120-27
117-01

MGG09005040

A SUMMARY OF SEDIMENT SIZE AND CHEMISTRY OF FOUR CORES FROM SAN DIEGO, CALIFORNIA, AND FOUR CORES FROM ST. JOHNS RIVER, JACKSONVILLE, FLORIDA. NAVY DIVERS. FEBRUARY 1973, AND MAY 1973.

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Prepared for: Code 7300

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Geological Laboratory
Nearshore Surveys Division
Oceanographic Surveys Department

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		

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.

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

Class ranges are:

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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

MGG09005040

Project No: 447
Location: SAN DIEGO

Logged By E.V. KELLY
Date Logged 25 MAY 73

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	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: SAN D. 1 Lat: 32° 40' 02 N. Long: 117° 07' 23 W. Date: FEB. 73 Water depth:	447 1	OLIVE BLACK 5Y2/1	YES	CLAYEY SILT	0 - 30.5 cm. CONTAINS WOOD FRAGMENTS.
Sample No: SAN D. 1 Lat: 32° 40' 02 N. Long: 117° 07' 23 W Date: FEB. 73 Water depth:	447 2	OLIVE BLACK 5Y2/1	YES	CLAYEY SILT	30.5 - 78.7 cm. OILY ODOR AND SHELL FRAGMENTS.
Sample No: SAN D. 1 Lat: 32° 40' 02 N Long: 117° 07' 23 W Date: FEB. 73 Water depth:	447 3	OLIVE GRAY 5Y3/2	YES	CLAYEY SILT	78.7 - 127 cm. CONTAINS SHELLS.
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
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Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES

MGG09005040

Project No: 447
Location: SAN DIEGO

Logged By E.V. KELLY
Date Logged 25 MAY 73

120-27

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: SAN D. 2 Lat: 32° 40' 02" N Long: 117° 07' 05" W Date: FEB. 73 Water depth:	447 4	OLIVE BLACK 5Y2/1	NO	CLAYEY SILT	0-30.5 CM. OILY ODOR.
Sample No: SAN D. 2 Lat: 32° 40' 02" N Long: 117° 07' 05" W Date: FEB 73 Water depth:	447 5	OLIVE BLACK 5Y2/1	YES	CLAYEY SILT	30.5 - 78.7 CM. OILY ODOR. CONTAINS WOOD AN SHELL FRAGMENTS.
Sample No: SAN D. 2 Lat: 32° 40' 02" N. Long: 117° 07' 05" W Date: FEB. 73 Water depth:	447 6	OLIVE GRAY 5Y3/2	YES	SANDY CLAYEY SILT	78.7 - 127 CM. CONTAINS SHELL FRAGMENTS.
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
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LOG FOR CORE SAMPLES MGG09005040

Project No: 447
Location: SAN DIEGO

Logged By E.V. KELLY
Date Logged 25 MAY 73

120-27

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: SAND.3 Lat: 32° 42' 14" N Long: 117° 12' 54" W Date: FEB 73 Water depth:	447 7	OLIVE BLACK 5Y 2/1	YES	CLAYEY SANDY SILT	0-30.5cm. CONTAINS SHELLS AND SHELL FRAGMENTS.
Sample No: SAND.3 Lat: 32° 42' 14" N Long: 117° 12' 54" W Date: FEB. 73 Water depth:	447 8	OLIVE BLACK 5Y 2/1	YES	CLAYEY SILT	30.5-58.4 cm. OILY ODOR.
Sample No: SAND.3 Lat: 32° 42' 14" N. Long: 117° 12' 54" W. Date: FEB. 73 Water depth:	447 9	GRAYISH OLIVE 10Y 4/2	NO	CLAYEY SILTY SAND	58.4-83.8 cm.
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
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Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					

