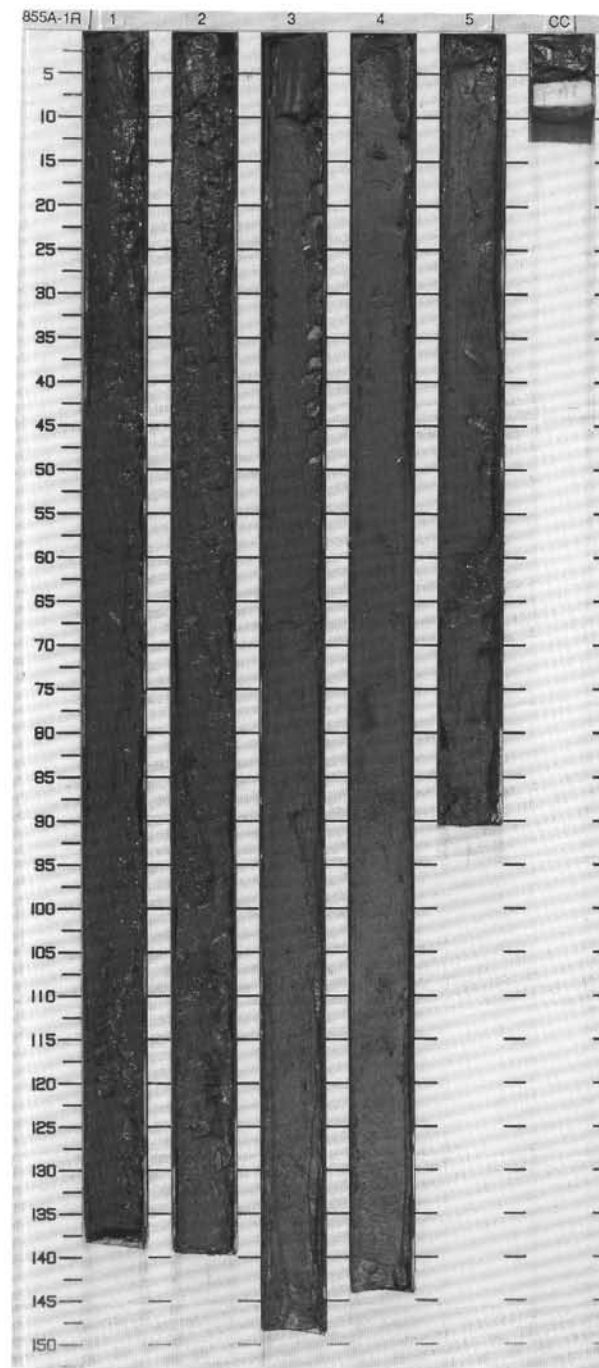
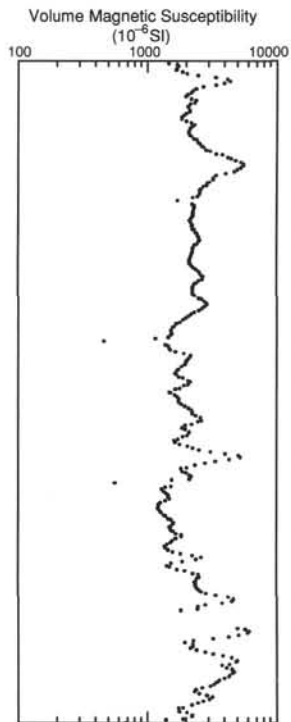


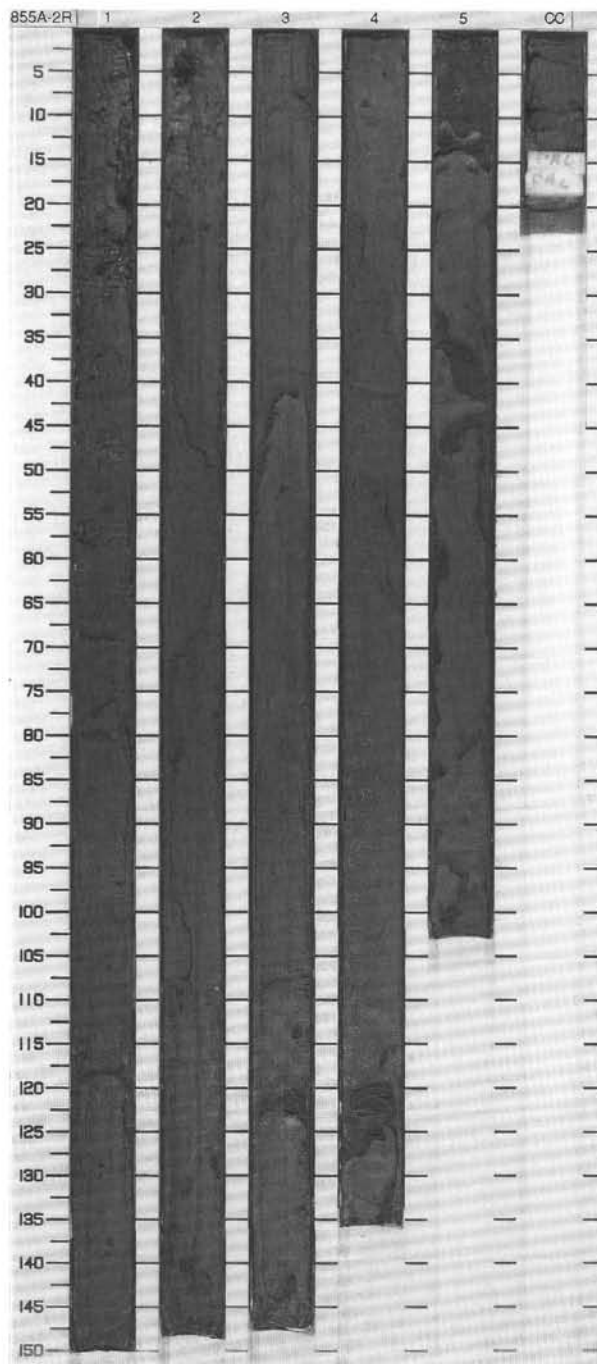
Information on Core Description Forms, for ALL sites, represents field notes taken aboard ship. Some of this information has been refined in accord with post-cruise findings, but production schedules prohibit definitive correlation of these forms with subsequent findings. Thus, the reader should be alerted to the occasional ambiguity or discrepancy.

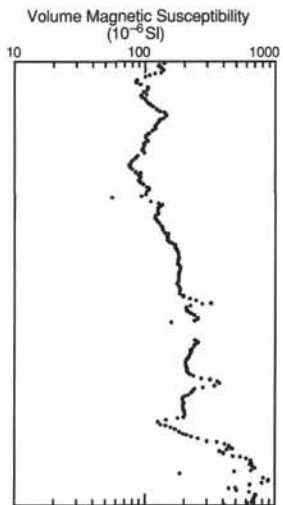




SITE 855 HOLE A CORE 2R CORED 7.6 - 16.6 mbsf

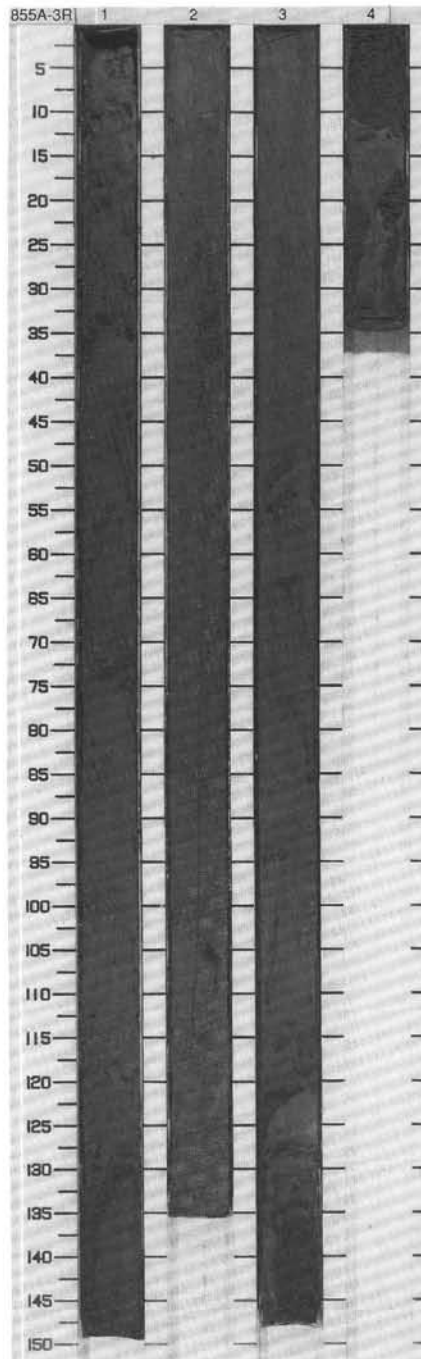
Meter	Graphic Lith.	Section Age	Structure	Disturb	Sample	Color	Description
1	[Lithology]	Holocene	[Structure]	[Disturb]	S P	5Y 4/1	Major Lithology: Gray SILTY CLAY, homogeneous, weakly bioturbated with no visible bedding, but with patches of dismembered and deformed turbiditic SILT and SAND and moderately indurated gray green (5G 4/1) SILTY CLAY containing black (N 1/) diagenetic sulfides.
2	S S				5GY 5/1		
3	P				5Y 4/1		
4	[Lithology]	Upper Pleistocene	[Structure]	[Disturb]	P	5Y 4/1	Minor Lithology: Dark gray SILT and SAND, thinly bedded to dismembered and deformed, sharp bases with diffuse tops; locally graded. General Description: Hemipelagic SILTY CLAY interbedded
5	P				5GY 5/1		
6	P				5Y 5/1		
7	P				5Y 5/1		
CC	[Lithology]				M		

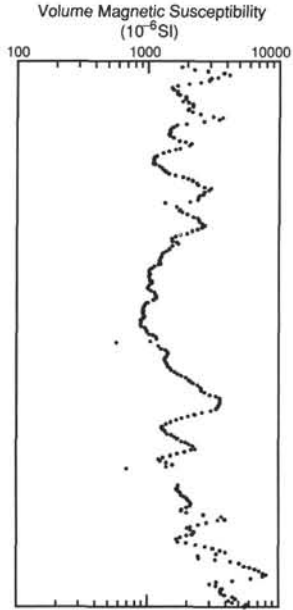




SITE 855 HOLE A CORE 3R CORED 16.6 - 26.0 mbsf

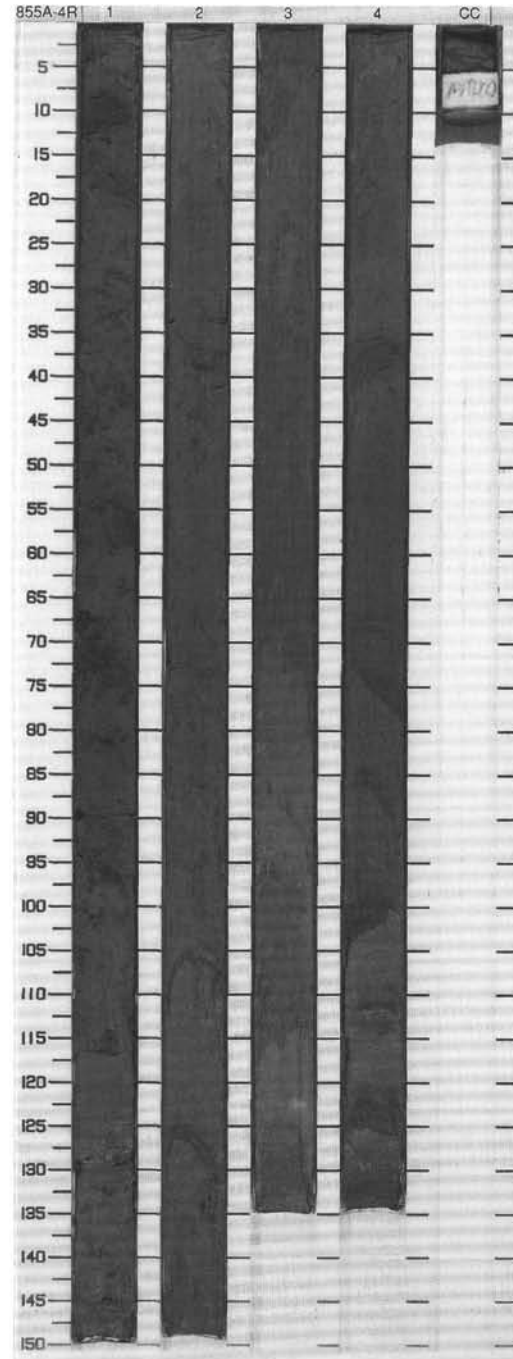
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
						S		SILTY CLAY
1		1	Upper Pleistocene			S	5Y 5/1	Major Lithology: Gray SILTY CLAY with patches of moderately indurated SILTY CLAY and black diagenetic sulfides. Vague bedding at the top of section 1. Patches of moderately indurated grayish green (5G 4/2) SILTY CLAY with black diagenetic sulfides distributed throughout core.
2		2				S		
3		3				P		
4		4				P		
				↑ F		W		Minor Lithology: Dark gray turbiditic SILT and SAND that fine upward and commonly display sharp bases and gradational tops. Turbidites have been dismembered and highly deformed by drilling.
				↑ F		P		General Description: Hemipelagic SILTY CLAY interbedded with turbiditic SILT and fine SAND.
				↑ F		S		
				↑ F		P		
						M		

