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Laboratory Item No. 36

00749

A SUMMARY OF SIZE ANALYSIS OF SPECIAL SAMPLES FOR U.S. NAVY MINE DEFENSE LABORATORY

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Geological Laboratory Branch
Ocean Surveys Division
Oceanographic Surveys Department

MGG09005002

These samples come from 3 basic regions:

I - No. A1 and A2, from the Gulf of Mexico
II - No. #6, #12, #15, #25, and #29, from Argentia, Newfoundland
III - Nos. E1 thru E24, from Northern Europe

I No. A1, a short core, and No. A2, a surface grab, were taken from 40.0 ft of water at 30° 07′ 33″ N, 85° 44′ 59″ W, or approximately one nautical mile WNW of the St. Andrew Bay, Fla entrance channel. Date on each, 20 Jan 1965.

II Locations on Argentia bottom samples,

#6	-	47° 10′ 18″ N	-	54° 05′ 15″ W	-	14 Sept 64
#12	-	47° 10′ 31″ N	-	54° 05′ 15″ W	-	" " "
#15	-	47° 10′ 22″ N	-	54° 04′ 58″ W	-	" " "
#25	-	47° 10′ 37″ N	-	54° 04′ 58″ W	-	" " "
#29	-	47° 10′ 36″ N	-	54° 05′ 46″ W	-	" " "

(III) Bottom Sample Log - MDL EUROPEAN TRIP (1964) (244)

Sample No	Date 1964	Gen'l Description	Location (Range and Bearing from Nearest Navigational Marker)
			(50° 40.0'N - 01° 01.5'E) (H.O. 4432)
E 1	8 Aug	sandy gravel	2000 yds SW of Nab Tower - Portsmouth, England
E 2	8 Aug	" "	4000 yds SW of Nab Tower - " "
E 3	10 Aug	" "	2500 yds SW of Nab Tower - " , "
E 4	10 Aug	" "	4500 yds SW of Nab Tower - " , "
E 5	11 Aug	" "	3000 yds SW of Nab Tower - " , "
E 6	11 Aug	clayey gravel	3500 yds SW of Nab Tower - " , "
			(54° 31.0'N - 10° 05.6'E) (H.O. 4922)
E 7	18 Aug	silty clay	1100 yds, 220° T from Stollgrunde "W" buoy, Kiel, Germany
E 8	18 Aug	" "	400 yds, 290° T " " " " , " ,
E 9	18 Aug	" "	1100 yds, 358° T " " " " , " , "
E 10	18 Aug	" "	1000 yds, 020° T " " " " , " , "
E 11	19 Aug	" "	1000 yds, 200° T " " " " " "
			(≈55° 20.2'N - 11° 07.0'E) (several mi SW of ↓)
E 12	24 Aug	silty sand (rocks)	2500 yds, 192° T from Korsör GP-BLK (3) 155, Korsör, Denmark
E 13	24 Aug	" " (rocks)	2550 yds, 208° T " " " " , " , "
E 14	24 Aug	" " (rocks)	2790 yds, 223° T " " " " , " , "
E 15	24 Aug	" " (rocks)	3150 yds, 232° T " " " " , " , "
E 16	24 Aug	" " (rocks)	3600 yds, 240° T " " " " , " , "
E 17	25 Aug	sand - clay (rocks) too large for jar	4080 yds, 242° T " " " " , " , "
E 18	25 Aug	(rocks)	2720 yds, 193° T " " " " , " , "
E 19	25 Aug	(rocks)	3560 yds, 227° T " " " " , " , "
			(≈51° 20'N - 02° 35'E)
E 20	1 Sep	med fine sand	1500 yds, 090° T from Quinte Bank Buoy, Ostende, Belgium
E 21	1 Sep	med fine sand	3500 yds, 090° T from Quinte Bank Buoy, Ostende, Belgium
			(≈48° 23'N - 04° 29'W)
E 22	8 Sep	silty sand	650 yds, 225° T from Inner Hbr Entrance, Brest, France
E 23	8 Sep	" "	1650 yds, 238° T from Inner Hbr Entrance, Brest, France
E 24	9 Sep	" "	1150 yds, 230° T from Inner Hbr Entrance, Brest, France

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OCEANOGRAPHIC LOG SHEET-R
PRNC-NAVOCEANO-3167/18 (Rev. 4-63)

