

HYDRAULICS DIVISION

Technical Note

DATE: March 1981 **REPORT NO:** 81-09

TITLE: "Lake Ontario Nearshore Sediment Data, Niagara to Jordan

AUTHOR: N. A. Rukavina

REASONS FOR REPORT: Requested by A. Mudroch, Environmental Contaminants Division.

CORRESPONDENCE FILE NO:

1371

1.0 INTRODUCTION

This report is in response to a request (Appendix 1) from A. Mudroch of the Environmental Contaminants Division, NWRI for unpublished data on the nearshore sediments of the south shore of Lake Ontario from Niagara to Jordan. Information is required to assist in the planning of a study on the influence of the Niagara River on the distribution of contaminants in the bottom and suspended sediments of the nearshore zone.

The report is a compilation of data on the properties and distribution of surface sediments, sediment thickness as measured by jetting to refusal and the properties of short sediment cores for the area shown in Figure 1.

2.0 BACKGROUND

The Niagara-to-Jordan area was sampled in 1968 as part of the Lake Ontario nearshore sediment survey programme (Rukavina, 1969). Sediment thickness was measured during a separate jetting programme in 1972 and cores were collected in 1973.

Surface sediment samples were collected with a Shipek sampler (Sly, 1969) within the depth range 2-20 m. Samples were taken on a 1-km grid and positioned by DECCA MINIFIX with an accuracy of ± 25 m. A description of sample physical properties was recorded immediately upon recovery and subsamples of the upper 3 cm were collected for grain-size analysis.

Sediment thickness was measured by jetting to refusal (Rukavina and LaHaie, 1977 - Appendix 2), and surface sediment samples were collected at the jet sites to up-date the grain-size data. Sites were positioned by DECCA HIFIX with an accuracy of ± 25 m.

Cores of the upper metre of unconsolidated sediment were collected with a hydraulic Beachor sampler (CM², California) or Benthos corer (Sly, 1969). Sites were located by radar ranging with an accuracy of ± 100 m. Cores were logged, x-radiographed and subsampled for grain-size analysis. Six cores were also analysed for pollen in an effort to establish the AMBROSIA horizon (MacInnis, 1973; MacInnis and Rukavina, 1977).

Surface samples and core samples were analysed for grain size with the F.A.S.T. and F.A.S.T.'R. methods of the NWRI Sedimentology Laboratory (Duncan and LaHaie, 1979). The F.A.S.T. Procedure yields gravel, sand, silt and

clay fraction percentages and 1/2-PHI resolution of the sand fraction; F.A.S.T.'R. extends 1/2-PHI resolution into the clay fraction. Size data were reduced by the computer program SIZDIST (Sandilands and Duncan, 1980) with output in the form of class frequencies and conventional summary statistics. Appendix 3 explains the content and format of the SIZDIST listings.

3.0 DATA PROVIDED

1. Maps of sites of 1968 surface-sediment samples (Appendix 3).
2. Field descriptions (DECODE format) 1968 samples (Appendix 4).
3. Grain-size data (SIZDIST format) 1968 samples (Appendix 5).
4. Map (1:50 000 scale) of nearshore sediment distribution of western Lake Ontario (after Rukavina, 1969) (Appendix 6 - under separate cover).
5. Map of 1972 jet and sample sites (Appendix 7 - under separate cover).
6. Jet data on sediment thickness (Appendix 8).
7. Grain-size data (SIZDIST format) for 1972 samples at jet sites (Appendix 9).
8. Map of core sites (Appendix 10 - under separate cover).
9. Core logs (Appendix 11).
10. Grain-size data (SIZDIST FORMAT) for core samples (Appendix 12).
11. Pollen data (Appendix 13).

4.0 REFERENCES CITED

- Duncan, G. A. and LaHaie, G. G., 1979. "Size Analysis Procedures used in the Sedimentology Laboratory, NWRI - Manual". NWRI Unpublished Report, 23 p.
- MacInnis, G. A., 1973. "Report on Palynological Analysis Procedures of Nearshore Cores from Lake Ontario". Unpublished CCIW contract report, Contract No. KL347-3-3258.
- MacInnis, G. A. and Rukavina, N. A., 1977. "A Method for Fossil Pollen Extraction from Sand-Rich Sediments". NWRI Hydraulics Research Division Technical Note 77-2.
- Rukavina, N. A., 1969. "Nearshore Sediment Survey of Western Lake Ontario, Methods and Preliminary Results". Proc. 12th Conf. Great Lakes Res. IAGLR, pp. 317-324.

Rukavina, N. A. and LaHaie, G. G., 1977. "Measurement of the Thickness of Nearshore Sands by Hydraulic Jetting". NWRI Hydraulics Research Division Technical Note 77-13.

Sandilands, R. G. and Duncan, G. A., 1980. "SIZDIST - A Computer Program for Size Analysis". NWRI Hydraulics Division Technical Note 80-08.

Sly, P.G., 1969. "Bottom Sediment Sampling". Proc. 12th Conf. Great Lakes Res., IAGLR, pp. 883-898.

ACKNOWLEDGEMENTS

G. LaHaie was the field officer for the jetting and coring surveys. Pollen analysis was done under contract by G. MacInnis. K. Hill assisted in the compilation of this note.

APPENDIX 1

A. Mudroch/NWRI/4389/emk

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE/NOTRE RÉFÉRENCE 1371
YOUR FILE/VOTRE RÉFÉRENCE
DATE November 3, 1980

Dr. T.M. Dick
Chief, Hydraulics Research Division

A. Mudroch
Inorganics Section
Environmental Contaminants Division

FROM
DE

SUBJECT
OBJET

Request for Information on the Sediments at the
Nearshore Zone Extending from Jordan to Niagara
River, Lake Ontario

A few staff members of the Environmental Contaminants Division, including myself, will be studying, next year, the effects of the Niagara River on distribution of contaminants in the suspended and bottom sediments in the nearshore zone of Western Lake Ontario. We would, therefore, appreciate very much all available information on the sediment type in the nearshore zone between Niagara River mouth and Jordan. Results published by Dr. N. Rukavina on the sediment survey in this area are a good guidance, however, more detailed information would be an advantage in the successful planning and accomplishment of our work. The following information would be very useful and may be available through Dr. Rukavina's studies:

1. detail map (1:50,000) of the sediment distribution.
2. sampling locations (map with coordinates).
3. sample description.
4. particle size data.
5. any jetting and core data.

We would appreciate any information you can make available to us by the end of January 1981.

A. Mudroch

A. Mudroch

NOV 5 1980

cc: Dr. R.J. Maguire, Head, Inorganics Section, ECD

APPENDIX 2
Jetting Procedure
(After Rukavina and LaHaie, 1977)

HYDRAULICS RESEARCH DIVISION

Technical Note

Date: September , 1977

Report No: 77-13

Title: Measurement of Thickness of Nearshore Sands by Hydraulic Jetting

Authors: N. A. Rukavina and G. G. LaHaie

Reason for Report:

Documentation of jetting procedure in response to several requests for published description of method.

ABSTRACT

Hydraulic jetting provides a fast and inexpensive method for direct measurement of the thickness of unconsolidated shallow-water sediments of sand size. The equipment is portable and can be operated from a small launch or barge. Sediment thickness can be resolved to 0.25 m and in some instances it is possible to identify the underlying material.

INTRODUCTION

Conventional acoustic techniques (echo-sounding, sub-bottom profiling) are of limited use in measuring the thickness of Great Lakes' nearshore sand deposits. Higher frequencies give inadequate penetration, lower frequencies inadequate resolution; in both cases noisy records result from the reverberation experienced in shallow water.

As an alternative to the geophysical approach, we have developed a procedure of direct measurement of sediment thickness by hydraulic jetting to refusal. The method was suggested by the previous use of jetting as an aid to sampling unconsolidated sediments by Wilson (1941), Pincus et al (1951) and Coffee (1968). It consists simply of fluidizing bottom sediment with a water jet and recording jet penetration to refusal. We offer it as a simple, inexpensive alternative to, or control procedure for, shallow-water geophysical surveys of sediment thickness.

EQUIPMENT

Jetting equipment (Figure 1) consists of a jet pipe, reinforced flexible intake and discharge hoses and a high pressure water pump. We use a 7.5 m long pipe made up of 1.5 m sections of aluminum (2", schedule 40) and an end section of steel to provide weight and resistance to abrasion. The working end of the steel pipe is threaded to serve as a sampler of the material in which refusal occurs. Hose is standard 2 inch fire hose or flexible reinforced plastic hose with clamp connectors. Both pipe and hose are calibrated in units of 0.25 m. A short length of flexible hose with a screened end piece serves as the water intake. The water pump is a 6 H.P. gasoline-powered fire pump with a discharge of 60 gpm at 60 psi.

OPERATION

Jetting is most conveniently carried out from a small catamaran or barge with low freeboard and a large deck area to facilitate handling of the hose. The minimal requirement for the operation in terms of space and stability would be a small Boston Whaler or equivalent.

The jetting platform is manoeuvred onto station and anchored fore and aft to minimize drift. The jet pipe is assembled and coupled to the pump with a hose length at least twice the water depth. The pipe is then lowered by hand (or by winch, if available) into contact with the bottom and the water depth is read from the hose markings (Figure 2). The pump is started and the water jet from the pipe

fluidizes a sediment column into which the pipe is advanced. Penetration continues until the jet encounters bedrock or semi-consolidated glacial sediment and no further progress is possible (Figure 2). Pipe behaviour at this stage is often a clue to the type of underlying material. The pipe tends to bounce on bedrock or boulder bottoms and to stick in glacial till or glaciolacustrine sediment. When refusal occurs, depth of penetration is recorded from the hose markings and the pipe is withdrawn and examined for evidence of underlying material retained in its end threads.

The jetting operation itself generally takes about 10 minutes in water depths of less than 20 m. Total site time including anchoring is about 20 minutes. Maximum penetration achieved to date has been 18 m.

APPLICATIONS

The jetting procedure was designed specifically for thickness measurement of nearshore lake sands and gravels as an aid to, or substitute for, conventional acoustic techniques. It should apply equally well to measurements in stream or beach deposits or in finer-grained basin or bay sediments. Limiting grain size with the equipment described is about 2-3 cm gravel beyond which pressure is lost because of the high permeability and material cannot be fluidized.

We use jetting in advance of coring to define the geometry of the sediment body being investigated and to provide a basis for optimum siting of cores. Jetting itself should be able to provide a coarse sediment stratigraphy if descent rate is monitored and contacts defined by abrupt changes in the rate of penetration. Further refinement would involve calibration of descent rates with geotechnical information from adjacent cores. There has not yet been a serious effort to explore this potential use.

In instances where point data on thickness are inadequate to the job at hand and geophysical profiling techniques must be employed, jetting can still be of use in calibration of the geophysical records.

REFERENCES

Coffee, C. E., 1968. "A New Technique in Sand Coring". UnderSea Technology, March 1968.

Pincus, H. J., Roseboom, M. L. and C. C. Humphris, 1951. "1950 Investigation of Lake Erie Sediments, Vicinity of Sandusky, Ohio". Ohio Division of Geological Survey, Report of Investigations No. 9.

Wilson, I. T., 1941. "A New Device for Sampling Lake Sediments". Jour. Sed. Petrology, 11:73-79.

FIGURE LEGEND

Figure 1 Water jet system

Figure 2 Jetting operation

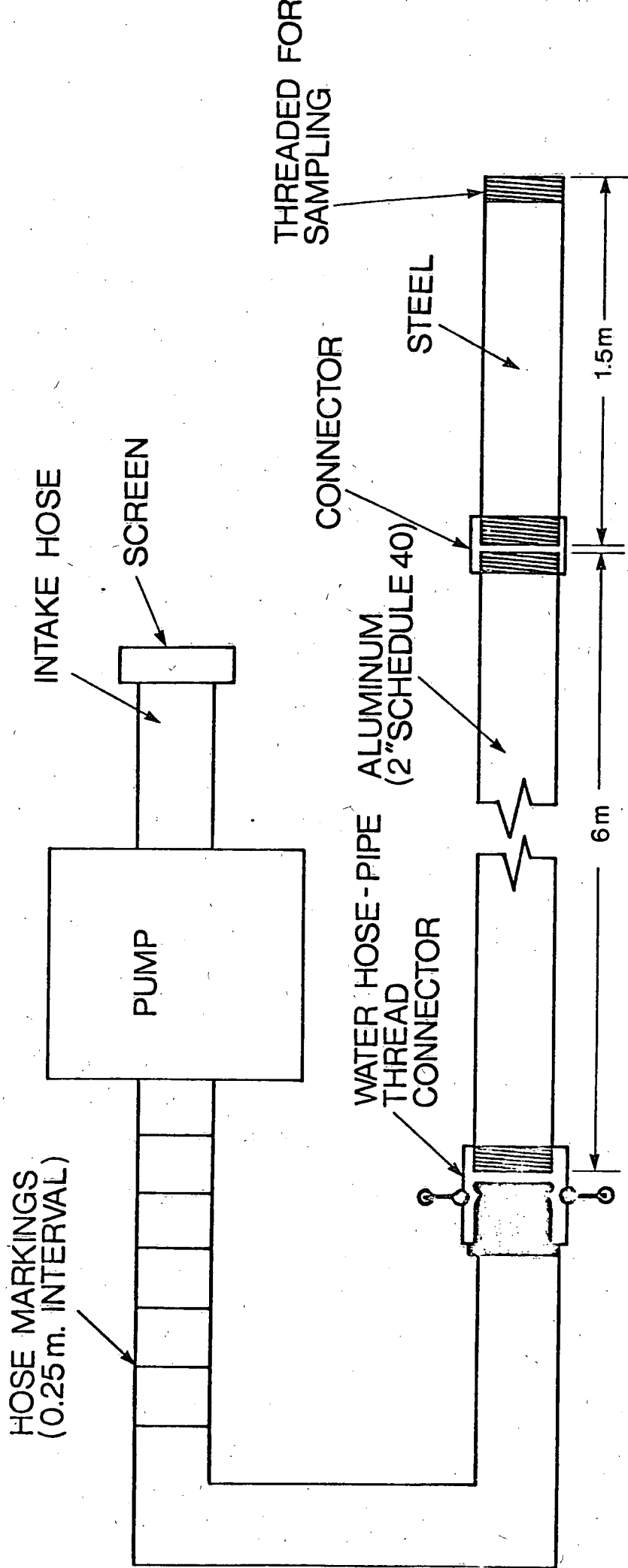


FIGURE 1

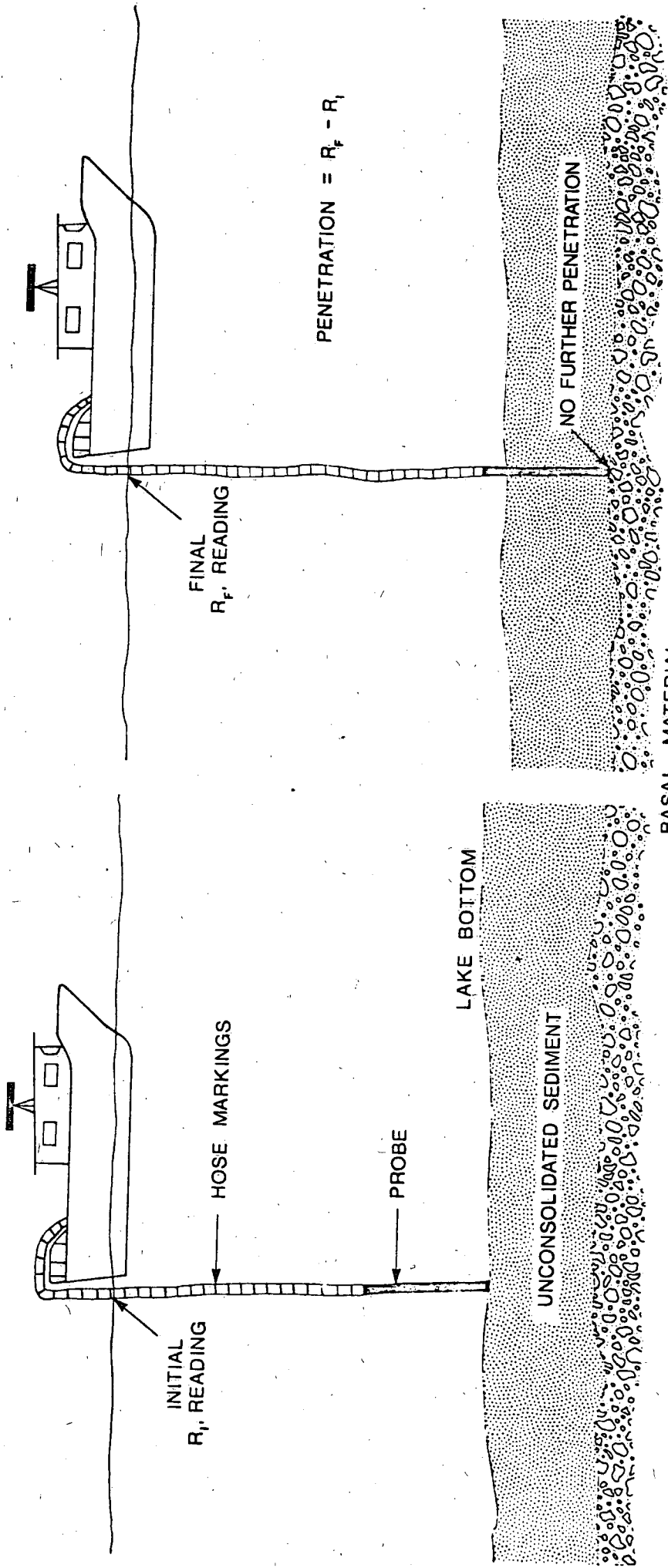


FIGURE 2

APPENDIX 3
Site Maps: 1968 Surface-Sediment Samples

UNITED STATES
NAVY

33+

32A+

31A+

25A+

24A+

30B+

26+

23A+

20A+

16A+

29+

27+

22B+

19A+

15A+

9A+

5B+

4A+

28+

25+

21B+

18A+

14A+

10A+

6A+

3A+

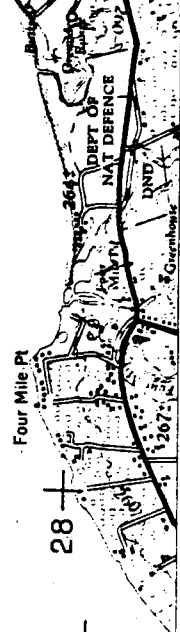
38A+

37B+

43°15'

79°15'

Port Weller East 5m



NIAGARA-ON-THE-LAKE

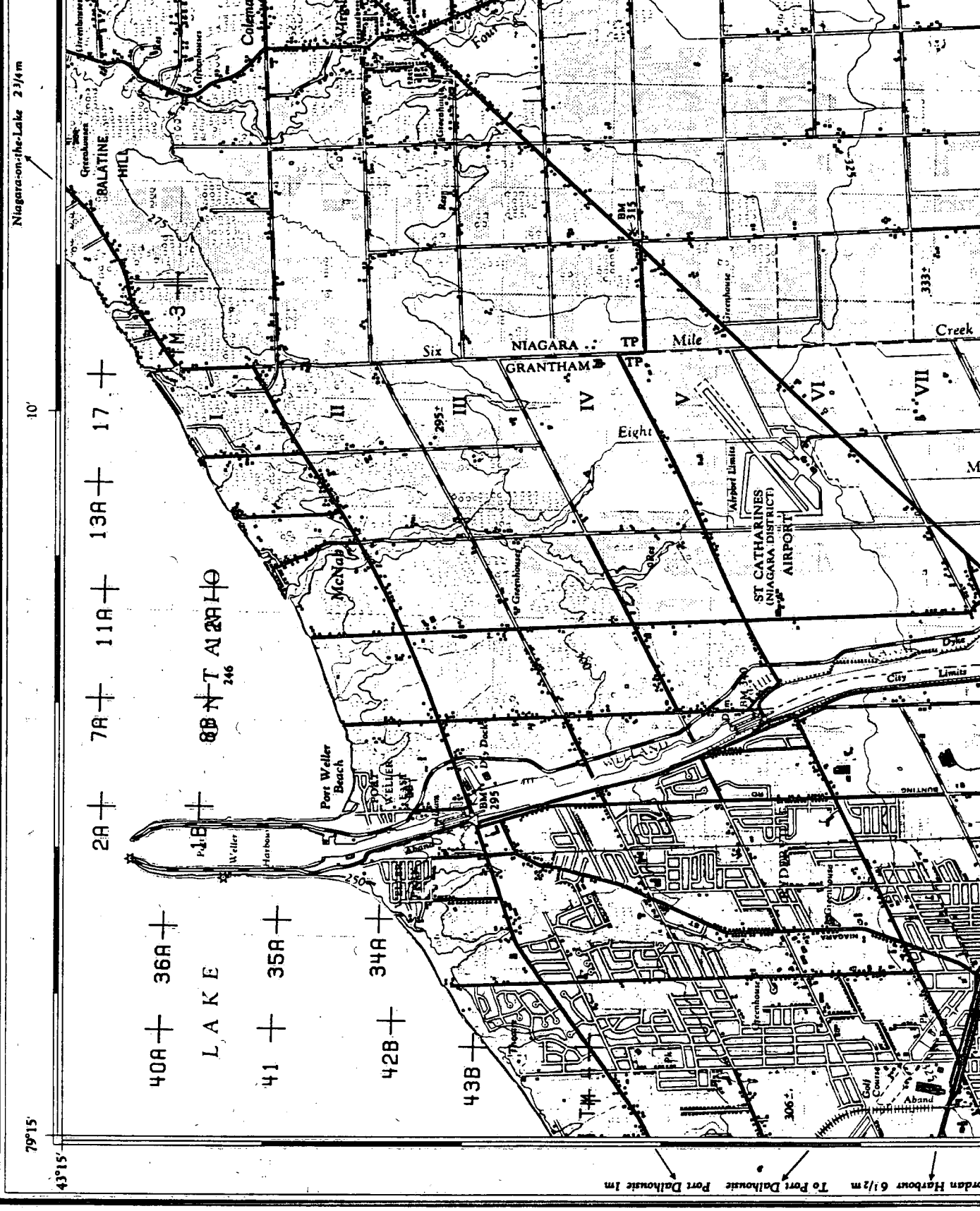
ONTARIO - NEW YORK

Produced by the ARMY SURVEY ESTABLISHMENT, R.C.E.
Information depicted current as of 1940.
U.S.A. information supplied by the ARMY MAP SERVICE,
CORPS OF ENGINEERS, U.S. ARMY, valid to 1949.
Copies may be obtained from the Map Distribution Office,
Department of Mines and Technical Surveys, Ottawa

CANA

1:50,000

30 M/3 E



Niagara-on-the-Lake 2 3/4 m

10'

79°15'

43°15'

To Port Dalhousie 6 1/2 m To Port Dalhousie Port Dalhousie 1 m

20'

79° 15'

43° 15'

49B + 48B +

50A + 47B +

588 + 57B + 51A + 46B +

90A + 89 +

ONTARIO

55A + 53B + 44B +

73B + 74B +

81A + 82B +

91 + 88A +

54A +

72B + 75B +

83A + 80B +

92A + 87B +

62A +

62A + 69A +

79A + 76A +

93B + 86B +

60B + 61A +

60B + 63B + 61A +

84A + 85B +

85B + 78A +

59A + 56B +

59A + 56B +

77 + 70B +

52C + 45B +

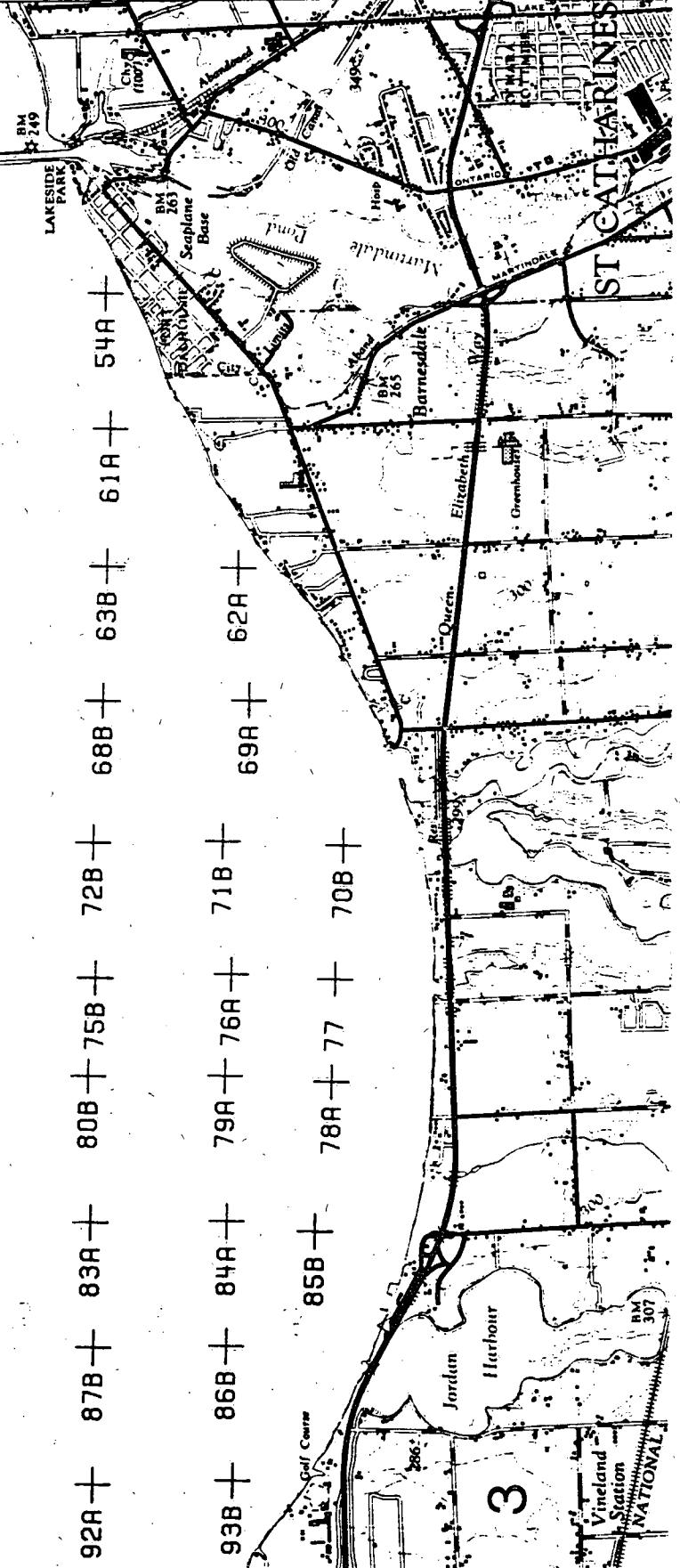
52C + 45B +

89 + 86 +

89 + 86 +

Weller Park 2m To Thorold Niagara Falls 10m

10'



ST CATHARINES

3

Vineland Station NATIONAL

APPENDIX 4
Field Descriptions: 1968 Samples

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-1B
 LOCATION: UTM NORTH: 4788678 EAST: 645172
 DEPTH: 3.5 METRES
 TIME: 1045 JUNE 12, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 3 CMS

TEXTURE: PEBBLY MUD SURFACE/CONTACT:
 STRUCTURE: SMELL: NON DISTINCTIVE
 COLOUR: GREYISH BROWN PEBBLES: MIXED
 CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, FRAGMENTS
 TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
 UNDERWATER PHOTO: NO

COMMENTS:

- PHOTOS 85/68, 86/68.
- ONE LARGE SUBANGULAR LIMESTONE COBBLE, ALGAE COVERED
- PEBBLES ARE ANGULAR TO ROUNDED. MAINLY RED SHALE, SANDSTONE
- TV OBSERVATIONS- BOULDER BOTTOM WITH FINE MATERIAL IN INTERSTICES.
- ANCHOR SAMPLE IS GREY-BROWN GRITTY PLASTIC TILL OR POSSIBLY GLACIOLACUSTRINE CLAY.
- BIOLOGY- SMALL SNAIL SHELL AND 2 SMALL LIVE SNAILS, FECAL TUBES, RED WORMS - 4 TO 5 CM LONG, 0.5MM DIAMETER.
- REMAINING SAMPLE- 41GM(FREEZE-DRIED) AND LABELLED COBBLE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-2A
LOCATION: UTM NORTH: 4789582 EAST: 645155
DEPTH: 7.7 METRES
TIME: 1200 JUNE 12, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 4 CMS

TEXTURE: PEBBLY CLAY
STRUCTURE: DISTURBED
COLOUR: GREYISH BROWN
CONSISTENCY: STIFF

SURFACE/CONTACT: DISTURBED SURFACE
SMELL:
PEBBLES: MIXED
HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, FRAGMENTS
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

COMMENTS:

- PHOTOS 87/68, 91/68, 94/68
- LIMESTONE, SANDSTONE AND SHALE COBBLES, ROUNDED TO SUBANGULAR.
- TV OBSERVATIONS- 1) FLAT FEATURELESS BOTTOM WITH OCCASIONAL COBBLES, MAINLY SAND OR SILT-CLAY. 2) BOULDER LIKE MASSES OF TILL, WITH FINE INTERSTITIAL SEDIMENT.
- BIOLOGY - RED WORMS, BROKEN CLAM SHELLS, ONE PINK WORM (LENGTH-3CM, DIAMETER-0.5MM).
- REMAINING SAMPLE- NONE

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-3A
 LOCATION: UTM NORTH: 4790627 EAST: 645162
 DEPTH: 15.7 METRES
 TIME: 1400 JUNE 12, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 3 CMS

TEXTURE: SANDY MUD
 STRUCTURE: DISTURBED
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT: DISTURBED SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 5 CMS

TEXTURE: MUD
 STRUCTURE: LAMINATED
 COLOUR: GREYISH BLACK
 CONSISTENCY: SOFT

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 2 CMS

TEXTURE: FINE-MEDIUM SAND
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES; SEE COMMENTS
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 46.09 SILT: 42.67 CLAY: 11.24

SHEPARD LABEL: SILTY SAND

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS 95/68
 -TV OBSERVATIONS- FLAT, FEATURELESS BOTTOM OF SAND OR FINER SEDIMENT,
 OCCASIONAL PEBBLES AND COBBLES. STRONG BOTTOM CURRENT.
 -SUBSAMPLES- ONE SAMPLE OF EACH UNIT, LABELLED 3A-TOP, MIDDLE, BOTTOM.
 -BIOLOGY- 2ND UNIT-ORGANIC FIBRES ABUNDANT, ALSO SMALL CLAM SHELLS MANY
 SMALL RED SEGMENTED WORMS. 3RD UNIT-SHELL FRAGMENTS.
 REMAINING SAMPLE- 8GM (FREEZE-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-4A
 LOCATION: UTM NORTH: 4791647 EAST: 645127
 DEPTH: 20.1 METRES
 TIME: 1500 JUNE 12, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: SHELLY GRAVEL SURFACE/CONTACT:
 STRUCTURE: SMELL:
 COLOUR: GREYISH BROWN PEBBLES: MIXED
 CONSISTENCY: HEAVY MINERALS:

UNIT: 2 THICKNESS: CMS

TEXTURE: MUD SURFACE/CONTACT:
 STRUCTURE: SMELL:
 COLOUR: GREYISH BLACK PEBBLES:
 CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 80.86 SILT: 14.17 CLAY: 4.98

SHEPARD LABEL: SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS 97/68
 -GRAVEL CONSISTS OF RED SHALE AND SANDSTONE, LIMESTONE, COAL FRAGMENTS,
 CINDERS.
 -BIOLOGY- UNIT 1-BROKEN AND SEPARATED SMALL CLAM SHELLS, SMALL LIVE CLAM
 TRANSLUCENT WHITE SHELLS. UNIT 2-RED WORMS, PLANT FIBRES.
 REMAINING SAMPLE- 61GM(FREEZE-DRIED), LESS THAN 2MM FRACTION ONLY

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-5B
 LOCATION: UTM NORTH: 4791729 EAST: 646120
 DEPTH: 18.1 METRES
 TIME: 1045 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT:
 SMELL:
 PEBBLES: SEE COMMENTS
 HEAVY MINERALS:

UNIT: 2 THICKNESS: CMS

TEXTURE: SAND
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: PACKED (SAND)

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
 UNDERWATER PHOTO: NO

COMMENTS:

- PHOTOS 98/68, 99/68
- PEBBLES OF SLAG AND COAL.
- TV OBSERVATIONS- STRONG BOTTOM CURRENT, SUSPENDED AND BOTTOM SEDIMENT MOVEMENT. SAND BOTTOM WITH SCATTERED PEBBLES.
- ANCHOR SAMPLE-WELL SORTED, COHESIVE, GREY-BROWN SAND SIMILAR TO UNIT 2.
- BIOLOGY- UNIT 1-SMALL LIVE CLAMS AND SMALL SNAIL SHELLS, RED WORMS, FECAL TUBES.
- REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-6A
LOCATION: UTM NORTH: 4790673 EAST: 646152
DEPTH: 13.7 METRES
TIME: 1115 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY SAND SURFACE/CONTACT:
STRUCTURE: SHELL:
COLOUR: GREYISH BROWN PEBBLES: ANGULAR RED SHALE
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: BEDROCK INFERRED, ROCK CHIPS
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

COMMENTS:

- PHOTOS 99/68, 100/68
- TV OBSERVATIONS- COARSE SAND AND PEBBLES POSSIBLY AS VENEER ON TILL OR BEDROCK. SOME POORLY DEVELOPED RIPPLE MARKS.
- BIOLOGY- BROKEN AND SEPARATED SMALL CLAM SHELLS, FECAL TUBES.
- 0-6A REMAINING SAMPLE- NONE.
- 0-6B REMAINING SAMPLE- LARGE (101GM) AND SMALL (50GM) TUBE CORES.-AIR DRIED

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-7A
 LOCATION: UTM NORTH: 4789621 EAST: 646159
 DEPTH: 8.9 METRES
 TIME: 1345 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: G.T.10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: STIFF

SURFACE/CONTACT: DISTURBED SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: CMS

TEXTURE: MUD
 STRUCTURE: LAMINATED
 COLOUR: GREYISH BLACK
 CONSISTENCY: STIFF

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 27.35 SILT: 64.58 CLAY: 8.06

SHEPARD LABEL: SANDY SILT

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS 104/68
 -BIOLOGY- UNIT 1-CLAM SHELLS. UNIT 2-FIBROUS PLANT MATERIAL, RED
 WORMS, CLAM SHELLS.
 REMAINING SAMPLE- LARGE (129GM) AND SMALL (60GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-88
LOCATION: UTM NORTH: 4788622 EAST: 646178
DEPTH: 6.3 METRES
TIME: 1400 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 2 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY:

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 8 CMS

TEXTURE: SHELLY MUD
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 14.59 SILT: 38.86 CLAY: 46.55

