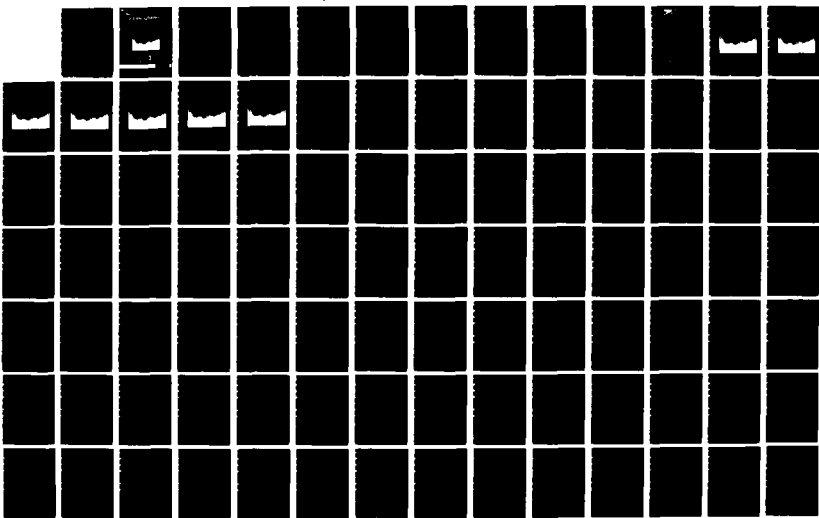


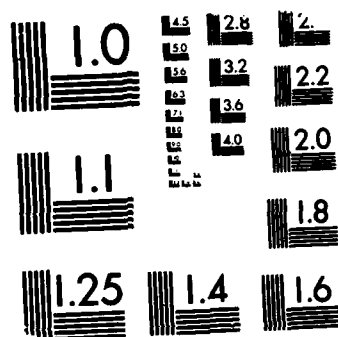
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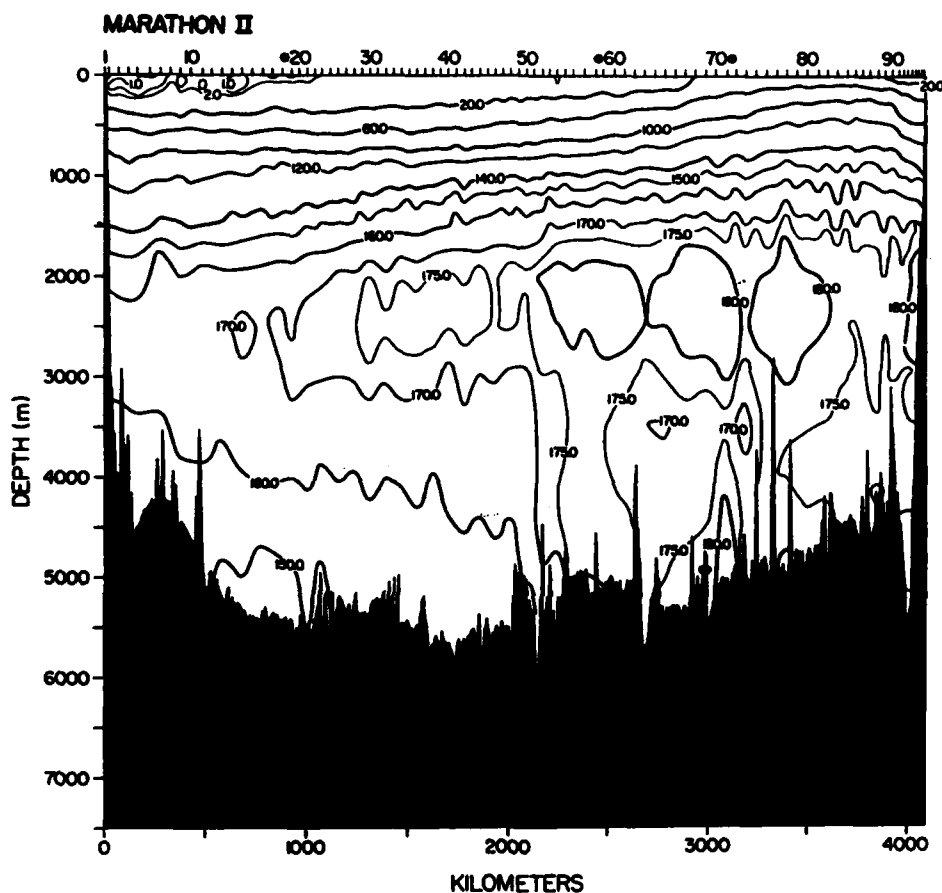
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PHYSICAL, CHEMICAL AND CTD  
DATA  
from the  
MARATHON EXPEDITION  
R/V THOMAS WASHINGTON 261  
4 May-4 June 1984

by

Margie Martin  
Lynne D. Talley  
Roland A. de Szoeke

Data Report 131  
Reference 87-15  
May 1987

National Science Foundation OCE-8318830  
Office of Naval Research N00014-84-C0218

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| 19. KEY WORDS (Continue on reverse side if necessary and identify by block number)<br>Physical Oceanography; Density; Oceanographic data;<br>CTD Measurements<br>Northeastern Pacific Ocean                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                       |                                                                             |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number)<br>Hydrographic and CTD measurements were taken from ninety-eight stations between Honolulu, Hawaii and Kodiak, Alaska from 4 May to 4 June 1984 on the second leg of the Marathon Expedition. This report consists of the cruise track, vertical sections, listings of all discrete hydrographic data, a subsample of the CTD data, plots of temperature and salinity as a function of pressure, and plots of potential temperature as a function of salinity. Key words: Physical Oceanography; Density; Oceanographic data; CTD Measurements; Northeastern Pacific Ocean. |                       |                                                                             |

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PHYSICAL, CHEMICAL AND CTD DATA

from the

MARATHON II EXPEDITION

R/V Thomas Washington 261

4 May - 4 June 1984

by

Margie Martin

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Data Report 131

Reference 87-15

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## INTRODUCTION

The hydrographic and CTD data presented in this report were collected aboard the RV *Thomas Washington* on the second leg of the Marathon Expedition, from Honolulu, Hawaii to Kodiak, Alaska (4 May - 4 June, 1984). The NODC identification number for the cruise is TW 261. The objective of the expedition was to provide information about the general circulation from the sea surface to the bottom in the northeastern Pacific with sufficient resolution along the cruise track to resolve the spacing of fronts and the scale of eddy variability. Except in boundary regimes at the beginning and end of the cruise where all stations extend from top to bottom, stations alternated between full water column coverage and coverage to 1500 meters. Station spacing between 28°N and 42°N was decreased in order to better sample the active frontal region. During the cruise, current meter moorings at 28°N and 42°N were retrieved and reset for P. Niiler by a separate group aboard the ship.

The hydrographic and CTD data presented in this report were collected and processed by the Physical and Chemical Oceanographic Data Facility (now part of the Shipboard Technical Support Group) at Scripps Institution of Oceanography. The hydrographic and 2-db CTD data have been sent to the National Oceanographic Data Center. Note that there is no station 72 on the cruise.

## STANDARD PROCEDURES

### *Hydrographic (Rosette) Data*

Each station consisted of a CTD lowering with a rosette carrying 24 Niskin bottles. Most stations included four reversing thermometer racks with one at the surface, one at the bottom, and the others at widely spaced intervals. Water samples were collected on the upcast and analyzed for salinity, oxygen, silicate, phosphate, nitrate, and nitrite. Samples for tritium analysis were collected for Dr. R. Fine and were processed by the Tritium Laboratory at the University of Miami.

Pressure and temperature for the discrete hydrographic tabulations were taken from the calibrated CTD data. The CTD pressure and temperature calibrations are discussed in the following section. Occasional discrepancies between the bottom depth listed in the header record and the maximum depth of the station resulted from incompatibility of the depth as read from the PDR and the actual depth of the cast.

Depths were calculated from CTD pressures (Saunders, 1981).

Salinity samples were analyzed at sea using one of two Guildline Autosol inductive salinometers. All salinity values are calculated from conductivity using the 1978 practical salinity scale (UNESCO, 1981) and are tabulated to three decimal places. Standard seawater batch P92 was used to standardize the salinometer at the beginning and end of each station; salinities are reported relative to P92 and have not been adjusted further. Mantyla (1987) compared various batches of standard seawater with batch P96; he found that the salinity of P92 is about 0.003‰ less than that of P96. A section made in 1985 which intersected the Marathon II section and on which P96 was used as a standard showed salinities in the deep water which were indeed about 0.003‰ higher than Marathon II, indicating that the laboratory comparisons hold *in situ* and that the precision of the autosol measurements is high. Bottle salinities were compared with CTD salinities to identify leaking bottles or salinometer malfunctions. Calibrated CTD salinities were used to replace bottle salinities in the event of problems and are indicated by the letter "D" in the hydrographic data tables. All salinities on station 34 were replaced by CTD salinities because of extensive drift in the autosalinometer standardization from the beginning to the end of that station's analysis; because the CTD salinities were calibrated using a large group of adjacent stations, the CTD salinities for station 34 are nearly as precise as those from bottle data.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965), using the equipment and procedure outlined by Anderson (1971). A small number of oxygen values were discarded because contamination by rusty springs in the Niskin bottles resulted in low values. The bad springs caused greater problems with phosphate measurements. The precision of oxygen measurements is .01 ml/l and accuracy is 2%.

Silicate, phosphate, nitrate and nitrite were analyzed at sea using an autoanalyzer. The procedures used are similar to those described in Atlas *et al.* (1971). Artificial seawater was used as a standard for the first 19 stations; this resulted in high values for all nutrients and was corrected by reducing the absorbance slope by 6.25% for these stations. During the early part of the cruise, the springs in a large number of Niskin bottles rusted as a result of inadequate coating. Most rusty springs were replaced after station 21. Phosphate measurements were the most strongly affected; hence a large number of phosphate measurements have been deleted from stations 1 to 21. Two bottles continued to cause problems on subsequent stations; all phosphate values from these bottles have been deleted. Oxygen measurements were also affected, but apparently less severely; oxygens have been deleted from a smaller number of stations. Silicate, nitrate, nitrite, and salinity values were apparently unaffected by the rusted springs. Nitrate measurements on station 80 have been deleted because of problems with the cadmium column in the autoanalyzer. A portion of the silicate values on station 87 were adversely affected by a 2°C change in the laboratory temperature and have been deleted.

The precision of nutrient measurements is estimated to be less than .5% and accuracy is 2% to 3%.

#### *Conductivity/Temperature/Depth (CTD) Data*

A single Neil Brown Mark III CTD was used for all casts. The time series data were processed and calibrated by PACODF; the final product is a 2 db pressure series.

Pressure, temperature, and conductivity were sampled at 32 frames/second and recorded on audio tape. Output from the oxygen probe was updated at 8 frames/second and recorded with the other three parameters; it was not processed. The audio tapes were digitized following the cruise. There was no obvious increase in noise due to digitization following the cruise; however, gaps in the final data for stations 13 and 42 resulted from yoyo's made to compensate for the ends of audio tape reels.

Pressure, temperature and conductivity data were block-averaged in one second intervals. Values which were more than four standard deviations from the average were eliminated, the average was recalculated, and values more than 2 standard deviations from the average were discarded.

The CTD pressure transducer was calibrated in a temperature-controlled bath to the PACODF Ashcroft deadweight-tester pressure standard. Thermal response-time, thermal hysteresis and mechanical hysteresis were measured. The mechanical hysteresis loading curves were measured at 0°C and 23°C and at maximum loadings of 2225 and 8825 PSI. The transducer thermal response-time was derived from the pressure response to a thermal step change from 21°C to 0°C. There was no significant difference between pre- and post-cruise calibrations. Pressure calibrations were applied to the 1-second averages using a family of hysteresis curves based on the laboratory calculations. There was no significant drift in comparisons between CTD and thermometric pressures, based on reversing thermometers mounted on an average of 4 bottles on every cast. The mean difference between calibrated CTD pressures and thermometric pressures was 2.5 db.

The CTD platinum resistance thermometer was calibrated in a temperature-controlled bath to the PACODF Leeds and Northrup PRT temperature standard at 0°C, 10°C and 25°C. Calibrations were performed before and after the cruise: there was a .002 to .003° decrease in the CTD temperature reading. In addition to a constant second-order slope applied to all casts as a result of the PRT calibrations, an offset that was linear as a function of time was applied to the full cruise to compensate for the shift between pre- and post-cruise calibrations. The mean

difference between CTD temperatures and thermometer values was  $-0.0005^{\circ}\text{C}$ .

After pressure and temperature calibration, the up and downcast CTD salinities differed by no more than  $.001^{\circ}/_{\text{‰}}$  in the deep water, except on a few stations which had obvious offsets in conductivity.

Conductivity was calibrated using bottle salinities collected on the upcasts. Bottle sample conductivities were calculated from the sample salinities and from CTD pressures and temperatures. A conductivity slope correction was calculated as a third order least-squares fit to station number. After application of the slope correction, a conductivity offset for each cast was calculated and applied. All bottle samples were used for calibration with heavier weighting of samples below 1000 db. The mean difference between final CTD conductivities and sample conductivities was 0.00073 mhos. Additional offset corrections were made following comparisons of calibrated downcast salinities with bottle salinities in order to account for discontinuous shifts in the conductivity transducer response.

After processing the time series, a roll filter was applied to eliminate pressure reversals and a 2 db pressure series was constructed by block-averaging all 1-second values within each 2 db bin. The final data set contains .46% missing data or 727 of 168,549 data points. Most missing data are at single levels and result from block-averaging in one second intervals followed by pressure sequencing. Eleven of the 98 stations account for 423 missing values, or more than half. The only blocks of missing data are 3422-3438 db at station 13 and 4438-4484 db at station 42, both due to large yo-yo's occasioned by operator compensation for the end of audio tape recordings.

Seven upcasts were sent instead of downcasts because of major offsets or other instrument-related problems on the downcasts. The up-casts are stations 29, 50, 80, 82, 84, 85, and 89.

## DATA

The data presentation consists of the cruise track, vertical sections, listings of all discrete hydrographic data, a subsample of the CTD data, plots of temperature and salinity as a function of pressure, and plots of potential temperature as a function of salinity.

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- UNESCO, 1981. Background papers and supporting data on the International Equation of State 1980. *UNESCO Tech. Pap. in Mar. Sci.*, No. 38.

## PERSONNEL

### Ship's Captain

Johnson, Curtis D., RV *Thomas Washington*

### Scientific personnel participating in collection of hydrographic/CTD data on RV *Thomas Washington*

deSzoek, Roland, Professor (chief scientist), College of Oceanography, Oregon State University

Talley, Lynne D., Research Oceanographer (co-chief scientist), Ocean Research Division, Scripps Institution of Oceanography

Boaz, John, Marine Technician, STS, Scripps Institution of Oceanography

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Paduan, Jeffrey, Graduate Student, College of Oceanography, Oregon State University

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### Additional personnel involved in data processing

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Delahoyde, Frank M., Programmer/Analyst, PACODF, Scripps Institution of Oceanography

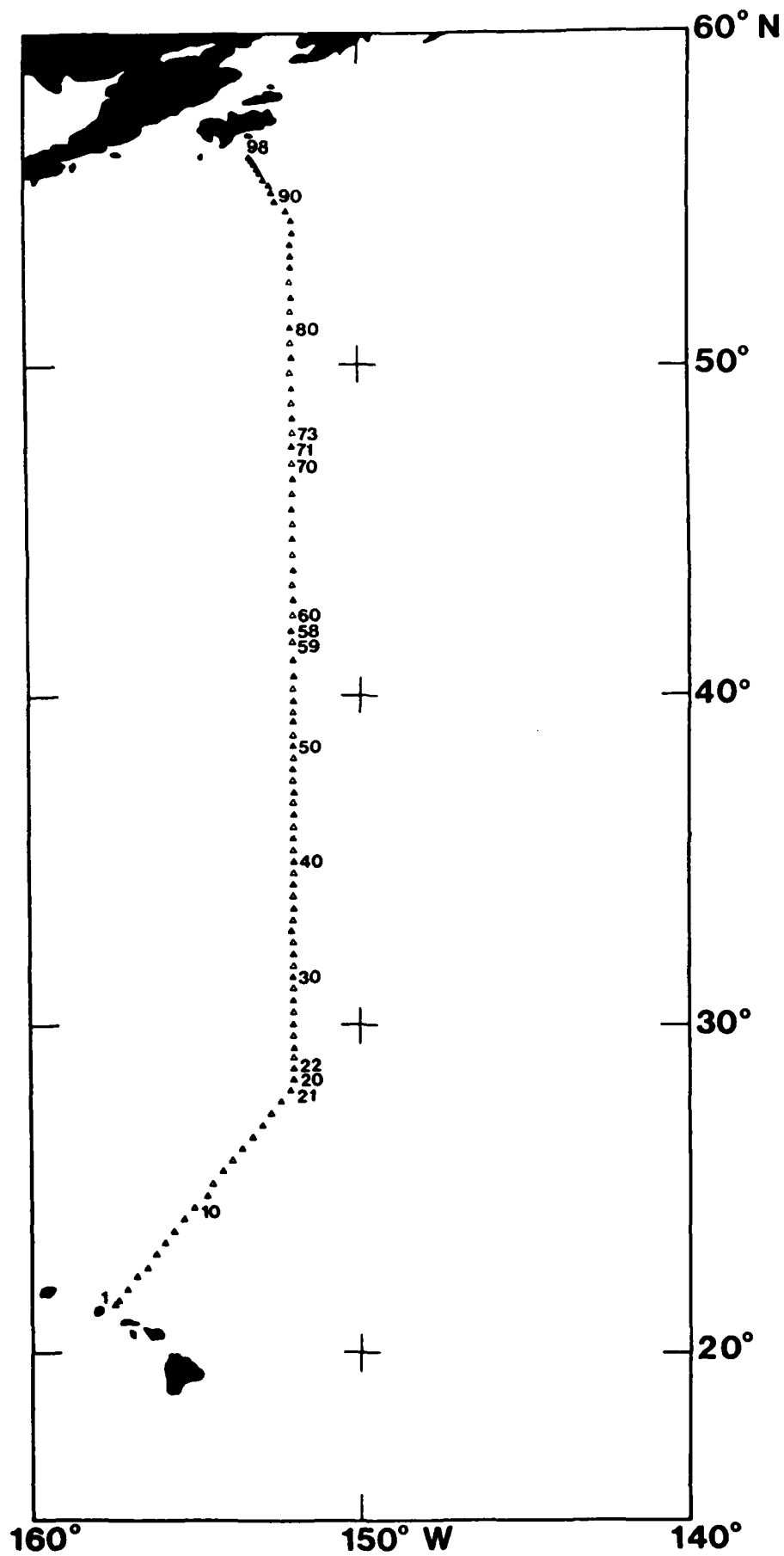
Johnson, Mary C., Staff Research Associate, PACODF, Scripps Institution of Oceanography

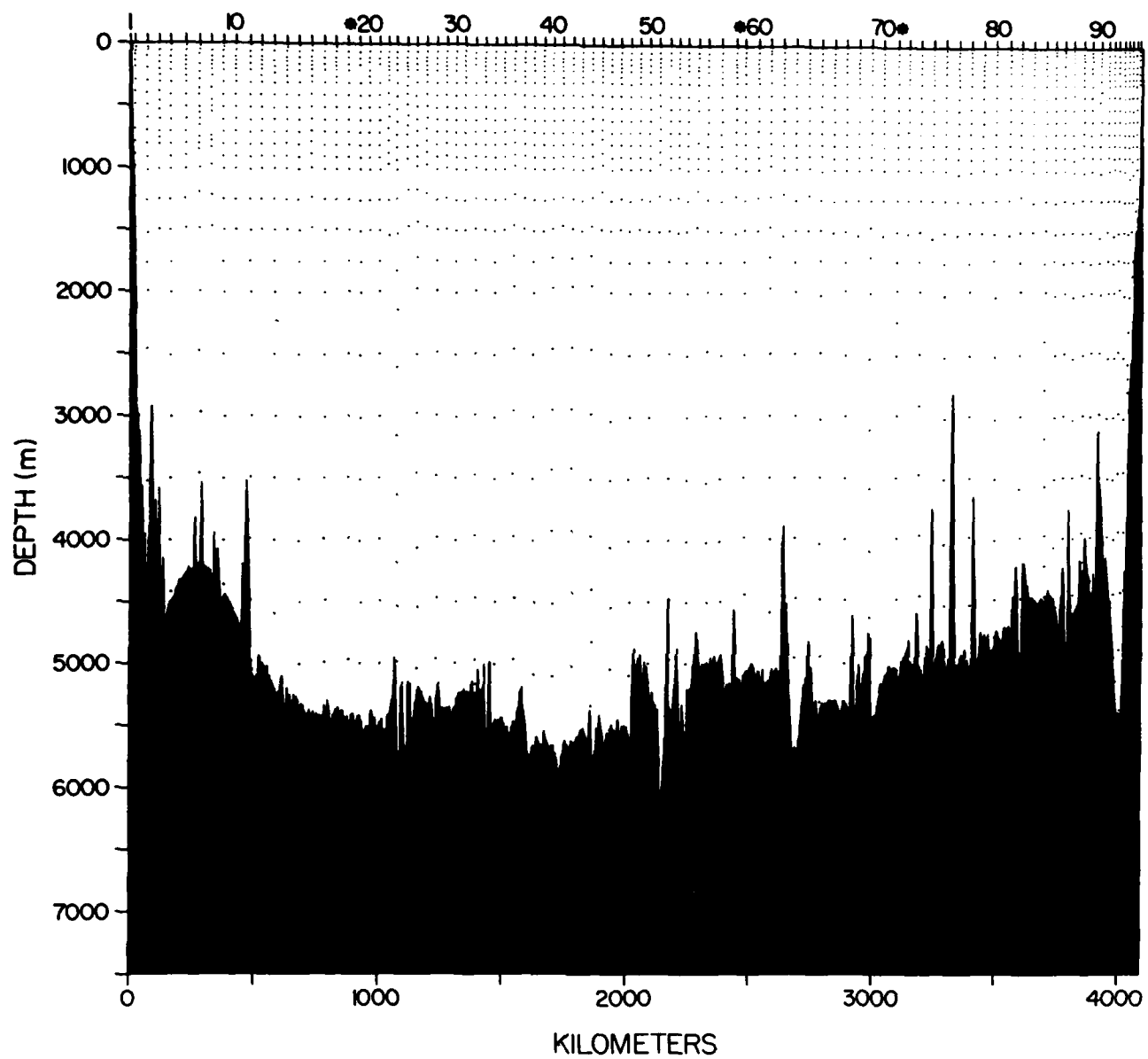
Sweet, Paul, Staff Research Associate, PACODF, Scripps Institution of Oceanography

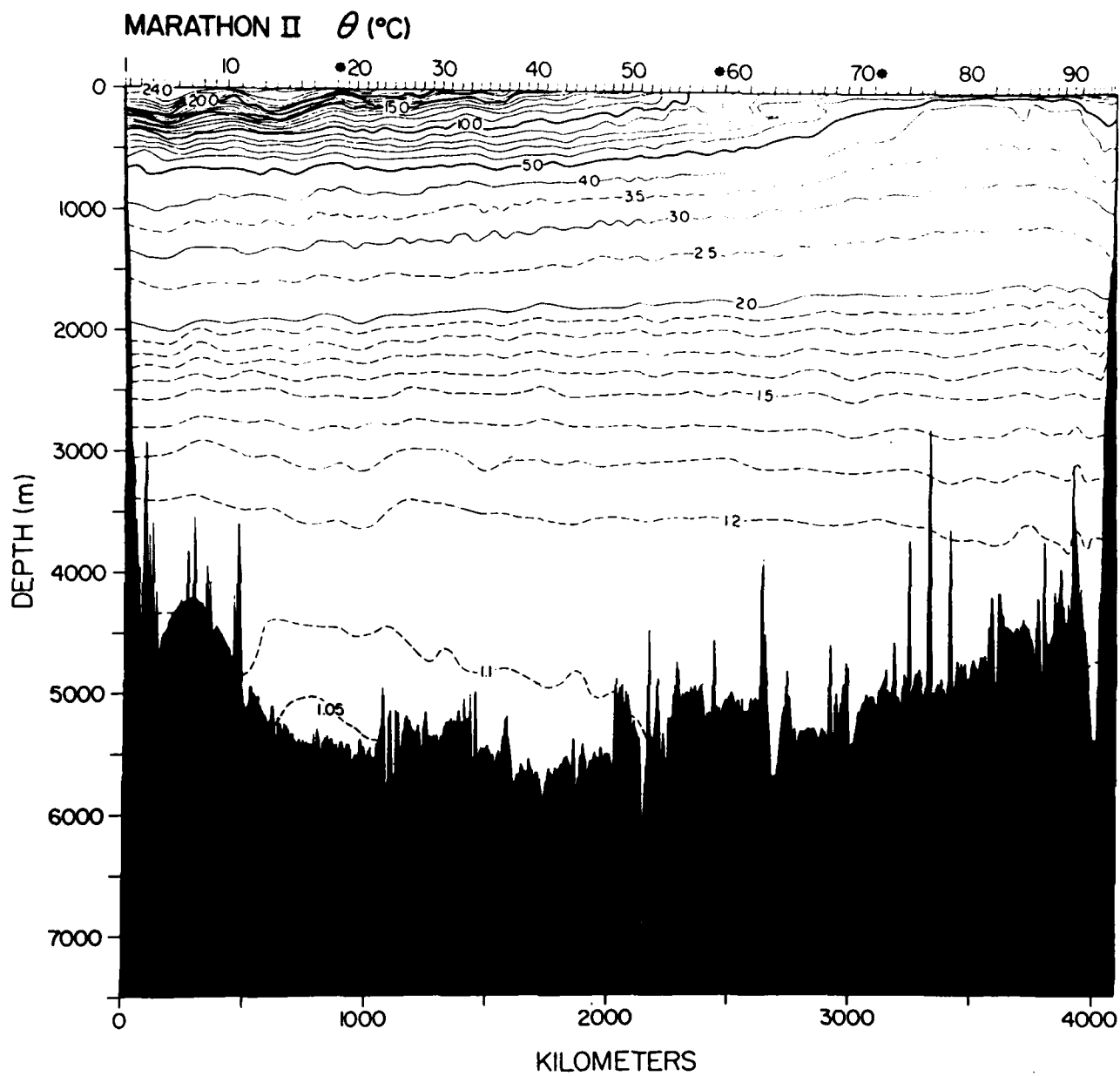
Wells, James A., Marine Technician, PACODF, Scripps Institution of Oceanography

## FIGURES

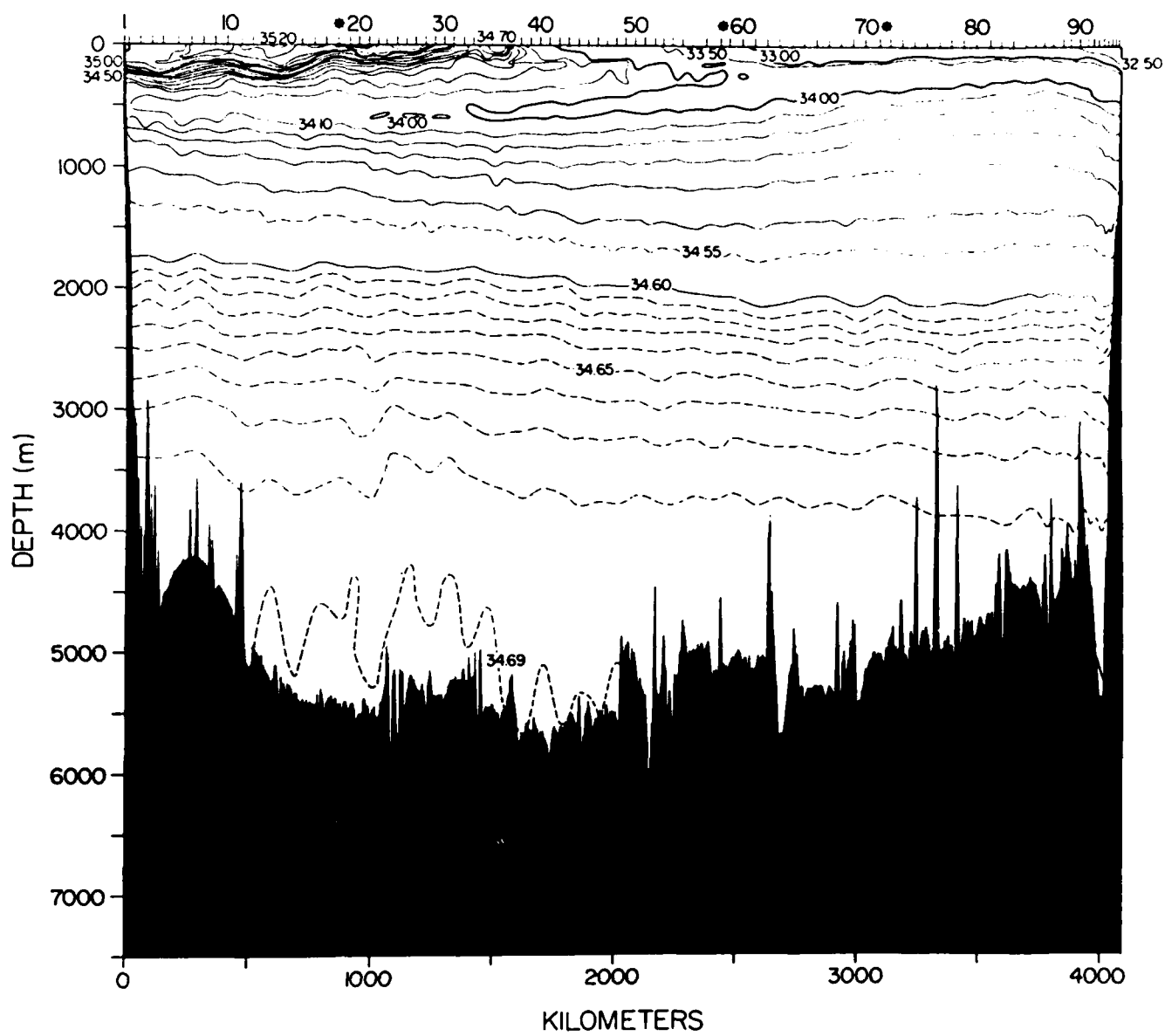
- Figure 1. Station positions for the Marathon II section on the R/V *Thomas Washington*, May 4 - June 4, 1984.
- Figure 2. Bottle positions. Asterisks indicate irregularities in station numbering.
- Figure 3. Potential temperature section.
- Figure 4. Salinity section.
- Figure 5. Oxygen section.
- Figure 6. Silicate section.
- Figure 7. Phosphate section.
- Figure 8. Nitrate section.

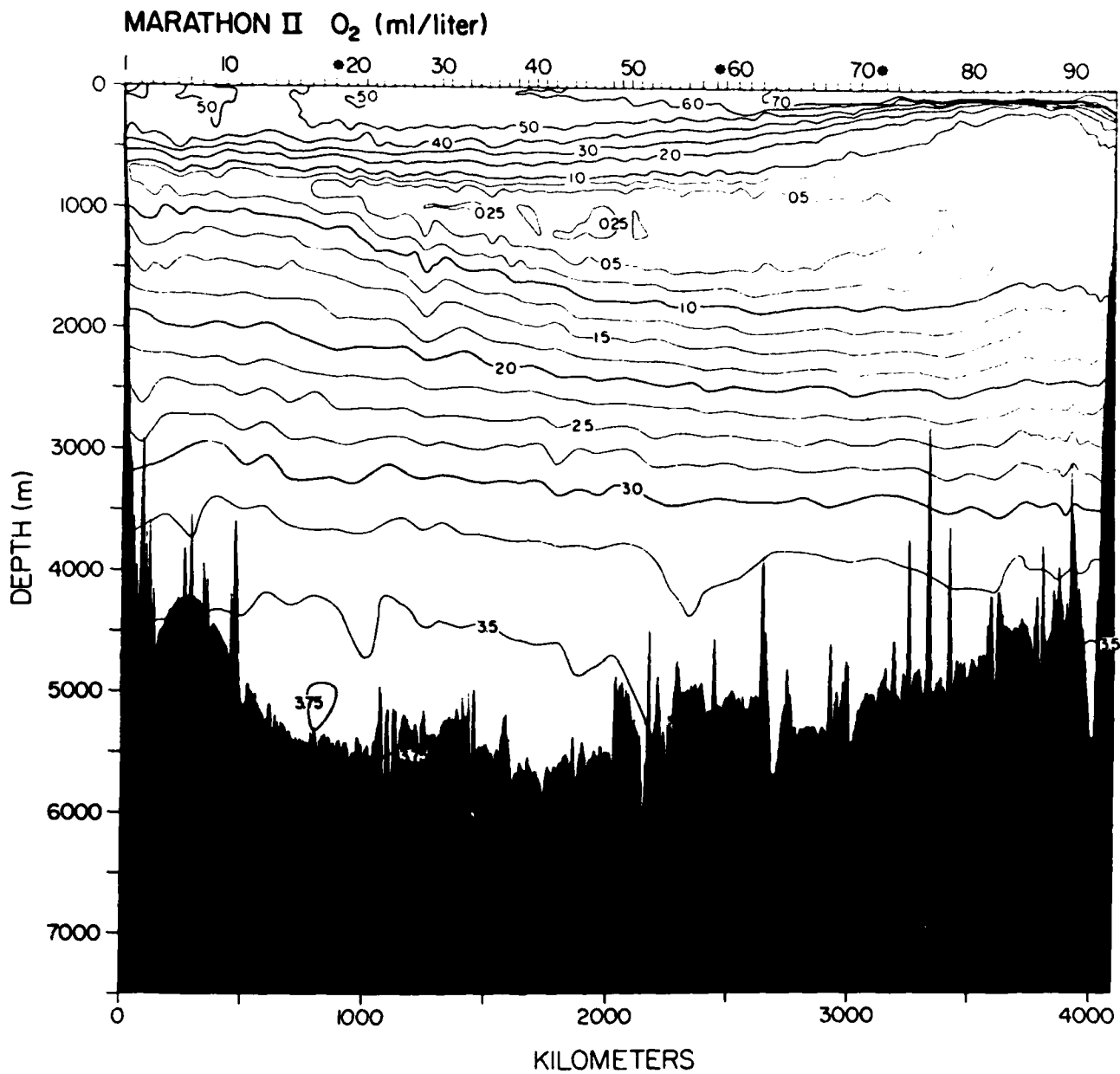


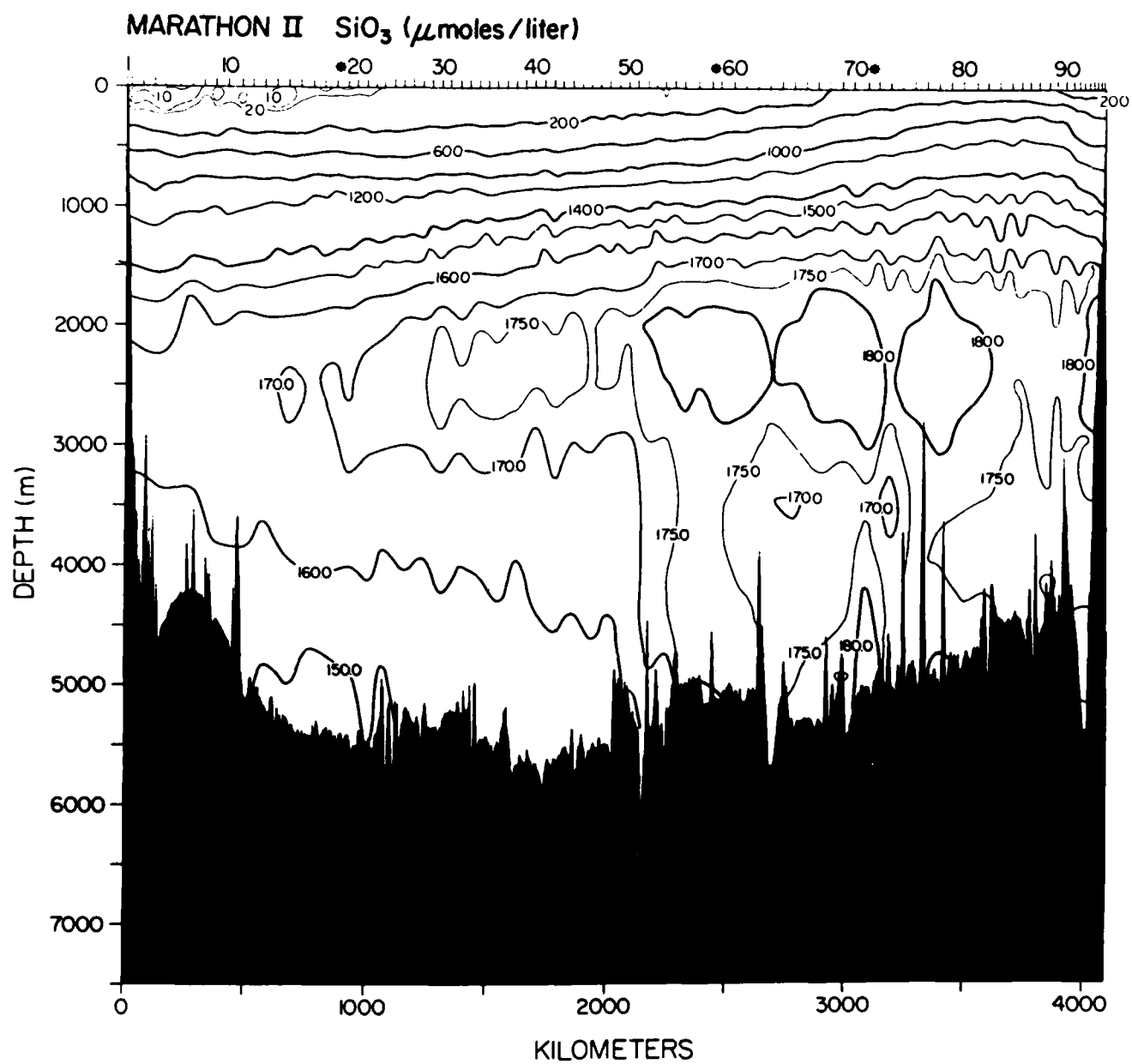


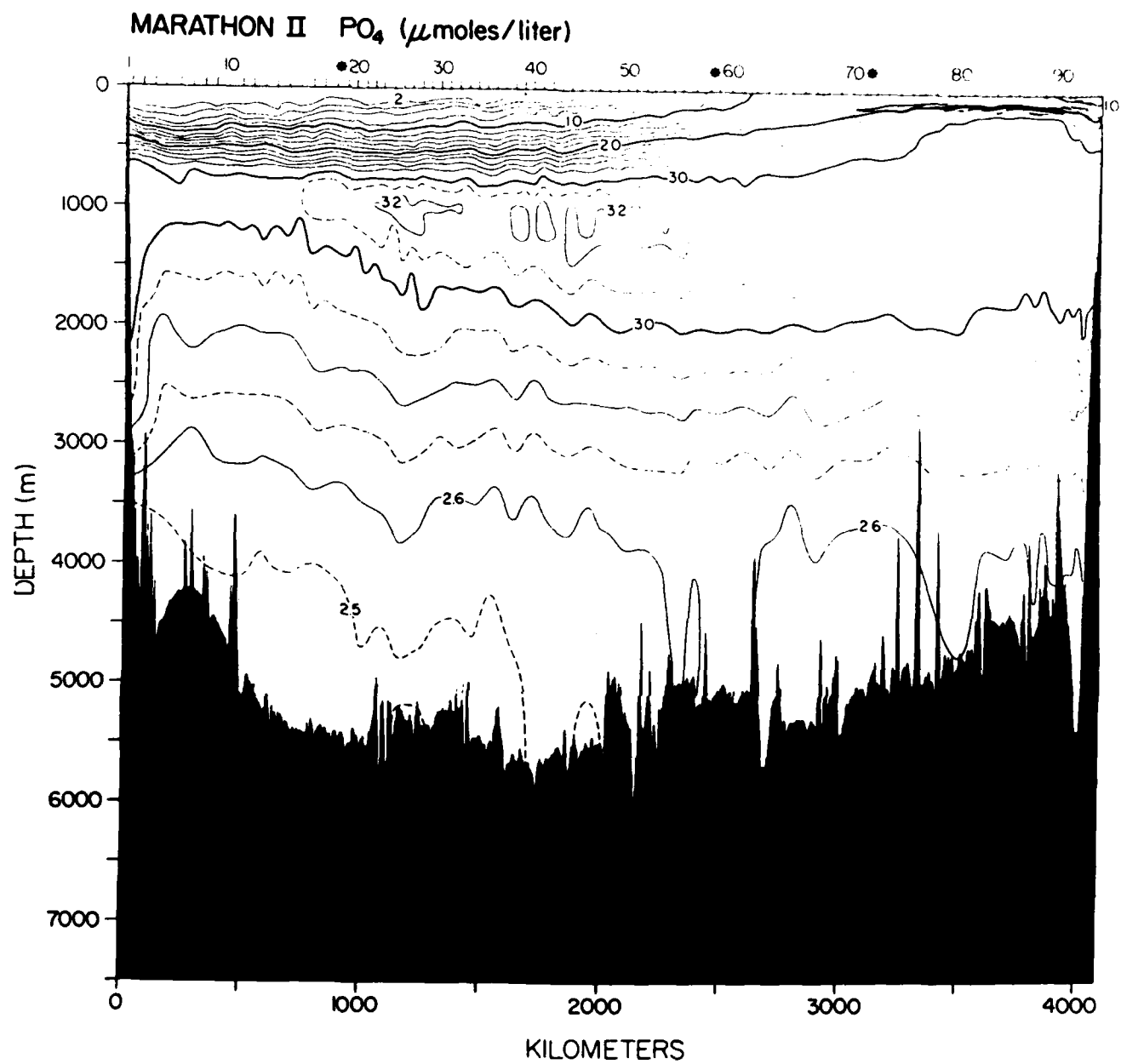


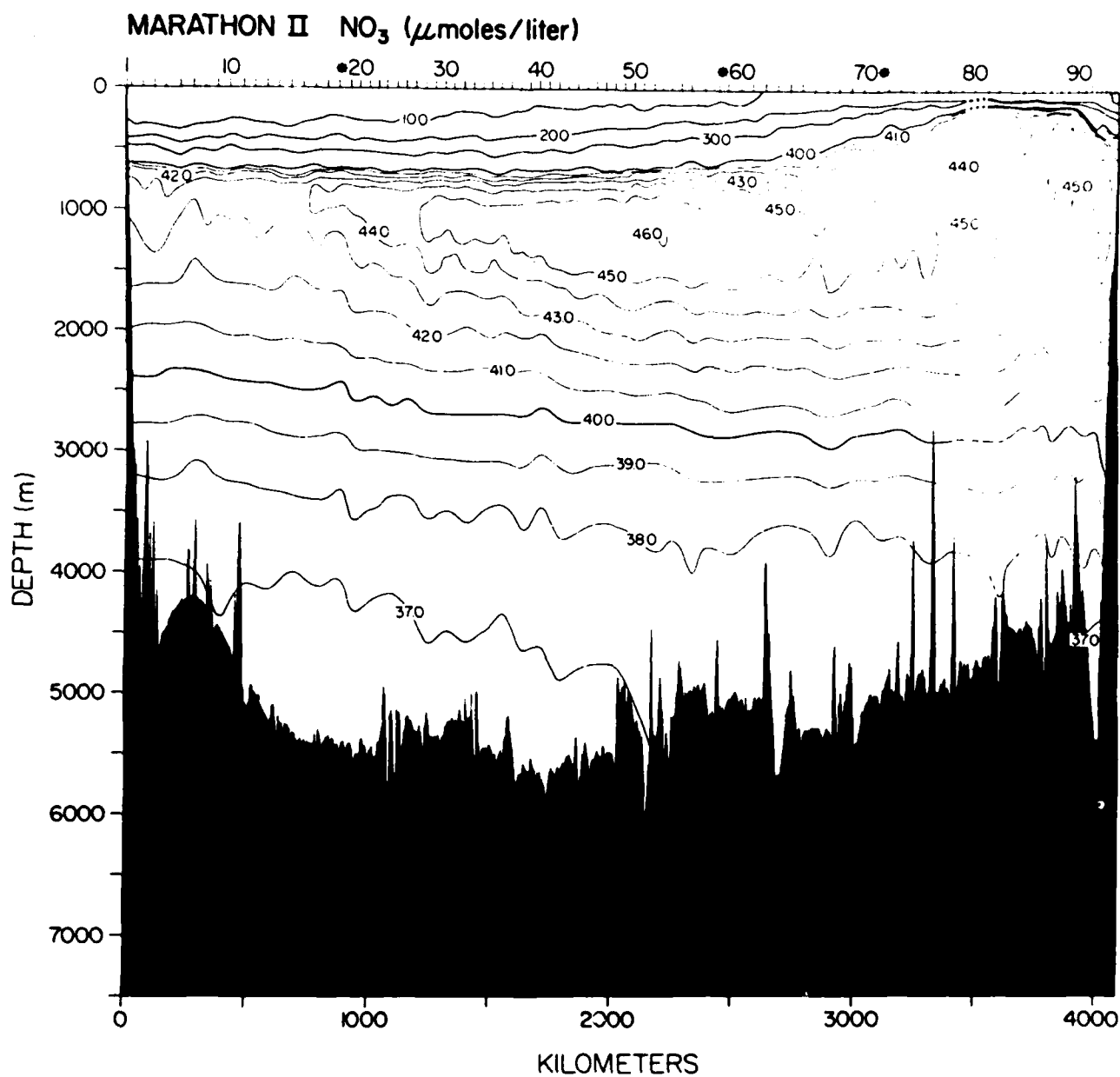
# MARATHON II SALINITY











R/V THOMAS WASHINGTON  
MARATHON LEG 2  
May 5, 1984 to June 4, 1984

| Station # | Date GMT | Time GMT | Latitude  | Longitude  | Depth M | Number of Samples |
|-----------|----------|----------|-----------|------------|---------|-------------------|
| 1         | 05/05/84 | 736      | 21 28.1 N | 157 28.4 W | 746     | 11                |
| 2         | 05/05/84 | 1342     | 21 35.9 N | 157 21.1 W | 3000    | 18                |
| 3         | 05/05/84 | 2054     | 21 57.2 N | 157 4.5 W  |         | 18                |
| 4         | 05/06/84 | 724      | 22 18.0 N | 156 48.0 W | 3905    | 16                |
| 5         | 05/06/84 | 1330     | 22 30.5 N | 156 26.0 W | 4439    | 22                |
| 6         | 05/06/84 | 1942     | 23 2.5 N  | 156 18.1 W |         | 19                |
| 7         | 05/07/84 | 130      | 23 23.5 N | 155 55.7 W | 4194    | 23                |
| 8         | 05/07/84 | 818      | 23 45.0 N | 155 38.4 W | 4340    | 16                |
| 9         | 05/07/84 | 1436     | 24 6.0 N  | 155 21.0 W | 4364    | 23                |
| 10        | 05/07/84 | 2042     | 24 28.0 N | 155 3.6 W  | 3128    | 17                |
| 11        | 05/08/84 | 306      | 24 48.3 N | 154 37.8 W | 5144    | 23                |
| 12        | 05/08/84 | 800      | 25 11.0 N | 154 28.6 W | 4990    | 17                |
| 13        | 05/08/84 | 1500     | 25 32.5 N | 154 11.0 W | 5266    | 23                |
| 14        | 05/08/84 | 2042     | 25 54.0 N | 153 53.4 W | 5400    | 18                |
| 15        | 05/09/84 | 300      | 26 15.5 N | 153 35.7 W | 5382    | 24                |
| 16        | 05/09/84 | 854      | 26 36.4 N | 153 16.4 W | 5322    | 17                |
| 17        | 05/09/84 | 1454     | 26 59.2 N | 152 57.7 W | 5493    | 24                |
| 18        | 05/09/84 | 2054     | 27 20.0 N | 152 41.9 W | 5379    | 18                |
| 19        | 05/10/84 | 242      | 27 41.6 N | 152 23.6 W | 5513    | 23                |
| 20        | 05/10/84 | 1024     | 28 21.3 N | 152 0.4 W  | 5482    | 17                |
| 21        | 05/11/84 | 224      | 28 1.9 N  | 152 6.0 W  | 5544    | 23                |
| 22        | 05/11/84 | 942      | 28 42.5 N | 152 0.3 W  | 5602    | 24                |
| 23        | 05/12/84 | 1312     | 29 2.8 N  | 152 0.1 W  | 5611    | 17                |
| 24        | 05/12/84 | 2036     | 29 21.3 N | 151 59.8 W | 5363    | 24                |
| 25        | 05/13/84 | 324      | 29 43.8 N | 152 0.8 W  | 5586    | 17                |
| 26        | 05/13/84 | 918      | 30 4.6 N  | 152 0.8 W  | 5317    | 24                |
| 27        | 05/13/84 | 1524     | 30 26.4 N | 152 0.3 W  | 5312    | 17                |
| 28        | 05/13/84 | 2124     | 30 47.5 N | 152 0.0 W  | 5435    | 24                |
| 29        | 05/14/84 | 524      | 31 8.9 N  | 152 0.0 W  | 5420    | 17                |
| 30        | 05/14/84 | 1112     | 31 29.8 N | 152 0.7 W  | 5458    | 24                |
| 31        | 05/14/84 | 1718     | 31 50.3 N | 151 59.2 W | 5219    | 17                |
| 32        | 05/14/84 | 2306     | 32 12.3 N | 152 0.4 W  | 5293    | 23                |
| 33        | 05/15/84 | 530      | 32 32.8 N | 152 0.6 W  | 5229    | 17                |
| 34        | 05/15/84 | 1212     | 32 54.3 N | 152 2.7 W  | 5503    | 24                |
| 35        | 05/15/84 | 1854     | 33 14.4 N | 152 0.6 W  | 5456    | 17                |
| 36        | 05/16/84 | 124      | 33 35.2 N | 151 59.6 W | 5461    | 24                |
| 37        | 05/16/84 | 736      | 33 56.5 N | 151 59.8 W | 5015    | 17                |
| 38        | 05/16/84 | 1418     | 34 18.4 N | 152 0.1 W  | 5687    | 24                |
| 39        | 05/16/84 | 2048     | 34 39.3 N | 151 59.8 W | 5663    | 17                |
| 40        | 05/17/84 | 324      | 35 0.0 N  | 151 59.2 W | 5722    | 24                |
| 41        | 05/17/84 | 942      | 35 20.7 N | 151 59.5 W | 5798    | 17                |
| 42        | 05/17/84 | 1630     | 35 42.6 N | 151 59.9 W | 5611    | 24                |
| 43        | 05/17/84 | 2254     | 36 3.2 N  | 151 59.8 W | 5529    | 17                |
| 44        | 05/18/84 | 542      | 36 24.8 N | 151 59.5 W | 5374    | 24                |
| 45        | 05/18/84 | 1600     | 36 46.2 N | 151 59.9 W | 5528    | 17                |
| 46        | 05/18/84 | 2224     | 37 6.5 N  | 151 58.8 W | 5539    | 24                |
| 47        | 05/19/84 | 436      | 37 27.1 N | 152 0.7 W  | 5565    | 17                |
| 48        | 05/19/84 | 1036     | 37 48.0 N | 152 0.4 W  | 5886    | 24                |
| 49        | 05/19/84 | 1642     | 38 8.8 N  | 151 59.2 W | 4936    | 17                |
| 50        | 05/19/84 | 2224     | 38 30.3 N | 152 0.3 W  | 5255    | 24                |
| 51        | 05/19/84 | 430      | 38 50.9 N | 151 59.1 W | 5358    | 17                |
| 52        | 05/20/84 | 1042     | 39 14.3 N | 151 59.2 W | 5503    | 22                |
| 53        | 05/20/84 | 1724     | 39 33.3 N | 152 0.4 W  | 5157    | 16                |
| 54        | 05/21/84 | 418      | 39 52.9 N | 151 59.8 W | 5606    | 24                |

