Core No: XVII - 1 - PVC | Date: 27 April 1971 | Logged By: Lambert

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge

Latitude: 22° 44.0' N | Date Sampled: 21 Jan. 1971

Longitude: 66° 28.0' W | Core Serial No:

CORE ANALYSIS SUMMARY SHEET

Sample Type: Hydroplastic Corer

Water Depth: 5817 (m)

Core Length: 186 (cm)

NOTES: Water on top of core - top 3cm disturbed

03005011

MGG03005011

Sample Interval (cm)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (LI)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
0-3	10YR 4/3	clay			158.1																
3-4					112.0																
4-5					108.0																
4-7/4-10			2.81	1.45	110.5	20.16	11.6	1.7	3.1	75.6	80.8	33.4	47.4	1.63	0.1	13.3	86.6		1.20	1.12	
5-6	10YR 5/3				113.9																
6-7	10YR 4/3				117.5																
7-8	10YR 5/3				135.2																
7-10	10YR 4/4					24.8	11.6	2.1													
9-10	10YR 6/3				109.9																
10-11	10YR 4/3				111.3																
10-13/10-16	10YR 5/3		2.88	1.47	106.1	32.7	11.2	2.9	3.1	75.3	81.2	36.4	44.8	1.56	0.4	22.0	77.6		1.56	1.56	
11-12/12-13	10YR 4/3				101.7/102.6																
13-14	10YR 5/3				102.6																
13-16/10-16	10YR 5/3					26.8	11.7	2.4													
14-15/15-16	10YR 5/1	clay			104.8/113.7																
16-17					143.9																
17-18					132.8																
17-20/17-23			2.84	1.42	124.9	20.5	10.9	1.9	3.5	78.0	77.1	32.7	44.4	2.08	0.4	8.2	91.4		1.05	0.97	
18-19/19-20					131.0/121.0																
20-21/21-22					124.6/118.0																
20-23/17-23						27.8	10.9	2.6													
22-23					115.7																
23-24					111.4																
23.5-26.5/23.5-29.5			2.81	1.41	125.0	35.4	7.9	4.5	3.5	77.8	83.5	36.0	47.8	1.86	0.1	15.0	84.9				
24-25/25-26					111.4/117.3																
26-27					134.3																
26.5-29.5/28.5-29.5						12.2	7.9	1.5											1.58	1.56	
27-28/28-29					137.0/138.6																
30-31					133.9																

REMARKS: (color, shells, bedding, structure, etc.)

0-3cm sediment disturbed - flowed in barrel when turned horizontal - sediment pure clay-sized with suggestion of thin laminations

3-15cm (10YR 5/3) Lt. brown to (10YR 4/3) brown clay with numerous thin laminations (slightly darker in color) no microorganism tests observed. Laminations appear faintly on radiograph.

15cm sharp color change (10YR 5/3 to 10YR 5/1)

Lt. brown to brownish gray - no noticable texture change - however, gray appears to be less dense than sediment (br.) above it + also appears to have a higher water content

15-47cm gray (10YR 5/1) clay with no visible structure or texture changes

Core No. XVII - 1 - PVC | Date: 27 April 1971 | Logged By: Lambert

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge

Latitude: 22° 44.0' N | Date Sampled: 21 Jan. 1971

Longitude: 66° 28.0' W | Core Serial No:

CORE ANALYSIS SUMMARY SHEET

Sample Type: Hydroplastic Corer

Water Depth: 5817 (m)

Core Length: (cm)

NOTES:

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)	Core Sketch (depth in core)	Color	Sed. Type (visual)
		10YR 5/1	Clay
47 cm Gray clay (10YR 5/1) becomes mottled with a grayish brown clay (10YR 5/2) which gradually increases to 52.5 cm where the sediment becomes completely grayish brown (10YR 5/2)			
53 cm End of section 0-1 - color change at 52.5 - 53 may be due to oxidation (end of section)		10YR 5/2	Clay
53-61 cm some motteling with a slight color change from 10YR 4/2 - 10YR 5/2 (matrix) to a slightly lighter brown than 10YR 5/2		10YR 4/2	
		Slightly lighter than 10YR 5/2	

Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit (γ) Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (LI)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
31-32			135.4																	
32-33			138.5																	
33-34			138.8																	
34-35			137.0																	
35-36			131.3																	
36-37			122.2																	
37-38			127.2																	
38-39			127.1																	
39-40			128.9																	
40-41 / 40-43			158.4	17.4	6.0	2.9														
40-46 / 41-42	2.80	1.41	131.7 / 129.6		6.0		3.7	78.7	71.7	33.1	38.6	2.55		0.0	19.5	80.5		1.98	1.65	
42-43			127.7																	
43-44 / 43-46			126.8	17.4	6.0	2.9														
44-45			125.2																	
45-46			122.1																	
47-48			120.2																	
48-49			122.5																	
49-50			119.4																	
50-51			115.0																	
51-52			109.5																	
52-53			139.1																	
54-55			103.7																	
55-56			104.6																	
56-57			101.4																	
57-58			98.7																	
58-59			96.1																	

Core No. XVII-1-PVC | Date: 27 April 1971 | Logged By: Lambert

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge

Latitude: 22° 44.0' N | Date Sampled: 21 Jan. 1971

Longitude: 66° 28.0' W | Core Serial No:

CORE ANALYSIS SUMMARY SHEET

Sample Type: Hydroplastic Corer

Water Depth: 5817 (f[redacted] (m)

Core Length: (cm)

NOTES:

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)

cm	Remarks
60	
62	
63 cm	SEDIMENT VERY FAINTLY BEGINS TO
64	SHOW SOME VERY THIN BEDDING OR LAMINATIONS
	THE LAMINATIONS BEGIN TO INCREASE
66	VISIBLY TO 71 cm + ARE LESS PRONOUNCED
	THERE AFTER - THESE LAMINATIONS APPEAR
68	AS VERY slight color changes NOT
	DISCERNIBLE WITH THE COLOR CHART - THE
70	TEXTURE OF THE SEDIMENT DOES NOT
	CHANGE although IT APPEARS FROM THE
72	RADIOGRAPH THAT THE DENSITY OF THE
	MATERIAL CHANGES IN EACH INDIVIDUAL LAYER
74	THE LAMINATIONS ARE VERY PRONOUNCED ON
	THE RADIO GRAPH
76	75cm - 78.5cm VERY STRONG LAYERING (SHOWS WELL
	ON RADIOGRAPH) - THIN (1 mm OR LESS) LENTICULAR
78	BEDDING (SOME ONLY LENSES) LIGHTER IN
	color (2.5Y 5/2) THAN THE MATRIX (5Y 4/1)
80	THE MATRIX IS ALSO THINLY BEDDED HOWEVER
	UP TO A maximum OF 3-4 mm
82	78.5 VERY SHARP slightly undulating CONTACT
	WITH A VERY THIN BEDDED (.1 mm) slightly
84	MOTTLED SANDY CLAY - SAND IS DUE TO
	RARE FORAMS
86	82-93.5 FINT MOTTLING - color CHANGE
	slight AND NOT DISCERNIBLE WITH color chart
88	MOTTLING INCREASES TOWARD 93.5cm. THEN
	FADES OUT TO 10YR 5/1
90	