SHEPARD LABEL: SILTY CLAY

FOLK LABELS: GSM: SANDY MUD SSC: SANDY MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS 105/68
-BIOLOGY- UNIT 2- FIBROUS PLANT MATERIAL AND SHELLS.
REMAINING SAMPLE- LARGE(115GM) AND SMALL(51GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-9A
 LOCATION: UTM NORTH: 4791670 EAST: 647126
 DEPTH: 16.5 METRES
 TIME: 1515 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES: SEE COMMENTS
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 3 CMS

TEXTURE: PEBBLY SAND
 STRUCTURE:
 COLOUR:
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES: RED
 HEAVY MINERALS:

UNIT: 4 THICKNESS: CMS

TEXTURE: CLAY
 STRUCTURE:
 COLOUR: REDDISH GREY
 CONSISTENCY: STIFF

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, FRAGMENTS
 TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 38.33 SILT: 47.30 CLAY: 14.37

SHEPARD LABEL: SANDY SILT

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PEBBLES-UNIT 2- PEBBLES ARE COAL FRAGMENTS.
 -BIOLOGY- UNIT 1- CLAM SHELLS.
 REMAINING SAMPLE- LARGE(80GM) AND SMALL(47GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-10A
LOCATION: UTM NORTH: 4790642 EAST: 647160
DEPTH: 14.3 METRES
TIME: 1545 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 2 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY:

SURFACE/CONTACT: DISTURBED SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 8 CMS

TEXTURE: MUD
STRUCTURE: LAMINATED
COLOUR: GREYISH BLACK
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 5.90 SILT: 65.96 CLAY: 28.15

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: MUD SSC: SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS 106/68

-BIOLOGY- UNIT 2- PLANT FIBRES, BLACK(CARBONIZED) CLAM SHELLS, RED WORMS.
REMAINING SAMPLE- LARGE(110GM) AND SMALL(46GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-11A
LOCATION: UTM NORTH: 4789603 EAST: 647165
DEPTH: 7.3 METRES
TIME: 1615 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: NONE

SAMPLE DESCRIPTION: THICKNESS: CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: PH:
TEMPERATURE:

OTHER NOTES: NONE SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-12B
LOCATION: UTM NORTH: 4788619 EAST: 647182
DEPTH: 3.2 METRES
TIME: 1630 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: NONE

SAMPLE DESCRIPTION: THICKNESS: CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: PEBBLY SAND
STRUCTURE:
COLOUR:
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-PEBBLES AND COBBLES, ROUNDED AND SUBANGULAR.
-BIOLOGY- CLAM AND SNAIL SHELLS.
REMAINING SAMPLE- CARTON OF PEBBLES, COBBLES (560GM).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-13A
LOCATION: UTM NORTH: 4789685 EAST: 648157
DEPTH: 5.9 METRES
TIME: 1645 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SCUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: NONE

SAMPLE DESCRIPTION: THICKNESS: CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: PH:
TEMPERATURE:

OTHER NOTES: NONE SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-14A
LOCATION: UTM NORTH: 4790665 EAST: 648155
DEPTH: 11.1 METRES
TIME: 1700 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 9 CMS

TEXTURE: MUD
STRUCTURE: LAMINATED
COLOUR: GREYISH BLACK
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 17.79 SILT: 57.98 CLAY: 24.23

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTO 108/68
-BIOLOGY- UNIT 1-RED WORMS, SOWBUGS. UNIT 2-FIBROUS PLANT FRAGMENTS,
RED WORMS, CLAMS.
REMAINING SAMPLE- LARGE(107GM) AND SMALL(49GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-15A
 LOCATION: UTM NORTH: 4791013 EAST: 648167
 DEPTH: 3.1 METRES
 TIME: 1815 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 "OXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 2 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 9 CMS

TEXTURE: MUD
 STRUCTURE: LAMINATED
 COLOUR: GREYISH BLACK
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 30.65 SILT: 46.73 CLAY: 22.62

SHEPARD LABEL: SAN SIL CLY

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPJT FOR DETAILED SIZE STATISTICS

COMMENTS:

-BIOLOGY- UNIT 1- FECAL TUBES, RED WORMS, SHELL FRAGMENTS.
 UNIT 2- ABUNDANT RED WORMS, FEW CLAMS.
 REMAINING SAMPLE- 43GM(AIR-DRIED) AND LARGE(102GM) AND SMALL(35GM)
 TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-16A
LOCATION: UTM NORTH: 4792585 EAST: 648048
DEPTH: 17.1 METRES
TIME: 1745 JUNE 14, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SILTY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: LIGHT BROWN PEBBLES:
CONSISTENCY: HEAVY MINERALS:

UNIT: 2 THICKNESS: 3 CMS

TEXTURE: MUD SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: GREYISH BLACK PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 61.57 SILT: 31.50 CLAY: 6.92

SHEPARD LABEL: SILTY SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-BIOLOGY- UNIT 1- FECAL TUBES, SMALL CLANS.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-17
LOCATION: UTM NORTH: 4789684 EAST: 649162
DEPTH: 1.8 METRES
TIME: 1100 JUNE 17, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY MEDIUM-COARSE SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: PEBBLES: ROUNDED
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-BIOLOGY- ABUNDANT LIVE SNAILS AND SHRIMP, FEW SMALL CLAMS, ABUNDANT
SNAIL SHELLS.
REMAINING SAMPLE- 0-17A - 25GM(AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-18A
LOCATION: UTM NORTH: 4790669 EAST: 649127
DEPTH: 8.3 METRES
TIME: 1145 JUNE 17, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SILTY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: PEBBLES: SANDSTONE
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-GLACIAL SEDIMENT INFERRED FROM POORLY SORTED SEDIMENT (LAG).
-BIOLOGY- FECAL CASTS, SMALL CLAMS, ABUNDANT SHELL FRAGMENTS.
REMAINING SAMPLE- 1GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-19A
LOCATION: UTM NORTH: 4791660 EAST: 649069
DEPTH: 14.1 METRES
TIME: 1230 JUNE 17, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SILTY CLAY
STRUCTURE:
COLOUR: BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 3 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: GREY
CONSISTENCY:

SURFACE/CONTACT:
SMELL: FETID
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 63.88 SILT: 29.51 CLAY: 6.61

SHEPARD LABEL: SILTY SAND

FOLK LABELS: GSN: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 110/68.
-SETTLING TUBE- VERY FINE SUSPENSION REMAINS AFTER FULL RUN
-BIOLOGY- LARGE CLAMS, BROKEN CLAM SHELLS.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-20A
LOCATION: UTM NORTH: 4792701 EAST: 649074
DEPTH: 15.9 METRES
TIME: 1245 JUNE 17, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SILTY CLAY
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: < .5 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: GREYISH BUFF
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 82.36 SILT: 16.34 CLAY: 1.30

SHEPARD LABEL: SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 111/68.
-BIOLOGY- SMALL CLAMS ABUNDANT, FEW SNAILS, FEW CLAM SHELLS, DECAYING
PLANT MATERIAL.
REMAINING SAMPLE- 67GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-21B
LOCATION: UTM NORTH: 4790617 EAST: 650141
DEPTH: 4.3 METRES
TIME: 1400 JUNE 17, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: SILT SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: GREENISH BROWN PEBBLES: MIXED
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: BEDROCK INFERRED, ROCK CHIPS
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-PEBBLES ARE SMALL WELL-ROUNDED SANDSTONE AND ANGULAR RED SHALE.
-BIOLOGY- SMALL CLAMS AND CLAM SHELLS ABUNDANT.
REMAINING SAMPLE- 0-21C- CARTON INCLUDING COBBLES 448GM (AIR-DRIED)

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-22B
LOCATION: UTM NORTH: 4791670 EAST: 650084
DEPTH: 10.7 METRES
TIME: 1615 JUNE 17, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SILT
STRUCTURE:
COLOUR: GREENISH BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT:
SMELL: FETID
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 9 CMS

TEXTURE: CLAYEY SILT
STRUCTURE: LAMINATED
COLOUR: DARK GREY
CONSISTENCY:

SURFACE/CONTACT: GRADATIONAL
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 28.39 SILT: 50.78 CLAY: 20.83

SHEPARD LABEL: SAN SIL CLY

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 112/68
-UNIT 2 BECOMES SANDIER WITH DEPTH. SAND OCCURS AS LENSES. ALSO LENSES
OF DECAYING ORGANIC MATTER.
-BIOLOGY- RED WORMS COMMON.
REMAINING SAMPLE- 67GM(AIR-DRIED), LARGE(113GM) AND SMALL(54GM) TUBE
CORES(AIR-DRIED), ALSO O-22A - 2GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-23A
LOCATION: UTM NORTH: 4792655 EAST: 650038
DEPTH: 13.5 METRES
TIME: 1700 JUNE 17, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SILT
STRUCTURE:
COLOUR:
CONSISTENCY: SOUPY

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: < .5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: RED SHALE
HEAVY MINERALS:

SEDIMENT BASE: BEDROCK INFERRED, ROCK CHIPS
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

COMMENTS:

-PHOTOS- 113/68.
-BIOLOGY- FEW SMALL CLAMS, SNAILS. WORMS ABUNDANT.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-24A
LOCATION: UTM NORTH: 4793667 EAST: 650005
DEPTH: 16.3 METRES
TIME: 1800 JUNE 17, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SILT
STRUCTURE:
COLOUR:
CONSISTENCY: SOUPY

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: < .5 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 79.51 SILT: 16.10 CLAY: 4.39

SHEPARD LABEL: SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

- PHOTOS- 114/68.
- UNIT 1- CONTAINS FINE, SHINY BLACK PARTICLES (COAL).
- UNIT 2- CONTAINS SMALL MATS OF DECAYING ORGANIC MATTER.
- BIOLOGY- SMALL CLAMS AND CLAM SHELLS ABUNDANT.
- REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-25B
LOCATION: UTM NORTH: 4793694 EAST: 650974
DEPTH: 13.9 METRES
TIME: 1545 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SILTY FINE-MEDIUM SAND SURFACE/CONTACT: COHESIVE ROLL
STRUCTURE: SMELL:
COLOUR: PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NONE

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

COMMENTS:

-PHOTOS- 115/68.
-BALANCE OF NOTES LOST IN TAPE RECORDER MALFUNCTION. UTM COORDINATES
ARE PRE-PLOTS.
REMAINING SAMPLE- LARGE (105GM) AND SMALL (37GM) TUBE CORES (AIR-DRIED).
LARGE CORE DISTURBED.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-26
LOCATION: UTM NORTH: 4792798 EAST: 651062
DEPTH: 12.1 METRES
TIME: 1545 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 4 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR:
CONSISTENCY:

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NONE

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 91.00 SILT: 5.88 CLAY: 3.12

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 116/68.
-BALANCE OF NOTES LOST IN TAPE RECORDER MALFUNCTION. UTM COORDINATES
ARE PRE-PLOTS.
REMAINING SAMPLE- 74GM(AIR-DRIED) AND LARGE(103GM) TUBE CORE(AIR-DRIED).
CORE IS DISTURBED.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-27
LOCATION: UTM NORTH: 4791838 EAST: 651067
DEPTH: 7.5 METRES
TIME: 1615 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 2 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SHELL:
COLOUR: PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NONE

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

COMMENTS:

-PHOTOS- 117/68.
-BALANCE OF NOTES LOST IN TAPE RECORDER MALFUNCTION. UTM COORDINATES
ARE PRE-PLOTS.
REMAINING SAMPLE- 46GM(AIR-DRIED), ALSO 0-27B - 2GM (AIR-DRIED) AND
LABELLED COBBLE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-28
LOCATION: UTM NORTH: 4790791 EAST: 651115
DEPTH: .9 METRES
TIME: 1700 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NONE

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

COMMENTS:

-PHOTOS- 118/68.
-COBBLE TRAPPED IN SHIPEK BUCKET.
-BALANCE OF NOTES LOST IN TAPE RECORDER MALFUNCTION. UTM COORDINATES
ARE PRE-PLOTS.
REMAINING SAMPLE- 2GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-29
LOCATION: UTM NORTH: 4791776 EAST: 651981
DEPTH: 0.0 METRES
TIME: 1715 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE:
STRUCTURE:
COLOUR:
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NONE

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:
-BALANCE OF NOTES LOST IN TAPE RECORDER MALFUNCTION. UTM COORDINATES
ARE PRE-PLOTS.
REMAINING SAMPLE- 4GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-30B
LOCATION: UTM NORTH: 4792689 EAST: 651956
DEPTH: 8.3 METRES
TIME: 1745 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 6 - 8 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 8 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: BROWNISH BUFF
CONSISTENCY:

SURFACE/CONTACT:
SMELL: FETID
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

COMMENTS:

- PHOTOS- 119/68.
- SAMPLE CONTAINS SMALL CINDER FRAGMENTS.
- BIOLOGY- LIVE LEECH IN SAMPLE BUCKET.
- REMAINING SAMPLE- LARGE (110GM) AND SMALL (50GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-31A
 LOCATION: UTM NORTH: 4793728 EAST: 651939
 DEPTH: 10.3 METRES
 TIME: 1815 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 6 - 8 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SAND SURFACE/CONTACT:
 STRUCTURE: SMELL:
 COLOUR: LIGHT BROWN PEBBLES:
 CONSISTENCY: HEAVY MINERALS:

UNIT: 2 THICKNESS: 7 CMS

TEXTURE: SAND SURFACE/CONTACT:
 STRUCTURE: SMELL: FETID
 COLOUR: DARK BROWN PEBBLES:
 CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 94.09 SILT: 4.35 CLAY: 1.56

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 120/68.
 -UNIT 2- CONTAINS LENSES OF GREY SAND AND BLACK DECAYING ORGANIC MATTER.
 -BIOLOGY- SNAIL SHELLS, SHELL FRAGMENTS.
 REMAINING SAMPLE- 87GM(AIR-DRIED), LARGE(135GM) AND SMALL(36GM) TUBE
 CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-32B
LOCATION: UTM NORTH: 4794722 EAST: 651935
DEPTH: 12.5 METRES
TIME: 1845 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 6 - 8 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SEE COMMENTS
STRUCTURE:
COLOUR: BROWNISH GREEN
CONSISTENCY: SOUPY

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 1 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: BROWNISH BUFF
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 3 THICKNESS: 6 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: GREY
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE AND SHORT PIPETTE

% GRAV: .14 SAND: 91.41 SILT: 6.32 CLAY: 2.13

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

DATA COARSER THAN ZERO PHI SUBDIVIDED INTO HALF-PHI CLASSES

-PHOTOS- 121/68.

-UNIT 1- IS AN ORGANIC OOZE CONTAINING PIECES OF DECAYED WOOD.

-UNIT 3- LENSES OF BLACK DECAYING ORGANIC MATTER.

-BIOLOGY- UNIT 3 FEW SNAILS, INTACT SNAIL SHELLS, BROKEN CLAM SHELLS.

REMAINING SAMPLE- 0-32A - LARGE(128GM) AND SMALL(64GM) TUBE CORES
(AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-33A
 LOCATION: UTM NORTH: 4795735 EAST: 651958
 DEPTH: 14.7 METRES
 TIME: 1900 JUNE 18, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 6 - 8 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: GREENISH BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 2 CMS

TEXTURE: FINE-MEDIUM SAND
 STRUCTURE:
 COLOUR: BROWNISH BUFF
 CONSISTENCY:

SURFACE/CONTACT: IRREGULAR
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 3 CMS

TEXTURE: FINE-MEDIUM SAND
 STRUCTURE:
 COLOUR: DARK GREY
 CONSISTENCY:

SURFACE/CONTACT: IRREGULAR
 SMELL: FETID
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 84.51 SILT: 9.12 CLAY: 6.37

SHEPARD LABEL: SAND

FOLK LABELS: GSM: MUDDY SAND SSC: MUDDY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 122/68.
 -BIOLOGY- UNIT 1- RED WORM. BROKEN CLAM SHELLS THROUGHOUT SAMPLE.
 REMAINING SAMPLE- LARGE (121GM) AND SMALL (62GM) TUBE CORES (AIR-DRIED).
 LARGE CORE DISTURBED

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-34A
LOCATION: UTM NORTH: 4786985 EAST: 644164
DEPTH: 1.1 METRES
TIME: 1100 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 3 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: FIRM

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 97.53 SILT: .22 CLAY: 2.25

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 123/68.
SUB-SAMPLES -LARGE AND SMALL TUBE CORES AND WEDGE SAMPLE.
REMAINING SAMPLE- LARGE (80GM) AND SMALL (41GM) TUBE CORES (AIR-DRIED).
LARGE CORE DISTURBED.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-35A
LOCATION: UTM NORTH: 4787932 EAST: 644133
DEPTH: 5.1 METRES
TIME: 1130 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY MUD
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: SOFT

SURFACE/CONTACT:
SMELL:
PEBBLES: SUBANGULAR CARBONATE
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-BIOLOGY- LIVE SNAILS, CLAMS.
REMAINING SAMPLE- 1GM (AIR-DRIED), ALSO 0-35C - 18GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-36A
 LOCATION: UTM NORTH: 4788982 EAST: 644058
 DEPTH: 8.7 METRES
 TIME: 1200 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: MEDIUM BROWN
 CONSISTENCY: SOFT

SURFACE/CONTACT: INCLINED SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 9 CMS

TEXTURE: SANDY MUD
 STRUCTURE: SEE COMMENTS
 COLOUR: GREYISH BLACK
 CONSISTENCY: FIRM

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 18.98 SILT: 63.20 CLAY: 17.83

SHEPARD LABEL: SANDY SILT

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 124/68.
 UNIT 2 - LAMINATIONS OR LENSES OF FIBROUS ORGANIC MATTER.
 -BIOLOGY- UNIT 2 - RED WORMS.
 REMAINING SAMPLE- LARGE (158GM) AND SMALL (65GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-37B
LOCATION: UTM NORTH: 4790044 EAST: 643998
DEPTH: 14.5 METRES
TIME: 1230 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SAND
STRUCTURE:
COLOUR: BROWNISH BUFF
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 93.79 SILT: 5.64 CLAY: .56

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-BIOLOGY- RED WORMS, ABUNDANT BROKEN AND DETACHED CLAM SHELLS.
REMAINING SAMPLE- 34GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-38A
LOCATION: UTM NORTH: 4791064 EAST: 643914
DEPTH: 20.7 METRES
TIME: 1245 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 3 CMS

TEXTURE: SANDY MUD
STRUCTURE: DISTURBED
COLOUR: GREYISH BROWN
CONSISTENCY: STIFF

SURFACE/CONTACT: COHESIVE ROLL
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 81.23 SILT: 15.89 CLAY: 2.88

SHEPARD LABEL: SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PEBBLES ARE SLAG, COAL, RED CLAY.
-BIOLOGY- BROKEN AND DETACHED CLAM SHELLS ABUNDANT.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-39A
LOCATION: UTM NORTH: 4790035 EAST: 643007
DEPTH: 18.3 METRES
TIME: 1300 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 4 - 6 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SANDY MUD
STRUCTURE:
COLOUR: MEDIUM BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 4 CMS

TEXTURE: MUDDY SAND
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: FIRM

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETT.TUBE + SH.PIP. + SEDIGRAPH

% GRAV: .15 SAND: 60.23 SILT: 26.13 CLAY: 13.49

SHEPARD LABEL: SILTY SAND

FOLK LABELS: GSM: MUDDY SAND SSC: MUDDY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 125/68.

SUB-SAMPLES - 1 BOX SAMPLE, SMALL TUBE CORE, WEDGE SAMPLE.

-BIOLOGY- UNIT 1 - FEW SMALL CLAM SHELLS.

REMAINING SAMPLE- SMALL (36GM) TUBE CORE (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE:° ONTARIO STATION: 0-40B
LOCATION: UTM NORTH: 4789011 EAST: 643070
DEPTH: 12.5 METRES
TIME: 1330 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: SANDY GRAVEL
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: CARBONATE
HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-SHIPEK BUCKET HELD OPEN BY LIMESTONE BOULDER. REMAINDER OF SAMPLE-
CORRODED LIMESTONE COBBLE, COARSE SAND AND GRANULES, WOOD FRAGMENTS.
-GLACIAL SEDIMENT INFERRED FROM POORLY SORTED SEDIMENT (LAG).
-BIOLOGY- SMALL LIVE CLAMS, BROKEN AND DETACHED CLAM SHELLS, SNAIL
SHELLS.
REMAINING SAMPLE- 25GM (AIR-DRIED) AND LABELLED PEBBLE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-41A
LOCATION: UTM NORTH: 4787956 EAST: 643115
DEPTH: 6.1 METRES
TIME: 1345 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BUFF PEBBLES: CARBONATE
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

- SAMPLE INCLUDES LIMESTONE COBBLE, PEBBLE.
 - GLACIAL SEDIMENT INFERRED FROM POORLY SORTED SEDIMENT (LAG).
 - BIOLOGY- SOWBUGS, BROKEN SHELLS, TUBULAR FECAL CASTS ABUNDANT.
- REMAINING SAMPLE- 6GM (AIR-DRIED) AND LABELLED PEBBLE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-428
LOCATION: UTM NORTH: 4786845 EAST: 643210
DEPTH: 2.9 METRES
TIME: 1415 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SCUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY MEDIUM-COARSE SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: GREYISH BROWN PEBBLES: SEE COMMENTS
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

- SAMPLE CONTAINS ALGAE-COVERED COBBLES AND PEBBLES.
 - GLACIAL SEDIMENT INFERRED FROM POORLY SORTED SEDIMENT (LAG).
 - BIOLOGY- SHRIMP, SOWBUGS, SNAIL SHELLS, BROKEN SHELLS.
- REMAINING SAMPLE- CARTON INCLUDING COEBLE 537GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-43B
LOCATION: UTM NORTH: 4786080 EAST: 642976
DEPTH: .9 METRES
TIME: 1445 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 4 - 6 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT: FLAT SURFACE
STRUCTURE: SMELL:
COLOUR: BROWNISH BUFF PEBBLES: SEE COMMENTS
CONSISTENCY: PACKED (SAND) HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE ONLY

% GRAV: .66 SAND: 99.26 SILT: 0.00 CLAY: 0.00

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC:

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-FEW SURFACE PEBBLES.
-BIOLOGY- BROKEN WHITE SHELLS ABUNDANT.
REMAINING SAMPLE- LARGE (143GM) AND SMALL (87GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-44B
LOCATION: UTM NORTH: 4785551 EAST: 641999
DEPTH: 3.2 METRES
TIME: 1630 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: DISTURBED SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 9 CMS

TEXTURE: SANDY MUD
STRUCTURE: DISTURBED
COLOUR: BROWN
CONSISTENCY: MEDIUM FIRM

SURFACE/CONTACT:
SMELL:
PEBBLES: WELL ROUNDED CARBONATE
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 15.33 SILT: 71.01 CLAY: 13.16

SHEPARD LABEL: SANDY SILT

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:
SUB-SAMPLES - TWO WEDGE SAMPLES.
UNIT 2 - LENSES OR LAMINAE OF FINE SAND.
REMAINING SAMPLE - NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-45B
LOCATION: UTM NORTH: 4786522 EAST: 641995
DEPTH: 0.0 METRES
TIME: 1700 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SHELLY MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: IRREGULAR
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 4.54 SILT: 60.91 CLAY: 34.55

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: MUD SSC: MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:
-BIOLOGY- FECAL CASTS, SNAIL SHELLS.
REMAINING SAMPLE- 3GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-46B
LOCATION: UTM NORTH: 4787528 EAST: 641975
DEPTH: 9.5 METRES
TIME: 1715 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: NONE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BUFF PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: G. ACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-UNDERWATER TV SHOWS IRREGULAR BOULDER, TILL BOTTOM.
-BIOLOGY- WHITE SHELL FRAGMENTS, SNAIL SHELLS, SOWBUGS.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-47B
LOCATION: UTM NORTH: 4788528 EAST: 641949
DEPTH: 14.1 METRES
TIME: 1730 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SANDY MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT:
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

UNIT: 2 THICKNESS: 1 CMS

TEXTURE: MUD
STRUCTURE: LAMINATED
COLOUR: DARK GREY
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 3 THICKNESS: 2 CMS

TEXTURE: PEBBLY SAND
STRUCTURE:
COLOUR: BROWN
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 75.92 SILT: 16.84 CLAY: 7.24

SHEPARD LABEL: SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-GLACIAL SEDIMENT INFERRED FROM POORLY SORTED SEDIMENT (LAG).
SUB-SAMPLES - 1 LARGE TUBE SAMPLE, WEDGE SAMPLE.
UNIT 1 - SURFACE PEBBLES AND SUB-ANGULAR COBBLE.
UNIT 2 - LAMINAE OR LENSES OF BLACK FIBROUS ORGANIC MATTER.
UNIT 3 - PEBBLES INCLUDE CINDER AND COAL FRAGMENTS.
-BIOLOGY- UNIT 1 - CLAM SHELLS, UNIT 3 - RED WORMS, BROKEN WHITE SHELLS.
REMAINING SAMPLE- LARGE (91GM) TUBE CORE (AIR-DRIED) AND LABELLED COBBLE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-48B
LOCATION: UTM NORTH: 4789564 EAST: 641931
DEPTH: 20.1 METRES
TIME: 1800 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: SEE COMMENTS
STRUCTURE: DISTURBED
COLOUR: GREYISH BROWN
CONSISTENCY: MEDIUM FIRM

SURFACE/CONTACT:
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-SAMPLE CONSISTS OF MIX OF MUDDY FINE SAND AND PEBBLES, COBBLES OF
LIMESTONE, COAL AND SLAG.
-BIOLOGY- SMALL CLAMS, CLAM AND SNAIL SHELLS.
REMAINING SAMPLE- CARTON 217GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-49B
 LOCATION: UTM NORTH: 4789554 EAST: 640926
 DEPTH: 25.7 METRES
 TIME: 1815 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 4 - 6 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 4 CMS

TEXTURE: MUDDY FINE-MEDIUM SAND
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES: SEE COMMENTS
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 35.51 SILT: 54.05 CLAY: 10.43

SHEPARD LABEL: SANDY SILT

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

SUB-SAMPLES - 1 BOX SAMPLE, 1 LARGE TUBE CORE, 1 WEDGE SAMPLE.
 UNIT 2 - SLAG FRAGMENTS THROUGHOUT.
 REMAINING SAMPLE - LARGE (71GM) TUBE CORE (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-50A
LOCATION: UTM NORTH: 4788532 EAST: 640955
DEPTH: 18.9 METRES
TIME: 1830 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: MUD
STRUCTURE: DISTURBED
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: COHESIVE ROLL
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 1 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: DARK GREY
CONSISTENCY: STIFF

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 36.82 SILT: 43.33 CLAY: 19.85

SHEPARD LABEL: SANDY SILT

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-SAMPLE O-50B DIFFERS- 88 PERCENT SAND, 10 PERCENT SILT, 2 PERCENT
CLAY - SILTY SAND.
-BIOLOGY- SMALL CLAM SHELLS, RED WORMS.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-51A
LOCATION: UTM NORTH: 4787513 EAST: 640971
DEPTH: 13.3 METRES
TIME: 1845 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: MEDIUM-COARSE SAND
STRUCTURE:
COLOUR: DARK BROWN
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 92.85 SILT: 4.27 CLAY: 2.88

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PEBBLES ARE SLAG FRAGMENTS.
-BIOLOGY- FEW SMALL CLAMS, BROKEN AND DETACHED CLAM SHELLS, FEW SNAILS.
REMAINING SAMPLE- 17GM (AIR-DRIED), ALSO 0-51B 7GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-52C
LOCATION: UTM NORTH: 4786554 EAST: 640969
DEPTH: 9.5 METRES
TIME: 1915 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: SANDY MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 9 CMS

TEXTURE: SANDY MUD
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: SOFT

SURFACE/CONTACT:
SMELL: SEWAGE SMELL
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 11.80 SILT: 61.87 CLAY: 26.33

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSH: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 127/68 OF SAMPLE 0-52A.
REMAINING SAMPLE- 44GM (AIR-DRIED), LARGE (66GM) AND SMALL (36GM) TUBE
CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-53B
LOCATION: UTM NORTH: 4785504 EAST: 640920
DEPTH: 4.3 METRES
TIME: 1930 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SEE COMMENTS
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: < .5 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: BUFF
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 89.20 SILT: 10.32 CLAY: .48

SHEPARD LABEL: SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-UNIT 1 IS ORGANIC OOZE.
-UNIT 2 CONTAINS CARBONIZED WOOD FRAGMENTS.
-BIOLOGY- UNIT 2 - SNAIL AND CLAM SHELLS AND BROKEN SHELLS. DEAD SHRIMP.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-54A
LOCATION: UTM NORTH: 4784505 EAST: 640030
DEPTH: .1 METRES
TIME: 2015 JUNE 21, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 6 - 8 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 8 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: BROWN
CONSISTENCY:

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NONE

SAMPLE PHOTO: YES, SEE COMMENTS
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 95.63 SILT: 2.43 CLAY: 1.94

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZOIST OUTPJT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS- 128/68.
REMAINING SAMPLE- LARGE (135GM) AND SMALL (68GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-55A
LOCATION: UTM NORTH: 4785529 EAST: 639994
DEPTH: 7.5 METRES
TIME: 1045 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SCUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: MUDDY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: GREYISH BROWN PEBBLES: SUBROUNDED CARBONATE
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIFETTE ONLY

% GRAV: 0.00 SAND: 30.00 SILT: 25.66 CLAY: 44.34

SHEPARD LABEL: SAN SIL CLY

FOLK LABELS: GSM: SANDY MUD SSC: SANDY MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-GLACIAL SEDIMENT INFERRED FROM POORLY SORTED COARSE SEDIMENT (LAG).
-BIOLOGY- SMALL CLAMS, LEECHES, CLAM AND SNAIL SHELLS, SOWBUG, FECAL
CASTS, BROKEN ALGAL FRAGMENTS, FISH SCALES.
REMAINING SAMPLE- 20GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-56B
LOCATION: UTM NORTH: 4786512 EAST: 639990
DEPTH: 11.5 METRES
TIME: 1100 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: NONE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY SAND
STRUCTURE:
COLOUR:
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

- GLACIAL SEDIMENT INFERRED FROM POORLY SORTED COARSE SEDIMENT (LAG).
- PEBBLES ARE SUB-ANGULAR TO SUB-ROUNDED. ONE LARGE COBBLE.
- BIOLOGY- SMALL CLAMS, RED WORMS, SOWBUGS, LEECH, ALGAL FRAGMENTS, SNAIL SHELLS, DETACHED CLAM SHELLS.
- REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-57B
 LOCATION: UTM NORTH: 4787514 EAST: 639964
 DEPTH: 17.9 METRES
 TIME: 1300 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
 STRUCTURE: DISTURBED
 COLOUR: BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT: COHESIVE ROLL
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 2 CMS

TEXTURE: SANDY MUD
 STRUCTURE: DISTURBED
 COLOUR: GREYISH BROWN
 CONSISTENCY: MEDIUM FIRM

SURFACE/CONTACT:
 SMELL:
 PEBBLES: WELL ROUNDED CARBONATE
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 19.48 SILT: 55.65 CLAY: 24.87

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSN: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

SUB-SAMPLES - TWO BOX SAMPLES, SMALL TUBE CORE.
 UNIT 2 - LENSES OF BLACK ORGANIC MATTER.
 -BIOLOGY- UNIT 1 - SMALL CLAMS, FECAL CASTS. UNIT 2 - RED WORMS, BROKEN
 WHITE SHELLS.
 REMAINING SAMPLE- LARGE (99GM) AND SMALL (17GM) TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-58B
LOCATION: UTM NORTH: 4787498 EAST: 638959
DEPTH: 0.0 METRES
TIME: 1330 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: INCLINED SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 3 CMS

TEXTURE: SANDY MUD
STRUCTURE:
COLOUR: GREYISH BLACK
CONSISTENCY: SOFT

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 3 THICKNESS: 6 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: FIRM

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

UNIT 3 - LENSES OF BLACK FIBROUS ORGANIC MATTER.
-BIOLOGY- WHITE SHELL FRAGMENTS.
REMAINING SAMPLE- 41GM (AIR-DRIED), LARGE (112GM) AND SMALL (43GM) TUBE
CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-59A
 LOCATION: UTM NORTH: 4786517 EAST: 638987
 DEPTH: 17.1 METRES
 TIME: 1345 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SCUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT: FLAT SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 6 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: DARK GREY
 CONSISTENCY: SOFT

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 3 CMS

TEXTURE: SANDY MUD
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: FIRM

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: YES, SEE COMMENTS
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETT.TUBE + SH.PIP. + SEDIGRAPH

% GRAV: 0.00 SAND: 9.08 SILT: 53.27 CLAY: 37.65

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: MUD SSC: MUD

SEE SIZDIST OUTPJT FOR DETAILED SIZE STATISTICS

COMMENTS:

-PHOTOS - 129/68.

SUB-SAMPLES - SMALL TUBE CORE AND SECOND SMALL CORE OF BASAL UNIT.

UNIT 3 - LENSES OF BLACK ORGANIC MATTER.

-SOME ORGANIC MATTER NOTED DURING SETTLING TUBE ANALYSIS.

-BIOLOGY- UNIT 1 - RED WORMS, WHITE CLAM SHELLS, BROKEN SHELLS.

UNIT 3 - WHITE SHELL FRAGMENTS.

