116-95; 29

MGGB 09005044

LABORATORY ITEM 449

MGG09005044

A SUMMARY OF SEDIMENT SIZE AND CHEMISTRY OF SIX CORES FROM CHARLESTON, SOUTH CAROLINA, AND TWO CORES FROM PHILADELPHIA, PA. NAVY DIVERS. OCTOBER 1973.

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Prepared for: Code 6110

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Nearshore Surveys Division
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U. S. NAVAL OCEANOGRAPHIC OFFICE
WASHINGTON, D. C. 20373

The results of the sediment size and composition analyses are printed out in tabular form.

The following is an explanation of the terms encountered on the data printout sheet:

CRUISE	A number assigned to each cruise for identification purposes.
SAMPLE	A consecutive number applied to each core taken successively throughout the cruise.
LATITUDE	Expressed in degrees, minutes, and tenths of minutes.
LONGITUDE	Expressed in degrees, minutes and tenths of minutes.
TAKEN	Date in day, month, and year that core was taken.
CORER TYPE	Letters corresponding to sampling device code below.

Corers		Grabs	
HYP	Hydroplastic piston	SPK	Shipek Sediment Sampler
HYG	Hydroplastic gravity	HLP	Alpine Heavy Duty Grab
KUP	Kullenberg piston	SMS	Small Mud Snapper
KUG	Kullenberg gravity	VVS	Van Veen Grab
PHL	Phlegar gravity	BED	Birge-Ekman Dredge
MEG	Modified Ewing gravity	DLS	Dietz-LaFond Snapper
MEP	Modified Ewing piston	OPG	Orange Peel Grab
VIB	Vibrocorer	SBS	Scoopfish Bottom Sampler
BOM	Boomerang		
EWP	Ewing piston		
EWG	Ewing gravity		
DOC	DIVER OPERATED		

LENGTH	Length of core recorded in centimeters as observed in the laboratory.
PENETRATION	Penetration of coring device recorded in centimeters as observed in the field.
DEPTH	The uncorrected sonic sounding in meters.
ANALYZED	Date in day, month, and year that core was analyzed in the laboratory.
I.D. No.	Three or four digit laboratory project number followed by consecutive number assigned to each subsample analyzed.
INTERVAL	Interval of subsample as measured in centimeters from the top of the core.
MM	Particle diameter size intervals based on Wentworth size grades in millimeters.
PER	Percent of total sample weight within the given size interval.

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GRAVEL, SAND SILT, CLAY — Percent of the total sample weight within the four size classes.

Class ranges are:

1. Gravel - coarser than 2 mm
2. Sand - 2 to 0.0625 mm
3. Silt - 0.0625 to 0.0039 mm
4. Clay - finer than 0.0039

MEAN (MM) — The geometric mean of the distribution expressed in millimeters.

MEAN (PHI) — The logarithmic mean of the distribution expressed in phi units ($-\log_2$) of the diameter in millimeters.

STAN DEV — Standard deviation. A measure of the degree of spread or dispersion of the distribution about the mean expressed in phi units.

$$s = \sqrt{\frac{\sum f \quad (X_i - \bar{X})^2}{100}}$$

SKEWNESS — A measure of the asymmetry of the distribution. Positive values denote skewness of the distribution toward the fine particles; negative values denote skewness toward the coarse particles. A normal distribution has a skewness of 0.

$$\text{Skewness} = \frac{2 \sum f \quad (X_i - X)^3}{100 \quad s^3}$$

KURTOSIS — A measure of the peakedness of the distribution. Positive values denote a "leptokurtic" distribution more "peaked" than normal. Negative values denote a "platykurtic" distribution, or a distribution more "flat" than normal. When using the following formula, a normal curve has a kurtosis of 0.

$$\text{Kurtosis} = \left[\frac{\sum f \quad (X_i - \bar{X})^4}{100 \quad s^4} \right] - 3$$

$CACO_3$ — Percent of the total sample weight soluble in 2 N HCL.

