



1966

LIMNOLOGICAL DATA REPORT NO. 10

# LAKE ONTARIO

CRUISE 66 - 15 SEPTEMBER 6 - 11

CRUISE 66 - 16 SEPTEMBER 12 - 16

PUBLISHED BY  
CANADIAN OCEANOGRAPHIC DATA CENTRE

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BURLINGTON, ONTARIO

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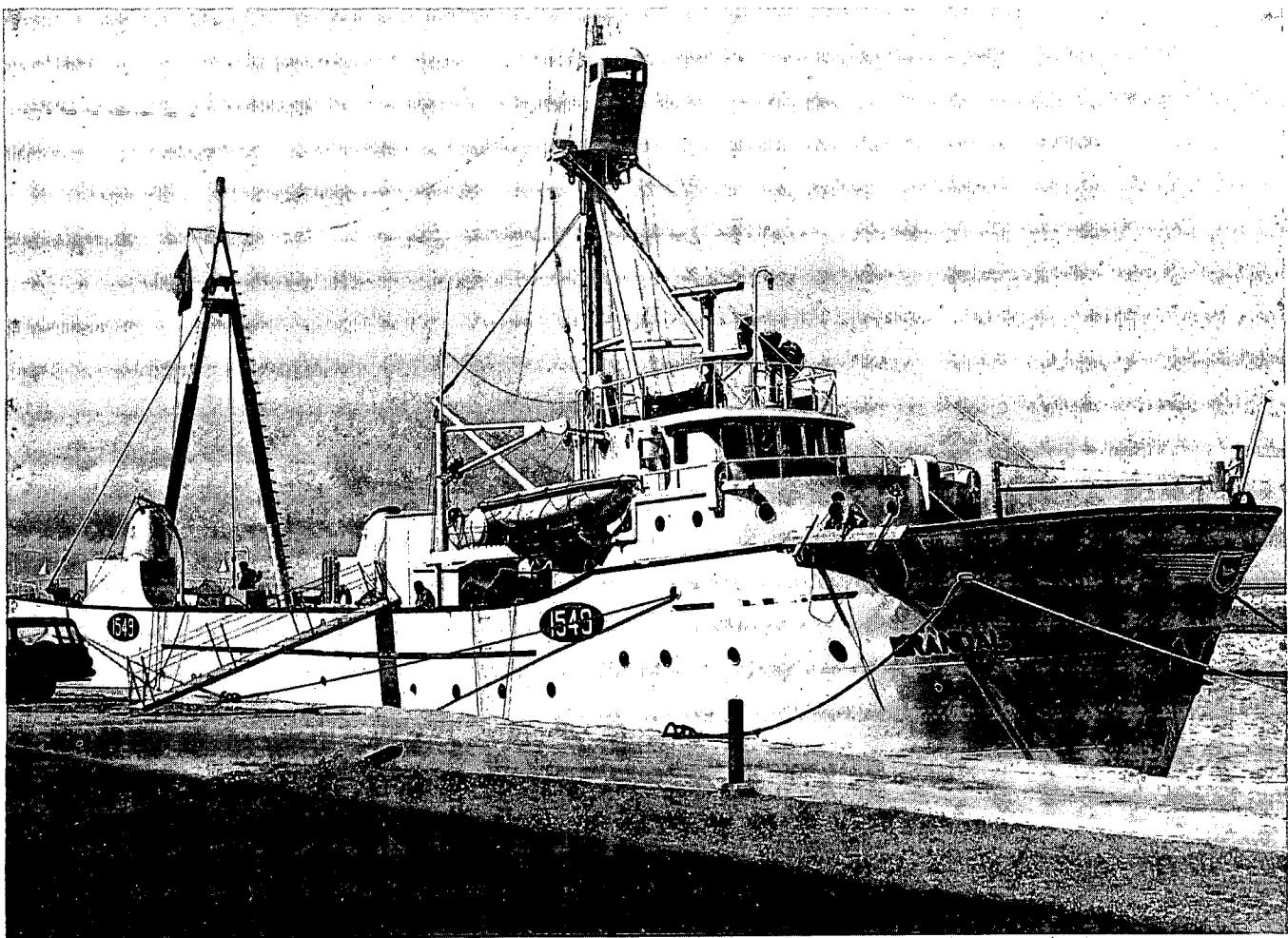
**DEPARTMENT of ENERGY, MINES & RESOURCES**

**and**

**PUBLIC HEALTH ENGINEERING DIVISION**

**DEPARTMENT of NATIONAL HEALTH & WELFARE**

**CANADA**



M.V. "Brandal"



**LIMNOLOGICAL DATA REPORT NO.10**

**LAKE ONTARIO**

**CRUISE 66 - 15, SEPTEMBER 6 - 11**

**CRUISE 66 - 16, SEPTEMBER 12 - 16**

**1966**

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BURLINGTON, ONTARIO**

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1969

## FOREWORD

This report contains limnological data gathered for research and monitoring purposes, primarily to provide data required in connection with the IJC reference on pollution of Lakes Erie and Ontario.

The agencies involved were:

Department of Energy, Mines and Resources  
Department of National Health and Welfare

The joint reference of the Governments of Canada and the United States to the International Joint Commission was for information on the following questions:

- (1) Are the waters of Lake Erie, Lake Ontario and the International Section of the St. Lawrence River being polluted on either side of the boundary to an extent which is causing or is likely to cause injury to health or property on the other side of the boundary?
- (2) If the foregoing question is answered in the affirmative, to what extent, by what causes, and in what localities is such pollution taking place?
- (3) If the Commission should find that pollution of the character just referred to is taking place, what remedial measures would, in its judgement, be most practicable from the economic, sanitary and other points of view and what would be the probable cost thereof?

These data have been made available to International Joint Commission agencies, federal and provincial, operating under the respective Boards: The International Lake Erie Water Pollution Board and the International Lake Ontario - St. Lawrence River Water Pollution Board.

In view of their interest to limnological research workers who are not formally charged with studies on behalf of the International Joint Commission, these data are distributed widely in this report. Because of difficulties in interpretation, anyone using these data in the preparation of a paper or report which draws conclusions pertaining to the three questions posed above, is requested by the IJC Pollution Reference Boards to discuss the data interpretation with the agencies concerned before publishing the report or paper. Such discussion can be arranged through the Canada Centre for Inland Waters, P.O. Box 5050, Burlington, Ontario.

In all other respects, the data are free to be used for scientific research and studies and should be acknowledged in accordance with the usual scientific practice.

## INTRODUCTION

This report is one of a series listing chemical, bacteriological and physical data for waters of Lake Ontario and Lake Erie, observed by Government of Canada agencies. The first twelve reports cover the year 1966, during which Lake Ontario was surveyed from June 1 to October 3, and Lake Erie, from August 8 to August 14.

The 1966 surveys were carried out by the Great Lakes Division (Inland Waters Branch) and the Canadian Hydrographic Service (Marine Sciences Branch), both of which are Branches of the Department of Energy, Mines and Resources, and by the Public Health Engineering Division of the Department of National Health and Welfare. Staff from the three agencies carried out the work aboard the 140-foot stern trawler "Brandal", chartered by the Department of Energy, Mines and Resources.

Water-quality data gathered during eighteen cruises in 1966 are contained in twelve separate reports in the present series. Not reported on is a nineteenth cruise, from August 23 to 28, which was for seismic purposes only. Supplementary bathythermograph data and weather data are available on request from the Canada Centre for Inland Waters, P.O. Box 5050, Burlington, Ontario.

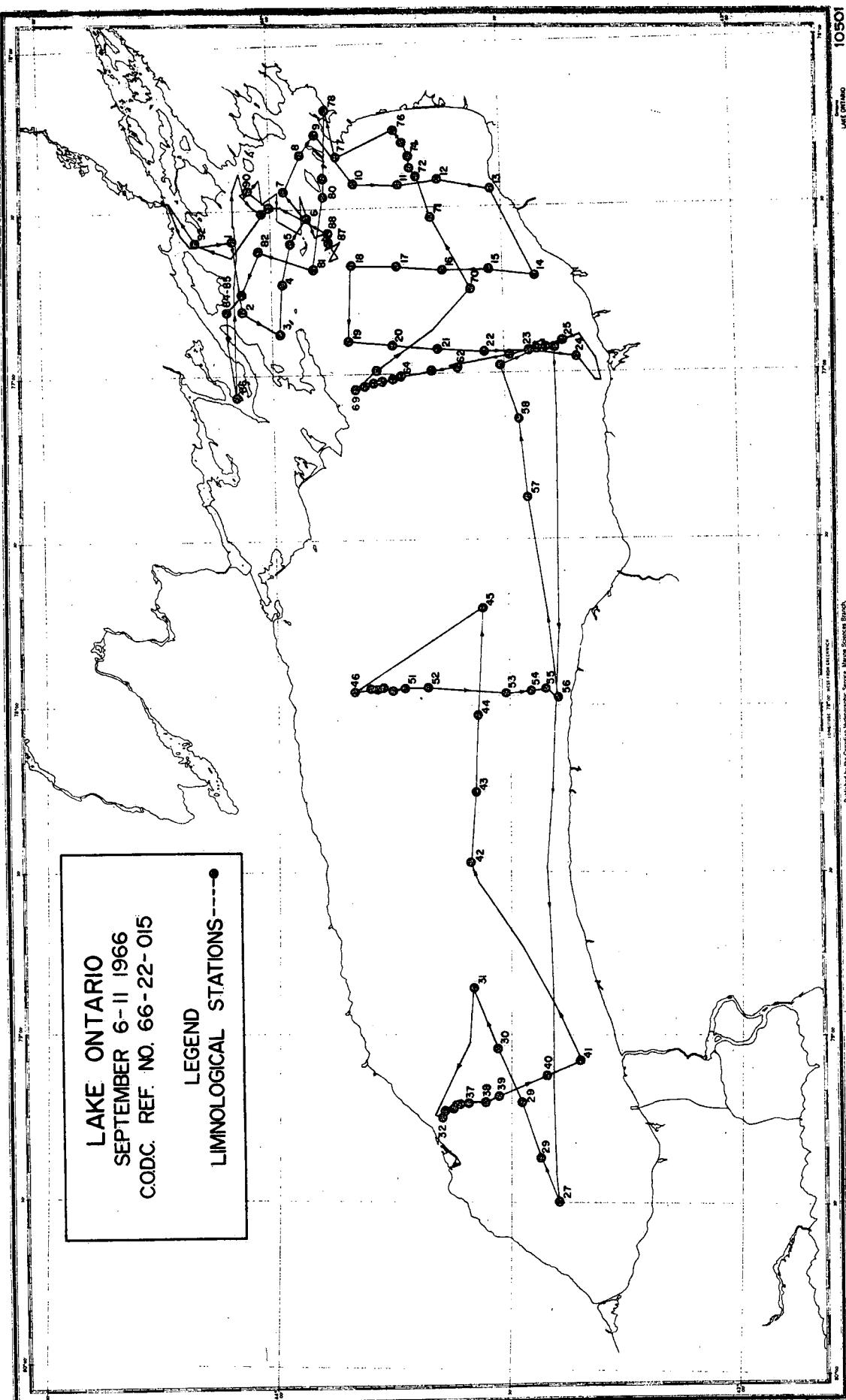
The Canadian Government's program developed in response to a request directed to the International Joint Commission by the Governments of Canada and the United States, that information relating to pollution of Lake Ontario, Lake Erie, and the international section of the St. Lawrence River be gathered. Preliminary listings of the data have already been made available to agencies preparing a report for the International Joint Commission.

The bacteriological data have already been published in Manuscript Report No. 67-1 of the Public Health Engineering Division, Department of National Health and Welfare. These data are again published in the present series of reports to facilitate comparison with the chemical and physical data.

Figure 1 shows the geographical locations of the observations listed in this data record, together with the vessel's track and the locations of bathythermograph lowerings.

LAKE ONTARIO  
SEPTEMBER 6-11 1966  
C.O.D.C. REF. NO. 66-22-015

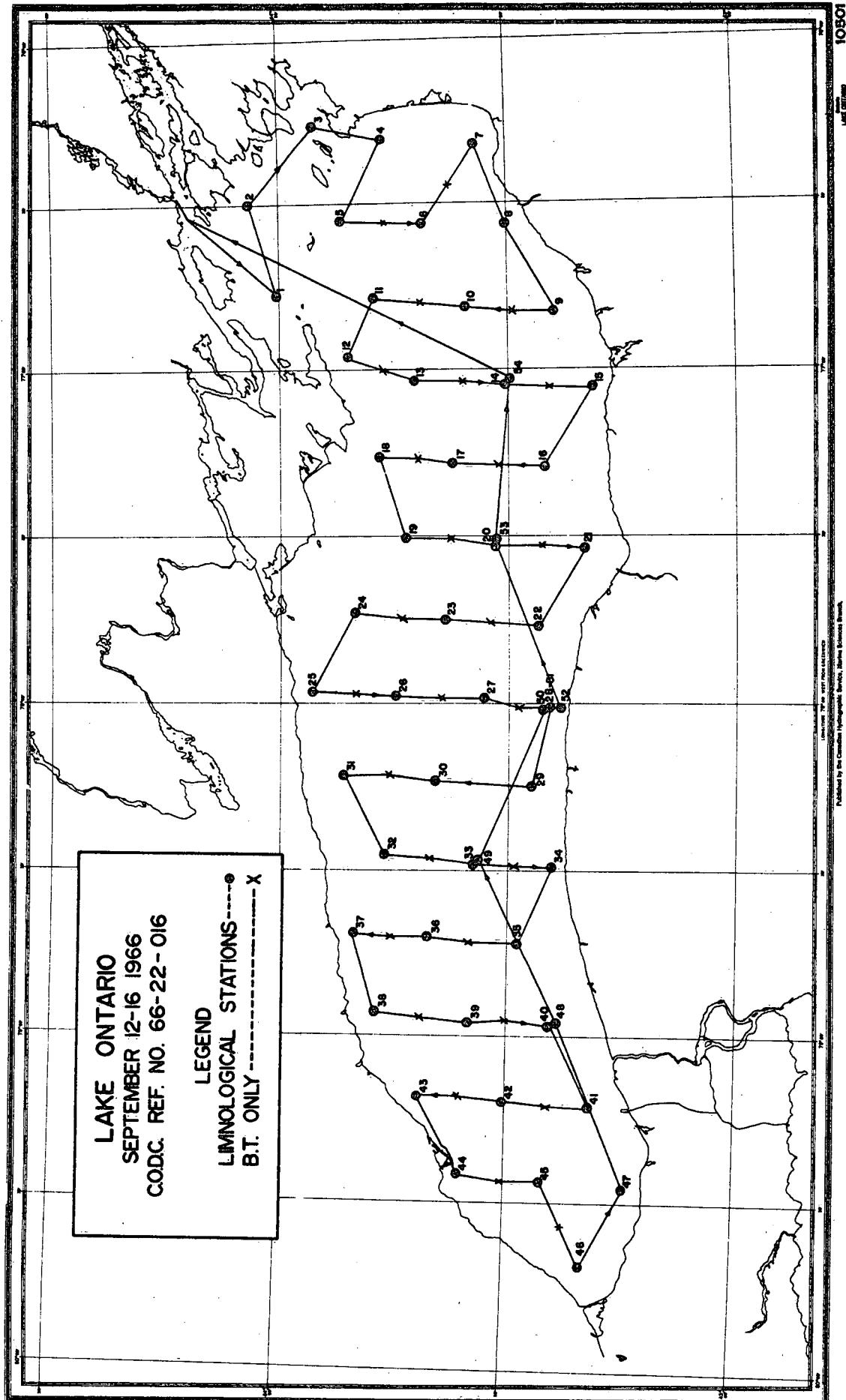
LEGEND  
LIMNOLOGICAL STATIONS---•



10501

Lake Ontario

Published by the Canadian Hydrographic Service, Marine Sciences Branch.



Summary of the cruises and data listed in Data Reports Nos. 1 to 12. (An "X" indicates that the parameter is reported for one or more stations in the particular cruise).