REMAINING SAMPLE- 24GM (FREEZE-DRIED), SMALL (25GM) TUBE CORE OF

UNIT 3 (AIR-DRIED), LARGE (80GM) AND SMALL (46GM) TUBE CORES (AIR-DRIED)

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-60B
LOCATION: UTM NORTH: 4785460 EAST: 639010
DEPTH: 11.3 METRES
TIME: 1400 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SCUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: INCLINED SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 5 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: SOFT

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 3 THICKNESS: 4 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR:
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 8.04 SILT: 68.47 CLAY: 23.49

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: MUD SSC: SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-UNIT 3 -HIGH CONTENT OF FIBROUS ORGANIC MATTER, ALSO FRAGMENTS OF
CARBONIZED LEAVES.
-BIOLOGY- UNIT 1- FEW SMALL CLAMS, FECAL CASTS. UNITS 2,3- RED WORMS,
SHELL FRAGMENTS.
REMAINING SAMPLE- 25GM (AIR-DRIED), LARGE (112GM) AND SMALL (73GM) TUBE
CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-61A
LOCATION: UTM NORTH: 4784451 EAST: 639038
DEPTH: 2.7 METRES
TIME: 1415 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: NONE

SAMPLE DESCRIPTION: THICKNESS: CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE:
STRUCTURE:
COLOUR:
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:
-NO SAMPLE RECOVERED AT 0-61A OR 0-61B. BOTTOM FEELS HARD.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-62A
LOCATION: UTM NORTH: 4783492 EAST: 638031
DEPTH: .2 METRES
TIME: 1545 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 4 - 6 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 5 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: BROWNISH BUFF
CONSISTENCY:

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE AND SHORT PIPETTE

% GRAV: 0.00 SAND: 99.04 SILT: .29 CLAY: .67

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-BIOLOGY- FEW WHITE SHELL FRAGMENTS.
REMAINING SAMPLE- 48GM (AIR-DRIED), LARGE (140GM) AND SMALL (60GM) TUBE
CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-63B
LOCATION: UTM NORTH: 4784454 EAST: 638028
DEPTH: 9.3 METRES
TIME: 1615 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SCUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: DISTURBED SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 9 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: SOFT

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 11.80 SILT: 60.82 CLAY: 27.37

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: SANDY MUD SSC: SANDY SILT

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

UNIT 2- LENSES OF BLACK FIBROUS ORGANIC MATTER.
-BIOLOGY- UNIT 1- ABUNDANT FECAL CASTS. UNIT 2- BROKEN AND DETACHED
SMALL WHITE CLAM SHELLS, RED WORMS ABUNDANT.
REMAINING SAMPLE- 65GM (AIR-DRIED), LARGE (109GM) AND SMALL (47GM) TUBE
CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-64B
 LOCATION: UTM NORTH: 4785457 EAST: 638002
 DEPTH: 0.0 METRES
 TIME: 1645 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: G.T.10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT: INCLINED SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 9 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: SOFT

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 1 CMS

TEXTURE: MUDDY FINE-MEDIUM SAND
 STRUCTURE:
 COLOUR: DARK BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETT.TUBE + SH.PIP. + SEDIGRAPH

% GRAV: 0.00 SAND: 5.06 SILT: 61.38 CLAY: 33.57

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: MUD SSC: MUD

SEE SIZDIST OUTPJT FOR DETAILED SIZE STATISTICS

COMMENTS:

UNIT 2- LENSES OF GREY-BLACK FIBROUS ORGANIC MATTER.
 -BIOLOGY- UNIT 1- FECAL CASTS. UNIT 2- DETACHED CLAM SHELLS.
 UNIT 3- ABUNDANT SHELL FRAGMENTS.
 REMAINING SAMPLE- 17GM (AIR-DRIED), LARGE (83GM) AND SMALL (43GM) TUBE
 CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-65A
LOCATION: UTM NORTH: 4786495 EAST: 637984
DEPTH: 21.3 METRES
TIME: 1700 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOFT

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 5 CMS

TEXTURE: SHELLY CLAY
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: SOFT

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 3 THICKNESS: 5 CMS

TEXTURE: CLAYEY SILT
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETT.TUBE + SH.PIP. + SEDIGRAPH

% GRAV: .52 SAND: 19.54 SILT: 49.02 CLAY: 30.92

SHEPARD LABEL: SAN SIL CLY

FOLK LABELS: GSM: SANDY MUD SSC: SANDY MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

UNIT 2- LENSES OF BLACK FIBROUS ORGANIC MATTER. UNIT 3- SOME FINE SAND
PRESENT AS WELL.
REMAINING SAMPLE- 31GM (FREEZE-DRIED), LARGE (83GM) AND SMALL (41GM)
TUBE CORES (AIR-DRIED). SETTLING TUBE SAMPLE - 1.5GM.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-66B
LOCATION: UTM NORTH: 4786468 EAST: 636997
DEPTH: 23.7 METRES
TIME: 1715 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: G.T.10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: DISTURBED SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 10 CMS

TEXTURE: SILTY MUD
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: SOFT

SURFACE/CONTACT:
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETT.TUBE + SH.PIP. + SEDIGRAPH

% GRAV: 0.00 SAND: 26.57 SILT: 43.87 CLAY: 29.56

SHEPARD LABEL: SAN SIL CLY

FOLK LABELS: GSM: SANDY MUD SSC: SANDY MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

UNIT 2 - LENSES OF BLACK ORGANIC MATTER.
-BIOLOGY- UNIT 1 - A FEW SMALL CLAM SHELLS, RED WORMS. UNIT 2 - SHELL
FRAGMENTS.
REMAINING SAMPLE- 31GM (AIR-DRIED), LARGE (69GM) AND SMALL (29GM) TUBE
CORES (AIR-DRIED). SETTLING TUBE SAMPLE- 4.5GM.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-67A
 LOCATION: UTM NORTH: 4785451 EAST: 636999
 DEPTH: 18.5 METRES
 TIME: 1745 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: G.T. 10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT: FLAT SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 2 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: FIRM

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: < .5 CMS

TEXTURE: SEE COMMENTS
 STRUCTURE:
 COLOUR: BLACK
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 4 THICKNESS: 8 CMS

TEXTURE: SANDY MUD
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: FIRM

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 4.99 SILT: 56.40 CLAY: 38.61

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: MUD SSC: MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

UNIT 3- LAYER OF BLACK ORGANIC SEDIMENT.

-BIOLOGY- UNIT 1- FECAL CASTS.

REMAINING SAMPLE- 19GM(FREEZE-DRIED). 0-67B- LARGE(73GM) AND SMALL(55GM)
 TUBE CORES (AIR-DRIED).

PROGRAM DECODE -

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-68B
LOCATION: UTM NORTH: 4784464 EAST: 637042
DEPTH: 13.1 METRES
TIME: 1800 JUNE 23, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: MUD
STRUCTURE:
COLOUR: LIGHT BROWN
CONSISTENCY: SOUPY

SURFACE/CONTACT: DISTURBED SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 3 CMS

TEXTURE: MUDDY SAND
STRUCTURE:
COLOUR: GREYISH BROWN
CONSISTENCY: STIFF

SURFACE/CONTACT:
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 36.48 SILT: 48.60 CLAY: 22.92

SHEPARD LABEL: SAN SIL CLY

FOLK LABELS: GSM: SANDY MUD SSC: SANDY MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-SAMPLE 0-68A DIFFERS- SMALL SAMPLE OF PEBBLY MUDDY SAND.
-UNIT 2- PEBBLES ARE DISINTEGRATING IGNEOUS ROCK FRAGMENTS.
-BIOLOGY- UNIT 1- FECAL CASTS. UNIT 2- CLAM SHELLS AND FRAGMENTS.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-69B
 LOCATION: UTM NORTH: 4783361 EAST: 637061
 DEPTH: 7.1 METRES
 TIME: 1145 JUNE 28, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 4 - 6 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SANDY MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: < .5 CMS

TEXTURE: SILTY MUD
 STRUCTURE:
 COLOUR: DARK GREY
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 5 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: STIFF

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

COMMENTS:

UNITS 2,3 - LENSES OF BLACK ORGANIC MATTER.
 -BIOLOGY- UNIT 1- A FEW CLAM, SNAIL SHELLS, FECAL CASTS. UNIT 3-CLAM
 SHELLS, RED WORMS.
 REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-70B
LOCATION: UTM NORTH: 4782679 EAST: 636009
DEPTH: 2.3 METRES
TIME: 1530 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 3 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: BROWNISH BUFF
CONSISTENCY:

SURFACE/CONTACT: FLAT SURFACE
SMELL:
PEBBLES:
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 97.27 SILT: 1.06 CLAY: 1.67

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-BIOLOGY- SURFACE FECAL CASTS, SHELL FRAGMENTS.
REMAINING SAMPLE- LARGE (86GM) AND SMALL (37GM) TUBE CORES (AIR-DRIED)

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-71B
LOCATION: UTM NORTH: 4783566 EAST: 636026
DEPTH: 0.0 METRES
TIME: 1615 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: BROWNISH BUFF
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: SUBANGULAR SANDSTONE
HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-GLACIAL SEDIMENT INFERRED FROM POORLY SORTED COARSE SEDIMENT (LAG).
-BULK OF SAMPLE CONSISTS OF ORGANIC MATTER- BROWN ALGAL FRAGMENTS AND
ROTTED WOOD FRAGMENTS.
-BIOLOGY- SMALL CLAMS AND BROKEN CLAM SHELLS, RED WORMS, SNAIL SHELLS,
FECAL CASTS.
REMAINING SAMPLE- 23GM (AIR-DRIED), ALSO 0-71A -CARTON 164GM (AIR-DRIED)
AND LABELLED COBBLE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-72B
 LOCATION: UTM NORTH: 4784515 EAST: 636002
 DEPTH: 15.3 METRES
 TIME: 1645 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: 4 - 6 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: MUDDY SAND
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT: COHESIVE ROLL
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 5 CMS

TEXTURE: MUDDY SAND
 STRUCTURE: DISTURBED
 COLOUR: GREYISH BROWN
 CONSISTENCY: FIRM

SURFACE/CONTACT:
 SMELL:
 PEBBLES: ANGULAR
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 65.88 SILT: 24.24 CLAY: 9.88

SHEPARD LABEL: SILTY SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-VERY FINE PARTICLES LEFT IN SETTLING TUBE AFTER SIZE ANALYSIS.
 SUB-SAMPLES - SMALL TUBE CORE, TWO WEDGE SAMPLES.
 -THIN LAYER OR LENSE OF FIBROUS ORGANIC MATTER SEPARATING UNITS 1 AND 2.
 UNIT 2- LENSES OF FIBROUS ORGANIC MATTER.
 -PEBBLES NOT INCLUDED IN SIZE ANALYSIS.
 -BIOLOGY- UNIT 1- ABUNDANT SHELL FRAGMENTS. UNIT 2- SNAIL SHELLS, SHELL
 FRAGMENTS, RED WORMS.
 REMAINING SAMPLE- SMALL TUBE CORE 29GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-73B
 LOCATION: UTM NORTH: 4785492 EAST: 635995
 DEPTH: 19.7 METRES
 TIME: 1645 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: G.T.10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: MUD
 STRUCTURE:
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT: DISTURBED SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 6 CMS

TEXTURE: SANDY MUD
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: SOFT

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 5 CMS

TEXTURE: MUDDY FINE-MEDIUM SAND
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY: FIRM

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 4.20 SILT: 62.20 CLAY: 33.60

SHEPARD LABEL: CLAYEY SILT

FOLK LABELS: GSM: MUD SSC: MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

UNIT 2- LENSES OF BLACK ORGANIC MATTER.
 -BIOLOGY- UNIT 1- WHITE CLAM SHELLS. UNIT 2- SNAIL SHELLS.
 REMAINING SAMPLE- 10GM (FREEZE-DRIED), LARGE (63GM) AND SMALL (44GM)
 TUBE CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-74B
LOCATION: UTM NORTH: 4785469 EAST: 634990
DEPTH: 18.5 METRES
TIME: 1700 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: SANDY MUD
STRUCTURE: DISTURBED
COLOUR: LIGHT BROWN
CONSISTENCY: SOFT

SURFACE/CONTACT: COHESIVE ROLL
SMELL:
PEBBLES:
HEAVY MINERALS:

UNIT: 2 THICKNESS: 2 CMS

TEXTURE: MUDDY FINE-MEDIUM SAND
STRUCTURE:
COLOUR: DARK BROWN
CONSISTENCY: FIRM

SURFACE/CONTACT:
SMELL:
PEBBLES: RED SHALE
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 87.72 SILT: 8.28 CLAY: 4.00

SHEPARD LABEL: SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-SAND PERCENTAGE INCLUDES GRAVEL FRACTION.
-BIOLOGY- RED WORMS, WHITE SNAIL SHELLS.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-75B
LOCATION: UTM NORTH: 4784479 EAST: 634999
DEPTH: 15.1 METRES
TIME: 1715 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 2 CMS

TEXTURE: SILTY FINE-MEDIUM SAND SURFACE/CONTACT: FLAT SURFACE
STRUCTURE: SMELL:
COLOUR: BROWN PEBBLES: SUBROUNDED
CONSISTENCY: FIRM HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 95.25 SILT: 2.98 CLAY: 1.77

SHEPARD LABEL: SAND

FOLK LABELS: GSN: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-BIOLOGY- FECAL CASTS, RED WORMS, PINK WORM, DETACHED AND BROKEN CLAM
SHELLS, SOWBUGS, TOOTH.
-PEBBLES NOT INCLUDED IN SIZE ANALYSIS.
REMAINING SAMPLE- 7GM PEBBLES.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-76A
 LOCATION: UTM NORTH: 4783483 EAST: 635041
 DEPTH: 10.9 METRES
 TIME: 1730 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 4 - 6 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: MUD
 STRUCTURE: DISTURBED
 COLOUR: LIGHT BROWN
 CONSISTENCY: SOUPY

SURFACE/CONTACT: COHESIVE ROLL
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 3 CMS

TEXTURE: MUDDY SAND
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 1 CMS

TEXTURE: MUDDY MEDIUM-COARSE SAND
 STRUCTURE:
 COLOUR: GREYISH BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES: ROUNDED CARBONATE
 HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 65.66 SILT: 22.08 CLAY: 12.26

SHEPARD LABEL: SILTY SAND

FOLK LABELS: GSM: MUDDY SAND SSC: MUDDY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-SAND PERCENTAGE INCLUDES GRAVEL FRACTION.
 -BIOLOGY- ABUNDANT WHOLE AND BROKEN CLAM AND SNAIL SHELLS.
 REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-77
LOCATION: UTM NORTH: 4782717 EAST: 635014
DEPTH: 0.0 METRES
TIME: 1730 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: PEBBLY SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BROWNISH BUFF PEBBLES: SEE COMMENTS
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:
-GLACIAL SEDIMENT INFERRED FROM THIN, POORLY SORTED COARSE SEDIMENT (LAG)
-LARGE SUB-ROUNDED LIMESTONE BOULDER, ANGULAR TO SUB-ANGULAR LIMESTONE
PEBBLES.
-BIOLOGY- A FEW DETACHED, LARGE (1CM) CLAM SHELLS, FECAL CASTS.
REMAINING SAMPLE- 88GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-78A
LOCATION: UTM NORTH: 4782728 EAST: 634248
DEPTH: 5.1 METRES
TIME: 1745 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: PEBBLY MEDIUM-COARSE SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: DARK BROWN PEBBLES: SEE COMMENTS
CONSISTENCY: HEAVY MINERALS:

UNIT: 2 THICKNESS: < .5 CMS

TEXTURE: PEBBLY CLAY SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: GREY PEBBLES:
CONSISTENCY: STIFF HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, FRAGMENTS
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 23.91 SILT: 42.75 CLAY: 33.34

SHEPARD LABEL: SAN SIL CLY

FOLK LABELS: GSM: SANDY MUD SSC: SANDY MUD

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

- SAMPLES OF UNITS 1 AND 2 BAGGED SEPARATELY.
- SAND PERCENTAGE INCLUDES GRAVEL FRACTION.
- UNIT 1- PEBBLES INCLUDE SHALE GRANULES.
- UNIT 2- INTERPRETED AS TILL.
- BIOLOGY- UNIT 1- DETACHED AND BROKEN CLAM SHELLS, SNAIL SHELL (1.5CM LONG).
- REMAINING SAMPLE- 25GM (AIR-DRIED) OF UNIT 1, 22GM (AIR-DRIED) OF UNIT 2.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-79A
 LOCATION: UTM NORTH: 4783513 EAST: 634281
 DEPTH: 10.5 METRES
 TIME: 1800 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: FINE-MEDIUM SAND
 STRUCTURE:
 COLOUR: DARK BROWN
 CONSISTENCY:

SURFACE/CONTACT: FLAT SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 2 CMS

TEXTURE: MEDIUM-COARSE SAND
 STRUCTURE:
 COLOUR: DARK BROWN
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: < .5 CMS

TEXTURE: PEBBLY CLAY
 STRUCTURE:
 COLOUR: GREY
 CONSISTENCY: FIRM

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, FRAGMENTS
 TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 96.36 SILT: 1.34 CLAY: 2.30

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

SUB-SAMPLES -WEDGE SAMPLE, SMALL TUBE CORE, UNIT 3 BAGGED SEPARATELY.
 -UNIT 3 INTERPRETED AS TILL.
 -BIOLOGY- UNIT 1- SNAIL AND CLAM SHELLS, AND SHELL FRAGMENTS.
 UNIT 2- RED WORMS.
 REMAINING SAMPLE- SMALL TUBE CORE 28GM (AIR-DRIED), 56GM (AIR-DRIED) OF
 UNIT 3.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-80B
LOCATION: UTM NORTH: 4784516 EAST: 634265
DEPTH: 14.1 METRES
TIME: 1815 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 3 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT: FLAT SURFACE
STRUCTURE: SMELL:
COLOUR: BROWN PEBBLES: MIXED
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 97.74 SILT: 1.35 CLAY: .92

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

- PEBBLES ARE SUB-ANGULAR TO SUB-ROUNDED SANDSTONE AND LIMESTONE.
- SIZE ANALYSIS DOES NOT INCLUDE PEBBLES.
- BIOLOGY- SMALL CLAMS AND CLAM SHELLS.
- REMAINING SAMPLE- 51GM OF PEBBLES.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-81A
LOCATION: UTM NORTH: 4785497 EAST: 634140
DEPTH: 18.1 METRES
TIME: 1830 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR: BUFF
CONSISTENCY:

SURFACE/CONTACT: DISTURBED SURFACE
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 91.06 SILT: 6.28 CLAY: 2.66

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-SAND CONTAINS PEBBLE-SIZED FRAGMENTS OF COHESIVE SUB-SURFACE SEDIMENT WHICH CONSISTS OF BUFF-BROWN, MUDDY FINE-MEDIUM SAND WITH A CORE OF CRUSTY GRANGE-BROWN SAND. ALSO A FEW SUB-ROUNDED PEBBLES (NOT INCLUDED IN THE SIZE ANALYSIS).
-BIOLOGY- CLAM SHELLS AND SHELL FRAGMENTS.
REMAINING SAMPLE- 69GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-82B
LOCATION: UTM NORTH: 4785467 EAST: 633141
DEPTH: 16.1 METRES
TIME: 1830 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: FINE-MEDIUM SAND
STRUCTURE:
COLOUR:
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: SEE COMMENTS
HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 99.15 SILT: .37 CLAY: .48

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZOIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-A FEW PEBBLES PRESENT IN AN OTHERWISE WELL-SORTED SAND.
-BIOLOGY- TRANSLUCENT CLAMS, PLANOSPIRAL SNAILS, SOWBUG, MANY CLAM
SHELLS, PLANT FRAGMENTS.
REMAINING SAMPLE - NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-83A
 LOCATION: UTM NORTH: 4784478 EAST: 633186
 DEPTH: 13.5 METRES
 TIME: 1900 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: 2 - 4 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 1 CMS

TEXTURE: FINE-MEDIUM SAND
 STRUCTURE:
 COLOUR: BROWNISH BUFF
 CONSISTENCY:

SURFACE/CONTACT: DISTURBED SURFACE
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 2 THICKNESS: 1 CMS

TEXTURE: PEBBLY MEDIUM-COARSE SANDS
 STRUCTURE:
 COLOUR: BROWNISH BUFF
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

UNIT: 3 THICKNESS: 1 CMS

TEXTURE: PEBBLY SAND
 STRUCTURE:
 COLOUR: GREY
 CONSISTENCY:

SURFACE/CONTACT:
 SMELL:
 PEBBLES:
 HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
 TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 94.31 SILT: 2.92 CLAY: 2.77

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

- SAND PERCENTAGE INCLUDES GRAVEL FRACTION.
 - BASAL UNIT IS STICKY POORLY SORTED, LAG-LIKE SEDIMENT. BASAL UNIT IN 0-83B WAS GREY STONEY CLAY (TILL).
 - BIOLOGY- UNIT 1 -NUMEROUS WHITE CLAM SHELLS AND PLANOSPIRAL SNAIL SHELLS.
- REMAINING SAMPLE- 0-83C - LARGE (71GM) AND SMALL (39GM) CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-84A
LOCATION: UTM NORTH: 4783479 EAST: 633212
DEPTH: 9.5 METRES
TIME: 1915 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SCUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BROWNISH BUFF PEBBLES:
CONSISTENCY: HEAVY MINERALS:

UNIT: 2 THICKNESS: < .5 CMS

TEXTURE: PEBBLY MEDIUM-COARSE SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE + SETTLING TUBE + SHORT PIPETTE

% GRAV: 0.00 SAND: 98.97 SILT: .44 CLAY: .59

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-GLACIAL SEDIMENT INFERRED FROM POORLY SORTED SEDIMENT (LAG) AND FROM
COBBLE RECOVERED IN 0-848.
-BIOLOGY- UNIT 1 -SHELL FRAGMENTS, TRANSLUCENT CLAMS, ALGAL FRAGMENTS,
SOWBUG, RED WORMS.
REMAINING SAMPLE - NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-85B
LOCATION: UTM NORTH: 4782829 EAST: 633148
DEPTH: 4.7 METRES
TIME: 1915 JUNE 24, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BROWNISH BUFF PEBBLES: MIXED
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

- SANDSTONE COBBLE, SUBROUNDED LIMESTONE AND SANDSTONE PEBBLES, ANGULAR FRAGMENTS OF RED SHALE.
 - GLACIAL SEDIMENT INFERRED FROM POORLY SORTED SEDIMENT OF MIXED COMPOSITION (LAG) AND GREY CLAY SMEAR (TILL) ON SAMPLE BUCKET.
 - BIOLOGY- SHELL FRAGMENTS, RED WORM, SOWBUG, ALGAL FRAGMENTS.
- REMAINING SAMPLE - ONE LIMESTONE PEBBLE 139GM

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: O-86A
LOCATION: UTM NORTH: 4783474 EAST: 632300
DEPTH: 8.1 METRES
TIME: 930 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: 2 BOXES + 2 CORES

SAMPLE DESCRIPTION: THICKNESS: 8 - 10 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 10 CMS

TEXTURE: PEBBLY MEDIUM-COARSE SAND SURFACE/CONTACT: INCLINED SURFACE
STRUCTURE: SMELL:
COLOUR: BROWN PEBBLES: MIXED
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SIEVE ONLY

% GRAV: 3.56 SAND: 96.06 SILT: .37 CLAY: 0.00

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND ° SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

SIEVE ANALYSIS ONLY. PIPETTE ENTRY IS PAN WT.
-PEBBLES ARE SUB-ROUNDED TO WELL-ROUNDED SANDSTONE, SHALE AND LIMESTONE.
-RUSTED BOTTLE CAP AND PIECE OF BLACKENED METAL AT 5CM LEVEL.
-BIOLOGY- A FEW WHITE SHELL FRAGMENTS.
-SEE DESCRIPTION OF O-86B WHICH DIFFERS MARKEDLY.
REMAINING SAMPLE- LARGE (175GM) AND SMALL (92GM) CORES (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-86B
 LOCATION: UTM NORTH: 4783464 EAST: 632304
 DEPTH: 8.1 METRES
 TIME: 930 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
 SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
 SAMPLER: SHIPEK SUB-SAMPLES: SEE COMMENTS

SAMPLE DESCRIPTION: THICKNESS: G.T.10 CMS
 NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 9 CMS

TEXTURE: PEBBLY MEDIUM-COARSE SAND SURFACE/CONTACT: DISTURBED SURFACE
 STRUCTURE: SMELL:
 COLOUR: BROWN PEBBLES:
 CONSISTENCY: HEAVY MINERALS:

UNIT: 2 THICKNESS: < .5 CMS

TEXTURE: SANDY MUD SURFACE/CONTACT:
 STRUCTURE: SMELL:
 COLOUR: GREYISH BROWN PEBBLES:
 CONSISTENCY: STIFF HEAVY MINERALS:

UNIT: 3 THICKNESS: < .5 CMS

TEXTURE: MEDIUM-COARSE SAND SURFACE/CONTACT:
 STRUCTURE: SMELL:
 COLOUR: LIGHT BROWN PEBBLES:
 CONSISTENCY: HEAVY MINERALS:

UNIT: 4 THICKNESS: 3 CMS

TEXTURE: MUDDY MEDIUM-COARSE SAND SURFACE/CONTACT:
 STRUCTURE: SMELL:
 COLOUR: GREYISH BROWN PEBBLES:
 CONSISTENCY: STIFF HEAVY MINERALS:

SEDIMENT BASE:
 TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
 UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 58.53 SILT: 29.05 CLAY: 12.42

SHEPARD LABEL: SILTY SAND

FOLK LABELS: GSM: MUDDY SAND SSC: SILTY SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-SAND PERCENTAGE INCLUDES GRAVEL FRACTION.
 -SUBSAMPLES- 2 SMALL CORES (SURFACE AND SUBSURFACE), 2 BOX SAMPLES.
 -SEE DESCRIPTION OF 0-86A WHICH DIFFERS MARKEDLY.
 REMAINING SAMPLE- 0-5CM, SMALL (73GM) CORE (AIR-DRIED).
 SUBSURFACE- SMALL (63GM) CORE (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-87B
LOCATION: UTM NORTH: 478443E EAST: 632278
DEPTH: 11.3 METRES
TIME: 1000 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BROWNISH BUFF PEBBLES: SANDSTONE
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: GLACIAL SEDIMENT INFERRED, SEE NOTES
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-SUBROUNDED COBBLE AND SMALL SUB-ANGULAR PEBBLES OF SANDSTONE.
TV OBSERVATIONS- HARD CLAY (TILL) STREWN WITH ALGAE-COVERED BOULDERS,
LOOSE SEDIMENT IN INTERSTICES.
-GLACIAL SEDIMENT INFERRED FROM SMALL SAMPLE OF POORLY SORTED COARSE
SEDIMENT (LAG) AND FROM TELEVISION OBSERVATIONS.
-BIOLOGY- TRANSLUCENT CLAMS, BROKEN WHITE SHELLS RECOVERED IN 0-87A.
REMAINING SAMPLE- 0-87A 5GM (AIR-DRIED), 0-87B 23GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-88A
LOCATION: UTM NORTH: 4785435 EAST: 632229
DEPTH: 14.1 METRES
TIME: 1015 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BUFF PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:

-BIOLOGY- BROKEN CLAM SHELLS, PLANOSPIRAL SNAIL SHELLS, BROWN ALGAL
FRAGMENTS.
REMAINING SAMPLE- 0-88A 32GM (AIR-DRIED), 0-88B 1.5GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-89
LOCATION: UTM NORTH: 4786442 EAST: 632228
DEPTH: 17.9 METRES
TIME: 1045 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: GREYISH BUFF PEBBLES: ANGULAR RED SHALE
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: BEDROCK INFERRED, ROCK CHIPS
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:
-BIOLOGY- CLAM SHELLS, SOWBUG, SMALL STRIPED LEECH, BROWN ALGAL
FRAGMENTS.
REMAINING SAMPLE- CARTON 2473M

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-90A
LOCATION: UTM NORTH: 4786431 EAST: 631233
DEPTH: 17.9 METRES
TIME: 1100 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: .5 - 2 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: 2 CMS

TEXTURE: PEBBLY SAND
STRUCTURE:
COLOUR: BUFF
CONSISTENCY:

SURFACE/CONTACT:
SMELL:
PEBBLES: RED SHALE
HEAVY MINERALS:

SEDIMENT BASE: BEDROCK INFERRED, ROCK CHIPS
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 98.74 SILT: .62 CLAY: .64

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPUT FOR DETAILED SIZE STATISTICS

COMMENTS:

-SAND PERCENTAGE INCLUDES GRAVEL FRACTION.
-BIOLOGY- BROKEN AND WHOLE SNAIL AND CLAM SHELLS.
REMAINING SAMPLE- NONE.

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-91
LOCATION: UTM NORTH: 4785428 EAST: 631245
DEPTH: 0.0 METRES
TIME: 1100 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BUFF PEBBLES: ANGULAR RED SHALE
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE: BEDROCK INFERRED, ROCK CHIPS
TEMPERATURE: PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:
-BIOLOGY- SMALL CLAMS, ALGAL FRAGMENTS.
REMAINING SAMPLE - 17GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-92B
LOCATION: UTM NORTH: 4784415 EAST: 631270
DEPTH: 6.7 METRES
TIME: 1115 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY MEDIUM-COARSE SANDS SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: PEBBLES: SUBANGULAR SHIELD
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

SIZE ANALYSIS: SHORT PIPETTE ONLY

% GRAV: 0.00 SAND: 94.22 SILT: 4.44 CLAY: 1.34

SHEPARD LABEL: SAND

FOLK LABELS: GSM: SAND SSC: SAND

SEE SIZDIST OUTPJT FOR DETAILED SIZE STATISTICS

COMMENTS:

-SAND PERCENTAGE INCLUDES GRAVEL FRACTION.
-BIOLOGY- A FEW SHELL FRAGMENTS.
REMAINING SAMPLE- 0-92A 8GM (AIR-DRIED), 0-92B 20GM (AIR-DRIED).

PROGRAM DECODE

DECODED NEARSHORE DATA

LAKE: ONTARIO STATION: 0-93B
LOCATION: UTM NORTH: 4783400 EAST: 631315
DEPTH: 3.5 METRES
TIME: 1130 JUNE 25, 1968

SCIENTIST: RUKAVINA LAUNCH/SHIP: GOSLING
SOUNDER: TWO FREQUENCIES POSITIONING: DECCA MINIFIX
SAMPLER: SHIPEK SUB-SAMPLES: TOTAL SAMPLE

SAMPLE DESCRIPTION: THICKNESS: L.T..5 CMS
NOTE: UNIT 1 IS TOP UNIT

UNIT: 1 THICKNESS: < .5 CMS

TEXTURE: PEBBLY FINE-MEDIUM SAND SURFACE/CONTACT:
STRUCTURE: SMELL:
COLOUR: BUFF PEBBLES:
CONSISTENCY: HEAVY MINERALS:

SEDIMENT BASE:
TEMPERATURE:

PH:

OTHER NOTES: NOTEBOOK

SAMPLE PHOTO: NO
UNDERWATER PHOTO: NO

COMMENTS:
-COBBLES AND ROUNDED TO SUB-ROUNDED PEBBLES.
REMAINING SAMPLE- NONE.

APPENDIX 5
Grain-Size Data: 1968 Samples

0-3A

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 27.7591

02/25/81

PHI	PCT.	CUMPCT.
-.50	.00	.00
0.00	0.00	.00
.50	.49	.00
1.00	.49	.49
1.50	3.88	.97
2.00	6.31	4.85
2.50	7.76	11.16
3.00	14.56	18.92
3.50	12.62	33.48
4.00	42.67	46.09
8.00	11.24	88.76
****	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

2.99 .69 -.41 .05

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	4.37	5TH	2.01	16TH	2.81	25TH	3.21
			75TH	6.71	84TH	7.55	95TH	*****

PCT. GRAVEL	0.00	SAND	46.09	SILT (PIPETTE)	42.67	CLAY (PIPETTE)	11.24
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 46.09 SILT/(SILT+CLAY) 79.15PCT.GRAV+SAND/SILT+CLAY .86

LABELS SHEPARD -SILTY SAND FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-4A SIEVE AND PIPETTE (2) SAMPLE WT. = 57.9394
 PCT. GRAVEL 0.00 SAND 80.86 SILT (PIPETTE) 14.17 CLAY (PIPETTE) 4.98
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 80.86 SILT/(SILT+CLAY) 74.00PCT.GRAV+SAND/SILT+CLAY 4.22
 LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

0-7A SIEVE AND PIPETTE (2) SAMPLE WT.= 44.3076
PCT. GRAVEL 0.00 SAND 27.35 SILT (PIPETTE) 64.58 CLAY (PIPETTE) 8.06
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 27.35 SILT/(SILT+CLAY) 88.90PCT.GRAV+SAND/SILT+CLAY .38
LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-8B SIEVE AND PIPETTE (2) SAMPLE WT. = 66.1609
PCT. GRAVEL 0.00 SAND 14.59 SILT (PIPETTE) 38.86 CLAY (PIPETTE) 46.55

(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 14.59 SILT/(SILT+CLAY) 45.49PCT.GRAV+SAND/SILT+CLAY .17

LABELS SHEPARD -SILTY CLAY FOLK(GMS)-SANDY MUD (SCS)-SANDY MUD

0-9A SIEVE AND PIPETTE (2) SAMPLE WT.= 55.9398
PCT. GRAVEL 0.00 SAND 38.33 SILT (PIPETTE) 47.30 CLAY (PIPETTE) 14.37

(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 38.33 SILT/(SILT+CLAY) 76.70PCT.GRAV+SAND/SILT+CLAY .62

LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-10A SIEVE AND PIPETTE (2) SAMPLE WT.= 60.4688
PCT. GRAVEL 0.00 SAND 5.90 SILT (PIPETTE) 65.96 CLAY (PIPETTE) 28.15
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 5.90 SILT/(SILT+CLAY) 70.09PCT.GRAV+SAND/SILT+CLAY .06
LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-SILT

0-14A SIEVE AND PIPETTE (2) SAMPLE WT.= 53.0525
 PCT. GRAVEL 0.00 SAND 17.79 SILT (PIPETTE) 57.98 CLAY (PIPETTE) 24.23
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 17.79 SILT/(SILT+CLAY) 70.52PCT.GRAV+SAND/SILT+CLAY .22
 LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-15A1 SIEVE AND PIPETTE (2) SAMPLE WT.= 38.2853
PCT. GRAVEL 0.00 SAND 30.65 SILT (PIPETTE) 46.73 CLAY (PIPETTE) 22.62
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 30.65 SILT/(SILT+CLAY) 67.38PCT.GRAV+SAND/SILT+CLAY .44
LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-15A2
PCT. GRAVEL 0.00 SAND 29.29 SILT (PIPETTE) 47.11 CLAY (PIPETTE) 23.60
SIEVE AND PIPETTE (2) SAMPLE WT. = 33.2387
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 29.29 SILT/(SILT+CLAY) 66.63PCT.GRAV+SAND/SILT+CLAY .41
LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY MUD

0-16A
PGT. GRAVEL 0.00 SAND 61.57 SILT (PIPETTE) 31.50 CLAY (PIPETTE) 6.92
SIEVE AND PIPETTE (2) SAMPLE WT.= 69.5667
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 61.57 SILT/(SILT+CLAY) 81.98PCT.GRAV+SAND/SILT+CLAY 1.60
LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

0-19A

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 46.1853

02/25/31

PHI	PCT.	CUM PCT.
- .50	.00	.00
0.00	0.00	.00
.50	0.00	.00
1.00	0.00	.00
1.50	4.87	4.87
2.00	3.65	8.52
2.50	3.65	12.17
3.00	9.73	21.90
3.50	25.55	47.46
4.00	16.43	63.88
4.50	29.51	93.39
5.00	6.61	100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

3.01 .73 -.57 .40

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.58	5TH	1.52	16TH	2.70	25TH	3.06
			75TH	5.51	84TH	6.73	95TH	*****

PCT. GRAVEL	0.00	SAND	63.88	SILT (PIPETTE)	29.51	CLAY (PIPETTE)	6.61
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 63.88 SILT/(SILT+CLAY) 81.70 PCT.GRAV+SAND/SILT+CLAY 1.77

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS - 0-19A ST VERY FINE SUSPENSION AFTER FULL RUN. STILL FALLING

0-20A

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 40.2546

02/25/81

PHI	PCT.	CUMFCT.
- .50	.00	.00
0.00	0.00	.00
.50	9.69	.00
1.00	2.15	9.69
1.50	4.31	11.84
2.00	6.46	16.15
2.50	15.61	22.61
3.00	29.61	38.22
3.50	14.53	67.83
4.00	16.34	82.36
8.00	1.30	98.70
*****	1.30	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.74 .93 -.52 -.03

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

3.19 1.56 .11 2.22

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	3.20	5TH	.75	16TH	1.98	25TH	2.58
			75TH	3.75	84TH	4.40	95TH	7.09

PCT. GRAVEL	0.00	SAND	82.36	SILT (PIPETTE)	16.34	CLAY (PIPETTE)	1.30
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 82.36 SILT/(SILT+CLAY) 92.62 PCT.GRAV+SAND/SILT+CLAY 4.67

LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS - 0-20A ST N.B. A SMALL AMOUNT IN SUSPENSION

0-22B SIEVE AND PIPETTE (2) SAMPLE WT.= 50.1216
 PCT. GRAVEL 0.00 SAND 28.39 SILT (PIPETTE) 50.78 CLAY (PIPETTE) 20.83
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 28.39 SILT/(SILT+CLAY) 70.91PCT.GRAV+SAND/SILT+CLAY .40
 LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-24A

SIEVE,SETT.TUBE,PIPETTE (2) SAMPLE WT.= 60.7075

02/25/81

PHI	PCT.	CUMPCT.
-0.50	.00	.00
0.00	0.00	.00
.50	7.57	.00
1.00	4.73	7.57
1.50	12.31	12.31
2.00	14.20	24.61
2.50	19.88	38.81
3.00	14.67	58.69
3.50	6.15	73.36
4.00	16.10	79.51
8.00	4.39	95.61
****		100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

2.40	.84	-.20	-.65
3.18	1.93	.40	1.78

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.78	5TH	.83	16TH	1.65	25TH	2.01
			75TH	3.63	84TH	5.11	95TH	7.85

PCT. GRAVEL	0.00	SAND	79.51	SILT (PIPETTE)	16.10	CLAY (PIPETTE)	4.39
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 79.51 SILT/(SILT+CLAY) 78.58 PCT.GRAV+SAND/SILT+CLAY 3.88

LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

0-26

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 19.4315

02/25/81

PHI	PCT.	CUM.PCT.	
-1.00			***
-.50	2.94	2.94	
	.00	2.94	
0.00	1.73	4.67	**
.50	6.91	11.58	*****
1.00	5.61	17.19	*****
1.50	16.84	34.02	*****
2.00	28.49	62.51	*****
2.50	26.76	89.28	*****
3.00	1.73	91.00	**
3.50	0.00	91.00	
4.00	5.88	96.88	*****
8.00	3.12	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

2.01	.83	-.72	2.19
2.19	1.32	.13	2.54

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE -.5 TO 4.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.28	5TH	.52	16TH	1.39	25TH	1.73
			75TH	2.73	84TH	2.90	95TH	6.72

PCT. GRAVEL	0.00	SAND	91.00	SILT (PIPETTE)	5.88	CLAY (PIPETTE)	3.12
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00
GRAVEL+SAND	91.00	SILT/(SILT+CLAY)	65.33	PCT.GRAV+SAND/SILT+CLAY	10.12		
LABELS SHEPARD	-SAND	FOLK (GMS) -SAND		(SCS) -SAND			

0-31A

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 19.1719

02/25/81

PHI	PCT.	CUMFCT.
-1.00		
-0.50	.04	.04
0.00	.00	.04
.50	0.00	.04
1.00	2.29	2.34
1.50	6.88	9.22
2.00	19.50	28.72
2.50	43.58	72.30
3.00	20.64	92.94
3.50	1.15	94.09
4.00	0.00	94.09
4.35	4.35	98.44
8.00	1.56	98.44
*****		100.00

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MEAN ST. DEV. SKEWNESS KURTOSIS.