Sample Interval (cm)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon[redacted] (%)	Organic Carbon (%)	% Heavy Minerals
60-61		10YR5/2	CLAY			99.8																
60-63 / 60-66				2.73	1.49	99.0	42.6	25.8 / 25.8	1.7	2.7	73.0	76.4	33.3	43.1	1.52	0.1	34.3	65.6		0.87	0.86	
61-62 / 62-63						101.6 / 103.7																
63-64						100.7																
63-66 / 64-65						94.2	64.4	25.8	2.5													
65-66						93.9																
66-67						89.7																
66-69 / 66-72				2.82	1.52	89.0	88.7	17.5 / 17.5	5.1	2.5	71.5	70.5	32.0	38.5	1.48	0.0	19.8	80.2		1.29	1.27	
67-68 / 68-69						89.1 / 88.7																
69-70 / 69-72						85.3																
							48.2	17.5	2.8													
70-71						87.6																
71-72		10YR5/1				93.6																
72-73						100.0																
73-75						100.6																
75-76						66.5																
75-78		5Y 4/1	CLAY				51.6	11.2	4.6													
75-81 / 76-77				2.75	1.57	84.2 / 58.9		11.2		2.3	69.6	56.2	28.4	27.8	2.01	0.4	40.2	59.4		1.86	1.64	
77-78 / 78-81						59.8	45.0	11.2	4.0													
78-79 / 79-80		10YR5/1	SANDY CLAY			98.1 / 110.4																
80-81						111.3																
81-81.5						124.1																
82-83						118.3																
82-85 / 82-88				2.86	1.43	117.8	34.0	9.6 / 9.6	3.6	3.4	77.1	83.7	35.5	48.2	1.71	0.4	17.7	81.9		2.03	1.92	
83-84		LOW DENSITY CLAY POCKET				118.1																
84-85						118.2																
85-86						117.7																
86-87						118.1																
87-88			CLAY			116.4																
85-88							30.7	9.6	3.2													
89-90						109.0																

Core No. XVII-1-PVC | Date: 3 MAY 1971 | Logged By: LAMBERT | CORE ANALYSIS SUMMARY SHEET | NOTES:

Location: N. OF PUERTO RICO | Project Name: ANTILLES OUTER RIDGE | Sample Type: HYDROPLASTIC CORER

Latitude: 22° 44.0' N | Date Sampled: 21 JAN. 1971 | Water Depth: 5817 (m)

Longitude: 66° 28.0' W | Core Serial No: | Core Length: (cm)

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)

90 THE FORAMS IN 78.5-88cm ARE NOT ABUNDANT ENOUGH TO BE ABLE TO DISCERN WHERE THEY
92 ACTUALLY BEGIN TO SHOW UP + WHERE THEY FADE OUT.
94
95-96cm SERIES OF VERY THIN DARKER (5Y 4/1)
96 LAYERS - NO VISIBLE TEXTURE CHANGE
96-107cm NO VISIBLE STRUCTURES OR
98 TEXTURE CHANGES IN CORE
100
102
104
106
107-115.5 VERY THIN LAYERING WHICH VERY
108 FAINTLY IS VISIBLE IN THE CORE. HOWEVER,
IT IS QUITE PRONOUNCED IN THE RADIOGRAPH.
110 NO VISIBLE TEXTURE CHANGE AND ONLY A
VERY SLIGHT COLOR CHANGE NOT DISCERNIBLE WITH
112 COLOR CHART.
115.5 cm VERY SHARP UNDULATING CONTACT
114 A VERY CLEAN AND STRAIGHT DIAGONAL FRACTURE
CUTS THROUGH THE CONTACT OFFSETTING THE
116 CONTACT
117-134cm MOTTLING WITH AREAS OF DIFFERING
118 WATER CONTENTS OR DENSITIES - (faded burrows(?))
120

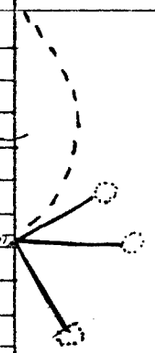
Core Sketch (depth in core)	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
		clay																				
			92-93			104.1																
	10YR5/1	clay																				
			94-95			107.3																
	5Y 4/1	clay	95-96			113.2																
	5Y 4/2	clay	96-97			113.5																
			99-100			114.7																
			100-103 / 100-106	2.76	1.45	111.9	33.4	5.0 / 5.0	6.7	3.1	75.5	75.4	33.7	41.7	1.85	0.3	23.7	76.0		2.21	2.05	
			101-102			110.9																
			103-104			114.6																
			103-106				26.8	5.0	5.4													
			105-106			107.3																
			106-109 / 106-112	2.72	1.61	67.3	42.0	11.4 / 14.4	3.7	1.8	64.7	50.6	26.0	24.6	1.68	0.4	35.2	64.5		1.89	1.57	
			107-108			82.6																
			108-109			74.7																
			109-110			62.2																
			109-112 / 110-111			58.4	48.0	11.4	4.7													
			111-112			58.4																
			112-113			66.1																
	FRACTURES		113-114			77.5																
			113-116 / 114-115	2.81	1.52	83.3 / 74.7	33.6	11.4	3.0	2.3	70.1	65.3	29.1	36.2	1.50	0.8	28.1	71.1		1.73	1.67	
			115-115.5 / 115.5-116			77.5 / 103.5																
	2.5Y5/2 BLACK OCAMIC POCKETS	clay	116-117			102.6																
			117-118			80.2																
			118-119			112.9																
			119-120			112.0																

Core No. XVII-1-PVC	Date: 3 MAY 1971	Logged By: LAMBERT	CORE ANALYSIS SUMMARY SHEET
Location: N. OF PUERTO RICO	Project Name: ANTILLES OUTER RIDGE		Sample Type: HYDROPLASTIC CORER
Latitude: 22° 44.0′ N	Date Sampled: 21 JAN. 1971		Water Depth: 5817 ([redacted] (m)
Longitude: 66° 28.0′ W	Core Serial No:		Core Length: (cm)

NOTES:

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)



Depth (cm)	Remarks	Color	Sed. Type (visual)
120		2.5Y 5/2	CLAY
122	AREA OF DENSER CLAY MATERIAL (LOWER WATER CONTENT) – n		
124			
126	SOFT CLAY POCKETS WITH HIGH WATER CONTENT		
128			
130			
132			
134	134–136.5 MOTTLING FADES OUT		
136	136.5 – 138 DARK (2.5Y 4/2) VERY THIN LAMINATIONS		
	SHARP CONTACT AT 136.5cm AND AT 188cm – NO	5Y 4/2	CLAY
138	VISIBLE TEXTURE CHANGE		
	138–140.5 FAINT VERY THIN LAMINATIONS	SLIGHTLY LIGHTER THAN 5Y 4/2	CLAY
140	SLIGHTLY LIGHTER THAN 5Y 4/2 – NO		
	VISIBLE TEXTURE CHANGE – RADIOGRAPH		
142	SHOWS LAMINATIONS QUITE PRONOUNCED		
144			
146			
148		10YR 4/1	CLAY
150			

Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon [redacted] (%)	Organic Carbon (%)	% Heavy Minerals
122-123			107.1																
125-126			106.8																
127-128			101.3																
129-130 CLAY POCKET			103.8																
129-130			93.4																
132-133			92.6																
134-134.5			91.05																
134.5-135.5			88.7																
134.5-137.5 / 134.5-140.5	2.84	1.58	78.6	62.3	9.0 / 9.0	6.9	2.2	69.1	54.0	28.0	26.0	2.11	0.3	42.8	56.9		0.97	0.97	
135.5-136.5 / 136.5-137.5			81.8 / 78.4																
137.5-140.5				30.0	9.0	3.3													
138-139			73.8																
139-140			70.6																
140-141			61.0																
141-141.5			58.7																
142-143			52.3																
142-145 / 142-148	2.72	1.74	48.5	48.0	10.8 / 10.8	4.5	1.3	56.9	37.8	22.9	14.9	4.25	0.1	66.4	33.6		1.12	1.02	
143-144 / 144-145			48.0 / 49.3																
145-148 / 145-146			47.0	40.2	10.8	3.7													
146-147			50.5																
147-148			43.7																
148-149			65.8																
149-150			105.0																

Core No. XVII-1-PVC | Date: 8 MAY 1971 | Logged By: LAMBSAT

Location: N. OF PUERTO RICO | Project Name: ANTILLES OUTER RIDGE

Latitude: 22° 44.0' N | Date Sampled: 21 JAN. 1971

Longitude: 66° 28.0' W | Core Serial No:

CORE ANALYSIS SUMMARY SHEET

Sample Type: HYDROPLASTIC CORER

Water Depth: 5817 (m)

Core Length: (cm)

NOTES:

MGG03005011

Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (γ) g/cm²	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural g/cm²	Cohesion (Cr) Remold g/cm²	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
149-152/149-155	2.82	1.48		28.2	11.4/11.4	2.5			65.2	31.8	33.4	2.22	0.3	14.4	85.3		1.41	1.23	
150-151/151-152			109.9/106.3																
152-153			106.1																
152-155/153-154			103.4	32.4	11.4	2.8													
154-155			104.1																
155-156			104.0																
156-157			105.3																
158-159			103.6																
160-161			102.7																
162-163			94.9																
164-165			90.9																
166-169			87.1																
167.5-170.5/167.5-178.5	2.75	1.58	78.4	33.0	9.6/9.6	3.4	2.2	68.3	52.3	26.8	25.5	2.11	0.1	42.3	57.6		1.71	1.55	
168-169			98.3																
169-170			91.3																
170-171			78.6																
170.5-173.5/171-172			90.3	38.4	9.6	4.0													
172-173			64.0																
173-174			59.1																
174-175			39.7																
174-177/174-180	2.78	1.89	30.9				6.86	46.2	32.2	23.2	9.0	1.59	0.5	77.1	22.4		1.49	0.95	
175-176/176-177			36.1/38.3																
177-178			35.2																
178-179			37.3																
179-180			37.4																

REMARKS: (color, shells, bedding, structure, etc.)

Core Sketch (depth in core) | Color | Sed. Type (visual)

150 148.5-156.5 cm MOTTLING - MATRIX (10YR4/1) BURROWS

MOTTLES (10YR5/2) OCCASIONAL THIN

152 BLACK STREAKS (ORGANIC?)

154

156 156.5-167 cm NO VISIBLE STRUCTURE OR TEXTURE CHANGES

158

160

162

164

166

167-170 cm THIN LAMINATIONS VISIBLE only on

168 RADIOGRAPH

170 170-184 cm VERY THIN LAMINATIONS (APPROX. .1 mm IN THICKNESS) NO OTHER

172 VISIBLE STRUCTURES OR TEXTURE CHANGES LAMINATIONS PRONOUNCED ON RADIOGRAPH

174

176

178

180

Color: 10YR4/1 — Sed. Type: CLAY

Color: 10YR4/1 — Sed. Type: CLAY

MGG03005011

Core No. XVII-1-PVC	Date: 6 MAY 1971	Logged By: LAMBERT	CORE ANALYSIS SUMMARY SHEET
Location: N. OF PUERTO RICO	Project Name: ANTILLES OUTER RIDGE		Sample Type: HYDROPLASTIC CORER
Latitude: 22° 44.0' N	Date Sampled: 21 JAN. 1971		Water Depth: 5817 (m)
Longitude: 66° 28.0' W	Core Serial No:		Core Length: 186 (cm)

NOTES:

REMARKS: (color, shells, bedding, structure, etc.)

Core Sketch (depth in core)

	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²) (δ)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
180																							
	10YR 4/1	CLAY	181-184	2.74		33.31				0.91	47.7	31.0	23.0	8.0	1.29		0.2	74.8	24.9		1.50	0.98	
182			181-182			29.43																	
			182-183			33.1																	
184 184-186 SEDIMENT DISTURBED			183-184			37.4																	
			184-185			33.6																	
186			185-186			47.8																	
186 cm END OF CORE	10YR5/2	CLAY																					

Core No. XVII-2-PVC | Date: 14 MAY 1971 | Logged By: LAMBERT

Location: N. OF PUERTO RICO | Project Name: ANTILLES OUTER RIDGE

Latitude: 22° 16.5' N | Date Sampled: 23 JAN. 1971 (GMT)

Longitude: 67° 26.2' W | Core Serial No:

CORE ANALYSIS SUMMARY SHEET

Sample Type: HYDROPLASTIC CORER

Water Depth: 5515 (f[redacted] (m)

Core Length: 239 (cm)

NOTES: WATER ON TOP OF CORE
0-2 cm POSSIBLY DISTURBED

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)

0 0-2 cm POSSIBLY DISTURBED AS IT BEGAN TO
slow in BARREL WHEN TURNED HORIZONTAL - MUD
2 HIGH WATER CONTENT : 2-8 cm SOME REWORKING
SEDIMENT WHICH INCREASES TO 8 cm WHERE IT
4 [redacted]ES QUITE INTENSE : 0-8 cm ABUNDANT
MICROORGANISM TESTS (MAINLY FORAMS) FORMING
6 COARSE FRACTION (<1%) OF SEDIMENT - MATRIX
IS CLAY-SIZED.
8 8-14 cm INTENSLY REWORKED (MATRIX 10YR 5/3)
REWORKED POCKETS (WORM BURROWS?) SLIGHTLY
10 DARKER THAN 10YR 5/3) NUMEROUS OTHER
ROUND TO LENTICULAR DARK "SPOTS" (10YR 4/2
12 [redacted]NSLY WORM BURROWS - FORAM TESTS
LESS ABUNDANT THAN 0-8 cm
14 14-29.5 cm VERY INTENSLY REWORKED -
MATRIX IS YELLOWISH-BROWN (10YR 4/3)
16 [redacted]ATTER COLORED (10YR 5/3) IRREGULAR SHAPED
[redacted] POCKETS OR SPOTS (16-16.5 cm HIGH WATER CONTENT CLAY POCKET
18 [redacted]HROUGHOUT - RARE FORAMS SCATTERED
THROUGHOUT
20 BURROWS V. COMMON 0-30 cm
22
24
26 10YR 5/3
28
29.5 cm REWORKING DECREASES IN INTENSITY
30

Sample Interval (cm)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (LI)	Size and Composition Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
0-1/0-6		10YR 4/3	CLAY			139.6	16.93	9.58	1.77			69.2	34.0	35.2	2.10	2.6	20.5	76.4		2.65	2.17	
1-2				2.68	1.39	122.4				3.28	76.6											
2-3						114.4																
3-4						103.6																
4-5						98.5																
5-6						68.3																
6-7				2.78	1.48	97.4				2.71	73.0											
7-8/7-13						91.4	32.97	13.19	2.50			70.6	35.0	35.6	1.61	0.9	13.9	85.2		2.20	1.34	
8-9		10YR 5/3	CLAY			91.7																
9-10						91.2																
10-11		Slightly DARKER				91.8																
11-12				2.75	1.49	93.0				2.56	71.9											
12-13						94.0																
13-14						93.9																
14-15/14.5-20.5		10YR 4/3	CLAY			95.2	34.76	14.20	2.41			76.6	36.0	40.6	1.46	0.9	12.7	86.3		1.72	1.05	
15-16						96.9																
CLAY POCKET 16-16.5/16-17				2.69	1.48	54.7/43.5				2.51	71.6											
17-18						95.7																
18-19		10YR 5/3				95.2																
19-20						95.6																
20-21						96.8																
22-23				2.81	1.50	94.2				2.65	72.6											
24-25						99.3																
26-27						100.5																
28-29				2.85	1.47	102.8				2.93	74.6											
29-30		10YR 5/3	CLAY			108.4																
29-35							25.17	8.99	2.80			77.0	35.4	41.6	1.83	0.2	9.9	89.9		0.72	0.70	

Core No. XVII-2-PVC	Date: 11 MAY 1971	Logged By: LAMBERT	CORE ANALYSIS SUMMARY SHEET
Location: N. of PUERTO RICO	Project Name: ANTILLES OUTER RIDGE		Sample Type: HYDRO-PLASTIC CORER
Latitude: 22° 16.5' N.	Date Sampled: 23 JAN. 1971 (GMT)		Water Depth: 5515 (m)
Longitude: 67° 26.2' W.	Core Serial No:		Core Length: 239 (cm)