|    |          |      |           |            |      |    |
|----|----------|------|-----------|------------|------|----|
| 55 | 05/21/84 | 1118 | 40 15.2 N | 152 0.3 W  | 4885 | 14 |
| 56 | 05/22/84 | 736  | 40 37.4 N | 151 59.0 W | 4993 | 24 |
| 57 | 05/22/84 | 1424 | 41 6.8 N  | 151 59.5 W | 4959 | 24 |
| 58 | 05/23/84 | 706  | 41 59.1 N | 152 3.0 W  | 5103 | 24 |
| 59 | 05/23/84 | 1254 | 41 38.9 N | 151 59.7 W | 5090 | 17 |
| 60 | 05/24/84 | 948  | 42 27.6 N | 151 59.5 W | 5111 | 17 |
| 61 | 05/24/84 | 1624 | 42 55.2 N | 151 58.8 W | 5149 | 24 |
| 62 | 05/24/84 | 2348 | 43 23.0 N | 152 0.4 W  | 4762 | 17 |
| 63 | 05/25/84 | 618  | 43 49.7 N | 151 59.4 W | 5689 | 24 |
| 64 | 05/25/84 | 1212 | 44 17.6 N | 152 1.0 W  | 5096 | 17 |
| 65 | 05/25/84 | 1724 | 44 45.3 N | 152 0.0 W  | 5305 | 24 |
| 66 | 05/25/84 | 2312 | 45 12.6 N | 151 59.8 W | 5298 | 17 |
| 67 | 05/26/84 | 518  | 45 39.9 N | 152 0.6 W  | 5374 | 24 |
| 68 | 05/26/84 | 1118 | 46 7.3 N  | 151 59.9 W | 5322 | 17 |
| 69 | 05/26/84 | 1730 | 46 34.7 N | 151 59.0 W | 4854 | 24 |
| 70 | 05/26/84 | 2348 | 47 2.3 N  | 151 59.6 W | 5206 | 17 |
| 71 | 05/27/84 | 554  | 47 34.2 N | 151 59.8 W | 5009 | 24 |
| 73 | 05/27/84 | 1206 | 47 57.9 N | 151 59.7 W | 4849 | 17 |
| 74 | 05/27/84 | 1924 | 48 25.0 N | 151 59.0 W | 5019 | 24 |
| 75 | 05/28/84 | 254  | 48 52.2 N | 152 0.1 W  | 4058 | 17 |
| 76 | 05/28/84 | 900  | 49 19.7 N | 151 59.4 W | 4996 | 24 |
| 77 | 05/28/84 | 1524 | 49 47.8 N | 152 1.1 W  | 4897 | 17 |
| 78 | 05/28/84 | 2124 | 50 15.1 N | 151 59.0 W | 5110 | 24 |
| 79 | 05/29/84 | 418  | 50 42.4 N | 152 0.7 W  | 4993 | 16 |
| 80 | 05/29/84 | 1012 | 51 9.7 N  | 152 0.0 W  | 4781 | 24 |
| 81 | 05/29/84 | 1648 | 51 40.9 N | 151 59.4 W | 4695 | 16 |
| 82 | 05/29/84 | 2324 | 52 4.7 N  | 151 58.2 W | 4965 | 24 |
| 83 | 05/30/84 | 530  | 52 32.0 N | 152 0.6 W  | 4467 | 17 |
| 84 | 05/30/84 | 1136 | 52 59.9 N | 151 59.4 W | 4448 | 24 |
| 85 | 05/30/84 | 1948 | 53 20.5 N | 151 58.9 W | 4531 | 24 |
| 86 | 05/31/84 | 212  | 53 41.1 N | 151 58.9 W | 4846 | 24 |
| 87 | 05/31/84 | 842  | 54 0.5 N  | 151 56.1 W | 4572 | 24 |
| 88 | 05/31/84 | 1530 | 54 23.1 N | 151 57.8 W | 4156 | 24 |
| 89 | 05/31/84 | 2218 | 54 40.2 N | 152 5.3 W  | 4316 | 24 |
| 90 | 06/01/84 | 518  | 54 57.4 N | 152 23.9 W | 4127 | 24 |
| 91 | 06/01/84 | 1218 | 55 13.9 N | 152 31.5 W | 4451 | 24 |
| 92 | 06/01/84 | 1900 | 55 25.6 N | 152 38.1 W | 5155 | 24 |
| 93 | 06/02/84 | 154  | 55 35.9 N | 152 46.3 W | 5377 | 24 |
| 94 | 06/02/84 | 806  | 55 46.6 N | 152 53.0 W | 4405 | 24 |
| 95 | 06/02/84 | 1336 | 55 56.3 N | 152 57.6 W | 2665 | 23 |
| 96 | 06/02/84 | 1824 | 56 4.0 N  | 153 2.7 W  | 1801 | 18 |
| 97 | 06/02/84 | 2242 | 56 12.0 N | 153 7.7 W  | 1340 | 15 |
| 98 | 06/03/84 | 218  | 56 18.0 N | 153 12.4 W | 303  | 8  |

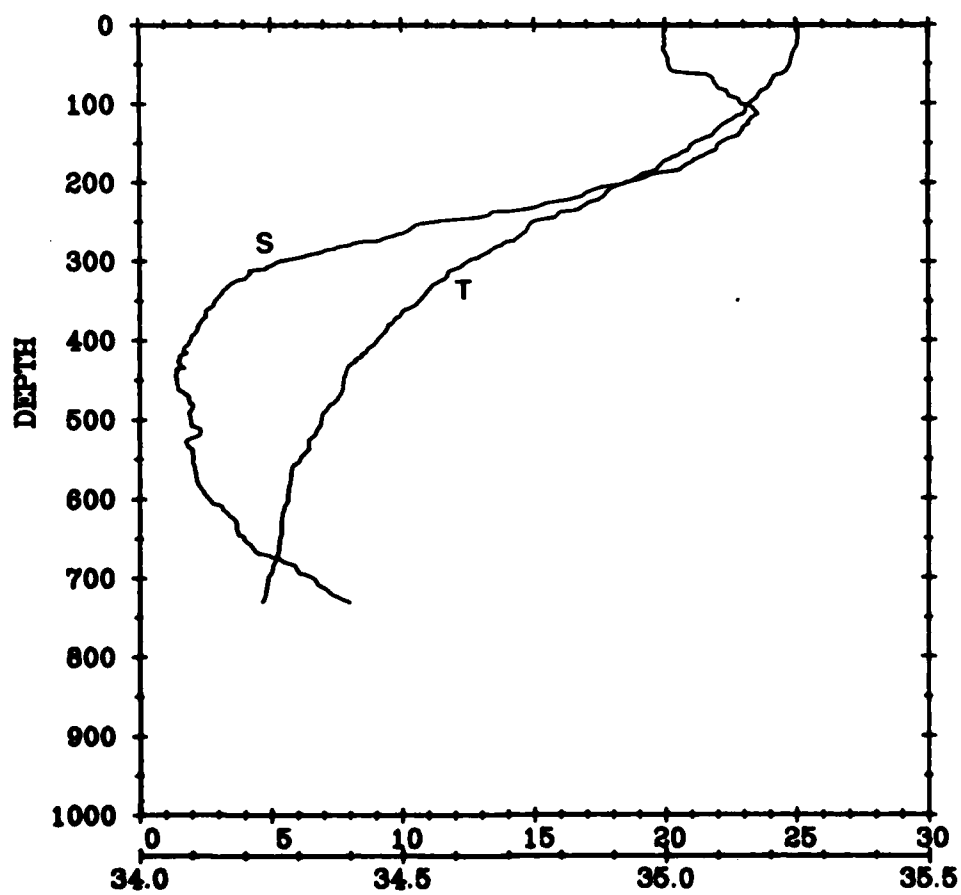
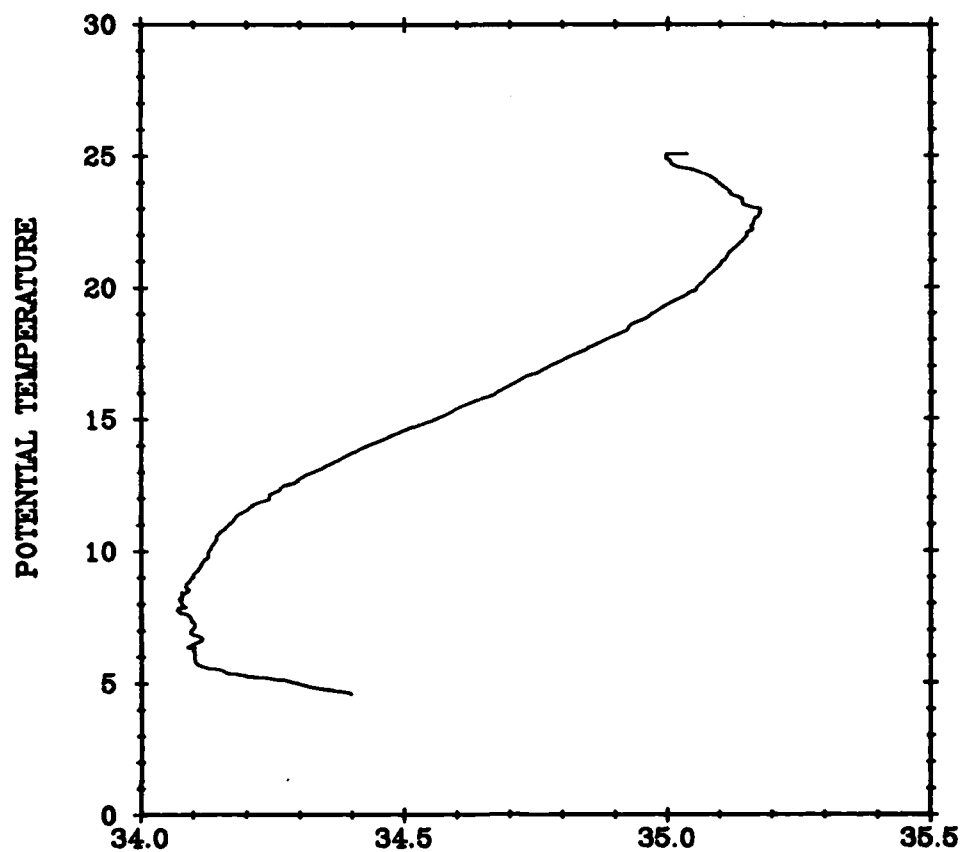
R/V THOMAS WASHINGTON MARATHON LEG II STATION 1

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | SAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | N      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 21 28 1N | 157 28 4W | 5/ 5/84  | 736        | 746    | 80   | 11    | 23 9     | 22 2     | 1017 6 |

| CTD DATA |        | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
|----------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| PRESS    | TEMP   |          |          |         |         |         |         |            |       |
| DB       | DEG C  |          | DEG C    |         |         |         | CL/TON  |            | M     |
| 0        | 25.065 | 35.005   | 25.065   | 23.327  | 31.635  | 39.587  | 454.264 | 0.000      | 0     |
| 20       | 25.037 | 34.997   | 25.033   | 23.331  | 31.639  | 39.593  | 454.749 | 0.091      | 19    |
| 40       | 24.839 | 35.002   | 24.830   | 23.396  | 31.710  | 39.668  | 449.370 | 0.191      | 39    |
| 60       | 24.472 | 35.039   | 24.459   | 23.536  | 31.859  | 39.826  | 436.856 | 0.270      | 59    |
| 80       | 23.838 | 35.105   | 23.821   | 23.775  | 32.115  | 40.097  | 414.795 | 0.355      | 79    |
| 100      | 23.227 | 35.149   | 23.206   | 23.989  | 32.344  | 40.341  | 395.250 | 0.416      | 99    |
| 150      | 21.192 | 35.111   | 21.163   | 24.535  | 32.949  | 41.001  | 344.891 | 0.621      | 149   |
| 200      | 19.518 | 34.924   | 19.483   | 25.095  | 33.593  | 41.725  | 292.931 | 0.781      | 199   |
| 250      | 18.202 | 34.574   | 18.164   | 25.608  | 34.224  | 42.465  | 244.695 | 0.915      | 249   |
| 300      | 17.547 | 34.279   | 17.507   | 25.932  | 34.551  | 42.989  | 214.119 | 1.030      | 299   |
| 350      | 16.614 | 34.146   | 16.572   | 26.187  | 34.986  | 43.399  | 190.013 | 1.131      | 349   |
| 400      | 9.059  | 34.098   | 9.015    | 26.410  | 35.276  | 43.752  | 168.816 | 1.220      | 399   |
| 450      | 7.767  | 34.071   | 7.722    | 26.585  | 35.510  | 44.040  | 151.976 | 1.301      | 447   |
| 500      | 6.929  | 34.097   | 6.882    | 26.724  | 35.687  | 44.253  | 138.844 | 1.373      | 497   |
| 600      | 5.601  | 34.128   | 5.550    | 26.919  | 35.946  | 44.572  | 120.149 | 1.503      | 596   |
| 700      | 4.946  | 34.313   | 4.890    | 27.143  | 36.203  | 44.854  | 99.324  | 1.613      | 695   |
| 736      | 4.631  | 34.399   | 4.573    | 27.247  | 36.318  | 44.986  | 89.470  | 1.647      | 731   |

| NISKIN BOTTLE DATA |        | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|--------------------|--------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   |          |        |        |       |      |      |      |       |          |         |         |         |       |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 47                 | 24.886 | 35.001   | 4.85   | 102.4  | 2.1   | 0.19 | 0.0  | 0.00 |       | 24.876   | 23.381  | 31.694  | 39.651  | 47    |
| 97                 | 23.195 | 35.173   | 4.83   | 99.1   | 1.6   | 0.20 | 0.0  | 0.00 |       | 23.175   | 24.016  | 32.172  | 40.370  | 97    |
| 147                | 21.066 | 35.105   | 4.49   | 88.7   | 1.8   | 0.28 | 1.4  | 0.08 |       | 21.038   | 24.565  | 32.982  | 41.038  | 147   |
| 195                | 18.371 | 34.927   | 4.45   | 83.5   | 3.4   |      | 3.7  | 0.01 |       | 18.337   | 25.134  | 33.637  | 41.773  | 195   |
| 295                | 12.175 | 34.248   | 4.33   | 71.4   | 11.8  |      | 12.0 | 0.08 |       | 12.136   | 25.979  | 34.713  | 43.065  | 296   |
| 395                | 9.530  | 34.119   | 4.37   | 68.0   | 22.5  |      | 18.6 | 0.03 |       | 9.485    | 26.350  | 35.195  | 43.652  | 396   |
| 497                | 7.121  | 34.101   | 2.58   | 38.0   | 52.2  | 2.25 | 30.9 | 0.01 |       | 7.073    | 26.701  | 35.655  | 44.213  | 499   |
| 594                | 5.637  | 34.127   | 1.28   | 18.2   | 75.6  | 2.84 | 38.8 | 0.00 |       | 5.586    | 26.914  | 35.938  | 44.563  | 597   |
| 690                | 4.961  | 34.316   | 0.77   | 10.8   | 93.3  |      | 41.9 | 0.03 |       | 4.905    | 27.144  | 36.199  | 44.853  | 694   |
| 705                | 4.844  | 34.339   | 0.80   | 11.2   | 95.9  | 3.09 | 42.3 | 0.01 |       | 4.787    | 27.176  | 36.236  | 44.895  | 709   |
| 730                | 4.623  | 34.401   | 0.95   | 11.8   | 100.0 |      | 42.5 | 0.04 |       | 4.565    | 27.249  | 36.321  | 44.989  | 734   |

# MARATHON 2 STA. 1



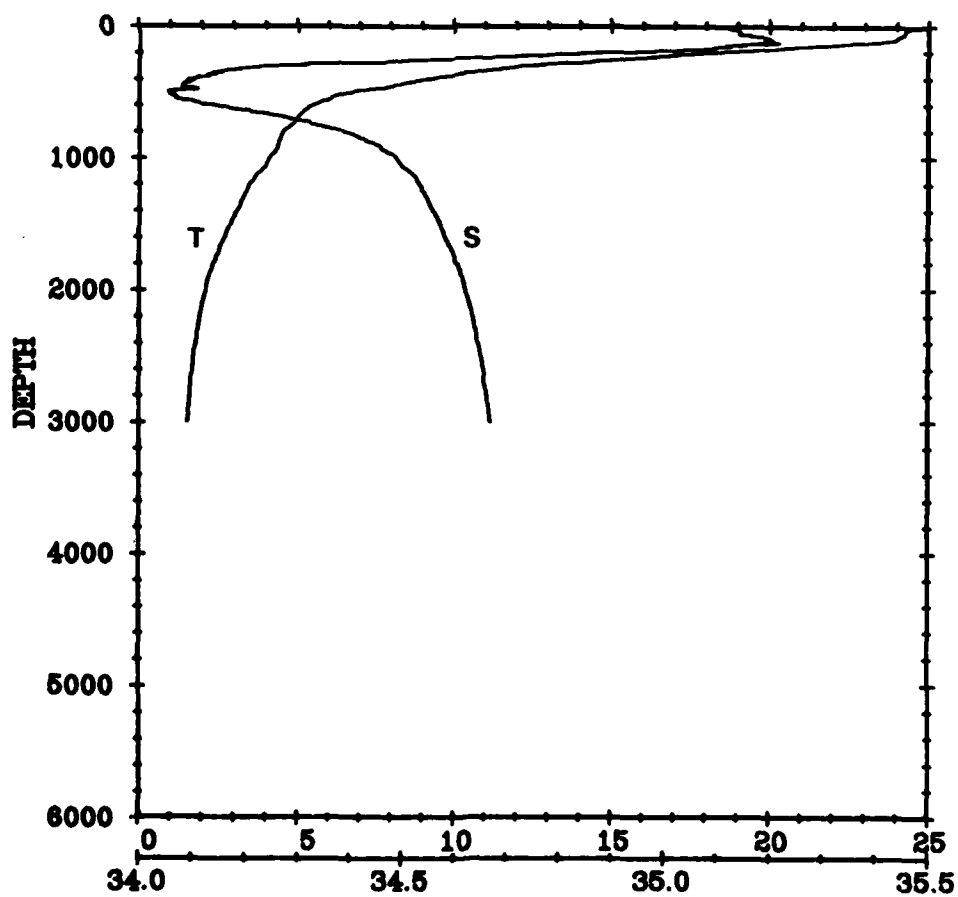
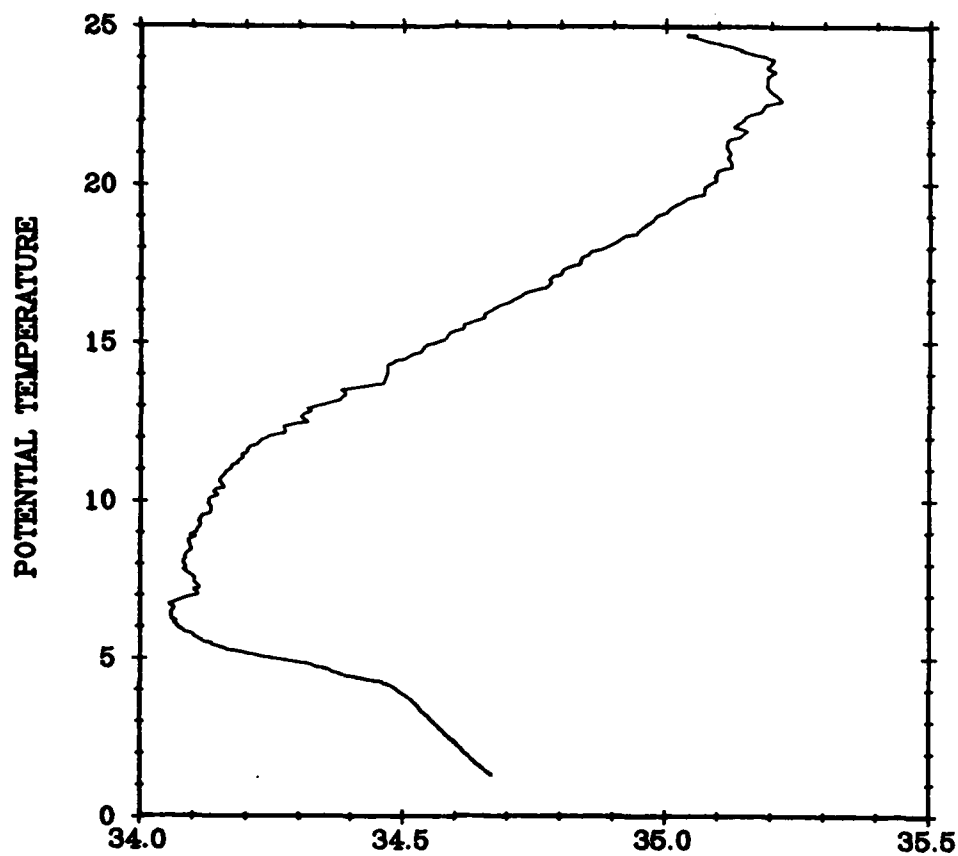
R/V THOMAS WASHINGTON MARATHON LEG II STATION 2

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 21 35 9N | 157 21 1W | 5/ 5/84  | 1342       | 3300   | 90   | 12    | 23 6     | 21 7     | 1015.2 |

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA<br>CL/TON | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |               |            |            |
| 0           | 24 616        | 35 063   | 24 616            | 23 507  | 31 925  | 39 798  | 437.101       | 0.000      | 0          |
| 20          | 24 346        | 35 121   | 24 342            | 23 513  | 31 958  | 39 927  | 425 901       | 0.086      | 19         |
| 40          | 24 259        | 35 140   | 24 251            | 23 575  | 32 002  | 39 973  | 422 767       | 0.171      | 39         |
| 60          | 24 214        | 35 146   | 24 201            | 23 694  | 32 022  | 39 995  | 421 770       | 0.256      | 59         |
| 80          | 24 060        | 35 179   | 24 043            | 23 766  | 32 098  | 40 074  | 415 730       | 0.339      | 79         |
| 100         | 23 914        | 35 199   | 23 893            | 23 825  | 32 161  | 40 141  | 410 869       | 0.422      | 99         |
| 150         | 21 357        | 35 131   | 21 328            | 24 505  | 32 914  | 40 962  | 347 773       | 0.512      | 149        |
| 200         | 18 348        | 34 918   | 18 313            | 25 133  | 33 637  | 41 773  | 299 291       | 0.771      | 199        |
| 250         | 15 422        | 34 604   | 15 383            | 25 583  | 34 130  | 42 423  | 247 210       | 0.905      | 249        |
| 300         | 12 490        | 34 289   | 12 450            | 25 951  | 34 672  | 43 012  | 212 306       | 1.020      | 298        |
| 350         | 10 667        | 34 152   | 10 625            | 26 182  | 34 979  | 43 390  | 190 486       | 1.121      | 348        |
| 400         | 9 268         | 34 109   | 9 224             | 26 385  | 35 242  | 43 709  | 171 333       | 1.211      | 398        |
| 450         | 8 168         | 34 084   | 8 122             | 26 536  | 35 443  | 43 956  | 156 967       | 1.293      | 447        |
| 500         | 6 822         | 34 066   | 6 776             | 26 714  | 35 692  | 44 254  | 139 659       | 1.367      | 497        |
| 600         | 5 540         | 34 129   | 5 490             | 26 977  | 35 957  | 44 596  | 119 299       | 1.497      | 596        |
| 700         | 4 992         | 34 277   | 4 935             | 27 119  | 36 164  | 44 817  | 102 562       | 1.608      | 695        |
| 800         | 4 548         | 34 383   | 4 485             | 27 244  | 36 320  | 44 992  | 90 292        | 1.704      | 795        |
| 900         | 4 356         | 34 448   | 4 286             | 27 317  | 36 432  | 45 033  | 84 090        | 1.791      | 894        |
| 1000        | 4 106         | 34 487   | 4 030             | 27 375  | 36 472  | 45 165  | 79 281        | 1.873      | 993        |
| 1100        | 3 842         | 34 511   | 3 759             | 27 422  | 36 533  | 45 238  | 74 971        | 1.950      | 1092       |
| 1200        | 3 492         | 34 532   | 3 404             | 27 474  | 36 603  | 45 325  | 70 313        | 2.022      | 1190       |
| 1300        | 3 289         | 34 545   | 3 195             | 27 504  | 36 644  | 45 376  | 67 360        | 2.091      | 1289       |
| 1400        | 3 106         | 34 557   | 3 005             | 27 521  | 36 691  | 45 423  | 64 971        | 2.157      | 1388       |
| 1500        | 2 995         | 34 571   | 2 778             | 27 563  | 36 724  | 45 477  | 61 935        | 2.221      | 1487       |
| 1600        | 2 719         | 34 592   | 2 606             | 27 587  | 36 757  | 45 519  | 59 728        | 2.282      | 1586       |
| 1700        | 2 533         | 34 594   | 2 414             | 27 613  | 36 794  | 45 565  | 57 162        | 2.340      | 1684       |
| 1800        | 2 389         | 34 601   | 2 264             | 27 631  | 36 820  | 45 599  | 55 423        | 2.396      | 1781       |
| 1900        | 2 212         | 34 613   | 2 091             | 27 655  | 36 854  | 45 642  | 52 873        | 2.450      | 1882       |
| 2000        | 2 108         | 34 620   | 1 970             | 27 670  | 36 875  | 45 668  | 51 533        | 2.503      | 1980       |
| 2100        | 2 011         | 34 627   | 1 866             | 27 683  | 36 894  | 45 693  | 50 244        | 2.554      | 2079       |
| 2200        | 1 922         | 34 634   | 1 770             | 27 696  | 36 912  | 45 716  | 49 022        | 2.603      | 2177       |
| 2300        | 1 846         | 34 639   | 1 686             | 27 707  | 36 927  | 45 735  | 48 077        | 2.652      | 2275       |
| 2400        | 1 796         | 34 643   | 1 628             | 27 714  | 36 938  | 45 749  | 47 509        | 2.700      | 2374       |
| 2500        | 1 722         | 34 649   | 1 547             | 27 725  | 36 953  | 45 768  | 46 465        | 2.747      | 2472       |
| 2600        | 1 682         | 34 653   | 1 499             | 27 732  | 36 963  | 45 790  | 45 983        | 2.793      | 2570       |
| 2700        | 1 644         | 34 657   | 1 452             | 27 738  | 36 972  | 45 792  | 45 512        | 2.839      | 2669       |
| 2800        | 1 609         | 34 661   | 1 409             | 27 745  | 36 980  | 45 802  | 45 065        | 2.884      | 2767       |
| 2900        | 1 579         | 34 665   | 1 370             | 27 751  | 36 998  | 45 813  | 44 672        | 2.929      | 2865       |
| 3000        | 1 546         | 34 669   | 1 328             | 27 757  | 36 997  | 45 823  | 44 224        | 2.973      | 2961       |
| 3038        | 1 540         | 34 670   | 1 319             | 27 758  | 36 999  | 45 826  | 44 179        | 2.990      | 3000       |

| NISKIN BOTTLE DATA |               |          |                |             |              |             |             |             |               |                   |         |         |         |             |
|--------------------|---------------|----------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C | SALINITY | DIS O2<br>ML/L | O2 SAT<br>% | SIO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUSIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
| 24                 | 24 352        | 35 120D  | 4 95           | 103 6       |              |             |             |             |               | 24 347            | 23 631  | 31 956  | 39 925  | 24          |
| 53                 | 24 203        | 35 146   | 4 99           | 104 2       | 1.9          | 0.16        | 0 0         | 0 00        |               | 24 192            | 23 697  | 32 025  | 39 998  | 53          |
| 79                 | 23 998        | 35 192   | 5 01           | 104 3       | 1.0          | 0.13        | 0 0         | 0 00        |               | 23 981            | 23 794  | 32 128  | 40 105  | 79          |
| 129                | 22 501        | 35 197   | 4 74           | 96 1        | 0 9          | 0 18        | 0 2         | 0 13        |               | 22 475            | 24 227  | 32 602  | 40 619  | 129         |
| 180                | 20 327        | 35 089   | 4 53           | 88 2        | 1 4          | 0 31        | 1 9         | 0 03        |               | 20 293            | 24 773  | 33 193  | 41 270  | 180         |
| 281                | 13 340        | 34 360   | 4 52           | 76 5        | 8 3          | 0 84        | 9 8         | 0 00        |               | 13 300            | 25 837  | 34 524  | 42 832  | 282         |
| 380                | 9 494         | 34 110D  |                |             |              |             |             |             |               | 9 451             | 26 349  | 35 195  | 43 653  | 381         |
| 481                | 7 238         | 34 100   | 2 70           | 39 9        | 49 5         | 2 26        | 29 9        | 0 00        |               | 7 191             | 26 683  | 35 632  | 44 185  | 483         |
| 681                | 4 958         | 34 289   | 0 65           | 9 1         | 92 6         | 3 26        | 42 3        | 0 00        |               | 4 903             | 27 123  | 36 178  | 44 933  | 685         |
| 782                | 4 532         | 34 388   | 0 74           | 10 3        | 102 9        |             | 43 2        | 0 00        |               | 4 470             | 27 249  | 36 325  | 44 999  | 786         |
| 882                | 4 315         | 34 460   | 0 84           | 11 6        | 106 0        |             | 43 2        | 0 00        |               | 4 246             | 27 331  | 36 417  | 45 100  | 887         |
| 982                | 4 031         | 34 493   | 0 94           | 12 9        | 112 4        |             | 43 2        | 0 03        |               | 3 956             | 27 387  | 36 488  | 45 194  | 988         |
| 1232               | 3 314         | 34 542   | 1 34           | 19 0        | 127 5        |             | 42 8        | 0 00        |               | 3 224             | 27 499  | 36 637  | 45 368  | 1241        |
| 1481               | 2 534         | 34 574   | 1 54           | 20 5        | 139 2        |             | 42 4        | 0 01        |               | 2 728             | 27 569  | 36 734  | 45 489  | 1493        |
| 1733               | 2 453         | 34 599   | 1 83           | 24 1        | 148 5        | 3 14        | 41 9        | 0 00        |               | 2 311             | 27 624  | 36 809  | 45 584  | 1749        |
| 1989               | 2 128         | 34 618   | 2 11           | 27 6        | 155 6        | 3 07        | 41 0        | 0 00        |               | 1 989             | 27 667  | 36 870  | 45 663  | 2008        |
| 2499               | 1 729         | 34 650   | 2 51           | 32 4        | 167 5        | 2 95        | 39 8        | 0 01        |               | 1 551             | 27 725  | 36 953  | 45 768  | 2527        |
| 3051               | 1 540         | 34 670   | 2 86           | 36 7        | 164 3        |             | 38 6        | 0 02        |               | 1 318             | 27 758  | 36 999  | 45 825  | 3038        |

# MARATHON 2 STA. 2



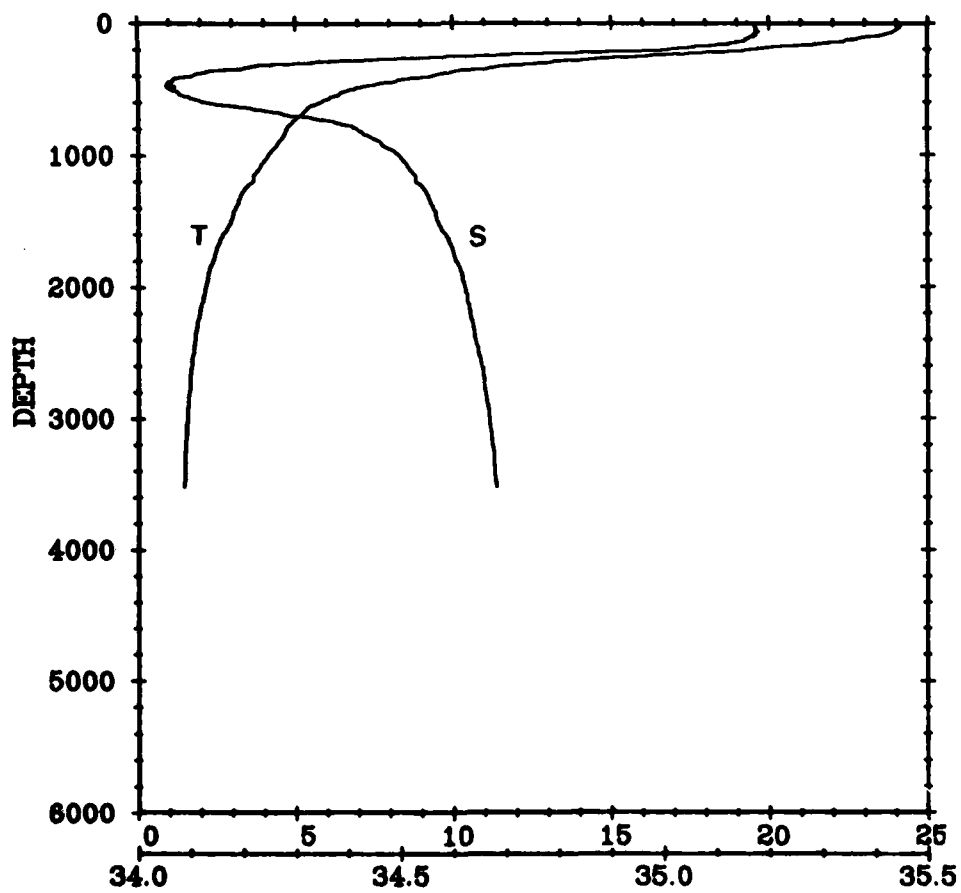
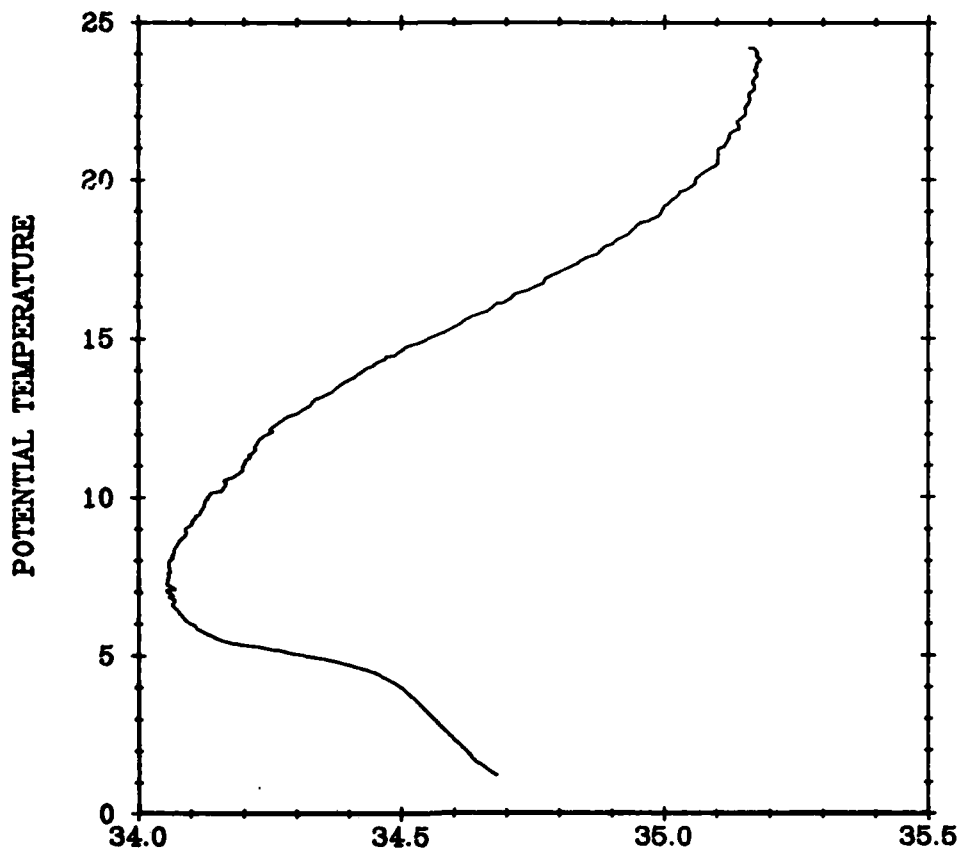
R/V THOMAS WASHINGTON MARATHON LEG II STATION 3

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 21 57 2N | 157 4 5W  | 5/ 5/84  | 2054       |        | 100  | 12    | 25.0     | 22.8     | 1015.9 |

| STD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | GVA<br>CL/TON | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |               |            |            |
| 0           | 24.157        | 35.168   | 24.167            | 23.721  | 32.050  | 40.323  | 416.692       | 0.000      | 0          |
| 20          | 24.131        | 35.172   | 24.127            | 23.735  | 32.066  | 40.340  | 416.100       | 0.083      | 19         |
| 40          | 24.055        | 35.174   | 24.057            | 23.758  | 32.090  | 40.366  | 414.851       | 0.166      | 39         |
| 60          | 23.944        | 35.175   | 23.931            | 23.796  | 32.131  | 40.410  | 412.021       | 0.249      | 59         |
| 80          | 23.724        | 35.176   | 23.707            | 23.863  | 32.204  | 40.489  | 406.463       | 0.331      | 79         |
| 100         | 23.315        | 35.171   | 23.294            | 23.980  | 32.332  | 40.527  | 396.104       | 0.411      | 99         |
| 150         | 21.924        | 35.142   | 21.894            | 24.357  | 32.749  | 40.781  | 362.015       | 0.601      | 149        |
| 200         | 19.499        | 35.021   | 19.463            | 24.919  | 33.386  | 41.487  | 309.892       | 0.769      | 199        |
| 250         | 16.124        | 34.686   | 16.084            | 25.488  | 34.069  | 42.279  | 256.522       | 0.910      | 249        |
| 300         | 13.124        | 34.339   | 13.083            | 25.865  | 34.561  | 42.977  | 220.916       | 1.030      | 298        |
| 350         | 10.967        | 34.193   | 10.924            | 26.161  | 34.945  | 43.343  | 192.700       | 1.133      | 348        |
| 400         | 9.282         | 34.104   | 9.238             | 26.379  | 35.235  | 43.702  | 171.927       | 1.224      | 398        |
| 450         | 7.921         | 34.061   | 7.876             | 26.555  | 35.473  | 43.997  | 154.992       | 1.306      | 447        |
| 500         | 6.829         | 34.061   | 6.782             | 26.709  | 35.677  | 44.249  | 140.126       | 1.380      | 497        |
| 600         | 5.797         | 34.122   | 5.745             | 26.891  | 35.908  | 44.525  | 123.111       | 1.511      | 596        |
| 700         | 5.146         | 34.279   | 5.109             | 27.091  | 36.137  | 44.782  | 104.579       | 1.625      | 695        |
| 800         | 4.699         | 34.412   | 4.635             | 27.250  | 36.319  | 44.983  | 89.975        | 1.722      | 795        |
| 900         | 4.458         | 34.457   | 4.387             | 27.313  | 36.393  | 45.069  | 84.668        | 1.810      | 894        |
| 1000        | 4.113         | 34.494   | 4.056             | 27.378  | 36.474  | 45.165  | 78.890        | 1.891      | 993        |
| 1100        | 3.847         | 34.515   | 3.764             | 27.424  | 36.535  | 45.240  | 74.736        | 1.968      | 1092       |
| 1200        | 3.638         | 34.529   | 3.549             | 27.457  | 36.579  | 45.294  | 71.984        | 2.042      | 1191       |
| 1300        | 3.282         | 34.535   | 3.188             | 27.539  | 36.684  | 45.382  | 66.908        | 2.111      | 1289       |
| 1400        | 3.105         | 34.561   | 3.004             | 27.634  | 36.684  | 45.425  | 64.655        | 2.177      | 1388       |
| 1500        | 2.956         | 34.569   | 2.849             | 27.555  | 36.713  | 45.462  | 62.912        | 2.241      | 1487       |
| 1600        | 2.716         | 34.582   | 2.623             | 27.585  | 36.755  | 45.516  | 59.912        | 2.302      | 1586       |
| 1700        | 2.525         | 34.595   | 2.406             | 27.614  | 36.795  | 45.567  | 56.993        | 2.361      | 1684       |
| 1800        | 2.398         | 34.604   | 2.273             | 27.632  | 36.821  | 45.599  | 55.122        | 2.417      | 1783       |
| 1900        | 2.237         | 34.614   | 2.105             | 27.654  | 36.852  | 45.638  | 53.103        | 2.471      | 1882       |
| 2000        | 2.154         | 34.621   | 2.015             | 27.667  | 36.869  | 45.661  | 52.025        | 2.523      | 1980       |
| 2100        | 2.041         | 34.626   | 1.915             | 27.679  | 36.897  | 45.683  | 50.918        | 2.575      | 2079       |
| 2200        | 1.957         | 34.632   | 1.804             | 27.692  | 36.906  | 45.708  | 49.606        | 2.625      | 2177       |
| 2300        | 1.854         | 34.637   | 1.704             | 27.704  | 36.923  | 45.730  | 48.450        | 2.674      | 2275       |
| 2400        | 1.815         | 34.641   | 1.647             | 27.711  | 36.934  | 45.744  | 47.898        | 2.722      | 2374       |
| 2500        | 1.755         | 34.645   | 1.579             | 27.720  | 36.947  | 45.760  | 47.110        | 2.770      | 2472       |
| 2600        | 1.692         | 34.652   | 1.508             | 27.730  | 36.960  | 45.777  | 46.187        | 2.817      | 2570       |
| 2700        | 1.652         | 34.657   | 1.460             | 27.738  | 36.971  | 45.790  | 45.618        | 2.863      | 2669       |
| 2800        | 1.613         | 34.659   | 1.412             | 27.741  | 36.976  | 45.797  | 45.534        | 2.908      | 2767       |
| 2900        | 1.583         | 34.664   | 1.374             | 27.750  | 36.987  | 45.811  | 44.799        | 2.953      | 2865       |
| 3000        | 1.560         | 34.667   | 1.342             | 27.754  | 36.993  | 45.819  | 44.562        | 2.998      | 2963       |
| 3100        | 1.535         | 34.673   | 1.308             | 27.759  | 37.000  | 45.828  | 44.287        | 3.042      | 3061       |
| 3200        | 1.511         | 34.673   | 1.275             | 27.764  | 37.007  | 45.836  | 44.015        | 3.087      | 3159       |
| 3300        | 1.480         | 34.677   | 1.234             | 27.770  | 37.015  | 45.846  | 43.560        | 3.130      | 3257       |
| 3400        | 1.476         | 34.678   | 1.221             | 27.772  | 37.017  | 45.849  | 43.701        | 3.174      | 3355       |
| 3500        | 1.466         | 34.680   | 1.201             | 27.775  | 37.022  | 45.854  | 43.678        | 3.218      | 3453       |
| 3572        | 1.454         | 34.681   | 1.182             | 27.777  | 37.025  | 45.859  | 43.618        | 3.249      | 3523       |

| MISKIN BOTTLE DATA |               | DIS O2<br>ML/L | O2 SAT<br>% | SIC3<br>UM/L | PC4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUBIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |                |             |              |             |             |             |               |                   |         |         |         |             |
| 29                 | 24.007        | 35.173         | 5.07        | 105.6        | 1.5         | 0.16        | 0.1         | 0.00          | 24.001            | 23.774  | 32.107  | 40.084  | 29          |
| 49                 | 23.893        | 35.172         | 5.14        | 107.0        | 0.8         | 0.16        | 0.1         | 0.00          | 23.983            | 23.778  | 32.112  | 40.090  | 48          |
| 96                 | 23.542        | 35.176         | 5.24        | 104.1        | 0.6         | 0.15        | 0.1         | 0.00          | 23.522            | 23.917  | 32.263  | 40.253  | 96          |
| 187                | 22.635        | 35.289         | 4.43        | 86.1         | 1.8         |             | 2.1         | 0.02          | 20.200            | 24.763  | 33.206  | 41.285  | 187         |
| 290                | 14.115        | 34.462         | 4.47        | 76.9         | 5.9         | 0.72        | 8.4         | 0.11          | 14.193            | 25.737  | 34.393  | 42.672  | 290         |
| 393                | 9.727         | 34.120         | 4.33        | 67.7         | 22.0        | 1.36        | 19.5        | 0.00          | 9.682             | 26.318  | 35.155  | 43.604  | 394         |
| 489                | 7.213         | 34.062         | 2.73        | 40.3         | 47.0        | 2.14        | 10.1        | 0.00          | 7.166             | 26.657  | 35.607  | 44.162  | 491         |
| 594                | 5.722         | 34.132         | 1.27        | 18.1         | 73.7        | 2.80        | 19.4        | 0.00          | 5.671             | 26.908  | 35.928  | 44.549  | 597         |
| 697                | 5.073         | 34.304         | 0.61        | 8.6          | 91.9        | 1.10        | 42.1        | 0.00          | 5.016             | 27.122  | 36.172  | 44.820  | 701         |
| 802                | 4.677         | 34.418         | 0.72        | 10.0         | 99.7        |             | 42.9        | 0.00          | 4.613             | 27.258  | 36.326  | 44.992  | 807         |
| 910                | 4.184         | 34.466         | 0.83        | 11.5         | 105.5       |             | 43.7        | 0.01          | 4.312             | 27.328  | 36.411  | 45.091  | 916         |
| 1016               | 4.030         | 34.502         | 0.90        | 12.3         | 112.3       |             | 44.2        | 0.01          | 3.952             | 27.395  | 36.496  | 45.192  | 1023        |
| 1263               | 3.441         | 34.541         | 1.17        | 15.8         | 126.9       |             | 44.1        | 0.00          | 3.347             | 27.486  | 36.618  | 45.343  | 1272        |
| 1524               | 2.865         | 34.575         | 1.47        | 19.6         | 139.5       |             | 42.4        | 0.02          | 2.755             | 27.568  | 36.731  | 45.485  | 1537        |
| 1773               | 2.422         | 34.603         | 1.83        | 24.1         | 149.0       | 2.94        | 41.5        | 0.00          | 2.297             | 27.629  | 36.816  | 45.594  | 1789        |
| 1992               | 2.113         | 34.624         | 2.13        | 27.8         | 155.4       | 2.86        | 40.9        | 0.00          | 1.993             | 27.671  | 36.875  | 45.667  | 2011        |
| 2453               | 1.753         | 34.647         | 2.19        | 30.9         | 164.8       |             | 39.4        | 0.02          | 1.578             | 27.721  | 36.947  | 45.761  | 2490        |
| 3522               | 1.452         | 34.683         | 3.19        | 40.8         | 158.9       |             | 37.4        | 0.03          | 1.179             | 27.778  | 37.026  | 45.860  | 3570        |

