Assessment of beach renourishment resources near Folly Beach, South Carolina

prepared by

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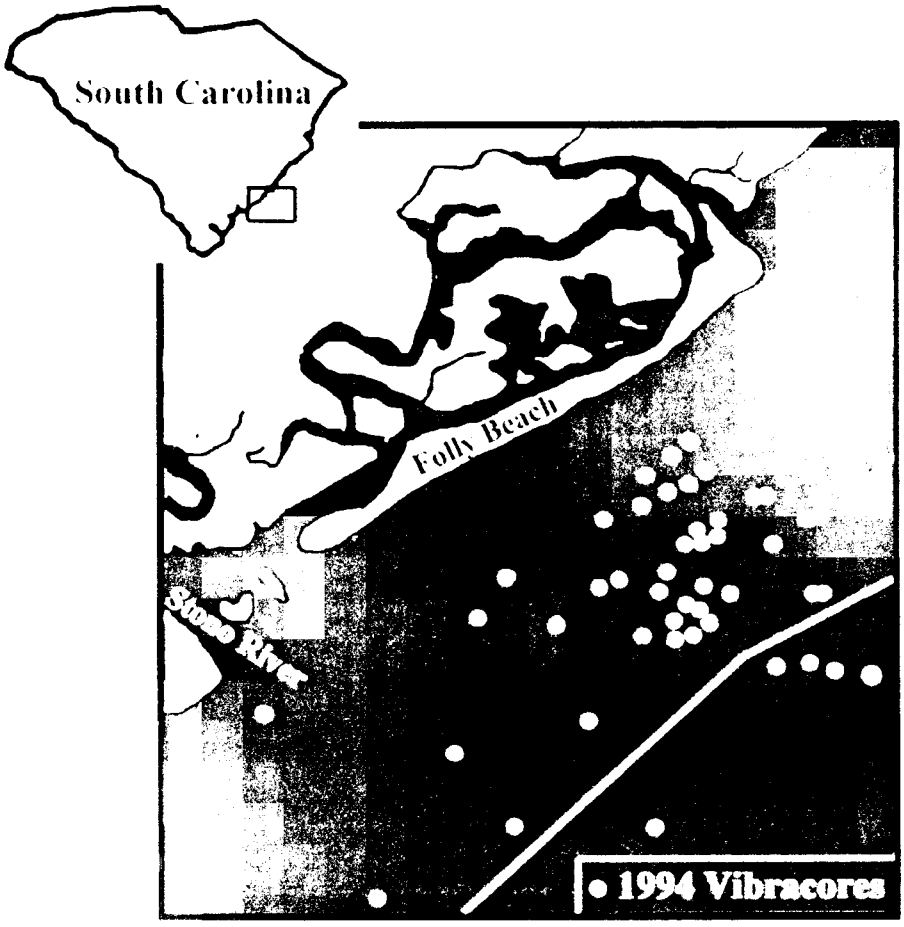

Final Report

South Carolina Task Force on Offshore Resources
a cooperative program with the
State of South Carolina
and the
Minerals Management Service

Final Report

Assessment of beach renourishment resources near Folly Beach, South Carolina

by:

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Executive Summary

The South Carolina Task Force on Offshore Resources was established through funding from the Minerals Management Service INTERMAR program to compile sand, mineral, and hardbottom resource data for the inner continental shelf of South Carolina. The objective of the Task Force was to facilitate the efficient use of the state's resources while ensuring such use will incorporate environmentally sound planning. The Task Force was designed to be a five-year program to evaluate sand, mineral and hard bottom resources that exist on the state's coastal ocean shelf from the shoreline to 16 km (10 mi) offshore and compile this information in a database.

The goal of the first year of work on the project was to assemble the biological, historical and geological information and identify areas where additional sand resource information was needed. That effort was presented in a combined Task Force Final Report in April 1994.

The goal of the second year of the Task Force was to assemble the Year I database into a GIS system and to begin a phased field study to gather relevant information to assess potential beach renourishment resources off areas of the South Carolina coast which are in need of these resources and for which existing data is inadequate. This report presents the results of the first field study assessing sand resources.

Folly Beach erosion/renourishment history

Folly Beach is a rapidly eroding barrier island located just south of Charleston and was chosen as the first site of the phased mapping effort. This selection was based on

historically large erosion of the island and an existing commitment to beach renourishment techniques to address erosion problems. Both the state and federal governments are committed to a beach renourishment maintenance program at Folly Beach. Although some work has been conducted on this part of the shelf, reliable data from areas within 3 km of the beach has not been available to ascertain whether suitable reserves exist that could be used for future anticipated demand. In addition, there is also only limited data available to assess the potential impacts of removing sand offshore on the marine environment.

The General Design Memorandum for the Folly Beach, South Carolina Shore Protection Project calls for a fifty-year nourishment project life with 2.5 million cubic yards needed for the initial nourishment, four periodic nourishments each requiring 1.7 million cy, and 2.1 million cy required for the final renourishment in the last 10 years of the project (USACOE, 1991). The amount of sacrificial beachfill to satisfy all phases of the renourishment is estimated at 5.4 million cy (Katuna et al., 1993). The initial nourishment was completed in May 1993 and reconstructed nearly 10 km of shoreline at Folly Beach.

Sand for the initial nourishment was taken from shoals in the lower Folly River behind Stono Inlet. The shoals have been previously dredged and have served as a borrow site for several small renourishment projects at the southern end of Folly Island and on Bird Key (Katuna et. al., 1993). The search for an offshore borrow site was warranted because the sand source in the Folly River may not be available for future use if the Coastal Barrier Resources System (CBRS) restrictions apply or if the site fails to fill with beach compatible sand.

The James (1975) method was modified by the USACOE CERC (1984) to yield appropriate overfill ratios. The overfill ratio (R_A) represents how much sand must be dredged from the borrow site to equal one unit of sand on the beach. Acceptable R_A values generally range form 1.00-1.254,except in cases where no economically suitable sand exists (Kana, 1992). The overfill ratio for the Stono Inlet/Folly River borrow site used as the source for the 1993 initial renourishment was 1.15. The overfill ratio was calculated for the borrow site identified off Folly Beach in this study using the whole (carbonate included) portion of each core over various depths (representing potential dredging depths of 50 cm, 1 m, and 1.5 m). The analyses show that the R_A ratio varies some over the length of the core and that the material in the upper 0.5-1 meter matches the Folly Beach sand fairly well. The range of R_A values as well as the mean R_A value for the proposed site off Folly Beach are smaller than those calculated for the Edisto Beach renourishment borrow site (Kana, 1992).

Summary and Recommendations

Based on interpretation of over 215 kilometers of high resolution seismic reflection profiles and 48 vibracores, a substantial volume of sand exists over a broad area of the inner continental shelf off Folly Beach that may be suitable for future use as beach fill material. This area is well identified on the northern and western boundary but less well delineated on the eastern and southern flanks. Based on the existing core data this reserve is estimated to be 2.5 million cubic yards of beach compatible sand. This site resides outside the area limited by the CBRS zones for the Folly Beach coastal ocean. Based on the existing data, the location is not characterized by extensive hard bottom environments but some hard bottom was found just outside the three mile (federal water) limit. It is proposed that ten

Year II field studies

The goal of the Year 2 fieldwork was to identify beach compatible sand offshore Folly Beach that may be useable as a future nourishment source. The U.S. Army Corps of Engineers conducted an investigation to determine sediment characteristics of the native dune and beach sand on Folly Beach. All of the samples, both on the beach and inner shelf, were classified as fine-grained sand.

Over 245 km of high-resolution seismic-reflection trackline was collected for the INTERMAR project during the summer of 1994. Based on interpretations of the seismic lines, 45 locations were identified to obtain vibracore information. At these sites vibracores varying between 1 to 6 m were collected. Each core was sampled for grain size and percent sand, silt, clay, and carbonate.

Based on sediment analyses of the cores collected off Folly Beach, a suitable source may have been located within close proximity to the coast. A zone approximately 1 mile by 1.5 miles in size was identified off the middle part of the island. The material within this zone is fine-grained sand and has similar percentages of fine/coarse sediment as native Folly Beach sand. The sediment within the zone is compatible to the native Folly Beach sand to a depth of 2+ meters. The trend of the zone parallels that of a series of incised channels identified on the seismic reflection profiles. Although the area is fairly well characterized by cores on the north and east sides, the limit of the reserve to the south and west is not as clearly delineated.

James (1975) developed a method to statistically compare borrow site sand to native sand to test the stability of the renourishment project using mean grain size and sorting.

The James (1975) method was modified by the USACOE CERC (1984) to yield appropriate overfill ratios. The overfill ratio (R_A) represents how much sand must be dredged from the borrow site to equal one unit of sand on the beach. Acceptable R_A values generally range form 1.00-1.254,except in cases where no economically suitable sand exists (Kana, 1992). The overfill ratio for the Stono Inlet/Folly River borrow site used as the source for the 1993 initial renourishment was 1.15. The overfill ratio was calculated for the borrow site identified off Folly Beach in this study using the whole (carbonate included) portion of each core over various depths (representing potential dredging depths of 50 cm, 1 m, and 1.5 m). The analyses show that the R_A ratio varies some over the length of the core and that the material in the upper 0.5-1 meter matches the Folly Beach sand fairly well. The range of R_A values as well as the mean R_A value for the proposed site off Folly Beach are smaller than those calculated for the Edisto Beach renourishment borrow site (Kana, 1992).

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additional vibracores be taken to better delineate the southern and western border of the potential borrow area and increase confidence in the continuity of beach compatible sands within the proposed potential borrow area. Incorporation of a side scan mosaic for the inner shelf off of Folly Beach being conducted in the summer of 1995 by the U.S. Geological Survey in cooperation with the CMWS which will also be available to incorporate into the INTERMAR database of resources off of Folly Beach.

Introduction

The South Carolina Task Force on Offshore Resource first met in 1992, after the state had entered into a cooperative agreement with the Minerals Management Service, Office of International Activities and Minerals Resources (INTERMAR). The Task Force includes members from state and federal agencies as well as academic institutions. The South Carolina Department of Natural Resources is acting as the lead agency for the project and has three divisions serving on the Task Force: Marine Research Division, Land Resources Division, and the Water Resources Division. Other state agencies include: Sea Grant, the Office of Coastal Resource Management, S.C. Geological Survey, and the Governor's Office. Federal agencies participating include: Minerals Management Service, South Atlantic Fisheries Management Council, U.S. Army Corps of Engineers-Charleston District and the U.S. Geological Survey. Academic institutions participating in the project include Coastal Carolina University and the University of Charleston.

The primary goal of the program is to identify sand sources that may be useful in beach renourishment projects being planned along the state's coastline. Other mineral resources and critical biological areas that could be adversely affected by beach nourishment programs are also being evaluated. Specific objectives during the first two years of the cooperative were to:

Year I Objectives

1. Establish an interagency Task Force to evaluate mineral and biological resources in the nearshore zone off South Carolina.

2. Conduct a detailed review of existing data sources on physical and biological data available for the nearshore zone (0-10 miles offshore) and summarize the data into an easily accessible PC database, and

3. Begin an analysis of historical trends in South Carolina's shoreline configuration based on historical data bases and photographic analyses.

Synopsis of Year I Task Force Database

The results of the first year's efforts of this Cooperative program have been compiled in a final report entitled: *An Evaluation of Sand, Mineral and Hard-Bottom Resources on the Coastal Ocean Shelf off South Carolina: Final Report of the South Carolina Task Force on Offshore Resources* (Van Dolah et al., 1994).

Geologic Database

The Center for Marine and Wetland Studies (CMWS) at Coastal Carolina University was given the task of creating the geologic portion of the database. Data sets were collected from several libraries and laboratories throughout the southeast. The university interlibrary loan system provided access to many articles and all incoming articles were cross-referenced. The geologic database contains existing high resolution seismic reflection survey lines, side scan sonar surveys, surficial sediment characterizations, heavy mineral/phosphate percentages, vibracore/boring logs, and literature on shallow geologic structure, sea level change and shelf evolution. The database records the following information: sample location, date, equipment type, water depth, mean grain size, %sand/silt/clay, %carbonate, %heavy minerals, %economic heavy minerals, zircon/tourmaline/rutile index, %phosphate, and complete reference information on each study and principal investigator. A bibliography of geological and geophysical studies on the South Carolina continental shelf has been simultaneously developed and given at the end of the paper.

The South Carolina coast was divided into four zones to describe the data (Figure 1). Zone 1 includes the Grand Strand region and included 45% of the Intermar database. Zone 2 includes the undeveloped coast along Winyah Bay and Santee Delta; Zone 3 includes the Charleston area and Zone 4 includes the south islands. Zones 2,3, and 4 contain 8%, 30%, and 17% of the Intermar Year 1 database respectively. The analysis of the data by zones helped to identify areas where little data exists.

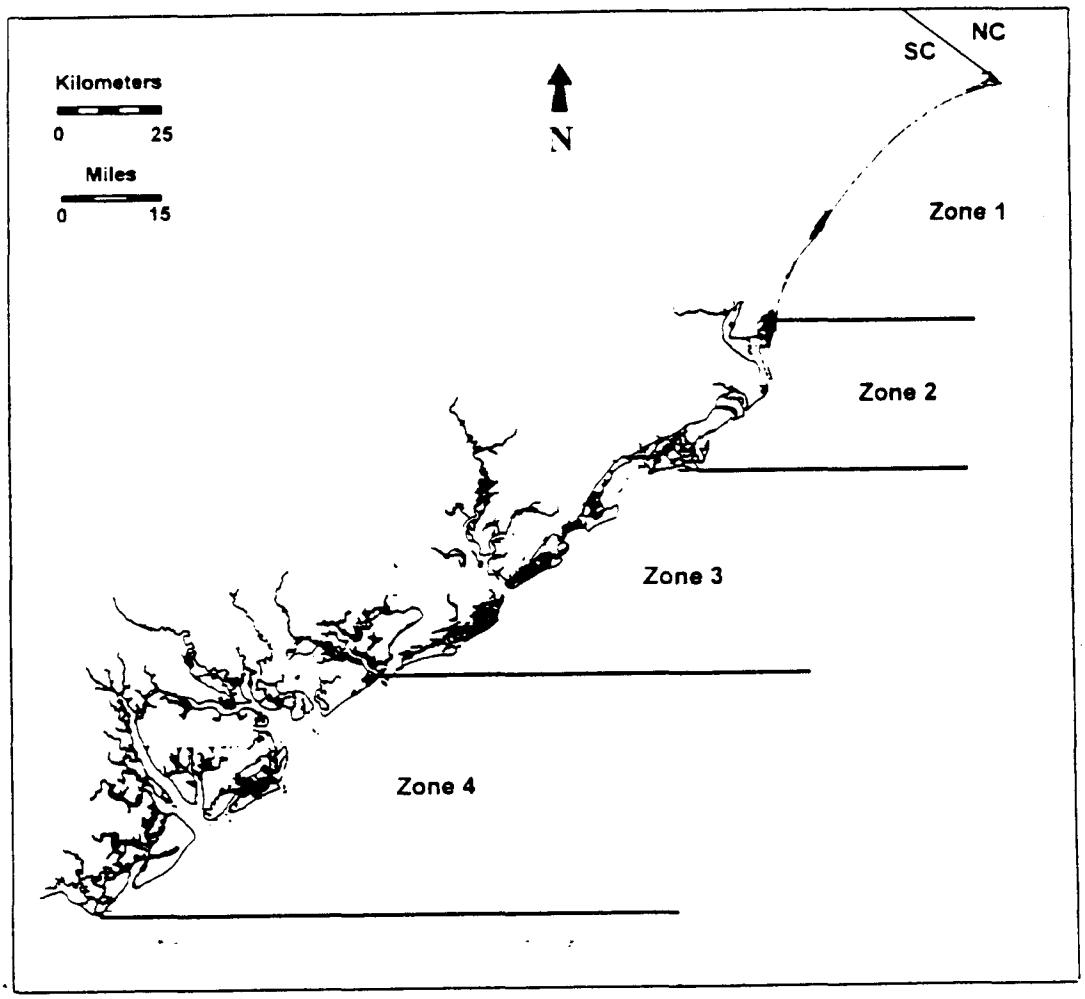

Figure 1. Regional zones created to describe data from INTERMAR primary database.

South Carolina Task Force on Offshore Resources - Year II

The second year of the Task Force's efforts were designed to analyze the database assembled in the first year and begin a phased field effort to augment the database in critical areas of need identified from the Year I database. Year II Task Force objectives were to:

1. Conduct a detailed analysis of the nearshore data collected during the first year using a Geographic Information System (GIS) to map the location and extent of known mineral and biological resources,

2. Begin a phased mapping effort of the nearshore zone where renourishment is known to be needed and data are lacking, and

3. Continue studies to determine historical shoreline movements and future beach renourishment needs for the South Carolina coastline.

4. To update the Year I database and add newly acquired data, particularly Year II generated data, into the database.

This report compiles the results of work completed on objectives 2 and 4 by the Center for Marine and Wetland Studies.

Phased Mapping Effort

In Program Years 2-5, the South Carolina Task Force on Offshore Resources is focussing attention on creating resource inventories for the coast of South Carolina that extend out to a distance of 10 miles. The study will concentrate on areas that have been nourished previously or are currently experiencing need for beach nourishment (Figure 2).

There are several areas of historically high erosion rates which are of particular interest to the state for future nourishment projects. These include the Grand Strand, Folly Beach, Edisto Beach, Hilton Head, Seabrook, Fripp and Hunting Islands. The Task Force

is interested in identifying beach compatible resources and bottom types and has planned a phased mapping effort of high-resolution seismic reflection surveys, bottom sediment grabs and offshore vibracoring to assess potential renourishment inventories on the inner shelf at these sites of historic and future need.

Folly Beach is an eroding barrier island located just south of Charleston and was chosen as the first site of the phased mapping effort. This selection was based on the

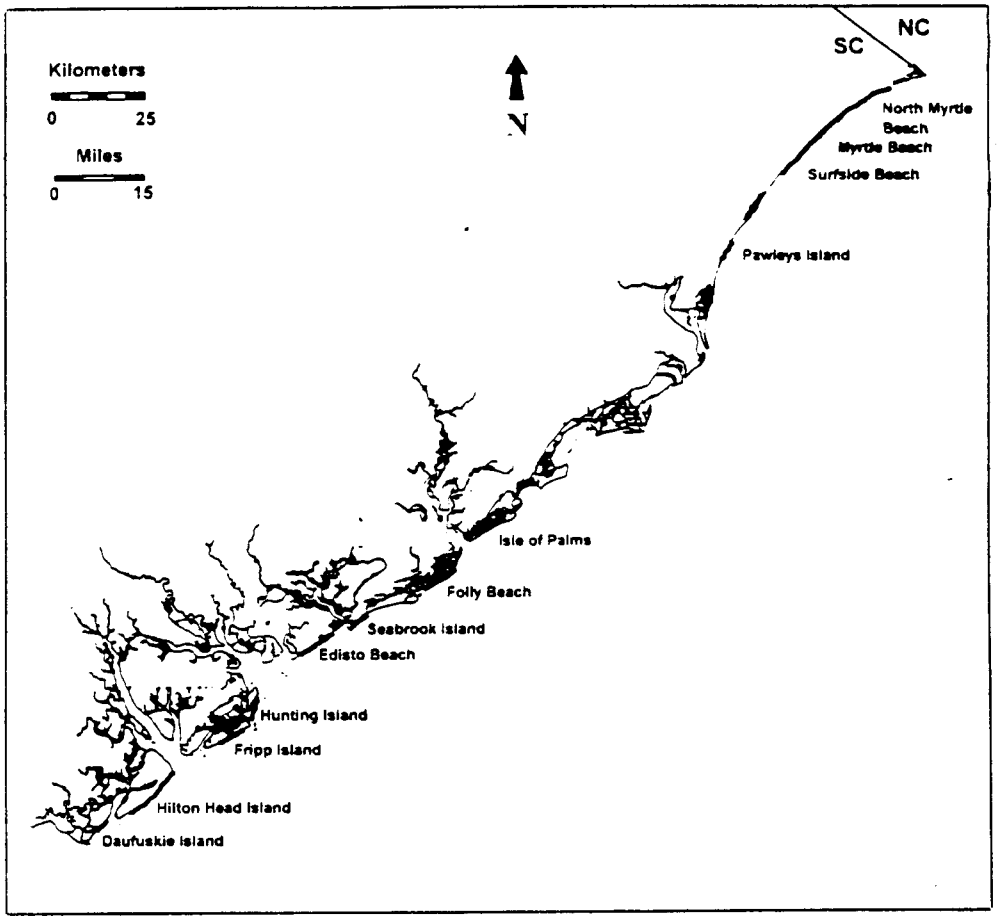

Figure 2. Areas along the South Carolina coast that have completed or planned beach renourishment projects.

historical erosion of the area and existing commitment to beach renourisment techniques to address erosion problems. Both the state and federal government are committed to a beach renourishment maintenance program at Folly Beach.

Construction of the Charleston Harbor jetties by the government exacerbated erosion at Folly Beach. A Section 111 report approved in 1988 finds that 57% of the total erosion at Folly Beach is due to the federal navigation project at Charleston Harbor (USACOE, 1991). Several factors have contributed to a long history of shoreline erosion (1.2 to 1.4 m/yr; Fitzgerald, 1979) at Folly Beach including a decrease in the sediment supply due to the cutoff by the jetties of sediment in longshore drift and increase in wave energy (Katuna et al., 1993). A potential sand source for the Folly Beach nourishment may exist on the inner continental shelf of South Carolina. Although some work has been conducted on this part of the shelf, reliable data within 3 km of the beach has not been available to ascertain whether suitable reserves exist nor are the effects of removing sand offshore on the marine habitat well understood.

The "General Design Memorandum" for the Folly Beach, South Carolina Shore Protection Project calls for a fifty-year nourishment project life with 2.5 million cubic yards (cy) needed for the initial nourishment, four periodic nourishments each requiring 1.7 million cy, and 2.1 million cy required for final nourishment in the last 10 years of the project (USACOE, 1991). The amount of sacrificial beachfill to satisfy all phases of the renourishment is estimated at 5.4 million cy (Katuna et al., 1993). The initial nourishment was completed in May 1993 and when the project is completed it will result in the reconstruction of nearly 10 km of shoreline in Folly Beach.

Sand for the initial nourishment was taken from shoals in the lower Folly River behind Stono Inlet (Figure 3). The shoals have been previously dredged and have served as a borrow site for several small renourishment projects at the southern end of Folly Island and on Bird Key (Katuna et al., 1993). The search for an offshore borrow site for Folly Beach is warranted because the sand source in the Folly River may not be available for future renourishment projects if the (CBRS) zone restrictions hold or if the site fails to refill with sand in a timely manner.

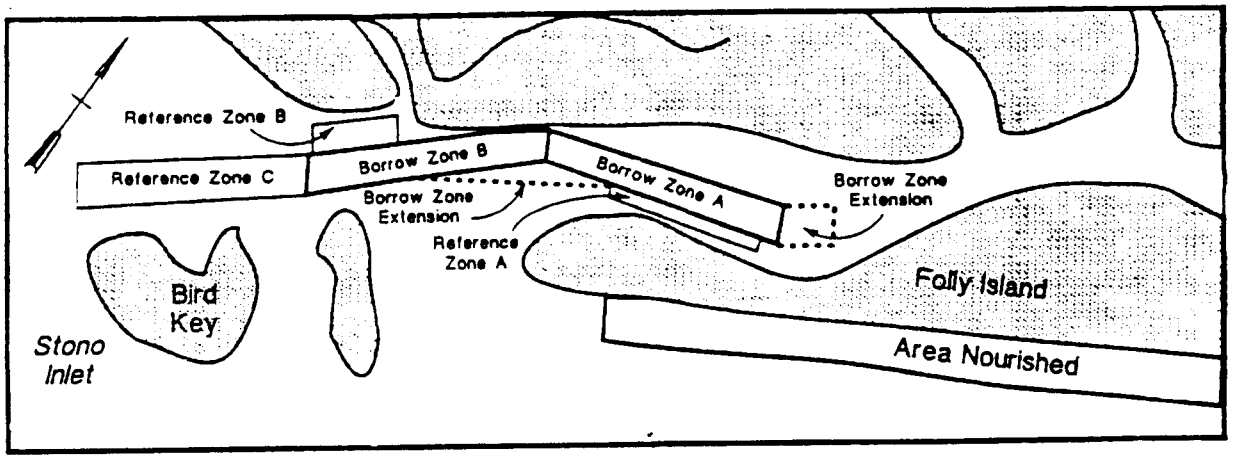

Figure 3. Folly Beach renourishment borrow site dredged January 1993 in Stono River (from Van Dolah et al., 1994).

The Folly Beach site was also selected to maximize the data set available for the assessment by targeting an area where several ongoing projects were being conducted by the Center for Marine and Wetland Studies. This allowed some sharing of mobilization costs for equipment and allowed for effective sharing of similar data sets, i.e. additional seismic line and vibracores, taken in the study area. In effect, the project received three add-on grants to augment the objectives of the program. Allocation of ship time on board the

NOAA Ship FERREL was made to the CMWS in support of long term geological investigations of the South Carolina continental shelf. Two weeks of this time, on two separate cruises, were dedicated to collecting seismic and vibracore data in the region. Some of this effort was specifically in support of the INTERMAR Task Force objectives offshore Folly Beach. In addition, ship time and diver support was awarded to CMWS for other investigations in the area. Several days of this award were also specifically targeted towards providing data through the National Underwater Research Center that would also benefit the objectives of the INTERMAR Task Force off of Folly Beach. This greatly enhanced the number of kilometers of seismic data and vibracores taken for the INTERMAR project. Construction of a digital side scan mosaic of the inner shelf is planned for August of 1995 in a collaborative effort of the U.S. Geological Survey-Woods Hole and the Center for Marine and Wetland Studies which will also provide valuable assistance and detail to assessment of the sand and biological resources offshore of Folly Beach. Some follow-up work is off of Folly Beach is proposed for Year III of the Task Force and will allow the inclusion of the digital side scan mosaic in the interpretation of inner shelf sediment dynamics.

Previous Work

Characterization of the Native Sand

The U.S. Army Corps of Engineers conducted an investigation to determine sediment characteristics of the native beach and dune sand on Folly Beach. Sediment analyses from 14 beach profiles indicated that both the beach and offshore sand are comprised of fine-grained material (Hales et al., 1991) (Table 1). The mean grain size of the subaerial beach

and offshore sand is 0.17 mm and 0.12 mm, respectively, and the existing sand in the nourishment area is classified as well-sorted (Hales et al., 1991). The percent carbonate was less than 1% in over 80% of samples and the maximum carbonate for any sample was 5% (Hales et al., 1991). The Corps of Engineers is interested in locating sand of similar grain size, less than 10% fines (silt/clay) and a moderate amount of carbonate (M. Dowd, personal communication).

Table 1. Folly Beach native sand (from Hale et al., 1991)

	MGS (mm)	MGS range	%Shell	Sorting
Beach sand	0.17	.12-.21	N/A	N/A
Offshore sand	0.12	.09-.27	N/A	N/A
Composite	0.15	N/A	1-5%	0.37

Existing Resource Data on the Inner Shelf

CMWS-Coastal Carolina University has been conducting high resolution seismic reflection studies on the inner South Carolina shelf for a variety of studies since 1988 (Figure 4). This data set includes several seismic lines in the vicinity of Folly Beach area from 3 to 33 km offshore. Seismic reflection profiles with acoustic penetration on the order of 80 meters below water level indicate various structural and stratigraphic features or trends relevant to identifying potential sand resources offshore of Folly Beach. These structures have recently been shown to have a strong influence the coastal dynamics and coastal evolution on the South Carolina coastal system (Harris et al., 1994).

Thirty-five offshore grab samples were taken and analyzed by Coastal Carolina University in November 1993 in order to delineate bottom characteristics off of Folly Beach (Figure 5; Table 2). The Charleston County Parks and Recreation Department completed a geotechnical survey for a pier at Folly Beach which includes five offshore borings and seven land borings all taken in close proximity to the beach just north of the intersection of Folly Road and Arctic Ave. The offshore borings encountered very loose to very dense sands with various amounts of fines and several borings drilled into layer of soft to firm clay (S & ME, Inc., 1993). A recent study by Katuna et al. (1993b) details the erosional history at Folly Beach and states that the Folly Beach has eroded at a rate of approximately 4 ft/yr over the last 100 years. Another investigation by Katuna et al. (1993a) uses sediment bottom grabs and offshore bathymetry to delineate a potential borrow site for Folly Beach renourishment off Stono Inlet/Bird Key.

Resource Mapping-Folly Beach Inner Shelf

Based on the existing CMWS seismic database in the area and other data available from the region, a field project design was established for assessing beach compatible resources in the study area. The area, offshore of the northern half of the island, is one where a channel system had incised the inner shelf during periods of lower relative sea level and was identified on CMWS seismic lines in the area. These deposits were thought to have a similar geologic setting as the borrow areas being used for the Myrtle Beach Renourishment Project and as a result were specifically targeted for more detailed assessment.

The existing data was presented to the Task Force in April 1994 along with a proposed plan for a seismic reflection and vibracoring study for May 1994. At that meeting discussions with South Carolina Wildlife and Marine Resources and the U.S. Fish and Wildlife Service about changes in the CBRS zones helped to refine the limits of the area proposed for field work.

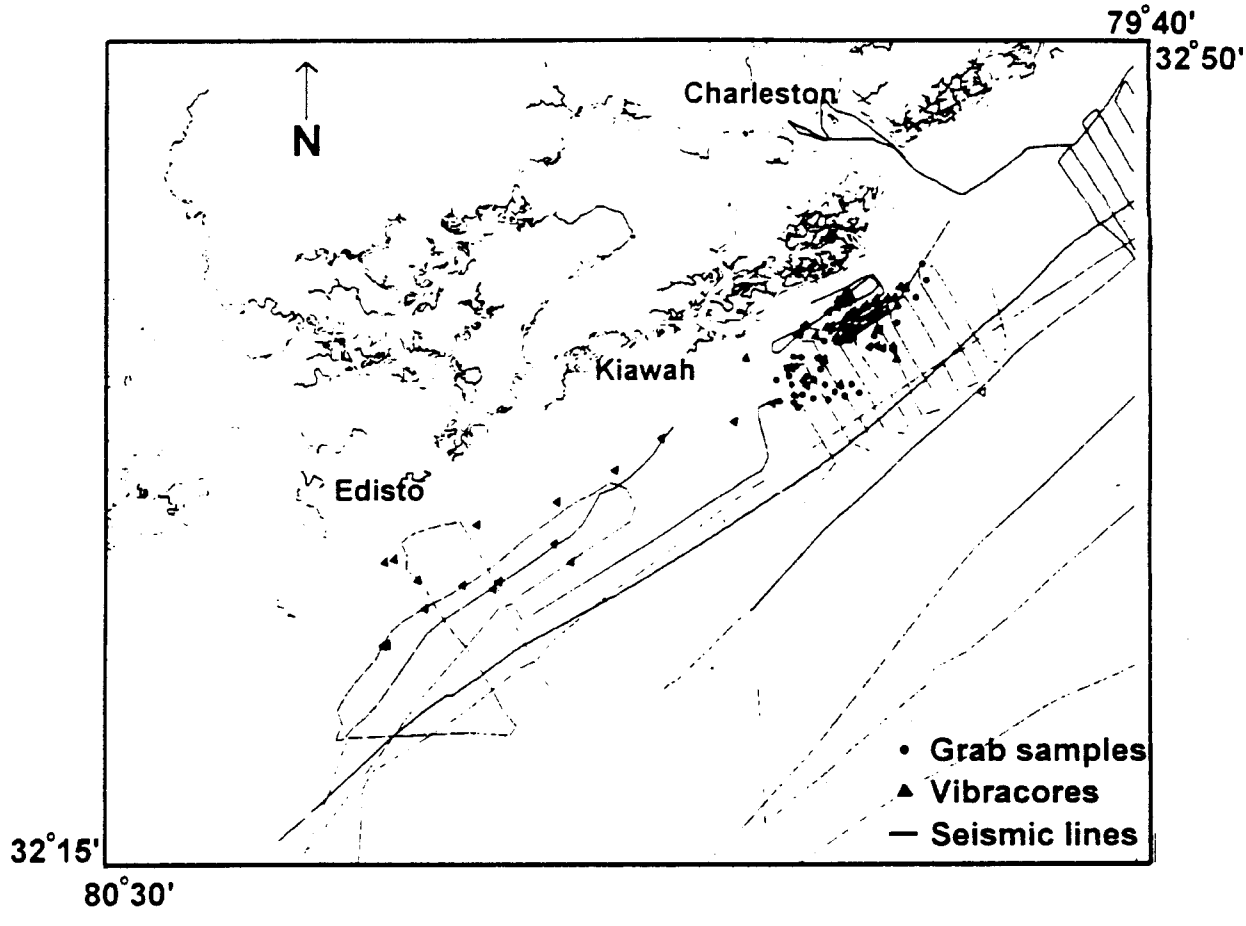

Figure 4. Composite of Coastal Carolina University seismic trackline, grab samples and vibracores collected 1993-1994 for Charleston-St. Helena Sound, South Carolina.

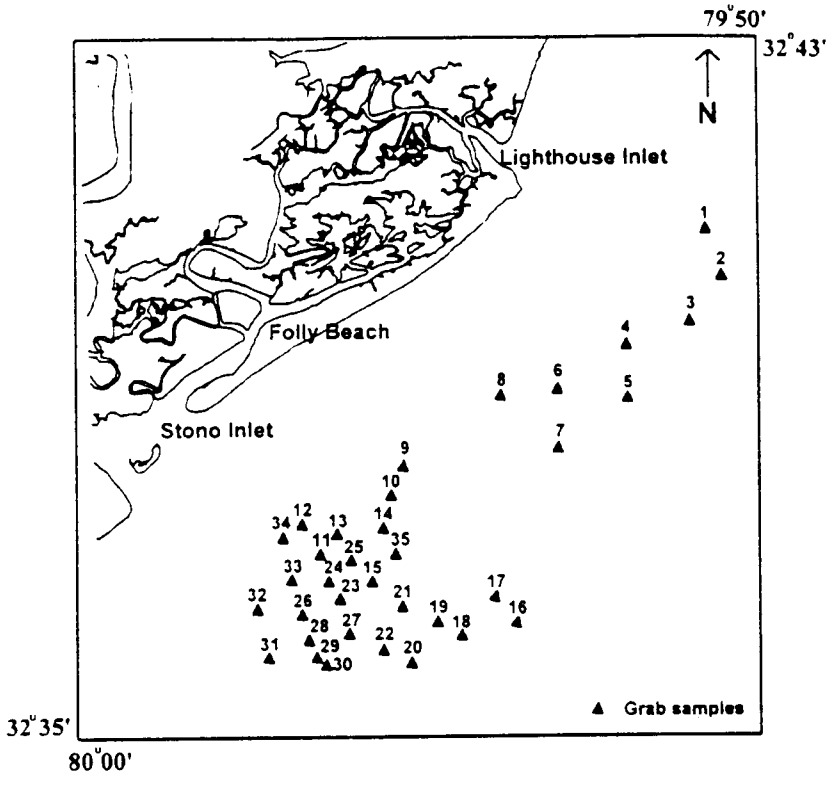

Figure 5. Thirty-five grab samples collected in November 1993 off Folly Beach, SC.

At that time, sensitive areas were identified in and directly offshore from both Stono and Lighthouse Inlets (Figures 6,7). Although these inlets have potentially large sand reservoirs, they were not targeted here because of the extension of the CBRS zones offshore perpendicular to beach. In addition, the search for potential borrow materials were limited by an agreed upon minimum water depth limit of the 16 foot MLW contour. This depth limitation was also made in response to the discussion of the changing CBRS zone. High-resolution seismic-reflection surveys and vibracoring were planned to essentially exclude those areas that fell into the new restrictions offshore of the inlets and in water shallower than 16 feet MLW.

Table 2. Folly Beach grab sample sediment analyses-November 1993

Grab ID	Latitude	Longitude	%Sand	%Silt/Clay	%Gravel	%Carbonate	MGS (mm)
1	32.671	-79.838	50.00	0.93	49.59	71.27	1.7720
2	32.661	-79.834	93.30	2.09	4.66	24.50	0.1844
3	32.651	-79.843	79.06	1.60	18.99	51.28	0.6886
4	32.646	-79.859	84.38	1.11	14.01	49.29	0.7871
5	32.635	-79.860	89.05	1.05	9.38	21.30	0.7535
6	32.637	-79.878	96.50	2.75	0.36	5.66	0.1244
7	32.624	-79.878	89.32	1.83	8.67	23.92	0.3817
8	32.636	-79.893	92.92	1.14	5.80	28.50	0.4192
9	32.622	-79.920	95.64	3.05	1.57	8.70	0.1395
10	32.617	-79.589	97.24	2.74	0.47	5.44	0.1307
11	32.597	-79.949	96.97	3.03	0.18	5.27	0.1220
12	32.609	-79.945	95.78	4.22	0.11	6.30	0.1100
13	32.610	-79.939	95.84	3.93	0.36	10.12	0.1144
14	32.608	-79.924	96.37	3.13	0.78	8.49	0.1230
15	32.603	-79.923	94.18	2.62	3.15	11.82	0.1694
16	32.586	-79.891	96.63	1.25	2.21	13.10	0.2218
17	32.592	-79.897	92.18	1.00	5.86	23.96	0.3236
18	32.583	-79.905	98.38	1.28	0.43	7.36	0.1910
19	32.587	-79.912	98.53	0.98	0.49	8.54	0.2289
20	32.580	-79.918	98.96	1.33	0.07	6.34	0.1794
21	32.590	-79.920	97.69	1.36	0.75	8.20	0.1931
22	32.582	-79.928	81.50	18.67	0.06	5.27	0.1560
23	32.595	-79.930	83.40	1.59	14.70	32.68	0.3568
24	32.595	-79.937	90.44	2.52	6.95	22.12	0.2783
25	32.594	-79.935	87.69	6.46	5.64	25.83	0.2761
26	32.590	-79.948	95.35	3.08	1.30	10.23	0.1819
27	32.585	-79.938	98.27	1.36	0.60	7.11	0.2298
28	32.582	-79.947	96.02	2.99	0.87	7.09	0.1619
29	32.583	-79.947	96.85	2.68	0.41	7.42	0.1513
30	32.578	-79.944	88.54	1.87	8.74	18.65	0.2292
31	32.576	-79.945	97.17	2.32	0.37	7.01	0.1525
32	32.579	-79.959	88.68	4.90	5.50	21.43	0.2604
33	32.585	-79.792	61.48	36.70	1.54	24.10	0.2446
34	32.594	-79.958	95.28	5.67	0.42	10.37	0.1078
35	32.603	-79.945	93.80	1.99	1.99	12.20	0.1708

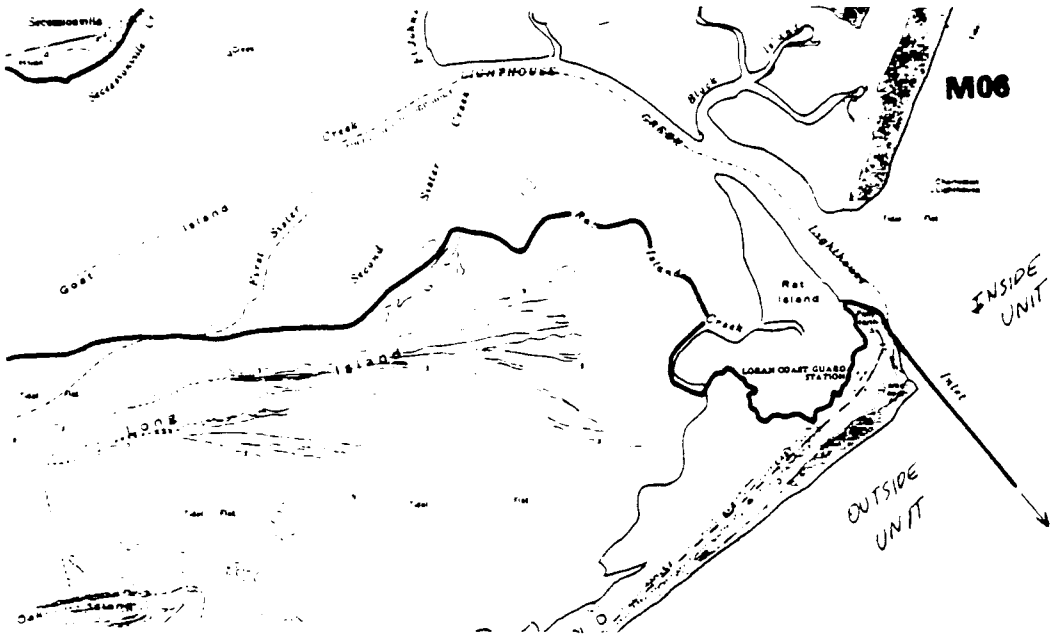

Figure 6. CBRS zone for North end of Folly Beach (Lighthouse Inlet) based on U.S. Fish and Wildlife Service, June, 1994.

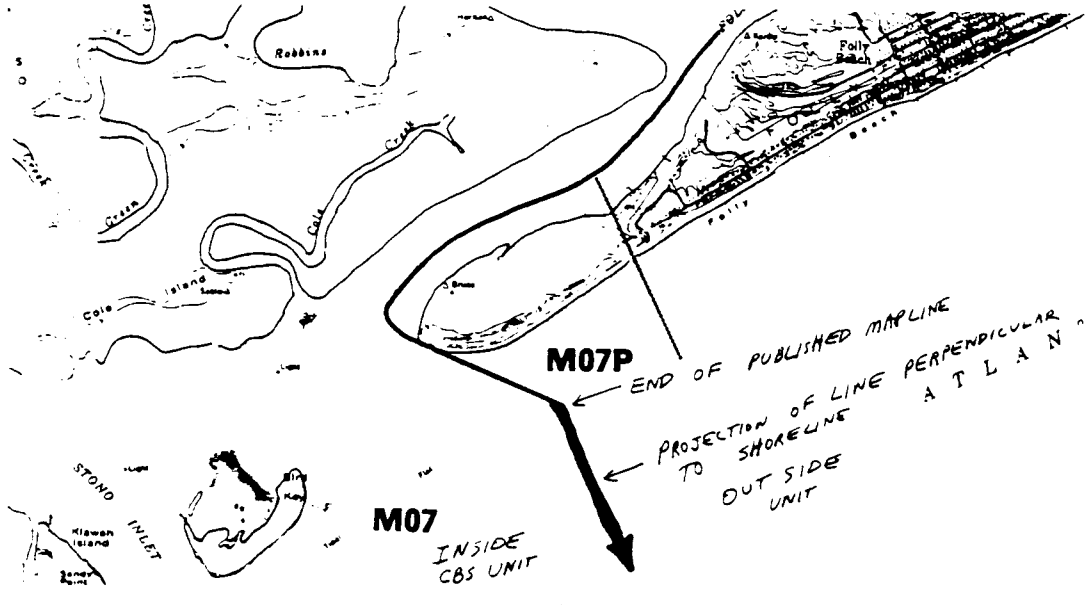

Figure 7. CBRS zone for south end of Folly Beach (Stono Inlet) based on U.S. Fish and Wildlife Service, June 1994.