Data Report No.	1	2	3	4	5	6		
Cruise No.	66-1	66-2	66-3	66-4	66-5	66-6	66-7	66-8
Dates (1966)	June 1 -June 5	June 7 -June 10	June 15 -June 19	June 21 -June 25	June 26 -June 30	July 4 -July 10	July 12 -July 15	July 19 -July 24
Cruise type	Physical	Monitor	Physical	Monitor	Coastal	Monitor	Geology	Monitor
Lake	Ontario	Ontario	Ontario	Ontario	Ontario	Ontario	Ontario	Ontario
Vessel	Brandal	Brandal	Brandal	Brandal	Brandal	Brandal	Brandal	Brandal
No. of stations	35	39	107	88	113	125	75	88
No. of BT slides	133	39	120	88	115	125	76	116

Station data:

Date/time	X	X	X	X	X	X	X	X
Sounding	X	X	X	X	X	X	X	X
BT slide no.	X	X	X	X	X	X	X	X
Secchi depth	X	X	X	X	X	X		X
Sample depth	X	X	X	X	X	X	X	X
Temperature	X	X	X	X	X	X		X
Conductance, 18°C.	X	X		X	X	X	X	X
Dissolved oxygen				X	X	X	X	X
pH at 25°C.				X	X	X	X	X
Turbidity					X			X
B.O.D.						X		X
Total alkalinity		X		X	X	X		X
Hardness					X	X		X
Chloride					X	X		X
Nitrate + nitrite								
Nitrite				X	X	X		X
Reactive phosphate								
Phenol					X	X		X
Total residue								
MP coliforms	X	X		X	X	X		X
MP enterococci	X	X		X	X	X		X
20°C standard plate count		X			X	X		X
35°C standard plate count		X			X	X		X

7		8	9		10		11	12	
66-9	66-10	66-11	66-12	66-14	66-15	66-16	66-17	66-18	66-19
July 26 -July 29	Aug. 2 -Aug. 7	Aug. 8 -Aug. 14	Aug. 15 -Aug. 19	Aug. 29 -Sept. 2	Sept. 6 -Sept. 11	Sept. 12 -Sept. 16	Sept. 20 -Sept. 24	Sept. 26 -Sept. 29	Oct. 1 -Oct. 3
Physical Ontario Brandal	Monitor Ontario Brandal	Monitor Erie Brandal	Monitor Ontario Brandal	Monitor Ontario Brandal	Geology Ontario Brandal	Monitor Ontario Brandal	Coastal Ontario Brandal	Monitor Ontario Brandal	Physical Ontario Brandal
62 105	79 106	105 97	69 96	47 70	92 92	54 81	109 109	47 72	45 94

X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X		X	X	X	X
X	X	X	X	X	X	X	X	X	X
X	X	X	X	X		X	X	X	X
	X	X	X	X	X	X	X	X	
	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	
	X	X	X	X		X	X	X	
	X	X	X	X		X	X	X	
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	X	X	X	X		X	X	X	
	X	X	X	X		X	X	X	
	X	X	X	X		X	X	X	
	X	X	X	X		X	X	X	
	X	X	X	X		X	X	X	

### Description of the Data Record

Information in the headings for each station:

1. C-REF-No.	5. LAT.	7. YEAR	11. No. DEPTHS
2. CONS. No.	6. LON.	8. MONTH	12. SOUNDING
3. COUNTRY		9. DAY	13. BT SLIDE No.
4. INSTITUTE		10. TIME	

### Explanations:

- (1) Cruise number: the 1966 cruises are numbered consecutively from 01 to 19, without regard for the lake involved. (In following years, consecutive numbers will be assigned to each lake separately).
- (2) Consecutive station number: the stations within each cruise are numbered in chronological order.
- (4) Institute: For filing purposes, the institute code was 22 (Inland Waters Branch, Department of Energy, Mines and Resources).
- (5) and (6) indicate the latitude and longitude of the vessel, in degrees, minutes and seconds, at the time of the observations.
- (7), (8) and (9) indicate the date of the observations, according to Greenwich Mean Time.
- (10) Indicates the messenger time in hours and minutes (Greenwich Mean Time) for the first bottle cast at the station. The hours of each day are numbered from 00 to 23.
- (11) The number of depths at which observations were made. This should correspond to the number of depths actually listed. The count is listed to reveal omissions due to the loss of punch-cards.
- (12) The sounding is listed in meters, to the nearest meter.
- (13) Indicates the bathythermograph slide number corresponding to the particular station. The slides are numbered consecutively within each cruise.

Explanation of the data listing for each station

Parameter Name	Abbreviation (column heading)	Units used in the Data Reports	No. of decimals printed	1966 processing code	1967 (Star System) code
Secchi depth	SECCHI	meters	1	026	030
Sample depth	DEPTH	meters	1	998	001
Temperature	TEMP	°C	2	004	100
Conductance, 18°C.	CON 18	mmhos	0	014	no equivalent
Dissolved oxygen	D 02	mg/L	2	003	245
pH at 25°C.	PH 25	pH units	3	055	215
Turbidity	TURB	Jackson units	1	015	123
B.O.D.	BOD	mg O <sub>2</sub> /L/5 days	1	001	239
Total alkalinity	T ALK	mg CaCO <sub>3</sub> /L	1	051	220
Hardness	HARD	mg CaCO <sub>3</sub> /L	1	050	300
Chloride	CL	mg N/L	1	057	290
Nitrate + nitrite	NO3NO2	mg N/L	3	022	275
Nitrite	NO2	mg N/L	3	021	273
Reactive phosphate	R PO4	mg PO <sub>4</sub> /L	3	028	262
Phenol	PHEN	mg C <sub>6</sub> H <sub>5</sub> OH/L	3	024	410
MF coliforms	MF COL	colonies/100 ml.	*	080	700
MF enterococci	MF ENT	colonies/100 ml.	*	084	706
20°C standard plate count	SPC 20	colonies/ml.	*	082	720
35°C standard plate count	SPC 35	colonies/ml.	*	083	721

Note: The four bacteriological parameters are listed in exponential form:

$$\begin{aligned}130E02 &= 1.30 \times 10^2 = 130. \\100E00 &= 1.00 \times 10^0 = 1. \\000E00 &= 0.00 \times 10^0 = 0.\end{aligned}$$

\* Exponential Notation

Note: For some parameters, the analytical methods listed in the Star System manual (Glennie and MacLeod 1967, pp. 23-33) are not the methods used for Data Reports Nos. 1-12.

## Methods of Sampling and Measurement

Water sampling was carried out on the port side of the vessel, amidships, where a davit and a "chains" platform were installed. A small wooden deckhouse provided shelter for reading the thermometers and for transferring water from the primary sampling devices to small bottles which were taken to the shipboard laboratory. The sampling procedure together with photographs of the equipment are published in Manuscript Report No. 67-1 of the Public Health Division, Department of National Health and Welfare.

Samples were collected at standard depths of 1, 10, 20, 30, 50, 75, 100, 150 and 200 meters, where the depth of water permitted. The water sampling devices were metal Knudsen bottles with a capacity of 1.2 liters, and polyvinylchloride Van Dorn bottles with capacities of 2 and 3 liters. Oceanographic reversing thermometers, and rubber bulbs for bacteriological sampling, were mounted on the Knudsen bottles.

For bacteriological sampling, a sterile deflated pear-shaped rubber bulb was attached to a Knudsen bottle. A brass plug in the opening of the rubber bulb was pulled out by the reversing Knudsen bottle. (I.J.C. agencies 1966, pp 88-90).

Position (Latitude and longitude) was determined using radar ranges and bearings on identifiable shoreline features. Occasionally, dead-reckoning had to be used when the vessel was far from shore.

Sounding The depth of water at each station was measured with the ship's echo sounder. Corrections for the transducer depth have been applied.

Secchi depth is the depth of disappearance of a white disc, 30 centimeters in diameter, when it is lowered slowly into the water.

Sample depth The length of wire was measured with a meter wheel, using the water surface as the reference level. Wire-angle corrections were applied whenever depths were one meter or more.

Temperature Oceanographic reversing thermometers manufactured by Yoshino Keiko Co. of Japan were lowered in series to all the required depths, and were turned over after five minutes. Later, each thermometer was read twice in the vessel's deckhouse. Scale corrections and thermal-expansion corrections were applied to the readings. There were usually two thermometers on each Knudsen bottle. A single mean temperature value is reported in this final data record, but the individual readings are kept on file at the Canada Centre for Inland Waters. The difference between readings of paired thermometers was usually less than 0.05°C. (U.S. hydrographic Office 1955).

Additional temperature measurements were made with bathythermographs, and with a thermistor thermometer towed at a depth of one meter while the ship was underway. The BT and thermistor data are available on request from the Canada Centre for Inland Waters.

Storage conditions for the chemical samples Most of the analyses reported here were done in the ship's laboratory and were completed within about 12 hours after sampling.

Conductance at 18°C The electrical conductance was measured at laboratory temperature with an "Industrial Instruments" Model RC 16 B2 bridge and a dip cell with cell constant 1.00. At the time of the measurement, the temperature of the sample was measured with a mercury thermometer and recorded to the nearest 0.1°C. These temperature readings varied throughout the survey period, with a range of from 15 to 28°C.

Conductance at 18.0°C listed in the Data Reports Nos. 1 to 12, was computed from Dr. G.K. Rodgers' correction tables for Great Lakes Waters (I.J.C. agencies 1966, p. 51). However, 25°C will be the reference temperature used in future data reports in this series. To convert the conductance at 18.0°C to conductance at 25.0°C, multiply by 1.176.

Dissolved oxygen was measured using the Winkler iodometric method. One milliliter of each reagent was added to each sample. In 1966, the alkaline iodide solution contained 700 grams potassium hydroxide and 150 grams potassium iodide per liter. Azide was not used. (I.J.C. agencies 1968, pp. 67-78).

Oxygen percent saturation may be computed (Dobson 1967) from the measured oxygen concentration and the temperature, using the following equations:

Oxygen percent saturation (Lake Erie and upper Great Lakes)

$$= \frac{100 \text{ (oxygen in mg/L)}}{(14.380 - 0.4105 T + 0.008800 T^2 - 0.00009500 T^3)} \%$$

Oxygen percent saturation (Lake Ontario)

$$= \frac{98.8 \text{ (oxygen in mg/L)}}{(14.380 - 0.4105 + 0.008800 T^2 - 0.00009500 T^3)} \%$$

A graph showing percent saturation as a function of oxygen concentration and temperature, according to either of these equations, provides a convenient way to evaluate percent saturation.

pH The pH is an approximate measure of  $(-\log H^+)$  where  $H^+$  is the hydrogen ion concentration.

<u>pH</u>	<u><math>H^+</math></u>	
7.0	$100. \times 10^{-9}$	gm atoms/liter
7.2	$63. \times 10^{-9}$	gm atoms/liter
7.5	$32. \times 10^{-9}$	gm atoms/liter
8.0	$10. \times 10^{-9}$	gm atoms/liter
8.2	$6.3 \times 10^{-9}$	gm atoms/liter
8.5	$3.2 \times 10^{-9}$	gm atoms/liter
9.0	$1.0 \times 10^{-9}$	gm atoms/liter

Samples were analysed for pH about 10 to 20 hours after sampling. Changes in pH during the storage interval were probably  $\pm 0.1$  to  $0.3$  pH units.

The pH near 25°C was measured using a Corning Model 10 meter, and glass and reference electrodes, calibrated with pH 7.4 (phosphate) and pH 9.2 (borax) standard solution. (I.J.C. agencies 1966, pp. 112-120).

Turbidity was measured within 24 hours after sampling, using a Hellige turbidimeter.

B.O.D. (Biochemical oxygen demand) One-liter samples were stored for a few hours so that they attained laboratory temperature. Then air was bubbled through each sample to produce oxygen concentrations near the equilibrium value for that temperature. Two 300-ml B.O.D. bottles were filled from each sample by means of a siphon. Dissolved oxygen in the sample of one of the B.O.D. bottles was measured immediately by the Winkler method. The sample in the other bottle was stored in the dark at 20°C, and after 5 days, its final oxygen concentration was measured. The "B.O.D." was the difference between the initial and final oxygen concentrations. A water seal was maintained around the top of each bottle during incubation. The dilution and seeding procedures of the American Public Health Association (1965, p. 415), were not included.

Alkalinity was measured using an Auto-Analyzer colorimetric instrument system. Samples were mixed with a buffered acidic methyl orange indicator solution. The final color was measured at 550 millimicrons. Standard solutions contained sodium bicarbonate. (I.J.C. agencies 1968, pp. 34-36). The unit for alkalinity in this report is mg CaCO<sub>3</sub>/liter. The constituents reacting with the hydrogen ion during the alkalinity measurement were assumed to be CO<sub>3</sub><sup>-2</sup>, and an equivalent amount of Ca<sup>++</sup> was arbitrarily assumed to be present. Actually most of the alkalinity in Great Lakes waters is HCO<sub>3</sub><sup>-</sup>. Conversion factor for alkalinity: 1 mg CaCO<sub>3</sub>/liter = 1.219 mg HCO<sub>3</sub><sup>-</sup>/liter.

Hardness (Ca<sup>++</sup> + Mg<sup>++</sup>) was measured using an Auto-Analyzer. The sample was mixed with disodium magnesium EDTA + disodium EDTA, then with Eriochrome Black T + pH 10.3 buffer. The resulting color was measured at 520 millimicrons. Standard solutions contained calcium. (I.J.C. agencies 1966, pp. 91-93). Lake-water samples contained some magnesium as well as calcium. The conventional unit, mg CaCO<sub>3</sub>/L, used in Data Reports Nos. 1 to 12, gives information for (Ca<sup>++</sup> + Mg<sup>++</sup>), but not for Ca<sup>++</sup> or CO<sub>3</sub><sup>-2</sup>. Conversion factor for hardness: 1 mg CaCO<sub>3</sub>/L = 0.0200 milli-equivalents (Ca<sup>++</sup> + Mg<sup>++</sup>)/L.

Chloride was measured using an Auto-Analyzer. Unfiltered samples were mixed with ferric ammonium sulfate + nitric acid + mercuric thiocyanate. The resulting color was measured at 480 millimicrons. (I.J.C. agencies 1966, pp. 97-98).

Nitrate + nitrite was measured using an Auto-Analyzer. Samples were not filtered. Nitrate was reduced to nitrite by adding sodium hydroxide, hydrazine sulfate, and copper sulfate. The mixture was passed through a 38°C heating bath. Then total nitrite was measured by adding ortho-phosphoric acid + sulfanilamide + N-(1-naphthyl) ethylenediamine dihydrochloride, and measuring the resulting color at 520 millimicrons. (I.J.C. agencies 1966, pp. 102-104).

$(NO_3 + NO_2)$  was sampled on cruises 5, 6, 8 and 10, but the results for the 4°C water in Lake Ontario on those cruises were near 0.5 mg N/L, about 2½ times the values found on cruise 66-12 and subsequent cruises in 1966 and 1967. The  $(NO_3 + NO_2)$  results for cruises 5, 6, 8 and 10 are probably in error and have been omitted from these final Data Reports. The  $(NO_3 + NO_2)$  data for cruise 66-11 on Lake Erie include values near 0.1 mg N/L for the eastern bottom water, which is in agreement with the 1967 data. Therefore the  $(NO_3 + NO_2)$  data from cruise 66-11 are probably correct, and have been printed in Data Report No. 8. For cruise 66-12 and following cruises on Lake Ontario, the  $(NO_3 + NO_2)$  data for the 4°C water have values near 0.2 mg N/L, which is also in agreement with 1967 results. Therefore the data for cruise 66-12 and later cruises are probably correct, and are included in the final Data Reports.

Nitrite Nitrite in unfiltered samples was measured, using an Auto-Analyzer, by adding sodium hydroxide + ortho-phosphoric acid + sulfanilamide + N-(1-naphthyl) ethylenediamine dihydrochloride. The resulting color was measured at 520 millimicrons. (I.J.C. agencies 1966, pp. 102-104).

Reactive phosphate Phosphate in unfiltered samples was measured, using an Auto-Analyzer, by adding ammonium molybdate + hydrochloric acid + stannous chloride, and measuring the resulting color at 660 millimicrons. (I.J.C. agencies 1966, pp. 94-96).

An ammonia was measured during 1966 on cruises 8, 10, 11, 12, 14, 16, 17 and 18. The maximum value was .072 mg N/L. There were very many results of .000 mg N/L, except for cruise 10 for which the minimum was .020 mg N/L. There was no obvious spatial distribution of the higher values. These data have not been included in the Data Reports Nos. 1 to 12.

Phenol and related substances. The pH of the sample was adjusted to 4.0 by adding ortho-phosphoric acid, and copper sulfate was also added, immediately after sampling. Analyses were done up to one week later. The sample was distilled, and phenol in the distillate was measured by adding ammonium chloride; then, ammonium hydroxide (to produce pH 10.0 ± 0.2), 4-aminoantipyrine and potassium ferricyanide were also added. The resulting color was extracted into chloroform and measured at 460 millimicrons (American Public Health Association 1965, pp. 516-520, distillation step and method A).

Storage conditions for bacteriological samples The analyses began within one or two hours after sampling, except for samples collected between midnight and 7.30 a.m. These night-time samples were stored at 10°C for up to 8 hours before their analyses commenced.

Total coliform density determinations were obtained by membrane filtration techniques using Bacto-m Endo MF Broth. Membranes were incubated at 35°C for 20±2 hours (American Public Health Association 1965, p. 615).