NOTES:

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (γ) (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
30 30 - 62 cm REWORKING OF MUD FADES																								
OUT GRADUALLY TO VERY FAINT AT		10YR 4/3	CLAY	30-31			108.1																	
32 APPROXIMATELY 62 cm - MICROBENTHIC TEST				31-32			112.7																	
(FORAMS MOSTLY) CONSTITUTE THE COARSE				32-33			111.4																	
34 FRACTION OF THE SEDIMENT AND ARE				33-34	2.79	1.43	113.1				3.16	75.9												
MOSTLY FINE-SAND SIZED - THEY ARE				34-35			115.9																	
36 NOT ABUNDANT BUT SCATTERED THROUGHOUT				35-36			115.8																	
38				37-38			108.3																	
		10YR 5/3																						
40				39-40			126.4																	
42				41-42	2.76	1.41	117.9				3.25	76.5												
44				43-44			111.5																	
46				45-46			110.3																	
48				47-48			114.2																	
50				49-50	2.74	1.42	114.6				3.14	75.9												
52				51-52			116.2																	
54				53-54			116.6																	
56				55-56			107.3																	
				55-61 / 56-57	/ 2.72	1.44	106.3	24.56 /	6.59 /	3.73 /	2.89	74.3	74.8 /	32.8 /	42.0	1.77		0.3 /	9.5 /	90.2 /		1.43 /	1.42 /	
58				57-58			106.6																	
				58-59			106.7																	
60				59-60			107.7																	

Core No. XVII-2-PVC | Date: 12 May 1971 | Logged By: Lambert

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge

Latitude: 22° 16.5' N | Date Sampled: 23 Jan. 1971 (GMT)

Longitude: 67° 26.2' W | Core Serial No:

CORE ANALYSIS SUMMARY SHEET

Sample Type: Hydroplastic Corer

Water Depth: 5515 (f[redacted] (m)

Core Length: 239 (cm)

NOTES:

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (γ) (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon[redacted] (%)	Organic Carbon (%)	% Heavy Minerals
60				60-61	2.65	1.42	109.4				2.90	74.4												
62 62-83cm color change very slight and gradually decreasing faint reworking - rare		10YR5/3	clay	62-63			116.1																	
64 scattered forams				64-65	2.74	1.41	117.5				3.22	76.3												
reworked pocket				66-67			119.0																	
68				68-69	2.72	1.41	116.1				3.16	75.9												
70				70-71			116.1																	
72				72-73			115.1																	
74				74-75	2.78	1.42	116.4				3.24	76.4												
76				76-77			108.9																	
78 dark spot (2mm x 4mm) (10YR4/2)				78-79 / 78-87			92.4	35.36	5.99	5.90			64.2	30.6	33.6	1.96		0.3	12.0	87.7		1.98	1.84	
80				79-80			93.8																	
				80-81	2.74	1.48	96.0				2.63	72.5												
82				81-82			97.7																	
83-88 cm organism activity increases		10YR5/3	clay	82-83			99.0																	
84 reworked pockets slightly lighter in color than matrix (10YR5/3) rare forams				83-84			99.4																	
86 reworked pockets				85-86	2.76	1.46	103.7				2.86	74.1												
				86-87			107.1																	
88 88-94cm intense reworking of sediment matrix (10YR 4/3) reworked pockets 10YR 5/3		10YR4/3	clay	88-89			118.7																	
90 rare forams																								

Core No. XVII - 2 - PVC | Date: 13 MAY 1971 | Logged By: LAMBERT | CORE ANALYSIS SUMMARY SHEET | NOTES:

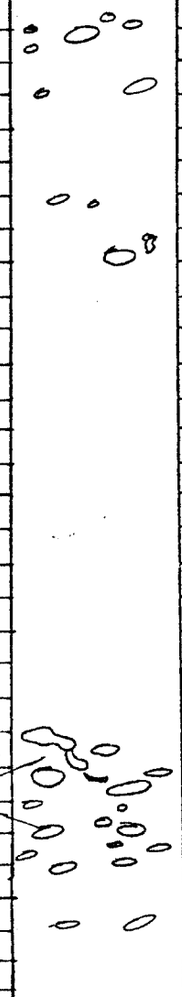
Location: N. of PUERTO RICO | Project Name: ANTILLES OUTER RIDGE | Sample Type: HYDROPLASTIC CORER

Latitude: 22° 16.5' N. | Date Sampled: 23 JAN. 1971 (GMT) | Water Depth: 5515 (f[redacted] (m)

Longitude: 67° 26.2' W | Core Serial No: | Core Length: 239 (cm)

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)



Sample Interval (cm)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (γ) (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (LI)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon[redacted] (%)	Organic Carbon (%)	% Heavy Minerals
90-91	10YR 4/3	clay	2.81	1.43	117.0				3.19	76.1											
91-92					113.4																
92-93					106.9																
94-95	10YR 5/3	clay			107.0																
96-97			2.72	1.44	105.5				2.87	74.2											
98-99					103.8																
100-101					103.1																
102-103					100.8																
104-110	10YR 5/3	clay				35.06	4.79	7.32			69.8	30.9	38.9	1.78	0.6	14.8	84.6		2.91	1.54	
105-106			2.69	1.46	99.3				2.67	72.8											
106-107					100.3																
107-108					100.0																
108-109					99.7																
109-110					100.5																
110-111					100.4																
112-113	10YR 4/3	clay	2.77	1.46	103.9				2.88	74.2											
115-116					113.0																
117-118					112.7																

90

92

94 94-105cm FAINT ORGANISM ACTIVITY
MATRIX 10YR 5/3 REWORKED AREAS 10YR 4/3

96

98

100

101-108 cm FORAMS MORE ABUNDANT THAN
102 EITHER ABOVE OR BELOW - SCATTERED

104

108-112cm VERY FAINT ACTIVITY (REWORKING)
106 MATRIX (10YR5/3) REWORKED POCKETS SLIGHTLY
LIGHTER IN COLOR

108

110

112 112cm-120cm INTENSE REWORKING ACTIVITY
MATRIX 10YR 4/3 REWORKED POCKETS 10YR5/3

114

116

118

120

Core No. XVII-2-PVC | Date: 14 MAY 1971 | Logged By: LAMBERT

Location: N. OF PUERTO RICO | Project Name: ANTILLES OUTER RIDGE

Latitude: 22° 16.5' N. | Date Sampled: 23 JAN. 1971 (GMT)

Longitude: 67° 26.2' W | Core Serial No:

CORE ANALYSIS SUMMARY SHEET

Sample Type: HYDROPLASTIC CORER

Water Depth: 5515 ([redacted] (m))

Core Length: 239 (cm)

NOTES:

MGG03005011

Depth	REMARKS: (color, shells, bedding, structure, etc.)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit (γ) Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon[redacted] (%)	Organic Carbon (%)	% Heavy Minerals
120	120 - 130 cm No OBSERVED STRUCTURES																								
	RARE SCATTERED FORAMS		10YR 4/3	CLAY	120-121	2.70	1.44	105.81				2.86	74.1												
122																									
					122-123			110.2																	
124																									
					124-125	2.80	1.45	108.4				3.04	75.2												
126																									
					126-127			114.1																	
128	130-190cm No INDICATION OF BURROWING ORGANISMS				127-128 / 127-128			112.7	32.07	4.20	7.63			73.1	35.1	38.0	2.17		0.2	10.6	89.2		0.97	0.97	
					128-129			115.6																	
130	130-131.5 cm IRREGULAR BAND OF DARKER (10YR 4/2)				129-130			119.6																	
	MATERIAL COMPOSED OF NEARLY BLACK AGGLUTINATED		10YR 4/2	silty-clay	130-131			121.1																	
132	"PELLET-LIKE" PARTICLES (APPROX. 100-200 μ DIA.)		10YR 4/3		131-132	2.92	1.43	118.9				3.47	77.6												
	THESE PELLETS APPEAR TO BE DENSLY SCATTERED THROUGHOUT				132-133			117.2																	
134	THE DARK BANDS (130-147cm) BUT ARE NOT IN		10YR 4/2		133-134			119.9																	
	DISTINCT LAYERS - THESE AGGLUTINATED PARTICLES				134.5-135.5			100.7																	
136	APPEAR TO BE HELD TOGETHER WITH AN ORGANIC				134.5-140.5				34.76	9.25	3.76			80.2	42.1	38.1	1.97		0.1	11.5	88.4		0.42	0.38	
	CEMENTING AGENT - HOWEVER WHEN DRIED THEY		10YR 4/3 TO		136-137	2.73	1.45	103.6				2.83	73.8												
138	ARE VERY FRIABLE. 131.5-133.5cm CONTAINS				137-138			129.3																	
	FEWER OF THESE DARK "PELLETS"; 133.5-136cm		10YR 4/2		138-139			126.6																	
140	"PELLETS" MORE ABUNDANT; 136-142cm				139-140			125.4																	
	"PELLETS" ABUNDANT ONLY IN ISOLATED BANDS OR				140-141	2.82	1.40	125.1				3.53	77.9												
142	STREAKS 142-143.5cm INTENSITY OF THE				141-142 / 141-147			118.6	44.80	10.90	4.11			71.3	33.8	37.5	1.82		0.2	16.0	83.8		1.05	1.02	
	DARK STREAKS INCREASES TO 143.5-144.5cm		10YR 3/2		142-143	2.89	1.47	104.0				3.00	75.0												
144	WHERE THEY FORM A VERY DARK BAND (10YR 3/1)		10YR 3/1		143-144	2.76	1.49	94.1				2.60	72.2												
	INTERMIXED WITHIN THIS BAND AND ABOVE & BELOW IT		10YR 3/2		144-145	2.88	1.50	96.8				2.79	73.6												
146	(142-146.5cm) ARE SMALL (1-2mm DIA.) IRREGULAR				145-146			97.8																	
	POCKETS OF LIGHTER COLORED (10YR 5/3) CLAY		10 YR 4/2		146-147	2.76	1.47	100.8				2.78	73.6												
148	130-146.5cm No MICROORGANISM (FORAM) TESTS		10YR 5/3	CLAY																					
	OBSERVED - THE "PELLETS" GIVE THE SEDIMENT				148-149			117.6																	
150	A silty CLAY "FEEL"				149-150 / 149-155			111.8	45.27	11.57	3.91			84.7	37.1	47.6	1.68		0.2	15.8	84.1		1.28	1.24	

Core-No. XVIII-2-PVC | Date: 17 MAY 1971 | Logged By: LAMBERT | CORE ANALYSIS SUMMARY SHEET | NOTES:

MGG03005011

6 of 8

B-

Location: N. OF PUERTO RICO | Project Name: ANTILLES OUTER RIDGE | Sample Type: HYDROPLASTIC CORER

Latitude: 22° 16.5' N. | Date Sampled: 23 JAN. 1971 (GMT) | Water Depth: 5515 ([redacted] (m)

Longitude: 67° 26.2' W | Core Serial No: | Core Length: 239 (cm)

REMARKS: (color, shells, bedding, structure, etc.)

150 146.5 - 168cm BROWN CLAY (10YR5/3)
CONTAINING SCATTERED DARK STREAKS AND
152 SPOTS OF VARYING INTENSITY - THESE STREAKS
AND SPOTS PROBABLY COMPOSED OF THE ABOVE
154 DESCRIBED PELLETS - [redacted]
[redacted]
156 RARE FORAM TESTS SCATTERED THROUGHOUT
158
160 10YR 5/2 / 10YR 5/3
162
164
166
168 168-172cm IRREGULAR STREAKING MORE
INTENSE GIVING MUD A SLIGHTLY GRAYER
170 COLOR 10YR 5/2
172 172-180cm NO VISIBLE STRUCTURES OTHER
THAN AN OCCASIONAL GRAYISH-BROWN
174 STREAK (10YR 5/2) NO FORAM TESTS
OBSERVED
176
178
180

Sample Interval (cm)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (IL)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
150-151	10YR5/3	CLAY			112.3																
151-152			2.83	1.42	119.7				3.39	77.2											
152-153					116.3																
153-154					120.3																
154-155					122.1																
156-159	SLIGHTLY GRAYER THAN 10YR5/3		2.71	1.42	112.6				3.05	75.3											
159-160					128.2																
161-162					127.4																
163-164					125.3																
165-166			2.76	1.45	107.0				2.95	74.7											
167-168	10YR5/2	CLAY			124.0																
169-170					121.2																
171-172	10YR5/3	CLAY			121.9																
173-174					119.3																
175-176			2.71	1.39	123.9				3.36	77.1											
177-178					130.6																
178-179					134.9																

Core No. XVII-2-PVC | Date: 18 MAY 1971 | Logged By: LAMBERT

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge

Latitude: 22°16.5' N. | Date Sampled: 23 JAN. 1971 (GMT)

Longitude: 67°26.2' W | Core Serial No:

CORE ANALYSIS SUMMARY SHEET

Sample Type: Hydraulic Corer

Water Depth: 5515 ([redacted] (m))

Core Length: 239 (cm)

NOTES:

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)

cm

180 180-181.5 cm SEVERAL FAINT HORIZONTAL GRAYISH-BROWN (10YR 5/3) STREAKS

182 181.5-185.5 cm NO VISIBLE STRUCTURES OTHER THAN AN OCCASIONAL SHORT GRAYISH-BROWN

184 STREAK

186 185.5-189 cm SEVERAL FAINT HORIZONTAL GRAYISH-BROWN STREAKS (10YR 5/2)

188 188-190 cm LIGHT BROWN (10YR 6/3) MUD

190 190-200 cm LT. BROWN SEDIMENT (10YR 5/3) STRONGLY REWORKED WITH WORM BURROWS

192 (10YR 6/3) RARE FORAMS SCATTERED THROUGHOUT

194

196

198

200 200-219.5 cm NO VISIBLE STRUCTURES - RARE FORAMS SCATTERED THROUGHOUT - OCCASIONAL

202 DARK SPOT

204

206

208

210

Sample Interval (cm)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
180-181 / 180-186		10YR 5/3	clay			131.2 /	35.06	5.95	5.89			82.4	34.2	48.2	1.99	0.3	14.9	84.8		1.06	1.06	
181-182						133.1																
182-183						135.8																
183-184				2.74	1.37	134.3				3.68	78.6											
184-185						126.3																
185-186						120.2																
187-188						117.1																
189-190		10YR 6/3	clay			123.4																
191-192		10YR 5/3	clay	2.92	1.40	130.7				3.81	79.2											
193-194 / 193-199						127.7 /	42.69	12.23	3.49			97.8	37.3	60.5	1.56	0.1	12.5	87.4		0.97	0.97	
194-195						122.5																
195-196						132.1																
196-197				2.72	1.36	136.9				3.72	78.8											
197-198						137.0																
198-199						132.1																
200-201		10YR 5/3	clay	2.72	1.38	127.7				3.47	77.6											
202-203						124.5																
204-205						113.8																
206-207						109.1																
208-209				2.74	1.44	108.2				2.97	74.8											

