**ATLANTIC COASTAL EXPERIMENT 5:
R/V ADVANCE II CRUISE (MESEX I)
27 APRIL — 2 MAY 1979**

DATA REPORT

K. von Bock, Editor

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ABSTRACT

68 hydrographic stations were arranged as boundary transects, and a proximate calibration matrix, to an array of current meters and fluorometers moored within the coastal boundary layer near southern Long Island. Assessments were made of water-mass characterization, nutrient distribution, chlorophyll variability and phytoplankton composition. Supplemental thermal structure was obtained from expendable bathythermographs.

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INTRODUCTION

MESEX (mesoscale experiment) was designed to quantify physical forcing of chlorophyll biomass-its diel flux across the pycnocline within the mesoscale- by employing closely-spaced (< 20 km), moored sensor arrays to assess the flux of heat, salt, momentum and chlorophyll, and shelf-wide and near-array stationing of the ships ADVANCE II and OCEANUS to provide description of boundary conditions, biomass characterization and estimates of primary productivity. This report presents data acquired from sailing ADVANCE II along four shelf transects and within a dense station plan about the arrays (Figs. 1, 2).

The relevant conditions at the shelf front, as well as the shelf-scale boundaries of the MESEX regime, were measured using standard hydrographic sections. The castings about the arrays (stas. 16-50) included depths chosen to correspond to sensor positionings providing correlative observations for the sensor moorings. The sampling for biomass characterization was intended to determine zooplankton coherence/variation and provide insight into phytoplankton physiology as affected by advective processes in the mesoscale.* Aerial modulation of surface-layer chlorophyll a was estimated by mapping near the arrays and on the central (Shinnecock) and the eastern, or upstream, transects (Fig. 3).

METHODS

Temperature, Salinity, Dissolved Oxygen

Temperatures are averaged values derived from correcting paired, reversing thermometers (Gohla or Watanabe) which were attached to 5 ℓ Niskin

*Division resource constraints have precluded zooplankton analysis as of publication date. The collections are archived at the Laboratory under the aegis of Dr. Sharon Smith.

Figure 1. Station locations, shelf transects

Figure 2. Station locations, MESEX I

bottles. A conductance salinometer (Autosal 8400, Guideline Instruments) was used ashore to determine salinity; its reference circuitry was standardized to correspondent conductivity for standard seawater (IAPSO, Copenhagen or Wormley). Dissolved oxygen was measured by the titrimetric procedures of WINKLER (1888) as modified by CARPENTER (1965). Supplemental thermal structure was obtained from interstation, underway soundings of Sippican Model T-10 XBTs. The manufacturer's specifications for accuracy are:

(1) System

Temperature: $\pm 0.2^{\circ}\text{C}$

Depth: $\pm 2\%$ or 4.6 m, whichever is greater

(2) Probe

Thermal response: 63% of a step change in temperature in 1 m;

95% of a step change in temperature in 3 m.

The traces were later converted to digital values using a Hewlett-Packard 9872 plotter, the values interpolated to 1 m averages, and the traces regenerated using a Hewlett-Packard 9845A computer. Their numbering scheme uses the station identification immediately preceding the sounding plus the letter X.

Chlorophyll

Discrete chlorophyll a concentrations were measured fluorometrically using a Turner Designs Model 10 fluorometer. Glass-fiber filters retaining plankton from 140 ml samples were finely ground in 90% acetone and the fluorescent emission of a clarified extract measured before and after acidification with ~1-2 drops of 1.0 N HCl (LORENZEN, 1966).

Surface in vivo chlorophyll (underway mapping) was determined using a second Turner Designs fluorometer modified for continuous flow measurement.

Sample seawater was received from a dedicated biological delivery system tapped into the ship's seachest, located ~2 m below the waterline. The record was calibrated with an extracted measurement at ~1 h intervals.

The fluorometers were calibrated previously using serial dilutions of a pure chlorophyll a standard derived from laboratory cultures of phytoplankton (PERKINS and ROBERTS, 1962). The concentration of the standard was measured spectrophotometrically using an extinction coefficient of $87.67 \text{ l} \cdot \text{cm}^{-1} \text{ g}^{-1}$ at 664 nm. The dilution (90% acetone) fluorescences were read before (R_o) and after (R_a) acidification (10% HCl) on a least two sensitivity ranges. Calibration factors for all dilutions were computed by:

$$F' = \frac{\mu\text{g chl } \underline{a} \cdot \text{ml}^{-1}}{\frac{\tau}{\tau-1} (R_o - R_a)}$$

where F' is the calibration factor for each dilution and τ is the maximum ratio of R_o/R_a . The mean F' determination was accepted as the calibration factor for all subsequent instrument determinations of chlorophyll a and concomitant phaeophytin, and any significant variation among the serial factors over the selected ranges has been compensated by internal adjustments.

Nutrients

Drawn samples were immediately placed in a shipboard freezer and maintained frozen until subsequent (January 1980) analysis ashore. Nitrate plus nitrite, ammonium, phosphate, and silicate were analyzed colorometrically by automated methods used on a Technicon II AutoAnalyzer, to which modifications had been made to permit the use of small-volume glassware in the manifolds in order to optimize stability and sensitivity. The analytical procedures of MURPHY and RILEY (1962) determined reactive phosphorous and those of ARMSTRONG

Figure 3. Surface-layer chlorophyll a

Figure 4. Chlorophyll as determined from 2 fluorometry sensors
on buoy 6, MESEX I, 24 April to 10 May 1979

et al. (1967) silicate and nitrate. Ammonium was measured by the phenolhypochlorite method of KOROLEFF (1970) as adapted to the AutoAnalyzer by SLAWYK and MACISAAC (1972) and modified by PATTON and CROUCH (1977). Analytical accuracy was determined daily by measuring standard concentrations of relevant analytes which were also included in station sample runs.

Absorbance voltages were recorded on both strip chart recorders and, through 8 Channel ADC interfacing, a computer (Hewlett-Packard 9845S). Computer software regenerated peaks (MACAULAY et al., 1976) to correct for dispersion and provided, in addition to chemical factors calculation, comparative analysis (differential plots) of "manually" read chart and computer processed data. Final editing was by visual examination of absorbance/concentration lists.

Phytoplankton

Two samples of approximately 125 ml were drawn at stations 17-68 from water taken in the surface layer (0 or 4 m) and the estimated chlorophyll maximum or the sensor depth of a neighbor mooring, usually 22-26 m, and preserved with 2-3 ml of Lugol's solution. The laboratory analyses consisted of "settling" 10 ml aliquots in Uttermohl chambers for at least 24 h and examining them with an inverted microscope equipped with phase-contrast illumination. One-half, or the whole chamber, was counted depending upon cell density. Those analyzed represent the domain of spars 2, 4, and 6, and the intervening near-shore waters.

Zooplankton*

Paired, 102 μ nylon nets mounted to coupled 60 cm frames (Bongo) were hauled near-vertically from 100 m to surface, or, in shoaler waters, from

*cf.: Note p. 1.

within a few meters of bottom. Flow volumes were derived from a General Oceanics flowmeter which bridged one of the nets. At all stations (10-58), one net collection was preserved in formalin pending future onshore analysis. For the Shinnecock transect stations, the other was processed for total catch estimates by being sieved (1050, 505, 223, 102 μ) to tared filters which were subsequently dried (60°C) to constant weight and scaled with an analytical balance.

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STATION LOG

Station	Temperature Salinity	Dis- solved Oxygen	Chloro- phyll <u>a</u>	Nutri- ents	Phyto- plankton	Zoo- plankton	Remarks
1	✓	✓	✓	✓			
2	✓	✓	✓	✓			
3	✓	✓	✓	✓			
4	✓	✓	✓	✓			
5	✓	✓	✓	✓			
6	✓	✓	✓	✓			
7	✓	✓	✓	✓			
8	✓	✓	✓	✓			
9	✓	✓	✓	✓			
10	✓		✓	✓		✓	Zooplankton Fractionated
11	✓	✓	✓	✓		✓	Zooplankton Fractionated
12	✓	✓	✓	✓		✓	Zooplankton Fractionated
13	✓	✓	✓	✓		✓	Zooplankton Fractionated
14	✓	✓	✓	✓		✓	Zooplankton Fractionated
15	✓	✓	✓	✓		✓	Zooplankton Fractionated
16	✓	✓	✓	✓		✓	Zooplankton Fractionated
17	✓	✓	✓	✓	✓	✓	Zooplankton Fractionated
18	✓	✓	✓	✓		✓	Begin MESEX Stations
19	✓	✓	✓	✓		✓	
20	✓	✓	✓	✓		✓	
21	✓	✓	✓	✓		✓	
22	✓	✓	✓	✓		✓	
23	✓	✓	✓	✓		✓	
24	✓	✓	✓	✓		✓	
25	✓	✓	✓	✓		✓	
26	✓	✓	✓	✓		✓	
27	✓	✓	✓	✓	✓	✓	
28	✓	✓	✓	✓	✓	✓	
29	✓	✓	✓	✓		✓	
30	✓	✓	✓	✓	✓	✓	
31	✓	✓	✓	✓		✓	
32	✓	✓	✓	✓	✓	✓	
33	✓	✓	✓	✓		✓	
34	✓	✓	✓	✓		✓	
35	✓	✓	✓	✓		✓	
36	✓	✓	✓	✓		✓	
37	✓	✓	✓	✓		✓	
38A	✓					✓	Spar No. 6
38B	✓					✓	Spar No. 6
38C	✓	✓	✓	✓		✓	Spar No. 6
40	✓	✓	✓	✓	✓	✓	
41	✓	✓	✓	✓		✓	
42	✓	✓	✓	✓	✓	✓	
43	✓	✓	✓	✓		✓	
44	✓	✓	✓	✓	✓	✓	
45	✓	✓	✓	✓		✓	

STATION LOG

Station	Temperature Salinity	Dis- solved Oxygen	Chloro- phyll <u>a</u>	Nutri- ents	Phyto- plankton	Zoo- plankton	Remarks
46	✓	✓	✓	✓		✓	
47	✓	✓	✓	✓		✓	
48	✓	✓	✓	✓		✓	
49	✓	✓	✓	✓		✓	End MESEX Stations
50	✓	✓	✓	✓	✓	✓	Zooplankton Fractionated
51	✓	✓	✓	✓		✓	Zooplankton Fractionated
52	✓	✓	✓	✓		✓	Zooplankton Fractionated
53	✓	✓	✓	✓		✓	Zooplankton Fractionated
54	✓	✓	✓	✓		✓	Zooplankton Fractionated
55	✓	✓	✓	✓		✓	Zooplankton Fractionated
56	✓	✓	✓	✓		✓	Zooplankton Fractionated
57	✓	✓	✓	✓		✓	Zooplankton Fractionated
58	✓	✓	✓	✓		✓	Zooplankton Fractionated
59	✓	✓	✓	✓			
60	✓	✓	✓	✓			
61	✓	✓	✓	✓			
62	✓	✓	✓	✓			
63	✓	✓	✓	✓			
64	✓	✓	✓	✓			
65	✓	✓	✓	✓			
66	✓	✓	✓	✓			
67	✓	✓	✓	✓			
68	✓	✓	✓	✓			

HYDROGRAPHY DATA

ATLANTIC COASTAL EXPERIMENT - 5

R/U ADVANCE II HYDROGRAPHY

STATION LIST

23-DEC-82 09:36:17

STA	CAST	MESSENGER TIME	LATITUDE	LONGITUDE	SDE	DEPTHS	PNTR
1	1	04/27/79 16:34:00	40 30.2	-73 23.5	23.	3	1
2	1	04/27/79 18:12:00	40 23.1	-73 14.1	37.	4	4
3	1	04/27/79 19:52:00	40 16.3	-73 4.5	44.	4	8
4	1	04/27/79 21:21:00	40 6.2	-72 55.2	57.	4	12
5	1	04/27/79 22:50:00	40 1.6	-72 45.8	58.	5	16
6	1	04/28/79 00:18:00	39 54.5	-72 37.0	58.	5	21
7	1	04/28/79 01:55:00	39 47.3	-72 26.6	77.	6	26
8	1	04/28/79 03:30:00	39 40.0	-72 17.2	119.	7	32
9	1	04/28/79 05:20:00	39 32.6	-72 8.6	210.	8	39
9	2	04/28/79 06:01:00	39 32.6	-72 8.6	210.	2	47
10	1	04/28/79 08:10:00	39 39.8	-71 50.2	650.	4	49
10	2	04/28/79 08:36:00	39 39.8	-71 50.2	650.	4	53
10	3	04/28/79 08:49:00	39 39.8	-71 50.2	650.	1	57
11	1	04/28/79 10:48:00	39 50.9	-71 56.6	137.	8	58
12	1	04/28/79 12:26:00	40 0.3	-72 2.4	163.	5	66
12	2	04/28/79 12:36:00	40 0.3	-72 2.4	163.	1	71
13	1	04/28/79 14:25:00	40 9.3	-72 7.9	67.	6	72
14	1	04/28/79 15:43:00	40 17.8	-72 13.4	60.	5	78
15	1	04/28/79 17:17:00	40 27.4	-72 18.5	63.	5	83
15	2	04/28/79 17:28:00	40 27.4	-72 18.5	63.	1	88
16	1	04/28/79 18:33:00	40 36.4	-72 23.1	46.	5	89
17	1	04/29/79 06:10:00	40 45.0	-72 33.6	31.	4	94
18	1	04/29/79 08:15:00	40 47.0	-72 29.0	27.	4	98
19	1	04/29/79 09:12:00	40 48.4	-72 24.1	27.	4	102
20	1	04/29/79 09:47:00	40 47.9	-72 18.5	29.	4	106
21	1	04/29/79 10:44:00	40 44.6	-72 17.0	43.	5	110
22	1	04/29/79 11:18:00	40 45.5	-72 22.0	29.	4	115
23	1	04/29/79 12:50:00	40 42.1	-72 20.3	44.	5	119
24	1	04/29/79 13:34:00	40 43.7	-72 27.1	34.	4	124
25	1	04/29/79 14:50:00	40 40.2	-72 28.9	42.	5	128
26	1	04/29/79 15:25:00	40 42.6	-72 30.8	34.	4	133
27	1	04/29/79 16:31:00	40 45.2	-72 33.6	34.	4	137
28	1	04/29/79 17:41:00	40 40.8	-72 34.7	33.	4	141
29	1	04/29/79 18:56:00	40 44.0	-72 38.7	29.	4	145
30	1	04/29/79 19:58:00	40 30.8	-72 40.2	35.	5	149
31	1	04/29/79 20:57:00	40 38.7	-72 35.2	37.	5	154
32	1	04/30/79 06:31:00	40 42.1	-72 30.1	32.	4	159
33	1	04/30/79 08:42:00	40 44.1	-72 33.3	30.	4	163
34	1	04/30/79 10:10:00	40 45.4	-72 28.6	30.	4	167
35	1	04/30/79 11:04:00	40 45.4	-72 22.8	29.	4	171
36	1	04/30/79 11:40:00	40 42.3	-72 21.0	44.	5	175
37	1	04/30/79 12:53:00	40 42.9	-72 26.2	35.	4	180
38A	1	04/30/79 13:32:00	40 40.3	-72 29.2	39.	4	184
38B	1	04/30/79 13:52:00	40 40.3	-72 29.2	39.	4	188
38C	1	04/30/79 14:12:00	40 40.3	-72 29.2	39.	5	192
39	1	04/30/79 15:20:00	40 37.7	-72 33.1	40.	5	197
40	1	04/30/79 16:02:00	40 40.8	-72 34.6	31.	4	202
41	1	04/30/79 17:13:00	40 45.3	-72 33.4	29.	4	206
42	1	04/30/79 18:27:00	40 42.2	-72 37.9	33.	4	210
43	1	04/30/79 19:40:00	40 41.1	-72 43.2	33.	4	214
44	1	04/30/79 20:18:00	40 39.9	-72 40.2	35.	4	218
45	1	04/30/79 21:35:00	40 40.2	-72 45.9	33.	4	222
46	1	04/30/79 22:11:00	40 43.1	-72 42.8	27.	4	226
47	1	04/30/79 23:16:00	40 37.5	-72 45.2	36.	4	230
48	1	05/01/79 00:05:00	40 36.0	-72 39.6	42.	5	234
49	1	05/01/79 01:21:00	40 36.2	-72 30.4	42.	5	239
50	1	05/01/79 02:15:00	40 36.2	-72 22.4	47.	5	244
51	1	05/01/79 03:55:00	40 26.0	-72 17.5	60.	6	249
52	1	05/01/79 05:07:00	40 18.0	-72 12.8	62.	6	255
53	1	05/01/79 06:45:00	40 9.0	-72 7.2	66.	6	261
54	1	05/01/79 08:58:00	39 59.9	-72 1.7	82.	6	267
55	1	05/01/79 09:30:00	39 53.5	-71 57.9	108.	7	273
56	1	05/01/79 10:34:00	39 50.4	-71 56.1	138.	8	280
57	1	05/01/79 12:06:00	39 46.1	-71 52.5	183.	8	288
57	2	05/01/79 12:35:00	39 46.1	-71 52.5	183.	1	296
58	1	05/01/79 13:29:00	39 42.2	-71 50.4	397.	8	297
59	1	05/01/79 17:18:00	39 57.2	-71 13.5	390.	8	306
60	1	05/01/79 18:31:00	40 4.6	-71 17.5	128.	8	313
61	1	05/01/79 19:48:00	40 11.3	-71 20.8	95.	7	321
62	1	05/01/79 21:00:00	40 20.4	-71 25.6	82.	6	328
63	1	05/01/79 22:17:00	40 30.1	-71 29.6	77.	6	334
64	1	05/01/79 23:29:00	40 39.0	-71 34.7	73.	6	340
65	1	05/02/79 01:02:00	40 48.6	-71 39.9	63.	6	346
66	1	05/02/79 02:15:00	40 55.9	-71 43.2	58.	5	352
67	1	05/02/79 03:28:00	41 5.2	-71 42.5	58.	5	357
68	1	05/02/79 04:20:00	41 10.6	-71 41.4	47.	5	362