Fecal Streptococcus density determinations were obtained by membrane filtration techniques using Bacto-m Enterococcus Agar. Membranes were

incubated at 35°C (American Public Health Association 1965, p. 619).

20°C and 35°C Standard Plate Counts were made using 1 ml samples mixed with liquified (45°C) Bacto-Plate Count Agar, allowed to solidify and then incubated at 20°C for 48±3 hours or at 35°C for 24±2 hours. (American Public Health Association 1965, p. 592).

Personnel (Great Lakes Division, Department of Energy, Mines and Resources; Canadian Hydrographic Service; Public Health Engineering Division, Department of National Health and Welfare).

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Other Participating Agencies

The Canadian Oceanographic Data Centre produced and distributed the preliminary data records, and published final reports in the present series.

The Meteorological Branch of the Department of Transport provided meteorological instruments, and trained the personnel who carried out the weather observations.

Captain R. Caldwell and the crew of the "Brandal" operated the vessel in support of the limnological program.

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**CRUISE 66-16, LAKE ONTARIO**

C-REF-NO 015            LAT 44-05-21N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 001            LON 076-34-57W            MONTH 09            SOUNDING 0033  
 COUNTRY 18            DAY 06            BT SLIDE NO 001  
 INSTITUTE 22            TIME 1601

DEPTH	CON 18	D 02	PH 25	TURB
28.0	287	5.18	7.780	1.3

C-REF-NO 015            LAT 44-03-54N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 002            LON 076-48-09W            MONTH 09            SOUNDING 0026  
 COUNTRY 18            DAY 06            BT SLIDE NO 002  
 INSTITUTE 22            TIME 1801

DEPTH	CON 18	D 02	PH 25	TURB
21.0	286	5.15	7.790	

C-REF-NO 015            LAT 43-59-09N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 003            LON 076-52-03W            MONTH 09            SOUNDING 0029  
 COUNTRY 18            DAY 06            BT SLIDE NO 003  
 INSTITUTE 22            TIME 1839

DEPTH	CON 18	D 02	PH 25	TURB
24.0	287	5.23	7.780	1.2

C-REF-NO 015            LAT 43-58-54N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 004            LON 076-43-18W            MONTH 09            SOUNDING 0035  
 COUNTRY 18            DAY 06            BT SLIDE NO 004  
 INSTITUTE 22            TIME 1946

DEPTH	CON 18	D 02	PH 25	TURB
30.0	286	7.83	7.820	1.9

C-REF-NO 015            LAT 43-57-33N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 005            LON 076-35-51W            MONTH 09            SOUNDING 0029  
 COUNTRY 18            DAY 06            BT SLIDE NO 005  
 INSTITUTE 22            TIME 2038

DEPTH	CON 18	D 02	PH 25	TURB
24.0	278	7.40	8.010	0.9

C-REF-NO 015            LAT 43-55-33N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 006            LON 076-31-30W            MONTH 09            SOUNDING 0051  
 COUNTRY 18            DAY 06            BT SLIDE NO 006  
 INSTITUTE 22            TIME 2115

DEPTH	CON 18	D 02	PH 25	TURB
46.0	283	9.75	7.970	1.4

C-REF-NO 015            LAT 43-58-18N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 007            LON 076-26-42W            MONTH 09            SOUNDING 0033  
 COUNTRY 18            DAY 06            BT SLIDE NO 007  
 INSTITUTE 22            TIME 2244

DEPTH	CON 18	D 02	PH 25	TURB
28.0	280	8.31	7.970	1.2

C-REF-NO 015            LAT 43-56-00N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 008            LON 076-19-48W            MONTH 09            SOUNDING 0022  
 COUNTRY 18            DAY 06            BT SLIDE NO 008  
 INSTITUTE 22            TIME 2337

DEPTH	CON 18	D 02	PH 25	TURB
17.0	271	8.69	8.380	2.1

C-REF-NO 015            LAT 43-54-09N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 009            LON 076-16-12W            MONTH 09            SOUNDING 0029  
 COUNTRY 18            DAY 07            BT SLIDE NO 009  
 INSTITUTE 22            TIME 0015

DEPTH	CON 18	D 02	PH 25	TURB
24.0	271	8.78	8.390	1.4

C-REF-NO 015            LAT 43-49-24N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 010            LON 076-25-21W            MONTH 09            SOUNDING 0028  
 COUNTRY 18            DAY 07            BT SLIDE NO 010  
 INSTITUTE 22            TIME 0135

DEPTH	CON 18	D 02	PH 25	TURB
23.0	270	8.44	8.370	0.9

C-REF-NO 015            LAT 43-43-30N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 011            LON 076-25-48W            MONTH 09            SOUNDING 0061  
 COUNTRY 18            DAY 07            BT SLIDE NO 011  
 INSTITUTE 22            TIME 0243

DEPTH	CON 18	D 02	PH 25	TURB
56.0	283	10.65	7.990	2.1

C-REF-NO 015            LAT 43-37-18N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 012            LON 076-26-33W            MONTH 09            SOUNDING 0112  
 COUNTRY 18            DAY 07            BT SLIDE NO 012  
 INSTITUTE 22            TIME 0340

DEPTH	CON 18	D 02	PH 25	TURB
107.0	284	10.68	7.950	

C-REF-NO 015            LAT 43-31-24N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 013            LON 076-26-48W            MONTH 09            SOUNDING 0022  
 COUNTRY 18            DAY 07            BT SLIDE NO 013  
 INSTITUTE 22            TIME 0451

DEPTH CON 18    D 02 PH 25 TURB  
 17.0      281      8.66    8.390      1.6

C-REF-NO 015            LAT 43-26-09N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 014            LON 076-42-33W            MONTH 09            SOUNDING 0065  
 COUNTRY 18            DAY 07            BT SLIDE NO 014  
 INSTITUTE 22            TIME 0641

DEPTH CON 18    D 02 PH 25 TURB  
 60.0      275      8.67    8.430      1.0

C-REF-NO 015            LAT 43-31-51N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 015            LON 076-41-12W            MONTH 09            SOUNDING 0179  
 COUNTRY 18            DAY 07            BT SLIDE NO 015  
 INSTITUTE 22            TIME 0757

DEPTH CON 18    D 02 PH 25 TURB  
 174.0     283     11.38    8.040     1.2

C-REF-NO 015            LAT 43-37-54N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 016            LON 076-41-03W            MONTH 09            SOUNDING 0176  
 COUNTRY 18            DAY 07            BT SLIDE NO 016  
 INSTITUTE 22            TIME 0912

DEPTH CON 18    D 02 PH 25 TURB  
 171.0     280     11.77    8.050     1.9

C-REF-NO 015            LAT 43-43-51N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 017            LON 076-40-30W            MONTH 09            SOUNDING 0095  
 COUNTRY 18            DAY 07            BT SLIDE NO 017  
 INSTITUTE 22            TIME 1009

DEPTH	CON 18	D 02	PH 25	TURB
90.0	282	12.04	8.090	1.4

C-REF-NO 015            LAT 43-49-51N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 018            LON 076-40-18W            MONTH 09            SOUNDING 0053  
 COUNTRY 18            DAY 07            BT SLIDE NO 018  
 INSTITUTE 22            TIME 1103

DEPTH	CON 18	D 02	PH 25	TURB
48.0	281	9.76	8.060	1.9

C-REF-NO 015            LAT 43-50-12N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 019            LON 076-54-03W            MONTH 09            SOUNDING 0049  
 COUNTRY 18            DAY 07            BT SLIDE NO 019  
 INSTITUTE 22            TIME 1225

DEPTH	CON 18	D 02	PH 25	TURB
44.0	283	11.12	8.030	0.7

C-REF-NO 015            LAT 43-44-45N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 020            LON 076-54-21W            MONTH 09            SOUNDING 0088  
 COUNTRY 18            DAY 07            BT SLIDE NO 020  
 INSTITUTE 22            TIME 1320

DEPTH	CON 18	D 02	PH 25	TURB
83.0	284	10.73	7.960	1.0

C-REF-NO 015      LAT 43-38-54N      YEAR 1966      NO. DEPTHS 01  
 CONS. NO 021      LON 076-55-21W      MONTH 09      SOUNDING 0152  
 COUNTRY 18                DAY 07      BT SLIDE NO 021  
 INSTITUTE 22                TIME 1420

DEPTH	CON 18	D 02	PH 25	TURB
147.0	280	11.90	7.990	0.8

C-REF-NO 015      LAT 43-32-42N      YEAR 1966      NO. DEPTHS 01  
 CONS. NO 022      LON 076-55-45W      MONTH 09      SOUNDING 0214  
 COUNTRY 18                DAY 07      BT SLIDE NO 022  
 INSTITUTE 22                TIME 1520

DEPTH	CON 18	D 02	PH 25	TURB
209.0	281	12.14	7.990	3.5

C-REF-NO 015      LAT 43-26-42N      YEAR 1966      NO. DEPTHS 01  
 CONS. NO 023      LON 076-56-00W      MONTH 09      SOUNDING 0198  
 COUNTRY 18                DAY 07      BT SLIDE NO 023  
 INSTITUTE 22                TIME 1704

DEPTH	CON 18	D 02	PH 25	TURB
193.0	280	12.42	7.990	0.7

C-REF-NO 015      LAT 43-20-33N      YEAR 1966      NO. DEPTHS 01  
 CONS. NO 024      LON 076-57-00W      MONTH 09      SOUNDING 0058  
 COUNTRY 18                DAY 07      BT SLIDE NO 024  
 INSTITUTE 22                TIME 1801

DEPTH	CON 18	D 02	PH 25	TURB
53.0	280	11.48	7.980	1.1

C-REF-NO 015            LAT 43-22-18N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 025            LON 076-54-21W            MONTH 09            SOUNDING 0075  
 COUNTRY 18              DAY 07                    BT SLIDE NO 025  
 INSTITUTE 22            TIME 2035

DEPTH	CON 18	D 02	PH 25	TURB
70.0	281	11.28	8.240	2.3

C-REF-NO 015            LAT 43-23-51N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 026            LON 076-55-00W            MONTH 09            SOUNDING 0109  
 COUNTRY 18              DAY 07                    BT SLIDE NO 026  
 INSTITUTE 22            TIME 2303

DEPTH	CON 18	D 02	PH 25	TURB
104.0	281	11.29	8.110	1.2

C-REF-NO 015            LAT 43-23-48N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 027            LON 079-29-51W            MONTH 09            SOUNDING 0099  
 COUNTRY 18              DAY 08                    BT SLIDE NO 027  
 INSTITUTE 22            TIME 1131

DEPTH	CON 18	D 02	PH 25	TURB
94.0	281	10.08	8.180	0.4

C-REF-NO 015            LAT 43-26-33N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 028            LON 079-21-45W            MONTH 09            SOUNDING 0117  
 COUNTRY 18              DAY 08                    BT SLIDE NO 028  
 INSTITUTE 22            TIME 1211

DEPTH	CON 18	D 02	PH 25	TURB
112.0	281	10.76	8.050	1.0

C-REF-NO 015            LAT 43-28-57N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 029            LON 079-12-00W            MONTH 09            SOUNDRING 0132  
 COUNTRY 18                                               DAY 08            BT SLIDE NO 029  
 INSTITUTE 22                                               TIME 1416

DEPTH	CON 18	D 02	PH 25	TURB
127.0	281	11.11	7.870	

C-REF-NO 015            LAT 43-31-48N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 030            LON 079-02-45W            MONTH 09            SOUNDRING 0139  
 COUNTRY 18                                               DAY 08            BT SLIDE NO 030  
 INSTITUTE 22                                               TIME 1526

DEPTH	CON 18	D 02	PH 25	TURB
134.0	281	12.08	8.120	0.7

C-REF-NO 015            LAT 43-35-03N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 031            LON 078-51-15W            MONTH 09            SOUNDRING 0141  
 COUNTRY 18                                               DAY 08            BT SLIDE NO 031  
 INSTITUTE 22                                               TIME 1652

DEPTH	CON 18	D 02	PH 25	TURB
136.0	281	11.82	8.060	0.4

C-REF-NO 015            LAT 43-38-45N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 032            LON 079-14-33W            MONTH 09            SOUNDRING 0064  
 COUNTRY 18                                               DAY 08            BT SLIDE NO 032  
 INSTITUTE 22                                               TIME 1929

DEPTH	CON 18	D 02	PH 25	TURB
59.0	275	10.13	8.280	1.0

C-REF-NO 015            LAT 43-38-27N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 033            LON 079-13-45W            MONTH 09            SOUNDING 0075  
 COUNTRY 18                                               DAY 08            BT SLIDE NO 033  
 INSTITUTE 22                                               TIME 1956

DEPTH CON 18    D 02 PH 25 TURB  
 70.0      281      11.63      8.140      0.3

C-REF-NO 015            LAT 43-37-48N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 034            LON 079-13-24W            MONTH 09            SOUNDING 0082  
 COUNTRY 18                                               DAY 08            BT SLIDE NO 034  
 INSTITUTE 22                                               TIME 2009

DEPTH CON 18    D 02 PH 25 TURB  
 77.0      280      11.40      8.150      0.3

C-REF-NO 015            LAT 43-37-15N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 035            LON 079-12-51W            MONTH 09            SOUNDING 0091  
 COUNTRY 18                                               DAY 08            BT SLIDE NO 035  
 INSTITUTE 22                                               TIME 2030

DEPTH CON 18    D 02 PH 25 TURB  
 86.0      280      11.65      8.130      0.3

C-REF-NO 015            LAT 43-36-42N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 036            LON 079-12-36W            MONTH 09            SOUNDING 0102  
 COUNTRY 18                                               DAY 08            BT SLIDE NO 036  
 INSTITUTE 22                                               TIME 2054

DEPTH CON 18    D 02 PH 25 TURB  
 97.0      280      11.97      8.070      0.4

C-REF-NO 015            LAT 43-35-54N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 037            LON 079-12-09W            MONTH 09            SOUNDING 0110  
 COUNTRY 18            DAY 08            BT SLIDE NO 037  
 INSTITUTE 22            TIME 2118

DEPTH	CON 18	D 02	PH 25	TURB
105.0	279	11.91	8.180	0.6

C-REF-NO 015            LAT 43-33-27N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 038            LON 079-12-09W            MONTH 09            SOUNDING 0119  
 COUNTRY 18            DAY 08            BT SLIDE NO 038  
 INSTITUTE 22            TIME 2151

DEPTH	CON 18	D 02	PH 25	TURB
114.0	280	12.00	8.140	0.6

C-REF-NO 015            LAT 43-31-42N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 039            LON 079-11-00W            MONTH 09            SOUNDING 0129  
 COUNTRY 18            DAY 08            BT SLIDE NO 039  
 INSTITUTE 22            TIME 2219

DEPTH	CON 18	D 02	PH 25	TURB
124.0	281	11.85	8.150	0.2

C-REF-NO 015            LAT 43-25-21N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 040            LON 079-07-09W            MONTH 09            SOUNDING 0120  
 COUNTRY 18            DAY 08            BT SLIDE NO 040  
 INSTITUTE 22            TIME 2318

DEPTH	CON 18	D 02	PH 25	TURB
115.0	282	9.80	8.060	0.6

C-REF-NO 015            LAT 43-21-03N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 041            LON 079-04-27W            MONTH 09            SOUNDING 0080  
 COUNTRY 18            DAY 09            BT SLIDE NO 041  
 INSTITUTE 22            TIME 0005

DEPTH	CON 18	D 02	PH 25	TURB
75.0	281	11.34	8.050	0.9

C-REF-NO 015            LAT 43-34-54N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 042            LON 078-28-12W            MONTH 09            SOUNDING 0170  
 COUNTRY 18            DAY 09            BT SLIDE NO 042  
 INSTITUTE 22            TIME 0330

DEPTH	CON 18	D 02	PH 25	TURB
165.0	282	11.93	8.090	0.2

C-REF-NO 015            LAT 43-34-45N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 043            LON 078-15-45W            MONTH 09            SOUNDING 0185  
 COUNTRY 18            DAY 09            BT SLIDE NO 043  
 INSTITUTE 22            TIME 0501

DEPTH	CON 18	D 02	PH 25	TURB
180.0	278	11.77	8.150	0.3

C-REF-NO 015            LAT 43-34-15N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 044            LON 078-01-51W            MONTH 09            SOUNDING 0188  
 COUNTRY 18            DAY 09            BT SLIDE NO 044  
 INSTITUTE 22            TIME 0631

DEPTH	CON 18	D 02	PH 25	TURB
183.0	282	11.77	8.060	

C-REF-NO 015            LAT 43-33-18N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 045            LON 077-42-45W            MONTH 09            SOUNDED 0176  
 COUNTRY 18            DAY 09            BT SLIDE NO 045  
 INSTITUTE 22            TIME 0815