The survey design was to identify areas of renourishment compatible sand reserves by running a reconnaissance grid of seismic trackline from as close into the beach as possible with the vessels available to a distance of about 16 km offshore and to run a more detailed grid in the vicinity of the buried channel system offshore of the washout.

The National Underwater Research Center (NURC) awarded Coastal Carolina University time from May 9-13 to use the research vessel R/V Elusive and crew to run high-resolution seismic reflection tracklines in a grid 1 to 5 km offshore Folly Beach (Figure 8). Using the seismic profiles and results from previous sediment grabs, 33 sites were targeted for obtaining vibracores. The vibracore unit used was designed by Drs.Stan Riggs from East Carolina University and William Cleary from University of North Carolina-Wilmington. The system is a SCUBA diver operated vibracore where the vibratory energy is a compressed air-driven hammer system. Three inch diameter aluminum irrigation pipe served as the core barrel. Once the core barrels were driven into the bottom, the barrels were cut, sealed, and extracted using air lift bags. Core locations were established using GPS and water depth was measured by the ships fathometer and diver gauges. Diver descriptions of the bottom conditions and drilling information was recorded for each site.

The cores were cut on the deck of the ship into approximately 1.5 meter sections and sealed. Limited visible compaction was reported by the divers and disruption of cores seemed minimal using this coring rig. The cores were transported to Coastal Carolina University and were split, described, sampled, photographed and videotaped and the sediment texture was analyzed. Channel samples of sand layers were obtained and standard sediment textural analysis was conducted on each sample using a Ro-tap and sieve system

to determine textural modes including, %sand/%silt/%clay, mean grain size distributions, higher moments reflecting sorting/skewness/kurtosis and percent carbonate. Pipet analyses was performed on clay rich units. Processing of the cores was conducted at Coastal Carolina University under the direction of Dr. Paul Gayes. The analyses were completed in the Fall of 1994 and the data are included in the update of the Year 1 Task Force database (Appendix A).

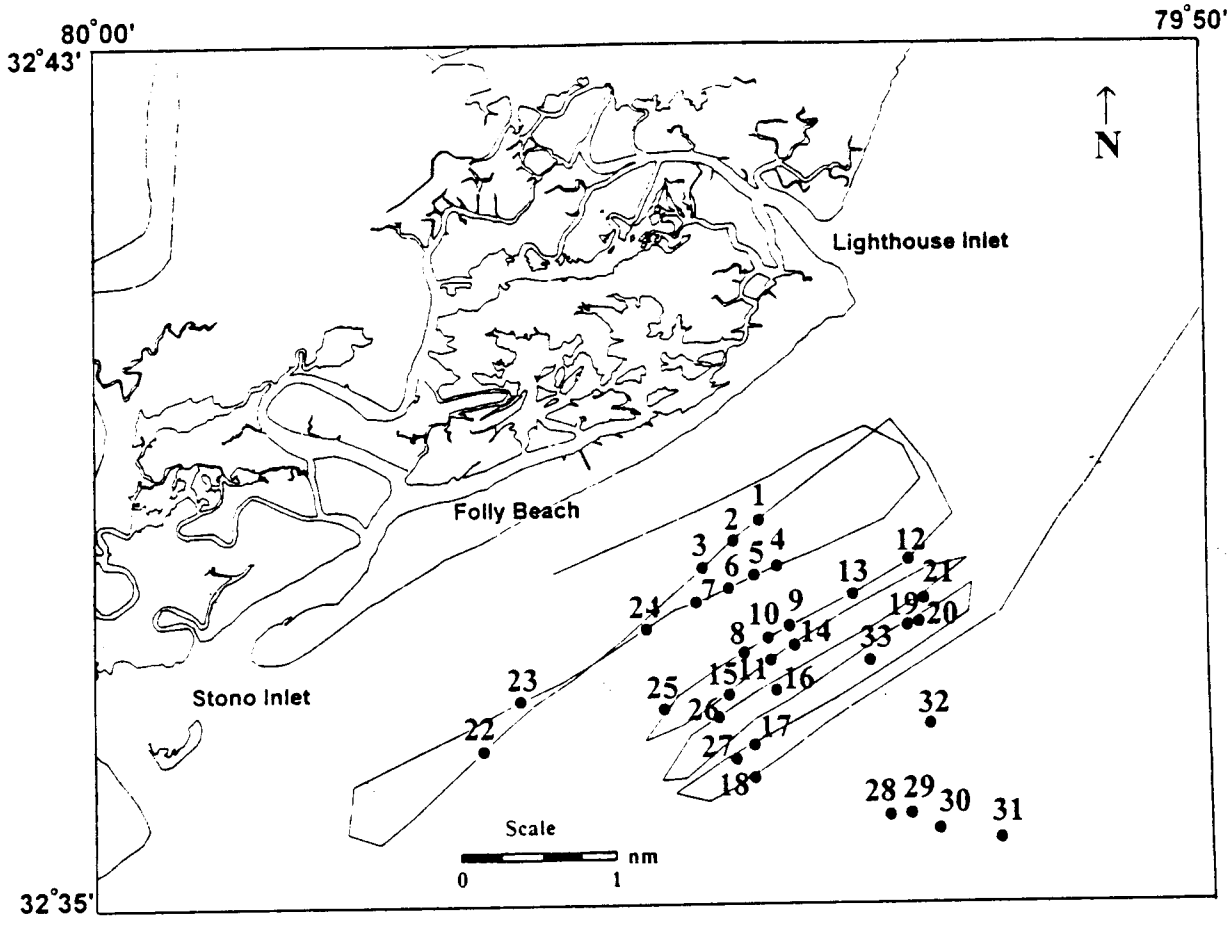

Figure 8. High-resolution seismic-reflection trackline and vibracore locations collected on NURC cruise off Folly Beach, May 5-12, 1994. Core numbers are referred to in subsequent tables and appendices.

The preliminary results were presented to the Task Force in June. At that meeting an award of shiptime aboard the NOAA Ship FERREL to the CMWS through the South Carolina Sea Grant Consortium for a cruise in the Charleston area in early August 1994 was identified. A Rossfelder Vibracore rig was available on this cruise through support from two other grants to the CMWS and a cooperative agreement with Dr. Dave Scott, Dalhousie University. Part of the cruise plan for this time included expanding the vibracore suite for INTERMAR objectives and priority targets were identified.

During August 1994, vibracore and high-resolution seismic reflection data were collected during 5 days aboard the NOAA FERREL. Forty-five cores were collected from 3 to 12 km offshore south of Charleston Harbor. Cores varied in length from about 1 to 6 meters and averaged 1.75 to 2.5 m. Twenty of these cores were collected within the general study area (Figure 9). Many of these cores were located in positions that were at least partially influenced by criteria for INTERMAR Task Force objectives. At the June Task Force meeting it was established that some additional cores would be taken offshore of Stono Inlet and also expand the coverage in areas not concentrated on in the May cruise.

The Dalhousie Rossfelder Vibracore rig is rotated by two electrical motors operating in opposition to produce the vibrational energy. The core system employs a re-usable outer steel core barrel with an inner plastic liner in which the actual core is recovered. A steel cutting head equipped with a core catcher is fitted into the base. The system is maintained vertical during the coring process by floats and the core is extracted by a straight lift from the ships crane. Compaction could not be directly assessed using this system but little distortion was present in cores which recovered more than one meter of sediment.

About one third of the 45 cores collected on the NOAA FERREL in July-August are described, photographed and videotaped. Preliminary analysis of several cores located within the proposed borrow site, confirm the existence of a sizeable reserve of fine sand. Upon completion of the sediment analysis, the information will be included in the Year III database. Over 215 km of high-resolution seismic-reflection trackline was also collected

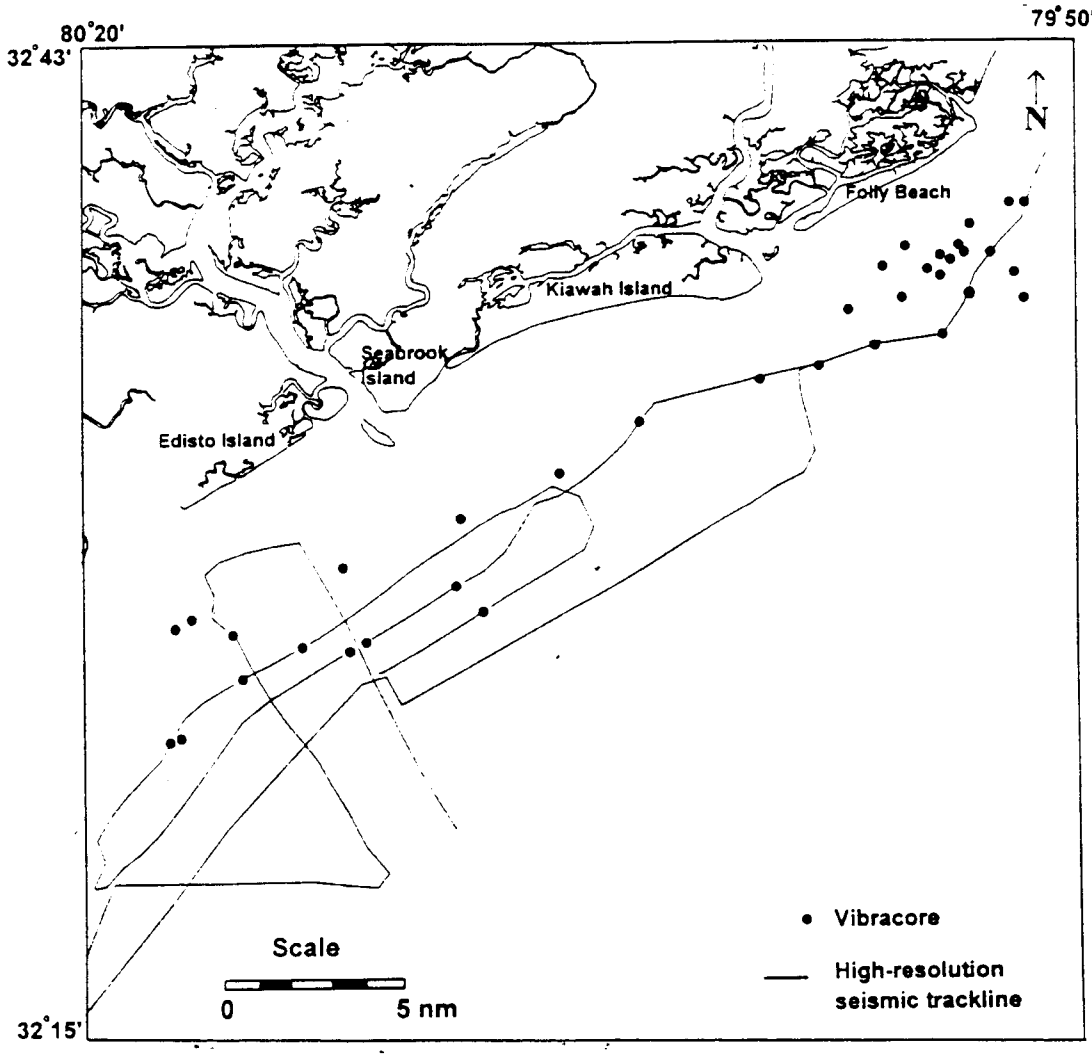

Figure 9. High-resolution seismic-reflection trackline and vibracore locations collected on the NOAA ship FERREL off Folly Beach-St. Helena Sound, July-August 1994.

offshore and data were processed to help choose core sites and locate potential sand reserves off Folly, Kiawah, and Edisto Islands. A Geopulse transducer was used to image depths of greater than 50 m beneath the water surface (Figure 10).

RESULTS

High Resolution Seismic Reflection Profiles

In general, the Geopulse seismic reflection profiler data is of high quality and shows a thin unconsolidated Quaternary sequence overlying indurated Tertiary deposits. The Quaternary system is interpreted to be composed of several transgressive and regressive Pleistocene sequences capped by a thin Holocene transgressive sheet. Many of the Pleistocene units have been reworked to varying degrees by successive fluvial and inlet incisions as well as by successive transgressive ravinement surfaces. In some places many of these sequences have been completely reworked and the Quaternary strata is very thin. In several areas. these deposits are missing and indurated Tertiary units exist at the sea floor.

The underlying Tertiary systems are characterized, in general, by an undulating upper surface in the area south of Charleston. Offshore of the study area these deposits form a gentle domelike structure whose surface tilts up to south along the shelf from offshore of Lighthouse Inlet, crests approximately five kilometers to the south and then plunges to the south towards Stono Inlet. The structure of the top of the Tertiary has clearly influenced the Quaternary deposits and processes. For example, the depth to which the Quaternary channels incise are limited by the depth of the top of the Tertiary (Figure 10). Tertiary units outcrop on the inner shelf approximately eight kilometers off of Folly Beach in water depths in excess of 10.5 m. The unit was described as a calcareous marl and preliminarily

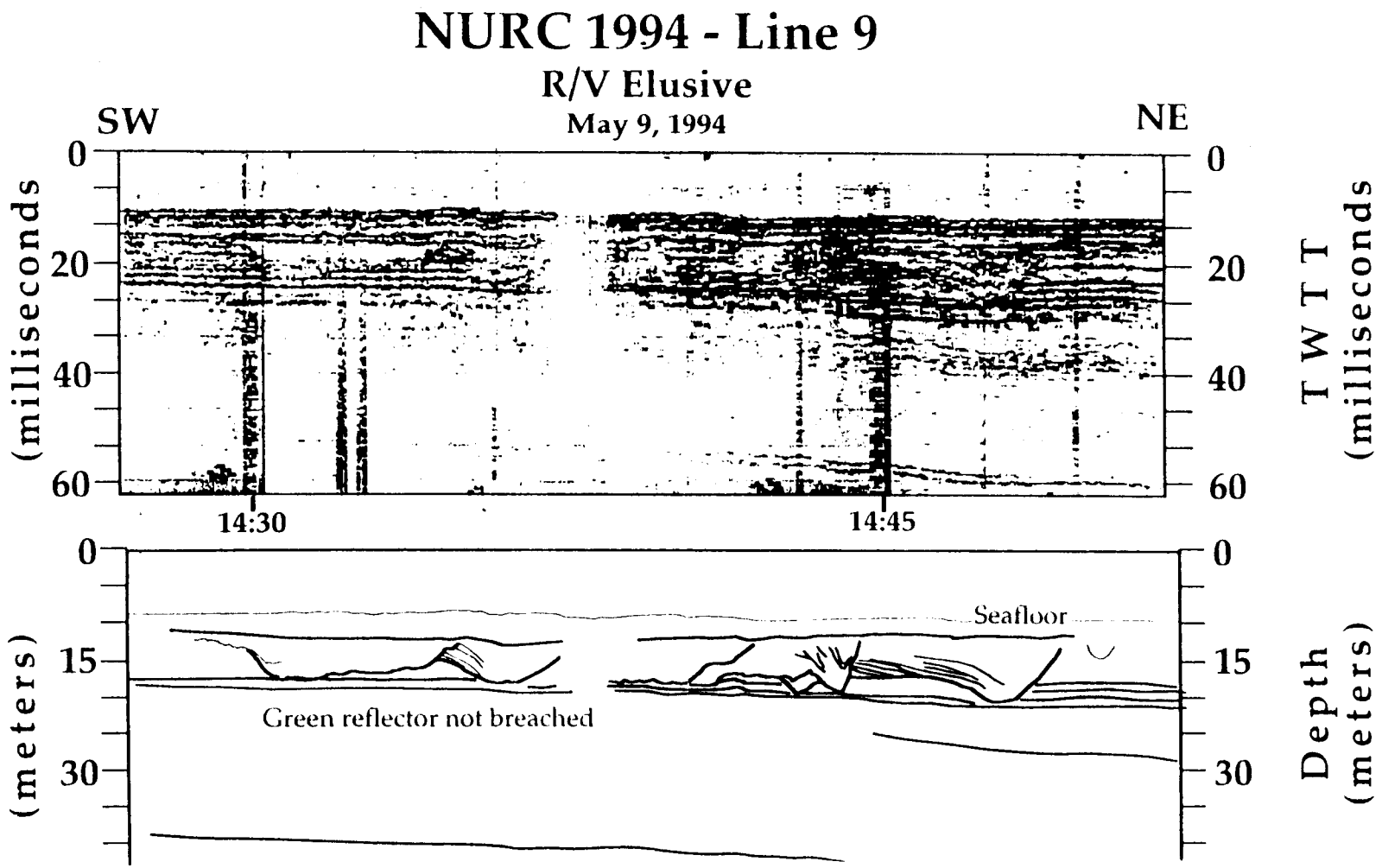

Figure 10. Example of the seismic record (original and interpreted) collected on the NURC cruise. Profile shows channels, reworked channels, and deeper units rising near the surface to the southeast. (figure from Harris et al., 1994)

identified as part the Cooper Formation. These features appear to serve as the nucleus of several poorly developed linear sand ridges offshore. Strong tidal flows in the areaappear to interact with these features and irregular shaped ridges presumably forming in the lee. A boring taken near the Folly Beach Coastal Guard Station encountered this unit approximately 21.3 m below the surface (Mike Katuna, University of Charleston, personal communication). Details on the stratigraphy and geologic framework for this area will be published this summer (Harris et al., 1995 [in prep]; Gayes et al., 1995 [in prep]).

Under the inner shelf overlying the crest of this dome-like structure the Quaternary systems are thin and very few channels are present. The Quaternary systems have largely been planned by the Holocene? transgressive ravinement. On the basis of this stratigraphy, vibracores were located to gather samples of the surficial and shallow subsurface sediments to depths of at least one meter below the sea floor.

Two areas were identified that displayed a high degree of channel cut-and-fill deposits (Figure 11). These areas were specifically targeted for coring and additional seismic lines, since this geologic setting is likely to possess relatively course sediment and serve as a potential renourishment resource.

A zone offshore from the northeast end of the island is nearly 1 km in width and exhibits reworking in channels to a depth of 15-20 meters below the sea floor. The zone that runs off the middle part of the island is on average wider and shallower than the more northerly zone (1.5-2 km wide and 10 meters deep). This zone has not pierced the stratigraphic unit below which may represent more resistant (competent) material (Figure 10).

Vibracore Data

Sediment analyses from cores collected off Folly Beach in May 1994 show Quaternary deposits with varying amounts of gravel, sand and fines. Channel samples for sediment analyses (sieve and pipet analyses) were taken from each lithologic unit within the core. The weighted averages for the 33 cores are given in Table 3. Visual description of these cores are provided in Appendix D. For cores which were sited along seismic reflection

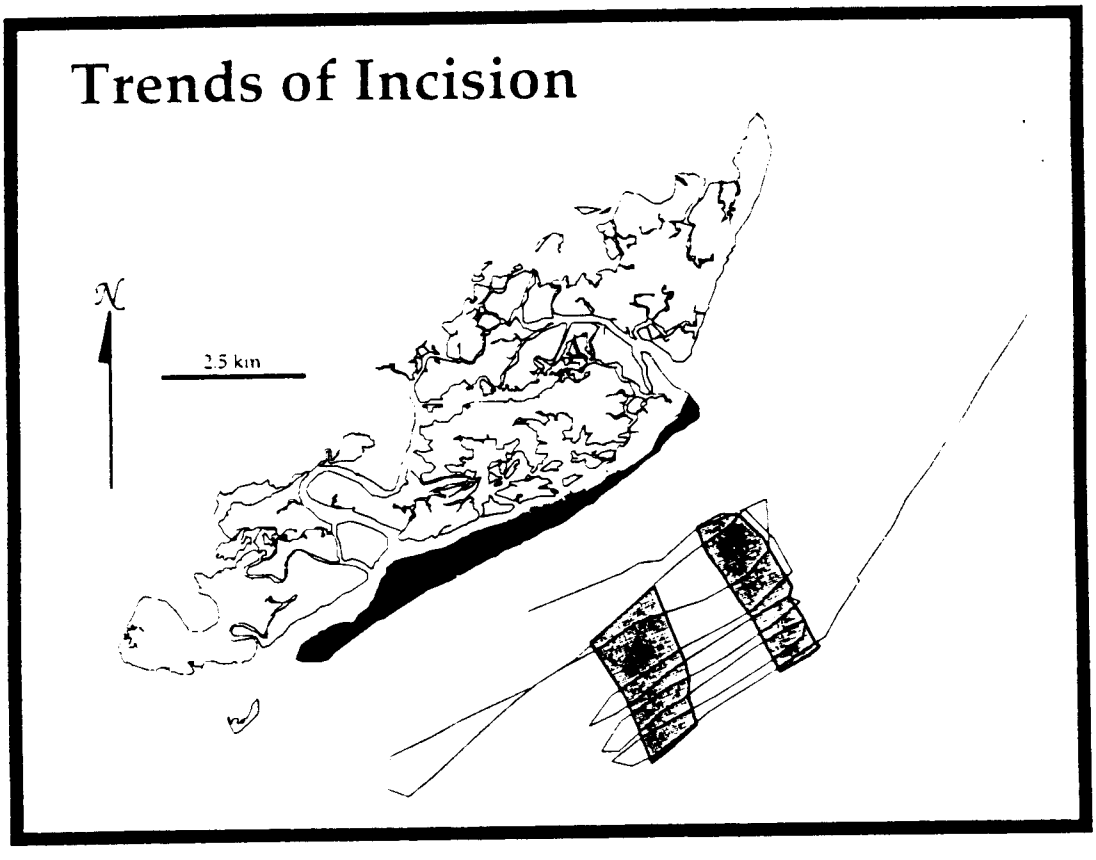

Figure 11. Trends of incision identified off high-resolution seismic-reflection profiles collected off Folly Beach in May 1994.

tracklines a copy of the seismic record with the position of the cores annotated on the record is provided in Appendix E.

The U.S. Army Corps of Engineers was contacted to establish criteria for defining beach renourishment compatible sands. This criteria is that a suitable reserve must be compatible with existing sand on Folly Beach (See Table 1, pg.9) and has less than 10-12% fines (M. Dowd, personal communication).

The percent clay fraction from the vibracores off Folly Beach ranges from 2% to 73% (Table 3; Figure 12). Two distinctive clay layers (one a dark grey and second brown clay) appear in many of the cores and can be correlated across short distances. The percent of sand found in the vibracores, as a weighted average of channel samples to represent the entire core, is shown in Figure 13. Two areas are delineated where the shallow subsurface deposits contain greater than 90% sand. The small area off the middle of the island and nearer shore is in shallow water (< 15 feet MLW) within the "depth of closure" for the beach profile, the zone was not cored later in summer. A large area off the middle part of Folly Island contains sand and gravel to depths exceeding 3 meters. The weighted mean average grain size of the cores (including the carbonate fraction) shows marked changes in grain size with in the study area off Folly Beach (Figure 14). These three plots (Figs. 12, 13 and 14) show a zone off the middle of the island with sediment that has less that 10% clay, >90% sand, and the mean grain size is very similar to the native sand on Folly Beach.

Table 3: Percent gravel, sand, carbonate, fines, and mean grain size for NURC vibracores off Folly Beach

Core ID	Core length	% Gravel	% Sand	% Silt/Clay	%$CaCO_3$	MGS (mm)
F-94-1	173	5.92	85.42	8.71	18.05	0.1848
F-94-2	182	7.67	86.77	4.61	25.21	0.3494
F-94-3	184	2.09	84.04	13.83	17.51	0.1484
F-94-4	212	2.25	76.59	21.36	24.34	0.2718
F-94-5	134	6.10	76.24	17.06	23.33	0.2691
F-94-6	192	5.67	80.43	13.54	22.66	0.2140
F-94-7	171	2.66	88.75	8.76	15.25	0.1690
F-94-8	194	8.06	78.12	14.11	30.06	0.3253
F-94-9	153	0.55	78.44	20.95	19.95	0.1718
F-94-10	232	2.5	70.09	27.66	22.16	0.1500
F-94-11	144	12.95	85.4	0.95	39.83	0.5139
F-94-12	203	1.8	87.84	10.34	15.35	0.2799
F-94-13	237	2.01	80.73	17.49	17.09	0.1236
F-94-14	273	6.85	80.91	12.49	49.78	0.3306
F-94-15	272	1.25	91.81	6.92	14.04	0.1385
F-94-16	272	1.86	92.2	5.95	15.52	0.1862
F-94-17	269	3.23	93.52	3.24	21.05	0.1935
F-94-18	340	2.66	95.3	2.03	14.66	0.1831
F-94-19	205	1.23	85.78	13.27	14.84	0.1018
F-94-20	303	3.32	81.39	15.27	19.46	0.2597
F-94-21	242	0.45	89.61	10.02	13.07	0.1185
F-94-22	164	1.71	90.65	7.65	10.64	0.1356
F-94-23	142	2.7	76.47	21.03	9.24	0.1242
F-94-24	190	1.21	76.74	22.34	12.56	0.1331
F-94-25	179	0.96	93.29	5.75	10.26	0.1286
F-94-26	199	1.86	94.11	4.03	17.37	0.1544
F-94-27	279	0.37	96.15	3.48	8.68	0.1379
F-94-28	46	24.92	67.05	5.86	39.75	0.7326
F-94-29	179	4.09	26.19	72.84	22.41	0.0735
F-94-30	132	20.82	67.73	11.58	43.53	0.9073
F-94-31	172	18.85	76.76	4.41	31.77	1.4319
F-94-32	223	4.65	92.65	2.67	19.02	0.2116
F-94-33	199	2.85	91.14	6.03	16.61	0.1643

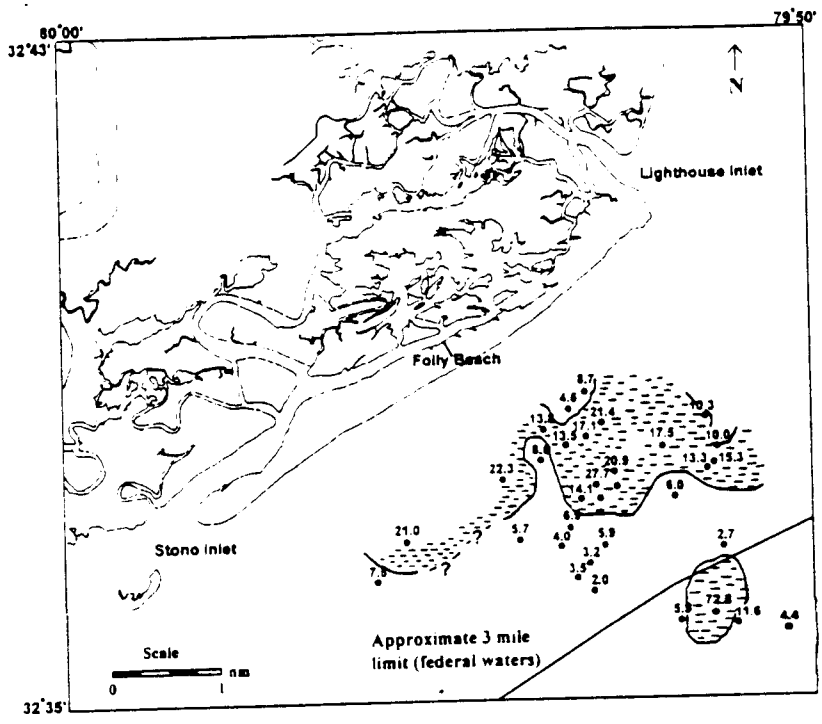

Figure 12. Percent clay from vibracores collected May 1994 off Folly Beach. The 10% clay contour is drawn.

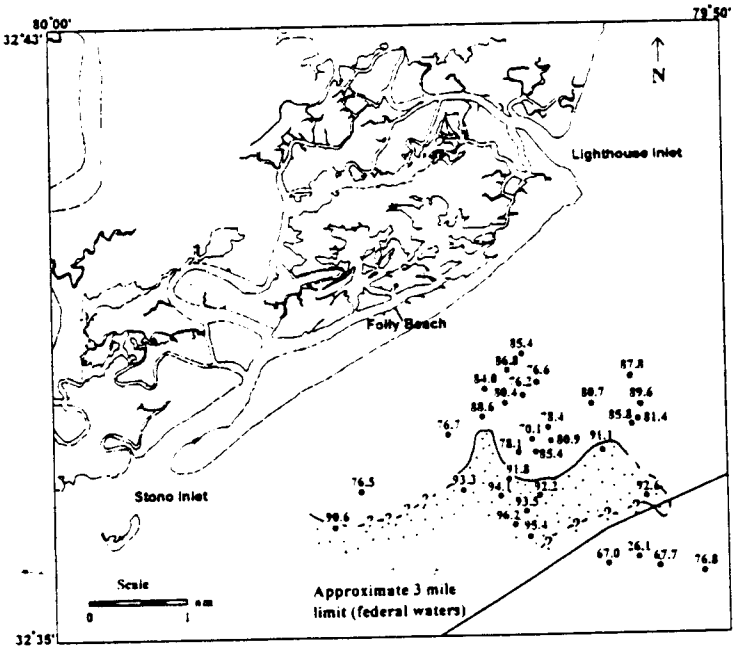

Figure 13. Percent combined sand and gravel fraction from cores collected on NURC cruise (May 1994). The 90% sand and gravel contour is drawn.

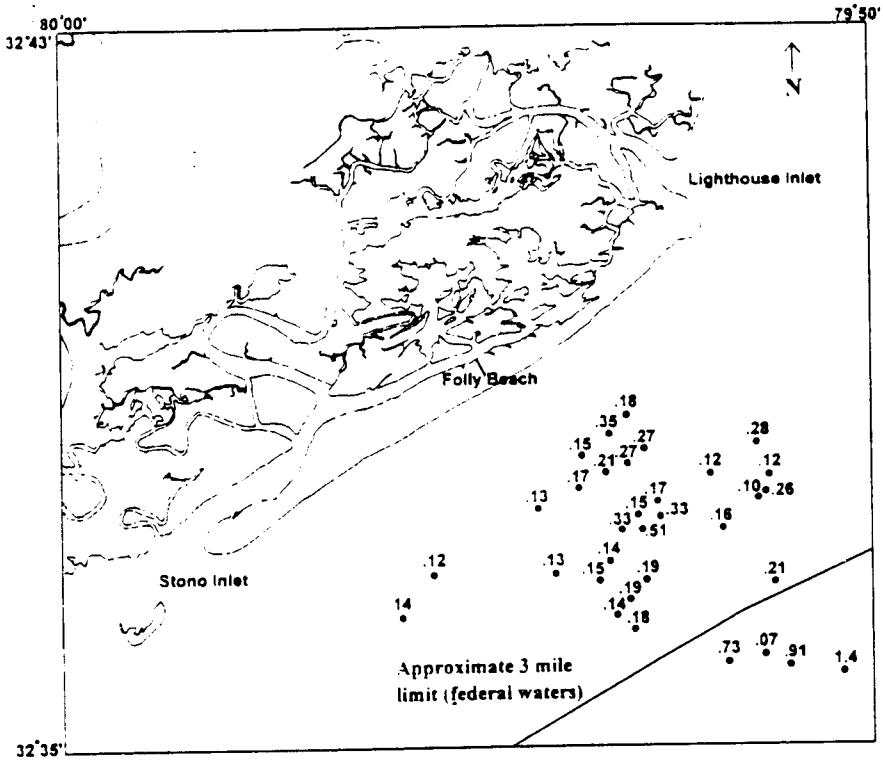

Figure 14. Mean grain size (mm) from cores off Folly Beach (May 1994).

Identification of a Potential Borrow Site

Using the sediment textural data derived from the vibracores and available seismic reflection profiles a potential borrow site has been delineated offshore Folly Beach (Figure 15). The zone is approximately 1 mile by 1.5 miles and could be dredged (with no loss in beach compatibility of the sand) to a depth of 2+ meters. This trend generally parallels the southern zone of channel incision identified in the seismic reflection profiles. Although the area is fairly well constrained by core data on the north and east sides the limit of the reserve to the south and west is less well constrained. The extent of this reserve's southern and eastern limit is proposed to be addressed in Year III of the Task Force. Some of the

cores obtained on the NOAA Ship FERREL in August 1994 for other ongoing studies will provide additional information assisting in defining the potential borrow area. The seismic and core data as well as diver observations suggest that there is limited or no hard bottom outcrops in the proposed borrow area although some may exist seaward of the site. This assessment will be greatly facilitated by the side scan survey of the Folly Beach inner shelf scheduled for Summer of 1995 by the US Geological Survey-Woods Hole office.

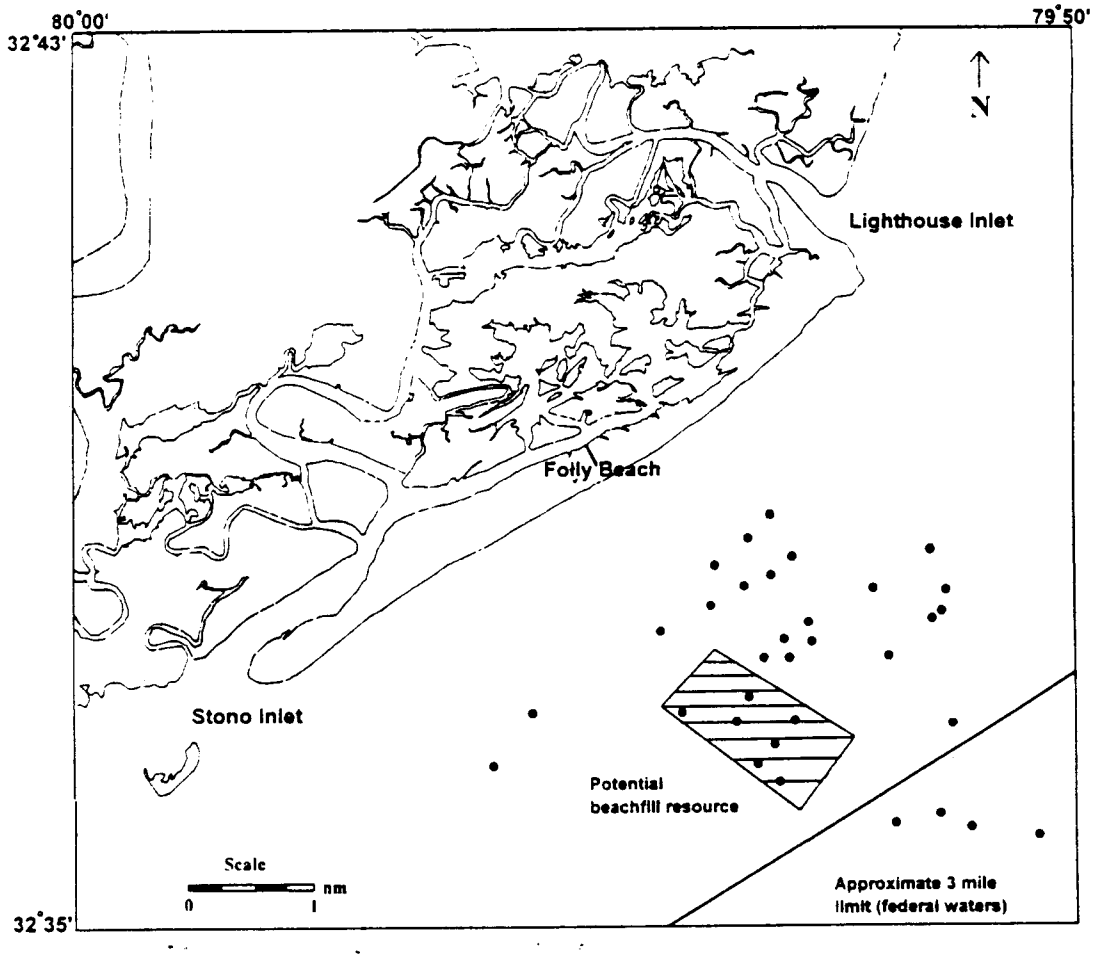

Figure 15. Proposed borrow site offshore Folly Beach. Filled circles represent vibracores collected May 1994.

The sediment data obtained from the cores consisted of textural parameters derived from channel samples of distinct lithologic units in the cores. Channel samples were obtained for the entire thickness of relatively massive sand layers that appeared to be homogeneous with respect to grain size from visual observation. Smaller distinct units, which may have been distinct fining upwards sequences, were also characterized by a channel sample. This information was assembled into a spreadsheet (Microsoft Excel v. 5.0) which allowed weighted average calculations both over the entire length of the core and could be computed for a specified length (0 to 50 cm, 0 cm to 1 m, 0 cm to 1.5 m etc.). Varying the length over which the analysis was run aided in identifying the depth at which the overall mean grain size, percent sand or silt/clay diverged from the native beach sand (Table 4). This analysis was performed to provide the best representation of the overall characteristics of the deposit for use as a renourishment resource.

Cores within the proposed borrow area have sand which is beach compatible over the entire length of the cores which ranged from 1.8 to 3.4 meters. The aerial extent of the potential borrow area appears to be well defined on the eastern and northern boundaries. The southern and western limit is less well defined. For purposes of estimating the potential of this site the following analysis was conducted. Three different sizes for the potential borrow areas were delineated (Table 5). These represent bottom areas of 1 square nautical mile, 1.5 square nautical miles, and 2.25 square nautical miles. Each of these progressively assumes a less conservative extent of the southern and western limits as constrained by the available core data. The aerial extent of the potential borrow sites where then subject

Table 4 Sediment analyses for NURC cores, Folly Beach for 0-99cm (left) and 0-50cm (right) Cores within the borrow site are highlighted

Core ID	MGS(mm)	%CaCo3	%Gravel	%Sand	%Silt/Clay	MGS(mm	%CaCO3	%Gravel	%Sand	%Silt/Clay
F-94-1	0 22	17 30	7 96	87 64	3 40	0 17	10 72	3 33	90 60	4 10
F-94-2	0 49	31 97	9 32	86 54	2 96	0 63	40 30	11 27	86 52	0 24
F-94-3	0 18	11 22	2 32	95 77	0 90	0 20	13 32	3 04	94 23	0 76
F-94-4	0 32	12 97	3 23	85 52	10 34	0 22	11 34	2 48	95 21	0 35
F-94-5	0 32	21 26	8 41	72 52	17 92	0 48	31 09	14 48	52 60	31 25
F-94-6	0 30	22 02	8 60	81 59	8 00	0 40	31 09	14 17	81 18	0 73
F-94-7	0 20	9 74	2 70	94 97	1 33	0 14	5 55	1 17	95 43	1 44
F-94-8	0 53	32 77	12 80	84 90	1 30	0 86	51 94	21 27	76 42	0 35
F-94-9	0 20	12 39	0 79	69 13	28 90	0 17	12 85	1 01	53 22	43 67
F-94-10	0 18	10 43	2 49	60 33	36 21	0 29	15 51	4 75	75 88	17 37
F-94-11	0 64	45 27	17 12	80 87	0 85	0 81	52 68	19 91	77 96	0 16
F-94-12	0 45	14 32	3 18	91 50	4 32	0 74	17 92	5 75	89 25	3 04
F-94-13	0 13	9 53	2 34	83 48	13 45	0 15	6 99	1 79	94 33	1 91
F-94-14	0 70	34 78	17 94	57 19	24 53	1 32	54 52	34 10	62 42	1 56
F-94-15	**0.14**	**8.08**	**1.82**	**86.40**	**10.71**	**0.14**	**8.25**	**1.24**	**94.45**	**2.35**
F-94-16	**0.28**	**19.75**	**4.38**	**91.79**	**2.83**	**0.37**	**25.88**	**6.80**	**90.19**	**1.04**
F-94-17	**0.14**	**12.70**	**0.63**	**94.10**	**4.28**	**0.14**	**14.89**	**0.97**	**91.48**	**5.59**
F-94-18	**0.26**	**18.21**	**5.15**	**91.98**	**1.86**	**0.32**	**22.07**	**6.84**	**90.90**	**0.30**
F-94-19	0 14	11 61	2 50	94 33	2 18	0 15	11 97	3 20	93 25	1 58
F-94-20	0 05	3 18	0 90	66 40	31 60	0 08	2 01	0 71	58 65	38 55
F-94-21	0 12	8 87	0 85	82 51	15 84	0 12	6 46	1 48	71 16	25 81
F-94-22	0 13	13 71	1 63	90 42	6 94	0 13	12 84	1 36	90 25	6 44
F-94-23	0 14	10 09	3 26	88 46	7 27	0 14	9 76	3 10	88 21	6 72
F-94-24	0 16	9 41	1 95	88 26	8 88	0 14	8 31	1 78	93 83	2 42
F-94-25	**0.14**	**9.05**	**1.43**	**92.45**	**5.11**	**0.14**	**9.53**	**1.32**	**92.91**	**3.81**
F-94-26	**0.19**	**13.12**	**3.41**	**92.61**	**2.97**	**0.18**	**9.96**	**2.51**	**94.13**	**1.40**
F-94-27	**0.14**	**7.32**	**0.46**	**95.21**	**3.32**	**0.14**	**7.66**	**0.61**	**94.33**	**3.09**
F-94-28	0 73	46 27	24 92	67 05	5 86	0 73	46 27	24 92	67 05	5 86
F-94-29	0 11	6 58	4 93	37 06	59 47	0 19	12 89	6 78	60 87	31 46
F-94-30	0 94	47 53	23 62	74 55	0 84	0 91	55 70	28 04	69 33	0 67
F-94-31	0 23	17 56	4 38	92 69	1 94	0 69	15 98	3 25	94 30	0 49
F-94-32	0 19	13 51	4 38	92 69	1 94	0 25	17 16	4 80	92 73	0 50
F-94-33	0 17	14 10	3 78	86 38	8 99	0 13	9 26	1 66	87 68	8 78

to volume calculations based on depth of dredging of 0.5, 1, and 1.5 m depth below existing grade. All of the cores from within this site possessed weighted averages for the entire core recovered of greater than 90% sand and gravel fractions and greater than 0.13 mm (2.943 phi) mean grain size. Depending on the depth of proposed dredging within the area a large volume of sand ranging from 3.3 to 7.7 million yd^3 exists (based on a one meter dredging depth).

Table 5. Volume calculations for borrow site. Folly Beach, SC

	Dredging depths below existing grade		
Borrow area	0.5 m	1.0 m	1.5 m
1^2 nm	1.71M yd^3	3.43M yd^3	5.14M yd^3
1.5^2 nm	2.57M yd^3	5.14M yd^3	7.72M yd^3
2.25^2 nm	3.86M yd^3	7.72M yd^3	11.58M yd^3

Compatibility Analysis for Borrow Site

The sand in the borrow site offshore Folly Beach appears to be compatible with native sand in mean grain size and percentage of fine/coarse sediment. James (1975) developed a method to statistically compare borrow site sand to native sand to test the stability of the renourishment project using mean grain size and sorting (Figure 15). James (1975) method was modified by CERC (1984) to yield an appropriate overfill ratios. For the present analysis, the overfill ratio (R_A) was calculated for each of the cores within the delineated borrow site (Table 6). The analysis assumes that the native beach sediments are representative of a dynamically stable beach profile and hence, provide an adequate comparison with the borrow site sediments. The sorting parameter which is the standard deviation of grain sizes around the mean was calculated for the whole (carbonated included) portion of each core based on a weighted average over the entire core length as well as for the upper 50 cm and upper 1 meter. The analysis shows that the R_A ratio varies some over the length of the core and that the material in the upper 0.5-1 meter matches the native Folly Beach sand fairly well. Acceptable RA values generally range from 1.00-1.25,except in cases where no economically suitable sand exists (Kana, 1992). The range of R_A values

as well as the mean R_A for the proposed borrow site off Folly Beach are smaller than those calculated for the offshore borrow site used for the Edisto Beach renourishment project (Kana, 1992).