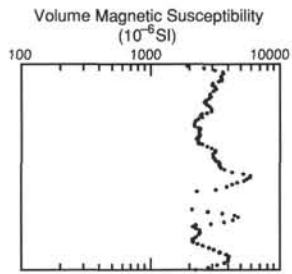




SITE 855 HOLE A CORE 4R CORED 26.0 - 35.5 mbsf

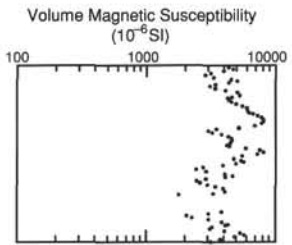
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
0-1	[Dotted pattern]	1		↑ F		S		<p>SILTY CLAY, SILT AND SAND</p> <p>Major Lithology: Gray SILTY CLAY, locally laminated and bioturbated. Interbedded with dismembered and deformed SILT and SAND layers that fine upward, and that commonly display sharp, erosional basal contacts and gradational upper contacts. SILTY CLAY units contain clots of more indurated sediment, and black diagenetic sulfides.</p> <p>General Description: Hemipelagic SILTY CLAY interbedded with laminated SILT and SAND turbidites that display sharp bases, gradational tops, and fine upwards.</p>
1-2	[Horizontal dashed lines]	2		↑ F		P	5Y 5/1	
2-3	[Horizontal dashed lines]	3	Upper Pleistocene			S P	5G 4/1	
3-4	[Horizontal dashed lines]	4				P	5Y 5/1	
4-5	[Horizontal dashed lines]	5				S P		
5-6	[Horizontal dashed lines]			↑ F		W		
6-7	[Horizontal dashed lines]			↑ F		P P		
7-8	[Horizontal dashed lines]			↑ F		S	5Y 4/1	
8-9	[Horizontal dashed lines]					M		
9-10	[Horizontal dashed lines]			↑ F				
10-11	[Horizontal dashed lines]			↑ F				





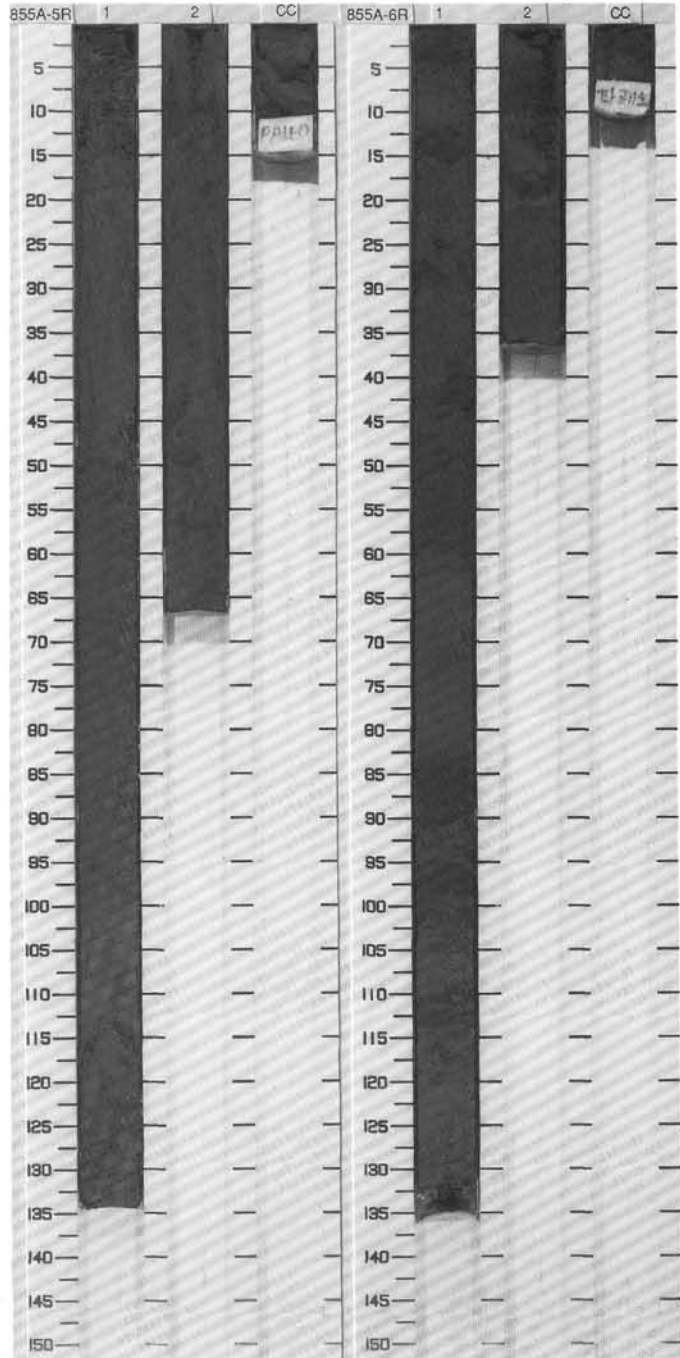
SITE 855 HOLE A CORE 5R CORED 35.5 - 45.5 mbsf

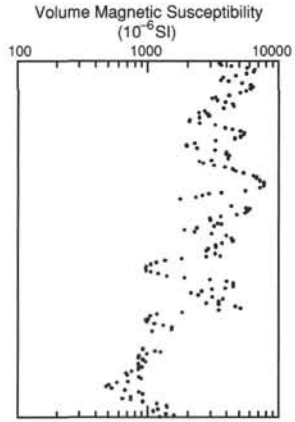
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
0-10	[Dotted pattern]	1	Upper Pleistocene			P	5GY 5/1	SILTY CLAY Major Lithology: Gray SILTY CLAY, homogeneous, highly disturbed by drilling; upper part of core is flow-in. Minor Lithology: Thin beds of dark gray clayey SILT that fine upward and display generally sharp bases and diffuse tops. General Description: Hemipelagic SILTY CLAY interbedded with graded turbiditic silt.
10-20	[Dotted pattern]	2	Upper Pleistocene	↑ F		P	5GY 4/1	
20-30	[Dotted pattern]	3	Upper Pleistocene	↑ F		W		
30-40	[Dotted pattern]	4	Upper Pleistocene	↑ F		P	5GY 4/1	
40-45.5	[Dotted pattern]	5	Upper Pleistocene	○		M		



SITE 855 HOLE A CORE 6R CORED 45.5 - 55.1 mbsf

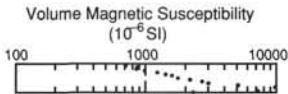
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
0-10	[Dotted pattern]	1	Upper Pleistocene	sss		P	5GY 4/1	SILTY CLAY AND SILT Major Lithology: SILTY CLAY and turbiditic SILT layers are interbedded throughout core. Individual SILT layers have sharp erosional contacts and commonly grade upward. Minor Lithologies: Indurated SILTY CLAY, associated with black diagenetic sulfide, is found throughout the core between turbiditic layers.
10-20	[Dotted pattern]	2	Upper Pleistocene	↑ F		P	5GY 4/1	
20-30	[Dotted pattern]	3	Upper Pleistocene	↑ F		W		
30-40	[Dotted pattern]	4	Upper Pleistocene	↑ F		P	5GY 4/1	
40-55.1	[Dotted pattern]	5	Upper Pleistocene	○		M	5GY 5/1	





SITE 855 HOLE A CORE 7R CORED 55.1 - 64.8 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
0-1	[Dotted pattern]	1	Upper Pleistocene	[Symbol]	[Symbol]	S	5Y 4/1 TO 5Y 5/1	<p>SILTY CLAY, SILT AND SAND</p> <p>Major Lithology: Gray SILTY CLAY (5Y 5/1) interbedded with turbiditic SAND and SILT (5Y 4/1) in section 1, the upper half of section 2 and section 3. Turbiditic SAND and SILT beds fine upward and display erosional basal and gradational upper contacts. Parallel laminated beds occur in the upper half of section 2. Most turbiditic beds are distorted along the core margins, and a few beds are dismembered.</p> <p>General Description: The gray SILTY CLAY is locally moderately indurated, giving the core a clumpy appearance. Black diagenetic sulfides are rare. Smear slides from sections 2 and 3 show authigenic clays. A clot of this dark green clay occurs in section 3, 68-70 cm.</p>
1-2	[Dotted pattern]	2				P		
2-3	[Dotted pattern]	3				P		
3-3.5	[Dotted pattern]	CC				W1		
						P		
						S		
						M		

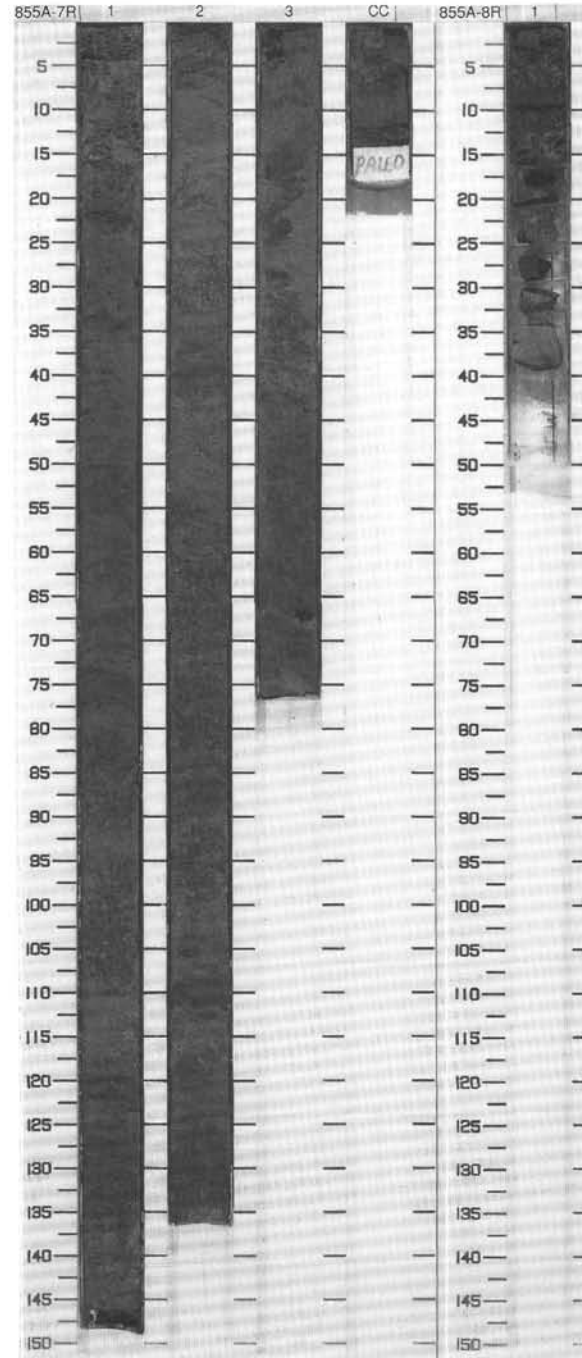


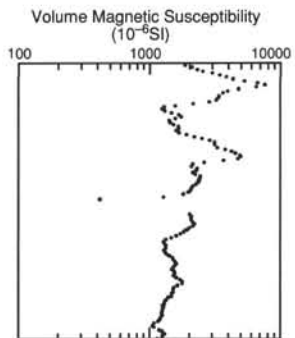
SITE 855 HOLE A CORE 8R CORED 64.8 - 74.3 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
0-1	[Dotted pattern]	1				S		<p>SILTY CLAY</p> <p>Major Lithology: Dark greenish gray (5GY 4/1), homogeneous SILTY CLAY.</p> <p>Minor Lithology: Dark gray (5Y 4/1) SILT laminae at 2 to 4 cm; gradational contacts; moderately disturbed.</p> <p>General Description: Sharp contact with underlying basalt. No evidence of thermal metamorphism.</p>
1-1.5	[Dotted pattern]					S		
						M		

