AND MICARB RICH NANNO OOZE
Smear slides 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Clay	62%	Nannos	62%
Silt	30%	Carb. frag.	15%
Sand	8%	Clay	14%
		Forams	8%
		Pyrite	1%

Other components are: dolomite rhombs, sponge spicules, silicoflagellates, rads, and plant debris.

Coarse Fraction (>63μ): forams, pyrite, sponge spicules, echinoderm fragments, fish remains, plant debris, and ostracods.

BULK X-RAY (283.6 m)

Calcite	57%
Aragonite	23%
Quartz	6%
Mica	5%
Montmorillonite	5%
Kaolinite	3%
Chlorite	1%

Site 262 Hole Core 32 Cored Interval: 290-299.5 m

AGE: PLEISTOCENE (lower part)

ZONE: (F) Globorotalia truncatulinoides / (N) Pseudoemiliania lacunosa

FOSSIL CHARACTER: FORAMS: AG; NANNOS: AG; RADIOLARIA: NONE; OTHERS: AG

SECTION / METERS / LITHOLOGY / DEFORMATION / LITHO.SAMPLE

Section	Meters	Litho.Sample
1	0.5	75 10Y4/2
	1.0	
2		GZ 74
		75 10Y4/2
3		XR 26-28
		75 10Y4/2
4		75 10Y6/2
		10Y5/2
5		GZ 74
		75 10Y4/2
6		75 10Y4/2
Core Catcher		5GY6/1

LITHOLOGIC DESCRIPTION

Stiff, grayish olive and pale olive nanno ooze with slight mottling. Moderately deformed. Calcerous shells up to 4 mm throughout.

CLAY AND MICARB RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Clay	59%	Nannos	71%
Silt	35%	Carb. frag.	12%
Sand	6%	Clay	10%
		Forams	4%
		Pyrite	1%

Other components are quartz, heavy minerals, dolomite rhombs, rads, sponge spicules, silicoflagellates, and plant debris.

Coarse Fraction (>63μ): forams, pyrite, sponge spicules, echinoderm fragments, molluscan debris, and plant debris.

BULK X-RAY (293.3 m)

Calcite	52%
Aragonite	29%
Quartz	7%
Mica	6%
Kaolinite	2%
Montmorillonite	2%
Chlorite	1%
Ca-dolomite	1%

Site 262 Hole Core 33 Cored Interval: 299.5-309 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
PLEISTOCENE (lower part)	(F) Globorotalia truncatulinoides (N) Pseudoemiliania lacunosa	AG				1	0.5	VOID		75	10Y4/2
							1.0				
		AG				2				GZ 74	
										75	10Y4/2
										XR	20-22
						3				75	10Y4/2
											white
										35	white
		AG				4				75	10Y4/2
						5				GZ 74	10Y4/2
										75	
		AG				6					10Y4/2
											10Y5/2
											10Y6/2
		AG	AG	NONE		Core Catcher					

Stiff, grayish olive nanno ooze with very slight mottling. Few calcareous shell fragments up to 3 mm. Moderately deformed. Volcanic ash and piece of pumice in upper portion of Section 4.

MICARB AND CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75

Texture		Composition	
Clay	68%	Nannos	69%
Silt	30%	Clay	12%
Sand	2%	Carb. frag.	10%
		Forams	7%
		Pyrite	1%

Other constituents are rads, sponge spicules, plant debris, dolomite rhombs, quartz, feldspar, and heavy minerals.

VOLCANIC ASH
Smear slide 4-35

Texture		Composition	
Sand	80%	Volcanic glass	97%
Silt	20%	Clay	1%

Others are hornblende, chlorite, opaques, and hypersthene.

Coarse Fraction (>63μ): forams, rads, plant debris, pyrite, and sponge spicules.

BULK X-RAY (302.7 m)

Calcite	59%
Aragonite	24%
Quartz	6%
Mica	5%
Ca-dolomite	3%
Kaolinite	2%
Chlorite	1%

Site 262 Hole Core 34 Cored Interval: 309-318.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER PLIOCENE (upper part) (Based on Forams)	(F) Globorotalia tosaensis (H) Pseudoemiliania lacunosa	AG			Ms	1	0.5			75	10Y4/2
							1.0				
						2				GZ 74	
										75	10Y4/2
										XR	26-28
		AG				3				75	10Y4/2
											10Y6/2
						4				75	10Y5/2
		AG	AG	NONE		Core Catcher					10Y5/2

Stiff, grayish olive and pale olive nanno ooze with very slight mottling. Few calcareous shell fragments up to 3 mm scattered throughout. Moderate deformation.

MICARB AND CLAY RICH NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75

Texture		Composition	
Clay	58%	Nannos	58%
Silt	41%	Clay	15%
Sand	1%	Carb. frag.	14%
		Forams	10%
		Pyrite	2%

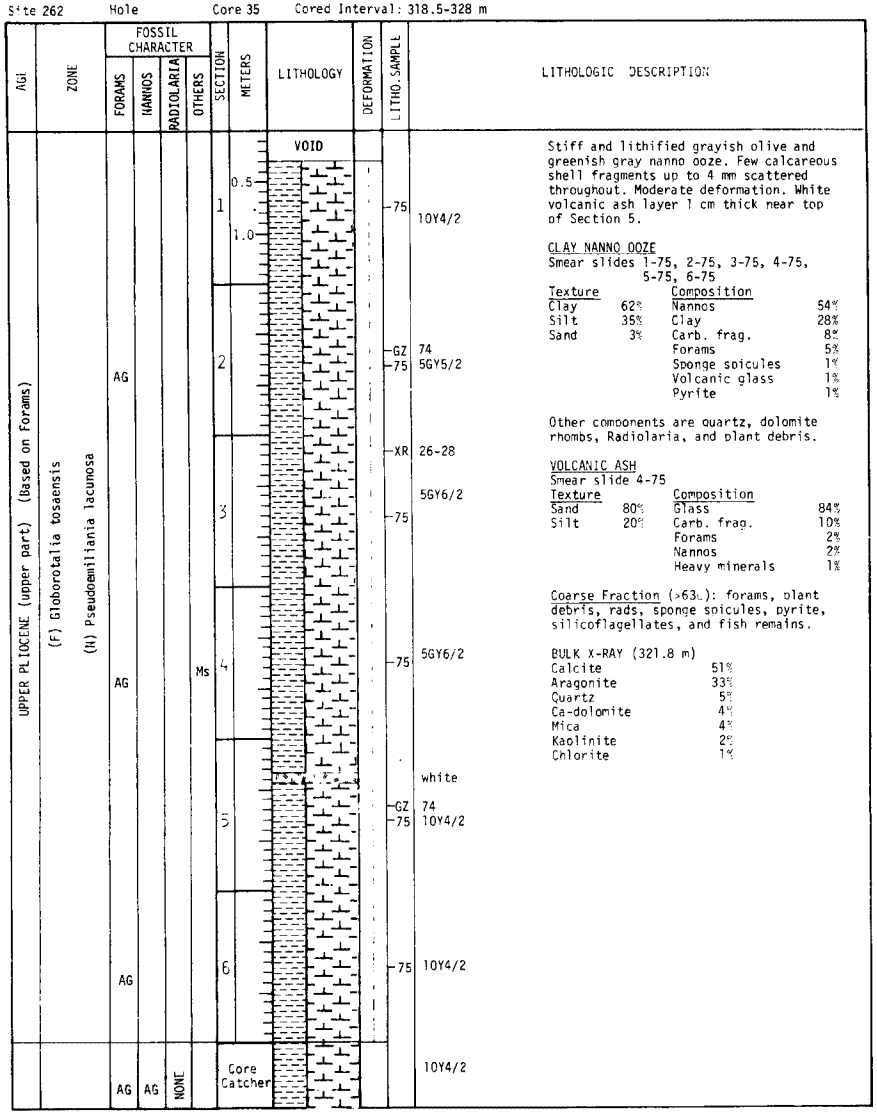
Other components are dolomite rhombs, quartz, sponge spicules, rads, and plant debris.

Coarse Fraction (>63μ): forams, sponge spicules, echinoderm fragments, molluscan debris, and pyrite.

BULK X-RAY (312.3 m)

Calcite	46%
Aragonite	33%
Ca-dolomite	6%
Quartz	6%
Mica	5%
Kaolinite	1%
Plagioclase	1%
Pyrite	1%
Chlorite	1%

Site 262 Hole Core 35 Cored Interval: 318.5-328 m



Stiff and lithified grayish olive and greenish gray nanno ooze. Few calcareous shell fragments up to 4 mm scattered throughout. Moderate deformation. White volcanic ash layer 1 cm thick near top of Section 5.

CLAY NANNO OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Clay	62%	Nannos	54%
Silt	35%	Clay	28%
Sand	3%	Carb. frag.	8%
		Forams	5%
		Sponge spicules	1%
		Volcanic glass	1%
		Pyrite	1%

Other components are quartz, dolomite rhombs, Radiolaria, and plant debris.

VOLCANIC ASH
Smear slide 4-75

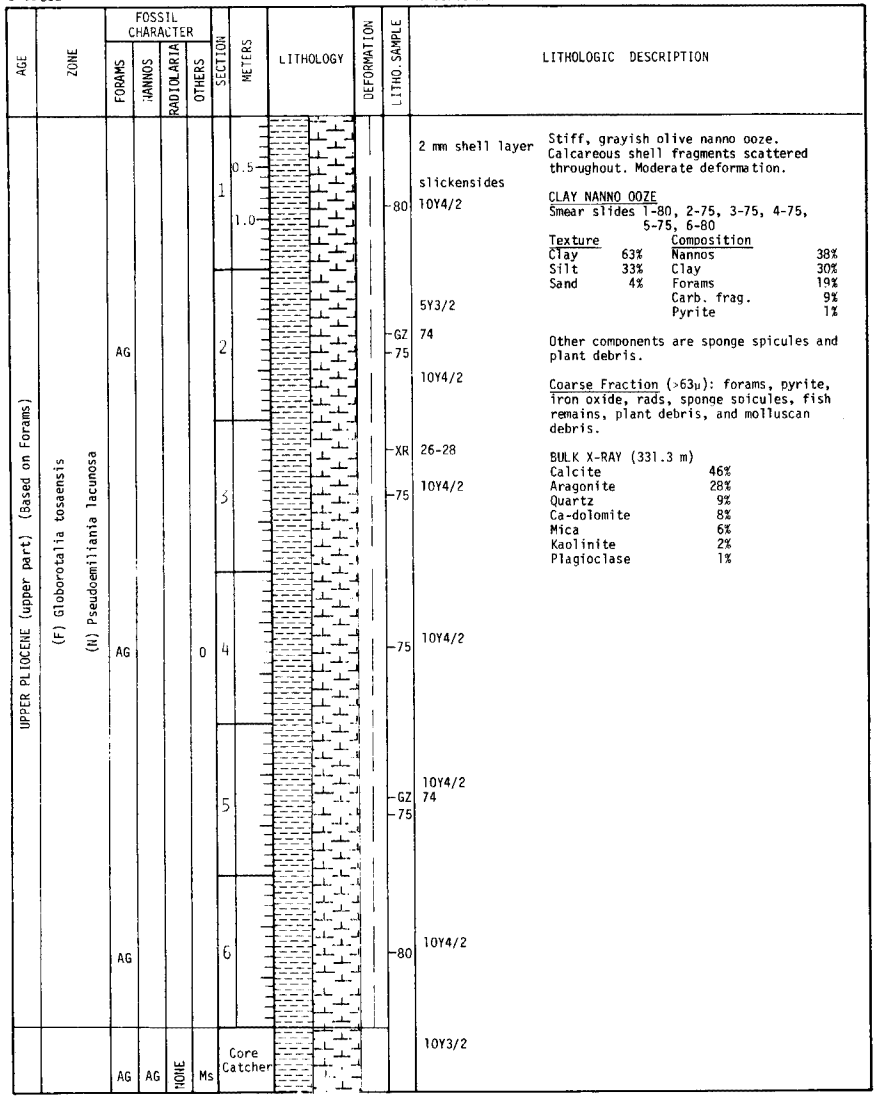
Texture		Composition	
Sand	80%	Glass	84%
Silt	20%	Carb. frag.	10%
		Forams	2%
		Nannos	2%
		Heavy minerals	1%

Coarse Fraction (>63μ): forams, plant debris, rads, sponge spicules, pyrite, silicoflagellates, and fish remains.