MGG03005011

Core No. XVII-2-PVC	Date: 19 MAY 1971	Logged By: LAMBERT	CORE ANALYSIS SUMMARY SHEET
Location: N. OF PUERTO RICO	Project Name: ANTILLES OUTER RIDGE		Sample Type: HYDROPLASTIC CORIER
Latitude: 22° 16.5' N.	Date Sampled: 23 JAN. 1971 (GMT)		Water Depth: 5515 ([redacted] (m)
Longitude: 67° 26.2' W	Core Serial No:		Core Length: 239 (cm)

NOTES:

REMARKS: (color, shells, bedding, structure, etc.)

cm

210 — 212 — 214 — 216 — 218 — 220 — 222 — 224 — 226 — 228 — 230 — 232 — 234 — 236 — 238 — 240

slightly LIGHTER THAN 10YR 5/3

219.5 - 220.5 LAYER slightly DARKER IN COLOR THAN (10YR 5/3) NO OBSERVED TEXTURE CHANGE

220.5 - 234.5 cm FEW STRUCTURES OTHER THAN WORM BURROWS AND A SLIGHT HINT OF REWORKING - FORAMS SCATTERED THROUGHOUT

234.5 - 239 cm slightly MOTTLED WITH SLIGHT COLOR VARIATIONS NOT DISCERNIBLE WITH COLOR CHART - OCCASIONAL DARK SPOTS - FEWER FORAMS THAN ABOVE

239 cm END OF CORE

Sample Interval (cm)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total [redacted] (%)	Organic Carbon (%)	% Heavy Minerals
210-211	10YR5/3	clay			109.9																
212-213					108.0																
214-215			2.70	1.42	112.1				3.03	75.16											
216-217					117.4																
218-219					121.3																
220-221 / 220-226					126.9	42.85	22.18	1.93			81.0	34.3	46.7	1.37	0.1	15.4	84.5		0.72	0.70	
221-222			2.75	1.39	128.9				3.54	78.0											
222-223					125.2																
223-224			2.75	1.41	120.2				3.31	76.8											
224-225					115.3																
225-226			2.85	1.44	113.0				3.22	76.3											
228-229					111.4																
230-231			2.70	1.44	105.8				2.86	74.1											
232-233					106.0																
	10YR5/4	clay																			
235-236					103.0																
236-237			2.67	1.45	100.7				2.69	72.89											
237-238					95.0																
238-239			2.78	1.51	90.8				2.52	71.62											

Core No. XVII-3-PVC | Date: 24 MAY 1971 | Logged By: LAMBERT | CORE ANALYSIS SUMMARY SHEET

Location: N. OF PUERTO RICO | Project Name: ANTILLES OUTER RIDGE | Sample Type: HYDROPLASTIC CORER

Latitude: 21°51.3' N | Date Sampled: 23 JAN. 1971 (GMT) | Water Depth: 5194 (f[redacted] (m)

Longitude: 67°38.2' W | Core Serial No: | Core Length: 222 (cm)

NOTES: NO WATER ON TOP OF CORE - HOWEVER DID NOT APPEAR TO HAVE DRIED OUT

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)

cm

0 0-2cm BROWN SANDY-CLAY (SAND FRACTION COMPOSED OF SCATTERED FORAM TESTS) NO VISIBLE STRUCTURES

2 2-8cm REWORKED WITH WORM BURROWS BURROWS GRAYISH BROWN IN color 10 YR 4/2 -

4 MATRIX IS 10YR 5/3 ; FORAM TESTS SCATTERED THROUGHOUT - RADIOGRAPH

6 SHOWS BURROWING ACTIVITY QUITE WELL

8 8-37cm BROWN SANDY-CLAY AS ABOVE, HOWEVER REWORKING BY ORGANISMS LESS INTENSE.

10 FORAMS SCATTERED THROUGHOUT, ESPECIALLY 19-20cm SAND FRACTION COMPOSED OF FORAMS

12

14

16

18

20 SMALL DARK (10YR 4/2) SPOTS ABUNDANT THROUGHOUT PROBABLY EVIDENCE OF ORGANISM ACTIVITY

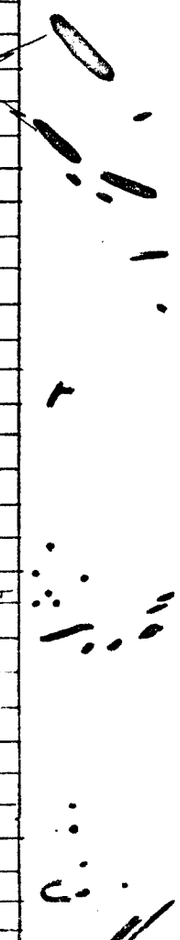
22

24

26

28

30



Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (LI)	Color	Sed. Type (visual)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
0-1/0-6	2.65	1.44	102.7	19.3	9.9	1.94	2.72	73.1	68.3	35.2	33.1	2.06	10YR5/3	SANDY-CLAY	4.2	25.0	70.8		2.62	2.18	
1-2	2.65		101.0																		
2-3	2.73	1.46	101.8				2.78	73.6													
3-4			105.4																		
4-5			105.4																		
5-6	2.76	1.46	103.3				2.85	74.0													
6-7			100.7																		
7-8			98.5																		
9-10/9-15	2.68	1.46	99.1	20.2	10.6	1.91	2.66	72.6	67.5	34.5	33.0	2.04			1.1	24.5	74.4		2.93	2.07	
10-11			102.5																		
11-12	2.70	1.44	105.9				2.85	74.1													
12-13			103.8																		
13-14			98.8																		
14-15			100.3																		
16-17/16-22	2.74	1.50	91.2	34.2	13.5	2.53	2.50	71.4	69.3	34.4	34.9	1.72			5.1	24.9	69.9		3.53	1.93	
17-18			102.3																		
18-19			92.2																		
19-20			93.1																		
20-21	2.69	1.48	93.6				2.52	71.6													
21-22			93.7																		
22-23			92.6																		
23-24	2.74	1.49	93.0				2.55	71.8													
24-25			94.4																		
26-27	2.77	1.49	93.6				2.59	72.2													
28-29			94.9																		

MGG03005011

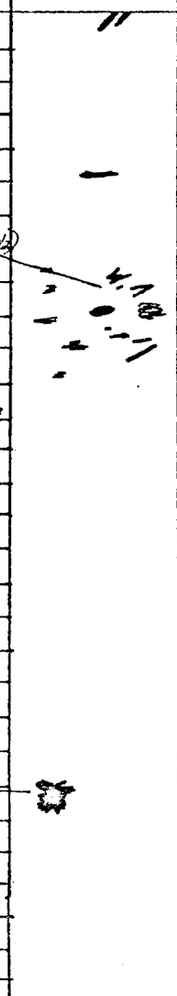
Core No. XVII-3-PVC	Date: 24 May 1971	Logged By: Lambert	CORE ANALYSIS SUMMARY SHEET
Location: N. of Puerto Rico	Project Name: Antilles Outer Ridge		Sample Type: Hydroplastic Corer
Latitude: 21°51.3'N	Date Sampled: 23 Jan. 1971 (GMT)		Water Depth: 5194 ([redacted] (m)
Longitude: 67°38.2'W	Core Serial No:		Core Length: (cm)

NOTES:

REMARKS: (color, shells, bedding, structure, etc.)