DEPTH CON 18    D 02    PH 25    TURB  
 171.0    280    12.10    8.110    0.3

C-REF-NO 015            LAT 43-50-24N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 046            LON 077-57-06W            MONTH 09            SOUNDED 0070  
 COUNTRY 18            DAY 09            BT SLIDE NO 046  
 INSTITUTE 22            TIME 1034

DEPTH CON 18    D 02    PH 25    TURB  
 65.0    283    10.84    8.050    0.6

C-REF-NO 015            LAT 43-47-54N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 047            LON 077-56-39W            MONTH 09            SOUNDED 0091  
 COUNTRY 18            DAY 09            BT SLIDE NO 047  
 INSTITUTE 22            TIME 1108

DEPTH CON 18    D 02    PH 25    TURB  
 86.0    282    11.62    8.090    0.4

C-REF-NO 015            LAT 43-47-00N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 048            LON 077-56-36W            MONTH 09            SOUNDED 0105  
 COUNTRY 18            DAY 09            BT SLIDE NO 048  
 INSTITUTE 22            TIME 1136

DEPTH CON 18    D 02    PH 25    TURB  
 100.0    281    11.54    7.950    0.5

C-REF-NO 015            LAT 43-46-18N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 049            LON 077-56-18W            MONTH 09            SOUNDING 0112  
 COUNTRY 18                                               DAY 09            BT SLIDE NO 049  
 INSTITUTE 22                                               TIME 1200

DEPTH	CON 18	D 02	PH 25	TURB
107.0	281	11.96	7.990	0.4

C-REF-NO 015            LAT 43-45-09N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 050            LON 077-56-45W            MONTH 09            SOUNDING 0119  
 COUNTRY 18                                               DAY 09            BT SLIDE NO 050  
 INSTITUTE 22                                               TIME 1230

DEPTH	CON 18	D 02	PH 25	TURB
114.0	281	12.00	8.010	0.2

C-REF-NO 015            LAT 43-43-30N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 051            LON 077-56-54W            MONTH 09            SOUNDING 0128  
 COUNTRY 18                                               DAY 09            BT SLIDE NO 051  
 INSTITUTE 22                                               TIME 1256

DEPTH	CON 18	D 02	PH 25	TURB
123.0	282	12.14	8.010	0.2

C-REF-NO 015            LAT 43-40-39N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 052            LON 077-56-36W            MONTH 09            SOUNDING 0145  
 COUNTRY 18                                               DAY 09            BT SLIDE NO 052  
 INSTITUTE 22                                               TIME 1336

DEPTH	CON 18	D 02	PH 25	TURB
140.0	281	11.90	8.010	0.4

C-REF-NO 015            LAT 43-30-15N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 053            LON 077-57-57W            MONTH 09            SOUNDING 0166  
 COUNTRY 18              DAY 09                    BT SLIDE NO 053  
 INSTITUTE 22            TIME 1503

DEPTH CON 18           D 02 PH 25           TURB  
 161.0        281        11.85        7.990        0.2

C-REF-NO 015            LAT 43-27-09N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 054            LON 077-57-09W            MONTH 09            SOUNDING 0127  
 COUNTRY 18              DAY 09                    BT SLIDE NO 054  
 INSTITUTE 22            TIME 1549

DEPTH CON 18           D 02 PH 25           TURB  
 122.0        280        11.15        7.950        0.4

C-REF-NO 015            LAT 43-25-21N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 055            LON 077-56-54W            MONTH 09            SOUNDING 0090  
 COUNTRY 18              DAY 09                    BT SLIDE NO 055  
 INSTITUTE 22            TIME 1623

DEPTH CON 18           D 02 PH 25           TURB  
 85.0        271        10.61        8.350        0.4

C-REF-NO 015            LAT 43-24-00N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 056            LON 077-57-30W            MONTH 09            SOUNDING 0055  
 COUNTRY 18              DAY 09                    BT SLIDE NO 056  
 INSTITUTE 22            TIME 1705

DEPTH CON 18           D 02 PH 25           TURB  
 50.0        282        10.47        7.950        0.2

C-REF-NO 015            LAT 43-27-33N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 057            LON 077-22-21W            MONTH 09            SOUNDING 0208  
 COUNTRY 18            DAY 09            BT SLIDE NO 057  
 INSTITUTE 22            TIME 1940

DEPTH	CON 18	D 02	PH 25	TURB
203.0	281	12.78	8.110	0.2

C-REF-NO 015            LAT 43-28-27N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 058            LON 077-08-27W            MONTH 09            SOUNDING 0212  
 COUNTRY 18            DAY 09            BT SLIDE NO 058  
 INSTITUTE 22            TIME 2106

DEPTH	CON 18	D 02	PH 25	TURB
207.0	281	12.08	8.090	0.5

C-REF-NO 015            LAT 43-30-30N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 059            LON 076-57-06W            MONTH 09            SOUNDING 0225  
 COUNTRY 18            DAY 09            BT SLIDE NO 059  
 INSTITUTE 22            TIME 2244

DEPTH	CON 18	D 02	PH 25	TURB
220.0	281	11.99	8.040	0.4

C-REF-NO 015            LAT 43-25-54N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 060            LON 076-55-30W            MONTH 09            SOUNDING 0183  
 COUNTRY 18            DAY 09            BT SLIDE NO 060  
 INSTITUTE 22            TIME 2342

DEPTH	CON 18	D 02	PH 25	TURB
178.0	279	12.07	8.020	0.2

C-REF-NO 015            LAT 43-24-42N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 061            LON 076-55-06W            MONTH 09            SOUNDING 0146  
 COUNTRY 18            DAY 10            BT SLIDE NO 061  
 INSTITUTE 22            TIME 0011

DEPTH CON 18    D 02    PH 25    TURB  
 141.0    281    11.09    8.010    0.9

C-REF-NO 015            LAT 43-36-12N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 062            LON 076-58-15W            MONTH 09            SOUNDING 0182  
 COUNTRY 18            DAY 10            BT SLIDE NO 062  
 INSTITUTE 22            TIME 0205

DEPTH CON 18    D 02    PH 25    TURB  
 177.0    281    11.85    8.070    0.4

C-REF-NO 015            LAT 43-39-27N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 063            LON 076-59-09W            MONTH 09            SOUNDING 0135  
 COUNTRY 18            DAY 10            BT SLIDE NO 063  
 INSTITUTE 22            TIME 0300

DEPTH CON 18    D 02    PH 25    TURB  
 130.0    281    11.92    8.030    0.2

C-REF-NO 015            LAT 43-43-33N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 064            LON 077-00-18W            MONTH 09            SOUNDING 0091  
 COUNTRY 18            DAY 10            BT SLIDE NO 064  
 INSTITUTE 22            TIME 0347

DEPTH CON 18    D 02    PH 25    TURB  
 86.0    284    10.92    7.960    0.7

C-REF-NO 015            LAT 43-44-21N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 065            LON 077-00-54W            MONTH 09            SOUNDING 0082  
 COUNTRY 18            DAY 10            BT SLIDE NO 065  
 INSTITUTE 22            TIME 0422

DEPTH CON 18    D 02    PH 25    TURB  
 77.0    282    11.09    8.050

C-REF-NO 015            LAT 43-46-00N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 066            LON 077-01-15W            MONTH 09            SOUNDING 0073  
 COUNTRY 18            DAY 10            BT SLIDE NO 066  
 INSTITUTE 22            TIME 0456

DEPTH CON 18    D 02    PH 25    TURB  
 68.0    282    11.40    8.020    0.6

C-REF-NO 015            LAT 43-47-00N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 067            LON 077-01-33W            MONTH 09            SOUNDING 0062  
 COUNTRY 18            DAY 10            BT SLIDE NO 067  
 INSTITUTE 22            TIME 0527

DEPTH CON 18    D 02    PH 25    TURB  
 57.0    284    11.08    8.000    0.8

C-REF-NO 015            LAT 43-48-09N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 068            LON 077-01-57W            MONTH 09            SOUNDING 0055  
 COUNTRY 18            DAY 10            BT SLIDE NO 068  
 INSTITUTE 22            TIME 0600

DEPTH CON 18    D 02    PH 25    TURB  
 50.0    283    10.50    7.980    0.6

C-REF-NO 015            LAT 43-49-33N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 069            LON 077-02-42W            MONTH 09            SOUNDING 0037  
 COUNTRY 18                                               DAY 10            BT SLIDE NO 069  
 INSTITUTE 22                                               TIME 0634

DEPTH	CON 18	D 02	PH 25	TURB
32.0	284	7.98	7.990	0.2

C-REF-NO 015            LAT 43-34-27N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 070            LON 076-44-48W            MONTH 09            SOUNDING 0204  
 COUNTRY 18                                               DAY 10            BT SLIDE NO 070  
 INSTITUTE 22                                               TIME 0856

DEPTH	CON 18	D 02	PH 25	TURB
199.0	282	12.16	8.010	0.7

C-REF-NO 015            LAT 43-39-09N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 071            LON 076-32-00W            MONTH 09            SOUNDING 0135  
 COUNTRY 18                                               DAY 10            BT SLIDE NO 071  
 INSTITUTE 22                                               TIME 1034

DEPTH	CON 18	D 02	PH 25	TURB
130.0	272	8.95	8.370	0.4

C-REF-NO 015            LAT 43-41-24N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 072            LON 076-24-00W            MONTH 09            SOUNDING 0073  
 COUNTRY 18                                               DAY 10            BT SLIDE NO 072  
 INSTITUTE 22                                               TIME 1132

DEPTH	CON 18	D 02	PH 25	TURB
68.0	282	11.23	8.090	0.4

C-REF-NO 015            LAT 43-41-48N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 073            LON 076-22-54W            MONTH 09            SOUNDING 0055  
 COUNTRY 18            DAY 10            BT SLIDE NO 073  
 INSTITUTE 22            TIME 1148

DEPTH	CON 18	D 02	PH 25	TURB
50.0	281	11.62	8.040	0.2

C-REF-NO 015            LAT 43-42-00N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 074            LON 076-20-57W            MONTH 09            SOUNDING 0046  
 COUNTRY 18            DAY 10            BT SLIDE NO 074  
 INSTITUTE 22            TIME 1205

DEPTH	CON 18	D 02	PH 25	TURB
41.0	280	11.08	7.940	0.2

C-REF-NO 015            LAT 43-42-57N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 075            LON 076-18-36W            MONTH 09            SOUNDING 0038  
 COUNTRY 18            DAY 10            BT SLIDE NO 075  
 INSTITUTE 22            TIME 1231

DEPTH	CON 18	D 02	PH 25	TURB
33.0	273	8.15	8.130	0.7

C-REF-NO 015            LAT 43-44-03N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 076            LON 076-15-54W            MONTH 09            SOUNDING 0027  
 COUNTRY 18            DAY 10            BT SLIDE NO 076  
 INSTITUTE 22            TIME 1308

DEPTH	CON 18	D 02	PH 25	TURB
22.0	272	8.77	8.280	0.5

C-REF-NO 015            LAT 43-51-39N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 077            LON 076-20-39W            MONTH 09            SOUNDING 0030  
 COUNTRY 18                                               DAY 10            BT SLIDE NO 077  
 INSTITUTE 22                                               TIME 1425

DEPTH	CON 18	D 02	PH 25	TURB
25.0	271	8.41	8.280	0.4

C-REF-NO 015            LAT 43-52-45N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 078            LON 076-12-00W            MONTH 09            SOUNDING 0009  
 COUNTRY 18                                               DAY 10            BT SLIDE NO 078  
 INSTITUTE 22                                               TIME 1556

DEPTH	CON 18	D 02	PH 25	TURB
4.0	267	9.59	8.480	0.4

C-REF-NO 015            LAT 43-53-06N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 079            LON 076-24-48W            MONTH 09            SOUNDING 0024  
 COUNTRY 18                                               DAY 10            BT SLIDE NO 079  
 INSTITUTE 22                                               TIME 1743

DEPTH	CON 18	D 02	PH 25	TURB
19.0	272	8.98	8.430	0.7

C-REF-NO 015            LAT 43-53-18N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 080            LON 076-28-00W            MONTH 09            SOUNDING 0023  
 COUNTRY 18                                               DAY 10            BT SLIDE NO 080  
 INSTITUTE 22                                               TIME 1817

DEPTH	CON 18	D 02	PH 25	TURB
18.0	273	8.88	8.400	0.3

C-REF-NO 015            LAT 43-54-48N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 081            LON 076-41-00W            MONTH 09            SOUNDING 0015  
 COUNTRY 18            DAY 10            BT SLIDE NO 081  
 INSTITUTE 22            TIME 1935

DEPTH	CON 18	D 02	PH 25	TURB
10.0	273	9.42	8.480	0.4

C-REF-NO 015            LAT 44-01-48N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 082            LON 076-37-30W            MONTH 09            SOUNDING 0039  
 COUNTRY 18            DAY 10            BT SLIDE NO 082  
 INSTITUTE 22            TIME 2024

DEPTH	CON 18	D 02	PH 25	TURB
34.0	287	7.06	8.010	1.1

C-REF-NO 015            LAT 44-04-00N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 083            LON 076-45-30W            MONTH 09            SOUNDING 0031  
 COUNTRY 18            DAY 10            BT SLIDE NO 083  
 INSTITUTE 22            TIME 2128

DEPTH	CON 18	D 02	PH 25	TURB
26.0	280	6.04	7.970	0.5

C-REF-NO 015            LAT 44-06-09N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 084            LON 076-48-33W            MONTH 09            SOUNDING 0015  
 COUNTRY 18            DAY 10            BT SLIDE NO 084  
 INSTITUTE 22            TIME 2208

DEPTH	CON 18	D 02	PH 25	TURB
10.0	267	9.40	8.460	0.9

C-REF-NO 015            LAT 44-06-45N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 085            LON 076-48-27W            MONTH 09            SOUNDING 0026  
 COUNTRY 18            DAY 10            BT SLIDE NO 085  
 INSTITUTE 22            TIME 2226

DEPTH	CON 18	D 02	PH 25	TURB
21.0	283	4.91	7.970	0.7

C-REF-NO 015            LAT 44-04-45N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 086            LON 077-05-00W            MONTH 09            SOUNDING 0011  
 COUNTRY 18            DAY 11            BT SLIDE NO 086  
 INSTITUTE 22            TIME 0005

DEPTH	CON 18	D 02	PH 25	TURB
6.0	292	7.67	8.380	

C-REF-NO 015            LAT 43-52-57N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 087            LON 076-35-51W            MONTH 09            SOUNDING 0038  
 COUNTRY 18            DAY 11            BT SLIDE NO 087  
 INSTITUTE 22            TIME 1102

DEPTH	CON 18	D 02	PH 25	TURB
33.0	276	7.73	8.060	0.5

C-REF-NO 015            LAT 43-53-51N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 088            LON 076-33-00W            MONTH 09            SOUNDING 0052  
 COUNTRY 18            DAY 11            BT SLIDE NO 088  
 INSTITUTE 22            TIME 1142

DEPTH	CON 18	D 02	PH 25	TURB
47.0	283	9.03	7.900	0.8

C-REF-NO 015            LAT 44-00-15N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 089            LON 076-29-21W            MONTH 09            SOUNDED 0045  
 COUNTRY 18            DAY 11            BT SLIDE NO 089  
 INSTITUTE 22            TIME 1240

DEPTH	CON 18	D 02	PH 25	TURB
40.0	273	7.98	7.890	0.1

C-REF-NO 015            LAT 44-02-57N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 090            LON 076-26-12W            MONTH 09            SOUNDED 0037  
 COUNTRY 18            DAY 11            BT SLIDE NO 090  
 INSTITUTE 22            TIME 1325

DEPTH	CON 18	D 02	PH 25	TURB
32.0	277	8.38	8.120	0.2

C-REF-NO 015            LAT 44-02-15N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 091            LON 076-29-36W            MONTH 09            SOUNDED 0016  
 COUNTRY 18            DAY 11            BT SLIDE NO 091  
 INSTITUTE 22            TIME 1452

DEPTH	CON 18	D 02	PH 25	TURB
11.0	271	8.98	8.470	0.3

C-REF-NO 015            LAT 44-10-48N            YEAR 1966            NO. DEPTHS 01  
 CONS. NO 092            LON 076-33-24W            MONTH 09            SOUNDED 0009  
 COUNTRY 18            DAY 11            BT SLIDE NO 092  
 INSTITUTE 22            TIME 1655

DEPTH	CON 18	D 02	PH 25	TURB
4.0	274	9.15	8.480	0.4

**CRUISE 66-15, LAKE ONTARIO**

C-REF-NO 016            LAT 44-00-24N            YEAR 1966            NO. DEPTHS 04  
 CONS. NO 001            LON 076-46-15W            MONTH 09            SOUNDING 0033  
 COUNTRY 18            DAY 12            BT SLIDE NO 001  
 INSTITUTE 22            TIME 1657