BULK X-RAY (321.8 m)

Calcite	51%
Aragonite	33%
Quartz	5%
Ca-dolomite	4%
Mica	4%
Kaolinite	2%
Chlorite	1%

Site 262 Hole Core 36 Cored Interval: 328-337.5 m



Stiff, grayish olive nanno ooze. Calcareous shell fragments scattered throughout. Moderate deformation.

CLAY NANNO OOZE
Smear slides 1-80, 2-75, 3-75, 4-75, 5-75, 6-80

Texture		Composition	
Clay	63%	Nannos	38%
Silt	33%	Clay	30%
Sand	4%	Forams	19%
		Carb. frag.	9%
		Pyrite	1%

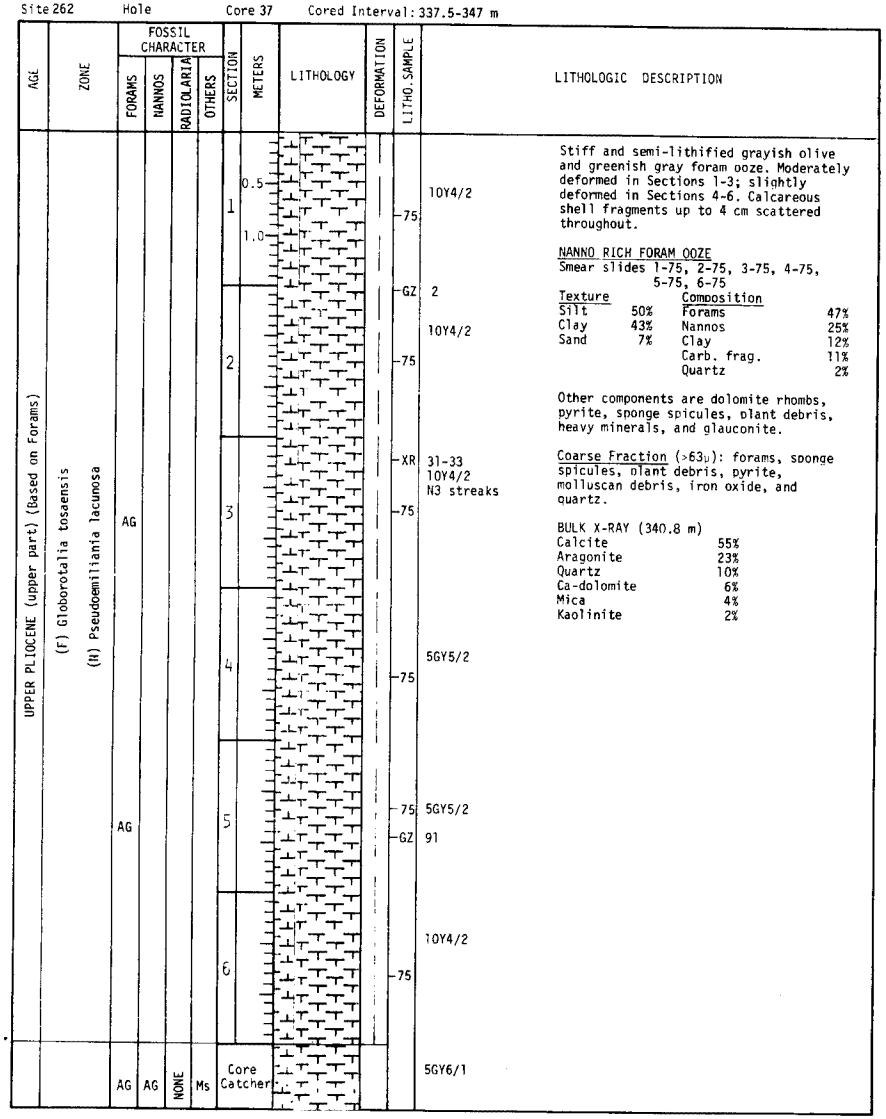
Other components are sponge spicules and plant debris.

Coarse Fraction (>63μ): forams, pyrite, iron oxide, rads, sponge spicules, fish remains, plant debris, and molluscan debris.

BULK X-RAY (331.3 m)

Calcite	46%
Aragonite	28%
Quartz	9%
Ca-dolomite	8%
Mica	6%
Kaolinite	2%
Plagioclase	1%

Site 262 Hole Core 37 Cored Interval: 337.5-347 m



Stiff and semi-lithified grayish olive and greenish gray foram ooze. Moderately deformed in Sections 1-3; slightly deformed in Sections 4-6. Calcareous shell fragments up to 4 cm scattered throughout.

NANNO RICH FORAM OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Silt	50%	Forams	47%
Clay	43%	Nannos	25%
Sand	7%	Clay	12%
		Carb. frag.	11%
		Quartz	2%

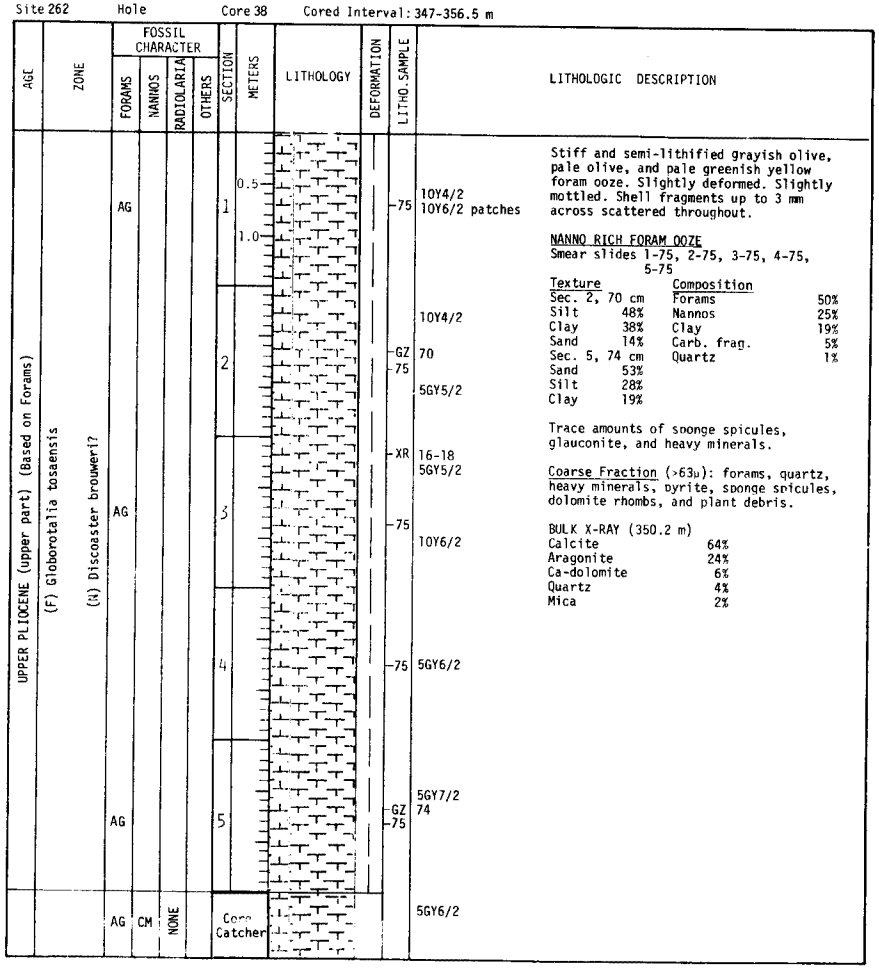
Other components are dolomite rhombs, pyrite, sponge spicules, plant debris, heavy minerals, and glauconite.

Coarse Fraction (>63μ): forams, sponge spicules, plant debris, pyrite, molluscan debris, iron oxide, and quartz.

BULK X-RAY (340.8 m)

Calcite	55%
Aragonite	23%
Quartz	10%
Ca-dolomite	6%
Mica	4%
Kaolinite	2%

Site 262 Hole Core 38 Cored Interval: 347-356.5 m



Stiff and semi-lithified grayish olive, pale olive, and pale greenish yellow foram ooze. Slightly deformed. Slightly mottled. Shell fragments up to 3 mm across scattered throughout.

NANNO RICH FORAM OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75

Texture		Composition	
Sec. 2, 70 cm		Forams	50%
Silt	48%	Nannos	25%
Clay	38%	Clay	19%
Sand	14%	Carb. frag.	5%
Sec. 5, 74 cm		Quartz	1%
Sand	53%		
Silt	28%		
Clay	19%		

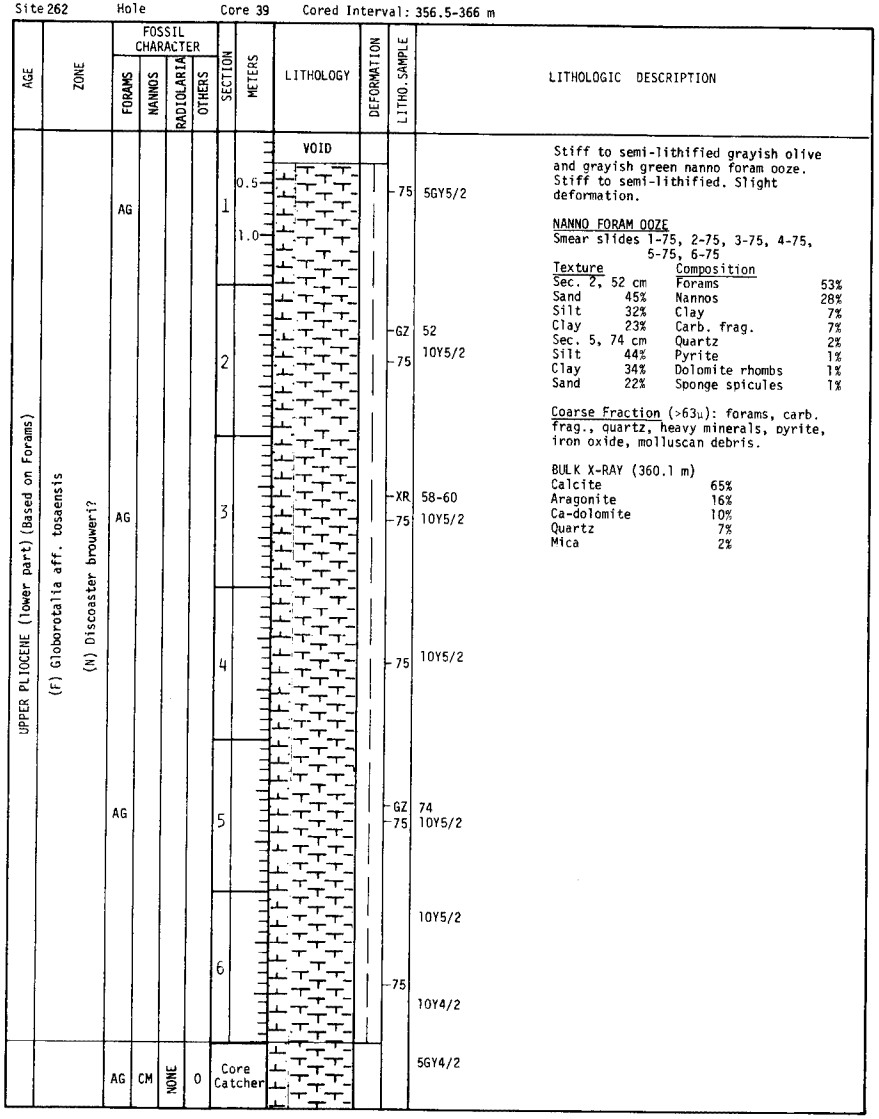
Trace amounts of sponge spicules, glauconite, and heavy minerals.

Coarse Fraction (>63μ): forams, quartz, heavy minerals, pyrite, sponge spicules, dolomite rhombs, and plant debris.

BULK X-RAY (350.2 m)

Calcite	64%
Aragonite	24%
Ca-dolomite	6%
Quartz	4%
Mica	2%

Site 262 Hole Core 39 Cored Interval: 356.5-366 m



Stiff to semi-lithified grayish olive and grayish green nanno foram ooze. Stiff to semi-lithified. Slight deformation.