# MARATHON 2 STA. 3



R/V THOMAS WASHINGTON MARATHON LEG II STATION 4

| LATITUDE | LONGITUDE | MO-DY-YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 22 19 ON | 156 48 OM | 5 6/84   | 724        | 1905   | 90   | 9     | 20 6     | 21 1     | 1019 6 |

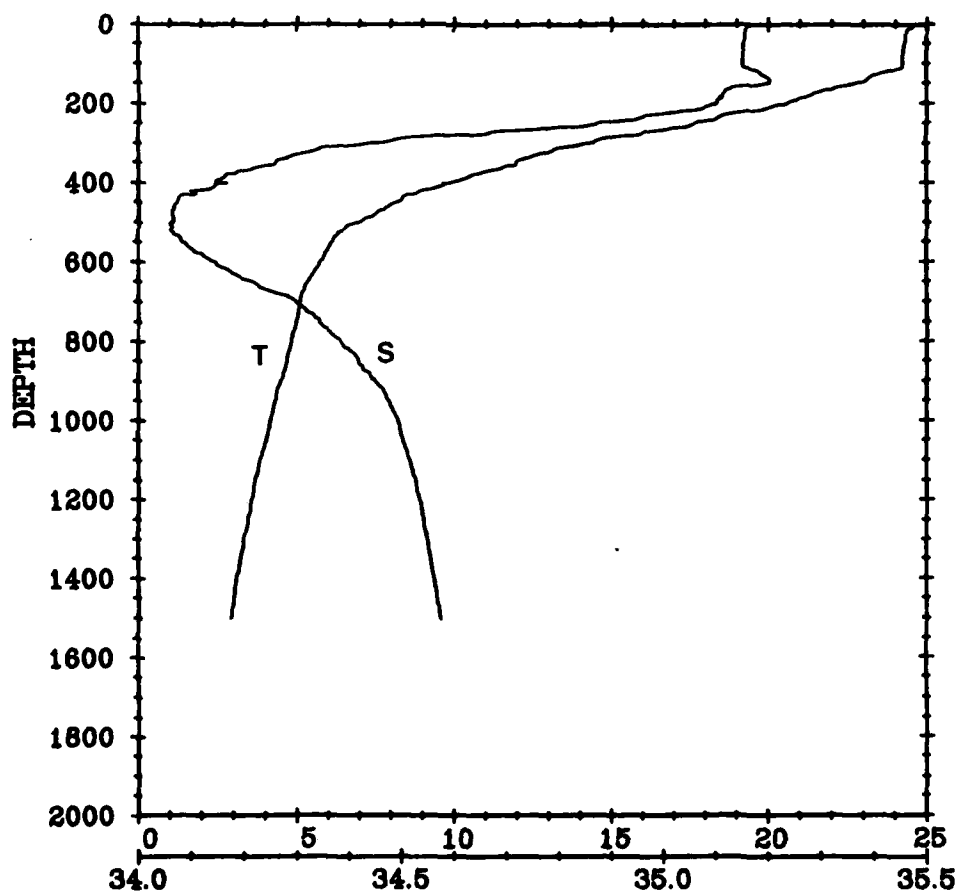
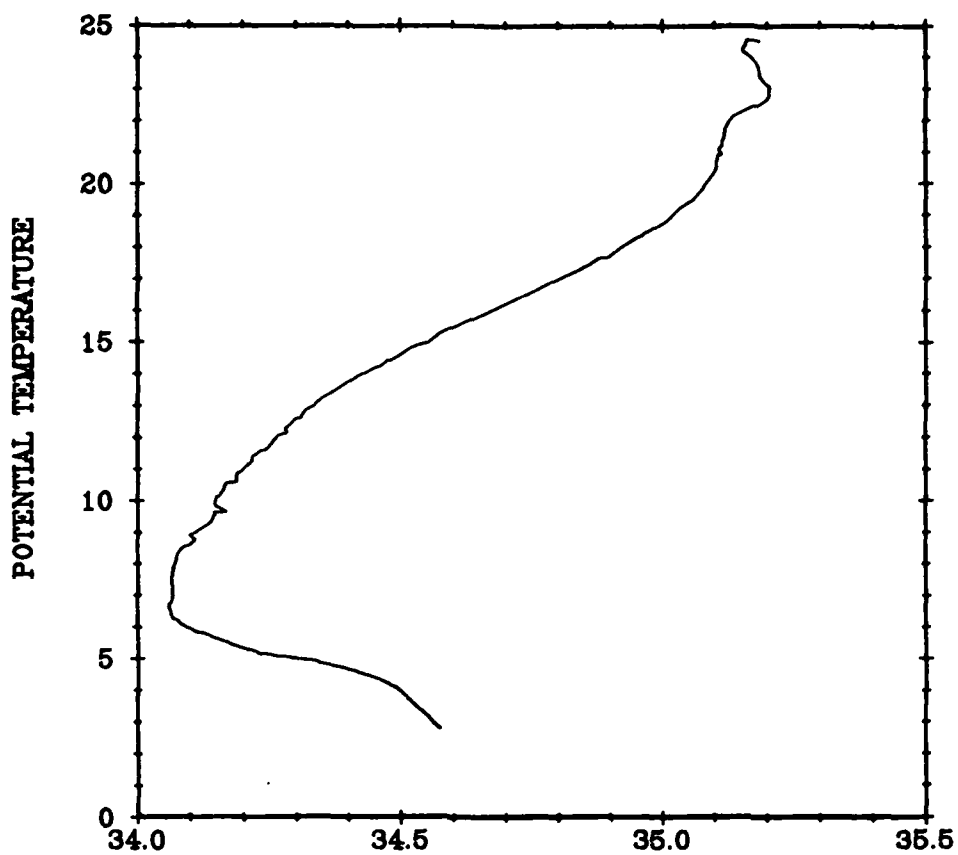
## CTD DATA

| PRESS | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
|-------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C  |          | DEG C    |         |         |         | CM/TON  |            | M     |
| 0     | 24.529 | 35.167   | 24.529   | 23.612  | 31.931  | 39.895  | 427.095 | 0.000      | 0     |
| 20    | 24.374 | 35.156   | 24.370   | 23.651  | 31.975  | 39.943  | 424.174 | 0.085      | 19    |
| 40    | 24.319 | 35.155   | 24.310   | 23.668  | 31.994  | 39.963  | 423.195 | 0.170      | 39    |
| 60    | 24.277 | 35.154   | 24.264   | 23.681  | 32.009  | 39.979  | 422.887 | 0.255      | 59    |
| 80    | 24.260 | 35.152   | 24.243   | 23.686  | 32.013  | 39.985  | 423.163 | 0.339      | 79    |
| 100   | 24.239 | 35.153   | 24.219   | 23.694  | 32.022  | 39.994  | 423.404 | 0.424      | 99    |
| 120   | 22.711 | 35.187   | 22.681   | 24.169  | 32.538  | 40.549  | 390.133 | 0.625      | 149   |
| 140   | 20.527 | 35.098   | 20.489   | 24.708  | 33.142  | 41.213  | 330.219 | 0.802      | 199   |
| 160   | 17.758 | 34.887   | 17.725   | 25.254  | 33.777  | 41.932  | 279.357 | 0.955      | 249   |
| 180   | 14.274 | 34.457   | 14.230   | 25.720  | 34.370  | 42.645  | 235.195 | 1.083      | 299   |
| 200   | 11.997 | 34.261   | 11.941   | 26.027  | 34.768  | 43.127  | 206.118 | 1.194      | 348   |
| 220   | 9.957  | 34.152   | 9.911    | 26.305  | 35.132  | 43.571  | 179.441 | 1.290      | 398   |
| 240   | 8.204  | 34.074   | 8.158    | 26.523  | 35.428  | 43.940  | 158.248 | 1.374      | 447   |
| 260   | 6.987  | 34.064   | 6.940    | 26.690  | 35.651  | 44.215  | 142.396 | 1.450      | 497   |
| 280   | 5.789  | 34.137   | 5.737    | 26.904  | 35.921  | 44.538  | 121.895 | 1.582      | 546   |
| 300   | 5.093  | 34.291   | 5.036    | 27.109  | 36.158  | 44.806  | 102.176 | 1.694      | 596   |
| 320   | 4.818  | 34.378   | 4.754    | 27.210  | 36.272  | 44.932  | 93.563  | 1.792      | 645   |
| 340   | 4.511  | 34.444   | 4.440    | 27.297  | 36.374  | 45.048  | 86.281  | 1.882      | 694   |
| 360   | 4.172  | 34.490   | 4.095    | 27.371  | 36.465  | 45.154  | 79.660  | 1.965      | 743   |
| 380   | 3.860  | 34.513   | 3.777    | 27.422  | 36.531  | 45.236  | 75.040  | 2.043      | 792   |
| 400   | 3.580  | 34.531   | 3.491    | 27.464  | 36.589  | 45.307  | 71.139  | 2.116      | 841   |
| 420   | 3.352  | 34.547   | 3.257    | 27.500  | 36.636  | 45.366  | 67.965  | 2.185      | 890   |
| 440   | 3.125  | 34.560   | 3.024    | 27.532  | 36.680  | 45.421  | 64.977  | 2.252      | 939   |
| 460   | 2.942  | 34.572   | 2.835    | 27.558  | 36.717  | 45.467  | 62.543  | 2.316      | 988   |
| 480   | 2.901  | 34.575   | 2.793    | 27.565  | 36.725  | 45.478  | 61.929  | 2.325      | 1037  |

## NISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | DIS O2 | O2 SAT | SI03  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 52    | 24.292 | 35.152   | 4.88   | 102.1  | 1.8   | 0.14 | 0.1  | 0.00 | 3.21  | 24.281   | 23.675  | 32.001  | 39.971  | 52    |
| 102   | 24.252 | 35.151   | 4.88   | 102.0  | 1.0   | 0.13 | 0.1  | 0.00 |       | 24.230   | 23.689  | 32.016  | 39.998  | 102   |
| 152   | 23.156 | 35.200   | 4.81   | 99.6   | 0.7   | 0.15 | 0.1  | 0.10 |       | 23.125   | 24.251  | 32.407  | 40.407  | 150   |
| 202   | 20.997 | 35.102   | 4.39   | 86.4   | 1.4   | 0.29 | 1.7  | 0.03 | 3.70  | 20.959   | 24.611  | 33.034  | 41.095  | 201   |
| 252   | 18.209 | 34.938   | 4.18   | 81.9   | 2.5   |      | 3.6  | 0.02 |       | 18.165   | 25.185  | 33.693  | 41.934  | 253   |
| 302   | 14.505 | 34.472   | 4.15   | 75.4   | 7.3   | 0.72 | 8.7  | 0.01 |       | 14.460   | 25.682  | 34.124  | 42.591  | 304   |
| 379   | 10.612 | 34.171   | 4.09   | 65.2   | 19.0  | 1.27 | 17.3 | 0.00 |       | 10.566   | 26.207  | 35.006  | 43.419  | 380   |
| 454   | 8.281  | 34.075   | 3.41   | 51.6   | 34.7  | 1.78 | 25.1 | 0.00 |       | 8.234    | 26.513  | 35.413  | 43.922  | 456   |
| 529   | 6.482  | 34.063   | 2.11   | 30.6   | 58.2  | 2.43 | 34.0 | 0.00 | 1.40  | 6.434    | 26.757  | 35.741  | 44.328  | 531   |
| 603   | 5.758  | 34.141   | 1.18   | 16.8   | 74.1  | 2.80 | 38.9 | 0.00 | 0.34  | 5.756    | 26.910  | 35.929  | 44.548  | 606   |
| 704   | 5.071  | 34.299   | 0.55   | 7.7    | 91.9  |      | 42.6 | 0.00 | 0.15  | 5.013    | 27.118  | 36.163  | 44.817  | 708   |
| 754   | 4.938  | 34.344   | 0.52   | 7.3    | 95.3  |      | 43.0 | 0.04 | 0.01  | 4.876    | 27.169  | 36.226  | 44.880  | 758   |
| 804   | 4.806  | 34.384   | 0.55   | 7.7    | 96.0  |      | 43.2 | 0.05 |       | 4.741    | 27.216  | 36.279  | 44.939  | 809   |
| 1005  | 4.150  | 34.493   | 0.88   | 12.1   | 109.6 |      | 43.6 | 0.01 |       | 4.072    | 27.375  | 36.470  | 45.161  | 1012  |
| 1254  | 3.435  | 34.542   | 1.15   | 15.5   | 125.4 |      | 43.3 | 0.02 |       | 3.342    | 27.488  | 36.620  | 45.345  | 1263  |
| 1502  | 2.893  | 34.573   | 1.53   | 20.4   | 139.5 | 2.99 | 42.7 | 0.00 |       | 2.785    | 27.564  | 36.725  | 45.478  | 1514  |

# MARATHON 2 STA. 4



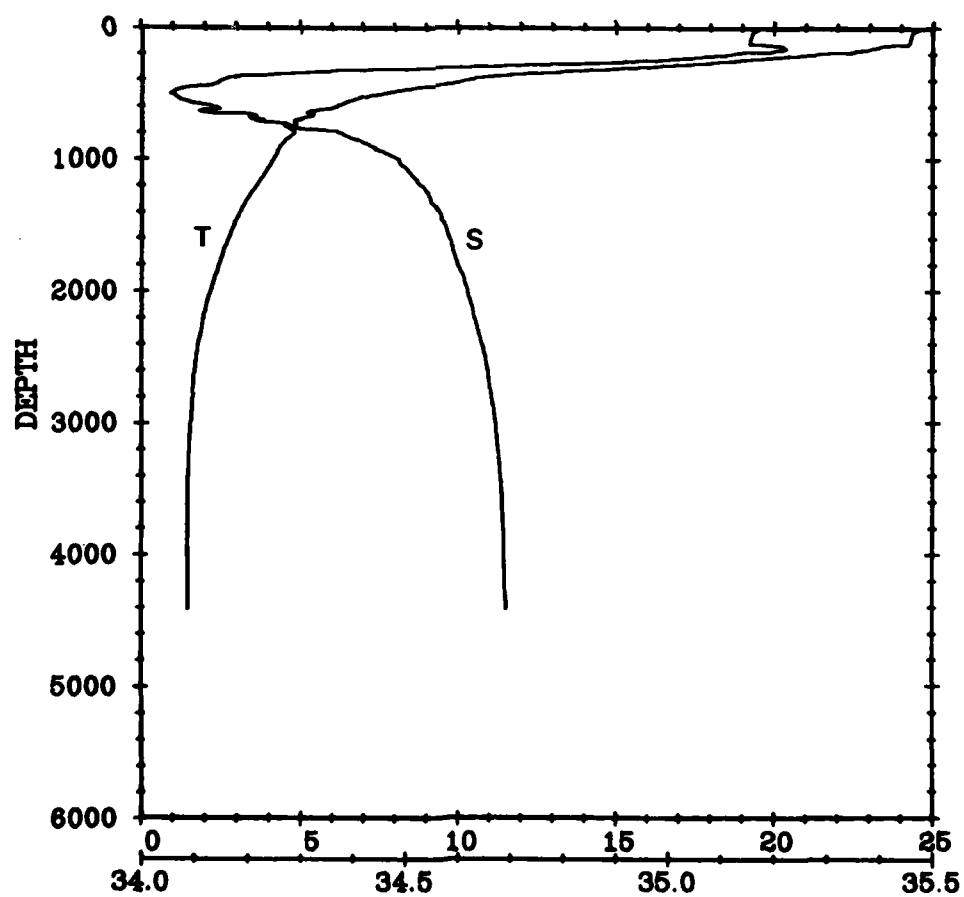
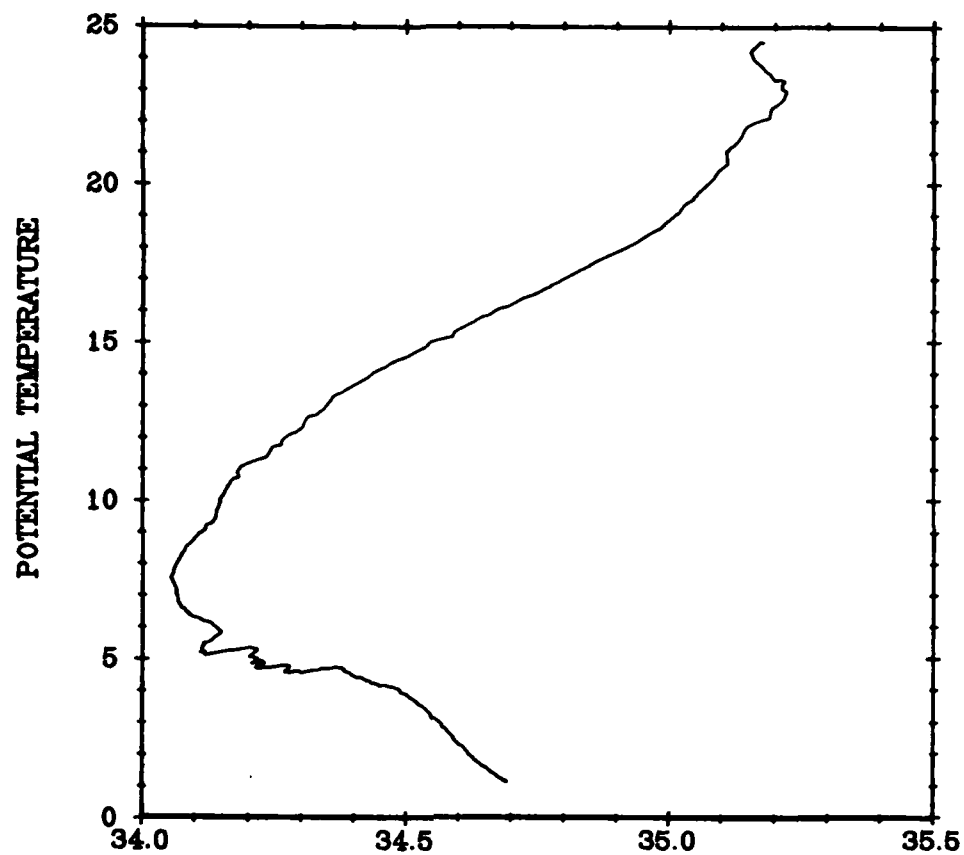
R.V. THOMAS WASHINGTON MARATHON LEG 11 STATION 5

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 22 30 5N | 156 26 0W | 5/ 6/84  | 1330       | 4419   | 100  | 7     | 25.2     | 21.1     | 1019.6 |

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |         |            |            |
| 0           | 24.504        | 35.178   | 24.504            | 23.628  | 31.948  | 39.912  | 425.584 | 0.000      | 0          |
| 10          | 24.451        | 35.167   | 24.447            | 23.636  | 31.958  | 39.924  | 425.582 | 0.085      | 10         |
| 20          | 24.396        | 35.159   | 24.327            | 23.666  | 31.991  | 39.960  | 423.591 | 0.170      | 20         |
| 30          | 24.299        | 35.156   | 24.286            | 23.676  | 32.002  | 39.972  | 423.470 | 0.255      | 30         |
| 40          | 24.283        | 35.155   | 24.266            | 23.681  | 32.008  | 39.978  | 423.803 | 0.339      | 40         |
| 50          | 24.266        | 35.153   | 24.245            | 23.686  | 32.013  | 39.985  | 424.178 | 0.424      | 50         |
| 60          | 23.185        | 35.213   | 23.154            | 24.052  | 32.438  | 40.405  | 391.210 | 0.528      | 60         |
| 70          | 21.339        | 35.126   | 21.299            | 24.509  | 32.919  | 40.969  | 349.337 | 0.813      | 70         |
| 80          | 18.699        | 34.979   | 18.655            | 25.094  | 33.596  | 41.712  | 294.596 | 0.974      | 80         |
| 90          | 15.919        | 34.659   | 15.872            | 25.515  | 34.155  | 42.321  | 255.410 | 1.122      | 90         |
| 100         | 12.303        | 34.291   | 12.257            | 25.990  | 34.719  | 43.065  | 219.817 | 1.228      | 100        |
| 110         | 10.304        | 34.154   | 10.257            | 26.248  | 35.060  | 43.485  | 185.144 | 1.327      | 110        |
| 120         | 9.258         | 34.112   | 9.209             | 26.422  | 35.288  | 43.764  | 158.677 | 1.415      | 120        |
| 130         | 7.696         | 34.057   | 7.646             | 26.585  | 35.513  | 44.047  | 132.759 | 1.496      | 130        |
| 140         | 6.139         | 34.129   | 6.086             | 26.854  | 35.854  | 44.456  | 107.281 | 1.566      | 140        |
| 150         | 4.928         | 34.213   | 4.872             | 27.066  | 36.125  | 44.781  | 116.523 | 1.752      | 150        |
| 160         | 4.792         | 34.358   | 4.718             | 27.206  | 36.270  | 44.932  | 94.258  | 1.951      | 160        |
| 170         | 4.037         | 34.431   | 4.267             | 27.306  | 36.391  | 45.073  | 85.118  | 1.943      | 170        |
| 180         | 4.101         | 34.482   | 4.054             | 27.369  | 36.465  | 45.156  | 79.754  | 2.025      | 180        |
| 190         | 3.879         | 34.575   | 3.796             | 27.413  | 36.522  | 45.225  | 75.861  | 2.103      | 190        |
| 200         | 3.619         | 34.526   | 3.530             | 27.457  | 36.579  | 45.295  | 71.977  | 2.177      | 200        |
| 210         | 3.341         | 34.545   | 3.246             | 27.499  | 36.636  | 45.366  | 67.981  | 2.247      | 210        |
| 220         | 3.107         | 34.561   | 3.006             | 27.534  | 36.684  | 45.426  | 64.689  | 2.313      | 220        |
| 230         | 2.898         | 34.573   | 2.791             | 27.563  | 36.724  | 45.477  | 61.942  | 2.376      | 230        |
| 240         | 2.744         | 34.582   | 2.631             | 27.584  | 36.754  | 45.514  | 60.028  | 2.437      | 240        |
| 250         | 2.569         | 34.599   | 2.450             | 27.606  | 36.785  | 45.554  | 57.963  | 2.496      | 250        |
| 260         | 2.446         | 34.597   | 2.320             | 27.623  | 36.809  | 45.585  | 56.407  | 2.554      | 260        |
| 270         | 2.306         | 34.599   | 2.173             | 27.645  | 36.839  | 45.622  | 54.311  | 2.609      | 270        |
| 280         | 2.181         | 34.616   | 2.042             | 27.661  | 36.862  | 45.652  | 52.722  | 2.662      | 280        |
| 290         | 2.051         | 34.622   | 1.905             | 27.676  | 36.885  | 45.682  | 51.105  | 2.714      | 290        |
| 300         | 1.943         | 34.629   | 1.790             | 27.691  | 36.906  | 45.708  | 49.648  | 2.765      | 300        |
| 310         | 1.885         | 34.635   | 1.725             | 27.701  | 36.919  | 45.725  | 48.862  | 2.814      | 310        |
| 320         | 1.796         | 34.642   | 1.628             | 27.714  | 36.937  | 45.748  | 47.592  | 2.862      | 320        |
| 330         | 1.739         | 34.649   | 1.563             | 27.724  | 36.951  | 45.766  | 46.672  | 2.909      | 330        |
| 340         | 1.685         | 34.655   | 1.502             | 27.733  | 36.964  | 45.781  | 45.878  | 2.956      | 340        |
| 350         | 1.644         | 34.657   | 1.452             | 27.738  | 36.972  | 45.792  | 45.512  | 3.001      | 350        |
| 360         | 1.615         | 34.661   | 1.416             | 27.744  | 36.979  | 45.801  | 45.160  | 3.047      | 360        |
| 370         | 1.589         | 34.665   | 1.379             | 27.750  | 36.987  | 45.811  | 44.795  | 3.092      | 370        |
| 380         | 1.553         | 34.669   | 1.335             | 27.756  | 36.996  | 45.822  | 44.322  | 3.136      | 380        |
| 390         | 1.524         | 34.671   | 1.297             | 27.761  | 37.002  | 45.830  | 44.061  | 3.180      | 390        |
| 400         | 1.494         | 34.674   | 1.258             | 27.766  | 37.010  | 45.840  | 43.701  | 3.224      | 400        |
| 410         | 1.481         | 34.676   | 1.235             | 27.769  | 37.014  | 45.845  | 43.646  | 3.268      | 410        |
| 420         | 1.465         | 34.679   | 1.210             | 27.773  | 37.020  | 45.852  | 43.468  | 3.311      | 420        |
| 430         | 1.454         | 34.681   | 1.189             | 27.776  | 37.024  | 45.857  | 43.429  | 3.355      | 430        |
| 440         | 1.449         | 34.683   | 1.174             | 27.779  | 37.027  | 45.862  | 43.473  | 3.398      | 440        |
| 450         | 1.445         | 34.684   | 1.160             | 27.781  | 37.030  | 45.865  | 43.601  | 3.442      | 450        |
| 460         | 1.448         | 34.685   | 1.152             | 27.782  | 37.032  | 45.867  | 43.833  | 3.486      | 460        |
| 470         | 1.449         | 34.686   | 1.142             | 27.783  | 37.034  | 45.870  | 44.033  | 3.530      | 470        |
| 480         | 1.453         | 34.686   | 1.135             | 27.784  | 37.034  | 45.871  | 44.350  | 3.574      | 480        |
| 490         | 1.459         | 34.687   | 1.130             | 27.785  | 37.036  | 45.872  | 44.629  | 3.618      | 490        |
| 500         | 1.462         | 34.688   | 1.122             | 27.786  | 37.038  | 45.875  | 44.859  | 3.663      | 500        |
| 510         | 1.464         | 34.689   | 1.113             | 27.788  | 37.040  | 45.877  | 45.073  | 3.708      | 510        |
| 520         | 1.467         | 34.690   | 1.104             | 27.789  | 37.041  | 45.879  | 45.302  | 3.753      | 520        |
| 530         | 1.468         | 34.690   | 1.095             | 27.790  | 37.043  | 45.881  | 45.542  | 3.794      | 530        |

| NISKIN BOTTLE DATA |               | DIS O2<br>ML/L | O2 SAT<br>% | SIO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUSIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |                |             |              |             |             |             |               |                   |         |         |         |             |
| 10                 | 24.465        | 35.174         | 4.89        | 102.6        | 1.1         | 0.15        | 0.0         | 0.00          | 24.463            | 23.637  | 31.958  | 39.924  | 10          |
| 55                 | 24.289        | 35.157         | 4.94        | 103.3        | 0.7         | 0.13        | 0.0         | 0.00          | 24.277            | 23.679  | 32.006  | 39.976  | 55          |
| 105                | 24.266        | 35.155         | 4.90        | 102.4        | 0.5         | 0.12        | 0.0         | 0.00          | 24.244            | 23.688  | 32.015  | 39.986  | 105         |
| 155                | 23.281        | 35.215         | 4.81        | 99.3         | 0.5         | 0.11        | 0.0         | 0.07          | 23.251            | 24.026  | 32.379  | 40.375  | 155         |
| 206                | 21.133        | 35.114         | 4.45        | 98.0         | 0.9         | 0.24        | 1.4         | 0.03          | 21.093            | 24.557  | 32.972  | 41.027  | 206         |
| 305                | 15.061        | 34.550         | 4.41        | 77.4         | 6.0         | 0.63        | 7.5         | 0.21          | 15.014            | 25.623  | 34.244  | 42.490  | 307         |
| 406                | 10.200        | 34.152         | 4.01        | 63.3         | 20.9        | 1.33        | 18.5        | 0.00          | 10.132            | 26.264  | 35.080  | 43.510  | 407         |
| 507                | 7.454         | 34.056         | 3.07        | 45.6         | 42.3        | 2.00        | 28.2        | 0.00          | 7.404             | 26.619  | 35.558  | 44.102  | 509         |
| 607                | 6.127         | 34.134         | 1.35        | 19.4         | 56.6        | 2.66        | 37.3        | 0.00          | 6.073             | 26.859  | 35.860  | 44.462  | 610         |
| 706                | 4.873         | 34.208         | 0.75        | 10.5         | 92.1        | 2.96        | 42.0        | 0.00          | 4.816             | 27.068  | 36.130  | 44.789  | 710         |
| 806                | 4.698         | 34.385         | 0.71        | 9.9          | 99.1        | 3.06        | 42.9        | 0.00          | 4.633             | 27.229  | 36.297  | 44.962  | 810         |
| 907                | 4.277         | 34.440         | 0.91        | 12.5         | 107.1       | 3.35        | 43.0        | 0.00          | 4.206             | 27.319  | 36.408  | 45.093  | 912         |
| 1007               | 4.070         | 34.487         | 1.02        | 14.0         | 112.2       |             | 43.1        | 0.00          | 3.992             | 27.379  | 36.478  | 45.172  | 1013        |
| 1257               | 3.447         | 34.541         | 1.20        | 16.2         | 125.0       |             | 43.1        | 0.00          | 3.354             | 27.486  | 36.617  | 45.342  | 1266        |
| 1506               | 2.876         | 34.579         | 1.48        | 19.7         | 136.9       |             | 42.4        | 0.01          | 2.748             | 27.570  | 36.732  | 45.485  | 1518        |
| 1755               | 2.474         | 34.595         | 1.80        | 23.7         | 147.9       |             | 41.7        | 0.00          | 2.350             | 27.619  | 36.803  | 45.578  | 1771        |
| 2005               | 2.151         | 34.616         | 2.01        | 26.3         | 155.3       |             | 40.9        | 0.01          | 2.010             | 27.663  | 36.866  | 45.657  | 2024        |
| 2504               | 1.712         | 34.651         | 2.60        | 33.6         | 164.5       | 2.70        | 39.6        | 0.00          | 1.534             | 27.728  | 36.956  | 45.772  | 2532        |
| 3002               | 1.528         | 34.672         | 2.95        | 37.9         | 166.3       | 2.62        | 38.6        | 0.00          | 1.306             | 27.761  | 37.002  | 45.829  | 3039        |
| 3500               | 1.451         | 34.682         | 3.23        | 41.3         | 157.9       |             | 37.5        | 0.01          | 1.180             | 27.778  | 37.025  | 45.859  | 3548        |
| 3998               | 1.455         | 34.686         | 3.47        | 44.3         | 157.7       | 2.45        | 36.9        | 0.00          | 1.130             | 27.794  | 37.035  | 45.871  | 4057        |
| 4420               | 1.468         | 34.689         | 3.50        | 44.7         | 153.0       |             | 36.6        | 0.02          | 1.094             | 27.789  | 37.042  | 45.880  | 4490        |

# MARATHON 2 STA. 5



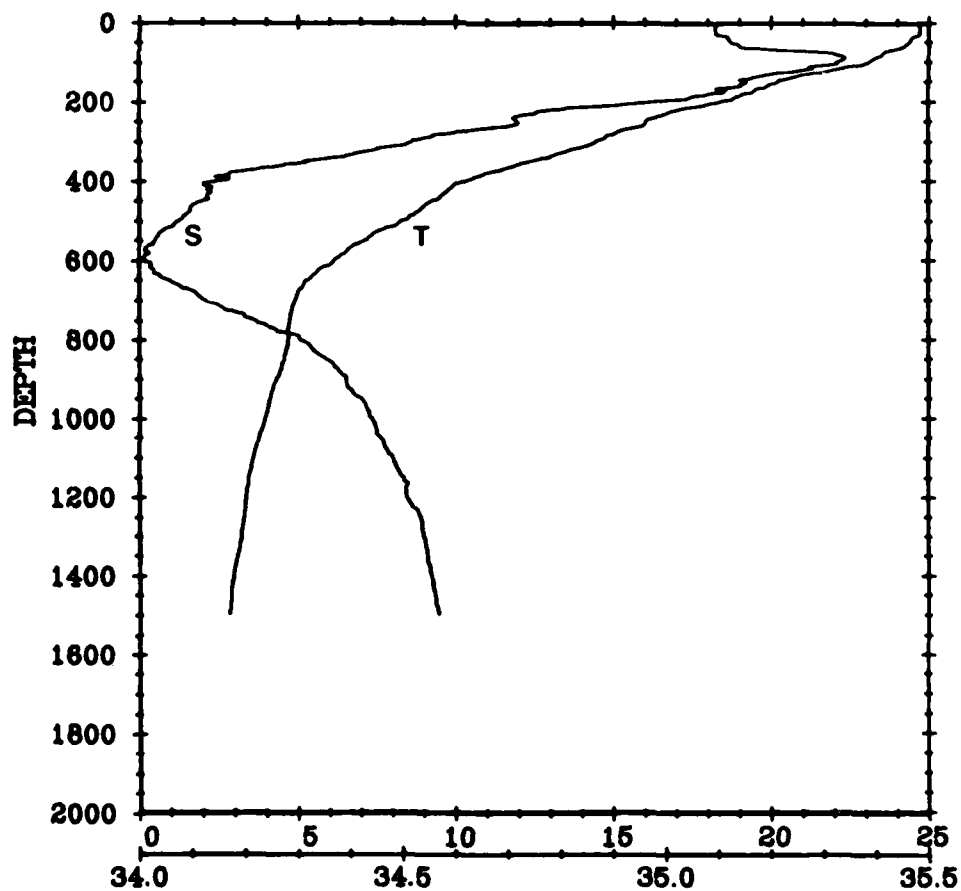
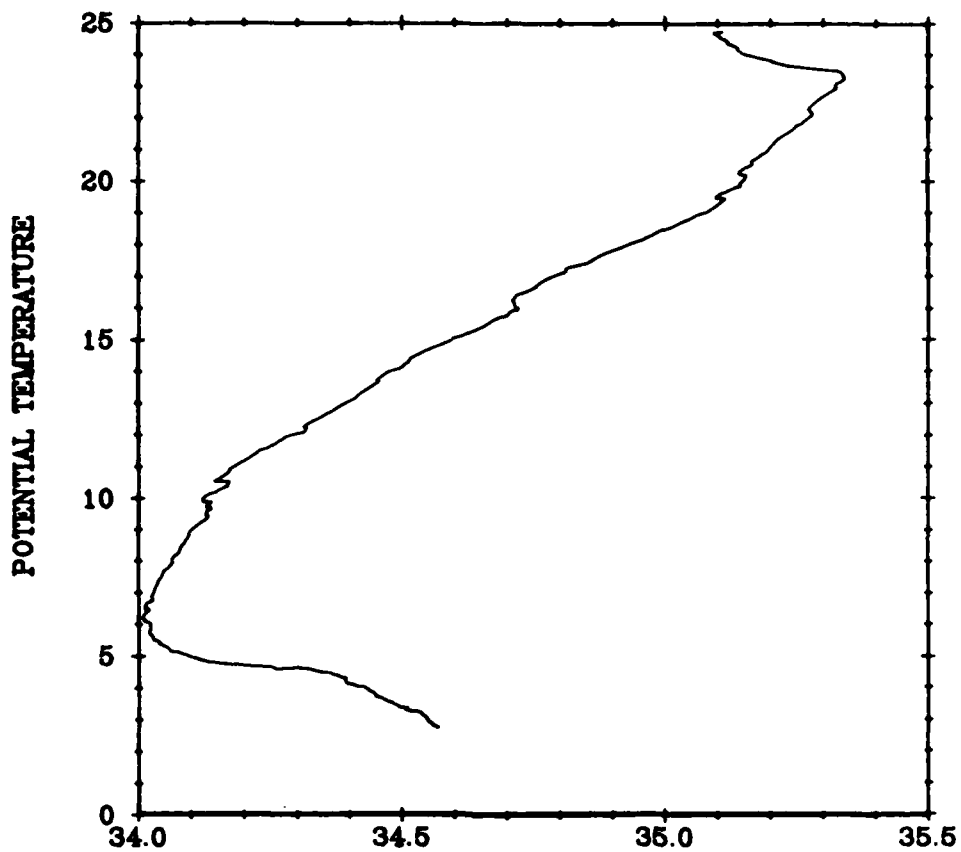
R/V THOMAS WASHINGTON MARATHON LEG 11 STATION 6

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | SARUM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 23 2 5N  | 156 19 1W | 5/ 6/84  | 1942       | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
|          |           |          |            |        | 150  | 13    | 25.7     | 23.3     | 1019.0 |

| CTD DATA | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
|----------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| PRESS    | DEG C  |          | DEG C    |         |         |         | CL TON  |            | M     |
| 1        | 24.705 | 35.099   | 24.705   | 23.507  | 31.823  | 19.783  | 437.262 | 0.700      | 0     |
| 20       | 24.687 | 35.095   | 24.683   | 23.511  | 31.827  | 19.788  | 437.554 | 0.687      | 19    |
| 40       | 24.660 | 35.115   | 24.651   | 23.536  | 31.918  | 19.884  | 433.311 | 0.714      | 39    |
| 60       | 24.612 | 35.154   | 24.609   | 23.710  | 32.251  | 43.116  | 419.294 | 0.759      | 59    |
| 80       | 23.503 | 35.101   | 23.486   | 24.023  | 32.169  | 40.358  | 191.177 | 0.740      | 79    |
| 100      | 22.992 | 35.122   | 22.972   | 24.188  | 32.547  | 40.549  | 174.264 | 0.727      | 99    |
| 150      | 20.130 | 35.149   | 20.142   | 24.814  | 33.277  | 41.157  | 114.116 | 0.590      | 149   |
| 200      | 19.160 | 34.978   | 18.325   | 25.176  | 33.678  | 41.914  | 285.222 | 0.740      | 199   |
| 250      | 16.090 | 34.715   | 16.040   | 25.520  | 34.103  | 42.313  | 253.419 | 0.875      | 249   |
| 300      | 14.490 | 34.526   | 14.446   | 25.727  | 34.369  | 42.635  | 234.610 | 0.937      | 299   |
| 350      | 12.448 | 34.334   | 12.401   | 25.945  | 34.718  | 43.059  | 209.455 | 1.118      | 348   |
| 400      | 10.351 | 34.152   | 10.304   | 26.238  | 35.048  | 43.472  | 186.992 | 1.207      | 398   |
| 450      | 9.367  | 34.123   | 9.317    | 26.391  | 35.233  | 43.697  | 172.830 | 1.297      | 447   |
| 500      | 8.403  | 34.078   | 8.351    | 26.497  | 35.393  | 43.897  | 161.821 | 1.380      | 497   |
| 600      | 6.231  | 34.013   | 6.178    | 26.750  | 35.748  | 44.347  | 134.902 | 1.510      | 596   |
| 700      | 4.923  | 34.119   | 4.867    | 26.942  | 36.052  | 44.711  | 111.419 | 1.655      | 695   |
| 800      | 4.549  | 34.100   | 4.526    | 27.163  | 36.232  | 44.899  | 99.153  | 1.761      | 795   |
| 900      | 4.154  | 34.189   | 4.284    | 27.270  | 36.156  | 45.038  | 88.414  | 1.854      | 894   |
| 1000     | 3.970  | 34.439   | 3.895    | 27.351  | 36.456  | 45.156  | 80.886  | 1.919      | 993   |
| 1100     | 3.419  | 34.477   | 3.528    | 27.418  | 36.541  | 45.259  | 74.706  | 2.016      | 1092  |
| 1200     | 3.175  | 34.508   | 3.288    | 27.465  | 36.601  | 45.320  | 70.400  | 2.089      | 1190  |
| 1300     | 3.227  | 34.539   | 3.133    | 27.505  | 36.648  | 45.384  | 67.045  | 2.158      | 1289  |
| 1400     | 2.984  | 34.553   | 2.885    | 27.539  | 36.695  | 45.443  | 63.815  | 2.223      | 1388  |
| 1500     | 2.845  | 34.567   | 2.739    | 27.563  | 36.727  | 45.482  | 61.162  | 2.286      | 1487  |
| 1508     | 2.826  | 34.569   | 2.719    | 27.566  | 36.731  | 45.487  | 61.426  | 2.291      | 1495  |

| NISKIN BOTTLE DATA |        |          |        |        |        |      |      |      |       |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|--------|------|------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIC 02 | O2 SAT | SIG 03 | P04  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L   | UM/L | UM/L | UM/L | TUSIN | DEG C    |         |         |         | DB    |
| 10                 | 24.779 | 35.099   |        |        | 1.3    | 0.15 | 0.0  | 0.00 |       | 24.777   | 20.485  | 31.799  | 19.787  | 10    |
| 53                 | 24.204 | 35.129   | 4.88   | 101.9  | 0.5    | 0.12 | 0.0  | 0.00 |       | 24.193   | 23.583  | 32.012  | 19.985  | 53    |
| 104                | 22.961 | 35.129   | 5.03   | 102.9  | 0.6    | 0.09 | 0.0  | 0.00 |       | 22.940   | 24.202  | 32.563  | 40.565  | 104   |
| 139                | 20.912 | 35.181   | 4.90   | 95.5   | 0.8    | 0.14 | 0.0  | 0.03 |       | 20.895   | 24.564  | 33.185  | 41.144  | 139   |
| 172                | 14.598 | 35.126   | 4.83   | 92.8   | 1.5    |      | 0.8  | 0.08 |       | 19.556   | 24.975  | 33.437  | 41.535  | 172   |
| 205                | 18.195 | 34.949   | 4.92   | 92.0   | 1.8    | 0.23 | 1.5  | 0.03 |       | 18.150   | 25.194  | 33.702  | 41.843  | 205   |
| 255                | 15.967 | 34.714   | 4.94   | 88.3   | 1.7    | 0.40 | 4.1  | 0.01 |       | 15.925   | 25.545  | 34.132  | 42.346  | 255   |
| 306                | 14.344 | 34.492   | 5.28   | 87.3   | 5.7    | 0.56 | 6.5  | 0.01 |       | 13.999   | 25.795  | 34.454  | 42.706  | 306   |
| 407                | 10.382 | 34.170   | 4.64   | 73.6   | 17.1   | 1.11 | 15.7 | 0.00 |       | 10.333   | 26.247  | 35.055  | 43.478  | 407   |
| 506                | 9.220  | 34.073   | 4.74   | 61.0   | 32.8   |      | 23.0 | 0.00 |       | 9.167    | 26.521  | 35.425  | 43.477  | 506   |
| 603                | 5.978  | 34.021   | 2.88   | 12.6   | 64.2   |      | 34.4 | 0.00 |       | 5.825    | 26.801  | 35.815  | 44.431  | 603   |
| 704                | 4.953  | 34.137   | 1.25   | 14.7   | 99.5   |      | 40.8 | 0.00 |       | 4.797    | 27.114  | 36.088  | 44.739  | 704   |
| 705                | 4.954  | 34.140   | 1.28   | 15.1   | 89.5   |      | 40.7 | 0.00 |       | 4.797    | 27.115  | 36.088  | 44.741  | 705   |
| 803                | 4.704  | 34.107   | 0.55   | 7.7    | 99.1   |      | 42.9 | 0.01 |       | 4.640    | 27.167  | 36.235  | 44.901  | 803   |
| 901                | 4.325  | 34.093   | 0.71   | 9.8    | 108.9  | 3.08 | 43.3 | 0.01 |       | 4.255    | 27.277  | 36.364  | 45.047  | 901   |
| 1003               | 3.943  | 34.440   | 0.87   | 11.9   | 115.1  | 3.05 | 43.2 | 0.00 |       | 3.867    | 27.354  | 36.460  | 45.162  | 1003  |
| 1203               | 3.297  | 34.535   | 1.29   | 17.4   | 128.2  |      | 42.6 | 0.01 |       | 3.194    | 27.496  | 36.535  | 45.368  | 1203  |
| 1488               | 2.845  | 34.567   | 1.37   | 20.9   | 139.3  | 2.92 | 42.1 | 0.00 |       | 2.719    | 27.563  | 36.727  | 45.482  | 1488  |
| 1489               | 2.842  | 34.569   | 1.55   | 20.6   | 139.4  |      | 42.0 | 0.01 |       | 2.716    | 27.565  | 36.729  | 45.484  | 1501  |

# MARATHON 2 STA. 6

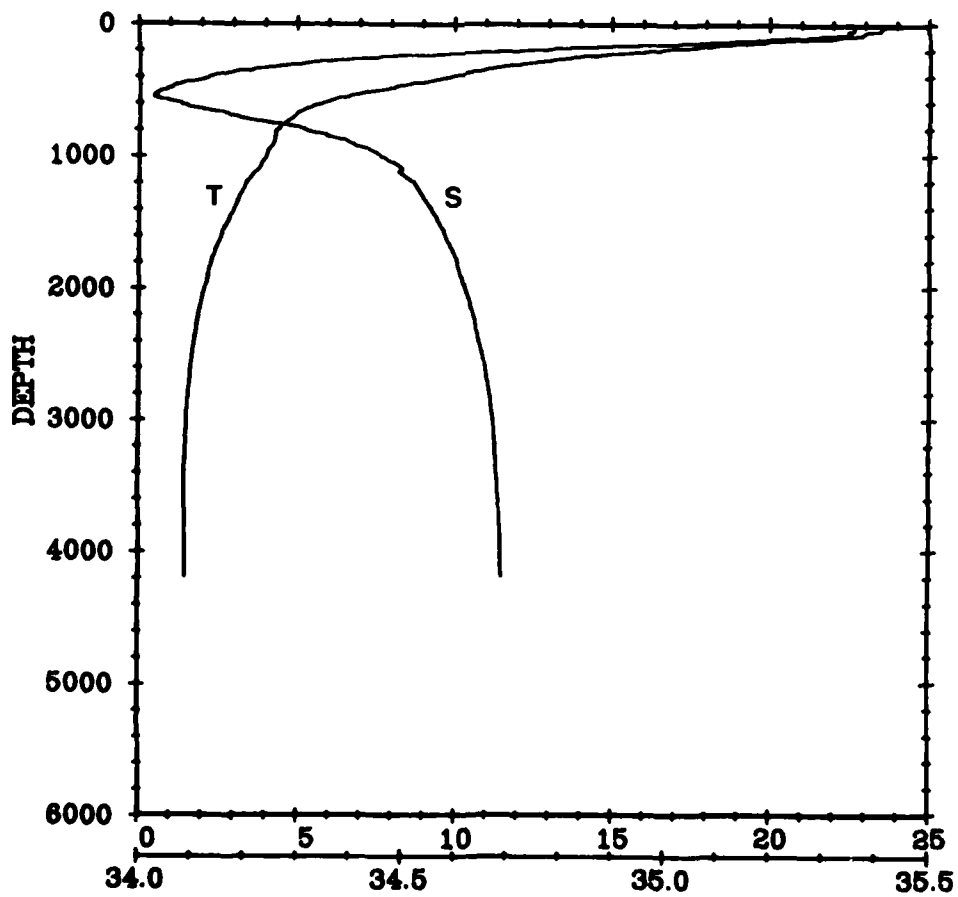
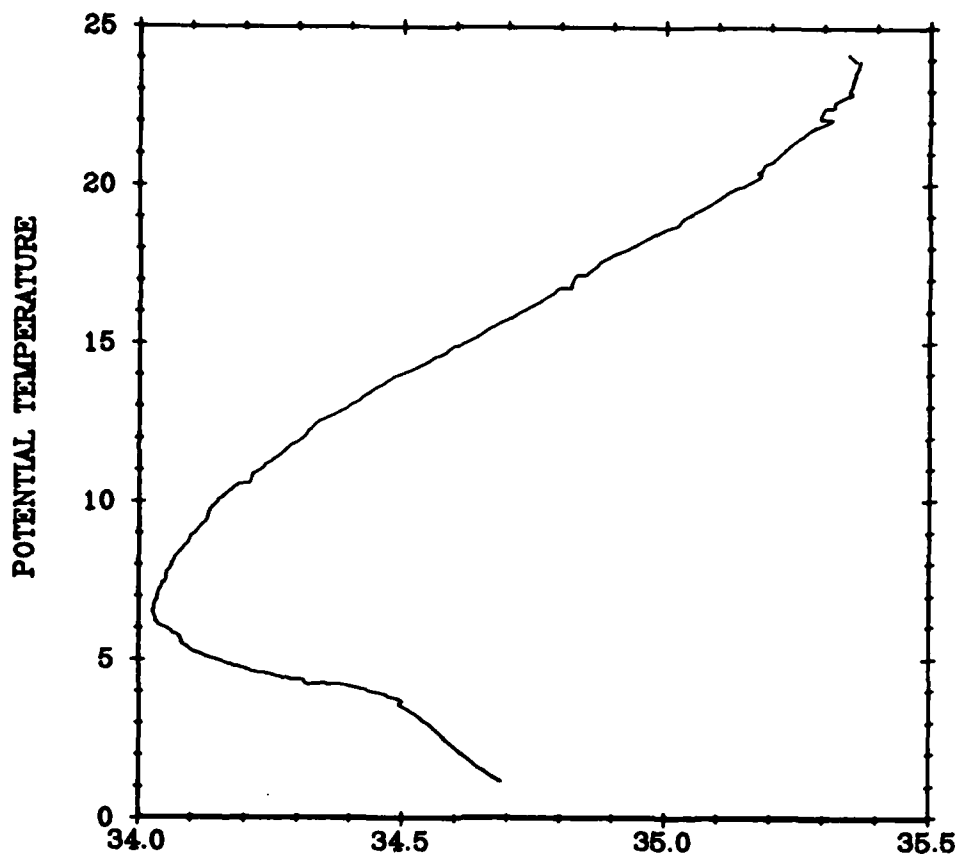