ORG CARBON — Percent organic carbon of the total sample weight as determined using a Leco carbon analyzer.

COLOR — Wet sediment color, based on the Geological Society of America Rock-Color Chart, as determined in the laboratory.

NITROGEN — Percent nitrogen of the total sample weight as determined by the Kjeldahl method.

LOG FOR CORE SAMPLES

Mu 0 9 0 0 5 0 4 4

Project No: 449
Location: Philadelphia, Pa.

Logged By J.C. Bowman
Date Logged 11 July 1973

116-95

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: Phila-1 Lat: 39° 53' 12" N Long: 75° 10' 30" W Date: 18 Oct 72 Water depth:	449-1	olive black 5Y2/1	Yes	Silty Clay	0-30 cm Fishy odor Petroleum odor
Sample No: Phila-1 Lat: 39° 53' 12" N Long: 75° 10' 30" W Date: 18 Oct 72 Water depth:	449-2	olive black 5Y2/1	Yes	Silty Clay	30-175 cm Fishy odor Petroleum odor
Sample No: Phila-1 Lat: 39° 53' 12" N Long: 75° 10' 30" W Date: 18 Oct 72 Water depth:	449-3	olive black 5Y2/1	Yes	Clay	175-292 cm Decaying plant material odor.
Sample No: Lat: Long: Date: Water depth:					Philadelphia Naval Shipyard, 180 ft up-stream from middle of Pier 1
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES

MGG09005044

Project No: 449
Location: Philadelphia, Pa.

116-95

Logged By J.C. Bowman
Date Logged 11 July 1973

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: Phila-2 Lat: 39° 53' 08" N Long: 75° 11' 09" W Date: 18 Oct 72 Water depth:	449-4	Olive gray 5Y3/2	Yes	Silty Clay	0-30 cm Strong Petroleum odor Oil droplets visible.
Sample No: Phila-2 Lat: 39° 53' 08" N Long: 75° 11' 09" W Date: 18 Oct 72 Water depth:	449-5	Olive black 5Y2/1	No	Silty Clay	30-119 cm Fishy odor Petroleum odor
Sample No: Phila-2 Lat: 39° 53' 08" N Long: 75° 11' 09" W Date: 18 Oct 72 Water depth:	449-6	Olive black 5Y2/1	No	Sandy, Silty, Clay	119-208 cm.
Sample No: Lat: Long: Date: Water depth:					Philadelphia Naval Shipyard, 10 ft down-stream from SW Corner of Pier 6A.
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES

Project No: 449
Location: NWS, Charleston, S.C.

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116-29

Logged By J.C. Bowman
Date Logged 11 July 73

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: Chsn-1 Lat: 32°55'39" N Long: 79°56'16" W Date: 31 Oct 72 Water depth:	449-7	olive gray 5Y 3/2	Yes	Silty Sand	0-30 cm. Slight fishy odor Slight Petroleum odor
Sample No: Chsn-1 Lat: 32°55'39" N Long: 79°56'16" W Date: 31 Oct 72 Water depth:	449-8	Dark olive gray 5Y 3/1	Yes	Silty Clay	30-64 cm Slight fishy odor Slight Petroleum odor
Sample No: Chsn-1 Lat: 32°55'39" N Long: 79°56'16" W Date: 31 Oct 72 Water depth:	449-9	olive brown 5Y 4/3	Yes	Silty Clay	64-99 cm
Sample No: Lat: Long: Date: Water depth:					Naval Weapon Station Charleston, S.C., 20 ft from end of Pier on downstream Side. Pier is across the river, from, and midway
Sample No: Lat: Long: Date: Water depth:					between Navaids R "72" and N "70A"
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES

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Project No: 449 M3G09005044

Location: NWS Charleston, SC

Logged By J.C. Bowman

Date Logged 11 July 73

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	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: Chasn-2 Lat: 32° 56' 12" N Long: 79° 56' 12" W Date: 31 Oct 72 Water depth:	449-10	Dark olive black, 5Y 1/1	No	Silty clay	0-30 cm Petroleum odor Oil droplets visible
Sample No: Chasn-2 Lat: 32° 56' 12" N Long: 79° 56' 12" W Date: 31 Oct 72 Water depth:	449-11	Dark gray N3	No	Silty Clay	30-109 cm Petroleum odor
Sample No: Chasn-2 Lat: 32° 56' 12" N Long: 79° 56' 12" W Date: 31 Oct 72 Water depth:	449-12	Medium dark gray N4	No	Clay	109-190 cm Slight Petroleum odor
Sample No: Lat: Long: Date: Water depth:					Naval Weapons Station Charleston, midway on outboard or Southeast side of wharf located just north of Navaid R "72"
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES

Project No: 449
Location: NSY, Charleston SC

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Logged By J.C. Bowman
Date Logged 11 JULY 73

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: Chasn-3 Lat: 32°51'55" N Long: 79°57'53" W Date: 2 NOV 72 Water depth:	449-13	Dark olive black 5Y 1/1	NO	Clay	0-30 cm Wood fragments Petroleum odor
Sample No: chasn-3 Lat: 32°51'55" N Long: 79°57'53" W Date: 2 NOV 72 Water depth:	449-14	Grayish black N2	No	Silty clay	30-122 cm Petroleum odor
Sample No: Chasn-3 Lat: 32°51'55" N Long: 79°57'53" W Date: 2 NOV 72 Water depth:	449-15	medium gray N5	Yes	Clay	122-184 cm Napthalene odor
Sample No: Lat: Long: Date: Water depth:					Charleston Naval Ship-Yard, midway on down-Stream Side of Pier C.
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES

Project No: 449 MGG09005044 Logged By J.C. Bowman
Location: NSY Charleston SC Date Logged 11 July 73
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	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: Chasn-4 Lat: 32° 51' 47" N Long: 79° 57' 43" W Date: 3 Nov 72 Water depth:	449-16	Dark gray N2	Yes	Clayey Silt	0-30cm.
Sample No: Chasn-4 Lat: 32° 51' 47" N Long: 79° 57' 43" W Date: 3 Nov 72 Water depth:	449-17	Dark gray N2	Yes	Clayey Silt	30-97cm Fishy odor
Sample No: Chasn-4 Lat: 32° 51' 47" N Long: 79° 57' 43" W Date: 3 Nov 72 Water depth:	449-18	Dark greenish gray 5GY4/1	Yes	Sandy Silt	97-163cm.
Sample No: Lat: Long: Date: Water depth:					Charleston Naval Ship-Yard, downstream side of Pier F at inside Corner.
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES

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Project No: 449
Location: NSY Charleston, SC

Logged By J.C. Bowman
Date Logged 11 July 73

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	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: Chasn-5 Lat: 32°51'36" N Long: 79°57'30" W Date: 6 Nov 72 Water depth:	449-19	Grayish black N2	Yes	Clayey Silt	0-30 cm Ammonia odor
Sample No: Chasn-5 Lat: 32°51'36" N Long: 79°57'30" W Date: 6 Nov 72 Water depth:	449-20	Grayish black N2	Yes	Silty Clay	30-109 cm Decaying Plant material odor
Sample No: Chasn-5 Lat: 32°51'36" N Long: 79°57'30" W Date: 6 Nov 72 Water depth:	449-21	Medium olive gray 5Y5/1	Yes	Silty Clay	109-190 cm.
Sample No: Lat: Long: Date: Water depth:					Charleston Naval Shipyard, alongside Pier G on downstream side, 20 ft. from end of Pier.
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES

Project No: 449
Location: NSY Charleston, SC

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Logged By J.C. Bowman
Date Logged 11 July 73