LOG FOR CORE SAMPLES MGG09005040 7

Project No: 447
Location: SAN DIEGO

Logged By E.V. KELLY
Date Logged 25 MAY 73

120-27

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: SAND.4 Lat: 32° 42' 08" N. Long: 117° 14' 46" W. Date: FEB 73 Water depth:	447 10	OLIVE BLACK 5Y 2/1	YES	CLAYEY SANDY SILT	0-30.5cm. CONTAINS SHELLS, SHELL FRAGMENTS, AND PLANT MATERIAL. FISHY ODOR.
Sample No: SAND.4 Lat: 32° 42' 08" N. Long: 117° 14' 46" W. Date: FEB 73 Water depth:	447 11	OLIVE GRAY 5Y3/2	YES	CLAYEY SILTY SAND	30.5 - 58.4 cm. CONTAINS SHELLS, SHELL FRAGMENTS, WOOD FRAGMENTS, AND WORMS.
Sample No: SAND.4 Lat: 32° 42' 08" N. Long: 117° 14' 46" W. Date: FEB 73 Water depth:	447 12	LIGHT OLIVE GRAY 5Y5/2	YES	SILTY SAND	58.4 - 83.8cm. CONTAINS SHELLS AND SHELL FRAGMENTS
Sample No: Lat: Long: Date: Water depth:					
Sample No: Lat: Long: Date: Water depth:					
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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 09005040

Project No: 447 117-
Location: JACKSONVILLE (NFD) ST. JOHNS RIVER

Logged By E.V. KELLY
Date Logged 25 MAY 73

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: NFD 2 Lat: Long: Date: MAY 73 Water depth:	447 13	OLIVE BLACK 5Y2/1	YES	SANDY SILT	0-30.5 cm. CONTAINS SHELLS AND SHELL FRAGMENTS
Sample No: NFD 2 Lat: Long: Date: MAY 73 Water depth:	447 14	OLIVE GRAY 5Y4/1	YES	SILTY SAND	30.5 - 94 cm. CONTAINS SHELL FRAGMENTS.
Sample No: NFD 2 Lat: Long: Date: MAY 73 Water depth:	447 15	YELLOWISH GRAY 5Y 7/2	YES	SILTY SAND	94 - 160 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:					

LOG FOR CORE SAMPLES MGG09005040

Project No: 447 117- Logged By P. B. LOOMIS

Location: JACKSONVILLE (NFD) ST JOHNS RIVER Date Logged 25 MAY 73

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: NFD 3 Lat: Long: Date: MAY 73 Water depth:	447 16	OLIVE GRAY 5Y3/2	YES	SILT	0-30.5 cm. H_2S ODOR.
Sample No: NFD 3 Lat: Long: Date: MAY 73 Water depth:	447 17	OLIVE GRAY 5Y3/2	YES	SILT	30.5 - 96.5 cm.
Sample No: NFD 3 Lat: Long: Date: MAY 73 Water depth:	447 18	OLIVE GRAY 5Y4/2	YES	SANDY SILT	96.5 - 162.6 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:					

LOG FOR CORE SAMPLES MGG09005040

Project No: 447 117-
Location: JACKSONVILLE (NFD) ST JOHNS RIVER
Logged By P.B. LOOMIS
Date Logged 25 MAY 73

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: NFD 4 Lat: Long: Date: MAY 73 Water depth:	447 19	OLIVE GRAY 5Y4/1	ND	SAND	0-30.5 cm.
Sample No: NFD 4 Lat: Long: Date: MAY 73 Water depth:	447 20	YELLOWISH GRAY 5Y7/1	ND	SAND	30.5-88.9 cm.
Sample No: NFD 4 Lat: Long: Date: MAY 73 Water depth:	447 21	YELLOWISH GRAY 5Y7/1	ND	SAND	88.9-147.3 cm.
Sample No: Lat: Long: Date: Water depth:					
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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 MGG09005040