TABLE OF UNITS

STATION	CAST	MAX DEPTH OF CAST M	DATE	MESSENGER TIME EST/EDT	LATITUDE DEG N	LONGITUDE DEG W	SONIC DEPTH METERS
	AIR TEMP DRY C	AIR TEMP WET C	BAROMETRIC PRESSURE MBS (TRUNC)	WIND DIRECTION WMO CODE	WIND SPEED METERS/SEC	SECCHI DISK M	
DEPTH M	ACCEPTED DEPTH M	TEMPERATURE C	SALINITY PARTS/1000	SIGMA-T	OXYGEN ML/L	FLOUROMETRIC CHLOROPHYLL UG/L	FLUOROMETRIC PHAEOPHYTIN UG/L
DEPTH M	ACCEPTED DEPTH M	PHOSPHATE UG-AT/L	SILICATE UG-AT/L	NITRATE UG-AT/L	NITRITE UG-AT/L	AMMONIA UG-AT/L	

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
1	1	17	27 APR 79	16:34:00	40 30.2 N	73 23.5 W	23
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.7	11.1	4.0	16	13	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.52	31.399	24.540		1.71	1.53
10	10	7.48	31.406	24.551		1.78	1.00
17	17	6.43	31.563	24.811	6.78	2.32	2.92

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.58	3.03	0.83	0.12	0.47
10	10	0.47	2.53	0.52	0.08	2.97
17	17	0.69	2.99	0.78	0.10	4.18

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
2	1	30	27 APR 79	18:12:00	40 23.1 N	73 14.1 W	37
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.1	10.0	5.0	20	10	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	6.65	31.712	24.901		0.75	0.40
10	9	6.42	31.990	25.149		0.58	0.37
20	19	5.30	-	-		-	-
30	28	5.29	32.327	25.549	6.81	3.83	1.49

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.38	1.98	0.22	0.07	1.46
10	9	0.39	4.24	0.58	0.05	1.44
20	19	-	-	-	-	-
30	28	0.58	1.98	0.65	0.08	2.18

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
3	1	35	27 APR 79	19:52:00	40 16.3 N	73 4.5 W	44
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	9.4	9.4	6.0	20	11	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.21	31.955	25.018		0.64	0.34
10	10	7.10	31.956	25.033		0.68	0.35
20	19	5.28	32.521	25.703	7.26	0.48	0.19
35	34	4.74	32.840	26.016	6.45	4.90	0.48

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.47	2.17	0.31	0.07	1.54
10	10	0.41	1.87	0.27	0.06	1.68
20	19	0.45	2.87	0.73	0.08	3.11
35	34	0.77	3.33	2.41	0.10	3.21

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
4	1	40	27 APR 79	21:21:00	40 6.2 N	72 55.2 W	57
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.0	8.9	8.0	21	9	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.36	32.543	25.459	6.88	1.25	0.78
10	10	7.25	32.552	25.482		1.86	0.59
20	20	5.12	32.698	25.862	6.88	7.93	0.50
40	40	4.78	32.986	26.127	6.29	6.06	0.09

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.32	1.75	0.46	0.07	1.46
10	10	0.38	1.30	0.38	0.06	1.25
20	20	0.54	1.15	0.56	0.06	4.27
40	40	0.71	3.74	3.58	0.10	3.02

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
5	1	50	27 APR 79	22:50:00	40 1.6 N	72 45.8 W	58
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	8.9	8.3	8.0	21	7	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.52	32.983	25.782		1.48	0.55
10	10	7.52	32.985	25.783		0.86	0.43
20	20	6.26	32.921	25.902		1.85	0.28
35	35	5.33	33.042	26.109	7.26	0.83	0.18
50	50	5.21	33.096	26.167	6.64	0.40	0.88

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.77	0.88	0.79	0.11	2.03
10	10	0.66	1.14	0.68	0.09	2.14
20	20	0.64	0.77	0.40	0.06	1.95
35	35	0.62	0.60	0.96	0.09	2.67
50	50	0.39	2.06	2.64	0.10	2.88

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
6	1	50	28 APR 79	00:18:00	39 54.5 N	72 37.0 W	58
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	8.9	7.8	10.0	22	9	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHEOPHYTIN
0	0	6.89	32.952	25.844		1.51	0.34
10	10	6.86	32.949	25.846		2.08	0.33
20	20	4.41	32.833	26.046		0.84	0.12
35	35	4.19	32.992	26.194	7.30	0.70	0.10
50	50	4.91	33.141	26.235	6.59	4.39	0.90

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.22	2.67	1.43	0.09	1.76
10	10	0.30	2.73	1.49	0.09	1.33
20	20	0.36	3.47	1.49	0.08	2.21
35	35	0.41	3.54	2.51	0.10	2.82
50	50	0.67	3.07	4.39	0.11	3.86

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
7	1	65	28 APR 79	01:55:00	39 47.3 N	72 26.6 W	77
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	8.9	7.6	11.0	27	3	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	6.97	32.932	25.817		2.70	0.66
10	10	6.96	32.932	25.819		3.00	0.57
20	20	6.43	33.068	25.996		5.52	0.05
35	35	5.56	33.253	26.249		1.97	0.22
50	50	5.88	33.384	26.313	6.78	1.33	0.58
65	65	6.63	33.824	26.565	6.27	1.18	0.30

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.34	2.28	1.17	0.10	1.88
10	10	0.35	2.37	1.17	0.09	2.20
20	20	0.35	1.52	0.28	0.08	2.11
35	35	0.28	1.49	0.21	0.10	1.76
50	50	0.52	2.37	3.70	0.16	3.01
65	65	1.04	9.21	8.70	0.15	7.08

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
8	1	100	28 APR 79	03:30:00	39 40.0 N	72 17.2 W	119
		AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK
		10.0	8.9	11.0	29	9	-

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.63	33.059	25.825		5.30	0.23
10	10	7.62	33.074	25.840		6.23	0.14
20	20	6.07	33.304	26.227		6.86	1.20
35	35	7.16	33.919	26.567		1.93	0.72
50	50	8.23	35.304	27.498		0.84	0.40
70	70	9.57	35.220	27.216	4.48	0.32	0.32
100	100	11.46	35.282	26.929	6.70	0.43	0.22

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	-	-	-	-	-
10	10	0.32	1.81	5.50	0.08	4.10
20	20	-	-	-	-	-
35	35	0.51	2.95	10.23	0.21	7.30
50	50	0.52	6.77	8.10	0.06	2.99
70	70	0.44	8.11	9.37	0.04	2.91
100	100	0.76	9.06	25.73	0.13	3.16

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
9	1	105	28 APR 79	05:20:00	39 32.6 N	72 8.6 W	210
9	2	185	28 APR 79	06:01:00	39 32.6 N	72 8.6 W	210

AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK
10.0	9.4	12.0	30	6	-
10.0	9.4	12.0	30	6	-

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	11.96	34.674	26.362		4.41	0.13
10	10	14.72	35.733	26.616		4.34	0.42
20	20	14.84	35.825	26.661		3.95	0.36
35	35	14.31	35.820	26.771		0.87	0.42
50	50	13.50	35.686	26.840		0.55	0.36
70	70	13.48	35.737	26.884		0.14	0.22
100	100	-	35.627	-	4.92	0.09	0.13
105	105	12.79	35.620	26.933	4.88	0.09	0.09
135	132	11.74	35.405	26.972		-	-
185	181	11.77	35.435	26.989		-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.21	7.66	1.63	0.15	2.09
10	10	-	-	-	-	-
20	20	0.26	6.22	3.40	0.30	2.36
35	35	0.40	7.48	5.20	0.47	1.94
50	50	0.48	8.00	6.94	0.46	1.66
70	70	0.48	7.58	7.42	0.28	1.36
100	100	0.71	8.25	11.59	0.06	1.30
105	105	0.60	8.65	11.58	0.06	1.76
135	132	0.87	7.89	13.66	0.07	1.36
185	181	0.89	8.68	15.03	0.09	1.48

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
10	1	35	28 APR 79	08:10:00	39 39.8 N	71 50.2 W	650
10	2	200	28 APR 79	08:36:00	39 39.8 N	71 50.2 W	650
10	3	120	28 APR 79	08:49:00	39 39.8 N	71 50.2 W	650

AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK
13.3	12.2	12.5	07	2	-
13.3	12.2	12.5	07	2	-
13.3	12.2	12.5	07	2	-

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	14.47	35.614	26.578		6.53	0.25
10	10	14.44	35.630	26.597		6.13	0.50
20	20	14.47	35.822	26.739		4.22	0.07
35	35	14.72	35.948	26.782		0.53	0.34
50	50	14.67	35.941	26.787		0.40	0.31
80	80	14.00	35.815	26.834		0.21	0.22
120	120	14.70	35.937	26.777		1.34	0.66
150	150	12.83	35.624	26.927		-	-
200	200	12.21	35.718	27.124		-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.26	2.86	2.24	0.20	1.84
10	10	0.19	3.40	2.20	0.19	1.65
20	20	0.32	4.18	3.64	0.32	2.10
35	35	0.41	4.78	5.52	0.60	1.50
50	50	0.49	5.04	6.28	0.76	1.85
80	80	0.45	4.79	6.66	0.58	1.31
120	120	0.38	4.32	4.74	0.42	2.08
150	150	0.77	5.72	11.31	0.07	1.53
200	200	0.78	17.38	13.45	0.05	1.76

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
11	1	130	28 APR 79	10:48:00	39 50.9 N	71 56.6 W	137
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	13.3	12.8	14.0	07	2	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.52	33.267	25.857		-	-
10	10	8.30	33.302	25.918		5.86	1.06
20	20	8.18	33.806	26.332	7.17	3.97	0.11
35	34	10.07	34.590	26.640	6.07	0.76	0.56
50	49	9.37	-	-	5.70	0.33	0.30
70	68	10.75	34.540	26.483	5.12	0.28	0.24
100	98	11.48	35.279	26.923	4.64	0.26	0.28
130	127	11.48	35.279	26.922	4.64	0.32	0.28

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.33	3.11	0.35	0.06	1.47
10	10	0.41	2.23	0.29	0.08	1.71
20	20	0.48	2.68	2.89	0.15	2.49
35	34	0.60	3.32	5.86	0.31	2.45
50	49	0.74	5.32	8.53	0.34	2.84
70	68	0.82	5.75	11.28	0.19	1.56
100	98	0.87	7.08	13.47	0.12	1.57
130	127	0.95	7.70	14.32	0.13	1.45

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH		MESSENGER		LATITUDE	LONGITUDE	SONIC DEPTH
		OF CAST	DATE	TIME				
12	1	70	28 APR 79	12:26:00		40 0.3 N	72 2.4 W	163
12	2	70	28 APR 79	12:36:00		40 0.3 N	72 2.4 W	163
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	AIR TEMP	AIR TEMP	BAROMETRIC	WIND	WIND	SECCHI		
	DRY	WET	PRESSURE	DIRECTION	SPEED	DISK		
	12.8	12.2	10.0	04	2	-		
	12.8	12.2	10.0	04	2	-		

DEPTH	ACCEPTED		SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC	FLUOROMETRIC
	DEPTH	TEMPERATURE				CHLOROPHYLL	PHAEOPHYTIN
0	0	6.99	32.717	25.646		0.81	0.38
10	9	5.86	32.783	25.843		2.34	0.51
20	19	4.61	32.955	26.121		3.68	0.05
35	33	5.75	33.272	26.240	7.02	4.07	0.58
50	47	5.62	33.345	26.315	6.99	0.82	0.33
70	70	6.11	33.604	26.459	5.73	1.98	0.22

DEPTH	ACCEPTED		SILICATE	NITRATE	NITRITE	AMMONIA
	DEPTH	PHOSPHATE				
0	0	0.42	2.87	0.94	0.07	1.96
10	9	0.33	2.72	0.65	0.07	1.87
20	19	0.41	2.42	2.01	0.10	2.80
35	33	0.56	2.36	3.21	0.15	2.11
50	47	0.44	2.71	3.37	0.17	3.27
70	70	0.93	8.42	7.52	0.15	5.47

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
13	1	60	28 APR 79	14:25:00	40 9.3 N	72 7.9 W	67
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.1	10.6	16.0	05	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.00	33.093	25.799		5.55	0.32
10	10	7.53	33.084	25.860		7.08	0.73
20	20	6.32	33.055	26.000		4.67	0.22
35	34	4.74	33.058	26.188	7.26	0.58	0.20
45	44	4.79	33.123	26.234	7.15	0.47	0.10
60	59	5.35	33.383	26.377	6.04	1.99	0.24

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.26	2.08	0.20	0.07	2.05
10	10	-	-	-	-	-
20	20	0.36	2.31	0.53	0.08	2.10
35	34	0.56	4.18	3.75	0.12	3.64
45	44	0.57	3.00	3.95	0.13	3.04
60	59	0.92	7.53	6.40	0.14	5.40

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
14	1	55	28 APR 79	15:43:00	40 17.8 N	72 13.4 W	60
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.6	10.0	15.0	05	3	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.13	32.591	25.528		1.63	0.91
10	10	6.04	32.640	25.707		1.40	0.34
20	20	4.28	32.780	26.017		1.64	0.18
35	34	4.39	32.882	26.086	7.63	0.48	0.08
55	54	4.42	33.037	26.206	6.85	3.46	0.53

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.42	3.10	0.45	0.06	1.52
10	10	0.30	-	-	0.08	-
20	20	0.48	2.72	0.96	0.07	2.03
35	34	0.52	-	3.87	0.09	3.01
55	54	0.82	5.31	3.87	0.10	3.69