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: Chash-6 Lat: 32°51'26" N Long: 79°57'20" W Date: 7 Nov 72 Water depth:	449-22	Light olive brown 5Y5/4	Yes	Clayey Silt	0-30 cm
Sample No: Chash-6 Lat: 32°51'26" N Long: 79°57'20" W Date: 7 Nov 72 Water depth:	449-23	Light olive brown 5Y5/4	Yes	Clayey Silt	30-69 cm
Sample No: Chash-6 Lat: 32°51'26" N Long: 79°57'20" W Date: 7 Nov 72 Water depth:	449-24	Light olive brown 5Y5/4	Yes	Clayey Silt	69-107 cm.
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

SEDIMENT SIZE AND COMPOSITION DATA

CRUISE PHILA TAKEN OCT72 LATITUDE 39 53.2 N MARSDEN SQUARE 116-95 LENGTH 292.0 ANALYZED JUL73
SAMPLE PHIL-1 DEPTH LONGITUDE 75 10.5 W CORER TYPE DOC PENETRATION

	SUBSAMPLE ID.	449.1	449.2	449.3
	DEPTH INTERVAL	.0- 30.5	30.5-175.3	175.3-292.1
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	.000	.000	.000
-3 TO -2	8.000 TO 4.000	.000	.000	.000
-2 TO -1	4.000 TO 2.000	.000	.109	.389
-1 TO 0	2.000 TO 1.000	.031	.022	.234
0 TO 1	1.000 TO .500	.013	.067	.304
1 TO 2	.500 TO .250	.049	.087	.229
2 TO 3	.250 TO .125	.099	.148	.319
3 TO 4	.125 TO .063	.479	.551	.659
4 TO 5	.063 TO .031	6.569	1.847	.833
5 TO 6	.031 TO .016	14.292	9.403	9.757
6 TO 7	.016 TO .008	16.423	15.057	14.399
7 TO 8	.008 TO .004	14.736	14.413	14.551
8 TO 9	.004 TO .002	11.096	10.019	9.840
9 TO 10	.002 TO .001	9.277	7.053	7.427
>10	<.001	26.986	41.224	42.000
	GRAVEL (>2.0 MM)	.000	.109	.389
	SAND (2.0-.063 MM)	.621	.876	1.744
	SILT (.063-.004 MM)	52.020	40.720	38.600
	CLAY (<.004 MM)	47.359	58.295	59.267
	MEAN (MM)	.0041	.0027	.0027
	MEAN (PHI)	7.931	8.533	8.530
	STANDARD DEVIATION	2.047	2.003	2.138
	SKEWNESS	-.056	-.311	-.545
	KURTOSIS	-1.154	-.216	1.803
	CALCIUM CARBONATE	12.000	13.000	11.000
	ORGANIC CARBON	4.790(±.036)	7.299(±.008)	7.104(±.297)
	NITROGEN (KJELDAHL)	.355(±.006)	.306(±.076)	.429(±.015)
	COLOR (GSA)	5Y2/1	5Y2/1	5Y2/1

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SEDIMENT SIZE AND COMPOSITION DATA

CRUISE PHILA TAKEN OCT72 LATITUDE 39 53.1 N MARSDEN SQUARE 116-96 LENGTH 208.0 ANALYZED JUL73
SAMPLE PHIL-2 DEPTH LONGITUDE 75 11.1 W CORER TYPE DOC PENETRATION