LATITUDE LONGITUDE MO DY YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB SARCH  
21 23 4N 125 15 7W 5 1 84 1 0 41 74 20 15 25 7 22 7 1019 1

| DEPTH | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH |
|-------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| M     | DEG C  |          | DEG C    |         |         |         |         |            | M     |
| 10    | 23 591 | 35 358   | 23 591   | 20 446  | 32 281  | 40 249  | 395 136 | 0 100      | 10    |
| 20    | 23 569 | 35 359   | 23 569   | 24 141  | 32 307  | 40 313  | 396 732 | 0 278      | 19    |
| 30    | 23 472 | 35 358   | 23 464   | 24 172  | 32 409  | 40 411  | 394 819 | 0 355      | 19    |
| 40    | 23 243 | 35 357   | 23 317   | 24 190  | 32 548  | 40 547  | 374 396 | 0 231      | 19    |
| 50    | 22 150 | 35 356   | 22 174   | 24 267  | 32 611  | 41 542  | 35 432  | 0 135      | 19    |
| 100   | 21 396 | 35 285   | 21 376   | 24 677  | 32 852  | 42 893  | 349 201 | 0 177      | 19    |
| 150   | 19 441 | 34 214   | 19 416   | 25 170  | 31 873  | 42 877  | 293 539 | 0 338      | 149   |
| 200   | 16 167 | 34 762   | 16 135   | 25 488  | 34 160  | 42 201  | 254 935 | 0 576      | 149   |
| 250   | 13 850 | 34 475   | 13 814   | 25 622  | 34 487  | 42 176  | 223 465 | 0 796      | 149   |
| 300   | 12 281 | 34 322   | 12 241   | 26 127  | 34 745  | 41 343  | 205 937 | 0 402      | 249   |
| 350   | 10 137 | 34 219   | 10 894   | 26 107  | 34 711  | 40 370  | 190 262 | 0 101      | 349   |
| 400   | 9 860  | 34 219   | 9 814    | 26 121  | 35 142  | 40 595  | 178 793 | 0 394      | 349   |
| 450   | 8 793  | 34 291   | 8 715    | 26 450  | 35 168  | 40 816  | 165 719 | 0 191      | 447   |
| 500   | 7 761  | 34 303   | 7 701    | 26 774  | 35 100  | 40 011  | 153 862 | 0 267      | 447   |
| 550   | 5 866  | 34 266   | 5 814    | 26 434  | 35 452  | 44 468  | 128 167 | 0 401      | 446   |
| 600   | 4 892  | 34 171   | 4 814    | 27 139  | 35 170  | 44 739  | 119 121 | 0 519      | 445   |
| 650   | 4 425  | 34 315   | 4 343    | 27 197  | 35 281  | 44 952  | 74 346  | 0 621      | 34    |
| 700   | 4 211  | 34 195   | 4 124    | 27 289  | 35 380  | 45 067  | 66 510  | 0 711      | 493   |
| 750   | 4 009  | 34 455   | 3 913    | 27 159  | 36 462  | 45 140  | 60 279  | 0 795      | 992   |
| 800   | 3 779  | 34 497   | 3 697    | 27 427  | 36 531  | 45 240  | 55 249  | 0 872      | 1031  |
| 850   | 3 425  | 34 129   | 3 328    | 27 462  | 36 612  | 45 328  | 50 281  | 0 946      | 1130  |
| 900   | 3 196  | 34 514   | 3 113    | 27 104  | 36 449  | 45 336  | 47 067  | 0 114      | 1289  |
| 950   | 2 924  | 34 441   | 2 925    | 27 114  | 36 629  | 45 416  | 64 111  | 0 190      | 1338  |
| 1000  | 2 809  | 34 545   | 2 713    | 27 565  | 36 710  | 45 487  | 61 472  | 0 243      | 1487  |
| 1050  | 2 604  | 34 479   | 2 497    | 27 593  | 36 770  | 45 517  | 58 709  | 0 203      | 1595  |
| 1100  | 2 445  | 34 599   | 2 327    | 27 616  | 36 802  | 45 517  | 56 477  | 0 260      | 1694  |
| 1150  | 2 282  | 34 611   | 2 159    | 27 634  | 36 834  | 45 618  | 54 134  | 0 316      | 1783  |
| 1200  | 2 195  | 34 607   | 2 164    | 27 652  | 36 852  | 45 641  | 53 105  | 0 369      | 1881  |
| 1250  | 2 198  | 34 616   | 2 190    | 27 665  | 36 874  | 45 669  | 51 590  | 0 421      | 1980  |
| 1300  | 2 171  | 34 624   | 2 127    | 27 684  | 36 897  | 45 698  | 49 969  | 0 472      | 2079  |
| 1350  | 2 181  | 34 612   | 2 101    | 27 697  | 36 915  | 45 741  | 48 753  | 0 522      | 2177  |
| 1400  | 2 189  | 34 618   | 2 149    | 27 629  | 36 911  | 45 741  | 47 669  | 0 570      | 2275  |
| 1450  | 2 185  | 34 642   | 2 199    | 27 156  | 36 942  | 45 755  | 47 067  | 0 617      | 2373  |
| 1500  | 2 192  | 34 649   | 2 166    | 27 127  | 36 947  | 45 774  | 46 063  | 0 664      | 2472  |
| 1550  | 2 142  | 34 675   | 2 159    | 27 175  | 36 969  | 45 739  | 45 101  | 0 711      | 2571  |
| 1600  | 2 107  | 34 679   | 2 116    | 27 141  | 36 978  | 45 870  | 44 810  | 0 758      | 2670  |
| 1650  | 2 161  | 34 661   | 2 154    | 27 150  | 36 987  | 45 822  | 44 301  | 0 799      | 2769  |
| 1700  | 2 151  | 34 667   | 2 125    | 27 155  | 36 946  | 45 822  | 43 859  | 0 843      | 2868  |
| 1750  | 2 136  | 34 670   | 2 289    | 27 160  | 37 002  | 45 811  | 43 609  | 0 887      | 2967  |
| 1800  | 2 149  | 34 673   | 2 263    | 27 165  | 37 009  | 45 818  | 43 426  | 0 930      | 3066  |
| 1850  | 2 179  | 34 676   | 2 242    | 27 163  | 37 012  | 45 841  | 43 402  | 0 974      | 3165  |
| 1900  | 2 166  | 34 677   | 2 221    | 27 171  | 37 016  | 45 849  | 43 358  | 1 017      | 3264  |
| 1950  | 2 144  | 34 679   | 2 203    | 27 174  | 37 020  | 45 873  | 43 366  | 1 061      | 3363  |
| 2000  | 2 140  | 34 680   | 2 196    | 27 176  | 37 023  | 45 857  | 43 455  | 1 104      | 3462  |
| 2050  | 2 149  | 34 682   | 2 173    | 27 179  | 37 027  | 45 861  | 43 530  | 1 148      | 3561  |
| 2100  | 2 147  | 34 683   | 2 161    | 27 180  | 37 029  | 45 864  | 43 702  | 1 191      | 3660  |
| 2150  | 2 149  | 34 684   | 2 153    | 27 181  | 37 031  | 45 866  | 43 919  | 1 235      | 3759  |
| 2200  | 2 152  | 34 685   | 2 145    | 27 183  | 37 032  | 45 868  | 44 151  | 1 279      | 3858  |
| 2250  | 2 159  | 34 686   | 2 141    | 27 184  | 37 034  | 45 870  | 44 445  | 1 323      | 3957  |
| 2300  | 2 166  | 34 686   | 2 137    | 27 184  | 37 034  | 45 870  | 44 911  | 1 369      | 4056  |
| 2350  | 2 175  | 34 687   | 2 135    | 27 185  | 37 035  | 45 872  | 45 140  | 1 413      | 4155  |
| 2400  | 2 173  | 34 688   | 2 126    | 27 186  | 37 037  | 45 874  | 45 179  | 1 458      | 4254  |

| WISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  | DEG C    |         |         |         | DB    |
| 10                 | 24 413 | 35 360   | 5 01   | 105 6  | 0 7   | 0 12 | 0 0  | 0 00 | 24 413 | 23 792   | 32 113  | 40 079  | 10      |       |
| 20                 | 23 501 | 35 360   | 5 05   | 104 1  | 0 2   | 0 09 | 0 0  | 0 00 | 23 492 | 24 065   | 32 410  | 40 199  | 12      |       |
| 30                 | 22 387 | 35 375   | 5 16   | 102 5  | 0 3   | 0 09 | 0 0  | 0 00 | 22 370 | 24 346   | 32 723  | 40 741  | 32      |       |
| 40                 | 18 564 | 34 985   | 4 72   | 88 9   | 1 8   | 0 29 | 2 2  | 0 16 | 18 515 | 25 128   | 33 624  | 41 751  | 161     |       |
| 50                 | 15 994 | 34 713   | 4 94   | 88 2   | 3 3   | 0 41 | 4 3  | 0 02 | 15 849 | 25 562   | 34 151  | 42 368  | 223     |       |
| 60                 | 13 390 | 34 412   | 5 21   | 88 6   | 6 1   | 0 61 | 7 5  | 0 01 | 13 340 | 25 895   | 34 569  | 42 975  | 283     |       |
| 70                 | 11 255 | 34 218   | 5 04   | 81 5   | 12 6  | 0 94 | 12 5 | 0 01 | 11 210 | 26 145   | 34 915  | 43 302  | 345     |       |
| 80                 | 9 673  | 34 116   | 4 72   | 73 7   | 19 9  | 1 22 | 17 1 | 0 01 | 9 627  | 26 340   | 35 179  | 43 629  | 405     |       |
| 90                 | 7 744  | 34 047   | 3 19   | 47 2   | 43 1  | 27 7 | 27 7 | 0 01 | 7 695  | 26 627   | 35 572  | 44 121  | 506     |       |
| 100                | 6 311  | 34 036   | 2 43   | 15 1   | 58 1  | 2 14 | 31 0 | 0 00 | 6 283  | 26 755   | 35 747  | 44 341  | 556     |       |
| 110                | 5 848  | 34 069   | 1 77   | 25 1   | 48 4  | 2 59 | 16 1 | 0 00 | 5 795  | 26 843   | 35 858  | 44 474  | 606     |       |
| 120                | 5 187  | 34 140   | 1 04   | 14 6   | 35 2  | 2 90 | 40 4 | 0 00 | 5 034  | 26 990   | 36 041  | 44 691  | 656     |       |
| 130                | 4 576  | 34 235   | 0 61   | 8 7    | 39 9  | 3 12 | 42 7 | 0 00 | 4 517  | 27 139   | 36 215  | 44 987  | 704     |       |
| 140                | 4 142  | 34 304   | 0 61   | 9 4    | 106 8 | 3 14 | 43 1 | 0 00 | 4 290  | 27 253   | 36 290  | 45 017  | 754     |       |
| 150                | 4 100  | 34 375   | 0 63   | 8 7    | 108 1 | 43 2 | 43 2 | 0 00 | 4 214  | 27 264   | 36 353  | 45 037  | 804     |       |
| 160                | 3 723  | 34 478   | 0 98   | 13 4   | 115 0 | 42 9 | 43 1 | 0 01 | 3 647  | 27 395   | 36 493  | 45 195  | 851     |       |
| 170                | 3 142  | 34 525   | 1 20   | 16 2   | 128 2 | 42 5 | 42 5 | 0 02 | 3 255  | 27 492   | 36 619  | 45 349  | 1004    |       |
| 180                | 2 715  | 34 572   | 1 59   | 21 1   | 142 4 | 41 9 | 41 9 | 0 01 | 2 610  | 27 576   | 36 746  | 45 527  | 1051    |       |
| 190                | 2 118  | 34 624   | 1 98   | 25 9   | 161 0 | 40 9 | 40 9 | 0 02 | 1 819  | 27 690   | 36 889  | 45 689  | 1097    |       |
| 200                | 1 690  | 34 651   | 2 50   | 32 1   | 167 1 | 39 7 | 39 7 | 0 00 | 1 514  | 27 729   | 36 958  | 45 775  | 1144    |       |
| 210                | 1 106  | 34 673   | 3 20   | 38 5   | 164 5 | 2 65 | 38 2 | 0 00 | 1 288  | 27 763   | 37 005  | 45 831  | 1194    |       |
| 220                | 1 450  | 34 692   | 3 20   | 41 0   | 158 5 | 37 3 | 37 3 | 0 02 | 1 134  | 27 777   | 37 025  | 45 859  | 1244    |       |
| 230                | 1 473  | 34 696   | 3 34   | 42 7   | 156 9 | 36 9 | 36 9 | 0 02 | 1 126  | 27 794   | 37 035  | 45 872  | 1294    |       |

# MARATHON 2 STA. 7



R. V. THOMAS WASHINGTON MARATHON LEG 11 STATION 9

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|-------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MM    |
| 23 45 IN | 155 19 4W | 5/7/84   | 019        | 4140   | 40   | 11    | 28.1     | 21.7     | 102.2 |

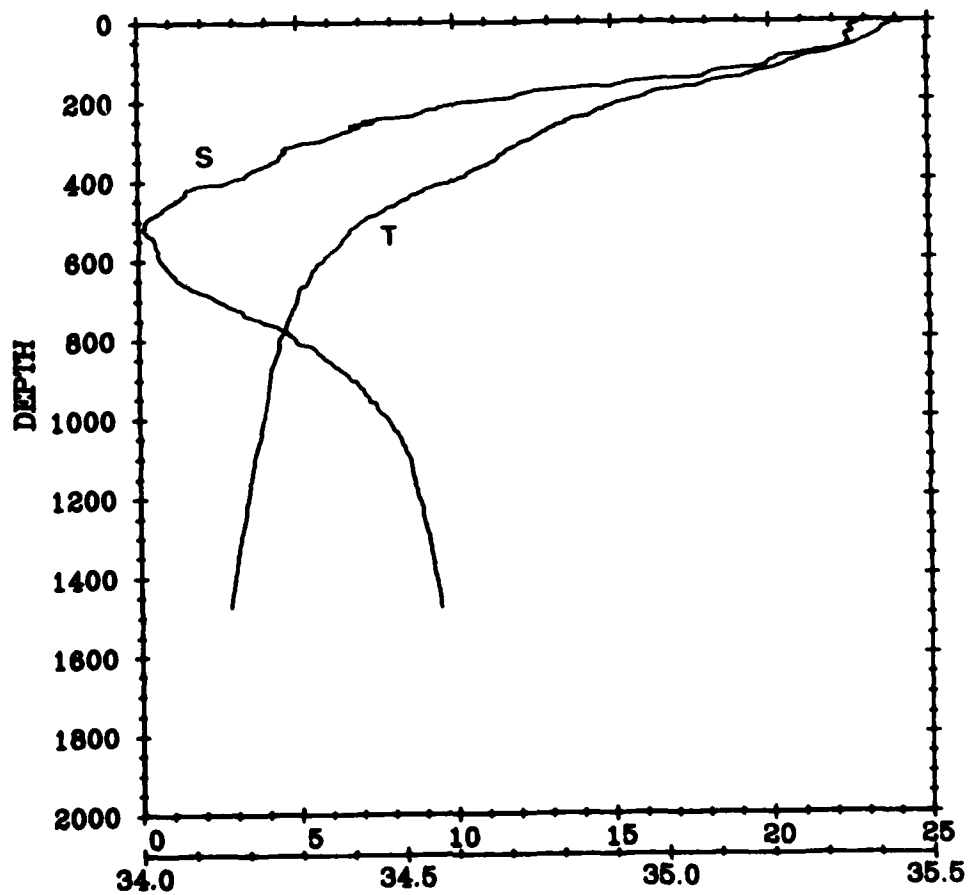
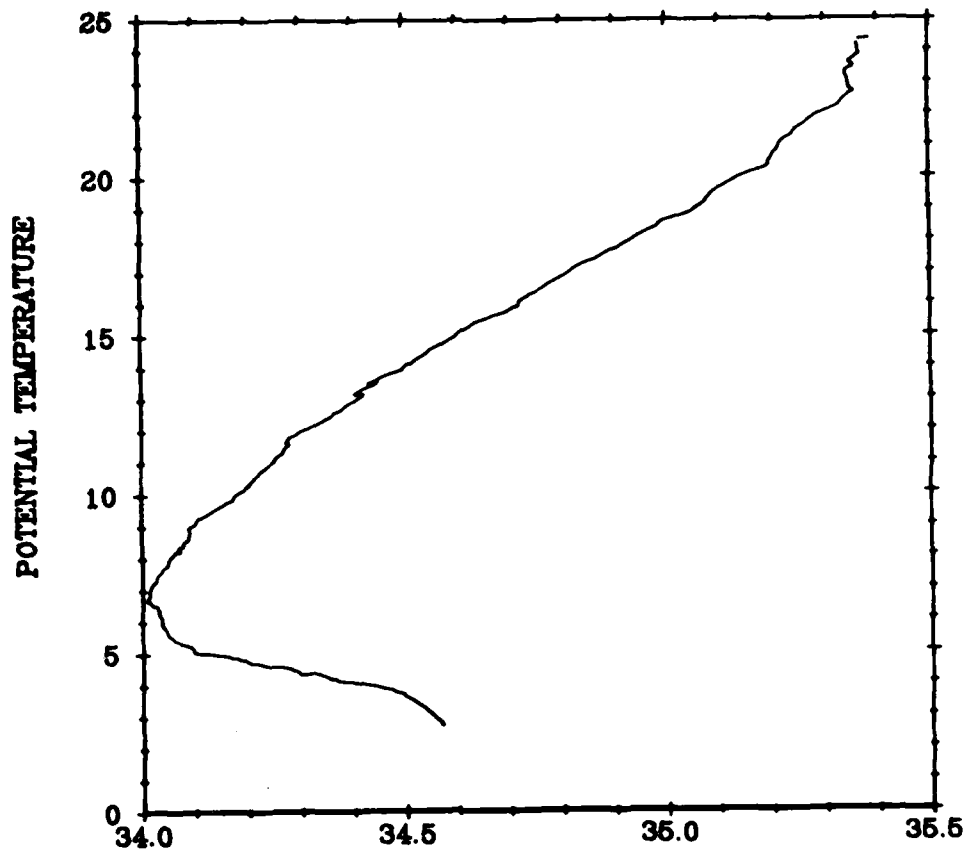
## STD DATA

| PRESS | TEMP   | SALINITY | POT TEMP | SIGMA 2 | SIGMA 2 | SIGMA 4 | SIGMA 4 | DYNAMIC HT | DEPTH |
|-------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C  |          | DEG C    |         |         |         | ML TON  |            | M     |
| 0     | 24.117 | 35.371   | 24.117   | 23.849  | 32.217  | 40.189  | 400.611 | 0.000      | 0     |
| 20    | 23.608 | 35.356   | 23.604   | 24.029  | 32.372  | 40.157  | 388.058 | 0.079      | 19    |
| 40    | 23.231 | 35.343   | 23.223   | 24.135  | 32.487  | 40.182  | 379.860 | 0.156      | 39    |
| 60    | 22.939 | 35.347   | 22.937   | 24.288  | 32.656  | 40.165  | 365.005 | 0.240      | 59    |
| 80    | 21.934 | 35.283   | 21.919   | 24.485  | 32.978  | 40.110  | 346.997 | 0.301      | 79    |
| 100   | 20.786 | 35.210   | 20.767   | 24.719  | 33.143  | 40.105  | 326.475 | 0.369      | 99    |
| 120   | 18.474 | 34.986   | 18.448   | 25.141  | 33.650  | 40.182  | 291.790 | 0.510      | 119   |
| 140   | 15.558 | 34.659   | 15.527   | 25.542  | 34.194  | 42.122  | 244.787 | 0.674      | 139   |
| 160   | 13.720 | 34.456   | 13.694   | 25.833  | 34.604  | 42.798  | 222.746 | 0.771      | 159   |
| 180   | 12.383 | 34.342   | 12.343   | 26.013  | 34.737  | 43.080  | 206.401 | 0.878      | 179   |
| 200   | 11.293 | 34.259   | 11.249   | 26.154  | 34.923  | 43.128  | 191.631 | 0.978      | 199   |
| 220   | 10.027 | 34.178   | 9.987    | 26.124  | 35.137  | 43.073  | 178.479 | 1.071      | 219   |
| 240   | 8.446  | 34.175   | 8.399    | 26.488  | 35.381  | 43.993  | 161.271 | 1.156      | 239   |
| 260   | 7.208  | 34.120   | 7.167    | 26.525  | 35.576  | 44.132  | 149.461 | 1.234      | 259   |
| 280   | 5.948  | 34.142   | 5.896    | 26.821  | 35.837  | 44.453  | 129.756 | 1.313      | 279   |
| 300   | 4.980  | 34.142   | 4.924    | 27.024  | 36.161  | 44.776  | 102.431 | 1.404      | 299   |
| 320   | 4.443  | 34.290   | 4.381    | 27.181  | 36.264  | 44.941  | 95.911  | 1.508      | 319   |
| 340   | 4.111  | 34.196   | 4.043    | 27.371  | 36.399  | 45.093  | 94.999  | 1.644      | 339   |
| 360   | 3.319  | 34.464   | 3.244    | 27.376  | 36.481  | 45.185  | 78.318  | 1.777      | 359   |
| 380   | 3.600  | 34.509   | 3.514    | 27.443  | 36.567  | 45.284  | 72.178  | 1.846      | 379   |
| 400   | 3.403  | 34.627   | 3.306    | 27.478  | 36.612  | 45.319  | 69.427  | 1.917      | 399   |
| 420   | 3.176  | 34.585   | 3.083    | 27.514  | 36.650  | 45.398  | 66.220  | 1.984      | 419   |
| 440   | 2.978  | 34.569   | 2.879    | 27.543  | 36.700  | 45.448  | 61.177  | 2.049      | 439   |
| 460   | 2.793  | 34.570   | 2.688    | 27.570  | 36.736  | 45.494  | 60.955  | 2.110      | 459   |

## WISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | D15 O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT | POT TEMP | SIGMA 2 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|--------|--------|-------|------|------|------|------|----------|---------|---------|---------|-------|
| M     | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | UM/L | DEG C    |         |         |         | DB    |
| 0     | 23.082 | 35.345   | 5.02   | 102.3  | 2.9   | 0.13 | 1.1  | 0.00 |      | 23.071   | 24.174  | 34.333  | 40.612  | 0     |
| 10    | 20.650 | 35.199   | 5.18   | 101.6  | 2.1   | 0.13 | 1.1  | 0.00 |      | 20.610   | 24.147  | 34.370  | 40.241  | 19    |
| 136   | 19.240 | 35.073   | 4.82   | 92.0   | 2.3   | 0.26 | 1.3  | 0.12 |      | 19.215   | 25.123  | 34.496  | 41.504  | 136   |
| 149   | 17.377 | 34.957   | 5.11   | 94.0   | 2.9   | 0.27 | 1.7  | 0.23 |      | 17.349   | 24.122  | 34.919  | 42.124  | 149   |
| 203   | 15.851 | 34.700   | 4.91   | 97.6   | 4.3   | 0.43 | 4.4  | 0.02 |      | 15.829   | 25.556  | 34.146  | 42.364  | 203   |
| 264   | 13.655 | 34.444   | 5.11   | 97.1   | 5.6   | 0.59 | 7.1  | 0.01 |      | 13.619   | 25.819  | 34.312  | 42.479  | 264   |
| 354   | 10.143 | 34.252   | 5.31   | 95.7   | 12.3  |      | 11.9 | 0.01 |      | 10.119   | 26.070  | 34.347  | 43.077  | 354   |
| 452   | 9.312  | 34.070   | 4.20   | 63.6   |       |      |      |      |      | 9.285    | 26.501  | 35.400  | 43.806  | 452   |
| 501   | 7.147  | 34.020   | 3.38   | 49.3   | 44.3  |      | 27.7 | 0.02 |      | 7.099    | 26.633  | 35.587  | 44.140  | 501   |
| 547   | 6.447  | 34.030   | 2.67   | 38.7   | 56.1  |      | 32.2 | 0.01 |      | 6.397    | 26.735  | 35.722  | 44.311  | 547   |
| 744   | 4.610  | 34.242   | 0.66   | 9.4    | 99.7  |      | 42.9 | 0.02 |      | 4.571    | 27.122  | 36.194  | 44.956  | 744   |
| 783   | 4.453  | 34.288   | 0.62   | 8.6    | 104.8 | 1.09 | 41.4 | 0.01 |      | 4.392    | 27.178  | 36.260  | 44.978  | 783   |
| 931   | 4.327  | 34.338   | 0.63   | 8.7    | 107.5 | 3.11 | 41.5 | 0.01 |      | 4.263    | 27.232  | 36.310  | 45.177  | 931   |
| 971   | 4.010  | 34.437   | 0.82   | 11.2   | 113.5 |      | 41.5 | 0.02 |      | 3.936    | 27.345  | 36.448  | 45.246  | 971   |
| 1219  | 3.384  | 34.530   | 1.28   | 17.3   | 127.2 | 2.98 | 42.9 | 0.01 |      | 3.295    | 27.482  | 36.517  | 45.540  | 1219  |
| 1476  | 2.793  | 34.570   | 1.53   | 20.3   | 141.8 |      | 42.2 | 0.02 |      | 2.688    | 27.570  | 36.736  | 45.494  | 1476  |

# MARATHON 2 STA. 8



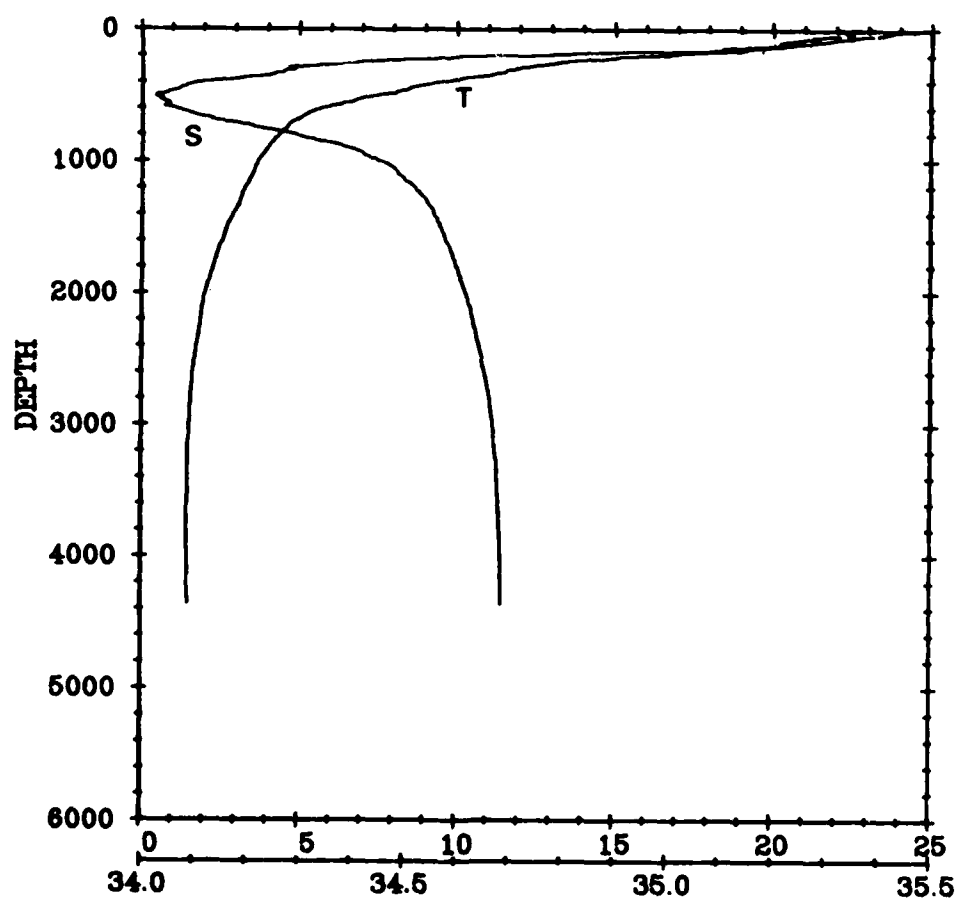
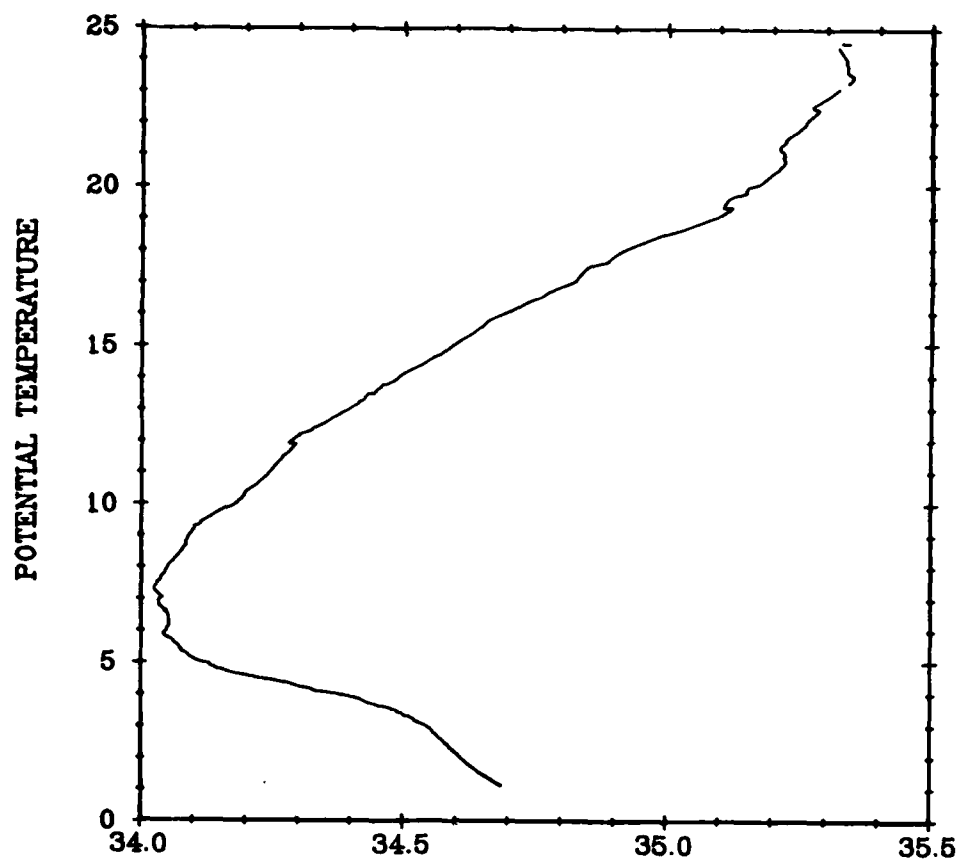
R/V THOMAS WASHINGTON MARATHON LEG II STATION 9

| LATITUDE | LONGITUDE | MO-DY-YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 24 6 ON  | 155 21 OW | 50 7 84  | 1435       | 4364   | 30   | 6     | 23.9     | 21.1     | 1018.6 |

| STD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA<br>CL/TON | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |               |            |            |
| 0           | 24.312        | 35.173   | 24.312            | 23.802  | 32.126  | 40.093  | 409.924       | 0.100      | 0          |
| 20          | 23.710        | 35.339   | 23.716            | 23.984  | 32.323  | 40.306  | 392.436       | 0.180      | 19         |
| 40          | 23.330        | 35.519   | 23.322            | 24.099  | 32.449  | 40.442  | 382.258       | 0.158      | 39         |
| 60          | 22.511        | 35.280   | 22.489            | 24.294  | 32.668  | 40.682  | 364.457       | 0.232      | 59         |
| 80          | 21.793        | 35.246   | 21.792            | 24.467  | 32.961  | 40.895  | 348.716       | 0.304      | 79         |
| 100         | 21.156        | 35.217   | 21.137            | 24.623  | 33.036  | 41.089  | 334.577       | 0.372      | 99         |
| 120         | 19.203        | 35.101   | 19.176            | 25.054  | 33.529  | 41.637  | 295.140       | 0.529      | 119        |
| 140         | 16.130        | 34.710   | 16.098            | 25.503  | 34.084  | 42.292  | 253.457       | 0.666      | 139        |
| 160         | 13.319        | 34.422   | 13.284            | 25.859  | 34.575  | 42.884  | 217.299       | 0.784      | 159        |
| 180         | 11.907        | 34.289   | 11.869            | 26.062  | 34.806  | 43.167  | 201.128       | 0.889      | 179        |
| 200         | 11.034        | 34.243   | 10.991            | 26.198  | 34.968  | 43.364  | 190.205       | 0.937      | 199        |
| 220         | 9.625         | 34.131   | 9.580             | 26.344  | 35.185  | 43.678  | 175.497       | 1.078      | 219        |
| 240         | 8.535         | 34.075   | 8.489             | 26.475  | 35.165  | 43.863  | 163.144       | 1.163      | 239        |
| 260         | 7.610         | 34.033   | 7.561             | 26.579  | 35.511  | 44.049  | 153.276       | 1.242      | 259        |
| 280         | 6.913         | 34.053   | 6.863             | 26.834  | 35.852  | 44.469  | 128.436       | 1.198      | 279        |
| 300         | 4.876         | 34.145   | 4.820             | 27.018  | 36.180  | 44.747  | 111.934       | 1.501      | 299        |
| 320         | 4.189         | 34.281   | 4.128             | 27.180  | 36.265  | 44.947  | 95.935        | 1.606      | 319        |
| 340         | 4.028         | 34.388   | 3.961             | 27.303  | 36.406  | 45.103  | 84.610        | 1.694      | 339        |
| 360         | 3.714         | 34.451   | 3.641             | 27.386  | 36.504  | 45.206  | 77.092        | 1.777      | 359        |
| 380         | 3.526         | 34.489   | 3.446             | 27.435  | 36.563  | 45.294  | 72.843        | 1.852      | 379        |
| 400         | 3.107         | 34.719   | 3.221             | 27.481  | 36.620  | 45.352  | 68.739        | 1.923      | 399        |
| 420         | 3.110         | 34.541   | 3.017             | 27.515  | 36.654  | 45.404  | 65.703        | 1.990      | 419        |
| 440         | 2.948         | 34.557   | 2.829             | 27.547  | 36.706  | 45.437  | 62.861        | 2.054      | 439        |
| 460         | 2.733         | 34.568   | 2.628             | 27.573  | 36.743  | 45.504  | 60.352        | 2.116      | 459        |
| 480         | 2.595         | 34.579   | 2.484             | 27.594  | 36.771  | 45.539  | 58.543        | 2.176      | 479        |
| 500         | 2.424         | 34.590   | 2.337             | 27.618  | 36.805  | 45.582  | 56.152        | 2.233      | 499        |
| 520         | 2.297         | 34.598   | 2.173             | 27.636  | 36.830  | 45.613  | 54.534        | 2.288      | 519        |
| 540         | 2.163         | 34.607   | 2.033             | 27.654  | 36.856  | 45.646  | 52.718        | 2.342      | 539        |
| 560         | 2.049         | 34.615   | 1.912             | 27.670  | 36.878  | 45.675  | 51.177        | 2.394      | 559        |
| 580         | 1.951         | 34.623   | 1.807             | 27.685  | 36.899  | 45.701  | 49.795        | 2.444      | 579        |
| 600         | 1.878         | 34.630   | 1.726             | 27.696  | 36.915  | 45.721  | 48.763        | 2.494      | 599        |
| 620         | 1.813         | 34.636   | 1.654             | 27.707  | 36.929  | 45.739  | 47.879        | 2.542      | 619        |
| 640         | 1.752         | 34.641   | 1.585             | 27.716  | 36.942  | 45.755  | 47.091        | 2.589      | 639        |
| 660         | 1.693         | 34.647   | 1.518             | 27.725  | 36.955  | 45.772  | 46.234        | 2.636      | 659        |
| 680         | 1.644         | 34.652   | 1.461             | 27.734  | 36.966  | 45.785  | 45.557        | 2.682      | 679        |
| 700         | 1.611         | 34.657   | 1.410             | 27.741  | 36.977  | 45.799  | 44.940        | 2.727      | 699        |
| 720         | 1.557         | 34.662   | 1.358             | 27.749  | 36.988  | 45.812  | 44.292        | 2.772      | 719        |
| 740         | 1.541         | 34.664   | 1.331             | 27.753  | 36.992  | 45.819  | 44.225        | 2.816      | 739        |
| 760         | 1.516         | 34.668   | 1.299             | 27.758  | 37.000  | 45.828  | 43.881        | 2.860      | 759        |
| 780         | 1.499         | 34.670   | 1.273             | 27.762  | 37.005  | 45.834  | 43.782        | 2.904      | 779        |
| 800         | 1.482         | 34.672   | 1.246             | 27.765  | 37.009  | 45.840  | 43.674        | 2.948      | 799        |
| 820         | 1.467         | 34.675   | 1.222             | 27.769  | 37.015  | 45.847  | 43.515        | 2.991      | 819        |
| 840         | 1.466         | 34.676   | 1.211             | 27.771  | 37.017  | 45.849  | 43.697        | 3.035      | 839        |
| 860         | 1.464         | 34.678   | 1.199             | 27.773  | 37.020  | 45.853  | 43.791        | 3.079      | 859        |
| 880         | 1.457         | 34.679   | 1.182             | 27.775  | 37.023  | 45.857  | 43.878        | 3.122      | 879        |
| 900         | 1.455         | 34.681   | 1.169             | 27.777  | 37.026  | 45.861  | 43.966        | 3.165      | 899        |
| 920         | 1.452         | 34.682   | 1.156             | 27.779  | 37.029  | 45.864  | 44.107        | 3.210      | 919        |
| 940         | 1.455         | 34.683   | 1.148             | 27.781  | 37.031  | 45.866  | 44.339        | 3.255      | 939        |
| 960         | 1.458         | 34.683   | 1.140             | 27.781  | 37.031  | 45.868  | 44.641        | 3.299      | 959        |
| 980         | 1.464         | 34.684   | 1.135             | 27.782  | 37.033  | 45.869  | 44.920        | 3.344      | 979        |
| 1000        | 1.471         | 34.685   | 1.130             | 27.784  | 37.034  | 45.871  | 45.207        | 3.389      | 999        |
| 1020        | 1.478         | 34.686   | 1.126             | 27.784  | 37.035  | 45.872  | 45.583        | 3.434      | 1019       |
| 1040        | 1.489         | 34.686   | 1.126             | 27.785  | 37.036  | 45.872  | 45.948        | 3.480      | 1039       |
| 1060        | 1.493         | 34.686   | 1.126             | 27.785  | 37.036  | 45.872  | 46.095        | 3.495      | 1059       |

| NISKIN BOTTLE DATA |               | DIS O2<br>ML/L | O2 SAT<br>% | SIG3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUBIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |                |             |              |             |             |             |               |                   |         |         |         |             |
| 1                  | 24.271        | 35.319         | 4.90        | 102.6        | 1.1         | 0.13        | 0.0         | 0.00          | 24.271            | 23.804  | 32.128  | 40.097  | 1           |
| 26                 | 23.571        | 35.340         | 5.01        | 103.6        | 0.6         | 0.09        | 0.0         | 0.00          | 23.566            | 24.129  | 32.372  | 40.358  | 26          |
| 56                 | 22.435        | 35.268         | 4.98        | 100.9        | 0.4         | 0.12        | 0.0         | 0.00          | 22.424            | 24.103  | 32.679  | 40.696  | 56          |
| 106                | 20.529        | 35.198         | 5.18        | 101.4        | 0.6         | 0.11        | 0.0         | 0.00          | 20.509            | 24.779  | 33.210  | 41.280  | 106         |
| 156                | 18.146        | 34.971         | 5.25        | 98.5         | 1.8         | 0.17        | 0.1         | 0.06          | 18.119            | 25.172  | 33.675  | 41.811  | 156         |
| 207                | 15.327        | 34.616         | 5.02        | 88.6         | 3.7         | 0.46        | 4.3         | 0.02          | 15.295            | 25.612  | 34.221  | 42.458  | 207         |
| 307                | 11.972        | 34.287         | 5.28        | 86.6         | 9.8         | 0.79        | 10.2        | 0.01          | 11.832            | 26.068  | 34.813  | 43.176  | 308         |
| 408                | 9.638         | 34.133         | 4.74        | 74.0         | 19.9        | 1.21        | 17.1        | 0.01          | 9.591             | 26.344  | 35.184  | 43.636  | 410         |
| 508                | 7.129         | 34.023         | 3.33        | 49.0         | 43.5        |             | 27.9        | 0.01          | 7.080             | 26.638  | 35.593  | 44.152  | 510         |
| 608                | 5.612         | 34.070         | 1.68        | 23.9         | 71.6        | 2.62        | 37.1        | 0.01          | 5.580             | 26.870  | 35.896  | 44.521  | 611         |
| 708                | 4.197         | 34.155         | 0.99        | 13.8         | 90.6        | 2.92        | 41.3        | 0.01          | 4.740             | 27.035  | 36.101  | 44.764  | 712         |
| 816                | 4.299         | 34.105         | 0.66        | 9.1          | 106.0       | 3.07        | 43.3        | 0.01          | 4.237             | 27.209  | 36.298  | 44.983  | 811         |
| 906                | 4.110         | 34.191         | 0.80        | 11.0         | 115.2       | 3.09        | 43.4        | 0.00          | 3.961             | 27.306  | 36.408  | 45.105  | 912         |
| 1016               | 3.772         | 34.443         | 0.94        | 12.8         | 120.0       | 3.07        | 43.2        | 0.00          | 3.697             | 27.374  | 36.489  | 45.198  | 1013        |
| 1257               | 3.219         | 34.526         | 1.35        | 18.1         | 130.5       |             | 42.6        | 0.00          | 3.127             | 27.495  | 36.639  | 45.375  | 1257        |
| 1505               | 2.758         | 34.570         | 1.56        | 20.7         | 141.7       |             | 42.2        | 0.00          | 2.651             | 27.573  | 36.741  | 45.501  | 1518        |
| 1755               | 2.365         | 34.595         | 1.76        | 23.1         | 151.2       |             | 41.7        | 0.02          | 2.242             | 27.628  | 36.818  | 45.598  | 1771        |
| 2005               | 2.075         | 34.615         | 2.03        | 25.5         | 160.0       |             | 41.1        | 0.00          | 1.935             | 27.668  | 36.875  | 45.670  | 2025        |
| 2516               | 1.696         | 34.648         |             | 166.4        |             |             | 39.8        | 0.01          | 1.518             | 27.726  | 36.956  | 45.772  | 2514        |
| 3006               | 1.311         | 34.671         | 3.04        | 39.0         | 164.8       | 2.62        | 38.4        | 0.00          | 1.289             | 27.761  | 37.003  | 45.831  | 3044        |
| 3505               | 1.462         | 34.680         | 3.11        | 42.4         | 161.7       | 2.56        | 37.6        | 0.00          | 1.191             | 27.775  | 37.022  | 45.856  | 3553        |
| 4003               | 1.461         | 34.685         | 3.39        | 43.3         |             |             | 37.1        | 0.02          | 1.135             | 27.781  | 37.033  | 45.870  | 4063        |
| 4502               | 1.493         | 34.686         | 3.51        | 44.9         | 157.6       | 2.47        | 37.0        | 0.01          | 1.125             | 27.785  | 37.035  | 45.872  | 4431        |