Summary and Recommendations

Based on interpretation of over 215 kilometers of high resolution seismic reflection profiles and 33 vibracores, a substantial volume of sand exists over a broad area of the inner continental shelf off Folly Beach that may be suitable for future use as beach fill material.

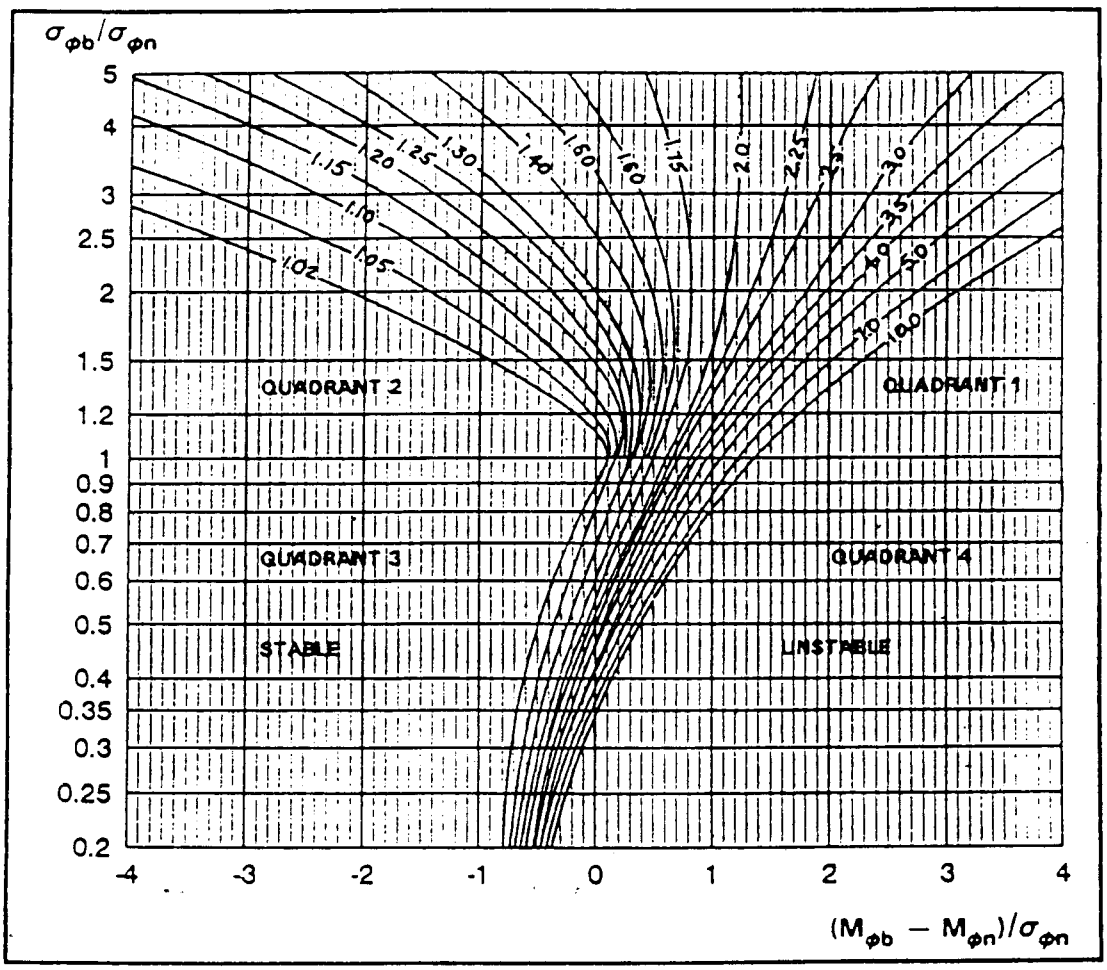

Figure 16. Nomogram used to determine R_a overfill values (after James, 1975).

Table 6. Overfill calculations for borrow site off Folly Beach, SC

Total Core

Core ID	M_b	Sort $_b$	M_b-M_n/sort$_n$	sort$_b$/sort$_n$	R_A
F-94-15	2.94	0.79	0.76	1.57	1.65
F-94-16	2.61	0.96	0.10	1.93	1.33
F-94-17	2.54	0.93	-0.03	1.86	1.25
F-94-18	2.54	1.03	-0.04	2.05	1.30
F-94-25	2.97	0.89	0.84	1.78	1.75
F-94-26	2.80	0.95	0.48	1.90	1.60
F-94-27	2.86	0.70	0.61	1.39	1.60
Average=	2.75	0.89		Mean (core)=	1.50

M=mean grain size
b=borrow site
n=native sand
M_n= 2.556
sort$_n$= 0.5

50 cm

Core ID	M_b	Sort $_b$	M_b-M_n/sort$_n$	sort$_b$/sort$_n$	R_A
F-94-15	2.84	0.81	0.56	1.62	1.50
F-94-16	1.43	0.44	-2.24	0.89	<1.02
F-94-17	2.84	0.96	0.56	1.93	1.60
F-94-18	1.64	0.69	-1.82	1.38	<1.02
F-94-25	2.84	0.89	0.56	1.78	1.60
F-94-26	2.47	1.00	-0.16	2.00	1.30
F-94-27	2.84	0.95	0.56	1.91	1.60
				Mean (0-50cm)=	1.38

1 meter

Core ID	M_b	Sort $_b$	M_b-M_n/sort$_n$	sort$_b$/sort$_n$	R_A
F-94-15	2.84	0.78	0.56	1.56	1.60
F-94-16	1.84	0.79	-1.44	1.58	<1.02
F-94-17	2.84	0.84	0.56	1.68	1.58
F-94-18	1.94	0.67	-1.23	1.34	<1.02
F-94-25	2.84	0.87	0.56	1.75	1.60
F-94-26	2.40	1.02	-0.32	2.04	1.25
F-94-27	2.84	0.73	0.56	1.45	1.55
				Mean (0-1m)=	1.37

This area is well identified on the northern and western boundary but less well delineated on the eastern and southern flanks. In general, there is a body of sand located between two and three miles from the beach that is characterized as greater than 90% sand and gravel size sediment, less than 10% silt/clay and with a mean size of greater than 0.13 mm (2.943 phi) for the total sediment distribution (including carbonate fractions). This site resides outside the area limited by the CBRS zones for the Folly Beach coastal ocean. Based on the existing data, the location is not characterized by extensive hard bottom environments but some hard bottom was found approximately 1.6 km further from the coast. South Carolina Department of Natural Resources has mapped extensive hard bottom resources further offshore (Van Dolah et al., 1994) and some has been recovered by vibracores (core F-94-31) seaward of the site (Appendix D).

It is proposed that ten additional vibracores be taken to better delineate the southern and western border of the potential borrow area and increase confidence in the continuity of beach compatible sands within the proposed potential borrow area. These cores are proposed to be gathered during YEAR III Task Force phased mapping effort which is being proposed for the inner shelf of Edisto Island only a short distance to the south of Folly Beach. Completed analysis for cores from the NOAA Ship FERREL cruise in August 1994 provided through two ongoing projects at CMWS will also be added to the database for Folly Beach. Several of these cores will provide data relevant to the proposed borrow area and five will provide information about sediment characteristics off of Lighthouse and Stono Inlets. This information will be added to the YEAR III phased mapping report (FY 1995).

Several of the NOAA FERREL core will also provide data valuable to the assessment of resources and planning of coring for the proposed Task Force mapping effort off of Edisto Island in the summer of 1995. Incorporation of a side scan mosaic for the inner shelf off of Folly Beach being conducted in the summer of 1995 by the US Geological Survey in cooperation with the CMWS will also be available to incorporate into the INTERMAR database of resources off of Folly Beach. In addition, a coring study will be conducted on the inner shelf in the area between Bulls Island and South Edisto Inlet. This is a cooperative effort involving the CMWS and U.S. Geological Survey and will generate additional vibracores that may assist in the assessment of sand resources on the inner continental shelf in the area. These cores will also be incorporated in the INTERMAR Task Force database.

Update of the Year I INTERMAR Database

Year 2 Data Acquisition

Both newly acquired data and data that were not analyzed for the Year 1 effort are included in the Year 2 database (Appendix 1). This includes 33 core samples collected off Folly Beach, 27 cores collected off Myrtle Beach and a total of 40 km of high-resolution seismic-reflection trackline. An additional set of 45 vibracores and 217 km of high-resolution seismic-reflection trackline; off Folly Beach is also included in the expanded database.

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APPENDICES

Appendix A. Primary INTERMAR database file-Year II.

Appendix B. Project information file-INTERMAR Year II.

Appendix C. Blocks file-INTERMAR Year II.

Appendix D. Vibracore description logs-Folly Beach, May 1994.

Appendix E. High-resolution seismic reflection trackline with vibracore locations marked.

Appendix F. Sediment analyses from NURC Folly Beach vibracores.

Appendix A. Primary database file contains information on the locations of pertinent geological or physical/biological evidence of bottom type off South Carolina (0-16 km from coast)

Database codes:

Block: Block number
Date: Date of collection or report
Agency_Pro: Agency project (See Appendix B)
Origcoll: Original unique collection number
Startlat: Latitude of starting coordinate
Startlong: Longitude of starting coordinate
Endlat: Latitude of ending coordinate
Endlong: Longitude of ending coordinate
Posmethod: Positioning method

0 = unknown
1 = loran-c
2 = loran-a
3 = GPS
4 = Range and Bearing
5 = Dead Reckoning
6 = Decca Hi-Fix System
7 = MiniRanger Positioning System (tm)

Corrfact: Correction Factor

0 = unknown
1 = none
2 = AFS
3 = corrected to a benchmark
4 = loran-c numbers converted by lorat program

Geartype: Sampling Gear

Dredge (DR)

DR00 unknown dredge
DR01 Orange-Peel dredge
DR02 Modified Pierce

Grabs and Cores (GR)

GR01 vibracore
GR02 Smith-McIntyre
GR04 Campbell
GR05 Peterson Grab

Trawl (FT)

FT01 3/4 Yankee Trawl #35 body-L liner-A cod-E (022 MRRI)
FT03 Semi-balloon 40/60 4-seam trawl
FT04 Falcon (233 MRRI)
FT05 1986 Seamap Data (230 MRRI)

Trap (TR)
- TR01 Blackfish Trap Baited
- TR04 Flordia "Antillean" Trap
- TR05 Chevron Trap (324 MRRI)

SCUBA Diver (SD)
- SD01 "pop" dive

Sidescan Sonar (SS)
- SS21 Dowty model 3010 (?)

Subbottom Profiler (PR)
- PR01 3.5 kHz subbottom profiler: O.R.E.
- PR02 Uniboom subbottom profiler: EG&G model 225

Closed Circuit T.V. (CC)
- CC01 Black & White
- CC02 Color

Combination Gears

Sidescan Sonar + Closed Circuit T.V. (01)
- 0101 Klein 595 and color T.V.

Depth: Station depth
Depth_End: Depth at end of towed gear
BottomType: Type of bottom
- HB hard bottom
- PH probable hard bottom
- NH no evidence of hardbottom
- AR artificial structure
- HA harb bottom and ariticial reef

Relief: bottom relief
- L < 0.5 m
- M 0.5-2 m
- H > 2 m

Sand: Percentage of sand in sediment
Silt: Percentage of silt in sediment
Clay: Percentage of clay in sediment
Carbonate: Percentage of carbonate
Meangrsiz: Mean grain size
Heavymin: Heavy minerals
Phosphate: Percent of phosphate
EHM: Economically important heavy minerals (ilmenite, leucoxene, rutile, zircon, sillimanite, and monazite)
ZTR: Percentage of zircon, tourmaline, rutile
Mindpthpen: Minimum depth of penetration
Maxdpthpen: Maximum depth of penetration
Minsandlen: Minimum sand lens thickne
Maxsandlen: Maximum sand le thickne
Stratig: Stratigraphy

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32377955	5/9/94	CC15	0955	3237.77	7955.83			1	0	PR02
32377956	5/9/94	CC15	1000	3237.54	7956.34			1	0	PR02
32377956	5/9/94	CC15	1004	3237.40	7956.72			1	0	PR02
32377957	5/9/94	CC15	1010	3237.16	7957.28			1	0	PR02
32367957	5/9/94	CC15	1016	3236.80	7957.33			1	0	PR02
32367957	5/9/94	CC15	1020	3236.72	7957.04			1	0	PR02
32367956	5/9/94	CC15	1024	3236.94	7956.73			1	0	PR02
32377956	5/9/94	CC15	1030	3237.26	7956.32			1	0	PR02
32377955	5/9/94	CC15	1036	3237.59	7955.88			1	0	PR02
32377955	5/9/94	CC15	1040	3237.79	7955.61			1	0	PR02
32377955	5/9/94	CC15	1044	3237.97	7955.30			1	0	PR02
32387954	5/9/94	CC15	1050	3238.25	7954.83			1	0	PR02
32387954	5/9/94	CC15	1055	3238.49	7954.49			1	0	PR02
32387954	5/9/94	CC15	1100	3238.76	7954.15			1	0	PR02
32387953	5/9/94	CC15	1104	3238.98	7953.88			1	0	PR02
32397953	5/9/94	CC15	1110	3239.27	7953.45			1	0	PR02
32397953	5/9/94	CC15	1116	3239.54	7953.04			1	0	PR02
32397952	5/9/94	CC15	1120	3239.69	7952.78			1	0	PR02
32397952	5/9/94	CC15	1124	3239.90	7952.49			1	0	PR02
32397952	5/9/94	CC15	1130	3239.57	7952.09			1	0	PR02
32397951	5/9/94	CC15	1135	3239.19	7951.87			1	0	PR02
32387952	5/9/94	CC15	1140	3238.77	7952.39			1	0	PR02
32387952	5/9/94	CC15	1144	3238.60	7952.75			1	0	PR02
32387953	5/9/94	CC15	1150	3238.34	7953.36			1	0	PR02
32387953	5/9/94	CC15	1156	3238.04	7953.96			1	0	PR02
32377954	5/9/94	CC15	1200	3237.82	7954.35			1	0	PR02
32377954	5/9/94	CC15	1205	3237.48	7954.65			1	0	PR02
32377954	5/9/94	CC15	1210	3237.60	7954.28			1	0	PR02
32377953	5/9/94	CC15	1214	3237.78	7953.99			1	0	PR02
32387953	5/9/94	CC15	1220	3238.07	7953.56			1	0	PR02
32387953	5/9/94	CC15	1224	3238.23	7953.27			1	0	PR02
32387952	5/9/94	CC15	1230	3238.46	7952.84			1	0	PR02
32387952	5/9/94	CC15	1234	3238.60	7952.55			1	0	PR02
32387951	5/9/94	CC15	1240	3238.91	7951.93			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC15	0955				51.0	1.0	2.0	
CC15	1000				51.0	1.0	3.0	
CC15	1004				51.0	1.0	2.0	
CC15	1010				51.0	1.0	2.0	
CC15	1016				51.0	0.0	1.0	
CC15	1020				51.0	1.0	3.0	
CC15	1024				51.0	1.0	2.0	
CC15	1030				51.0	1.0	2.0	
CC15	1036				51.0	1.0	3.0	
CC15	1040				51.0	1.0	3.0	
CC15	1044				51.0	1.0	2.0	
CC15	1050				51.0	1.0	3.0	
CC15	1055				51.0	1.0	3.0	
CC15	1100				51.0	1.0	2.0	
CC15	1104				51.0	1.0	2.0	
CC15	1110				51.0	1.0	2.0	
CC15	1116				51.0	1.0	3.0	
CC15	1120				51.0	1.0	2.0	
CC15	1124				51.0	1.0	2.0	
CC15	1130				51.0	1.0	2.0	
CC15	1135				51.0	1.0	2.0	
CC15	1140				51.0	1.0	3.0	
CC15	1144				51.0	1.0	2.0	
CC15	1150				51.0	0.0	2.0	
CC15	1156				51.0	0.0	2.0	
CC15	1200				51.0	0.0	2.0	
CC15	1205				51.0	0.0	2.0	
CC15	1210				51.0	0.0	2.0	
CC15	1214				51.0	0.0	2.0	
CC15	1220				51.0	0.0	2.0	
CC15	1224				51.0	0.0	2.0	
CC15	1230				51.0	1.0	2.0	
CC15	1234				51.0	1.0	2.0	
CC15	1240				51.0	1.0	3.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC15	0955	7		NH	L						
CC15	1000	7		NH	L						
CC15	1004	7		NH	L						
CC15	1010	6		NH	L						
CC15	1016	6		PH	L						
CC15	1020	7		NH	M						
CC15	1024	7		NH	L						
CC15	1030	7		NH	L						
CC15	1036	7		NH	L						
CC15	1040	7		NH	L						
[illegible]15	1044	7		NH	L						
	1050	7		NH	L						
CC15	1055	7		NH	L						
CC15	1100	5		NH	M						
CC15	1104	6		NH	M						
[illegible]15	1110	6		NH	M						
CC15	1116	6		NH	M						
CC15	1120	5		NH	L						
CC15	1124	6		NH	M						
CC15	1130	7		NH	H						
CC15	1135	8		NH	H						
CC15	1140	8		NH	H						
CC15	1144	7		NH	L						
CC15	1150	8		PH	M						
CC15	1156	7		PH	M						
CC15	1200	7		PH	L						
CC15	1205	7		PH	L						
CC15	1210	7		PH	L						
[illegible]15	1214	7		PH	M						
CC15	1220	6		PH	H						
CC15	1224	7		PH	M						
CC15	1230	6		NH	L						
CC15	1234	6		NH	L						
CC15	1240	7		NH	M						

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC15	1247	7		PH	M						
CC15	1250	7		NH	H						
CC15	1254	7		NH	M						
CC15	1300	7		PH	M						
CC15	1304	7		PH	M						
CC15	1310	7		PH	M						
CC15	1315	7		PH	L						
CC15	1320	7		PH	M						
CC15	1326	8		PH	M						
CC15	1331	7		PH	M						
CC15	1334	7		PH	L						
CC15	1340	7		PH	L						
CC15	1345	7		PH	L						
CC15	1351	8		NH	H						
CC15	1355	8		NH	H						
CC15	1400	8		NH	H						
CC15	1405	7		PH	M						
CC15	1411	8		PH	L						
CC15	1420	7		PH	M						
CC15	1424	7		PH	M						
CC15	1430	8		PH	L						
CC15	1434	7		PH	M						
CC15	1440	8		NH	L						
CC14	1446	8		NH	L						
CC14	1450	8		PH	L						
CC15	1500	8		PH	L						
CC15	1510	7		NH	H						
CC15	1520	7		NH	M						
CC15	1530	7		PH	H						
CC15	1540	7		PH	H						
CC15	1550	8		NH	L						
CC15	1600	7		NH	L						
CC15	1604	7		PH	M						
CC16	2030	12		NH	M						

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32387951	5/9/94	CC15	1247	3238.86	7951.75			1	0	PR02
32387952	5/9/94	CC15	1250	3238.61	7952.12			1	0	PR02
32387952	5/9/94	CC15	1254	3238.25	7952.79			1	0	PR02
32387953	5/9/94	CC15	1300	3238.07	7953.18			1	0	PR02
32377953	5/9/94	CC15	1304	3237.91	7953.58			1	0	PR02
32377954	5/9/94	CC15	1310	3237.52	7954.23			1	0	PR02
32377954	5/9/94	CC15	1315	3237.18	7954.49			1	0	PR02
32377954	5/9/94	CC15	1320	3237.20	7954.27			1	0	PR02
32377953	5/9/94	CC15	1326	3237.66	7953.63			1	0	PR02
32377953	5/9/94	CC15	1331	3237.79	7953.35			1	0	PR02
32377953	5/9/94	CC15	1334	3237.88	7953.18			1	0	PR02
32387952	5/9/94	CC15	1340	3238.12	7952.76			1	0	PR02
32387952	5/9/94	CC15	1345	3238.32	7952.41			1	0	PR02
32387951	5/9/94	CC15	1351	3238.53	7951.95			1	0	PR02
32387951	5/9/94	CC15	1355	3238.68	7951.70			1	0	PR02
32	5/9/94	CC15	1400	3238.45	7951.73			1	0	PR02
3238/952	5/9/94	CC15	1405	3238.16	7952.24			1	0	PR02
32377952	5/9/94	CC15	1411	3237.81	7952.90			1	0	PR02
32377953	5/9/94	CC15	1420	3237.35	7953.90			1	0	PR02
32377954	5/9/94	CC15	1424	3237.08	7954.37			1	0	PR02
32377954	5/9/94	CC15	1430	3237.02	7954.07			1	0	PR02
32377953	5/9/94	CC15	1434	3237.14	7953.79			1	0	PR02
32377953	5/9/94	CC15	1440	3237.36	7953.41			1	0	PR02
32377953	5/9/94	CC14	1446	3237.61	7953.02			1	0	PR02
32377952	5/9/94	CC14	1450	3237.75	7952.77			1	0	PR02
32387952	5/9/94	CC15	1500	3238.10	7952.11			1	0	PR02
32387951	5/9/94	CC15	1510	3238.46	7951.43			1	0	PR02
32397950	5/9/94	CC15	1520	3239.08	7950.96			1	0	PR02
32397950	5/9/94	CC15	1530	3239.72	7950.48			1	0	PR02
32407949	5/9/94	CC15	1540	3249.36	7949.97			1	0	PR02
32407949	5/9/94	CC15	1550	3240.96	7949.48			1	0	PR02
32417949	5/9/94	CC15	1600	3241.59	7949.01			1	0	PR02
32417948	5/9/94	CC15	1604	3241.85	7948.82			1	0	PR02
32328003	8/2/94	CC16	2030	3232.76	8003.52			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32328004	8/2/94	CC16	2040	3232.25	8004.11			1	0	PR02
32318004	8/2/94	CC16	2050	3231.76	8004.76			1	0	PR02
32318005	8/2/94	CC16	2100	3231.36	8005.44			1	0	PR02
32318006	8/2/94	CC16	2110	3231.14	8006.16			1	0	PR02
32308006	8/2/94	CC16	2120	3230.51	8006.57			1	0	PR02
32298007	8/2/94	CC16	2130	3229.87	8007.02			1	0	PR02
32298007	8/2/94	CC16	2140	3229.16	8008.05			1	0	PR02
32288008	8/2/94	CC16	2150	3228.98	8008.44			1	0	PR02
32288009	8/2/94	CC16	2200	3228.55	8009.17			1	0	PR02
32288009	8/2/94	CC16	2210	3228.14	8009.90			1	0	PR02
32278010	8/2/94	CC16	2220	3227.73	8010.68			1	0	PR02
32278011	8/2/94	CC16	2230	3227.34	8011.46			1	0	PR02
32268012	8/2/94	CC16	2240	3226.91	8012.26			1	0	PR02
32268013	8/2/94	CC16	2250	3226.44	8013.10			1	0	PR02
32258013	8/2/94	CC16	2300	3225.99	8013.94			1	0	PR02
32258014	8/2/94	CC16	2310	3225.43	8014.72			1	0	PR02
32248015	8/2/94	CC16	2320	3224.72	8015.30			1	0	PR02
32238015	8/2/94	CC16	2330	3223.99	8015.89			1	0	PR02
32238016	8/2/94	CC16	2340	3223.24	8016.51			1	0	PR02
322280[illegible]	[illegible]/2/94	CC16	2350	3222.55	8017.12			1	0	PR02
32228017	8/3/94	CC16	0000	3222.03	8017.69			1	0	PR02
32218018	8/3/94	CC16	0010	3221.65	8018.25			1	0	PR02
32218018	8/3/94	CC16	0020	3221.19	8018.72			1	0	PR02
32218019	8/3/94	CC16	0030	3221.12	8019.09			1	0	PR02
32218018	8/3/94	CC16	0040	3221.80	8018.77			1	0	PR02
32228019	8/3/94	CC16	0050	3222.35	8019.01			1	0	PR02
32228018	8/3/94	CC16	0100	3222.95	8018.62			1	0	PR02
32238018	8/3/94	CC16	0110	3223.46	8018.16			1	0	PR02
32238017	8/3/94	CC16	0120	3223.95	8017.65			1	0	PR02
32248017	8/3/94	CC16	0130	3224.41	8017.15			1	0	PR02
32248016	8/3/94	CC16	0140	3224.96	8016.82			1	0	PR02
32258016	8/3/94	CC16	0150	3225.51	8016.46			1	0	PR02
32258015	8/3/94	CC16	0200	3225.95	8015.89			1	0	PR02
32268015	8/3/94	CC16	0210	3226.30	8015.22			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC15	1247				51.0	0.0	3.0	
CC15	1250				51.0	1.0	2.0	
CC15	1254				51.0	1.0	2.0	
CC15	1300				51.0	0.0	2.0	
CC15	1304				51.0	0.0	2.0	
CC15	1310				51.0	0.0	2.0	
CC15	1315				51.0	0.0	2.0	
CC15	1320				51.0	0.0	3.0	
CC15	1326				51.0	0.0	2.0	
CC15	1331				51.0	0.0	2.0	
CC15	1334				51.0	0.0	1.0	
CC15	1340				51.0	0.0	2.0	
CC15	1345				51.0	0.0	3.0	
CC15	1351				51.0	1.0	3.0	
CC15	1355				51.0	1.0	2.0	
	1400				51.0	1.0	2.0	
CC15	1405				51.0	0.0	1.0	
CC15	1411				51.0	0.0	1.0	
CC15	1420				51.0	0.0	3.0	
CC15	1424				51.0	0.0	2.0	
CC15	1430				51.0	0.0	2.0	
CC15	1434				51.0	0.0	1.0	
CC15	1440				51.0	1.0	2.0	
CC14	1446				51.0	1.0	3.0	
CC14	1450				51.0	0.0	2.0	
CC15	1500				51.0	0.0	2.0	
CC15	1510				51.0	1.0	2.0	
CC15	1520				51.0	1.0	2.0	
CC15	1530				51.0	0.0	2.0	
CC15	1540				51.0	0.0	2.0	
CC15	1550				51.0	1.0	2.0	
CC15	1600				51.0	1.0	3.0	
CC15	1604				51.0	0.0	2.0	
CC16	2030				60.0	1.0	3.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC16	2040				60.0	1.0	3.0	
CC16	2050				60.0	1.0	2.0	
CC16	2100				60.0	0.0	2.0	
CC16	2110				60.0	0.0	2.0	
CC16	2120				60.0	1.0	3.0	
CC16	2130				60.0	1.0	3.0	
CC16	2140				60.0	1.0	3.0	
CC16	2150				60.0	1.0	3.0	
CC16	2200				60.0	1.0	3.0	
CC16	2210				60.0	1.0	3.0	
CC16	2220				60.0	1.0	3.0	
CC16	2230				60.0	1.0	3.0	
CC16	2240				60.0	1.0	3.0	
CC16	2250				60.0	0.0	2.0	
CC16	2300				60.0	1.0	2.0	
CC16	2310				60.0	1.0	2.0	
CC16	2320				60.0	1.0	3.0	
CC16	2330				60.0	0.0	3.0	
CC16	2340				60.0	0.0	3.0	
CC16	2350				60.0	0.0	3.0	
CC16	0000				60.0	1.0	2.0	
CC16	0010				60.0	1.0	2.0	
CC16	0020				60.0	0.0	2.0	
CC16	0030				60.0	0.0	2.0	
CC16	0040				60.0	0.0	2.0	
CC16	0050				60.0	0.0	2.0	
CC16	0100				60.0	0.0	2.0	
CC16	0110				60.0	0.0	2.0	
CC16	0120				60.0	0.0	3.0	
CC16	0130				60.0	0.0	3.0	
CC16	0140				60.0	1.0	3.0	
CC16	0150				60.0	0.0	3.0	
CC16	0200				60.0	0.0	2.0	
CC16	0210				60.0	0.0	2.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC16	2040	11		NH	M						
CC16	2050	12		NH	M						
CC16	2100	11		PH	H						
CC16	2110	11		NH	M						
CC16	2120	12		NH	H						
CC16	2130	11		NH	H						
CC16	2140	12		NH	L						
CC16	2150	13		NH	L						
CC16	2200	13		NH	L						
CC16	2210	14		NH	M						
CC16	2220	12		NH	M						
CC16	2230	13		NH	M						
CC16	2240	14		NH	M						
CC16	2250	13		PH	M						
CC16	2300	13		NH	L						
CC16	2310	13		NH	M						
CC16	2320	14		NH	M						
CC16	2330	13		PH	M						
CC16	2340	13		PH	L						
CC16	2350	13		NH	L						
CC16	0000	12		NH	L						
CC16	0010	11		NH	L						
CC16	0020	10		NH	M						
CC16	0030	9		NH	M						
CC16	0040	10		NH	M						
CC16	0050	9		NH	M						
CC16	0100	10		NH	M						
CC16	0110	11		NH	L						
CC16	0120	11		NH	M						
CC16	0130	12		NH	M						
CC16	0140	11		NH	M						
CC16	0150	12		NH	M						
CC16	0200	13		NH	M						
CC16	0210	13		NH	M						

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC16	0220	12		NH	M						
CC16	0230	12		NH	M						
CC16	0240	13		NH	M						
CC16	0250	12		NH	M						
CC16	0300	12		NH	M						
CC16	0310	13		NH	M						
CC16	0320	13		NH	M						
CC16	0330	12		NH	L						
CC16	0340	13		NH	M						
CC16	0350	12		NH	L						
CC16	0400	12		NH	M						
CC16	0410	12		NH	M						
CC16	0420	13		NH	M						
CC16	0430	11		NH	M						
CC16	0440	11		NH	M						
CC16	0450	12		NH	M						
CC16	0500	13		NH	M						
CC16	0510	14		NH	M						
CC16	0520	14		NH	L						
CC16	0530	12		NH	M						
CC16	0540	14		NH	M						
CC16	0550	14		NH	M						
CC16	0600	13		NH	M						
CC16	0610	13		NH	M						
CC16	0620	14		NH	M						
CC16	0630	15		NH	M						
CC17	1800	9		NH	M						
CC17	1815	10		NH	M						
CC17	1825	11		NH	M						
CC17	1845	12		NH	M						
CC17	1900	13		NH	M						
CC17	1915	13		NH	M						
CC17	1930	12		NH	M						
CC17	1945	12		NH	M						

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32268014	8/3/94	CC16	0220	3226.65	8014.53			1	0	PR02
32268013	8/3/94	CC16	0230	3226.94	8013.84			1	0	PR02
32278013	8/3/94	CC16	0240	3227.28	8013.14			1	0	PR02
32278012	8/3/94	CC16	0250	3227.61	8012.45			1	0	PR02
32288011	8/3/94	CC16	0300	3228.01	8011.79			1	0	PR02
32288011	8/3/94	CC16	0310	3228.41	8011.15			1	0	PR02
32288010	8/3/94	CC16	0320	3228.84	8010.50			1	0	PR02
32298009	8/3/94	CC16	0330	3229.29	8009.87			1	0	PR02
32298009	8/3/94	CC16	0340	3229.71	8009.19			1	0	PR02
32308008	8/3/94	CC16	0350	3230.09	8008.53			1	0	PR02
32308007	8/3/94	CC16	0400	3230.54	8007.83			1	0	PR02
32308007	8/3/94	CC16	0410	3230.90	8007.16			1	0	PR02
32318006	8/3/94	CC16	0420	3231.22	8006.39			1	0	PR02
32318005	8/3/94	CC16	0430	3231.60	8005.66			1	0	PR02
[illegible]	8/3/94	CC16	0440	3231.59	8005.03			1	0	PR02
[illegible]	8/3/94	CC16	0450	3231.10	8004.67			1	0	PR02
32308004	8/3/94	CC16	0500	3230.58	8004.41			1	0	PR02
32308004	8/3/94	CC16	0510	3230.09	8004.35			1	0	PR02
32298005	8/3/94	CC16	0520	3229.83	8005.00			1	0	PR02
32298005	8/3/94	CC16	0530	3229.37	8005.75			1	0	PR02
32288006	8/3/94	CC16	0540	3228.94	8006.54			1	0	PR02
32288007	8/3/94	CC16	0550	3228.52	8007.35			1	0	PR02
32288008	8/3/94	CC16	0600	3228.06	8008.15			1	0	PR02
32278008	8/3/94	CC16	0610	3227.61	8008.95			1	0	PR02
32278009	8/3/94	CC16	0620	3227.19	8009.76			1	0	PR02
32268010	8/3/94	CC16	0630	3226.75	8010.71			1	0	PR02
32407950	8/3/94	CC17	1800	3240.63	7950.75			1	0	PR02
32397951	8/3/94	CC17	1815	3239.70	7951.23			1	0	PR02
32397951	8/3/94	CC17	1825	3239.02	7951.52			1	0	PR02
32377952	8/3/94	CC17	1845	3237.81	7952.45			1	0	PR02
32377953	8/3/94	CC17	1900	3237.05	7953.37			1	0	PR02
32367954	8/3/94	CC17	1915	3236.16	7954.12			1	0	PR02
32357954	8/3/94	CC17	1930	3235.39	7954.83			1	0	PR02
32357956	8/3/94	CC17	1945	3235.41	7956.23			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32347957	8/3/94	CC17	2000	3234.94	7957.32			1	0	PR02
32347958	8/3/94	CC17	2015	3234.48	7958.46			1	0	PR02
32347959	8/3/94	CC17	2030	3234.05	7959.61			1	0	PR02
32338000	8/3/94	CC17	2045	3233.61	8000.81			1	0	PR02
32338001	8/3/94	CC17	2100	3233.19	8001.99			1	0	PR02
32328003	8/3/94	CC17	2115	3232.70	8003.24			1	0	PR02
32328004	8/3/94	CC17	2130	3232.26	8004.35			1	0	PR02
32318005	8/3/94	CC17	2145	3231.80	8005.57			1	0	PR02
32318006	8/3/94	CC17	2200	3231.33	8006.75			1	0	PR02
32308008	8/3/94	CC17	2215	3230.80	8008.10			1	0	PR02
32308009	8/3/94	CC17	2231	3230.18	8009.50			1	0	PR02
32298010	8/3/94	CC17	2245	3229.76	8010.63			1	0	PR02
32298011	8/3/94	CC17	2300	3229.24	8011.92			1	0	PR02
32288013	8/3/94	CC17	2315	3228.66	8013.20			1	0	PR02
32288014	8/3/94	CC17	2330	3228.01	8014.41			1	0	PR02
32278015	8/3/94	CC17	2345	3227.36	8015.62			1	0	PR02
32268016	8/4/94	CC17	0004	3226.83	8016.78			1	0	PR02
32178017	8/4/94	CC17	0017	3227.04	8017.23			1	0	PR02
32278017	8/4/94	CC17	0030	3227.92	8017.06			1	0	PR02
32288016	8/4/94	CC17	0045	3228.48	8016.39			1	0	PR02
32288015	8/4/94	CC17	0100	3228.69	8015.70			1	0	PR02
32298014	8/4/94	CC17	0113	3229.04	8014.53			1	0	PR02
32298013	8/4/94	CC17	0132	3229.53	8013.17			1	0	PR02
32298012	8/4/94	CC17	0145	3229.79	8012.22			1	0	PR02
32308011	8/4/94	CC17	0200	3230.02	8011.11			1	0	PR02
32308010	8/4/94	CC17	0215	3230.19	8010.24			1	0	PR02
32308009	8/4/94	CC17	0230	3230.29	8009.18			1	0	PR02
32298008	8/4/94	CC17	0246	3229.70	8008.54			1	0	PR02
32288008	8/4/94	CC17	0300	3228.95	8008.00			1	0	PR02
32288007	8/4/94	CC17	0316	3228.11	8007.44			1	0	PR02
32278007	8/4/94	CC17	0330	3227.43	8007.00			1	0	PR02
32268006	8/4/94	CC17	0345	3226.69	8006.60			1	0	PR02
32258006	8/4/94	CC17	0400	3225.99	8006.08			1	0	PR02
32258006	8/4/94	CC17	0415	3225.64	8006.28			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC16	0220				60.0	0.0	3.0	
CC16	0230				60.0	0.0	3.0	
CC16	0240				60.0	0.0	3.0	
CC16	0250				60.0	1.0	3.0	
CC16	0300				60.0	0.0	2.0	
CC16	0310				60.0	0.0	2.0	
CC16	0320				60.0	0.0	2.0	
CC16	0330				60.0	1.0	2.0	
CC16	0340				60.0	1.0	2.0	
CC16	0350				60.0	1.0	2.0	
CC16	0400				60.0	1.0	2.0	
CC16	0410				60.0	0.0	2.0	
CC16	0420				60.0	1.0	2.0	
CC16	0430				60.0	1.0	2.0	
CC16	0440				60.0	1.0	2.0	
CC16	0450				60.0	1.0	2.0	
CC16	0500				60.0	1.0	3.0	
CC16	0510				60.0	1.0	3.0	
CC16	0520				60.0	1.0	3.0	
CC16	0530				60.0	0.0	3.0	
CC16	0540				60.0	0.0	3.0	
CC16	0550				60.0	0.0	2.0	
CC16	0600				60.0	0.0	2.0	
CC16	0610				60.0	0.0	2.0	
CC16	0620				60.0	0.0	3.0	
CC16	0630				60.0	1.0	3.0	
CC17	1800				60.0	0.0	2.0	
CC17	1815				60.0	0.0	2.0	
CC17	1825				60.0	1.0	2.0	
CC17	1845				60.0	1.0	3.0	
CC17	1900				60.0	1.0	2.0	
CC17	1915				60.0	1.0	2.0	
CC17	1930				60.0	0.0	2.0	
CC17	1945				60.0	0.0	2.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC17	2000				60.0	0.0	2.0	
CC17	2015				60.0	1.0	3.0	
CC17	2030				60.0	0.0	3.0	
CC17	2045				60.0	1.0	3.0	
CC17	2100				60.0	0.0	3.0	
CC17	2115				60.0	1.0	3.0	
CC17	2130				60.0	1.0	2.0	
CC17	2145				60.0	1.0	2.0	
CC17	2200				60.0	0.0	2.0	
CC17	2215				60.0	0.0	2.0	
CC17	2231				60.0	0.0	2.0	
CC17	2245				60.0	0.0	3.0	
CC17	2300				60.0	0.0	3.0	
CC17	2315				60.0	0.0	2.0	
CC17	2330				60.0	0.0	2.0	
CC17	2345				60.0	1.0	4.0	
CC17	0004				60.0	1.0	2.0	
CC17	0017				60.0	1.0	3.0	
CC17	0030				60.0	1.0	3.0	
CC17	0045				60.0	1.0	4.0	
CC17	0100				60.0	0.0	3.0	
CC17	0113				60.0	0.0	3.0	
CC17	0132				60.0	0.0	3.0	
CC17	0145				60.0	0.0	3.0	
CC17	0200				60.0	0.0	2.0	
CC17	0215				60.0	0.0	2.0	
CC17	0230				60.0	0.0	2.0	
CC17	0246				60.0	0.0	2.0	
CC17	0300				60.0	0.0	2.0	
CC17	0316				60.0	0.0	3.0	
CC17	0330				60.0	0.0	2.0	
CC17	0345				60.0	0.0	2.0	
CC17	0400				60.0	0.0	2.0	
CC17	0415				60.0	0.0	3.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC17	2000	12		NH	L						
CC17	2015	12		NH	L						
CC17	2030	13		NH	L						
CC17	2045	12		NH	M						
CC17	2100	10		NH	H						
CC17	2115	12		NH	M						
CC17	2130	11		NH	M						
CC17	2145	12		NH	M						
CC17	2200	10		PH	H						
CC17	2215	10		NH	L						
CC17	2231	10		NH	L						
CC17	2245	11		NH	L						
CC17	2300	11		NH	L						
CC17	2315	11		NH	L						
CC17	2330	11		NH	L						
CC17	2345	12		NH	M						
CC17	0004	10		NH	M						
CC17	0017	10		NH	M						
CC17	0030	9		NH	L						
CC17	0045	10		NH	L						
CC17	0100	11		NH	L						
CC17	0113	11		NH	L						
CC17	0132	11		NH	L						
CC17	0145	11		NH	L						
CC17	0200	10		NH	M						
CC17	0215	10		NH	L						
CC17	0230	10		NH	M						
CC17	0246	13		NH	M						
CC17	0300	13		NH	M						
CC17	0316	13		NH	H						
CC17	0330	13		NH	M						
CC17	0345	14		NH	M						
CC17	0400	14		NH	M						
CC17	0415	14		NH	M						

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC17	0430	15		NH	M						
CC17	0445	15		NH	M						
CC17	0500	13		NH	M						
CC17	0515	13		NH	M						
CC17	0530	13		NH	M						
CC17	0545	11		NH	M						
CC17	0600	11		NH	L						
CC17	0615	11		NH	L						
CC17	0630	11		NH	L						
CC17	0645	11		NH	L						
CC17	0700	10		NH	L						
CC17	0715	10		NH	M						
CC18	1608	8		PH	M						
CC18	1600	8		NH	L						
CC18	1550	8		NH	M						
CC18	1540	7		NH	H						
CC18	1530	8		PH	M						
CC18	1520	8		PH	M						
CC18	1510	8		NH	M						
CC18	1500	9		PH	M						
CC18	1450	9		PH	L						
CC18	1440	8		PH	M						
CC18	1430	8		PH	M						
CC18	1420	7		NH	M						
CC18	1411	8		PH	L						
CC18	1400	8		PH	H						
CC18	1351	8		PH	H						
CC18	1340	7		PH	M						
CC18	1331	8		PH	M						
CC18	1320	8		NH	M						
CC18	1310	7		PH	L						
CC18	1300	8		NH	M						
CC18	1250	7		NH	M						
CC18	1240	7		NH	M						