855A 9R HARD ROCK

855B 1R NO RECOVERY

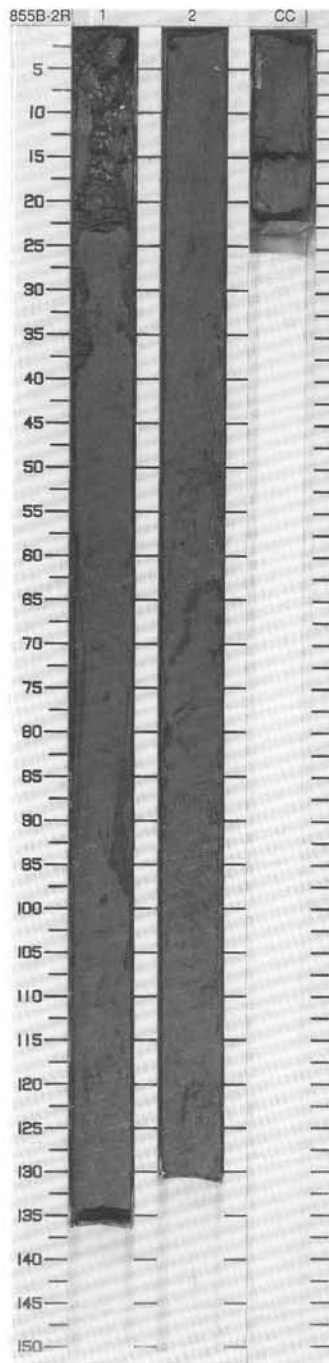


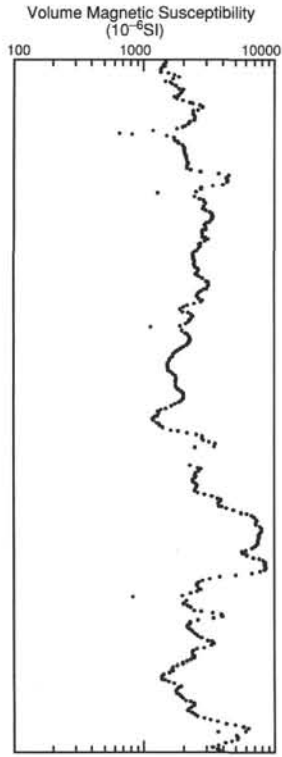


SITE 855 HOLE B CORE 2R CORED 5.7 - 15.1 mbsf

Meter	Graphic Lith.	Section Age	Structure	Disturb	Sample	Color	Description
0.0 - 1.0	[Graphic Lithology: Dotted pattern]	1 Upper Pleistocene			S S P	5BG 4/1 To 5Y 4/1	NANNOFOSSIL CLAY WITH FORAMINIFERS Major Lithology: Gray green NANNOFOSSIL CLAY WITH FORAMINIFERS, homogeneous except for gray silt to fine sand layers. Wispy streaks of green and black material along core.
1.0 - 2.0	[Graphic Lithology: Horizontal dashed lines]	2 Upper Pleistocene			W P	5BG 4/1 To 5Y 4/1	Minor Lithologies: PLAGIOCLASE SILTY SAND with CLAY and SANDY CLAY occur as a minor lithology, most commonly at the base of turbidite units. SANDY CLAY with FORAMS is present as a 1 cm-thick disturbed laminae at 63 cm.
2.0 - 3.0	[Graphic Lithology: Horizontal dashed lines]	CC			M		

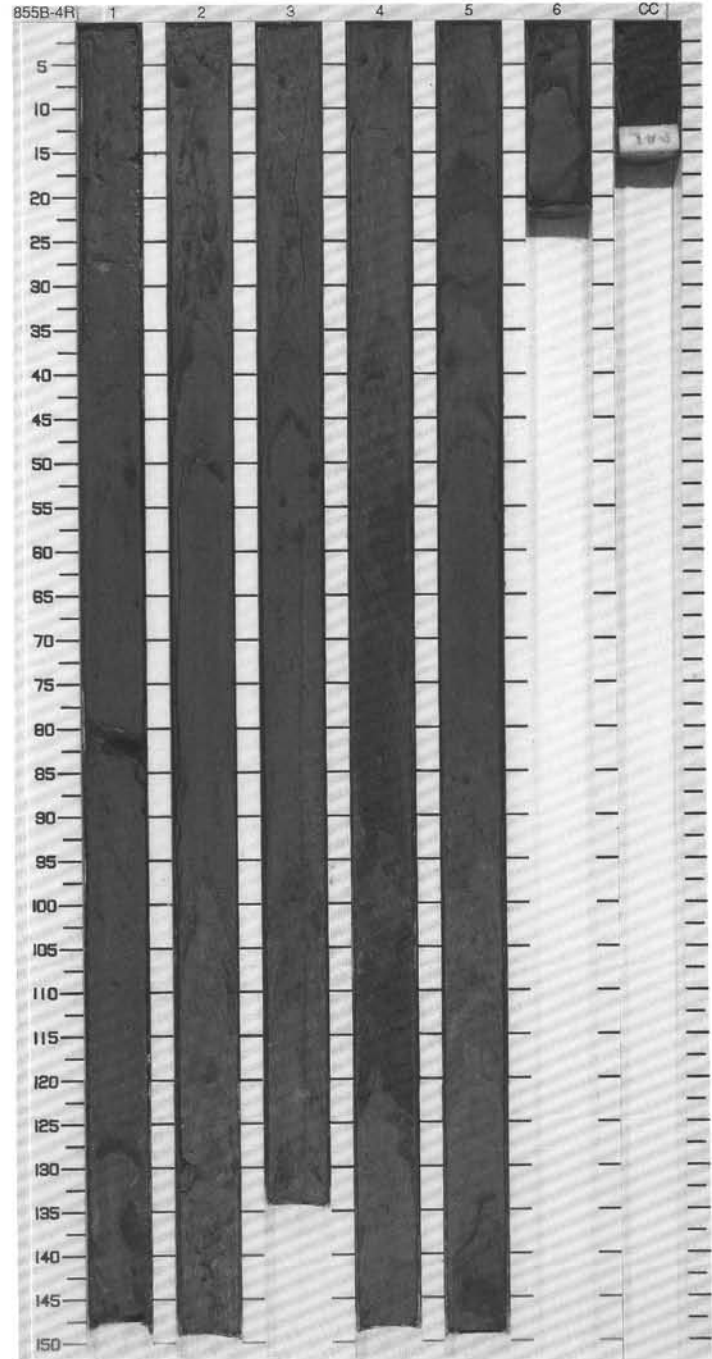
855B 3R NO RECOVERY

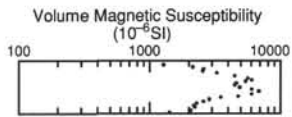




SITE 855 HOLE B CORE 4R CORED 24.5 - 34.0 mbsf

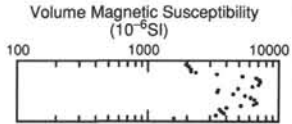
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1	[Pattern]	1	Upper Pleistocene	+		S P		SILTY CLAY and SILTY CLAY WITH PLAGIOCLASE SILTY SAND
2	[Pattern]	2		+		S P	5BG 4/1 To 5B 4/1	Major Lithologies: Moderately disturbed gray green, dark gray to gray turbidite sand, silts, and clays. Minor Lithologies: PLAGIOCLASE SILTY SAND WITH CLAY and SANDY SILT are typically the coarser grained fraction of the turbidites.
3	[Pattern]	3		+		S P	5G 4/1	General Description: SILTY CLAY with moderately disturbed, thin (cm-thick) layers of SILT and SAND. Coarse grained sediment are micaceous. Fining upward sequences range from 15 to 120 cm thick, have sharp bases, and are generally dominated by fine grained sediment. Color changes are transitional and commonly associated with grain-size changes. A 1 mm wide, 12 mm long pyritized burrow is present at 4R-03, 57-59 cm. Small (2-3 cm diameter) lenses of SILTY CLAY WITH NANNOFOSSILS are present at 4R-03,
4	[Pattern]	4		+		S S	5Y 5/1	
5	[Pattern]	4		+		I W	5GY 4/1	
6	[Pattern]	5		+		S S	5Y 5/1 To 5Y 4/1	
7	[Pattern]	6		+		S S		
8	[Pattern]	8	+		M			





SITE 855 HOLE B CORE 5R CORED 34.0 - 43.9 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
		1	uPle			P	5Y 4/1	SILTY CLAY General Description: Dark gray to gray green moderately disturbed SILTY CLAY with minor SILTY SAND and SANDY SILT interbeds.

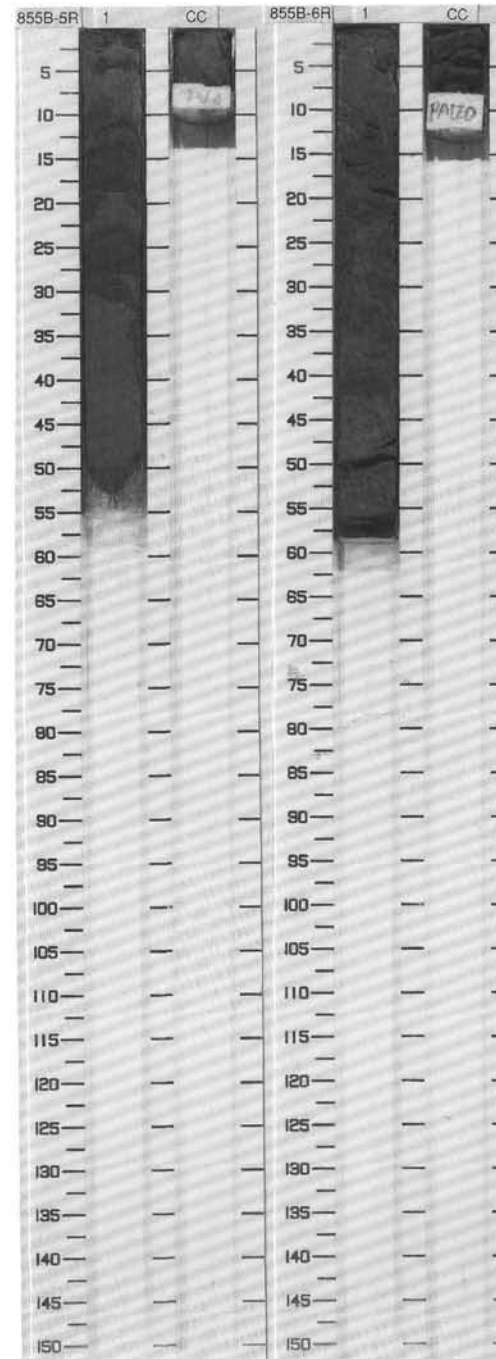


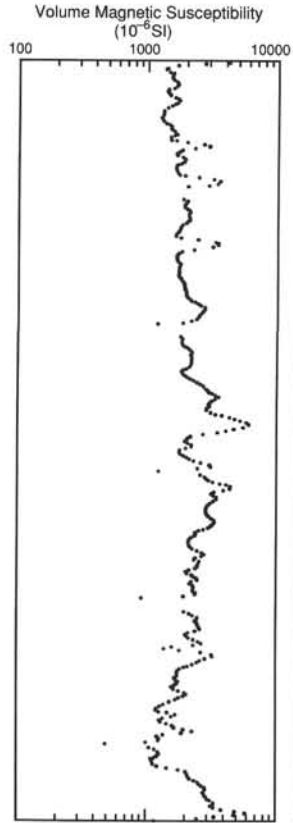
SITE 855 HOLE B CORE 6R CORED 43.9 - 48.6 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
		1	uPle	↑ F ↑ F		S S M		SILTY CLAY and PLAGIOCLASE SANDY CLAY WITH SILT General Description: Interbedded, greenish gray (5GY 5/1, 5BG 5/1, 5G 5/1), dark greenish gray (5GY 4/1), and dark gray (5Y 4/1), fining-upward turbidite sequences with sharp upper and lower contacts. Turbidites are slightly micaceous at their bases, and are overlain by hemipelagic SILTY CLAY.
							8cm 5BG 4/1 26cm 5GY 4/1 40cm 5Y 4/1	