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
15	1	45	28 APR 79	17:17:00	40 27.4 N	72 18.5 W	63
15	2	53	28 APR 79	17:28:00	40 27.4 N	72 18.5 W	63
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	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.6	10.0	10.0	09	5	-	
	10.6	10.0	10.0	09	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.83	31.953	24.784		1.37	0.59
10	9	7.76	31.926	24.920		1.34	0.44
20	19	5.01	32.526	25.738		0.42	0.11
35	32	4.75	32.927	26.084	6.69	7.11	0.19
45	42	4.92	33.000	26.123	6.13	3.27	0.27
53	53	4.96	33.016	26.131	6.73	2.92	0.58

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.41	2.89	0.11	0.06	1.50
10	9	0.40	2.79	0.10	0.04	1.41
20	19	0.34	-	4.67	0.09	4.58
35	32	0.74	3.30	2.24	0.09	3.22
45	42	0.72	2.76	2.44	0.10	2.88
53	53	0.73	3.05	2.58	0.10	2.79

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
16	1	44	28 APR 79	18:33:00	40 36.4 N	72 23.1 W	46
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.6	10.0	11.5	09	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.51	31.179	24.370		1.69	0.45
6	6	6.53	31.243	24.547		1.86	0.38
16	16	5.54	31.754	25.068		2.10	0.33
28	28	4.65	32.443	25.712	7.24	2.77	0.57
40	40	4.61	32.801	25.999	6.29	4.75	1.35

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.33	2.87	0.03	0.04	1.32
6	6	0.37	2.94	0.04	0.04	1.60
16	16	0.42	3.14	0.03	0.05	1.94
28	28	0.55	1.97	0.91	0.07	2.11
40	40	0.52	1.82	1.79	0.07	2.32

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
17	1	25	29 APR 79	06:10:00	40 45.0 N	72 33.6 W	31
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	-	-	11.5	27	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.73	30.585	23.732		1.69	0.56
8	8	6.52	31.050	24.397	7.46	0.79	0.24
16	16	6.69	31.278	24.554	7.32	0.82	0.12
25	25	5.18	31.475	24.889	0.72	1.76	1.25

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.55	4.40	0.38	0.09	1.92
8	8	0.40	3.85	0.22	0.05	1.75
16	16	0.38	3.50	0.18	0.05	1.80
25	25	0.44	3.61	0.35	0.07	2.24

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
18	1	25	29 APR 79	08:15:00	40 47.0 N	77 29.0 W	27
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.1	10.6	13.0	34	7	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	7.21	30.767	24.086		0.88	0.26
8	8	6.77	30.822	24.187	7.07	0.73	0.18
16	16	6.30	31.022	24.402	7.33	0.98	0.42
25	25	5.81	31.206	24.605	7.18	2.90	3.94

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.36	4.67	0.33	0.04	1.64
8	8	0.38	4.04	0.16	0.05	1.70
16	16	0.43	4.96	0.33	0.05	1.86
25	25	0.51	3.75	0.36	0.06	1.82

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
19	1	22	29 APR 79	09:12:00	40 48.4 N	72 24.1 W	27
		AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK
		11.1	10.6	13.0	33	9	12

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	6.91	30.579	23.978		0.63	0.24
8	8	6.51	30.647	24.081	7.56	0.71	0.20
16	16	6.07	30.801	24.255	7.50	1.15	0.33
22	22	6.09	31.071	24.465	7.32	0.91	0.68

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.31	4.25	0.11	0.04	1.42
8	8	0.40	4.50	0.08	0.05	1.56
16	16	0.18	4.28	0.12	0.05	1.77
22	22	0.45	4.10	0.26	0.06	2.09

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
20	1	24	29 APR 79	09:47:00	40 47.9 N	72 18.5 W	29
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	12.2	11.1	13.0	34	9	13	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	7.56	30.570	23.885		-	-
8	8	6.71	30.751	24.138		0.91	0.25
16	16	6.24	31.096	24.467	7.27	0.86	0.18
24	24	4.87	32.069	25.393	6.79	1.31	0.41

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.37	4.64	0.17	0.04	1.63
8	8	0.43	4.68	0.18	0.05	1.77
16	16	0.49	3.84	0.47	0.06	1.94
24	24	0.59	4.16	1.38	0.09	2.80

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
21	1	36	29 APR 79	10:44:00	40 44.6 N	72 17.0 W	43
		AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK
		16.7	13.9	13.0	34	9	14

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.02	31.122	24.254		0.91	0.20
8	8	7.16	31.288	24.502		0.69	0.20
16	16	5.18	31.763	25.117	7.27	1.18	0.23
24	24	4.67	32.559	25.801	7.25	0.61	0.20
36	36	4.57	32.762	25.972	6.44	1.45	0.78

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.41	3.54	0.29	0.05	1.59
8	8	0.43	2.94	0.21	0.05	1.72
16	16	0.43	3.12	0.65	0.07	2.28
24	24	0.44	2.83	1.20	0.09	2.24
36	36	0.72	4.36	2.68	0.11	3.70

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
22	1	29	29 APR 79	11:18:00	40 45.5 N	72 22.0 W	29
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	15.6	14.4	14.0	34	6	14	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	7.48	30.628	23.942		0.90	0.19
12	12	6.59	31.012	24.358		1.06	0.28
20	20	5.01	31.817	25.178	7.36	2.62	0.22
28	28	4.70	32.450	25.712	6.57	1.98	0.75

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.37	4.14	0.25	0.05	1.76
12	12	0.45	3.94	0.32	0.05	2.05
20	20	0.45	3.03	0.78	0.05	2.18
28	28	0.65	4.24	2.09	0.10	3.40

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
23	1	32	29 APR 79	12:50:00	40 42.1 N	72 20.3 W	44
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	15.6	14.4	14.0	33	9	17	

DEPTH	ACCEPTED	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
	DEPTH						
4	4	8.32	31.155	24.236		0.61	0.12
8	8	7.32	31.497	24.644		0.58	0.13
16	16	5.88	32.286	25.448	7.55	0.82	0.20
24	24	4.79	32.694	25.895	7.66	0.96	0.21
32	32	4.59	32.859	26.047	5.83	1.91	1.05

DEPTH	ACCEPTED	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
	DEPTH					
4	4	0.34	4.38	0.29	0.04	1.89
8	8	0.43	3.08	0.09	0.04	1.85
16	16	0.43	2.15	0.13	0.04	1.71
24	24	0.43	2.30	0.78	0.06	1.98
32	32	0.90	5.84	4.01	0.15	5.52

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
24	1	26	29 APR 79	13:34:00	40 43.7 N	72 27.1 W	34
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.4	13.9	14.0	33	5	19	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.38	30.675	23.852		0.64	0.16
8	8	7.38	31.216	24.416		0.72	0.14
16	16	6.54	31.725	24.926	6.31	0.92	0.17
26	26	4.66	32.401	25.677	7.38	3.01	0.86

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.39	3.88	0.15	0.04	1.69
8	8	0.36	3.15	0.11	0.04	1.80
16	16	0.44	2.38	0.09	0.04	2.34
26	26	0.67	4.09	2.26	0.11	3.42

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
25	1	32	29 APR 79	14:50:00	40 40.2 N	72 28.9 W	42
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	17.8	14.4	14.0	33	5	22	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	9.35	31.082	24.025		0.76	0.10
8	8	8.40	31.119	24.196		0.56	0.12
16	16	5.27	32.128	25.394	6.41	2.02	0.23
24	24	4.80	32.290	25.574	6.95	3.82	0.28
32	32	4.65	32.599	25.835	6.90	3.37	1.71

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.65	3.94	0.28	0.08	0.36
8	8	0.39	3.60	0.16	0.04	3.65
16	16	0.46	2.78	0.70	0.06	2.78
24	24	0.57	2.96	1.48	0.08	2.92
32	32	0.79	4.71	2.63	0.11	4.57

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
26	1	26	29 APR 79	15:25:00	40 42.6 N	72 30.8 W	34
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	20.6	18.3	14.0	24	9	23	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.39	30.863	23.999		1.06	0.17
8	8	7.44	31.299	24.473		0.65	0.15
16	16	5.50	31.694	25.026	7.29	0.78	0.17
26	26	5.11	31.976	25.292	7.44	1.59	0.70

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.38	3.81	0.21	0.03	2.29
8	8	0.36	3.11	0.16	0.03	2.09
16	16	0.37	2.74	0.29	0.04	2.57
26	26	0.56	3.41	0.74	0.06	2.60

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
27	1	26	29 APR 79	16:31:00	40 45.2 N	72 33.6 W	34
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.1	-	14.0	24	9	13	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
2	2	9.19	30.948	23.945		0.82	0.11
6	6	8.08	31.033	24.175		0.75	0.15
14	14	6.29	31.116	24.477	7.37	1.21	0.20
24	24	5.34	31.187	24.644	7.20	1.26	1.43

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
2	2	0.38	3.61	0.25	0.04	2.19
6	6	0.38	3.52	0.22	0.03	2.08
14	14	0.40	3.70	0.30	0.05	2.22
24	24	0.43	3.90	0.37	0.05	2.49

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
28	1	26	29 APR 79	17:41:00	40 40.8 N	72 34.7 W	33
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	15.6	15.0	14.0	24	6	16	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	9.11	31.130	24.100		0.62	0.10
8	8	8.05	31.160	24.279		0.39	0.12
16	16	6.98	31.385	24.602	7.28	0.14	0.02
26	26	4.87	31.873	25.237	6.92	0.88	0.54

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.35	3.43	0.23	0.02	1.77
8	8	0.21	3.07	0.19	0.01	1.29
16	16	0.33	3.17	0.21	0.02	1.95
26	26	0.41	3.19	0.55	0.06	2.28

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
29	1	22	29 APR 79	18:56:00	40 44.0 N	72 38.7 W	29
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.1	-	13.5	25	8	25	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	9.73	30.555	23.555		1.57	0.42
8	8	8.06	30.675	23.897		1.01	0.45
16	16	6.71	31.150	24.452	7.33	0.37	0.11
22	22	5.10	31.403	24.841	7.19	0.90	0.82

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.44	4.08	0.25	0.03	1.76
8	8	0.43	4.34	0.37	0.04	2.65
16	16	0.39	3.64	0.27	0.04	2.14
22	22	0.39	3.15	0.27	0.04	2.27

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
30	1	30	29 APR 79	19:58:00	40 39.8 N	72 40.2 W	35
		AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK
		-	-	13.5	24	6	-

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	9.46	30.605	23.635		1.45	0.32
8	8	7.89	30.677	23.924		0.78	0.18
16	16	5.80	31.503	24.841	7.59	0.59	0.12
22	22	4.80	31.903	25.268	3.74	3.47	0.67
30	30	4.74	32.052	25.392	7.01	4.40	0.83

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.33	3.60	0.20	0.03	1.70
8	8	0.33	3.92	0.17	0.02	1.94
16	16	0.33	2.67	0.16	0.04	1.82
22	22	0.58	3.36	0.57	0.05	2.21
30	30	0.57	3.25	1.00	0.06	2.51

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
31	1	31	29 APR 79	20:57:00	40 38.7 N	72 35.2 W	37
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.6	10.0	14.0	25	9	-	

ACCEPTED					FLOUROMETRIC		FLUOROMETRIC	
DEPTH	DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	CHLOROPHYLL	PHAEOPHYTIN	
4	4	8.48	31.124	24.189		1.02	0.20	
8	8	8.39	31.158	24.229		1.05	0.18	
16	16	5.41	31.707	25.047	7.67	0.60	0.19	
24	24	5.21	32.118	25.393	7.54	0.82	0.26	
31	31	4.70	32.582	25.816	5.33	4.71	0.91	

DEPTH	ACCEPTED	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
	DEPTH					
4	4	0.38	3.77	0.19	0.02	1.85
8	8	0.45	3.81	0.30	0.04	1.93
16	16	0.47	2.70	0.20	0.04	1.85
24	24	0.70	2.46	0.45	0.08	2.03
31	31	2.04	3.23	2.49	0.13	3.71

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
32	1	24	30 APR 79	05:31:00	40 42.1 N	72 38.1 W	32
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	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.6	10.0	15.5	33	8	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.79	30.634	23.760		0.85	0.28
8	8	8.29	30.939	24.072		0.84	0.26
16	16	5.88	31.399	24.749	7.49	0.82	0.20
24	24	4.92	31.804	25.178	7.13	2.19	1.25

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.66	3.99	0.30	0.06	2.21
8	8	0.41	3.45	0.15	0.04	1.98
16	16	0.38	3.16	0.35	0.05	2.19
24	24	0.46	3.02	0.49	0.07	2.14

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
33	1	24	30 APR 79	06:48:00	40 44.1 N	72 33.3 W	30
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	9.4	8.3	16.0	32	8	18	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	7.77	30.588	23.870		0.48	0.17
8	8	7.55	30.601	23.911		0.48	0.14
16	16	5.75	31.262	24.856	7.37	1.01	0.48
24	24	5.08	31.636	25.026	7.20	1.82	0.75

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.60	5.17	0.43	0.07	1.43
8	8	0.33	4.07	0.21	0.03	1.87
16	16	0.48	3.63	0.30	0.06	2.43
24	24	0.57	3.78	0.51	0.08	2.72

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
34	1	24	30 APR 79	10:10:00	40 45.4 N	72 28.6 W	30
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	14.4	13.3	16.0	0	0	9	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHEOPHYTIN
4	4	7.50	30.617	23.930		0.61	0.16
8	8	6.82	30.738	24.114		0.52	0.15
16	16	6.49	31.202	24.520	7.31	1.01	0.23
24	24	5.10	32.063	25.363	7.07	1.65	0.56

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.41	4.95	0.20	0.04	1.91
8	8	0.43	4.93	0.32	0.05	2.35
16	16	0.43	3.42	0.42	0.05	2.12
24	24	0.57	3.73	1.02	0.08	2.86

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
35	1	24	30 APR 79	11:04:00	40 45.4 N	72 22.8 W	29
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	13.3	12.8	16.0	27	1	15	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.21	30.587	23.808		0.43	0.12
8	8	7.22	30.722	24.051		0.54	0.14
16	16	6.00	31.743	25.006	7.27	0.75	0.17
24	24	4.59	32.482	25.749	7.03	1.83	0.69

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.38	-	2.94	0.04	2.07
8	8	0.41	4.65	0.23	0.04	2.16
16	16	0.46	2.75	0.41	0.06	2.35
24	24	0.55	3.75	1.73	0.08	2.94

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
36	1	36	30 APR 79	11:40:00	40 42.3 N	72 21.0 W	44
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	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	15.6	14.4	16.0	22	3	15	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.14	30.991	24.134		0.82	0.13
8	8	6.45	31.403	24.683		0.60	0.13
16	16	5.20	32.246	25.495	7.62	0.83	0.25
24	24	4.72	32.596	25.825	7.54	1.80	0.34
36	36	4.60	32.821	26.016	6.89	2.52	0.77

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.43	3.91	0.37	0.04	2.24
8	8	0.39	3.02	0.26	0.03	1.97
16	16	0.40	3.20	0.48	0.03	2.34
24	24	0.46	2.42	0.72	0.04	2.29
36	36	0.64	4.31	2.89	0.10	4.53

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
37	1	26	30 APR 79	12:53:00	40 42.9 N	72 26.2 W	35
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	16.7	14.4	16.0	20	4	18	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHEOPHYTIN
4	4	8.14	30.669	23.882		0.43	0.09
8	8	7.76	30.711	23.968		0.84	0.14
16	16	5.99	31.682	24.958	7.45	1.01	0.19
26	26	4.71	32.395	25.667	7.15	2.77	0.49

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.41	4.76	0.26	0.03	2.35
8	8	0.40	4.27	0.23	0.04	2.52
16	16	0.44	2.49	0.22	0.04	2.51
26	26	0.54	2.87	1.04	0.07	2.26

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
38A	1	36	30 APR 79	13:32:00	40 40.3 N	72 29.2 W	39
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	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	13.9	12.8	16.0	20	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.04	30.849	24.037		-	-
8	8	7.18	31.321	24.524		-	-
16	16	6.13	32.249	25.388		-	-
36	36	4.59	32.699	25.920		-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	-	-	-	-	-
8	8	-	-	-	-	-
16	16	-	-	-	-	-
36	36	-	-	-	-	-