2.16	.49	-.36	.90
2.23	.83	.20	2.26

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -0.5 TO 4.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS
FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.24	5TH	1.19	16TH	1.67	25TH	1.90
			75TH	2.57	84TH	2.78	95TH	4.84
PCT. GRAVEL	0.00	SAND	94.09	SILT (PIPETTE)	4.35	CLAY (PIPETTE)		1.56
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00
GRAVEL+SAND	94.09	SILT/(SILT+CLAY)		73.54	PCT. GRAV+SAND/SILT+CLAY			15.91
LABELS SHEPARD	-SAND	FOLK (GMS)	-SAND		(SCS)	-SAND		

0-32B

SIEVE AND PIPETTE (2)

SAMPLE WT.= 21.3908

02/25/81

PHI	PCT.	CUMFCT.
-1.50		
-1.00	.14	.14
-.50	.32	.45
0.00	.49	.94
.50	.74	1.68
1.00	2.08	3.76
1.50	9.15	12.92
2.00	31.07	43.99
2.50	25.46	69.45
3.00	17.21	86.66
3.50	3.97	90.63
4.00	.92	91.55
8.00	6.32	97.87
*****	2.13	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.05	.65	-.30	2.27
2.20	1.12	.38	2.17

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 4.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.12	5TH	1.07	16TH	1.55	25TH	1.69
			75TH	2.66	84TH	2.92	95TH	6.18
PCT. GRAVEL	.14	SAND	91.41	SILT (PIPETTE)	6.32	CLAY (PIPETTE)	2.13	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	91.55	SILT/(SILT+CLAY)	74.78		PCT.GRAV+SAND/SILT+CLAY	10.83		
LABELS SHEPARD	-SAND	FOLK (GMS)-SAND			(SCS)-SAND			

COMMENTS - 0-32B DATA COARSER THAN ZERO PHI SUBDIVIDED INTO HALF-PHI CLASSES

0-33

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 45.7526

02/25/81

PHI	PCT.	CUMFCT.
- .50	.00	.00
0.00	.39	.39
.50	3.91	.39
1.00	9.39	4.30
1.50	27.78	13.69
2.00	37.56	41.47
2.50	3.13	79.03
3.00	1.56	82.16
3.50	.78	83.73
4.00	9.12	84.51
8.00	6.37	93.63
****	100.00	100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

1.95 .52 -.05 1.45 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	2.11	5TH	1.04	16TH	1.54	25TH	1.70
			75TH	2.45	84TH	3.68	95TH	*****
PCT. GRAVEL	0.00	SAND	84.51	SILT (PIPETTE)	9.12	CLAY (PIPETTE)	6.37	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	84.51	SILT/(SILT+CLAY)	58.86	PCT.GRAV+SAND/SILT+CLAY	5.45			
LABELS SHEPARD	-SAND	FOLK(GMS)	-MUDDY SAND	(SCS)	-MUDDY SAND			

0-34A

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT.= 64.1026

02/25/81

PHI	PCT.	CUMFCT.
-0.50	.00	.00
0.00	0.00	.00
.50	0.00	.00
1.00	0.00	.00
1.50	0.00	.00
2.00	2.73	2.73
2.50	17.73	20.46
3.00	60.02	80.48
3.50	15.00	95.48
4.00	2.05	97.53
8.00	.22	97.75
*****	2.25	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.73	.36	-.02	.96	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
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2.75	.40	.02	1.40	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957
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PERCENTILES	MEDIAN	2.75	5TH	2.06	16TH	2.37	25TH	2.54
			75TH	2.95	84TH	3.12	95TH	3.48

PCT. GRAVEL	0.00	SAND	97.53	SILT (PIPETTE)	.22	CLAY (PIPETTE)	2.25
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND	97.53	SILT/(SILT+CLAY)	9.09	PCT.GRAV+SAND/SILT+CLAY	39.47
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LABELS SHEPARD	-SAND	FOLK(GMS)-SAND	(SCS)-SAND
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0-36A SIEVE AND PIPETTE (2) SAMPLE WT.= 47.0087
PCT. GRAVEL 0.00 SAND 18.98 SILT (PIPETTE) 63.20 CLAY (PIPETTE) 17.83
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 18.98 SILT/(SILT+CLAY) 78.00PCT.GRAV+SAND/SILT+CLAY .23
LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-37B

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 21.2630

02/25/81

PHI	PCT.	CUMFCT.	
- .50			
0.00	.00	.00	
.50	.59	.59	*
1.00	7.62	8.21	*****
1.50	12.90	21.10	*****
2.00	17.59	38.69	*****
2.50	34.59	73.28	*****
3.00	5.86	79.14	*****
3.50	7.62	86.76	*****
4.00	7.03	93.79	*****
4.50	5.64	99.44	*****
5.00	.56	100.00	*

MEAN ST.DEV. SKEWNESS KURTOSIS

2.11	.80	.13	-.24	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
2.26	1.12	.23	1.61	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.16	5TH	.79	16TH	1.30	25TH	1.61
			75TH	2.65	84TH	3.32	95TH	4.86

PCT. GRAVEL	0.00	SAND	93.79	SILT (PIPETTE)	5.64	CLAY (PIPETTE)	.56
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND	93.79	SILT/(SILT+CLAY)	90.91	PCT. GRAV+SAND/SILT+CLAY	15.11
LABELS SHEPARD -SAND		FOLK (GMS) -SAND		(SCS) -SAND	

0-38A

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 41.1346

02/25/81

PHI	PCT.	CUMFCT.	
- .50	.00	.00	
0.00	2.96	2.96	***
.50	6.77	9.73	*****
1.00	6.35	16.08	*****
1.50	14.38	30.46	*****
2.00	12.69	43.15	*****
2.50	6.77	49.92	*****
3.00	18.19	68.12	*****
3.50	13.12	81.23	*****
4.00	15.89	97.12	*****
8.00	2.88	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

2.39	1.02	-.16	-.97	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
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3.06	1.83	.18	1.43	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957
------	------	-----	------	--

PERCENTILES	MEDIAN	3.00	5TH	.65	16TH	1.49	25TH	1.81
			75TH	3.76	84TH	4.70	95TH	7.47

PCT. GRAVEL	0.00	SAND	81.23	SILT (PIPETTE)	15.89	CLAY (PIPETTE)	2.88
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND	81.23	SILT/(SILT+CLAY)	84.66	PCT. GRAV+SAND/SILT+CLAY	4.33
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LABELS SHEPARD	-SAND	FOLK (GMS)	-MUDDY SAND	(SCS)	-SILTY SAND
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0-39A

170475 SIEVE, SETT. TUBE, PIPET, SEDIGRAPH SAMPLE WT. = 20.8300

PHI PCT. CUM.PCT.

02/25/81

-1.50			
-1.00	.15	.15	
-.50	.05	.20	
0.00	0.00	.20	
.50	.31	.51	
1.00	.61	1.12	*
1.50	3.38	4.50	***
2.00	6.76	11.25	*****
2.50	13.51	24.76	*****
3.00	10.44	35.20	*****
3.50	15.35	50.56	*****
4.00	9.83	60.38	*****
4.50	2.11	62.49	**
5.00	6.32	68.81	*****
5.50	5.06	73.87	*****
6.00	2.53	76.40	***
6.50	2.53	78.93	***
7.00	2.70	81.62	***
7.50	3.20	84.83	***
8.00	1.69	86.51	**
8.50	1.69	88.20	**
9.00	1.69	89.89	**
9.50	1.69	91.57	**
10.00	.84	92.41	*
10.50	1.26	93.68	*
*****	6.32		*****
*****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

4.04	2.18	.50	.38	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
				FOR SIZE RANGE -1.0 TO 10.5 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.48	5TH	1.54	16TH	2.18	25TH	2.51
			75TH	5.72	84TH	7.37	95TH	*****

PCT. GRAVEL	.15	SAND	60.23	SILT (PIPETTE)	39.62	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	26.13	(SEDIGRAPH)	13.49

GRAVEL+SAND	60.38	SILT/(SILT+CLAY)	65.96	PCT. GRAV+SAND/SILT+CLAY	1.52
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LABELS SHEPARD	-SILTY SAND	FOLK (GMS)	-MUDDY SAND	(SCS)	-MUDDY SAND
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0-43B

SIEVE ONLY

SAMPLE WT.=122.0500

02/25/81

PHI	PCT.	CUM.PCT.	
-2.00			
-1.50	.16	.16	
-1.00	.49	.66	
-0.50	.57	1.23	*
0.00	.66	1.89	*
.50	.82	2.71	*
1.00	3.42	6.13	***
1.50	7.52	13.65	*****
2.00	11.21	24.86	*****
2.50	17.33	42.19	*****
3.00	48.41	90.59	*****
3.50	8.59	99.19	*****
4.00	.73	99.92	*
****	.08	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

2.33	.78	-.87	4.19	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 4.0 PHI
2.37	.70	-.46	1.19	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.58	5TH	.83	16TH	1.60	25TH	2.00
			75TH	2.84	84TH	2.93	95TH	3.26

PCT. GRAVEL	.66	SAND	99.26	SILT+CLAY	.08		
GRAVEL+SAND	99.92					GRAV+SAND/SILT+CLAY	1219.50
LABELS SHEPARD	-SAND		FOLK(GMS)-SAND			(SCS)-	

O-44B1
PCT. GRAVEL 0.00 SAND 15.83 SILT (PIPETTE) 71.01 CLAY (PIPETTE) 13.16
SIEVE AND PIPETTE (2) SAMPLE WT.= 48.0390
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 15.83 SILT/(SILT+CLAY) 84.36PCT.GRAV+SAND/SILT+CLAY .19
LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-4482 SIEVE AND PIPETTE (2) SAMPLE WT.= 86.0694
PCT. GRAVEL 0.00 SAND 23.77 SILT (PIPETTE) 63.49 CLAY (PIPETTE) 12.74
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 23.77 SILT/(SILT+CLAY) 83.29PCT.GRAV+SAND/SILT+CLAY .31
LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-45B SIEVE AND PIPETTE (2) SAMPLE WT.= 7.6765
PCT. GRAVEL 0.00 SAND 4.54 SILT (PIPETTE) 60.91 CLAY (PIPETTE) 34.55
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 4.54 SILT/(SILT+CLAY) 63.81PCT.GRAV+SAND/SILT+CLAY .05
LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-MUD

0-478
PCT. GRAVEL 0.00 SAND 75.92 SILT (PIPETTE) 16.84 CLAY (PIPETTE) 7.24
SIEVE AND PIPETTE (2) SAMPLE WT.= 54.1187
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 75.92 SILT/(SILT+CLAY) 69.95PCT.GRAV+SAND/SILT+CLAY 3.15
LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

0-4981 SIEVE AND PIPETTE (2) SAMPLE WT.= 21.5863
PCT. GRAVEL 0.00 SAND 35.51 SILT (PIPETTE) 54.05 CLAY (PIPETTE) 10.43
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 35.51 SILT/(SILT+CLAY) 83.82 PCT.GRAV+SAND/SILT+CLAY .55
LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-49B2 SIEVE AND PIPETTE (2) SAMPLE WT.= 53.4754
PCT. GRAVEL 0.00 SAND 52.28 SILT (PIPETTE) 34.59 CLAY (PIPETTE) 13.13

(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 52.28 SILT/(SILT+CLAY) 72.49PCT.GRAV+SAND/SILT+CLAY 1.10

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

0-50A SIEVE AND PIPETTE (2) SAMPLE WT.= 49.8569
PCT. GRAVEL 0.00 SAND 36.82 SILT (PIPETTE) 43.33 CLAY (PIPETTE) 19.85
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 36.82 SILT/(SILT+CLAY) 68.58PCT.GRAV+SAND/SILT+CLAY .58
LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-51A
 PCT. GRAVEL 0.00 SAND 92.85 SILT (PIPETTE) 4.27 CLAY (PIPETTE) 2.88
 SIEVE AND PIPETTE (2) SAMPLE WT.= 13.2001
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 92.85 SILT/(SILT+CLAY) 59.75PCT.GRAV+SAND/SILT+CLAY 12.98
 LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

0-52C SIEVE AND PIPETTE (2) SAMPLE WT.= 38.4370
PCT. GRAVEL 0.00 SAND 11.80 SILT (PIPETTE) 61.87 CLAY (PIPETTE) 26.33

(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 11.80 SILT/(SILT+CLAY) 70.15PCT.GRAV+SAND/SILT+CLAY .13

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-538
 PCT. GRAVEL 0.00 SAND 89.20 SILT (PIPETTE) 10.32 CLAY (PIPETTE) .43
 SIEVE AND PIPETTE (2) SAMPLE WT. = 42.4898
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 89.20 SILT/(SILT+CLAY) 95.55PCT.GRAV+SAND/SILT+CLAY 8.26
 LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

0-54A

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 18.7679

02/25/81

PHI	PCT.	CUMPCT.
-0.50	.00	.00
0.00	0.00	.00
.50	0.00	.00
1.00	0.00	.00
1.50	0.00	.00
2.00	18.54	18.54
2.50	58.06	76.60
3.00	18.05	94.66
3.50	.98	95.63
4.00	0.00	95.63
8.00	2.43	98.06
****	1.94	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.26	.33	.10	.03	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
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2.30	.43	.15	1.47	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957
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PERCENTILES	MEDIAN	2.27	5TH	1.63	16TH	1.93	25TH	2.06
			75TH	2.49	84TH	2.70	95TH	3.18

PCT. GRAVEL	0.00	SAND	95.63	SILT (PIPETTE)	2.43	CLAY (PIPETTE)	1.94
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND	95.63	SILT/(SILT+CLAY)	55.61	PCT.GRAV+SAND/SILT+CLAY	21.89
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LABELS SHEPARD -SAND	FOLK (GMS) -SAND	(SCS) -SAND
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0-55A
PCT. GRAVEL 0.00 SAND 30.00 SILT (PIPETTE) 25.66 CLAY (PIPETTE) 44.34
SIEVE AND PIPETTE (2) SAMPLE WT.= 2.6971
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 30.00 SILT/(SILT+CLAY) 36.65PCT.GRAV+SAND/SILT+CLAY .43
LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY MUD

0-57B SIEVE AND PIPETTE (2) SAMPLE WT.= 45.0470
PCT. GRAVEL 0.00 SAND 19.48 SILT (PIPETTE) 55.65 CLAY (PIPETTE) 24.87
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 19.48 SILT/(SILT+CLAY) 69.11PCT.GRAV+SAND/SILT+CLAY .24
LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-59A

170 475 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 21.2579

02/25/81

PHI	PCT.	CUMPCT.	
- .50	0.00	0.00	
0.00	0.00	0.00	
.50	.04	0.00	
1.00	.15	.04	
1.50	.93	.19	*
2.00	1.11	1.11	*
2.50	1.48	2.22	*
3.00	1.48	3.71	*
3.50	3.89	5.19	****
4.00	0.00	9.08	
4.50	2.76	9.08	***
5.00	7.81	11.83	*****
5.50	7.35	19.64	*****
6.00	8.72	26.99	*****
6.50	8.27	35.71	*****
7.00	10.10	43.98	*****
7.50	8.27	54.08	*****
8.00	6.43	62.35	*****
8.50	4.59	68.77	*****
9.00	4.59	73.37	*****
9.50	3.67	77.96	*****
10.00	3.67	81.63	*****
10.50	3.67	85.31	*****
11.00	11.02	88.98	*****
****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

6.97 2.04 -.12 -.18

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 11.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	7.30	5TH	3.44	16TH	5.27	25TH	5.86
			75TH	9.18	84TH	10.32	95TH	*****

PCT. GRAVEL 0.00 SAND 9.08 SILT (PIPETTE) 90.92 CLAY (PIPETTE) 0.00
 (SEDIGRAPH) 53.27 (SEDIGRAPH) 37.65

GRAVEL+SAND 9.08 SILT/(SILT+CLAY) 58.59 PCT.GRAV+SAND/SILT+CLAY .10

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-MUD

COMMENTS -

0-59A SOME ORGANIC MATTER PRESENT IN SETT TUBE

0-60B SIEVE AND PIPETTE (2) SAMPLE WT.= 32.7915
PCT. GRAVEL 0.00 SAND 8.04 SILT (PIPETTE) 68.47 CLAY (PIPETTE) 23.49
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 8.04 SILT/(SILT+CLAY) 74.45PCT.GRAV+SAND/SILT+CLAY .09
LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-SILT

0-62A

SIEVE AND PIPETTE (2)

SAMPLE WT. = 54.3921

02/25/81

PHI	PCT.	CUMFCT.
- .50		
0.00	.02	.02
.50	.03	.05
1.00	.21	.26
1.50	.60	.86
2.00	10.88	11.74
2.50	46.47	58.21
3.00	35.87	94.08
3.50	4.58	98.66
4.00	.39	99.04
8.00	.29	99.33
****	.67	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.42 .40 -.10 1.20

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

2.44 .42 .04 .98

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.41	5TH	1.69	16TH	2.05	25TH	2.14
			75TH	2.73	84TH	2.86	95TH	3.10

PCT. GRAVEL	0.00	SAND	99.04	SILT (PIPETTE)	.29	CLAY (PIPETTE)	.67
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 99.04 SILT/(SILT+CLAY) 30.00PCT.GRAV+SAND/SILT+CLAY 103.59

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

0-638 SIEVE AND PIPETTE (2) SAMPLE WT.= 61.0828
PCT. GRAVEL 0.00 SAND 11.80 SILT (PIPETTE) 60.82 CLAY (PIPETTE) 27.37
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 11.80 SILT/(SILT+CLAY) 68.96PCT.GRAV+SAND/SILT+CLAY .13
LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

0-648

220 475 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH SAMPLE WT.= 20.9554

02/25/81

PHI	PCT.	CUM PCT.	
- .50			
0.00	0.00	0.00	
.50	0.00	0.00	
1.00	.02	.02	
1.50	.34	.36	
2.00	.27	.63	
2.50	.45	1.08	
3.00	.45	1.53	
3.50	1.08	2.62	*
4.00	2.44	5.06	**
4.50	.10	5.15	
5.00	4.70	9.85	*****
5.50	6.71	16.56	*****
6.00	10.55	27.11	*****
6.50	8.15	35.27	*****
7.00	10.07	45.33	*****
7.50	12.47	57.80	*****
8.00	8.63	66.43	*****
8.50	6.71	73.15	*****
9.00	5.75	78.90	*****
9.50	5.75	84.66	*****
10.00	3.84	88.49	****
****	11.51	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

6.86 1.63 -.20 .21

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	7.19	5TH	3.99	16TH	5.46	25TH	5.90
			75TH	8.66	84TH	9.44	95TH	*****
PCT. GRAVEL	0.00	SAND	5.06	SILT (PIPETTE)	94.94	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	61.38	(SEDIGRAPH)	33.57	
GRAVEL+SAND	5.06	SILT/(SILT+CLAY)	64.65	PCT.GRAV+SAND/SILT+CLAY			.05	
LABELS SHEPARD	-CLAYEY	SILT FOLK (GMS)	-MUD			(SCS)	-MUD	

0-85A

170475 SIEVE, SETT. TUBE, PIPET, SEDIGRAPH

SAMPLE WT. = 20.6580

PHI PCT. CUM PCT.

02/25/81

-2.50	.43		
-2.00	.00	.43	
-1.50	.09	.43	
-1.00	.00	.52	
-.50	0.00	.52	
0.00	0.00	.52	
.50	.15	.52	
1.00	.46	.67	
1.50	1.54	1.13	**
2.00	.92	2.67	*
2.50	1.23	3.59	*
3.00	4.46	4.82	****
3.50	10.77	9.29	*****
4.00	3.09	20.06	***
4.50	6.18	23.15	*****
5.00	8.83	29.33	*****
5.50	6.18	38.17	*****
6.00	7.07	44.35	*****
6.50	6.18	51.42	*****
7.00	6.18	57.60	*****
7.50	5.30	63.78	*****
8.00	4.42	69.08	****
8.50	5.30	73.50	*****
9.00	2.65	78.80	***
9.50	3.53	81.45	****
10.00	3.53	84.98	****
10.50	1.77	88.52	**
11.00	9.72	90.28	*****
*****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

6.16 2.32 -.04 -.14

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.0 TO 11.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	6.40	5TH	3.02	16TH	3.81	25TH	4.65
			75TH	8.64	84TH	9.86	95TH	*****

PCT. GRAVEL	.52	SAND	19.54	SILT (PIPETTE)	79.94	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	49.02	(SEDIGRAPH)	30.92

GRAVEL+SAND 20.06 SILT/(SILT+CLAY) 61.33 PCT.GRAV+SAND/SILT+CLAY .25

LABELS SHEPARD -SAN SIL CLY FOLK (GMS)-SANDY MUD

(SCS)-SANDY MUD

0-66B

220475 SIEVE, SETT. TUBE, PIPET, SEDIGRAPH SAMPLE WT. = 20.2880

02/25/81

PHI	PCT.	CUM PCT.	
- .50	.02	.02	
0.00	.45	.48	
.50	1.44	1.91	*
1.00	1.68	3.59	**
1.50	3.59	7.18	***
2.00	4.31	11.49	****
2.50	3.11	14.60	****
3.00	4.31	18.91	*****
3.50	7.66	26.57	*****
4.00	1.91	28.47	**
4.50	5.72	34.20	*****
5.00	6.87	41.06	*****
5.50	5.53	46.59	*****
6.00	5.72	52.32	*****
6.50	6.68	58.99	*****
7.00	5.72	64.71	*****
7.50	5.72	70.44	*****
8.00	5.72	76.16	*****
8.50	4.77	80.93	*****
9.00	4.96	85.89	*****
9.50	4.58	90.46	***
10.00	2.86	93.32	*****
10.50	6.68	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

5.88 2.55 -.08 -.95 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.5 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	6.30	5TH	1.70	16TH	3.16	25TH	3.90
			75TH	8.40	84TH	9.31	95TH	*****
PCT. GRAVEL	0.00	SAND	26.57	SILT (PIPETTE)	73.43	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	43.87	(SEDIGRAPH)	29.56	
GRAVEL+SAND	26.57	SILT/(SILT+CLAY)	59.74	PCT.GRAV+SAND/SILT+CLAY	.36			
LABELS SHEPARD	-SAN	SIL	CLY	FOLK(GMS)	-SANDY MUD	(SCS)	-SANDY MUD	

0-67A

SIEVE AND PIPETTE (2) SAMPLE WT.= 15.6992

PCT. GRAVEL 0.00 SAND 4.99 SILT (PIPETTE) 56.40 CLAY (PIPETTE) 38.61

(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 4.99 SILT/(SILT+CLAY) 59.36PCT.GRAV+SAND/SILT+CLAY .05

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-MUD

0-688 SIEVE AND PIPETTE (2) SAMPLE WT.= 38.2056
 PCT. GRAVEL 0.00 SAND 36.48 SILT (PIPETTE) 40.60 CLAY (PIPETTE) 22.92
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 36.48 SILT/(SILT+CLAY) 63.92PCT.GRAV+SAND/SILT+CLAY .57
 LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY MUD

0-70B

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 56.8526

02/25/81

PHI	PCT.	CUMFCT.
- .50	.00	.00
0.00	0.00	.00
.50	0.00	.00
1.00	4.99	.00
1.50	4.99	4.99
2.00	12.47	9.98
2.50	44.06	22.45
3.00	28.27	66.51
3.50	2.49	94.78
4.00	1.06	97.27
8.00	1.67	98.33
*****	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

2.73	.54	-.49	.96	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
2.79	.58	-.18	1.35	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.81	5TH	1.50	16TH	2.24	25TH	2.53
			75TH	3.15	84TH	3.31	95TH	3.54
PCT. GRAVEL	0.00	SAND	97.27	SILT (PIPETTE)	1.06	CLAY (PIPETTE)		1.67
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00
GRAVEL+SAND	97.27	SILT/(SILT+CLAY)	38.66	PCT.GRAV+SAND/SILT+CLAY				35.63
LABELS SHEPARD	-SAND		FOLK(GMS)	-SAND		(SCS)		-SAND

0-72B

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT.= 48.2300

02/25/81

PHI	PCT.	CUM.PCT.
- .50	.00	.00
0.00	0.00	0.00
.50	6.10	6.10
1.00	6.71	12.81
1.50	12.81	25.62
2.00	15.86	41.48
2.50	15.86	57.34
3.00	6.71	64.05
3.50	1.83	65.88
4.00	24.24	90.12
8.00	9.88	100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

2.18 .76 -.10 -.62

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	2.77	5TH	.91	16TH	1.62	25TH	1.98
			75TH	5.50	84TH	6.99	95TH*****	

PCT. GRAVEL	0.00	SAND	65.88	SILT (PIPETTE)	24.24	CLAY (PIPETTE)	9.88
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 65.88 SILT/(SILT+CLAY) 71.05 PCT.GRAV+SAND/SILT+CLAY 1.93

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS - 0-72B ST VERY FINE PARTICLES LEFT IN TUBE AFTER RUN

0-73B
 PCT. GRAVEL 0.00 SAND 4.20 SILT (PIPETTE) 62.20 CLAY (PIPETTE) 33.60
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 4.20 SILT/(SILT+CLAY) 64.93PCT.GRAV+SAND/SILT+CLAY .04
 LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-MUD

SIEVE AND PIPETTE (2) SAMPLE WT.= 21.8519

0-74B
PCT. GRAVEL 0.00 SAND 87.72 SILT (PIPETTE) 8.28 CLAY (PIPETTE) 4.00
SIEVE AND PIPETTE (2) SAMPLE WT. = 51.6251
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 87.72 SILT/(SILT+CLAY) 67.44 PCT. GRAV+SAND/SILT+CLAY 7.14
LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

0-75B

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT.= 62.3687

02/25/81

PHI	PCT.	CUM PCT.
-0.50	.00	.00
0.00	4.33	4.33
.50	9.52	13.85
1.00	12.99	26.84
1.50	24.68	51.52
2.00	26.41	77.93
2.50	13.85	91.78
3.00	3.46	95.25
3.50	0.00	95.25
4.00	2.98	98.23
8.00	1.77	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

1.85	.72	-.17	-.42
1.92	.85	-.03	1.18

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 0.0 TO 4.0 PHI
 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD, 1957

PERCENTILES	MEDIAN	1.97	5TH	.54	16TH	1.08	25TH	1.43
			75TH	2.44	84TH	2.72	95TH	3.46

PCT.	GRAVEL	0.00	SAND	95.25	SILT (PIPETTE)	2.98	CLAY (PIPETTE)	1.77
					(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND	95.25	SILT/(SILT+CLAY)	62.75	PCT.GRAV+SAND/SILT+CLAY	20.04
LABELS SHEPARD -SAND		FOLK (GMS) -SAND		(SCS) -SAND	

0-76A SIEVE AND PIPETTE(2) SAMPLE WT.= 57.8692
PCT. GRAVEL 0.00 SAND 65.66 SILT (PIPETTE) 22.08 CLAY (PIPETTE) 12.26
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 65.66 SILT/(SILT+CLAY) 64.29PCT.GRAV+SAND/SILT+CLAY 1.91
LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-MUDDY SAND

0-78A1

SIEVE AND PIPETTE (2) SAMPLE WT.= 51.0773

PCT. GRAVEL 0.00 SAND 23.91 SILT (PIPETTE) 42.75 CLAY (PIPETTE) 33.34

(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 23.91 SILT/(SILT+CLAY) 56.19PCT.GRAV+SAND/SILT+CLAY .31

LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY MUD

0-78A2 SIEVE AND PIPETTE (2) SAMPLE WT.= 42.1462
PCT. GRAVEL 0.00 SAND 95.40 SILT (PIPETTE) 2.73 CLAY (PIPETTE) 1.87
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 95.40 SILT/(SILT+CLAY) 59.38PCT.GRAV+SAND/SILT+CLAY 20.72
LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

0-79A
PCT. GRAVEL 0.00 SAND 96.36 SILT (PIPETTE) 1.34 CLAY (PIPETTE) 2.30
SIEVE AND PIPETTE (2) SAMPLE WT. = 55.6526
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 96.36 SILT/(SILT+CLAY) 36.76 PCT. GRAV+SAND/SILT+CLAY 26.50
LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

0-80B
 PCT. GRAVEL 0.00 SAND 97.74 SIEVE AND PIPETTE (2) SAMPLE WT.= 59.7545
 SILT (PIPETTE) 1.35 CLAY (PIPETTE) .92
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 97.74 SILT/(SILT+CLAY) 59.47PCT.GRAV+SAND/SILT+CLAY 43.20
 LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

0-81A

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 66.4998

02/25/81

PHI	PCT.	CUMPCT.	
-0.50	.00	.00	
0.00	3.64	3.64	****
.50	9.71	13.36	*****
1.00	23.68	47.35	*****
1.50	23.07	70.42	*****
2.00	14.57	84.99	*****
2.50	4.86	89.85	*****
3.00	1.21	91.06	*
3.50	6.28	97.34	*****
4.00	2.66	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

1.92	.77	-.09	-.35	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
2.05	1.36	.24	2.16	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.06	5TH	.57	16TH	1.13	25TH	1.53
			75TH	2.66	84TH	2.97	95TH	6.51
PCT. GRAVEL	0.00	SAND	91.06	SILT (PIPETTE)	6.28	CLAY (PIPETTE)	2.66	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	91.06	SILT/(SILT+CLAY)	70.26PCT.GRAV+SAND/SILT+CLAY			10.19		
LABELS SHEPARD	-SAND	FOLK(GMS)-SAND			(SCS)-SAND			

0-82B

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 54.6431

02/25/81

PHI	PCT.	CUMPCT.
- .50	.00	.00
0.00	2.08	2.08
.50	15.57	17.65
1.00	23.88	41.53
1.50	45.16	86.69
2.00	10.90	97.59
2.50	1.56	99.15
3.00	0.00	99.15
3.50	0.00	99.15
4.00	.37	99.52
8.00	.48	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

1.51	.50	-.14	-.17	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
1.50	.53	-.19	1.02	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	1.59	5TH	.59	16TH	.95	25TH	1.15
			75TH	1.87	84TH	1.97	95TH	2.38
PCT. GRAVEL	0.00	SAND	99.15	SILT (PIPETTE)	.37	CLAY (PIPETTE)		.48
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00
GRAVEL+SAND	99.15	SILT/(SILT+CLAY)	43.97	PCT.GRAV+SAND/SILT+CLAY	116.77			
LABELS SHEPARD	-SAND	FOLK(GMS)	-SAND	(SCS)	-SAND			

0-83A

SIEVE AND PIPETTE (2) SAMPLE WT. = 42.1592

PCT. GRAVEL 0.00 SAND 94.31 SILT (PIPETTE) 2.92 CLAY (PIPETTE) 2.77

(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 94.31 SILT/(SILT+CLAY) 51.33PCT.GRAV+SAND/SILT+CLAY 16.57

LABELS SHEPARD -SAND

FOLK(GMS)-SAND

(SCS)-SAND

02/25/81

PHI	PCT.	CUMPCT.
- .50	.00	.00
0.00	6.02	6.02
.50	12.05	18.07
1.00	17.21	35.29
1.50	31.84	67.13
2.00	26.68	93.81
2.50	4.30	98.11
3.00	.86	98.97
3.50	0.00	98.97
4.00	.44	99.41
8.00	.59	100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

1.64	.65	-.19	-.35
1.65	.69	-.17	.96

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 0.0 TO 4.0 PHI
 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES	MEDIAN	1.73	5TH	.41	16TH	.91	25TH	1.20
			75TH	2.15	84TH	2.32	95TH	2.64

PCT. GRAVEL	0.00	SAND	98.97	SILT (PIPETTE)	.44	CLAY (PIPETTE)	.59
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00
GRAVEL+SAND	98.97	SILT/(SILT+CLAY)	42.67	PCT.GRAV+SAND/SILT+CLAY	96.18		
LABELS SHEPARD	-SAND	FOLK(GMS)-SAND		(SCS)-SAND			

0-86B1 SIEVE AND PIPETTE (2) SAMPLE WT.= 51.5059
PCT. GRAVEL 0.00 SAND 58.53 SILT (PIPETTE) 29.05 CLAY (PIPETTE) 12.42
(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
GRAVEL+SAND 58.53 SILT/(SILT+CLAY) 70.06PCT.GRAV+SAND/SILT+CLAY 1.41
LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

0-90A
 PCT. GRAVEL 0.00 SAND 98.74 SILT (PIPETTE) .62 CLAY (PIPETTE) .64
 SIEVE AND PIPETTE (2) SAMPLE WT.= 59.6304
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 98.74 SILT/(SILT+CLAY) 48.94 PCT.GRAV+SAND/SILT+CLAY 78.30
 LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

0-92B

SIEVE AND PIPETTE (2) SAMPLE WT. = 23.8675

PCT. GRAVEL 0.00 SAND 94.22 SILT (PIPETTE) 4.44 CLAY (PIPETTE) 1.34

(SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00

GRAVEL+SAND 94.22 SILT/(SILT+CLAY) 76.81 PCT. GRAV+SAND/SILT+CLAY 16.30

LABELS SHEPARD -SAND

FOLK (GMS) -SAND

(SCS) -SAND

APPENDIX 6
Nearshore Sediment Distribution of Western Lake Ontario
(Under separate Cover)

APPENDIX 7

**Map of 1972 Jet and Sample Sites
(Under Separate Cover)**

APPENDIX 8

Jet Data on Sediment Thickness

LAKE ONTARIO JET DATA - 1972

Niagara Area

Station No.	Date	U.T.M. Northing	U.T.M. Easting	Depth m	Penetration m	Notes
JOA1	21-06-72	4792896	658877	4.5	0.0	Bedrock exposed. No Shipek sample.
JOA2	21-06-72	4794904	657680	9.0	8.0	Bounced during penetration. Bottomed on bedrock.
JOA3	21-06-72	4796935	656427	12.5	9.5	Bounced during penetration. Bottomed on bedrock.
JOA4	21-06-72	4794572	661109	12.5	2.25	Bounced during penetration of upper 1/2 m. Bottomed on glacial sediment.
JOA5	21-06-72	4796528	659908	12.0	11.25	Bounced during penetration. Bottomed on glacial sediment.
JOA6	21-06-72	4798189	658859	18.0	-	No jet value - anchors would not hold. Shipek sample collected.
JOA7	02-08-72	4794361	664488	7.0	0.0	Bottom of exposed bedrock and boulders.
JO1	16-06-72	4793283	655450	10.0	-	Current too strong to operate jet.
JO2	19-06-72	4795365	654200	8.5	10.25	Bounced in upper part of hole. Bottomed in sticky glacial sediment.
JO3	19-06-72	4797466	652878	15.5	8.5	Bottomed on glacial sediment.
JO4	19-06-72	4791647	653194	6.0	0.75	Bounced during penetration. Bottomed on bedrock.
JO5	19-06-72	4793784	651950	12.5	9.75	Bottomed on glacial sediment.
JO6	19-06-72	4795941	650634	20.0	5.75	Bottomed on glacial sediment.
JO7	19-06-72	4792204	649699	15.5	5.25	Bottomed on glacial sediment. Shipek sample consisted of 1 cm of silty sand over stiffer clay-silt.
JO8	19-06-72	4794415	648388	22.0	3.25	Bottomed on glacial sediment. Very small Shipek sample.