Project No: 447 117-
Location: JACKSONVILLE (NFD) ST JOHNS RIVER

Logged By E.V. KELLY
Date Logged 7 JUNE 73

	La No.	Color	Calc. Mat.	Sediment Type	Remarks
Sample No: NFD 1 Lat: Long: Date: MAY 1973 Water depth:	447 22	LIGHT OLIVE GRAY 5Y5/2	YES	SILTY SAND	0-30.5 cm. CONTAINS PLANT MATERIAL.
Sample No: NFD 1 Lat: Long: Date: MAY 1973 Water depth:	447 23	LIGHT OLIVE GRAY 5Y5/2	YES	SILTY SAND	30.5-127cm. CONTAINS SHELL FRAGMENTS AND PLANT MATERIAL.
Sample No: NFD 1 Lat: Long: Date: MAY 1973 Water depth:	447 24	OLIVE GRAY 5Y3/2	YES	CLAYEY SANDY SILT	127-223.5 cm. H_2S ODOR
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 DIVERS TAKEN FEB 73 LATITUDE 32° 40.0'N MARSDEN SQUARE 120-27 LENGTH 127.0 ANALYZED JUN73
SAMPLE SAND-1 DEPTH LONGITUDE 117° 7.4'W CORER TYPE PENETRATION

	SUBSAMPLE ID.	447 1	447 2	447 3
	DEPTH INTERVAL	.0- 30.5	30.5- 78.7	78.7-127.0
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	.000	1.521	2.014
-3 TO -2	8.000 TO 4.000	.562	.770	.948
-2 TO -1	4.000 TO 2.000	.194	2.603	.385
-1 TO 0	2.000 TO 1.000	.213	2.016	.909
0 TO 1	1.000 TO .500	.233	1.136	.817
1 TO 2	.500 TO .250	.504	1.008	2.251
2 TO 3	.250 TO .125	4.961	1.532	31.543
3 TO 4	.125 TO .063	5.543	1.070	9.863
4 TO 5	.063 TO .031	4.612	.770	4.058
5 TO 6	.031 TO .016	8.256	3.043	6.723
6 TO 7	.016 TO .008	11.124	4.252	5.094
7 TO 8	.008 TO .004	10.543	5.938	5.509
8 TO 9	.004 TO .002	7.519	4.179	3.584
9 TO 10	.002 TO .001	5.814	41.972	3.258
>10	<.001	39.922	28.189	23.043
	GRAVEL (>2.0 MM)	.756	4.894	3.347
	SAND (2.0-.063 MM)	11.453	6.763	45.384
	SILT (.063-.004 MM)	34.535	14.003	21.384
	CLAY (<.004 MM)	53.256	74.340	29.885
	MEAN (MM)	.0043	.0034	.0237
	MEAN (PHI)	7.867	8.201	5.397
	STANDARD DEVIATION	2.811	3.389	3.658
	SKEWNESS	-.433	-1.027	.019
	KURTOSIS	.129	3.268	-.868
	CALCIUM CARBONATE	15.000	33.000	12.000
	ORGANIC CARBON	2.004	2.756	.647
	NITROGEN (KJELDAHL)	.188	.264	.068
	COLOR (GSA)	5Y2/1	5Y2/1	5Y3/2

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SEDIMENT SIZE AND COMPOSITION DATA

CRUISE PIVERS TAKEN FEB73 LATITUDE 32° 44.0' N MARSDEN SQUARE 120-27 LENGTH 127.0 ANALYZED JUN73
SAMPLE SAND-2 DEPTH LONGITUDE 117° 7.4' W CORER TYPE PENETRATION