NANNO FORAM OOZE
Smear slides 1-75, 2-75, 3-75, 4-75, 5-75, 6-75

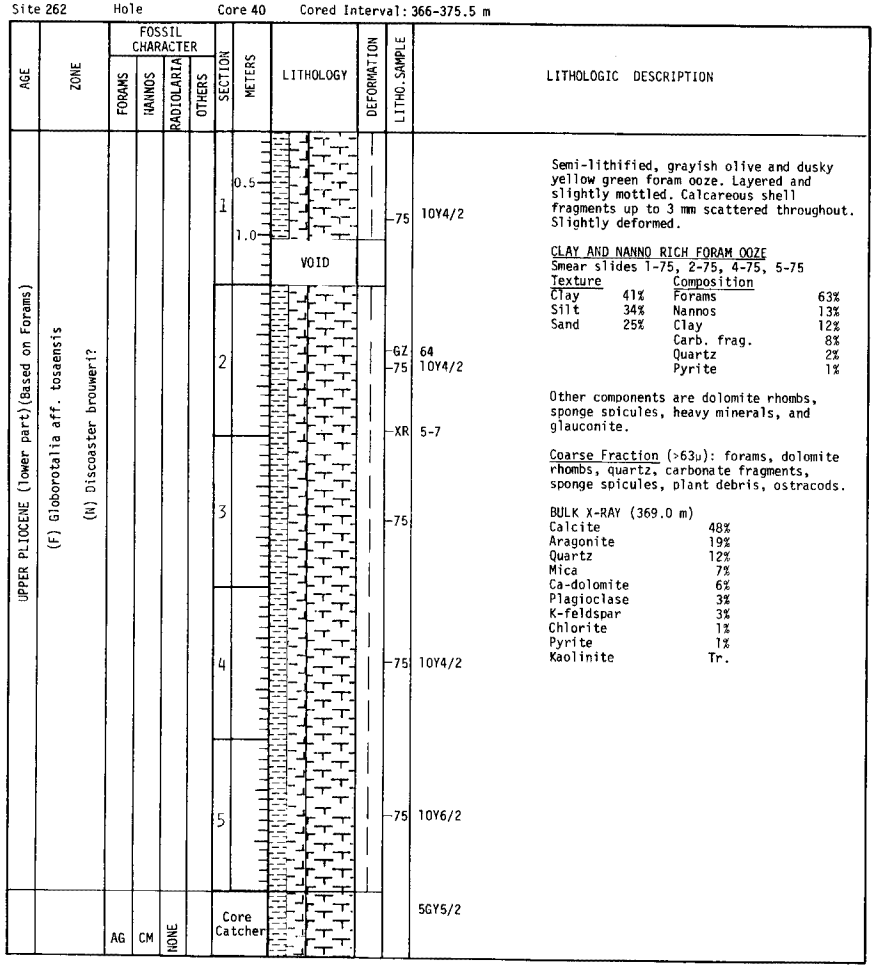
Texture		Composition	
Sec. 2, 52 cm		Forams	53%
Sand	45%	Nannos	28%
Silt	32%	Clay	7%
Clay	23%	Carb. frag.	7%
Sec. 5, 74 cm		Quartz	2%
Silt	44%	Pyrite	1%
Clay	34%	Dolomite rhombs	1%
Sand	22%	Sponge spicules	1%

Coarse Fraction (>63μ): forams, carb. frag., quartz, heavy minerals, pyrite, iron oxide, molluscan debris.

BULK X-RAY (360.1 m)

Calcite	65%
Aragonite	16%
Ca-dolomite	10%
Quartz	7%
Mica	2%

Site 262 Hole Core 40 Cored Interval: 366-375.5 m



Semi-lithified, grayish olive and dusky yellow green foram ooze. Layered and slightly mottled. Calcareous shell fragments up to 3 mm scattered throughout. Slightly deformed.

CLAY AND NANNO RICH FORAM OOZE
Smear slides 1-75, 2-75, 4-75, 5-75

Texture		Composition	
Clay	41%	Forams	63%
Silt	34%	Nannos	13%
Sand	25%	Clay	12%
		Carb. frag.	8%
		Quartz	2%
		Pyrite	1%

Other components are dolomite rhombs, sponge spicules, heavy minerals, and glauconite.

Coarse Fraction (>63μ): forams, dolomite rhombs, quartz, carbonate fragments, sponge spicules, plant debris, ostracods.

BULK X-RAY (369.0 m)

Calcite	48%
Aragonite	19%
Quartz	12%
Mica	7%
Ca-dolomite	6%
Plagioclase	3%
K-feldspar	3%
Chlorite	1%
Pyrite	1%
Kaolinite	Tr.

Site 262 Hole Core 41 Cored Interval: 375.5-385 m

AGE: UPPER PLIOCENE (lower part) (Based on Forams)

ZONE: (F) Globorotalia aff. tosaensis / (N) Discoaster brouweri?

FOSSIL CHARACTER: FORAMS: AG; NANNOS: CM; RADIOLARIA: NONE; OTHERS: O

SECTION | METERS | LITHOLOGY | DEFORMATION | LITHO.SAMPLE

Section	Meters	Litho.Sample
1	0.5	10Y6/2
	1.0	GZ 46
2		10Y6/2
		75 10Y4/2 mottles
3		XR 49-51
		75 10Y6/2
		10Y4/2 mottles
4		75 10Y5/2
5		GZ 59
		75 10Y5/2
6		75 10Y5/2
Core Catcher		5GY5/2

VOID

LITHOLOGIC DESCRIPTION

Semi-lithified pale olive and grayish olive foram ooze. Moderate mottling. Slight deformation. Shell fragments up to 3 mm scattered throughout.

MICARB AND NANNO RICH FORAM OOZE
Smear slides 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Sand	51%	Forams	49%
Silt	28%	Nannos	22%
Clay	21%	Carb. frag.	19%
		Clay	7%
		Dolomite rhombs	1%
		Pyrite	1%

Other components are heavy minerals and glauconite.

Coarse Fraction (>63μ): forams, carbonate fragments, quartz, sponge spicules, plant debris, ostracods, and echinoid fragments.

BULK X-RAY (379.0 m)

Calcite	75%
Aragonite	11%
Ca-dolomite	10%
Quartz	4%

Site 262 Hole Core 42 Cored Interval: 385-394.5 m

AGE: UPPER PLIOCENE (lower part) (Based on Forams)

ZONE: (F) Globorotalia aff. tosaensis / (N) Discoaster brouweri?

FOSSIL CHARACTER: FORAMS: AG; NANNOS: CM; RADIOLARIA: NONE; OTHERS: O

SECTION | METERS | LITHOLOGY | DEFORMATION | LITHO.SAMPLE

Section	Meters	Litho.Sample
1	0.5	10Y5/2
	1.0	10Y5/2
2		75 10Y4/2 mottles
		GZ 79
		GZ 40
		10Y5/2
3		75 10Y4/2 mottles
4		10Y5/2
		75 10Y4/2 mottles
5		10Y5/2
		XR 63
		75
Core Catcher		5GY5/2

LITHOLOGIC DESCRIPTION

Semi-lithified pale olive micarb foram ooze with grayish olive mottles. Shell fragments scattered throughout. Slight deformation.

MICARB FORAM OOZE
Smear slides 2-75, 3-75, 4-75, 5-75

Texture		Composition	
Silt	42%	Forams	45%
Clay	31%	Carb. frag.	29%
Sand	27%	Nannos	15%
		Clay	7%
		Quartz	1%
		Dolomite rhombs	1%

Other components are heavy minerals, pyrite, sponge spicules.

Coarse Fraction (>63μ): forams, carbonate fragments, quartz, gypsum, echinoid fragments.

BULK X-RAY (391.6 m)

Calcite	55%
Aragonite	25%
Quartz	12%
Ca-dolomite	5%
Mica	2%
Kaolinite	1%

Site 262 Hole Core 43 Cored Interval: 394.5-404 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER PLIOCENE (lower part)	(F) Globorotalia aff. tosaensis (N) Discoaster brouweri (upper limit of abundant D. brouweri)					1	0.5			75	10Y5/2
							1.0	VOID			
						2				75	10Y5/2
										GZ	80
		AG	CM	NONE	O	Core Catcher					5GY5/2

Semi-lithified, grayish olive foram ooze. Slight mottles. Slight deformation. Some shells up to 4 mm scattered throughout.

MICARB AND FORAM OOZE
Smear slides 1-75, 2-75

Texture		Composition	
Sand	46%	Forams	57%
Silt	34%	Carb. frag.	29%
Clay	20%	Nannos	10%
		Clay	2%
		Dolomite rhombs	1%
		Quartz	1%

Trace amounts of heavy minerals, pyrite, and sponge spicules.

Coarse Fraction (>63μ): forams, carbonate fragments, quartz, heavy minerals.

Site 262 Hole Core 44 Cored Interval: 404-413.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER PLIOCENE (lower part)	(F) Layers with Cellanthus craticulatus and planktonic species (N) Discoaster brouweri					1	0.5				10Y5/2
							1.0	VOID			
						2				GZ	74
		AG								75	10Y5/2
						3				XR	29-31
		AG								75	10Y4/2
		AG	CG	NONE	Ms	Core Catcher					10Y4/2

Semi-lithified grayish olive and pale olive nanno foram ooze, Laminated and shelly throughout. Slight deformation.

NANNO FORAM OOZE
Smear slides 2-75, 3-75

Texture		Composition	
Sand	50%	Forams	34%
Silt	30%	Nannos	31%
Clay	20%	Carb. frag.	26%
		Clay	5%
		Quartz	2%
		Dolomite rhombs	1%
		Pyrite	1%

Other components are heavy minerals, glauconite, and sponge spicules.

Coarse Fraction (>63μ): forams, carb. frag., dolomite rhombs, molluscan debris, fish remains, echinoid remains, quartz, and heavy minerals.

BULK X-RAY (407.3 m)

Calcite	70%
Ca-dolomite	14%
Aragonite	10%
Quartz	6%

Site 262 Hole Core 45 Cored Interval: 413.5-423 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
UPPER PLIOCENE	(F) C. craticulatus, planktonic (N) D. brouweri	AG	FM			1	0.5			40	10Y5/2 and 10Y4/2 bands
							1.0			93.5	
										95	Sharp, planar, contact
										130	10Y6/2
		AG	NONE		Ms	2				75	5GY6/1
										GZ	108
PLIOCENE	(F) Layers with Cellanthus craticulatus, Operculina, etc.					3				75	5GY6/1
										XR	129-131
		AG	NONE			4				75	10Y6/2
						5				GZ	75
										75	10Y6/2
		AG	NONE			6					5GY6/1
		AM	RM	NONE	Ms	Core Catcher					10Y6/2

SECTION 1: 0-95 cm
Semi-lithified micarb ooze that is shelly and laminated on a fine scale (pale olive and grayish olive laminae). Crossbedded from 15-25 cm. Slight deformation.

FORAM RICH MICARB OOZE
Smear slides 1-40, 1-93.5

Composition	
Carb. frag.	61%
Forams	22%
Nannos	5%
Clay	5%
Quartz	3%
Pyrite	2%
Dolomite rhombs	1%

Trace of glauconite, plant debris, and heavy minerals.

SECTION 1 (below 95 cm) and SECTIONS 2, 3, 4, 5, 6
Soft, stiff, and semi-lithified greenish gray and pale olive foram rich dolomite. Slightly deformed. Generally massive, but laminated in places. Few shells near base of Section 6.

FORAM RICH DOLOMITE
Smear slides 1-95, 1-130, 2-75, 3-75, 4-75, 5-75, 6-75

Texture		Composition	
Silt	55%	Dolomite rhombs	83%
Sand	27%	Forams	14%
Clay	18%	Clay	3%

Traces of quartz, pyrite, glauconite.

BULK X-RAY (417.8 m)

Calcite	53%
Ca-dolomite	45%
Quartz	1%
Aragonite	1%

Site 262 Hole Core 46 Cored Interval: 423-432.4 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
PLIOCENE	(F) Layers with Cellanthus craticulatus, Operculina, etc.	AP	NONE	NONE		Core Catcher				CC 5GY8/1	DOLOMITIC SHELL CALCARENITE Lithified light greenish gray shell calcarenite. Composition Calcite fragments 82% Forams 10% Dolomite rhombs 5% Clay 3% Quartz Tr.