LAKE ONTARIO JET DATA - 1972

Niagara Area

Station No.	Date	U.T.M. Northing	U.T.M. Easting	Depth m	Penetration m	Notes
JO9	19-06-72	4790620	647438	15.0	4.5	Bottomed on glacial sediment.
JO10	19-06-72	4792888	646135	25.5	3.5	Penetration through stiff sediment. Stiff, silty clay recovered in base of Shipek sample.
JO11	19-06-72	4788438	646128	7.5	0.5	Penetration through stiff sediment. Bottomed on bedrock. Stiff clay (glacial?) recovered in base of Shipek sample.
JO12	19-06-72	4789561	645923	10.5	3.5	Bounced during penetration. Bottomed on bedrock.
JO13	16-06-72	4789818	644763	14.5	1.0	Bottomed on bedrock.
JO14	19-06-72	4791358	643875	26.5	3.0	Bottomed on glacial? sediment.
JO15	21-06-72	4789759	641639	27.0	2.75	Bottomed on glacial sediment. Stiff clay recovered in base of Shipek sample.
JO16	21-06-72	4788283	639320	28.0	2.5	Bottomed on glacial sediment. Stiff clay recovered in base of Shipek sample.
JO17	21-06-72	4785574	638608	17.5	2.0	Material at base of hole uncertain. Possibly bedrock.
JO18	20-06-72	4782701	637043	7.5	1.0	Bounced during penetration. Bottomed on bedrock. Shipek sample includes fragments of very stiff glaciolacustrine clay.
JO19	20-06-72	4784499	637046	16.5	1.0?	Bottomed on glacial sediment. Refusal depth poorly defined.
JO20	21-06-72	4786732	637018	28.0	3.75	Material at base of hole uncertain. Possibly glacial sediment.
JO21	20-06-72	4782530	635827	8.0	2.25	Surface boulder at site. Bottomed on bedrock. Fragments of stiff glaciolacustrine clay recovered in Shipek sample.
JO22	20-06-72	4784295	635092	16.0	0.5	Boulder bottom. Appeared to bottom on boulders.

LAKE ONTARIO JET DATA - 1972

Niagara Area

Station No.	Date	U.T.M.		Depth m	Penetration m	Notes
		Northing	Easting			
JO22A	03-08-72	4782865	634668	11.3	0.25	Bottomed on bedrock.
JO22B	03-08-72	4782783	633678	11.8	0.25	Bottomed on bedrock.
JO23	20-06-72	4783583	632331	10.5	0.25	Surface boulders.

APPENDIX 9
Grain-Size Data: 1972 Samples

JOA1-A

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 20.6074

02/25/81

PHI	PCT.	CUMPCT.
-1.50		
-1.00	.12	.12
-.50	0.00	.12
0.00	0.00	.12
.50	0.00	.12
1.00	.48	.60
1.50	3.33	3.93
2.00	18.10	22.03
2.50	66.68	88.71
3.00	8.57	97.28
3.50	.48	97.76
4.00	0.00	97.76
4.50	1.58	99.34
5.00	.66	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.16 .35 -.86 11.83

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 4.0 PHI

2.17 .36 -.10 1.46

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.21	5TH	1.53	16TH	1.83	25TH	2.02
			75TH	2.40	84TH	2.46	95TH	2.87
PCT. GRAVEL	.12	SAND	97.64	SILT (PIPETTE)	1.58	CLAY (PIPETTE)		.66
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00
GRAVEL+SAND	97.76	SILT/(SILT+CLAY)	70.50	PCT.GRAV+SAND/SILT+CLAY	43.57			
LABELS SHEPARD	-SAND	FOLK(GMS)-SAND		(SCS)-SAND				

JOA-2

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 21.9794

02/25/81

PHI	PCT.	CUMPCT.
- .50	0.00	0.00
0.00	.41	0.41
.50	5.37	5.78
1.00	11.56	17.34
1.50	37.99	55.34
2.00	41.29	96.63
2.50	.83	97.46
3.00	.41	97.87
3.50	0.00	97.87
4.00	1.90	99.77
8.00	.23	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

1.86	.45	-.40	.70
1.91	.46	-.18	1.00

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 0.0 TO 4.0 PHI
 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES	MEDIAN	1.93	5TH	.93	16TH	1.44	25TH	1.60
			75TH	2.24	84TH	2.35	95TH	2.48

PCT. GRAVEL	0.00	SAND	97.87	SILT (PIPETTE)	1.90	CLAY (PIPETTE)	.23
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND	97.87	SILT/(SILT+CLAY)	89.24	PCT.GRAV+SAND/SILT+CLAY	45.92
LABELS SHEPARD	-SAND	FOLK(GMS)-SAND		(SCS)-SAND	

JOA-3

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 20.9860

02/25/81

PHI	PCT.	CUMPCT.	
-0.50			
0.00	0.00	0.00	
.50	.51	.51	*
1.00	1.52	2.02	**
1.50	12.14	14.16	*****
2.00	42.49	56.65	*****
2.50	36.42	93.07	*****
3.00	2.02	95.10	**
3.50	1.01	96.11	*
4.00	0.00	96.11	
8.00	3.35	99.46	***
****	.54		*
	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

1.89	.42	-.15	1.36	KRUNBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
1.94	.49	.10	1.22	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	1.92	5TH	1.12	16TH	1.52	25TH	1.63
			75TH	2.25	84TH	2.38	95TH	2.98

PCT. GRAVEL	0.00	SAND	96.11	SILT (PIPETTE)	3.35	CLAY (PIPETTE)	.54
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 96.11 SILT/(SILT+CLAY) 86.23 PCT.GRAV+SAND/SILT+CLAY 24.71

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

COMMENTS -
JOA-3 SHELL .0098 GM

JOA-4

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 20.9362

02/25/81

PHI	PCT.	CUM PCT.
- .50	0.00	0.00
0.00	0.00	0.00
.50	0.00	0.00
1.00	.46	0.46
1.50	4.11	4.56
2.00	8.21	12.78
2.50	31.49	44.26
3.00	10.95	55.21
3.50	5.93	61.15
4.00	30.25	91.40
8.00	8.60	100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

2.79 .51 -.08 .35

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.26	5TH	2.03	16TH	2.55	25TH	2.69
			75TH	5.83	84TH	7.02	95TH	*****

PCT. GRAVEL	0.00	SAND	61.15	SILT (PIPETTE)	30.25	CLAY (PIPETTE)	8.60
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 61.15 SILT/(SILT+CLAY) 77.87 PCT.GRAV+SAND/SILT+CLAY 1.57

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS - JOA-4 S.T. A LITTLE ORGANIC

JOA-5

SIEVE,SETT.TUBE,PIPETTE (2) SAMPLE WT.= 21.2672

02/25/81

PHI	PCT.	CUMPCT.
- .50	0.00	0.00
0.00	.49	0.49
.50	0.00	.49
1.00	3.43	.49
1.50	7.85	3.92
2.00	15.69	11.77
2.50	61.79	27.46
3.00	3.92	89.26
3.50	.49	93.18
4.00	4.74	93.67
8.00	1.59	98.41
*****		100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.54 .46 -.80 3.69

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

2.59 .74 .02 3.15

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.68	5TH	1.57	16TH	2.13	25TH	2.42
			75TH	2.88	84TH	2.96	95TH	5.12

PCT. GRAVEL	0.00	SAND	93.67	SILT (PIPETTE)	4.74	CLAY (PIPETTE)	1.59
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 93.67 SILT/(SILT+CLAY) 74.87 PCT.GRAV+SAND/SILT+CLAY 14.80

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

JOA-6

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 20.9615

02/25/81

PHI	PCT.	CUM PCT.
- .50	0.00	0.00
0.00	0.00	0.00
.50	0.00	0.00
1.00	0.00	0.00
1.50	1.00	1.00
2.00	2.99	3.99
2.50	16.95	20.94
3.00	60.82	81.76
3.50	6.98	88.74
4.00	1.99	90.73
8.00	7.62	98.36
****	1.64	98.36
		100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.67 .37 -.26 2.84

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

2.75 .84 .35 4.20

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.74	5TH	2.03	16TH	2.35	25TH	2.53
			75TH	2.94	84TH	3.16	95TH	6.24

PCT. GRAVEL	0.00	SAND	90.73	SILT (PIPETTE)	7.62	CLAY (PIPETTE)	1.64
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 90.73 SILT/(SILT+CLAY) 82.27 PCT.GRAV+SAND/SILT+CLAY 9.79

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SGS)-SAND

COMMENTS -

JOA-6 SHELLS .4298 GM
JOA-6 S.T. SOME SHELLS IN FIRST READING

JOA-8

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 16.3552

02/25/81

PHI	PCT.	CUM.PCT.	
-0.50			
0.00	0.00	0.00	
.50	0.00	0.00	*
1.00	.94	.94	*
1.50	.94	1.89	*
2.00	.94	2.83	
2.50	4.71	7.54	*****
3.00	49.02	56.56	*****
3.50	29.22	85.78	*****
4.00	2.83	88.61	***
4.50	8.72	97.33	*****
5.00	2.67	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

2.87	.44	-.83	6.44	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
3.00	.93	.46	3.02	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.93	5TH	2.23	16TH	2.59	25TH	2.68
			75TH	3.32	84TH	3.47	95TH	6.93

PCT. GRAVEL	0.00	SAND	88.61	SILT (PIPETTE)	8.72	CLAY (PIPETTE)	2.67
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 88.61 SILT/(SILT+CLAY) 76.57PCT.GRAV+SAND/SILT+CLAY 7.78

LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS -
JOA-8 SHELL .0073 GM.

JOA-9

SIEVE,SETT.TUBE,PIPETTE (2) SAMPLE WT.= 20.6162

02/25/81

PHI	PCT.	CUMPCT.
-0.50		
0.00	0.00	0.00
0.50	0.00	0.00
1.00	.46	.46
1.50	.46	.92
2.00	1.84	2.76
2.50	4.60	7.37
3.00	40.51	47.88
3.50	29.46	77.34
4.00	5.52	82.87
4.50	13.84	96.71
5.00	3.29	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.93	.44	-.52	3.71	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI
3.32	1.23	.60	2.90	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	3.04	5TH	2.24	16TH	2.61	25TH	2.72
			75TH	3.46	84TH	4.33	95TH	7.51
PCT. GRAVEL	0.00	SAND	82.87	SILT (PIPETTE)	13.84	CLAY (PIPETTE)		3.29
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00

GRAVEL+SAND 82.87 SILT/(SILT+CLAY) 80.79PCT.GRAV+SAND/SILT+CLAY 4.84
 LABELS SHEPARD -SAND FOLK(GMS)-M(LDDY SAND (SCS)-SILTY SAND
 COMMENTS -
 JOA-9 SHELL .0181 GM.

J02

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 21.5834

02/25/81

PHI	PCT.	CUMPCT.	
-2.50			
-2.00	.42	.42	
-1.50	2.50	2.92	**
-1.00	7.01	9.92	*****
-.50	6.83	16.76	*****
0.00	.40	17.16	
.50	20.56	37.72	*****
1.00	18.55	56.27	*****
1.50	20.97	77.24	*****
2.00	13.71	90.95	*****
2.50	3.23	94.17	**
3.00	1.61	95.79	*
3.50	.81	96.59	
4.00	.40	97.00	
8.00	2.66	99.66	***
****	.34	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

.68 1.06 -.20 .13 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE -2.0 TO 4.0 PHI
 .67 1.20 -.13 1.34 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES MEDIAN .83 5TH -1.35 16TH -.56 25TH .19
 75TH 1.45 84TH 1.75 95TH 2.76
 PCT. GRAVEL 9.92 SAND 87.07 SILT (PIPETTE) 2.66 CLAY (PIPETTE) .34
 (SEDIGRAPH) 0.00 (SEDIGRAPH) 0.00
 GRAVEL+SAND 97.00 SILT/(SILT+CLAY) 88.53 PCT.GRAV+SAND/SILT+CLAY 32.29
 LABELS SHEPARD -SAND FOLK(GMS)-GRAVELLY SAND (SCS)-

J03

SIEVE,SETT.TUBE,PIPETTE (2) SAMPLE WT.= 21.3155

02/25/81

PHI	PCT.	CUM.PCT.
-1.50		
-1.00	.05	.05
-.50	.13	.17
0.00	0.00	.17
	2.72	
.50	6.34	2.89
1.00	8.15	9.23
1.50	27.18	17.39
2.00	45.30	44.57
2.50	4.53	89.87
3.00	.91	94.40
3.50	0.00	95.31
4.00	3.60	95.31
8.00	1.09	98.91
*****		100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

1.89 .58 -.56 1.65

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 4.0 PHI

1.97 .66 -.16 1.57

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.06	5TH	.67	16TH	1.42	25TH	1.64
			75TH	2.34	84TH	2.44	95TH	3.33

PCT. GRAVEL	.05	SAND	95.26	SILT (PIPETTE)	3.60	CLAY (PIPETTE)	1.09
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 95.31 SILT/(SILT+CLAY) 76.77 PCT.GRAV+SAND/SILT+CLAY 20.31

LABELS SHEPARD -SAND FOLK (GMS) -SAND (SCS) -SAND

J04

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 21.9951

02/25/81

PHI	PCT.	CUMPCT.
- .50	0.00	0.00
0.00	0.00	0.00
.50	.96	0.00
1.00	4.81	.96
1.50	16.34	5.77
2.00	50.94	22.11
2.50	20.19	73.05
3.00	.48	93.24
3.50	.48	93.72
4.00	4.71	94.20
8.00	1.09	98.91
*****		100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.22 .43 -.25 1.36

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

2.29 .73 .26 2.57

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.27	5TH	1.42	16TH	1.81	25TH	2.03
			75TH	2.55	84TH	2.77	95TH	4.68

PCT. GRAVEL	0.00	SAND	94.20	SILT (PIPETTE)	4.71	CLAY (PIPETTE)	1.09
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 94.20 SILT/(SILT+CLAY) 81.17 PCT. GRAV+SAND/SILT+CLAY 16.23

LABELS SHEPARD -SAND FOLK (GMS) -SAND (SCS) -SAND

J05

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 21.2394

02/25/81

PHI	PCT.	CUMFCT.
-2.50		
-2.00	.35	.35
-1.50	.47	.82
-1.00	3.87	4.69
-.50	9.47	14.17
0.00	.78	14.95
.50	15.64	30.58
1.00	16.42	47.00
1.50	17.98	64.99
2.00	20.33	85.31
2.50	7.82	93.13
3.00	2.35	95.48
3.50	.78	96.26
4.00	0.00	96.26
8.00	3.33	99.59
****	.41	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

.90	1.03	-.24	-.19	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.0 TO 4.0 PHI
1.03	1.07	-.08	1.12	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	1.08	5TH	-.98	16TH	.03	25TH	.32
			75TH	1.75	84TH	1.97	95TH	2.90
PCT. GRAVEL	4.69	SAND	91.57	SILT (PIPETTE)	3.33	CLAY (PIPETTE)		.41
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00

GRAVEL+SAND 96.26 SILT/(SILT+CLAY) 89.12 PCT.GRAV+SAND/SILT+CLAY 25.74

LABELS SHEPARD -SAND FOLK (GMS) -SAND (SCS) -SAND

COMMENTS -
J05 SHELLS .5189 GM.

J06

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 20.8657

02/25/81

PHI	PCT.	CUM PCT.	
-2.00			*
-1.50	.81	.81	*
-1.00	.57	1.38	*
-.50	.91	2.29	
0.00	0.00	2.29	
.50	3.05	5.35	***
1.00	4.58	9.93	*****
1.50	6.87	16.80	*****
2.00	8.40	25.19	*****
2.50	16.79	41.99	*****
3.00	22.14	64.12	*****
3.50	10.69	74.81	*****
4.00	6.11	80.91	*****
8.00	15.62	96.54	*****
****	3.46	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

2.24	1.05	-.59	1.87	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 4.0 PHI
2.97	1.92	.32	1.92	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.68	5TH	.44	16TH	1.44	25TH	1.99
			75TH	3.52	84TH	4.79	95TH	7.61
PCT. GRAVEL	1.38	SAND	79.53	SILT (PIPETTE)	15.62	CLAY (PIPETTE)		3.46
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00
GRAVEL+SAND	80.91	SILT/(SILT+CLAY)		81.86PCT.GRAV+SAND/SILT+CLAY				4.24
LABELS SHEPARD	-SAND		FOLK(GMS)-MUDDY SAND			(SCS)-SILTY SAND		

02/25/81

PHI	PCT.	CUM PCT.
-1.50	.11	.11
-1.00	.27	.38
-.50	0.00	.38
0.00	.39	.77
.50	2.73	3.50
1.00	4.68	8.18
1.50	9.35	17.53
2.00	15.59	33.12
2.50	29.61	62.73
3.00	22.60	85.33
3.50	3.12	88.45
4.00	8.34	96.79
8.00	3.21	100.00

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MEAN . ST.DEV. SKEWNESS KURTOSIS

2.55 .73 -.56 1.89

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
FOR SIZE RANGE -1.0 TO 4.0 PHI

2.72 1.29 .17 2.38

FOLK GRAPHIC STATISTICAL PARAMETERS
FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.79	5TH	1.16	16TH	1.92	25TH	2.24	
			75TH	3.27	84TH	3.47	95TH	7.14	
PCT. GRAVEL	.11	SAND	88.33	SILT (PIPETTE)	8.34	CLAY (PIPETTE)	3.21		
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00		
GRAVEL+SAND	88.45	SILT/(SILT+CLAY)	72.21PCT.GRAV+SAND/SILT+CLAY			7.65			
LABELS SHEPARD -SAND		FOLK(GMS)-MUDDY SAND				(SCS)-SILTY SAND			

02/25/81

PHI	PCT.	CUMPCT.
-2.00		
-1.50	.36	.36
-1.00	.46	.82
-.50	.33	1.15
0.00	0.00	1.15
.50	0.00	1.15
1.00	4.89	6.04
1.50	6.52	12.56
2.00	10.59	23.15
2.50	9.78	32.93
3.00	11.41	44.33
3.50	24.44	68.78
4.00	10.18	78.96
8.00	17.61	96.57
****	3.43	100.00

MEAN ST.DEV. SKEWNESS KURTOSIS

2.53	1.00	-.54	1.53
3.31	1.89	.25	1.62

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 4.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	3.12	5TH	.89	16TH	1.66	25TH	2.09
			75TH	3.81	84TH	5.14	95TH	7.64
PCT. GRAVEL	.82	SAND	78.14	SILT (PIPETTE)	17.61	CLAY (PIPETTE)		3.43
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00
GRAVEL+SAND	78.96	SILT/(SILT+CLAY)	83.70	PCT.GRAV+SAND/SILT+CLAY				3.75
LABELS SHEPARD	-SAND	FOLK(GMS)	-MUDDY SAND	(SCS)	-SILTY SAND			

J09

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 20.5395

02/25/81

PHI	PCT.	CUM.PCT.
-.50		
0.00	0.00	0.00
.50	0.00	0.00
1.00	0.00	0.00
1.50	.17	.17
2.00	.34	.50
2.50	.84	1.34
3.00	2.01	3.35
3.50	6.37	9.73
4.00	11.74	21.46
4.00	58.53	80.00
8.00	20.00	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.40 .49 -.87 3.32 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	5.95	5TH	3.13	16TH	3.77	25TH	4.24
			75TH	7.66	84TH*****		95TH*****	

PCT. GRAVEL	0.00	SAND	21.46	SILT (PIPETTE)	58.53	CLAY (PIPETTE)	20.00
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 21.46 SILT/(SILT+CLAY) 74.53PCT.GRAV+SAND/SILT+CLAY .27

LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

COMMENTS -
J09 S.T. MUCH ORGANIC MATERIAL
J09 SOME SHELLS IN FIRST READING

JD10

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 20.5187

02/25/81

PHI	PCT.	CUM.PCT.
-4.00		
-3.50	3.70	3.70
-3.00	.00	3.71
-2.50	.00	3.71
-2.00	.00	3.71
-1.50	.00	3.71
-1.00	.06	3.71
-.50	0.00	3.76
0.00	0.00	3.76
.50	.72	3.76
1.00	2.87	4.48
1.50	2.87	7.35
2.00	2.87	10.22
2.50	1.79	12.02
3.00	2.51	14.53
3.50	16.51	31.04
4.00	24.40	55.44
8.00	38.46	93.90
*****	6.10	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.73 1.89 -1.33 6.29

KRUMHEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -3.5 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.89	5TH	1.09	16TH	3.04	25TH	3.32
			75TH	6.03	84TH	6.97	95TH*****	

PCT. GRAVEL	3.71	SAND	51.73	SILT (PIPETTE)	38.46	CLAY (PIPETTE)	6.10
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 55.44 SILT/(SILT+CLAY) 86.32 PCT.GRAV+SAND/SILT+CLAY 1.24

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

JO10-A

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 23.5999

02/25/81

PHI	PCT.	CUMFCT.	
-3.00			**
-2.50	2.21	2.21	
	.46		
-2.00		2.67	*
	.84		
-1.50		3.51	*
	1.28		
-1.00		4.79	*
	1.11		
-.50		5.90	
	0.00		
0.00		5.90	
	2.84		***
.50		8.74	
	2.13		**
1.00		10.87	
	2.13		**
1.50		13.00	
	2.84		***
2.00		15.84	
	7.82		*****
2.50		23.66	
	12.79		*****
3.00		36.45	
	9.24		*****
3.50		45.68	
	8.53		*****
4.00		54.21	
	36.11		*****
8.00		90.32	
	9.68		*****
*****		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

2.10 1.68 -.74 1.46

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.5 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.75	5TH	-.90	16TH	2.01	25TH	2.55
			75TH	6.30	84TH	7.30	95TH	*****
PCT. GRAVEL	4.79	SAND	49.42	SILT (PIPETTE)	36.11	CLAY (PIPETTE)	9.68	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	54.21	SILT/(SILT+CLAY)	78.86	PCT.GRAV+SAND/SILT+CLAY	1.18			
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)-MUDDY SAND		(SCS)-SILTY SAND				

J011

SIEVE,SETT.TUBE,PIPETTE (2) SAMPLE WT.= 20.6251

02/25/81

PHI	PCT.	CUM.PCT.	
- .50	0.00	0.00	
0.00	0.00	0.00	
.50	.59	0.59	*
1.00	0.00	.59	
1.50	1.18	.59	*
2.00	2.96	1.77	***
2.50	1.18	4.73	*
3.00	7.69	5.91	*****
3.50	17.74	13.60	*****
4.00	53.57	31.34	*****
8.00	15.09	84.91	*****
****		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

3.32 .67 -.91 3.05 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	5.39	5TH	2.61	16TH	3.57	25TH	3.82
			75TH	7.26	84TH	7.93	95TH	*****

PCT. GRAVEL	0.00	SAND	31.34	SILT (PIPETTE)	53.57	CLAY (PIPETTE)	15.09
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 31.34 SILT/(SILT+CLAY) 78.02PCT.GRAV+SAND/SILT+CLAY .46

LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

COMMENTS - J011 SHELL .0452 GM.

J012

SIEVE,SETT.TUBE,PIPETTE (2) SAMPLE WT.= 20.4107

02/25/81

PHI	PCT.	CUMPCT.
-0.50		
0.00	0.00	0.00
.50	0.00	0.00
1.00	0.00	0.00
1.50	.73	.73
2.00	.73	1.46
2.50	2.18	3.64
3.00	9.46	13.10
3.50	20.37	33.47
4.00	11.64	45.11
8.00	47.20	92.31
****	7.69	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.17 .51 -.61 2.26

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	4.41	5TH	2.57	16TH	3.07	25TH	3.29
			75TH	6.53	84TH	7.30	95TH	****

PCT. GRAVEL	0.00	SAND	45.11	SILT (PIPETTE)	47.20	CLAY (PIPETTE)	7.69
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 45.11 SILT/(SILT+CLAY) 86.00 PCT.GRAV+SAND/SILT+CLAY .82

LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

J014

SIEVE,SETT.TUBE,PIPETTE (2) SAMPLE WT.= 22.8487

02/25/81

PHI	PCT.	CUMFCT.
-2.00		
-1.50	.14	.14
-1.00	.13	.28
-.50	.18	.46
0.00	0.00	.46
.50	.63	1.09
1.00	.31	1.40
1.50	1.57	2.98
2.00	3.14	6.12
2.50	2.52	8.64
3.00	1.89	10.52
3.50	13.21	23.73
4.00	25.78	49.51
8.00	44.40	93.90
****	6.10	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.19 .89 -1.12 5.88

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	4.04	5TH	1.82	16TH	3.21	25TH	3.52
			75TH	6.30	84TH	7.11	95TH	*****
PCT. GRAVEL	.28	SAND	49.23	SILT (PIPETTE)	44.40	CLAY (PIPETTE)	6.10	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	49.51	SILT/(SILT+CLAY)	87.93	PCT.GRAV+SAND/SILT+CLAY	.98			
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)	-SANDY MUD			(SCS)	-SANDY SILT	

J015

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 22.1786

02/25/81

PHI	PCT.	CUM PCT.
-2.00		
-1.50	.10	.10
-1.00	.20	.30
-.50	.16	.45
0.00	0.00	.45
.50	.23	.69
1.00	.23	.92
1.50	.94	1.86
2.00	1.88	3.73
2.50	2.35	6.08
3.00	2.35	8.43
3.50	8.44	16.87
4.00	13.13	30.00
8.00	52.69	82.69
****	17.31	100.00

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MEAN ST. DEV. SKEWNESS KURTOSIS

3.09 .93 -1.08 5.94

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	5.52	5TH	2.27	16TH	3.45	25TH	3.81
			75TH	7.42	84TH*****		95TH*****	
PCT. GRAVEL	.30	SAND	29.71	SILT (PIPETTE)	52.69	CLAY (PIPETTE)	17.31	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	30.00	SILT/(SILT+CLAY)	75.27	PCT. GRAV+SAND/SILT+CLAY	.43			
LABELS SHEPARD	-SANDY SILT	FOLK (GMS)	-SANDY MUD			(SCS)	-SANDY SILT	

J016

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 21.7856

02/25/81

PHI	PCT.	CUM PCT.	
-2.50			*
-2.00	.60	.60	
-1.50	.00	.60	
-1.00	.00	.60	
-.50	.11	.71	
0.00	0.00	.71	
.50	0.00	.71	
1.00	.28	.99	
1.50	.28	1.27	*
2.00	1.11	2.37	
2.50	2.21	4.58	**
3.00	2.21	6.79	**
3.50	12.16	18.95	*****
4.00	19.34	38.29	*****
8.00	53.04	91.32	*****
8.68	8.68	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

3.24 .93 -1.91 18.20 Krumbein + Pettijohn (1938) Moment Measures
 for size range -2.0 to 4.0 phi

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	4.88	5TH	2.59	16TH	3.38	25TH	3.66
			75TH	6.77	84TH	7.45	95TH	*****
PCT. GRAVEL	.60	SAND	37.68	SILT (PIPETTE)	53.04	CLAY (PIPETTE)	8.68	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	38.29	SILT/(SILT+CLAY)	85.94	PCT. GRAV+SAND/SILT+CLAY	.62			
LABELS SHEPARD	-SANDY SILT	FOLK (GMS)	-SANDY MUD			(SCS)	-SANDY SILT	

J017

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 20.4792

02/25/81

PHI	PCT.	CUM PCT.
- .50	0.00	0.00
0.00	0.00	0.00
.50	.08	0.08
1.00	.08	.16
1.50	.64	.80
2.00	.48	1.29
2.50	.32	1.61
3.00	1.13	2.73
3.50	1.93	4.66
4.00	59.97	64.63
8.00	35.37	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.03 .82 -.46 -.36

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	7.02	5TH	4.02	16TH	4.76	25TH	5.36
			75TH*****		84TH*****		95TH*****	

PCT. GRAVEL	0.00	SAND	4.66	SILT (PIPETTE)	59.97	CLAY (PIPETTE)	35.37
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 4.66 SILT/(SILT+CLAY) 62.90 PCT.GRAV+SAND/SILT+CLAY .05

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-MUD

COMMENTS - J017 S.T. VERY MUCH ORGANIC MATERIAL

J018

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT.= 20.0285

02/25/81

PHI	FCT.	CUMFCT.
-2.50		
-2.00	1.21	1.21
-1.50	.18	1.40
-1.00	.26	1.65
-.50	.00	1.65
0.00	0.00	1.65
.50	.52	2.18
1.00	2.62	4.80
1.50	1.05	5.85
2.00	1.31	7.16
2.50	1.05	8.21
3.00	1.05	9.26
3.50	1.57	10.83
4.00	1.31	12.14
8.00	31.28	43.42
*****	56.58	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

1.45 1.75 -.36 -.18

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN*****	5TH 1.10	16TH 4.49	25TH 5.64
		75TH*****	84TH*****	95TH*****
PCT. GRAVEL	1.65	SAND 10.49	SILT (PIPETTE) 31.28	CLAY (PIPETTE) 56.58
		(SEDIGRAPH) 0.00	(SEDIGRAPH) 0.00	
GRAVEL+SAND	12.14	SILT/(SILT+CLAY)	35.60PCT.GRAV+SAND/SILT+CLAY	.14
LABELS SHEPARD	-SILTY CLAY	FOLK(GMS)-SANDY MUD	(SCS)-SANDY MUD	

COMMENTS -

J018 SHELLS .1127 GM.
J018 S.T. SOME ORGANIC MATERIAL AND SHELLS

J019

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 19.9480

02/25/81

PHI	PCT.	CUMFCT.
-1.50		
1.00	.12	.12
	.07	
-0.50		.19
0.00	0.00	.19
	0.00	
.50		.19
	.22	
1.00		.40
	1.29	
1.50		1.70
	1.08	
2.00		2.77
	1.08	
2.50		3.85
	1.29	
3.00		5.14
	1.94	
3.50		7.08
	3.23	
4.00		10.31
	54.77	
8.00		65.09
	34.91	
*****		100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.70 1.06 -.52 1.07

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	6.90	5TH	2.94	16TH	4.42	25TH	5.07
			75TH*****		84TH*****		95TH*****	
PCT. GRAVEL	.12	SAND	10.19	SILT (PIPETTE)	54.77	CLAY (PIPETTE)	34.91	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	10.31	SILT/(SILT+CLAY)	61.07	PCT.GRAV+SAND/SILT+CLAY			.11	
LABELS SHEPARD	-CLAYEY SILT	FOLK(GMS)	-SANDY MUD			(SCS)	-SANDY MUD	

COMMENTS - J019 S.T. MUCH ORGANIC MATERIAL AND SHELLS IN FIRST TWO READINGS

J020

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 20.7213

02/25/81

PHI	PCT.	CUMFCT.
-0.50		
0.00	0.00	0.00
.50	0.00	0.00
1.00	0.00	0.00
1.50	.32	.32
2.00	.65	.97
2.50	.97	1.94
3.00	.97	2.91
3.50	2.91	5.82
4.00	7.12	12.94
8.00	61.55	74.49
****	25.51	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.29 .67 -.74 1.23

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	6.41	5TH	3.36	16TH	4.20	25TH	4.78
			75TH*****		84TH*****		95TH*****	

PCT. GRAVEL	0.00	SAND	12.94	SILT (PIPETTE)	61.55	CLAY (PIPETTE)	25.51
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 12.94 SILT/(SILT+CLAY) 70.70PCT.GRAV+SAND/SILT+CLAY .15

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

J021

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 24.3407

02/25/81

PHI	PCT.	CUMPCT.	
-2.50			
-2.00	.33	.33	
-1.50	.00	.33	
-1.00	.25	.57	
-0.50	.98	1.55	*
0.00	0.00	1.55	
0.50	3.52	5.07	****
1.00	7.03	12.10	*****
1.50	7.91	20.01	*****
2.00	11.42	31.43	*****
2.50	15.82	47.25	*****
3.00	17.58	64.83	*****
3.50	8.79	73.61	*****
4.00	3.52	77.13	****
8.00	17.18	94.31	*****
*****	5.69	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

2.07 1.00 -.41 1.07 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE -2.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	2.58	5TH	.49	16TH	1.25	25TH	1.72
			75TH	3.70	84TH	5.60	95TH	*****
PCT. GRAVEL	.57	SAND	76.56	SILT (PIPETTE)	17.18	CLAY (PIPETTE)	5.69	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	77.13	SILT/(SILT+CLAY)	75.13	PCT.GRAV+SAND/SILT+CLAY		3.37		
LABELS SHEPARD	-SAND	FOLK(GMS)-MUDDY SAND		(SCS)-SILTY SAND				

COMMENTS -
 J021 S.T. SOME ORGANIC MATERIAL

02/25/81

PHI	PCT.	CUM.PCT.	
-2.50			*
-2.00	.68	.68	*
-1.50	.79	1.47	
-1.00	.48	1.95	
-.50	.48	2.43	
0.00	.50	2.93	
	4.48		****
.50		7.41	
	8.96		*****
1.00		16.37	
	11.94		*****
1.50		28.31	
	25.88		*****
2.00		54.19	
	24.88		*****
2.50		79.07	
	8.96		*****
3.00		88.02	
	2.99		***
3.50		91.01	*
	1.00		
4.00		92.00	
	5.13		*****
8.00		97.13	
	2.87		***
*****		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

1.72	.92	-.63	3.41	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.0 TO 4.0 PHI
1.89	1.37	.20	2.37	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	1.92	5TH	.23	16TH	.98	25TH	1.36
			75TH	2.42	84TH	2.78	95TH	6.34
PCT. GRAVEL	1.95	SAND	99.05	SILT (PIPETTE)	5.13	CLAY (PIPETTE)		2.87
				(SEDIGRAPH)	0.00	(SEDIGRAPH)		0.00
GRAVEL+SAND	92.00	SILT/(SILT+CLAY)	64.14	PCT.GRAV+SAND/SILT+CLAY				11.51
LABELS SHEPARD -SAND		FOLK(GMS)-SAND		(SCS)-SAND				

J022-A

SIEVE,SETT.TUBE,PIPETTE(2) SAMPLE WT.= 20.4435

02/25/81

PHI	PCT.	CUM.PCT.	
-2.00			
-1.50	.19	.19	
-1.00	.19	.38	
-.50	.72	1.11	*
0.00	.58	1.69	*
.50	6.38	8.07	*****
1.00	11.60	19.67	*****
1.50	17.40	37.07	*****
2.00	26.68	63.75	*****
2.50	19.72	83.47	*****
3.00	6.96	90.43	*****
3.50	.58	91.01	*
4.00	.58	91.59	*
8.00	5.33	96.93	*****
****	3.07	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

1.58	.77	-.25	.87
1.71	1.38	.23	2.28

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 4.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	1.74	5TH	.26	16TH	.84	25TH	1.15
			75TH	2.29	84TH	2.54	95TH	6.55

PCT. GRAVEL	.38	SAND	91.21	SILT (PIPETTE)	5.33	CLAY (PIPETTE)	3.07
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 91.59 SILT/(SILT+CLAY) 63.43PCT.GRAV+SAND/SILT+CLAY 10.90

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

COMMENTS - J022-A SHELLS .0075 GM.