# MARATHON 2 STA. 9



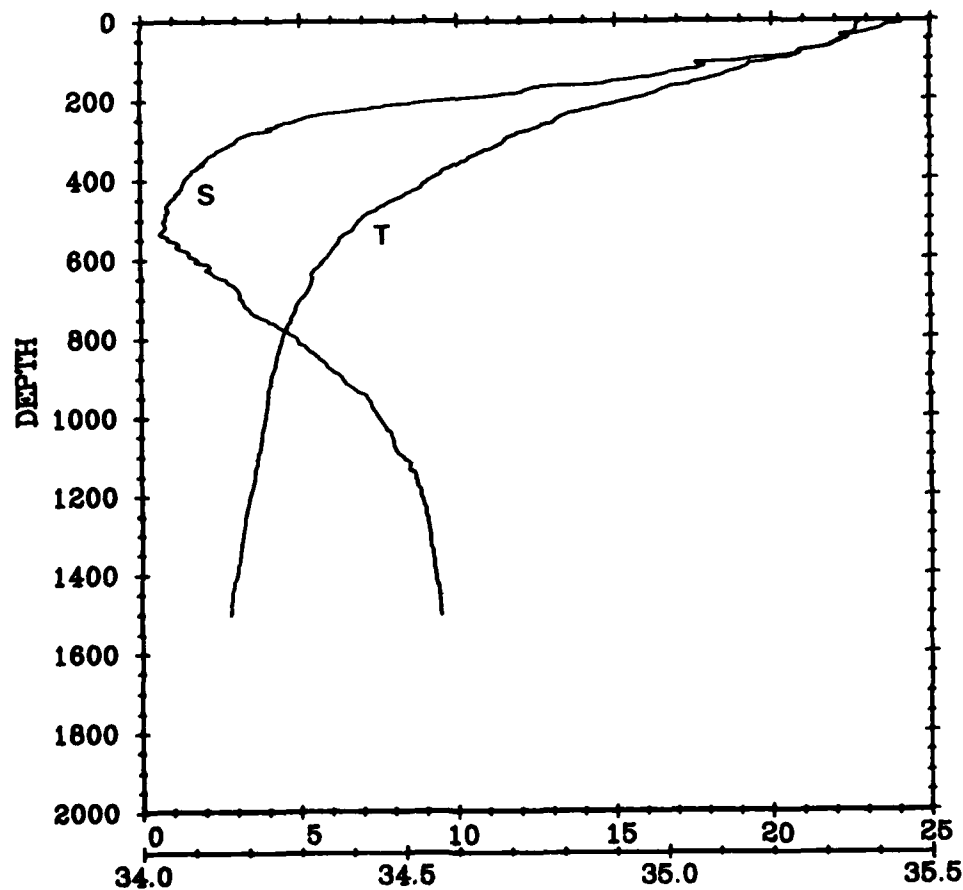
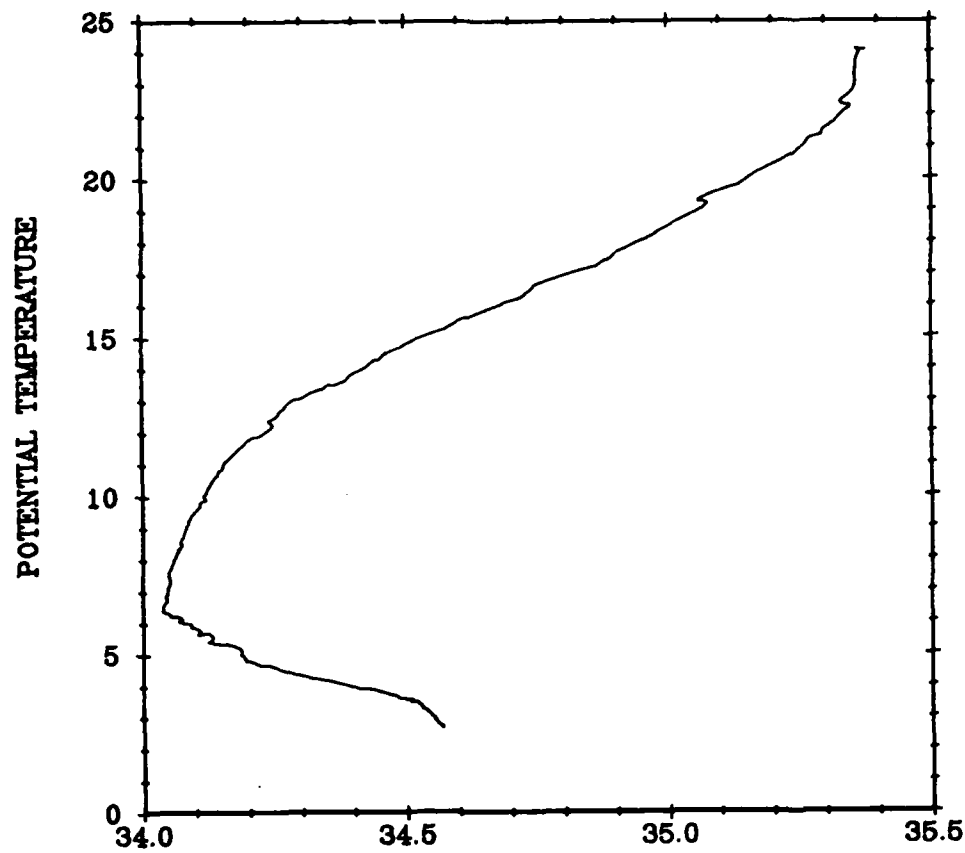
R. V. THOMAS WASHINGTON MARATHON LEG II STATION 12

| LATITUDE | LONGITUDE | MO. DY. YR. | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|-------------|------------|--------|------|-------|----------|----------|--------|
| 24 29 IN | 155 3 64  | 5 7 94      | 2142       | 3.23   | DIR  | KT    | DEG C    | DEG C    | MB     |
|          |           |             |            |        | 40   | 8     | 25.0     | 21.7     | 1020.0 |

| STD DATA |        | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH |
|----------|--------|----------|---------|---------|---------|---------|------------|-------|
| PRESS    | TEMP   | DEG C    |         |         |         | CL/TON  |            | M     |
| 00       | 23.949 | 35.365   | 23.929  | 32.261  | 40.237  | 196.853 | 0.000      | 0     |
| 10       | 23.366 | 35.359   | 23.362  | 32.451  | 40.443  | 181.099 | 0.078      | 19    |
| 20       | 22.474 | 35.345   | 22.466  | 32.450  | 40.738  | 159.020 | 0.102      | 39    |
| 30       | 21.891 | 35.321   | 21.869  | 32.500  | 40.922  | 144.806 | 0.222      | 59    |
| 40       | 21.033 | 35.257   | 21.019  | 32.586  | 41.157  | 127.791 | 0.289      | 79    |
| 50       | 20.040 | 35.102   | 20.024  | 32.673  | 41.320  | 110.714 | 0.353      | 99    |
| 60       | 17.909 | 34.928   | 17.883  | 32.747  | 41.764  | 91.914  | 0.500      | 119   |
| 70       | 15.495 | 34.597   | 15.464  | 32.559  | 42.395  | 247.893 | 0.631      | 139   |
| 80       | 13.174 | 34.375   | 13.139  | 32.522  | 42.837  | 222.965 | 0.749      | 159   |
| 90       | 11.557 | 34.195   | 11.519  | 32.547  | 43.192  | 202.079 | 0.855      | 179   |
| 100      | 10.126 | 34.125   | 10.085  | 32.522  | 43.456  | 186.634 | 0.953      | 199   |
| 110      | 9.189  | 34.196   | 9.145   | 32.380  | 43.711  | 171.767 | 1.042      | 219   |
| 120      | 8.135  | 34.262   | 8.090   | 32.324  | 43.947  | 158.112 | 1.125      | 239   |
| 130      | 6.994  | 34.245   | 6.947   | 32.575  | 44.200  | 143.527 | 1.200      | 259   |
| 140      | 5.854  | 34.198   | 5.802   | 32.665  | 44.494  | 125.631 | 1.335      | 279   |
| 150      | 5.091  | 34.187   | 5.024   | 32.529  | 44.729  | 110.141 | 1.453      | 299   |
| 160      | 4.441  | 34.295   | 4.379   | 32.178  | 44.940  | 96.195  | 1.555      | 319   |
| 170      | 4.122  | 34.175   | 4.054   | 32.284  | 45.382  | 86.612  | 1.647      | 339   |
| 180      | 3.897  | 34.445   | 3.822   | 32.364  | 45.472  | 79.608  | 1.730      | 359   |
| 190      | 3.592  | 34.487   | 3.501   | 32.419  | 45.538  | 74.821  | 1.808      | 379   |
| 200      | 3.415  | 34.528   | 3.329   | 32.478  | 45.611  | 69.407  | 1.891      | 399   |
| 210      | 3.192  | 34.545   | 3.089   | 32.514  | 45.659  | 66.091  | 1.947      | 419   |
| 220      | 2.991  | 34.555   | 2.894   | 32.540  | 45.695  | 63.775  | 2.012      | 439   |
| 230      | 2.798  | 34.557   | 2.592   | 32.567  | 45.734  | 61.194  | 2.075      | 459   |
| 240      | 2.781  | 34.559   | 2.574   | 32.570  | 45.718  | 60.919  | 2.085      | 479   |

| WISKIN BOTTLE DATA |         | DIS O2 | O2 SAT | SIO3  | PO4   | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|--------------------|---------|--------|--------|-------|-------|------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP    | ML/L   | %      | UM/L  | UM/L  | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 0                  | 24.013  | 35.358 | 4.92   | 102.9 | 1.2   | 0.11 | 0.0  | 0.00  | 24.293   | 21.857  | 32.281  | 40.189  | 0     |
| 10                 | 23.474  | 35.356 | 5.20   | 104.5 | 1.5   | 0.18 | 0.0  | 0.00  | 21.963   | 24.470  | 32.458  | 40.386  | 19    |
| 20                 | 22.508  | 35.321 | 5.26   | 101.0 | 1.9   | 0.0  | 0.0  | 0.00  | 19.489   | 24.939  | 33.463  | 41.552  | 39    |
| 30                 | 21.812  | 34.974 | 5.14   | 95.4  | 2.1   | 0.19 | 0.6  | 0.13  | 19.103   | 25.178  | 33.681  | 41.818  | 59    |
| 40                 | 20.776  | 34.759 | 4.61   | 84.1  | 3.3   | 0.43 | 4.3  | 0.01  | 16.708   | 25.399  | 33.959  | 42.146  | 79    |
| 50                 | 19.349  | 34.569 | 4.64   | 81.9  | 4.5   | 0.54 | 5.9  | 0.01  | 15.116   | 25.571  | 34.180  | 42.407  | 99    |
| 60                 | 17.904  | 34.299 | 4.55   | 75.3  | 8.7   | 0.79 | 10.0 | 0.00  | 12.869   | 25.868  | 34.572  | 42.897  | 119   |
| 70                 | 16.287  | 34.170 | 4.48   | 72.5  | 13.5  | 1.02 | 13.9 | 0.00  | 11.249   | 26.094  | 34.955  | 43.241  | 139   |
| 80                 | 15.010  | 34.082 | 4.03   | 62.0  | 25.9  |      | 21.1 | 0.00  | 8.936    | 26.402  | 35.269  | 43.747  | 159   |
| 90                 | 13.895  | 34.045 | 2.59   | 37.9  | 49.9  |      | 31.1 | 0.00  | 6.817    | 26.689  | 35.654  | 44.224  | 179   |
| 100                | 12.653  | 34.125 | 1.12   | 15.9  | 73.4  |      | 38.9 | 0.01  | 5.601    | 26.911  | 35.934  | 44.589  | 199   |
| 110                | 11.4924 | 34.193 | 0.77   | 10.2  | 90.1  |      | 41.9 | 0.00  | 4.867    | 27.051  | 36.110  | 44.767  | 219   |
| 120                | 10.401  | 34.275 | 0.49   | 6.8   | 103.6 |      | 43.6 | 0.00  | 4.338    | 27.190  | 36.274  | 44.955  | 239   |
| 130                | 9.136   | 34.382 | 0.61   | 8.6   | 110.7 | 3.10 | 43.8 | 0.00  | 4.017    | 27.293  | 36.392  | 45.187  | 259   |
| 140                | 8.979   | 34.451 | 0.93   | 12.7  | 115.3 | 3.04 | 43.2 | 0.00  | 3.803    | 27.370  | 36.479  | 45.183  | 279   |
| 150                | 8.248   | 34.538 | 1.30   | 17.5  | 129.4 |      | 42.7 | 0.01  | 3.157    | 27.502  | 36.644  | 45.178  | 299   |
| 160                | 2.781   | 34.559 | 1.55   | 20.6  | 139.6 | 2.91 | 42.2 | 0.00  | 2.674    | 27.569  | 36.737  | 45.495  | 319   |

# MARATHON 2 STA. 10

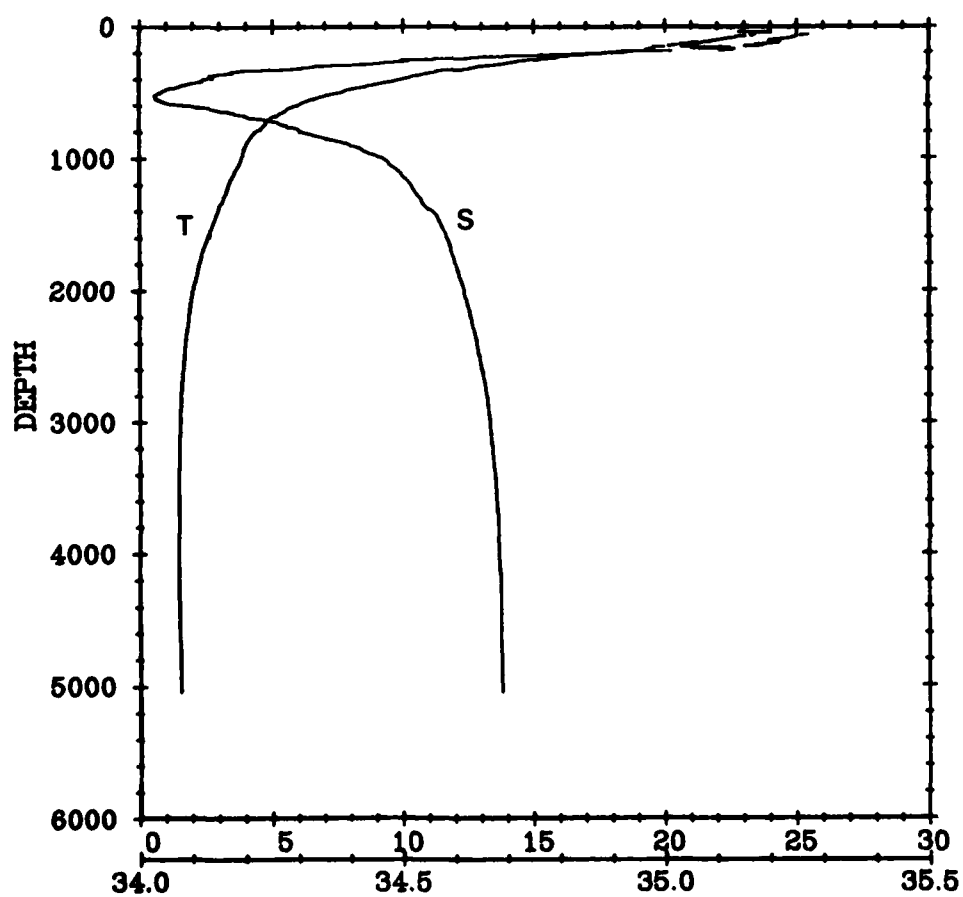
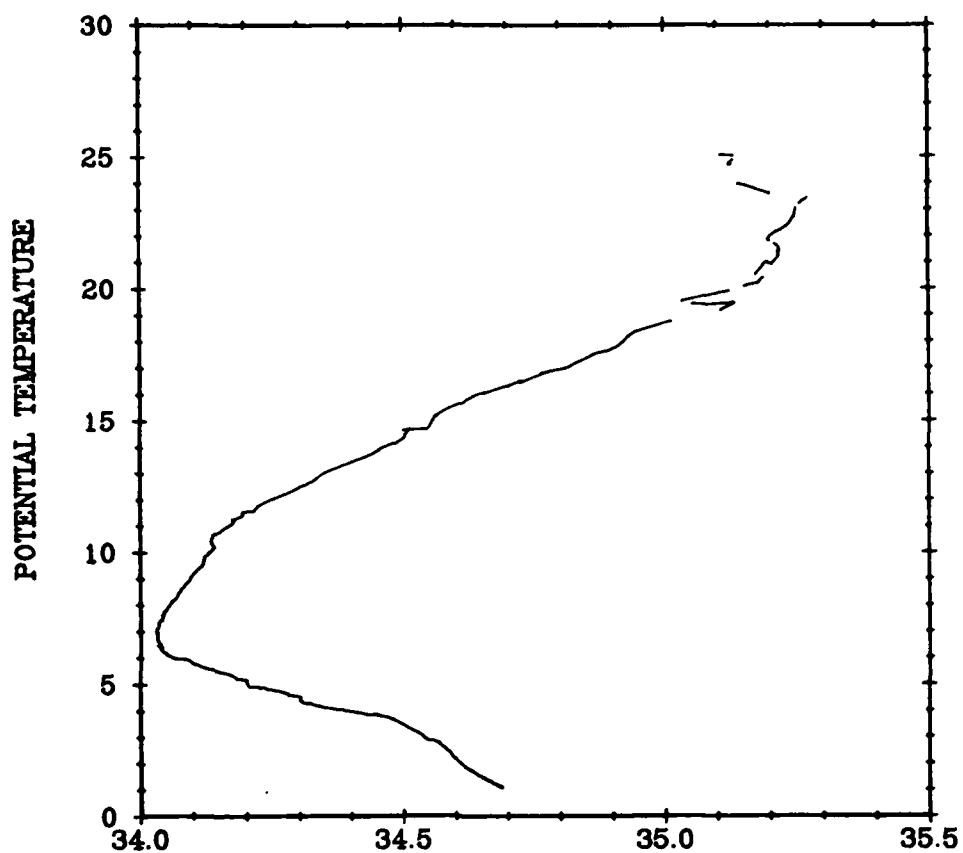


| LATITUDE | LONGITUDE | MO | DAY | YEAR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----|-----|------|------------|--------|------|-------|----------|----------|--------|
| 24 48 N  | 174 37 W  | 11 | 3   | 94   | 105        | 1144   | 01   | 10    | 24.4     | 20.1     | 1019.0 |

| TID DATA |        |          |          |         |         |         |         |            |       |  |  |
|----------|--------|----------|----------|---------|---------|---------|---------|------------|-------|--|--|
| PRESS    | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 1 | SIGMA 4 | SIGMA 4 | DYNAMIC HT | DEPTH |  |  |
| DB       | DEG C  |          | DEG C    |         |         |         |         |            | M     |  |  |
| 100      | 24.478 | 35.122   | 24.953   | 23.460  | 31.739  | 39.733  | 442.669 | 0.000      | 10    |  |  |
| 105      | 24.795 | 35.124   | 24.931   | 23.394  | 31.932  | 39.845  | 432.127 | 0.000      | 15    |  |  |
| 110      | 25.023 | 35.117   | 23.927   | 23.787  | 32.121  | 40.102  | 421.769 | 0.000      | 20    |  |  |
| 115      | 25.429 | 35.139   | 23.477   | 23.949  | 32.345  | 40.335  | 392.742 | 0.000      | 25    |  |  |
| 120      | 25.759 | 35.143   | 22.693   | 24.208  | 32.576  | 40.395  | 373.499 | 0.000      | 30    |  |  |
| 125      | 26.105 | 35.203   | 22.235   | 24.357  | 32.741  | 40.769  | 350.004 | 0.000      | 35    |  |  |
| 130      | 26.309 | 35.124   | 19.980   | 24.861  | 33.300  | 41.195  | 317.945 | 0.000      | 40    |  |  |
| 135      | 26.373 | 34.902   | 17.309   | 25.208  | 33.757  | 41.909  | 279.100 | 0.000      | 45    |  |  |
| 140      | 26.207 | 34.563   | 15.169   | 25.599  | 34.214  | 42.455  | 245.604 | 0.000      | 50    |  |  |
| 145      | 26.100 | 34.358   | 13.059   | 25.844  | 34.581  | 42.899  | 218.958 | 0.000      | 55    |  |  |
| 150      | 26.109 | 34.176   | 11.195   | 26.099  | 34.872  | 43.261  | 199.763 | 0.000      | 60    |  |  |
| 155      | 26.106 | 34.132   | 9.999    | 26.273  | 35.046  | 43.732  | 182.049 | 0.000      | 65    |  |  |
| 160      | 26.111 | 34.084   | 9.763    | 26.439  | 35.316  | 43.802  | 166.442 | 0.000      | 70    |  |  |
| 165      | 26.114 | 34.043   | 7.624    | 26.577  | 35.571  | 44.742  | 153.471 | 0.000      | 75    |  |  |
| 170      | 26.165 | 34.085   | 5.913    | 26.841  | 35.830  | 44.463  | 128.044 | 0.000      | 80    |  |  |
| 175      | 26.489 | 34.217   | 4.903    | 27.056  | 36.123  | 44.779  | 106.609 | 0.000      | 85    |  |  |
| 180      | 26.427 | 34.304   | 4.365    | 27.134  | 36.277  | 44.956  | 94.693  | 0.000      | 90    |  |  |
| 185      | 26.442 | 34.397   | 3.974    | 27.309  | 36.411  | 45.109  | 84.109  | 0.000      | 95    |  |  |
| 190      | 26.367 | 34.459   | 3.792    | 27.376  | 36.496  | 45.191  | 79.364  | 0.000      | 100   |  |  |
| 195      | 26.629 | 34.491   | 3.548    | 27.427  | 36.549  | 45.263  | 73.907  | 0.000      | 105   |  |  |
| 200      | 26.391 | 34.114   | 3.294    | 27.470  | 36.605  | 45.333  | 70.028  | 0.000      | 110   |  |  |
| 205      | 26.212 | 34.831   | 3.118    | 27.500  | 36.644  | 45.381  | 67.479  | 0.000      | 115   |  |  |
| 210      | 26.176 | 34.549   | 2.877    | 27.536  | 36.693  | 45.442  | 64.016  | 0.000      | 120   |  |  |
| 215      | 26.177 | 34.571   | 2.691    | 27.570  | 36.737  | 45.494  | 61.889  | 0.000      | 125   |  |  |
| 220      | 26.109 | 34.583   | 2.497    | 27.597  | 36.774  | 45.541  | 58.342  | 0.000      | 130   |  |  |
| 225      | 26.424 | 34.192   | 2.307    | 27.620  | 36.907  | 45.584  | 56.005  | 0.000      | 135   |  |  |
| 230      | 26.272 | 34.599   | 2.148    | 27.638  | 36.834  | 45.619  | 54.161  | 0.000      | 140   |  |  |
| 235      | 26.109 | 34.607   | 2.029    | 27.655  | 36.956  | 45.647  | 52.670  | 0.000      | 145   |  |  |
| 240      | 26.140 | 34.615   | 1.903    | 27.671  | 36.980  | 45.677  | 51.067  | 0.000      | 150   |  |  |
| 245      | 26.162 | 34.422   | 1.818    | 27.693  | 36.896  | 45.699  | 50.003  | 0.000      | 155   |  |  |
| 250      | 26.395 | 34.429   | 1.733    | 27.695  | 36.913  | 45.719  | 48.423  | 0.000      | 160   |  |  |
| 255      | 26.145 | 34.435   | 1.646    | 27.705  | 36.927  | 45.736  | 49.002  | 0.000      | 165   |  |  |
| 260      | 26.144 | 34.640   | 1.582    | 27.705  | 36.941  | 45.755  | 47.025  | 0.000      | 170   |  |  |
| 265      | 26.177 | 34.645   | 1.532    | 27.723  | 36.952  | 45.769  | 46.560  | 0.000      | 175   |  |  |
| 270      | 26.149 | 34.651   | 1.485    | 27.700  | 36.952  | 45.791  | 46.016  | 0.000      | 180   |  |  |
| 275      | 26.120 | 34.655   | 1.429    | 27.738  | 36.973  | 45.794  | 45.317  | 0.000      | 185   |  |  |
| 280      | 26.194 | 34.659   | 1.384    | 27.745  | 36.992  | 45.805  | 44.872  | 0.000      | 190   |  |  |
| 285      | 26.162 | 34.662   | 1.353    | 27.750  | 36.993  | 45.813  | 44.635  | 0.000      | 195   |  |  |
| 290      | 26.177 | 34.665   | 1.319    | 27.755  | 36.996  | 45.822  | 44.115  | 0.000      | 200   |  |  |
| 295      | 26.125 | 34.667   | 1.289    | 27.757  | 36.999  | 45.827  | 44.562  | 0.000      | 205   |  |  |
| 300      | 26.159 | 34.670   | 1.272    | 27.762  | 37.005  | 45.834  | 44.187  | 0.000      | 210   |  |  |
| 305      | 26.176 | 34.672   | 1.250    | 27.765  | 37.009  | 45.839  | 44.149  | 0.000      | 215   |  |  |
| 310      | 26.143 | 34.674   | 1.227    | 27.769  | 37.013  | 45.845  | 44.088  | 0.000      | 220   |  |  |
| 315      | 26.179 | 34.676   | 1.212    | 27.772  | 37.017  | 45.849  | 44.141  | 0.000      | 225   |  |  |
| 320      | 26.169 | 34.678   | 1.192    | 27.774  | 37.021  | 45.854  | 44.114  | 0.000      | 230   |  |  |
| 325      | 26.166 | 34.679   | 1.180    | 27.775  | 37.023  | 45.857  | 44.075  | 0.000      | 235   |  |  |
| 330      | 26.161 | 34.681   | 1.165    | 27.778  | 37.027  | 45.862  | 44.017  | 0.000      | 240   |  |  |
| 335      | 26.164 | 34.682   | 1.157    | 27.779  | 37.029  | 45.864  | 44.051  | 0.000      | 245   |  |  |
| 340      | 26.165 | 34.682   | 1.147    | 27.780  | 37.030  | 45.866  | 44.023  | 0.000      | 250   |  |  |
| 345      | 26.162 | 34.684   | 1.133    | 27.782  | 37.033  | 45.870  | 44.089  | 0.000      | 255   |  |  |
| 350      | 26.165 | 34.685   | 1.126    | 27.784  | 37.035  | 45.872  | 45.035  | 0.000      | 260   |  |  |
| 355      | 26.170 | 34.686   | 1.119    | 27.785  | 37.036  | 45.874  | 45.082  | 0.000      | 265   |  |  |
| 360      | 26.180 | 34.686   | 1.117    | 27.785  | 37.037  | 45.874  | 45.798  | 0.000      | 270   |  |  |
| 365      | 26.190 | 34.686   | 1.115    | 27.785  | 37.037  | 45.874  | 46.216  | 0.000      | 275   |  |  |
| 370      | 26.171 | 34.686   | 1.114    | 27.785  | 37.037  | 45.875  | 46.463  | 0.000      | 280   |  |  |
| 375      | 26.171 | 34.687   | 1.112    | 27.786  | 37.038  | 45.875  | 47.006  | 0.000      | 285   |  |  |
| 380      | 26.173 | 34.686   | 1.112    | 27.786  | 37.037  | 45.875  | 47.534  | 0.000      | 290   |  |  |
| 385      | 26.173 | 34.687   | 1.105    | 27.787  | 37.039  | 45.877  | 47.803  | 0.000      | 295   |  |  |
| 390      | 26.174 | 34.689   | 1.104    | 27.788  | 37.040  | 45.879  | 48.197  | 0.000      | 300   |  |  |
| 395      | 26.174 | 34.689   | 1.101    | 27.788  | 37.040  | 45.879  | 48.508  | 0.000      | 305   |  |  |
| 400      | 26.174 | 34.689   | 1.097    | 27.788  | 37.041  | 45.879  | 48.731  | 0.000      | 310   |  |  |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PC4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  | DEG C    |         |         |         | DB    |
| 10                 | 24.707 | 35.160   | 4.97   | 102.6  | 1.4   | 0.14 | 0.0  | 0.00 | 24.705 | 23.553   | 31.858  | 39.428  | 10      |       |
| 15                 | 23.455 | 35.259   | 4.96   | 102.3  | 0.9   | 0.10 | 0.0  | 0.00 | 23.443 | 24.003   | 32.300  | 40.141  | 15      |       |
| 20                 | 21.916 | 35.199   | 4.76   | 95.5   | 0.7   | 0.14 | 0.0  | 0.01 | 21.895 | 24.199   | 32.792  | 40.822  | 20      |       |
| 25                 | 19.695 | 35.101   | 4.71   | 90.7   | 1.2   | 0.22 | 1.1  | 0.09 | 19.666 | 24.927   | 33.386  | 41.481  | 25      |       |
| 30                 | 17.118 | 34.797   | 4.62   | 84.4   | 2.3   | 0.38 | 4.0  | 0.01 | 17.024 | 25.359   | 33.907  | 42.086  | 30      |       |
| 35                 | 11.129 | 34.204   | 4.59   | 75.0   | 11.6  | 0.95 | 13.0 | 0.00 | 11.689 | 26.010   | 34.782  | 43.151  | 35      |       |
| 40                 | 9.355  | 34.103   | 4.32   | 66.9   | 23.5  | 1.36 | 19.4 | 0.00 | 9.239  | 26.175   | 35.229  | 43.695  | 40      |       |
| 45                 | 7.171  | 34.735   | 3.01   | 44.4   | 46.8  | 2.04 | 29.4 | 0.00 | 7.121  | 26.642   | 35.594  | 44.152  | 45      |       |
| 50                 | 5.733  | 34.122   | 1.19   | 17.0   | 73.8  |      | 38.7 | 0.00 | 5.680  | 26.897   | 35.917  | 44.537  | 50      |       |
| 55                 | 4.979  | 34.216   | 0.66   | 9.2    | 108.8 | 2.99 | 42.1 | 0.00 | 4.921  | 27.063   | 36.119  | 44.773  | 55      |       |
| 60                 | 4.153  | 34.309   | 0.52   | 7.2    | 108.8 | 3.08 | 43.6 | 0.00 | 4.290  | 27.206   | 36.282  | 44.973  | 60      |       |
| 65                 | 4.019  | 34.426   | 0.70   | 9.6    | 115.8 | 3.08 | 43.6 | 0.00 | 3.949  | 27.319   | 36.421  | 45.119  | 65      |       |
| 70                 | 3.943  | 34.466   | 0.98   | 11.4   | 118.4 | 3.04 | 43.2 | 0.00 | 3.769  | 27.395   | 36.466  | 45.202  | 70      |       |
| 75                 | 3.013  | 34.522   | 1.26   | 17.0   | 130.1 | 2.99 | 42.7 | 0.00 | 3.223  | 27.483   | 36.521  | 45.351  | 75      |       |
| 80                 | 2.855  | 34.570   | 1.54   | 20.5   | 140.2 |      | 42.3 | 0.00 | 2.747  | 27.565   | 36.728  | 45.481  | 80      |       |
| 85                 | 2.962  | 34.595   | 1.77   | 23.3   | 154.3 |      | 41.7 | 0.00 | 2.239  | 27.628   | 36.818  | 45.798  | 85      |       |
| 90                 | 2.043  | 34.617   | 1.97   | 25.7   | 163.2 |      | 41.1 | 0.02 | 1.904  | 27.672   | 36.881  | 45.678  | 90      |       |
| 95                 | 1.536  | 34.667   | 2.89   | 37.1   | 166.4 |      | 38.6 | 0.01 | 1.315  | 27.756   | 36.997  | 45.924  | 95      |       |
| 100                | 1.470  | 34.677   | 3.25   | 41.6   | 163.9 | 2.55 | 37.6 | 0.00 | 1.200  | 27.772   | 37.019  | 45.952  | 100     |       |
| 105                | 1.461  | 34.685   | 3.44   | 44.0   | 159.0 | 2.51 | 37.1 | 0.00 | 1.118  | 27.783   | 37.033  | 45.869  | 105     |       |
| 110                | 1.495  | 34.686   |        |        | 154.8 |      | 36.7 | 0.01 | 1.113  | 27.785   | 37.037  | 45.876  | 110     |       |
| 115                | 1.441  | 34.683   | 3.58   | 45.7   |       | 2.45 | 36.6 | 0.00 | 1.036  | 27.789   | 37.041  | 45.879  | 115     |       |
| 120                | 1.350  | 34.699   |        |        |       |      | 36.7 | 0.01 | 1.046  | 27.789   | 37.041  | 45.880  | 120     |       |

# MARATHON 2 STA. 11



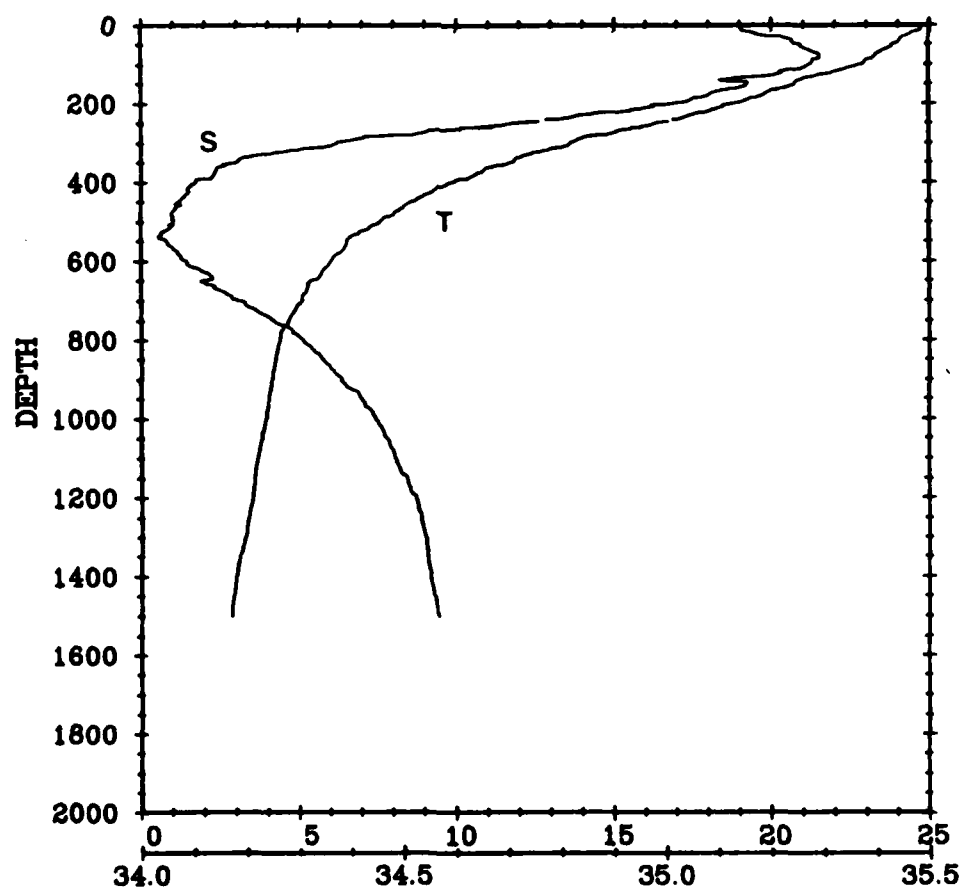
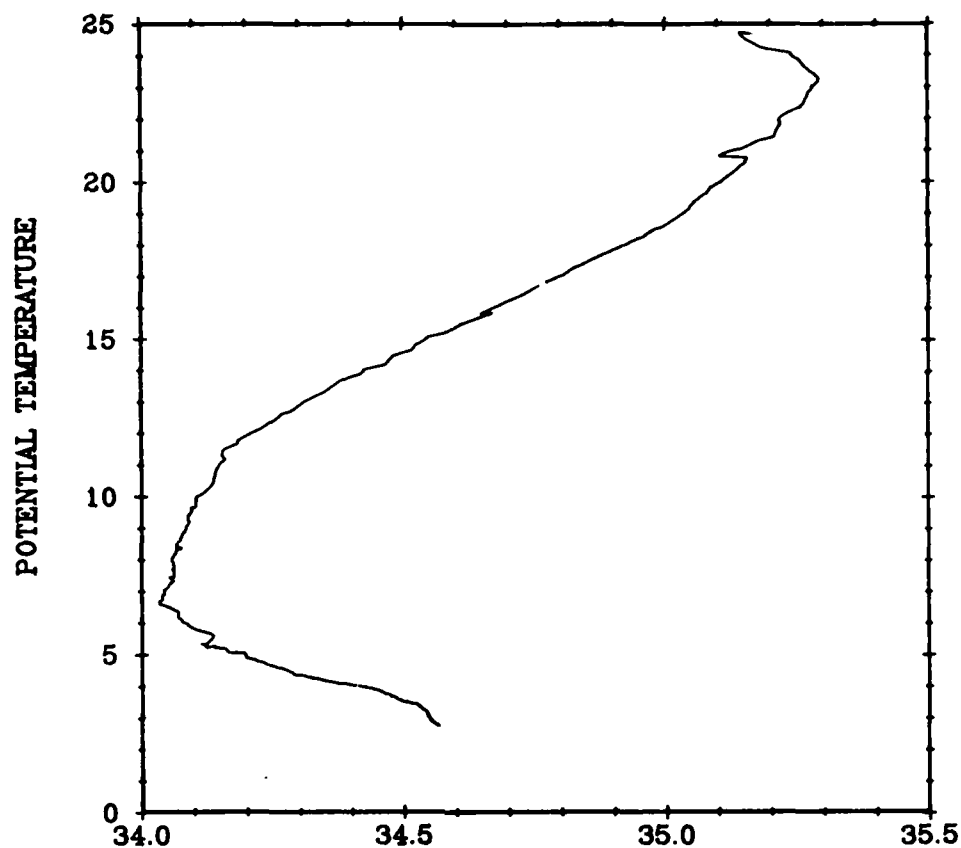
S/V THOMAS WASHINGTON MARATHON LEG II STATION 12

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 25 11 0N | 154 28 6W | 5/ 8/84  | 0800       | 4990   | 110  | 11    | 23.3     | 21.1     | 1021.7 |

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA<br>CL/TON | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |               |            |            |
| 0           | 24.708        | 35.148   | 24.708            | 23.543  | 31.959  | 39.918  | 433.612       | 0.100      | 0          |
| 20          | 24.438        | 35.168   | 24.434            | 23.641  | 31.963  | 39.930  | 425.137       | 0.186      | 19         |
| 40          | 24.027        | 35.237   | 24.019            | 23.817  | 32.149  | 40.125  | 409.177       | 0.169      | 39         |
| 60          | 23.649        | 35.267   | 23.635            | 23.952  | 32.295  | 40.280  | 397.076       | 0.250      | 59         |
| 80          | 23.225        | 35.287   | 23.209            | 24.091  | 32.446  | 40.442  | 384.523       | 0.328      | 79         |
| 100         | 22.758        | 35.270   | 22.738            | 24.215  | 32.582  | 40.591  | 373.592       | 0.404      | 99         |
| 150         | 20.691        | 35.145   | 20.663            | 24.697  | 33.125  | 41.191  | 329.419       | 0.580      | 149        |
| 200         | 18.795        | 35.007   | 18.760            | 25.089  | 33.577  | 41.700  | 291.502       | 0.735      | 199        |
| 250         | 16.391        | 34.716   | 16.351            | 25.443  | 34.021  | 42.222  | 260.263       | 0.874      | 249        |
| 300         | 13.684        | 34.380   | 13.641            | 25.783  | 34.457  | 42.753  | 228.971       | 0.996      | 298        |
| 350         | 11.677        | 34.176   | 11.632            | 26.019  | 34.774  | 43.146  | 206.658       | 1.105      | 348        |
| 400         | 9.932         | 34.107   | 9.886             | 26.274  | 35.103  | 43.543  | 182.137       | 1.202      | 398        |
| 450         | 8.635         | 34.073   | 8.587             | 26.457  | 35.343  | 43.837  | 164.910       | 1.289      | 447        |
| 500         | 7.636         | 34.061   | 7.586             | 26.597  | 35.528  | 44.064  | 151.585       | 1.368      | 497        |
| 600         | 6.044         | 34.082   | 5.991             | 26.829  | 35.834  | 44.441  | 129.125       | 1.509      | 596        |
| 700         | 5.081         | 34.179   | 5.024             | 27.022  | 36.073  | 44.723  | 110.915       | 1.629      | 695        |
| 800         | 4.378         | 34.302   | 4.317             | 27.198  | 36.283  | 44.965  | 94.246        | 1.731      | 794        |
| 900         | 4.130         | 34.377   | 4.062             | 27.284  | 36.382  | 45.074  | 86.633        | 1.822      | 893        |
| 1000        | 3.942         | 34.444   | 3.867             | 27.358  | 36.464  | 45.165  | 80.292        | 1.905      | 992        |
| 1100        | 3.690         | 34.482   | 3.609             | 27.414  | 36.533  | 45.246  | 75.295        | 1.983      | 1091       |
| 1200        | 3.510         | 34.518   | 3.422             | 27.461  | 36.589  | 45.311  | 71.261        | 2.056      | 1190       |
| 1300        | 3.293         | 34.539   | 3.199             | 27.499  | 36.639  | 45.371  | 67.950        | 2.126      | 1289       |
| 1400        | 3.020         | 34.551   | 2.920             | 27.534  | 36.689  | 45.435  | 64.390        | 2.192      | 1388       |
| 1500        | 2.815         | 34.554   | 2.729             | 27.561  | 36.726  | 45.482  | 61.854        | 2.255      | 1487       |
| 1514        | 2.822         | 34.556   | 2.715             | 27.564  | 36.730  | 45.486  | 61.635        | 2.264      | 1500       |

| NISKIN BOTTLE DATA |               | SALINITY | DIS O2<br>ML/L | O2 SAT<br>% | SiO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUBIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |          |                |             |              |             |             |             |               |                   |         |         |         |             |
| 13                 | 24.662        | 35.141   | 4.97           | 102.5       | 2.2          | 0.15        | 0.0         | 0.00        | 24.659        | 23.553            | 31.869  | 39.910  | 13      |             |
| 53                 | 23.713        | 35.262   | 4.95           | 102.6       | 1.7          | 0.0         | 0.0         | 0.00        | 23.702        | 23.929            | 32.270  | 40.254  | 53      |             |
| 103                | 22.239        | 35.239   | 4.97           | 100.3       | 1.7          | 0.11        | 0.0         | 0.00        | 22.218        | 24.339            | 32.721  | 40.744  | 103     |             |
| 135                | 20.717        | 35.145   | 4.59           | 90.1        | 1.6          | 0.24        | 0.8         | 0.04        | 20.691        | 24.689            | 33.116  | 41.191  | 135     |             |
| 166                | 19.533        | 35.066   | 4.46           | 85.6        | 2.0          | 0.29        | 2.1         | 0.02        | 19.503        | 24.943            | 33.408  | 41.508  | 166     |             |
| 203                | 18.057        | 34.923   | 4.56           | 95.0        | 2.7          | 0.34        | 1.1         | 0.01        | 18.022        | 25.209            | 33.722  | 41.867  | 203     |             |
| 253                | 15.177        | 34.564   | 4.45           | 78.3        | 6.0          | 0.59        | 6.8         | 0.01        | 15.138        | 25.606            | 34.222  | 42.465  | 254     |             |
| 304                | 12.738        | 34.282   | 4.39           | 73.3        | 10.0         |             | 11.0        | 0.00        | 12.697        | 25.897            | 34.608  | 42.939  | 305     |             |
| 403                | 9.934         | 34.124   | 4.16           | 65.2        | 21.4         |             | 18.3        | 0.01        | 9.787         | 26.304            | 35.136  | 43.580  | 404     |             |
| 505                | 7.603         | 34.064   | 2.85           | 42.4        | 42.9         |             | 28.4        | 0.01        | 7.553         | 26.604            | 35.516  | 44.074  | 507     |             |
| 604                | 5.975         | 34.089   | 1.51           | 21.7        | 67.4         |             | 17.1        | 0.00        | 5.922         | 26.843            | 35.851  | 44.461  | 607     |             |
| 704                | 5.120         | 34.194   | 0.73           | 10.3        | 86.5         |             | 42.0        | 0.00        | 5.062         | 27.029            | 36.079  | 44.727  | 708     |             |
| 804                | 4.372         | 34.302   | 0.53           | 7.3         | 106.8        | 3.12        | 43.8        | 0.00        | 4.310         | 27.198            | 36.284  | 44.966  | 809     |             |
| 904                | 4.126         | 34.381   | 0.67           | 9.2         | 113.0        | 3.12        | 44.0        | 0.00        | 4.057         | 27.288            | 36.395  | 45.078  | 910     |             |
| 1004               | 3.907         | 34.449   | 0.88           | 12.0        | 118.9        |             | 43.6        | 0.01        | 3.831         | 27.365            | 36.473  | 45.176  | 1011    |             |
| 1255               | 3.355         | 34.534   | 1.29           | 17.4        | 129.0        | 2.97        | 43.0        | 0.00        | 3.263         | 27.489            | 36.625  | 45.354  | 1265    |             |
| 1498               | 2.825         | 34.566   | 1.49           | 19.8        | 140.4        |             | 42.6        | 0.01        | 2.718         | 27.564            | 36.729  | 45.485  | 1511    |             |