Sample Interval (cm)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total [redacted] (%)	Organic Carbon (%)	% Heavy Minerals
30-31	10YR5/3	sandy-clay	2.72	1.48	95.8				2.60	72.3											
					96.7																
32-33																					
34-35					92.7																
35-36 / 35-41			2.78	1.48	96.8	30.4	13.0	2.34	2.69	72.9	66.1	32.5	33.6	1.92	1.0	19.2	79.8		2.28	1.86	
36-37	10YR5/3	sandy-clay			98.0																
37-38					97.9																
38-39					95.9																
39-40					96.8																
40-41			2.72	1.47	96.4				2.62	72.4											
41-42	10YR5/3	sandy-clay			95.3																
43-44			2.78	1.48	96.4				2.68	72.8											
45-46					100.1																
47-48					103.9																
49-50					115.7																
50-51 / 50-56			2.90	1.47	104.7	25.4	9.3	2.73	3.04	75.3	73.3	37.3	36.0	2.12	0.1	12.9	87.0		1.13	1.12	
51-52					108.0																
52-53					112.2																
53-54					116.8																
54-55			2.80	1.41	119.3				3.34	77.0											
55-56	10YR4/3	[illegible]-clay			119.7																
56-57					120.4																
58-59					115.4																

Core Sketch (depth in core)



cm

30

32

34

36

37-41 cm INCREASE IN ABUNDANCE OF "DARK IRREGULAR (10YR4/2) SPOTS" INTERMIXED WITH SLIGHTLY LIGHTER THAN 10YR5/3 IN A BROWN MATRIX (10YR5/3) GIVING IT A MOTTLED AFFECT, HOWEVER PROBABLY DUE TO REWORKING

38

40

42 41-56 cm FAINTLY MOTTLED WITH MATRIX 10YR5/3 AND MOTTLES SLIGHTLY LIGHTER BROWN

44 VERY RARE FORAMS SCATTERED THROUGHOUT FORMING SAND FRACTION. GRADUAL COLOR

46 CHANGE TO 10YR 4/3

48

50

IRREGULAR "DARK SPOT" 10YR 4/2

52

54

56 56-67.5 cm NO VISIBLE STRUCTURES - VERY RARE SCATTERED FORAMS

58

60

Core No. XVII - 3 - PVC | Date: 24 MAY 1971 | Logged By: LAMBERT | CORE ANALYSIS SUMMARY SHEET | NOTES:

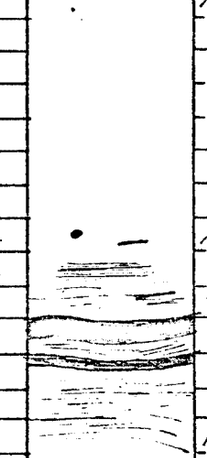
Location: N. of PUERTO RICO | Project Name: ANTILLES OUTER RIDGE | Sample Type: HYDROPLASTIC CORER

Latitude: 21°51.3' N. | Date Sampled: 23 JAN. 1971 (GMT) | Water Depth: 5194 (m)

Longitude: 67°38.2' W | Core Serial No: | Core Length: (cm)

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)



Sample Interval (cm)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index	Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
60-61	10YR 4/3	SANDY-Clay	2.78	1.43	114.5				3.18	76.1											
62-63					116.4																
64-65			2.78	1.41	118.7				3.30	76.7											
66-67 / 67-72					117.3	22.8	8.6	2.65			73.0	37.3	35.7	2.27		0.1	16.1	83.8	0.53	0.47	
67-68	10YR 4/3 TO 10YR 4/2	clay			118.8																
68-69					120.7																
69-70					119.7																
70-71			2.77	1.42	116.7				3.23	76.4											
71-72					116.5																
72-73					112.6																
74-75	10YR 4/3	clay			106.1																
75-76			2.72	1.43	110.8				3.01	75.1											
76-77					118.1																
79-80					111.7																
81-82	10YR 4/3	clay	2.80	1.41	120.0				3.36	77.1											
83-84					117.5																
84-85					117.5																
85-86	10YR 4/2	clay	2.74	1.41	118.4				3.24	76.4											
86-87					118.4																
87-88					117.3																
88-89					116.9																
89-90					116.6																

67.5 - 74 cm DARK (10YR 4/2) IRREGULAR STREAKING WITH TWO PRONOUNCED BANDS AT 70 + 71 cm - PROBABLY WERE HORIZONTAL BUT DISTORTED WITH INSERTION OF VANE TOOL IN CORE - NO FORAM TESTS OBSERVED

74 - 81 cm NO STRUCTURES OR FORAMS OBSERVED

81 - 91.5 cm OCCASIONAL DARK (10YR 4/2) SPOTS AND STREAKS - 85-86.5 cm DARK BAND (10YR 4/2) NO FORAM OBSERVED

84 - 91 cm FAINTLY DARKER BAND THAT HAS SLIGHTLY MOTTLED APPEARANCE

Core No. XVII - 3 - PVC | Date: 25 MAY 1971 | Logged By: LAMBERT | CORE ANALYSIS SUMMARY SHEET | NOTES:

Location: N. of PUERTO RICO | Project Name: ANTILLES OUTER RIDGE | Sample Type: HYDROPLASTIC CORER

Latitude: 21° 51.3' N | Date Sampled: 23 JAN. 1971 (GMT) | Water Depth: 5194 ([redacted] (m)

Longitude: 67° 38.2' W | Core Serial No: | Core Length: (cm)

MGG03005011

Depth (cm)	REMARKS: (color, shells, bedding, structure, etc.)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (IL)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon [redacted] (%)	Organic Carbon (%)	% Heavy Minerals
90																									
	91-100.5 cm NO STRUCTURES OR FORAMS		10YR 4/3	CLAY																					
92	OBSERVED - GRADUAL color CHANGE TO 10YR 5/3				91-92	2.73	1.41	116.8				3.19	76.1												
94					93-94			115.6																	
96					95-96	2.75	1.41	120.3				3.31	76.8												
98					97-88			124.6																	
					98-99 / 98-104			119.4 /	29.1	9.6	3.03			73.9	31.2	42.7	2.10		0.1	12.0	87.9		0.79	0.77	
100	100.5 - 105 cm THIN DARK (10YR 4/2) SLIGHTLY SILTY		10YR5/3	CLAY	99-100			119.4																	
	UNDULATING LAYERS - NO FORAMS OBSERVED				100-101	2.69	1.41	115.8				3.11	75.7												
102					101-102			123.4																	
					102-103			124.2																	
104					103-104			123.0																	
	105-111 cm (THAN 10YR 5/3) SLIGHTLY DARKER BROWN IRREGULAR SPOTS																								
106	PROBABLY WORM BURROWS		10YR5/3	CLAY	105-106	2.74	1.41	118.1				3.24	76.4												
108					107-108			109.3																	
110					109-110			107.4																	
	111-112 cm DARK BAND SOMEWHAT IRREGULAR		10YR 4/2	CLAY																					
112	WITH INTERMIXING WITH THE MATRIX (10YR5/3)		10YR5/3		111-112	2.71	1.43	110.9				3.01	75.0												
	112-115 NO STRUCTURES OTHER THAN AREA		10YR5/3	CLAY																					
114	OF SMALL DARK SPOTS - NO FORAMS				113-114			114.8																	
	115-119 cm THIN HORIZONTAL LAYERS OF																								
116	DARK MATERIAL INTERMIXED WITH MOTTLED		10YR4/2 10YR 5/3	CLAY	115-116			109.9																	
	OR REWORKED APPEARING MUD VARYING IN																								
118	COLOR FROM 10YR 5/3 TO 10YR 6/3		10YR4/3		117-118	2.76	1.44	109.8				3.03	75.2												
	119-121.5 cm DARK BANDS (10YR 4/2)		10YR4/2	CLAY	118-119			118.7																	
120	OF CONCENTRATIONS OF BLACK SILT SIZE				119-120			121.9																	

Core No. XVII-3-PVC | Date: 26 MAY 1971 | Logged By: LAMBERT | CORE ANALYSIS SUMMARY SHEET | NOTES:

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge | Sample Type: Hydroplastic Corer

Latitude: 21°51.3′ N | Date Sampled: 23 JAN. 1971 (GMT) | Water Depth: 5194 ([redacted] (m)

Longitude: 67°38.2′ W | Core Serial No: | Core Length: (cm)