	SUBSAMPLE ID.	449.4	449.5	449.6
	DEPTH INTERVAL	.0- 30.5	30.5-119.4	119.4-208.3
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	.000	.000	2.055
-3 TO -2	8.000 TO 4.000	.292	.345	1.687
-2 TO -1	4.000 TO 2.000	.207	.068	1.651
-1 TO 0	2.000 TO 1.000	.252	.276	1.520
0 TO 1	1.000 TO .500	.169	.370	8.518
1 TO 2	.500 TO .250	.379	.751	28.636
2 TO 3	.250 TO .125	1.100	1.296	13.642
3 TO 4	.125 TO .063	2.714	5.843	11.221
4 TO 5	.063 TO .031	2.908	11.393	4.885
5 TO 6	.031 TO .016	13.108	17.309	6.265
6 TO 7	.016 TO .008	14.152	13.495	5.251
7 TO 8	.008 TO .004	13.867	10.048	3.562
8 TO 9	.004 TO .002	8.472	6.527	1.802
9 TO 10	.002 TO .001	6.154	4.327	1.337
>10	<.001	36.247	27.992	7.757
	GRAVEL (>2.0 MM)	.499	.413	5.603
	SAND (2.0-.063 MM)	4.594	8.496	63.537
	SILT (.063-.004 MM)	44.045	52.244	19.963
	CLAY (<.004 MM)	50.872	38.847	10.897
	MEAN (MM)	.0038	.0066	.1000
	MEAN (PHI)	8.041	7.239	3.322
	STANDARD DEVIATION	2.399	2.610	3.231
	SKEWNESS	-.403	-.134	.336
	KURTOSIS	.713	-.438	.150
	CALCIUM CARBONATE	14.800	9.000	5.000
	ORGANIC CARBON	5.925(±.020)	4.513(±.074)	1.609(±.031)
	NITROGEN (KJELDAHL)	.388(±.023)	.256(±.002)	.113(±.003)
	COLOR (GSA)	5Y3/2	5Y2/1	5Y2/1

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SEDIMENT SIZE AND COMPOSITION DATA

CRUISE CHASN TAKEN OCT72 LATITUDE 32 55.6 N MARSDEN SQUARE 116-29 LENGTH 99.0 ANALYZED JUL73
SAMPLE CHAS-1 DEPTH LONGITUDE 79 58.3 W CORER TYPE DOC PENETRATION

	SUBSAMPLE ID.	449 7	449 8	449 9
	DEPTH INTERVAL	.0-30.5	30.5-63.5	63.5-99.1
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	2.498	.000	.000
-3 TO -2	8.000 TO 4.000	4.856	.000	.081
-2 TO -1	4.000 TO 2.000	2.215	.136	.141
-1 TO 0	2.000 TO 1.000	3.598	.650	.283
0 TO 1	1.000 TO .500	3.542	.390	.303
1 TO 2	.500 TO .250	3.262	1.126	.444
2 TO 3	.250 TO .125	23.210	21.243	13.957
3 TO 4	.125 TO .063	19.872	20.330	23.935
4 TO 5	.063 TO .031	4.984	6.615	7.251
5 TO 6	.031 TO .016	6.544	8.854	11.573
6 TO 7	.016 TO .008	4.567	5.925	5.777
7 TO 8	.008 TO .004	3.579	5.320	5.171
8 TO 9	.004 TO .002	2.424	3.301	3.535
9 TO 10	.002 TO .001	1.481	2.136	2.353
>10	<.001	13.441	23.262	25.066
	GRAVEL (>2.0 MM)	9.582	.136	.222
	SAND (2.0-.063 MM)	53.488	44.350	39.662
	SILT (.063-.004 MM)	19.575	26.615	29.772
	CLAY (<.004 MM)	17.356	28.899	31.024
	MEAN (MM)	.0671	.0185	.0148
	MEAN (PHI)	3.986	5.757	5.879
	STANDARD DEVIATION	3.634	3.191	3.091
	SKEWNESS	.109	.195	.152
	KURTOSIS	-.393	-1.276	-1.317
	CALCIUM CARBONATE	48.000	52.000	48.000
	ORGANIC CARBON	.034(±.028)	1.247(±.016)	1.281(±.033)
	NITROGEN (KJELDAHL)	.074(±.004)	.093(±.003)	.086(±.003)
	COLOR (GSA)	5Y3/2	5Y3/1	5Y4/2

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SEDIMENT SIZE AND COMPOSITION DATA