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
38B	1	36	30 APR 79	13:52:00	40 40.3 N	72 29.2 W	39
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	13.9	12.8	16.0	20	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.45	30.832	23.965		-	-
8	8	6.95	31.284	24.527		-	-
16	16	6.10	32.300	25.433		-	-
36	36	4.60	32.680	25.905		-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	-	-	-	-	-
8	8	-	-	-	-	-
16	16	-	-	-	-	-
36	36	-	-	-	-	-

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
38C	1	36	30 APR 79	14:12:00	40 40.3 N	72 29.2 W	39
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	13.9	12.8	16.0	20	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.98	30.780	23.846		0.57	0.09
8	8	7.16	31.232	24.458		0.52	0.12
16	16	5.42	32.297	25.511	7.60	0.64	0.16
24	24	4.64	32.637	25.866	6.99	1.08	0.44
36	36	4.58	32.696	25.919	6.02	1.91	0.74

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.39	4.06	0.30	0.05	3.00
8	8	0.41	3.53	0.20	0.04	2.48
16	16	0.34	2.42	0.19	0.04	2.02
24	24	0.54	3.25	1.41	0.08	3.20
36	36	0.62	3.65	2.27	0.08	3.20

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
39	1	36	30 APR 79	15:20:00	40 37.7 N	72 33.1 W	40
	AIR TEMP	AIR TEMP	BAROMETRIC	WIND	WIND	SECCHI	
	DRY	WET	PRESSURE	DIRECTION	SPEED	DISK	
	14.4	13.3	16.0	22	10	19	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.86	30.801	23.881		0.60	0.14
8	8	7.97	30.998	24.164		0.41	0.10
16	16	5.25	32.063	25.346	7.24	0.90	0.30
24	24	4.93	32.375	25.627	7.68	1.18	0.23
36	36	4.70	32.664	25.881	6.28	3.97	0.87

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.41	4.15	0.18	0.04	2.41
8	8	0.35	3.50	0.17	0.04	2.26
16	16	0.40	2.02	0.28	0.04	2.17
24	24	0.46	1.85	0.35	0.05	2.51
36	36	0.61	2.12	2.05	0.10	4.30

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
40	1	26	30 APR 79	16:02:00	40 40.8 N	72 34.6 W	31
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	15.6	14.4	16.0	23	10	14	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.33	30.724	23.899		0.58	0.17
8	8	7.69	30.828	24.070		0.85	0.19
16	16	5.30	31.624	24.993	7.23	0.76	0.53
26	25	4.91	32.013	25.344	6.87	2.26	0.89

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.37	3.64	0.21	0.04	2.20
8	8	0.30	2.93	0.13	0.03	1.73
16	16	0.35	2.54	0.35	0.07	2.17
26	25	0.48	2.78	0.77	0.06	2.72

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
41	1	22	30 APR 79	17:13:00	40 45.3 N	72 33.4 W	29
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.7	-	15.0	23	8	9	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHEOPHYTIN
4	4	8.95	30.529	23.655		1.00	0.30
8	8	7.48	-	-		0.60	0.05
16	16	6.43	30.625	24.074	7.20	0.82	0.45
22	21	5.77	31.046	24.484	7.38	1.27	1.05

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.55	4.78	0.33	0.05	1.60
8	8	0.41	3.96	0.15	0.06	2.42
16	16	0.43	3.42	0.21	0.06	2.66
22	21	0.43	3.81	0.37	0.07	2.67

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
42	1	26	30 APR 79	18:27:00	40 42.2 N	72 37.9 W	33
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	11.1	-	15.0	22	9	12	

DEPTH	ACCEPTED						
	DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.37	30.647	23.832		0.39	0.12
8	8	7.43	30.748	24.043		0.51	0.10
16	16	5.54	31.204	24.635	7.22	1.02	0.68
26	26	5.23	31.509	24.910	7.38	1.54	0.63

DEPTH	ACCEPTED					
	DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.39	3.76	0.18	0.07	2.68
8	8	0.38	3.41	0.15	0.06	2.32
16	16	0.38	3.06	0.27	0.11	2.40
26	26	0.44	2.80	0.34	0.08	2.69

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
43	1	24	30 APR 79	19:40:00	40 41.1 N	72 43.2 W	33
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.0	-	15.0	20	10	9	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	9.28	30.653	23.700		0.77	0.21
8	8	8.51	30.881	23.995		0.64	0.19
16	16	6.80	31.324	24.577	7.37	0.68	0.17
24	24	5.03	31.688	25.073	7.15	1.45	1.00

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.46	4.26	0.24	0.06	2.67
8	8	0.46	3.91	0.18	0.06	2.79
16	16	0.41	2.83	0.16	0.06	2.40
24	24	0.58	3.41	0.42	0.08	3.35

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
44	1	26	30 APR 79	20:18:00	40 39.9 N	72 40.2 W	35
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.0	10.0	15.0	21	8	-	

DEPTH	ACCEPTED	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
	DEPTH						
4	4	8.93	31.040	24.056		0.71	0.14
8	8	8.78	31.044	24.082		0.60	0.12
16	16	5.69	31.383	24.759	7.43	1.00	0.23
26	26	4.94	31.864	25.223	7.15	1.93	0.53

DEPTH	ACCEPTED	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
	DEPTH					
4	4	0.40	3.05	0.15	0.04	2.06
8	8	0.27	2.76	0.19	0.02	1.60
16	16	0.45	3.07	0.30	0.05	2.64
26	26	0.50	2.71	0.38	0.08	2.69

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
45	1	24	30 APR 79	21:35:00	40 40.2 N	72 45.9 W	33
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.0	9.4	15.0	22	10	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	9.36	30.585	23.636		1.23	0.35
8	8	9.27	30.593	23.655		1.08	0.32
16	16	6.58	31.295	24.581	7.44	0.68	0.17
24	24	5.02	31.727	25.106	7.19	2.02	1.09

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.37	2.92	0.13	0.04	1.95
8	8	0.41	3.10	0.14	0.05	2.29
16	16	0.36	2.42	0.16	0.04	2.17
24	24	0.56	3.34	0.48	0.08	3.04

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
46	1	22	30 APR 79	22:11:00	40 43.1 N	72 42.8 W	27
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	9.4	9.4	15.0	21	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	9.33	30.561	23.621		1.26	0.42
8	8	9.20	30.569	23.648		1.21	0.53
16	16	6.75	31.281	24.549	7.38	0.43	0.13
22	22	5.52	31.438	24.822	7.40	2.17	0.40

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.37	2.79	0.15	0.04	2.05
8	8	0.46	3.52	0.18	0.05	2.67
16	16	0.34	2.13	0.14	0.04	1.99
22	22	0.46	2.59	0.26	0.05	2.69

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
47	1	26	30 APR 79	23:16:00	40 37.5 N	72 45.2 W	36
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.0	8.9	15.0	22	8	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	9.07	30.720	23.785		1.03	0.12
8	8	9.04	30.731	23.799		0.79	0.21
16	16	6.38	31.383	24.676	7.46	0.39	0.13
26	26	4.74	32.040	25.384	7.02	1.68	0.57

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.47	4.13	0.31	0.06	0.78
8	8	0.38	3.92	0.12	0.03	0.62
16	16	0.38	3.16	0.12	0.03	0.65
26	26	0.48	2.52	0.39	0.05	0.87

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
48	1	32	1 MAY 79	00:05:00	40 36.0 N	72 39.6 W	42
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	9.4	8.9	16.0	24	4	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.82	31.186	24.187		0.54	0.10
8	8	8.73	31.195	24.207		-	-
16	16	6.37	31.790	24.997	7.44	0.46	0.16
24	24	4.80	32.426	25.682	6.77	1.72	0.85
32	32	4.87	32.557	25.778	6.35	2.98	0.83

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.28	2.37	0.09	0.01	0.59
8	8	0.15	2.11	0.08	0.01	0.54
16	16	0.33	1.76	0.07	0.02	0.48
24	24	0.69	2.26	0.88	0.08	1.16
32	32	0.78	2.33	1.31	0.08	1.74

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
49	1	32	1 MAY 79	01:21:00	40 36.2 N	72 30.4 W	42
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	9.4	8.9	15.0	24	6	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
4	4	8.54	30.923	24.023		0.54	0.11
8	8	6.97	31.419	24.630		0.48	0.14
16	16	5.63	31.859	25.140	7.40	0.44	0.16
24	24	4.73	32.730	25.930	6.39	3.99	0.52
32	32	4.69	32.731	25.935	6.36	3.74	0.57

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
4	4	0.45	3.19	0.10	0.02	0.63
8	8	0.47	2.77	0.07	0.03	0.60
16	16	0.43	2.21	0.07	0.03	0.64
24	24	0.83	2.38	1.82	0.12	2.00
32	32	0.83	2.28	2.05	0.12	2.02

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
50	1	44	1 MAY 79	02:15:00	40 36.2 N	72 22.4 W	47
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	9.4	8.9	15.0	24	6	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.94	30.990	24.016		0.77	0.14
10	10	5.85	32.011	25.235		0.50	0.12
20	20	4.63	32.762	25.966		2.28	0.37
32	32	4.66	-	-	6.22	2.37	0.43
44	44	4.66	32.844	26.028	6.23	2.51	0.44

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.38	3.22	0.09	0.04	0.59
10	10	0.39	2.32	0.08	0.02	0.56
20	20	0.60	2.46	1.39	0.07	1.39
32	32	0.80	-	2.26	0.10	-
44	44	0.80	2.51	2.25	0.11	2.24

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
51	1	55	1 MAY 79	03:55:00	40 26.9 N	72 17.5 W	60
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.0	8.9	15.0	26	9	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.73	30.864	23.949		0.70	0.13
6	6	8.68	30.869	23.960		0.53	0.12
16	16	5.47	32.507	25.670	7.77	0.61	0.16
28	28	4.89	32.874	26.026	7.66	0.72	0.24
40	40	5.23	32.998	26.086	7.42	0.48	0.16
55	54	4.98	33.027	26.137	6.67	2.14	0.00

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.25	2.46	0.05	0.02	0.44
6	6	0.27	4.54	0.14	0.03	0.52
16	16	0.39	1.88	0.08	0.03	0.47
28	28	0.44	2.06	0.52	0.05	0.74
40	40	0.51	1.81	0.93	0.07	0.92
55	54	0.62	2.35	1.86	0.08	1.24

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
52	1	55	1 MAY 79	05:07:00	40 18.0 N	72 12.8 W	62
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	9.4	8.9	15.0	26	8	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.98	32.131	24.900		0.86	0.28
10	10	7.55	32.644	25.512		1.39	0.83
20	20	5.43	32.694	25.823		2.18	1.06
35	35	4.50	32.882	26.076		0.81	0.18
45	45	4.28	32.921	26.129	7.35	0.43	0.27
55	55	4.57	33.070	26.216	6.68	5.35	0.33

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.37	1.97	0.05	0.03	0.28
10	10	0.37	2.22	0.01	0.04	0.29
20	20	0.44	-	0.16	0.07	0.39
35	35	0.48	1.90	0.78	0.07	-
45	45	0.54	1.91	1.43	0.09	0.98
55	55	0.73	4.72	3.26	0.09	1.68

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
53	1	60	1 MAY 79	06:45:00	40 9.0 N	72 7.2 W	66
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.0	9.4	15.5	24	8	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.39	32.639	25.387		0.96	0.62
10	10	7.91	32.694	25.500		1.69	0.69
20	20	4.36	32.845	26.060		0.93	0.35
35	35	4.82	33.043	26.168		0.66	0.18
45	45	4.63	33.092	26.227	7.27	0.60	0.23
60	60	5.05	33.277	26.327	6.52	1.00	0.30

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.32	2.35	0.07	0.05	0.34
10	10	0.29	1.73	0.07	0.04	0.32
20	20	0.50	2.28	0.80	0.08	1.36
35	35	0.65	3.07	2.55	0.11	1.87
45	45	0.68	3.00	3.13	0.13	1.73
60	60	0.86	5.69	4.50	0.13	2.67

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
54	1	75	1 MAY 79	08:58:00	39 59.9 N	72 1.7 W	82
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	16.1	16.1	16.0	24	9	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.93	32.791	25.573		1.15	0.52
10	10	8.19	32.992	25.692		2.14	0.46
20	20	7.54	33.246	25.985	8.46	4.41	0.43
35	35	6.29	33.381	26.260	7.01	1.03	1.12
50	50	6.52	33.557	26.369	6.72	0.27	0.33
75	75	9.21	34.520	26.729	5.11	1.38	0.55

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.34	2.01	0.36	0.08	0.38
10	10	0.25	1.10	0.01	0.05	0.61
20	20	0.20	0.01	0.01	0.05	0.54
35	35	0.49	1.90	2.97	0.15	0.84
50	50	0.78	3.92	5.21	0.23	1.66
75	75	0.98	8.19	9.42	0.21	1.29

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
55	1	100	1 MAY 79	09:30:00	39 53.5 N	71 57.9 W	108
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	20.6	18.3	16.0	28	8	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	10.09	33.666	25.917		5.91	0.27
10	10	10.68	33.910	26.004		6.96	0.15
20	20	11.73	34.600	26.348		15.05	0.78
35	35	10.70	34.735	26.643	6.14	2.74	0.69
50	50	10.52	34.914	26.814	5.01	0.46	0.34
75	75	12.10	35.434	26.926	5.15	0.83	0.24
100	100	11.97	35.455	26.966	4.57	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.18	0.35	0.03	0.09	0.49
10	10	0.12	0.18	0.00	0.06	0.52
20	20	0.12	0.26	0.03	0.07	0.49
35	35	0.57	2.41	4.35	0.29	1.00
50	50	0.88	7.21	10.59	0.11	0.38
75	75	0.75	4.86	10.00	0.11	0.39
100	100	0.93	7.11	12.66	0.13	0.34

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
56	1	125	1 MAY 79	10:34:00	39 50.4 N	71 56.1 W	138
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	18.3	15.6	16.0	34	9	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	10.98	33.975	26.002		7.18	0.81
10	10	10.81	33.973	26.031		7.56	0.82
20	20	12.08	34.782	26.424		14.54	1.74
35	35	12.10	35.202	26.745	5.65	1.47	0.58
50	50	11.74	35.223	26.830	5.43	0.70	0.38
70	70	12.34	35.348	26.812	5.54	-	-
100	100	11.68	35.352	26.941	4.76	-	-
125	125	11.74	35.453	27.008	4.29	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.13	0.73	0.08	0.07	0.44
10	10	0.12	1.29	0.00	0.07	0.39
20	20	0.14	1.17	0.50	0.11	0.42
35	35	0.56	4.24	5.24	0.37	0.73
50	50	0.59	4.88	6.44	0.40	0.40
70	70	0.39	2.76	3.65	0.34	0.34
100	100	0.88	6.88	11.75	0.11	0.36
125	125	1.03	8.96	14.84	0.14	0.32

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
57	1	130	1 MAY 79	12:05:00	39 46.1 N	71 52.5 W	183
57	2	170	1 MAY 79	12:35:00	39 46.1 N	71 52.5 W	183

AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK
16.7	15.0	17.0	33	6	-
16.7	15.0	17.0	33	6	-

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHTHOEPHYTIN
0	0	11.79	34.263	26.076		6.36	0.32
10	10	14.10	35.598	26.646		5.29	0.40
20	19	13.79	35.509	26.642		2.51	0.48
35	34	13.43	35.517	26.724		0.87	0.71
50	48	14.34	35.846	26.785	5.43	0.21	0.31
75	72	13.63	35.739	26.854	5.34	0.12	0.21
100	97	13.59	35.767	26.884	5.23	-	-
130	126	12.92	35.626	26.912	5.19	-	-
170	164	11.69	35.455	27.020	4.14	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.14	1.31	0.23	0.09	0.40
10	10	0.29	2.08	2.16	0.23	0.82
20	19	0.34	2.96	2.60	0.24	0.86
35	34	0.42	2.96	3.36	0.39	1.13
50	48	0.45	3.09	4.98	0.86	0.42
75	72	0.54	4.17	7.12	0.32	0.34
100	97	0.54	4.09	7.51	0.16	0.32
130	126	0.63	5.31	8.84	0.12	0.24
170	164	1.07	9.07	15.88	0.12	0.21