CRUISE NO. _____

GRAB SAMPLE ANALYSIS SUMMARY SHEET
SEDIMENT SIZE AND COMPOSITION

ANALYZED BY GLOVER & D.S. HILL

DATE MARCH 65

1. DATE TAKEN (Day, Mo., Yr.)	8 AUG 64	8 AUG 64	10 AUG 64	10 AUG 64	11 AUG 64	11 AUG 64	18 AUG 64	18 AUG 64
2. SAMPLE NO.	E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8
3. LABORATORY NO.	244-1	244-2	244-3	244-4	244-5	244-6	244-7	244-8
4. LATITUDE	50°40.0'N	50°40.0'N	50°40.0'N	50°40.0'N	50°40.0'N	50°40.0'N	54°31.0'N	54°31.0'N
5. LONGITUDE	01°01.5'E	01°01.5'E	01°01.5'E	01°01.5'E	01°01.5'E	01°01.5'E	10°05.6'E	10°05.6'E
6. WATER DEPTH (m)								
7. TYPE SAMPLER								
8. COLOR (GSA Rock Color Charts) [F] FIELD [L] LAB DETERMINATION	[L] 5GY 2/1	[L] 5GY 2/1	[L] 10YR 6/2	[L] N3	[L] N3	[L] 5GY 6/1	[L] N3	[L] N3
9. ODOR								
10. SIZE & COMPOSITION ANALYSIS								
a. > 4mm mm (%)	53	90	40	57	68	49		
b. 4 to 2 mm (%)	21	6	17	9	12	9	TRACE	TRACE
c. 2 to 1 mm (%)	3	1	6	6	3	2	TRACE	TRACE
d. 1 to .500 mm (%)	3	1	6	9	3	3	TRACE	TRACE
e. .500 to .250 mm (%)	5	1	13	11	6	4	TRACE	1
f. .250 to .125 mm (%)	11	1	13	8	4	3	16	36
g. .125 to .062 mm (%)	3	TRACE	TRACE	TRACE	TRACE	8	47	48
h. .062 to .031 mm (%)								
i. .031 to .016 mm (%)	1		4	TRACE	2	5	23	10
j. .016 to .008 mm (%)								
k. .008 to .004 mm (%)	0	TRACE	1	0	TRACE	3	5	2
l. .004 to .002 mm (%)								
m. .002 to .001 mm (%)	TRACE		TRACE	TRACE	1	6	4	1
n. < .001 mm (%)	TRACE		TRACE	TRACE	1	6	5	2
o. Median Diameter (mm)	4.4383	16.3360	2.6027	5.6962	6.4086	3.9177	0.0759	0.1058
p. Sorting Coefficient	2.36	1.40	1.69	4.76	2.28	10.09	1.73	1.37
q. Skewness	0.65	0.66	0.40	0.41	0.90	0.05	0.68	0.96
r. Standard Deviation (mm)								
s. Sediment Type	San. Gravel	Gravel	San. Gravel	San. Gravel	Gravel	San. Gravel	Silty Sand	Sand
t. Dominant Minerals (%)								
u. Secondary Minerals (%)								
v. Calcium Carbonate (%)								
w. Organic Carbon (%)								

11. REMARKS

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OCEANOGRAPHIC LOG SHEET-R
PRNC-NAVOCEANO-3167/18 (Rev. 4-63)

GRAB SAMPLE ANALYSIS SUMMARY SHEET
SEDIMENT SIZE AND COMPOSITION

ANALYZED BY GLOVER & D.S. HILL
DATE MARCH 65

CRUISE NO. _____

1. DATE TAKEN (Day, Mo., Yr.)	18 AUG 64	18 AUG 64	19 AUG 64	24 AUG 64	24 AUG 64	24 AUG 64	24 AUG 64	24 AUG 64
2. SAMPLE NO.	E-9	E-10	E-11	E-12	E-13	E-14	E-15	E-16
3. LABORATORY NO.	244-9	244-10	244-11	244-12	244-13	244-14	244-15	244-16
4. LATITUDE	54°31.0'N	54°31.0'N	54°31.0'N	55°20.2'N	55°20.2'N	55°20.2'N	55°20.2'N	55°20.2'N
5. LONGITUDE	10°05.6'E	10°05.6'E	10°05.6'E	11°07.0'E	11°07.0'E	11°07.0'E	11°07.0'E	11°07.0'E
6. WATER DEPTH (m)								
7. TYPE SAMPLER								
8. COLOR (GSA Rock Color Charts) F FIELD L LAB DETERMINATION	L N3	L N3	L N3	L N3	L N3	L N3	L N3	L N3
9. ODOR								
10. SIZE & COMPOSITION ANALYSIS								
a. > 4mm mm (%)				TRACE		2	16	
b. 4 to 2 mm (%)			TRACE	1	TRACE	1	2	TRACE
c. 2 to 1 mm (%)	TRACE	TRACE	TRACE	3	1	1	3	1
d. 1 to .500 mm (%)	TRACE	1	1	13	6	7	14	10
e. .500 to .250 mm (%)	1	1	2	53	35	23	28	26
f. .250 to .125 mm (%)	32	44	2	26	37	19	8	22
g. .125 to .062 mm (%)	43	42	70	2	11	19	9	TRACE
h. .062 to .031 mm (%)								
i. .031 to .016 mm (%)	16	8	15	TRACE	5	14	10	31
j. .016 to .008 mm (%)								
k. .008 to .004 mm (%)	3	2	3	1	2	3	2	2
l. .004 to .002 mm (%)								
m. .002 to .001 mm (%)	3	1	3	1	2	4	3	2
n. < .001 mm (%)	2	1	4	TRACE	1	7	5	6
o. Median Diameter (mm)	0.0960	0.1174	0.0764	0.3164	0.2207	0.1416	0.3487	0.1672
p. Sorting Coefficient	1.47	1.36	1.22	1.39	1.54	2.49	2.10	3.00
q. Skewness	0.96	0.89	1.01	0.99	0.93	0.81	1.28	0.44
r. Standard Deviation (mm)								
s. Sediment Type	Silty Sand	Sand	Silty Sand	Sand	Sand	Silty Sand	Gr. Sand	Silty Sand
t. Dominant Minerals (%)								
u. Secondary Minerals (%)								
v. Calcium Carbonate (%)								
w. Organic Carbon (%)								