CRUISE CHAS-2 TAKEN OCT72 LATITUDE 32 56.2 N MARSDEN SQUARE 116-29 LENGTH 190.0 ANALYZED JUL73
SAMPLE CHAS-2 DEPTH LONGITUDE 79 56.2 W CORER TYPE DOC PENETRATION

	SUBSAMPLE ID.	449 10	449 11	449 12
	DEPTH INTERVAL	.0- 30.5	30.5-109.2	109.2-190.5
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	.000	.000	.000
-3 TO -2	8.000 TO 4.000	.000	.000	.000
-2 TO -1	4.000 TO 2.000	.013	.063	.119
-1 TO 0	2.000 TO 1.000	.053	.125	.060
0 TO 1	1.000 TO .500	.146	.125	.159
1 TO 2	.500 TO .250	.186	.250	.159
2 TO 3	.250 TO .125	1.070	2.675	5.627
3 TO 4	.125 TO .063	7.441	20.526	19.308
4 TO 5	.063 TO .031	5.980	37.265	7.219
5 TO 6	.031 TO .016	5.980	3.942	9.664
6 TO 7	.016 TO .008	10.355	4.005	6.041
7 TO 8	.008 TO .004	5.332	4.944	5.835
8 TO 9	.004 TO .002	6.113	5.726	4.156
9 TO 10	.002 TO .001	6.511	5.444	2.625
>10	<.001	50.761	8.049	36.258
	GRAVEL (>2.0 MM)	.013	.063	.119
	SAND (2.0-.063 MM)	8.636	23.662	25.733
	SILT (.063-.004 MM)	27.706	50.156	28.509
	CLAY (<.004 MM)	63.384	20.118	45.639
	MEAN (MM)	.0029	.0236	.0069
	MEAN (PHI)	8.434	5.406	7.174
	STANDARD DEVIATION	2.556	2.443	3.060
	SKEWNESS	-.431	.452	-.040
	KURTOSIS	-.623	-.329	-1.534
	CALCIUM CARBONATE	17.000	12.000	12.000
	ORGANIC CARBON	3.655 (±.094)	1.312 (±.024)	.966 (±.032)
	NITROGEN (KJELDAHL)	.340 (±.009)	.172 (±.027)	.085 (±.004)
	COLOR (OSA)	5Y1/1	N3	N4

SEDIMENT SIZE AND COMPOSITION DATA

CRUISE CHAS-N TAKEN OCT72 LATITUDE 32 51.8 N MARSDEN SQUARE 116-29 LENGTH 184.0 ANALYZED JUL73
SAMPLE CHAS-3 DEPTH LONGITUDE 79 57.9 W CORER TYPE DOC PENETRATION

	SUBSAMPLE ID.	449 13	449 14	449 15
	DEPTH INTERVAL	.0- 30.5	30.5-121.9	121.9-184.2
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	.000	.000	.000
-3 TO -2	8.000 TO 4.000	.275	.132	2.221
-2 TO -1	4.000 TO 2.000	.136	.026	.706
-1 TO 0	2.000 TO 1.000	.345	2.513	.689
0 TO 1	1.000 TO .500	.355	3.285	.430
1 TO 2	.500 TO .250	.592	4.157	.568
2 TO 3	.250 TO .125	1.308	14.175	4.787
3 TO 4	.125 TO .063	.758	5.808	5.045
4 TO 5	.063 TO .031	2.725	2.580	9.504
5 TO 6	.031 TO .016	5.754	4.740	14.187
6 TO 7	.016 TO .008	6.488	5.137	8.643
7 TO 8	.008 TO .004	8.369	4.582	6.508
8 TO 9	.004 TO .002	4.486	3.461	3.531
9 TO 10	.002 TO .001	8.369	2.372	3.220
>10	<.001	60.046	44.551	38.601
	GRAVEL (>2.0 MM)	.371	1.058	2.927
	SAND (2.0-.063 MM)	3.779	30.049	11.519
	SILT (.063-.004 MM)	23.334	17.549	38.843
	CLAY (<.004 MM)	72.916	51.345	46.711
	MEAN (MM)	.0019	.0079	.0064
	MEAN (PHI)	9.031	6.982	7.230
	STANDARD DEVIATION	2.322	3.209	3.294
	SKEWNESS	-.936	-.264	-.402
	KURTOSIS	3.293	-1.236	.157
	CALCIUM CARBONATE	20.000	13.000	12.000
	ORGANIC CARBON	3.521 (±.186)	2.546 (±.056)	.503 (±.014)
	NITROGEN (KJELDAHL)	.398 (±.003)	.201 (±.003)	.059 (±.001)
	COLOR (GSA)	5Y1/1	N2	N5