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32258008	8/4/94	CC17	0430	3225.63	8008.11			1	0	PR02
32268008	8/4/94	CC17	0445	3226.62	8008.78			1	0	PR02
32278009	8/4/94	CC17	0500	3227.54	8009.30			1	0	PR02
32288009	8/4/94	CC17	0515	3228.41	8009.81			1	0	PR02
32298010	8/4/94	CC17	0530	3229.28	8010.37			1	0	PR02
32308010	8/4/94	CC17	0545	3230.10	8010.93			1	0	PR02
32308011	8/4/94	CC17	0600	3230.03	8011.82			1	0	PR02
32298012	8/4/94	CC17	0615	3229.78	8012.84			1	0	PR02
32298013	8/4/94	CC17	0630	3229.55	8013.88			1	0	PR02
32298014	8/4/94	CC17	0645	3229.41	8014.95			1	0	PR02
32298016	8/4/94	CC17	0700	3229.26	8016.09			1	0	PR02
32288016	8/4/94	CC17	0715	3228.77	8016.86			1	0	PR02
32427948	5/9/94	CC18	1608	3242.08	7948.64			1	0	PR02
32417949	5/9/94	CC18	1600	3241.59	7949.01			1	0	PR02
32407949	5/9/94	CC18	1550	3240.96	7949.48			1	0	PR02
32407949	5/9/94	CC18	1540	3240.36	7949.97			1	0	PR02
32397950	5/9/94	CC18	1530	3239.72	7950.48			1	0	PR02
32397950	5/9/94	CC18	1520	3239.08	7950.96			1	0	PR02
32387951	5/9/94	CC18	1510	3238.46	7951.43			1	0	PR02
32387952	5/9/94	CC18	1500	3238.10	7952.10			1	0	PR02
32377952	5/9/94	CC18	1450	3237.75	7952.77			1	0	PR02
32377953	5/9/94	CC18	1440	3237.36	7953.41			1	0	PR02
32377954	5/9/94	CC18	1430	3237.02	7954.07			1	0	PR02
32377953	5/9/94	CC18	1420	3237.35	7953.90			1	0	PR02
32377952	5/9/94	CC18	1411	3237.81	7952.90			1	0	PR02
32387951	5/9/94	CC18	1400	3238.45	7951.73			1	0	PR02
32387951	5/9/94	CC18	1351	3238.53	7951.95			1	0	PR02
32387952	5/9/94	CC18	1340	3238.12	7952.76			1	0	PR02
32377953	5/9/94	CC18	1331	3237.79	7953.35			1	0	PR02
32377953	5/9/94	CC18	1320	3237.20	7954.27			1	0	PR02
32377954	5/9/94	CC18	1310	3237.52	7954.23			1	0	PR02
32387953	5/9/94	CC18	1300	3238.07	7953.18			1	0	PR02
32387952	5/9/94	CC18	1250	3238.61	7952.12			1	0	PR02
32387951	5/9/94	CC18	1240	3238.91	7951.93			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32387952	5/9/94	CC18	1230	3238.46	7952.84			1	0	PR02
32387953	5/9/94	CC18	1220	3238.07	7953.56			1	0	PR02
32377954	5/9/94	CC18	1210	3237.60	7954.28			1	0	PR02
32377954	5/9/94	CC18	1200	3237.82	7954.35			1	0	PR02
32387953	5/9/94	CC18	1150	3238.34	7953.36			1	0	PR02
32387952	5/9/94	CC18	1140	3238.77	7952.40			1	0	PR02
32397952	5/9/94	CC18	1130	3239.57	7952.09			1	0	PR02
32397952	5/9/94	CC18	1120	3239.69	7952.78			1	0	PR02
32397953	5/9/94	CC18	1110	3239.27	7953.45			1	0	PR02
32387954	5/9/94	CC18	1100	3238.76	7954.15			1	0	PR02
32387954	5/9/94	CC18	1050	3238.25	7954.83			1	0	PR02
32377955	5/9/94	CC18	1040	3237.79	7955.61			1	0	PR02
32377956	5/9/94	CC18	1030	3237.26	7956.32			1	0	PR02
32367957	5/9/94	CC18	1020	3236.72	7957.04			1	0	PR02
32377957	5/9/94	CC18	1010	3237.16	7957.28			1	0	PR02
32377956	5/9/94	CC18	1000	3237.55	7956.34			1	0	PR02
32377955	5/9/94	CC18	0950	3237.94	7955.39			1	0	PR02
32387954	5/9/94	CC18	0940	3238.38	7954.46			1	0	PR02
32387953	5/9/94	CC18	0930	3238.78	7953.50			1	0	PR02
32397952	5/9/94	CC18	0920	3239.15	7952.50			1	0	PR02
32467956	5/9/94	CC18	0911	3246.28	7956.73			1	0	PR02
32397953	5/9/94	CC18	0900	3239.67	7953.16			1	0	PR02
32008042	5/7/79	UA01	2120	3200.74	8042.49			1	0	PR01
32008041	5/7/79	UA01	2130	3200.18	8041.52			1	0	PR01
31598040	5/7/79	UA01	2140	3159.55	8040.52			1	0	PR01
31588039	5/7/79	UA01	2150	3158.85	8039.66			1	0	PR01
31588038	5/7/79	UA01	2200	3158.15	8038.82			1	0	PR01
31578037	5/7/79	UA01	2210	3157.49	8037.84			1	0	PR01
31568037	5/7/79	UA01	2220	3156.77	8037.00			1	0	PR01
31568036	5/7/79	UA01	2230	3156.16	8036.02			1	0	PR01
31558034	5/7/79	UA01	2240	3155.60	8034.97			1	0	PR01
31558034	5/7/79	UA01	2250	3155.03	8034.05			1	0	PR01
31548033	5/7/79	UA01	2300	3154.36	8033.18			1	0	PR01
31538032	5/7/79	UA01	2310	3153.60	8032.52			1	0	PR01

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC17	0430				60.0	0.0	3.0	
CC17	0445				60.0	0.0	3.0	
CC17	0500				60.0	0.0	2.0	
CC17	0515				60.0	0.0	2.0	
CC17	0530				60.0	0.0	2.0	
CC17	0545				60.0	0.0	2.0	
CC17	0600				60.0	0.0	3.0	
CC17	0615				60.0	0.0	3.0	
CC17	0630				60.0	0.0	2.0	
CC17	0645				60.0	0.0	2.0	
CC17	0700				60.0	0.0	2.0	
CC17	0715				60.0	0.0	3.0	
CC18	1608			0.0	51.0	0.0	1.0	
CC18	1600			0.0	51.0	1.0	2.0	
CC18	1550			0.0	51.0	1.0	2.0	
CC18	1540			0.0	51.0	1.0	2.0	
CC18	1530			0.0	51.0	0.0	1.0	
CC18	1520			0.0	51.0	0.0	1.0	
CC18	1510			0.0	51.0	1.0	2.0	
CC18	1500			0.0	51.0	0.0	1.0	
CC18	1450			0.0	51.0	0.0	1.0	
CC18	1440			0.0	51.0	0.0	1.0	
CC18	1430			0.0	51.0	0.0	1.0	
CC18	1420			0.0	51.0	1.0	2.0	
CC18	1411			0.0	51.0	0.0	1.0	
CC18	1400			0.0	51.0	0.0	1.0	
CC18	1351			0.0	51.0	0.0	1.0	
CC18	1340			0.0	51.0	0.0	1.0	
CC18	1331			0.0	51.0	0.0	1.0	
CC18	1320			0.0	51.0	1.0	2.0	
CC18	1310			0.0	51.0	0.0	1.0	
CC18	1300			0.0	51.0	1.0	2.0	
CC18	1250			0.0	51.0	1.0	2.0	
CC18	1240			0.0	51.0	1.0	2.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC18	1230			0.0	51.0	0.0	1.0	
CC18	1220			0.0	51.0	1.0	2.0	
CC18	1210			0.0	51.0	0.0	1.0	
CC18	1200			0.0	51.0	0.0	1.0	
CC18	1150			0.0	51.0	1.0	2.0	
CC18	1140			0.0	51.0	0.0	1.0	
CC18	1130			0.0	51.0	1.0	2.0	
CC18	1120			0.0	51.0	0.0	1.0	
CC18	1110			0.0	51.0	1.0	2.0	
CC18	1100			0.0	51.0	0.0	1.0	
CC18	1050			0.0	51.0	0.0	1.0	
CC18	1040			0.0	51.0	0.0	1.0	
CC18	1030			0.0	51.0	0.0	1.0	
CC18	1020			0.0	51.0	0.0	1.0	
CC18	1010			0.0	51.0	0.0	1.0	
CC18	1000			0.0	51.0	0.0	1.0	
CC18	0950			0.0	51.0	0.0	1.0	
CC18	0940			0.0	51.0	0.0	1.0	
CC18	0930			0.0	51.0	1.0	2.0	
CC18	0920			0.0	51.0	0.0	1.0	
CC18	0911			0.0	51.0	0.0	1.0	
CC18	0900			0.0	51.0	1.0	2.0	
UA01	2120			1.0	200.0	1.0	4.0	
UA01	2130			1.0	200.0	1.0	4.0	
UA01	2140			1.0	200.0	1.0	4.0	
UA01	2150			1.0	200.0	1.0	5.0	
UA01	2200			1.0	200.0	1.0	5.0	
UA01	2210			1.0	200.0	1.0	4.0	
UA01	2220			1.0	200.0	1.0	4.0	
UA01	2230			1.0	200.0	1.0	7.0	
UA01	2240			1.0	200.0	1.0	6.0	
UA01	2250			1.0	200.0	1.0	5.0	
UA01	2300			1.0	200.0	1.0	10.0	
UA01	2310			1.0	200.0	1.0	7.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC18	1230	6		PH	L						
CC18	1220	6		NH	H						
CC18	1210	7		PH	M						
CC18	1200	6		PH	M						
CC18	1150	7		NH	M						
CC18	1140	6		PH	H						
CC18	1130	7		NH	M						
CC18	1120	6		PH	L						
CC18	1110	6		NH	L						
CC18	1100	6		PH	M						
CC18	1050	7		PH	M						
CC18	1040	7		PH	L						
CC18	1030	7		PH	L						
CC18	1020	6		PH	M						
CC18	1010	6		PH	L						
CC18	1000	7		PH	L						
CC18	0950	7		PH	L						
CC18	0940	7		PH	M						
CC18	0930	7		NH	M						
CC18	0920	7		PH	M						
CC18	0911	7		PH	M						
CC18	0900	7		NH	M						
UA01	2120	16		NH							
UA01	2130	16		NH							
UA01	2140	16		NH							
UA01	2150	16		NH							
UA01	2200	16		NH							
UA01	2210	17		NH							
UA01	2220	16		NH							
UA01	2230	17		NH							
UA01	2240	17		NH							
UA01	2250	16		NH							
UA01	2300	16		NH							
UA01	2310	16		NH							

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
UA01	2320	20		NH							
UA01	2330	18		NH							
UA01	2340	21		NH							
UA01	2350	18		NH							
UA01	2400	19		NH							
UA01	0010	21		NH							
UA01	0020	21		NH							
UA01	0030	22		NH							
UA01	0040	23		NH							
UA01	0050	23		NH							
UA01	0100	25		NH							
UA01	0110	24		NH							
UA01	0120	24		NH							
UA01	0130	21		NH							
UA01	0140	22		NH							
UA01	0150	23		NH							
UA01	0200	25		NH							
UA01	0210	21		NH							
UA01	0220	19		NH							
UA01	0230	18		NH							
UA01	0240	19		NH							
UA01	0250	17		NH							
UA01	0300	18		NH							
UA01	0310	20		NH							
UA01	0320	20		NH							
UA01	0330	19		NH							
UA01	0340	17		NH							
UA01	0350	16		NH							
UA01	0400	16		NH							
UA01	0410	17		NH							
UA01	0420	17		NH							
UA01	0430	17		NH							
UA01	0440	15		NH							
UA01	0450	16		NH							

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
31528031	5/7/79	UA01	2320	3152.87	8031.72			1	0	PR01
31528030	5/7/79	UA01	2330	3152.33	8030.72			1	0	PR01
31528030	5/7/79	UA01	2340	3152.33	8030.72			1	0	PR01
31518028	5/7/79	UA01	2350	3151.20	8028.89			1	0	PR01
31508028	5/7/79	UA01	2400	3150.55	8028.05			1	0	PR01
31498027	5/8/79	UA01	0010	3149.91	8027.14			1	0	PR01
31498026	5/8/79	UA01	0020	3149.33	8026.19			1	0	PR01
31498026	5/8/79	UA01	0030	3149.32	8026.05			1	0	PR01
31508024	5/8/79	UA01	0040	3150.27	8024.45			1	0	PR01
31508023	5/8/79	UA01	0050	3150.70	8023.45			1	0	PR01
31518022	5/8/79	UA01	0100	3151.15	8022.47			1	0	PR01
31518021	5/8/79	UA01	0110	3151.80	8021.70			1	0	PR01
31528020	5/8/79	UA01	0120	3152.53	8020.97			1	0	PR01
31538020	5/8/79	UA01	0130	3153.30	8020.92			1	0	PR01
31538021	5/8/79	UA01	0140	3153.87	8021.97			1	0	PR01
31548022	5/8/79	UA01	0150	3154.48	8022.89			1	0	PR01
31558023	5/8/79	UA01	0200	3155.12	8023.82			1	0	PR01
31558024	5/8/79	UA01	0210	3155.79	8024.77			1	0	PR01
31568025	5/8/79	UA01	0220	3156.50	8025.79			1	0	PR01
31578026	5/8/79	UA01	0230	3157.22	8026.62			1	0	PR01
31578027	5/8/79	UA01	0240	3157.90	8027.56			1	0	PR01
31588028	5/8/79	UA01	0250	3158.55	8028.52			1	0	PR01
31598029	5/8/79	UA01	0300	3159.17	8029.54			1	0	PR01
31598030	5/8/79	UA01	0310	3159.75	8030.53			1	0	PR01
32008031	5/8/79	UA01	0320	3200.34	8031.53			1	0	PR01
32008032	5/8/79	UA01	0330	3200.95	8032.51			1	0	PR01
32018033	5/8/79	UA01	0340	3201.66	8033.56			1	0	PR01
32028034	5/8/79	UA01	0350	3202.34	8034.47			1	0	PR01
32038035	5/8/79	UA01	0400	3203.02	8035.48			1	0	PR01
32038036	5/8/79	UA01	0410	3203.77	8036.27			1	0	PR01
32048035	5/8/79	UA01	0420	3204.49	8035.86			1	0	PR01
32058035	5/8/79	UA01	0430	3205.08	8035.15			1	0	PR01
32058034	5/8/79	UA01	0440	3205.66	8034.44			1	0	PR01
32068033	5/8/79	UA01	0450	3206.27	8033.75			1	0	PR01

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32068032	5/8/79	UA01	0500	3206.83	8032.98			1	0	PR01
32078032	5/8/79	UA01	0510	3207.42	8032.18			1	0	PR01
32078031	5/8/79	UA01	0520	3207.30	8031.43			1	0	PR01
32068030	5/8/79	UA01	0530	3206.69	8030.68			1	0	PR01
31458029	5/7/80	UA02	1245	3145.82	8029.54			1	0	PR02
31468028	5/7/80	UA02	1300	3146.54	8028.61			1	0	PR02
31478027	5/7/80	UA02	1315	3147.27	8027.58			1	0	PR02
31478026	5/7/80	UA02	1330	3147.76	8026.96			1	0	PR02
31478026	5/7/80	UA02	1345	3147.99	8026.65			1	0	PR02
31488026	5/7/80	UA02	1400	3148.35	8026.42			1	0	PR02
31488025	5/7/80	UA02	1415	3148.84	8025.94			1	0	PR02
31498025	5/7/80	UA02	1430	3149.01	8025.64			1	0	PR02
31498025	5/7/80	UA02	1445	3149.07	8025.56			1	0	PR02
31498025	5/7/80	UA02	1500	3149.14	8025.37			1	0	PR02
31488024	5/7/80	UA02	1515	3148.76	8024.78			1	0	PR02
31488023	5/7/80	UA02	1530	3148.11	8023.79			1	0	PR02
31478022	5/7/80	UA02	1545	3147.44	8022.65			1	0	PR02
31468021	5/7/80	UA02	1600	3146.85	8021.49			1	0	PR02
31468020	5/7/80	UA02	1615	3146.32	8020.29			1	0	PR02
31458019	5/7/80	UA02	1630	3145.67	8019.15			1	0	PR02
31448018	5/7/80	UA02	1645	3144.97	8018.03			1	0	PR02
31448016	5/7/80	UA02	1700	3144.21	8016.79			1	0	PR02
31538019	5/8/80	UA03	1530	3153.67	8019.96			1	0	PR02
31548018	5/8/80	UA03	1545	3154.74	8018.96			1	0	PR02
31558017	5/8/80	UA03	1600	3155.71	8017.82			1	0	PR02
31568016	5/8/80	UA03	1615	3156.83	8016.85			1	0	PR02
31578017	5/8/80	UA03	1630	3157.57	8017.19			1	0	PR02
31578018	5/8/80	UA03	1645	3157.95	8017.85			1	0	PR02
31588018	5/8/80	UA03	1700	3158.34	8018.73			1	0	PR02
31588019	5/8/80	UA03	1715	3158.71	8019.53			1	0	PR02
31598020	5/8/80	UA03	1730	3159.01	8020.28			1	0	PR02
31598020	5/8/80	UA03	1745	3159.06	8020.91			1	0	PR02
31598021	5/8/80	UA03	1800	3159.07	8021.54			1	0	PR02
31598022	5/8/80	UA03	1815	3159.23	8022.25			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
UA01	2320			1.0	200.0	1.0	5.0	
UA01	2330			1.0	200.0	1.0	4.0	
UA01	2340			1.0	200.0	1.0	5.0	
UA01	2350			1.0	200.0	1.0	4.0	
UA01	2400			1.0	200.0	1.0	4.0	
UA01	0010			1.0	200.0	1.0	6.0	
UA01	0020			1.0	200.0	1.0	6.0	
UA01	0030			1.0	200.0	1.0	5.0	
UA01	0040			1.0	200.0	1.0	5.0	
UA01	0050			1.0	200.0	1.0	4.0	
UA01	0100			1.0	200.0	1.0	4.0	
UA01	0110			1.0	200.0	1.0	4.0	
UA01	0120			1.0	200.0	1.0	5.0	
UA01	0130			1.0	200.0	1.0	5.0	
UA01	0140			1.0	200.0	1.0	6.0	
UA01	0150			1.0	200.0	1.0	5.0	
UA01	0200			1.0	200.0	1.0	6.0	
UA01	0210			1.0	200.0	1.0	5.0	
UA01	0220			1.0	200.0	1.0	5.0	
UA01	0230			1.0	200.0	1.0	7.0	
UA01	0240			1.0	200.0	1.0	6.0	
UA01	0250			1.0	200.0	1.0	5.0	
UA01	0300			1.0	200.0	1.0	4.0	
UA01	0310			1.0	200.0	1.0	4.0	
UA01	0320			1.0	200.0	1.0	4.0	
UA01	0330			1.0	200.0	1.0	5.0	
UA01	0340			1.0	200.0	1.0	6.0	
UA01	0350			1.0	200.0	1.0	5.0	
UA01	0400			1.0	200.0	1.0	5.0	
UA01	0410			1.0	200.0	1.0	7.0	
UA01	0420			1.0	200.0	1.0	6.0	
UA01	0430			1.0	200.0	1.0	5.0	
UA01	0440			1.0	200.0	1.0	5.0	
UA01	0450			1.0	200.0	1.0	5.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
UA01	0500			1.0	200.0	1.0	5.0	
UA01	0510			1.0	200.0	1.0	4.0	
UA01	0520			1.0	200.0	1.0	6.0	
UA01	0530			1.0	200.0	1.0	5.0	
UA02	1245			1.0	80.0	1.0	8.0	
UA02	1300			1.0	80.0	1.0	6.0	
UA02	1315			1.0	80.0	1.0	8.0	
UA02	1330			1.0	80.0	1.0	4.0	
UA02	1345			1.0	80.0	1.0	3.0	
UA02	1400			1.0	80.0	1.0	3.0	
UA02	1415			1.0	80.0	1.0	3.0	
UA02	1430			1.0	80.0	1.0	4.0	
UA02	1445			1.0	80.0	1.0	7.0	
UA02	1500			1.0	80.0	1.0	3.0	
UA02	1515			1.0	80.0	1.0	5.0	
UA02	1530			1.0	80.0	1.0	5.0	
UA02	1545			1.0	80.0	1.0	7.0	
UA02	1600			1.0	80.0	1.0	9.0	
UA02	1615			1.0	80.0	1.0	9.0	
UA02	1630			1.0	80.0	1.0	9.0	
UA02	1645			1.0	80.0	1.0	8.0	
UA02	1700			1.0	80.0	1.0	8.0	
UA03	1530			1.0	80.0	1.0	3.0	
UA03	1545			1.0	80.0	1.0	3.0	
UA03	1600			1.0	80.0	1.0	4.0	
UA03	1615			1.0	80.0	0.0	1.0	
UA03	1630			1.0	80.0	0.0	1.0	
UA03	1645			1.0	80.0	0.0	1.0	
UA03	1700			1.0	80.0	0.0	1.0	
UA03	1715			1.0	80.0	0.0	1.0	
UA03	1730			1.0	80.0	0.0	1.0	
UA03	1745			1.0	80.0	0.0	1.0	
UA03	1800			1.0	80.0	0.0	1.0	
UA03	1815			1.0	80.0	0.0	1.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
UA01	0500	15		NH							
UA01	0510	13		NH							
UA01	0520	17		NH							
UA01	0530	20		NH							
UA02	1245	21		NH							
UA02	1300	24		NH							
UA02	1315	22		NH							
UA02	1330	22		NH							
UA02	1345	21		NH							
UA02	1400	23		NH							
UA02	1415	25		NH							
UA02	1430	26		NH							
UA02	1445	26		NH							
UA02	1500	26		NH							
UA02	1515	24		NH							
UA02	1530	24		NH							
UA02	1545	26		NH							
UA02	1600	22		NH							
UA02	1615	23		NH							
UA02	1630	24		NH							
UA02	1645	23		NH							
UA02	1700	27		NH							
UA03	1530	22		NH							
UA03	1545	24		NH							
UA03	1600	27		NH							
UA03	1615	28		PH							
UA03	1630	27		PH							
UA03	1645	27		PH							
UA03	1700	27		PH							
UA03	1715	28		PH							
UA03	1730	25		PH							
UA03	1745	25		PH							
UA03	1800	24		PH							
UA03	1815	23		PH							

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
UA03	1830	22		PH							
UA03	1845	21		PH							
UA04	2245	20		NH							
UA04	2300	22		NH							
UA04	2315	17		NH							
UA04	2330	17		NH							
UA04	2345	17		NH							
UA04	2400	17		NH							
UA04	0015	17		NH							
UA04	0030	17		NH							
UA04	0045	17		NH							
UA04	0100	16		NH							
UA04	0115	17		NH							
UA04	0130	16		NH							
UA04	0145	17		NH							
UA04	0200	17		NH							
UA04	0215	15		NH							
CC19	1800	12		NH	M						
CC19	1815	13		NH	M						
CC19	1830	13		NH	M						
CC19	1846	13		NH	M						
CC19	1901	13		NH	M						
CC19	1915	13		NH	M						
CC19	1930	13		NH	M						
CC19	1946	14		NH	M						
CC19	2000	12		NH	M						
CC19	2016	14		NH	M						
CC19	2030	12		NH	M						
CC19	2045	14		NH	M						
CC19	2100	14		NH	M						
CC19	2115	13		NH	H						
CC19	2130	13		NH	M						
CC19	2145	14		NH	M						
CC19	2200	13		NH	H						

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
31598023	5/8/80	UA03	1830	3159.50	8023.02			1	0	PR02
31598023	5/8/80	UA03	1845	3159.72	8023.78			1	0	PR02
32008029	5/8/80	UA04	2245	3200.40	8029.16			1	0	PR02
32018030	5/8/80	UA04	2300	3201.19	8030.15			1	0	PR02
32028031	5/8/80	UA04	2315	3202.10	8031.28			1	0	PR02
32028032	5/8/80	UA04	2330	3202.93	8032.32			1	0	PR02
32038033	5/8/80	UA04	2345	3203.75	8033.48			1	0	PR02
32048034	5/8/80	UA04	2400	3204.49	8034.70			1	0	PR02
32038035	5/9/80	UA04	0015	3203.78	8035.88			1	0	PR02
32028036	5/9/80	UA04	0030	3202.93	8036.94			1	0	PR02
32028037	5/9/80	UA04	0045	3202.12	8037.98			1	0	PR02
32018039	5/9/80	UA04	0100	3201.25	8039.04			1	0	PR02
32008040	5/9/80	UA04	0115	3200.40	8040.14			1	0	PR02
31598041	5/9/80	UA04	0130	3159.41	8041.15			1	0	PR02
31588042	5/9/80	UA04	0145	3158.56	8042.09			1	0	PR02
31578043	5/9/80	UA04	0200	3157.62	8043.10			1	0	PR02
31568043	5/9/80	UA04	0215	3156.66	8043.91			1	0	PR02
32347958	8/4/94	CC19	1800	3234.65	7958.33			1	0	PR02
32337958	8/4/94	CC19	1815	3233.88	7958.26			1	0	PR02
32337958	8/4/94	CC19	1830	3233.29	7958.01			1	0	PR02
32327957	8/4/94	CC19	1846	3232.17	7957.83			1	0	PR02
32317959	8/4/94	CC19	1901	3231.60	7959.08			1	0	PR02
32318000	8/4/94	CC19	1915	3231.03	8000.20			1	0	PR02
32308001	8/4/94	CC19	1930	3230.40	8001.30			1	0	PR02
32298002	8/4/94	CC19	1946	3229.77	8002.46			1	0	PR02
32298003	8/4/94	CC19	2000	3229.19	8003.52			1	0	PR02
32288004	8/4/94	CC19	2016	3228.59	8004.69			1	0	PR02
32288005	8/4/94	CC19	2030	3228.06	8005.66			1	0	PR02
32278006	8/4/94	CC19	2045	3227.49	8006.74			1	0	PR02
32268007	8/4/94	CC19	2100	3226.89	8007.83			1	0	PR02
32268008	8/4/94	CC19	2115	3226.30	8008.97			1	0	PR02
32258010	8/4/94	CC19	2130	3225.95	8010.00			1	0	PR02
32268010	8/4/94	CC19	2145	3226.70	8010.83			1	0	PR02
32268011	8/4/94	CC19	2200	3226.06	8011.89			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32258012	8/4/94	CC19	2215	3225.33	8012.87			1	0	PR02
32248013	8/4/94	CC19	2230	3224.42	8013.57			1	0	PR02
32238014	8/4/94	CC19	2245	3223.51	8014.38			1	0	PR02
32228015	8/4/94	CC19	2300	3222.60	8015.16			1	0	PR02
32218015	8/4/94	CC19	2315	3221.56	8015.99			1	0	PR02
32208016	8/4/94	CC19	2330	3220.74	8016.77			1	0	PR02
32198017	8/4/94	CC19	2344	3219.90	8017.56			1	0	PR02
32188018	8/5/94	CC19	0000	3218.95	8018.46			1	0	PR02
32188019	8/5/94	CC19	0015	3218.02	8019.34			1	0	PR02
32178020	8/5/94	CC19	0030	3217.09	8020.18			1	0	PR02
32168020	8/5/94	CC19	0045	3216.03	8020.77			1	0	PR02
32178020	8/5/94	CC19	0100	3217.19	8020.22			1	0	PR02
32188019	8/5/94	CC19	0115	3218.44	8019.62			1	0	PR02
32198019	8/5/94	CC19	0130	3219.68	8019.16			1	0	PR02
32208018	8/5/94	CC19	0146	3220.99	8018.62			1	0	PR02
32218017	8/5/94	CC19	0200	3221.26	8017.48			1	0	PR02
32218015	8/5/94	CC19	0216	3221.28	8015.96			1	0	PR02
32218014	8/5/94	CC19	0230	3221.34	8014.58			1	0	PR02
32218013	8/5/94	CC19	0245	3221.41	8013.06			1	0	PR02
32218011	8/5/94	CC19	0300	3221.33	8011.52			1	0	PR02
32218010	8/5/94	CC19	0315	3221.26	8010.16			1	0	PR02
32228011	8/5/94	CC19	0330	3222.34	8011.03			1	0	PR02
32238011	8/5/94	CC19	0342	3223.29	8011.61			1	0	PR02
32248012	8/5/94	CC19	0404	3224.70	8012.61			1	0	PR02
32258013	8/5/94	CC19	0415	3225.20	8013.15			1	0	PR02
32258013	8/5/94	CC19	0430	3225.94	8013.82			1	0	PR02
32268014	8/5/94	CC19	0446	3226.79	8014.42			1	0	PR02
32278014	8/5/94	CC19	0500	3227.56	8014.92			1	0	PR02
32288015	8/5/94	CC19	0515	3228.38	8015.44			1	0	PR02
32298015	8/5/94	CC19	0530	3229.21	8015.94			1	0	PR02
32298015	8/5/94	CC19	0545	3229.64	8015.07			1	0	PR02
32298013	8/5/94	CC19	0600	3229.93	8013.85			1	0	PR02
32298012	8/5/94	CC19	0615	3229.74	8012.86			1	0	PR02
32288012	8/5/94	CC19	0630	3228.69	8012.12			1	0	PR02

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
UA03	1830			1.0	80.0	0.0	1.0	
UA03	1845			1.0	80.0	0.0	1.0	
UA04	2245			1.0	80.0	1.0	6.0	
UA04	2300			1.0	80.0	1.0	7.0	
UA04	2315			1.0	80.0	1.0	5.0	
UA04	2330			1.0	80.0	1.0	5.0	
UA04	2345			1.0	80.0	1.0	10.0	
UA04	2400			1.0	80.0	1.0	5.0	
UA04	0015			1.0	80.0	1.0	7.0	
UA04	0030			1.0	80.0	1.0	8.0	
UA04	0045			1.0	80.0	1.0	8.0	
UA04	0100			1.0	80.0	1.0	11.0	
UA04	0115			1.0	80.0	1.0	13.0	
UA04	0130			1.0	80.0	1.0	15.0	
UA04	0145			1.0	80.0	1.0	20.0	
UA04	0200			1.0	80.0	1.0	20.0	
UA04	0215			1.0	80.0	1.0	20.0	
CC19	1800				60.0	0.0	2.0	
CC19	1815				60.0	0.0	2.0	
CC19	1830				60.0	0.0	2.0	
CC19	1846				60.0	1.0	3.0	
CC19	1901				60.0	1.0	3.0	
CC19	1915				60.0	1.0	3.0	
CC19	1930				60.0	1.0	3.0	
CC19	1946				60.0	1.0	2.0	
CC19	2000				60.0	1.0	2.0	
CC19	2016				60.0	0.0	2.0	
CC19	2030				60.0	0.0	2.0	
CC19	2045				60.0	0.0	2.0	
CC19	2100				60.0	1.0	4.0	
CC19	2115				60.0	1.0	3.0	
CC19	2130				60.0	1.0	3.0	
CC19	2145				60.0	1.0	2.0	
CC19	2200				60.0	1.0	2.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC19	2215				60.0	0.0	2.0	
CC19	2230				60.0	1.0	2.0	
CC19	2245				60.0	1.0	3.0	
CC19	2300				60.0	1.0	3.0	
CC19	2315				60.0	1.0	3.0	
CC19	2330				60.0	0.0	2.0	
CC19	2344				60.0	0.0	2.0	
CC19	0000				60.0	0.0	2.0	
CC19	0015				60.0	0.0	2.0	
CC19	0030				60.0	0.0	2.0	
CC19	0045				60.0	0.0	2.0	
CC19	0100				60.0	1.0	2.0	
CC19	0115				60.0	1.0	2.0	
CC19	0130				60.0	0.0	2.0	
CC19	0146				60.0	0.0	3.0	
CC19	0200				60.0	0.0	2.0	
CC19	0216				60.0	0.0	2.0	
CC19	0230				60.0	0.0	2.0	
CC19	0245				60.0	0.0	2.0	
CC19	0300				60.0	0.0	2.0	
CC19	0315				60.0	0.0	2.0	
CC19	0330				60.0	0.0	2.0	
CC19	0342				60.0	0.0	2.0	
CC19	0404				60.0	0.0	2.0	
CC19	0415				60.0	0.0	2.0	
CC19	0430				60.0	1.0	2.0	
CC19	0446				60.0	1.0	3.0	
CC19	0500				60.0	1.0	3.0	
CC19	0515				60.0	1.0	3.0	
CC19	0530				60.0	1.0	3.0	
CC19	0545				60.0	1.0	3.0	
CC19	0600				60.0	1.0	3.0	
CC19	0615				60.0	1.0	3.0	
CC19	0630				60.0	1.0	3.0	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC19	2215	14		NH	M						
CC19	2230	13		NH	M						
CC19	2245	13		NH	M						
CC19	2300	12		NH	H						
CC19	2315	13		NH	M						
CC19	2330	13		PH	H						
CC19	2344	12		PH	M						
CC19	0000	14		NH	L						
CC19	0015	13		NH	H						
CC19	0030	14		NH	M						
CC19	0045	12		PH	M						
CC19	0100	14		NH	M						
CC19	0115	15		NH	M						
CC19	0130	11		PH	H						
CC19	0146	11		PH	H						
CC19	0200	13		PH	M						
CC19	0216	13		NH	M						
CC19	0230	14		PH	M						
CC19	0245	13		NH	M						
CC19	0300	14		NH	M						
CC19	0315	14		NH	M						
CC19	0330	15		PH	H						
CC19	0342	15		PH	H						
CC19	0404	12		PH	H						
CC19	0415	13		NH	M						
CC19	0430	14		NH	M						
CC19	0446	13		NH	H						
CC19	0500	13		NH	L						
CC19	0515	12		NH	M						
CC19	0530	10		NH	M						
CC19	0545	10		NH	L						
CC19	0600	10		NH	M						
CC19	0615	12		NH	M						
CC19	0630	14		NH	M						

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32278011	8/5/94	CC19	0645	3227.63	8011.43			1	0	PR02
32268010	8/5/94	CC19	0700	3226.50	8010.79			1	0	PR02
32258010	8/5/94	CC19	0715	3225.38	8010.11			1	0	PR02
32238008	8/5/94	CC19	0745	3223.17	8008.59			1	0	PR02
32228007	8/5/94	CC19	0800	3222.06	8007.90			1	0	PR02
32397953	5/10/94	CC20	F-94-1	3239.26	7953.98				0	GR01
32397954	5/10/94	CC20	F-94-2	3239.10	7954.18				0	GR01
32387954	5/10/94	CC20	F-94-3	3238.91	7954.48				0	GR01
32387953	5/10/94	CC20	F-94-4	3238.96	7953.81				0	GR01
32387953	5/10/94	CC20	F-94-5	3238.83	7953.99				0	GR01
32387954	5/10/94	CC20	F-94-6	3238.76	7954.23				0	GR01
32387954	5/10/94	CC20	F-94-7	3238.63	7954.53				0	GR01
32387954	5/10/94	CC20	F-94-8	3238.28	7954.06				0	GR01
32387953	5/10/94	CC20	F-94-9	3238.47	7953.69				0	GR01
32387953	5/10/94	CC20	F-94-10	3238.36	7953.90				0	GR01
32387953	5/10/94	CC20	F-94-11	3238.23	7953.88				0	GR01
32387953	5/11/94	CC20	F-94-12	3238.96	7952.62				0	GR01
32387953	5/11/94	CC20	F-94-13	3238.70	7953.13				0	GR01
32387953	5/11/94	CC20	F-94-14	3238.33	7953.67				0	GR01
32377954	5/11/94	CC20	F-94-15	3237.95	7954.23				0	GR01
32377953	5/11/94	CC20	F-94-16	3237.77	7953.84				0	GR01
32377954	5/11/94	CC20	F-94-17	3237.47	7953.17				0	GR01
32377954	5/11/94	CC20	F-19-18	3237.34	7954.00				0	GR01
32387952	5/11/94	CC20	F-94-19	3238.47	7952.61				0	GR01
32387952	5/11/94	CC20	F-94-20	3238.51	7952.53				0	GR01
32387952	5/11/94	CC20	F-94-21	3238.67	7952.50				0	GR01
32377956	5/12/94	CC20	F-94-22	3237.54	7956.47				0	GR01
32377956	5/12/94	CC20	F-94-23	3237.91	7956.12				0	GR01
32387954	5/12/94	CC20	F-94-24	3238.46	7954.99				0	GR01
32377954	5/12/94	CC20	F-94-25	3237.87	7954.83				0	GR01
32377954	5/12/94	CC20	F-94-26	3237.79	7954.35				0	GR01
32377954	5/12/94	CC20	F-94-27	3237.61	7954.03				0	GR01
32377953	5/12/94	CC20	F-94-28	3237.01	7953.00				0	GR01
32377952	5/12/94	CC20	F-94-29	3237.06	7952.62				0	GR01

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC19	0645	14		NH	M						
CC19	0700	14		PH	H						
CC19	0715	15		PH	H						
CC19	0745	16		PH	M						
CC19	0800	14		PH	H						
CC20	F-94-1	5		NH		85.4	8.70		15.4		
CC20	F-94-2	5		NH		86.7	4.60		25.0		
CC20	F-94-3	4		NH		84.0	13.80		10.0		
CC20	F-94-4	5		NH		76.5	21.36		11.6		
CC20	F-94-5	5		NH		76.2	17.06		18.8		
CC20	F-94-6	4		NH		80.4	13.54		16.8		
CC20	F-94-7	5		NH		88.8	8.76		9.6		
CC20	F-94-8	5		NH		78.1	14.11		21.7		
CC20	F-94-9	7		NH		78.4	20.95		12.3		
CC20	F-94-10	7		NH		70.1	27.66		11.7		
CC20	F-94-11	5		NH		85.4	0.95		35.8		
CC20	F-94-12	7		NH		87.8	10.34		13.5		
CC20	F-94-13	6		NH		80.7	17.49		10.2		
CC20	F-94-14	7		NH		80.9	12.49		19.7		
CC20	F-94-15	7		NH		91.8	6.92		8.0		
CC20	F-94-16	8		NH		92.2	5.95		14.2		
CC20	F-94-17	9		NH		93.5	3.25		16.6		
CC20	F-19-18	8		NH							
CC20	F-94-19	6		NH		85.8	1.33		11.7		
CC20	F-94-20	7		NH		81.4	15.27		11.8		
CC20	F-94-21	7		NH		89.6	10.02		10.7		
CC20	F-94-22	7		NH		90.6	7.65		13.0		
CC20	F-94-23	6		NH		76.5	21.03		8.2		
CC20	F-94-24	5		NH		76.7	22.34		6.9		
CC20	F-94-25	7		NH		93.3	5.75		7.9		
CC20	F-94-26	7		NH		94.1	4.03		9.9		
CC20	F-94-27	8		NH		96.2	3.47		7.1		
CC20	F-94-28	11		NH		67.0	5.96		46.3		
CC20	F-94-29	12		NH		26.2	72.84		3.7		

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Block	Date	Agency_Pro	Origcoll	Startlat	Startlong	Endlat	Endlong	Posmethod	Corrfactor	Geartype
32367952	5/12/94	CC20	F-94-30	3236.95	7952.36				0	GR01
32367951	5/12/94	CC20	F-94-31	3236.88	7951.80				0	GR01
32377952	5/12/94	CC20	F-94-32	3237.71	7952.49				0	GR01
32387953	5/12/94	CC20	F-94-33	3238.21	7953.02				0	GR01

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC19	0645				60.0	1.0	3.0	
CC19	0700				60.0	0.0	3.0	
CC19	0715				60.0	0.0	3.0	
CC19	0745				60.0	0.0	3.0	
CC19	0800				60.0	0.0	3.0	
CC20	F-94-1				1.7	1.7	1.7	
CC20	F-94-2				1.8	1.8	1.8	
CC20	F-94-3				1.8	1.8	1.8	
CC20	F-94-4				2.1			
CC20	F-94-5				1.3			
CC20	F-94-6				1.9			
CC20	F-94-7				1.7	1.7	1.7	
CC20	F-94-8				1.9			
CC20	F-94-9				1.5			
CC20	F-94-10				2.3			
CC20	F-94-11				1.4	1.4	1.4	
CC20	F-94-12				2.0			
CC20	F-94-13				2.3			
CC20	F-94-14				2.7			
CC20	F-94-15				2.7			
CC20	F-94-16				2.7	2.7	2.7	
CC20	F-94-17				2.7	2.7	2.7	
CC20	F-19-18							
CC20	F-94-19				2.1			
CC20	F-94-20				3.0			
CC20	F-94-21				2.4			
CC20	F-94-22				1.6	1.6	1.6	
CC20	F-94-23				1.4			
CC20	F-94-24				1.9			
CC20	F-94-25				1.8	1.8	1.8	
CC20	F-94-26				1.9	1.9	1.9	
CC20	F-94-27				2.8	2.8	2.8	
CC20	F-94-28				0.5			
CC20	F-94-29				1.8			

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Phosphate	EHM ZTR	Mindpthpen	Maxdpthpen	Minsandlen	Maxsandlen	Stratig
CC20	F-94-30				1.3			
CC20	F-94-31				1.7			
CC20	F-94-32				2.2	2.2	2.2	
CC20	F-94-33				1.9	1.9	1.9	

Appendix A. INTERMAR Year II primary database file (0-16km from coast).

Agency_Pro	Origcoll	Depth	Depth_End	Bottomtype	Relief	Sand	Silt	Clay	Carbonate	Meangrsiz	Heavymin
CC20	F-94-30	10		NH		67.7	11.58		41.2		
CC20	F-94-31	11		NH		76.7	4.41		38.1		
CC20	F-94-32	9		NH		92.6	2.67		17.8		
CC20	F-94-33	7		NH		91.1	6.03		12.2		

Appendix B. Project information for the INTERMAR database.

Appendix B. Project information for the INTERMAR database.

Project code	State	Project title/info.		
UA01	GA	Ocean Bottom Survey of Georgia Bight, R/V Bluefin cruise May 1979; GS-4	lines 37-41	U. Georgia, Athens
UA02	GA	Ocean Bottom Survey of Georgia Bight, R/V Bluefin cruise May 1980; GS-7	line 10	U. Georgia, Athens
UA03	GA	Ocean Bottom Survey of Georgia Bight, R/V Bluefin cruise May 1980; GS-7	line 14	U. Georgia, Athens
UA04	GA	Ocean Bottom Survey of Georgia Bight, R/V Bluefin cruise May 1980; GS-7	lines 19-20	U. Georgia, Athens
CC15	SC	High resolution seismic lines off Folly Beach (NURC) 5-9-94		NURC
CC16	SC	High resolution seismic lines off Folly Beach-Edisto Island (8-2/3-94),	NOAA Ferrel	Sea Grant Consortium
CC17	SC	High resolution seismic lines off Edisto-St. Helena Sound (8-3/4-94), N	OAA Ferrel	Sea Grant Consortium
CC18	SC	High resolution seismic lines off Folly Beach-Edisto Island (8-4/5-94),	NOAA Ferrel	Sea Grant Consortium
CC19	SC	Vibracoring off Folly Beach (NURC) 5-9/12-94		NURC

Project code	Principal Invest.	Agency	Address				Phone
UA01	V.J. Henry	U. GA; now at GA Southern U.	Skidaway Institute,	Savannah	GA	31416	912-598-2463
UA02	V.J. Henry	U. GA; now at GA Southern U.	Skidaway Institute,	Savannah	GA	31416	912-598-2463
UA03	V.J. Henry	U. GA; now at GA Southern U.	Skidaway Institute,	Savannah	GA	31416	912-598-2463
UA04	V.J. Henry	U. GA; now at GA Southern U.	Skidaway Institute,	Savannah	GA	31416	912-598-2463
CC15	P.T. Gayes	Coastal Carolina University.	PO Box 1954	Conway	SC	29526	803-349-2224
CC16	P.T. Gayes	Coastal Carolina University.	PO Box 1954	Conway	SC	29526	803-349-2224
CC17	P.T. Gayes	Coastal Carolina University.	PO Box 1954	Conway	SC	29526	803-349-2224
CC18	P.T. Gayes	Coastal Carolina University.	PO Box 1954	Conway	SC	29526	803-349-2224
CC19	P.T. Gayes	Coastal Carolina University.	PO Box 1954	Conway	SC	29526	803-349-2224

Appendix C. Secondary database file which summarizes the number of data records and occurrence of hard bottom in each 1 minute x 1 minute block of the area surveyed.