11. REMARKS

MGG09005002

OCEANOGRAPHIC LOG SHEET-R
PRNC-NAVOCEANO-3167/18 (Rev. 4-63)

GRAB SAMPLE ANALYSIS SUMMARY SHEET
SEDIMENT SIZE AND COMPOSITION

ANALYZED BY Clover & D.S. Hill
DATE MARCH 65

CRUISE NO. _____

1. DATE TAKEN (Day, Mo., Yr.)	25 AUG 64	25 AUG 64	25 AUG 64	1 SEP 64	1 SEP 64	8 SEP 64	8 SEP 64	8 SEP 64
2. SAMPLE NO.	E-17	E-18	E-19	E-20	E-21	E-22	E-23	E-24
3. LABORATORY NO.	244-17	244-18	244-19	244-20	244-21	244-22	244-23	244-24
4. LATITUDE	55°20.2'N	55°20.2'N	55°20.2'N	51°20'N	51°20'N	48°23'N	48°23'N	48°23'N
5. LONGITUDE	11°07.0'E	11°07.0'E	11°07.0'E	02°35'E	02°35'E	04°29'W	04°29'W	04°29'W
6. WATER DEPTH (m)								
7. TYPE SAMPLER								
8. COLOR (GSA Rock Color Charts) [F] FIELD [L] LAB DETERMINATION	L N3	L N3	L N3	L N3	L N3	L N3	L N3	L N3
9. ODOR								
10. SIZE & COMPOSITION ANALYSIS								
a. > 4mm mm (%)	TRACE	TRACE	3	8		13	12	
b. 4 to 2 mm (%)	TRACE	3	6	11	TRACE	11	30	
c. 2 to 1 mm (%)	3	2	2	9	TRACE	11	22	TRACE
d. 1 to .500 mm (%)	19	6	5	8	1	10	14	2
e. .500 to .250 mm (%)	29	35	20	36	59	10	8	5
f. .250 to .125 mm (%)	14	39	23	27	39	26	8	14
g. .125 to .062 mm (%)	12	6	10	1	1	7	2	31
h. .062 to .031 mm (%)								
i. .031 to .016 mm (%)	12	4	15			4	1	17
j. .016 to .008 mm (%)								
k. .008 to .004 mm (%)	4	1	4	TRACE	TRACE	2	0	7
l. .004 to .002 mm (%)								
m. .002 to .001 mm (%)	4	1	4			2	1	7
n. < .001 mm (%)	3	3	8			4	2	17
o. Median Diameter (mm)	0.2570	0.2349	0.1638	0.3869	0.2698	0.3585	1.5503	0.0665
p. Sorting Coefficient	2.50	1.52	3.05	2.26	1.22	3.58	2.16	4.54
q. Skewness	0.54	1.01	0.51	2.01	0.96	2.33	0.71	0.14
r. Standard Deviation (mm)								
s. Sediment Type	Silty Sand	Sand	Silty Sand	Sand	Sand	Gr. Sand	Gr. Sand	Mud
t. Dominant Minerals (%)								
u. Secondary Minerals (%)								
v. Calcium Carbonate (%)								
w. Organic Carbon (%)								

11. REMARKS

MGG09005002

MGG09005002

OCEANOGRAPHIC LOG SHEET-R
PRNC-NAVOCEANO-3167/18 (Rev. 4-63)