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
58	1	200	1 MAY 79	13:29:00	39 42.2 N	71 50.4 W	397
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	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	13.3	12.2	17.0	30	5	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLUOROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	11.43	34.188	26.085		7.24	1.06
15	15	12.71	35.005	26.472		11.21	1.31
30	30	14.79	35.862	26.700		0.52	0.32
50	49	13.74	35.737	26.828		0.23	0.29
75	74	12.80	35.566	26.889	5.38	0.16	0.24
100	99	13.27	35.698	26.897	5.19	0.08	0.14
150	148	11.71	35.434	27.000	4.39	-	-
200	198	11.39	35.408	27.040	4.24	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.11	0.39	0.14	0.12	0.39
15	15	0.14	1.04	0.43	0.16	0.48
30	30	0.34	2.54	3.37	0.50	0.77
50	49	0.42	3.20	5.03	0.68	0.29
75	74	0.59	3.41	7.74	0.28	0.33
100	99	0.60	3.93	8.35	0.13	0.21
150	148	1.01	7.98	14.24	0.06	0.16
200	198	-	-	-	-	-

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
59	1	200	1 MAY 79	17:18:00	39 57.2 N	71 13.5 W	390
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	13.3	12.2	17.0	26	8	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	15.45	35.634	26.377		4.38	0.59
15	14	15.88	35.840	26.438		4.50	0.61
30	27	16.05	35.951	26.486		2.29	0.49
50	45	15.52	36.023	26.660		0.26	0.28
75	68	14.23	35.820	26.788		-	-
100	91	12.97	35.557	26.848		-	-
150	136	11.99	35.424	26.939		-	-
200	181	11.63	35.428	27.010		-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.13	1.07	0.35	0.07	1.59
15	14	0.19	1.12	0.55	0.21	1.05
30	27	-	-	-	-	-
50	45	-	-	-	-	-
75	68	-	-	-	-	-
100	91	-	-	-	-	-
150	136	-	-	-	-	-
200	181	-	-	-	-	-

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
60	1	120	1 MAY 79	18:31:00	40 4.6 N	71 17.5 W	128
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	12.2	12.2	17.0	26	8	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	10.34	33.533	25.770		3.87	0.31
10	10	12.65	34.644	26.206		6.34	0.21
20	19	13.94	35.479	26.588		9.07	0.84
35	34	14.85	35.928	26.737	5.49	0.67	0.30
50	48	14.67	35.912	26.766	5.37	0.50	0.33
75	72	13.10	35.596	26.852	5.41	-	-
100	97	12.73	-	-	5.02	-	-
120	116	11.98	35.454	26.964	4.92	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	-	-	-	-	-
10	10	0.20	0.83	0.28	0.09	1.59
20	19	0.11	0.49	0.89	0.08	0.79
35	34	0.42	2.60	4.89	0.72	1.07
50	48	0.40	2.49	5.11	0.48	0.98
75	72	0.54	3.33	7.02	0.46	1.01
100	97	0.51	-	10.85	0.09	0.99
120	116	0.85	5.43	11.93	0.12	1.47

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
61	1	85	1 MAY 79	19:48:00	40 11.3 N	71 20.8 W	95
		AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK
		12.2	12.2	17.0	25	8	-

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	9.77	33.099	25.528		2.76	0.93
10	10	8.55	33.112	25.732		2.08	0.40
20	19	6.02	33.257	26.195		1.01	0.76
35	34	5.58	33.285	26.273	7.00	0.17	0.35
50	48	5.62	33.340	26.310	6.78	0.14	0.32
70	68	6.51	33.650	26.443	6.12	-	-
85	82	8.45	34.230	26.622	5.52	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.15	4.82	0.58	0.02	0.79
10	10	0.18	2.31	0.19	0.03	1.01
20	19	0.54	2.36	3.85	0.10	1.46
35	34	-	-	-	-	-
50	48	0.45	1.97	2.59	0.09	1.99
70	68	0.89	6.08	6.62	0.28	4.11
85	82	0.87	7.08	7.70	0.21	3.09

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
62	1	75	1 MAY 79	21:00:00	40 20.4 N	71 25.6 W	82
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.6	10.0	17.0	25	10	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	9.12	32.962	25.527		1.17	0.53
10	9	9.02	32.959	25.540		0.87	0.29
20	19	4.93	33.049	26.160		7.37	0.47
35	33	4.79	33.068	26.191	7.20	2.02	0.55
50	47	4.58	33.074	26.218	6.91	0.54	0.17
75	70	5.01	33.206	26.276	6.54	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.34	0.39	0.35	0.08	1.75
10	9	0.35	0.56	0.29	0.07	1.70
20	19	0.31	1.28	0.37	0.07	1.20
35	33	0.68	1.29	3.05	0.13	2.92
50	47	0.72	1.97	3.00	0.12	3.97
75	70	0.68	6.21	4.22	0.11	3.06

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
63	1	70	1 MAY 79	22:17:00	40 30.1 N	71 29.6 W	77
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.0	9.4	17.0	28	9	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.90	32.552	25.240		0.83	0.47
10	10	8.18	32.713	25.474		1.46	0.94
20	20	5.65	32.941	25.992		0.41	0.19
35	34	4.95	33.057	26.165	7.53	0.21	0.16
50	49	4.64	33.116	26.246	6.94	0.42	0.16
70	68	4.44	33.110	26.262	6.49	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.28	5.73	0.53	0.04	1.04
10	10	0.31	1.16	0.10	0.04	1.21
20	20	0.39	1.10	0.29	0.06	2.12
35	34	-	-	-	-	-
50	49	0.69	3.29	3.16	0.13	3.80
70	68	0.83	5.75	4.05	0.14	5.06

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
64	1	65	1 MAY 79	23:29:00	40 39.0 N	71 34.7 W	73
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	10.6	10.6	19.0	34	11	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	8.33	32.528	25.309		0.92	0.72
10	9	8.29	32.543	25.326		0.85	0.65
20	19	4.77	32.811	25.990		1.08	0.22
35	33	4.36	32.898	26.102	6.59	0.90	0.08
50	47	4.42	32.960	26.145	7.30	0.89	0.14
65	61	3.83	32.953	26.199	7.56	1.05	0.28

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.27	1.48	0.17	0.07	0.98
10	9	0.32	3.73	0.33	0.04	1.32
20	19	0.23	6.29	0.52	0.04	1.02
35	33	0.50	2.10	1.03	0.08	2.63
50	47	0.55	1.64	2.05	0.10	3.46
65	61	0.65	4.58	2.26	0.07	4.25

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
65	1	57	2 MAY 79	01:02:00	40 48.6 N	71 39.9 W	63
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	8.9	7.2	21.0	34	11	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.85	32.168	25.097		0.86	0.23
10	9	7.73	32.190	25.131		0.89	0.25
20	18	3.67	32.560	25.902		0.77	0.10
35	31	3.60	32.647	25.978	7.45	1.00	0.16
45	40	3.47	32.671	26.009	6.71	0.25	0.15
57	50	3.50	32.679	26.013	6.65	0.50	0.26

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.41	-	1.49	0.09	1.69
10	9	0.41	3.39	0.21	0.05	3.33
20	18	0.38	2.99	0.12	0.09	1.55
35	31	0.42	2.47	0.25	0.04	4.01
45	40	0.68	5.88	1.31	0.08	9.78
57	50	0.61	6.56	1.46	0.07	10.57

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
66	1	53	2 MAY 79	02:15:00	40 55.9 N	71 43.2 W	58
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	7.8	6.7	21.0	34	10	-	

DEPTH	ACCEPTED	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
	DEPTH						
0	0	7.40	30.971	24.221		0.70	0.20
10	10	7.10	31.635	24.782		1.40	0.34
20	20	3.99	32.448	25.782		0.62	0.11
35	35	3.88	32.661	25.963	6.86	1.94	0.22
53	53	3.87	32.664	25.966	6.88	1.09	0.23

DEPTH	ACCEPTED	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
	DEPTH					
0	0	0.43	4.58	0.47	0.07	5.03
10	10	0.40	2.88	0.22	0.05	5.84
20	20	0.43	2.53	0.13	0.04	6.93
35	35	0.64	4.91	1.78	0.10	6.83
53	53	0.57	4.64	1.59	0.07	8.01

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
67	1	45	2 MAY 79	03:26:00	41 5.2 N	71 42.5 W	58
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	7.8	6.7	21.0	34	10	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	7.07	31.326	24.544		0.75	0.20
3	3	7.03	31.340	24.560		0.80	0.23
13	13	6.34	31.878	25.071		0.98	0.26
28	28	4.35	32.444	25.744	7.07	1.03	0.29
45	45	4.20	32.467	25.777	7.03	0.78	0.44

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.32	-	2.60	0.06	9.06
3	3	0.40	4.05	0.33	0.05	9.51
13	13	0.41	2.64	0.27	0.06	10.37
28	28	0.52	3.80	0.59	0.07	11.58
45	45	0.50	3.55	0.56	0.06	12.43

- DATA NOT TAKEN

STATION	CAST	MAX DEPTH OF CAST	DATE	MESSENGER TIME	LATITUDE	LONGITUDE	SONIC DEPTH
68	1	42	2 MAY 79	04:20:00	41 10.6 N	71 41.4 W	47
	AIR TEMP DRY	AIR TEMP WET	BAROMETRIC PRESSURE	WIND DIRECTION	WIND SPEED	SECCHI DISK	
	6.7	5.6	21.0	30	9	-	

DEPTH	ACCEPTED DEPTH	TEMPERATURE	SALINITY	SIGMA-T	OXYGEN	FLOUROMETRIC CHLOROPHYLL	FLUOROMETRIC PHAEOPHYTIN
0	0	6.84	30.123	23.629		0.35	0.21
10	10	6.81	30.171	23.670		0.59	0.25
20	19	6.68	31.100	24.416		0.54	0.25
35	34	5.93	31.794	25.054	7.07	0.69	0.47
42	41	5.62	31.857	25.141	6.99	-	-

DEPTH	ACCEPTED DEPTH	PHOSPHATE	SILICATE	NITRATE	NITRITE	AMMONIA
0	0	0.44	6.39	0.64	0.07	13.15
10	10	0.43	6.56	0.84	0.09	-
20	19	0.44	3.57	0.36	0.09	14.14
35	34	0.53	4.54	0.38	0.06	14.78
42	41	0.54	3.83	0.56	0.08	15.48

- DATA NOT TAKEN

SXBT DATA

THE SIPICAN CORP. MARION, MASS., U.S.A.

INCREASING DEPTH

TEMPERATURE (°C)

DEPTH (METERS)
SURFACE

Figure 5. SXT calibration

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 2X 27 APR 79 1917 40-17.6N 73-06.2W 0043 7.2

	0	1	2	3	4	5	6	7	8	9
0	7.08	6.94	6.93	6.91	6.91	6.91	6.91	6.90	6.91	6.94
10	6.97	7.05	7.12	7.15	7.35	7.39	7.36	7.30	7.18	6.93
20	6.34	5.40	5.25	5.35	5.19	5.02	4.93	4.93	4.97	4.96
30	4.91	4.87	4.85	4.84	4.83	4.82	4.82	4.82	4.82	4.82
40	4.82	4.82	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 3X DATE 27 APR 79 TIME 2035 LAT 40-12.0N LON 73-25.0W DEPTH(M) 0041 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	-	6.67	6.66	6.65	6.64	6.64	6.63	6.62	6.62	6.61
10	6.61	6.61	6.54	6.40	6.13	5.80	5.40	5.16	5.05	4.93
20	4.76	4.65	4.63	4.62	4.61	4.61	4.61	4.61	4.62	4.62
30	4.63	4.64	4.65	4.66	4.66	4.67	4.68	4.69	4.70	4.71
40	4.72	4.73	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 4X DATE 27 APR 79 TIME 2209 LAT 40-05.0N LON 72-50.0W DEPTH(M) 0051 SST(C) 555T

	0	1	2	3	4	5	6	7	8	9
0	-	7.49	7.48	7.48	7.48	7.48	7.48	7.48	7.47	7.47
10	7.47	7.47	7.47	7.46	7.43	7.41	7.38	7.37	7.35	7.22
20	7.08	6.59	6.07	5.63	5.56	5.49	5.42	5.35	5.29	5.26
30	5.23	5.22	5.22	5.21	5.21	5.20	5.20	5.19	5.19	5.19
40	5.18	5.18	5.18	5.17	5.17	5.17	5.16	5.16	5.16	5.16
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 5X DATE 27 APR 79 TIME 2333 LAT 39-57.7N LON 72-40.7W DEPTH(M) 0057 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	-	7.56	7.55	7.55	7.54	7.54	7.53	7.53	7.52	7.51
10	7.50	7.48	7.39	7.26	7.05	6.79	6.33	5.71	5.07	4.91
20	4.87	4.85	4.82	4.80	4.78	4.78	4.78	4.84	4.91	5.08
30	5.25	5.29	5.30	5.31	5.31	5.19	5.15	5.14	5.13	5.12
40	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11
50	5.11	5.11	5.11	5.11	5.11	5.11	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 6X 28 APR 79 0110 39-47.7N 72-33.5W 0068 SSST

	0	1	2	3	4	5	6	7	8	9
0	7.15	7.07	7.02	7.02	7.01	7.00	7.00	6.99	6.99	6.99
10	6.99	6.89	6.70	6.50	6.03	5.41	4.86	4.71	4.58	4.51
20	4.48	4.53	4.83	4.96	4.97	4.98	4.99	5.03	5.10	5.20
30	5.20	5.20	5.20	5.20	5.20	5.20	5.18	5.14	5.10	5.06
40	5.04	5.03	5.02	5.01	5.01	5.05	5.10	5.13	5.17	5.20
50	5.22	5.25	5.27	5.30	5.32	5.42	5.52	5.87	6.01	6.13
60	6.17	6.19	6.20	6.21	6.22	6.24	6.26	6.28	6.30	6.31
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 7X DATE 20 APR 79 TIME 0240 LAT 39-43.2N LON 72-21.8W DEPTH(M) 0099 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	8.45	8.38	8.36	8.34	8.32	8.31	8.31	8.31	8.31	8.31
10	8.29	8.23	8.19	8.15	8.09	7.93	7.52	7.03	6.66	6.53
20	6.41	6.32	6.27	6.18	6.08	6.04	6.00	5.99	5.99	5.99
30	5.99	5.99	6.01	6.02	6.04	6.05	6.06	6.08	6.10	6.23
40	6.36	6.55	6.76	7.09	7.22	7.33	7.44	7.71	8.17	8.51
50	8.74	8.84	8.90	8.94	9.05	9.01	8.69	8.43	8.00	7.66
60	7.55	7.53	7.52	7.50	7.50	7.51	7.52	7.53	7.55	7.56
70	7.57	7.58	7.58	7.59	7.60	7.61	7.62	7.63	7.64	7.65
80	7.65	7.66	7.70	7.73	7.93	8.15	8.37	8.59	8.81	8.92
90	8.97	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98	8.98
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 8X 28 APR 79 0418 39-35.4N 72-11.7W 0141 11.1

TEMPERATURE (C)