Appendix C. Year 2 INTERMAR blocks file

BLOCK	LATITUD	LONGITUDE	HARD_EV	NUM_OBS
31568043	3156.66	8043.91	N	1
31578043	3157.62	8043.10	N	1
31588038	3158.15	8038.82	N	1
31588039	3158.85	8039.66	N	1
31588042	3158.56	8042.09	N	1
31598040	3159.55	8040.52	N	1
31598041	3159.41	8041.15	N	1
32008040	3200.40	8040.14	N	1
32008041	3200.18	8041.52	N	1
32008042	3200.74	8042.49	N	1
32018039	3201.25	8039.04	N	1
32028034	3202.34	8034.47	N	1
32028036	3202.93	8036.94	N	1
32028037	3202.12	8037.98	N	1
32038033	3203.75	8033.48	N	1
32038035	3203.78	8035.88	N	2
32038036	3203.77	8036.27	N	1
32048034	3204.49	8034.70	N	1
32048035	3204.49	8035.86	N	1
32058034	3205.66	8034.44	N	1
32058035	3205.08	8035.15	N	1
32068030	3206.69	8030.68	N	1
32068032	3206.83	8032.98	N	1
32068033	3206.27	8033.75	N	1
32078031	3207.30	8031.43	N	1
32078032	3207.42	8032.18	N	1
32168020	3216.03	8020.77	P	1
32178017	3227.04	8017.23	N	1
32178020	3217.09	8020.18	N	2
32188018	3218.95	8018.46	N	1
32188019	3218.44	8019.62	N	2
32198017	3219.90	8017.56	P	1
32198019	3219.68	8019.16	P	1
32208016	3220.74	8016.77	P	1
32208018	3220.99	8018.62	P	1
32218010	3221.26	8010.16	N	1
32218011	3221.33	8011.52	N	1
32218013	3221.41	8013.06	N	1
32218014	3221.34	8014.58	P	1
32218015	3221.28	8015.96	N	2
32218017	3221.26	8017.48	P	1
32218018	3221.65	8018.25	N	3
32218019	3221.12	8019.09	N	1
32228007	3222.06	8007.90	P	1
32228011	3222.34	8011.03	P	1
32228015	3222.60	8015.16	N	1
32228017	3222.55	8017.12	N	2
32228018	3222.95	8018.62	N	1

32228019	3222.35	8019.01	N	1
32238008	3223.17	8008.59	P	1
32238011	3223.29	8011.61	P	1
32238014	3223.51	8014.38	N	1
32238015	3223.99	8015.89	P	1
32238016	3223.24	8016.51	P	1
32238017	3223.95	8017.65	N	1
32238018	3223.46	8018.16	N	1
32248012	3224.70	8012.61	P	1
32248013	3224.42	8013.57	N	1
32248015	3224.72	8015.30	N	1
32248016	3224.96	8016.82	N	1
32248017	3224.41	8017.15	N	1
32258006	3225.99	8006.08	N	2
32258008	3225.63	8008.11	N	1
32258010	3225.38	8010.11	P	2
32258012	3225.33	8012.87	N	1
32258013	3225.94	8013.82	N	3
32258014	3225.43	8014.72	N	1
32258015	3225.95	8015.89	N	1
32258016	3225.51	8016.46	N	1
32268006	3226.69	8006.60	N	1
32268007	3226.89	8007.83	N	1
32268008	3226.62	8008.78	N	2
32268010	3226.50	8010.79	P	3
32268010	3226.70	8010.83	N	
32268011	3226.06	8011.89	N	1
32268012	3226.91	8012.26	N	1
32268013	3226.44	8013.10	P	2
32268013	3226.94	8013.84	N	
32268014	3226.79	8014.42	N	2
32268014	3226.65	8014.53	N	
32268015	3226.30	8015.22	N	1
32268016	3226.83	8016.78	N	1
32278006	3227.49	8006.74	N	1
32278007	3227.43	8007.00	N	1
32278008	3227.61	8008.95	N	1
32278009	3227.54	8009.30	N	2
32278009	3227.19	8009.76	N	
32278010	3227.73	8010.68	N	1
32278011	3227.34	8011.46	N	2
32278011	3227.63	8011.43	N	
32278012	3227.61	8012.45	N	1
32278013	3227.28	8013.14	N	1
32278014	3227.56	8014.92	N	1
32278015	3227.36	8015.62	N	1
32278017	3227.92	8017.06	N	1
32288004	3228.59	8004.69	N	1
32288005	3228.06	8005.66	N	1

32288006	3228.94	8006.54	N	1
32288007	3228.52	8007.35	N	2
32288007	3228.11	8007.44	N	
32288008	3228.98	8008.44	N	3
32288008	3228.95	8008.00	N	
32288008	3228.06	8008.15	N	
32288009	3228.41	8009.81	N	3
32288009	3228.55	8009.17	N	
32288009	3228.14	8009.90	N	
32288010	3228.84	8010.50	N	1
32288011	3228.41	8011.15	N	2
32288011	3228.01	8011.79	N	
32288012	3228.69	8012.12	N	1
32288013	3228.66	8013.20	N	1
32288014	3228.01	8014.41	N	1
32288015	3228.38	8015.44	N	2
32288015	3228.69	8015.70	N	
32288016	3228.48	8016.39	N	2
32288016	3228.77	8016.86	N	
32298002	3229.77	8002.46	N	1
32298003	3229.19	8003.52	N	1
32298005	3229.83	8005.00	N	2
32298005	3229.37	8005.75	N	
32298007	3229.87	8007.02	N	2
32298007	3229.16	8008.05	N	
32298008	3229.70	8008.54	N	1
32298009	3229.29	8009.87	N	2
32298009	3229.71	8009.19	N	
32298010	3229.76	8010.63	N	2
32298010	3229.28	8010.37	N	
32298011	3229.24	8011.92	N	1
32298012	3229.74	8012.86	N	3
32298012	3229.78	8012.84	N	
32298012	3229.79	8012.22	N	
32298013	3229.55	8013.88	N	3
32298013	3229.93	8013.85	N	
32298013	3229.53	8013.17	N	
32298014	3229.41	8014.95	N	2
32298014	3229.04	8014.53	N	
32298015	3229.21	8015.94	N	2
32298015	3229.64	8015.07	N	
32298016	3229.26	8016.09	N	1
32308001	3230.40	8001.30	N	1
32308004	3230.09	8004.35	N	2
32308004	3230.58	8004.41	N	
32308006	3230.51	8006.57	N	1
32308007	3230.54	8007.83	N	2
32308007	3230.90	8007.16	N	
32308008	3230.09	8008.53	N	2

Appendix C. Year 2 INTERMAR blocks file

32308008	3230.80	8008.10	N	
32308009	3230.18	8009.50	N	2
32308009	3230.29	8009.18	N	
32308010	3230.19	8010.24	N	2
32308010	3230.10	8010.93	N	
32308011	3230.02	8011.11	N	2
32308011	3230.03	8011.82	N	
32317959	3231.60	7959.08	N	1
32318000	3231.03	8000.20	N	1
32318004	3231.76	8004.76	N	2
32318005	3231.36	8005.44	P	4
32318006	3231.33	8006.75	P	3
32327957	3232.17	7957.83	N	1
32328003	3232.70	8003.24	N	2
32328004	3232.25	8004.11	N	2
32337958	3233.29	7958.01	N	2
32338000	3233.61	8000.81	N	1
32338001	3233.19	8001.99	N	1
32347957	3234.94	7957.32	N	1
32347958	3234.65	7958.33	N	2
32347959	3234.05	7959.61	N	1
32357954	3235.39	7954.83	N	1
32357956	3235.41	7956.23	N	1
32367951	3236.88	7951.80	N	1
32367952	3236.95	7952.36	N	1
32367954	3236.16	7954.12	N	1
32367956	3236.94	7956.73	N	1
32367957	3236.72	7957.04	P	3
32377952	3237.75	7952.77	P	7
32377953	3237.66	7953.63	P	16
32377954	3237.82	7954.35	P	18
32377955	3237.79	7955.61	P	6
32377956	3237.26	7956.32	P	7
32377957	3237.16	7957.28	P	2
32387951	3238.86	7951.75	P	10
32387952	3238.10	7952.10	P	18
32387953	3238.34	7953.36	P	19
32387954	3238.38	7954.46	P	11
32397950	3239.72	7950.48	P	4
32397951	3239.02	7951.52	N	3
32397952	3239.69	7952.78	P	6
32397953	3239.26	7953.98	N	5
32397954	3239.10	7954.18	N	1
32407949	3249.36	7949.97	P	4
32407950	3240.63	7950.75	N	1
32417948	3241.85	7948.82	P	1
32417949	3241.59	7949.01	N	2
32427948	3242.08	7948.64	P	1

Appendix D. Core descriptions for vibracores collected May 9-12, 1994 by Coastal Carolina University.

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

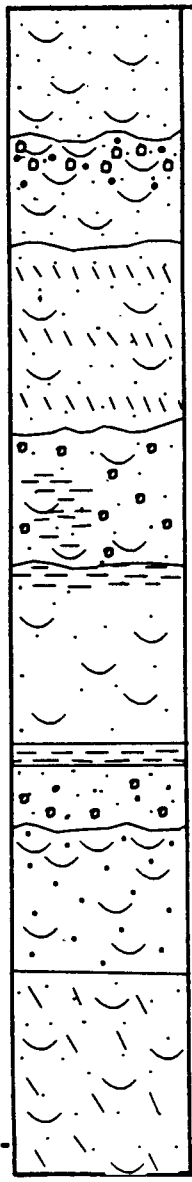
Core ID F-94-1

Total Depth 173 cm

Date cored 5-10-94

Equipment NURC vibracore

Location 32°39.26'N 79°53.78'W Analyst/Date described Pat Ealy 6-2-94

	Sketch	Color	Texture	Sed. Structures	Comments
0-		5GY 5/1	mod. poorly sorted		fine gr. sand, some silt, 5% opaques
10-					10-15% fine shell (fair amt black shell)
		2.5Y 5/2	inverse graded bed		coarse-fine sand, 10-20% shell frags. (decr. down section)
20-					
		2.5Y 5/2	inverse graded bed	coarsens upward 19-35cm fair amt. organics	fine-coarse sand, 15% shell, some black shells
30-					
40-		5GY 4/1	mod. well sorted		med.-coarse sand, 5-10% fine shell frags., lens of organic-rich clay 3-4 cm
		5GY 5/1			
50-					
		N/3	poorly sorted		fine sand and silt, incr. shell down section
60-					
		N/3			clay layer
70-		N/3	graded bed	coarsening down	fine-coarse sand
		N/3	poorly sorted	71-73cm coarse shell hash	med. gr. sand, 20-30% shell,
80-					
90-		N/3	mod. poorly sorted	97-104cm shell hash	fine sand, some silt
100-					

Core ID F-94-1

Sketch	Color	Texture	Sed. Structures	Comments
100-			see description previous page	
110-				
120-				
130-	N/3	well sorted		fine sand, 25% silty clay, 5% fine shell frags.
140-				
150-				
160-	N/4			silty clay
170-	N/3	well sorted	165 cm clam shells (7 mm)	fine sand, clay
180-				
190-				
200-				
210-				
220-				
230-				

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

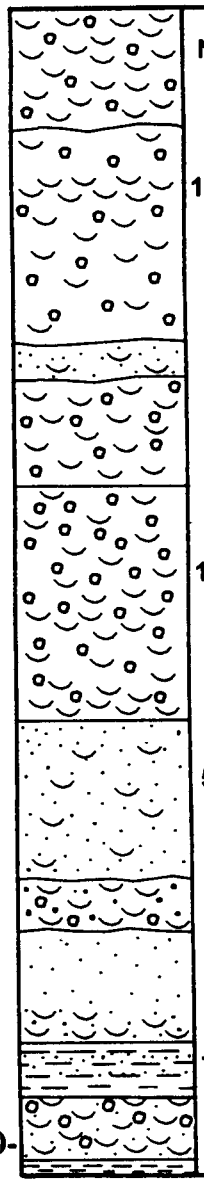
Core ID F-94-2

Total Depth 184 cm

Date cored 5-10-94

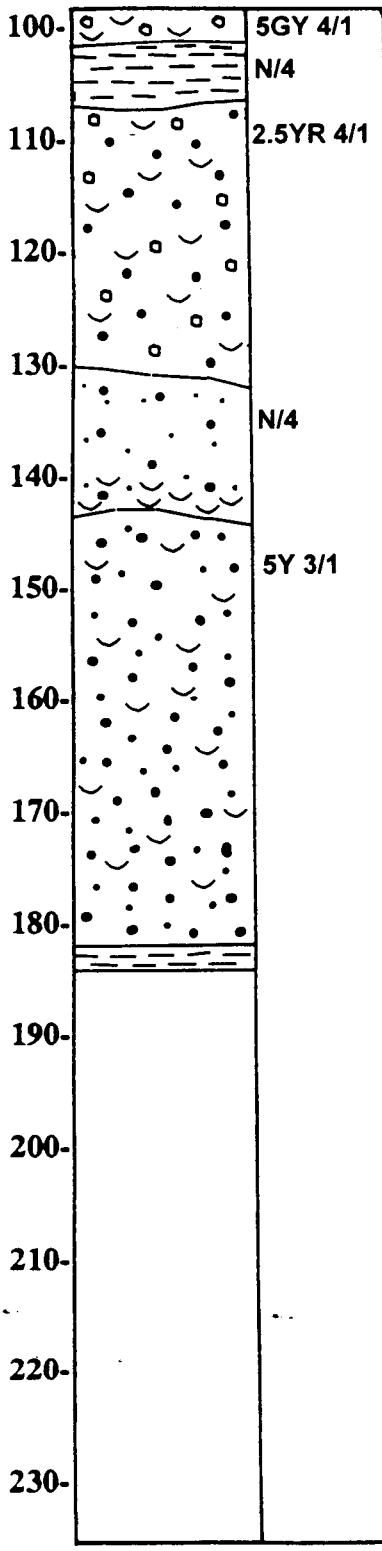
Equipment NURC vibracore

Location 32°39.10'N 79°54.18'W Analyst/Date described Pat Ealy 6-3-94



	Color	Texture	Sed. Structures	Comments
0	N/2.5	mod. poorly sorted		coarse sand, shell hash many black shells, initially smelled bad
10-	10 YR 5/4	mod. poorly sorted		shell hash, coarse sand 15-16cm shell hash, 5% opaques, iron stained and black shells
20-				
30-		mod. well sorted		fine sand, 10% shell frags., 5% opaques
	N/2.5	mod. well sorted	32-34cm dk. grey bivalves	shell hash, coarse sand, initially smelled bad
40-				
50-	10YR 6/6	mod. poorly sorted	55-57cm shell content incr. 62-64 cm shell content incr.	shell hash, coarse sand
60-				
70-	5GY 4/1	poorly sorted	64-82cm coarsens down section	med. gr. sand-silt, 20% fine shell frags.
80-	5Y 4/1	poorly sorted	coarsens down	silt-med. gr. sand, 25% shell frags.
	5GY 4/1	mod. poorly sorted	82cm mud lens	shell hash, coarse sand
90-	7.5YR 5/2		87-89cm incr. shell content	mud and fine sand
100-	5GY 4/1	mod. poorly sorted		shell hash, med-coarse sand

Core ID F-94-2



Sketch	Color	Texture	Sed. Structures	Comments
100-	5GY 4/1		see description previous page	
	N/4	clay		clay
110-	2.5YR 4/1	mod. poorly sorted		med.-v.coarse sand, 50% shell hash
120-				
130-	N/4	fairly well sorted		fine-med. gr. sand, 30% fine shell frags., no visible mica
140-				
150-	5Y 3/1	mod. poorly sorted		med. gr. sand, 20% shell frags., 5% fine mica gr.
160-				
170-				
180-		clay		
190-				
200-				
210-				
220-				
230-				

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

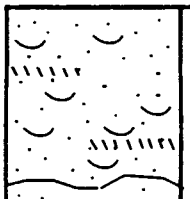
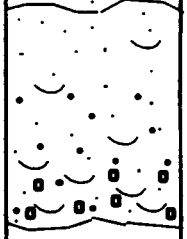
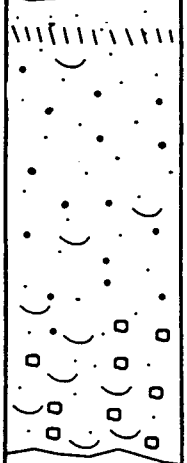
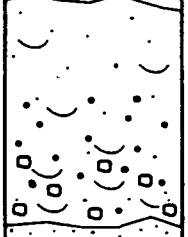
Core ID F-94-3

Total Depth 186 cm

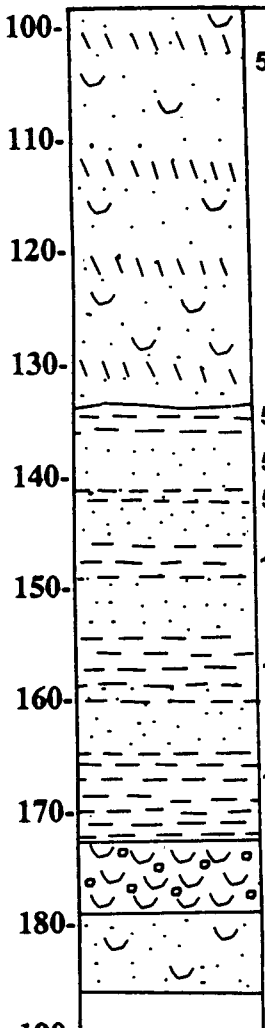
Date cored 5-10-94

Equipment NURC vibracore

Location 32°38.91'N 79°54.48'W Analyst/Date described Pat Ealy 6-6-94

	Sketch	Color	Texture	Sed. Structures	Comments
0-10-		5Y 5/3	mod. sorted, sub-ang. grains		fine sand, some intersp. silt, 5% opaques, 15% fine shell frags.
20-30-		2.5Y 6/3	graded bed, sub-ang. grains	31-35cm high shell content, fair amt. iron staining	fine-coarse gr. sand, coarsens down, shell incr. down section
40-50-60-70-		5Y 5/3	graded bed, ang. grains		silty fine-coarse sand, coarsens down section, 5-15% fine shell, <5% mica 5% opaques,
80-90-		5Y 5/3	graded bed, ang.-sub-ang. grains, mod. to poorly sorted		silty fine-coarse sand, coarsens down section, 10-15% fine shell, 0-5% opaques, <5% mica, some black shells
100-		5Y 6/2	mod. sorted	110-111cm shell layer	fine gr. with silt, 0-5% opaques, 15% fine shell

Core ID F-94-3



Sketch	Color	Texture	Sed. Structures	Comments
100-	5Y 6/2		description previous page	
110-				
120-				
130-	5Y 4/2	poorly sorted sub-ang. grains	interspersed mud layers	fine silty sand and mud, 15% shell (fine to mod. sized), 5-8% mica grains
	5Y 6/2			
140-	5Y 4/2			
	10YR 5/3			
150-	5Y 4/1			
	10YR 5/3			
160-	5Y 4/1			
	10YR 5/3			
170-	2.5Y 4/1	mod. poorly sorted		coarse sand, shell hash, 5% opaques
180-	5B 4/1	poorly sorted		fine silty sand, 10% fine shell frags.,
190-				
200-				
210-				
220-				
230-				

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

Core ID F-94-4

Total Depth 212 cm

Date cored 5-10-94

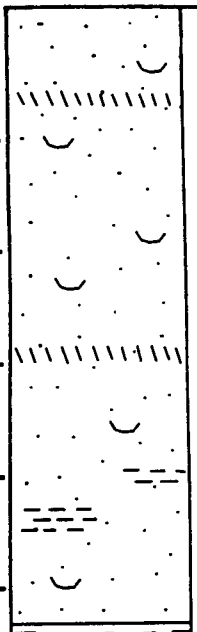
Equipment NURC vibracore

Location 32° 38.96'N 79° 53.81'W Analyst/Date described Pat Ealy 6-24-94

Sketch	Color	Texture	Sed. Structures	Comments
0-	5Y 5/1	mod. poorly sorted	0-10cm fair amt. organics	v.fine sand, little silt, 15% fine shell frags., 5% mica, 5% opaques
10-				
20-				
30-				
40-				
50-	2.5Y 6/3	poorly sorted, sub-ang. to ang. grains		fine-coarse sand, 40% shell hash, 5% mica
60-	5Y 5/2	graded bed, ang. to sub-ang. grains	50-52cm mud layer	fine-coarse sand, coarsens down section, shell incr. down section (5% to 30%)
70-	5GY 4/1	mod. poorly sorted sand	two shell-filled burrows (2 cm diameter)	v.fine silty sand and mud, v. little mica
80-	5GY 4/1	mod. poorly sorted		v. fine-silty sand, 10% mica, 5% opaques, 5% fine shell frags.
90-				
100-				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-4

Sketch	Color	Texture	Sed. Structures	Comments
			see previous description	
			130-154 cm mud layers (1cm x 0.5 cm)	
	N/4	mod. poorly sorted sand	mud layers interspersed (2-6 cm thick)	fine silty sand and mud, 10% mica, 5% opaques, 5% fine shell frags.
	N/4	mod. poorly sorted	189-192 cm shell layers	v. fine silty sand, 5% opaques

100- 110- 120- 130- 140- 150- 160- 170- 180- 190- 200- 210- 220- 230-

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-5

Total Depth 134 cm

Date cored 5-10-94

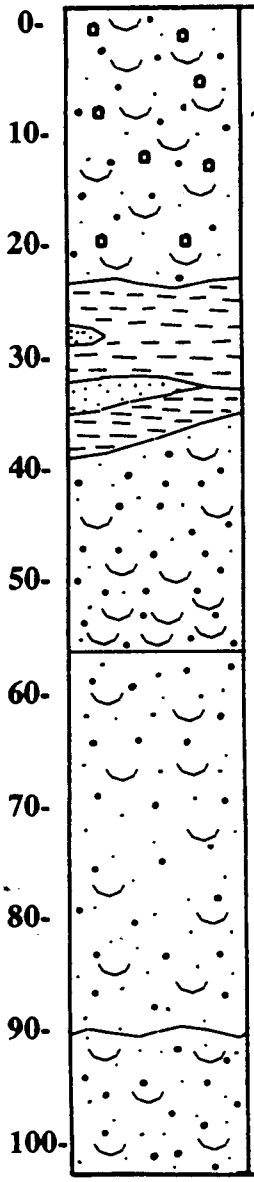
Equipment NURC vibracore

Location 32°38.86'N 79°53.99'W

Analyst/Date described Pat Ealy 6-1-94

KEY

- Fine sand
- Med. sand
- Coarse sand
- Pebbles
- Shells
- Silt
- Clay
- Burrows
- Wood Frags.
- Roots
- Peat
- Mud Rollers
- Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
0- to 20-	10YR 5/6	poorly sorted		fine-coarse sand, 50% coarse shell hash
20- to 30-	N/3	mud	mud contains 1-2% organic flakes	24-40cm mud with lenses of fine sand (1-1.5 cm thick),
30- to 40-	N/4	well-sorted		sand contains fine shell frags. (0.25 cm)
40- to 50-	N/4	mod. sorted	56-59 cm med. sized shell hash (0.75-1.0 cm diam.)	fine-med. gr. sand, 10-30% shell frags., shell incr. down section
60- to 70-	N/4	fairly well-sorted		fine-med. gr. sand, 3-5% fine shell, much of shell is black, 5% opaques
90- to 100-	N/4	well-sorted		fine-med. gr. sand, 10-15% shell frags.

Core ID F-94-5

Sketch	Color	Texture	Sed. Structures	Comments
100-	N/4		see previous page	
110-	N/3	mud		mud rollers, no significant sand
120-	N/4	fairly well-sorted		fine gr. sand, 5-7% shell frags. (0.5 cm diam.)
130-				
140-				
150-				
160-				
170-				
180-				
190-				
200-				
210-				
220-				
230-				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-6

Total Depth 193 cm

Date cored 5-10-94

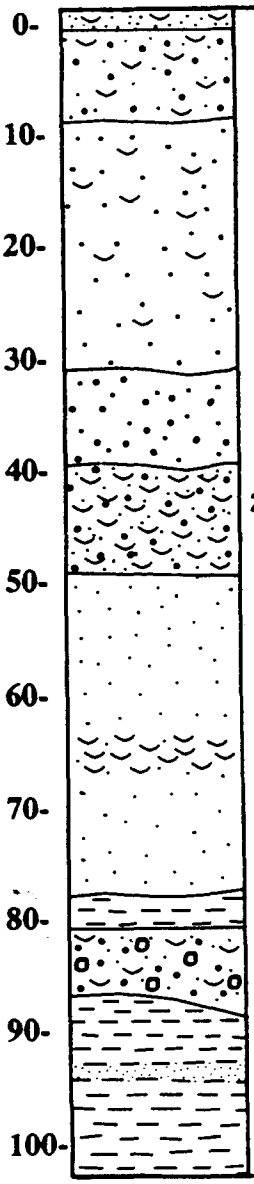
Equipment NURC vibracore

Location 32°38.76'N 79°54.23'W

Analyst/Date described Paul Gayes and students 6-1-94

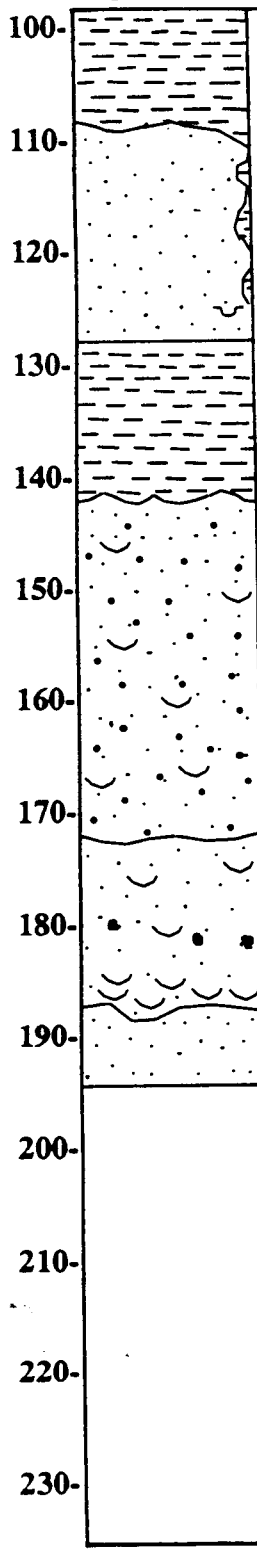
KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
0-	N/4	well-sorted		fine gr. sand, 10% fine shell frags.
	2.5Y 5/2	poorly sorted	8 cm coquina clam shell	fine-med. gr. sand, 15% shell frags.
10-	N/4	well sorted		fine sand, 15% small shell frags.
20-				
30-	N/5	mod. well-sorted		fine-med. gr. sand, v. little shell
40-	2.5Y 4/1	poorly sorted		shell hash (coquina clams), v. fine-med. gr. sand,
50-	N/4	well-sorted	color change down section, 65-68 cm sm. shell frags.	fine gr. sand, 5-10% fine shell frags. throughout
60-				
70-	N/5			
80-	N/4	clay		
	N/4	poorly sorted	80 cm partial sand dollar shell	fine-v. coarse gr. sand, pebbles, 15-20% shell frags.
90-	N/3	clay	92 cm large clam shell frag.	mud, band of fine sand at 95 cm
100-				

Core ID F-94-6



Sketch	Color	Texture	Sed. Structures	Comments
100-	N/3	clay		mud/clay
110-	N/4	well-sorted	124 cm moon snail burrow filled with shell hash	fine sand, 5% fine shell frags.
120-				
130-	N/3	clay		mud/clay
140-				
150-	N/4	mod. sorted		fine-med. gr. sand, 8% fine shell frags.
160-				
170-				
180-	N/4	mod. sorted	180-183 cm mud rollers 188 cm incr. shell content	fine-med. gr. sand, 10% fine shell frags.
190-	N/3	well-sorted		fine sand, 2-3% fine shell frags.
200-				
210-				
220-				
230-				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-7

Total Depth 180 cm

Date cored 5-10-94

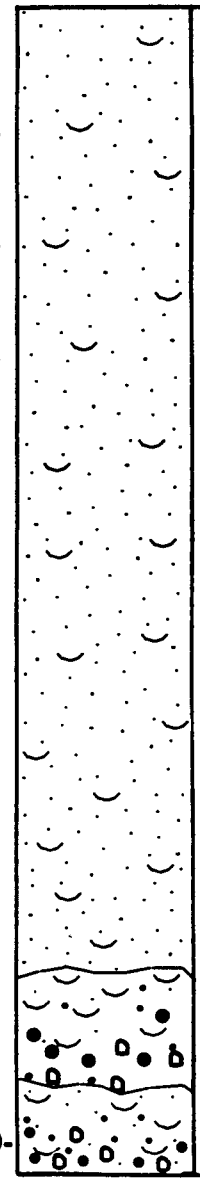
Equipment NURC vibracore

Location 32°38.63'N 79°54.53'W

Analyst/Date described Pat Ealy 6-14-94

KEY

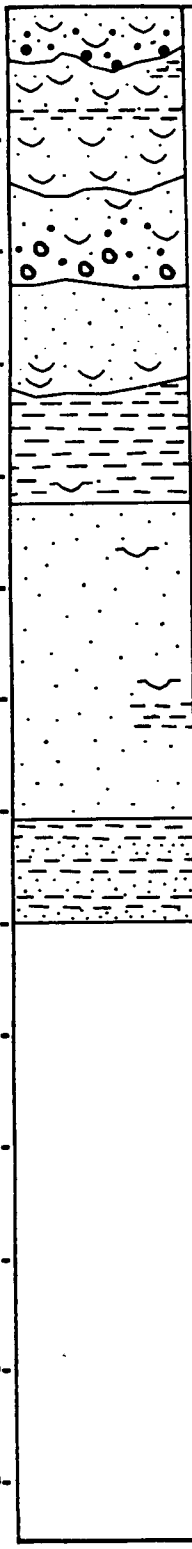
Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
	5Y 5/1	mod. well-sorted, grains sub-ang.	locally some v.fine/silty material	fine sand, 5% fine shell frags., some black shell, 5% opaques
	5Y 6/3	graded bed	decr. shell down section	med.-coarse sand, 15-30% shell frags., 5% opaques
	5Y 5/1	graded bed		fine-coarse sand, 10-15% shell, 5% opaques

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-7



	Color	Texture	Sed. Structures	Comments
100-	5Y 5/1		see previous page	
	5Y 5/1	mod. poorly sorted		fine sand, mud laminae (.5-1 cm thick), 30-40% shell frags. (olive and mulinia shells)
110-				
	5Y 5/1	graded bed		fine-coarse sand, 10% shell incl. black shells
120-				
	5Y 3/1	mod. sorted	131-133 cm shelly layer (1-5 cm diam.)	v. fine-fine sand, 5% opaques, 5-10% mica
130-				
	2.5Y 4/1	clay		mud, burrow filled w/ sand and 25% shell
140-				
	5Y 4/2	mod. sorted, gr. sub-ang. to angular	149 cm, 160 cm shell-filled burrows	fine sand, 10% mica, 15-20% fine shell frags., 5% opaques
150-				
160-				
170-				
	5Y 3/2	laminated mud and sand		mud and sand laminae (0.5-0.75 cm thick), sand v. fine-fine w/ 10% opaques and 10% mica
180-				
190-				
200-				
210-				
220-				
230-				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-8

Total Depth 193 cm

Date cored 5-10-94

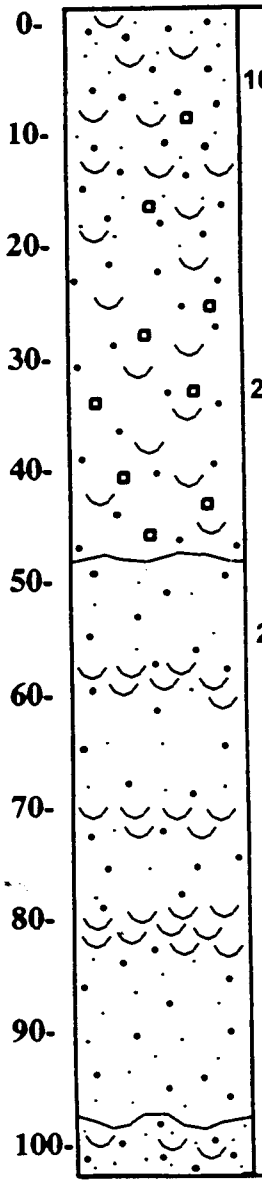
Equipment NURC vibracore

Location 32°38.24'N 79°54.08'W

Analyst/Date described Pat Ealy 6-3-94

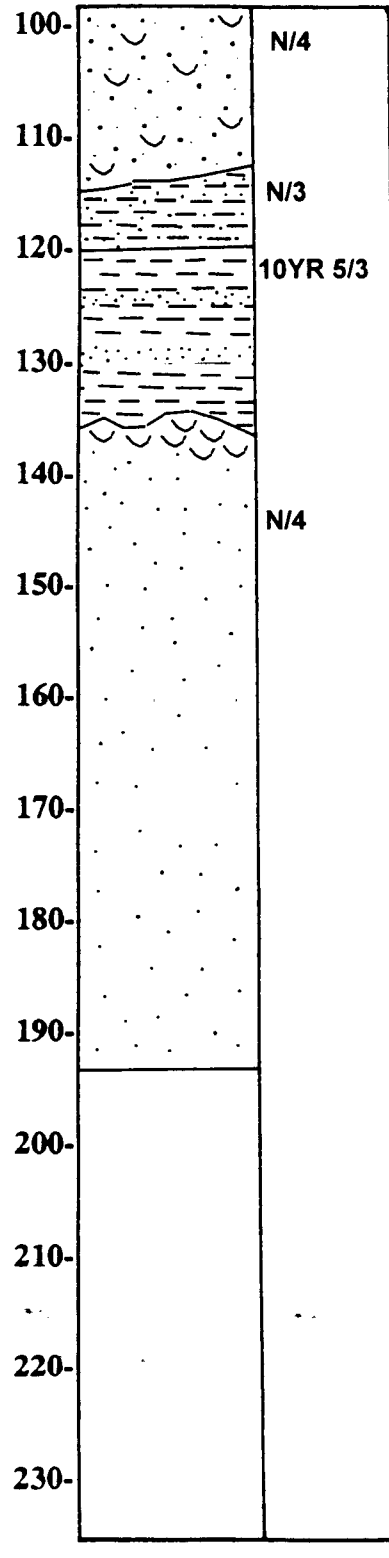
KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
	10 YR 5/4	mod. sorted		shell hash, sand coarsens down section from med.-coarse gr., sand fraction decr. down section, 7% opaques
	2.5 YR 3/1			
	2.5 YR 3/1	mod. poorly sorted	58 cm, 70 cm, 79 cm shelly layers (2-4 cm thick)	fine-med. gr. sand, 5-10% fine shell, 5% opaques
	N/4			

Core ID F-94-8



Color	Texture	Sed. Structures	Comments
N/4	fairly well-sorted		fine gr. sand, little silt, 25% shell frags., 5% opaques
N/3	poorly sorted		sandy clay, v.fine-fine gr. sand in clay
10YR 5/3	poorly sorted		clay and silty sand laminae 0.25-0.5 cm thick
		30% shell hash at contact, muddy sand top, lose fines down section	
N/4	mod. poorly sorted		fine sand, some silt, <5% fine shell frags.

CENTER FOR MARINE & WETLAND STUDIES

COASTAL CAROLINA UNIVERSITY

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

Core ID F-94-9

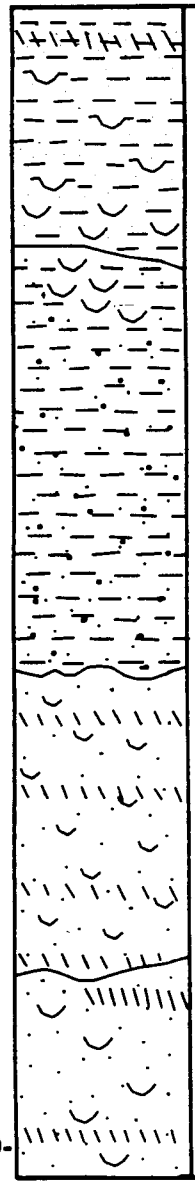
Total Depth 150 cm

Date cored 5-10-94

Equipment NURC vibracore

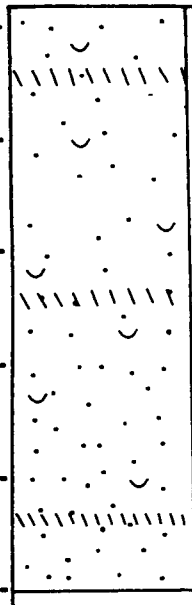
Location 32°38.47'N 79°53.69'W

Analyst/Date described Johann Gielstra/Pat Ealy 6-3-94



Sketch	Color	Texture	Sed. Structures	Comments
	5GY 4/1	poorly sorted	5-15 cm burrows filled with coarse sand/shell	silty mud, 10-15% fine shell, 10% mica grains, few black shells
	5B 4/1	poorly sorted		sandy mud, fine sand/ silt disseminated through-out, lenses of med.-coarse sand (1-3cm thick), 5% shell near top of section
	5GY 5/1	mod. poorly sorted		fine gr. sand, some silt 5-7% fine shell frags., 10% mica grains
	N/4	mod. well-sorted		fine gr. sand, some silt, 5% fine shell frags., 2% opaques

Core ID F-94-9

Sketch	Color	Texture	Sed. Structures	Comments
	N/3	mod. well-sorted		fine gr. sand, 20-30% silt, v. little shell (<10%), 3% opaques

100-
110-
120-
130-
140-
150-
160-
170-
180-
190-
200-
210-
220-
230-

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

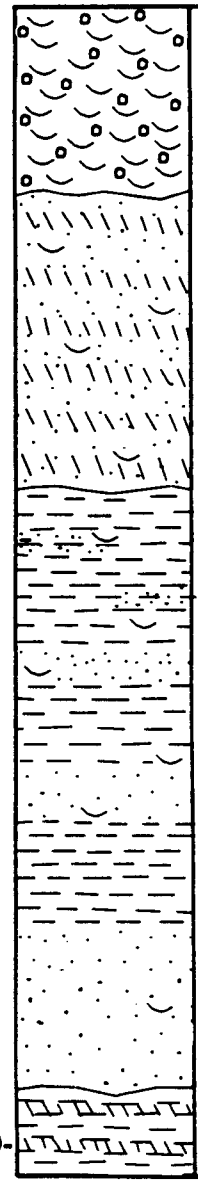
Core ID F-94-10

Total Depth 233 cm

Date cored 5-10-94

Equipment NURC vibracore

Location 32°38.56'N 79°53.90'W Analyst/Date described Pat Ealy 6-6-94



Sketch	Color	Texture	Sed. Structures	Comments
0-	2.5Y 6/4	mod. poorly sorted, ang. grains	0-5cm black organic rich zone	coarse gr. sand, 50% shell hash
10-				
20-	5BG 4/1	mod. poorly sorted		fine silty sand, 10% fine shell, 5-10% mica gr., 0-5% opaques
30-				
40-				
50-	2.5Y 5/2	poorly sorted	interspersed silty sand and mud	brown mud and silty sand sand layers 5-10% mica, <5% fine shell
60-				
70-				
80-				
90-				
100-	2.5Y 4/1	mod. sorted		slightly silty mud, silt decreases down section

Core ID F-94-10

Sketch	Color	Texture	Sed. Structures	Comments
100-110-120-	2.5Y 4/1		see description previous page	
130-140-	5Y 4/2	graded bed		fine-coarse sand, 15-20% mica, 5 % opaques, 10% shell
150-160-170-	5Y 4/1	graded bed		fine-coarse sand, shell fraction incr. near bottom, mica-rich
180-190-200-210-220-230-	N/3	mod. poorly sorted, ang. grains		v. fine gr. sand and silt, 5-10% mica, 5-10% opaques

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

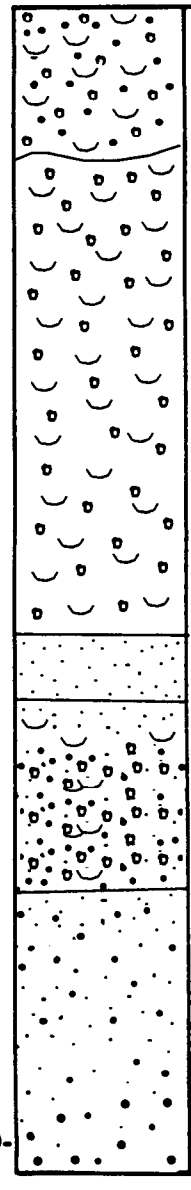
Core ID F-94-11

Total Depth 144 cm

Date cored 5-10-94

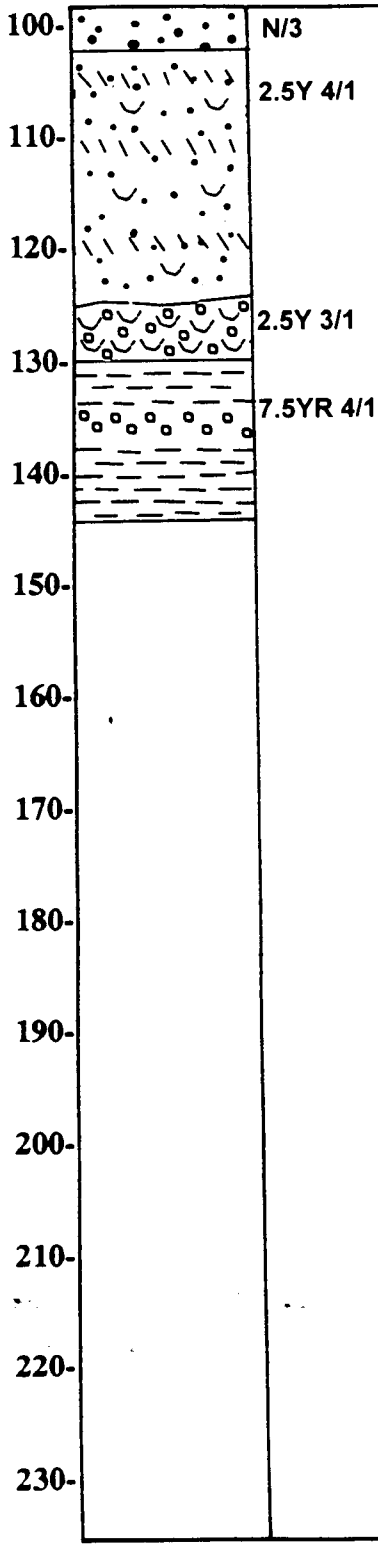
Equipment NURC vibracore

Location 32°38.23'N 79°53.88'W Analyst/Date described Pat Ealy 6-3-94

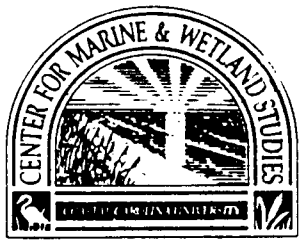


	Color	Texture	Sed. Structures	Comments
0-10-	7.5YR 5/4	mod. poorly sorted		med.-coarse sand, 40% coarse shell frags., 20% opaques
20-30-40-50-	5YR 3/1	mod. sorted	35-39 cm black layer, irreg. color changes throughout section	coarse-v. coarse sand, 50% coarse shell hash, shell incr. down section, black shells 25% of shell
60-	5Y 4/1	mod. sorted		fine-med. gr. sand, 15% fine shell hash, 5% black shell/opaques
70-	2.5Y 4/1	graded bed		med.-v.coarse sand, shell incr. down section (10-30%)
80-90-100-	2.5Y 4/1	mod. sorted		fine sand, 10% silt, fine-med shell frags.