SEDIMENT SIZE AND COMPOSITION DATA

CRUISE CHASN TAKEN OCT72 LATITUDE 32 51.8 N MARSDEN SQUARE 116-29 LENGTH 163.0 ANALYZED JUL73
SAMPLE CHAS-4 DEPTH LONGITUDE 79 57.7 W CORER TYPE DOC PENETRATION

	SUBSAMPLE ID.	449 06	449 17	449 18
	DEPTH INTERVAL	.0- 30.5	30.5- 96.5	96.5-162.6
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	.000	2.260	1.417
-3 TO -2	8.000 TO 4.000	1.104	.837	3.245
-2 TO -1	4.000 TO 2.000	.696	1.479	4.867
-1 TO 0	2.000 TO 1.000	4.622	3.069	13.732
0 TO 1	1.000 TO .500	7.692	3.460	24.232
1 TO 2	.500 TO .250	4.450	3.237	22.198
2 TO 3	.250 TO .125	3.449	5.078	12.510
3 TO 4	.125 TO .063	2.484	2.358	3.519
4 TO 5	.063 TO .031	.172	.251	.845
5 TO 6	.031 TO .016	3.725	3.516	1.211
6 TO 7	.016 TO .008	5.450	3.776	1.314
7 TO 8	.008 TO .004	5.588	5.329	1.348
8 TO 9	.004 TO .002	4.001	4.660	.845
9 TO 10	.002 TO .001	3.484	3.516	.571
>10	<.001	53.087	54.576	8.146
	GRAVEL (>2.0 MM)	1.784	4.576	9.528
	SAND (2.0-.063 MM)	22.697	17.801	76.101
	SILT (.063-.004 MM)	14.936	14.872	4.718
	CLAY (<.004 MM)	60.573	62.751	9.562
	MEAN (MM)	.0059	.0052	.2698
	MEAN (PHI)	7.449	7.599	1.890
	STANDARD DEVIATION	4.053	4.080	3.268
	SKEWNESS	-.487	-.606	.747
	KURTOSIS	-.605	.172	1.742
	CALCIUM CARBONATE	24.000	24.000	13.000
	ORGANIC CARBON	3.039 (±.028)	2.690 (±.085)	2.337 (±.031)
	NITROGEN (KJELDAHL)	.281 (±.005)	.221 (±.005)	.058 (±.002)
	COLOR (GSA)	N2	N2	5GY4/1

SEDIMENT SIZE AND COMPOSITION DATA

CRUISE CHASN TAKEN OCT72 LATITUDE 32 51.6 N MARSDEN SQUARE 116-29 LENGTH 190.0 ANALYZED JUL73
SAMPLE CHAS-5 DEPTH LONGITUDE 79 57.5 W CORER TYPE DOC PENETRATION