	0	1	2	3	4	5	6	7	8	9
0	-	8.23	8.12	8.13	8.13	8.13	8.17	8.31	8.50	8.87
10	9.27	9.87	10.47	10.68	10.89	11.20	11.52	11.77	12.03	12.28
20	12.55	13.29	13.96	14.31	14.39	14.44	14.47	14.48	14.50	14.52
30	14.54	14.52	14.50	14.49	14.48	14.46	14.43	14.39	14.35	14.31
40	14.13	14.06	14.02	13.96	13.78	13.60	13.42	13.27	13.26	13.25
50	13.25	13.24	13.24	13.23	13.23	13.22	13.22	13.21	13.21	13.20
60	13.20	13.21	13.22	13.24	13.25	13.25	13.14	13.02	12.91	12.85
70	12.80	12.74	12.69	12.64	12.59	12.55	12.51	12.46	12.43	12.44
80	12.45	12.47	12.47	12.48	12.49	12.50	12.51	12.52	12.54	12.66
90	12.71	12.72	12.74	12.76	12.77	12.78	12.79	12.79	12.80	12.80
100	12.80	12.80	12.80	12.79	12.79	12.79	12.79	12.78	12.77	12.76
110	12.75	12.71	12.63	12.55	12.49	12.44	12.39	12.35	12.32	12.29
120	12.27	12.23	12.17	12.15	12.15	12.15	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 9X 20 APR 79 0658 39-37.4N 71-50.8W 0380 SSST

	0	1	2	3	4	5	6	7	8	9
0	12.99	13.12	13.70	14.28	14.69	14.83	14.96	14.98	15.01	15.04
10	15.07	15.09	15.12	15.14	15.14	15.14	15.14	15.14	15.14	15.14
20	15.14	15.14	15.13	15.12	15.11	15.11	15.09	15.08	15.07	15.06
30	15.05	15.03	15.00	14.98	14.96	14.93	14.91	14.89	14.87	14.83
40	14.71	14.59	14.46	14.43	14.43	14.42	14.42	14.42	14.42	14.36
50	14.27	14.19	14.13	14.11	14.08	14.06	13.98	13.86	13.74	13.81
60	13.83	13.83	13.83	13.83	13.79	13.76	13.75	13.74	13.72	13.72
70	13.73	13.73	13.73	13.73	13.73	13.74	13.75	13.77	13.78	13.78
80	13.78	13.78	13.79	13.79	13.79	13.83	13.88	13.91	13.93	13.94
90	13.96	13.98	13.98	13.98	13.99	13.99	13.99	13.99	13.99	13.99
100	13.99	13.99	13.99	13.99	13.99	13.99	14.00	13.99	13.99	13.99
110	13.98	13.98	13.97	13.97	13.97	13.96	13.96	13.96	13.95	13.95
120	13.95	13.95	13.89	13.77	13.68	13.61	13.53	13.50	13.42	13.20
130	12.93	12.78	12.67	12.58	12.53	12.47	12.42	12.39	12.38	12.37
140	12.37	12.36	12.35	12.34	12.34	12.31	12.28	12.25	12.22	12.12
150	12.02	11.99	11.96	11.93	11.91	11.94	12.02	12.02	12.03	12.04
160	12.05	12.05	12.06	12.07	12.08	12.10	12.12	12.12	12.09	12.06
170	12.03	12.01	11.99	11.97	11.94	11.92	11.90	11.80	11.68	11.59
180	11.50	11.49	11.48	11.47	11.47	11.46	11.45	11.45	11.44	11.43
190	11.42	11.42	11.41	11.41	11.40	11.39	11.39	11.39	11.39	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 10X1 20 APR 79 0922 39-43.3N 71-53.1W 0650 SSST

	0	1	2	3	4	5	6	7	8	9
0	8.48	8.24	8.09	8.12	8.16	8.17	8.13	8.11	8.10	8.09
10	8.09	8.09	8.11	8.16	8.44	8.54	8.89	8.99	8.96	8.96
20	8.96	9.38	9.94	10.93	11.37	11.55	11.94	12.37	12.68	12.73
30	12.67	12.81	12.89	12.90	12.64	12.17	11.35	10.93	10.79	11.03
40	11.43	11.83	12.07	12.33	12.76	13.31	13.58	13.81	13.95	14.04
50	14.09	14.10	14.11	14.12	14.13	14.14	14.18	14.22	14.25	14.25
60	14.25	14.25	14.25	14.25	14.25	14.22	14.15	14.09	14.08	14.07
70	14.07	14.06	13.97	13.89	13.89	13.89	13.89	13.89	13.89	13.89
80	13.85	13.79	13.76	13.76	13.77	13.77	13.76	13.74	13.74	13.74
90	13.74	13.74	13.74	13.75	13.87	13.91	13.93	13.94	13.95	13.96
100	13.96	13.97	13.97	13.97	13.98	13.98	13.98	13.99	13.99	13.99
110	14.00	14.00	13.99	13.98	13.97	13.96	13.95	13.94	13.93	13.92
120	13.92	13.92	13.93	13.93	13.93	13.93	13.92	13.92	13.91	13.87
130	13.82	13.77	13.73	13.70	13.66	13.63	13.63	13.63	13.63	13.63
140	13.52	13.48	13.36	13.20	12.81	12.49	12.43	12.23	12.06	11.96
150	11.86	11.83	11.82	11.81	11.80	11.80	11.79	11.78	11.77	11.76
160	11.75	11.74	11.73	11.73	11.72	11.71	11.71	11.71	11.71	11.71
170	11.71	11.71	11.71	11.71	11.71	11.71	11.71	11.70	11.69	11.68
180	11.67	11.65	11.64	11.63	11.62	11.62	11.62	11.62	11.62	11.62
190	11.62	11.62	11.62	11.61	11.61	11.61	11.61	11.61	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 10X2 20 APR 79 0940 39-45.2N 71-54.2W 0219 SSST

0	-	9.94	10.14	10.46	10.86	11.37	11.91	12.51	13.14	13.72
10	14.13	14.30	14.40	14.54	14.73	14.85	14.89	14.94	14.97	15.00
20	15.03	15.03	15.03	15.03	15.03	15.03	15.03	15.03	15.03	15.03
30	15.03	15.03	15.02	15.01	15.00	14.99	14.98	14.94	14.88	14.82
40	14.75	14.72	14.70	14.68	14.65	14.65	14.65	14.65	14.64	14.63
50	14.57	14.53	14.53	14.53	14.53	14.53	14.54	14.57	14.49	14.43
60	14.41	14.38	14.34	14.31	14.29	14.27	14.25	14.23	14.20	14.18
70	14.15	14.12	14.09	14.06	14.04	14.03	14.02	14.01	14.00	13.99
80	13.99	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00
90	14.01	14.02	14.02	14.03	14.04	14.04	14.04	14.04	14.04	14.04
100	14.04	14.04	14.04	14.04	14.03	14.03	14.00	13.97	13.93	13.88
110	13.82	13.52	13.35	13.30	13.31	13.32	13.33	13.34	13.35	13.34
120	13.33	13.33	13.32	13.32	13.33	13.35	13.37	13.38	13.40	13.39
130	13.36	13.34	13.32	13.30	13.28	13.27	13.20	13.12	13.05	12.96
140	12.90	12.86	12.84	12.82	12.81	12.79	12.77	12.75	12.74	12.72
150	12.70	12.68	12.66	12.65	12.63	12.62	12.61	12.59	12.58	12.57
160	12.54	12.51	12.48	12.46	12.44	12.42	12.40	12.38	12.38	12.38
170	12.39	12.33	12.28	12.10	12.06	12.05	12.06	12.07	12.08	12.09
180	12.09	12.06	12.04	12.02	12.00	11.98	11.97	11.96	11.95	11.94
190	11.94	11.94	11.94	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 10X3 20 APR 79 0952 39-48.5N 71-55.5W 0155 08.9

	0	1	2	3	4	5	6	7	8	9
0	8.83	8.52	8.45	8.37	8.29	8.28	8.60	9.04	9.43	10.25
10	10.89	11.52	12.10	12.59	13.03	13.37	13.61	13.83	13.86	13.98
20	14.14	14.43	14.68	14.71	14.73	14.74	14.74	14.75	14.75	14.75
30	14.75	14.75	14.75	14.75	14.75	14.75	14.75	14.74	14.72	14.71
40	14.69	14.67	14.66	14.64	14.63	14.62	14.61	14.60	14.59	14.58
50	14.56	14.55	14.53	14.52	14.50	14.47	14.42	14.38	14.31	14.25
60	14.18	14.11	14.04	14.01	13.99	13.98	13.97	13.96	13.94	13.93
70	13.93	13.93	13.93	13.93	13.93	13.89	13.82	13.76	13.69	13.59
80	13.50	13.45	13.40	13.39	13.38	13.37	13.36	13.35	13.25	13.23
90	13.23	13.23	13.23	13.22	13.14	13.10	13.09	13.09	13.09	13.08
100	13.00	12.64	12.40	12.37	12.34	12.32	12.31	12.31	12.31	12.30
110	12.30	12.30	12.29	12.19	12.06	12.03	12.02	12.01	12.00	11.99
120	11.98	11.96	11.92	11.87	11.72	11.62	11.59	11.56	11.53	11.52
130	11.52	11.52	11.51	11.51	11.51	11.51	11.51	11.51	11.51	11.51
140	11.51	11.51	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52
150	11.52	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 11X DATE 28 APR 79 TIME 1124 LAT 39-55.3N LON 71-59.7W DEPTH(M) 0095 SST(C) 09.4

	0	1	2	3	4	5	6	7	8	9
0	-	8.38	8.31	8.25	8.19	8.15	8.10	8.06	8.01	7.77
10	7.56	7.39	7.12	6.84	6.74	6.64	6.53	6.48	6.43	6.38
20	6.35	6.34	6.33	6.31	6.32	6.34	6.36	6.37	6.39	6.42
30	6.46	6.50	6.54	6.58	6.56	6.46	6.37	6.41	6.45	6.47
40	6.42	6.40	6.45	6.50	6.60	6.77	6.95	7.22	7.49	7.75
50	7.83	7.89	7.96	8.03	8.17	8.31	8.46	8.70	8.86	8.94
60	9.00	9.03	9.07	9.14	9.23	9.34	9.43	9.50	9.54	9.57
70	9.62	9.70	9.77	9.83	9.85	9.82	9.78	9.77	9.78	9.79
80	9.80	9.81	9.82	9.83	9.84	9.86	10.06	10.19	10.19	10.19
90	10.19	10.19	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 12X DATE 28 APR 79 TIME 1328 LHT 40-05.0N 72-05.7W LON DEPTH(M) 0072 SST(C) 08.9

DEPTH (M)	0	1	2	3	4	5	6	7	8	9
0	-	8.79	8.29	8.18	8.20	7.85	7.69	7.64	7.60	7.56
10	7.46	7.29	7.04	6.56	6.01	5.57	5.28	5.11	5.11	5.11
20	5.11	5.11	5.13	5.14	5.12	5.10	5.08	5.06	5.04	5.03
30	5.01	5.00	4.99	4.97	4.96	4.94	4.93	4.97	5.05	5.10
40	5.10	5.10	5.10	5.10	5.10	5.12	5.14	5.13	5.11	4.97
50	4.82	4.73	4.72	4.72	4.72	4.82	5.02	5.30	5.43	5.52
60	5.59	5.62	5.65	5.68	5.71	5.72	5.73	5.74	5.75	5.76
70	5.77	5.78	5.78	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 13X DATE 28 APR 79 TIME 1501 LAT 40-13.8N LON 72-10.8W DEPTH(M) 0064 SST(C) 08.9

	0	1	2	3	4	5	6	7	8	9
0	-	7.64	7.56	7.46	7.34	7.21	7.20	7.22	7.20	7.17
10	7.15	7.10	7.05	7.00	6.95	6.90	6.72	6.54	6.13	5.56
20	5.13	4.89	4.78	4.71	4.68	4.64	4.59	4.53	4.50	4.48
30	4.53	4.58	4.62	4.62	4.52	4.49	4.49	4.49	4.49	4.46
40	4.42	4.54	4.66	4.79	4.93	5.05	5.06	5.08	5.09	5.10
50	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10
60	5.11	5.11	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 14X DATE 28 APR 79 TIME 1625 LAT 40-22.4N LON 72-18.2W DEPTH(M) 0059 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	8.62	8.51	8.41	8.29	8.15	7.93	7.76	7.67	7.57	7.38
10	7.14	6.94	6.61	6.36	6.02	5.54	5.37	5.20	5.15	5.24
20	5.19	5.18	5.15	5.13	5.14	5.16	5.17	5.20	5.26	5.26
30	5.24	5.22	5.18	5.12	5.05	4.94	4.89	4.85	4.77	4.78
40	4.86	4.87	4.87	4.88	4.88	4.88	4.87	4.87	4.87	4.87
50	4.87	4.87	4.87	4.87	4.87	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 15X DATE 28 APR 79 TIME 1756 LAT 40-31.8N LON 72-21.3W DEPTH(M) 0049 SST(C) 08.9

	0	1	2	3	4	5	6	7	8	9
0	9.00	8.58	8.47	8.30	8.05	7.94	7.85	7.75	7.56	7.38
10	7.02	6.64	6.28	5.91	5.93	5.83	5.57	5.14	5.01	4.99
20	4.89	4.85	4.84	4.78	4.80	4.78	4.75	4.63	4.60	4.61
30	4.62	4.64	4.65	4.66	4.67	4.68	4.69	4.70	4.71	4.71
40	4.71	4.72	4.72	4.73	4.73	4.73	4.73	4.73	4.72	4.72
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 16X DATE 20 APR 79 TIME 1928 LAT 40-36.5N LON 72-23.2W DEPTH(M) 0035 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	9.12	8.03	7.87	7.82	7.80	7.78	7.77	7.75	7.71	7.55
10	7.25	6.89	6.68	6.53	6.34	5.96	5.76	5.78	6.02	6.27
20	6.23	5.74	5.00	4.85	4.81	4.79	4.78	4.69	4.64	4.66
30	4.68	4.69	4.69	4.69	4.68	4.68	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 18 29 APR 79 0815 40-47.0N 72-29.0W 0024 08.9

	0	1	2	3	4	5	6	7	8	9
0	-	7.94	7.81	7.76	7.54	7.21	7.00	6.94	6.91	6.82
10	6.76	6.68	6.46	6.40	6.39	6.37	6.34	6.32	6.29	6.19
20	6.08	5.99	5.91	5.90	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 18X 29 APR 79 0843 40-48.2N 72-25.8W 0028 07.8

	0	1	2	3	4	5	6	7	8	9
0	7.52	7.29	7.04	6.91	6.84	6.43	6.23	6.10	6.16	6.22
10	6.26	6.31	6.27	6.24	6.26	6.27	6.28	6.29	6.29	6.29
20	6.27	6.12	5.92	5.74	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 20X 29 APR 79 1013 40-46.0N 72-18.0W 0030 08.3

	0	1	2	3	4	5	6	7	8	9
0	7.52	7.45	7.19	7.11	6.90	6.71	6.56	6.46	6.35	6.16
10	6.12	6.38	6.51	6.86	6.90	6.96	6.68	6.16	5.76	5.43
20	5.32	5.08	4.88	4.74	4.66	4.64	4.63	4.63	4.63	4.63
30	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	4.63	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 21X 29 APR 79 1101 40-45.0N 72-20.0W 0042 07.8

	0	1	2	3	4	5	6	7	8	9
0	-	7.33	7.27	7.26	7.28	7.47	7.47	7.36	7.14	7.17
10	7.16	7.03	6.61	6.05	5.67	5.40	5.22	5.15	5.10	5.06
20	5.04	5.03	5.01	4.98	4.82	4.81	4.79	4.77	4.75	4.74
30	4.74	4.73	4.73	4.72	4.72	4.71	4.70	4.70	4.70	4.70
40	4.70	4.70	4.70	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 22X DATE 29 APR 79 TIME 1153 LAT 40-43.6N LON 72-21.3W DEPTH(M) 0042 SST(C) 08.3