02/25/81

PHI	PCT.	CUM.PCT.	
-2.50			*
-2.00	.66	.66	****
-1.50	4.05	4.71	*****
-1.00	5.14	9.85	*****
-.50	4.26	14.11	*
0.00	.99	15.10	*****
.50	19.72	34.82	*****
1.00	7.89	42.70	*****
1.50	13.31	56.02	*****
2.00	21.20	77.22	*****
2.50	12.82	90.03	*
3.00	1.48	91.51	*
3.50	.99	92.50	
4.00	.49	92.99	****
8.00	4.38	97.38	***
****	2.62	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

.90	1.20	-.30	-.21	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.0 TO 4.0 PHI
1.19	1.67	.07	1.76	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	1.27	5TH	-1.47	16TH	.02	25TH	.25
			75TH	1.95	84TH	2.26	95TH	5.83
PCT. GRAVEL	9.85	SAND	83.14	SILT (PIPETTE)	4.38	CLAY (PIPETTE)	2.62	
				(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00	
GRAVEL+SAND	92.99	SILT/(SILT+CLAY)	62.55	PCT.GRAV+SAND/SILT+CLAY	13.27			
LABELS SHEPARD	-SAND	FOLK(GMS)-GRAVELLY SAND	(SCS)-					

J023

SIEVE, SETT. TUBE, PIPETTE (2) SAMPLE WT. = 12.7376

02/25/81

PHI	PCT.	CUM PCT.
-3.50		
-3.00	14.52	14.52
-2.50	.00	14.52
-2.00	.00	14.52
-1.50	.00	14.52
-1.00	.00	14.52
-.50	.00	14.52
0.00	0.00	14.52
.50	1.02	15.54
1.00	1.02	16.56
1.50	12.20	28.76
2.00	27.45	56.20
2.50	26.43	82.64
3.00	5.08	87.72
3.50	2.54	90.26
4.00	1.52	91.79
5.00	5.28	97.06
6.00	2.94	100.00

*

*

**

MEAN ST.DEV. SKEWNESS KURTOSIS

1.14 1.98 -.79 .99

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -3.0 TO 4.0 PHI

1.75 1.96 -.14 3.96

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	1.89	5TH	-3.33	16TH	.73	25TH	1.35
			75TH	2.36	84TH	2.63	95TH	6.44

PCT.	GRAVEL	14.52	SAND	77.26	SILT (PIPETTE)	5.28	CLAY (PIPETTE)	2.94
					(SEDIGRAPH)	0.00	(SEDIGRAPH)	0.00

GRAVEL+SAND 91.79 SILT/(SILT+CLAY) 64.23 PCT.GRAV+SAND/SILT+CLAY 11.17

LABELS SHEPARD -SAND FOLK(GNS)-GRAVELLY SAND (SCS)-

COMMENTS - J023 SHELLS .0323 GM.

14.22.04.UCLP, 7022,

13.360 KLMS.

APPENDIX 10
Map of Core Sites
(Under Separate Cover)

APPENDIX 11

Core Logs

SEDIMENT CORE LOG

Core No.C05..... LakeOntario.....
Date3 August 1972..... UTM N 4792911 E 646106.....
TypeBenthos..... Length15.5 cm..... Depth26.5 m..... IGLD?no.....
Photos: Slides Logged byHawkins/LaHaie.....
X-rayX..... Date5 June 1973.....

UNIT 1: 0-1 cm

- dark grey (5Y 4/1)
- firm
- fine silty sand
- weak effervescence in HCl with H₂S odour

UNIT 2: 1-2 cm

- very dark grey (5Y 3/1)
- firm
- medium-to-coarse sand
- weak effervescence in HCl with H₂S odour

UNIT 3: 2-10.5 cm

- very dark grey (5Y 3/1)
- firm
- fine silty sand
- weak effervescence in HCl with H₂S odour
- grain-size data available for channel sample through units 1, 2 and 3

UNIT 4: 10.5-15.5 cm

- dark grey (5Y 4/1)
- firm
- fine-to-medium sand
- weak effervescence in HCl with H₂S odour
- grain-size data available

SEDIMENT CORE LOG

Core No. C06 Lake Ontario
Date 3 August 1972 UTM N 4786759 E 636990
Type Benthos Length 52 cm Depth 26.5 m IGLD? no
Photos: Slides Logged by Hawkins/LaHaie
X-ray X Date 4 June 1973

UNIT 1: 0-6 cm

- semi-fluid silt ooze
- grain-size data available
- pollen data available for 0-2 cm and 4-6 cm

UNIT 2: 6-13 cm

- very dark grey (5Y 3/1)
- firm
- silt
- numerous heavy mineral lenses
- very weak effervescence in HCl with strong H₂S odour
- grain-size data available
- pollen data available for 10-12 cm and 12-14 cm

UNIT 3: 13-52 cm

- very dark grey (5Y 3/1)
- firm
- sandy silt
- numerous heavy mineral lenses between 13 and 22 cm and 30.5-32 cm
- black, rounded limestone pebble at 51-cm level
- very weak effervescence in HCl with H₂S odour
- grain-size data available
- pollen data available for 12-14 cm, 14-16 cm, 16-18 cm and 20-22 cm

SEDIMENT CORE LOG

Core No. C07 Lake Ontario
Date 3 August 1972 UTM N 4784525 E 637019
Type Benthos Length 23 cm Depth 16.6 m IGLD? no
Photos: Slides Logged by Hawkins/LaHaie
X-ray x Date 5 June 1973

UNIT 1: 0-2 cm

- dark greyish brown (2.5Y 4/2)
- silty ooze
- weak effervescence in HCl
- grain-size data available
- pollen data available

UNIT 2: 2-9 cm

- dark grey (5Y 4/1)
- soft
- sandy clay
- weak effervescence in HCl with H₂S odour
- grain-size data available
- pollen data available for 6-8 cm and 8-10 cm

UNIT 3: 9-12 cm

- dark grey (5Y 4/1)
- firm
- silty medium sand
- weak effervescence in HCl with H₂S odour
- grain-size data available
- pollen data available for 8-10 cm and 10-12 cm

UNIT 4: 12-17 cm

- dark grey (5Y 4/1)
- soft
- sandy clay
- weak effervescence in HCl with slight H₂S odour
- grain-size data available
- pollen data available for 12-14 cm

UNIT 5: 17-20 cm

- dark grey (5Y 4/1)
- firm
- silty medium-to coarse sand
- weak effervescence in HCl
- flat, rounded carbonate pebble at 18-cm level
- grain-size data available

continued next page

SEDIMENT CORE LOG

Core No. C07 cont'd Lake Ontario
Date UTM N E
Type Length Depth IGLD? no
Photos: Slides Logged by
X-ray Date

- UNIT 6: 20-23 cm
- dark grey (5Y 4/1)
- soft
- sandy clay
- very weak effervescence in HCl with H₂S odour
- grain-size data available
- pollen data available for 20-22 cm

SEDIMENT CORE LOG

Core No. C033 Lake Ontario

Date 24 August 1973 UTM N 4787103 E 639205

Type Beachcor Length 86 cm Depth 19.9 m IGLD? no

Photos: Slides Logged by G. LaHaie

X-ray ^x Date

UNIT 1: 0-5 cm

- dark grey
- soft
- silty clay
- grain-size data available
- pollen (and grain-size) data available for 0-2 cm

UNIT 2: 5-10 cm

- dark brown
- firm
- sandy silt
- grain-size data available
- pollen (and grain-size) data available for 8-10 cm

UNIT 3: 10-81 cm

- dark grey
- firm
- silty clay
- weak effervescence in HCl with H₂S odour
- black streaks (sulphides?) between 10 and 16 cm and at 36 cm
- well-rounded granitic pebble at 41 cm
- grain-size data available for 10-45 cm and 45-81 cm
- pollen (and grain-size) data available for 10-12 cm, 12-14 cm, 14-16 cm and 24-26 cm

UNIT 4: 81-86 cm

- grey
- firm
- pebbly clay (till?)
- large sandstone pebble
- numerous shell fragments
- grain-size data available

SEDIMENT CORE LOG

Core No. C034 Lake Ontario
Date 25 August 1973 UTM N 4792794 E 647785
Type Beachcor Length 62 cm Depth 19.0 m IGLD? no
Photos: Slides Logged by G. LaHaie
X-ray ...x... Date

UNIT 1: 0-62 cm

- dark greyish-brown
- firm
- silty sand
- weak effervescence in HCl with H₂S odour
- black laminae at 41, 47 and 51 cm
- scattered shells and shell fragments
- angular carbonate pebble at 24 cm
- veneer of sandy silt on base of core
- grain-size data available for 0-15 cm, 15-30 cm, 30-45 cm and 45-62 cm
- pollen data available for 0-2 cm and 4-6 cm.

SEDIMENT CORE LOG

Core No. C035 Lake Ontario
Date 25 August 1973 UTM N 4795807 E 652656
Type Beachcor Length 54 cm Depth 15.8 m IGLD? no
Photos: Slides Logged by G. LaHaie
X-ray ^x..... Date

UNIT 1: 0-34 cm

- dark greyish-brown
- firm
- medium-to-fine sand
- high concentration of heavy minerals at 24-cm level
- broken shells throughout; whole shell at 23-cm level
- weak effervescence in HCl with H₂S odour
- grain-size data available for 0-17 cm and 17-34 cm

UNIT 2: 34-54 cm

- dark greyish-brown
- firm
- alternating layers of medium-to-fine sand and silty clay
- shelly layer at 35 cm; large shells at 41 and 43.5 cm and at base of core
- wood pieces and twigs at 44.5 and 50 cm
- large piece of wood at base of core
- layer of peat at 49 cm
- weak effervescence in HCl with H₂S odour
- grain-size data available for 34-38.5 cm(sand layer), 38.5-41.5 cm(silt-clay layer) and 41.5-43 cm(sand layer)

SEDIMENT CORE LOG

Core No. C036 Lake Ontario

Date 29 August 1973 UTM N 4797020 E 661483

Type Beachcor Length 85 cm Depth 13.8 m IGLD? no

Photos: Slides Logged by G. LaHaie

X-ray ^x Date

UNIT 1: 0-5 cm

- dark grey
- firm
- medium-to-fine sand
- scattered broken shells
- weak effervescence in HCl
- grain-size data available
- pollen (and grain-size) data available for 0-2 cm

UNIT 2: 5-10.5 cm

- dark grey
- firm
- silty sand
- scattered broken shells
- weak effervescence in HCl
- grain-size data available
- pollen (and grain-size) data available for 8-10 cm

UNIT 3: 10.5-40 cm

- dark brown with occasional black laminae
- firm
- medium-to-fine sand with scattered pebbles
- scattered broken shells
- weak effervescence in HCl
- grain-size data available
- pollen (and grain-size) data available for 24-26 cm, 32-34 cm, 34-36 cm and 36-38 cm

UNIT 4: 40-85 cm

- dark brownish-grey with occasional black laminae
- firm
- medium sand
- weak effervescence in HCl
- grain-size data available
- pollen (and grain-size) data available for 40-42 cm and 44-46 cm

SEDIMENT CORE LOG

Core No. .C037..... LakeOntario.....
Date .29 August 1973..... UTM N .4796966... E .658186.....
Type .Beachcor.... Length .84.cm.... Depth .14.0.m... IGLD? .no.....
Photos: Slides Logged by .G. LaHaie.....
X-ray .x... Date

UNIT 1: 0-84 cm

- dark greyish-brown
- firm
- medium sand with scattered small pebbles
- scattered broken shells
- concentration of heavy minerals in 26-30-cm level
- piece of wood at 74 cm; twig at 83 cm
- weak effervescence in HCl
- grain-size data available for 0-26 cm, 26-30 cm, 30-55 cm, and 55-84 cm

SEDIMENT CORE LOG

Core No. C038 Lake Ontario
Date 29 August 1973 UTM N 4795271 E 655807
Type Beachcor Length 65.5 cm Depth 8.4 m IGLD? no
Photos: Slides Logged by G. LaHaie
X-ray^x Date

UNIT 1: 0-17 cm

- dark brown
- loose medium-to-coarse sand
- scattered broken shells
- concentration of heavy minerals at 6-cm level
- weak effervescence in HCl with H₂S odour
- grain-size data available

UNIT 2: 17-25 cm

- dark brown
- loose pebbly coarse sand
- scattered broken shells
- weak effervescence in HCl with H₂S odour
- grain-size data available

UNIT 3: 25-55 cm

- dark greyish-brown
- loose medium-to-coarse sand
- scattered shells and broken shells
- concentration of heavy minerals at 29-cm level
- weak effervescence in HCl with H₂S odour
- grain-size data available

UNIT 4: 55-65.5 cm

- dark greyish-brown
- loose pebbly coarse sand
- scattered broken shells; large whole shell at 57 cm
- weak effervescence in HCl with H₂S odour
- grain-size data available

APPENDIX 12

Grain-Size Data: Core Samples

02/25/81

PHI	PCT.	CUMFCT.	
-2.00			*
-1.50	1.22	1.22	
-1.00	0.00	1.22	
-.50	.03	1.25	
0.00	0.00	1.25	
.50	.15	1.40	
1.00	.15	1.55	
1.50	1.19	2.73	*
2.00	.89	3.62	*
2.50	1.19	4.81	*
3.00	1.19	6.00	*
3.50	7.72	13.71	*****
4.00	9.50	23.21	*****
4.50	11.61	34.82	*****
5.00	23.41	58.23	*****
5.50	14.98	73.22	*****
6.00	6.18	79.40	*****
6.50	2.81	82.21	***
7.00	2.43	84.64	**
7.50	3.56	88.20	***
8.00	2.06	90.26	**
8.50	3.75	94.01	***
9.00	2.25	96.25	**
9.50	2.81	99.06	***
*****	.94	100.00	*

MEAN ST.DEV. SKEWNESS KURTOSIS

4.99	1.80	-.03	2.01
5.10	1.74	.26	1.61

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 9.5 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	4.82	5TH	2.58	16TH	3.62	25TH	4.08
			75TH	5.64	84TH	6.87	95TH	8.72

PCT. GRAVEL	1.22	SAND	21.99	SILT (PIPETTE)	76.79	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	67.05	(SEDIGRAPH)	9.74

GRAVEL+SAND 23.21 SILT/(SILT+CLAY) 87.32PCT.GRAV+SAND/SILT+CLAY .30

LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

02/25/81

PHI	PCT.	CUMPCT.	
- .50	0.00		
0.00	.13	0.00	
.50	.53	.13	*
1.00	.66	.66	*
1.50	3.29	1.32	***
2.00	2.63	4.61	***
2.50	1.97	7.24	**
3.00	14.48	9.22	*****
3.50	23.70	23.70	*****
4.00	6.27	47.39	*****
4.50	14.33	53.66	*****
5.00	8.95	67.99	*****
5.50	2.91	76.94	***
6.00	2.24	79.85	**
6.50	1.79	82.09	*
7.00	2.69	83.88	***
7.50	2.24	86.57	**
8.00	3.36	88.81	***
8.50	1.57	92.17	**
9.00	2.24	93.73	**
9.50	2.91	95.97	***
10.00	1.12	98.88	*
*****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

4.71	1.93	.48	.52	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.0 PHI
4.82	2.04	.45	1.58	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	4.21	5TH	2.07	16TH	3.23	25TH	3.53
			75TH	5.39	84TH	7.02	95TH	9.28

PCT. GRAVEL	0.00	SAND	47.39	SILT (PIPETTE)	52.61	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	41.41	(SEDIGRAPH)	11.19

GRAVEL+SAND 47.39 SILT/(SILT+CLAY) 78.72PCT.GRAV+SAND/SILT+CLAY .90

LABELS SHEPARD -SILTY SAND FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

C06 0-6CM 241075 SIEVE, SETT. TUBE, PIPET, SEDIGRAPH SAMPLE WT.= 19.8272

PHI PCT. CUMFCT.

02/25/81

-1.50			
-1.00	.14	.14	
-.50	.10	.25	
0.00	.76	1.01	*
.50	.38	1.39	
1.00	.38	1.77	
1.50	.38	2.15	
2.00	.76	2.91	*
2.50	2.28	5.19	**
3.00	1.14	6.33	*
3.50	5.32	11.65	*****
4.00	4.94	16.59	*****
4.50	.73	17.32	*
5.00	6.85	24.17	*****
5.50	9.77	33.94	*****
6.00	9.19	43.13	*****
6.50	5.83	48.96	*****
7.00	7.29	56.25	*****
7.50	8.46	64.71	*****
8.00	6.12	70.84	*****
8.50	6.85	77.69	*****
9.00	3.94	81.63	****
9.50	5.54	87.17	*****
10.00	3.79	90.96	****
10.50	3.21	94.17	***
11.00	2.92	97.08	***
****	2.92	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

6.42 2.35 -.15 -.16

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 11.0 PHI

6.58 2.56 -.00 1.03

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES MEDIAN 6.57 5TH 2.46 16TH 3.94 25TH 5.04
75TH 8.30 84TH 9.21 95TH 10.64

PCT. GRAVEL .14 SAND 16.45 SILT (PIPETTE) 83.41 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 54.25 (SEDIGRAPH) 29.16

GRAVEL+SAND 16.59 SILT/(SILT+CLAY) 65.03 PCT.GRAV+SAND/SILT+CLAY .20

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY MUD

COMMENTS -



02/25/81

PHI	PCT.	CUMPCT.	
- .50			
0.00	0.00	0.00	
.50	.21	.21	
1.00	.21	.41	
1.50	.82	1.24	*
2.00	1.03	2.26	*
2.50	.82	3.09	*
3.00	1.44	4.53	*
3.50	5.76	10.29	*****
4.00	8.23	18.53	*****
4.50	8.21	26.74	*****
5.00	17.21	43.95	*****
5.50	15.38	59.33	*****
6.00	8.73	68.06	*****
6.50	5.21	73.28	*****
7.00	4.30	77.58	****
7.50	3.13	80.71	***
8.00	3.65	84.36	****
8.50	1.96	86.31	**
9.00	3.52	89.83	****
9.50	2.35	92.18	**
10.00	2.35	94.53	**
10.50	2.48	97.00	**
11.00	1.69	98.70	**
*****	1.30		*
		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

5.61 2.02 .34 .20

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 11.0 PHI

5.66 2.10 .37 1.25

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	5TH	16TH	25TH
	5.20	3.04	3.85	4.39
		6.70	7.95	10.10

PCT. GRAVEL	SAND	SILT (PIPETTE)	CLAY (PIPETTE)
0.00	18.53	81.47	0.00
		(SEDIGRAPH) 65.83	(SEDIGRAPH) 15.64

GRAVEL+SAND 18.53 SILT/(SILT+CLAY) 80.80 PCT.GRAV+SAND/SILT+CLAY .23

LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

C06 13-32

SIEVE,SETT.TUBE,PIPET,SEDIGRAPH SAMPLE WT.= 20.0425

02/26/81

PHI	PCT.	CUMPCT.	
-1.00			
-.50	.18	.18	
0.00	0.00	.18	
.50	.06	.25	
.50	.26	.25	
1.00	.32	.50	
1.50	.83	.83	
2.00	1.95	2.78	**
2.50	1.95	4.73	**
3.00	2.27	7.00	**
3.50	12.67	19.67	*****
4.00	23.38	43.05	*****
4.50	.53	43.58	*
5.00	7.36	50.94	*****
5.50	11.74	62.68	*****
6.00	7.89	70.56	*****
6.50	4.38	74.94	****
7.00	3.68	78.62	****
7.50	4.21	82.83	****
8.00	2.28	85.11	**
8.50	4.38	89.49	****
9.00	3.86	93.34	****
9.50	0.00	93.34	
10.00	2.80	96.14	***
10.50	2.10	98.25	**
****	1.75	100.00	**

MEAN ST.DEV. SKEWNESS KURTOSIS

5.16 2.07 .32 -.17

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -.5 TO 10.5 PHI

5.35 2.20 .31 1.02

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	4.94	5TH	2.56	16TH	3.36	25TH	3.61
			75TH	6.51	84TH	7.76	95TH	9.80

PCT. GRAVEL	0.00	SAND	43.05	SILT (PIPETTE)	56.95	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	42.05	(SEDIGRAPH)	14.89

GRAVEL+SAND 43.05 SILT/(SILT+CLAY) 73.85 PCT.GRAV+SAND/SILT+CLAY .76

LABELS SHEPARD -SILTY SAND FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

02/25/81

PHI	PCT.	CUMPCT.	
-1.50			
-1.00	.28	.28	
-.50	.06	.34	
0.00	0.00	.34	
.50	.07	.41	
1.00	.26	.67	
1.50	.33	1.00	
2.00	2.63	3.62	***
2.50	1.64	5.26	**
3.00	2.95	8.22	***
3.50	6.56	14.78	*****
4.00	13.79	28.57	*****
4.50	5.10	33.67	*****
5.00	16.58	50.25	*****
5.50	14.03	64.28	*****
6.00	7.65	71.94	*****
6.50	4.85	76.78	*****
7.00	3.70	80.48	*****
7.50	3.19	83.67	***
8.00	3.19	86.86	***
8.50	2.55	89.41	***
9.00	1.66	91.07	**
9.50	2.30	93.37	**
10.00	2.55	95.92	***
10.50	1.53	97.45	**
****	2.55	97.45	***
		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

5.22 1.96 .26 .40

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 10.5 PHI

5.36 2.12 .29 1.24

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES MEDIAN 4.99 5TH 2.42 16TH 3.54 25TH 3.87
75TH 6.32 84TH 7.55 95TH 9.82

PCT. GRAVEL .28 SAND 28.28 SILT (PIPETTE) 71.43 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 58.29 (SEDIGRAPH) 13.14

GRAVEL+SAND 28.57 SILT/(SILT+CLAY) 81.61 PCT.GRAV+SAND/SILT+CLAY .40

LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

02/25/81

PHI	PCT. CUM PCT.	
3.50	ASSUMED UPPER LIMIT	
	5.45	*****
4.00	5.45	**
	1.60	
4.50	7.05	*****
	6.73	
5.00	13.78	***
	2.88	
5.50	16.67	*****
	8.65	
6.00	25.32	*****
	5.13	
6.50	30.45	*****
	8.01	
7.00	38.46	*****
	11.86	
7.50	50.32	*****
	8.01	
8.00	58.33	*****
	10.26	
8.50	68.59	*****
	8.97	
9.00	77.56	*****
	12.82	
9.50	90.38	*****
	5.45	
10.00	95.83	*****
	4.17	
*****	100.00	

NO STATISTICS ARE COMPUTED BECAUSE THE UPPER SIZE LIMIT IS ASSUMED AND THIS AFFECTS MORE THAN 5 PERCENT OF THE SAMPLE

PERCENTILES	MEDIAN	7.49	5TH*****	16TH	5.38	25TH	5.98	
			75TH	8.86	84TH	9.25	95TH	9.92

PCT. GRAVEL	.00	SAND	5.45	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	52.88	(SEDIGRAPH)	41.67

GRAVEL+SAND 5.45 SILT/(SILT+CLAY) 55.93 PCT.GRAV+SAND/SILT+CLAY .06

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-MUD (SCS)-MUD

COMMENTS -
C07 0-2CM. SAND REPRESENTED IS BETWEEN 88 AND 62.5 MICROWS

C07 2-9 CM 241075 SIEVE, SETT. TUBE, PIPET, SEDIGRAPH SAMPLE WT. = 20.1525

PHI PCT. CUM PCT.

02/25/81

-0.50			
0.00	0.00	0.00	
.50	.83	.83	*
1.00	.83	1.67	*
1.50	1.11	2.78	*
2.00	3.33	6.11	***
2.50	3.61	9.72	****
3.00	3.05	12.77	***
3.50	6.66	19.43	*****
4.00	5.83	25.26	*****
4.50	3.60	28.86	***
5.00	6.41	35.27	*****
5.50	8.68	43.94	*****
6.00	8.94	52.89	*****
6.50	5.74	58.63	*****
7.00	4.67	63.30	*****
7.50	6.41	69.70	*****
8.00	6.54	76.24	*****
8.50	3.47	79.71	***
9.00	4.14	83.85	****
9.50	3.47	87.32	***
10.00	2.94	90.26	***
10.50	1.47	91.73	*
11.00	2.67	94.39	***
*****	5.61	100.00	*****

MEAN ST. DEV. SKEWNESS KURTOSIS

5.77 2.45 .02 -.67 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 11.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	5.84	5TH	1.83	16TH	3.24	25TH	3.98
			75TH	7.90	84TH	9.02	95TH	*****

PCT. GRAVEL 0.00 SAND 25.26 SILT (PIPETTE) 74.74 CLAY (PIPETTE) 0.00
 (SEDIGRAPH) 50.98 (SEDIGRAPH) 23.76

GRAVEL+SAND 25.26 SILT/(SILT+CLAY) 68.21 PCT. GRAV+SAND/SILT+CLAY .34

LABELS SHEPARD -SAN SIL CLY FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

02/25/81

PHI	PCT.	CUMPCT.	
-1.50			*
-1.00	.62	.62	*
	.64		*
-.50		1.26	
0.00	0.00	1.26	
	.64		*
.50		1.90	
1.00	3.18	5.08	***
	6.37		*****
1.50		11.45	
	6.37		*****
2.00		17.81	
	10.19		*****
2.50		28.00	
	8.91		*****
3.00		36.91	
	10.19		*****
3.50		47.10	
	7.00		*****
4.00		54.10	
	1.29		*
4.50		55.39	
	5.51		*****
5.00		60.89	
	5.51		*****
5.50		66.40	
	4.22		****
6.00		70.62	
	4.59		*****
6.50		75.21	
	4.04		****
7.00		79.25	
	4.22		****
7.50		83.48	
	4.04		****
8.00		87.52	
	4.77		*****
8.50		92.29	
	6.43		*****
9.00		98.71	
	1.29		*
****		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

4.31	2.48	.14	-.98	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 9.0 PHI
4.38	2.60	.32	.77	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	3.71	5TH	.99	16TH	1.86	25TH	2.35
			75TH	6.48	84TH	7.56	95TH	8.71
PCT. GRAVEL	.62	SAND	53.48	SILT (PIPETTE)	45.90	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	33.42	(SEDIGRAPH)		12.48
GRAVEL+SAND	54.10	SILT/(SILT+CLAY)	72.80	PCT.GRAV+SAND/SILT+CLAY				1.18
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)-MUDDY SAND		(SCS)-SILTY SAND				

COMMENTS -
C07 9-12CM SHELLS 0.0136

02/25/81

PHI	PCT. CUMFCT.
- .50	0.00
0.00	.21
.50	.86
1.00	1.07
1.50	4.30
2.00	5.37
2.50	9.67
3.00	11.81
3.50	15.04
4.00	26.85
4.50	9.67
5.00	36.51
5.50	6.44
6.00	42.96
6.50	9.67
7.00	52.62
7.50	1.65
8.00	54.27
8.50	4.09
9.00	58.37
9.50	6.46
10.00	64.83
10.50	6.32
11.00	71.14
11.50	5.02
12.00	76.17
12.50	4.24
13.00	80.40
13.50	4.52
14.00	84.93
14.50	2.30
15.00	87.22
15.50	2.23
16.00	89.45
16.50	1.94
17.00	91.39
17.50	1.94
18.00	93.32
18.50	1.51
19.00	94.83
19.50	.86
20.00	95.69
20.50	1.29
21.00	96.99
21.50	.86
22.00	97.85
22.50	2.15
23.00	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

4.51 2.51 .35 -.38
4.43 2.65 .38 .89

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 11.5 PHI
FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES MEDIAN 3.86 5TH 1.46 16TH 2.04 25TH 2.42
75TH 6.38 84TH 7.40 95TH 10.10

PCT. GRAVEL 0.00 SAND 52.62 SILT (PIPETTE) 47.38 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 34.60 (SEDIGRAPH) 12.78

GRAVEL+SAND 52.62 SILT/(SILT+CLAY) 73.03 PCT.GRAV+SAND/SILT+CLAY 1.11

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

PHI PCT. CUMPCT. 02/25/81

-2.50			*
-2.00	1.43	1.43	
-1.50	.26	1.70	
-1.00	.12	1.81	
-.50	.52	2.33	*
0.00	0.00	2.33	
.50	1.39	3.72	*
1.00	2.77	6.49	***
1.50	7.62	14.11	*****
2.00	11.78	25.90	*****
2.50	18.71	44.61	*****
3.00	13.86	58.47	*****
3.50	3.47	61.94	***
4.00	4.16	66.09	****
4.50	.88	66.98	*
5.00	3.29	70.27	***
5.50	4.52	74.79	*****
6.00	4.57	79.36	*****
6.50	2.80	82.16	***
7.00	3.10	85.26	***
7.50	2.70	87.96	***
8.00	1.97	89.93	**
8.50	1.57	91.50	**
9.00	1.23	92.73	*
9.50	.88	93.61	*
10.00	.98	94.59	*
10.50	.88	95.48	*
11.00	.59	96.07	*
11.50	1.23	97.30	*
****	2.70	97.30	***
****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

3.58 2.62 .44 .53 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.0 TO 11.5 PHI

3.69 2.74 .58 1.09 FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.69	5TH	.73	16TH	1.58	25TH	1.96
			75TH	5.52	84TH	6.80	95TH	10.23

PCT. GRAVEL	1.81	SAND	64.28	SILT (PIPETTE)	33.91	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	23.83	(SEDIGRAPH)	10.07

GRAVEL+SAND 66.09 SILT/(SILT+CLAY) 70.29PCT.GRAV+SAND/SILT+CLAY 1.95
LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

02/25/81

PHI	PCT.	CUM.PCT.	
-1.00			
-.50	.16	.16	
0.00	0.00	.16	
.50	.06	.22	
1.00	.52	.74	*
1.50	1.73	2.47	**
2.00	3.46	5.93	***
2.50	4.33	10.26	****
3.00	2.88	13.14	***
3.50	2.88	16.03	***
4.00	2.60	18.62	***
4.50	3.62	18.62	****
5.00	3.62	22.24	*****
5.50	5.43	27.67	*****
6.00	9.04	36.71	*****
6.50	7.69	44.39	*****
7.00	5.38	50.27	*****
7.50	8.14	58.41	*****
8.00	5.43	63.83	*****
8.50	5.43	69.26	*****
9.00	3.62	72.87	*****
9.50	5.43	78.30	*****
10.00	7.23	85.53	*
10.50	.90	86.44	*
11.00	6.78	93.22	*****
	5.88	99.10	*****
*****	.90	100.00	*

MEAN ST.DEV. SKEWNESS KURTOSIS

6.43 2.64 -.08 -.80

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -.5 TO 11.0 PHI

6.46 2.81 -.03 .91

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES MEDIAN 6.48 5TH 1.87 16TH 3.50 25TH 4.75
75TH 8.70 84TH 9.39 95TH 10.65