	SUBSAMPLE ID.	447 4	447 5	447 6
	DEPTH INTERVAL	.0- 30.5	30.5- 78.7	78.7-127.0
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	2.181	.000	.000
-4 TO -3	16.000 TO 8.000	.000	.000	.000
-3 TO -2	8.000 TO 4.000	.077	.000	3.058
-2 TO -1	4.000 TO 2.000	.475	3.269	2.135
-1 TO 0	2.000 TO 1.000	.607	3.685	2.114
0 TO 1	1.000 TO .500	1.049	2.972	2.176
1 TO 2	.500 TO .250	1.490	2.972	3.838
2 TO 3	.250 TO .125	3.036	4.862	12.890
3 TO 4	.125 TO .063	4.251	5.736	17.077
4 TO 5	.063 TO .031	2.926	2.853	12.028
5 TO 6	.031 TO .016	6.183	8.619	11.884
6 TO 7	.016 TO .008	6.569	6.776	6.404
7 TO 8	.008 TO .004	8.612	7.014	4.598
8 TO 9	.004 TO .002	6.514	4.399	2.443
9 TO 10	.002 TO .001	4.637	3.329	2.073
>10	<.001	51.394	43.512	17.282
	GRAVEL (>2.0 MM)	2.733	3.269	5.193
	SAND (2.0-.063 MM)	10.433	20.228	38.095
	SILT (.063-.004 MM)	24.289	25.263	34.914
	CLAY (<.004 MM)	62.545	51.239	21.798
	MEAN (MM)	.0037	.0071	.0303
	MEAN (PHI)	8.077	7.142	5.045
	STANDARD DEVIATION	3.406	3.782	3.435
	SKEWNESS	-.831	-.399	.031
	KURTOSIS	2.682	-.618	-.510
	CALCIUM CARBONATE	21.000	26.000	18.000
	ORGANIC CARBON	3.688	4.668	.758
	NITROGEN (KJELDAHL)	.223	.224	.038
	COLOR (GSA)	5Y2/1	5Y2/1	5Y3/2

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SEDIMENT SIZE AND COMPOSITION DATA

CRUISE DIVERS TAKEN FEB73 LATITUDE 32° 40'N MARSDEN SQUARE 120-27 LENGTH 83.8 ANALYZED JUN73
SAMPLE SAND-3 DEPTH LONGITUDE 117° 24'W CORER TYPE PENETRATION

	SUBSAMPLE ID.	447 7	447 8	447 9
	DEPTH INTERVAL	.0-30.5	30.5-58.4	58.4-83.8
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	11.596	.000	.000
-4 TO -3	16.000 TO 8.000	1.277	.000	.000
-3 TO -2	8.000 TO 4.000	2.835	.000	.000
-2 TO -1	4.000 TO 2.000	2.963	.332	.000
-1 TO 0	2.000 TO 1.000	2.784	.638	.101
0 TO 1	1.000 TO .500	2.708	.638	.167
1 TO 2	.500 TO .250	5.415	.468	.685
2 TO 3	.250 TO .125	17.420	.893	21.590
3 TO 4	.125 TO .063	15.045	2.041	52.847
4 TO 5	.063 TO .031	3.423	4.210	8.626
5 TO 6	.031 TO .016	4.368	9.780	4.440
6 TO 7	.016 TO .008	3.346	11.140	3.171
7 TO 8	.008 TO .004	3.857	9.865	1.269
8 TO 9	.004 TO .002	2.835	8.334	3.425
9 TO 10	.002 TO .001	1.941	6.718	.381
>10	<.001	18.186	44.944	3.298
	GRAVEL (>2.0 MM)	18.672	.332	.000
	SAND (2.0-.063 MM)	43.372	4.677	75.391
	SILT (.063-.004 MM)	14.994	34.994	17.506
	CLAY (<.004 MM)	22.963	59.997	7.104
	MEAN (MM)	.0826	.0031	.0622
	MEAN (PHI)	3.597	8.353	4.007
	STANDARD DEVIATION	4.725	2.502	1.838
	SKEWNESS	-.044	-.550	1.036
	KURTOSIS	-.860	.921	4.135
	CALCIUM CARBONATE	30.000	26.000	9.000
	ORGANIC CARBON	.882	1.834	.071
	NITROGEN (KJELDAHL)	.132	.335	.014
	COLOR (GSA)	5Y2/1	5Y2/1	10Y4/2