Site 262 Hole Core 47 Cored Interval: 432.5-442 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
PLIOCENE	(F) Layers with Cellanthus craticulatus, Operculina, etc.	AP	NONE	NONE		Core Catcher				5Y8/1	Lithified, yellow gray shell calcarenite DOLOMITIC SHELL CALCARENITE Coarse Fraction (>63μ): carbonate fragments, dolomite rhombs, forams, quartz.

DEEP SEA DRILLING PROJECT

LEG 27 SITE 263

SITE SUMMARY SHEET

POSITION: Latitude: 23°19.43'S Longitude: 110°57.81'E

Water depth (from sea level): 5048 corrected meters (Echo sounding)

Bottom felt at: 5065 meters (drill pipe) Penetration: 746 meters

Number of Holes: 1 Number of Cores: 29

Total length of cored section: 271 meters Total core recovered: 163.5 m

Percentage of core recovery: 60.33

OLDEST SEDIMENT CORED:

Depth below sea floor: 746 meters Nature: Quartz-bearing clay

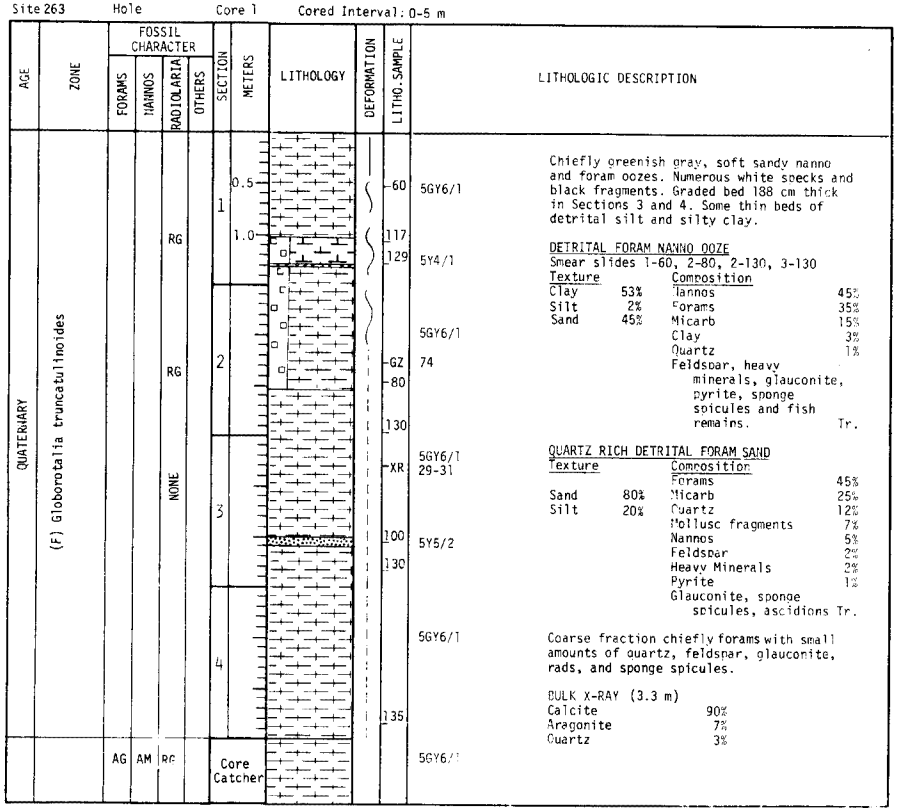
Age: Albian Measured Velocity: 2.4 km/sec

BASEMENT: Not reached

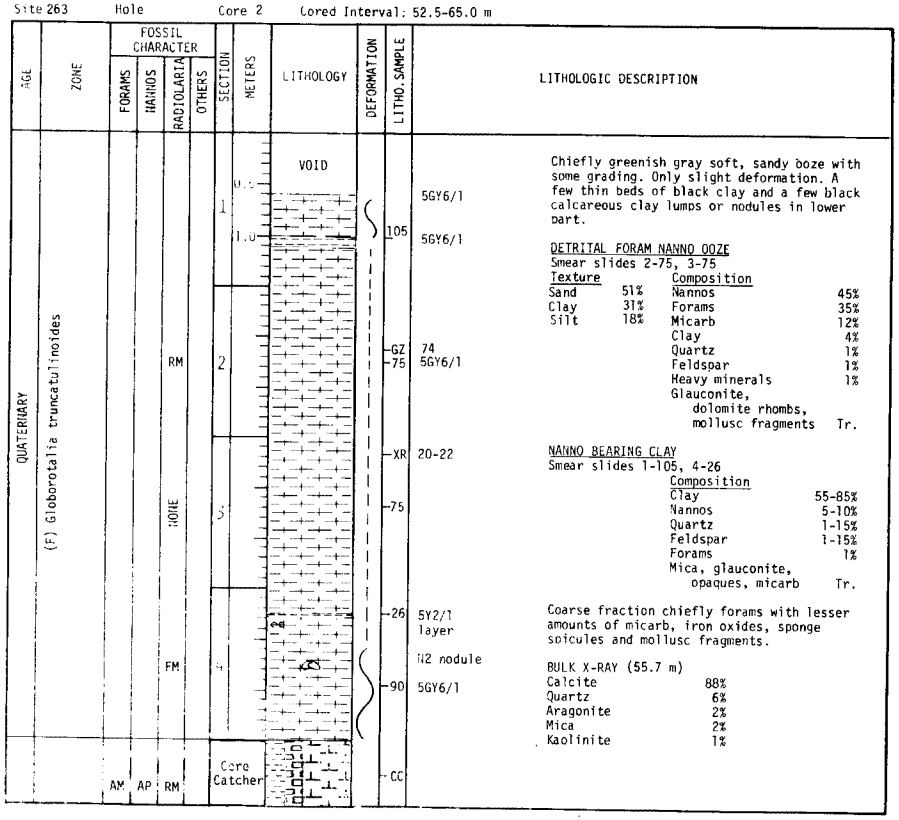
PRINCIPAL RESULTS:

Site 263 is situated near the eastern edge of the Cuvier Abyssal Plain. Beneath 100 m of Quaternary and Upper Pliocene turbiditic foram nanno ooze, which shows in the seismic profile as a well-stratified layer, is an acoustically transparent layer of Cretaceous sediments. These sediments comprise poorly fossiliferous clayey nanno ooze and black claystone that overlie Albian black glauconitic quartz-bearing clay. A mechanical failure terminated drilling in these sediments at a total depth of 746 m, a short distance above acoustic basement.

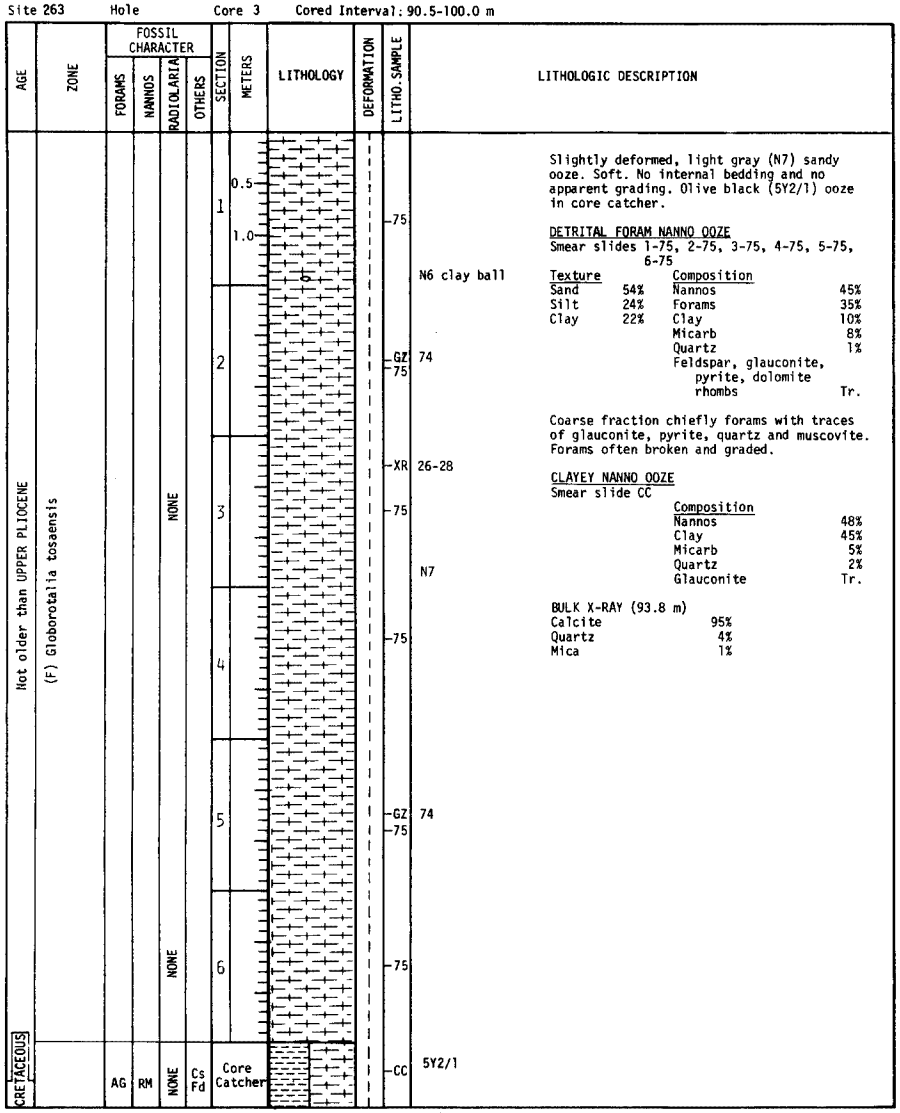
Site 263 Hole Core 1 Cored Interval: 0-5 m



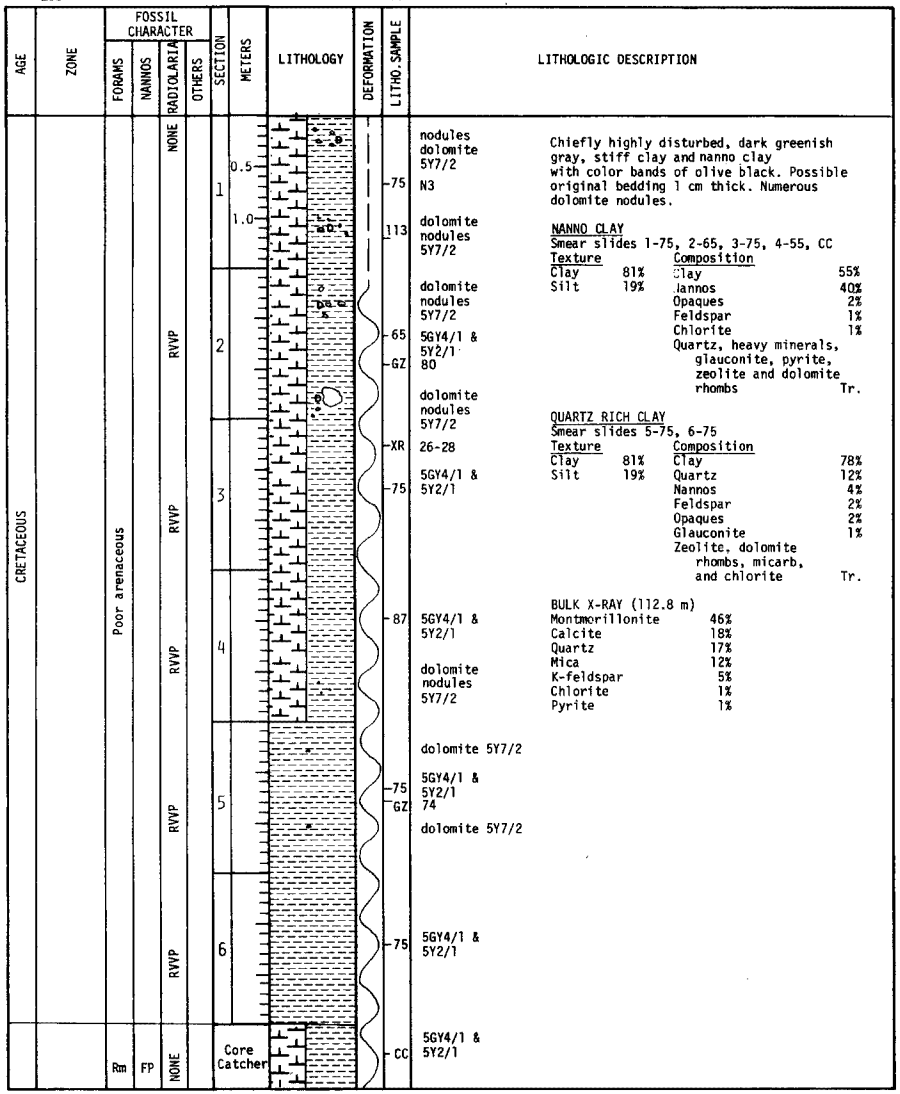
Site 263 Hole Core 2 Cored Interval: 52.5-65.0 m