MGG03005011

Depth (cm)	REMARKS: (color, shells, bedding, structure, etc.)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (γ) (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon [redacted] (%)	Organic Carbon (%)	% Heavy Minerals
120	Particles cemented with a white substance																								
	most are flowcemed in shape		10YR 4/2	clay	120-121	2.76	1.40	123.4				3.41	77.3												
122	121.5-124 light tan worm burrows or other				121-122			123.8																	
	organism activity (10YR 6/3) rare forams		10YR 6/3 10YR 4/2 matrix	clay	122-123			123.4																	
124	124-127 No structures		10YR 5/3																						
					124-125			117.3																	
126					125-126 / 125-131	2.73	1.40	121.1	25.8	9.3	2.77	3.31	76.8	70.8	31.7	39.1	2.38		0.7	18.2	81.1		1.61	1.54	
	127-128.5 Dark band similar to above		10YR 4/2	clay	126-127			125.3																	
128	128.5-141 cm Faint reworking although				127-128	2.68	1.39	123.9				3.32	76.9												
	the activity was intense especially		10YR 5/3	clay	128-129			126.4																	
130	between 133-137 matrix 10YR 5/3				129-130			130.0																	
	reworked material slightly lighter				130-131	2.71	1.40	121.7				3.30	76.7												
132					131-132			123.6																	
					132-133			119.8																	
134					134-135			106.7																	
136																									
					136-137	2.68	1.43	107.5				2.88	74.2												
138	Dark spot 10YR 4/2				138-139			105.6																	
140																									
	141-148 cm No visible structures or		10YR 5/3	clay	140-141			108.1																	
142	forams																								
					142-143	2.71	1.49	91.87				2.48	71.2												
144					144-145			126.6																	
146					146-147			138.3																	
148	148-168 cm No visible structures other																								
	than an occasional dark spot				148-149			130.2																	
150																									

MGG03005011

Core No. XVII-3-PVC | Date: 27 May 1971 | Logged By: Lambert | CORE ANALYSIS SUMMARY SHEET | NOTES:

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge | Sample Type: Hydroplastic Corer

Latitude: 21°51.3'N | Date Sampled: 23 Jan. 1971 (GMT) | Water Depth: 5194 ([redacted] (m)

Longitude: 67°38.2'W | Core Serial No: | Core Length: (cm)

REMARKS: (color, shells, bedding, structure, etc.)

Core Sketch (depth in core): DARK SPOT 10YR 4/2

Sample Interval (cm)	Color	Sed. Type (visual)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon [redacted] (%)	Organic Carbon (%)	% Heavy Minerals
150-151	10YR5/3	Clay	2.70	1.39	123.0				3.32	76.9												
152-153 / 152-158					120.2	38.4	6.0	6.4			79.0	35.2	43.8	2.11		0.7	20.1	79.3		1.31	1.21	
153-154					123.9																	
154-155					128.1																	
155-156			2.78	1.38	132.2				3.67	78.6												
156-157					134.6																	
158-159					123.0																	
160-161			2.76	1.43	112.6				3.11	75.7												
162-163					110.0																	
164-165					111.6																	
166-167			2.76	1.42	117.4				3.24	76.4												
167-168					120.6																	
168-169	10YR4/2	Clay			123.9																	
169-170 / 169-175	10YR5/3				125.4						76.4	35.2	41.2	2.16		0.3	22.9	76.9		1.40	1.35	
170-171	10YR5/4		2.69	1.37	134.2	57.5	7.3	7.9	3.61	78.3												
171-172	10YR5/2	Sandy-Clay			125.0																	
172-175 / 172-173					122.4	33.0	7.3	4.5														
173-174					120.9																	
174-175					117.0																	
175-176			2.75	1.44	109.3				3.01	75.0												
176-177					99.9																	
176-182 / 177-178					99.0	35.7	9.6	3.72			61.2	32.5	28.7	2.29		0.1	17.7	82.2		2.72	2.18	
178-179					99.3																	
179-180					97.8																	

150
152
154
156
158
160
162
164
166
168 168-168.5cm DARK BAND (10YR 4/2)
170 169.5-170.5 UNDULATING THIN LAYER (yellowish BROWN 10YR 5/4) NO VISIBLE TEXTURE CHANGE
172 OR FORAMS
170.5 - 227cm (END OF CORE) GRAYISH
174 BROWN MUD (10YR 5/2) WITH SCATTERED ORGANISM ACTIVITY AND COMMON SCATTERED
176 FORAMS
178
180

Core No. XVII-3-PVC | Date: 28 May 1971 | Logged By: Lambert | CORE ANALYSIS SUMMARY SHEET | NOTES:

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge | Sample Type: Hydroplastic Corer

Latitude: 21°51.3'N | Date Sampled: 23 Jan. 1971 (GMT) | Water Depth: 5198 ([redacted] (m)

Longitude: 67°38.2'W | Core Serial No: | Core Length: (cm)

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (γ) (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon (%)	Organic Carbon (%)	% Heavy Minerals
180																								
		10YR 5/2	SANDY-CLAY	180-181	2.71	1.47	98.5				2.67	72.7												
182 DARK SPOTS 10YR 4/2				181-182			96.5																	
				182-183			97.2																	
184																								
				184-185			99.2																	
186																								
				186-187	2.68	1.46	99.8				2.67	72.8												
188																								
				188-189			100.9																	
190																								
				190-191			105.8																	
192																								
				192-193	2.72	1.42	112.6				3.06	75.4												
194																								
				194-195			119.3																	
196																								
				196-197			130.0																	
198																								
				198-199			126.1																	
200																								
				200-201	2.71	1.41	117.0				3.17	76.0												
202 DARK SPOTS 10YR 4/2																								
				202-203			107.8																	
204																								
				204-205			108.1																	
206																								
				206-207	2.69	1.43	109.9				2.96	74.7												
208																								
				208-209			109.5																	
210																								

Core No. XVII-3-PVC | Date: 28 MAY 1971 | Logged By: Lambert | CORE ANALYSIS SUMMARY SHEET | NOTES:

Location: N. of Puerto Rico | Project Name: Antilles Outer Ridge | Sample Type: Hydroplastic Corer

Latitude: 21° 51.3' N | Date Sampled: 23 JAN. 1971 (GMT) | Water Depth: 5194 ([redacted] (m)

Longitude: 67° 38.2' W | Core Serial No: | Core Length: (cm)

MGG03005011

REMARKS: (color, shells, bedding, structure, etc.)	Core Sketch (depth in core)	Color	Sed. Type (visual)	Sample Interval (cm)	Specific Gravity of Solids (Gs)	Wet Unit Weight (g/cm²)	Water Content (%dry weight) (wc)	Cohesion (Cn) Natural (g/cm²)	Cohesion (Cr) Remold (g/cm²)	Sensitivity (St)	Void Ratio (e)	Porosity (%) (n)	Liquid Limit (LL)	Plastic Limit (PL)	Plasticity Index (PI)	Liquidity Index (B)		Size and Composition: Sand %	Silt %	Clay %	<62.5μ	Total Carbon[redacted] (%)	Organic Carbon (%)	% Heavy Minerals
210		10YR5/2	SANDY-CLAY	210-211	2.72	1.44	107.0				2.91	74.4												
212				212-213			106.4																	
214				213-/213-214/219			101.7	36.3	7.8	4.7			67.0	32.2	34.8	2.04		1.4	23.9	74.7		3.49	2.30	
				214-215			101.7																	
216				215-216	2.75	1.46	102.2				2.81	73.8												
				216-217			102.7																	
218				217-218			104.1																	
				218-219			106.1																	
220				219-220			108.3																	
				220-221	2.84	1.45	108.2				3.07	75.5												
222				221-222			105.2																	
223-227cm VERY FAINT HINT OF THIN LAYERING																								
224 COMMON SCATTERED FORAMS				223-224			105.2																	
226				225-226	2.66	1.48	92.1				2.45	71.0												
228	227 cm END OF CORE																							
230																								
232																								
234																								
236																								
238																								
240																								