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.2	19.41	271	9.31	8.510	1.2	0.8	86.5
3.0								
10.0		17.40	271	9.19	8.510	0.7		87.5
20.0		16.78	286	5.11	7.850	1.4		95.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0		27.0	0.004	0.001	0.020		000E00	
3.0						0.000		
10.0		26.0	0.004	0.001	0.015		000E00	
20.0		26.0	0.163	0.002	0.080		000E00	

DEPTH	SPC 20	SPC 35
1.0	600E00	700E00
3.0		
10.0		
20.0		

C-REF-NO 016            LAT 44-03-42N            YEAR 1966            NO. DEPTHS 03  
 CONS. NO 002            LON 076-30-09W            MONTH 09            SOUNDING 0024  
 COUNTRY 18            DAY 12            BT SLIDE NO 002  
 INSTITUTE 22            TIME 1828

DEPTH	SECCHI	TEMP	CON 18	D O2	PH 25	TURB	BOD	T ALK
1.0	4.7	20.03	271	9.33	8.490	0.7	0.7	86.5
3.0								
10.0		19.58	272	8.85	8.440	0.5		86.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0		27.0	0.004	0.001	0.010		000E00	
3.0						0.000		
10.0		27.0	0.004	0.001	0.010		100E00	

DEPTH	SPC 20	SPC 35
1.0	870E01	190E01
3.0		
10.0		

C-REF-NO 016                    LAT 43-54-57N                    YEAR 1966  
 CONS. NO 003                    LON 076-15-57W                    MONTH 09  
 COUNTRY 18                    DAY 12                            NO. DEPTHS 03  
 INSTITUTE 22                    TIME 2007                            SOUNDING 0024  
     BT SLIDE NO 003

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0	3.8	21.29	265	9.54	8.550	1.0	1.4	84.0
3.0								
10.0		20.14	268		8.450	1.1		

DEPTH	HARD	CL	NO3NO2	NO2	R P04	PHEN	MF COL	MF ENT
1.0		26.0	0.007	0.003	0.025		000E00	
3.0						0.000		
10.0							000E00	

DEPTH	SPC 20	SPC 35
1.0	400E00	600E00
3.0		
10.0		

C-REF-NO 016  
 CONS. NO 004  
 COUNTRY 18  
 INSTITUTE 22

LAT 43-46-12N  
 LON 076-18-33W

YEAR 1966  
 MONTH 09  
 DAY 12  
 TIME 2111

NO. DEPTHS 05  
 SOUNDING 0036  
 BT SLIDE NO 004

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.0	20.26	271	9.26	8.510	0.8	0.8	86.0
3.0								
10.0		19.91	271	8.82	8.450	1.0	0.5	86.0
20.0		19.86	271	8.72	8.440	0.8	0.7	86.0
30.0		5.97	284	9.31	7.990	2.0	0.4	93.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0		27.0	0.012	0.008	0.010		000E00	000E00
3.0						0.000		
10.0		27.0	0.014	0.006	0.015		000E00	
20.0		27.0	0.010	0.005	0.015		200E00	
30.0		26.0	0.207	0.003	0.085		100E00	000E00

DEPTH	SPC 20	SPC 35
1.0	300E00	900E00
3.0		
10.0		
20.0		
30.0	190E01	300E00

C-REF=NO 016 LAT 43-51-39N YEAR 1966 NO. DEPTHS 04  
 CONS. NO 005 LON 076-32-51W MONTH 09 SOUNDING 0026  
 COUNTRY 18 DAY 12 BT SLIDE NO 005  
 INSTITUTE 22 TIME 2242

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.5	20.73	271	9.31	8.490	1.0	1.0	86.0
3.0								
10.0		19.89	270	8.99	8.470	0.8		86.5
20.0		19.89	271	8.78	8.440	0.6		86.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0		27.0	0.014	0.006	0.010		000E00	000E00
3.0						0.000		
10.0		27.0	0.013	0.007	0.020		000E00	
20.0	126.0	27.0	0.013	0.007	0.015		000E00	

DEPTH SPC 20 SPC 35

1.0	
3.0	
10.0	
20.0	

C-REF-NO 016 LAT 43-41-03N YEAR 1966 NO. DEPTHS 08  
 CONS. NO 006 LON 076-33-51W MONTH 09 SOUNDING 0117  
 COUNTRY 18 DAY 13 BT SLIDE NO 007  
 INSTITUTE 22 TIME 0020

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		20.07	272	9.47	8.480	0.8	0.6	86.5
3.0								
10.0		19.85	270	9.16	8.460	0.9	0.7	86.5
20.0		19.71	273	8.94	8.440	0.9	0.6	
30.0		6.99	278	10.96	8.050	1.2	0.3	90.5
50.0		4.73	279	12.03	8.090	0.7	0.2	90.0
75.0		4.24	279	12.46	8.120	0.2	0.4	90.5
100.0		3.96	283	11.22	8.040	1.2	0.4	92.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.0	27.0	0.006	0.004	0.015		100E00	
3.0						0.001		
10.0	127.5	27.0	0.007	0.003	0.010		000E00	
20.0	126.5	27.0	0.007	0.003	0.005		100E00	
30.0	131.5	26.0	0.168	0.002	0.130		000E00	
50.0	131.5	26.0	0.194	0.001			000E00	
75.0	131.5	26.0	0.179	0.001	0.060		000E00	
100.0	133.5	26.0	0.204	0.001	0.110		100E00	100E00

DEPTH SPC 20 SPC 35

1.0	400E01	400E00
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0	120E01	140E01

C-REF-NO 016            LAT 43-34-06N            YEAR 1966            NO. DEPTHS 05  
 CONS. NO 007            LON 076-19-54W            MONTH 09            SOUNDING 0039  
 COUNTRY 18            DAY 13            BT SLIDE NO 009  
 INSTITUTE 22            TIME 0217

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		20.14	276	9.22	8.490	1.4	1.0	84.5
3.0								
10.0		19.90	273	8.72	8.430	1.7		84.5
20.0		19.82	274	8.69	8.440	1.4		84.5
30.0		6.19	281	10.99	8.080	0.5		84.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.5	28.0	0.002	0.003	0.000		000E00	000E00
3.0						0.000		
10.0	128.0	28.0	0.009	0.006	0.010		100E00	
20.0	127.0	28.0	0.002	0.003	0.030		000E00	
30.0	132.5	26.0	0.189	0.001	0.085		000E00	000E00

DEPTH	SPC 20	SPC 35
1.0	390E01	700E00
3.0		
10.0		
20.0		
30.0	290E01	400E00

C-REF-NO 016 LAT 43-29-57N YEAR 1966 NO. DEPTHS 06  
 CONS. NO 008 LON 076-34-18W MONTH 09 SOUNDING 0070  
 COUNTRY 18 DAY 13 BT SLIDE NO 010  
 INSTITUTE 22 TIME 0348

DEPTH	SECCHI	TEMP	CON 18	D O2	PH 25	TURB	BOD	T ALK
1.0		20.09	265	9.32	8.490	1.1	1.0	90.5
3.0								
10.0		19.92	280	8.95	8.450	1.0		85.0
20.0		19.82	279	8.70	8.430	1.4		85.0
30.0		5.63	279	11.32	8.110	0.8		85.0
50.0		4.17	281	11.28	7.980	0.4		90.5

DEPTH	HARD	CL	NO3NO2	NO2	R P04	PHEN	MF COL	MF ENT
1.0	128.5	27.0	0.006	0.004	0.110		300E00	400E00
3.0						0.000		
10.0	129.0	27.0	0.007	0.003	0.055		100E00	
20.0	129.5	27.0	0.011	0.004	0.090		500E00	
30.0	129.0	25.0	0.189	0.001	0.055		500E00	
50.0	133.0	25.0	0.210	0.000	0.085		000E00	000E00

DEPTH SPC 20 SPC 35

1.0	100E02	800E00
3.0		
10.0		
20.0		
30.0		
50.0	280E01	500E00

C-REF-NO 016  
 CONS. NO 009  
 COUNTRY 18  
 INSTITUTE 22

LAT 43-23-27N  
 LON 076-49-54W

YEAR 1966  
 MONTH 09  
 DAY 13  
 TIME 0540

NO. DEPTHS 06  
 SOUNDING 0073  
 BT SLIDE NO 011

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.96	275	9.28	8.460	0.6	0.9	84.5
3.0								
10.0		19.98	277	9.09	8.460	0.6		85.0
20.0		19.91	277	8.87	8.420	0.5		85.0
30.0		7.53	279	10.62	7.990	0.4		90.0
50.0		4.04	281	11.75	7.980	0.4		91.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	128.0	28.0	0.002	0.003	0.035		000E00	000E00
3.0					0.000			
10.0	127.0	28.0	0.003	0.002	0.010		000E00	
20.0	128.0	28.0	0.006	0.004	0.020		000E00	
30.0	132.0	26.0	0.178	0.002	0.050		600E00	
50.0	133.0	26.0	0.194	0.001	0.070		000E00	100E01

DEPTH	SPC 20	SPC 35
1.0	880E01	600E00
3.0		
10.0		
20.0		
30.0		
50.0	580E01	190E01

C-REF-NC 016      LAT 43-35-33N      YEAR 1966      NO. DEPTHS 09  
 CONS. NO 010      LON 076-48-33W      MONTH 09      SOUNDING 0198  
 COUNTRY 18      DAY 13      BT SLIDE NO 013  
 INSTITUTE 22      TIME 0732

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.53	272	9.27	8.480	0.4	0.5	84.0
3.0								
10.0		19.56	270	9.21	8.490	0.4	0.6	85.0
20.0		19.34	271	8.70	8.450	0.4	0.4	85.0
30.0		13.75	277	8.79	8.090	0.7	0.4	88.0
50.0		4.77	278	12.24	8.070	0.7	0.3	89.5
75.0		4.06	278	12.45	8.080	0.6	0.3	89.5
100.0		3.94	278	12.49	8.080	0.0	0.4	90.0
150.0		3.83	280	12.34	8.080	0.2	0.4	95.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.0	26.0	0.002	0.003	0.020		000E00	000E00
3.0						0.000		
10.0	128.0	26.0	0.002	0.003	0.005		000E00	
20.0	127.5	27.0	0.006	0.004	0.025		000E00	
30.0	130.0	26.0	0.107	0.003	0.015		500E00	
50.0	132.0	27.0	0.185	0.000	0.095		100E00	
75.0	132.0	26.0	0.185	0.000	0.070		000E00	
100.0	132.0	26.0	0.185	0.000	0.065		100E00	
150.0	132.0	26.0	0.195	0.000	0.060		200E00	000E00

DEPTH SPC 20 SPC 35

1.0	860E01	100E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0		
150.0	180E01	300E00

C-REF-NO 016 LAT 43-47-27N YEAR 1966 NO. DEPTHS 05  
 CONS. NO 011 LON 076-47-12W MONTH 09 SOUNDING 0070  
 COUNTRY 18 DAY 13 BT SLIDE NO 015  
 INSTITUTE 22 TIME 0911

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.74	271	9.09	8.470	0.6	0.7	85.0
3.0								
10.0		19.76	272	9.07	8.400	0.6		85.0
20.0		19.63	272	8.84	8.430	0.5		85.0
30.0		6.89	281	10.21	7.980	0.2		89.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.0	26.0	0.002	0.003	0.015		300E00	000E00
3.0						0.000		
10.0	127.5	26.0	0.002	0.003	0.040		000E00	
20.0	128.0	27.0	0.002	0.003	0.015		000E00	
30.0	131.5	26.0	0.194	0.001			400E00	000E00

DEPTH SPC 20 SPC 35

1.0	280E02	400E00
3.0		
10.0		
20.0		
30.0	500E01	120E01

C-REF-NO 016            LAT 43-51-06N            YEAR 1966            NO. DEPTHS 04  
 CONS. NO 012            LON 076-58-18W            MONTH 09            SOUNDING 0027  
 COUNTRY 18            DAY 13            BT SLIDE NO 016  
 INSTITUTE 22            TIME 1028

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.68	272	9.15	8.460	0.5	0.9	85.0
3.0								
10.0		19.72	271	9.23	8.470	0.4	0.7	85.0
20.0		19.28	272	8.48	8.400	0.4	0.6	85.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.0	26.0	0.002	0.003	0.035		100E00	000E00
3.0						0.002		
10.0	127.5	26.0	0.002	0.003	0.055		100E00	
20.0	128.0	26.0	0.016	0.004	0.035		000E00	

DEPTH SPC 20 SPC 35

DEPTH	SPC 20	SPC 35
1.0	630E01	900E00
3.0		
10.0		
20.0		

C-REF-NO 016 LAT 43-42-12N YEAR 1966 NO. DEPTHS 07  
 CONS. NO 013 LON 077-02-33W MONTH 09 SOUNDING 0099  
 COUNTRY 18 DAY 13 BT SLIDE NO 018  
 INSTITUTE 22 TIME 1203

DEPTH	SECCHI	TEMP	CON 18	D O2	PH 25	TURB	BOD	T ALK
1.0		19.40	272	8.87	8.440	0.4	0.8	85.0
3.0								
10.0		19.43	270	9.17	8.440	0.5	1.3	85.5
20.0		19.15	271	8.61	8.400	0.5	1.0	86.0
30.0		10.99	279	9.12	8.010	0.2	0.3	89.0
50.0		5.36	281	11.21	8.020	0.2	0.3	90.5
75.0		4.64	283	10.86	8.000	0.9	0.6	91.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.5	26.0	0.005	0.005	0.015		100E00	000E00
3.0						0.000		
10.0	127.0	26.0	0.004	0.006	0.015		000E00	
20.0	128.5	25.0	0.002	0.003	0.015		100E00	
30.0	131.0	25.0	0.143	0.002	0.025		300E00	
50.0	132.5	25.0	0.184	0.001	0.045		800E00	
75.0	133.5	25.0	0.194	0.001	0.065		900E00	000E00

DEPTH	SPC 20	SPC 35
1.0	150E02	110E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0	620E01	700E00

C-REF-NO 016 LAT 43-30-06N YEAR 1966 NO. DEPTHS 10  
 CONS. NO 014 LON 077-03-06W MONTH 09 SOUNDING 0229  
 COUNTRY 18 DAY 13 BT SLIDE NO 020  
 INSTITUTE 22 TIME 1412

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.21	270	8.84	8.460	0.7	0.8	85.5
3.0								
10.0		19.20	270	8.76	8.450	0.9	0.6	85.0
20.0		10.98	277	9.40	8.040	0.4	0.2	87.5
30.0		5.03	278	12.18	8.050	0.6	1.0	89.0
50.0		4.15	279	12.25	8.100	0.7	0.2	89.0
75.0		3.93	279	12.66	8.120	0.4		88.0
100.0		3.87	278	12.28	8.130	0.4	0.2	88.0
150.0		3.84	279	12.58	8.140	0.3	0.2	88.5
200.0		3.77	280	12.25	8.090	1.6	0.3	89.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.5	25.0	0.005	0.005	0.020		120E02	000E00
3.0						0.000		
10.0	127.5	25.0	0.006	0.004	0.015		120E02	
20.0	132.0	25.0	0.137	0.003	0.035		800E01	
30.0	132.0	25.0	0.180	0.000	0.035		000E00	
50.0	132.0	25.0	0.180	0.000	0.045		000E00	
75.0	131.0	25.0	0.185	0.000	0.160		000E00	
100.0	132.0	25.0	0.185	0.000	0.100		000E00	
150.0	133.0	25.0	0.188	0.007	0.205		100E00	
200.0	132.0	25.0	0.180	0.000	0.115		300E00	000E00

DEPTH SPC 20 SPC 35

1.0	590E01	500E00
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0		
150.0		
200.0	250E01	600E00

C-REF-NO 016      LAT 43-18-45N      YEAR 1966      NO. DEPTHS 04  
 CONS. NO 015      LON 077-03-51W      MONTH 09      SOUNDING 0035  
 COUNTRY 18      DAY 13      BT SLIDE NO 022  
 INSTITUTE 22      TIME 1623

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.2	20.00	277	8.22	8.480	1.0	1.2	84.0
3.0								
10.0		19.78	276	8.16	8.440	0.5	0.5	84.0
20.0		12.91	278	8.92	8.100	0.7	0.3	86.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	124.0	27.0	0.001	0.004	0.085		000E00	100E00
3.0						0.000		
10.0	124.5	26.0	0.001	0.004	0.105		100E00	
20.0	131.5	27.0	0.133	0.007	0.085		260E01	