Core ID F-94-11



Sketch	Color	Texture	Sed. Structures	Comments
100-	N/3		see description previous page	
	2.5Y 4/1	mod. sorted		fine sand, little silt, 3% black shell/opaques, 10% fine-med. gr. shell hash
110-				
120-				
	2.5Y 3/1			shell hash, v. coarse sand
130-				
	7.5YR 4/1		135-136 cm coarse sand, fine shell hash	mud, <5% v. fine shell
140-				
150-				
160-				
170-				
180-				
190-				
200-				
210-				
220-				
230-				



KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

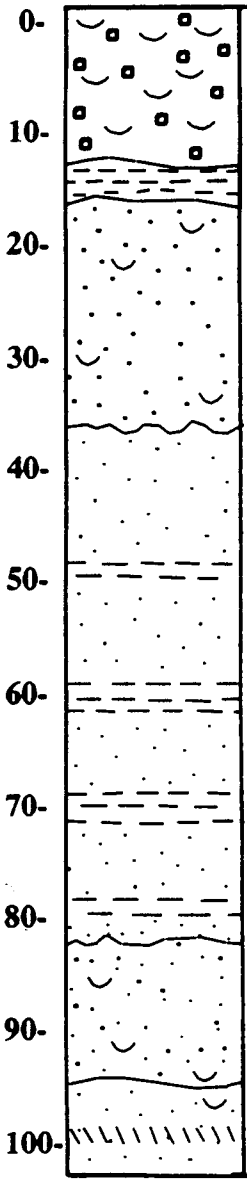
Core ID F-94-12

Total Depth 203 cm

Date cored 5-11-94

Equipment NURC vibracore

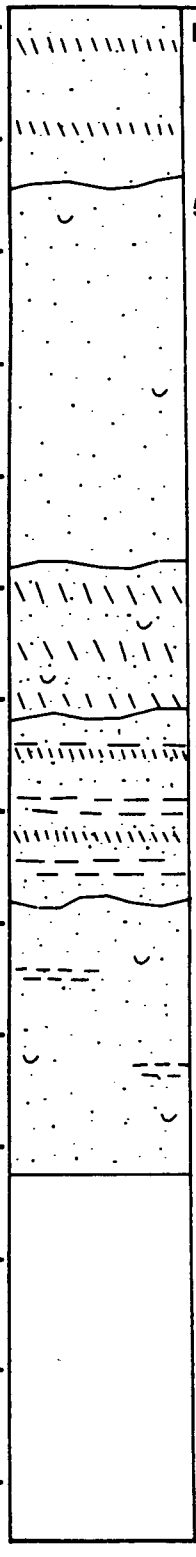
Location 32°38.96'N 79°52.62'W Analyst/Date described Caryn Sullivan 6-29-94



Color	Texture	Sed. Structures	Comments
2.5Y 5/3	poorly sorted		coarse-v.coarse sand, 40% coarse shell hash, 7% black shells/opaques
5Y 3/1	clay		13-16 cm clay layer
N/5	mod. sorted		v. fine sand, 3-5% fine shell frags., 7% black shell/opaques
N/5	poorly sorted	36-83 cm alternating layers sand/clay	70% fine-v. fine sand, 30% clay, alternating layers 3-7 cm thick, 5% mica grains
5Y 4/1	mod. sorted		fine-v. fine sand, 5% fine shell, 5% opaques, 5% mica
N/5	mod. sorted		v. fine sand, 20% silt, 3% fine shell, 5% opaques

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-12



Sketch	Color	Texture	Sed. Structures	Comments
	N/5	mod. sorted		v. fine sand, 30% silt, 5% fine shell, 5% mica grains, 5% black shells/ opaques
	5GY 5/1	mod. well-sorted		v. fine-fine sand, 3% fine shell, 5% opaques/ black shell, 5% mica
	5GY 4/1	mod. sorted		v. fine-silty sand, 3% v. fine shell frags.
	5GY 4/1	poorly sorted		70% v. fine sand, 30% silt, <5% v. fine shell, 5% mica
	5GY 5/1	poorly sorted		v. fine-silty sand, some interspersed mud lenses, 5% mica, 7% fine shell frags.

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

Core ID F-94-13

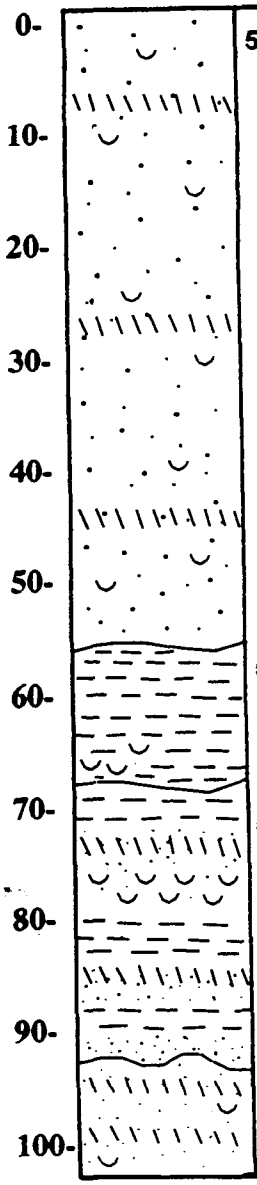
Total Depth 227 cm

Date cored 5-11-94

Equipment NURC vibracore

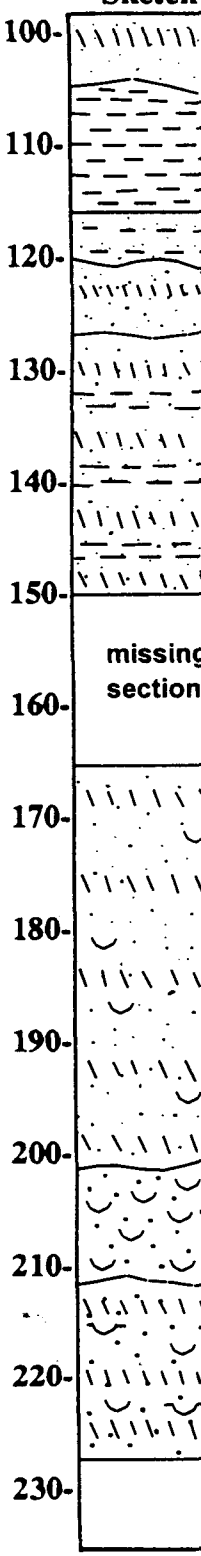
Location 32°38.70'N 79°53.13'W

Analyst/Date described Pat Ealy 6-8-94



Sketch	Color	Texture	Sed. Structures	Comments
0-	5Y 6/3	mod. sorted		fine sand, 10-20% silt, 7% shell frags., 5% mica grains, 5% black shell/opaques
10-				
20-				
30-				
40-				
50-				
60-	5Y 5/2	clay		greenish-grey mud, 67 cm 5% fine shell, v. little silt
70-	5B 4/1	poorly sorted		alternating layers mud and silty sand, layers 0.5-1 cm thick, shelly layer 75-80 cm (15% fine shell frags., 5% mica grains
80-				
90-	5Y 4/1	poorly sorted		v.fine-silty sand, 2-3% fine shell frags., 5% mica grains
100-				

Core ID F-94-13



Sketch	Color	Texture	Sed. Structures	Comments
100-	5Y 4/1		see description previous page	
	5Y 4/1	clay		
110-				
	5Y 4/1	poorly sorted		silty sand and mud, laminae 0.5-2 cm thick, 5% fine shell frags., v. little mica
120-	5Y 3/2	mod. sorted	fine sand, 10-15% silt, 2% v. fine shell frags.	
130-	5Y 4/1	poorly sorted		silty clay, 5% coarse mica grains, no visible shell frags.
140-				
150-				
missing section				
160-				
170-	5Y 4/1	poorly sorted		fine sand, 10-15% silt, 10% mica grains, 5% opaques/black shells, 5% fine shell frags.
180-				
190-				
200-				
	5Y 4/1	poorly sorted		fine sand, 60% shell hash (gastropods, mollsks)
210-				
	5Y 4/1	poorly sorted	several mud-filled burrows, two articulated mulinia	fine sand, 15% silt, 10% fine shell, (v. similar to sand above)
220-				
230-				

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

Core ID F-94-14

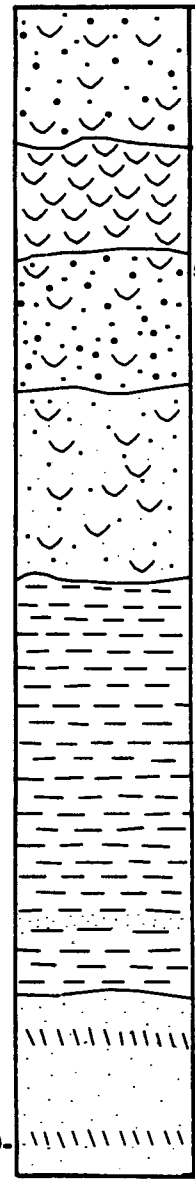
Total Depth 273 cm

Date cored 5-11-94

Equipment NURC vibracore

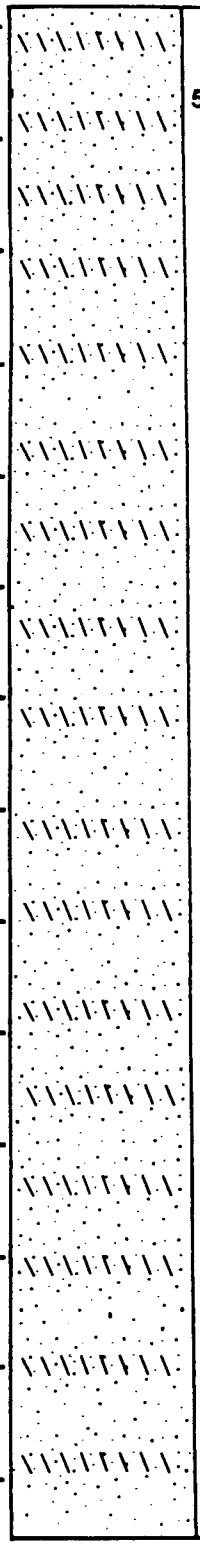
Location 32° 38.33'N 79° 53.67'W

Analyst/Date described Pat Ealy 7-1-94

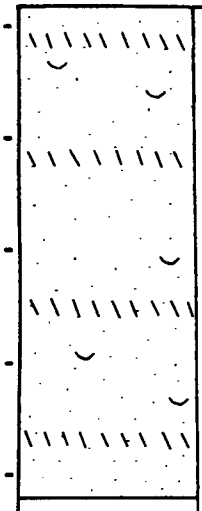


Sketch	Color	Texture	Sed. Structures	Comments
0-	2.5Y 4/3	mod. poorly sorted		fine-med. gr. sand, 30% shell frags., some black shells, 30-40% shell is iron-stained
10-	2.5 Y 5/4	mod. sorted		shell hash, no appreciable sand, 50% iron stained, 5% black shells
20-	5Y 3/2	mod. poorly sorted		fine-med. sand, 45% shell frags., 40% iron stained,
30-	5Y 3/2	mod. poorly sorted		fine-v. fine gr. sand, 45% shell frags., 50% shell is black shell
40-				
50-	5Y 3/1	clay	80 cm lens of silty sand, 2-3 cm thick	dk. grey mud
60-				
70-				
80-				
90-	5Y 4/1	mod. poorly sorted		v. fine sand, some silt, 5% fine shell frags., 5% mica grains, 5% opaques
100-				

Core ID F-94-14

Sketch	Color	Texture	Sed. Structures	Comments
	5Y 3/1	mod. poorly sorted, gr. ang.		v. fine silty sand, 2% fine shell frags., 5% black shell/opaques

Core ID F-94-14

Sketch	Color	Texture	Sed. Structures	Comments
	5Y 3/1		see description previous page	

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-15

Total Depth 272 cm

Date cored 5-11-94

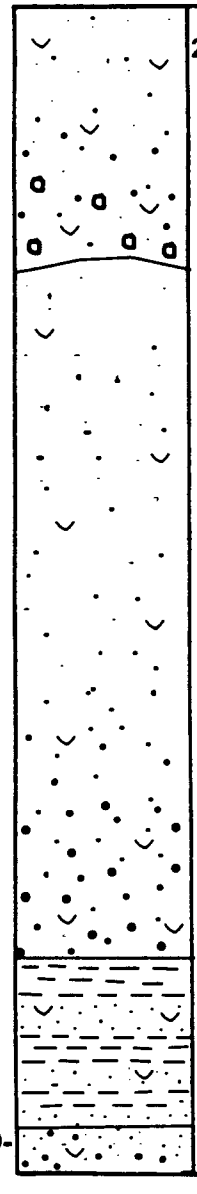
Equipment NURC vibracore

Location 32°37.95'N 79°54.23'W

Analyst/Date described Pat Ealy 6-14-94

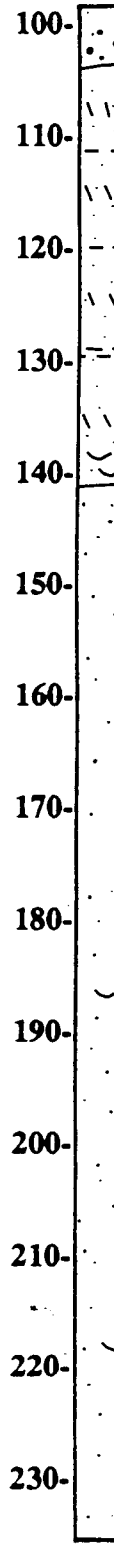
KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
	2.5Y 5/1	graded bed		v.fine/silty-coarse sand, 25% shell frags., 5% opaques/black shell, 5% mica grains
	2.5Y 5/2	graded bed		v. fine-med. gr. sand, some silt, 10% fine shell frags., 5% mica, 5% opaques
	2.5Y 4/1	poorly sorted		alternating layers of mud and v. fine sand, 5% v. fine shell frags., 5% mica gr., 5% opaques/black shell
	2.5Y 4/1	graded bed		v.fine-med. gr. sand, 5-10% fine shell frags., 5% mica

Core ID F-94-15



Sketch	Color	Texture	Sed. Structures	Comments
100-	2.5Y 4/1	graded bed		v.fine-med. gr. sand, 5-10% fine shell frags., 5% mica
110-	2.5Y 3/1	mod. poorly sorted		v. fine silty sand, some mud throughout, 5-10% fine shell, incr. shell down section
120-				
130-				
140-			138-141cm shelly layer	
150-	2.5Y 4/1	mod. well sorted		fine-v. fine sand, 5% fine shell frags., 3% fine mica gr., 5% opaques/ black shells
160-				
170-				
180-			180-181cm shelly layer, avg. diameter 1 cm	
190-				
200-				
210-				
220-				
230-				

Core ID F-94-15

Sketch	Color	Texture	Sed. Structures	Comments
230 240 250 260 270 280	2.5Y 4/1	mod. well sorted		fine-v.fine sand, 5% fine shell frags., 3% fine mica, 5% opaques/ black shell

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

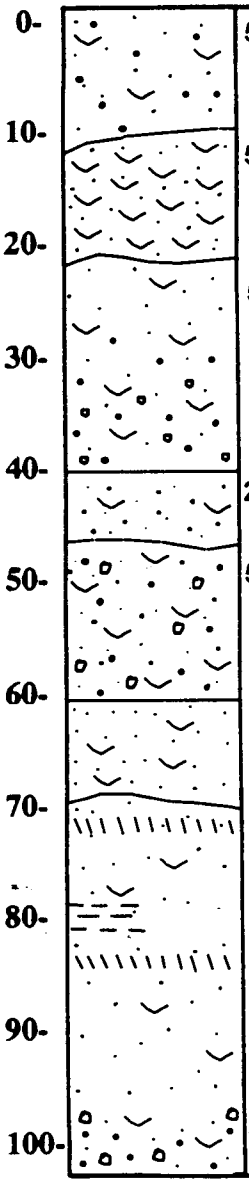
Core ID F-94-16

Total Depth 272 cm

Date cored 5-11-94

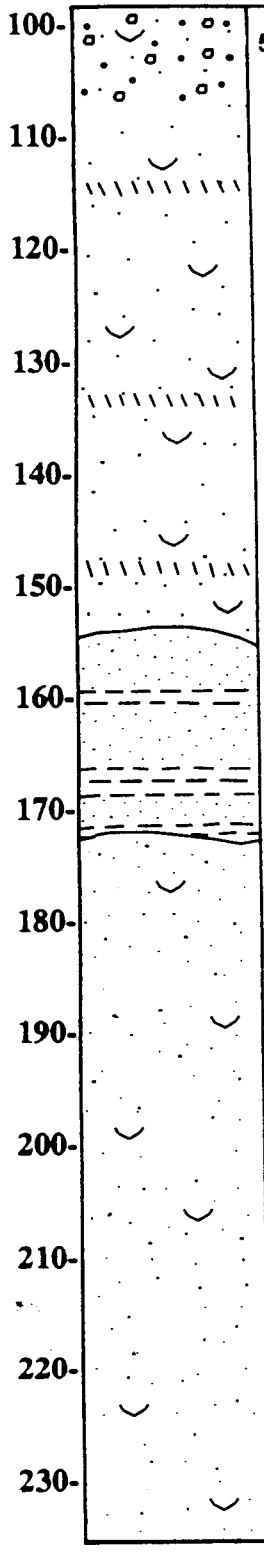
Equipment NURC vibracore

Location 32°37.77'N 79°53.84'W Analyst/Date described Pat Ealy 6-10-94



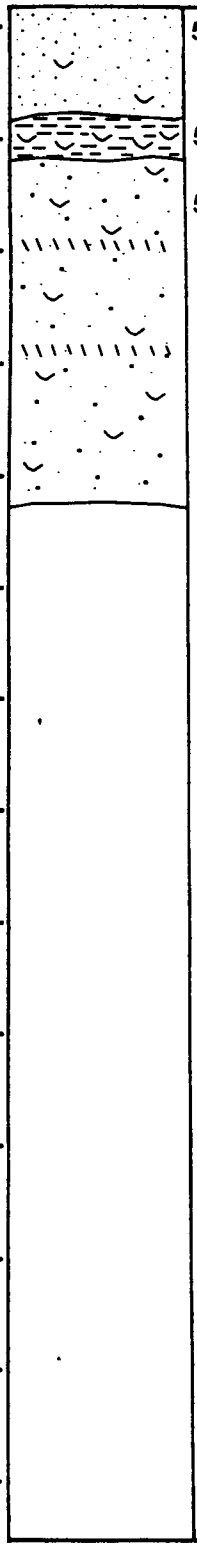
Sketch	Color	Texture	Sed. Structures	Comments
0-	5Y 5/2	poorly sorted		fine-med. gr. sand, 15-20% shell frags., 7% mica, 5% opaques/black shell
10-	5Y 4/2	poorly sorted		60% shell hash, fine sand, 5-10% black shell/opaques
20-	5Y 5/1	graded bed		fine-coarse gr. sand, 10-15% shell frags., 5% mica
30-				
40-	2.5Y 4/1	poorly sorted		fine-v. fine sand, 10% phos. shells, 5% mica
50-	5Y 5/2	v. poorly sorted		v.fine-coarse sand, 25% fine shell frags., 5-10% black shell/opaques
60-	5Y 5/2	mod. well sorted		fine sand, 15% shell, 5% black shell, 5% mica
70-	5Y 4/1	poorly sorted	80 cm mud lens (1cm thick)	silty to med. gr. sand, 15% shell frags., 5% black shells, 5-8% mica
80-			100-107cm coarsens to med.-coarse sand	
90-				
100-				

Core ID F-94-16



Sketch	Color	Texture	Sed. Structures	Comments
	5Y 4/1		see description previous page	
	5Y 3/1	poorly sorted		silty sand, 5% v. fine shell frags., 5% fine mica grains, 5-10% black shell/ opaques
	5Y 5/2	poorly sorted		fine-v.fine silty sand, 5% fine shell frags., 5% mica grains, 5-10% black shells/opaques

Core ID F-94-16



Sketch	Color	Texture	Sed. Structures	Comments
	5Y 5/2		see description previous page	
	5Y 3/1	poorly sorted grains ang.	Dosinia and arc shells	75% shell hash, mud and v.fine sand matrix
	5Y 5/2	mod. poorly sorted, grains angular		fine sand, some silt, 10% shell frags., 5% black shell/opaques

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-17

Total Depth 269 cm

Date cored 5-11-94

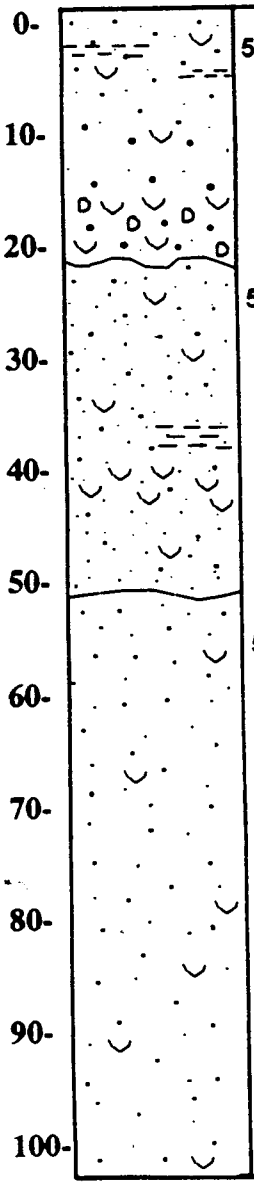
Equipment NURC vibracore

Location 32°37.47'N 79°54.17'W

Analyst/Date described Pat Ealy 6-27-94

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

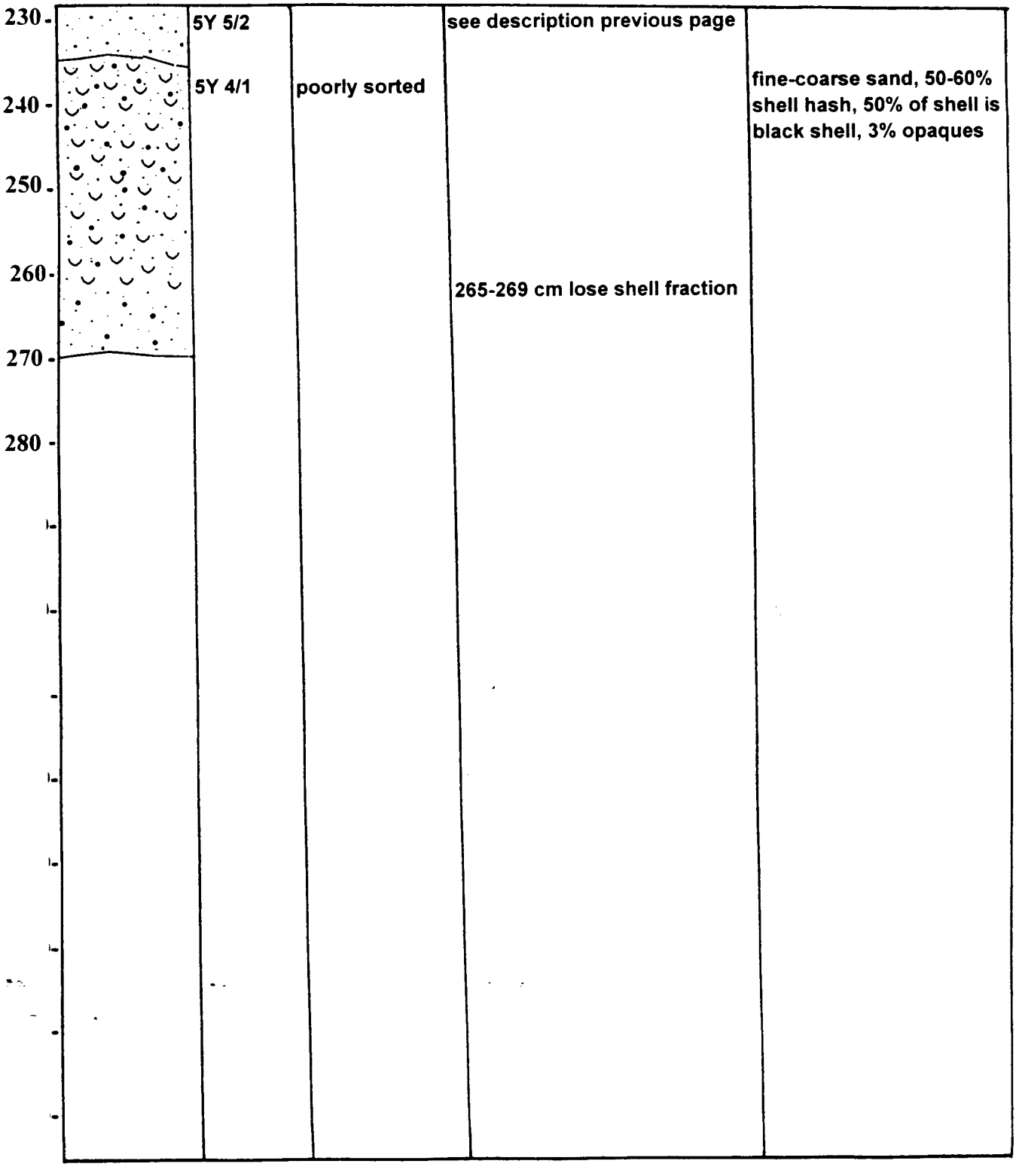


Sketch	Color	Texture	Sed. Structures	Comments
	5Y 6/2	graded bed	top 5 cm contain some mud lenses <0.5cm thick 0-10cm fair amt. organics	fine silty-coarse sand, 5-10% shell frags., 3% mica grains, 10% black shell/opaques
	5Y 4/2	mod. poorly sorted		fine-v.fine sand, 15% shell frags., some silt
			39-41 cm mud lens 40-43 cm shelly layer	
	5Y 5/2	mod. well sorted, grains sub-angular		fine-v.fine sand, 5-10% fine shell frags.

Core ID F-94-17

Sketch	Color	Texture	Sed. Structures	Comments
100- 110- 120- 130- 140- 150- 160- 170- 180- 190- 200- 210- 220- 230-	5Y 5/2		see description previous page	

Core ID F-94-17



CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

Core ID F-94-18

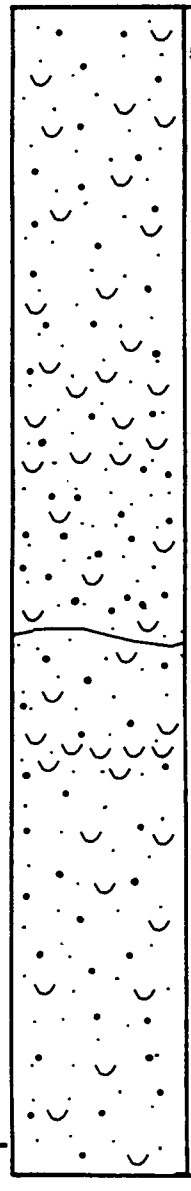
Total Depth 340 cm

Date cored 5-11-94

Equipment NURC vibracore

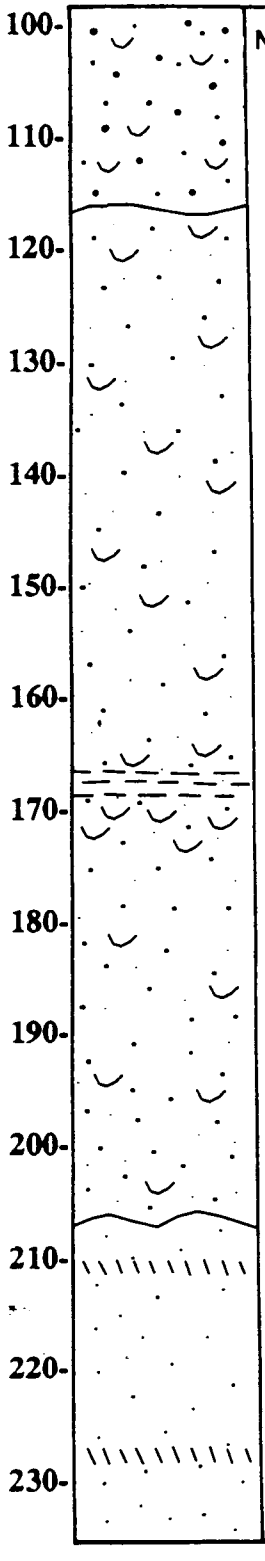
Location 32° 37.34'N 79° 54.00'W

Analyst/Date described Pat Ealy 6-6-94

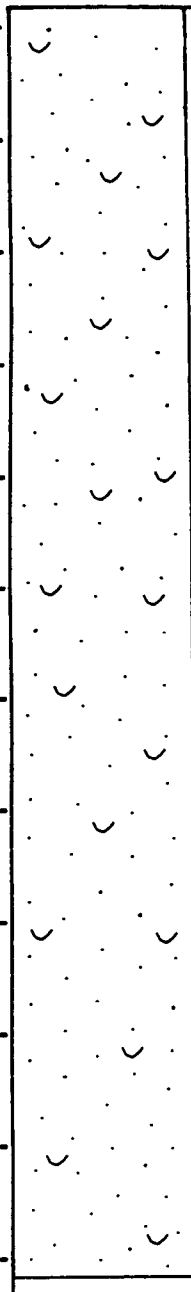


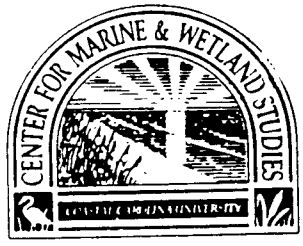
Sketch	Color	Texture	Sed. Structures	Comments
0-	5Y 3/2	poorly sorted grains sub-ang.		fine-med. gr. sand, 20% shell hash, 10% black shell/opaques
10-				
20-				
30-				
40-				
50-				
60-	N/4	well sorted	incr. shell content (20%)	fine sand, <5% shell frags., <5% mica gr.
70-		mod. poorly sorted		
80-				
90-				
100-				

Core ID F-94-18

Sketch	Color	Texture	Sed. Structures	Comments
	N/4		see description previous page	
	5G 4/1	mod. poorly sorted	120-150 cm <5% shell frags.	fine sand, some silt, mud lenses throughout 1-2 cm thick
			150-208 cm 20% shell hash 165 cm coarse shell hash	
	5GY 4/1	mod. sorted		fine sand, some silt, 5% mica grains, 10-15% fine shell frags.

Core ID F-94-18

Sketch	Color	Texture	Sed. Structures	Comments
	5GY 4/1		see description previous page	



KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

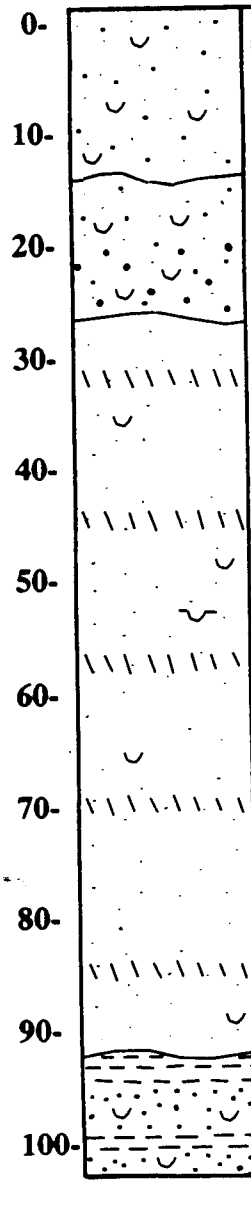
Core ID F-94-19

Total Depth 205 cm

Date cored 5-11-94

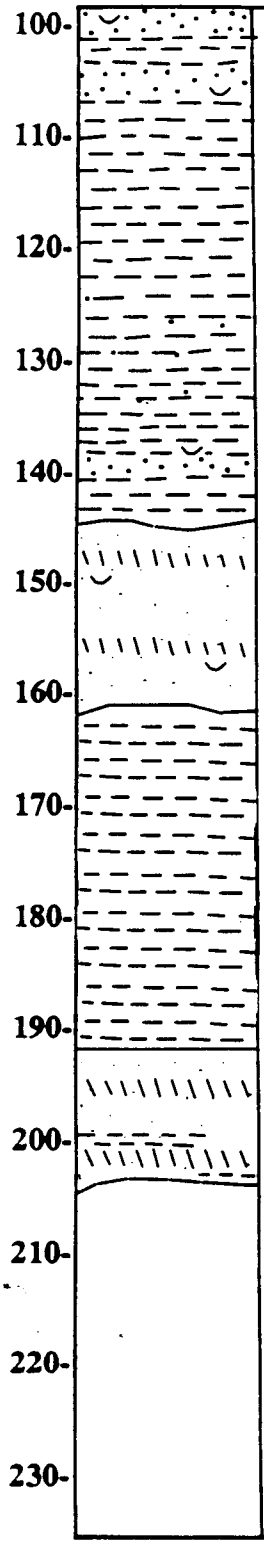
Equipment NURC vibracore

Location 32°38.47'N 79°52.61'W Analyst/Date described Pat Ealy 6-29-94



Sketch	Color	Texture	Sed. Structures	Comments
0-	5Y 5/2	mod. poorly sorted		fine-v. fine sand, 15% fine-mod. shell frags., 5% opaques
10-				
		graded bed		fine-med. gr. sand, 10% fine-mod. shell frags., some black shells
20-				
30-	5Y 3/1	mod. well sorted		v.fine silty sand, 5% fine shell frags., 3% opaques
40-				
50-			56 cm burrow. 2-3 cm diameter	
60-				
70-				
80-				
90-	2.5Y 4/1	alternating layers mud/sand		3 cm thick, alt. layers sand/mud
100-				

Core ID F-94-19



Color	Texture	Sed. Structures	Comments
2.5Y 4/1		sand layers disappear below 120 cm	sand: fine-v.fine sand, 5-10% fine shell, mud: sandy clay w/ v. little shell frags.
5Y 4/1	mod. poorly sorted		v. fine silty sand, <3% shell, 5% opaques, 5% fines (clay-sized)
5Y 3/1	clay layer		clay
5Y 4/1	poorly sorted		v.fine muddy sand, incr. mud down section, 7-10% mica grains

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

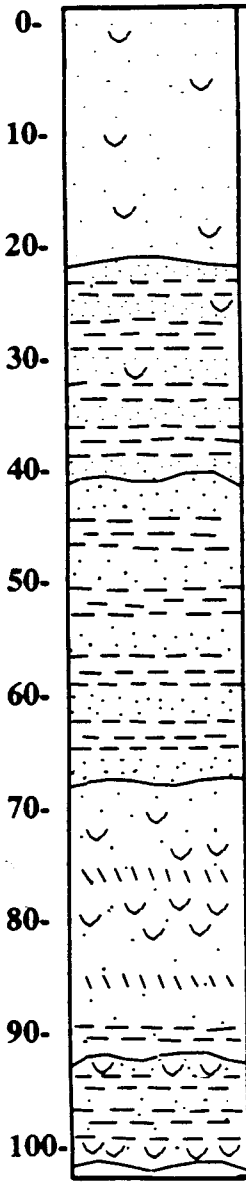
Core ID F-94-20

Total Depth 303 cm

Date cored 5-11-94

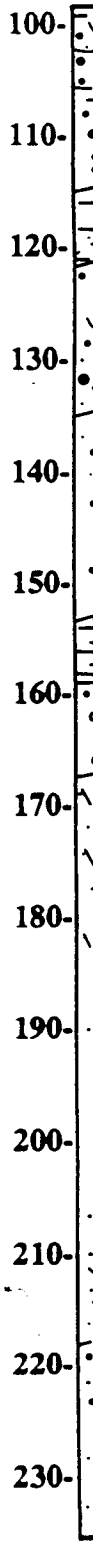
Equipment NURC vibracore

Location 32°38.59'N 79°52.50'W Analyst/Date described Pat Ealy 6-9-94



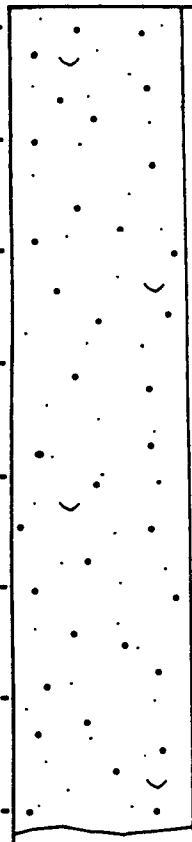
	Color	Texture	Sed. Structures	Comments
0-	5Y 5/2	poorly sorted		fine sand, some silt, 10% shell frags., 5% mica
10-				
20-				
	2.5Y 5/4	alternating layers mud/sand		brown mud/fine silty sand, 5% mica, v. little shell (<5%)
30-				
40-				
	2.5Y 4/2	poorly sorted		clay, fine silty sand, sand similar to above with up to 10% mica
50-				
60-				
70-	2.5Y 4/1	poorly sorted		fine sand, some silt, 25% shell frags.
80-				
90-			90-92cm mud layer	
	2.5Y 4/2	poorly sorted		med.-coarse gr. sandy mud, 50% shell hash,
100-				

Core ID F-94-20



Sketch	Color	Texture	Sed. Structures	Comments
100-	2.5Y 4/2			
	2.5Y 4/2	mod. poorly sorted	106-108cm mud layer	silty sand, fine-coarse gr. sand, 5% mica, 10% shell frags.
110-				
	2.5Y 3/2	poorly sorted		mud/sand layers, mud avg. 2 cm thick, sand avg. 1 cm thick, fine gr.
120-				
	5Y 4/1	poorly sorted grains sub-ang.- sub-rounded		fine-coarse sand, 50% shell hash, some black shells
130-				
	5Y 5/2	mod. poorly sorted		fine-med. gr. sand, 5% shell frags., 5% mica, 5% opaques
140-				
150-				
	5Y 4/1	clay		clay
160-	2.5Y 4/1	poorly sorted gr. sub-ang.		60% shell hash, med.-coarse sand, 5% opaques
170-	2.5Y 4/1	mod. poorly sorted		fine silty sand (loses silt down section), <5% shell frags.
180-				
190-				
200-				
210-			213-217 cm shelly silty layer	
			217 cm possible contact	
220-	5Y 6/2	mod. sorted gr. ang.		med. gr sand, some fine sand, <5% shell frags., <5% mica, 5% opaques
230-				

Core ID F-94-20

Sketch	Color	Texture	Sed. Structures	Comments
	5Y 6/2		see description previous page	

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-21

Total Depth 242 cm

Date cored 5-11-94

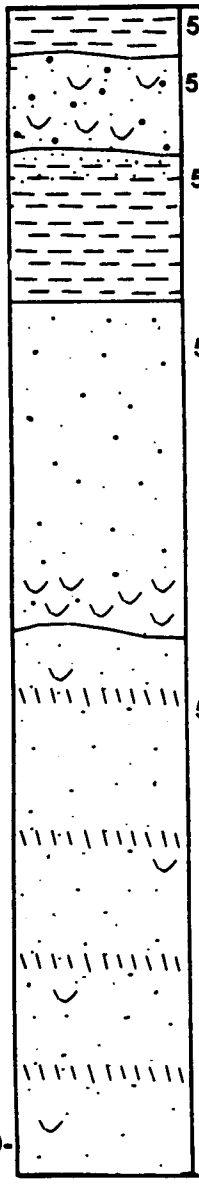
Equipment NURC vibracore

Location 32°38.67'N 79°52.50'W

Analyst/Date described Pat Ealy 7-1-94

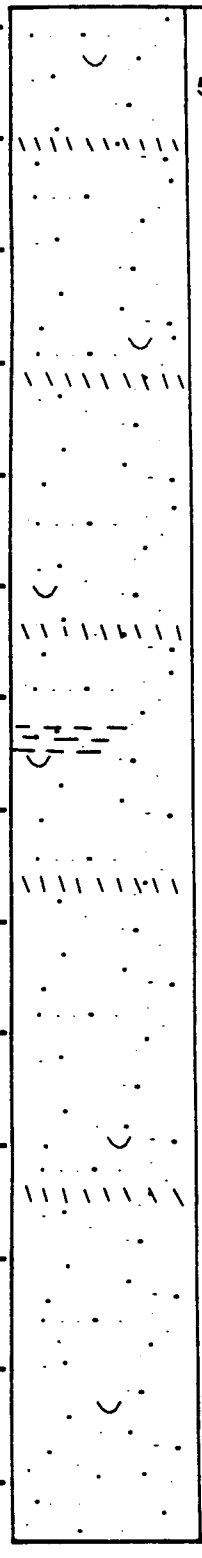
KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
0-	5B 4/1	clay		clay
	5Y 4/1	mod. sorted	shell incr. down section	fine sand (v.fine-med. gr), 20% shell frags., some organic material, 5% opaques
10-	5B 4/1	poorly sorted		mud, interspersed silty sand in top 3 cm
20-				
30-	5Y 5/1	mod. poorly sorted		v.fine-fine sand, 3% mica grains
40-				
50-			51-55cm shelly layer, lose fines	
60-	5Y 4/1	mod. well sorted		v. fine silty sand, 1-3% fine shell frags., 3% mica gr., 3% opaques
70-				
80-				
90-				
100-				

Core ID F-94-21

Sketch	Color	Texture	Sed. Structures	Comments
	5Y 4/1		see description previous page	
			162-165 cm mud lens	

Core ID F-94-21

Sketch	Color	Texture	Sed. Structures	Comments
230 -	5Y 4/1		see description previous page	
240 -				
250 -				
260 -				
270 -				
280 -				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-22