855B 7R NO RECOVERY

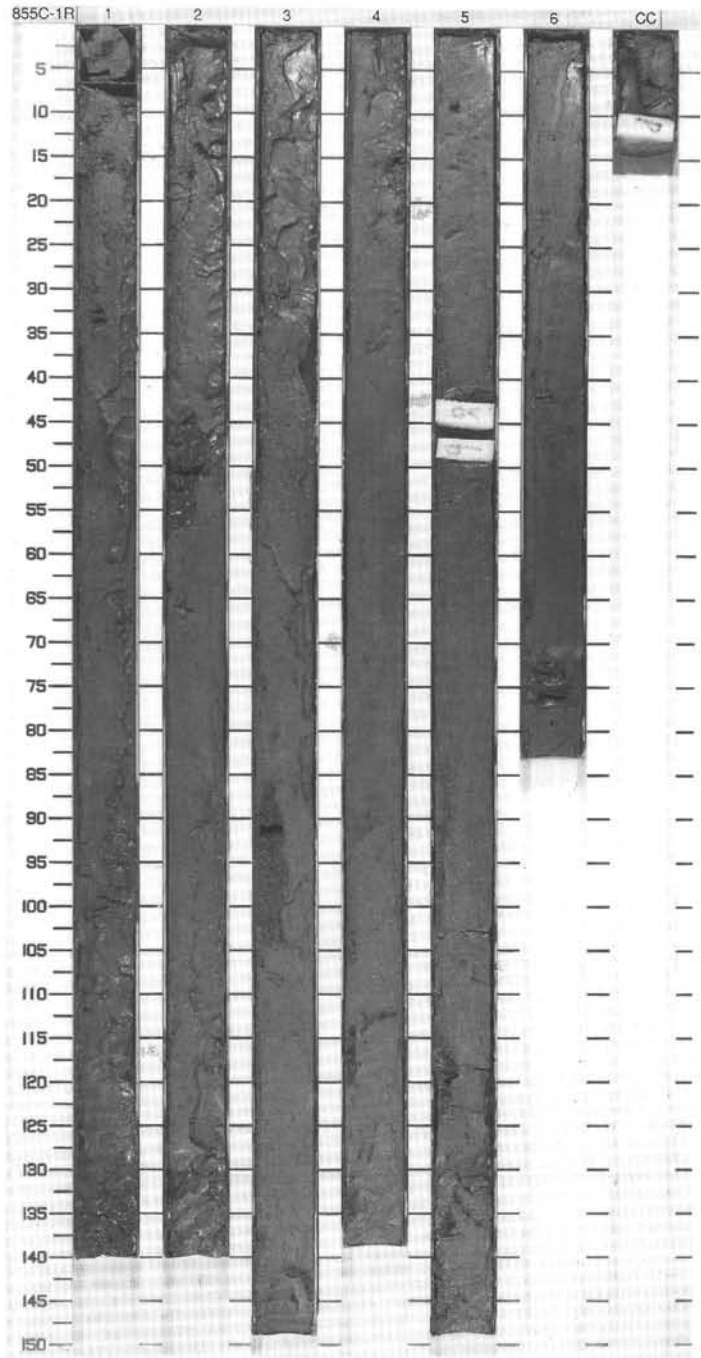
855B 8R HARD ROCK

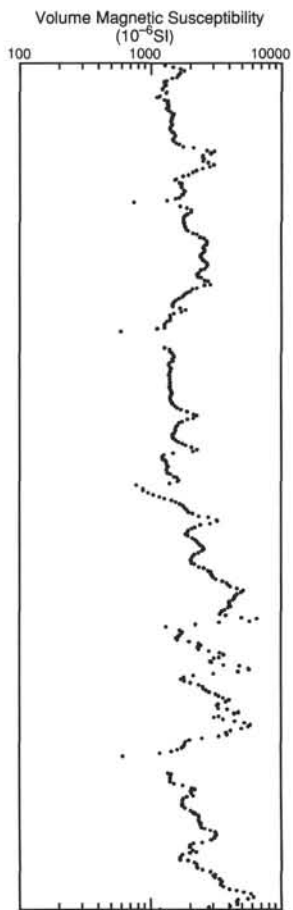




SITE 855 HOLE C CORE 1R CORED 0.0 - 8.7 mbsf

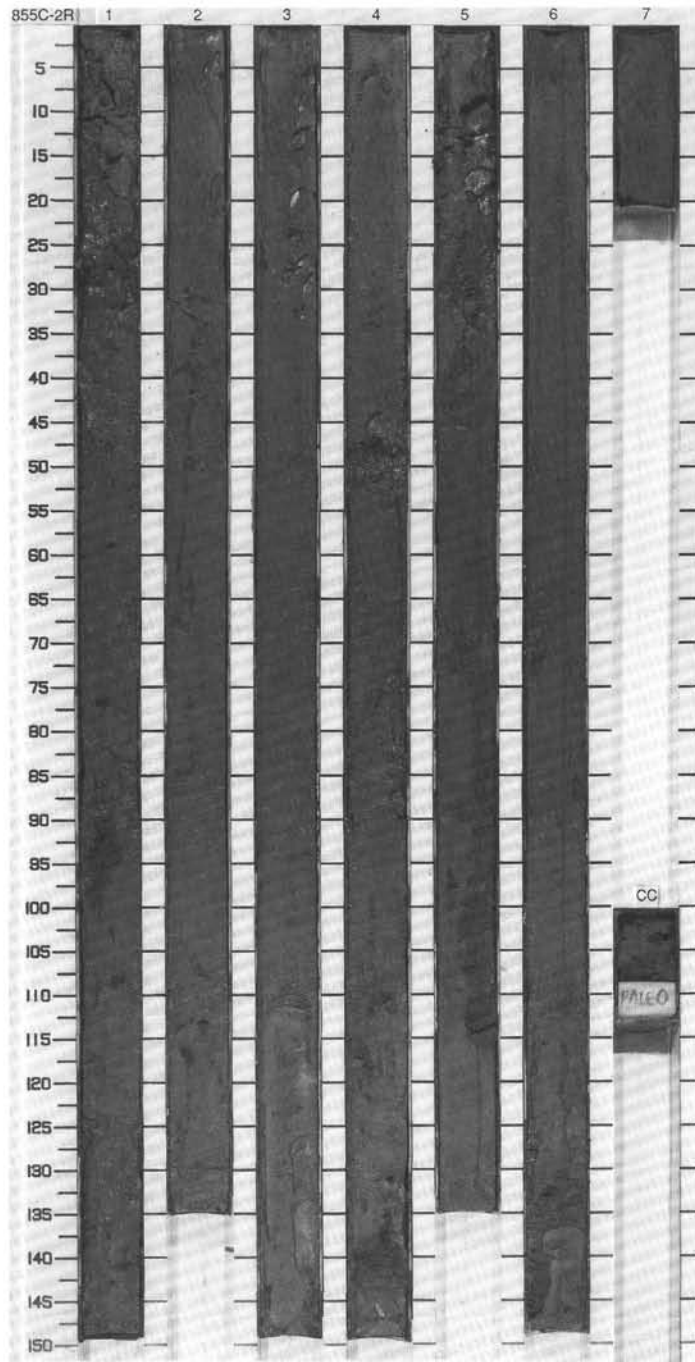
Meter	Graphic Lith.	Section Age	Structure	Disturb	Sample	Color	Description
0-1	Igneous	1	↑ F		P S	5Y 5/2 To 5Y 6/1	Major Lithology: Olive gray (5Y 5/2) feldspar and quartz SILTY CLAY with abundant forams and rads and some nannofossils and diatoms. Mostly homogeneous texture throughout, except for turbidites. Minor gray streaks possibly iron sulfide of diagenetic origin, but no H2S odor.
1-2							
2-3		2	↑ F		P S	5GY 5/1	Minor Lithology: Pockets and layers of DARK GRAY QUARTZ AND FELDSPAR SILT WITH MAFIC ACCESSORIES; turbiditic commonly deformed and locally dismembered by drilling.
3-4							
4-5		3	↑ F		P S	5GY 5/1	
5-6							
6-7		4	↑ F		P S	5Y 5/1	
7-8							
8	Void	5			P S	5GY 5/1	
		6			P S		
		6			M S		

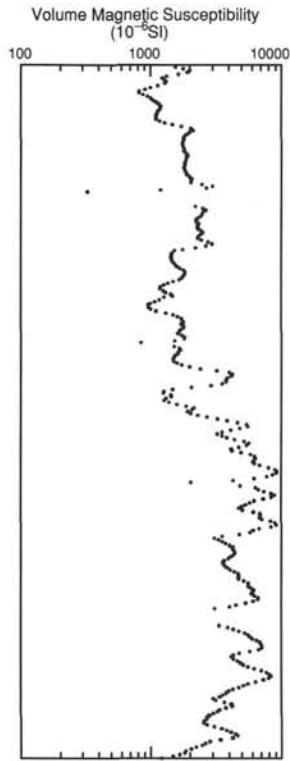




SITE 855 HOLE C CORE 2R CORED 8.7 - 17.7 mbsf

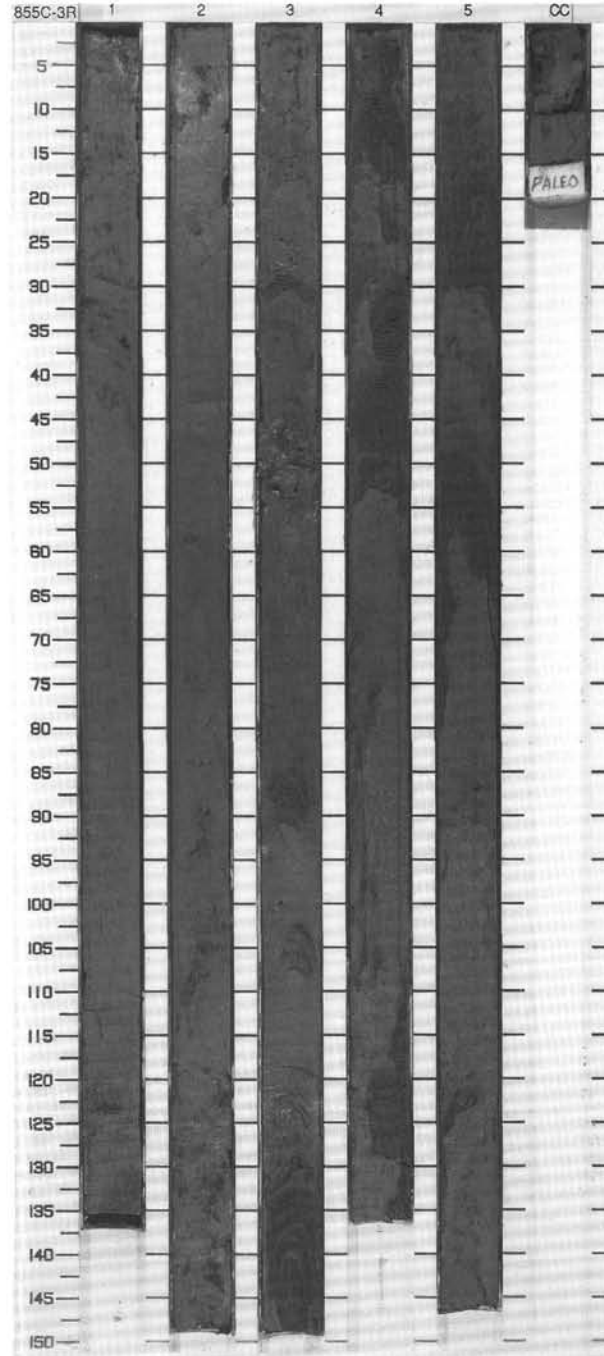
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
0-1	[Dotted pattern]	1		4 F		S		<p>SILTY CLAY</p> <p>Major Lithology: Greenish gray SILTY CLAY with dismembered and highly disturbed dark gray layers of SILT and SAND. Clumps of more indurated, dark greenish gray (5GY 4/1) material are present in section 2.</p>
1-2	[Horizontal dashed pattern]	2				S	5GY 5/1	
2-3	[Horizontal dashed pattern]	3				S		<p>Minor Lithologies: Gray (5Y 5/1) to dark gray (5Y 4/1) SILT and SAND of probable turbiditic origin. Basal contacts are erosional and units fine upward. Layers are dismembered in sections 1, 2, 5, 6. Pale gray (5Y 5/1) CLAY is interbedded with SILTY CLAY in section 1, 4-10 cm. The top of the core has a high water content.</p>
3-4	[Horizontal dashed pattern]	4		4 F		I		
4-5	[Horizontal dashed pattern]	4	Upper Pleistocene	4 F		S	5GY 5/1	
5-6	[Horizontal dashed pattern]	5		4 F		S		
6-7	[Horizontal dashed pattern]	5				F	5Y 3/2	
7-8	[Horizontal dashed pattern]	6		4 F		I		
8-9	[Horizontal dashed pattern]	6		4 F		S	5GY 5/1	
9-10	[Horizontal dashed pattern]	7		4 F		S		
10-11	[Horizontal dashed pattern]	CC				S	M	

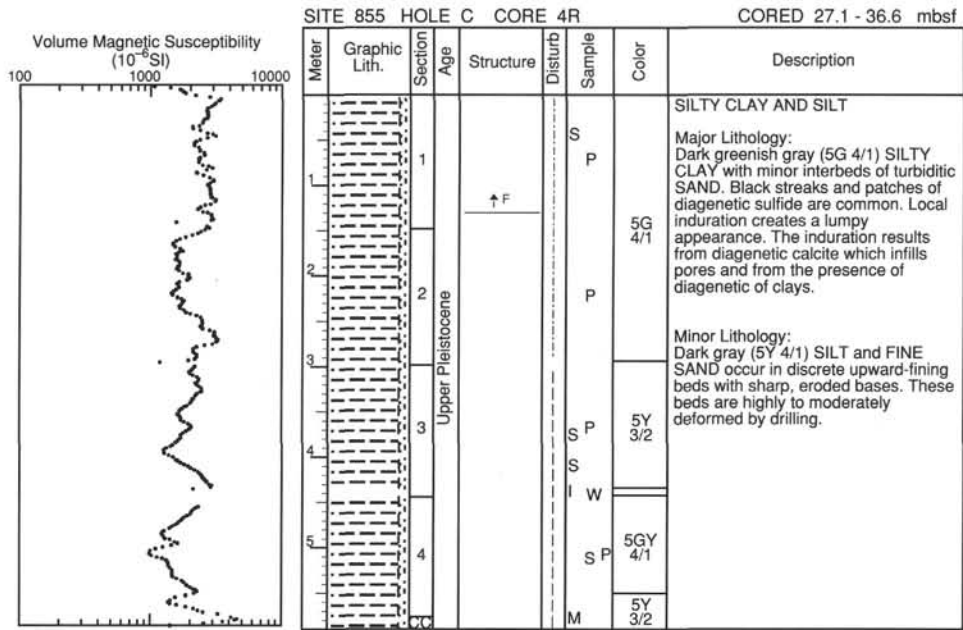




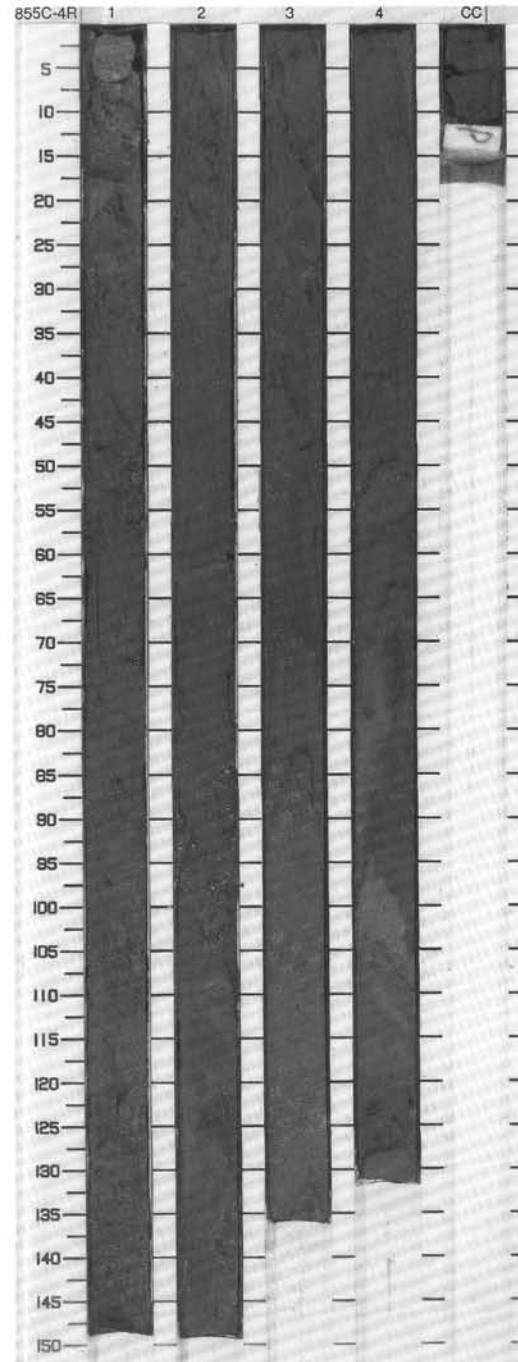
SITE 855 HOLE C CORE 3R CORED 17.7 - 27.1 mbsf