# MARATHON 2 STA. 12

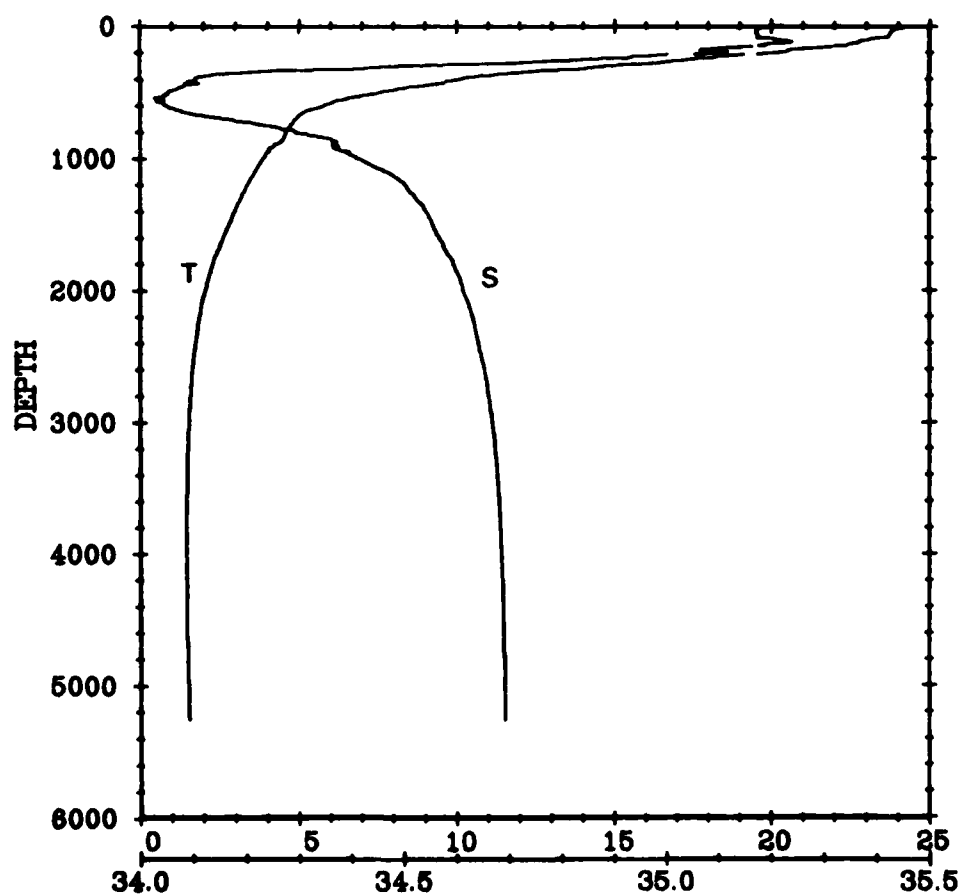
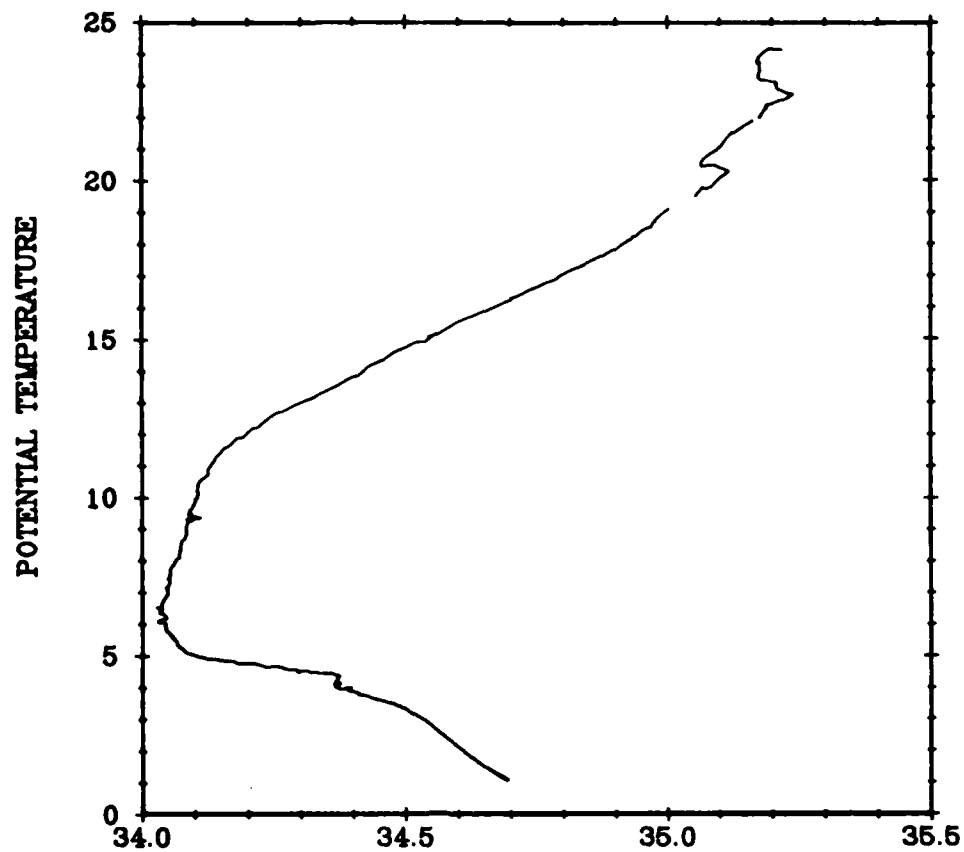


| LATITUDE | LONGITUDE | MO | DAY | YEAR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAR M |
|----------|-----------|----|-----|------|------------|--------|------|-------|----------|----------|-------|
|          |           |    |     |      | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB    |
| 25 12 N  | 154 11 W  | 5  | 9   | 84   | 1900       | 5265   | 170  | 12    | 43       | 20.9     | 1.21  |

| STD DATA |        |          |          |         |         |         |        |            |       |  |  |
|----------|--------|----------|----------|---------|---------|---------|--------|------------|-------|--|--|
| PRESS    | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA    | DYNAMIC HT | DEPTH |  |  |
| DB       | DEG C  |          | DEG C    |         |         |         | 10 T M |            | M     |  |  |
| 1        | 24.146 | 35.202   | 24.146   | 23.753  | 32.102  | 40.285  | 41.164 | 1.100      | 1     |  |  |
| 20       | 23.997 | 35.191   | 23.993   | 23.782  | 32.116  | 40.293  | 41.164 | 1.190      | 19    |  |  |
| 40       | 23.829 | 35.173   | 23.801   | 23.833  | 32.172  | 40.114  | 41.164 | 1.164      | 39    |  |  |
| 60       | 23.742 | 35.171   | 23.729   | 23.854  | 32.215  | 40.119  | 41.164 | 1.249      | 59    |  |  |
| 80       | 23.633 | 35.177   | 23.616   | 23.890  | 32.234  | 40.221  | 41.164 | 1.327      | 79    |  |  |
| 100      | 23.126 | 35.200   | 23.105   | 24.156  | 32.414  | 40.424  | 41.164 | 1.415      | 99    |  |  |
| 120      | 22.052 | 35.170   | 22.022   | 24.142  | 32.730  | 40.759  | 41.164 | 1.504      | 119   |  |  |
| 140      | 20.175 | 35.098   | 20.138   | 24.951  | 33.246  | 41.327  | 41.164 | 1.593      | 139   |  |  |
| 160      | 17.496 | 34.951   | 17.454   | 25.292  | 33.825  | 41.999  | 41.164 | 1.685      | 159   |  |  |
| 180      | 14.935 | 34.524   | 14.890   | 25.610  | 34.256  | 42.537  | 41.164 | 1.779      | 179   |  |  |
| 200      | 12.119 | 34.202   | 12.072   | 25.956  | 34.593  | 43.049  | 41.164 | 1.879      | 199   |  |  |
| 220      | 10.150 | 34.104   | 10.113   | 26.233  | 35.052  | 43.484  | 41.164 | 1.979      | 219   |  |  |
| 240      | 9.049  | 34.084   | 9.000    | 26.401  | 35.268  | 43.745  | 41.164 | 2.079      | 239   |  |  |
| 260      | 7.662  | 34.053   | 7.612    | 26.587  | 35.517  | 44.052  | 41.164 | 2.179      | 259   |  |  |
| 280      | 5.825  | 34.048   | 5.774    | 26.829  | 35.845  | 44.461  | 41.164 | 2.279      | 279   |  |  |
| 300      | 4.914  | 34.151   | 4.858    | 27.018  | 36.079  | 44.731  | 41.164 | 2.379      | 299   |  |  |
| 320      | 4.593  | 34.291   | 4.530    | 27.165  | 36.241  | 44.912  | 41.164 | 2.479      | 319   |  |  |
| 340      | 4.250  | 34.367   | 4.181    | 27.264  | 36.355  | 45.042  | 41.164 | 2.579      | 339   |  |  |
| 360      | 3.898  | 34.409   | 3.813    | 27.335  | 36.445  | 45.149  | 41.164 | 2.672      | 359   |  |  |
| 380      | 3.627  | 34.461   | 3.546    | 27.403  | 36.526  | 45.241  | 41.164 | 2.772      | 379   |  |  |
| 400      | 3.382  | 34.501   | 3.295    | 27.459  | 36.595  | 45.321  | 41.164 | 2.875      | 399   |  |  |
| 420      | 3.174  | 34.521   | 3.081    | 27.495  | 36.642  | 45.381  | 41.164 | 2.975      | 419   |  |  |
| 440      | 2.988  | 34.540   | 2.889    | 27.528  | 36.684  | 45.432  | 41.164 | 3.071      | 439   |  |  |
| 460      | 2.812  | 34.554   | 2.706    | 27.556  | 36.721  | 45.479  | 41.164 | 3.174      | 459   |  |  |
| 480      | 2.635  | 34.566   | 2.523    | 27.581  | 36.756  | 45.523  | 41.164 | 3.285      | 479   |  |  |
| 500      | 2.477  | 34.578   | 2.359    | 27.604  | 36.789  | 45.563  | 41.164 | 3.394      | 499   |  |  |
| 520      | 2.295  | 34.593   | 2.171    | 27.632  | 36.826  | 45.610  | 41.164 | 3.501      | 519   |  |  |
| 540      | 2.174  | 34.604   | 2.043    | 27.651  | 36.852  | 45.642  | 41.164 | 3.605      | 539   |  |  |
| 560      | 2.069  | 34.611   | 1.932    | 27.665  | 36.873  | 45.668  | 41.164 | 3.707      | 559   |  |  |
| 580      | 1.950  | 34.621   | 1.806    | 27.693  | 36.897  | 45.699  | 41.164 | 3.808      | 579   |  |  |
| 600      | 1.873  | 34.629   | 1.722    | 27.696  | 36.915  | 45.721  | 41.164 | 3.907      | 599   |  |  |
| 620      | 1.803  | 34.635   | 1.644    | 27.707  | 36.929  | 45.740  | 41.164 | 4.004      | 619   |  |  |
| 640      | 1.749  | 34.640   | 1.581    | 27.715  | 36.942  | 45.755  | 41.164 | 4.100      | 639   |  |  |
| 660      | 1.691  | 34.646   | 1.516    | 27.725  | 36.955  | 45.771  | 41.164 | 4.195      | 659   |  |  |
| 680      | 1.648  | 34.651   | 1.465    | 27.733  | 36.965  | 45.785  | 41.164 | 4.296      | 679   |  |  |
| 700      | 1.612  | 34.656   | 1.421    | 27.740  | 36.975  | 45.797  | 41.164 | 4.394      | 699   |  |  |
| 720      | 1.580  | 34.659   | 1.380    | 27.745  | 36.982  | 45.806  | 41.164 | 4.491      | 719   |  |  |
| 740      | 1.550  | 34.663   | 1.342    | 27.751  | 36.990  | 45.816  | 41.164 | 4.588      | 739   |  |  |
| 760      | 1.531  | 34.666   | 1.314    | 27.755  | 36.996  | 45.821  | 41.164 | 4.685      | 759   |  |  |
| 780      | 1.512  | 34.670   | 1.285    | 27.761  | 37.003  | 45.832  | 41.164 | 4.782      | 779   |  |  |
| 800      | 1.495  | 34.672   | 1.260    | 27.764  | 37.008  | 45.839  | 41.164 | 4.879      | 799   |  |  |
| 820      | 1.480  | 34.675   | 1.234    | 27.769  | 37.013  | 45.845  | 41.164 | 4.975      | 819   |  |  |
| 840      | 1.473  | 34.676   | 1.219    | 27.770  | 37.016  | 45.848  | 41.164 | 5.071      | 839   |  |  |
| 860      | 1.466  | 34.679   | 1.201    | 27.774  | 37.021  | 45.854  | 41.164 | 5.168      | 859   |  |  |
| 880      | 1.459  | 34.680   | 1.183    | 27.776  | 37.024  | 45.859  | 41.164 | 5.265      | 879   |  |  |
| 900      | 1.452  | 34.682   | 1.166    | 27.779  | 37.027  | 45.862  | 41.164 | 5.362      | 899   |  |  |
| 920      | 1.445  | 34.683   | 1.148    | 27.780  | 37.030  | 45.865  | 41.164 | 5.459      | 919   |  |  |
| 940      | 1.449  | 34.683   | 1.142    | 27.781  | 37.031  | 45.867  | 41.164 | 5.556      | 939   |  |  |
| 960      | 1.451  | 34.684   | 1.133    | 27.782  | 37.033  | 45.870  | 41.164 | 5.653      | 959   |  |  |
| 980      | 1.456  | 34.685   | 1.127    | 27.784  | 37.035  | 45.871  | 41.164 | 5.750      | 979   |  |  |
| 1000     | 1.459  | 34.686   | 1.118    | 27.785  | 37.036  | 45.874  | 41.164 | 5.847      | 999   |  |  |
| 1020     | 1.460  | 34.687   | 1.109    | 27.786  | 37.038  | 45.876  | 41.164 | 5.944      | 1019  |  |  |
| 1040     | 1.464  | 34.689   | 1.101    | 27.788  | 37.040  | 45.879  | 41.164 | 6.041      | 1039  |  |  |
| 1060     | 1.467  | 34.688   | 1.093    | 27.789  | 37.041  | 45.880  | 41.164 | 6.138      | 1059  |  |  |
| 1080     | 1.474  | 34.689   | 1.088    | 27.790  | 37.043  | 45.882  | 41.164 | 6.235      | 1079  |  |  |
| 1100     | 1.482  | 34.689   | 1.084    | 27.790  | 37.043  | 45.882  | 41.164 | 6.332      | 1099  |  |  |
| 1120     | 1.489  | 34.690   | 1.079    | 27.791  | 37.045  | 45.894  | 41.164 | 6.429      | 1119  |  |  |
| 1140     | 1.495  | 34.691   | 1.073    | 27.792  | 37.046  | 45.896  | 41.164 | 6.526      | 1139  |  |  |
| 1160     | 1.506  | 34.691   | 1.071    | 27.792  | 37.046  | 45.896  | 41.164 | 6.623      | 1159  |  |  |
| 1180     | 1.517  | 34.691   | 1.070    | 27.792  | 37.047  | 45.896  | 41.164 | 6.720      | 1179  |  |  |
| 1200     | 1.527  | 34.691   | 1.067    | 27.792  | 37.047  | 45.897  | 41.164 | 6.817      | 1199  |  |  |
| 1220     | 1.537  | 34.692   | 1.064    | 27.793  | 37.048  | 45.898  | 41.164 | 6.914      | 1219  |  |  |
| 1240     | 1.543  | 34.691   | 1.063    | 27.793  | 37.047  | 45.897  | 41.164 | 7.011      | 1239  |  |  |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |          |         |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  | DEG C    |         |
| 1                  | 24.042 | 35.191   | 4.94   | 102.9  | 1.7   | 0.13 | 0.0  | 0.00 | 24.042 | 23.775   | 32.107  |
| 5                  | 23.753 | 35.172   | 4.98   | 103.2  | 1.3   | 0.12 | 0.0  | 0.00 | 23.741 | 23.850   | 32.190  |
| 12                 | 22.440 | 35.201   | 4.85   | 98.2   | 1.1   | 0.14 | 0.0  | 0.08 | 22.414 | 24.255   | 32.632  |
| 17                 | 20.290 | 35.194   | 4.51   | 87.8   | 1.6   | 0.25 | 1.4  | 0.03 | 20.256 | 24.767   | 33.408  |
| 22                 | 17.693 | 34.878   | 4.47   | 82.7   | 3.3   | 0.39 | 4.0  | 0.01 | 17.654 | 25.264   | 33.792  |
| 30                 | 12.695 | 34.253   | 4.41   | 73.6   | 10.3  | 0.87 | 11.0 | 0.00 | 12.653 | 25.893   | 34.595  |
| 40                 | 9.461  | 34.093   | 3.93   | 61.1   | 24.2  | 1.46 | 20.4 | 0.00 | 9.415  | 26.341   | 35.190  |
| 50                 | 7.486  | 34.052   | 2.94   | 43.7   | 43.3  |      | 28.6 | 0.00 | 7.436  | 26.611   | 35.549  |
| 60                 | 5.577  | 34.063   | 1.54   | 23.3   | 73.1  | 2.64 | 37.8 | 0.00 | 5.526  | 26.871   | 35.899  |
| 70                 | 4.863  | 34.179   | 0.81   | 11.3   | 92.2  | 2.95 | 42.0 | 0.00 | 4.806  | 27.046   | 36.109  |
| 80                 | 4.554  | 34.324   | 0.63   | 8.7    | 103.1 | 3.04 | 43.3 | 0.00 | 4.490  | 27.196   | 36.272  |
| 90                 | 4.237  | 34.373   | 0.73   | 10.0   | 115.4 | 3.09 | 43.7 | 0.00 | 4.168  | 27.291   | 36.393  |
| 100                | 3.796  | 34.430   | 0.89   | 12.1   | 120.6 | 3.06 | 43.5 | 0.00 | 3.711  | 27.362   | 36.477  |
| 125                | 3.240  | 34.517   | 1.28   | 17.2   | 133.1 |      | 42.9 | 0.00 | 3.149  | 27.486   | 36.628  |
| 150                | 2.806  | 34.550   | 1.51   | 20.1   | 141.4 |      | 42.5 | 0.00 | 2.699  | 27.558   | 36.724  |
| 175                | 2.350  | 34.590   | 1.74   | 22.9   | 152.4 |      | 41.9 | 0.01 | 2.228  | 27.625   | 36.816  |
| 200                | 2.038  | 34.616   | 2.02   | 26.3   | 162.0 |      | 41.3 | 0.00 | 1.899  | 27.672   | 36.881  |
| 250                | 1.674  | 34.648   | 2.51   | 32.4   | 165.6 |      | 39.9 | 0.01 | 1.497  | 27.729   | 36.959  |
| 300                | 1.528  | 34.668   | 2.97   | 38.1   | 167.4 | 2.62 | 38.7 | 0.00 | 1.306  | 27.758   | 36.998  |
| 349                | 1.468  | 34.679   | 3.27   | 41.9   | 161.3 | 2.54 | 37.7 | 0.00 | 1.197  | 27.774   | 37.021  |
| 399                | 1.453  | 34.686   | 3.43   | 43.9   | 157.2 |      | 37.2 | 0.02 | 1.129  | 27.784   | 37.035  |
| 450                | 1.480  | 34.691   | 3.66   | 46.7   | 153.1 | 2.43 | 36.6 | 0.00 | 1.085  | 27.791   | 37.044  |
| 526                | 1.543  | 34.693   | 3.67   | 46.8   | 144.9 |      | 36.3 | 0.02 | 1.062  | 27.794   | 37.049  |

# MARATHON 2 STA. 13

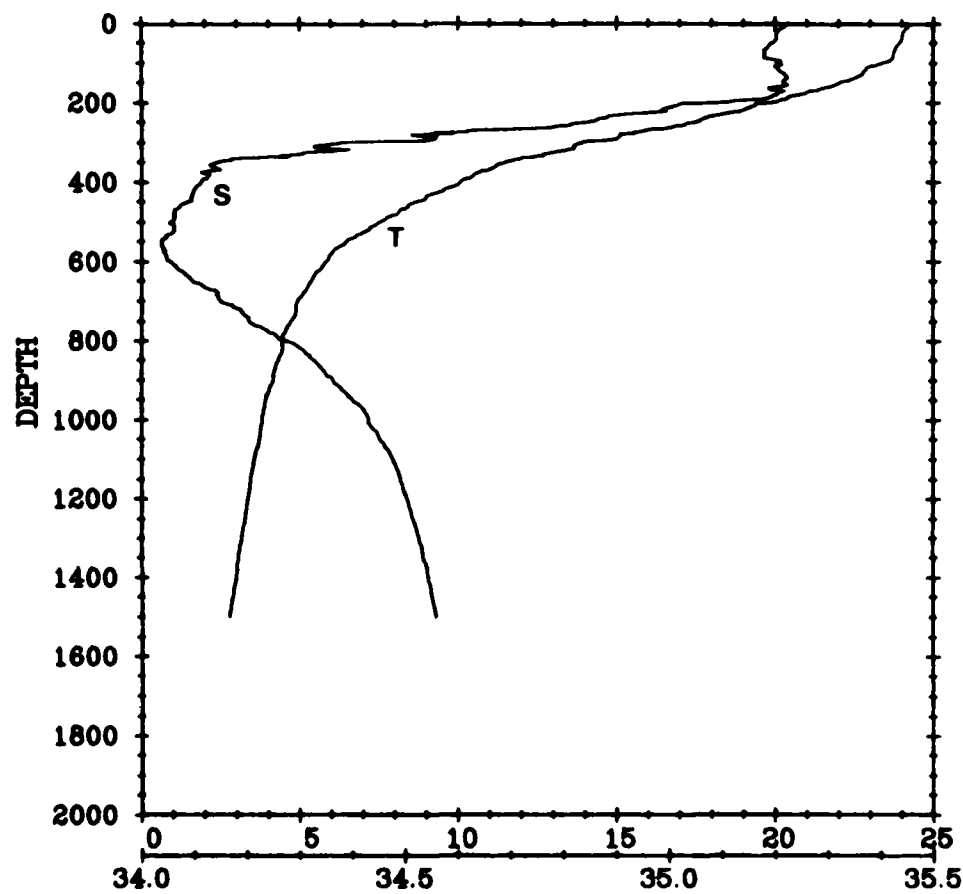
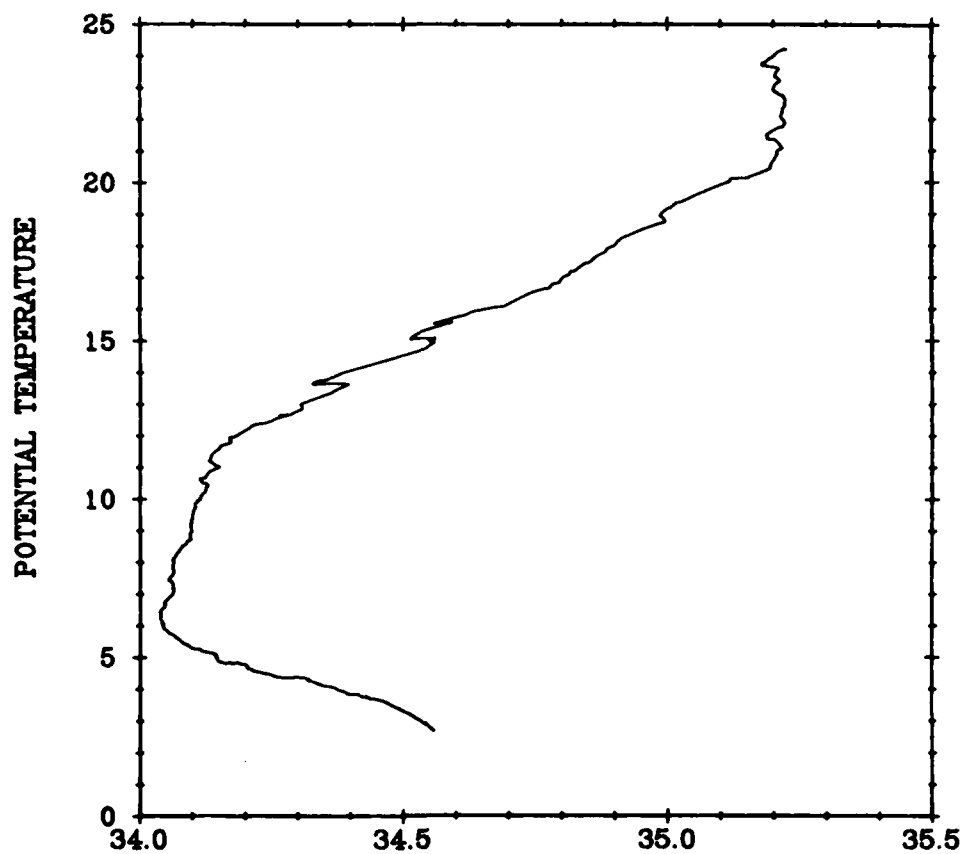


[illegible]

| TEST DATA |       |          |          |          |          |          |          |                |            |
|-----------|-------|----------|----------|----------|----------|----------|----------|----------------|------------|
| FREQ      | TEMP  | SALINITY | WET TEMP | SIGNAL 1 | SIGNAL 2 | SIGNAL 3 | SIGNAL 4 | DIFF. SIGNAL 4 | DIFF. TEMP |
| CH        | DEG F |          | DEG F    |          |          |          |          | IN IN          | IN IN      |
| 1         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 2         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 3         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 4         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 5         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 6         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 7         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 8         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 9         | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 10        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 11        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 12        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 13        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 14        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 15        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 16        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 17        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 18        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 19        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 20        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 21        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 22        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 23        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 24        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 25        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 26        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 27        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 28        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 29        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 30        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 31        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 32        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 33        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 34        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 35        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 36        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 37        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 38        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 39        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 40        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 41        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 42        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 43        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 44        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 45        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 46        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 47        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 48        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 49        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 50        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 51        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 52        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 53        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 54        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 55        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 56        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 57        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 58        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 59        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 60        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 61        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 62        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 63        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 64        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 65        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 66        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 67        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 68        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 69        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 70        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 71        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 72        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 73        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 74        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 75        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 76        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 77        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 78        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 79        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 80        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 81        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 82        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 83        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 84        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 85        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 86        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 87        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 88        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 89        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 90        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 91        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 92        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 93        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 94        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 95        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 96        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 97        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 98        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 99        | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |
| 100       | 24.41 | 35.267   | 24.41    | 27.149   | 2.14     | 4.14     | 4.14     | 14.14          | 1.14       |

| WISKIN BUTTE DATA |        |          |        |        |       |      |      |      |       |          |         |         |         |       |
|-------------------|--------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| LEPCH             | TEMP   | GALINITY | DIG 02 | P2 SAT | SIG0  | P04  | N01  | N02  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                 | DEG C  |          | ML L   | %      | UMHO  | UM L | CM L | UMHO | TUBIN | DEG C    |         |         |         | DB    |
| 2                 | 24.173 | 35.625   | 4.42   | 101.1  | 1.3   | 0.16 | 0.1  | 0.01 |       | 24.377   | 23.702  | 32.015  | 34.443  | 1     |
| 22                | 24.174 | 35.620   | 4.6    | 101.4  | 1.5   | 0.14 | 0.1  | 0.01 |       | 24.059   | 23.774  | 32.118  | 34.140  | 21    |
| 52                | 23.767 | 35.174   | 4.93   | 102.2  | 1.8   | 0.1  | 0.1  | 0.01 |       | 23.756   | 23.947  | 32.147  | 40.17   | 12    |
| 111               | 23.470 | 35.209   | 4.93   | 101.7  | 1.7   | 0.12 | 0.0  | 0.1  |       | 23.449   | 24.293  | 32.117  | 40.372  | 101   |
| 134               | 22.482 | 35.221   | 4.90   | 99.3   | 1.5   | 0.19 | 0.1  | 0.1  |       | 22.435   | 24.557  | 32.414  | 40.351  | 134   |
| 169               | 21.041 | 35.209   | 4.22   | 97.3   | 1.6   | 0.17 | 0.2  | 0.13 |       | 21.210   | 24.797  | 33.078  | 40.118  | 169   |
| 202               | 19.162 | 35.213   | 4.40   | 94.1   | 1.6   | 0.15 | 2.6  | 0.13 |       | 19.125   | 24.949  | 33.419  | 40.165  | 202   |
| 252               | 17.143 | 34.930   | 4.57   | 94.0   | 2.9   | 0.41 | 1.9  | 0.02 |       | 17.110   | 25.311  | 33.951  | 42.129  | 252   |
| 303               | 13.634 | 34.319   | 4.30   | 71.5   | 1.9   |      | 9.5  | 0.02 |       | 13.591   | 25.745  | 34.423  | 42.101  | 303   |
| 340               | 9.450  | 34.110   | 3.99   | 62.7   | 21.4  |      | 19.9 | 0.01 |       | 9.433    | 26.274  | 35.101  | 41.141  | 340   |
| 354               | 7.490  | 34.257   | 2.67   | 14.7   | 44.9  |      | 29.2 | 0.02 |       | 7.410    | 26.624  | 35.562  | 44.114  | 354   |
| 457               | 5.895  | 34.562   | 1.9    | 24.3   | 5     |      | 5.93 | 0.1  |       | 5.845    | 26.945  | 35.853  | 44.432  | 457   |
| 472               | 4.999  | 34.189   | 1.99   | 11.9   | 90.2  |      | 40.8 | 0.01 |       | 4.892    | 27.013  | 35.072  | 44.108  | 472   |
| 794               | 4.498  | 34.253   | 1.66   | 9.1    | 101.9 | 1.05 | 42.9 | 0.01 |       | 4.416    | 27.154  | 36.214  | 44.110  | 799   |
| 995               | 4.223  | 34.354   | 1.67   | 9.2    | 105.7 | 1.10 | 43.5 | 0.01 |       | 4.055    | 27.267  | 36.365  | 45.058  | 901   |
| 999               | 3.222  | 34.429   | 0.83   | 11.1   | 102.7 |      | 43.3 | 0.02 |       | 3.747    | 27.359  | 36.470  | 45.119  | 1005  |
| 1253              | 3.275  | 34.515   | 1.24   | 15.7   | 134.0 | 2.98 | 42.7 | 0.02 |       | 3.184    | 27.481  | 36.622  | 45.155  | 1252  |
| 1498              | 2.767  | 34.561   | 1.47   | 19.5   | 146.7 |      | 42.2 | 0.03 |       | 2.561    | 27.565  | 36.733  | 45.492  | 1497  |

# MARATHON 2 STA. 14



| LATITUDE | LONGITUDE | MO | DAY | YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | WIND DIR | WIND SPC |
|----------|-----------|----|-----|----|------------|--------|------|-------|----------|----------|----------|----------|
| 26 13 N  | 127 15 W  | 1  | 12  | 84 | 000        | 192    | 147  | 10    | 24.4     | 21.1     | 147      | 1010     |

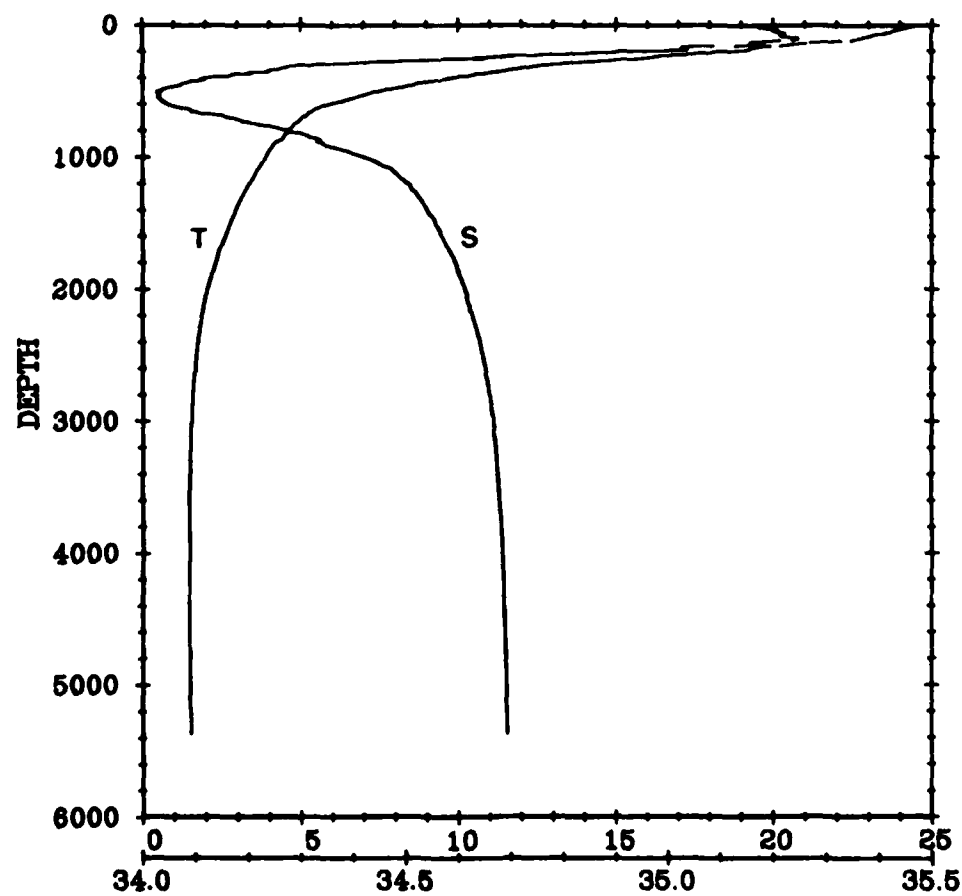
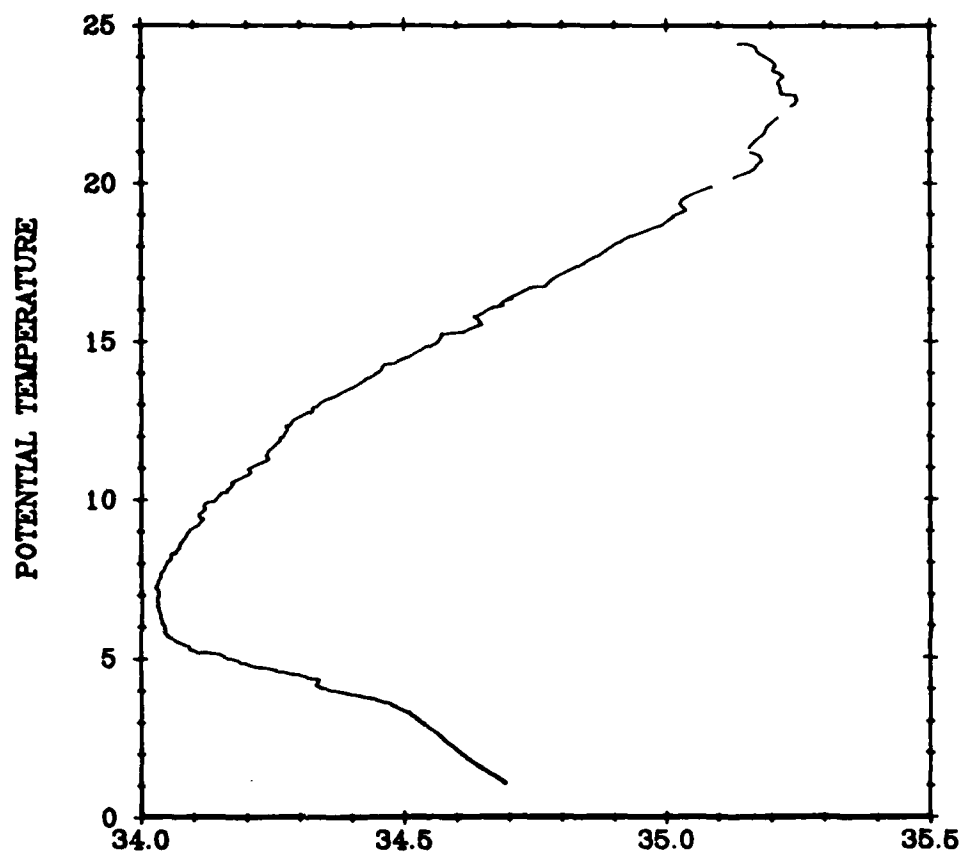
## CCTO DATA

| DEPTH | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA  | DYNAMIC HT | DEPTH |
|-------|--------|----------|----------|---------|---------|---------|--------|------------|-------|
| 0     | 24.407 | 35.144   | 24.407   | 23.631  | 31.494  | 34.921  | 31.724 | 0.0        | 0     |
| 10    | 24.187 | 35.174   | 24.187   | 23.721  | 32.149  | 35.152  | 32.246 | 0.1        | 10    |
| 20    | 23.845 | 35.200   | 23.857   | 23.837  | 32.774  | 35.274  | 32.702 | 0.2        | 20    |
| 30    | 23.580 | 35.229   | 23.564   | 23.924  | 33.404  | 35.392  | 33.100 | 0.3        | 30    |
| 40    | 23.331 | 35.255   | 23.215   | 24.065  | 34.022  | 35.441  | 33.400 | 0.4        | 40    |
| 50    | 22.802 | 35.283   | 22.782   | 24.177  | 34.541  | 35.499  | 33.747 | 0.5        | 50    |
| 60    | 22.544 | 35.342   | 22.536   | 24.744  | 35.176  | 35.245  | 34.922 | 0.6        | 60    |
| 70    | 22.577 | 34.961   | 19.535   | 25.110  | 33.606  | 34.716  | 34.949 | 0.7        | 70    |
| 80    | 15.983 | 34.938   | 17.943   | 25.499  | 34.185  | 34.299  | 34.546 | 0.8        | 80    |
| 90    | 13.135 | 34.349   | 13.174   | 25.872  | 34.565  | 34.881  | 34.812 | 0.9        | 90    |
| 100   | 11.512 | 34.241   | 11.485   | 26.096  | 34.854  | 35.213  | 34.927 | 1.0        | 100   |
| 110   | 9.975  | 34.134   | 9.929    | 26.289  | 35.114  | 35.573  | 35.056 | 1.1        | 110   |
| 120   | 8.679  | 34.177   | 8.611    | 26.454  | 35.337  | 35.829  | 35.249 | 1.2        | 120   |
| 130   | 7.446  | 34.136   | 7.346    | 26.593  | 35.516  | 36.055  | 35.316 | 1.3        | 130   |
| 140   | 6.946  | 34.144   | 6.894    | 26.911  | 35.822  | 36.413  | 35.815 | 1.4        | 140   |
| 150   | 5.787  | 34.157   | 5.710    | 27.104  | 36.155  | 36.715  | 36.241 | 1.5        | 150   |
| 160   | 4.616  | 34.265   | 4.551    | 27.143  | 36.217  | 36.899  | 36.957 | 1.6        | 160   |
| 170   | 4.170  | 34.137   | 4.112    | 27.249  | 36.344  | 36.916  | 37.073 | 1.7        | 170   |
| 180   | 3.979  | 34.414   | 3.903    | 27.340  | 36.450  | 36.955  | 37.151 | 1.8        | 180   |
| 190   | 3.610  | 34.473   | 3.549    | 27.412  | 36.535  | 36.981  | 37.249 | 1.9        | 190   |
| 200   | 3.400  | 34.501   | 3.313    | 27.459  | 36.592  | 36.919  | 37.212 | 2.0        | 200   |
| 210   | 3.193  | 34.524   | 3.100    | 27.499  | 36.645  | 36.855  | 37.165 | 2.1        | 210   |
| 220   | 2.942  | 34.540   | 2.861    | 27.531  | 36.689  | 36.818  | 37.104 | 2.2        | 220   |
| 230   | 2.748  | 34.557   | 2.673    | 27.561  | 36.729  | 36.897  | 37.093 | 2.3        | 230   |
| 240   | 2.614  | 34.568   | 2.522    | 27.587  | 36.759  | 36.924  | 37.041 | 2.4        | 240   |
| 250   | 2.482  | 34.580   | 2.384    | 27.609  | 36.794  | 36.959  | 37.019 | 2.5        | 250   |
| 260   | 2.342  | 34.593   | 2.297    | 27.633  | 36.823  | 36.955  | 36.989 | 2.6        | 260   |
| 270   | 2.192  | 34.612   | 2.161    | 27.649  | 36.849  | 36.937  | 36.935 | 2.7        | 270   |
| 280   | 2.035  | 34.611   | 1.933    | 27.657  | 36.872  | 36.968  | 36.925 | 2.8        | 280   |
| 290   | 1.974  | 34.619   | 1.874    | 27.670  | 36.891  | 36.932  | 36.944 | 2.9        | 290   |
| 300   | 1.912  | 34.625   | 1.750    | 27.691  | 36.909  | 36.913  | 36.927 | 3.0        | 300   |
| 310   | 1.842  | 34.631   | 1.661    | 27.704  | 36.925  | 36.915  | 36.910 | 3.1        | 310   |
| 320   | 1.781  | 34.640   | 1.596    | 27.715  | 36.941  | 36.954  | 36.916 | 3.2        | 320   |
| 330   | 1.711  | 34.646   | 1.535    | 27.723  | 36.952  | 36.957  | 36.919 | 3.3        | 330   |
| 340   | 1.647  | 34.650   | 1.484    | 27.730  | 36.962  | 36.980  | 36.923 | 3.4        | 340   |
| 350   | 1.615  | 34.654   | 1.441    | 27.737  | 36.970  | 36.991  | 36.929 | 3.5        | 350   |
| 360   | 1.611  | 34.659   | 1.401    | 27.744  | 36.979  | 36.992  | 36.921 | 3.6        | 360   |
| 370   | 1.611  | 34.663   | 1.362    | 27.750  | 36.988  | 36.992  | 36.921 | 3.7        | 370   |
| 380   | 1.612  | 34.666   | 1.334    | 27.753  | 36.993  | 36.993  | 36.921 | 3.8        | 380   |
| 390   | 1.616  | 34.668   | 1.309    | 27.757  | 36.998  | 36.998  | 36.921 | 3.9        | 390   |
| 400   | 1.612  | 34.670   | 1.285    | 27.761  | 37.003  | 36.992  | 36.987 | 4.0        | 400   |
| 410   | 1.610  | 34.673   | 1.264    | 27.765  | 37.008  | 36.988  | 36.979 | 4.1        | 410   |
| 420   | 1.615  | 34.674   | 1.249    | 27.766  | 37.011  | 36.941  | 36.941 | 4.2        | 420   |
| 430   | 1.444  | 34.676   | 1.229    | 27.770  | 37.015  | 36.946  | 36.978 | 4.3        | 430   |
| 440   | 1.485  | 34.679   | 1.209    | 27.772  | 37.019  | 36.952  | 36.970 | 4.4        | 440   |
| 450   | 1.478  | 34.679   | 1.192    | 27.775  | 37.022  | 36.955  | 36.958 | 4.5        | 450   |
| 460   | 1.475  | 34.680   | 1.179    | 27.776  | 37.024  | 36.958  | 36.959 | 4.6        | 460   |
| 470   | 1.470  | 34.682   | 1.163    | 27.779  | 37.028  | 36.963  | 36.944 | 4.7        | 470   |
| 480   | 1.467  | 34.683   | 1.149    | 27.781  | 37.030  | 36.966  | 36.944 | 4.8        | 480   |
| 490   | 1.467  | 34.684   | 1.139    | 27.782  | 37.032  | 36.969  | 36.949 | 4.9        | 490   |
| 500   | 1.470  | 34.685   | 1.130    | 27.784  | 37.034  | 36.971  | 36.920 | 5.0        | 500   |
| 510   | 1.471  | 34.686   | 1.120    | 27.785  | 37.035  | 36.974  | 36.939 | 5.1        | 510   |
| 520   | 1.473  | 34.687   | 1.110    | 27.786  | 37.038  | 36.976  | 36.912 | 5.2        | 520   |
| 530   | 1.474  | 34.689   | 1.100    | 27.788  | 37.040  | 36.979  | 36.908 | 5.3        | 530   |
| 540   | 1.474  | 34.689   | 1.089    | 27.790  | 37.043  | 36.982  | 36.985 | 5.4        | 540   |
| 550   | 1.479  | 34.689   | 1.081    | 27.790  | 37.043  | 36.983  | 36.917 | 5.5        | 550   |
| 560   | 1.485  | 34.689   | 1.075    | 27.790  | 37.044  | 36.984  | 36.956 | 5.6        | 560   |
| 570   | 1.492  | 34.690   | 1.070    | 27.792  | 37.045  | 36.985  | 36.963 | 5.7        | 570   |
| 580   | 1.495  | 34.691   | 1.061    | 27.793  | 37.048  | 36.988  | 36.919 | 5.8        | 580   |
| 590   | 1.500  | 34.691   | 1.053    | 27.793  | 37.049  | 36.989  | 36.922 | 5.9        | 590   |
| 600   | 1.509  | 34.692   | 1.050    | 27.794  | 37.050  | 36.991  | 36.956 | 6.0        | 600   |
| 610   | 1.515  | 34.693   | 1.043    | 27.796  | 37.052  | 36.993  | 36.913 | 6.1        | 610   |
| 620   | 1.523  | 34.693   | 1.038    | 27.796  | 37.052  | 36.994  | 36.926 | 6.2        | 620   |
| 630   | 1.510  | 34.693   | 1.036    | 27.796  | 37.052  | 36.994  | 36.929 | 6.3        | 630   |

## WISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2   | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|--------|--------|-------|------|------|-------|--------|----------|---------|---------|---------|-------|
| 0     | 24.423 | 35.186   | 4.92   | 103.2  | 0.0   | 0.12 | 0.0  | 0.03  | 24.421 | 23.658   | 31.980  | 39.947  | 1.0     |       |
| 10    | 23.673 | 35.209   | 5.00   | 103.5  | 0.0   | 0.11 | 0.0  | 0.03  | 23.661 | 23.901   | 32.243  | 40.229  | 56      |       |
| 20    | 22.366 | 35.229   | 4.89   | 98.9   | 0.2   | 0.13 | 0.0  | 0.03  | 22.345 | 24.296   | 32.674  | 40.693  | 106     |       |
| 30    | 19.630 | 35.250   | 4.42   | 85.1   | 1.2   | 0.32 | 2.3  | 0.06  | 19.651 | 24.892   | 33.352  | 41.448  | 156     |       |
| 40    | 17.128 | 34.795   | 4.50   | 82.4   | 2.9   | 0.43 | 4.6  | 0.04  | 17.093 | 25.335   | 33.881  | 42.357  | 207     |       |
| 50    | 12.597 | 34.290   | 5.26   | 87.6   | 7.8   | 0.67 | 8.5  | 0.03  | 12.555 | 25.911   | 34.648  | 42.984  | 309     |       |
| 60    | 9.876  | 34.119   | 4.36   | 68.4   | 20.3  | 1.31 | 17.9 | 0.02  | 9.829  | 26.293   | 35.124  | 43.566  | 409     |       |
| 70    | 8.165  | 34.146   | 3.58   | 53.6   | 37.8  | 1.81 | 25.7 | 0.02  | 7.765  | 26.559   | 35.482  | 44.011  | 509     |       |
| 80    | 6.110  | 34.045   | 2.00   | 28.8   | 62.9  | 1.51 | 1.0  | 0.03  | 6.076  | 26.788   | 35.790  | 44.394  | 609     |       |
| 90    | 5.124  | 34.152   | 0.94   | 13.2   | 86.8  | 2.92 | 40.9 | 0.02  | 5.066  | 26.995   | 36.045  | 44.694  | 710     |       |
| 100   | 4.590  | 34.273   | 0.60   | 9.3    | 101.9 | 3.06 | 43.1 | 0.02  | 4.526  | 27.152   | 36.227  | 44.999  | 811     |       |
| 110   | 4.104  | 34.337   | 0.65   | 9.9    | 110.9 | 3.07 | 43.5 | 0.02  | 4.124  | 27.246   | 36.340  | 45.311  | 913     |       |
| 120   | 3.897  | 34.411   | 0.70   | 10.9   | 120.5 | 3.08 | 43.5 | 0.02  | 3.811  | 27.337   | 36.447  | 45.551  | 1014    |       |
| 130   | 3.341  | 34.513   | 1.26   | 17.0   | 130.9 | 3.00 | 42.5 | 0.02  | 3.249  | 27.471   | 36.611  | 45.341  | 1266    |       |
| 140   | 2.755  | 34.558   | 1.56   | 20.7   | 145.2 | 42.1 | 0.02 | 2.658 | 27.563 | 36.731   | 45.490  | 1519    |         |       |
| 150   | 2.377  | 34.588   | 1.74   | 22.9   | 153.3 | 41.7 | 0.02 | 2.254 | 27.621 | 36.811   | 45.590  | 1773    |         |       |
| 160   | 2.267  | 34.613   | 1.93   | 25.2   | 162.4 | 41.2 | 0.02 | 1.927 | 27.667 | 36.875   | 45.670  | 2026    |         |       |
| 170   | 1.777  | 34.647   | 2.40   | 31.0   | 172.5 | 40.0 | 0.01 | 1.529 | 27.725 | 36.954   | 45.770  | 2332    |         |       |
| 180   | 1.550  | 34.668   | 2.81   | 35.3   | 168.7 | 38.7 | 0.02 | 1.327 | 27.776 | 36.995   | 45.822  | 2643    |         |       |
| 190   | 1.489  | 34.677   | 1.19   | 40.7   | 165.7 | 2.57 | 37.9 | 0.01  | 1.217  | 27.771   | 37.017  | 45.949  | 3554    |       |
| 200   | 1.468  | 34.685   | 3.42   | 43.7   | 159.5 | 2.51 | 37.0 | 0.01  | 1.142  | 27.792   | 37.032  | 45.968  | 4066    |       |
| 210   | 1.476  | 34.687   | 3.45   | 45.3   | 153.3 | 36.5 | 0.02 | 1.092 | 27.788 | 37.040   | 45.879  | 4578    |         |       |
| 220   | 1.501  | 34.689   | 3.63   | 46.3   | 1     | 35.2 | 0.01 | 1.055 | 27.792 | 37.046   | 45.997  | 5092    |         |       |
| 230   | 1.530  | 34.691   | 3.67   | 46.8   | 148.1 | 36.1 | 0.02 | 1.035 | 27.795 | 37.051   | 45.892  | 5470    |         |       |