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SEDIMENT SIZE AND COMPOSITION DATA

CRUISE DIVERS TAKEN FEB73 LATITUDE 32° 40.0'N MARSDEN SQUARE 120-27 LENGTH 83.8 ANALYZED JUN73
SAMPLE SAND-4 DEPTH LONGITUDE 117° 7.0'W CORER TYPE PENETRATION -

	SUBSAMPLE ID.	447 10	447 11	447 12
	DEPTH INTERVAL	.0-30.5	30.5-58.4	58.4-83.8
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	4.250	.000
-4 TO -3	16.000 TO 8.000	.731	2.012	4.129
-3 TO -2	8.000 TO 4.000	7.186	5.522	4.895
-2 TO -1	4.000 TO 2.000	3.211	5.924	5.180
-1 TO 0	2.000 TO 1.000	2.734	5.892	5.285
0 TO 1	1.000 TO .500	4.801	12.267	13.498
1 TO 2	.500 TO .250	14.563	26.481	27.523
2 TO 3	.250 TO .125	18.537	21.426	26.321
3 TO 4	.125 TO .063	6.473	5.779	5.001
4 TO 5	.063 TO .031	1.399	1.223	2.462
5 TO 6	.031 TO .016	3.847	1.690	.901
6 TO 7	.016 TO .008	3.816	1.030	.676
7 TO 8	.008 TO .004	2.798	.934	.526
8 TO 9	.004 TO .002	2.067	.773	.526
9 TO 10	.002 TO .001	2.925	.547	.300
>10	<.001	24.960	4.250	2.177
	GRAVEL (>2.0 MM)	11.129	17.708	14.204
	SAND (2.0-.063 MM)	47.059	71.845	78.228
	SILT (.063-.004 MM)	11.860	4.878	4.565
	CLAY (<.004 MM)	29.952	5.570	3.003
	MEAN (MM)	.0451	.3469	.3514
	MEAN (PHI)	4.470	1.527	1.509
	STANDARD DEVIATION	4.382	3.066	2.460
	SKEWNESS	.086	.410	.428
	KURTOSIS	-1.265	1.866	3.206
	CALCIUM CARBONATE	39.000	34.000	21.000
	ORGANIC CARBON	.990	.271	.080
	NITROGEN (KJELDAHL)	.205	.054	.015
	COLOR (GSA)	5Y2/1	5Y3/2	5Y5/2

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SEDIMENT SIZE AND COMPOSITION DATA

CRUISE DIVERS TAKEN MAY 73 LATITUDE MARSDEN SQUARE 117-01 LENGTH 223.5 ANALYZED JUN73
SAMPLE NFD-1 DEPTH ' LONGITUDE CORER TYPE PENETRATION

DIAM (PHI)	DIAM (MM)	SUBSAMPLE ID. 447 22 PERCENT	447 23 PERCENT	447 24 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	.015	.000	.000
-2 TO -1	4.000 TO 2.000	.031	.086	.037
-1 TO 0	2.000 TO 1.000	.108	.166	.009
0 TO 1	1.000 TO .500	.223	.543	.037
1 TO 2	.500 TO .250	10.912	15.749	.375
2 TO 3	.250 TO .125	83.440	80.903	44.985
3 TO 4	.125 TO .063	5.271	2.553	19.052
4 TO 5	.063 TO .031	.000	.000	1.428
5 TO 6	.031 TO .016	.000	.000	2.050
6 TO 7	.016 TO .008	.000	.000	2.635
7 TO 8	.008 TO .004	.000	.000	3.386
8 TO 9	.004 TO .002	.000	.000	2.873
9 TO 10	.002 TO .001	.000	.000	2.086
>10	<.001	.000	.000	21.047
	GRAVEL (>2.0 MM)	.046	.086	.037
	SAND (2.0-.063 MM)	99.954	99.914	64.458
	SILT (.063-.004 MM)	.000	.000	9.499
	CLAY (<.004 MM)	.000	.000	26.007
	MEAN (MM)	.1851	.1963	.0302
	MEAN (PHI)	2.434	2.349	5.051
	STANDARD DEVIATION	.430	.459	3.276
	SKEWNESS	-.663	-.913	.414
	KURTOSIS	9.505	8.031	-1.083
	CALCIUM CARBONATE	1.000	1.000	2.000
	ORGANIC CARBON	.068	.126	1.711
	NITROGEN (KJELDAHL)	.010	.016	.153
	COLOR (GSA)	5Y5/2	5Y5/2	5Y3/2