PCT. GRAVEL 0.00 SAND 18.62 SILT (PIPETTE) 81.38 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 50.63 (SEDIGRAPH) 30.74

GRAVEL+SAND 18.62 SILT/(SILT+CLAY) 62.22 PCT.GRAV+SAND/SILT+CLAY .23

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY MUD

C033 0-5CM

SIEVE, SETT. TUBE, PIPET, SEDIGRAPH SAMPLE WT. = 20.7839

02/25/81

PHI	PCT.	CUM PCT.
- .50	0.00	0.00
0.00	0.00	0.00
.50	.05	0.05
1.00	.42	.47
1.50	1.65	2.12
2.00	5.42	7.54
2.50	14.61	22.16
3.00	3.06	25.22
3.50	10.84	36.07
4.00	.97	37.03
4.50	3.39	40.43
5.00	4.84	45.27
5.50	5.33	50.60
6.00	6.01	56.60
6.50	5.62	62.22
7.00	5.81	68.03
7.50	2.91	70.94
8.00	3.87	74.81
8.50	4.84	79.66
9.00	3.87	83.53
9.50	2.91	86.44
10.00	3.87	90.31
10.50	1.94	92.25
11.00	7.75	100.00

MEAN ST. DEV. SKEWNESS KURTOSIS

5.66 2.60 .14 -1.15

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 11.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	5.94	5TH	2.27	16TH	2.79	25TH	3.46
			75TH	8.52	84TH	9.58	95TH	*****

PCT. GRAVEL	0.00	SAND	36.07	SILT (PIPETTE)	63.93	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	34.87	(SEDIGRAPH)	29.06

GRAVEL+SAND 36.07 SILT/(SILT+CLAY) 54.55 PCT. GRAV+SAND/SILT+CLAY .56

LABELS SHEPARD -SAN SIL CLY FOLK(GMS) -SANDY MUD (SCS) -SANDY MUD

02/25/81

PHI	PCT.	CUM PCT.	
-1.50			
-1.00	.20	.20	
-.50	.16	.36	
0.00	0.00	.36	
.50	0.00	.36	
1.00	.05	.41	
1.50	.48	.89	
2.00	2.41	3.31	**
2.50	4.02	7.33	****
3.00	5.90	13.23	*****
3.50	8.85	22.08	*****
4.00	18.51	40.59	*****
4.50	3.25	43.84	***
5.00	9.75	53.59	*****
5.50	8.35	61.94	*****
6.00	4.64	66.58	*****
6.50	2.78	69.37	***
7.00	3.71	73.08	****
7.50	4.64	77.72	*****
8.00	2.78	80.51	***
8.50	3.71	84.22	****
9.00	2.78	87.00	***
9.50	2.78	89.79	***
10.00	1.86	91.65	**
*****	8.35	91.65	*****
*****		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

4.97 2.09 .26 -.37

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 10.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	4.82	5TH	2.21	16TH	3.16	25TH	3.58
			75TH	7.21	84TH	8.47	95TH	*****

PCT. GRAVEL	.20	SAND	40.39	SILT (PIPETTE)	59.41	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	39.92	(SEDIGRAPH)	19.49

GRAVEL+SAND 40.59 SILT/(SILT+CLAY) 67.19 PCT.GRAV+SAND/SILT+CLAY .68

LABELS SHEPARD -SILTY SAND FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

C033 10-45CM

SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.2769

02/25/81

PHI	PCT.	CUM.PCT.	
-.50			
0.00	0.00	0.00	
.50	0.00	0.00	
1.00	.03	.03	
1.50	.24	.27	
2.00	1.19	1.46	*
2.50	1.99	3.45	**
3.00	2.26	5.70	**
3.50	3.98	9.68	****
4.00	10.21	19.90	*****
4.50	3.38	23.28	***
5.00	10.72	34.00	*****
5.50	11.85	45.85	*****
6.00	9.03	54.87	*****
6.50	6.77	61.64	*****
7.00	3.95	65.59	****
7.50	6.21	71.80	*****
8.00	5.08	76.87	*****
8.50	1.69	78.56	**
9.00	5.08	83.64	*****
9.50	2.82	86.46	***
10.00	1.69	88.15	**
*****	11.85	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

5.65 1.88 .12 -.54

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	5TH	16TH	25TH
	5.73	2.84	3.81	4.58
		7.82	9.06	*****

PCT. GRAVEL	SAND	SILT (PIPETTE)	CLAY (PIPETTE)
0.00	19.90	80.10	0.00
		(SEDIGRAPH) 56.97	(SEDIGRAPH) 23.13

GRAVEL+SAND 19.90 SILT/(SILT+CLAY) 71.13PCT.GRAV+SAND/SILT+CLAY .25

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

CO33 45-81CM

SIEVE, SETT. TUBE, PIPET, SEDIGRAPH SAMPLE WT. = 20.4101

02/25/81

PHI	PCT.	CUM.PCT.	
- .50			
0.00	0.00	0.00	
.50	.02	.02	
1.00	.21	.23	
1.50	.23	.46	
2.00	1.16	1.63	*
2.50	1.16	2.79	*
3.00	1.28	4.06	*
3.50	2.79	6.85	***
4.00	8.36	15.21	*****
4.50	3.12	18.33	***
5.00	10.40	28.73	*****
5.50	13.00	41.74	*****
6.00	10.40	52.14	*****
6.50	5.20	57.34	*****
7.00	6.24	63.59	*****
7.50	6.24	69.83	*****
8.00	4.16	73.99	*****
8.50	4.16	78.15	*****
9.00	2.08	80.23	**
9.50	4.16	84.39	*****
10.00	2.08	86.47	**
10.50	2.08	88.56	**
*****	11.44	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

5.92 1.94 .13 -.32 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.5 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	5.90	5TH	3.17	16TH	4.13	25TH	4.82
			75TH	8.12	84TH	9.45	95TH	*****
PCT. GRAVEL	0.00	SAND	15.21	SILT (PIPETTE)	84.79	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	58.78	(SEDIGRAPH)	26.01	
GRAVEL+SAND	15.21	SILT/(SILT+CLAY)	69.33	PCT.GRAV+SAND/SILT+CLAY	.18			
LABELS SHEPARD	-CLAYEY SILT	FOLK (GMS)	-SANDY MUD			(SCS)	-SANDY SILT	

02/25/81

PHI	PCT.	CUMPCT.	
-3.00			*****
-2.50	5.19	5.19	**
-2.00	2.25	7.44	**
-1.50	1.95	9.39	*
-1.00	.75	10.14	*
-.50	1.10	11.24	
0.00	.04	11.28	
.50	3.14	14.42	***
1.00	2.29	16.71	**
1.50	4.05	20.76	****
2.00	6.70	27.46	*****
2.50	8.46	35.92	*****
3.00	5.11	41.03	****
3.50	2.47	43.50	**
4.00	2.29	45.79	**
4.50	1.62	47.41	**
5.00	5.66	53.07	*****
5.50	6.90	61.97	*****
6.00	5.66	67.63	*****
6.50	3.64	71.28	****
7.00	4.45	75.73	****
7.50	4.85	80.58	****
8.00	2.83	83.41	***
8.50	2.83	86.24	***
9.00	3.24	89.48	***
9.50	1.21	90.69	*
10.00	1.21	91.91	*
10.50	1.62	93.53	**
****	6.47	93.53	*****
		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

3.84 3.33 -.12 -.67

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.5 TO 10.5 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	4.73	5TH	-2.52	16TH	.85	25TH	1.82
			75TH	6.92	84TH	8.10	95TH	*****

PCT. GRAVEL	10.14	SAND	35.64	SILT (PIPETTE)	54.21	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	37.63	(SEDIGRAPH)	16.59

GRAVEL+SAND 45.79 SILT/(SILT+CLAY) 69.40 PCT.GRAV+SAND/SILT+CLAY .84

LABELS SHEPARD -SILTY SAND FOLK(GMS)-GRAVELLY MUD

(SCS)-

C033 0-2 CM POLL SIEVE, SETT. TUBE, PIPET, SEDIGRAPH SAMPLE WT.= 20.1905

PHI PCT. CUMPCT.

02/25/81

-0.50			
0.00	.00	.00	
.50	0.00	.00	
1.00	0.00	.00	
1.50	1.34	1.34	*
2.00	5.36	6.71	*****
2.50	10.73	17.44	*****
3.00	18.11	35.54	*****
3.50	12.74	48.28	*****
4.00	6.71	54.99	*****
4.50	1.29	56.27	*
5.00	5.79	62.06	*****
5.50	4.50	66.56	*****
6.00	4.50	71.06	*****
6.50	4.50	75.57	*****
7.00	2.57	78.14	***
7.50	5.79	83.92	*****
8.00	3.22	87.14	***
8.50	2.57	89.71	***
9.00	2.57	92.28	***
****	7.72	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

4.23 2.03 .35 -.74

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 9.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.63	5TH	1.94	16TH	2.43	25TH	2.71
			75TH	6.44	84TH	7.51	95TH	*****

PCT. GRAVEL	0.00	SAND	54.99	SILT (PIPETTE)	45.01	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	32.15	(SEDIGRAPH)	12.86

GRAVEL+SAND 54.99 SILT/(SILT+CLAY) 71.43 PCT.GRAV+SAND/SILT+CLAY 1.22

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

CO33 8-10 CM POLL SIEVE,SETT.TUBE,PIPET,SEDIGRAPH SAMPLE WT.= 21.4105

PHI PCT. CUMFCT.

02/25/81

-1.50			
-1.00	.41	.41	
-.50	.07	.48	
0.00	.00	.48	
.50	0.00	.48	
1.00	0.00	.48	
1.50	1.89	2.37	**
2.00	4.25	6.62	****
2.50	5.67	12.29	*****
3.00	4.25	16.54	****
3.50	10.87	27.41	*****
4.00	18.43	45.84	*****
4.50	4.28	50.12	****
5.00	11.40	61.52	*****
5.50	8.55	70.07	*****
6.00	7.13	77.20	****
6.50	2.85	80.05	****
7.00	4.28	84.32	****
7.50	2.85	87.17	***
8.00	2.85	90.02	***
8.50	2.85	92.87	***
****	7.13	92.87	*****
****	100.00	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

4.41 1.72 .11 -.05 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 8.5 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	4.49	5TH	1.81	16TH	2.94	25TH	3.39
			75TH	5.85	84TH	6.96	95TH	*****
PCT. GRAVEL	.41	SAND	45.43	SILT (PIPETTE)	54.16	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	44.18	(SEDIGRAPH)		9.98
GRAVEL+SAND	45.84	SILT/(SILT+CLAY)		81.58	PCT.GRAV+SAND/SILT+CLAY			.85
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)-SANDY MUD			(SCS)-SANDY SILT			

02/25/81

PHI	PCT.	CUMPGT.	
- .50			
0.00	.00	.00	
.50	0.00	.00	
1.00	.35	.35	
1.50	.35	.71	
2.00	4.01	4.71	*****
2.50	5.89	10.60	*****
3.00	6.48	17.09	*****
3.50	12.96	30.05	*****
4.00	17.67	47.72	*****
4.50	3.65	51.37	*****
5.00	10.94	62.31	*****
5.50	8.51	70.82	*****
6.00	6.69	77.51	*****
6.50	4.26	81.76	*****
7.00	2.43	84.19	**
7.50	4.86	89.06	*****
8.00	2.43	91.49	**
8.50	4.86	96.35	*****
*****	3.65	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

4.52 1.74 .24 -.49 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 0.0 TO 8.5 PHI
 4.73 1.97 .29 1.04 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES MEDIAN 4.31 5TH 2.02 16TH 2.92 25TH 3.31
 75TH 5.81 84TH 6.96 95TH 8.36
 PCT. GRAVEL 0.00 SAND 47.72 SILT (PIPETTE) 52.28 CLAY (PIPETTE) 0.00
 (SEDIGRAPH) 43.77 (SEDIGRAPH) 8.51
 GRAVEL+SAND 47.72 SILT/(SILT+CLAY) 83.72 PCT.GRAV+SAND/SILT+CLAY .91
 LABELS SHEPARD -SILTY SAND FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

02/25/81

PHI PCT. CUMPCT.

-1.50			
-1.00	.26	.26	
-.50	.04	.31	
0.00	.00	.31	
.50	0.00	.31	
1.00	0.00	.31	
1.50	0.00	.31	
2.00	3.52	.31	****
2.50	6.45	3.83	*****
3.00	7.03	10.27	*****
3.50	7.62	17.31	*****
4.00	17.00	24.93	*****
4.50	5.44	41.92	*****
5.00	11.80	47.37	*****
5.50	10.89	59.17	*****
6.00	8.17	70.05	*****
6.50	5.44	78.22	*****
7.00	4.54	83.67	*****
7.50	3.63	88.20	*****
8.00	5.44	91.83	*****
	2.72	97.28	*****
*****	2.72	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

4.57	1.62	.06	-.39	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 8.0 PHI
4.69	1.77	.09	1.02	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	4.61	5TH	2.09	16TH	2.91	25TH	3.50
			75TH	5.80	84TH	6.54	95TH	7.79

PCT. GRAVEL	.26	SAND	41.66	SILT (PIPETTE)	58.08	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	55.35	(SEDIGRAPH)	2.72

GRAVEL+SAND 41.92 SILT/(SILT+CLAY) 95.31 PCT.GRAV+SAND/SILT+CLAY .72

LABELS SHEPARD -SANDY SILT FOLK(GMS)-SANDY MUD (SCS)-SANDY SILT

COMMENTS -
C033 14-16 CM 8 PHI AND FINER BY EXTRAPOLATIONS

02/25/81

PHI PCT. CUM PCT.

-1.50			
-1.00	.14	.14	
-.50	.00	.14	
0.00	.00	.14	
.50	0.00	.14	
1.00	0.00	.14	
1.50	.28	.42	
2.00	1.69	2.11	**
2.50	2.25	4.36	**
3.00	1.40	5.76	*
3.50	3.09	8.85	***
4.00	10.96	19.81	*****
4.50	4.13	23.94	*****
5.00	16.53	40.47	*****
5.50	14.88	55.36	*****
6.00	9.09	64.45	*****
6.50	7.44	71.89	*****
7.00	6.61	78.50	*****
7.50	4.13	82.64	****
8.00	2.48	85.12	**
8.50	4.96	90.08	*****
****	9.92	90.08	*****
		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

5.23 1.51 -.05 .22

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 8.5 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	5.32	5TH	2.73	16TH	3.83	25TH	4.53
			75TH	6.74	84TH	7.77	95TH	*****

PCT. GRAVEL	.14	SAND	19.66	SILT (PIPETTE)	80.19	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	65.31	(SEDIGRAPH)	14.83

GRAVEL+SAND 19.81 SILT/(SILT+CLAY) 81.44 PCT.GRAV+SAND/SILT+CLAY .25

LABELS SHEPARD -SANDY SILT FOLK (GMS)-SANDY MUD (SCS)-SANDY SILT

G034 0-15CM

SIEVE, SETT. TUBE, PIPET, SEDIGRAPH SAMPLE WT. = 20.5578

02/25/81

PHI	PCT.	CUMPCT.	
-0.50			
0.00	0.00	0.00	
	.08		
.50		.08	*
	.73		
1.00		.81	**
	2.43		
1.50		3.24	***
	3.64		
2.00		6.88	**
	1.62		
2.50		8.50	*****
	6.88		
3.00		15.37	*****
	26.70		*****
3.50		42.07	*****
	14.56		*****
4.00		56.64	**
	2.17		
4.50		58.81	*****
	7.59		
5.00		66.40	*****
	6.50		*****
5.50		72.90	**
	3.25		
6.00		76.15	***
	4.34		***
6.50		80.49	**
	2.17		
7.00		82.66	***
	4.34		***
7.50		86.99	**
	2.17		**
8.00		89.16	**
	2.17		**
8.50		91.33	**
	2.17		**
9.00		93.50	*****
	6.50		*****
*****		100.00	

MEAN ST. DEV. SKEWNESS KURTOSIS

4.27 1.78 .37 -.02

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 9.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.77	5TH	1.74	16TH	3.01	25TH	3.18
			75TH	5.82	84TH	7.16	95TH*****	
PCT. GRAVEL	0.00	SAND	56.64	SILT (PIPETTE)	43.36	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	32.52	(SEDIGRAPH)	10.84	
GRAVEL+SAND	56.64	SILT/(SILT+CLAY)	75.00	PCT. GRAV+SAND/SILT+CLAY	1.31			
LABELS SHEPARD	-SILTY SAND	FOLK (GMS)	-MUDDY SAND		(SCS)	-SILTY SAND		

G034 15-30CM

SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.6017

02/25/81

PHI	PCT.	CUMPCT.	
-0.50	0.00	0.00	
0.00	0.00	0.00	
.50	0.00	0.00	
1.00	0.00	0.00	
1.50	.07	.07	
2.00	.59	.66	*
2.50	1.97	2.62	**
3.00	5.57	8.19	*****
3.50	24.58	32.77	*****
4.00	22.29	55.06	*****
4.50	2.70	57.76	***
5.00	8.54	66.30	*****
5.50	6.74	73.04	*****
6.00	2.70	75.73	***
6.50	3.60	79.33	***
7.00	3.15	82.47	***
7.50	4.04	86.52	****
8.00	1.80	88.32	**
8.50	.90	89.21	*
9.00	1.80	91.01	**
9.50	.90	91.91	*
10.00	1.80	93.71	**
*****	6.29	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

4.52 1.74 .62 .87

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.89	5TH	2.71	16TH	3.16	25TH	3.34
			75TH	5.86	84TH	7.19	95TH*****	
PCT. GRAVEL	0.00	SAND	55.06	SILT (PIPETTE)	44.94	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	33.25	(SEDIGRAPH)	11.68	
GRAVEL+SAND	55.06	SILT/(SILT+CLAY)	74.00	PCT.GRAV+SAND/SILT+CLAY	1.23			
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)	-MUDDY SAND	(SCS)	-SILTY SAND			

CO34 30-45CM

SIEVE,SETT.TUBE,PIPET,SEDIGRAPH SAMPLE WT.= 20.2633

02/25/81

PHI	PCT.	CUMPCT.	
-1.00			
-.50	.11	.11	
0.00	0.00	.11	
.50	0.00	.11	
1.00	.07	.18	
1.50	0.00	.18	
2.00	.67	.85	*
2.50	1.48	2.33	*
3.00	6.30	8.62	*****
3.50	24.81	33.44	*****
4.00	20.00	53.43	*****
4.50	3.51	56.95	****
5.00	7.91	64.86	*****
5.50	6.15	71.01	*****
6.00	3.51	74.52	****
6.50	4.39	78.91	****
7.00	3.08	81.99	***
7.50	2.64	84.62	***
8.00	3.08	87.70	***
8.50	.44	88.14	
9.00	2.20	90.34	**
9.50	.88	91.21	*
10.00	2.20	93.41	**
*****	6.59	93.41	*****
		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

4.56 1.80 .58 .75 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -.5 TO 10.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.91	5TH	2.71	16TH	3.15	25TH	3.33
			75TH	6.05	84TH	7.38	95TH	*****
PCT. GRAVEL	0.00	SAND	53.43	SILT (PIPETTE)	46.57	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	34.27	(SEDIGRAPH)		12.30
GRAVEL+SAND	53.43	SILT/(SILT+CLAY)		73.58	PCT.GRAV+SAND/SILT+CLAY			1.15
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)-MUDDY SAND				(SCS)-SILTY SAND		

02/25/81

PHI	PCT.	CUMPCT.	
-0.50	0.00	0.00	
0.00	0.00	0.00	
.50	0.00	0.00	
1.00	0.00	0.00	
1.50	0.00	0.00	
2.00	.11	.11	*
2.50	1.03	1.15	*****
3.00	9.20	10.35	*****
3.50	25.29	35.64	*****
4.00	22.99	58.64	***
4.50	3.33	61.96	*****
5.00	5.71	67.67	*****
5.50	6.18	73.85	***
6.00	3.33	77.18	***
6.50	2.85	80.03	***
7.00	2.85	82.88	*****
7.50	4.75	87.64	**
8.00	1.90	89.54	**
8.50	1.90	91.44	**
9.00	1.90	93.34	*****
*****	6.66	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

4.37 1.59 .59 .37

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 9.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.81	5TH	2.71	16TH	3.11	25TH	3.29
			75TH	5.67	84TH	7.12	95TH*****	
PCT. GRAVEL	0.00	SAND	58.64	SILT (PIPETTE)	41.36	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	30.90	(SEDIGRAPH)	10.46	
GRAVEL+SAND	58.64	SILT/(SILT+CLAY)	74.71	PCT.GRAV+SAND/SILT+CLAY	1.42			
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)	-MIDDY SAND	(SCS)	-SILTY SAND			

C035 0-17CM

0575 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.6076

02/25/81

PHI	PCT.	CUM.PCT.
-0.50		
0.00	0.00	0.00
	.09	
.50		.09
	.09	
1.00		.17
	2.41	
1.50		2.58
	11.17	
2.00		13.74
	30.92	
2.50		44.67
	42.95	
3.00		87.62
	2.58	
3.50		90.20
	.43	
4.00		90.62
	2.68	
4.50		93.30
	4.29	
5.00		97.59
	1.07	
5.50		98.66
	1.34	
*****		100.00

**

 *
 *

MEAN ST.DEV. SKEWNESS KURTOSIS

2.61	.74	.73	3.06
2.52	.70	.12	1.69

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 0.0 TO 5.5 PHI
 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.56	5TH	1.61	16TH	2.04	25TH	2.18
			75TH	2.85	84TH	2.96	95TH	4.70

PCT. GRAVEL	0.00	SAND	90.62	SILT (PIPETTE)	9.38	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	9.38	(SEDIGRAPH)	0.00

GRAVEL+SAND 90.62 SILT/(SILT+CLAY) 100.00PCT.GRAV+SAND/SILT+CLAY 9.67

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

COMMENTS - CORE 08 0-17CM CLINKER - 0.0435GM

C035 17-34CM

0575 SIEVE, SETT. TUBE, PIPET, SEDIGRAPH

SAMPLE WT. = 21.0310

02/25/81

PHI	PCT.	CUM.PCT.
-0.50		
0.00	0.00	0.00
.50	0.00	0.00
1.00	.44	.44
1.50	9.14	9.58
2.00	20.03	29.61
2.50	33.09	62.70
3.00	26.13	88.83
3.50	3.48	92.31
4.00	.09	92.40
4.50	1.71	94.11
5.00	2.09	96.20
5.50	1.90	98.10
*****	1.90	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.36 .79 .73 3.42

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 5.5 PHI

2.29 .84 .17 1.67

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.31	5TH	1.25	16TH	1.66	25TH	1.88
			75TH	2.74	84TH	2.91	95TH	4.71

PCT. GRAVEL	0.00	SAND	92.40	SILT (PIPETTE)	7.60	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	7.60	(SEDIGRAPH)	0.00

GRAVEL+SAND 92.40 SILT/(SILT+CLAY) 100.00 PCT.GRAV+SAND/SILT+CLAY 12.16

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

PHI PCT. CUMPCT.

02/25/81

-1.00				
-0.50	.16	.16		
0.00	0.00	.16		
.50	0.00	.16		
1.00	1.47	1.63	*	
1.50	5.87	7.51	*****	
2.00	10.28	17.79	*****	
2.50	21.29	39.08	*****	
3.00	32.31	71.39	*****	
3.50	4.41	75.79	****	
4.00	.37	76.16		
4.50	0.00	76.16		
5.00	1.70	77.86	**	
5.50	2.55	80.42	***	
6.00	3.41	83.82	***	
6.50	4.94	88.76	*****	
7.00	1.87	90.63	**	
7.50	2.55	93.19	***	
8.00	5.11	98.30	*****	
****	1.70	98.30	**	
****	100.00			

MEAN ST.DEV. SKEWNESS KURTOSIS

3.27	1.85	.62	.35	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -.5 TO 8.0 PHI
3.53	1.99	.60	2.11	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.67	5TH	1.29	16TH	1.91	25TH	2.17
			75TH	3.41	84TH	6.02	95TH	7.68
PCT. GRAVEL	0.00	SAND	76.16	SILT (PIPETTE)	23.84	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	22.14	(SEDIGRAPH)		1.70
GRAVEL+SAND	76.16	SILT/(SILT+CLAY)		92.86PCT.GRAV+SAND/SILT+CLAY				3.19
LABELS SHEPARD -SAND		FOLK(GMS)-MUDDY SAND		(SCS)-SILTY SAND				

PHI	PCT.	CUMPCT.	
3.50			ASSUMED UPPER LIMIT
	3.00		***
4.00	2.00	3.00	**
4.50	4.00	5.00	****
5.00	9.00	9.00	*****
5.50	18.00	18.00	*****
6.00	17.00	36.00	*****
6.50	11.00	53.00	*****
7.00	7.00	64.00	*****
7.50	4.50	71.00	****
8.00	3.50	75.50	***
8.50	3.00	79.00	***
9.00	3.00	82.00	***
9.50	2.50	85.00	**
10.00	12.50	87.50	*****
****		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

6.43 1.34 .27 .17

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 4.0 TO 10.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	6.41	5TH	4.50	16TH	5.39	25TH	5.69
			75TH	7.94	84TH	9.33	95TH	*****

PCT.	GRAVEL	.00	SAND	3.00	SILT (PIPETTE)	0.00	CLAY (PIPETTE)	0.00
					(SEDIGRAPH)	72.50	(SEDIGRAPH)	24.50

GRAVEL+SAND 3.00 SILT/(SILT+CLAY) 74.74 PCT.GRAV+SAND/SILT+CLAY .03

LABELS SHEPARD -CLAYEY SILT FOLK(GMS)-M(LD (SCS)-SILT

C035 41.5-43CM

0575

SIEVE ONLY

SAMPLE WT.= 5.2900

PHI PCT. CUMPCT.

02/25/81

-0.50	.95	*
0.00	1.13	*
.50	2.08	*
1.00	3.02	*
1.50	4.35	****
2.00	7.37	*****
2.50	12.29	*****
3.00	19.66	*****
3.50	35.92	*****
4.00	75.24	*****
4.50	12.10	*****
5.00	87.33	*****
5.50	6.81	*****
6.00	94.14	*****
6.50	5.86	*****
7.00	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

2.50 .73 -.45 1.72

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 4.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	2.65	5TH	1.23	16TH	1.85	25TH	2.14
			75TH	3.00	84TH	3.36	95TH	*****

PCT. GRAVEL	0.00	SAND	94.14	SILT+CLAY	5.86
GRAVEL+SAND	94.14			GRAV+SAND/SILT+CLAY	16.06
LABELS SHEPARD -SAND		FOLK(GMS)-SAND		(SCS)-	

C036 0-5CM

0575 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.7470

02/25/81

PHI	PCT.	CUMPCT.
-0.50	0.00	0.00
0.00	0.00	0.00
.50	0.00	0.00
1.00	0.00	0.00
1.50	0.00	0.00
2.00	.30	.30
2.50	2.38	2.67
3.00	25.86	28.53
3.50	28.23	56.76
4.00	8.62	65.38
4.50	.65	66.04
5.00	3.92	69.96
5.50	7.84	77.79
6.00	5.88	83.67
6.50	2.61	86.28
7.00	5.23	91.51
8.49	8.49	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.81 1.27 .51 -.25

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 7.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.38	5TH	2.54	16TH	2.76	25TH	2.93
			75TH	5.32	84TH	6.06	95TH	*****
PCT. GRAVEL	0.00	SAND	65.38	SILT (PIPETTE)	34.62	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	34.62	(SEDIGRAPH)	0.00	
GRAVEL+SAND	65.38	SILT/(SILT+CLAY)	100.00 PCT.GRAV+SAND/SILT+CLAY			1.89		
LABELS SHEPARD	-SILTY SAND			FOLK(GMS)-MUDDY SAND			(SCS)-SILTY SAND	

02/25/81

PHI	PCT.	CUMPCT.
-2.00		
-1.50	.41	.41
-1.00	.00	.41
-.50	.06	.48
0.00	0.00	.48
.50	0.00	.48
1.00	0.00	.48
1.50	.08	.55
2.00	.71	1.26
2.50	3.15	4.41
3.00	32.26	36.67
3.50	29.11	65.78
4.00	6.29	72.07
4.50	.46	72.53
5.00	2.93	75.46
5.50	4.85	80.31
6.00	3.20	83.52
6.50	3.66	87.18
7.00	3.20	90.39
****	9.61	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.53 1.23 .45 1.98 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 7.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.23	5TH	2.51	16TH	2.68	25TH	2.82
			75TH	4.92	84TH	6.07	95TH	*****
PCT. GRAVEL	.41	SAND	71.66	SILT (PIPETTE)	27.93	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	27.93	(SEDIGRAPH)		0.00
GRAVEL+SAND	72.07	SILT/(SILT+CLAY)	100.00	PCT.GRAV+SAND/SILT+CLAY				2.58
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)-MUDDY SAND				(SCS)-SILTY SAND		

02/25/81

PHI	PCT.	CUMFCT.	
-1.00			
	.08	.08	
-.50	0.00	.08	
0.00	0.00	.08	
.50	0.00	.08	
1.00	.39	.08	
1.50	2.76	.48	***
2.00	1.58	3.24	**
2.50	4.82	4.82	*****
3.00	26.46	31.28	*****
3.50	39.10	70.39	*****
4.00	5.13	75.52	*****
4.50	.44	75.96	
5.00	1.75	77.71	**
5.50	3.93	81.64	****
6.00	2.62	84.26	***
6.50	3.50	87.76	***
7.00	3.50	91.26	***
7.50	2.62	93.88	***
8.00	4.37	98.25	****
****	1.75	98.25	**
****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

3.79 1.53 .67 .76 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE -.5 TO 8.0 PHI
 3.97 1.59 .69 1.97 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES MEDIAN 3.24 5TH 2.50 16TH 2.71 25TH 2.88
 75TH 3.95 84TH 5.95 95TH 7.63
 PCT. GRAVEL 0.00 SAND 75.52 SILT (PIPETTE) 24.48 CLAY (PIPETTE) 0.00
 (SEDIGRAPH) 22.73 (SEDIGRAPH) 1.75
 GRAVEL+SAND 75.52 SILT/(SILT+CLAY) 92.86 PCT.GRAV+SAND/SILT+CLAY 3.09
 LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

02/25/81

PHI	PCT.	CUMPCT.
-1.00		
-0.50	.09	.09
0.00	0.00	.09
.50	0.00	.09
1.00	.79	.09
1.50	3.17	.89
2.00	2.37	4.05
2.50	22.17	6.43
3.00	47.50	28.59
3.50	5.94	76.09
4.00	0.00	82.03
4.50	2.57	82.03
5.00	1.85	84.60
5.50	2.77	86.44
6.00	1.03	89.22
6.50	3.59	90.24
7.00	3.08	93.84
7.50	2.05	96.92
8.00	1.03	98.97
****	100.00	

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.60 1.36 .82 2.14

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -.5 TO 8.0 PHI

3.61 1.30 .56 3.59

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	3.23	5TH	2.20	16TH	2.72	25TH	2.92
			75TH	3.49	84TH	4.88	95TH	7.19

PCT. GRAVEL	0.00	SAND	82.03	SILT (PIPETTE)	17.97	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	16.94	(SEDIGRAPH)	1.03

GRAVEL+SAND 82.03 SILT/(SILT+CLAY) 94.29 PCT.GRAV+SAND/SILT+CLAY 4.56

LABELS SHEPARD -SAND FOLK (GMS) -MUDDY SAND (SCS) -SILTY SAND

PHI PCT. CUMPCT.

02/25/81

-2.50			*
-2.00	1.33	1.33	
-1.50	.00	1.33	
-1.00	.26	1.59	
-.50	.00	1.59	
0.00	.00	1.59	
.50	0.00	1.59	
1.00	0.00	1.59	
1.50	1.12	2.71	*
2.00	2.80	5.51	***
2.50	4.48	9.99	****
3.00	43.10	53.08	*****
3.50	24.63	77.71	*****
4.00	4.48	82.19	****
4.50	1.27	83.46	*
5.00	1.91	85.37	**
5.50	1.91	87.28	**
6.00	2.54	89.82	***
6.50	1.27	91.09	*
7.00	2.29	93.38	**
7.50	1.78	95.17	**
8.00	2.93	98.09	***
*****	1.91	100.00	**

MEAN ST.DEV. SKEWNESS KURTOSIS

3.33	1.53	.36	3.62	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -2.0 TO 8.0 PHI
3.39	1.36	.62	2.95	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.96	5TH	1.91	16TH	2.57	25TH	2.67
			75TH	3.44	84TH	4.64	95TH	7.45
PCT. GRAVEL	1.59	SAND	80.60	SILT (PIPETTE)	17.81	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	15.90	(SEDIGRAPH)		1.91
GRAVEL+SAND	82.19	SILT/(SILT+CLAY)	89.29	PCT.GRAV+SAND/SILT+CLAY				4.61
LABELS SHEPARD	-SAND	FOLK(GMS)-MUDDY SAND		(SCS)-SILTY SAND				

PHI PCT. CUMPCT.