# MARATHON 2 STA. 15

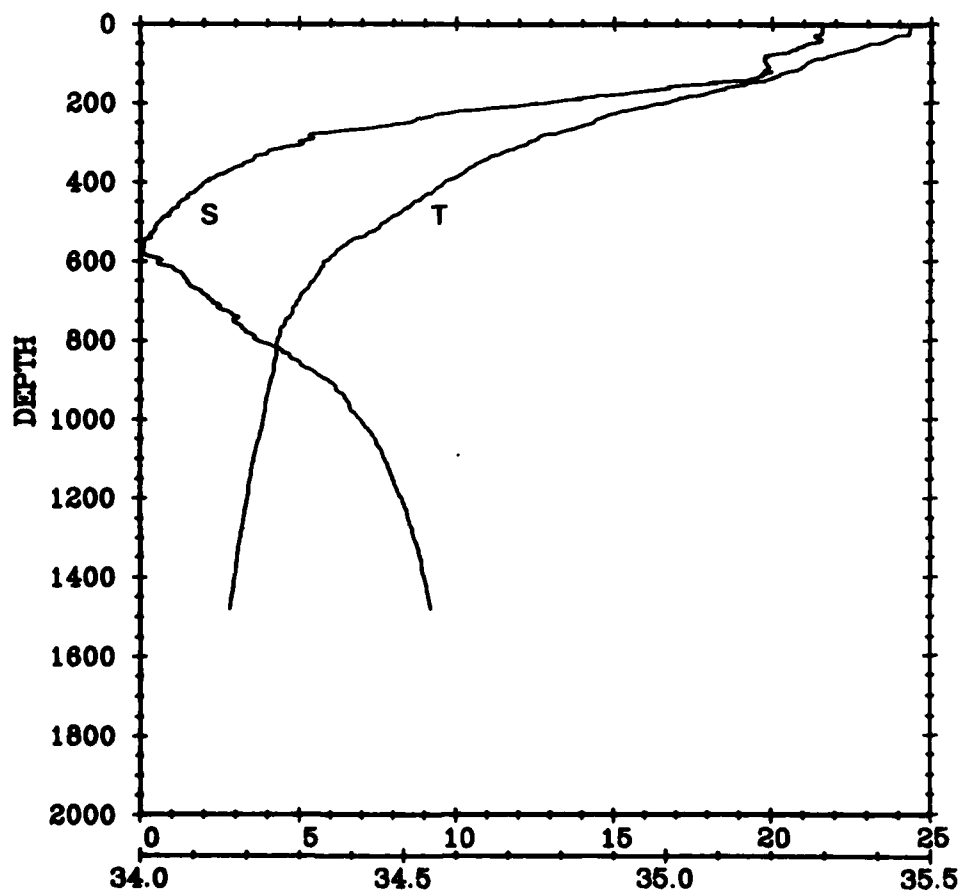
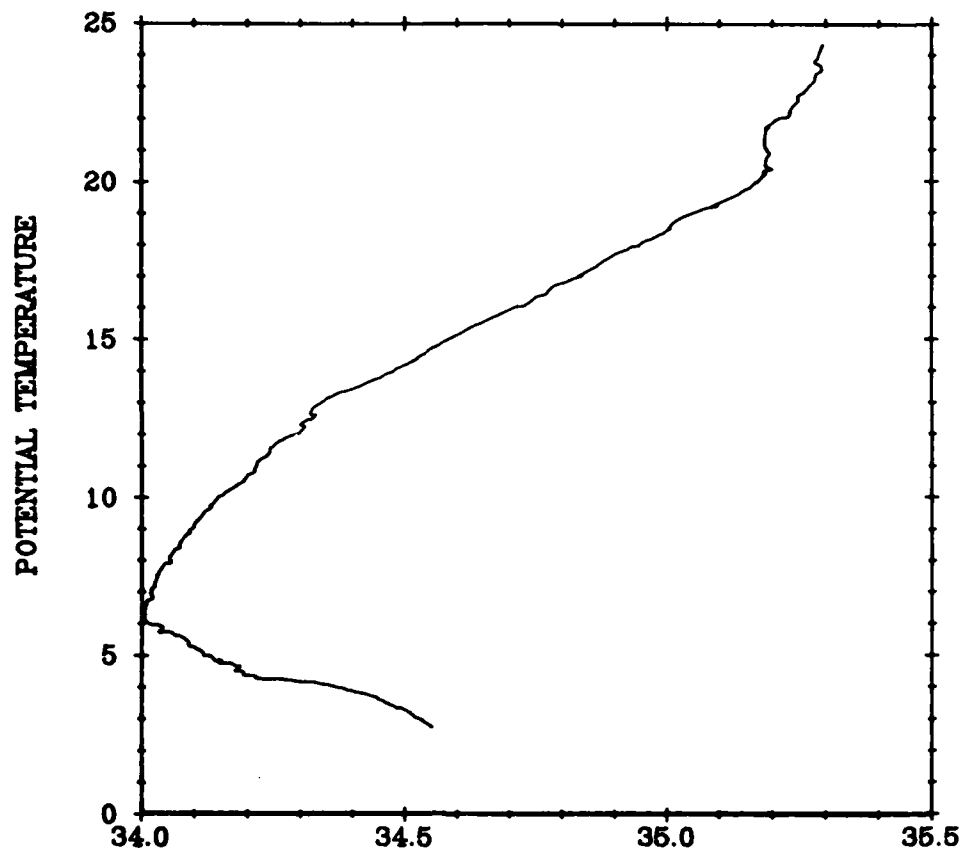


| LATITUDE | LONGITUDE | MO | DAY | HR | START TIME | HEIGHT | WIND | SPEED | AIR TEMP | WET BULB | SEA H |
|----------|-----------|----|-----|----|------------|--------|------|-------|----------|----------|-------|
|          |           |    |     |    | HH         | FT     | DIR  | KT    | DEG F    | DEG F    | FT    |
| 25 15 N  | 1 15 W    | 5  | 9   | 44 | 374        | 142    |      | 10    | 71       | 67       | 10    |

| SITE DATA |       |          |          |         |         |         |                    |            |       |
|-----------|-------|----------|----------|---------|---------|---------|--------------------|------------|-------|
| PRESS     | TEMP  | SALINITY | F00 TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | SVA                | DYNAMIC HT | DEPTH |
| DB        | DEG C |          | DEG C    |         |         |         | CM <sup>2</sup> /N |            | M     |
| 24        | 17.4  | 35.294   | 24.174   | 24.171  | 12.145  | 40.126  | 412.144            |            |       |
| 20        | 17.0  | 35.291   | 24.175   | 24.166  | 12.142  | 40.119  | 412.24             | 74         | 1.2   |
| 16        | 16.6  | 35.284   | 24.165   | 24.156  | 12.131  | 40.107  | 412.137            |            |       |
| 12        | 16.2  | 35.281   | 24.161   | 24.148  | 12.124  | 40.104  | 412.137            | 294        | 1.2   |
| 8         | 15.8  | 35.276   | 24.152   | 24.139  | 12.116  | 40.096  | 412.139            |            |       |
| 4         | 15.4  | 35.271   | 24.141   | 24.128  | 12.106  | 40.084  | 412.144            | 144        | 1.2   |
| 0         | 15.0  | 35.266   | 24.129   | 24.115  | 12.097  | 40.072  | 412.144            | 144        | 1.2   |
| 24        | 14.6  | 35.261   | 24.118   | 24.104  | 12.087  | 40.060  | 412.144            | 294        | 1.2   |
| 20        | 14.2  | 35.256   | 24.107   | 24.093  | 12.077  | 40.048  | 412.144            | 294        | 1.2   |
| 16        | 13.8  | 35.251   | 24.096   | 24.082  | 12.067  | 40.036  | 412.144            | 294        | 1.2   |
| 12        | 13.4  | 35.246   | 24.085   | 24.071  | 12.057  | 40.024  | 412.144            | 294        | 1.2   |
| 8         | 13.0  | 35.241   | 24.074   | 24.060  | 12.047  | 40.012  | 412.144            | 294        | 1.2   |
| 4         | 12.6  | 35.236   | 24.063   | 24.049  | 12.037  | 40.000  | 412.144            | 294        | 1.2   |
| 0         | 12.2  | 35.231   | 24.052   | 24.038  | 12.027  | 39.988  | 412.144            | 294        | 1.2   |
| 24        | 11.8  | 35.226   | 24.041   | 24.027  | 12.017  | 39.976  | 412.144            | 294        | 1.2   |
| 20        | 11.4  | 35.221   | 24.030   | 24.016  | 12.007  | 39.964  | 412.144            | 294        | 1.2   |
| 16        | 11.0  | 35.216   | 24.019   | 24.005  | 11.997  | 39.952  | 412.144            | 294        | 1.2   |
| 12        | 10.6  | 35.211   | 24.008   | 23.994  | 11.987  | 39.940  | 412.144            | 294        | 1.2   |
| 8         | 10.2  | 35.206   | 23.997   | 23.983  | 11.977  | 39.928  | 412.144            | 294        | 1.2   |
| 4         | 9.8   | 35.201   | 23.986   | 23.972  | 11.967  | 39.916  | 412.144            | 294        | 1.2   |
| 0         | 9.4   | 35.196   | 23.975   | 23.961  | 11.957  | 39.904  | 412.144            | 294        | 1.2   |
| 24        | 9.0   | 35.191   | 23.964   | 23.950  | 11.947  | 39.892  | 412.144            | 294        | 1.2   |
| 20        | 8.6   | 35.186   | 23.953   | 23.939  | 11.937  | 39.880  | 412.144            | 294        | 1.2   |
| 16        | 8.2   | 35.181   | 23.942   | 23.928  | 11.927  | 39.868  | 412.144            | 294        | 1.2   |
| 12        | 7.8   | 35.176   | 23.931   | 23.917  | 11.917  | 39.856  | 412.144            | 294        | 1.2   |
| 8         | 7.4   | 35.171   | 23.920   | 23.906  | 11.907  | 39.844  | 412.144            | 294        | 1.2   |
| 4         | 7.0   | 35.166   | 23.909   | 23.895  | 11.897  | 39.832  | 412.144            | 294        | 1.2   |
| 0         | 6.6   | 35.161   | 23.898   | 23.884  | 11.887  | 39.820  | 412.144            | 294        | 1.2   |
| 24        | 6.2   | 35.156   | 23.887   | 23.873  | 11.877  | 39.808  | 412.144            | 294        | 1.2   |
| 20        | 5.8   | 35.151   | 23.876   | 23.862  | 11.867  | 39.796  | 412.144            | 294        | 1.2   |
| 16        | 5.4   | 35.146   | 23.865   | 23.851  | 11.857  | 39.784  | 412.144            | 294        | 1.2   |
| 12        | 5.0   | 35.141   | 23.854   | 23.840  | 11.847  | 39.772  | 412.144            | 294        | 1.2   |
| 8         | 4.6   | 35.136   | 23.843   | 23.829  | 11.837  | 39.760  | 412.144            | 294        | 1.2   |
| 4         | 4.2   | 35.131   | 23.832   | 23.818  | 11.827  | 39.748  | 412.144            | 294        | 1.2   |
| 0         | 3.8   | 35.126   | 23.821   | 23.807  | 11.817  | 39.736  | 412.144            | 294        | 1.2   |
| 24        | 3.4   | 35.121   | 23.810   | 23.796  | 11.807  | 39.724  | 412.144            | 294        | 1.2   |
| 20        | 3.0   | 35.116   | 23.799   | 23.785  | 11.797  | 39.712  | 412.144            | 294        | 1.2   |
| 16        | 2.6   | 35.111   | 23.788   | 23.774  | 11.787  | 39.700  | 412.144            | 294        | 1.2   |

| WIGGIN BOTTLE DATA |        |          |      |        |      |         |         |      |      |          |         |         |         |       |
|--------------------|--------|----------|------|--------|------|---------|---------|------|------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIST | W. SAT | W. L | P. W. L | N. W. L | W. L | TRIT | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 3 | PRESS |
| M                  | DEG C  | PRACT    | ML   | PCT    | CM L | CM L    | CM L    | CM L | TEMP | DEG C    |         |         |         | DB    |
| 10                 | 24.424 | 35.288   | 4.32 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 20                 | 22.932 | 35.288   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 30                 | 22.460 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 40                 | 21.988 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 50                 | 21.516 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 60                 | 21.044 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 70                 | 20.572 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 80                 | 20.100 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 90                 | 19.628 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 100                | 19.156 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 110                | 18.684 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 120                | 18.212 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 130                | 17.740 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 140                | 17.268 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 150                | 16.796 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 160                | 16.324 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 170                | 15.852 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 180                | 15.380 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 190                | 14.908 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 200                | 14.436 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 210                | 13.964 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 220                | 13.492 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 230                | 13.020 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 240                | 12.548 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 250                | 12.076 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 260                | 11.604 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 270                | 11.132 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 280                | 10.660 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 290                | 10.188 | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 300                | 9.716  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 310                | 9.244  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 320                | 8.772  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 330                | 8.300  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 340                | 7.828  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 350                | 7.356  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 360                | 6.884  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 370                | 6.412  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 380                | 5.940  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 390                | 5.468  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 400                | 4.996  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 410                | 4.524  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 420                | 4.052  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 430                | 3.580  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 440                | 3.108  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 450                | 2.636  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 460                | 2.164  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 470                | 1.692  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 480                | 1.220  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 490                | 0.748  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |
| 500                | 0.276  | 35.290   | 4.40 | 112.4  | 2.1  | 1.3     | 1.0     | 1.0  | 1.14 | 24.232   | 21.792  | 32.118  | 40.588  | 11    |

# MARATHON 2 STA. 16

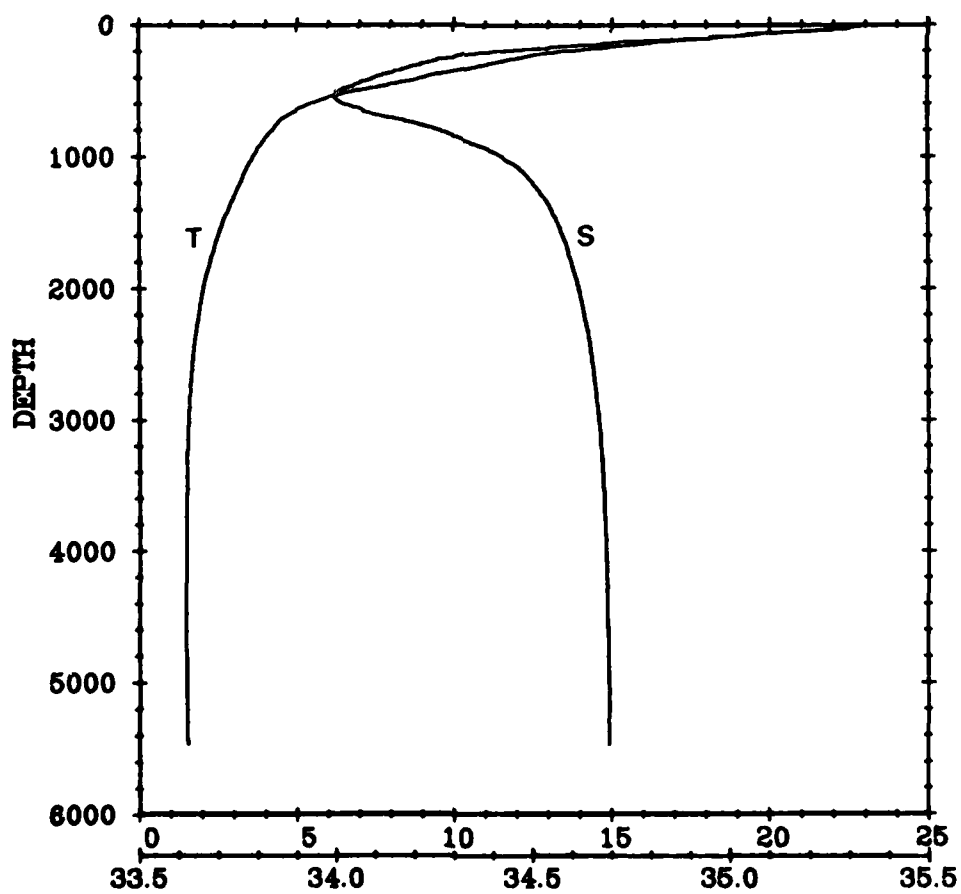
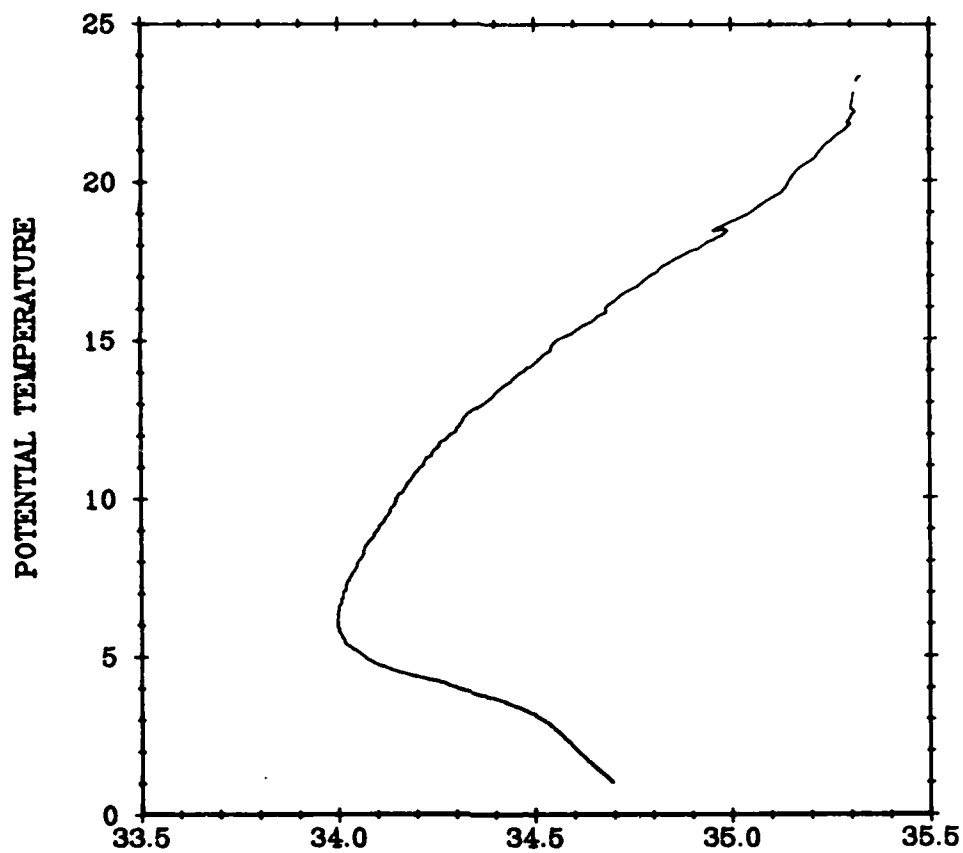


| LATITUDE   | LONGITUDE   | NO. BY YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|------------|-------------|-----------|------------|--------|------|-------|----------|----------|--------|
| 24 19 24 N | 152 17 17 W | 10 4984   | 1454       | 1493   | 110  | 9     | 22.3     | 17.1     | 1026.4 |

| STD DATA |        |          |          |         |         |         |           |            |       |
|----------|--------|----------|----------|---------|---------|---------|-----------|------------|-------|
| PRESS    | TEMP   | SALINITY | POT TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | SIGMA 6   | DYNAMIC HT | DEPTH |
| DB       | DEG C  |          | DEG C    |         |         |         | CTD DB    |            | M     |
| 1        | 21.249 | 34.104   | 21.249   | 24.119  | 12.470  | 11.465  | 379.924   | 1.113      | 1     |
| 20       | 22.259 | 34.104   | 22.259   | 24.379  | 12.739  | 11.739  | 354.942   | 1.171      | 20    |
| 40       | 23.269 | 34.104   | 23.269   | 24.592  | 12.962  | 11.962  | 339.256   | 1.143      | 40    |
| 60       | 24.279 | 34.104   | 24.279   | 24.847  | 13.237  | 12.237  | 321.629   | 1.191      | 60    |
| 80       | 25.289 | 34.104   | 25.289   | 25.102  | 13.512  | 12.512  | 291.951   | 1.239      | 80    |
| 100      | 26.299 | 34.104   | 26.299   | 25.357  | 13.787  | 12.787  | 262.274   | 1.287      | 100   |
| 120      | 27.309 | 34.104   | 27.309   | 25.612  | 14.062  | 13.062  | 232.597   | 1.335      | 120   |
| 140      | 28.319 | 34.104   | 28.319   | 25.867  | 14.337  | 13.337  | 202.920   | 1.383      | 140   |
| 160      | 29.329 | 34.104   | 29.329   | 26.122  | 14.612  | 13.612  | 173.243   | 1.431      | 160   |
| 180      | 30.339 | 34.104   | 30.339   | 26.377  | 14.887  | 13.887  | 143.566   | 1.479      | 180   |
| 200      | 31.349 | 34.104   | 31.349   | 26.632  | 15.162  | 14.162  | 113.889   | 1.527      | 200   |
| 220      | 32.359 | 34.104   | 32.359   | 26.887  | 15.437  | 14.437  | 84.212    | 1.575      | 220   |
| 240      | 33.369 | 34.104   | 33.369   | 27.142  | 15.712  | 14.712  | 54.535    | 1.623      | 240   |
| 260      | 34.379 | 34.104   | 34.379   | 27.397  | 15.987  | 14.987  | 24.858    | 1.671      | 260   |
| 280      | 35.389 | 34.104   | 35.389   | 27.652  | 16.262  | 15.262  | -5.119    | 1.719      | 280   |
| 300      | 36.399 | 34.104   | 36.399   | 27.907  | 16.537  | 15.537  | -35.442   | 1.767      | 300   |
| 320      | 37.409 | 34.104   | 37.409   | 28.162  | 16.812  | 15.812  | -65.765   | 1.815      | 320   |
| 340      | 38.419 | 34.104   | 38.419   | 28.417  | 17.087  | 16.087  | -96.088   | 1.863      | 340   |
| 360      | 39.429 | 34.104   | 39.429   | 28.672  | 17.362  | 16.362  | -126.411  | 1.911      | 360   |
| 380      | 40.439 | 34.104   | 40.439   | 28.927  | 17.637  | 16.637  | -156.734  | 1.959      | 380   |
| 400      | 41.449 | 34.104   | 41.449   | 29.182  | 17.912  | 16.912  | -187.057  | 2.007      | 400   |
| 420      | 42.459 | 34.104   | 42.459   | 29.437  | 18.187  | 17.187  | -217.380  | 2.055      | 420   |
| 440      | 43.469 | 34.104   | 43.469   | 29.692  | 18.462  | 17.462  | -247.703  | 2.103      | 440   |
| 460      | 44.479 | 34.104   | 44.479   | 29.947  | 18.737  | 17.737  | -278.026  | 2.151      | 460   |
| 480      | 45.489 | 34.104   | 45.489   | 30.202  | 19.012  | 18.012  | -308.349  | 2.199      | 480   |
| 500      | 46.499 | 34.104   | 46.499   | 30.457  | 19.287  | 18.287  | -338.672  | 2.247      | 500   |
| 520      | 47.509 | 34.104   | 47.509   | 30.712  | 19.562  | 18.562  | -368.995  | 2.295      | 520   |
| 540      | 48.519 | 34.104   | 48.519   | 30.967  | 19.837  | 18.837  | -399.318  | 2.343      | 540   |
| 560      | 49.529 | 34.104   | 49.529   | 31.222  | 20.112  | 19.112  | -429.641  | 2.391      | 560   |
| 580      | 50.539 | 34.104   | 50.539   | 31.477  | 20.387  | 19.387  | -459.964  | 2.439      | 580   |
| 600      | 51.549 | 34.104   | 51.549   | 31.732  | 20.662  | 19.662  | -490.287  | 2.487      | 600   |
| 620      | 52.559 | 34.104   | 52.559   | 31.987  | 20.937  | 19.937  | -520.610  | 2.535      | 620   |
| 640      | 53.569 | 34.104   | 53.569   | 32.242  | 21.212  | 20.212  | -550.933  | 2.583      | 640   |
| 660      | 54.579 | 34.104   | 54.579   | 32.497  | 21.487  | 20.487  | -581.256  | 2.631      | 660   |
| 680      | 55.589 | 34.104   | 55.589   | 32.752  | 21.762  | 20.762  | -611.579  | 2.679      | 680   |
| 700      | 56.599 | 34.104   | 56.599   | 33.007  | 22.037  | 21.037  | -641.902  | 2.727      | 700   |
| 720      | 57.609 | 34.104   | 57.609   | 33.262  | 22.312  | 21.312  | -672.225  | 2.775      | 720   |
| 740      | 58.619 | 34.104   | 58.619   | 33.517  | 22.587  | 21.587  | -702.548  | 2.823      | 740   |
| 760      | 59.629 | 34.104   | 59.629   | 33.772  | 22.862  | 21.862  | -732.871  | 2.871      | 760   |
| 780      | 60.639 | 34.104   | 60.639   | 34.027  | 23.137  | 22.137  | -763.194  | 2.919      | 780   |
| 800      | 61.649 | 34.104   | 61.649   | 34.282  | 23.412  | 22.412  | -793.517  | 2.967      | 800   |
| 820      | 62.659 | 34.104   | 62.659   | 34.537  | 23.687  | 22.687  | -823.840  | 3.015      | 820   |
| 840      | 63.669 | 34.104   | 63.669   | 34.792  | 23.962  | 22.962  | -854.163  | 3.063      | 840   |
| 860      | 64.679 | 34.104   | 64.679   | 35.047  | 24.237  | 23.237  | -884.486  | 3.111      | 860   |
| 880      | 65.689 | 34.104   | 65.689   | 35.302  | 24.512  | 23.512  | -914.809  | 3.159      | 880   |
| 900      | 66.699 | 34.104   | 66.699   | 35.557  | 24.787  | 23.787  | -945.132  | 3.207      | 900   |
| 920      | 67.709 | 34.104   | 67.709   | 35.812  | 25.062  | 24.062  | -975.455  | 3.255      | 920   |
| 940      | 68.719 | 34.104   | 68.719   | 36.067  | 25.337  | 24.337  | -1005.778 | 3.303      | 940   |
| 960      | 69.729 | 34.104   | 69.729   | 36.322  | 25.612  | 24.612  | -1036.101 | 3.351      | 960   |
| 980      | 70.739 | 34.104   | 70.739   | 36.577  | 25.887  | 24.887  | -1066.424 | 3.399      | 980   |
| 1000     | 71.749 | 34.104   | 71.749   | 36.832  | 26.162  | 25.162  | -1096.747 | 3.447      | 1000  |

| NICKEN BOTTLE DATA |        |          |        |        |         |        |      |      |         |
|--------------------|--------|----------|--------|--------|---------|--------|------|------|---------|
| DEPTH              | TEMP   | SALINITY | DIST   | ST SAT | SIGMA T | POT    | NOI  | NO2  | TRIT    |
| M                  | DEG C  |          | ML L   |        | UM L    | UM L   | UM L | UM L | TUBIN   |
| 1                  | 21.249 | 34.104   | 5.13   | 121.5  | 12.470  | 11.465 | 0.0  | 0.0  | 23.270  |
| 20                 | 22.259 | 34.104   | 6.46   | 104.4  | 12.739  | 11.739 | 0.0  | 0.0  | 21.264  |
| 40                 | 23.269 | 34.104   | 8.40   | 107.8  | 12.962  | 11.962 | 0.0  | 0.0  | 19.265  |
| 60                 | 24.279 | 34.104   | 10.43  | 104.4  | 13.237  | 12.237 | 0.0  | 0.0  | 17.266  |
| 80                 | 25.289 | 34.104   | 12.46  | 97.4   | 13.512  | 12.512 | 0.0  | 0.0  | 15.267  |
| 100                | 26.299 | 34.104   | 14.49  | 90.4   | 13.787  | 12.787 | 0.0  | 0.0  | 13.268  |
| 120                | 27.309 | 34.104   | 16.52  | 83.4   | 14.062  | 13.062 | 0.0  | 0.0  | 11.269  |
| 140                | 28.319 | 34.104   | 18.55  | 76.4   | 14.337  | 13.337 | 0.0  | 0.0  | 9.270   |
| 160                | 29.329 | 34.104   | 20.58  | 69.4   | 14.612  | 13.612 | 0.0  | 0.0  | 7.271   |
| 180                | 30.339 | 34.104   | 22.61  | 62.4   | 14.887  | 13.887 | 0.0  | 0.0  | 5.272   |
| 200                | 31.349 | 34.104   | 24.64  | 55.4   | 15.162  | 14.162 | 0.0  | 0.0  | 3.273   |
| 220                | 32.359 | 34.104   | 26.67  | 48.4   | 15.437  | 14.437 | 0.0  | 0.0  | 1.274   |
| 240                | 33.369 | 34.104   | 28.70  | 41.4   | 15.712  | 14.712 | 0.0  | 0.0  | -0.725  |
| 260                | 34.379 | 34.104   | 30.73  | 34.4   | 15.987  | 15.012 | 0.0  | 0.0  | -2.726  |
| 280                | 35.389 | 34.104   | 32.76  | 27.4   | 16.262  | 15.287 | 0.0  | 0.0  | -4.727  |
| 300                | 36.399 | 34.104   | 34.79  | 20.4   | 16.537  | 15.562 | 0.0  | 0.0  | -6.728  |
| 320                | 37.409 | 34.104   | 36.82  | 13.4   | 16.812  | 15.837 | 0.0  | 0.0  | -8.729  |
| 340                | 38.419 | 34.104   | 38.85  | 6.4    | 17.087  | 16.112 | 0.0  | 0.0  | -10.730 |
| 360                | 39.429 | 34.104   | 40.88  | -0.6   | 17.362  | 16.387 | 0.0  | 0.0  | -12.731 |
| 380                | 40.439 | 34.104   | 42.91  | -7.6   | 17.637  | 16.662 | 0.0  | 0.0  | -14.732 |
| 400                | 41.449 | 34.104   | 44.94  | -14.6  | 17.912  | 16.937 | 0.0  | 0.0  | -16.733 |
| 420                | 42.459 | 34.104   | 46.97  | -21.6  | 18.187  | 17.212 | 0.0  | 0.0  | -18.734 |
| 440                | 43.469 | 34.104   | 49.00  | -28.6  | 18.462  | 17.487 | 0.0  | 0.0  | -20.735 |
| 460                | 44.479 | 34.104   | 51.03  | -35.6  | 18.737  | 17.762 | 0.0  | 0.0  | -22.736 |
| 480                | 45.489 | 34.104   | 53.06  | -42.6  | 19.012  | 18.037 | 0.0  | 0.0  | -24.737 |
| 500                | 46.499 | 34.104   | 55.09  | -49.6  | 19.287  | 18.312 | 0.0  | 0.0  | -26.738 |
| 520                | 47.509 | 34.104   | 57.12  | -56.6  | 19.562  | 18.587 | 0.0  | 0.0  | -28.739 |
| 540                | 48.519 | 34.104   | 59.15  | -63.6  | 19.837  | 18.862 | 0.0  | 0.0  | -30.740 |
| 560                | 49.529 | 34.104   | 61.18  | -70.6  | 20.112  | 19.137 | 0.0  | 0.0  | -32.741 |
| 580                | 50.539 | 34.104   | 63.21  | -77.6  | 20.387  | 19.412 | 0.0  | 0.0  | -34.742 |
| 600                | 51.549 | 34.104   | 65.24  | -84.6  | 20.662  | 19.687 | 0.0  | 0.0  | -36.743 |
| 620                | 52.559 | 34.104   | 67.27  | -91.6  | 20.937  | 19.962 | 0.0  | 0.0  | -38.744 |
| 640                | 53.569 | 34.104   | 69.30  | -98.6  | 21.212  | 20.237 | 0.0  | 0.0  | -40.745 |
| 660                | 54.579 | 34.104   | 71.33  | -105.6 | 21.487  | 20.512 | 0.0  | 0.0  | -42.746 |
| 680                | 55.589 | 34.104   | 73.36  | -112.6 | 21.762  | 20.787 | 0.0  | 0.0  | -44.747 |
| 700                | 56.599 | 34.104   | 75.39  | -119.6 | 22.037  | 21.062 | 0.0  | 0.0  | -46.748 |
| 720                | 57.609 | 34.104   | 77.42  | -126.6 | 22.312  | 21.337 | 0.0  | 0.0  | -48.749 |
| 740                | 58.619 | 34.104   | 79.45  | -133.6 | 22.587  | 21.612 | 0.0  | 0.0  | -50.750 |
| 760                | 59.629 | 34.104   | 81.48  | -140.6 | 22.862  | 21.887 | 0.0  | 0.0  | -52.751 |
| 780                | 60.639 | 34.104   | 83.51  | -147.6 | 23.137  | 22.162 | 0.0  | 0.0  | -54.752 |
| 800                | 61.649 | 34.104   | 85.54  | -154.6 | 23.412  | 22.437 | 0.0  | 0.0  | -56.753 |
| 820                | 62.659 | 34.104   | 87.57  | -161.6 | 23.687  | 22.712 | 0.0  | 0.0  | -58.754 |
| 840                | 63.669 | 34.104   | 89.60  | -168.6 | 23.962  | 22.987 | 0.0  | 0.0  | -60.755 |
| 860                | 64.679 | 34.104   | 91.63  | -175.6 | 24.237  | 23.262 | 0.0  | 0.0  | -62.756 |
| 880                | 65.689 | 34.104   | 93.66  | -182.6 | 24.512  | 23.537 | 0.0  | 0.0  | -64.757 |
| 900                | 66.699 | 34.104   | 95.69  | -189.6 | 24.787  | 23.812 | 0.0  | 0.0  | -66.758 |
| 920                | 67.709 | 34.104   | 97.72  | -196.6 | 25.062  | 24.087 | 0.0  | 0.0  | -68.759 |
| 940                | 68.719 | 34.104   | 99.75  | -203.6 | 25.337  | 24.362 | 0.0  | 0.0  | -70.760 |
| 960                | 69.729 | 34.104   | 101.78 | -210.6 | 25.612  | 24.637 | 0.0  | 0.0  | -72.761 |
| 980                | 70.739 | 34.104   | 103.81 | -217.6 | 25.887  | 24.912 | 0.0  | 0.0  | -74.762 |
| 1000               | 71.749 | 34.104   | 105.84 | -224.6 | 26.162  | 25.187 | 0.0  | 0.0  | -76.763 |

# MARATHON 2 STA. 17



| LATITUDE | LONGITUDE | MO | DAY | YEAR | START TIME | BOTT M | WIND | SPEED | AIR TEMP | WET WIND | BAROM  |
|----------|-----------|----|-----|------|------------|--------|------|-------|----------|----------|--------|
| 17 27 N  | 152 40 W  | 4  | 9   | 84   | 2054       | 1119   | 147  | 12    | 24.4     | 21.1     | 1024.0 |

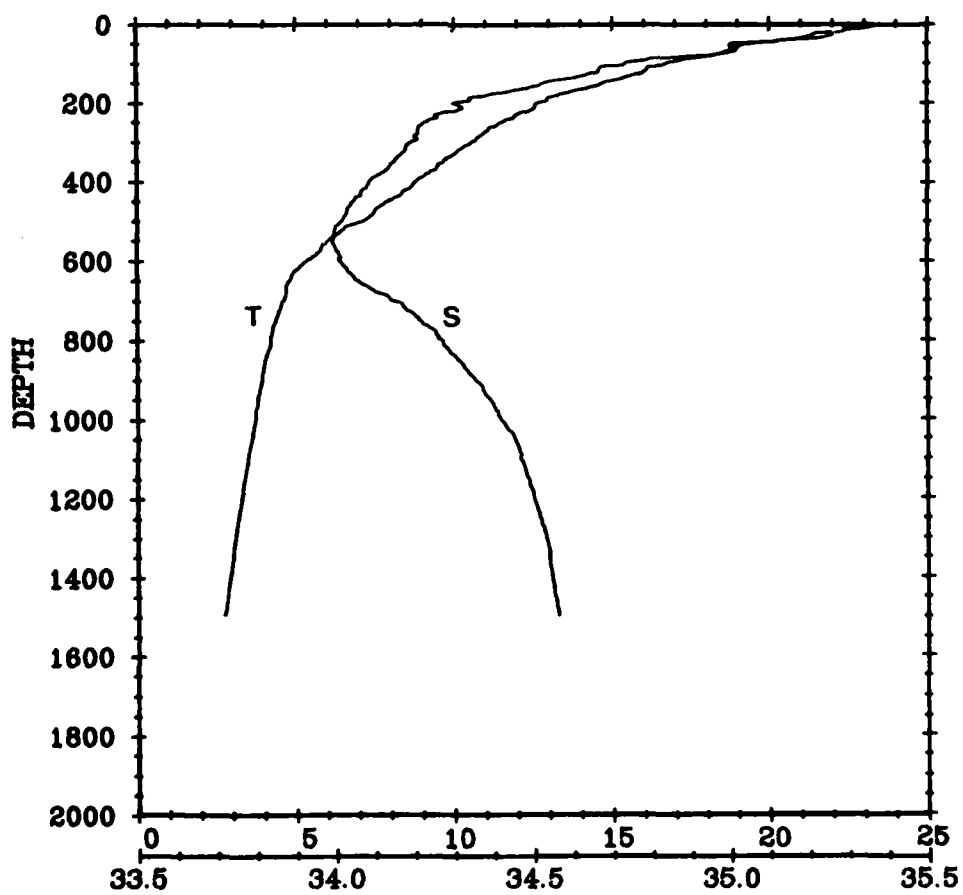
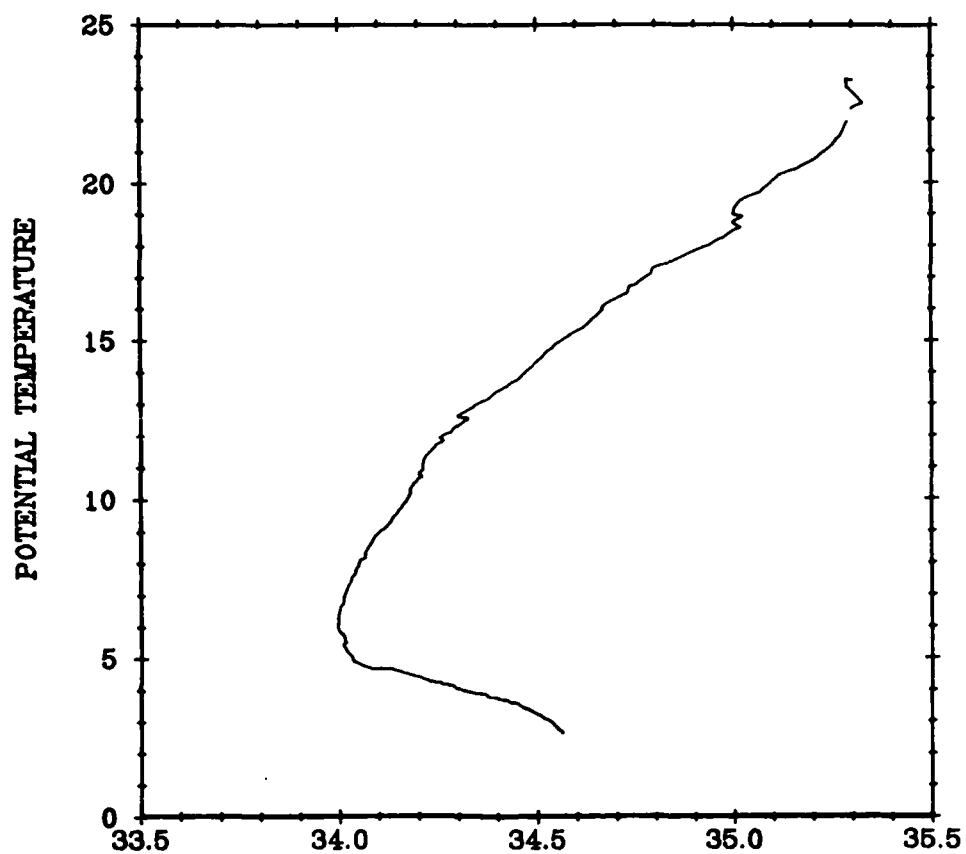
## WTD DATA

| PRESS | TEMP   | SALINITY | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
|-------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C  |          | DEG C    |         |         |         | CM TON  |            | M     |
| 2     | 21.144 | 34.192   | 21.154   | 24.112  | 12.467  | 40.465  | 179.332 | 1.100      | 0     |
| 10    | 21.143 | 34.179   | 21.139   | 24.448  | 12.339  | 40.357  | 143.105 | 1.113      | 19    |
| 20    | 21.443 | 34.165   | 21.437   | 24.763  | 11.201  | 41.272  | 119.682 | 1.119      | 39    |
| 30    | 21.443 | 34.150   | 21.449   | 25.144  | 10.126  | 41.643  | 292.819 | 1.121      | 59    |
| 40    | 21.443 | 34.135   | 21.454   | 25.217  | 10.102  | 41.819  | 275.977 | 1.129      | 79    |
| 50    | 21.443 | 34.119   | 21.454   | 25.191  | 10.112  | 42.141  | 260.915 | 1.111      | 99    |
| 60    | 21.443 | 34.104   | 21.454   | 25.174  | 10.112  | 42.572  | 214.761 | 1.435      | 119   |
| 70    | 21.443 | 34.089   | 21.454   | 25.159  | 10.112  | 42.572  | 212.225 | 1.147      | 139   |
| 80    | 21.443 | 34.074   | 21.454   | 25.144  | 10.112  | 42.572  | 197.446 | 1.149      | 159   |
| 90    | 21.443 | 34.059   | 21.454   | 25.129  | 10.112  | 42.572  | 184.673 | 1.145      | 179   |
| 100   | 21.443 | 34.044   | 21.454   | 25.114  | 10.112  | 42.572  | 171.892 | 1.143      | 199   |
| 110   | 21.443 | 34.029   | 21.454   | 25.099  | 10.112  | 42.572  | 165.430 | 1.149      | 219   |
| 120   | 21.443 | 34.014   | 21.454   | 25.084  | 10.112  | 42.572  | 158.402 | 1.110      | 239   |
| 130   | 21.443 | 34.000   | 21.454   | 25.069  | 10.112  | 42.572  | 147.915 | 1.116      | 259   |
| 140   | 21.443 | 33.985   | 21.454   | 25.054  | 10.112  | 42.572  | 137.919 | 1.113      | 279   |
| 150   | 21.443 | 33.970   | 21.454   | 25.039  | 10.112  | 42.572  | 127.919 | 1.110      | 299   |
| 160   | 21.443 | 33.955   | 21.454   | 25.024  | 10.112  | 42.572  | 117.919 | 1.110      | 319   |
| 170   | 21.443 | 33.940   | 21.454   | 25.009  | 10.112  | 42.572  | 107.919 | 1.110      | 339   |
| 180   | 21.443 | 33.925   | 21.454   | 24.994  | 10.112  | 42.572  | 97.919  | 1.110      | 359   |
| 190   | 21.443 | 33.910   | 21.454   | 24.979  | 10.112  | 42.572  | 87.919  | 1.110      | 379   |
| 200   | 21.443 | 33.895   | 21.454   | 24.964  | 10.112  | 42.572  | 77.919  | 1.110      | 399   |
| 210   | 21.443 | 33.880   | 21.454   | 24.949  | 10.112  | 42.572  | 67.919  | 1.110      | 419   |
| 220   | 21.443 | 33.865   | 21.454   | 24.934  | 10.112  | 42.572  | 57.919  | 1.110      | 439   |
| 230   | 21.443 | 33.850   | 21.454   | 24.919  | 10.112  | 42.572  | 47.919  | 1.110      | 459   |
| 240   | 21.443 | 33.835   | 21.454   | 24.904  | 10.112  | 42.572  | 37.919  | 1.110      | 479   |
| 250   | 21.443 | 33.820   | 21.454   | 24.889  | 10.112  | 42.572  | 27.919  | 1.110      | 499   |
| 260   | 21.443 | 33.805   | 21.454   | 24.874  | 10.112  | 42.572  | 17.919  | 1.110      | 519   |
| 270   | 21.443 | 33.790   | 21.454   | 24.859  | 10.112  | 42.572  | 7.919   | 1.110      | 539   |
| 280   | 21.443 | 33.775   | 21.454   | 24.844  | 10.112  | 42.572  | -3.919  | 1.110      | 559   |
| 290   | 21.443 | 33.760   | 21.454   | 24.829  | 10.112  | 42.572  | -13.919 | 1.110      | 579   |
| 300   | 21.443 | 33.745   | 21.454   | 24.814  | 10.112  | 42.572  | -23.919 | 1.110      | 599   |

## WISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | SIG 02 | 02 SAT | SIG 03 | P04  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|--------|--------|--------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C  |          | ML/L   | %      | UM/L   | UM/L | UM/L | UM/L | UM/L   | DEG C    |         |         |         | DB    |
| 2     | 21.193 | 35.291   | 5.06   | 103.8  | 0.7    | 0.07 | 0.0  | 0.00 | 21.193 | 24.129   | 12.486  | 40.485  |         | 2     |
| 10    | 21.192 | 35.255   | 5.26   | 104.5  | 0.7    | 0.08 | 0.0  | 0.00 | 21.192 | 24.605   | 11.113  | 41.060  |         | 23    |
| 20    | 21.194 | 35.110   | 5.17   | 104.1  | 1.3    | 0.11 | 0.0  | 0.00 | 21.194 | 24.846   | 11.294  | 41.379  |         | 53    |
| 30    | 21.193 | 34.715   | 5.36   | 101.0  | 2.9    | 0.0  | 0.00 | 0.01 | 21.193 | 25.182   | 11.941  | 42.110  |         | 103   |
| 40    | 21.193 | 34.199   | 5.16   | 91.1   | 3.9    | 0.37 | 1.5  | 0.09 | 21.193 | 25.595   | 14.204  | 42.440  |         | 136   |
| 50    | 21.193 | 34.467   | 5.21   | 89.2   | 5.1    | 0.54 | 5.1  | 0.12 | 21.193 | 25.736   | 14.460  | 42.748  |         | 169   |
| 60    | 21.193 | 34.107   | 5.15   | 85.9   | 7.9    | 0.69 | 8.4  | 0.11 | 21.193 | 25.932   | 14.645  | 42.990  |         | 203   |
| 70    | 21.193 | 34.121   | 5.12   | 92.9   | 11.8   | 0.86 | 11.7 | 0.00 | 21.193 | 26.118   | 14.886  | 43.271  |         | 253   |
| 80    | 21.193 | 34.129   | 5.12   | 73.6   | 15.3   | 1.05 | 14.6 | 0.00 | 21.193 | 26.265   | 15.074  | 43.497  |         | 306   |
| 90    | 21.193 | 34.191   | 4.52   | 68.9   | 27.5   |      | 20.2 | 0.00 | 21.193 | 26.453   | 15.348  | 43.942  |         | 407   |
| 100   | 21.193 | 34.125   | 3.22   | 46.9   | 49.9   |      | 29.1 | 0.00 | 21.193 | 26.588   | 15.665  | 44.245  |         | 507   |
| 110   | 21.193 | 34.122   | 1.84   | 25.9   | 72.7   |      | 17.2 | 0.01 | 21.193 | 26.878   | 15.923  | 44.568  |         | 607   |
| 120   | 21.193 | 34.144   | 0.92   | 11.4   | 91.5   |      | 41.9 | 0.00 | 21.193 | 27.045   | 16.120  | 44.792  |         | 708   |
| 130   | 21.193 | 34.260   | 0.44   | 5.1    | 109.1  |      | 43.7 | 0.00 | 21.193 | 27.182   | 16.277  | 44.957  |         | 810   |
| 140   | 21.193 | 34.355   | 0.45   | 5.1    | 119.1  | 3.19 | 44.1 | 0.00 | 21.193 | 27.289   | 16.397  | 45.111  |         | 910   |
| 150   | 21.193 | 34.421   | 0.61   | 9.3    | 123.4  | 3.14 | 44.0 | 0.00 | 21.193 | 27.365   | 16.484  | 45.148  |         | 1010  |
| 160   | 21.193 | 34.519   | 1.10   | 14.8   | 132.8  |      | 42.9 | 0.01 | 21.193 | 27.435   | 16.642  | 45.281  |         | 1262  |
| 170   | 21.193 | 34.763   | 1.45   | 19.2   | 142.9  | 2.95 | 42.2 | 0.00 | 21.193 | 27.570   | 16.740  | 45.501  |         | 1508  |