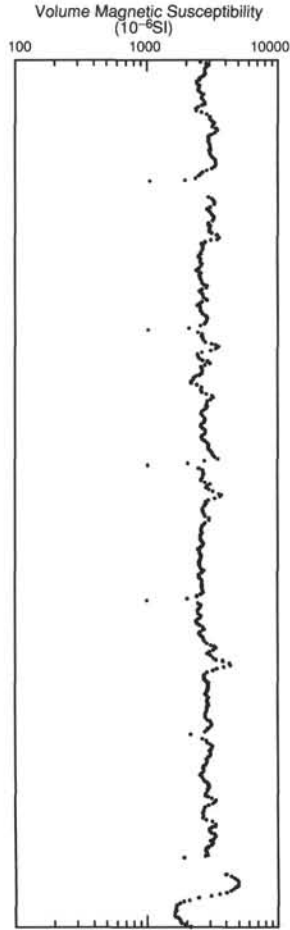
Meter	Graphic Lith.	Section Age	Structure	Disturb	Sample	Color	Description	
1	[Dotted pattern]	Upper Pleistocene			S	5G 4/1 To 5G 5/1	<p>SILTY CLAY, MODERATELY INDURATED and CLAYEY SILT AND FINE SAND</p> <p>Major Lithologies: Dark greenish gray (5G 4/1) moderately indurated SILTY CLAY interlayered with dark greenish gray turbiditic SILT and SAND. In section 1 there are local clumps of indurated SILTY CLAY associated with an increased abundance of foraminifers. The SILTY CLAY is partly altered to authigenic clay which infills pores and calcite which replaces the foraminifers. CLAYEY SILT AND FINE SAND comprise variably dismembered and deformed bands of turbidites. The turbiditic layers have sharp, commonly scoured, bases which fine upwards.</p> <p>General Description: Common diagenetic sulfides discolor the sediment with black patches and streaks.</p>	
2	[Dotted pattern]				S			
3	[Dotted pattern]			↑ F		P		
4	[Dotted pattern]			↑ F		P		5Y 3/2
5	[Dotted pattern]			↑ F		I W		
6	[Dotted pattern]				P S	5Y 3/2		
7	[Dotted pattern]				M			
CC								





855C 5R Entire core given to paleontologists.

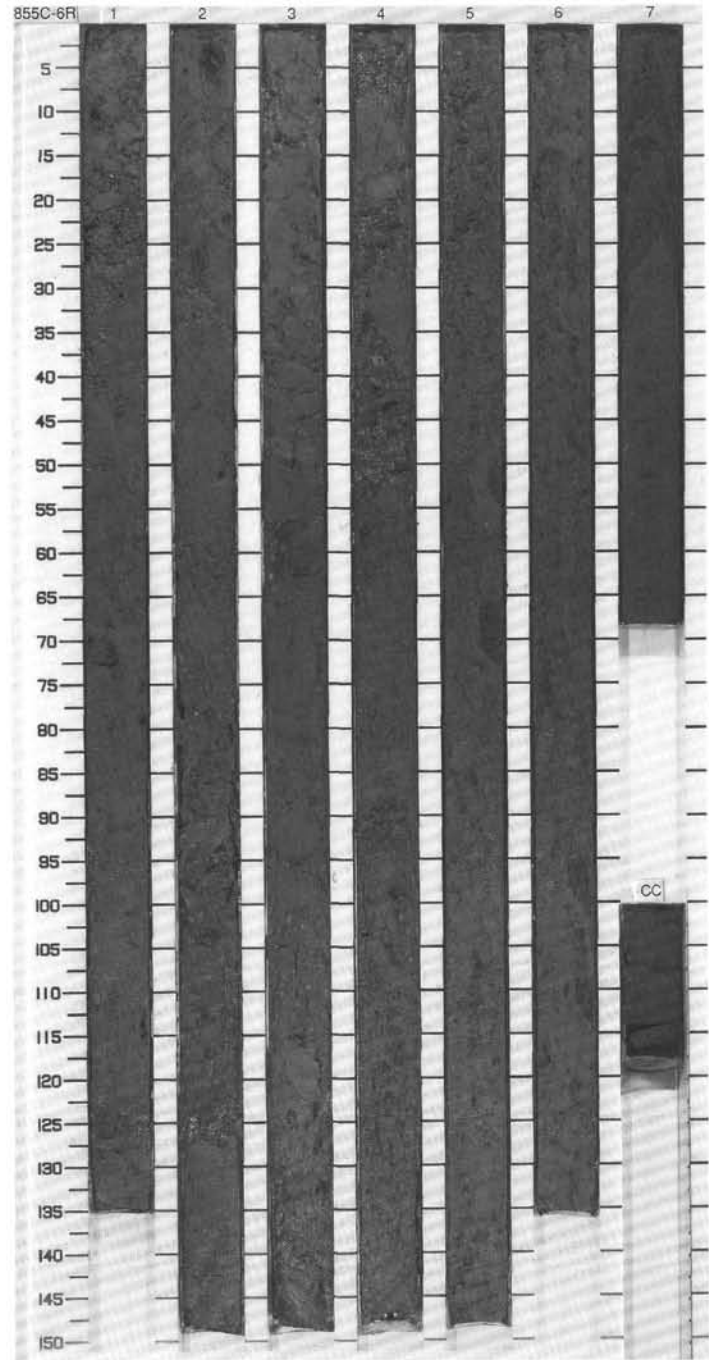




SITE 855 HOLE C CORE 6R CORED 46.5 - 56.1 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1	[Dotted pattern]	1			X	P S	5GY 4/1	<p>SILTY CLAY</p> <p>Major Lithology: Dark greenish gray (5G 4/1) hemipelagic SILTY CLAY interbedded with grayish olive green (5GY 3/2) turbiditic CLAYEY SILT and FINE SAND. The whole core is badly brecciated, presumably as a result of drilling.</p>
2	[Dotted pattern]	2			X	S P	5GY 4/1	
3	[Dotted pattern]	3			X	S P		
4	[Dotted pattern]	4			X	I W	N 4	
5	[Dotted pattern]	5			X	S P		
6	[Dotted pattern]	6			X	S P	5G 4/1	
7	[Dotted pattern]	7			X	P S	5Y 4/1	
8	[Dotted pattern]	8			X	I W	5Y 4/1	
9	[Dotted pattern]	9			X	P S	5GY 4/1	
	[Dotted pattern]	CC				M		

Upper Pleistocene

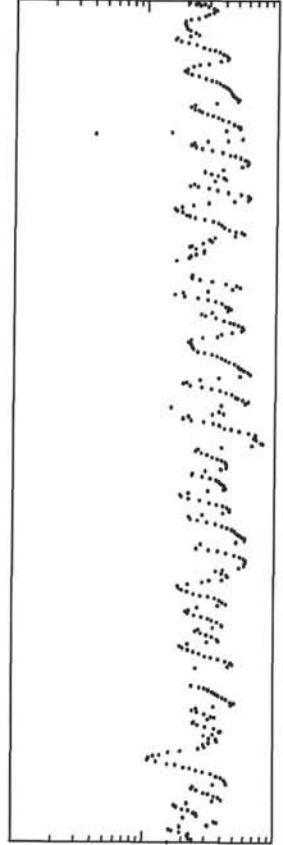


SITE 855 HOLE C CORE 7R

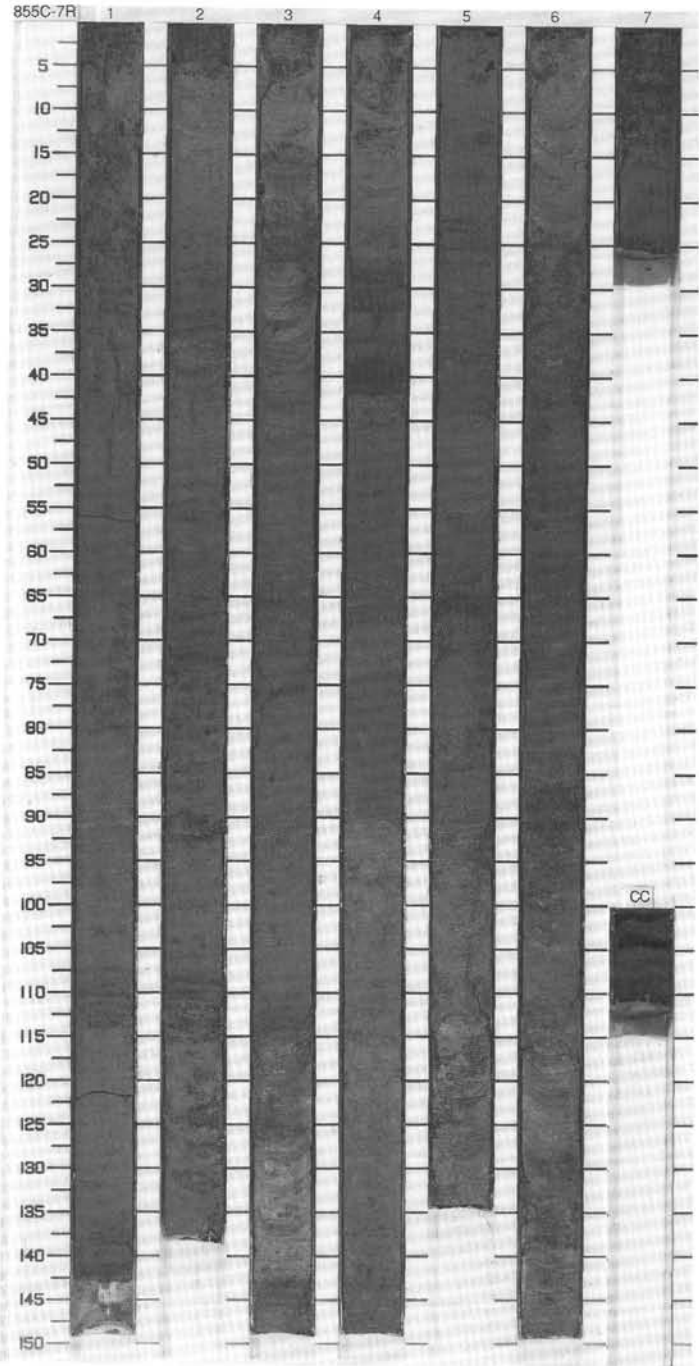
CORED 56.1 - 65.7 mbsf

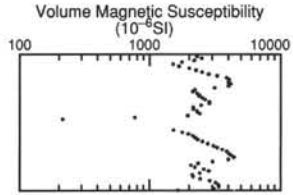
Volume Magnetic Susceptibility
(10^{-6} SI)

100 1000 10000



Meter	Graphic Lith.	Section Age	Structure	Disturb	Sample	Color	Description
1		Upper Pleistocene	↑ F	I	P		CLAY WITH PLAGIOCLASE SILT and PLAGIOCLASE SILTY CLAY General Description: Core consists of a series of fining-upward units which grade from dark gray (5GY 4/1) SILT and FINE SAND to dark greenish gray (5G 4/1) CLAY and are overlain by stiff, homogeneous dark greenish gray (5BG 4/1) CLAY. The greenish color at the top of the turbidite sequences fades within minutes. The upper clayey parts of the units are commonly bioturbated; the entire section at 7R-4, 74-115 cm is mottled by burrowing. A small fragment of subaerial pumice occurs at Section 5, 5 cm.
			↑ F		P	5GY 4/1 To 5Y 4/1	
			↑ F		S		
			↑ F		P		
			↑ F		P		
			↑ F		W		
			↑ F		P		
			↑ F		S		
			↑ F		P	5GY 4/1 To 5Y 4/1	
			↑ F		P		
2			↑ F		P		
3			↑ F		P		
4			↑ F		P		
5			↑ F		P		
6			↑ F		P		
7			↑ F		P		
8			↑ F		P	5GY 4/1 To 5Y 4/1	
9			↑ F		P		
100					PM		