	0	1	2	3	4	5	6	7	8	9
0	-	7.85	7.64	7.61	7.55	7.37	7.31	7.32	7.29	7.20
10	7.11	6.76	6.32	5.74	5.69	5.64	5.58	5.46	5.32	5.14
20	5.03	4.94	4.86	4.82	4.85	4.88	4.90	4.87	4.84	4.81
30	4.78	4.75	4.72	4.71	4.71	4.71	4.71	4.71	4.71	4.71
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 23X DATE 29 APR 79 TIME 1310 LAT 40-49.0N LON 72-24.0W DEPTH(M) 0037 SST(C) 09.4

	0	1	2	3	4	5	6	7	8	9
0	8.90	8.29	8.24	8.48	8.11	7.61	7.46	7.42	7.41	7.40
10	7.13	6.77	6.50	6.40	6.19	5.50	4.96	5.04	5.02	4.86
20	4.80	4.80	4.74	4.71	4.69	4.68	4.68	4.68	4.69	4.68
30	4.67	4.66	4.65	4.64	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 24X DATE 29 APR 79 TIME 1403 LAT 40-41.8N LON 72-27.3W DEPTH(M) 0035 SST(C) 08.9

	0	1	2	3	4	5	6	7	8	9
0	-	9.36	8.84	8.53	8.16	8.06	7.98	7.86	7.61	7.38
10	7.04	6.66	5.86	5.06	5.03	5.00	4.95	4.84	4.79	4.78
20	4.80	4.79	4.73	4.72	4.70	4.70	4.69	4.69	4.68	4.67
30	4.67	4.66	4.66	4.66	4.66	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 25X 29 APR 79 1502 40-41.4N 72-30.1W 0037 10.6

	0	1	2	3	4	5	6	7	8	9
0	-	9.82	8.91	8.77	8.60	8.45	8.33	8.27	8.23	8.18
10	8.12	8.06	8.00	7.70	7.24	6.74	5.74	5.66	5.50	5.41
20	5.36	5.36	5.37	5.36	5.29	5.20	5.15	5.05	4.85	4.79
30	4.77	4.77	4.76	4.76	4.76	4.76	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 26X DATE 29 APR 79 TIME 1558 LAT 40-43.9N LON 72-32.5W DEPTH(M) 0031 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	-	9.26	8.80	8.65	8.13	7.69	7.63	7.59	6.67	6.00
10	5.95	5.92	5.89	5.86	5.83	5.79	5.75	5.66	5.55	5.45
20	5.35	5.31	5.33	5.30	5.19	5.19	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 27X 29 APR 79 1703 40-42.9N 72-34.7W 0031 SSST

	0	1	2	3	4	5	6	7	8	9
0	-	8.97	8.91	8.79	8.55	8.13	8.00	7.88	7.76	7.63
10	7.49	7.24	6.92	6.38	6.18	5.82	5.74	5.65	5.55	5.52
20	5.48	5.44	5.37	5.16	5.15	5.15	5.14	5.13	5.09	5.05
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 28X 29 APR 79 1815 40-42.4N 72-37.0W 0029 SSST

	0	1	2	3	4	5	6	7	8	9
0	-	10.07	9.80	9.32	8.04	7.41	6.75	6.42	6.35	6.30
10	6.26	6.33	6.54	6.47	6.02	5.96	5.91	5.85	5.77	5.57
20	5.39	5.22	5.21	5.24	5.06	5.02	5.00	5.00	5.00	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LRT LON DEPTH(M) SST(C)
 29X 29 APR 79 1918 40-41.8N 72-40.3W 0033 555T

	0	1	2	3	4	5	6	7	8	9
0	-	9.60	9.50	9.36	9.12	8.76	8.46	8.20	7.82	7.65
10	7.47	7.19	7.02	6.98	6.69	6.31	5.93	5.55	5.20	5.09
20	5.05	5.08	5.10	5.07	5.07	5.07	5.07	5.07	5.07	5.07
30	5.07	5.07	5.07	5.07	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 30X 29 APR 79 2035 40-39.1N 72-37.5W 0032 09.4

	0	1	2	3	4	5	6	7	8	9
0	-	9.02	8.98	8.93	8.79	8.44	7.56	6.99	6.93	6.98
10	6.94	6.89	6.84	6.49	5.96	5.56	5.52	5.40	5.00	5.01
20	4.90	4.83	4.79	4.76	4.76	4.75	4.74	4.73	4.73	4.74
30	4.75	4.76	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 31X DATE 29 APR 79 TIME 2117 LAT 40-40.4N LON 72-37.5W DEPTH(M) 0036 SST(C) 08.9

	0	1	2	3	4	5	6	7	8	9
0	8.95	8.82	8.77	8.74	8.71	8.64	8.40	8.11	7.82	7.70
10	7.64	7.51	7.13	6.60	6.04	5.71	5.76	5.18	4.93	4.87
20	4.87	4.87	4.86	4.85	4.84	4.83	4.83	4.83	4.83	4.83
30	4.83	4.83	4.83	4.82	4.82	4.82	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 32 DATE 30 APR 79 TIME 0540 LAT 40-42.1N LON 72-38.1W DEPTH(M) 0032 SST(C) 999T

	0	1	2	3	4	5	6	7	8	9
0	9.16	8.98	8.88	8.74	8.65	8.58	8.36	8.02	7.93	7.34
10	7.10	6.95	6.79	6.32	5.99	5.87	5.68	5.59	5.54	5.36
20	5.10	5.01	4.99	4.97	4.96	4.96	4.95	4.94	4.94	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 33X DATE 30 APR 79 TIME 0703 LAT 40-45.0N LON 73-31.0W DEPTH(M) 0029 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	-	7.78	7.72	7.67	7.60	7.26	6.86	6.61	6.54	6.56
10	6.59	6.59	6.46	6.33	6.41	6.34	5.99	5.63	5.39	5.47
20	5.42	5.28	5.21	5.18	5.18	5.18	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 34X 30 APR 78 1034 40-45.4N 72-25.3W 0038 10.0

	0	1	2	3	4	5	6	7	8	9
0	-	9.12	8.20	7.77	7.51	7.28	7.16	7.04	6.94	6.90
10	6.91	6.93	6.95	6.88	6.65	6.36	6.32	6.28	6.42	6.59
20	6.55	6.23	5.64	5.35	5.13	5.00	4.93	4.89	4.85	4.81
30	4.78	4.75	4.73	4.72	4.71	4.71	4.71	4.71	4.73	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 35X DATE 30 APR 79 TIME 1122 LAT 40-43.2N LON 72-21.8W DEPTH(M) 0039 SST(C) 08.9

	0	1	2	3	4	5	6	7	8	9
0	-	9.05	8.43	8.29	8.25	8.22	8.18	8.14	8.05	7.91
10	7.40	6.87	6.58	6.50	5.82	5.47	5.11	5.06	5.01	4.93
20	4.79	4.68	4.69	4.70	4.70	4.70	4.70	4.70	4.70	4.70
30	4.69	4.69	4.68	4.67	4.67	4.66	4.65	4.65	4.65	4.65
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 36X DATE 30 APR 79 TIME 1214 LAT 40-42.8N LON 72-23.6W DEPTH(M) 0038 SST(C) 08.9

	0	1	2	3	4	5	6	7	8	9
0	-	9.01	8.46	8.37	8.29	8.20	7.98	7.73	7.40	6.99
10	6.79	6.68	6.61	6.69	6.42	5.95	5.50	5.33	5.24	5.13
20	4.97	4.90	4.85	4.81	4.77	4.74	4.74	4.73	4.72	4.72
30	4.72	4.72	4.72	4.72	4.72	4.72	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 37X DATE 30 APR 79 TIME 1313 LAT 40-41.3N LON 72-27.9W DEPTH(M) 0035 SST(C) 10.6

	0	1	2	3	4	5	6	7	8	9
0	10.14	9.41	8.76	8.42	8.24	8.09	7.82	7.02	6.69	6.50
10	6.26	6.06	5.67	5.37	5.18	5.31	5.54	5.61	5.42	5.11
20	4.90	4.84	4.83	4.78	4.71	4.69	4.66	4.65	4.64	4.63
30	4.63	4.63	4.63	4.63	4.63	4.63	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 38X DATE 30 APR 79 TIME 1442 LAT 40-39.0N LON 72-31.2W DEPTH(M) 0038 SST(C) 10.0

	0	1	2	3	4	5	6	7	8	9
0	8.72	8.62	8.49	8.37	8.11	7.77	7.72	7.71	7.73	7.58
10	7.47	7.41	7.25	7.14	6.52	5.38	5.06	4.98	4.84	4.81
20	4.82	4.83	4.80	4.77	4.75	4.72	4.71	4.71	4.71	4.71
30	4.71	4.72	4.74	4.74	4.74	4.74	4.74	4.74	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 39X DATE 30 APR 79 TIME 1536 LAT 40-39.6N LON 72-34.0W DEPTH(M) 0035 SST(C) 10.0

	0	1	2	3	4	5	6	7	8	9
0	9.15	8.89	8.84	8.64	8.38	8.16	7.83	7.45	7.09	6.92
10	6.89	6.93	7.10	7.11	7.05	6.68	6.12	5.59	5.25	5.28
20	5.17	5.08	4.96	4.89	4.82	4.81	4.80	4.79	4.78	4.77
30	4.77	4.81	4.83	4.83	4.83	4.83	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 40X DATE 30 APR 79 TIME 1840 LAT 40-43.2N LON 72-33.5W DEPTH(M) 0031 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	-	8.50	8.44	8.39	8.24	8.00	7.69	7.38	7.26	7.20
10	7.16	7.04	6.89	6.85	6.79	6.19	5.82	5.69	5.41	5.36
20	5.34	5.32	5.27	5.23	5.20	5.16	5.13	4.97	4.90	4.89
30	4.89	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 41X 30 APR 79 1746 40-43.6N 72-36.1W 0029 09.4

	0	1	2	3	4	5	6	7	8	9
0	8.84	8.65	8.58	8.52	8.47	8.37	8.04	7.85	7.68	7.49
10	7.18	6.78	6.51	6.38	5.99	5.87	5.82	5.75	5.68	5.66
20	5.64	5.58	5.55	5.54	5.54	5.41	5.26	5.26	5.26	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 43X DATE 30 APR 79 TIME 1959 LAT 40-40.5N LON 72-41.5W DEPTH(M) 0033 SST(C) SSST

	0	1	2	3	4	5	6	7	8	9
0	9.75	9.22	8.96	8.90	8.86	8.81	8.75	8.59	8.34	7.95
10	7.64	7.57	7.40	7.27	7.12	6.89	6.51	6.08	5.82	5.52
20	5.41	5.50	5.52	5.21	4.99	4.94	4.91	4.89	4.87	4.86
30	4.86	4.86	4.86	4.86	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 44X DATE 30 APR 79 TIME 2054 LAT 40-40.0N LON 72-43.1W DEPTH(M) 0027 SST(C) 09.4

	0	1	2	3	4	5	6	7	8	9
0	9.63	9.20	9.11	9.06	9.00	8.87	8.62	8.17	7.59	6.95
10	6.67	6.60	6.50	6.24	5.74	5.54	5.46	5.43	5.20	5.06
20	4.98	4.97	4.97	4.94	4.90	4.89	4.90	4.91	-	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 45X DATE 30 APR 79 TIME 2150 LAT 40-41.9N LON 72-44.3W DEPTH(M) 0027 SST(C) 10.0

	0	1	2	3	4	5	6	7	8	9
0	9.76	9.61	9.53	9.51	9.50	9.48	9.34	9.13	8.89	8.59
10	8.20	7.87	7.66	7.54	7.49	7.00	6.48	6.07	5.93	5.83
20	5.55	5.28	5.23	5.21	5.21	5.21	5.21	5.21	-	-
30	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 46X 30 APR 79 2242 40-00.1N 72-44.0W 0033 10.0

	0	1	2	3	4	5	6	7	8	9
0	-	9.37	9.14	9.10	9.08	9.06	9.04	9.01	8.86	8.68
10	8.37	8.09	7.66	7.56	7.44	7.08	6.71	6.30	5.99	5.82
20	5.82	5.82	5.39	5.36	5.06	4.98	4.99	4.99	4.97	4.95
30	4.92	4.92	4.97	4.97	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 47X DATE 30 APR 79 TIME 2338 LAT 40-36.7N LON 72-41.9W DEPTH(M) 0036 SST(C) 10.0

	0	1	2	3	4	5	6	7	8	9
0	10.23	9.64	9.27	9.08	8.96	8.88	8.71	8.15	7.39	7.38
10	7.34	7.37	7.32	7.18	6.92	6.54	6.31	6.26	6.26	6.20
20	5.92	5.45	5.18	4.98	4.93	4.91	4.91	4.91	4.90	4.90
30	4.89	4.89	4.89	4.89	4.89	4.89	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 48X 01 MAY 79 0039 40-36.2N 72-35.0W 0036 10.0

	0	1	2	3	4	5	6	7	8	9
0	8.68	8.54	8.51	8.50	8.49	8.48	8.24	7.76	7.15	7.05
10	7.13	7.15	7.06	6.83	6.35	5.91	5.75	5.69	5.45	5.30
20	5.10	4.91	4.86	4.83	4.80	4.81	4.83	4.83	4.83	4.83
30	4.83	4.83	4.83	4.83	4.83	4.83	4.83	-	-	-
40	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 49X DATE 01 MAY 79 TIME 0144 LAT 40-36.3N LON 72-26.4W DEPTH(M) 0044 SST(C) 10.0

	0	1	2	3	4	5	6	7	8	9
0	-	9.49	9.38	9.36	9.35	9.28	8.19	7.10	6.46	6.08
10	5.89	5.96	5.86	5.96	6.01	5.60	5.30	5.45	5.40	5.13
20	4.84	4.77	4.75	4.74	4.73	4.72	4.71	4.71	4.71	4.71
30	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71
40	4.71	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 50X DATE 01 MAY 78 TIME 0300 LAT 40-31.2N LON 72-19.3W DEPTH(M) 0048 SST(C) 07.8

	0	1	2	3	4	5	6	7	8	9
0	8.24	7.97	7.97	8.00	8.00	8.01	8.01	8.02	7.71	6.76
10	6.20	5.74	5.60	5.42	5.25	5.19	5.05	4.87	4.78	4.78
20	4.76	4.75	4.74	4.73	4.73	4.75	4.77	4.76	4.74	4.73
30	4.72	4.71	4.70	4.70	4.69	4.69	4.69	4.69	4.69	4.69
40	4.69	4.69	4.69	4.69	4.69	4.69	4.69	4.68	4.68	-
50	-	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 51X 01 MAY 79 0420 40-22.2N 72-14.6W 0060 SSST

	0	1	2	3	4	5	6	7	8	9
0	9.66	9.20	9.17	9.15	9.11	9.06	8.89	8.66	8.36	7.87
10	7.62	7.46	7.15	6.77	6.30	5.71	5.14	4.71	4.66	4.72
20	4.79	4.76	4.65	4.60	4.56	4.54	4.52	4.51	4.49	4.49
30	4.51	4.53	4.53	4.51	4.49	4.47	4.46	4.51	4.57	4.62
40	4.61	4.56	4.64	4.73	4.79	4.79	4.79	4.79	4.79	4.78
50	4.78	4.78	4.77	4.77	4.76	4.74	4.72	4.70	4.68	4.67
60	4.67	-	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 52X DATE 01 MAY 79 TIME 0455 LAT 40-19.3N LON 72-09.9W DEPTH(M) 0061 SST(C) 555T

	0	1	2	3	4	5	6	7	8	9
0	-	8.46	8.38	8.36	8.35	8.35	8.35	8.35	8.35	8.34
10	8.34	8.33	8.29	8.04	7.96	7.76	7.63	7.56	7.47	7.37
20	6.85	6.54	6.69	6.41	5.87	5.13	4.77	4.54	4.43	4.53
30	4.56	4.54	4.56	4.58	4.56	4.51	4.45	4.36	4.29	4.27
40	4.26	4.21	4.16	4.16	4.17	4.17	4.17	4.30	4.43	4.45
50	4.47	4.56	4.67	4.69	4.72	4.64	4.62	4.66	4.86	4.92
60	4.94	4.98	-	-	-	-	-	-	-	-
70	-	-	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 53X DATE 01 MAY 79 TIME 0720 LAT 40-04.4N LON 72-04.0W DEPTH(M) 0071 SST(C) 999T