Site 263 Hole Core 3 Cored Interval: 90.5-100.0 m



Site 263 Hole Core 4 Cored Interval: 109.5-119.0 m



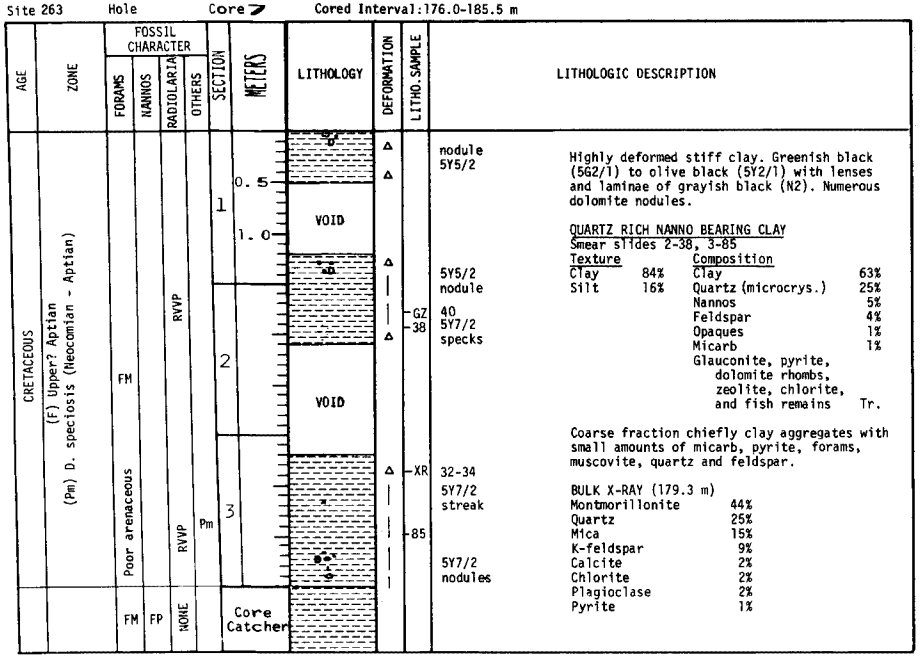
Site 263 Hole Core 5 Cored Interval: 128.5-138.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS	(F) Lower? Albian (Pm) D. speciosis (Neocomian - Aptian)	Poor arenaceous		RVVP	Pm	1	0.5 1.0	VOID			Strongly deformed, stiff nanno clay; chiefly dark greenish gray and olive black. Dolomite nodules. NANNO CLAY
										5GY4/1 & 5Y2/1	
		FM	AP	RVVP	Cs	Core Catcher				5GY4/1 & 5Y2/1	

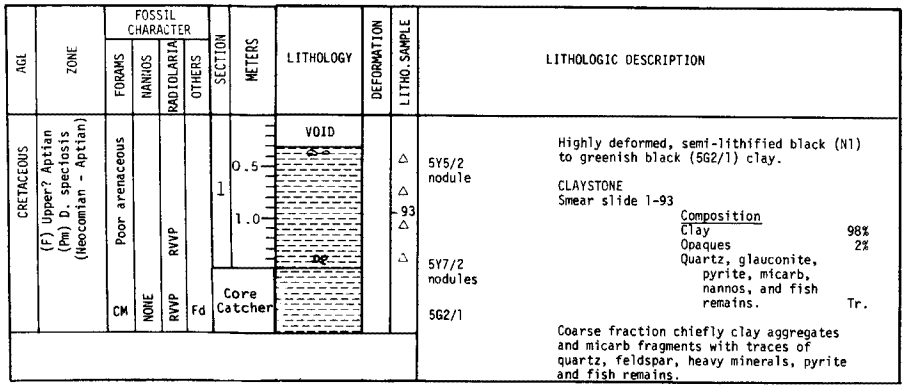
Site 263 Hole Core 6 Cored Interval: 147.5-157.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS	(F) Lower? Albian (Pm) D. speciosis (Neocomian - Aptian)	Poor arenaceous		NONE		1	0.5 1.0	VOID		90	Strongly to weakly disturbed stiff clay. Chiefly olive black (5Y2/1) and dark greenish gray (5GY4/1) with lenses and laminae of olive black. Many dolomite nodules, spots, streaks and wisps. One barite nodule. QUARTZ RICH NANNO BEARING CLAY Smear slides 1-90, 3-70, 4-75, 5-65, 6-70, CC Texture: Clay 83%, Silt 17% Composition: Clay 70%; Quartz (microcrystalline) 20%; Feldspar 4%; Nannos 5%; Opaques 1%; Heavy minerals, glauconite, pyrite, zeolite, dolomite rhombs, chlorite, and fish fragments Tr.
										5Y7/2 nodules	
										5Y7/2 nodules	
						2				5Y7/2 nodules	
										GZ 120	
										XR 26-28	
						3				5Y7/2 wisp	
										5Y7/2 wisp	
										70	
										5Y7/2 wisp & nodules	
						4				5Y7/2 wisps	
										59	
										nodule of barite	
										75	
										5Y7/2 specks	Coarse fraction chiefly micarb, pyrite and glauconite with lesser quartz, feldspar, muscovite and fish remains. BULK X-RAY (150.8 m) Montmorillonite 47% Quartz 19% Mica 16% K-feldspar 10% Calcite 3% Chlorite 3% Plagioclase 2% Pyrite 2%
						5				5Y7/2 nodules	
										69 GZ 74	
										5Y7/2 spots	
										5Y7/2 nodule	
		RM									
						6				70	
										5Y7/2 spots & nodules	
										5Y7/2 wisps	
		RM	CP	RVVP	Fd	Core Catcher				CC	

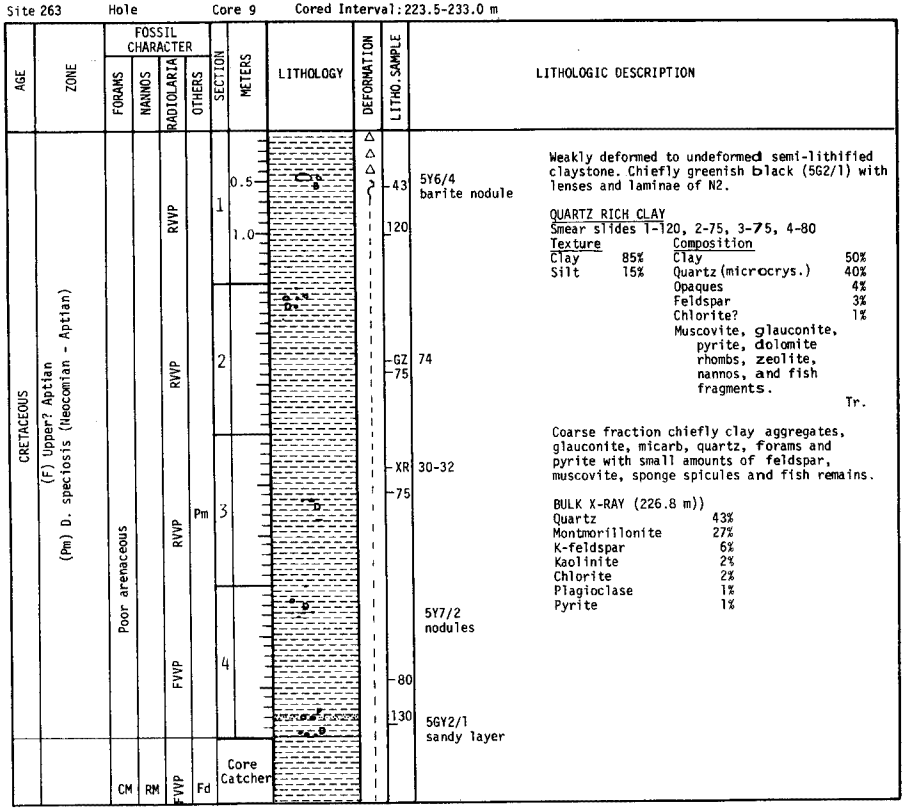
Site 263 Hole Core 7 Cored Interval: 176.0-185.5 m



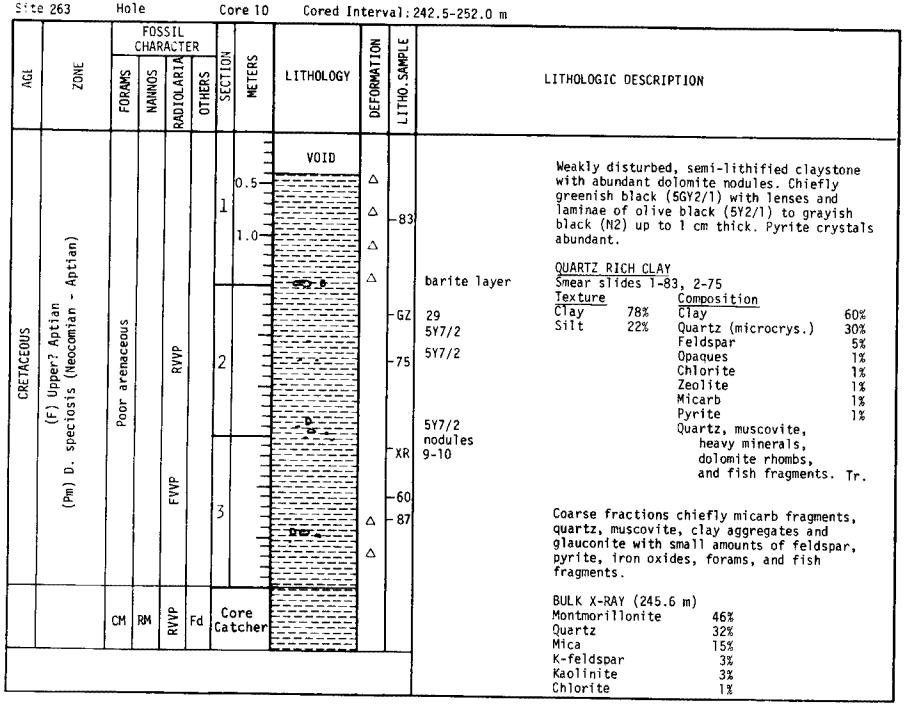
Site 263 Hole Core 8 Cored Interval: 204.5-214.0 m



Site 263 Hole Core 9 Cored Interval: 223.5-233.0 m



Site 263 Hole Core 10 Cored Interval: 242.5-252.0 m



LITHOLOGIC DESCRIPTION

Weakly disturbed, semi-lithified claystone with abundant dolomite nodules. Chiefly greenish black (5GY2/1) with lenses and laminae of olive black (5Y2/1) to grayish black (N2) up to 1 cm thick. Pyrite crystals abundant.