Total Depth 163 cm

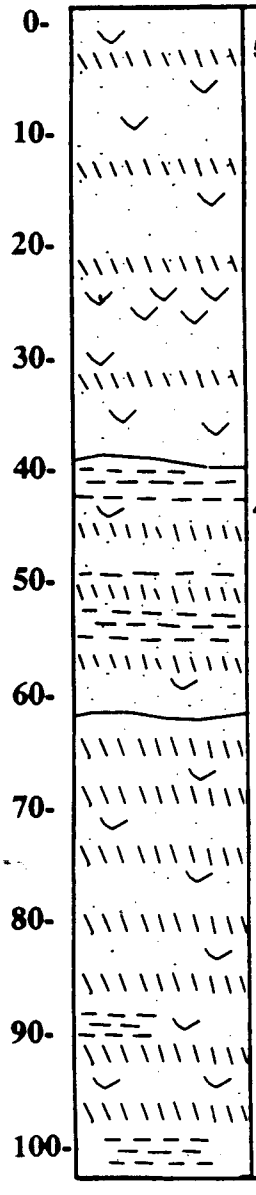
Date cored 5-12-94

Equipment NURC vibracore

Location 32°37.54'N 79°56.47'W Analyst/Date described Pat Ealy 6-7-94

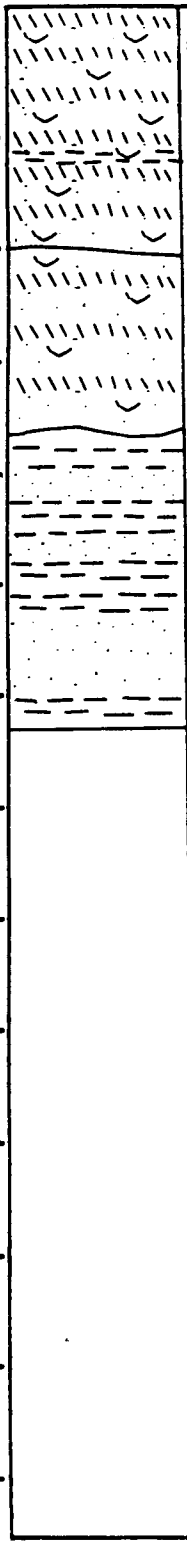
KEY

- Fine sand
- Med. sand
- Coarse sand
- Pebbles
- Shells
- Silt
- Clay
- Burrows
- Wood Frags.
- Roots
- Peat
- Mud Rollers
- Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
0-40	5GY 4/1	mod. sorted		v. fine silty sand, 5-10% fine shell hash, some black shells, 5% mica, locally some black organic material
40-60	4GY 5/1	poorly sorted		v.fine silty sand with mud lenses (1-3 cm thick), 5% fine shell frags., 5% mica, 5% opaques
60-100	5GY 4/1	poorly sorted		v.fine sandy silt, some mud in 1-3cm lenses, 10% shell frags. (locally more shell), 5% opaques

Core ID F-94-22



Sketch	Color	Texture	Sed. Structures	Comments
100-110-120-	5GY 4/1		see description previous page	
120-130-	5GY 4/1	mod. poorly sorted	130-137 cm organic materia 0.5-1 cm diameter	fine silty sand, 5% fine shell hash, 5% opaques
140-150-160-	5GY 4/1	poorly sorted gr. ang.		laminated layers mud/ silty sand, 5% fine shell frags., 5% opaques
170-180-190-200-210-220-230-				

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

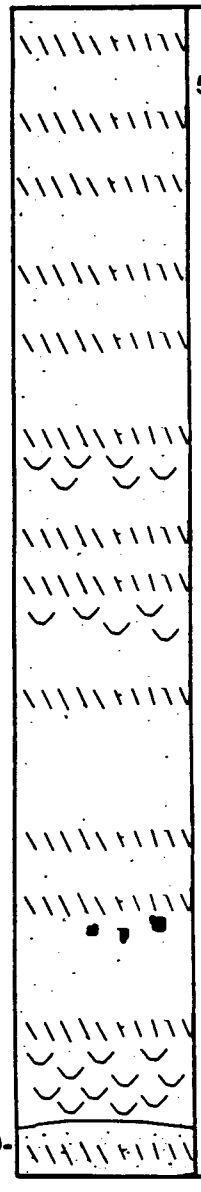
Core ID F-94-23

Total Depth 142 cm

Date cored 5-12-94

Equipment NURC vibracore

Location 32°37.91'N 79°56.12'W Analyst/Date described Pat Ealy 6-7-94



Color	Texture	Sed. Structures	Comments
5GY 4/1	poorly sorted		v. fine silty sand, 5% fine shell frags., 5% opaques, 5% mica
		41-43 cm shelly layer	
		55-57 cm coarse shell hash	
		78-86 cm mud rollers or mud-filled burrows	
		90-97 cm incr. shell content articulated shells including mulinia (1-2cm diam.), enses (4cm diam.)	v.fine silty sand, 30-40% coarse shell hash, 5% opaques

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-23

Sketch	Color	Texture	Sed. Structures	Comments
100- 110-	5GY 4/1	mod. poorly sorted		v.fine gr. silty sand, 5% fine shell frags., <5% opaques
120- 130- 140-	5GY 4/1	layered bedding	layers of silty sand/mud 2-4cm thick silty sand disappears below 130cm	poorly sorted v. fine gr. silty sand, <5% mica, <5% opaques
150- 160- 170- 180- 190- 200- 210- 220- 230-				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-24

Total Depth 190 cm

Date cored 5-12-94

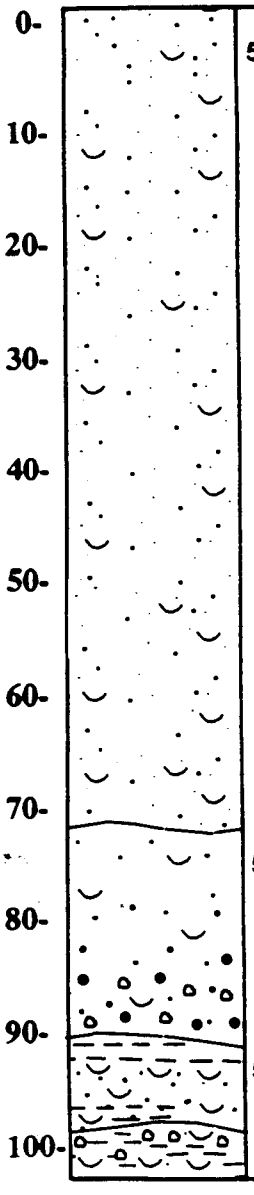
Equipment NURC vibracore

Location 32°38.46'N 79°54.99'W

Analyst/Date described Pat Ealy 6-10-94

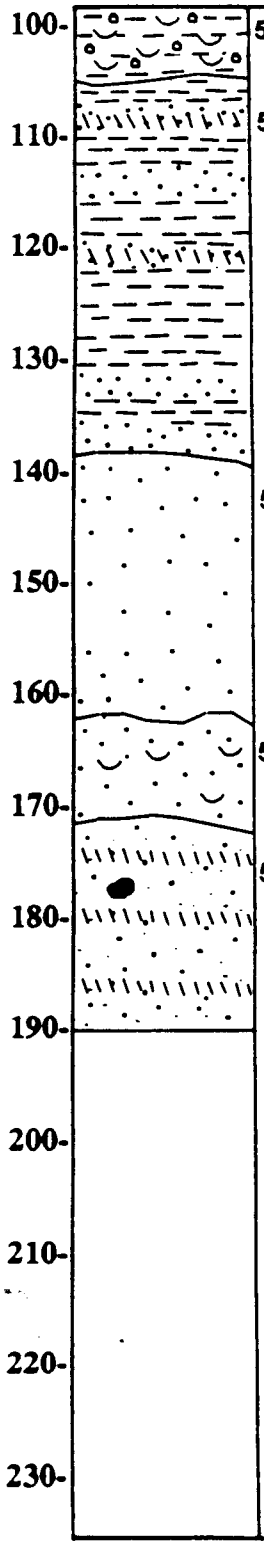
KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
0-	5Y 4/1	poorly sorted		fine sand, 10% fine shell frags., 5% fine mica gr., 5% opaques, locally fair amt. black shells
70-	5Y 4/2	graded bed gr. sub ang.-ang.		fine-v. coarse sand, coarsens down section, 10% fine shell frags.
90-	5Y 5/2	poorly sorted		fine sand, 30% shell hash, 1-2 cm thick grey mud lenses, 10% black shell and opaques

Core ID F-94-24



Color	Texture	Sed. Structures	Comments
5Y 3/1	poorly sorted		v. coarse sand, mud layers 1-3 cm thick, 30% shell hash, fair amt. black shell
5Y 4/2	poorly sorted		layers of brown mud and silty fine gr. sand, 5% fine shell frags., 5% mica gr., 5% opaques
5Y 4/2	mod. sorted		fine sand, no appreciable shell, 10% mod. sized mica grains, 5% opaques
5Y 6/2	mod. sorted		fine gr. sand, 20% fine shell frags., <5% opaques
5GY 4/1	mod. poorly sorted	176-180 cm mud roller (4 cm diam.)	fine silty sand, 5% mica grains, 5% opaques

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-25

Total Depth 179 cm

Date cored 5-12-94

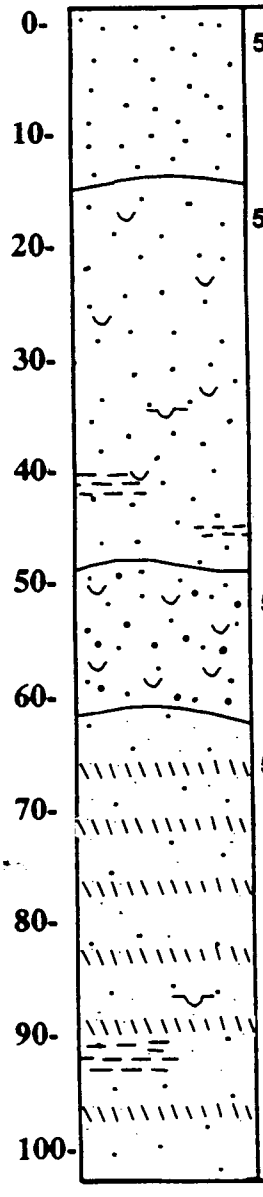
Equipment NURC vibracore

Location 32°37.87'N 79°54.83'W

Analyst/Date described Pat Ealy 6-13-94

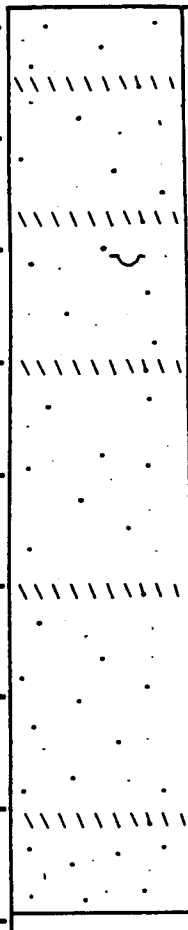
KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



	Sketch	Color	Texture	Sed. Structures	Comments
0-		5Y 5/2	mod. sorted		fine sand, 5% fine mica grains, 5% opaques
10-				8-16 cm black organic layer)	
20-		5GY 4/1	mod. sorted		fine sand, 5-10% mod.-coarse sized shell frags., shell content incr. down section, 2-3% mica, 5% opaques
30-					
40-				35 cm possible burrow 40-42 cm, 48 cm mud lenses	
50-		5GY 4/1	mod. poorly sorted		fine-med. sand, 15% mod. sized shell frags., 2-3% mica, 5% opaques
60-					
70-		5GY 4/1	mod. poorly sorted		fine silty sand, v. little shell, thin mud lenses (0.1 cm) throughout section
80-					
90-				shell-filled burrow 89 cm 91-94 cm mud lens	
100-					

Core ID F-94-25

Sketch	Color	Texture	Sed. Structures	Comments
			see description previous page 120 cm shell-filled burrow	

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-26

Total Depth 199 cm

Date cored 5-12-94

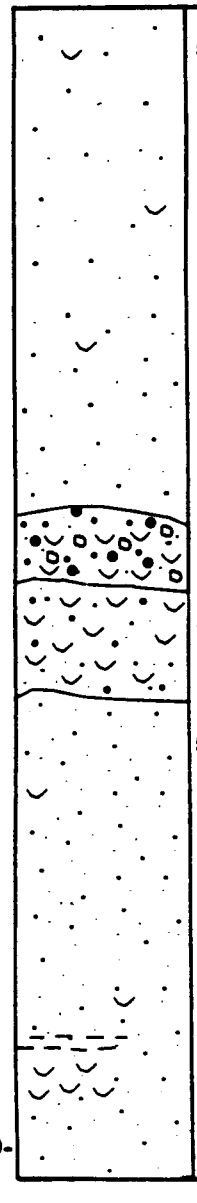
Equipment NURC vibracore

Location 32° 37.79'N 79° 54.35'W

Analyst/Date described Pat Ealy 6-13-94

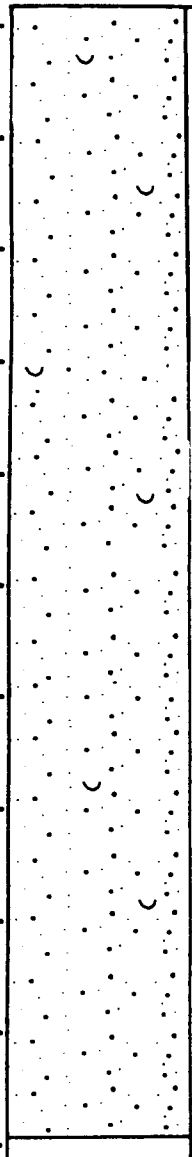
KEY

- Fine sand
- Med. sand
- Coarse sand
- Pebbles
- Shells
- Silt
- Clay
- Burrows
- Wood Frags.
- Roots
- Peat
- Mud Rollers
- Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
0-	5Y 3/1	mod. sorted		fine-v. fine sand, 5% fine shell frags., <5% mica, 5% opaques
40-	N/4	poorly sorted gr. ang.	45 cm shelly layer, half bivalve shells	fine-coarse sand, 25% shell frags., 5% opaques
50-	5Y 5/2	poorly sorted, gr. ang.	mainly mulinia shells, fine-coarse sized (0.5-3 cm diam.)	v.fine-med. sand, 40% shell hash, 3% opaques
60-	5Y 4/1	mod. sorted, gr.sub-ang.-ang.		fine-v.fine sand, 5% shell frags., 10% black shell/opaques, 5% fine mica
90-			90-91 cm mud lens 94-97 cm fine shell hash	

Core ID F-94-26

Sketch	Color	Texture	Sed. Structures	Comments
	5Y 4/1		see description previous page	

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

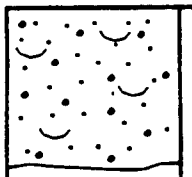
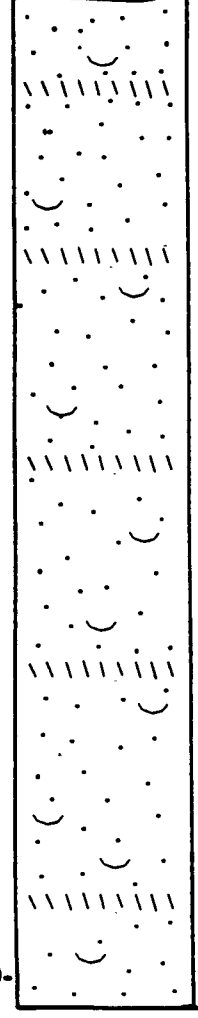
Core ID F-94-27

Total Depth 180 cm

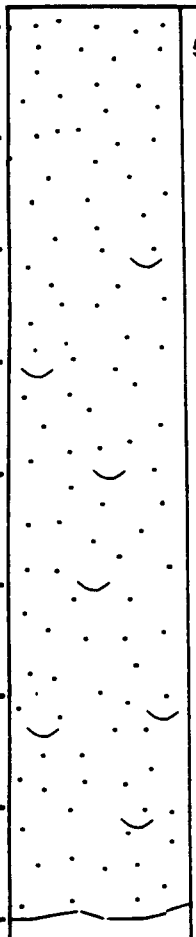
Date cored 5-12-94

Equipment NURC vibracore

Location 32°37.61'N 77°54.03'W Analyst/Date described Pat Ealy 6-9-94

	Sketch	Color	Texture	Sed. Structures	Comments
0-10		5Y 6/2	poorly sorted	10% mod. sized shell frags.	fine-med. gr. sand 5% opaques, ang. gr.
10-20		5Y 5/1	poorly sorted	5% mod. fine shell frags.	v. fine-silty sand, 5% opaques, 5% mica gr.
20-30					
30-40					
40-50					
50-60					
60-70					
70-80					
80-90					
90-100					

Core ID F-94-27

Sketch	Color	Texture	Sed. Structures	Comments
	5Y 5/1		see description previous page	

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-28

Total Depth 45 cm

Date cored 5-12-94

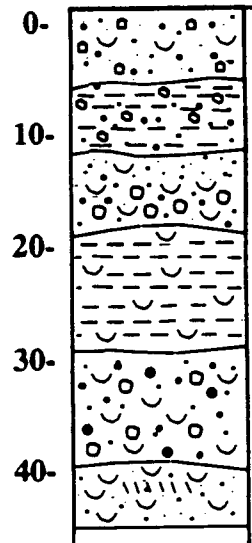
Equipment NURC vibracore

Location 32°37.01'N 79°53.00'W

Analyst/Date described Pat Ealy 6-7-94

KEY

- Fine sand
- Med. sand
- Coarse sand
- Pebbles
- Shells
- Silt
- Clay
- Burrows
- Wood Frags.
- Roots
- Peat
- Mud Rollers
- Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
		poorly sorted	3-6 cm black silty mud	v. fine-coarse sand, 10% shell/bioclast, 5% opaques
		poorly sorted		brownish-grey sandy mud
		graded bed		fine-coarse sand, 25% shell frags., 5% opaques
		clay		clay, 30% shell hash
		poorly sorted		shell hash, fine-coarse sand (50%)
		poorly sorted		fine silty sand, 30% shell hash (many oyster shells)

CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

Core ID F-94-29

Total Depth 179 cm

Date cored 5-12-94

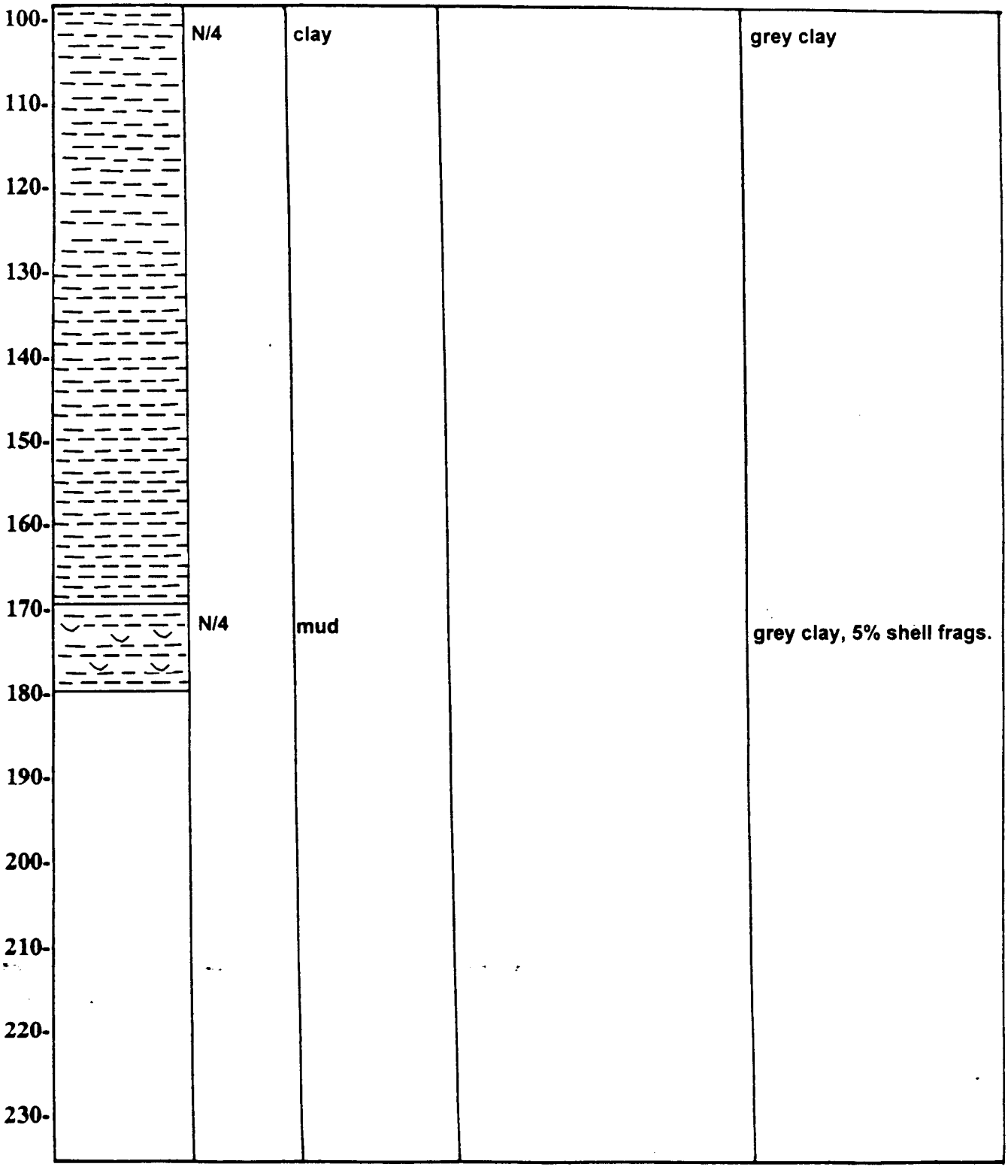
Equipment NURC vibracore

Location 32° 37.06'N 79° 52.62'W Analyst/Date described Pat Ealy 6-10-94

Sketch	Color	Texture	Sed. Structures	Comments
0-	N/4	poorly sorted		mud, small lenses of silty sand (0.5-1 cm thick)
	5Y 6/3	mod. sorted gr. sub-round-sub.-ang		v. coarse sand, 20% shell frags., 1-2% opaques
10-				
	5Y 5/2	v. poorly sorted		mud with fine-coarse sand interspersed, 30% shell frags., 5% black shell/opaques
20-				
30-				
40-	5BG 4/1	poorly sorted, gr. sub-ang.-ang.		grey mud, lenses of v. fine-med. sand, 5% opaques
50-				
60-			66 cm shell-filled burrow (3 cm diam.)	
70-			73-84 cm green mud (5GY 6/1)	
80-				
90-			86 cm silty sand disappears from section	
100-				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-29



CENTER FOR MARINE & WETLAND STUDIES

KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

Core ID F-94-30

Total Depth 132 cm

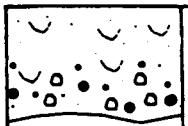
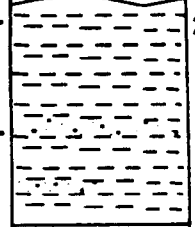
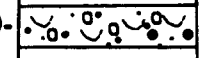
Date cored 5-12-94

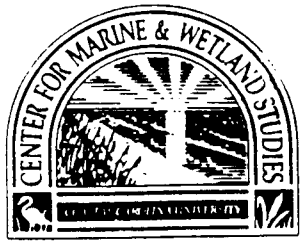
Equipment NURC vibracore

Location 32°36.95'N 79°52.36'W Analyst/Date described Pat Ealy 7-1-94

Sketch	Color	Texture	Sed. Structures	Comments
0-10-20-	2.5Y 5/4	poorly sorted gr. sub-round to ang.		fine-coarse sand, 40% coarse shell hash, 10-15% of shell is iron-stained, 5% black shell
30-40-50-	5Y 4/2	graded bed,	40 cm fines disappear	v. fine-coarse sand, 15-20% fine shell frags., 20-30% shell is black
60-70-	5GY 4/1	graded bed	68 cm sand fraction coarsens significantly	v.fine-med. sand, 10-15% shell frags. (top), 40-50% shell frags. (bttm.), nearly 50% of shell frags. are black
80-90-	5GY 4/1	graded bed gr. sub-ang. to sub-round		v.fine-coarse sand, shell fraction 5% (top) to 20% (bttm.), <5% black shell
100-	5G 5/1	graded bed	99 cm shell fraction incr. size and abundance	fine-coarse sand, 15% fine to mod. sized shell (top), 25% (bttm)

Core ID F-94-30

	Sketch	Color	Texture	Sed. Structures	Comments
100-		5G 5/1		see description previous page	
110-		2.5Y 4/2	clay		brown clay, few thin lenses of silty fine sand (0.5-1 cm thick)
120-					
130-		2.5Y 4/1	poorly sorted, gr. sub-round to sub.-ang.		fine-coarse sand, 25% mod.-sized shell frags.,
140-					
150-					
160-					
170-					
180-					
190-					
200-					
210-					
220-					
230-					



KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds

Core ID F-94-31

Total Depth 201 cm

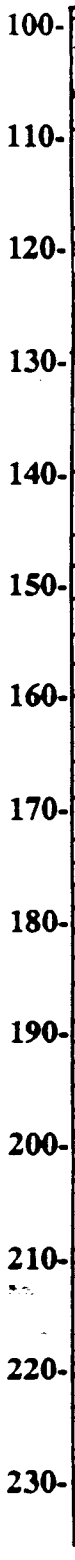
Date cored 5-12-94

Equipment NURC vibracore

Location 32° 36.89'N 79° 51.79'W Analyst/Date described Pat Ealy 7-1-94

Sketch	Color	Texture	Sed. Structures	Comments
0-	2.5Y 5/3	mod. poorly sorted, gr. ang. to sub-round		fine-med. gr. sand, 10% fine shell frags., 5% black shells/opaques
10-				
20-				
30-				
40-	5Y 4/2	mod. poorly sorted, gr. ang.	39-40 cm mud lens	v. fine-fine sand
50-	5Y 5/2	v. poorly sorted		v.fine-coarse sand, 10% fine shell frags., 5% black shells/opaques
60-				
70-	5Y 3/2	clay		clay
80-	5Y 3/2	poorly sorted, gr. ang.		fine-coarse sand, 30% fine-coarse shell frags., fair amt. black shells
90-				
100-	5Y 5/1		see description next page	

Core ID F-94-31



	Color	Texture	Sed. Structures	Comments
100-	5Y 5/1		101 cm moon snail (5 cm diam.)	grey mud, 40% coarse shell hash, 30% fine sand
110-				
120-				
130-				
140-				
150-				
160-				
170-	5Y 6/1			Marl, mud interspersed down to 190 cm, hard-packed, phosphatic
180-				
190-			187-190 cm shell lens	
200-				
210-				
220-				
230-				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-32

Total Depth 232 cm

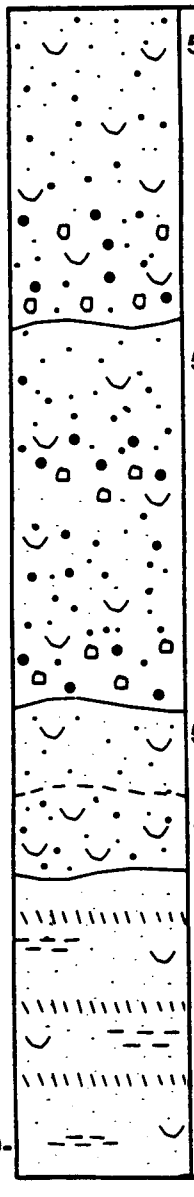
Date cored 5-12-94

Equipment NURC vibracore

Location 32°37.71'N 79°52.49'W Analyst/Date described Pat Ealy 6-30-94

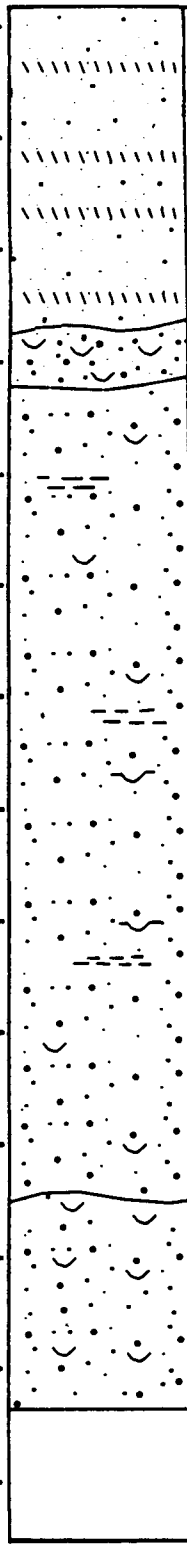
KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



Sketch	Color	Texture	Sed. Structures	Comments
	5Y 5/2	graded bed gr. sub-ang.		fine-coarse sand, 20% fine to mod. coarse shell frags. 5% black shell/opaques
	5Y 6/2	poorly sorted, possible graded beds, gr. ang.		v.fine-coarse sand, 15% shell frags., 5% black shell, 2% opaques
	5Y 5/1	mod. well sorted		v.fine-fine sand, 5-10% fine-v.fine shell frags., 3-5% black shells/opaques
	5Y 5/1	mod. poorly sorted	possible contact 68 cm	fine-med. sand, 20% fine-mod. coarse shell frags.
	5Y 3/1	mod. poorly sorted		v.fine silty sand, thin mud lenses (1 cm thick), 10% fine shell frags., 3% opaques, few black shells

Core ID F-94-32



	Color	Texture	Sed. Structures	Comments
100-	5Y 3/1		see description previous page	
110-				
120-				
130-	5Y 3/1	poorly sorted	131 cm dosinia shell (5 cm diam.)	fine-med. sand, 30% shell hash
140-	5Y 4/1	mod. poorly sorted		fine-med. sand, 5% fine shell frags., 5% silt/clay, few mud lenses (1 cm thick)
150-				
160-				
170-			168, 180 cm burrows	
180-				
190-				
200-				
210-	5Y 4/1	mod. poorly sorted		fine-med. sand, 25% fine-coarse shell frags., 5% silt/clay
220-				
230-				

CENTER FOR MARINE & WETLAND STUDIES

Core ID F-94-33

Total Depth 199 cm

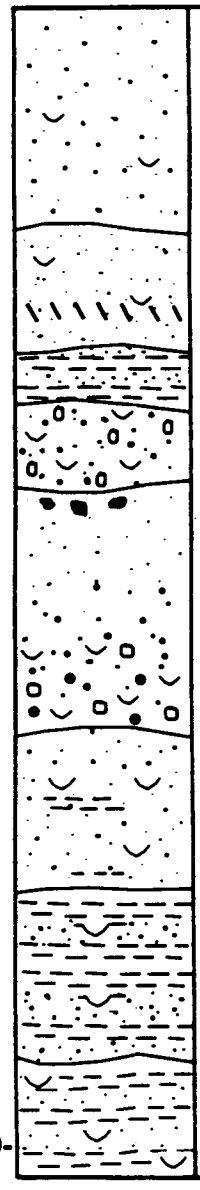
Date cored 5-12-94

Equipment NURC vibracore

Location 32° 38.21'W 79°53.02'W Analyst/Date described Pat Ealy 6-7-94

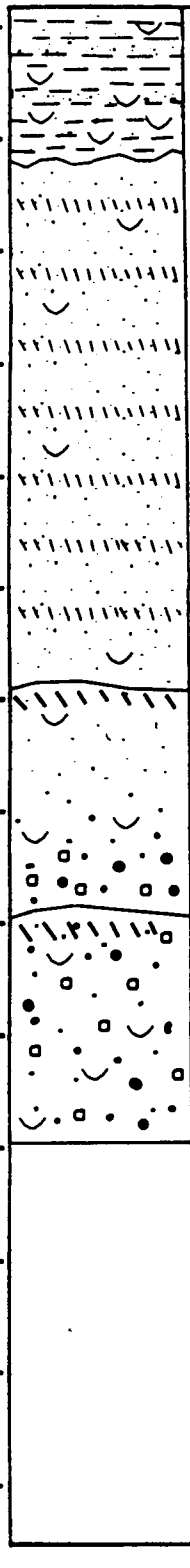
KEY

Fine sand	Clay
Med. sand	Burrows
Coarse sand	Wood Frags.
Pebbles	Roots
Shells	Peat
Silt	Mud Rollers
	Flaser beds



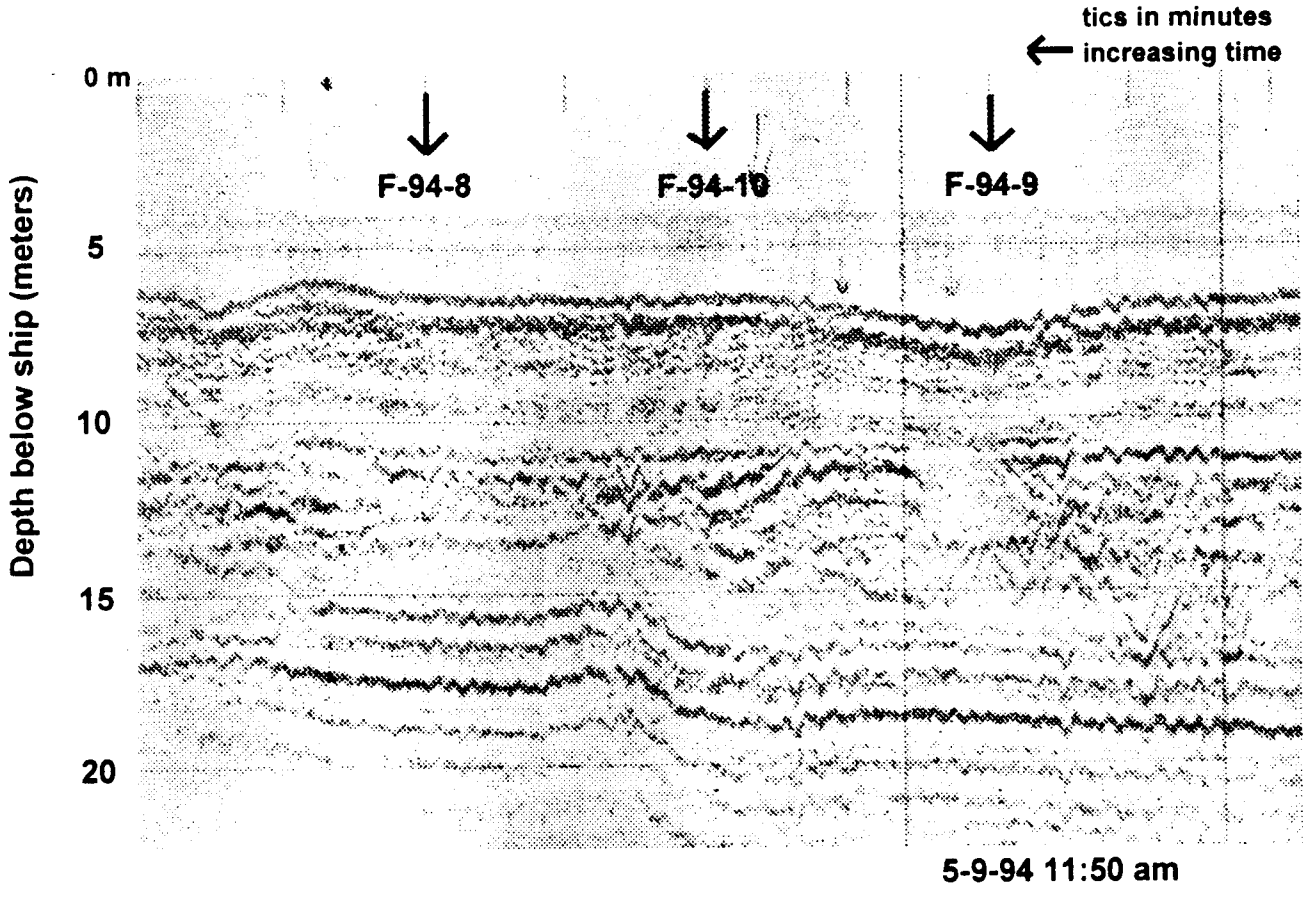
	Color	Texture	Sed. Structures	Comments
0-		mod. sorted		v.fine-fine sand, 5% fine shell frags., 10% mica grains, <5% opaques
10-				
20-		mod. poorly sorted		v.fine silty sand, v. little shell, <5% opaques
30-		poorly sorted		laminated beds of mud and fine sand, organic frags. 0.25-0.5 cm
		poorly sorted		fine-coarse sand, 25% fine-coarse shell hash, some black shells
40-			44 cm mud rollers (2-4 cm diam.)	
50-		graded bed		v.fine-coarse sand, 20% fine shell frags. (bttm)
60-				
70-		mod. poorly sorted	several thin mud lenses (0.5-2 cm thick)	v. fine-fine sand, 5% fine shell frags., 10% black shell/opaques, 10% fine mica grains
80-		poorly sorted	83,89 cm coarse sand-filled burrows	grey mud with silty sand interspersed, 5% fine shell frags.
90-		poorly sorted		sandy mud, shells incr. down section from 10-25%
100-				

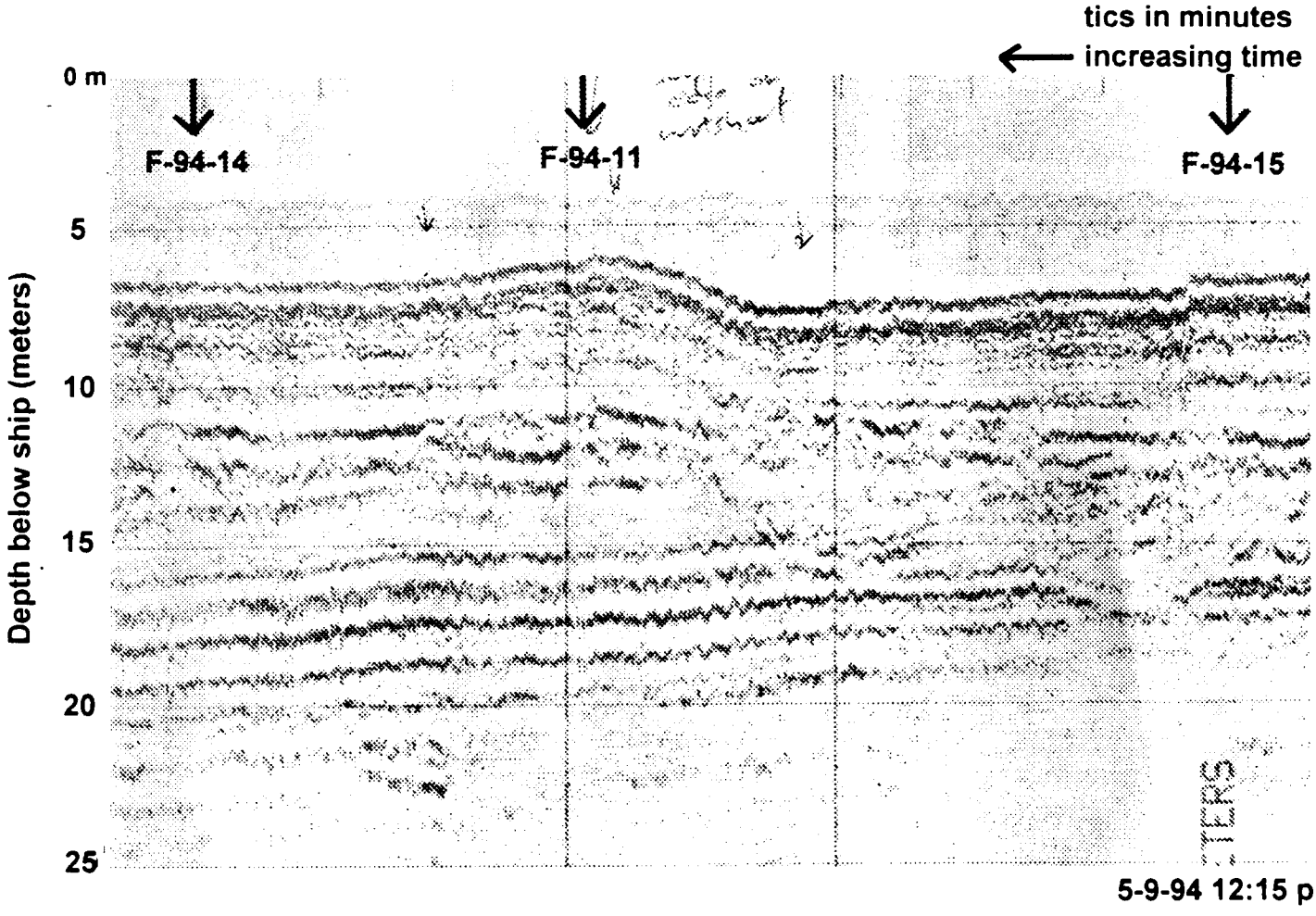
Core ID F-94-33

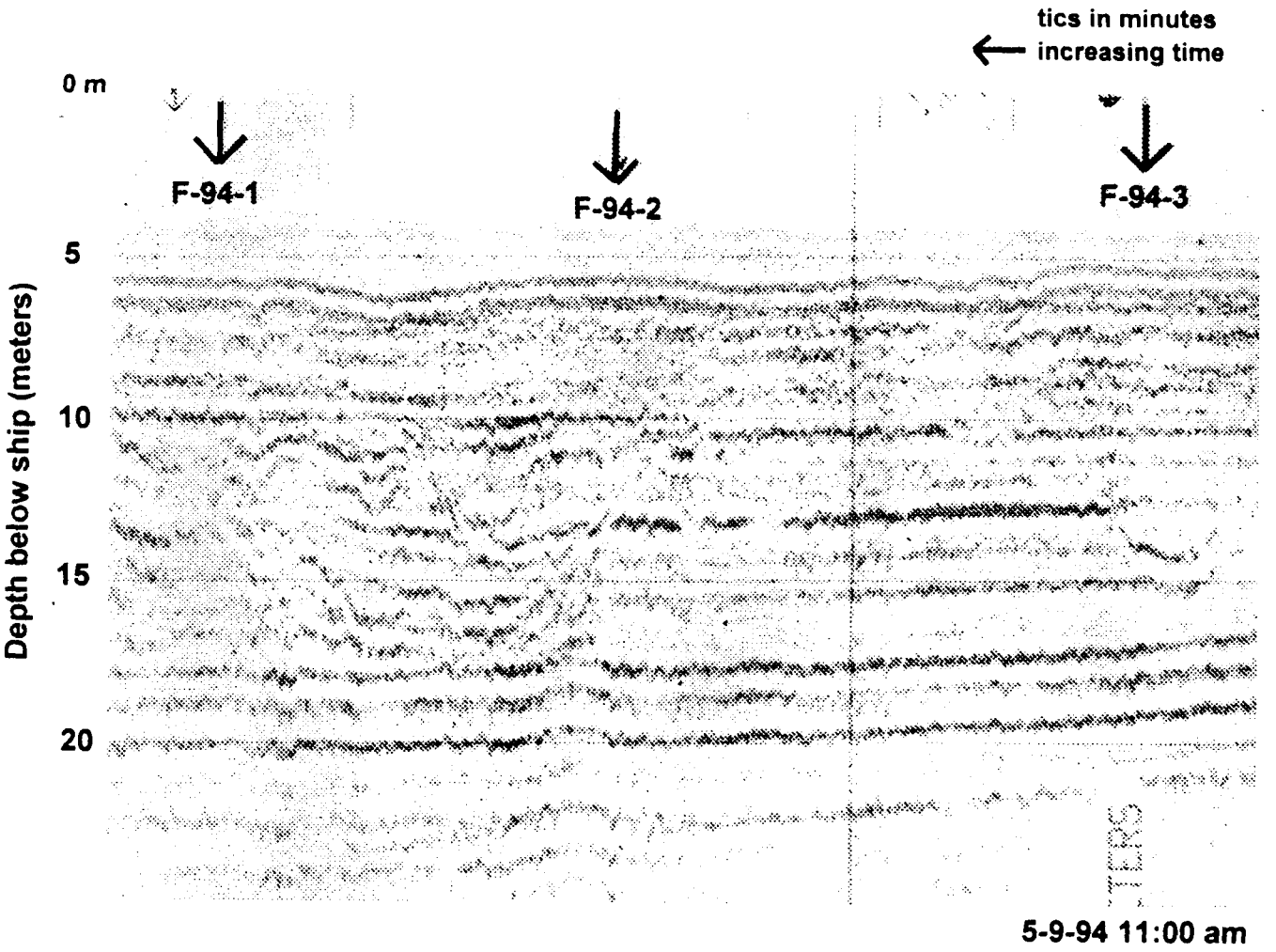
Sketch	Color	Texture	Sed. Structures	Comments
		poorly sorted	see description previous page	v.fine silty sand, 5% fine shell frags., 10% fine mica grains, <5% opaques
		graded bed	175 cm enses shell (3 cm long)	v.fine silty sand (top) to fine-coarse sand (bttm.), 10% fine shell frags., 10% fine mica grains
		poorly sorted		v.fine/silty-coarse sand, 10% fine mica grains, 5% opaques