Location: St. Johns River, Navy Fuel Depot Jacksonville, Florida

MGG09005040

SEDIMENT SIZE AND COMPOSITION DATA

CRUISE DIVERS TAKEN MAY 73 LATITUDE MARSDEN SQUARE 117-01 LENGTH 160.0 ANALYZED JUN73
SAMPLE NFD-2 DEPTH LONGITUDE CORER TYPE PENETRATION

	SUBSAMPLE ID.	447 13	447 14	447 15
	DEPTH INTERVAL	.0- 30.5	30.5- 94.0	94.0-160.0
DIAM (PHI)	DIAM (MM)	PERCENT	PERCENT	PERCENT
<-4	>16.000	.000	.000	.000
-4 TO -3	16.000 TO 8.000	3.899	.000	.000
-3 TO -2	8.000 TO 4.000	.917	.000	.545
-2 TO -1	4.000 TO 2.000	.789	.367	1.122
-1 TO 0	2.000 TO 1.000	.653	2.264	3.840
0 TO 1	1.000 TO .500	.811	7.465	12.815
1 TO 2	.500 TO .250	2.276	18.091	30.576
2 TO 3	.250 TO .125	40.115	48.338	37.181
3 TO 4	.125 TO .063	33.482	18.377	9.655
4 TO 5	.063 TO .031	.776	.816	.869
5 TO 6	.031 TO .016	.988	.102	.711
6 TO 7	.016 TO .008	8.115	.204	.237
7 TO 8	.008 TO .004	.811	.918	.158
8 TO 9	.004 TO .002	.600	.306	.158
9 TO 10	.002 TO .001	.406	.408	.079
>10	<.001	5.363	2.346	2.054
	GRAVEL (>2.0 MM)	5.604	.367	1.667
	SAND (2.0-.063 MM)	77.337	94.534	94.067
	SILT (.063-.004 MM)	10.690	2.040	1.975
	CLAY (<.004 MM)	6.368	3.059	2.291
	MEAN (MM)	.0968	.1674	.2361
	MEAN (PHI)	3.369	2.579	2.083
	STANDARD DEVIATION	2.631	1.742	1.729
	SKEWNESS	.219	1.256	1.150
	KURTOSIS	2.502	9.633	10.315
	CALCIUM CARBONATE	9.000	3.000	4.000
	ORGANIC CARBON	.870	.247	1.894
	NITROGEN (KJELDAHL)	.074	.023	.007
	COLOR (GSA)	5Y2/1	5Y4/1	5Y7/2

Location St. Johns River, Jacksonville Florida

MGG09005040

SEDIMENT SIZE AND COMPOSITION DATA

CRUISE DIVERS TAKEN MAY 73 LATITUDE MARSDEN SQUARE 117-01 LENGTH 162.6 ANALYZED JUN73
SAMPLE NFD-3 DEPTH LONGITUDE CORER TYPE PENETRATION