QUARTZ RICH CLAY
Smear slides 1-83, 2-75

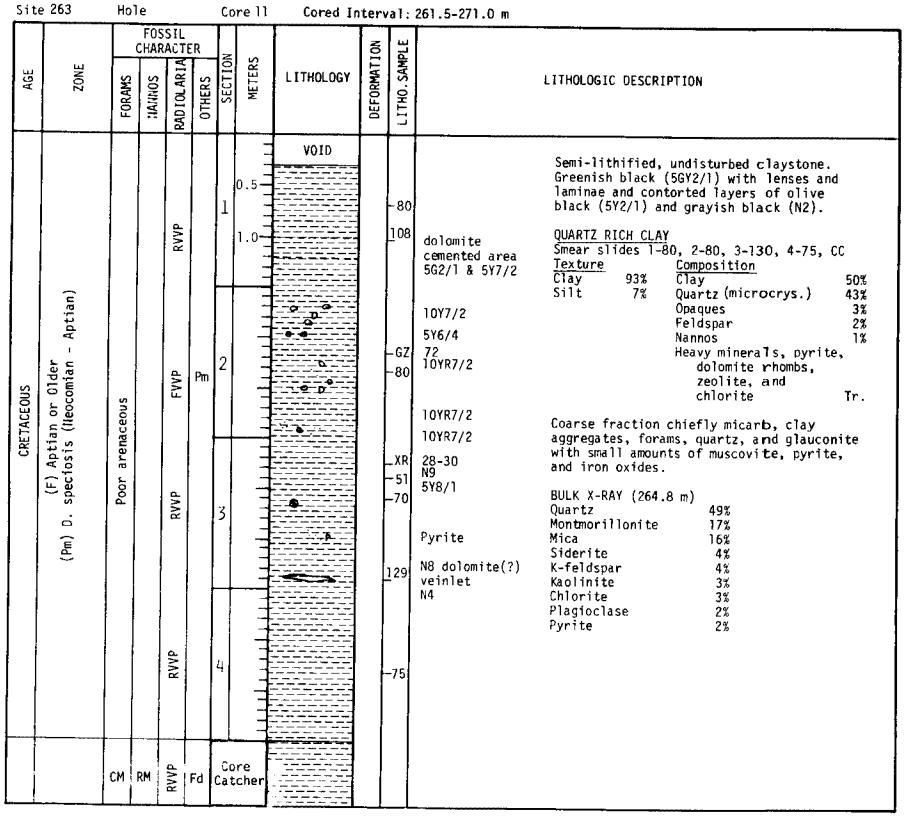
Texture		Composition	
Clay	78%	Clay	60%
Silt	22%	Quartz (microcrys.)	30%
		Feldspar	5%
		Opaques	1%
		Chlorite	1%
		Zeolite	1%
		Micarb	1%
		Pyrite	1%
		Quartz, muscovite, heavy minerals, dolomite rhombs, and fish fragments.	Tr.

Coarse fractions chiefly micarb fragments, quartz, muscovite, clay aggregates and glauconite with small amounts of feldspar, pyrite, iron oxides, forams, and fish fragments.

BULK X-RAY (245.6 m)

Montmorillonite	46%
Quartz	32%
Mica	15%
K-feldspar	3%
Kaolinite	3%
Chlorite	1%

Site 263 Hole Core 11 Cored Interval: 261.5-271.0 m



LITHOLOGIC DESCRIPTION

Semi-lithified, undisturbed claystone. Greenish black (5GY2/1) with lenses and laminae and contorted layers of olive black (5Y2/1) and grayish black (N2).

QUARTZ RICH CLAY
Smear slides 1-80, 2-80, 3-130, 4-75, CC

Texture		Composition	
Clay	93%	Clay	50%
Silt	7%	Quartz (microcrys.)	43%
		Opaques	3%
		Feldspar	2%
		Nannos	1%
		Heavy minerals, pyrite, dolomite rhombs, zeolite, and chlorite	Tr.

Coarse fraction chiefly micarb, clay aggregates, forams, quartz, and glauconite with small amounts of muscovite, pyrite, and iron oxides.

BULK X-RAY (264.8 m)

Quartz	49%
Montmorillonite	17%
Mica	16%
Siderite	4%
K-feldspar	4%
Kaolinite	3%
Chlorite	3%
Plagioclase	2%
Pyrite	2%

Site 263 Hole Core 12 Cored Interval: 280.5-290.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS	(F) Aptian or Older (Pm) D. speciosis (Neocomian - Aptian)	Poor arenaceous		RVVP		1	0.5	VOID			Weakly deformed semi-lithified greenish black (5G2/1) claystone with dolomite nodules. Some lenses of olive black (5Y2/1). Abundant pyrite specks. Sandy and silty clay near base. This is greenish gray (5G4/1) to grayish green (10G4/2).
							1.0		△ △	130	5Y7/2 nodule
						2					5Y6/2
										75	
				RVVP		3				31	N3 barite nodule 58-60
										XR	
										80	
										111	5G4/1 sandy layer
											5GY2/1
										GZ	1
				RVVP	Pm	4				45	5G4/1 to 10G4/2
										75	5G2/1
										125	
											5G2/1
											5G2/1
		CM	NONE	RVVP		Core Catcher					5G2/1

QUARTZ RICH CLAY
Smear slides 1-130, 2-75, 3-80, 4-75, CC

Composition	
Clay & microcrys.qtz.	94%
Opaques	2%
Feldspar	1%
Pyrite	1%
Quartz, muscovite, heavy minerals, zeolite and micarb	Tr.

CLAYEY SAND TO SANDY CLAY
Smear slides 3-111, 4-45, 4-125

Texture		Composition	
Clay	73%	Clay	20-40%
Sand	17%	Quartz	40-60%
Silt	10%	Feldspar	5-10%
		Glauconite	10-20%
		Pyrite	1- 5%
		Opaques	1%
		Heavies, zeolite, and fish fragments	Tr.

Coarse fractions chiefly clay aggregates, worm tubes(??) and forams with lesser quartz, feldspar, muscovite, pyrite, micarb, and fish remains.

BULK X-RAY (284.1 m)

Quartz	58%
Montmorillonite	20%
Mica	15%
K-feldspar	3%
Chlorite	2%
Pyrite	2%

Site 263 Hole Core 13 Cored Interval: 299.5-309.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS	(F) Aptian or Older	Poor arenaceous		RVVP		1	0.5	VOID			Semi-lithified, moderately to strongly deformed and brecciated claystone. Greenish black (5GY2/1) with laminae, lenses and streaks of olive black (5Y2/1) and grayish black (N2). Abundant dolomite nodules.
							1.0		△ △ △	105	
						2					5GY2/1 streak
										51	5Y6/1 dolomite
				RVVP							5Y7/2 nodules
						3					5Y7/2
										XR	48-50
											nodules
										100	5GY2/1
									△ △		5Y6/4
				RVVP		4					
						5			△ △ △ △	GZ	109
											5Y7/2
											5Y7/2
											nodule
				NONE		6				85	5Y7/2 nodule
									△ △		
		CM	NONE	NONE		Core Catcher					

Coarse fraction chiefly micarb, glauconite, worm tubes(??), clay aggregates with some quartz, muscovite and pyrite.

BULK X-RAY (303.0 m)

Quartz	51%
Mica	17%
Montmorillonite	14%
K-feldspar	7%
Plagioclase	3%
Gypsum	3%
Chlorite	2%
Kaolinite	2%

QUARTZ RICH CLAY
Smear slides 1-105, 3-100, 5-125, 6-85, CC

Texture		Composition	
Clay	86%	Clay & microcrys. qtz.	93%
Silt	14%	Opaques	2%
		Pyrite	2%
		Feldspar	1%
		Glauconite, dolomite rhombs, zeolite, and fish remains	Tr.

Site 263 Hole Core 14 Cored Interval: 318.5-328.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS	(F) Aptian or Older	Poor arenaceous		RVVP		1	0.5		△		Semi-lithified, little disturbed claystone with abundant dolomite and barite nodules. Colors chiefly greenish black (5GY2/1) with streaks, lenses and laminae of olive black (5Y2/1) and grayish black (N2).
			NONE				1.0		△	-75	
				RVVP		2			△		QUARTZ RICH CLAY
									△	-60	Smear slides 1-75, 3-65, 4-85, 5-86, CC
									△	GZ	5Y7/2 90
									△		Texture: Clay 91%, Silt 9%
											Composition: Quartz (microcrys.) 50%; Clay 40%; Feldspar 3%; Opaques 2%; Glauconite(?) 1%; Pyrite 1%; Zeolite 1%; Quartz, muscovite, heavies, dolomite rhombs, micarb, and fish fragments Tr.
										-65	
					Pm	3				XR	95-100 5Y7/2 barite nodule N8 5Y7/2
									△		CLAY
									△		Smear slide 2-60
									△		Texture: Clay 84%, Silt 16%
											Composition: Clay 57%; Glauconite(?) 18%; Quartz 12%; Feldspar 9%; Opaques 1%; Pyrite 1%; Zeolite 1%; Heavies, dolomite rhombs, and fish fragments Tr.
										-45	N6 dolomite nodule
			NONE			4				-85	barite nodule, N8
											5Y7/2 5Y6/4 52
						5				GZ	
										-86	N8
		FM	NONE	RVVP	Fd	Core Catcher				CC	Coarse fractions chiefly micarb, forams, quartz, glauconite and mica with lesser feldspar, heavies, pyrite, fish fragments and worm tubes(??).

BULK X-RAY (322.5 m)

Quartz	50%
Montmorillonite	25%
Mica	15%
K-feldspar	5%
Plagioclase	2%
Chlorite	2%
Pyrite	1%

Site 263 Hole Core 15 Cored Interval: 337.5-347.0 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS	(F) Aptian or Older	Poor arenaceous		RVVP		1	0.5		△		Semi-lithified, little disturbed claystone. Chiefly greenish black (5GY2/1) with lenses and laminae of olive black (5Y2/1). Some grayish green (10G4/2) in lower part. Numerous dolomite nodules. Clay slightly silty in lower part.
							1.0		△	-70	5Y7/2 nodule
						2			△		QUARTZ RICH CLAY
											Smear slides 1-20, 2-120, 3-6, 3-55, 3-125
										-120	5Y7/2 nodule
										-6	10YR5/4 nodule
										XR	27-29
						3				-55	5GY2/1 to 10G4/2
									△		
									△	-125	
		FM	NONE	RVVP		Core Catcher					5GY2/1 to 10G4/2

Composition: Quartz (microcrys.) 40-60%; Clay 20-40%; Feldspar 1-10%; Zeolite 1-2%; Glauconite 1-5%; Muscovite, heavies, and pyrite Tr.

BULK X-RAY (340.8 m)

Quartz	56%
Montmorillonite	21%
Mica	12%
Kaolinite	6%
K-feldspar	3%
Plagioclase	2%

Site 263 Hole Core 16 Cored Interval: 356.5-366.0 m

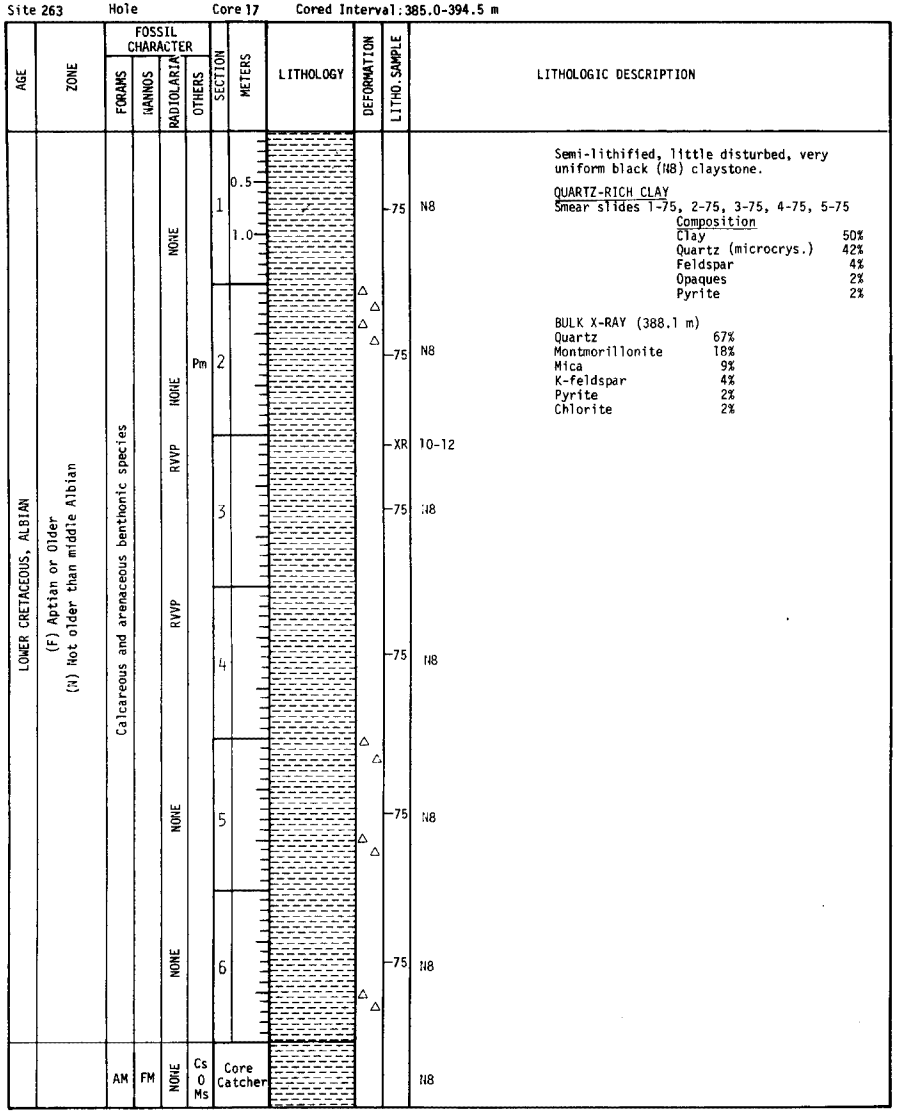
AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
CRETACEOUS	(F) Aptian or Older	Poor arenaceous		RVVP		1	0.5	VOID	△		Semi-lithified, somewhat brecciated greenish black (5GY2/1) to grayish green (10G4/2) sandy claystone.
							1.0		△	-50	5GY2/1 to 10G4/2 nodule of calcite & dolomite
									△		SANDY QUARTZ RICH CLAY
									△		Smear slide 1-50
		CM	NONE	RVVP		Core Catcher					5GY2/1 to 10G4/2