DEPTH	SPC 20	SPC 35
1.0	450E01	300E00
3.0		
10.0		
20.0		

C-REF-NO 016 LAT 43-25-06N YEAR 1966 NO. DEPTHS 10  
 CONS. NO 016 LON 077-17-24W MONTH 09 SOUNDING 0221  
 COUNTRY 18 DAY 13 BT SLIDE NO 023  
 INSTITUTE 22 TIME 1803

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	3.3	20.10	271	8.69	8.540	1.2	0.6	84.0
3.0								
10.0		19.67	272	9.07	8.510	0.7		84.0
20.0		19.06	272	8.02	8.390	0.6		84.5
30.0		7.66	280	10.79	8.070	0.7		88.0
50.0		4.58	280	11.86	8.090	0.8		88.5
75.0		4.11	280	12.44	8.120	0.3		88.5
100.0		3.91	280	12.64	8.080	0.9		89.0
150.0		3.80	280	12.33	8.080	0.3		88.5
200.0			282	11.40		0.2		90.0

DEPTH	HARD	CL	NO3NO2	NO2	R P04	PHEN	MF COL	MF ENT
1.0	127.5	26.0	0.002	0.003	0.025		200E00	100E00
3.0						0.001		
10.0	128.5	26.0	0.002	0.003	0.025		000E00	
20.0	129.0	26.0	0.010	0.005	0.075		100E00	
30.0	133.5	25.0	0.163	0.002	0.070		200E00	
50.0	133.5	25.0	0.180	0.000	0.065		300E00	
75.0	133.0	25.0	0.180	0.000	0.150		300E00	
100.0	133.0	25.0	0.184	0.001	0.060		200E00	
150.0	133.0	26.0	0.180	0.000	0.075		000E00	
200.0	133.0	24.0	0.205	0.000	0.070		100E00	000E00

DEPTH SPC 20 SPC 35

1.0	520E01	110E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0		
150.0		
200.0	610E01	600E00

C-REF-N0 016 LAT 43-37-09N YEAR 1966 NO. DEPTHS 07  
 CONS. NO 017 LON 077-17-00W MONTH 09 SOUNDING 0139  
 COUNTRY 18 DAY 13 BT SLIDE NO 025  
 INSTITUTE 22 TIME 2050

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		20.08	271		8.530	0.9	0.6	86.0
10.0		19.42	273	9.73	8.570	0.9		86.0
20.0		19.10	272	9.00	8.450	0.5		86.5
30.0		8.96	280	9.99	8.050	1.0		90.0
50.0		5.09	278	11.96	8.080	0.4		90.5
75.0		4.28	279	11.94	8.070	0.4		91.5
100.0		4.11	282	12.05	8.100	0.7		90.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.0	25.0	0.003	0.002	0.005		000E00	000E00
10.0	127.5	25.0	0.003	0.002	0.005		000E00	
20.0	128.0	25.0	0.007	0.003	0.005		100E00	
30.0	132.0	24.0	0.159	0.001	0.005		100E00	
50.0	132.5	24.0	0.190	0.000	0.050		200E00	
75.0	133.5	25.0	0.194	0.001	0.055			
100.0	134.0	25.0	0.204	0.001	0.065			

DEPTH SPC 20 SPC 35

1.0	150E02	180E01
10.0		
20.0		
30.0		
50.0		
75.0		
100.0		

C-REF-NO 016            LAT 43-46-48N            YEAR 1966            NO. DEPTHS 05  
 CONS. NO 018            LON 077-16-03W            MONTH 09            SOUNDING 0051  
 COUNTRY 18            DAY 13            BT SLIDE NO 027  
 INSTITUTE 22            TIME 2208

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.0	19.77	273	9.60	8.570	1.0	0.7	86.0
3.0								
10.0		19.33	274	9.26	8.520	1.2		86.0
20.0		18.94	271	9.00	8.460	1.7		86.5
30.0		10.95	278	8.96	8.040	0.8		90.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.5	25.0	0.003	0.002	0.005		100E00	000E00
3.0						0.000		
10.0	128.0	25.0	0.003	0.002	0.005		300E00	
20.0	128.0	24.0	0.007	0.003	0.010		000E00	
30.0	132.5	25.0	0.154	0.001	0.015		000E00	000E00

DEPTH	SPC 20	SPC 35
1.0	940E01	000E00
3.0		
10.0		
20.0		
30.0	130E01	000E00

C-REF-NO 016            LAT 43-43-30N            YEAR 1966            NO. DEPTHS 07  
 CONS. NO 019            LON 077-30-24W            MONTH 09            SOUNDING 0081  
 COUNTRY 18            DAY 13            BT SLIDE NO 028  
 INSTITUTE 22            TIME 2336

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.22	272	9.86	8.540	1.3	0.7	
3.0								
10.0		18.81	272	9.46	8.390	0.7		86.0
20.0		14.11	276	8.76	8.080	0.2		88.0
30.0		7.58	281	10.47	8.010	0.2		89.5
49.0		4.64	281	11.63	8.060	0.0		90.5
74.0		4.35	283	11.85	8.030	0.2		90.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	128.5	24.0	0.009	0.006	0.010		100E00	000E00
3.0						0.001		
10.0	128.5	24.0	0.010	0.005	0.015		000E00	
20.0	130.5	24.0	0.099	0.006	0.015		000E00	
30.0	132.0	25.0	0.179	0.001	0.035		100E00	
49.0	133.5	25.0	0.203	0.002	0.055		400E00	
74.0	135.0	24.0	0.204	0.001	0.065		100E00	100E00

DEPTH	SPC 20	SPC 35
1.0	800E00	300E00
3.0		
10.0		
20.0		
30.0		
49.0		
74.0	110E01	200E00

C-REF-N0 016            LAT 43-31-45N            YEAR 1966            NO. DEPTHS 09  
 CONS. NO 020            LON 077-31-51W            MONTH 09            SOUNDING 0172  
 COUNTRY 18            DAY 14            BT SLIDE NO 030  
 INSTITUTE 22            TIME 0132

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0		19.25	271	9.70	8.470	0.7	0.8	86.0
3.0								
10.0		18.87	272	9.38	8.450	0.7	0.8	86.0
20.0		18.67	272	8.96	8.390	0.8	0.5	86.0
30.0		7.37	279	11.19	8.060	0.6	0.2	89.5
50.0		4.74	278	12.37	8.070	0.3	0.3	89.5
74.0		4.06	280	12.61	8.080	2.0	0.2	89.5
99.0		3.91	281	12.70	8.090	0.3	0.2	89.5
149.0		3.79	281	11.88	8.030	0.6	0.2	91.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	128.0	24.0	0.006	0.004	0.005		000E00	000E00
3.0						0.000		
10.0	127.0	24.0	0.014	0.006	0.010		100E00	
20.0	128.5	25.0	0.024	0.006	0.010		000E00	
30.0	132.0	24.0	0.164	0.001	0.025		200E00	
50.0	133.0	24.0	0.195	0.000	0.045		000E00	
74.0	133.0	24.0	0.189	0.001	0.055		000E00	
99.0	133.0	24.0	0.190	0.000	0.050		000E00	
149.0	133.5	25.0	0.205	0.000	0.065		100E00	000E00

DEPTH SPC 20 SPC 35

1.0	520E01	130E01
3.0		
10.0		
20.0		
30.0		
50.0		
74.0		
99.0		
149.0	390E01	110E01

C-REF-NO 016      LAT 43-19-51N      YEAR 1966      NO. DEPTHS 05  
 CONS. NO 021      LON 077-32-30W      MONTH 09      SOUNDING 0050  
 COUNTRY 18      DAY 14      BT SLIDE NO 032  
 INSTITUTE 22      TIME 0335

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.46	272	9.50	8.510	0.9	0.9	88.5
3.0								
10.0		19.27	271	9.26	8.480	0.7		89.0
20.0		7.98	278	10.25	8.050	1.3		92.0
30.0		4.28	280	12.45	8.070	0.7		92.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.5	25.0	0.006	0.004	0.005		120E01	000E00
3.0						0.000		
10.0	128.0	24.0	0.006	0.004	0.005		200E01	
20.0	132.5	24.0	0.186	0.004	0.025		380E01	
30.0	133.0	24.0	0.195	0.000	0.050		900E00	000E00

DEPTH	SPC 20	SPC 35
1.0	200E01	280E01
3.0		
10.0		
20.0		
30.0	310E01	100E01

C-REF-NO 016            LAT 43-26-15N            YEAR 1966            NO. DEPTHS 08  
 CONS. NO 022            LON 077-46-18W            MONTH 09            SOUNDING 0128  
 COUNTRY 18            DAY 14            BT SLIDE NO 033  
 INSTITUTE 22            TIME 0510

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.41	272	9.35	8.460	1.1	0.5	87.5
3.0								
10.0		19.19	273	9.16	8.430	1.0		89.0
20.0		13.76	277	8.86	8.090	1.0		91.0
30.0		5.38	279	11.95	8.060	0.9		93.0
50.0		4.26	279	12.54	8.090	0.8		93.0
75.0		3.90	278	12.68	8.090	0.7		93.0
100.0		3.82	280	11.95	8.060	1.0		93.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	125.0	25.0	0.007	0.003	0.000		120E01	000E00
3.0						0.000		
10.0	126.5	25.0	0.012	0.003	0.000		300E01	
20.0	130.0	24.0	0.145	0.020	0.030		260E01	
30.0	132.5	25.0	0.189	0.001	0.025		600E00	
50.0	132.5	24.0	0.195	0.000	0.035		200E01	
75.0	132.5	24.0	0.200	0.000	0.040		100E00	
100.0	136.0	24.0		0.000	0.065		300E01	000E00

DEPTH	SPC 20	SPC 35
1.0	520E01	100E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0	100E01	170E01

C-REF-NO 016                    LAT 43-38-24N                    YEAR 1966                    NO. DEPTHS 09  
 CONS. NO 023                    LON 077-45-15W                    MONTH 09                    SOUNDING 0161  
 COUNTRY 18                    DAY 14                            BT SLIDE NO 035  
 INSTITUTE 22                    TIME 0652

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		18.98	271	9.40	8.440	1.0	0.8	89.0
3.0								
10.0		19.02	271	9.39	8.460	1.6		89.5
20.0		18.48	272	8.82	8.350	0.7		90.0
30.0		5.94	279	11.80	8.090	0.5		93.0
50.0		4.57	280	12.49	8.110	0.7		93.5
75.0		3.94	279	12.73	8.100	0.8		93.5
100.0		3.90	280	12.73				93.0
150.0		3.81	282	11.92	7.980	0.4		94.0

DEPTH	HARD	CL	NO3NO2	NO2	R P04	PHEN	MF COL	MF ENT
1.0		25.0	0.010	0.005	0.000		100E01	000E00
3.0						0.001		
10.0	127.5	25.0	0.001	0.009	0.000		400E00	
20.0	129.5	25.0			0.005		400E01	
30.0	132.5	24.0	0.174	0.001	0.020		000E00	
50.0	132.0	25.0	0.185	0.000	0.030		300E00	
75.0	133.0	25.0	0.190	0.000	0.040		400E01	
100.0	133.0	25.0	0.190	0.000	0.035		200E01	
150.0	134.5	25.0	0.200	0.000	0.050		400E01	100E00

DEPTH SPC 20 SPC 35

1.0	630E01	800E00
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0		
150.0	140E01	110E01

C-REF-NC 016            LAT 43-50-15N            YEAR 1966            NO. DEPTHS 06  
 CONS. NO 024            LON 077-43-54W            MONTH 09            SOUNDING 0070  
 COUNTRY 18            DAY 14            BT SLIDE NO 037  
 INSTITUTE 22            TIME 0828

DEPTH	SECCHI	TEMP	CON 18	D O2	PH 25	TURB	BOD	T ALK
1.0		18.80	272	9.78	8.440	1.6	0.9	86.0
3.0								
10.0		18.82	271	9.78	8.530	1.6		87.5
20.0		13.72	276	9.00	8.200	1.1		90.0
30.0		7.11	281	10.55	8.100	0.6		92.0
50.0		4.98	282	11.48	8.080	0.9		92.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	125.5	24.0	0.003	0.002	0.005		300E00	300E00
3.0						0.000		
10.0	126.5	25.0	0.004	0.001	0.005		000E00	
20.0	130.0	24.0	0.088	0.002	0.005		200E00	
30.0	132.5	24.0	0.170	0.000	0.015		600E00	
50.0	134.5	25.0	0.195	0.000	0.045		600E00	000E00

DEPTH SPC 20 SPC 35

1.0	760E01	600E00
3.0		
10.0		
20.0		
30.0		
50.0	180E01	140E01

C-REF-NO 016            LAT 43-55-51N            YEAR 1966            NO. DEPTHS 05  
 CONS. NO 025            LON 077-57-54W            MONTH 09            SOUNDING 0038  
 COUNTRY 18            DAY 14            BT SLIDE NO 038  
 INSTITUTE 22            TIME 0958

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0		18.14	271	9.87	8.460	1.6	0.8	88.0
3.0								
10.0		17.69	273	9.47	8.430	1.4	0.9	88.0
20.0		15.11	277	9.34	8.280	1.2	0.7	91.0
30.0		11.86	278	9.35	8.170	0.9	0.6	91.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	126.5	25.0	0.003	0.002	0.000		000E00	000E00
3.0						0.000		
10.0	127.5	24.0	0.014	0.001	0.000		000E00	
20.0	129.5	25.0	0.058	0.002	0.000		100E00	
30.0	131.5	25.0	0.129	0.001	0.000		000E00	000E00

DEPTH	SPC 20	SPC 35
1.0	120E01	120E01
3.0		
10.0		
20.0		
30.0	600E00	700E00

C-REF-NO 016            LAT 43-45-00N            YEAR 1966            NO. DEPTHS 08  
 CONS. NO 026            LON 077-59-06W            MONTH 09            SOUNDING 0114  
 COUNTRY 18            DAY 14            BT SLIDE NO 040  
 INSTITUTE 22            TIME 1135

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		18.67	271	9.58	8.450	1.4	0.9	87.5
3.0								
10.0		18.70	272	9.60	8.510	1.2	0.9	90.5
20.0		8.88	278	10.25	8.300	0.7	0.6	91.5
30.0		5.25	279	11.68	8.140	0.6	0.4	91.5
50.0		4.07	279	12.64	8.140	0.4	0.3	91.5
75.0		3.91	279	12.64	8.100	0.6	0.4	91.5
100.0		3.88	281	11.88	8.080	0.6	0.4	91.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	126.5		0.004	0.001	0.010		270E01	150E01
3.0						0.000		
10.0	127.0	25.0	0.004	0.001	0.005		300E00	
20.0	132.0	24.0	0.148	0.002	0.000		600E00	
30.0	127.5	24.0	0.179	0.001	0.005		100E00	
50.0	129.0	24.0	0.185	0.000	0.025		200E00	
75.0	133.5	24.0	0.185	0.000	0.040		000E00	
100.0	130.0	24.0	0.200	0.000	0.055		200E00	000E00

DEPTH SPC 20 SPC 35

1.0	310E01	380E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0	670E01	200E01

C-REF-NO 016            LAT 43-33-15N            YEAR 1966            NO. DEPTHS 09  
 CONS. NO 027            LON 077-59-39W            MONTH 09            SOUNDING 0177  
 COUNTRY 18            DAY 14            BT SLIDE NO 042  
 INSTITUTE 22            TIME 1327

DEPTH	SECCHI	TEMP	CON 18	D D2	PH 25	TURB	BOD	T ALK
1.0		18.98	271	9.36	8.460	0.7	0.8	86.0
3.0								
10.0		19.00	272	9.40	8.470	0.7	0.7	86.0
20.0		18.38	272	9.01	8.350	0.8	0.5	86.0
29.0		4.88	279	12.18	8.080	0.5	0.4	90.0
49.0		4.25	279	12.72	8.120	0.3	0.4	90.0
74.0		3.95	279	12.80	8.140	0.6	0.4	89.0
99.0		3.87	279	12.81	8.140	0.4	0.4	89.0
149.0		3.78	281	12.66	8.120	0.3	0.4	89.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	126.0	25.0	0.007	0.003	0.005		130E01	200E00
3.0						0.000		
10.0	126.5	24.0	0.007	0.003	0.005		200E00	
20.0	127.5	24.0	0.023	0.007	0.010		700E00	
29.0	135.0	24.0	0.201	0.014	0.010		000E00	
49.0	133.5	24.0	0.190	0.000	0.035		100E00	
74.0	132.5	24.0	0.185	0.000	0.035		100E00	
99.0	132.5	24.0	0.180	0.000	0.035		100E00	
149.0	133.0	24.0	0.185	0.000	0.040		200E00	000E00