	SUBSAMPLE ID.	447 16	447 17	447 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	.000	.000
-3 TO -2	8.000 TO 4.000	.000	.000	.000
-2 TO -1	4.000 TO 2.000	.030	.000	.000
-1 TO 0	2.000 TO 1.000	.121	.064	.107
0 TO 1	1.000 TO .500	.151	.127	.694
1 TO 2	.500 TO .250	.227	.300	3.789
2 TO 3	.250 TO .125	53.287	28.304	55.016
3 TO 4	.125 TO .063	6.680	41.691	25.880
4 TO 5	.063 TO .031	3.808	4.654	1.708
5 TO 6	.031 TO .016	3.536	4.048	1.547
6 TO 7	.016 TO .008	2.841	3.410	2.188
7 TO 8	.008 TO .004	2.962	3.379	.587
8 TO 9	.004 TO .002	2.841	1.179	1.387
9 TO 10	.002 TO .001	1.481	3.920	.747
>10	<.001	22.034	8.925	6.350
	GRAVEL (>2.0 MM)	.030	.000	.000
	SAND (2.0-.063 MM)	60.465	70.485	85.486
	SILT (.063-.004 MM)	13.148	15.491	6.030
	CLAY (<.004 MM)	26.356	14.024	8.485
	MEAN (MM)	.0304	.0445	.0857
	MEAN (PHI)	5.038	4.488	3.545
	STANDARD DEVIATION	3.342	2.545	2.208
	SKEWNESS	.395	.712	1.136
	KURTOSIS	-1.136	.661	4.229
	CALCIUM CARBONATE	6.000	26.000	9.000
	ORGANIC CARBON	1.467	1.572	.657
	NITROGEN (KJELDAHL)	.120	.111	.053
	COLOR (GSA)	5Y3/2	5Y3/2	5Y4/2

MGG09005040

Location St. Johns River, Jacksonville Florida

SEDIMENT SIZE AND COMPOSITION DATA

CRUISE DIVERS TAKEN MAY 73 LATITUDE MARSDEN SQUARE 117 LENGTH 147.3 ANALYZED JUN73
SAMPLE NFD-4 DEPTH LONGITUDE CORER TYPE PENETRATION

	SUBSAMPLE ID.	447 19	447 20	447 21
	DEPTH INTERVAL	.0- 30.5	30.5- 88.9	88.9-142.3
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	.451	.000	.000
-1 TO 0	2.000 TO 1.000	.183	.004	.015
0 TO 1	1.000 TO .500	.172	.065	.044
1 TO 2	.500 TO .250	1.096	.961	.545
2 TO 3	.250 TO .125	71.258	79.306	80.354
3 TO 4	.125 TO .063	14.204	13.880	9.510
4 TO 5	.063 TO .031	4.900	.604	.262
5 TO 6	.031 TO .016	.215	.540	.218
6 TO 7	.016 TO .008	.645	.108	.327
7 TO 8	.008 TO .004	.107	.540	.763
8 TO 9	.004 TO .002	.322	.324	4.035
9 TO 10	.002 TO .001	.215	.108	1.854
>10	<.001	6.232	3.562	2.072
	GRAVEL (>2.0 MM)	.451	.000	.000
	SAND (2.0-.063 MM)	86.913	94.215	90.468
	SILT (.063-.004 MM)	5.867	1.792	1.570
	CLAY (<.004 MM)	6.769	3.993	7.961
	MEAN (MM)	.1035	.1251	.1097
	MEAN (PHI)	3.273	2.999	3.189
	STANDARD DEVIATION	2.051	1.605	1.895
	SKEWNESS	1.385	1.981	1.416
	KURTOSIS	7.175	15.143	6.631
	CALCIUM CARBONATE	5.000	2.000	2.000
	ORGANIC CARBON	.239	.058	.075
	NITROGEN (KJELDAHL)	.022	.009	.012
	COLOR (GSA)	5Y4/1	5Y7/1	5Y7/1

MGG09005040

Location: St. Johns River Jacksonville, Florida