GRAB SAMPLE ANALYSIS SUMMARY SHEET
SEDIMENT SIZE AND COMPOSITION

ANALYZED BY Clover & DS. Hill

DATE March 65

CRUISE NO. _____

1. DATE TAKEN (Day, Mo., Yr.)	14 SEP 64	14 SEP 64	14 SEP 64	14 SEP 64	14 SEP 64	20 JAN 65		
2. SAMPLE NO.	6	12	15	25	29	A-2		
3. LABORATORY NO.	244-25	244-26	244-27	244-28	244-29	244-30		
4. LATITUDE	47°10'15" N	47°10'31" N	47°10'22" N	47°10'37" N	47°10'36" N	30°07'33" N		
5. LONGITUDE	54°05'15" W	54°05'15" W	54°04'53" W	54°04'58" W	54°05'46" W	85°44'59" W		
6. WATER DEPTH (m)						13		
7. TYPE SAMPLER								
8. COLOR (GSA Rock Color Charts) F FIELD L LAB DETERMINATION	L N5	L N3	L N3	L N5	L N3	L 5Y 6/1		
9. ODOR								
10. SIZE & COMPOSITION ANALYSIS								
a. > 4mm mm (%)	15	31	30	84	20			
b. 4 to 2 mm (%)	42	58	59	12	59	TRACE		
c. 2 to 1 mm (%)	25	9	11	3	5	TRACE		
d. 1 to .500 mm (%)	13	2	TRACE	1	6	2		
e. .500 to .250 mm (%)	5	TRACE	TRACE	TRACE	8	16		
f. .250 to .125 mm (%)	TRACE	TRACE	TRACE	TRACE	2	74		
g. .125 to .062 mm (%)	TRACE	TRACE	TRACE	TRACE	TRACE	TRACE		
h. .062 to .031 mm (%)								
i. .031 to .016 mm (%)						8		
j. .016 to .008 mm (%)								
k. .008 to .004 mm (%)	TRACE	TRACE	TRACE	TRACE	TRACE			
l. .004 to .002 mm (%)						TRACE		
m. .002 to .001 mm (%)								
n. < .001 mm (%)								
o. Median Diameter (mm)	2.2191	3.2490	3.2490	8.2249	2.8089	0.1908		
p. Sorting Coefficient	1.62	1.37	1.41	1.33	1.33	1.22		
q. Skewness	0.81	1.09	1.16	0.72	1.00	1.01		
r. Standard Deviation (mm)								
s. Sediment Type	San. Gravel	Gravel	Gravel	Gravel	San. Gravel	Sand		
t. Dominant Minerals (%)								
u. Secondary Minerals (%)								
v. Calcium Carbonate (%)								
w. Organic Carbon (%)								

11. REMARKS

CORE ANALYSIS SUMMARY SHEET
SEDIMENT SIZE AND COMPOSITION

ANALYZED BY CLOVER & D.S. HILL

DATE MARCH 65

NAVOCEANO-EXP-3167/16-A (Rev. 1-63)

1. CRUISE NO.			4. SAMPLE NO. A-1						7. TYPE CORER KULLENBERG					
2. LATITUDE 30° 07' 33" N			5. DATE TAKEN (DAY, MO., YR.) 20 JAN 65						8. CORE LENGTH (cm) 43					
3. LONGITUDE 85° 44' 59" W			6. WATER DEPTH (m)						9. CORER PENETRATION (cm)					
10. LABORATORY NUMBER	244-31	244-32	244-33											
11. SUBSAMPLE DEPTH IN CORE (cm)	0-23	24-28	40-43											
12. COLOR (GSA ROCK COLOR CHART) [F] FIELD [X] LAB DETERMINATION	5GY 4/1 L	5GY 4/1 L	5GY 4/1 L											
13. ODOR														
14. SIZE & COMPOSITION ANALYSIS														
a. > 4 (mm) (%)														
b. 4 to 2 mm (%)	TRACE	TRACE	TRACE											
c. 2 to 1 mm (%)	1	1	2											
d. 1 to .500 mm (%)	6	8	6											
e. .500 to .250 mm (%)	16	25	13											
f. .250 to .125 mm (%)	66	56	68											
g. .125 to .062 mm (%)	7	TRACE	8											
h. .062 to .031 mm (%)														
i. .031 to .016 mm (%)	1	7	1											
j. .016 to .008 mm (%)														
k. .008 to .004 mm (%)	TRACE	1	TRACE											
l. .004 to .002 mm (%)														
m. .002 to .001 mm (%)	1	TRACE	TRACE											
n. < .001 mm (%)	2	2	3											
o. Median Diameter (mm)	0.1934	0.2117	0.1895											
p. Sorting Coefficient	1.23	1.39	1.26											
q. Skewness	1.08	1.12	0.99											
r. Standard Deviation (mm)														
s. Sediment Type	Sand	Sand	Sand											
t. Dominant Minerals (%)														
u. Secondary Minerals (%)														
v. Calcium Carbonate (%)														
w. Organic Carbon (%)														

15. REMARKS