DEPTH SPC 20 SPC 35

1.0	140E02	430E01
3.0		
10.0		
20.0		
29.0		
49.0		
74.0		
99.0		
149.0	330E01	210E01

C-REF-NO 016 LAT 43-24-21N YEAR 1966 NO. DEPTHS 05  
 CONS. NO 028 LON 078-01-03W MONTH 09 SOUNDING 0053  
 COUNTRY 18 DAY 14 BT SLIDE NO 044  
 INSTITUTE 22 TIME 1530

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		19.00	272	9.16	8.430	0.7	0.8	85.0
3.0								
10.0		13.49	277	8.93	8.090	0.8	0.4	88.0
20.0		5.57	281	10.51	7.960	0.4	0.2	91.0
30.0		4.36	281	11.12	7.990	0.4	0.2	90.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	125.0	25.0			0.010		150E02	000E00
3.0						0.000		
10.0	130.0	25.0	0.140	0.020	0.030		120E02	
20.0	135.0	25.0	0.209	0.001	0.020		600E00	
30.0	135.0	24.0	0.214	0.001	0.030		120E01	100E00

DEPTH	SPC 20	SPC 35
1.0	190E02	190E02
3.0		
10.0		
20.0		
30.0	460E01	270E01

C-REF-NO 016            LAT 43-27-51N            YEAR 1966            NO. DEPTHS 08  
 CONS. NO 029            LON 078-14-57W            MONTH 09            SOUNDING 0139  
 COUNTRY 18            DAY 14            BT SLIDE NO 045  
 INSTITUTE 22            TIME 1702

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.0	19.08	272	9.78	8.1520	0.9	0.7	85.5
3.0								
10.0		18.98	273	9.55	8.440	0.7		85.0
20.0		10.79	280	9.16	7.960	0.3		86.5
30.0		5.27	280	11.55	7.990	0.3		87.5
50.0		4.19	279	12.49	8.070	0.4		88.0
75.0		3.96	279	12.50	8.080	0.2		88.0
100.0		4.06	282	10.64	7.950	0.4		90.0

DEPTH	HARD	CL	N03N02	N02	R PO4	PHEN	MF COL	MF ENT
1.0	126.5	25.0	0.002	0.003	0.010		100E00	700E00
3.0						0.000		
10.0	126.5	25.0	0.002	0.003	0.010		000E00	
20.0	129.5	24.0	0.163	0.002	0.035		400E00	
30.0	133.5	24.0	0.194	0.001	0.025		400E00	
50.0	132.0	24.0	0.184	0.001	0.050		400E00	
75.0	132.5	24.0	0.190	0.000	0.135		200E00	
100.0	136.0	25.0	0.219	0.001	0.065		600E00	000E00

DEPTH	SPC 20	SPC 35
1.0	160E02	540E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0	530E01	340E01

C-REF-NO 016      LAT 43-39-42N      YEAR 1966      NO. DEPTHS 08  
 CONS. NO 030      LON 078-13-54W      MONTH 09      SOUNDING 0155  
 COUNTRY 18      DAY 14      BT SLIDE NO 046  
 INSTITUTE 22      TIME 2043

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.0	18.93	270	9.64	8.430	0.8	0.7	83.5
3.0								
10.0		18.63	271	9.35	8.410	0.8		83.5
20.0		7.45	279	10.75	8.010	0.4		88.0
30.0		5.18	280	12.07	8.070	0.2		88.0
50.0		4.86	282	12.56	8.100	0.2		88.0
75.0		4.12	279	12.55	8.110	0.2		88.0
100.0		4.00	280	12.58	8.080	0.2		88.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	126.5	25.0	0.010	0.005	0.010		100E00	000E00
3.0						0.001		
10.0	126.0	25.0	0.016	0.004	0.015		000E00	
20.0	131.0	25.0	0.159	0.001	0.010		000E00	
30.0	131.5	25.0	0.185	0.000	0.025		000E00	
50.0	132.5	24.0	0.195	0.000	0.045		000E00	
75.0	133.5		0.185	0.000	0.055		000E00	
100.0	132.5		0.190	0.000	0.050		000E00	000E00

DEPTH	SPC 20	SPC 35
1.0	300E01	240E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0	230E01	140E01

C-REF-NO 016      LAT 43-51-45N      YEAR 1966      NO. DEPTHS 05  
 CONS. NO 031      LON 078-12-54W      MONTH 09      SOUNDING 0051  
 COUNTRY 18      DAY 14      BT SLIDE NO 048  
 INSTITUTE 22      TIME 2219

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		18.59	272	10.48	8.600	0.9	0.8	84.5
3.0								
10.0		17.66	273	9.69	8.490	0.9		85.0
20.0		9.62	280	9.44	7.960	0.2		88.0
30.0		7.22	282	10.20	8.020	0.1		86.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	128.0		0.009	0.001	0.010		000E00	000E00
3.0						0.000		
10.0	129.0		0.008	0.002	0.005		000E00	
20.0	135.0		0.159	0.001	0.010		100E00	
30.0	133.0		0.185	0.000	0.020		200E00	000E00

DEPTH SPC 20 SPC 35

1.0	260E01	800E00
3.0		
10.0		
20.0		
30.0	110E01	900E00

C-REF-NO 016 LAT 43-46-18N YEAR 1966 NO. DEPTHS 06  
 CONS. NO 032 LON 078-27-15W MONTH 09 SOUNDING 0075  
 COUNTRY 18 DAY 14 BT SLIDE NO 049  
 INSTITUTE 22 TIME 2348

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0		18.52	271	10.48	8.580	0.5	0.9	83.5
3.0								
10.0		18.19	272	10.19	8.510	0.5		84.0
20.0		13.59	278	10.50	8.240	0.3		86.5
30.0		4.81	278	11.74	8.050	0.1		87.0
50.0		4.07	278	12.10	8.070	0.2		88.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	129.5		0.000	0.001	0.010		000E00	000E00
3.0						0.000		
10.0	129.5		0.000	0.001	0.005		000E00	
20.0	133.0		0.063	0.002	0.005		200E00	
30.0	134.5		0.185	0.000	0.005		000E00	
50.0	135.5		0.200	0.000	0.040		000E00	000E00

DEPTH SPC 20 SPC 35

1.0	360E01	250E01
3.0		
10.0		
20.0		
30.0		
50.0	160E02	160E01

C-REF-NO 016      LAT 43-34-39N      YEAR 1966      NO. DEPTHS 09  
 CONS. NO 033      LON 078-29-00W      MONTH 09      SOUNDING 0174  
 COUNTRY 18      DAY 15      BT SLIDE NO 051  
 INSTITUTE 22      TIME 0137

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		18.99	272	9.99	8.460	0.5	0.8	82.5
3.0								
10.0		18.89	274	9.57	8.420	0.4	0.9	83.0
20.0		8.96	278	10.37	8.020	0.0	0.6	85.5
30.0		4.74	280	12.08	8.070	0.0	0.1	86.5
50.0		4.00	278	12.77	8.100	0.3	0.1	87.0
75.0		3.91	280	12.86	8.090	0.0	0.0	86.5
100.0		3.86	280	12.89	8.100	0.0	0.1	86.5
150.0		3.77	282	12.87	8.090	0.1	0.1	86.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	129.5			0.002	0.003	0.005		100E00
3.0							0.002	100E00
10.0	129.5			0.007	0.003	0.010		000E00
20.0	132.0			0.163	0.002	0.020		100E00
30.0	133.5			0.198	0.007	0.015		400E00
50.0	133.0			0.195	0.000	0.040		100E00
75.0	133.0			0.190	0.000	0.045		000E00
100.0	133.0			0.190	0.000	0.045		000E00
150.0	133.5			0.185	0.000	0.050		000E00

DEPTH SPC 20 SPC 35

1.0	320E01	500E00
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0		
150.0	380E01	140E01

C-REF-NO 016            LAT 43-24-09N            YEAR 1966            NO. DEPTHS 05  
 CONS. NO 034            LON 078-29-33W            MONTH 09            SOUNDING 0052  
 COUNTRY 18            DAY 15            BT SLIDE NO 053  
 INSTITUTE 22            TIME 0334

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		18.08	276	9.97	8.460	0.6		83.5
3.0								
10.0		9.18	281	9.85	8.030	0.7		91.0
20.0		5.66	281	10.54	7.950	0.3		92.0
30.0		4.40	283	11.45	7.990	0.4		92.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	130.0		0.016	0.004	0.005		500E00	000E00
3.0						0.001		
10.0	133.5	24.0	0.185	0.005	0.030		700E00	
20.0	134.5	24.0	0.210	0.000	0.035		800E00	
30.0	134.0	24.0	0.212	0.003	0.025		500E00	100E00

DEPTH SPC 20 SPC 35

DEPTH	SPC 20	SPC 35
1.0	620E01	140E01
3.0		
10.0		
20.0		
30.0	320E01	800E00

C-REF-NO 016  
 CONS. NO 035  
 COUNTRY 18  
 INSTITUTE 22

LAT 43-28-33N  
 LON 078-41-45W

YEAR 1966  
 MONTH 09  
 DAY 15  
 TIME 0513

NO. DEPTHS 08  
 SOUNDING 0155  
 BT SLIDE NO 054

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0		18.47	274	9.88	8.480	1.2		89.0
3.0								
9.0		18.51	277	9.86	8.490	1.3		89.0
18.0		6.03	280	11.76	8.080	0.6		91.5
28.0		5.69	281	11.65	8.050	0.4		91.0
47.0		4.12	280	12.73	8.110	0.2		91.0
70.0		3.93	279	12.84	8.120	0.3		91.5
92.0		3.89	280	12.86	8.120	0.5		91.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	130.5	24.0	0.004	0.001	0.010		000E00	100E00
3.0						0.000		
9.0	130.5	24.0	0.004	0.001	0.010		000E00	
18.0	134.0	24.0	0.178	0.002	0.015			
28.0	133.5	24.0	0.178	0.002	0.035		100E00	
47.0	133.5	24.0	0.189	0.001	0.035		000E00	
70.0	132.5	24.0	0.184	0.001	0.040		200E00	
92.0	133.5	24.0	0.185	0.000	0.035		000E00	170E01

DEPTH SPC 20 SPC 35

1.0	120E02	190E01
3.0		
9.0		
18.0		
28.0		
47.0		
70.0		
92.0	330E01	160E01

C-REF-NO 016 LAT 43-40-45N YEAR 1966 NO. DEPTHS 08  
 CONS. NO 036 LON 078-42-15W MONTH 09 SOUNDING 0115  
 COUNTRY 18 DAY 15 BT SLIDE NO 056  
 INSTITUTE 22 TIME 0803

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		17.93	272	9.68	8.400	1.2	0.4	87.5
3.0								
9.0		17.90	271	9.69	8.410	1.1		87.5
18.0		5.70	279	11.43	8.070	0.7		91.5
28.0		4.45	280	12.27	8.070	0.7		91.5
46.0		3.99	279	12.70	8.080	0.6		91.0
70.0		3.92	281	12.98	8.090	0.8		90.5
93.0		3.81	281	12.27	8.050	0.4		92.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	129.0	24.0	0.000	0.005	0.010		100E00	000E00
3.0						0.000		
9.0	129.0	24.0	0.006	0.004	0.005		100E00	
18.0	133.5	24.0	0.182	0.003	0.020		000E00	
28.0	132.5	24.0	0.189	0.001	0.020		500E00	
46.0	133.0	24.0	0.189	0.001	0.035		100E00	
70.0	132.0	25.0	0.189	0.001	0.035		000E00	
93.0	135.0	25.0	0.200	0.000	0.050		000E00	700E00

DEPTH SPC 20 SPC 35

1.0	660E01	560E01
3.0		
9.0		
18.0		
28.0		
46.0		
70.0		
93.0	130E02	290E01

C-REF-NO 016            LAT 43-50-18N            YEAR 1966            NO. DEPTHS 04  
 CONS. NO 037            LON 078-41-27W            MONTH 09            SOUNDING 0029  
 COUNTRY 18            DAY 15            BT SLIDE NO 058  
 INSTITUTE 22            TIME 0922

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		17.04	276	10.25	8.510	1.5	0.6	88.5
3.0								
10.0		16.73	277	10.22	8.460	1.3		89.0
20.0		11.91	280	9.63	8.130	0.7		91.0

DEPTH	HARD	CL	NO3NO2	NO2	R PO4	PHEN	MF COL	MF ENT
1.0	130.5	25.0	0.004	0.001	0.010		400E00	000E00
3.0						0.000		
10.0	130.5	25.0	0.018	0.002	0.010		600E00	
20.0	133.0	25.0	0.109	0.001	0.005		200E01	

DEPTH SPC 20 SPC 35

DEPTH	SPC 20	SPC 35
1.0	400E01	400E00
3.0		
10.0		
20.0		

C-REF-NO 016                    LAT 43-47-39N                    YEAR 1966                    NO. DEPTHS 05  
 CONS. NO 038                    LON 078-55-57W                    MONTH 09                    SOUNDING 0042  
 COUNTRY 18                    DAY 15                            BT SLIDE NO 059  
 INSTITUTE 22                    TIME 1042

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		16.13	274	10.50	8.480	1.0	0.6	89.0
3.0								
10.0		15.86	277	10.50	8.450	1.0	0.7	89.5
20.0		10.17	279	10.11	8.090	0.8	0.3	90.5
30.0		7.79	282	10.26	8.030	0.7	0.3	92.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	132.0	25.0	0.009	0.001	0.050		000E00	000E00
3.0						0.000	000E00	
10.0	131.0	25.0	0.009	0.001	0.035		000E00	
20.0	134.0	25.0	0.134	0.001	0.030		200E00	
30.0	134.5	25.0	0.174	0.001	0.005		100E00	000E00

DEPTH	SPC 20	SPC 35
1.0	540E01	400E01
3.0		
10.0		
20.0		
30.0	450E01	500E00

C-REF-NO 016      LAT 43-35-03N      YEAR 1966      NO. DEPTHS 08  
 CONS. NO 039      LON 078-57-39W      MONTH 09      SOUNDING 0126  
 COUNTRY 18      DAY 15      BT SLIDE NO 061  
 INSTITUTE 22      TIME 1227

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0		17.28	273	9.80	8.440	1.1	0.7	88.0
3.0								
10.0		17.34	273	9.80	8.450	1.7	0.6	88.0
20.0		7.64	282	10.09	8.000	1.0	0.3	91.5
30.0		4.56	280	11.94	8.030	0.9	0.2	91.0
50.0		4.08	281	12.59	8.070	0.4	0.2	91.0
75.0		3.98	279	12.67	8.090	0.1	0.2	91.0
100.0		3.91	279	11.72	8.110	0.3	0.0	90.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	129.5	25.0	0.008	0.002	0.055		200E00	000E00
3.0						0.000		
10.0	130.0	25.0	0.008	0.002	0.055		100E00	
20.0	133.5	24.0	0.098	0.002	0.035		700E00	
30.0	133.5	25.0	0.194	0.001	0.025		700E00	
50.0	133.5	25.0	0.189	0.001	0.040		000E00	
75.0	133.5	25.0	0.185	0.000	0.050		000E00	
100.0	131.0		0.150	0.005	0.020		000E00	000E00

DEPTH SPC 20 SPC 35

1.0	120E02	760E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0	500E01	120E01

C-REF-NO 016 LAT 43-24-06N YEAR 1966 NO. DEPTHS 07  
 CONS. NO 040 LON 078-58-06W MONTH 09 SOUNDING 0104  
 COUNTRY 18 DAY 15 BT SLIDE NO 063  
 INSTITUTE 22 TIME 1432

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		17.78	276	9.51	8.360	1.0	0.6	88.0
3.0								
10.0		17.75	275	9.51	8.390	0.8	0.5	88.5
20.0		9.47	281	9.34	8.080	0.4		92.0
30.0		4.42	280	12.18	8.060	0.2		91.5
50.0		4.00	280	12.56	8.070	0.2		92.0
75.0		3.89	284	11.08	8.010	0.4		93.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	129.5	25.0	0.016	0.004	0.015		350E01	400E00
3.0						0.000		
10.0	130.5	25.0	0.016	0.004	0.020		490E01	
20.0	134.5	25.0	0.137	0.003	0.040		120E02	
30.0	132.5	25.0	0.195	0.000	0.030		900E00	
50.0	132.0	25.0	0.190	0.000	0.055		180E01	
75.0	135.5	25.0	0.219	0.001	0.065		190E01	600E00

DEPTH	SPC 20	SPC 35
1.0	720E01	600E00
3.0		
10.0		
20.0		
30.0		
50.0		
75.0	180E02	410E01

C-REF-NO 016            LAT 43-18-48N            YEAR 1966            NO. DEPTHS 06  
 CONS. NO 041            LON 079-13-03W            MONTH 09            SOUNDING 0081  
 COUNTRY 18    DAY 15            BT SLIDE NO 064  
 INSTITUTE 22    TIME 1619