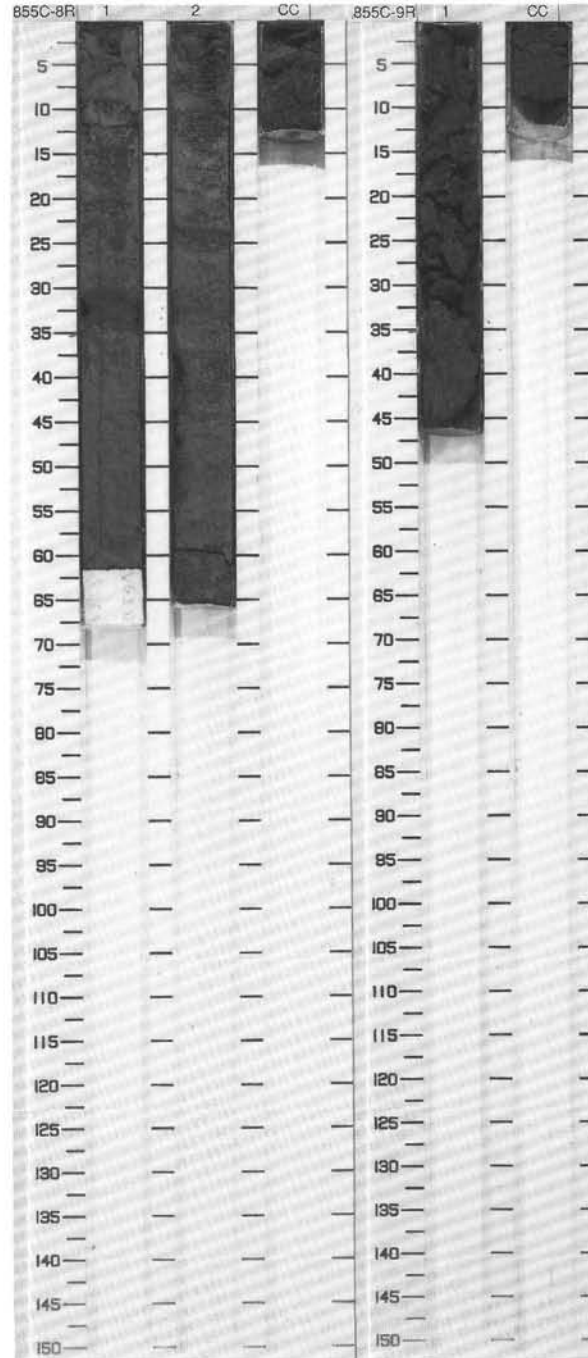


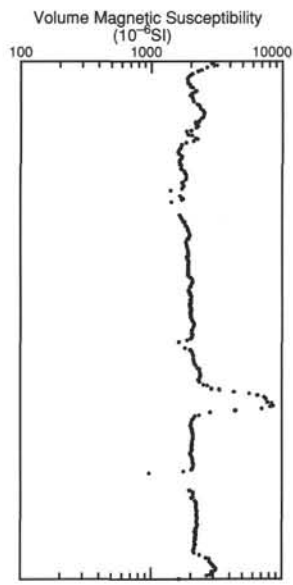
SITE 855 HOLE C CORE 8R CORED 65.7 - 75.2 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
		1	uPle	↑ F		S P	5GY 4/1 To 5Y 4/1	CLAY WITH PLAGIOCLASE SILT and PLAGIOCLASE SILTY CLAY General Description: Fining-upward turbidite SILT and CLAY (as in core 855-7R).
		2		↑ F		I W P	5GY 4/1 To 5Y 4/1	
						M		

SITE 855 HOLE C CORE 9R CORED 75.2 - 84.9 mbsf

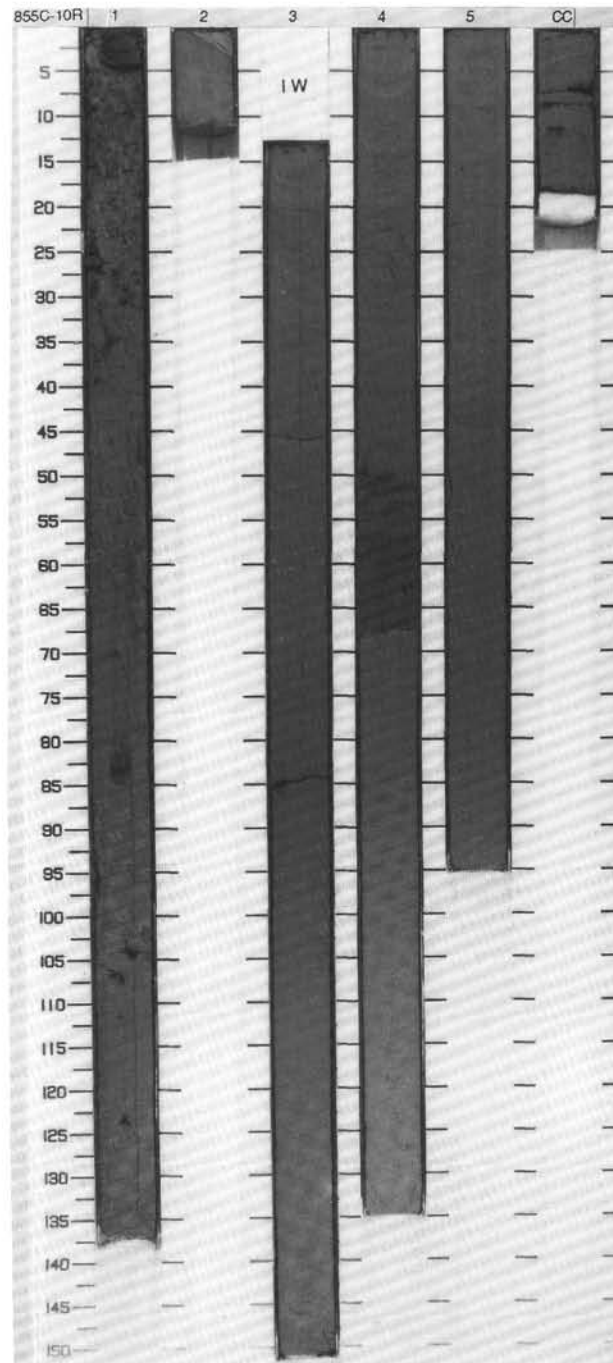
Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
		1	uPle		www	I M	5BG 4/1	SILTY CLAY General Description: Gray (5BG 4/1) SILTY CLAY. Core is completely disturbed. The lithology of the sediment appears to be the same as Core 855C-7R.

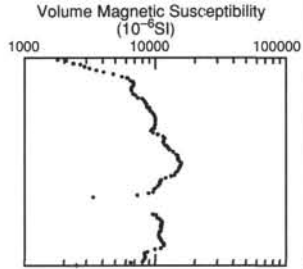




SITE 855 HOLE C CORE 10R CORED 84.9 - 94.6 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1	[Hatched]	1			W W W W W	P	10Y 4/1	QUARTZ-PLAGIOCLASE SILTY CLAY and QUARTZ-PLAGIOCLASE SANDY CLAY General Description: Dominantly homogeneous, stiff dark greenish gray (10Y 4/1) CLAY throughout with one distinct, very dark greenish gray (10Y 3/1), sharp-based, turbiditic SANDY CLAY layer at 10R-4, 68-50 cm. The SANDY CLAY layer contains a small (4 mm) igneous clast.
2	[Hatched]	2				I		
3	[Hatched]	3				P S	10Y 4/1	
4	[Dotted]	4		↑ F		S P	10Y 3/1	
4	[Hatched]	4				I W	10Y 4/1	
5	[Hatched]	5				P	10Y 4/1	
CC						M		





SITE 855 HOLE C CORE 11R CORED 94.6 - 101.2 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1	[Dotted pattern]	1	Pleistocene	↑ F		S	5GY 4/1	PLAGIOCLASE SAND and PLAGIOCLASE SANDY CLAY General Description: Core contains three distinct, dark greenish gray (5GY 4/1), turbiditic units. Each unit is characterized by a sharp basal contact overlain by a thick (60 - 116 cm) silty layer that fines upward into a thin (3 - 15 cm) clay layer near the top.
2	[Dotted pattern]	2		↑ F		W	5GY 4/1	
						M	S	

855C 12R HARD ROCK

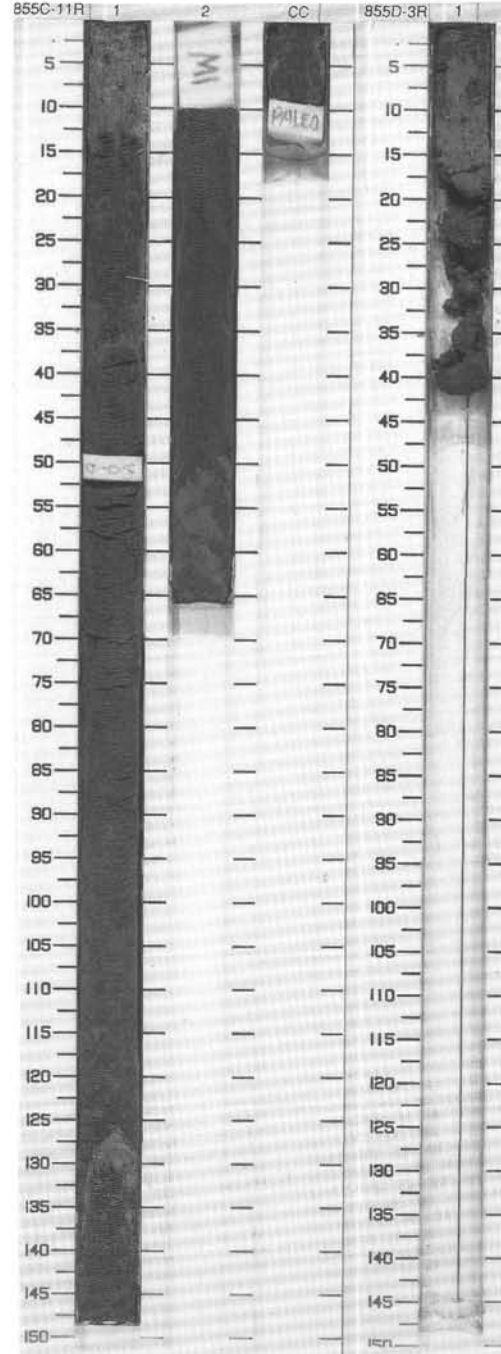
855C 13R NO RECOVERY

855D 1R NO RECOVERY


855D 2R NO RECOVERY

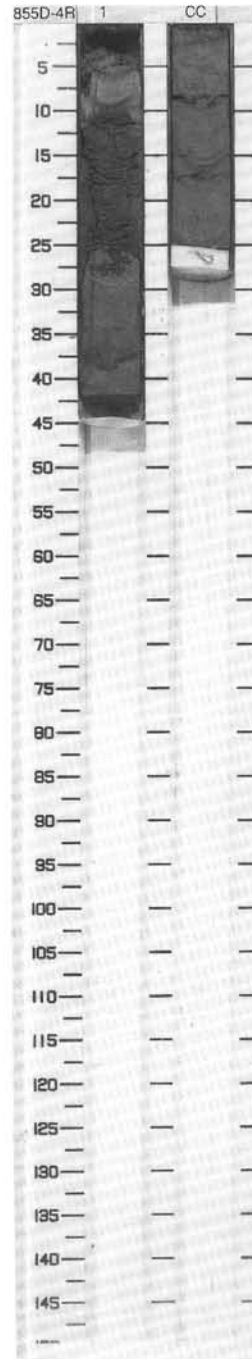
SITE 855 HOLE D CORE 3R CORED 94.7 - 104.3 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
	[Horizontal dashed pattern]	1	Ple			W/Y	5GY 4/1	SILTY CLAYSTONE General Description: Badly disturbed dark greenish gray (5GY 4/1) SILTY CLAYSTONE.



SITE 855 HOLE D CORE 4R CORED 104.3 - 108.5 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
		1 CC		- 4 F -		I	↑ 5GY 4/1 5GY 4/1	SILTY SAND AND SANDY SILT General Description: Fining-upward sequences of dark greenish gray (5GY 4/1) SANDY SILT and grayish green (5Y 4/1) SILTY CLAY.



UNIT 1: HIGHLY PLAGIOCLASE-OLIVINE-CLINOPYROXENE PHYRIC BASALT

Piece 1

CONTACTS: None visible.
PHENOCRYSTS: Large and evenly distributed. Rare pyroxene phenocrysts.
 Plagioclase - 25%, 1.0–3.0 mm, tabular to equant, subhedral.
 Olivine - 10%, 1.0–1.5 mm, euhedral to subhedral, green, fresh.
 Pyroxene - 5%, 0.5–3.5 mm, anhedral to oikocrystic.
GROUNDMASS: Fine-grained to aphanitic, slightly altered.
VESICLES: 5%, 1.0–1.5 mm, ovoid, evenly distributed, mostly void with some celadonite.
COLOR: Dark gray.
STRUCTURE: Glassy pillow margin.
ALTERATION: Slight to none. One surface coated with light blue celadonite. Anhydrite occurs in fractures on the blue surface.
VEINS/FRACTURES: 1%, 0.1 mm, unknown orientation, surface coating.
ADDITIONAL COMMENTS: Quite fresh phenocrysts contrast with basalt in Core 139-855A-9R.