	SUBSAMPLE ID.	449 19	449 20	449 21
	DEPTH INTERVAL	.0- 30.5	30.5-109.2	109.2-190.5
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	.000	.000	.000
-3 TO -2	8.000 TO 4.000	.000	.000	1.139
-2 TO -1	4.000 TO 2.000	.024	.020	.369
-1 TO 0	2.000 TO 1.000	.174	.068	.232
0 TO 1	1.000 TO .500	.230	.140	.421
1 TO 2	.500 TO .250	.342	.321	.401
2 TO 3	.250 TO .125	1.102	.638	1.359
3 TO 4	.125 TO .063	4.571	1.833	6.987
4 TO 5	.063 TO .031	1.473	.580	2.375
5 TO 6	.031 TO .016	6.480	4.024	8.672
6 TO 7	.016 TO .008	7.594	7.058	6.125
7 TO 8	.008 TO .004	7.305	7.127	6.754
8 TO 9	.004 TO .002	4.713	4.569	6.382
9 TO 10	.002 TO .001	7.434	5.149	4.007
>10	<.001	57.850	63.074	54.721
	GRAVEL (>2.0 MM)	.024	.020	1.508
	SAND (2.0-.063 MM)	6.368	2.793	8.456
	SILT (.063-.004 MM)	23.152	18.788	23.026
	CLAY (<.004 MM)	70.457	78.392	65.110
	MEAN (MM)	.0071	.0015	.0029
	MEAN (PHI)	8.801	9.407	8.408
	STANDARD DEVIATION	2.728	1.835	2.895
	SKEWNESS	-.562	-.926	-.638
	KURTOSIS	.831	3.056	1.574
	CALCIUM CARBONATE	22.000	22.000	50.000
	ORGANIC CARBON	3.642 (±.105)	3.317 (±.076)	2.510 (±.089)
	NITROGEN (KJELDAHL)	.378 (±.005)	.408 (±.005)	.120 (±.002)
	COLOR (CSA)	N2	N2	5Y5/1

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SEDIMENT SIZE AND COMPOSITION DATA

CRUISE CHASN TAKEN OCT72 LATITUDE 32 57.4 N MARSDEN SQUARE 116-29 LENGTH 108.0 ANALYZED JUL73
SAMPLE CHAS-5 DEPTH LONGITUDE 79 57.3 W CORER TYPE DOC PENETRATION

	SUBSAMPLE ID.	449 22	449 23	449 24
	DEPTH INTERVAL	.0- 30.5	30.5- 68.6	68.6-107.7
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	.000	.000	.000
-3 TO -2	8.000 TO 4.000	1.398	.382	.000
-2 TO -1	4.000 TO 2.000	.293	.402	.000
-1 TO 0	2.000 TO 1.000	1.474	.402	.074
0 TO 1	1.000 TO .500	2.084	.392	.062
1 TO 2	.500 TO .250	2.363	.422	.124
2 TO 3	.250 TO .125	4.371	5.088	2.122
3 TO 4	.125 TO .063	17.840	28.922	29.365
4 TO 5	.063 TO .031	7.118	8.648	12.911
5 TO 6	.031 TO .016	12.554	12.329	12.589
6 TO 7	.016 TO .008	7.243	4.626	6.839
7 TO 8	.008 TO .004	6.129	5.229	7.261
8 TO 9	.004 TO .002	4.574	4.103	4.753
9 TO 10	.002 TO .001	3.304	2.735	2.850
>10	<.001	29.352	25.368	21.064
	GRAVEL (>2.0 MM)	1.601	.784	.000
	SAND (2.0-.063 MM)	28.132	35.177	31.764
	SILT (.063-.004 MM)	33.037	30.833	39.600
	CLAY (<.004 MM)	37.230	33.206	28.646
	MEAN (MM)	.0114	.0130	.0133
	MEAN (PHI)	6.460	6.267	6.238
	STANDARD DEVIATION	3.358	3.083	2.748
	SKEWNESS	-.140	.090	.238
	KURTOSIS	-.781	-1.136	-1.252
	CALCIUM CARBONATE	57.000	63.000	72.000
	ORGANIC CARBON	1.380(±.010)	1.106(±.001)	.904(±.004)
	NITROGEN (KJELDAHL)	.097(±.001)	.064(±.001)	.056(±.007)
	COLOR (SSA)	5Y5/4	5Y5/4	5Y5/4