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0	3.2	16.84	279	9.56	8.330	0.9		91.0
3.0								
10.0		16.87	278	9.59	8.350	0.9		91.0
20.0		5.81	283	10.63	8.000	0.5		92.5
30.0		4.92	282	11.25	8.000	0.2		93.0
50.0		4.62	282	11.08	7.980	0.2		93.0

DEPTH	HARD	CL	NO3NO2	NO2	R P04	PHEN	MF COL	MF ENT
1.0	131.5	25.0	0.036	0.004	0.040		120E02	100E00
3.0						0.002		
10.0	131.5	25.0	0.041	0.004	0.040		660E01	
20.0	135.0	24.0	0.189	0.001	0.045		140E01	
30.0	135.0	24.0	0.199	0.001	0.055		280E01	
50.0	135.0	25.0	0.204	0.001	0.080		360E01	100E00

DEPTH	SPC 20	SPC 35
1.0	160E02	940E02
3.0		
10.0		
20.0		
30.0		
50.0	610E01	390E01

C-REF-NO 016 LAT 43-30-48N YEAR 1966 NO. DEPTHS 08  
 CONS. NO 042 LON 079-11-42W MONTH 09 SOUNDING 0128  
 COUNTRY 18 DAY 15 BT SLIDE NO 066  
 INSTITUTE 22 TIME 1808

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.0	17.22	276	9.65	8.380	0.8		90.5
3.0								
10.0		17.21	276	9.68	8.410	1.0		90.5
20.0		4.90	280	11.55	7.850	0.5		92.0
30.0		4.25	281	12.23	7.940	0.2		91.5
50.0		3.99	281	12.73	8.000	0.8		92.0
75.0		3.94	279	12.79	8.030	0.3		92.0
100.0		3.87	279	12.73	8.050	0.5		92.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	131.0	26.0	0.012	0.003	0.025		100E00	100E00
3.0						0.004		
10.0	131.5	26.0	0.012	0.003	0.040		000E00	
20.0	133.5	25.0	0.193	0.002	0.040		100E00	
30.0	130.5	25.0	0.198	0.002	0.030		000E00	
50.0	132.0	25.0	0.194	0.001	0.075		100E00	
75.0	132.0	25.0	0.194	0.001	0.065		100E00	
100.0	132.5	25.0	0.189	0.001	0.045		000E00	100E00

DEPTH SPC 20 SPC 35

DEPTH	SPC 20	SPC 35
1.0	600E01	310E01
3.0		
10.0		
20.0		
30.0		
50.0		
75.0		
100.0	170E01	900E00

C-REF-NO 016            LAT 43-41-39N            YEAR 1966            NO. DEPTHS 03  
 CONS. NO 043            LON 079-10-36W            MONTH 09            SOUNDING 0025  
 COUNTRY 18            DAY 15            BT SLIDE NO 068  
 INSTITUTE 22            TIME 1936

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	3.0	16.21	276	10.30	8.420	1.0		90.0
10.0		16.24	276	10.32	8.460	1.2		90.5
20.0		15.24	276	10.46	8.470	1.1		91.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	129.5	26.0	0.008	0.002	0.005		100E00	100E00
10.0	129.0	26.0	0.008	0.002	0.035		000E00	
20.0	130.5	26.0	0.018	0.002	0.005		000E00	

DEPTH	SPC 20	SPC 35
1.0	200E01	370E01
10.0		
20.0		

C-REF-NO 016 LAT 43-36-06N YEAR 1966 NO. DEPTHS 04  
 CONS. NO 044 LON 079-25-06W MONTH 09 SOUNDING 0039  
 COUNTRY 18 DAY 15 BT SLIDE NO 069  
 INSTITUTE 22 TIME 2058

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0		17.16	279	10.20	8.480	1.5		91.0
10.0		17.12	278	10.18	8.480	1.7		91.0
20.0		15.76	277	10.17	8.440	1.6		91.0
30.0		9.86	281	9.86	8.120	0.8		92.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	130.0	27.0	0.008	0.002	0.065			
10.0	131.0	27.0	0.012	0.003	0.070			
20.0	130.5	26.0	0.023	0.002	0.040			
30.0	133.0	26.0	0.123	0.002	0.005			

DEPTH SPC 20 SPC 35

DEPTH	SPC 20	SPC 35
1.0		
10.0		
20.0		
30.0		

C-REF-N0 016 LAT 43-25-09N YEAR 1966 NO. DEPTHS 06  
 CONS. N0 045 LON 079-26-15W MONTH 09 SOUNDING 0105  
 COUNTRY 18 DAY 15 BT SLIDE NO 071  
 INSTITUTE 22 TIME 2231

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		15.71	275	10.07	8.380	1.9		90.0
10.0		15.73	276	10.01	8.390	1.4	1.1	90.5
19.0		4.99	281	11.48	8.100	1.0	0.2	92.0
28.0		4.44	280	12.20	8.060	0.6	0.2	92.0
47.0		4.05	279	12.52	8.050	0.4	0.0	91.5
71.0		3.91	280	12.73	8.080	0.4	0.2	92.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	130.0	26.0	0.022	0.003	0.010		100E00	000E00
10.0	131.0	26.0	0.023	0.002	0.005			
19.0	135.0	26.0	0.197	0.003	0.005		200E00	
28.0		25.0	0.192	0.003	0.005		000E00	
47.0		25.0	0.194	0.001	0.030		400E00	
71.0	131.5	25.0	0.184	0.001	0.040		000E00	000E00

DEPTH SPC 20 SPC 35

1.0	490E01	330E01
10.0		
19.0		
28.0		
47.0		
71.0	600E00	110E02

C-REF-NO 016 LAT 43-19-36N YEAR 1966 NO. DEPTHS 04  
 CONS. NO 046 LON 079-41-12W MONTH 09 SOUNDING 0048  
 COUNTRY 18 DAY 16 BT SLIDE NO 073  
 INSTITUTE 22 TIME 0009

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		15.07	278	10.32	8.340	1.1	0.9	91.5
10.0		15.10	278	10.29	8.380	1.0	0.9	91.5
20.0		14.90	277	10.40	8.390	1.5	1.0	91.5
30.0		12.07	282	9.37	8.130	1.2		92.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	130.5	26.0	0.031	0.004	0.015		400E00	000E00
10.0	131.0	26.0	0.031	0.004	0.020		600E00	
20.0	131.0	26.0	0.036	0.004	0.010		800E00	
30.0	134.0	26.0	0.103	0.007	0.020		380E01	100E00

DEPTH	SPC 20	SPC 35
1.0	200E02	430E01
10.0		
20.0		
30.0	960E01	490E01

C-REF-NO 016 LAT 43-14-09N YEAR 1966 NO. DEPTHS 03  
 CONS. NO 047 LON 079-27-24W MONTH 09 SOUNDING 0027  
 COUNTRY 18 DAY 16 BT SLIDE NO 074  
 INSTITUTE 22 TIME 0139

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		16.90	276	9.65	8.410	1.6	0.6	90.0
10.0		16.94	276	9.68	8.440	1.5		90.5
20.0		14.54	276	9.59	8.440	1.8		90.0

DEPTH	HARD	CL	NO3NO2	NO2	R P04	PHEN	MF COL	MF ENT
1.0	130.5	26.0	0.012	0.003	0.010		400E00	000E00
10.0	130.0	26.0	0.012	0.003	0.010		600E00	
20.0	130.5	26.0	0.017	0.003	0.015		300E00	

DEPTH SPC 20 SPC 35

DEPTH	SPC 20	SPC 35
1.0	440E01	230E01
10.0		
20.0		

C-REF-NC 016      LAT 43-23-51N      YEAR 1966      NO. DEPTHS 06  
 CONS. NO 048      LON 078-58-06W      MONTH 09      SOUNDING 0103  
 COUNTRY 18      DAY 16      BT SLIDE NO 075  
 INSTITUTE 22      TIME 0428

DEPTH	SECCHI	TEMP	CON 18	D O2	PH 25	TURB	BOD	T ALK
1.0		17.38	277	9.57	8.440	0.6		91.5
10.0		17.41	278	9.49	8.440	0.9		92.5
20.0		16.35	280	9.38	8.390	0.9		94.5
30.0		7.66	283	9.66	8.010	0.4		97.0
50.0		4.56	281	11.42	7.990	0.3		96.0
75.0		4.34	283	10.71	7.860	0.6		97.5

DEPTH	HARD	CL	NO3NO2	NO2	R PD4	PHEN	MF COL	MF ENT
1.0	128.5	26.0	0.016	0.004	0.005		800E01	
10.0	130.0	26.0	0.016	0.004	0.010		730E01	
20.0	131.5	26.0	0.040	0.005	0.010		710E02	
30.0	134.0	26.0	0.192	0.003	0.025		370E02	
50.0	133.0	25.0	0.144	0.001	0.025		830E01	
75.0	134.5	25.0	0.239	0.001	0.055		620E01	

DEPTH SPC 20 SPC 35

1.0	200E02	380E02
10.0		
20.0		
30.0		
50.0		
75.0	700E01	920E01

C-REF-NO 016            LAT 43-34-24N            YEAR 1966            NO. DEPTHS 08  
 CONS. NO 049            LON 078-28-30W            MONTH 09            SOUNDING 0174  
 COUNTRY 18            DAY 16            BT SLIDE NO 076  
 INSTITUTE 22            TIME 0721

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	TALK
1.0		17.92	274	9.32	8.320	1.6		92.0
10.0		17.96	274	9.29	8.380	0.8		92.0
20.0		15.80	276	8.86	8.220	0.8		93.5
30.0		4.65	284	12.00	8.060	0.7		96.0
50.0		3.98	286	12.68	8.070	0.8		95.5
75.0		3.95	280	12.67	8.060	0.6		96.0
100.0		3.87	282	12.78	8.080	0.9		96.0
150.0		3.76	283	12.67	8.080	0.7		96.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	127.5	26.0	0.019	0.001	0.005		400E00	
10.0	128.0	26.0	0.017	0.003	0.010		000E00	
20.0	129.0	26.0	0.082	0.003	0.015		000E00	
30.0	132.5	26.0	0.204	0.006	0.015		100E00	
50.0	133.0	26.0	0.200	0.005	0.040		100E00	
75.0	132.0	26.0	0.199	0.001	0.040		000E00	
100.0	133.0	26.0	0.200	0.000	0.040		100E00	
150.0	133.0	26.0	0.200	0.000	0.040		100E00	

DEPTH SPC 20 SPC 35

1.0	760E01	860E01
10.0		
20.0		
30.0		
50.0		
75.0		
100.0		
150.0	360E01	260E02

C-REF-NO 016      LAT 43-25-12N      YEAR 1966      NO. DEPTHS 05  
 CONS. NO 050      LON 078-01-00W      MONTH 09      SOUNDING 0081  
 COUNTRY 18      DAY 16      BT SLIDE NO 077  
 INSTITUTE 22      TIME 0953

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		17.49	274	9.20	8.210	0.8		92.0
10.0		16.88	277	9.35	8.240	0.7		92.5
20.0		6.92	282	10.17	7.910	0.4		97.0
30.0		4.85	281	11.05	7.880	0.3		97.0
50.0		4.14	280	11.59	7.920	0.2		96.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	128.5	26.0	0.024	0.006	0.010		105E02	
10.0	129.5	26.0	0.034	0.006	0.015		340E02	
20.0	134.0	26.0	0.211	0.004	0.035		420E01	
30.0	134.0	26.0	0.228	0.002	0.020		110E01	
50.0	133.5	28.0	0.219	0.001	0.030		400E00	

DEPTH	SPC 20	SPC 35
1.0	120E02	250E02
10.0		
20.0		
30.0		
50.0	200E01	740E01

C-REF-NO 016            LAT 43-24-12N            YEAR 1966            NO. DEPTHS 04  
 CONS. NO 051            LON 078-00-54W            MONTH 09            SOUNDING 0052  
 COUNTRY 18            DAY 16            BT SLIDE NO 078  
 INSTITUTE 22            TIME 1016

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		16.33	278	9.29	8.210	1.0		93.5
10.0		15.68	278	9.50	8.190	0.9		93.5
20.0		6.56	282	10.34	7.920	0.7		97.0
30.0		5.29	281	10.38	7.890	0.8		98.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	129.5	27.0	0.047	0.008	0.015		820E02	
10.0	130.5	26.0	0.068	0.007	0.010		310E02	
20.0	132.5	26.0	0.222	0.003	0.030		240E02	
30.0	135.0	26.0	0.228	0.002	0.035		200E01	

DEPTH	SPC 20	SPC 35
1.0	370E02	780E02
10.0		
20.0		
30.0	300E01	830E01

C-REF-NO 016 LAT 43-23-21N YEAR 1966 NO. DEPTHS 02  
 CONS. NO 052 LON 078-00-45W MONTH 09 SOUNDING 0017  
 COUNTRY 18 DAY 16 BT SLIDE NO. 079  
 INSTITUTE 22 TIME 1039

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0		15.85	277	9.40	8.190	0.7		93.0
10.0		15.81	275	9.43	8.220	1.2		93.0

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	130.0	26.0	0.054	0.006	0.010			350E02
10.0	129.5	27.0	0.059	0.006	0.015			250E02

DEPTH	SPC 20	SPC 35
1.0	460E02	720E02
10.0		

C-REF-NO 016  
 CONS. NO 053  
 COUNTRY 18  
 INSTITUTE 22

LAT 43-31-57N  
 LON 077-31-06W

YEAR 1966  
 MONTH 09  
 DAY 16  
 TIME 1330

NO. DEPTHS 08  
 SOUNDING 0172  
 BT SLIDE NO 080

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	4.0	18.53	271	9.04	8.320	0.8		91.0
9.0		18.55	271	9.03	8.390	0.9		91.0
17.0		18.51	272	9.04	8.410	1.0		93.0
26.0		12.94	276	9.16	8.140	0.8		95.0
43.0		5.21	279	12.13	7.890			95.0
65.0		4.24	279	12.53	7.990	0.3		94.5
87.0		3.93	280	12.70	8.020	0.2		94.5
130.0		3.83	282	12.45	8.010	0.2		94.5

DEPTH	HARD	CL	N03N02	N02	R PO4	PHEN	MF COL	MF ENT
1.0	128.0	27.0	0.006	0.004	0.030		100E00	
9.0	128.0	27.0	0.005	0.005	0.050		100E00	
17.0	128.5	27.0	0.009	0.006	0.045		500E00	
26.0	130.0	26.0	0.106	0.004	0.040		100E00	
43.0	133.0	26.0	0.189	0.001	0.050		000E00	
65.0	133.0	26.0	0.194	0.001	0.070		000E00	
87.0	133.0	26.0	0.199	0.001	0.060		000E00	
130.0	133.0	26.0	0.199	0.001	0.065			

DEPTH SPC 20 SPC 35

1.0  
 9.0  
 17.0  
 26.0  
 43.0  
 65.0  
 87.0  
 130.0

C-REF-NO 016  
 CONS. NO 054  
 COUNTRY 18  
 INSTITUTE 22

LAT 43-30-06N  
 LON 077-02-48W

YEAR 1966  
 MONTH 09  
 DAY 16  
 TIME 1558

NO. DEPTHS 09  
 SOUNDING 0228  
 BT SLIDE NO 081

DEPTH	SECCHI	TEMP	CON 18	D 02	PH 25	TURB	BOD	T ALK
1.0	3.4	18.63	275	9.06	8.300	0.6		89.0
9.0		18.64	275	9.01	8.360	0.5		90.0
17.0		5.49	279	11.82	8.090	0.5		95.5
26.0		4.52	281	12.45	8.060	0.4		95.0
43.0		4.08	282	12.56	8.070	0.4		95.0
65.0		3.92	282	12.59	8.040	0.6		95.0
87.0		3.89	280	12.64	8.050	0.2		94.5
130.0		3.85	280	12.65	8.050	0.2		95.0
173.0		3.76	283	12.05	8.020	0.3		95.5

DEPTH	HARD	CL	N03N02	N02	R P04	PHEN	MF COL	MF ENT
1.0	128.0	26.0	0.000	0.005	0.020		000E00	
9.0	128.0	26.0	0.006	0.004	0.030		000E00	
17.0	133.5	26.0	0.189	0.001	0.030		000E00	
26.0	131.5	27.0	0.199	0.001	0.060		000E00	
43.0	133.0	27.0	0.199	0.001	0.055		000E00	
65.0	133.0	28.0	0.199	0.001	0.045		000E00	
87.0	133.0	28.0	0.199	0.001	0.050		000E00	
130.0	132.0	28.0	0.199	0.001	0.050		200E00	
173.0	134.0	28.0	0.204	0.001	0.060		000E00	

DEPTH SPC 20 SPC 35

1.0  
 9.0  
 17.0  
 26.0  
 43.0  
 65.0  
 87.0  
 130.0  
 173.0