Pieces 2–3

CONTACTS: None visible.
PHENOCRYSTS: Olivine locally glomeroporphyritic, light green. Large ellipsoidal clinopyroxene may be a xenocryst.
 Plagioclase - 20%, 2.0–3.0 mm, even distribution, random orientation.
 Olivine - 8%, 2.0–3.0 mm, excellent hexagonal crystals, fresh.
 Clinopyroxene - 3%, 0.3–1.0 mm, subhedral to ellipsoidal.
GROUNDMASS: Fine-grained to aphanitic.
VESICLES: 1%, 0.5 mm, ovoid, even distribution, void.
COLOR: Medium gray.
STRUCTURE: Massive.
ALTERATION: Slight some clays, no calcite.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Quite fresh, excellent phenocrysts for probe work.

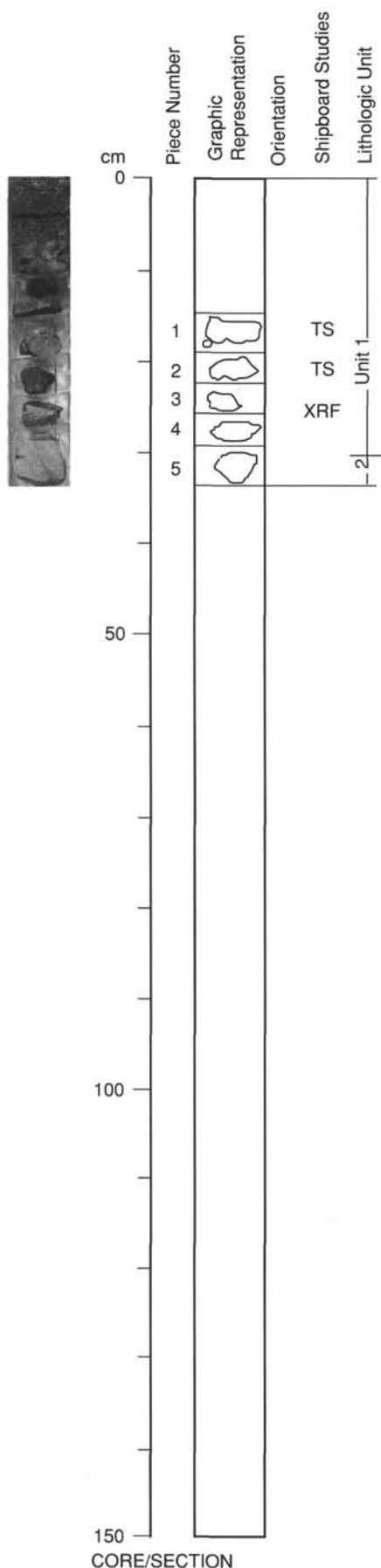
Piece 4

CONTACTS: None visible.
PHENOCRYSTS:
 Plagioclase - 9%, 2.0 mm, laths, define ophitic texture.
 Olivine - 1%, 2.0 mm, subhedral to euhedral.
GROUNDMASS: Aphanitic, slightly altered.
VESICLES: 5%, 1.0–2.0 mm, ovoid, random, relatively large compared to other basalts in this hole, some lined with olivine and have rare "metallic" globules.
COLOR: Dark gray.
STRUCTURE: Massive
ALTERATION: Slight.
VEINS/FRACTURES: None.

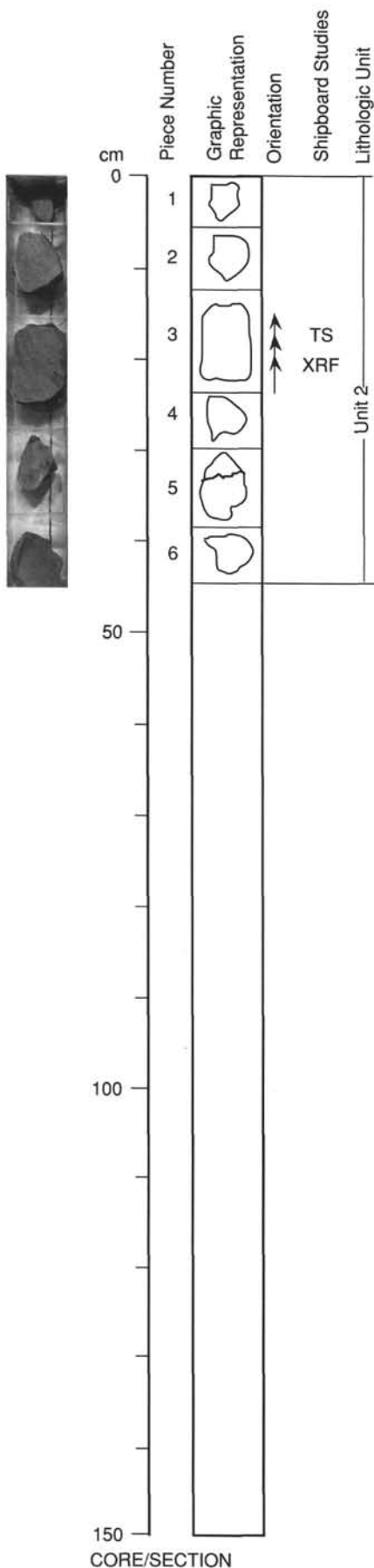
UNIT 2: PLAGIOCLASE-OLIVINE PHYRIC BASALT

Piece 5

CONTACTS: None visible.
PHENOCRYSTS: Both types of phenocrysts altered.
 Plagioclase - 4%, 1.5–2.0 mm, random oriented blades, some twinned.
 Olivine - 1%, 1.0 mm, altered?
GROUNDMASS: Aphanitic, gray, altered.
VESICLES: 2%, 1.0–2.0 mm, ovoid, even, filled to partly filled with celadonite.
COLOR: Gray.
STRUCTURE: Massive.
ALTERATION: Moderate; clay, no calcite.
VEINS/FRACTURES: None.



139-855A-9R-1



UNIT 2: MODERATELY PLAGIOCLASE-OLIVINE- CLINOPYROXENE PHYRIC BASALT

Piece 1

CONTACTS: None visible.
PHENOCRYSTS: All moderately to strongly altered.
 Plagioclase - 5%, 1.0–2.0 mm, locally glomeroporphyritic.
 Olivine - 1%, 1.5–2.0 mm, equant, altered to talc?
GROUNDMASS: Mixture of plagioclase microlites and devitrified glass.
VESICLES: 5%, 0.1 mm, spherical, even distribution, filled with celadonite.
COLOR: Gray.
STRUCTURE: Pillow basalt
ALTERATION: Moderately altered to clay.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: May be a talus block.

UNIT 2: SPARSELY PLAGIOCLASE-PHYRIC BASALT

Piece 2

CONTACTS: None, visible.
PHENOCRYSTS:
 Plagioclase - <1%, 1.0 mm, equant.
GROUNDMASS: Plagioclase and microlites.
VESICLES: 2%, 1.0 mm; spherical, even distribution, filled with light green saponite plus other clay.
COLOR: Gray.
STRUCTURE: Massive.
ALTERATION: Moderately altered to clay minerals.
VEINS/FRACTURES: None.

UNIT 2: SPARSELY OLIVINE-PHYRIC BASALT

Piece 3

CONTACTS: None visible.
PHENOCRYSTS:
 Olivine - 2%, 1.0–1.5 mm, equant, light to medium green, altered.
 Plagioclase - 3%, 0.5–1.5 mm, tabular.
 Clinopyroxene - 0.5%, 1.0–2.0 mm, anhedral.
GROUNDMASS: Medium-grained, (0.5 mm) with 70% plagioclase and clinopyroxene microlites.
VESICLES: 1%, 1.0 mm, spherical, ovoid, even distribution, filled with light green saponite and clay.
COLOR: Dark gray.
STRUCTURE: Glassy pillow margin.
ALTERATION: Moderately altered to clay, carbonate and talc.
VEINS/FRACTURES: None.

UNIT 2: APHYRIC BASALT

Piece 4

CONTACTS: None visible.
PHENOCRYSTS: None.
GROUNDMASS: Fine- to medium-grained, 30%–40% plagioclase microlites.
VESICLES: None.
COLOR: Dark gray.
STRUCTURE: Massive.
ALTERATION: Altered to clay plus some calcite.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Cut surface has dark patches, areas of fewer plagioclase microlites.

139-855A-9R-1

UNIT 2: SPARSELY OLIVINE-PLAGIOCLASE PHYRIC BASALT

Piece 5

CONTACTS: None visible.

PHENOCRYSTS:

Plagioclase - 0.1%, 1.0–2.0 mm, equant.

Olivine - 0.1%, 1.0–2.0 mm, equant, medium to light green.

GROUNDMASS: Plagioclase microlites (50%), ophitic texture.

VESICLES: 3%–5%, 0.5 mm, ovoid, even distribution, filled with celadonite.

COLOR: Gray.

STRUCTURE: Massive.

ALTERATION: Calcite abundant, clay alteration of feldspar.

VEINS/FRACTURES: 0.1%, 0.1 mm, one fracture at 80° to core, filled with chlorite.

UNIT 2: SPARSELY OLIVINE-PLAGIOCLASE PHYRIC BASALT

Piece 6

CONTACTS: None visible.

PHENOCRYSTS: Sparse.

Plagioclase - 1%, 0.2 mm, white, equant, rare.

Olivine - 1%, 0.2 mm, light green and altered.

GROUNDMASS: Subhedral amounts of feldspar and ferromagnesian/glass. Feldspar is equant.

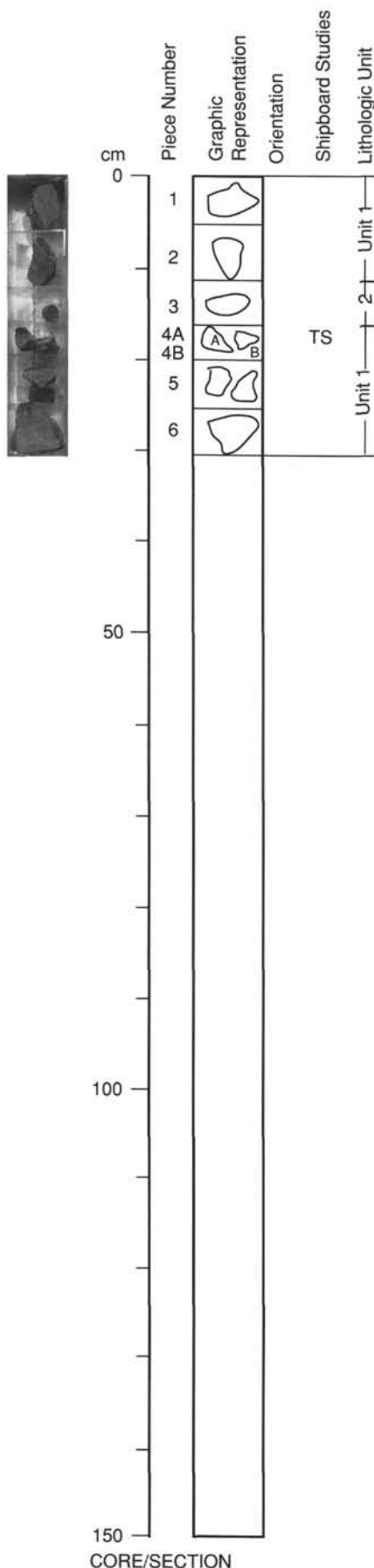
VESICLES: 2%, 1.0–2.0 mm, ovoid, even distribution, filled with celadonite, some zoned with a white center.

COLOR: Gray.

STRUCTURE: None.

ALTERATION: Moderate, calcite plus clay minerals.

139-855B-8R-CC



UNIT 1: HIGHLY PLAGIOCLASE-OLIVINE-PHYRIC BASALT

Pieces 1-2

CONTACTS: None visible.
PHENOCRYSTS: Moderately fresh, some pyroxene possible with olivine.
 Plagioclase - 10%, 2.0-3.0 mm, elongate-tabular, oriented.
 Olivine - 2%, 1.5-2.0 mm, subhedral.
GROUNDMASS: Fine-grained, plagioclase microlites in pilotaxitic texture in Piece 1.
VESICLES: None.
COLOR: Medium gray.
STRUCTURE: Massive.
ALTERATION: Moderate to slight.
VEINS/FRACTURES: None.

UNIT 2: APHYRIC BASALT

Piece 3

CONTACTS: None visible.
PHENOCRYSTS: None.
GROUNDMASS: Fine-grained, plagioclase microlites.
VESICLES: 1%, 1.0 mm, ovoid, random distribution, void.
COLOR: Gray.
STRUCTURE: Massive.
ALTERATION: Moderate.
VEINS/FRACTURES: None.

UNIT 1: MODERATELY PLAGIOCLASE-OLIVINE-PHYRIC BASALT

Pieces 4A-5

CONTACTS: None visible.
PHENOCRYSTS:
 Plagioclase - 8%, 2.0-4.0 mm, large tabular crystals, glomeroporphyritic.
 Olivine - 2%, 1.0-2.0 mm, some corona structures, surrounded by plagioclase and ilmenite magnetite.
GROUNDMASS: Fine-grained to aphanitic, wispy ilmenite-magnetite.
VESICLES: 0.2%, 0.5 mm, ovoid, random distribution, sparse, some partially filled with celadonite.
COLOR: Gray.
STRUCTURE: Massive.
ALTERATION: Slight.
VEINS/FRACTURES: None.