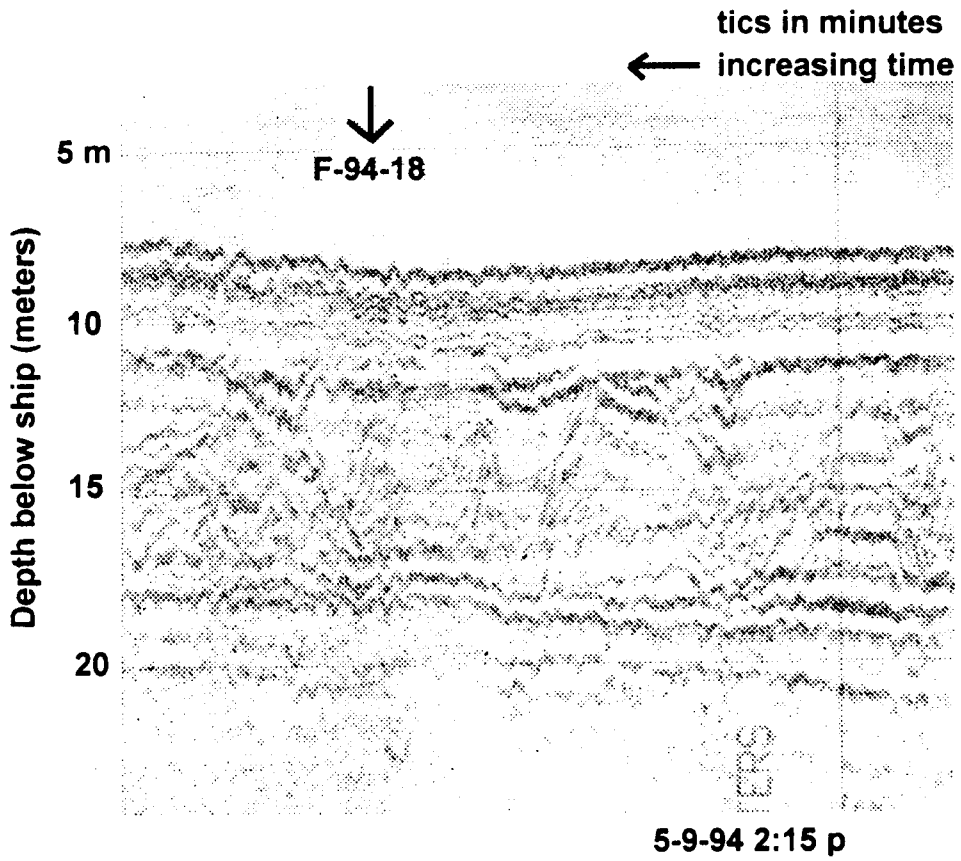
100-
110-
120-
130-
140-
150-
160-
170-
180-
190-
200-
210-
220-
230-

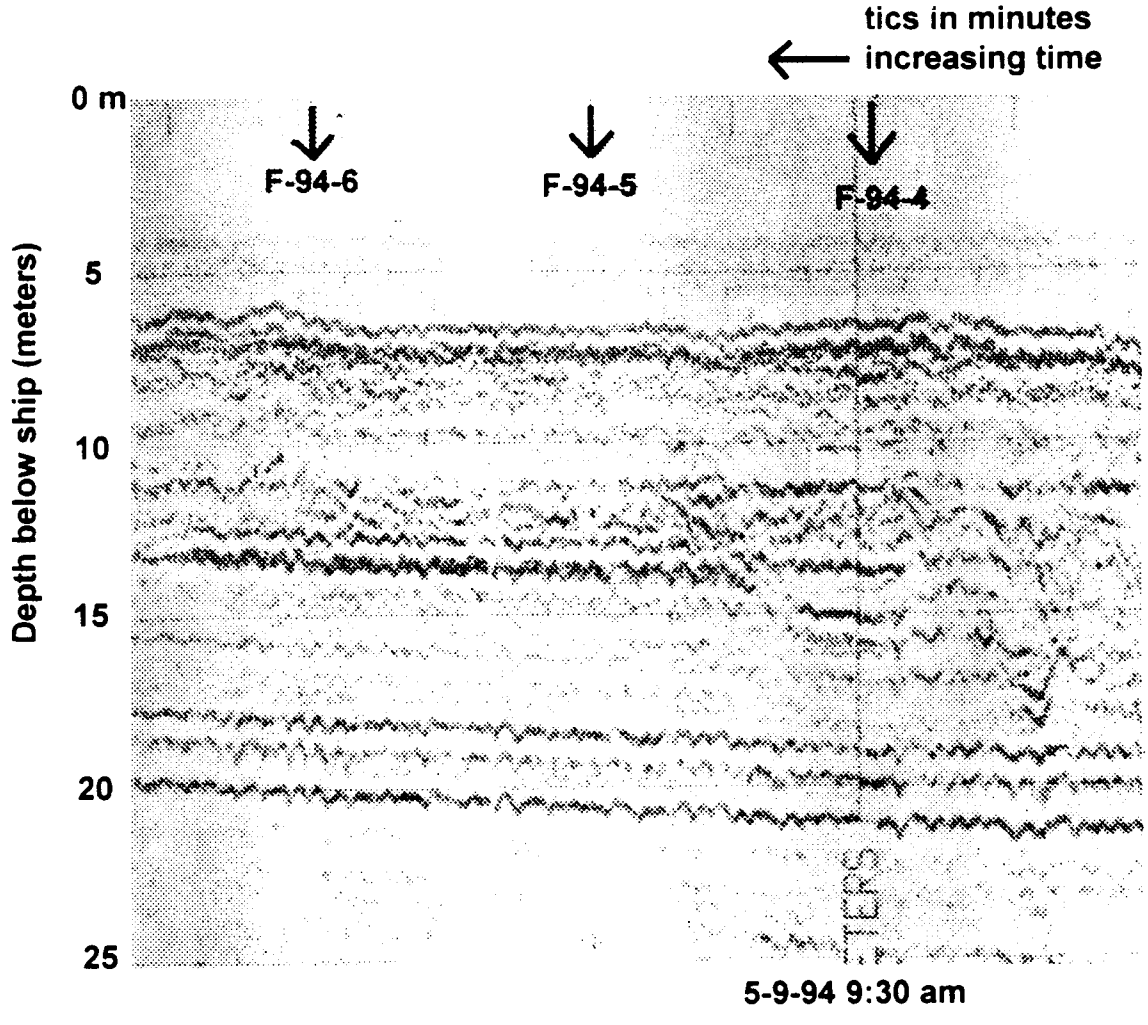
Appendix E. High-resolution seismic reflection record showing placement of vibracores taken on or adjacent to the seismic line. Uniboom source used with assumed velocity of 1500 m/sec for water and unconsolidated sediment for estimating depth. Trackline run May 9, 1994.

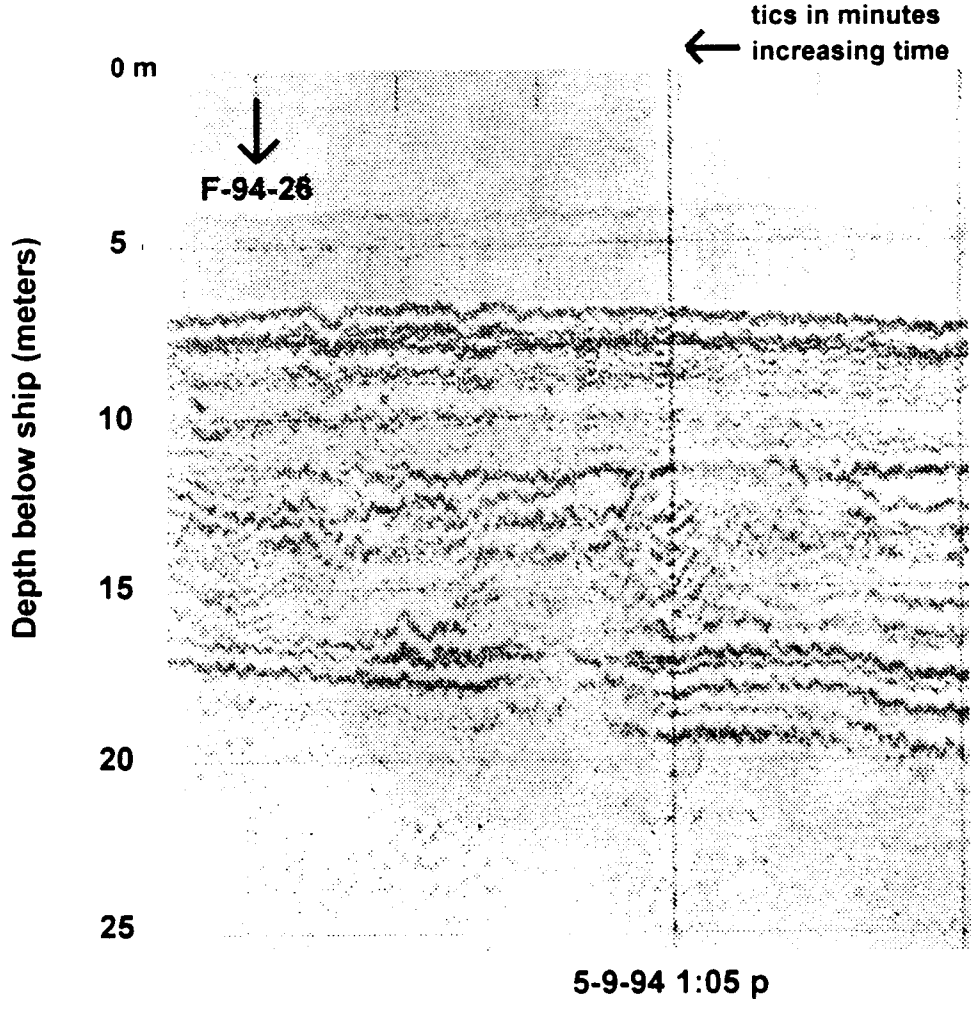

tics in minutes
increasing time
0 m
F-94-8
F-94-10
F-94-9
5
10
15
20
Depth below ship (meters)
5-9-94 11:50 am

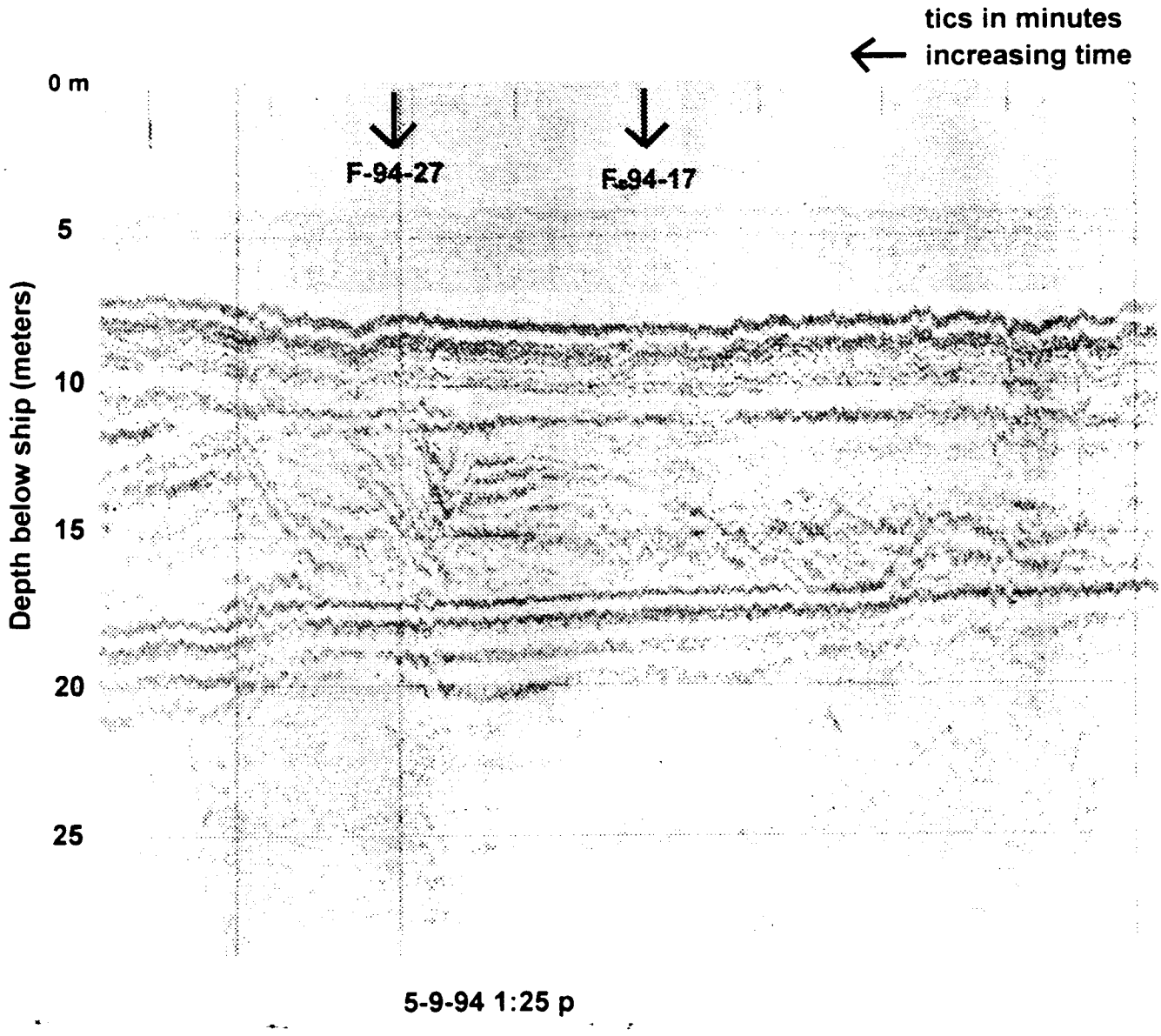

tics in minutes
increasing time
0 m
F-94-14
F-94-11
F-94-15
5
10
15
20
25
Depth below ship (meters)
5-9-94 12:15 p


tics in minutes
increasing time
0 m
F-94-1
F-94-2
F-94-3
5
10
15
20
Depth below ship (meters)
5-9-94 11:00 am


tics in minutes
increasing time
F-94-18
5 m
10
15
20
Depth below ship (meters)
5-9-94 2:15 p


tics in minutes
increasing time
0 m
F-94-6
F-94-5
F-94-4
5
10
15
20
25
Depth below ship (meters)
5-9-94 9:30 am


tics in minutes
increasing time
0 m
F-94-26
5
10
15
20
25
Depth below ship (meters)
5-9-94 1:05 p


tics in minutes
increasing time
0 m
F-94-27
F-94-17
5
10
15
20
25
Depth below ship (meters)
5-9-94 1:25 p

Appendix F. Sediment analysis of NURC vibracore data. Channel samples taken over entire lithostratigraphic unit within core.

Appendix F. Sediment Analyses from NURC vibracores (5-94)

Core ID	Interval	with CaCO3 MGS (mm)	Sorting	%CaCO3	% Gravel	% Sand	% Silt/Clay	Sorting w/out CaCO3	MGS
F-94-1	0-8cm	0.1118	1.123	6.32	1.07	79.63	19.31	0.904	0.0986
	8-44cm	0.1832	1.153	12.01	3.92	94.95	1.13	0.540	0.1509
	44-71cm	0.1599	1.142	10.64	3.36	94.28	2.36	0.579	0.1315
	71-85cm	0.4752	2.158	41.39	23.69	74.67	1.64	1.135	0.1827
	85-108cm	0.2670	2.020	27.22	15.98	79.86	4.16	0.763	0.1197
	108-156cm	0.1286	1.047	10.26	1.60	89.64	8.76	0.701	0.1072
	156-162cm	0.0235		*	0	36.27	65.53	*	*
	162-173cm	0.0962	1.306	18.52	0.85	70.41	28.74	0.965	0.0683
	Wt. avg.	0.1848			**5.93**	**85.42**	**8.71**		
F-94-2	0-30cm	0.6899	1.246	44.87	12.86	86.89	0.25	0.819	0.4151
	30-33cm	0.1649	1.029	11.15	2.71	96.76	0.53	0.459	0.1525
	34-65cm	0.6930	1.125	42.26	10.66	89.14	0.20	0.701	0.4635
	65-89cm	0.2311	1.440	18.25	5.53	93.68	0.80	0.866	0.1766
	89-95cm	0.0214		*	3.26	60.89	39.40	*	*
	95-104cm	0.1847	1.501	17.35	6.35	89,91	3.74	0.752	0.1357
	104-108cm	0.0235		*	0.00	36.27	65.53	*	*
	109-182cm	0.1847	1.501	17.35	6.35	89.91	3.74	0.752	0.1357
	Wt. avg.	0.3494			**7.67**	**86.77**	**4.61**		
F-94-3	0-29cm	0.1629	0.892	9.15	1.58	97.78	0.64	0.471	0.1427
	29-36cm	0.4477	1.681	42.32	13.03	85.70	1.28	0.977	0.2195
	36-92cm	0.1666	0.822	8.40	1.29	97.89	0.81	0.489	0.1481
	92-134cm	0.1516	1.117	12.83	3.31	94.25	2.44	0.522	0.1260
	134-149cm	0.1443	0.995	15.88	1.65	93.91	4.44	0.671	0.1262
	149-182cm	0.0393		*	0.14	30.28	69.35	*	*
	182-184cm	0.1423	1.241	16.50	3.13	89.75	7.12	0.709	0.1073
	Wt. avg.	0.1484			**2.09**	**84.04**	**13.83**		
F-94-4	0-46cm	0.1470	0.773	8.05	0.91	98.71	0.37	0.462	0.1399
	46-52cm	1.1660	1.102	52.01	21.11	78.72	0.17	0.972	0.4583
	52-64cm	1.0389	2.059	27.85	11.79	87.19	1.01	0.866	0.1522
	64-76cm	0.0308		*	0.16	27.06	73.57	*	*
	76-154cm	0.2466	1.365	12.20	0.48	94.24	5.27	0.603	0.1198
	154-189cm	0.0152		*	0.36	14.90	85.67	*	*

* not determined

Appendix F. Sediment Analyses from NURC vibracores (5-94)

Core ID	Interval	with CaCO3 MGS (mm)	Sorting	%CaCO3	% Gravel	% Sand	% Silt/Clay	Sorting w/out CaCO3	MGS
	189-212cm	0.4900	2.129	21.57	4.97	86.09	8.94	0.706	0.0933
	Wt. avg.	0.2718		*	**2.25**	**76.59**	**21.36**	*	*
F-94-5	0-24cm	0.9587	1.602	56.83	29.57	70.18	0.25	0.808	0.3797
	24-45cm	0.0308		*	0.16	27.06	73.57	*	*
	45-49cm	0.1378	1.096	13.14	2.76	94.38	2.85	0.569	0.1230
	50-56cm	0.1286	0.922	12.59	1.25	94.63	4.12	0.663	0.1081
	56-60cm	0.6930	1.125	42.26	10.66	89.14	0.20	0.701	0.4635
	60-105cm	0.1206	0.808	11.91	0.78	94.62	4.60	0.545	0.1100
	105-110cm	0.0308		*	0.16	27.06	73.57	*	*
	110-122cm	0.1230	0.558	10.56	0.19	97.73	2.07	0.446	0.1168
	122-134cm	0.1038	0.785	16.03	0.43	91.33	8.24	0.646	0.0984
	Wt. avg.	0.2691			**6.10**	**76.20**	**17.06**		
F-94-6	0-15cm	0.3556	1.658	32.36	12.17	87.40	0.44	0.764	0.1963
	15-32cm	0.1809	1.059	11.07	1.90	97.18	0.93	0.709	0.1499
	33-48cm	0.7908	2.052	59.33	33.52	65.74	0.74	1.036	0.2059
	48-81cm	0.1690	1.187	11.05	2.57	95.49	1.94	0.940	0.1298
	81-86cm	0.6346	1.270	38.00	9.30	90.31	0.39	1.003	0.4171
	86-96cm	0.0235		*	0	36.27	65.53	*	*
	96-107cm	0.1340	1.399	28.14	3.58	81.39	15.04	1.008	0.1114
	107-128cm	0.1384	1.361	14.51	1.99	82.04	15.97	1.033	0.0987
	128-144cm	0.0308		*	0.16	27.06	73.57	*	*
	144-172cm	0.1397	1.022	9.29	2.56	94.36	3.08	1.951	0.1204
	172-182cm	0.1963	1.468	15.90	7.77	91.24	0.99	0.816	0.1545
	182-192cm	0.1092	0.830	6.92	0.72	92.25	7.03	0.615	0.1057
	Wt. avg.	0.2140			**5.67**	**80.43**	**13.54**		
F-94-7	0-85	0.1455	0.876	5.66	1.19	97.34	1.47	0.557	0.1269
	85-96cm	0.6172	1.497	42.47	15.00	84.56	0.44	1.050	0.1290
	96-104cm	0.1591	0.950	8.74	1.28	97.76	0.96	0.710	0.1290
	104-114cm	0.2041	1.746	18.85	9.27	85.55	5.18	0.831	0.1302
	114-123cm	0.1563	0.920	7.48	0.56	98.44	1.01	0.784	0.1262
	123-133cm	0.1729	1.226	15.40	4.25	91.63	4.12	0.633	0.1214
	133-145cm	0.0098		*	0.00	8.93	93.45	*	*
	145-171cm	0.1222	0.909	8.18	1.46	93.29	5.25	0.638	0.0964

* not determined

Appendix F. Sediment Analyses from NURC vibracores (5-94)

Interval	with CaCO3 MGS (mm)	Sorting	%CaCO3	% Gravel	% Sand	% Silt/Clay	Sorting w/out CaCO3	MGS
Wt. avg.	0.1690			**2.66**	**88.75**	**8.76**		
0-47cm	0.9187	1.372	55.69	22.89	76.85	0.26	0.729	0.4327
47-76cm	0.1496	1.048	10.54	3.00	95.11	1.89	0.505	0.1322
76-80cm	0.6868	1.939	53.36	26.55	72.82	0.63	1.082	0.2210
80-113cm	0.1233	0.758	7.39	0.58	96.25	3.16	0.515	0.1203
113-137cm	0.0098		*	0.00	8.93	93.45	*	*
137-146cm	0.4810	2.399	44.39	30.22	66.06	3.72	0.822	0.1058
146-194cm	0.1172	0.695	8.99	0.07	93.93	6.00	0.603	0.1058
Wt. avg.	0.3258			**8.06**	**78.12**	**14.11**		
0-20cm	0.3781	1.498	32.76	2.37	90.3	7.33	1.487	0.2598
20-58cm	0.0393		*	0.14	30.28	69.35	*	*
58-87cm	0.3174	0.968	15.2	0.88	97.44	1.68	0.639	0.1177
87-153cm	0.1216	0.764	11.89	0.1	94.23	5.67	0.643	0.1114
Wt. avg.	0.1718			**0.55**	**78.44**	**20.95**		
0-15cm	0.7526	1.281	42.06	14.31	85.58	0.11	0.662	0.4687
15-40cm	0.1262	0.908	6.4	1.04	91.33	7.63	0.704	0.1161
40-81cm	0.0393		*	0.14	30.28	69.35	*	*
81-94cm	0.149	1.104	19.42	0.22	90.74	9.05	0.645	0.2767
94-122	0.0098		*	0	8.93	93.45	*	*
122-161cm	0.1239	1.075	19.07	2.57	93.04	4.39	0.638	0.1179
161-172cm	0.4523	2.022	37.49	20.59	78.77	0.64	0.925	0.1849
172-232cm	0.1121	0.754	8.52	0.07	92.14	7.8	0.693	0.0926
Wt. avg.	0.15			**2.5**	**70.09**	**27.66**		
0-54cm	0.827	1.339	53.74	20.31	79.52	0.16	0.694	0.4012
55-60cm	0.1754	1.143	15.89	2.84	96.69	0.47	0.606	0.1407
60-79cm	0.5021	1.665	44.27	16.28	83.48	0.24	0.778	0.2366
79-82cm	0.2026	1.424	19.32	6.6	92.73	0.67	0.54	0.1411
82-91cm	0.1742	1.346	17.37	3.99	90.74	5.27	0.844	0.1277
91-102cm	0.8298	1.753	61.29	28.29	71.08	0.63	0.98	0.2615
102-130cm	0.1533	0.941	10.66	2.00	96.8	1.2	0.484	0.1372
130-144cm	0.2382	0.988	10.49	1.59	96.18	2.23		
Wt. avg.	0.5139		**39.83**	**12.95**	**89.4**	**0.95**		
0-23cm	1.4906	1.057	32.55	12	85.81	2.19	1.254	0.6839

* not determined

Appendix F. Sediment Analyses from NURC vibracores (5-94)

Core ID	Interval	with CaCO3 MGS (mm)	Sorting	%CaCO3	% Gravel	% Sand	% Silt/Clay	Sorting w/out CaCO3	MGS
	23-36	0.1455	0.876	5.66	1.19	97.34	1.47	0.557	0.1269
	36-83cm	0.1211	0.687	7.62	0.13	93.77	6.1	0.592	0.1012
	83-95cm	0.2095	1.846	14.65	1.61	95.69	2.7	0.495	0.1205
	95-115cm	0.1753	0.843	19.06	0.26	88.78	10.96	0.689	0.0871
	115-148cm	0.1218	0.733	11.21	0.63	97.4	1.97	0.46	0.102
	148-162cm	0.0974	0.838	15.07	0.3	90.09	9.61	0.617	0.0903
	162-178cm	0.0393		*	0.14	30.28	69.35	*	*
	178-203cm	0.1172	0.973	16.98	0.64	92.07	7.29	0.676	0.09
	Wt. avg.	0.2799			**1.8**	**87.84**	**10.34**		
F-94-13	0-53cm	0.1485	0.904	7.13	1.83	96.22	1.95	0.496	0.1334
	53-57cm	0.421	2.2	74.47	24.81	73.98	1.21	0.767	0.1472
	57-72cm	0.0235		*	0	36.27	65.53	*	*
	72-83cm	0.1365	1.327	14.71	3.28	86.58	10.14	0.817	0.1067
	83-92cm	0.1169	0.917	6.89	0.06	88.88	11.07	0.921	0.1173
	92-105cm	0.1211	0.687	7.62	0.13	93.77	6.1	0.592	0.1012
	105-120cm	0.0235		*	0	36.27	65.53	*	*
	120-125cm	0.1209	0.508	5.59	0.13	97.87	2	0.405	0.1064
	125-150cm	0.1193	1.302	16.86	0.15	76.76	23.09	1.086	0.0762
	150-187cm	0.0897	0.988	7.79	0.03	73.33	26.64	0.873	0.0765
	187-198cm	0.2607	2.169	26.5	18.26	75.77	5.97	0.968	0.1817
	198-215cm	0.1222	0.771	9.94	0.07	94.49	5.44	0.592	0.0971
	215-237cm	0.1385	0.954	10.49	1.59	96.18	2.23		
	Wt. avg.	0.1236			**2.01**	**80.73**	**17.49**		
F-94-14	0-12cm	1.6958	1.491	62.44	33.35	66.2	0.45	0.762	0.3965
	12-22cm	1.8138	1.276	86.14	51.65	48.19	0.16	0.791	0.4071
	22-34cm	1.1445	1.475	65.14	33.08	66.68	0.25	0.78	0.4044
	34-49cm	0.9904	1.51	59.88	28.37	71.37	0.26	0.757	0.3847
	49-86cm	0.0125		*	0	36.27	65.53	*	*
	86-112cm	0.161	1.229	14.45	4.22	94.66	1.12	0.529	0.1203
	112-273cm	0.115	0.748	10.61	0.13	94.03	5.85	0.653	0.1173
	Wt. avg.	0.3306			**6.85**	**80.91**	**12.49**		
F-94-15	0-13cm	0.14	1.141	9.73	2.76	95.46	1.78	0.537	0.133
	13-22cm	0.2087	1.044	11.48	1.54	97.8	0.66	0.822	0.1635

* not determined

Appendix F. Sediment Analyses from NURC vibracores (5-94)

Core ID	Interval	with CaCO3 MGS (mm)	Sorting	%CaCO3	% Gravel	% Sand	% Silt/Clay	Sorting w/out CaCO3	MGS
	22-42cm	0.1286	0.812	6.6	0.51	95.92	3.56	0.59	0.1257
	42-63cm	0.1292	0.651	7.39	0.43	97.15	2.42	0.55	0.1077
	63-79cm	0.1458	0.872	5.75	1.06	98.24	0.69	0.371	0.137
	79-84cm	0.3527	2.02	35.55	18.18	80.63	0.56	0.589	0.1356
	84-97cm	0.0393		*	0.14	30.28	69.35	*	*
	97-104cm	0.2382	0.988	10.49	1.59	96.18	2.23	0.514	0.1153
	104-137cm	0.1385	0.954	9	1.04	92.84	6.12	0.676	0.1061
	137-141cm	0.3667	2.282	37.74	23.78	72.15	4.07	0.756	0.1244
	141-272cm	0.1251	0.671	6.63	0.16	95.41	4.44	0.576	0.1114
	Wt. avg.	0.1385			**1.25**	**91.81**	**6.92**		
F-94-16	0-11cm	0.2062	0.996	21.43	2.22	96.44	1.34	0.767	0.2035
	11-21cm	0.693	1.125	42.26	10.66	89.14	0.2		
	21-60cm	0.3348	1.458	22.82	7.44	91.3	1.26	0.642	0.1689
	60-106cm	0.1381	0.866	10.94	0.44	93.99	5.57	0.61	0.1247
	106-155cm	0.1404	0.858	12.25	0.25	93.89	5.86	0.767	0.1199
	155-173cm	0.0854	1.176	10.64	0.2	69.42	30.38	1.039	0.0762
	173-177cm	0.1424	0.516	7.6	0.04	98.34	1.62	0.456	0.1296
	177-237cm	0.1381	0.866	10.94	0.44	93.99	5.57	0.61	0.1247
	237-241cm	0.1494	1.219	6.34	1.53	93.95	4.53		
	241-272cm	0.1348	0.678	10.01	0.49	96.19	3.32	0.547	0.1282
	Wt. avg.	0.1862	**1.84**	.	**1.86**	**92.2**	**5.95**		
F-94-17	0-22cm	0.1367	1.029	16.18	0.96	91.66	7.38	0.774	0.1172
	22-51cm	0.1453	0.945	14.41	1.01	94.6	4.39	0.737	0.1258
	51-211cm	0.1458	0.679	10.44	0.26	96.86	2.89	0.566	0.1298
	211-235cm	0.1623	1.019	14.06	2.19	95.36	2.45	0.591	0.1382
	235-269cm	0.5176	1.988	50.16	21.32	76.82	1.86	0.99	0.1844
	Wt. avg.	0.1935			**3.23**	**93.52**	**3.24**		
F-94-18	0-25cm	0.2157	1.093	14.41	3.24	96.34	0.43	0.616	0.1768
	25-33cm	0.1639	0.895	8.44	1.47	97.99	0.54	0.617	0.126
	33-55cm	0.5758	1.472	41.06	15.07	84.92	0.01	0.818	0.3035
	55-118cm	0.1421	1.083	11.14	2.07	94.04	3.89	0.659	0.1166
	118-150cm	0.1246	0.811	7.21	0.6	99.18	0.22	0.627	0.116

* not determined

Appendix F. Sediment Analyses from NURC vibracores (5-94)

Core ID	Interval	with CaCO3 MGS (mm)	Sorting	%CaCO3	% Gravel	% Sand	% Silt/Clay	Sorting w/out CaCO3	MGS
	150-204cm	0.1596	1.32	11.59	3.78	95.53	0.69	0.795	0.1245
	204-340cm	0.1568	0.857	8.78	0.94	96.23	2.83	0.591	0.1393
	Wt. avg.	0.1831			**2.66**	**95.4**	**2.02**		
F-94-19	0-14cm	0.1449	1.017	9.35	2.8	96.45	0.75	0.435	0.1339
	14-26cm	0.1791	1.306	12.57	6.23	93.76	0.01	0.401	0.1357
	26-92cm	0.1407	1.015	11.79	2.06	95.02	2.92	0.593	0.125
	92-144cm	0.0647	1.931	14.45	0.18	24.4	76.48	0.529	0.1203
	144-161cm	0.1033	0.78	19.77	0.05	87.98	11.97	0.749	0.0966
	161-193cm	0.0317		*	0	36.27	65.53	*	*
	193-205cm	0.1064	0.79	21.09	0.11	90.58	9.31	0.708	0.0967
	Wt. avg.	0.1018			**1.23**	**85.78**	**13.27**		
F-94-20	0-22cm	0.1445	0.843	4.65	1.47	97.43	1.1	0.562	0.1331
	22-65cm	0.0393		*	0.14	30.28	69.35	*	*
	65-114cm	0.1494	1.219	6.34	1.53	93.95	4.53	0.946	0.1376
	114-122cm	0.0393		*	0.14	30.28	69.35	*	*
	122-153cm	0.6930	1.125	42.26	10.66	89.14	0.20	0.701	0.4635
	153-158cm	0.0125		*	0	14.22	87.07	*	*
	158-165cm	1.4906	1.057	32.55	12	85.81	2.19	1.254	0.6839
	165-221cm	0.1568	0.857	8.78	0.94	96.23	2.83	0.591	0.1393
	221-234cm	0.6223	0.606	26.29	10.37	87.5	2.12	1.471	0.474
	234-251cm	0.1429	0.953	6.18	1.57	97.04	1.39	0.624	0.1458
	251-263cm	0.7874	1.567	43.85	21.28	77.85	0.87	1.371	0.374
	263-303cm	0.1362	0.76	4.22	0.18	95.62	4.2	0.678	0.1345
	Wt. avg.	0.2597			**3.32**	**81.39**	**15.27**		
F-94-21	0-4cm	0.0125		*	0	36.27	65.53	*	*
	4-12cm	0.2373	1.624	20.75	7.82	90.08	2.11	1.026	0.1499
	12-25cm	0.0647		*	0.18	24.4	76.48	*	*
	25-55cm	0.1233	0.676	6.54	0.43	97.84	1.73	0.458	0.1213
	55-242cm	0.1186	0.752	11.93	0.17	93.94	5.88	0.672	0.1077
	Wt. avg.	0.1185			**0.45**	**89.61**	**10.02**		
F-94-22	0-18cm	0.1176	0.784	10.39	0.43	94.61	4.96	0.626	0.1095
	18-140cm	0.1364	1.01	14.62	1.92	90.61	7.47	0.727	0.1111
	140-164cm	0.1452	1.318	6.9	1.57	87.85	10.58	0.894	0.1028

* not determined

Appendix F. Sediment Analyses from NURC vibracores (5-94)

Core ID	Interval	with CaCO3 MGS (mm)	Sorting	%CaCO3	% Gravel	% Sand	% Silt/Clay	Sorting w/out CaCO3	MGS
	Wt. avg.	0.1356			**1.71**	**90.65**	**7.65**		
F-94-23	0-10cm	0.1469	1.034	8.05	2.03	95.04	2.93	0.683	0.1073
	10-114cm	0.138	1.361	10.43	3.44	88.71	7.84	0.771	0.0949
	114-142cm	0.0647		*	0.18	24.4	76.48	*	*
	Wt. avg.	0.1242			**2.69**	**76.47**	**21.03**		
F-94-24	0-72cm	0.1409	0.917	8.48	1.82	95.71	2.47	0.507	0.1193
	72-82cm	0.1412	0.984	9.09	0.84	97.39	1.77	0.706	0.1378
	82-90cm	0.4413	1.433	29.92	6.76	92.78	0.46	0.407	0.1572
	90-141cm	0.0647		*	0.18	24.4	76.48	*	*
	141-170cm	0.1569	0.78	8.09	0.74	98.42	0.84	1.146	0.2969
	170-190cm	0.1172	0.839	7.21	0.24	93.76	6	0.601	0.1031
	Wt. avg.	0.1331			**1.21**	**76.7**	**22.3**		
F-94-25	0-16cm	0.1171	0.588	4.99	0.14	96.57	3.3	0.515	0.121
	16-40cm	0.1411	0.946	8.83	1.14	96.01	2.85	0.766	0.1089
	40-48cm	0.1883	1.56	20.97	3.81	88.25	7.94	0.985	0.1258
	48-60cm	0.1643	1.306	13.34	3.55	91.55	4.9	0.782	0.1283
	60-121cm	0.1301	0.967	7.32	1.04	92.09	6.87	0.748	0.1014
	121-179cm	0.1093	0.688	6.11	0.1	93.57	6.32	0.571	0.1012
	Wt. avg.	0.1286			**0.96**	**93.29**	**5.75**		
F-94-26	0-44cm	0.1558	0.954	7.63	1.59	96.9	1.51	0.571	0.1286
	44-49cm	0.3874	1.619	33.02	11.58	88.06	0.36	0.884	0.2126
	49-60cm	0.1428	0.803	7.33	0.35	96.74	2.91	0.613	0.128
	60-72cm	0.4025	1.782	39.62	15.73	83.81	0.46	0.713	0.1825
	72-94cm	0.1363	1.009	10.13	0.89	91.56	7.55	0.762	0.1078
	94-199cm	0.1193	0.825	6.48	0.28	94.67	5.05	0.692	0.1002
	Wt. avg.	0.1544			**1.86**	**94.11**	**4.03**		
F-94-27	0-12.5cm	0.1815	1.098	10.39	1.57	96.46	1.97	0.883	0.1545
	12.5-279cm	0.1359	0.678	6.96	0.31	96.14	3.55	0.564	0.1289
	Wt. avg.	0.1379			**0.37**	**96.15**	**3.48**		
F-94-28	0-6cm	0.4338	1.547	29.12	8.36	89.54	2.1	1.31	0.2765
	6-12cm	0.2738	2.112	28.95	8.99	70.02	20.99	1.727	0.1554
	12-17cm	0.5537	1.385	27.68	9.11	88.53	2.36	1.138	0.4395
	18-28cm	0.5537	2.103	49.03	27.07	67.2	5.74	1.679	0.2288

* not determined

Appendix F. Sediment Analyses from NURC vibracores (5-94)

Core ID	Interval	with CaCO3 MGS (mm)	Sorting	%CaCO3	% Gravel	% Sand	% Silt/Clay	Sorting w/out CaCO3	MGS
	28-46cm	1.1748	1.953	63.95	40.34	56.23	3.43	1.659	0.3568
	Wt. avg.	0.7326			**24.92**	**67.05**	**5.86**		
F-94-29	0-4cm	0.0317		*	0	25.6	75.33	*	*
	4-9cm	0.7211	1.261	25.97	9.42	89.45	1.13	1.118	0.5478
	9-37cm	0.2041	1.746	18.85	9.27	85.55	5.18	0.831	0.1302
	37-179cm	0.027		*	3	12.27	88.64	*	*
	Wt. avg.	0.0735			**4.09**	**26.19**	**72.84**		
F-94-30	0-28cm	0.938	1.559	54.84	27.16	72.42	0.42	1.04	0.4062
	28-60cm	0.9109	1.7	59.33	30.43	68.55	1.03	1.111	0.3253
	60-69cm	0.4176	1.732	34.51	15.38	84.03	0.59	0.776	0.2181
	69-78cm	1.9013	1.58	50.35	31.43	68.29	0.28	0.72	0.2127
	78-92cm	1.111	1.89	29.69	11.46	86.43	2.11	0.842	0.1984
	92-100cm	0.3156	1.366	19.93	6.52	93.25	0.23	0.853	0.2423
	100-108cm	1.787	1.509	55.4	32.71	67.04	0.25	0.974	0.223
	108-127cm	0.0317		*	0	25.6	75.33	*	*
	127-132cm	2.1009	1.193	44.22	23.68	73.99	2.33	1.323	0.6078
	Wt. avg.	0.9073			**20.82**	**67.73**	**11.58**		
F-94-31	0-35cm	0.845	1.429	17.15	4.27	95.32	0.41	0.829	0.266
	35-50cm	0.3811	1.252	14.3	1.07	98.22	0.71	0.638	0.1894
	50-75cm	1.2051	1.585	26.81	10.38	89.25	0.38	0.908	0.3095
	75-77cm	0.0098		*	0	8.93	93.45	*	*
	77-98cm	2.0236	1.561	44.86	31.2	67.92	0.88	1.321	0.3468
	98-172cm	1.8697	1.617	55.73	29.22	63.76	7.02	1.429	0.1924
	Wt. avg.	1.432			**18.85**	**76.76**	**4.41**		
F-94-32	0-27cm	0.2069	1.172	14.15	4.39	94.95	0.66	0.582	0.1693
	27-61cm	0.3008	1.359	21.44	5.5	94.16	0.34	0.895	0.2258
	61-76cm	0.2141	1.369	16	4.52	94.29	1.19	0.966	0.1744
	76-127cm	0.1564	1.284	17.62	2.79	90.83	6.37	0.916	0.1307
	127-132cm	0.1847	1.501	17.35	6.35	89.91	3.74	0.752	0.1357
	132-205cm	0.1847	1.134	14.34	3.34	94.33	2.24	0.655	0.1478
	205-223cm	0.3209	1.846	32.27	13.61	84.06	2.33	1.017	0.1747
	Wt. avg.	0.2116			**4.65**	**92.65**	**2.67**		
F-94-33	0-28cm	0.1165	0.722	7.56	0.64	95.88	3.48	0.538	0.1118

* not determined

Appendix F. Sediment Analyses from NURC vibracores (5-94)

nterval	with CaCO3 MGS (mm)	**Sorting**	**%CaCO3**	**% Gravel**	**% Sand**	**% Silt/Clay**	**Sorting** w/out CaCO3	**MGS**
8-32cm	0.0647		*	0.18	24.4	76.48	*	*
2-40cm	0.2171	1.408	18.87	5.72	92.09	2.19	0.881	0.1067
0-75cm	0.1549	1.014	10.94	2.03	95.28	2.69	0.619	0.1202
5-91cm	0.2738	2.112	28.95	8.99	70.02	20.99	1.727	0.1554
-111cm	0.2856	1.935	25.18	12.33	82.94	4.74	1.092	0.1656
-199cm	0.1354	0.796	8.18	0.47	96.63	2.89	0.65	0.1245
/t. avg.	0.1643			**2.85**	**91.14**	**6.03**		

* not determined