02/25/81

-1.50		
-1.00	.20	.20
-.50	.09	.29
0.00	.00	.29
.50	0.00	.29
1.00	.44	.72
1.50	0.00	.72
2.00	.44	1.16
2.50	2.61	3.77
3.00	30.04	33.81
3.50	23.94	57.75
4.00	9.58	67.33
4.50	.13	67.46
5.00	3.79	71.25
5.50	3.92	75.17
6.00	3.79	78.96
6.50	2.61	81.57
7.00	2.74	84.32
7.50	2.61	86.93
8.00	1.31	88.24
8.50	1.44	89.68
9.00	3.79	93.47
*****	6.53	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.99 1.78 .63 .88

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 9.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.34	5TH	2.52	16TH	2.70	25TH	2.85
			75TH	5.48	84TH	6.94	95TH*****	

PCT. GRAVEL .20 SAND 67.13 SILT (PIPETTE) 32.67 CLAY (PIPETTE) 0.00
 (SEDIGRAPH) 20.91 (SEDIGRAPH) 11.76

GRAVEL+SAND 67.33 SILT/(SILT+CLAY) 64.00PCT.GRAV+SAND/SILT+CLAY 2.06

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-MUDDY SAND

02/25/81

PHI	PCT.	CUMPCT.
-0.50		
0.00	.00	.00
.50	0.00	.00
1.00	0.00	.00
1.50	0.00	.00
2.00	.71	.71
2.50	3.54	4.25
3.00	38.21	42.45
3.50	29.01	71.46
4.00	4.95	76.41
4.50	1.71	78.12
5.00	.19	78.32
5.50	3.14	81.45
6.00	2.38	83.83
6.50	2.85	86.68
7.00	2.85	89.54
7.50	1.43	90.96
8.00	1.90	92.87
8.50	2.28	95.15
****	4.85	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.64	1.49	.88	2.03	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 8.5 PHI
3.94	1.75	.75	2.25	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	3.13	5TH	2.51	16TH	2.65	25TH	2.77
			75TH	3.86	84TH	6.03	95TH	8.47
PCT. GRAVEL	0.00	SAND	76.41	SILT (PIPETTE)	23.59	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	16.45	(SEDIGRAPH)	7.13	
GRAVEL+SAND	76.41	SILT/(SILT+CLAY)	69.76 PCT. GRAV+SAND/SILT+CLAY				3.24	
LABELS SHEPARD	-SAND	FOLK (GMS) - MUDDY SAND				(SCS) - SILTY SAND		

02/25/81

PHI	PCT.	CUMFCT.	
-2.00			
-1.50	.10	.10	
-1.00	.04	.14	
-.50	.06	.20	
0.00	.00	.20	
.50	0.00	.20	
1.00	0.00	.20	
1.50	.69	.88	*
2.00	3.43	4.32	***
2.50	4.81	9.12	*****
3.00	44.65	53.77	*****
3.50	26.10	79.87	*****
4.00	4.12	83.99	****
4.50	0.00	83.99	
5.00	1.17	85.16	*
5.50	1.95	87.12	**
6.00	1.95	89.07	**
6.50	1.95	91.02	**
7.00	2.26	93.28	**
7.50	.86	94.14	*
8.00	1.95	96.10	**
****	3.90	96.10	****
****		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

3.29 1.26 .95 4.00 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 8.0 PHI

3.35 1.34 .65 3.18 FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES MEDIAN 2.96 5TH 2.07 16TH 2.58 25TH 2.68
75TH 3.41 84TH 4.50 95TH 7.72

PCT. GRAVEL .14 SAND 83.85 SILT (PIPETTE) 16.01 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 12.10 (SEDIGRAPH) 3.90

GRAVEL+SAND 83.99 SILT/(SILT+CLAY) 75.61 PCT.GRAV+SAND/SILT+CLAY 5.25

LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

02/25/81

PHI	PCT.	CUMPCT.	
-0.50	.00	.00	
0.00	.63	.63	*
.50	.38	.63	
1.00	1.51	1.01	**
1.50	3.15	2.52	***
2.00	4.41	5.67	****
2.50	43.49	10.08	*****
3.00	24.58	53.58	*****
3.50	3.15	78.16	***
4.00	1.10	81.31	*
4.50	1.10	82.41	*
5.00	2.75	83.51	***
5.50	2.75	86.26	***
6.00	3.85	89.00	****
6.50	2.20	92.85	**
7.00	3.30	95.05	***
7.50	1.65	98.35	**
*****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

3.38 1.36 .72 1.65 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 7.5 PHI

3.54 1.40 .64 2.73 FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES MEDIAN 2.96 5TH 1.89 16TH 2.57 25TH 2.67
75TH 3.44 84TH 5.09 95TH 6.99

PCT. GRAVEL 0.00 SAND 81.31 SILT (PIPETTE) 18.69 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 18.69 (SEDIGRAPH) 0.00

GRAVEL+SAND 81.31 SILT/(SILT+CLAY) 100.00PCT.GRAV+SAND/SILT+CLAY 4.35

LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS -
C036 34-36 CM 8 PHI AND FINER BY EXTRAPOLATIONS

02/25/81

PHI	PCT.	CUMPCT.	
-0.50			
0.00	.00	.00	
.50	.24	.24	
1.00	.37	.61	
1.50	1.22	1.83	*
2.00	1.83	3.66	**
2.50	4.27	7.94	****
3.00	30.53	38.47	*****
3.50	44.57	83.04	*****
4.00	6.11	89.14	*****
4.50	0.00	89.14	
5.00	1.25	90.40	*
5.50	2.09	92.48	**
6.00	1.25	93.74	*
6.50	.84	94.57	*
7.00	2.09	96.66	**
7.50	2.09	98.75	**
****	1.25	100.00	*

MEAN ST.DEV. SKEWNESS KURTOSIS

3.29 1.07 .99 5.10 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 7.5 PHI

3.11 .91 .26 2.89 FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES MEDIAN 3.13 5TH 2.16 16TH 2.63 25TH 2.78
75TH 3.41 84TH 3.58 95TH 6.60

PCT. GRAVEL 0.00 SAND 89.14 SILT (PIPETTE) 10.86 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 10.86 (SEDIGRAPH) 0.00

GRAVEL+SAND 89.14 SILT/(SILT+CLAY) 100.00PCT.GRAV+SAND/SILT+CLAY 8.21

LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS -
C036 36-38 CM 8 PHI AND FINER BY EXTRAPOLATIONS

02/25/81

PHI	PCT.	CUMPCT.	
- .50	.00	.00	
0.00	0.00	.00	
.50	.74	.00	*
1.00	.74	.74	*
1.50	.74	1.48	***
2.00	2.97	4.45	****
2.50	4.45	8.90	*****
3.00	36.35	45.25	*****
3.50	35.61	80.86	*****
3.71	3.71	84.57	****
4.00	.26	84.83	
4.50	0.00	84.83	
5.00	.90	85.73	*
5.50	.13	85.86	
6.00	2.57	88.43	***
6.50	1.29	89.72	*
7.00	2.57	92.29	***
7.50	2.57	94.86	***
8.00	5.14	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

3.33 1.32 1.05 4.11 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 8.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.07	5TH	2.06	16TH	2.60	25TH	2.72
			75TH	3.42	84TH	3.92	95TH*****	
PCT. GRAVEL	0.00	SAND	84.57	SILT (PIPETTE)	15.43	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	10.28	(SEDIGRAPH)	5.14	
GRAVEL+SAND	84.57	SILT/(SILT+CLAY)	66.67	PCT.GRAV+SAND/SILT+CLAY	5.48			
LABELS SHEPARD	-SAND	FOLK(GMS)-MUDDY SAND		(SCS)-MUDDY SAND				

02/25/81

PHI	PCT.	CUM.PCT.
-1.50	.17	
-1.00	.00	.17
-.50	.00	.17
0.00	.00	.17
.50	0.00	.17
1.00	0.00	.17
1.50	0.00	.17
2.00	2.67	2.84
2.50	2.67	5.51
3.00	29.35	34.86
3.50	46.70	81.56
4.00	4.67	86.23
4.50	.17	86.40
5.00	.69	87.09
5.50	1.29	88.38
6.00	2.07	90.45
6.50	.95	91.39
7.00	1.72	93.11
7.50	.86	93.97
8.00	1.72	95.70
8.50	.77	96.47
9.00	.86	97.33
****	2.67	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

3.43 1.29 1.15 5.82

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 9.0 PHI

3.20 1.09 .41 3.70

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES MEDIAN 3.16 5TH 2.40 16TH 2.68 25TH 2.83
75TH 3.43 84TH 3.76 95TH 7.80

PCT. GRAVEL .17 SAND 86.06 SILT (PIPETTE) 13.77 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 9.47 (SEDIGRAPH) 4.30

GRAVEL+SAND 86.23 SILT/(SILT+CLAY) 68.75 PCT.GRAV+SAND/SILT+CLAY 6.26

LABELS SHEPARD -SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

02/25/81

PHI	PCT.	CUMPCT.
-1.50		
-1.00	.04	.04
-.50	.11	.15
0.00	0.00	.15
.50	0.00	.15
1.00	.08	.23
1.50	2.33	2.56
2.00	5.63	8.19
2.50	11.27	19.46
3.00	57.13	76.59
3.50	13.28	89.87
4.00	1.21	91.08
4.50	.45	91.52
5.00	0.00	91.52
5.50	.45	91.97
6.00	.71	92.68
6.50	.18	92.86
7.00	5.35	98.22
****	1.78	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.94	1.08	1.18	6.48
2.80	.99	.34	4.67

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 7.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.77	5TH	1.72	16TH	2.35	25TH	2.55
			75TH	2.99	84TH	3.28	95TH	6.70

PCT. GRAVEL	.04	SAND	91.04	SILT (PIPETTE)	8.92	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	8.92	(SEDIGRAPH)	0.00

GRAVEL+SAND 91.08 SILT/(SILT+CLAY) 100.00 PCT.GRAV+SAND/SILT+CLAY 10.20

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

02/25/81

PHI	PCT.	CUMFCT.
-1.50	.33	.33
-1.00	.11	.44
-.50	0.00	.44
0.00	0.00	.44
.50	.88	.44
1.00	5.28	1.32
1.50	6.16	6.59
2.00	15.83	12.75
2.50	51.90	28.58
3.00	9.68	80.48
3.50	.88	90.15
4.00	0.00	91.03
4.50	0.00	91.03
5.00	.45	91.03
5.50	2.24	91.48
6.00	1.79	93.72
6.50	2.87	95.52
7.00	1.61	98.39
****		100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.81	1.13	.87	5.01	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 7.0 PHI
2.66	1.03	.17	3.66	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	2.71	5TH	1.35	16TH	2.10	25TH	2.39
			75TH	2.95	84TH	3.18	95TH	6.36
PCT. GRAVEL	.33	SAND	90.70	SILT (PIPETTE)	8.97	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	8.97	(SEDIGRAPH)	0.00	
GRAVEL+SAND	91.03	SILT/(SILT+CLAY)	100.00	PCT.GRAV+SAND/SILT+CLAY	10.15			
LABELS SHEPARD	-SAND	FOLK(GMS)	-SAND	(SCS)	-SAND			

02/25/81

PHI	PCT.	CUMPCT.
-2.00		
-1.50	.25	.25
-1.00	.10	.35
-.50	.20	.55
0.00	0.00	.55
.50	0.00	.55
1.00	.47	1.02
1.50	3.28	4.30
2.00	5.62	9.92
2.50	16.39	26.31
3.00	54.32	80.63
3.50	11.71	92.34
4.00	1.40	93.74
4.50	.89	94.63
5.00	3.58	98.21
5.50	1.34	99.55
*****	.45	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.72	.76	-.00	6.34	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 5.5 PHI
2.68	.69	.06	2.51	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.72	5TH	1.56	16TH	2.19	25TH	2.46
			75TH	2.95	84TH	3.14	95TH	4.55

PCT. GRAVEL	.35	SAND	93.39	SILT (PIPETTE)	6.26	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	6.26	(SEDIGRAPH)	0.00

GRAVEL+SAND	93.74	SILT/(SILT+CLAY)	100.00PCT.GRAV+SAND/SILT+CLAY	14.97
LABELS SHEPARD	-SAND	FOLK(GMS)-SAND	(SCS)-SAND	

C037 55-84CM

0575 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.7477

02/25/81

PHI	PCT.	CUM.PCT.
- .50	0.00	0.00
0.00	0.00	0.00
.50	.09	0.09
1.00	.83	.92
1.50	3.67	4.59
2.00	13.76	18.35
2.50	63.30	81.64
3.00	11.93	93.57
3.50	.92	94.49
4.00	2.21	96.69
4.50	2.76	99.45
5.00	.55	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.79 .54 .63 4.51

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 5.0 PHI

2.75 .49 .16 2.18

FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.75	5TH	2.02	16TH	2.41	25TH	2.55
			75TH	2.95	84TH	3.10	95TH	4.12

PCT. GRAVEL	0.00	SAND	94.49	SILT (PIPETTE)	5.51	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	5.51	(SEDIGRAPH)	0.00

GRAVEL+SAND 94.49 SILT/(SILT+CLAY) 100.00PCT.GRAV+SAND/SILT+CLAY 17.14

LABELS SHEPARD -SAND FOLK(GMS)-SAND (SCS)-SAND

02/25/81

PHI	PCT.	CUMFCT.
-1.50		
-1.00	.07	.07
-.50	.42	.49
0.00	0.00	.49
.50	.47	.96
1.00	2.34	3.30
1.50	6.55	9.85
2.00	24.33	34.17
2.50	51.46	85.64
3.00	8.42	94.06
3.50	.47	94.53
4.00	0.00	94.53
4.50	2.03	96.56
5.00	2.66	99.22
*****	.78	
		100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.16	.72	.52	5.47
2.09	.67	.04	2.09

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 5.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS
FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.15	5TH	1.13	16TH	1.63	25TH	1.81
			75TH	2.40	84TH	2.48	95TH	4.12
PCT. GRAVEL	.07	SAND	94.45	SILT (PIPETTE)	5.47	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	5.47	(SEDIGRAPH)	0.00	
GRAVEL+SAND	94.53	SILT/(SILT+CLAY)	100.00PCT.GRAV+SAND/SILT+CLAY			17.27		
LABELS SHEPARD -SAND		FOLK(GMS)-SAND			(SCS)-SAND			

02/25/81

PHI	PCT.	CUMFCT.
-2.00		
-1.50	.40	.40
-1.00	3.42	3.82
-.50	5.02	8.84
0.00	.43	9.27
.50	11.65	20.92
1.00	6.04	26.97
1.50	6.91	33.87
2.00	21.58	55.45
2.50	30.21	85.66
3.00	8.20	93.87
3.50	.86	94.73
4.00	0.00	94.73
4.50	1.05	95.78
5.00	2.46	98.24
5.50	.70	98.95
6.00	.70	99.65
****	.35	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

1.63	1.30	-.01	1.01
1.54	1.31	-.28	1.38

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE -1.5 TO 6.0 PHI
 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES	MEDIAN	1.87	5TH	-.88	16TH	.29	25TH	.84
			75TH	2.32	84TH	2.47	95TH	4.13
PCT. GRAVEL	3.82	SAND	90.91	SILT (PIPETTE)	5.27	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	5.27	(SEDIGRAPH)		0.00
GRAVEL+SAND	94.73	SILT/(SILT+CLAY)	100.00	PCT.GRAV+SAND/SILT+CLAY				17.97
LABELS SHEPARD	-SAND		FOLK(GMS)-SAND			(SCS)-SAND		

C038 25-55CM

0575 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.4301

02/25/81

PHI	PCT.	CUMPCT.
-1.00		
-0.50	.06	.06
0.00	0.00	.06
.50	.45	.51
1.00	5.83	6.34
1.50	8.08	14.42
2.00	23.33	37.74
2.50	39.48	77.22
3.00	14.36	91.58
3.50	1.79	93.37
4.00	.45	93.82
4.50	1.03	94.85
5.00	2.06	96.91
5.50	1.03	97.94
6.00	1.03	98.97
****	1.03	100.00

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MEAN ST.DEV. SKEWNESS KURTOSIS

2.19	.87	.74	4.40
2.14	.85	.14	2.01

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE -.5 TO 6.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES	MEDIAN	2.16	5TH	.89	16TH	1.53	25TH	1.73
			75TH	2.47	84TH	2.74	95TH	4.54
PCT. GRAVEL	0.00	SAND	93.82	SILT (PIPETTE)	6.18	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	6.18	(SEDIGRAPH)	0.00	
GRAVEL+SAND	93.82	SILT/(SILT+CLAY)	100.00	PCT.GRAV+SAND/SILT+CLAY	15.19			
LABELS SHEPARD	-SAND	FOLK (GMS)	-SAND	(SCS)	-SAND			

PHI PCT. CUMPCT.

02/25/81

-2.00			*
-1.50	.69	.69	****
-1.00	4.28	4.97	*****
-.50	8.47	13.44	*
0.00	.75	14.19	*****
.50	19.40	33.59	*****
1.00	6.72	40.30	*****
1.50	5.97	46.27	*****
2.00	17.91	64.18	*****
2.50	23.13	87.31	*****
3.00	7.46	94.77	*
3.50	1.49	96.26	*
4.00	.07	96.34	*
4.50	1.22	97.56	*
5.00	.98	98.53	*
*****	1.47	100.00	*

MEAN ST.DEV. SKEWNESS KURTOSIS

1.25	1.29	-.09	-.36	KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 5.0 PHI
1.36	1.21	-.29	.85	FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES	MEDIAN	1.60	5TH	-1.00	16TH	.05	25TH	.28
			75TH	2.23	84TH	2.43	95TH	3.08
PCT. GRAVEL	4.97	SAND	91.36	SILT (PIPETTE)	3.66	CLAY (PIPETTE)	0.00	
				(SEDIGRAPH)	3.66	(SEDIGRAPH)	0.00	
GRAVEL+SAND	96.34	SILT/(SILT+CLAY)	100.00	PCT.GRAV+SAND/SILT+CLAY	26.30			
LABELS SHEPARD	-SAND	FOLK(GMS)	-SAND	(SCS)	-SAND			

C039 0-25CM

0575 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.5940

02/25/81

PHI	PCT.	CUMPCT.	
- .50	0.00	0.00	
0.00	0.00	0.00	
.50	.07	0.00	
1.00		.07	
1.50	1.32	1.39	*
2.00	2.78	4.18	***
2.50	4.52	8.70	*****
3.00	11.48	20.18	*****
3.50	25.05	45.23	*****
4.00	15.31	60.54	*****
4.50	2.96	63.50	***
5.00	6.91	70.41	*****
5.50	7.89	78.30	*****
6.00	5.92	84.22	*****
6.50	3.95	88.16	***
7.00	1.97	90.14	**
7.50	4.93	95.07	*****
8.00	2.96	98.03	***
****	1.97	100.00	**

MEAN ST.DEV. SKEWNESS KURTOSIS

4.13	1.54	.35	-.28
4.15	1.61	.45	1.01

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE 0.0 TO 8.0 PHI

FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD,1957

PERCENTILES	MEDIAN	3.66	5TH	2.09	16TH	2.82	25TH	3.10
			75TH	5.29	84TH	5.98	95TH	7.49

PCT. GRAVEL	0.00	SAND	60.54	SILT (PIPETTE)	39.46	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	37.49	(SEDIGRAPH)	1.97

GRAVEL+SAND	60.54	SILT/(SILT+CLAY)	95.00	PCT.GRAV+SAND/SILT+CLAY	1.53
LABELS SHEPARD	-SILTY SAND	FOLK(GHS)-MUDDY SAND		(SCS)-SILTY SAND	

CO39 25-50CM

0575 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.8363

02/25/81

PHI	PCT.	CUMPCT.	
-0.50			
0.00	0.00	0.00	
.50	0.00	0.00	
1.00	0.00	0.00	
1.50	.73	.73	*
2.00	1.46	2.18	*
2.50	2.91	5.10	***
3.00	9.47	14.56	*****
3.50	27.67	42.23	*****
4.00	18.20	60.43	*****
4.50	2.33	62.76	**
5.00	7.60	70.36	*****
5.50	5.59	75.95	*****
6.00	3.10	79.05	***
6.50	2.33	81.38	**
7.00	2.33	83.71	**
7.50	3.10	86.81	***
8.00	2.33	89.14	**
8.50	2.33	91.47	**
9.00	1.16	92.63	*
9.50	0.00	92.63	
10.00	1.94	94.57	**
*****	5.43	99.00	*****
		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

4.30 1.77 .64 1.03

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.71	5TH	2.48	16TH	3.03	25TH	3.19
			75TH	5.41	84TH	7.05	95TH	*****

PCT. GRAVEL	0.00	SAND	60.43	SILT (PIPETTE)	39.57	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	28.70	(SEDIGRAPH)	10.86

GRAVEL+SAND 60.43 SILT/(SILT+CLAY) 72.55PCT.GRAV+SAND/SILT+CLAY 1.53

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

C039 50-75CM

0575 SIEVE,SETT.TUBE,PIPET,SEDIGRAPH

SAMPLE WT.= 20.6354

02/25/81

PHI	PCT.	CUMFCT.	
- .50			
0.00	0.00	0.00	
.50	0.00	0.00	
1.00	.08	.08	
1.50	1.61	1.69	**
2.00	1.69	3.38	**
2.50	4.23	7.61	***
3.00	14.80	22.42	*****
3.50	33.41	55.83	*****
4.00	16.07	71.90	*****
4.50	1.90	73.80	**
5.00	3.42	77.22	***
5.50	3.42	80.64	***
6.00	2.51	83.14	***
6.50	1.67	84.81	**
7.00	2.28	87.09	**
7.50	3.04	90.13	***
8.00	.76	90.89	*
8.50	1.14	92.03	*
9.00	.38	92.41	
9.50	.38	92.79	
10.00	1.52	94.30	**
10.50	1.14	95.44	*
****	4.56	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

3.95 1.76 .87 2.86 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.5 PHI

4.15 2.10 .67 2.03 FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES MEDIAN 3.41 5TH 2.19 16TH 2.78 25TH 3.04 75TH 4.68 84TH 6.26 95TH 10.31

PCT. GRAVEL 0.00 SAND 71.90 SILT (PIPETTE) 28.10 CLAY (PIPETTE) 0.00 (SEDIGRAPH) 18.98 (SEDIGRAPH) 9.11

GRAVEL+SAND 71.90 SILT/(SILT+CLAY) 67.57 PCT.GRAV+SAND/SILT+CLAY 2.56

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

02/25/61

PHI	PCT.	CUMFCT.	
- .50			
0.00	0.00	0.00	
	.07		
.50		.07	*
	.62		
1.00		.69	*
	1.38		
1.50		2.06	***
	3.09		
2.00		5.16	***
	3.09		
2.50		8.25	*****
	16.50		
3.00		24.75	*****
	28.19		
3.50		52.94	*****
	9.97		
4.00		62.91	
	.41		
4.50		63.32	*****
	4.53		
5.00		67.85	*****
	4.95		
5.50		72.80	*****
	3.71		
6.00		76.51	*****
	3.71		
6.50		80.22	**
	2.47		
7.00		82.69	***
	3.30		
7.50		85.99	**
	2.47		
8.00		88.46	**
	2.06		
8.50		90.52	*
	1.24		
9.00		91.76	*
	.82		
9.50		92.58	**
	1.65		
10.00		94.23	*****
	5.77		
*****		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

4.18 1.94 .55 .46

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE 0.0 TO 10.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.45	5TH	1.97	16TH	2.73	25TH	3.00
			75TH	5.80	84TH	7.20	95TH	*****

PCT. GRAVEL	0.00	SAND	62.91	SILT (PIPETTE)	37.09	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	25.55	(SEDIGRAPH)	11.54

GRAVEL+SAND 62.91 SILT/(SILT+CLAY) 68.89 PCT.GRAV+SAND/SILT+CLAY 1.70

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

PHI PCT. CUM PCT.

02/25/81

-2.00			
-1.50	.19	.19	
-1.00	.31	.51	
-.50	.09	.60	
0.00	.00	.60	
.50	1.37	.60	*
1.00	1.37	1.97	*
1.50	7.52	3.33	*****
2.00	5.47	10.86	*****
2.50	6.16	16.33	*****
3.00	13.00	22.48	*****
3.50	26.68	35.48	*****
4.00	12.31	62.16	*****
4.50	1.92	74.47	**
5.00	3.40	76.38	***
5.50	3.19	79.79	***
6.00	2.13	82.98	**
6.50	1.06	85.11	*
7.00	2.13	86.17	**
7.50	2.13	88.30	**
8.00	1.49	90.42	*
8.50	1.70	91.91	**
****	6.38	93.62	*****
****	100.00		

MEAN ST.DEV. SKEWNESS KURTOSIS

3.39 1.68 .41 1.19 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 8.5 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.27	5TH	1.11	16TH	1.97	25TH	2.60
			75TH	4.14	84TH	5.74	95TH	*****
PCT. GRAVEL	.51	SAND	73.96	SILT (PIPETTE)	25.53	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	17.45	(SEDIGRAPH)		8.09
GRAVEL+SAND	74.47	SILT/(SILT+CLAY)	68.33	PCT.GRAV+SAND/SILT+CLAY				2.92
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)-MUDDY SAND		(SCS)-SILTY SAND				

02/25/81

PHI	PCT.	CUMPCT.
-1.00		
-0.50	.10	.10
0.00	.00	.10
.50	0.00	.10
1.00	.32	.42
1.50	2.86	3.27
2.00	4.76	8.03
2.50	3.17	11.21
3.00	12.69	23.90
3.50	32.53	56.43
4.00	15.07	71.50
4.50	2.25	73.75
5.00	2.25	76.00
5.50	5.25	81.25
6.00	3.75	85.00
6.50	3.00	88.00
7.00	3.00	91.00
7.50	6.00	97.00
*****	3.00	100.00

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MEAN ST. DEV. SKEWNESS KURTOSIS

3.80	1.50	.42	.21
3.99	1.65	.47	1.32

KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -.5 TO 7.5 PHI
 FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES	MEDIAN	3.40	5TH	1.68	16TH	2.69	25TH	3.02
			75TH	4.78	84TH	5.87	95TH	7.33

PCT. GRAVEL	0.00	SAND	71.50	SILT (PIPETTE)	28.50	CLAY (PIPETTE)	0.00
				(SEDIGRAPH)	28.50	(SEDIGRAPH)	0.00

GRAVEL+SAND 71.50 SILT/(SILT+CLAY) 100.00 PCT. GRAV+SAND/SILT+CLAY 2.51
 LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

02/25/81

PHI	PCT.	CUM.PCT.	
-1.50			
-1.00	.02	.02	
-.50	.14	.16	
0.00	.00	.16	
.50	0.00	.16	
1.00	0.00	.16	
1.50	2.56	.16	***
2.00	2.56	2.71	***
2.50	3.07	5.27	***
3.00	8.69	8.34	*****
3.50	33.24	17.03	*****
4.00	16.88	50.28	*****
4.50	1.51	67.15	**
5.00	5.34	68.66	*****
5.50	4.79	74.00	*****
6.00	4.11	78.79	*****
6.50	2.05	82.89	**
7.00	1.37	84.95	*
7.50	2.05	86.31	**
8.00	2.05	88.37	**
8.50	1.37	90.42	*
9.00	1.37	91.79	*
****	6.84	93.16	*****
		100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

3.93 1.57 .58 1.33 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 9.0 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.50	5TH	1.95	16TH	2.94	25TH	3.12
			75TH	5.10	84TH	6.27	95TH*****	
PCT. GRAVEL	.02	SAND	67.13	SILT (PIPETTE)	32.85	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	23.27	(SEDIGRAPH)		9.58
GRAVEL+SAND	67.15	SILT/(SILT+CLAY)		70.83PCT.GRAV+SAND/SILT+CLAY				2.04
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)-MUDDY SAND		(SCS)-SILTY SAND				

02/25/81

PHI	PCT.	CUM PCT.	
-2.00			
-1.50	.16	.16	
-1.00	.14	.30	
-.50	.00	.31	
0.00	.00	.31	
.50	0.00	.31	
1.00	0.00	.31	
1.50	.83	1.14	*
2.00	2.09	3.23	**
2.50	2.09	5.31	**
3.00	6.68	11.99	*****
3.50	29.22	41.22	*****
4.00	19.62	60.84	*****
4.50	2.01	62.85	**
5.00	8.03	70.88	*****
5.50	9.04	79.92	*****
6.00	6.02	85.94	*****
6.50	2.01	87.95	**
7.00	2.01	89.96	**
7.50	5.02	94.98	*****
****	5.02	100.00	*****

MEAN ST.DEV. SKEWNESS KURTOSIS

4.08 1.36 .25 .68 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 7.5 PHI

> 5 PERCENT OF THE FINES ARE NOT RESOLVED, OBTAIN FOLK STATS. GRAPHICALLY

PERCENTILES	MEDIAN	3.72	5TH	2.42	16TH	3.07	25TH	3.22
			75TH	5.23	84TH	5.84	95TH	57.21
PCT. GRAVEL	.30	SAND	60.53	SILT (PIPETTE)	39.16	CLAY (PIPETTE)		0.00
				(SEDIGRAPH)	39.16	(SEDIGRAPH)		0.00
GRAVEL+SAND	60.84	SILT/(SILT+CLAY)	100.00	PCT.GRAV+SAND/SILT+CLAY				1.55
LABELS SHEPARD	-SILTY SAND	FOLK(GMS)	-MUDDY SAND			(SCS)	-SILTY SAND	

02/25/81

PHI	PCT.	CUMFCT.	
-1.50			
-1.00	.09	.09	
-.50	.03	.13	
0.00	.00	.13	
.50	0.00	.13	
1.00	0.00	.13	
1.50	1.26	1.39	*
2.00	2.52	3.90	***
2.50	2.52	6.42	***
3.00	9.44	6.42	*****
3.50	24.54	15.86	*****
4.00	22.03	40.40	*****
4.50	3.18	62.43	***
5.00	8.38	65.61	*****
5.50	9.39	73.99	*****
6.00	5.06	83.38	*****
6.50	1.45	88.44	*
7.00	2.17	89.88	**
7.50	2.31	92.05	**
8.00	4.48	94.36	****
8.50	1.16	98.84	*
9.00	1.16	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

4.11 1.45 .40 .49 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.0 TO 8.0 PHI

4.09 1.45 .44 1.17 FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD, 1957

PERCENTILES MEDIAN 3.72 5TH 2.22 16TH 3.00 25TH 3.19
75TH 5.05 84TH 5.56 95TH 7.57

PCT. GRAVEL .09 SAND 62.33 SILT (PIPETTE) 37.57 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 36.42 (SEDIGRAPH) 1.16

GRAVEL+SAND 62.43 SILT/(SILT+CLAY) 96.92 PCT. GRAV+SAND/SILT+CLAY 1.66

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS -
C039 10-12 CM 8 PHI AND FINER BY EXTRAPOLATIONS

02/25/81

PHI	PCT.	CUMFCT.	
-1.00			
-0.50	.08	.08	
0.00	.00	.08	
.50	0.00	.08	
1.00	0.00	.08	
1.50	1.34	1.42	*
2.00	2.00	3.42	**
2.50	4.01	7.43	***
3.00	12.02	19.45	*****
3.50	24.71	44.16	*****
4.00	16.03	60.19	*****
4.50	3.91	64.10	***
5.00	8.86	72.96	*****
5.50	9.01	81.97	*****
6.00	3.00	84.98	**
6.50	4.21	89.18	***
7.00	3.61	92.79	***
7.50	4.21	97.00	***
****	3.00	100.00	***

MEAN ST.DEV. SKEWNESS KURTOSIS

4.04 1.40 .31 -.16 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES
 FOR SIZE RANGE -.5 TO 7.5 PHI
 4.13 1.51 .43 1.04 FOLK GRAPHIC STATISTICAL PARAMETERS
 FOLK AND WARD, 1957

PERCENTILES MEDIAN 3.68 5TH 2.20 16TH 2.86 25TH 3.11
 75TH 5.11 84TH 5.84 95TH 7.26

PCT. GRAVEL 0.00 SAND 60.19 SILT (PIPETTE) 39.81 CLAY (PIPETTE) 0.00
 (SEDIGRAPH) 39.81 (SEDIGRAPH) 0.00

GRAVEL+SAND 60.19 SILT/(SILT+CLAY) 100.00 PCT.GRAV+SAND/SILT+CLAY 1.51

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

PHI PCT. CUM.PCT.

02/25/81

-2.00			
-1.50	.41	.41	
-1.00	.00	.41	
-.50	.09	.41	
0.00	.00	.50	
.50	0.00	.50	
1.00	0.00	.50	
1.50	0.00	.50	
2.00	2.86	3.37	***
2.50	2.86	6.23	***
3.00	11.46	17.69	*****
3.50	30.80	48.49	*****
4.00	19.34	67.83	*****
4.50	3.39	71.22	***
5.00	6.77	77.99	*****
5.50	6.77	84.76	*****
6.00	3.39	88.15	***
6.50	3.39	91.53	***
7.00	3.39	94.92	***
7.50	2.37	97.29	**
8.00	2.37	99.66	**
****	.34	100.00	

MEAN ST.DEV. SKEWNESS KURTOSIS

3.97 1.42 .34 1.22 KRUMBEIN + PETTIJOHN (1938) MOMENT MEASURES FOR SIZE RANGE -1.5 TO 8.0 PHI

3.97 1.35 .49 1.17 FOLK GRAPHIC STATISTICAL PARAMETERS FOLK AND WARD,1957

PERCENTILES MEDIAN 3.54 5TH 2.28 16TH 2.93 25TH 3.12
75TH 4.78 84TH 5.44 95TH 7.02

PCT. GRAVEL .41 SAND 67.42 SILT (PIPETTE) 32.17 CLAY (PIPETTE) 0.00
(SEDIGRAPH) 31.83 (SEDIGRAPH) .34

GRAVEL+SAND 67.83 SILT/(SILT+CLAY) 98.95 PCT.GRAV+SAND/SILT+CLAY 2.11

LABELS SHEPARD -SILTY SAND FOLK(GMS)-MUDDY SAND (SCS)-SILTY SAND

COMMENTS -

C039 16-18 CM

8 PHI AND FINER BY EXTRAPOLATIONS

APPENDIX 13
Pollen Data

**POLLEN DATA
LAKE ONTARIO NEARSHORE CORES
NIAGARA TO JORDAN**

Core	Depth	% Silt-Clay	AMBROSIA Count	PINUS Count	AMBROSIA /gm	PINUS /gm	
CO6	0- 2 cm	32	71	31	5200	2300	
	4- 6 cm	27	133	13	5600	540	
	10-12 cm	38	31	27	1300	1200	
	----- AMBROSIA horizon -----						
	12-14 cm	31	6	347	100	6260	
	16-18 cm	24	2	97	70	3200	
	20-22 cm	27	4	162	90	3710	
CO7	0- 2 cm	32	84	41	5600	2700	
	6- 8 cm	29	53	18	1400	460	
	8-10 cm	28	9	152	300	5040	
	----- AMBROSIA horizon -----						
	10-12 cm	16	3	148	60	2800	
	12-14 cm	34	5	85	100	1900	
	20-22	32	8	136	100	2050	
CO33	0- 2 cm	45	142	57	2510	1000	
	8-10 cm	54	64	429	1000	6800	
	10-12 cm	52	18	472	340	8990	
	----- AMBROSIA horizon -----						
	12-14 cm	59	4	438	70	7650	
	16-18 cm	58	1	241	20	4800	
	24-26 cm	80	4	175	70	3250	
CO34	0- 2 cm	8	1	26	10	360	
	4- 6 cm	10	3	43	70	1100	
CO36	0- 2 cm	18	36	8	710	160	
	8-10 cm	33	61	13	1500	320	
	24-26 cm	24	32	13	640	260	
	32-34 cm	16	44	12	890	240	
	34-36 cm	19	36	13	770	280	
	36-38 cm	11	6	9	200	300	
	----- AMBROSIA horizon -----						
	40-42 cm	15	5	18	100	400	
	44-46 cm	14	3	24	70	590	

23690

POLLEN DATA
LAKE ONTARIO NEARSHORE CORES cont'd.
NIAGARA TO JORDAN

Core	Depth	% Silt-Clay	AMBROSIA Count	PINUS Count	AMBROSIA /gm	PINUS /gm
CO39	0- 2 cm	26	17	122	140	980
----- AMBROSIA horizon? -----						
	4- 6 cm	33	2	184	20	1970
	8-10 cm	39	6	237	60	2340
	10-12 cm	38	3	116	30	1260
	12-14 cm	40	1	150	10	1870
	16-18 cm	32	1	116	10	990