UNIT 1: HIGHLY PLAGIOCLASE-OLIVINE BASALT

Piece 6

CONTACTS: None.
PHENOCRYSTS:
 Plagioclase - 15%, 1.0-1.5 mm, ophitic texture.
 Olivine - 2%; 1.0-1.5 mm, anhedral, may contain some pyroxene.
GROUNDMASS: Aphanitic to fine-grained, some wispy ilmenite-magnetite, some weathered olivine grains.
VESICLES: 0.2%, 0.5 mm, ovoid, random distribution, void to partially filled.
COLOR: Gray.
STRUCTURE: Massive.
ALTERATION: Moderate to slight.
VEINS/FRACTURES: None. Some celadonite on surfaces.
ADDITIONAL COMMENTS: Probably a boulder.

139-855C-1R-1

UNIT 1: HIGHLY PLAGIOCLASE-OLIVINE PHYRIC BASALT

Piece 1

CONTACTS: None visible.

PHENOCRYSTS:

Plagioclase - 15%, 0.5–2.0 mm, rounded to euhedral tabular.
Olivine - 1%, 0.5 mm, ovoid.

GROUNDMASS: Fine-grained with minor oxide.

VESICLES: 5%, up to 1.0 mm, spherical, evenly distributed, void.

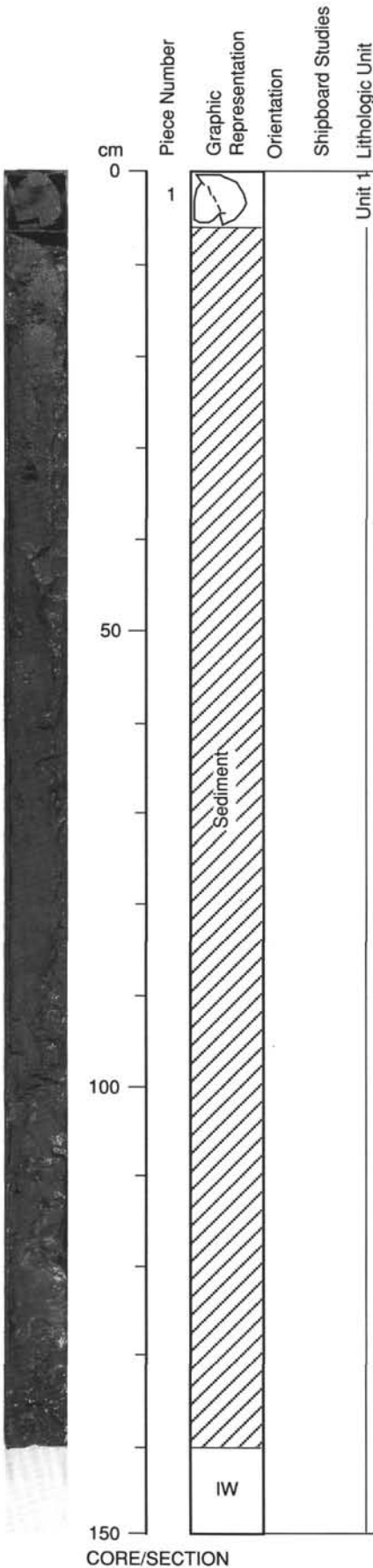
COLOR: Medium gray (2.5Y 5/).

STRUCTURE: Tennis ball sized "roller".

ALTERATION: Pseudomorphs and veinlets of green and white mineral, otherwise relatively fresh.

VEINS/FRACTURES: 2%, 2.0 mm, orthogonal.

ADDITIONAL COMMENTS: This piece is identical to bottom of previous hole. Likely stuck in bit when ceased drilling in previous hole. Should be considered part of Hole 855B.

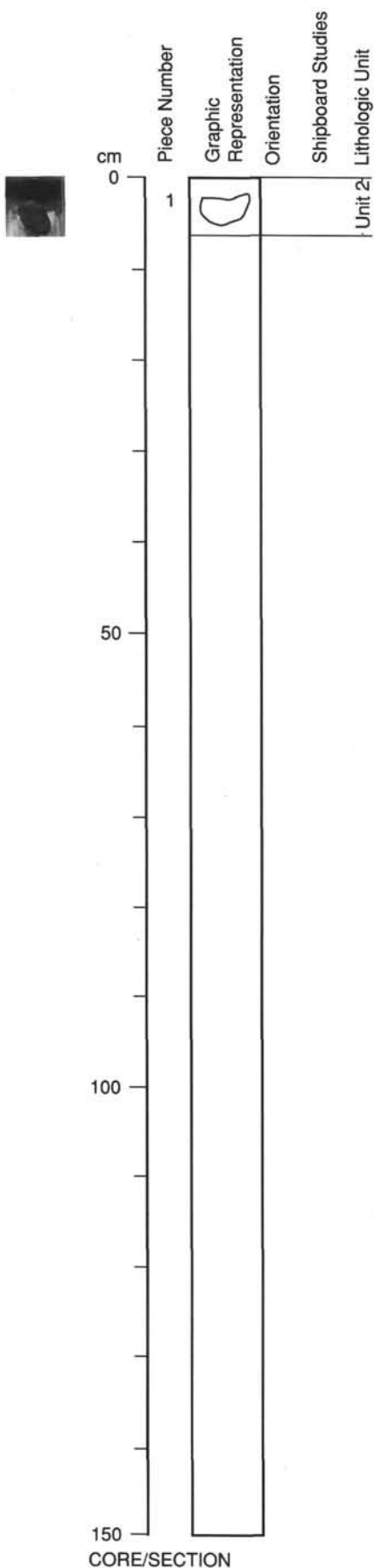


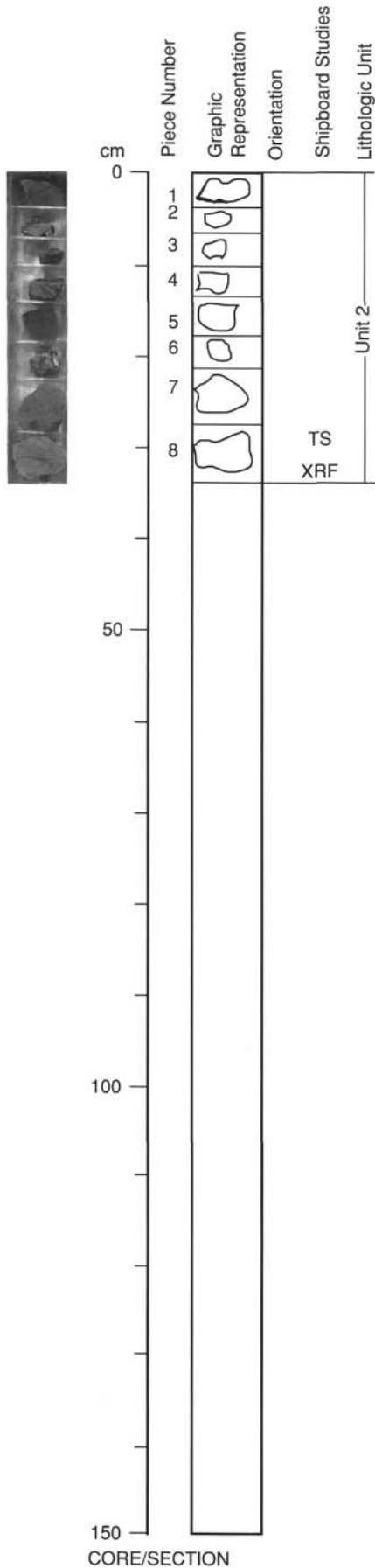
139-855C-12R-CC

UNIT 2: SPARSELY PLAGIOCLASE-PHYRIC BASALT

Piece 1

CONTACTS: None.
PHENOCRYSTS: Contains blocky plagioclase phenocrysts and skeletal plagioclase microlites.
 Plagioclase - 2%, 1.0 mm, white, tabular.
GROUNDMASS: Fine-grained with trace of sulfides, plagioclase microlites are less than 0.4 mm.
VESICLES: 2%-3%, 1.0 mm, ovoid, evenly distributed, partly filled with white mineral, likely carbonate.
COLOR: Medium olive-gray (5Y 4/1).
STRUCTURE: None.
ALTERATION: Moderate, weathered surfaces with clay patina.
VEINS/FRACTURES: None.
ADDITIONAL COMMENTS: Rounded pebble likely talus or rubble.





UNIT 2: MODERATELY PLAGIOCLASE-OLIVINE PHYRIC BASALT

Piece 1

CONTACTS: None visible.
PHENOCRYSTS: Rock contains few phenocrysts, mostly plagioclase with a couple of olivine crystals.
 Plagioclase - 3%, 1.0–2.0 mm, white, tabular.
 Olivine - 1%, 1.0 mm, rounded, slightly altered.
GROUNDMASS: Fine-grained with plagioclase microlites; intergranular.
VESICLES: 2%, 0.2 mm, round, even distribution, some contain celadonite.
 Miaroles: None present.
COLOR: Medium brownish gray.
STRUCTURE: Pillow basalt.
ALTERATION: Slightly altered, green coating on exterior could be celadonite or mixture with chlorite.
VEINS/FRACTURES: None visible. Surface coating was likely a fracture filling.

UNIT 2: MODERATELY PLAGIOCLASE-PHYRIC BASALT

Pieces 2–5

CONTACTS: Piece 5 has a chilled margin and variolitic zone.
PHENOCRYSTS: Euhedral plagioclase is the dominant phenocryst. May be trace amounts of olivine in Piece 5.
 Plagioclase - 2%–5%, 1.0–2.0 mm, white, tabular.
GROUNDMASS: Aphanitic to fine-grained with plagioclase microlites.
VESICLES: 2%, 0.5–1.0 mm, round, evenly distributed.
 Miaroles: Absent.
COLOR: Medium gray
STRUCTURE: Pillow basalt.
ALTERATION: Slight to moderate, dark clay fills some pseudomorphs.
VEINS/FRACTURES: None.

UNIT 2: MODERATELY PLAGIOCLASE-PHYRIC BASALT

Pieces 6–8

CONTACTS: None visible.
PHENOCRYSTS: Some plagioclase phenocrysts are weathered out forming vugs.
 Plagioclase - 2%–4%, 1.0–2.0 mm, euhedral tabular or equant.
GROUNDMASS: Fine- to medium-grained.
VESICLES: 2%–3%, 1.0 mm, round, evenly distributed, some filled with black chlorite.
 Miaroles: None besides the artifacts of plagioclase weathering.
COLOR: Greenish gray.
STRUCTURE: Pillow basalt.
ALTERATION: Outer surfaces of all pieces coated with mixture of chlorite and epidote. Some epidote has good crystal forms. The interiors of the rocks are fresh, however.
VEINS/FRACTURES: Outer coatings are likely the remnants of veins.
ADDITIONAL COMMENTS: Weathering rinds visible on piece, suggesting that they may have been rubble.

139-855D-6R-1

UNIT 2: SLIGHTLY TO HIGHLY PLAGIOCLASE-PHYRIC BASALT

Pieces 1-5

CONTACTS: None visible.
PHENOCRYSTS: Rare anhedral phenocrysts and microphenocrysts of plagioclase and olivine, frequently altered; some glomeritic clusters.
 Plagioclase - 0-5%, 1.0 mm, small laths.
 Olivine - 0-0.5%, 0.5 mm, few pseudomorphs.
GROUNDMASS: Fine-grained equigranular intergrowth of plagioclase and ferromagnesian minerals with glassy mesostasis; plagioclase microphenocrysts more prominent on weathered surface.
VESICLES: 0.5%-5%, 0.2 mm, spherical, evenly distributed, most are void, a few are lined with either chlorite, quartz, or an unidentified white mineral.
COLOR: Medium to dark gray with dark weathering rind.
STRUCTURE: Massive.
ALTERATION: Surfaces are coated with an assortment of greenschist to subgreenschist grade minerals including chlorite, quartz, pyrite, silica, Mn/Fe oxides, and clays. Moderate alteration.
VEINS/FRACTURES: Surface coatings are likely artifacts of veins.

UNIT 3: PLAGIOCLASE-PHYRIC, MODERATELY ALTERED BASALT

Pieces 6-8

CONTACTS: None visible.
PHENOCRYSTS: Rock contains prominent plagioclase phenocrysts that show twinning in Piece 8, Piece 6 may contain a single mafic phenocryst.
 Plagioclase - 0.5%-2%, 1.0-2.0 mm, Stubby laths or long thin blades.
GROUNDMASS: Fine-grained to intersertal, plagioclase and mafic minerals equigranular, crystals up to 0.3 mm. May contain quartz.
VESICLES: 0.1%-5%, 0.1-0.2 mm, spherical, evenly distributed, void.
COLOR: Medium gray.
STRUCTURE: Massive.
ALTERATION: All pieces have a weathering rind. Surface coatings include: pyrite, clay, quartz, chlorite. Subgreenschist, moderately altered.
VEINS/FRACTURES: None. Surface coatings were likely originally veins.
ADDITIONAL COMMENTS: Weathering rind suggests these are clasts from talus or other debris. Could be from a variety of sources.