Texture: Clay 61%, Sand 28%, Silt 11%

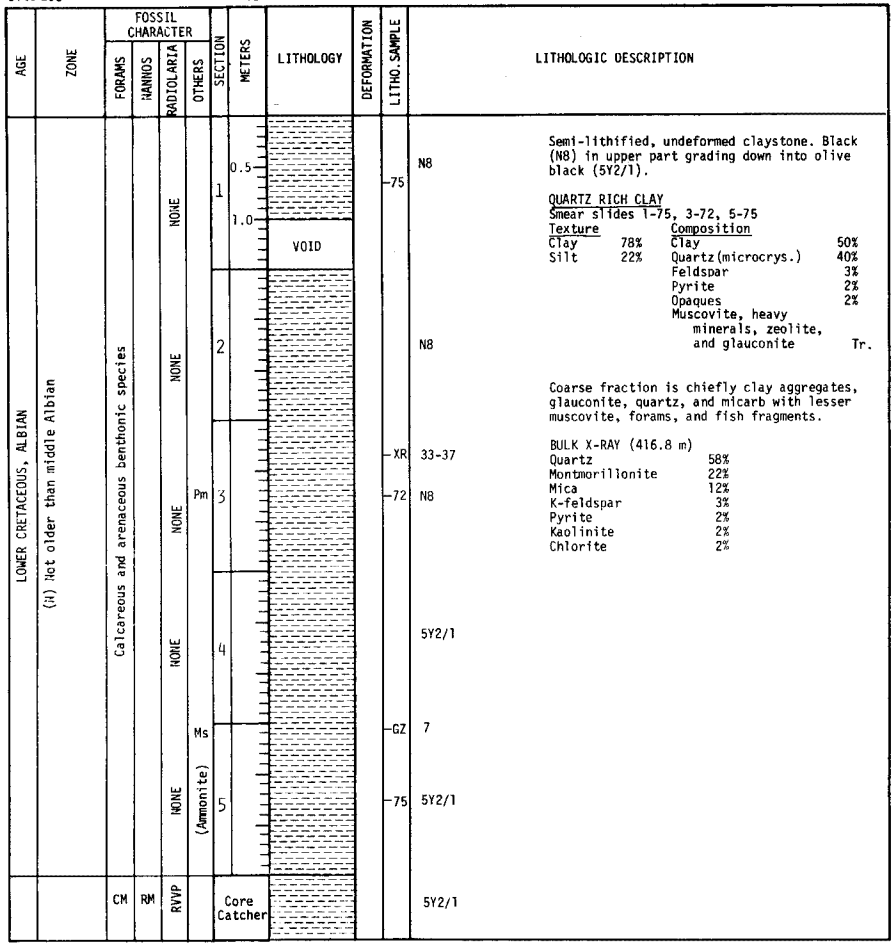
Composition: Clay 40%; Quartz (microcrys.) 37%; Feldspar 12%; Glauconite(?) 10%; Pyrite 1%; Zeolite, micarb, and fish fragments Tr.

Coarse fraction chiefly clay aggregates, quartz, forams, glauconite with lesser feldspar, muscovite, pyrite, spines and worm tubes(??).

Site 263 Hole Core 17 Cored Interval: 385.0-394.5 m



Site 263 Hole Core 18 Cored Interval: 413.5-423.0 m



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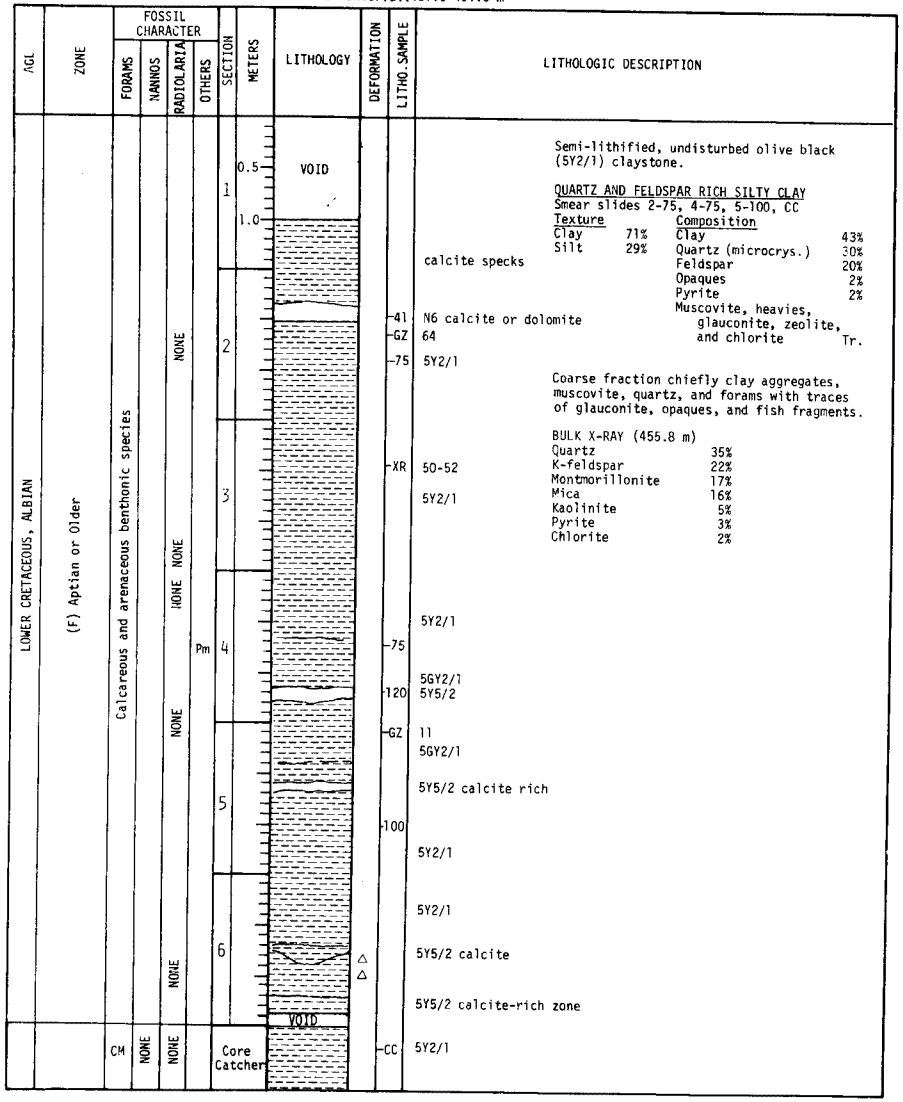
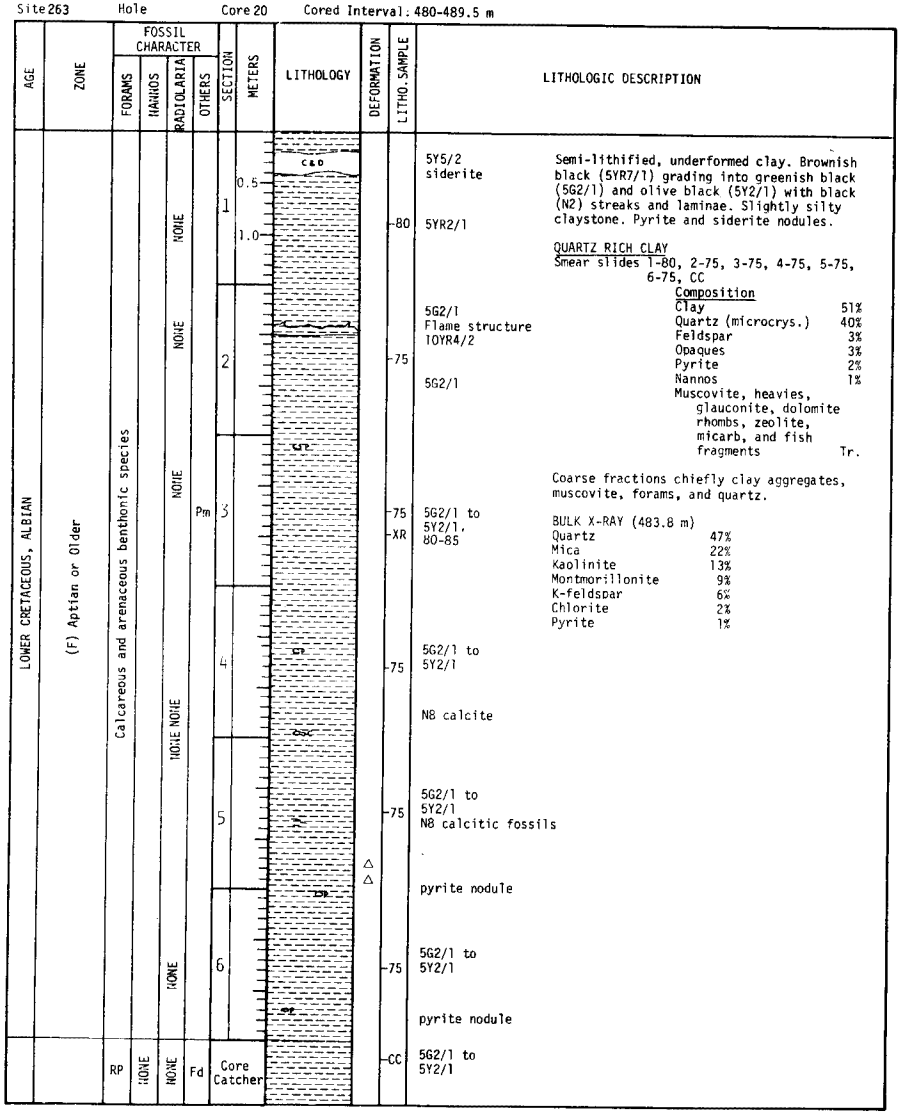
Site 263 Hole Core 19 Cored Interval: 451.5-461.0 m