	0	1	2	3	4	5	6	7	8	9
0	-	8.82	8.77	8.75	8.73	8.70	8.54	8.23	7.97	7.53
10	7.21	7.07	6.99	6.88	6.73	6.58	6.51	6.37	6.19	6.00
20	5.84	5.80	5.77	5.73	5.68	5.51	5.34	5.15	5.01	4.99
30	4.96	4.94	4.94	4.94	4.94	4.94	4.94	4.88	4.87	4.89
40	4.92	5.03	5.19	5.22	5.21	5.18	5.20	5.23	5.14	5.21
50	5.28	5.35	5.45	5.54	5.62	5.63	5.64	5.62	5.60	5.59
60	5.59	5.60	5.60	5.61	5.61	5.61	5.61	5.61	5.61	5.61
70	5.61	5.61	-	-	-	-	-	-	-	-
80	-	-	-	-	-	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING DATE TIME LAT LON DEPTH(M) SST(C)
 54X 01 MAY 79 0841 39-56.3N 71-58.9W 0084 09.4

	0	1	2	3	4	5	6	7	8	9
0	-	9.27	9.33	9.40	9.62	10.42	10.59	11.14	10.93	10.85
10	10.95	10.77	10.61	10.46	10.32	10.33	10.47	10.57	10.65	10.63
20	10.62	10.60	10.50	10.44	10.47	10.64	10.83	10.83	10.71	10.65
30	10.50	10.53	10.56	10.59	10.60	10.62	10.65	10.70	10.80	10.95
40	11.11	11.25	11.28	11.26	11.25	11.24	11.28	11.33	11.43	11.60
50	11.69	11.71	11.72	11.72	11.70	11.50	11.38	11.34	11.31	11.28
60	11.25	11.32	11.39	11.35	11.34	11.34	11.34	11.34	11.34	11.35
70	11.37	11.38	11.39	11.39	11.39	11.43	11.51	11.61	11.71	11.84
80	12.00	12.14	12.29	12.53	12.64	-	-	-	-	-
90	-	-	-	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-	-	-	-
110	-	-	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

SOUNDING 55X DATE 01 MAY 79 TIME 1005 LAT 39-52.2N LON 71-56.9W DEPTH(M) 0120 SST(C) 55ST

	0	1	2	3	4	5	6	7	8	9
0	-	10.65	10.45	10.41	10.40	10.40	10.40	10.40	10.38	10.35
10	10.33	10.33	10.33	10.33	10.33	10.33	10.33	10.33	10.33	10.33
20	11.65	11.89	12.23	12.85	13.50	13.75	13.93	14.24	14.36	14.21
30	14.12	14.11	14.10	14.09	14.09	14.09	14.09	14.09	13.86	13.10
40	12.29	11.23	11.05	11.02	11.01	11.00	11.03	11.07	11.06	11.02
50	10.98	11.01	11.04	10.99	10.85	10.86	10.97	11.07	11.13	11.13
60	11.12	11.10	11.07	11.04	11.00	10.99	10.99	10.99	10.98	10.98
70	10.98	11.08	11.28	11.30	11.30	11.30	11.30	11.37	11.45	11.48
80	11.48	11.48	11.48	11.49	11.49	11.49	11.49	11.49	11.50	11.50
90	11.50	11.50	11.49	11.49	11.49	11.49	11.49	11.49	11.52	11.64
100	11.67	11.70	11.72	11.78	11.85	11.86	11.88	11.89	11.92	12.00
110	12.00	12.00	12.00	11.99	11.99	11.99	11.99	11.99	11.99	11.99
120	11.99	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
140	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-
160	-	-	-	-	-	-	-	-	-	-
170	-	-	-	-	-	-	-	-	-	-
180	-	-	-	-	-	-	-	-	-	-
190	-	-	-	-	-	-	-	-	-	-
200	-	-	-	-	-	-	-	-	-	-

PHYTOPLANKTON DATA

TABLE OF UNITS

Station	Date	Time	Latitude	Longitude
	EST/EDT	EST/EDT	North	West
	Sonic Depth	Surface Temperature	Fluorometric Chlorophyll	Secchi Depth
	M	C	µg/l	M

Depth
M

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
17	29 APR 79	06:10:00	40 45.0 N	72 33.6 W
	SONIC DEPTH	SURFACE TEMPERATURE	FLOUROMETRIC CHLOROPHYLL	SECCHI DEPTH
	31	-	1.76	-

DEPTH
25.0

SPECIES	RANK	%	NO/L
GYMNODINIUM SIMPLEX - - - - -	1.0	42.48	6500
MELOSIRA MONILIFORMIS - - - - -	2.0	32.03	4900
GYRODINIUM SPIRALE - - - - -	3.0	7.84	1200
GYMNODINIUM SPLENDENS - - - - -	4.0	4.58	700
NANNOPLANKTON - - - - -	5.0	3.92	600
NAVICULA SP. - - - - -	6.0	3.27	500
AMPHIDINIUM CARTERAE - - - - -	7.0	1.96	300
GYMNODINIUM SP - - - - -	8.0	1.31	200
COSCINODISCUS SP. - - - - -	10.5	0.65	100
GYRODINIUM PELLUCIDUM - - - - -	10.5	0.65	100
BIDDULPHIA PULCHELLA - - - - -	10.5	0.65	100
RHAPHONEIS AMPHICEROS - - - - -	10.5	0.65	100
TOTALS	12	100	15300

PERCENT
OF
TOTAL

DIATOM - - - - - 37.25
DINOFLAGELLATE - 58.82
OTHER - - - - - 3.92

- DATA NOT TAKEN

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
27	29 APR 79	16:31:00	40 45.2 N	72 33.6 W

SONIC	SURFACE	FLOUROMETRIC	SECCHI
DEPTH	TEMPERATURE	CHLOROPHYLL	DEPTH
34	10.6	1.26	13

DEPTH
24.0

SPECIES	RANK	%	NO/L
MELOSIRA MONILIFORMIS - - - - -	1.0	43.31	5500
GYMNODINIUM SIMPLEX - - - - -	2.0	14.17	1800
NANNOPLANKTON - - - - -	3.0	10.24	1300
AMPHIDINIUM SPHENOIDES - - - - -	4.0	9.45	1200
UNIDENTIFIED DINOFLAGELLATES - -	5.0	4.72	600
GYMNODINIUM SPLENDENS - - - - -	6.5	3.94	500
PLEUROSIGMA SP. - - - - -	6.5	3.94	500
COSCINODISCUS EXCENTRICUS - - - - -	8.0	3.15	400
GYMNODINIUM PYGMAEUM - - - - -	9.0	2.36	300
AMPHIPHORA SP. - - - - -	12.5	0.79	100
BIDDULPHIA ALTERNANS - - - - -	12.5	0.79	100
COSCINODISCUS RADIATUS - - - - -	12.5	0.79	100
COSCINODISCUS CONCINNUS - - - - -	12.5	0.79	100
AMPHIDINIUM SP. - - - - -	12.5	0.79	100
NAVICULA DISTANS - - - - -	12.5	0.79	100
TOTALS	15	100	12700

PERCENT
OF
TOTAL

DIATOM - - - - -	55.12
DINOFLAGELLATE -	34.65
OTHER - - - - -	10.24

- DATA NOT TAKEN

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
28	29 APR 79	17:41:00	40 40.8 N	72 34.7 W

SONIC	SURFACE	FLOUROMETRIC	SECCHI
DEPTH	TEMPERATURE	CHLOROPHYLL	DEPTH
33	9.4	0.88	16

DEPTH
26.0

S P E C I E S	RANK	%	NO/L
GYMNODINIUM SIMPLEX	1.0	74.15	10900
AMPHIDINIUM CARTERAE	2.0	7.48	1100
GYMNODINIUM SP	3.5	4.08	600
MELOSIRA MONILIFORMIS	3.5	4.08	600
GYMNODINIUM PYGMAEUM	5.0	3.40	500
COSCINODISCUS RADIATUS	6.0	2.72	400
AMPHIDINIUM SPHENOIDES	7.0	1.36	200
NAVICULA SP.	9.5	0.68	100
AMPHIDINIUM SP.	9.5	0.68	100
PLEUROSIGMA AESTUARII	9.5	0.68	100
COSCINODISCUS SP.	9.5	0.68	100
TOTALS	11	100	14700

PERCENT
O F
TOTAL

DIATOM	9.52
DINOFLLAGELLATE	90.48
OTHER	0.00

- DATA NOT TAKEN

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
30	29 APR 79	19:58:00	40 39.8 N	72 40.2 W

SONIC	SURFACE	FLOUROMETRIC	SECCHI
DEPTH	TEMPERATURE	CHLOROPHYLL	DEPTH
35	9.4	4.40	-

DEPTH
30.0

S P E C I E S	RANK	%	NO/L
GYMNODINIUM SIMPLEX - - - - -	1.0	68.85	8400
MELOSIRA MONILIFORMIS - - - - -	2.0	18.03	2200
COSCINODISCUS RADIATUS - - - - -	3.0	9.84	1200
PLEUROSIGMA AESTUARII - - - - -	4.0	2.46	300
COSCINODISCUS CONCINNUS - - - - -	5.0	0.82	100
TOTALS	5	100	12200

PERCENT
O F
TOTAL

DIATOM - - - - -	31.15
DINOFLAGELLATE -	68.85
OTHER - - - - -	0.00

- DATA NOT TAKEN

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
32	30 APR 79	05:31:00	40 42.1 N	72 39.1 W
SONIC DEPTH	SURFACE TEMPERATURE	FLOUROMETRIC CHLOROPHYLL	SECCHI DEPTH	
32	9.4	2.19	-	

DEPTH
24.0

SPECIES	RANK	%	NO/L
GYMNODINIUM SIMPLEX - - - - -	1.0	68.12	4700
UNIDENTIFIED DINOFLAGELLATES - -	2.0	8.70	600
GYMNODINIUM SP - - - - -	3.0	7.25	500
GYMNODINIUM PYGMAEUM - - - - -	4.0	5.80	400
MELOSIRA MONILIFORMIS - - - - -	5.5	2.90	200
PHALACROMA ROTUNDATUM - - - - -	5.5	2.90	200
PLEUROSIGMA NORMANII - - - - -	8.0	1.45	100
DINOPHYSIS ACUTA - - - - -	8.0	1.45	100
DINOPHYSIS ACUMINATA - - - - -	8.0	1.45	100
TOTALS	9	100	6900

PERCENT
OF
TOTAL

DIATOM - - - - - 4.35
DINOFLAGELLATE - 95.65
OTHER - - - - - 0.00

- DATA NOT TAKEN

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
40	30 APR 79	16:02:00	40 40.8 N	72 34.6 W
SONIC DEPTH	SURFACE TEMPERATURE	FLOUROMETRIC CHLOROPHYLL	SECCHI DEPTH	
31	10.0	2.26	14	

DEPTH
26.0

SPECIES	RANK	%	NO/L
GYMNODINIUM SIMPLEX - - - - -	1.0	34.83	3100
MELOSIRA MONILIFORMIS - - - - -	2.0	29.21	2600
COSCINODISCUS CONCINNUS - - - - -	3.0	10.11	900
GYRODINIUM DOMINANS - - - - -	4.0	7.87	700
GYMNODINIUM SPLENDENS - - - - -	5.0	6.74	600
PLEUROSIGMA AESTUARII - - - - -	7.5	2.25	200
AMPHIDINIUM SPHENOIDES - - - - -	7.5	2.25	200
COSCINODISCUS RADIATUS - - - - -	7.5	2.25	200
THALASSIOSIRA GRAVIDA - - - - -	7.5	2.25	200
DINOPHYSIS SP. - - - - -	10.5	1.12	100
GYMNODINIUM LINEATUM - - - - -	10.5	1.12	100
TOTALS	11	100	8900

PERCENT
OF
TOTAL

DIATOM - - - - - 46.07
DINOFLAGELLATE - 53.93
OTHER - - - - - 0.00

- DATA NOT TAKEN

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
42	30 APR 79	18:27:00	40 42.2 N	72 37.9 W
SONIC DEPTH	SURFACE TEMPERATURE	FLOUROMETRIC CHLOROPHYLL	SECCHI DEPTH	
33	8.9	1.54	12	

DEPTH
26.0

SPECIES	RANK	%	NO/L
GYMNODINIUM SIMPLEX - - - - -	1.0	90.48	19000
COSCONODISCUS CONCINNUS - - - - -	2.5	1.90	400
GYMNODINIUM SP - - - - -	2.5	1.90	400
MELOSIRA MONILIFORMIS - - - - -	6.0	0.95	200
AMPHIDINIUM SPHENOIDES - - - - -	6.0	0.95	200
COSCONODISCUS RADIATUS - - - - -	6.0	0.95	200
COSCONODISCUS SP. - - - - -	6.0	0.95	200
GYMNODINIUM MINUTUM - - - - -	6.0	0.95	200
THALASSIOSIRA GRAVIDA - - - - -	9.5	0.48	100
CERATIUM TRIPOS - - - - -	9.5	0.48	100
TOTALS	10	100	21000

PERCENT
OF
TOTAL

DIATOM - - - - -	5.24
DINOFLAGELLATE - - - - -	94.76
OTHER - - - - -	0.00

- DATA NOT TAKEN

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
44	30 APR 79	20:18:00	40 39.9 N	72 40.2 W
SONIC DEPTH	SURFACE TEMPERATURE	FLOUROMETRIC CHLOROPHYLL	SECCHI DEPTH	
35	10.0	1.93	-	

DEPTH
26.0

SPECIES	RANK	%	NO/L
GYMNODINIUM SIMPLEX - - - - -	1.0	97.35	44100
GYMNODINIUM SPLENDENS - - - - -	2.0	0.66	300
GYMNODINIUM MINUTUM - - - - -	4.0	0.44	200
MELOSIRA MONILIFORMIS - - - - -	4.0	0.44	200
COSCONODISCUS CONCINNUS - - - - -	4.0	0.44	200
COSCONODISCUS OCULUS-IRIDIS - - - - -	7.0	0.22	100
COSCONODISCUS SP. - - - - -	7.0	0.22	100
COSCONODISCUS RADIATUS - - - - -	7.0	0.22	100
TOTALS	8	100	45300

PERCENT
O F
TOTAL

DIATOM - - - - - 1.55
DINOFLAGELLATE - 98.45
OTHER - - - - - 0.00

- DATA NOT TAKEN

ATLANTIC COASTAL EXPERIMENT - 5 ADVANCE II PHYTOPLANKTON DATA

STATION	DATE	TIME	LATITUDE	LONGITUDE
50	1 MAY 79	02:15:00	40 36.2 N	72 22.4 W
SONIC DEPTH	SURFACE TEMPERATURE	FLOUROMETRIC CHLOROPHYLL	SECCHI DEPTH	
47	8.9	2.28	-	

DEPTH
20.0

S P E C I E S	RANK	%	NO/L
GYMNODINIUM SIMPLEX - - - - -	1.0	98.31	122000
GYMNODINIUM PYGMAEUM - - - - -	2.0	0.48	600
COSCINODISCUS RADIATUS - - - - -	3.0	0.40	500
GYMNODINIUM MINUTUM - - - - -	4.0	0.32	400
COSCINODISCUS CONCINNUS - - - - -	5.0	0.24	300
THALASSIOSIRA DECIPIENS - - - - -	6.0	0.16	200
AMPHIDINIUM SPHEROIDES - - - - -	7.0	0.08	100
TOTALS	7	100	124100

PERCENT
O F
TOTAL

DIATOM - - - - - 0.81
DINOFLAGELLATE - 99.19
OTHER - - - - - 0.00

- DATA NOT TAKEN

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