Site 263 Hole Core 20 Cored Interval: 480-489.5 m



Site 263 Hole Core 21 Cored Interval: 518-527.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, ALBIAN	(F) Aptian or Older	Cm Calcareous and arenaceous benthonic species		NONE		1	0.5	VOID			Semi-lithified, undeformed claystone. Grayish black (5G2/1) to olive black (5Y2/1) with streaks and laminae of black (N2), somewhat silty clay. Splits parallel to layering at 10 cm intervals.
							1.0				QUARTZ RICH CLAY Smear slides 2-80, 3-79, 4-65, 5-96, CC Composition Clay 61% Quartz (microcrys.) 30% Opaques 3% Pyrite 3% Feldspar 2% Nannos 1% Muscovite, heavies, glauconite, zeolite, and micarb Tr.
						2				80	5G2/1 to 5Y2/1 5Y5/2 calcitic layer worm tubes? 5G2/1 to 5Y2/1 clay spot 5Y3/2 N5 mottling
				NONE				VOID			
					Pm	3				79 XR	pyrite nodule N2 to 5G2/1 pyrite nodule 97-101 pyrite nodule worm tubes? Coarse fraction clay aggregates with traces of quartz, glauconite, pyrite, micarb, forams, mollusc fragments. BULK X-RAY (522.0 m) Quartz 37% Kaolinite 22% Mica 18% Calcite 7% K-feldspar 5% Pyrite 5% Chlorite 3% Plagioclase 2% Montmorillonite 1%
				NONE	Ms	4				65	N2 to 5G2/1
										113	5Y7/2 mottling worm tubes? 5Y7/2 mottling
				NONE		5				18	5Y7/2 calcite-rich layer with worm tubes? 5Y7/2 tube 5Y6/4 with calcite & worm tubes?
										96	scattered white specks of kaolinite 5Y6/1 with pyrite nodule 5Y6/1 with 5Y7/2 dolomitic zone with worm tubes?
		CM	RP			Core Catcher				CC	

Site 263 Hole Core 22 Cored Interval: 556-565.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, UPPER ALBIAN	(F) Aptian or Older (N) Eiffellithus turriseiffeli (upper Albian)	Calcareous and arenaceous benthonic species		NONE		1	0.5		△		white kaolinite 5Y6/1 Semi-lithified, undisturbed silty claystone, black (N2) to greenish black (5GY2/1). Some color mottling - shell fragments.
							1.0	VOID	△		5Y7/2 worm structures? 5Y6/4 worm structures? QUARTZ RICH SILTY CLAY Smear slides 3-93, CC Texture Clay 63% Silt 37% Composition Clay 55% Quartz (microcrys.) 30% Feldspar 7% Dolomite 4% Opaques 2% Pyrite 2% Muscovite, heavies, zeolite, nannos, and fish fragments Tr.
						2			△	25	N6 to N7 calcite-rich limestone
				NONE						GZ	71
						3				XR 93	white kaolinitic stringers Coarse fraction - clay aggregates with traces of pyrite, forams, and muscovite. BULK X-RAY (559.7 m) Quartz 36% Kaolinite 25% Mica 19% Montmorillonite 9% K-feldspar 5% Chlorite 3% Pyrite 2% Plagioclase 1%
										129	5Y7/2 dolomite 5Y6/4 mottling 70-72 N2 mottles on 5GY2/1 5Y7/2 with mottling of 5Y5/2
		FM	AP	NONE		Core Catcher				CC	

Site 263 Hole Core 23 Cored Interval: 594-603.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, UPPER ALBIAN	(F) Aptian or Older (N) Eiffellithus turriseiffelii (upper Albian)	Calcareous and arenaceous benthonic species		NONE		1	0.5	VOID	△		Semi-lithified, undisturbed slightly silty claystone; olive black (5Y2/1); no bedding; slightly calcareous; pyrite specks common; white kaolinite specks.
							1.0		△		5Y5/2 with 5Y7/2 mottles
									△		5Y2/1 calcite
						2			△		white streak of kaolinite
										GZ	5Y2/1
										75	72
						3				XR	pyrite nodule
											20-23
											bedding?
										75	5Y2/1
											5Y6/1 calcite-rich
					Pm	4					5Y6/4 dolomite with calcite
										75	5Y2/1
						5				GZ	35
										75	5Y2/1
		RM	CP	NONE		Core Catcher					5Y2/1

QUARTZ RICH SILTY CLAY
Smear slides 2-75, 3-75, 4-75, 5-75

Texture		Composition	
Clay	52%	Clay and microcrys. quartz	88%
Silt	48%	Quartz	4%
		Opaque	3%
		Feldspar	2%
		Nannos	1%
		Muscovite, heavies, glauconite, dolomite rhombs, zeolite, micarb, and fish fragments	Tr.

Coarse fractions - clay aggregates with traces of quartz, muscovite, glauconite, pyrite, micarb, forams, and fish remains.

BULK X-RAY (597.2 m)

Quartz	36%
Mica	23%
Kaolinite	23%
Pyrite	6%
Montmorillonite	5%
K-feldspar	4%
Plagioclase	2%
Chlorite	1%

Site 263 Hole Core 24 Cored Interval: 632-641.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, UPPER ALBIAN	(F) Aptian or Older	Calcareous and arenaceous benthonic species		NONE		1	0.5	VOID			Semi-lithified, undisturbed slightly silty claystone. Olive black (5Y2/1) with a few streaks of black (N2) and light gray (N7). Pyrite common; white calcareous specks, may be fossils.
							1.0			75	5Y2/1
						2				GZ	58
										65	5Y2/1
						3				XR	13-17
										75	5Y2/1
						4				70	5Y2/1 pyrite nodule white kaolinitic streaks
											white kaolinitic streaks 1-2 mm white kaolinitic spheres
						5				150 (2)	pyrite nodules
											5Y7/2 nodule
		RM		NONE		6				75	5Y2/1
											5Y7/2 calcitic layer
		RM	CP			Core Catcher					5Y2/1

QUARTZ RICH SILTY CLAY
Smear slides 1-75, 2-65, 3-75, 4-70, 6-75

Texture		Composition	
Clay	51%	Clay	61%
Silt	49%	Quartz (microcrys.)	33%
		Feldspar	2%
		Pyrite	1%
		Opaque	1%
		Heavies, muscovite, glauconite, dolomite rhombs, zeolite, micarb, nannos, and fish fragments	Tr.

Coarse fractions - clay aggregates with traces of quartz, muscovite, glauconite, forams, fish remains.

BULK X-RAY (635.1 m)

Quartz	38%
Kaolinite	26%
Mica	21%
Montmorillonite	5%
K-feldspar	4%
Pyrite	3%
Chlorite	2%
Plagioclase	1%

Site 263 Hole Core 25 Cored Interval: 670-679.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, ALBIAN	(F) Aptian or Older (N) Eiffellithus turriseiffeli?	Calcareous and arenaceous benthonic species		NONE		1	0.5, 1.0	VOID			Semi-lithified, undisturbed slightly silty claystone; olive black (5Y2/1); no bedding; slightly calcareous, pyrite common. Dolomite and calcite nodules and layers.
											QUARTZ BEARING CLAY Smear slides 2-74, 3-105, 4-75, CC Composition Clay 87% Quartz 3% Opaques 2-15% Pyrite 2% Nannos 1% Feldspar, heavies, glauconite, dolomite rhombs, micarb, and fish fragments Tr.
						2					5Y2/1 calcite-rich area 5Y7/2 5Y2/1
				NONE					△ △	74	dolomite nodule 5Y7/2 5Y2/1 Coarse fraction - clay aggregates with traces of quartz, muscovite, white spheres, pyrite, forams, and fish fragments.
						3				XR 105	71-72 5Y6/1 with 1-3 mm white spherical to ellipsoidal bodies of kaolinite BULK X-RAY (673.7 m) Kaolinite 88% Calcite 6% Quartz 3% Montmorillonite 2% Mica 1%
				NONE					△ △	65 75	5Y6/1 with 1-3 mm white spheres of kaolinite 10YR4/2, slightly calcareous 5Y2/1 dolomite
						4			△		
		RM	CP	NONE		Core Catcher				CC	5Y2/1

Site 263 Hole Core 26 Cored Interval: 698.5-708 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, ALBIAN	(F) Aptian or Older (N) Eiffellithus turriseiffeli?	Calcareous and arenaceous benthonic species		NONE	(Belemnite)	1	0.5, 1.0	VOID			Semi-lithified, undisturbed, slightly calcareous, slightly silty claystone. Olive black (5Y2/1). Pyrite common, streaks and nodules of calcite and dolomite present.
											QUARTZ BEARING CLAY Smear slide 2-75, 3-75, 4-75, CC Composition Clay 85% Quartz 1-20% Opaques 3% Feldspar 2% Pyrite 2% Nannos 1-10% Muscovite, heavies, glauconite, micarb, and fish fragments Tr.
						2				75	N7 streaks 5Y2/1 white calcite 5Y2/1 fossil white shells
						3				75	5Y4/1 5Y5/2 Coarse fraction - clay aggregates, a few forams and traces of quartz, feldspar, glauconite, pyrite, and fish fragments. nodule and veinlet
					Pm						calcite veinlet calcite
				NONE		4				75	calcite 5Y2/1 calcite kaolinitic spheres in calcite-rich matrix
		RP	FP	NONE	0	5				70	5Y6/1, calcite-rich
						Core Catcher				CC	5Y2/1

Site 263 Hole Core 27 Cored Interval: 708-717.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
*	**	RP ***	CP	NONE		Core Catcher					5Y2/1 Semi-lithified, highly deformed, olive black (5Y2/1) slightly calcareous, slightly silty claystone. QUARTZ BEARING CLAYSTONE Coarse fraction - clay aggregates, a few forams, opaques, and traces of quartz, muscovite, glauconite, pyrite.

* LOWER CRETACEOUS, ALBIAN **(F) Aptian or Older
(N) Eiffellithus turriseiffeli?
***Calcareous and arenaceous benthonic species

Site 263 Hole Core 28 Cored Interval: 727-736.5 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, ALBIAN	(F) Aptian or Older	Calcareous and arenaceous benthonic species		NONE		1	0.5 1.0			75	calcite 5Y2/1 Semi-indurated, undeformed slightly calcareous, slightly silty clay; olive black (5Y2/1) calcite nodules, layers and wisps. Grayish blue green (5BG5/2) glauconitic sandstone at base. QUARTZ RICH SILTY CLAY Smear slides 1-75, 2-75, 3-50 Texture: Clay 53%, Silt 47% Composition: Clay 68%, Quartz 22%, Opaques 2%, Pyrite 2%, Micarb 2%, Feldspar 2%, Nannos 1%, Muscovite, heavies, glauconite, and fish fragments Tr.
				NONE		2			△ △ △ △	75 GZ	calcite-rich layer 5Y2/1 87 calcite-rich layer
				NONE		3				50	GLAUCONITE SANDSTONE Smear slide CC Composition: Calcite cement 40%, Glauconite 35%, Clay clasts 15%, Chert 7%, Quartz 2%, Feldspar, mica, and opaques Tr.
		RP	FP	NONE	Fd	Core Catcher				XR CC	141-150 N7 with white spheres of kaolinite 5Y2/1 and 5BG5/2 green glauconitic sandstone BULK X-RAY (731.4 m): Kaolinite 47%, Quartz 28%, Montmorillonite 20%, Mica 2%, Pyrite 1%, Calcite 1%

Site 263 Hole Core 29 Cored Interval: 736.5-746 m

AGE	ZONE	FOSSIL CHARACTER: FORAMS	NANNOS	RADIOLARIA	OTHERS	SECTION	METERS	LITHOLOGY	DEFORMATION	LITHO. SAMPLE	LITHOLOGIC DESCRIPTION
LOWER CRETACEOUS, ALBIAN	(F) Aptian or Older (Pm) C. stylosus (Neocomian)	Calcareous and arenaceous benthonic species		NONE		1	0.5 1.0	VOID	△ △ △ △		Semi-lithified, undisturbed slightly calcareous, slightly silty claystone. Carbonate veins, zones, and layers. QUARTZ RICH SILTY CLAY Smear slides 2-80, 4-80, CC Texture: Clay 64%, Silt 36% Composition: Clay 47%, Quartz (microcrys.) 44%, Opaques 3%, Feldspar 2%, Pyrite 2%, Nannos 1%, Heavies, zeolite, muscovite, dolomite rhombs, and fish fragments Tr.
											white calcite vein 5Y2/1
						2				80	white spheres of kaolinite 5Y2/1
				NONE						6Z 108	pyritized burrow in N4 calcite-rich zone
										XR	6-8 pyrite nodule 5Y2/1 BULK X-RAY (739.6 m): Quartz 46%, Mica 19%, Kaolinite 18%, Pyrite 7%, Montmorillonite 5%, Chlorite 2%, Calcite 2%, Plagioclase 1%
						3				66	white spheres of kaolinite
					Pm						
						4			△ △ △ △	80	white spheres of kaolinite
		CM	RM	RVVP	0	Core Catcher				CC	5Y2/1