# MARATHON 2 STA. 18

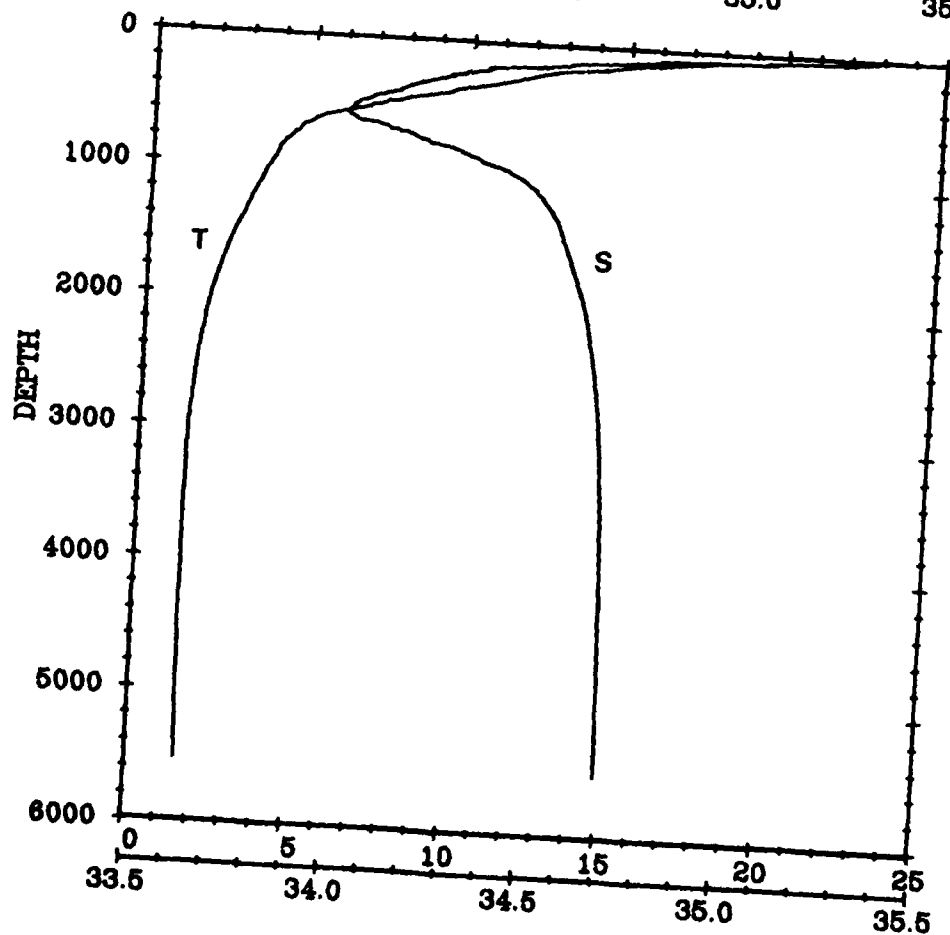
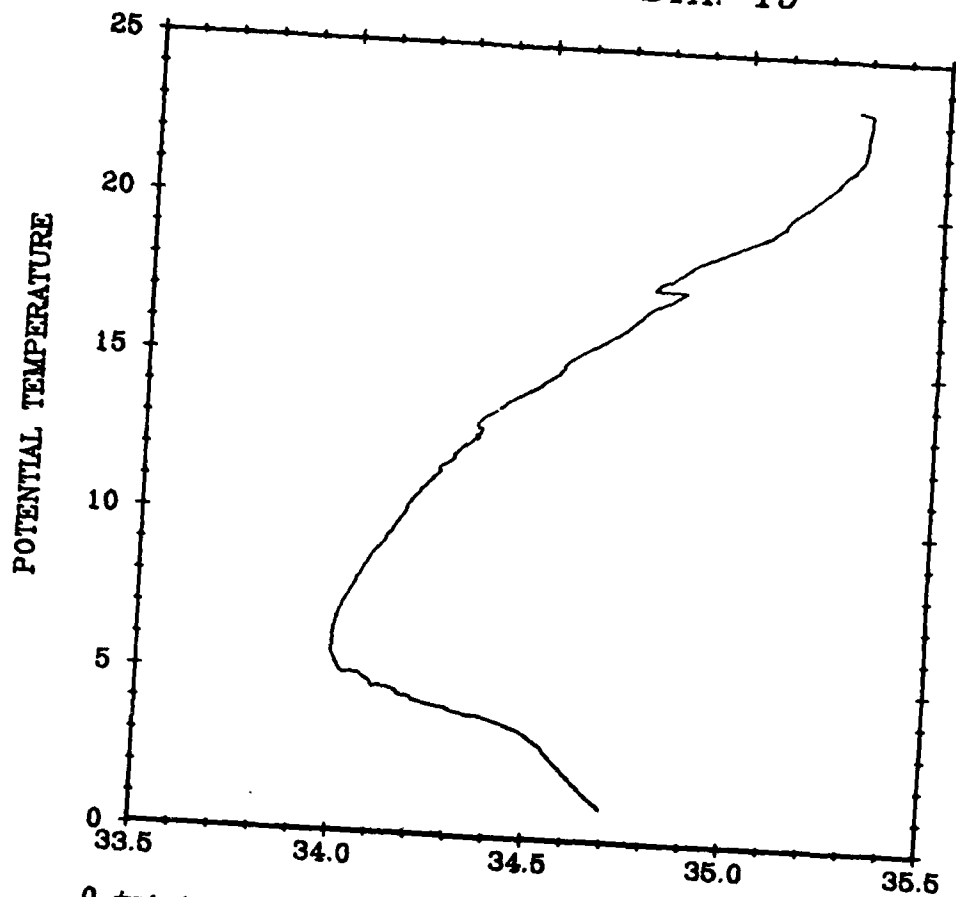


| LATITUDE | LONGITUDE | MO-DY-YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 21 41.5N | 152 23.5W | 5 10 94  | 242        | 5113   | 110  | KT    | 27.5     | 22.2     | 1021.0 |

| STD DATA | PRESS  | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA | DYNAMIC HT | DEPTH |
|----------|--------|--------|----------|----------|---------|---------|---------|-------|------------|-------|
| DB       | DEG C  | PSU    | DEG C    | DB       | KG/M3   | KG/M3   | KG/M3   | KG/M3 | M          | M     |
| 1        | 23.247 | 35.235 | 23.247   | 24.399   | 32.441  | 40.436  | 391.497 | 1.100 | 1          | 1     |
| 20       | 22.507 | 35.239 | 22.513   | 24.275   | 32.545  | 40.539  | 394.555 | 1.106 | 19         | 19    |
| 40       | 21.347 | 35.231 | 21.359   | 24.593   | 33.110  | 41.146  | 395.129 | 1.147 | 39         | 39    |
| 60       | 19.347 | 35.248 | 19.356   | 24.713   | 33.443  | 41.548  | 399.596 | 1.278 | 59         | 59    |
| 80       | 17.347 | 34.913 | 17.353   | 25.210   | 35.734  | 41.839  | 397.612 | 1.265 | 79         | 79    |
| 100      | 15.347 | 34.765 | 15.352   | 25.191   | 35.948  | 42.135  | 397.924 | 1.120 | 99         | 99    |
| 120      | 13.347 | 34.542 | 13.352   | 25.573   | 34.111  | 42.539  | 395.559 | 1.444 | 119        | 119   |
| 140      | 11.347 | 34.347 | 11.353   | 25.919   | 34.512  | 42.935  | 393.913 | 1.765 | 139        | 139   |
| 160      | 9.347  | 34.231 | 9.352    | 26.250   | 34.792  | 43.153  | 392.763 | 1.640 | 159        | 159   |
| 180      | 7.347  | 34.218 | 7.352    | 26.269   | 34.908  | 43.191  | 391.752 | 1.708 | 179        | 179   |
| 200      | 5.347  | 34.157 | 5.352    | 26.296   | 35.110  | 43.556  | 392.247 | 1.431 | 199        | 199   |
| 220      | 3.347  | 34.119 | 3.354    | 26.285   | 35.239  | 43.774  | 391.399 | 1.303 | 219        | 219   |
| 240      | 1.347  | 34.055 | 1.351    | 26.507   | 35.424  | 43.949  | 392.794 | 1.121 | 239        | 239   |
| 260      | 0.229  | 34.015 | 0.181    | 26.618   | 35.548  | 44.123  | 399.129 | 1.198 | 259        | 259   |
| 280      | 0.573  | 33.995 | 0.523    | 26.817   | 35.847  | 44.477  | 399.461 | 1.207 | 279        | 279   |
| 300      | 4.659  | 34.112 | 4.653    | 27.116   | 36.090  | 44.751  | 399.753 | 1.159 | 299        | 299   |
| 320      | 4.222  | 34.218 | 4.162    | 27.147   | 36.242  | 44.932  | 398.434 | 1.462 | 319        | 319   |
| 340      | 3.921  | 34.330 | 3.854    | 27.268   | 36.377  | 45.081  | 397.655 | 1.555 | 339        | 339   |
| 360      | 3.704  | 34.418 | 3.611    | 27.251   | 36.480  | 45.193  | 397.409 | 1.639 | 359        | 359   |
| 380      | 3.489  | 34.472 | 3.439    | 27.425   | 36.555  | 45.278  | 397.667 | 1.716 | 379        | 379   |
| 400      | 3.276  | 34.502 | 3.170    | 27.470   | 36.611  | 45.344  | 397.682 | 1.787 | 399        | 399   |
| 420      | 3.196  | 34.525 | 3.054    | 27.505   | 36.656  | 45.399  | 397.555 | 1.755 | 419        | 419   |
| 440      | 2.909  | 34.543 | 2.839    | 27.538   | 36.698  | 45.450  | 397.659 | 1.420 | 439        | 439   |
| 460      | 2.731  | 34.556 | 2.626    | 27.564   | 36.734  | 45.495  | 397.212 | 1.383 | 459        | 459   |
| 480      | 2.364  | 34.569 | 2.453    | 27.589   | 36.769  | 45.538  | 397.837 | 1.343 | 479        | 479   |
| 500      | 2.437  | 34.580 | 2.313    | 27.610   | 36.797  | 45.573  | 397.957 | 2.101 | 499        | 499   |
| 520      | 2.292  | 34.593 | 2.158    | 27.632   | 36.827  | 45.610  | 397.840 | 2.157 | 519        | 519   |
| 540      | 2.167  | 34.604 | 2.037    | 27.651   | 36.853  | 45.644  | 397.986 | 2.211 | 539        | 539   |
| 560      | 2.048  | 34.614 | 1.911    | 27.669   | 36.878  | 45.675  | 397.238 | 2.263 | 559        | 559   |
| 580      | 1.957  | 34.622 | 1.813    | 27.683   | 36.897  | 45.699  | 397.942 | 2.313 | 579        | 579   |
| 600      | 1.893  | 34.628 | 1.731    | 27.694   | 36.912  | 45.718  | 397.971 | 2.363 | 599        | 599   |
| 620      | 1.827  | 34.634 | 1.661    | 27.705   | 36.927  | 45.736  | 397.112 | 2.411 | 619        | 619   |
| 640      | 1.779  | 34.640 | 1.591    | 27.715   | 36.940  | 45.753  | 397.240 | 2.459 | 639        | 639   |
| 660      | 1.700  | 34.646 | 1.525    | 27.724   | 36.953  | 45.771  | 397.397 | 2.506 | 659        | 659   |
| 680      | 1.659  | 34.650 | 1.475    | 27.731   | 36.963  | 45.782  | 397.885 | 2.552 | 679        | 679   |
| 700      | 1.615  | 34.655 | 1.424    | 27.739   | 36.974  | 45.795  | 397.270 | 2.597 | 699        | 699   |
| 720      | 1.585  | 34.659 | 1.385    | 27.745   | 36.982  | 45.805  | 397.895 | 2.643 | 719        | 719   |
| 740      | 1.559  | 34.663 | 1.350    | 27.750   | 36.989  | 45.814  | 397.141 | 2.687 | 739        | 739   |
| 760      | 1.539  | 34.666 | 1.321    | 27.755   | 36.995  | 45.822  | 397.343 | 2.732 | 759        | 759   |
| 780      | 1.522  | 34.669 | 1.295    | 27.759   | 37.001  | 45.829  | 397.175 | 2.775 | 779        | 779   |
| 800      | 1.510  | 34.671 | 1.274    | 27.762   | 37.005  | 45.835  | 397.144 | 2.820 | 799        | 799   |
| 820      | 1.501  | 34.673 | 1.255    | 27.765   | 37.009  | 45.839  | 397.149 | 2.864 | 819        | 819   |
| 840      | 1.491  | 34.675 | 1.237    | 27.768   | 37.013  | 45.844  | 397.164 | 2.908 | 839        | 839   |
| 860      | 1.489  | 34.677 | 1.222    | 27.771   | 37.016  | 45.848  | 397.219 | 2.953 | 859        | 859   |
| 880      | 1.484  | 34.678 | 1.208    | 27.773   | 37.019  | 45.852  | 397.155 | 2.997 | 879        | 879   |
| 900      | 1.479  | 34.680 | 1.192    | 27.775   | 37.023  | 45.856  | 397.197 | 3.041 | 899        | 899   |
| 920      | 1.475  | 34.681 | 1.178    | 27.777   | 37.025  | 45.859  | 397.533 | 3.085 | 919        | 919   |
| 940      | 1.474  | 34.682 | 1.167    | 27.779   | 37.027  | 45.862  | 397.707 | 3.130 | 939        | 939   |
| 960      | 1.473  | 34.683 | 1.155    | 27.780   | 37.030  | 45.865  | 397.879 | 3.175 | 959        | 959   |
| 980      | 1.475  | 34.684 | 1.146    | 27.781   | 37.031  | 45.867  | 397.597 | 3.220 | 979        | 979   |
| 1000     | 1.476  | 34.685 | 1.136    | 27.783   | 37.034  | 45.870  | 397.297 | 3.265 | 999        | 999   |
| 1020     | 1.480  | 34.686 | 1.128    | 27.784   | 37.035  | 45.872  | 397.545 | 3.311 | 1019       | 1019  |
| 1040     | 1.484  | 34.687 | 1.121    | 27.786   | 37.037  | 45.874  | 397.794 | 3.356 | 1039       | 1039  |
| 1060     | 1.481  | 34.687 | 1.107    | 27.787   | 37.039  | 45.877  | 397.995 | 3.402 | 1059       | 1059  |
| 1080     | 1.484  | 34.688 | 1.098    | 27.788   | 37.041  | 45.879  | 397.225 | 3.448 | 1079       | 1079  |
| 1100     | 1.490  | 34.689 | 1.092    | 27.789   | 37.042  | 45.881  | 397.506 | 3.495 | 1099       | 1099  |
| 1120     | 1.492  | 34.689 | 1.082    | 27.790   | 37.043  | 45.883  | 397.787 | 3.541 | 1119       | 1119  |
| 1140     | 1.494  | 34.691 | 1.072    | 27.792   | 37.046  | 45.886  | 397.928 | 3.588 | 1139       | 1139  |
| 1160     | 1.497  | 34.691 | 1.063    | 27.793   | 37.047  | 45.887  | 397.225 | 3.635 | 1159       | 1159  |
| 1180     | 1.502  | 34.692 | 1.055    | 27.794   | 37.049  | 45.890  | 397.488 | 3.683 | 1179       | 1179  |
| 1200     | 1.509  | 34.692 | 1.050    | 27.794   | 37.050  | 45.891  | 397.855 | 3.730 | 1199       | 1199  |
| 1220     | 1.519  | 34.692 | 1.047    | 27.795   | 37.050  | 45.891  | 397.280 | 3.778 | 1219       | 1219  |
| 1240     | 1.530  | 34.693 | 1.045    | 27.796   | 37.051  | 45.892  | 397.655 | 3.827 | 1239       | 1239  |
| 1260     | 1.542  | 34.693 | 1.044    | 27.796   | 37.051  | 45.892  | 397.120 | 3.876 | 1259       | 1259  |
| 1280     | 1.554  | 34.693 | 1.042    | 27.796   | 37.052  | 45.893  | 397.587 | 3.925 | 1279       | 1279  |
| 1300     | 1.559  | 34.693 | 1.042    | 27.796   | 37.052  | 45.893  | 397.773 | 3.944 | 1299       | 1299  |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIOL  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  | PSU      | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  | DEG C    | KG/M3   | KG/M3   | KG/M3   | DB    |
| 1                  | 23.739 | 35.316   | 5.10   | 103.7  | 1.3   | 0.07 | 0.0  | 0.00 | 23.739 | 23.739   | 33.959  | 32.298  | 40.280  | 1     |
| 5                  | 19.135 | 35.224   | 5.42   | 103.3  | 1.9   | 0.10 | 0.0  | 0.00 | 19.125 | 25.009   | 33.485  | 41.597  | 41.597  | 57    |
| 10                 | 16.201 | 34.704   | 5.37   | 96.5   | 2.7   | 0.24 | 1.1  | 0.24 | 16.194 | 25.476   | 34.053  | 42.259  | 42.259  | 107   |
| 15                 | 14.471 | 34.514   | 5.28   | 98.1   | 4.8   | 0.47 | 5.1  | 0.02 | 14.448 | 25.717   | 34.359  | 42.626  | 42.626  | 158   |
| 20                 | 12.473 | 34.379   | 5.24   | 97.9   | 7.7   | 0.54 | 7.9  | 0.01 | 12.842 | 25.928   | 34.633  | 42.958  | 42.958  | 207   |
| 25                 | 10.491 | 34.193   | 4.95   | 99.2   | 15.2  | 1.00 | 13.9 | 0.00 | 10.554 | 26.209   | 35.004  | 43.413  | 43.413  | 258   |
| 30                 | 9.561  | 34.291   | 4.48   | 98.2   | 24.3  | 1.45 | 22.5 | 0.00 | 9.519  | 26.473   | 35.362  | 43.958  | 43.958  | 307   |
| 35                 | 8.716  | 34.207   | 3.34   | 48.8   | 48.4  | 2.70 | 23.8 | 0.00 | 8.729  | 26.673   | 35.645  | 44.219  | 44.219  | 358   |
| 40                 | 8.115  | 34.242   | 1.59   | 22.3   | 78.5  | 3.9  | 39.4 | 0.00 | 8.066  | 26.908   | 35.960  | 44.610  | 44.610  | 408   |
| 45                 | 4.483  | 34.149   | 0.94   | 11.6   | 98.1  | 3.20 | 42.2 | 0.00 | 4.434  | 27.064   | 36.145  | 44.824  | 44.824  | 458   |
| 50                 | 4.194  | 34.261   | 0.45   | 6.2    | 113.8 | 3.13 | 44.0 | 0.00 | 4.033  | 27.195   | 36.295  | 44.991  | 44.991  | 509   |
| 55                 | 3.556  | 34.371   | 0.45   | 6.1    | 122.2 | 3.17 | 44.3 | 0.00 | 3.739  | 27.291   | 36.403  | 45.139  | 45.139  | 559   |
| 60                 | 3.547  | 34.431   | 0.56   | 9.0    | 124.8 | 3.14 | 43.9 | 0.00 | 3.573  | 27.376   | 36.498  | 45.214  | 45.214  | 609   |
| 65                 | 3.29   | 34.521   | 1.15   | 15.4   | 114.8 | 3.05 | 42.9 | 0.00 | 3.318  | 27.499   | 36.548  | 45.388  | 45.388  | 659   |
| 70                 | 2.20   | 34.561   | 1.43   | 19.0   | 146.2 |      | 42.4 | 0.00 | 2.614  | 27.569   | 36.740  | 45.501  | 45.501  | 709   |
| 75                 | 2.161  | 34.590   | 1.61   | 21.2   | 155.4 |      | 41.9 | 0.00 | 2.239  | 27.624   | 36.814  | 45.595  | 45.595  | 759   |
| 80                 | 2.148  | 34.617   | 1.91   | 23.5   | 165.2 |      | 41.3 | 0.01 | 1.909  | 27.672   | 36.880  | 45.677  | 45.677  | 809   |
| 85                 | 1.538  | 34.649   | 2.15   | 10.3   | 172.7 |      | 39.9 | 0.01 | 1.521  | 27.727   | 36.956  | 45.771  | 45.771  | 859   |
| 90                 | 1.545  | 34.658   | 2.19   | 35.9   | 169.7 |      | 38.6 | 0.01 | 1.324  | 27.756   | 36.996  | 45.823  | 45.823  | 909   |
| 95                 | 1.495  | 34.679   | 3.18   | 40.7   | 166.6 | 2.57 | 37.7 | 0.00 | 1.216  | 27.773   | 37.019  | 45.851  | 45.851  | 959   |
| 100                | 1.475  | 34.686   | 3.19   | 43.4   | 160.8 | 2.52 | 37.1 | 0.00 | 1.152  | 27.783   | 37.032  | 45.867  | 45.867  | 1009  |
| 105                | 1.499  | 34.691   | 3.15   | 47.8   | 148.2 | 2.40 | 35.9 | 0.00 | 1.057  | 27.793   | 37.048  | 45.888  | 45.888  | 1059  |
| 110                | 1.559  | 34.693   | 3.70   | 47.2   | 144.9 |      | 35.7 | 0.02 | 1.041  | 27.796   | 37.051  | 45.892  | 45.892  | 1109  |

# MARATHON 2 STA. 19



R V THOMAS WASHINGTON MARATHON LEG 11 STATION 11

| LATITUDE | LONGITUDE | MO | DAY | YEAR | START TIME | BOTT M | WIND | SPEED | AIR TEMP | WET BULB | BAR M  |
|----------|-----------|----|-----|------|------------|--------|------|-------|----------|----------|--------|
| 18 41 N  | 152 14 W  | 11 | 11  | 84   | 1024       | 5492   | 21   | 4     | 20.2     | 20.0     | 1024.1 |

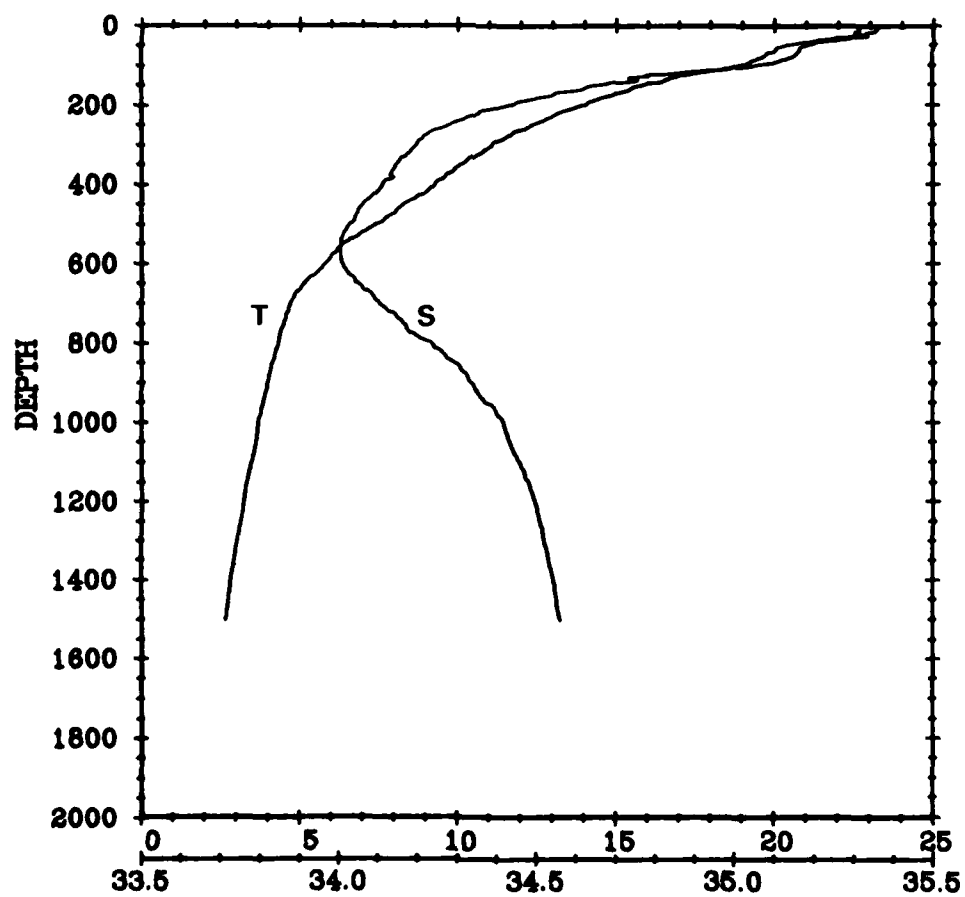
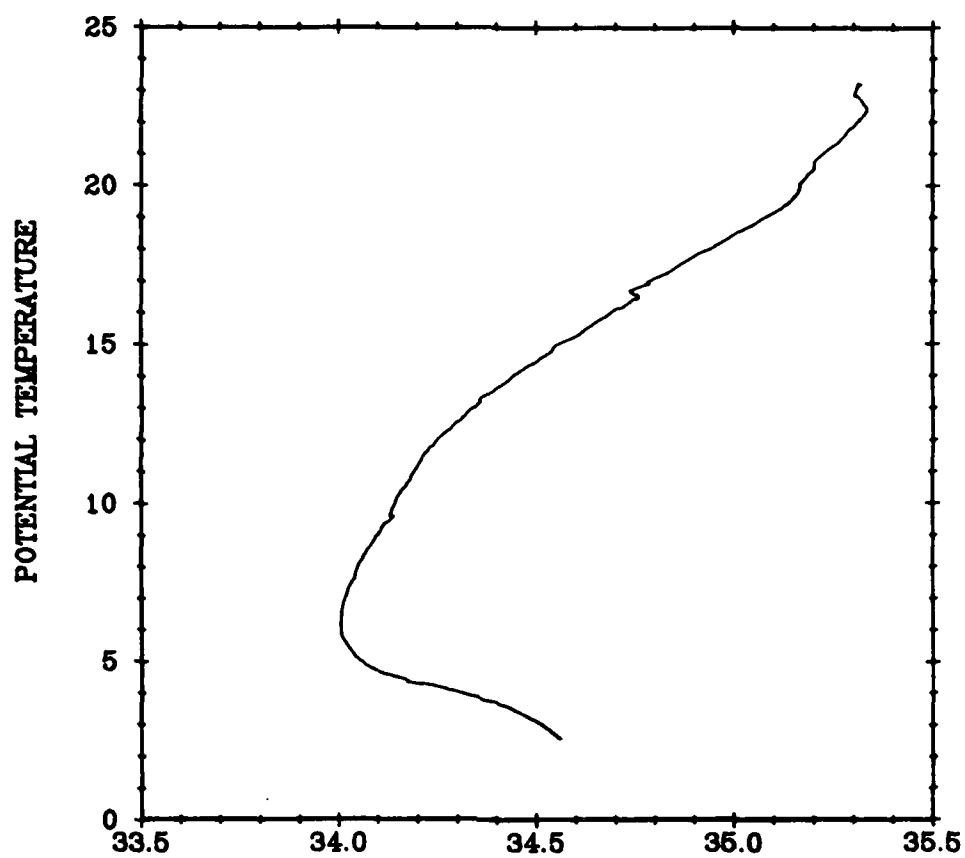
## STD DATA

| DEPTH | PRESS  | TEMP   | SALINITY | POT TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH |
|-------|--------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| 0     | 0.0    | 20.2   | 35.114   | 20.124   | 24.111  | 32.456  | 40.462  | 50.298  | 0.000      | 0     |
| 10    | 1.0    | 20.204 | 35.114   | 20.124   | 24.111  | 32.456  | 40.462  | 50.298  | 0.000      | 10    |
| 20    | 2.0    | 20.204 | 35.114   | 20.124   | 24.111  | 32.456  | 40.462  | 50.298  | 0.000      | 20    |
| 30    | 3.0    | 20.190 | 35.114   | 20.120   | 24.110  | 32.455  | 40.461  | 50.297  | 0.000      | 30    |
| 40    | 4.0    | 20.185 | 35.114   | 20.115   | 24.105  | 32.450  | 40.456  | 50.292  | 0.000      | 40    |
| 50    | 5.0    | 20.177 | 35.114   | 20.107   | 24.097  | 32.442  | 40.448  | 50.284  | 0.000      | 50    |
| 60    | 6.0    | 20.169 | 35.114   | 20.099   | 24.089  | 32.434  | 40.440  | 50.276  | 0.000      | 60    |
| 70    | 7.0    | 20.161 | 35.114   | 20.091   | 24.081  | 32.426  | 40.432  | 50.268  | 0.000      | 70    |
| 80    | 8.0    | 20.153 | 35.114   | 20.083   | 24.073  | 32.418  | 40.424  | 50.260  | 0.000      | 80    |
| 90    | 9.0    | 20.145 | 35.114   | 20.075   | 24.065  | 32.410  | 40.416  | 50.252  | 0.000      | 90    |
| 100   | 10.0   | 20.137 | 35.114   | 20.067   | 24.057  | 32.402  | 40.408  | 50.244  | 0.000      | 100   |
| 110   | 11.0   | 20.129 | 35.114   | 20.059   | 24.049  | 32.394  | 40.400  | 50.236  | 0.000      | 110   |
| 120   | 12.0   | 20.121 | 35.114   | 20.051   | 24.041  | 32.386  | 40.392  | 50.228  | 0.000      | 120   |
| 130   | 13.0   | 20.113 | 35.114   | 20.043   | 24.033  | 32.378  | 40.384  | 50.220  | 0.000      | 130   |
| 140   | 14.0   | 20.105 | 35.114   | 20.035   | 24.025  | 32.370  | 40.376  | 50.212  | 0.000      | 140   |
| 150   | 15.0   | 20.097 | 35.114   | 20.027   | 24.017  | 32.362  | 40.368  | 50.204  | 0.000      | 150   |
| 160   | 16.0   | 20.089 | 35.114   | 20.019   | 24.009  | 32.354  | 40.360  | 50.196  | 0.000      | 160   |
| 170   | 17.0   | 20.081 | 35.114   | 20.011   | 24.001  | 32.346  | 40.352  | 50.188  | 0.000      | 170   |
| 180   | 18.0   | 20.073 | 35.114   | 20.003   | 23.993  | 32.338  | 40.344  | 50.180  | 0.000      | 180   |
| 190   | 19.0   | 20.065 | 35.114   | 19.995   | 23.985  | 32.330  | 40.336  | 50.172  | 0.000      | 190   |
| 200   | 20.0   | 20.057 | 35.114   | 19.987   | 23.977  | 32.322  | 40.328  | 50.164  | 0.000      | 200   |
| 210   | 21.0   | 20.049 | 35.114   | 19.979   | 23.969  | 32.314  | 40.320  | 50.156  | 0.000      | 210   |
| 220   | 22.0   | 20.041 | 35.114   | 19.971   | 23.961  | 32.306  | 40.312  | 50.148  | 0.000      | 220   |
| 230   | 23.0   | 20.033 | 35.114   | 19.963   | 23.953  | 32.298  | 40.304  | 50.140  | 0.000      | 230   |
| 240   | 24.0   | 20.025 | 35.114   | 19.955   | 23.945  | 32.290  | 40.296  | 50.132  | 0.000      | 240   |
| 250   | 25.0   | 20.017 | 35.114   | 19.947   | 23.937  | 32.282  | 40.288  | 50.124  | 0.000      | 250   |
| 260   | 26.0   | 20.009 | 35.114   | 19.939   | 23.929  | 32.274  | 40.280  | 50.116  | 0.000      | 260   |
| 270   | 27.0   | 19.999 | 35.114   | 19.929   | 23.919  | 32.264  | 40.270  | 50.106  | 0.000      | 270   |
| 280   | 28.0   | 19.991 | 35.114   | 19.921   | 23.911  | 32.256  | 40.262  | 50.098  | 0.000      | 280   |
| 290   | 29.0   | 19.983 | 35.114   | 19.913   | 23.903  | 32.248  | 40.254  | 50.090  | 0.000      | 290   |
| 300   | 30.0   | 19.975 | 35.114   | 19.905   | 23.895  | 32.240  | 40.246  | 50.082  | 0.000      | 300   |
| 310   | 31.0   | 19.967 | 35.114   | 19.897   | 23.887  | 32.232  | 40.238  | 50.074  | 0.000      | 310   |
| 320   | 32.0   | 19.959 | 35.114   | 19.889   | 23.879  | 32.224  | 40.230  | 50.066  | 0.000      | 320   |
| 330   | 33.0   | 19.951 | 35.114   | 19.881   | 23.871  | 32.216  | 40.222  | 50.058  | 0.000      | 330   |
| 340   | 34.0   | 19.943 | 35.114   | 19.873   | 23.863  | 32.208  | 40.214  | 50.050  | 0.000      | 340   |
| 350   | 35.0   | 19.935 | 35.114   | 19.865   | 23.855  | 32.200  | 40.206  | 50.042  | 0.000      | 350   |
| 360   | 36.0   | 19.927 | 35.114   | 19.857   | 23.847  | 32.192  | 40.198  | 50.034  | 0.000      | 360   |
| 370   | 37.0   | 19.919 | 35.114   | 19.849   | 23.839  | 32.184  | 40.190  | 50.026  | 0.000      | 370   |
| 380   | 38.0   | 19.911 | 35.114   | 19.841   | 23.831  | 32.176  | 40.182  | 50.018  | 0.000      | 380   |
| 390   | 39.0   | 19.903 | 35.114   | 19.833   | 23.823  | 32.168  | 40.174  | 50.010  | 0.000      | 390   |
| 400   | 40.0   | 19.895 | 35.114   | 19.825   | 23.815  | 32.160  | 40.166  | 50.002  | 0.000      | 400   |
| 410   | 41.0   | 19.887 | 35.114   | 19.817   | 23.807  | 32.152  | 40.158  | 49.994  | 0.000      | 410   |
| 420   | 42.0   | 19.879 | 35.114   | 19.809   | 23.799  | 32.144  | 40.150  | 49.986  | 0.000      | 420   |
| 430   | 43.0   | 19.871 | 35.114   | 19.801   | 23.791  | 32.136  | 40.142  | 49.978  | 0.000      | 430   |
| 440   | 44.0   | 19.863 | 35.114   | 19.793   | 23.783  | 32.128  | 40.134  | 49.970  | 0.000      | 440   |
| 450   | 45.0   | 19.855 | 35.114   | 19.785   | 23.775  | 32.120  | 40.126  | 49.962  | 0.000      | 450   |
| 460   | 46.0   | 19.847 | 35.114   | 19.777   | 23.767  | 32.112  | 40.118  | 49.954  | 0.000      | 460   |
| 470   | 47.0   | 19.839 | 35.114   | 19.769   | 23.759  | 32.104  | 40.110  | 49.946  | 0.000      | 470   |
| 480   | 48.0   | 19.831 | 35.114   | 19.761   | 23.751  | 32.096  | 40.102  | 49.938  | 0.000      | 480   |
| 490   | 49.0   | 19.823 | 35.114   | 19.753   | 23.743  | 32.088  | 40.094  | 49.930  | 0.000      | 490   |
| 500   | 50.0   | 19.815 | 35.114   | 19.745   | 23.735  | 32.080  | 40.086  | 49.922  | 0.000      | 500   |
| 510   | 51.0   | 19.807 | 35.114   | 19.737   | 23.727  | 32.072  | 40.078  | 49.914  | 0.000      | 510   |
| 520   | 52.0   | 19.799 | 35.114   | 19.729   | 23.719  | 32.064  | 40.070  | 49.906  | 0.000      | 520   |
| 530   | 53.0   | 19.791 | 35.114   | 19.721   | 23.711  | 32.056  | 40.062  | 49.898  | 0.000      | 530   |
| 540   | 54.0   | 19.783 | 35.114   | 19.713   | 23.703  | 32.048  | 40.054  | 49.890  | 0.000      | 540   |
| 550   | 55.0   | 19.775 | 35.114   | 19.705   | 23.695  | 32.040  | 40.046  | 49.882  | 0.000      | 550   |
| 560   | 56.0   | 19.767 | 35.114   | 19.697   | 23.687  | 32.032  | 40.038  | 49.874  | 0.000      | 560   |
| 570   | 57.0   | 19.759 | 35.114   | 19.689   | 23.679  | 32.024  | 40.030  | 49.866  | 0.000      | 570   |
| 580   | 58.0   | 19.751 | 35.114   | 19.681   | 23.671  | 32.016  | 40.022  | 49.858  | 0.000      | 580   |
| 590   | 59.0   | 19.743 | 35.114   | 19.673   | 23.663  | 32.008  | 40.014  | 49.850  | 0.000      | 590   |
| 600   | 60.0   | 19.735 | 35.114   | 19.665   | 23.655  | 32.000  | 40.006  | 49.842  | 0.000      | 600   |
| 610   | 61.0   | 19.727 | 35.114   | 19.657   | 23.647  | 31.992  | 39.998  | 49.834  | 0.000      | 610   |
| 620   | 62.0   | 19.719 | 35.114   | 19.649   | 23.639  | 31.984  | 39.990  | 49.826  | 0.000      | 620   |
| 630   | 63.0   | 19.711 | 35.114   | 19.641   | 23.631  | 31.976  | 39.982  | 49.818  | 0.000      | 630   |
| 640   | 64.0   | 19.703 | 35.114   | 19.633   | 23.623  | 31.968  | 39.974  | 49.810  | 0.000      | 640   |
| 650   | 65.0   | 19.695 | 35.114   | 19.625   | 23.615  | 31.960  | 39.966  | 49.802  | 0.000      | 650   |
| 660   | 66.0   | 19.687 | 35.114   | 19.617   | 23.607  | 31.952  | 39.958  | 49.794  | 0.000      | 660   |
| 670   | 67.0   | 19.679 | 35.114   | 19.609   | 23.599  | 31.944  | 39.950  | 49.786  | 0.000      | 670   |
| 680   | 68.0   | 19.671 | 35.114   | 19.601   | 23.591  | 31.936  | 39.942  | 49.778  | 0.000      | 680   |
| 690   | 69.0   | 19.663 | 35.114   | 19.593   | 23.583  | 31.928  | 39.934  | 49.770  | 0.000      | 690   |
| 700   | 70.0   | 19.655 | 35.114   | 19.585   | 23.575  | 31.920  | 39.926  | 49.762  | 0.000      | 700   |
| 710   | 71.0   | 19.647 | 35.114   | 19.577   | 23.567  | 31.912  | 39.918  | 49.754  | 0.000      | 710   |
| 720   | 72.0   | 19.639 | 35.114   | 19.569   | 23.559  | 31.904  | 39.910  | 49.746  | 0.000      | 720   |
| 730   | 73.0   | 19.631 | 35.114   | 19.561   | 23.551  | 31.896  | 39.902  | 49.738  | 0.000      | 730   |
| 740   | 74.0   | 19.623 | 35.114   | 19.553   | 23.543  | 31.888  | 39.894  | 49.730  | 0.000      | 740   |
| 750   | 75.0   | 19.615 | 35.114   | 19.545   | 23.535  | 31.880  | 39.886  | 49.722  | 0.000      | 750   |
| 760   | 76.0   | 19.607 | 35.114   | 19.537   | 23.527  | 31.872  | 39.878  | 49.714  | 0.000      | 760   |
| 770   | 77.0   | 19.599 | 35.114   | 19.529   | 23.519  | 31.864  | 39.870  | 49.706  | 0.000      | 770   |
| 780   | 78.0   | 19.591 | 35.114   | 19.521   | 23.511  | 31.856  | 39.862  | 49.698  | 0.000      | 780   |
| 790   | 79.0   | 19.583 | 35.114   | 19.513   | 23.503  | 31.848  | 39.854  | 49.690  | 0.000      | 790   |
| 800   | 80.0   | 19.575 | 35.114   | 19.505   | 23.495  | 31.840  | 39.846  | 49.682  | 0.000      | 800   |
| 810   | 81.0   | 19.567 | 35.114   | 19.497   | 23.487  | 31.832  | 39.838  | 49.674  | 0.000      | 810   |
| 820   | 82.0   | 19.559 | 35.114   | 19.489   | 23.479  | 31.824  | 39.830  | 49.666  | 0.000      | 820   |
| 830   | 83.0   | 19.551 | 35.114   | 19.481   | 23.471  | 31.816  | 39.822  | 49.658  | 0.000      | 830   |
| 840   | 84.0   | 19.543 | 35.114   | 19.473   | 23.463  | 31.808  | 39.814  | 49.650  | 0.000      | 840   |
| 850   | 85.0   | 19.535 | 35.114   | 19.465   | 23.455  | 31.800  | 39.806  | 49.642  | 0.000      | 850   |
| 860   | 86.0   | 19.527 | 35.114   | 19.457   | 23.447  | 31.792  | 39.798  | 49.634  | 0.000      | 860   |
| 870   | 87.0   | 19.519 | 35.114   | 19.449   | 23.439  | 31.784  | 39.790  | 49.626  | 0.000      | 870   |
| 880   | 88.0   | 19.511 | 35.114   | 19.441   | 23.431  | 31.776  | 39.782  | 49.618  | 0.000      | 880   |
| 890   | 89.0   | 19.503 | 35.114   | 19.433   | 23.423  | 31.768  | 39.774  | 49.610  | 0.000      | 890   |
| 900   | 90.0   | 19.495 | 35.114   | 19.425   | 23.415  | 31.760  | 39.766  | 49.602  | 0.000      | 900   |
| 910   | 91.0   | 19.487 | 35.114   | 19.417   | 23.407  | 31.752  | 39.758  | 49.594  | 0.000      | 910   |
| 920   | 92.0   | 19.479 | 35.114   | 19.409   | 23.399  | 31.744  | 39.750  | 49.586  | 0.000      | 920   |
| 930   | 93.0   | 19.471 | 35.114   | 19.401   | 23.391  | 31.736  | 39.742  | 49.578  | 0.000      | 930   |
| 940   | 94.0   | 19.463 | 35.114   | 19.393   | 23.383  | 31.728  | 39.734  | 49.570  | 0.000      | 940   |
| 950   | 95.0   | 19.455 | 35.114   | 19.385   | 23.375  | 31.720  | 39.726  | 49.562  | 0.000      | 950   |
| 960   | 96.0   | 19.447 | 35.114   | 19.377   | 23.367  | 31.712  | 39.718  | 49.554  | 0.000      | 960   |
| 970   | 97.0   | 19.439 | 35.114   | 19.369   | 23.359  | 31.704  | 39.710  | 49.546  | 0.000      | 970   |
| 980   | 98.0   | 19.431 | 35.114   | 19.361   | 23.351  | 31.696  | 39.702  | 49.538  | 0.000      | 980   |
| 990   | 99.0   | 19.423 | 35.114   | 19.353   | 23.343  | 31.688  | 39.694  | 49.530  | 0.000      | 990   |
| 1000  | 1000.0 | 19.415 | 35.114   | 19.345   | 23.335  | 31.680  | 39.686  | 49.522  | 0.000      | 1000  |

## WISKIN BOTTLE DATA

| DEPTH | TEMP | SALINITY |
|-------|------|----------|
|-------|------|----------|

# MARATHON 2 STA. 20

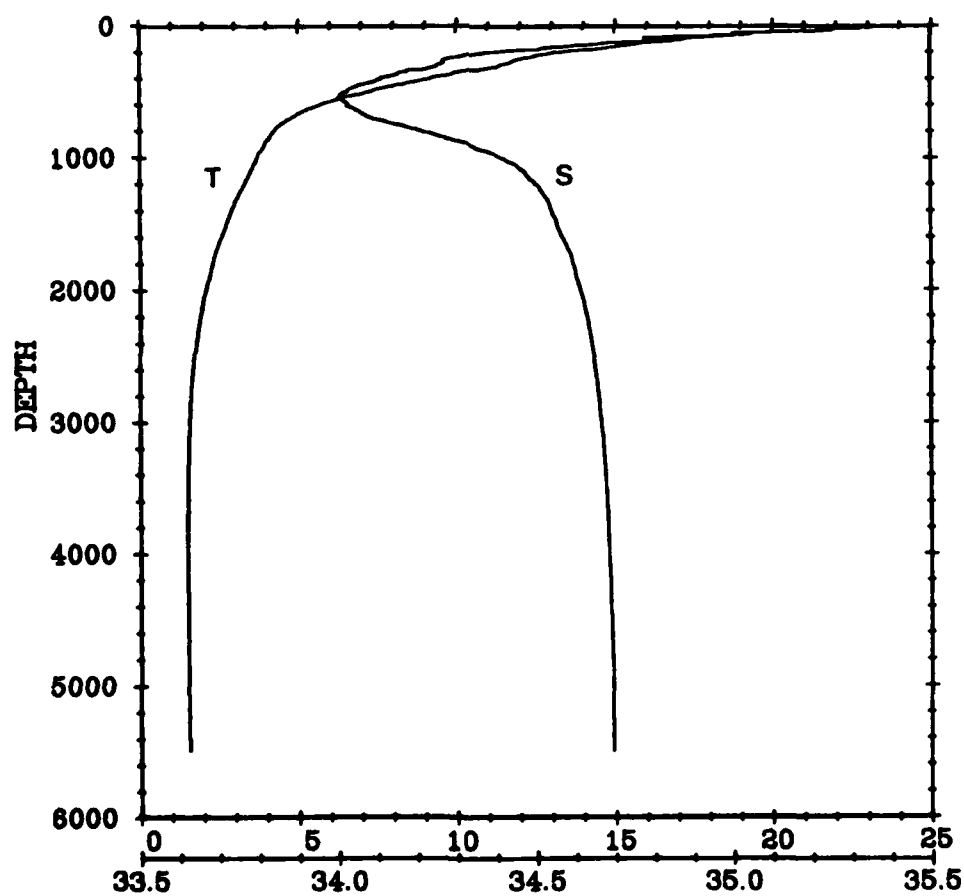
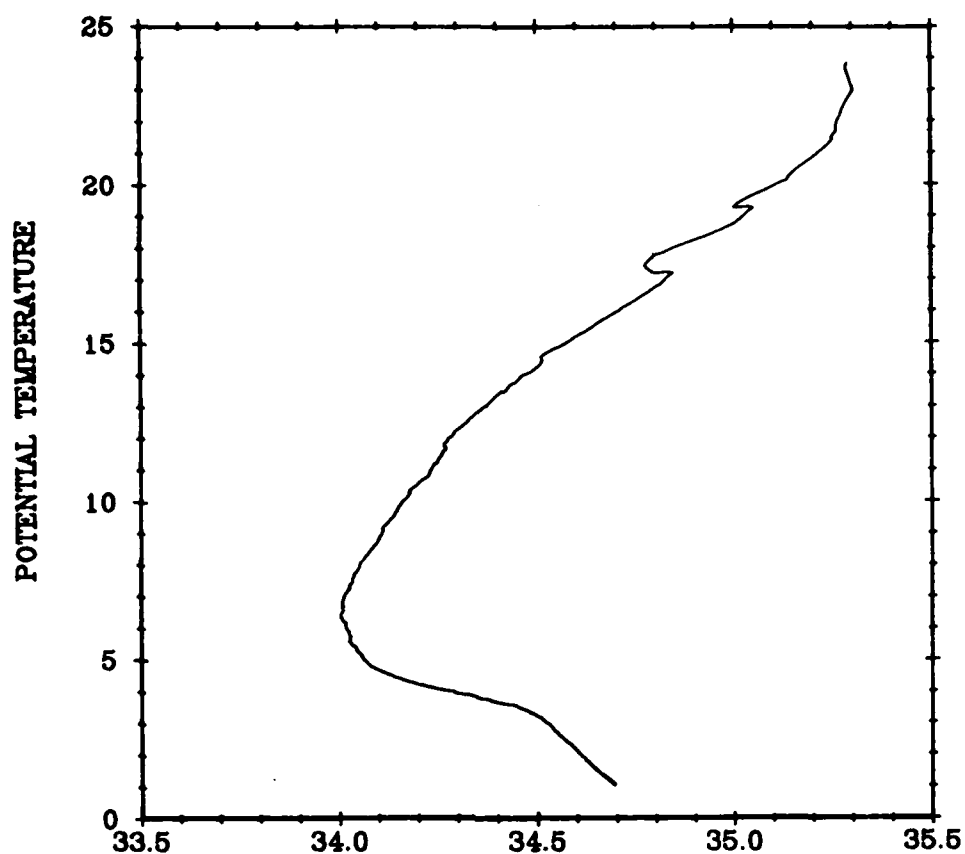


| LATITUDE | LONGITUDE | MO DY YR | START TIME | S TO N | WIND | SPEED | AIR TEMP | WET BULB | WAVE H |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 24 14 N  | 132 40 W  | 1 10 94  | 014        | 1044   | 100  | 100   | 10.0     | 10.0     | 10.0   |

| CTD DATA |        |          |          |         |         |         |         |            |       |
|----------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| PRESS    | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH |
| DB       | DEG C  |          | DEG C    |         |         |         |         |            | M     |
| 20       | 21.517 | 35.242   | 21.517   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 21       | 22.412 | 35.239   | 22.412   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 22       | 23.276 | 35.235   | 23.276   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 23       | 24.121 | 35.231   | 24.121   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 24       | 24.946 | 35.227   | 24.946   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 25       | 25.751 | 35.223   | 25.751   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 26       | 26.536 | 35.219   | 26.536   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 27       | 27.301 | 35.215   | 27.301   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 28       | 28.046 | 35.211   | 28.046   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 29       | 28.771 | 35.207   | 28.771   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 30       | 29.476 | 35.203   | 29.476   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 31       | 30.161 | 35.199   | 30.161   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 32       | 30.826 | 35.195   | 30.826   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 33       | 31.471 | 35.191   | 31.471   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 34       | 32.096 | 35.187   | 32.096   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 35       | 32.701 | 35.183   | 32.701   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 36       | 33.286 | 35.179   | 33.286   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 37       | 33.851 | 35.175   | 33.851   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 38       | 34.396 | 35.171   | 34.396   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 39       | 34.921 | 35.167   | 34.921   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 40       | 35.426 | 35.163   | 35.426   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 41       | 35.911 | 35.159   | 35.911   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 42       | 36.376 | 35.155   | 36.376   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 43       | 36.821 | 35.151   | 36.821   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 44       | 37.246 | 35.147   | 37.246   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 45       | 37.651 | 35.143   | 37.651   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 46       | 38.036 | 35.139   | 38.036   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 47       | 38.401 | 35.135   | 38.401   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 48       | 38.746 | 35.131   | 38.746   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 49       | 39.071 | 35.127   | 39.071   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 50       | 39.376 | 35.123   | 39.376   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 51       | 39.661 | 35.119   | 39.661   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 52       | 39.926 | 35.115   | 39.926   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 53       | 40.171 | 35.111   | 40.171   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 54       | 40.396 | 35.107   | 40.396   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 55       | 40.601 | 35.103   | 40.601   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 56       | 40.786 | 35.099   | 40.786   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 57       | 40.951 | 35.095   | 40.951   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 58       | 41.096 | 35.091   | 41.096   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 59       | 41.221 | 35.087   | 41.221   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 60       | 41.326 | 35.083   | 41.326   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 61       | 41.411 | 35.079   | 41.411   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 62       | 41.476 | 35.075   | 41.476   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 63       | 41.521 | 35.071   | 41.521   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 64       | 41.546 | 35.067   | 41.546   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 65       | 41.551 | 35.063   | 41.551   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 66       | 41.536 | 35.059   | 41.536   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 67       | 41.501 | 35.055   | 41.501   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 68       | 41.446 | 35.051   | 41.446   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 69       | 41.371 | 35.047   | 41.371   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 70       | 41.276 | 35.043   | 41.276   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 71       | 41.161 | 35.039   | 41.161   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 72       | 41.026 | 35.035   | 41.026   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 73       | 40.871 | 35.031   | 40.871   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 74       | 40.696 | 35.027   | 40.696   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 75       | 40.501 | 35.023   | 40.501   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 76       | 40.286 | 35.019   | 40.286   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 77       | 40.051 | 35.015   | 40.051   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 78       | 39.796 | 35.011   | 39.796   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 79       | 39.521 | 35.007   | 39.521   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 80       | 39.226 | 35.003   | 39.226   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 81       | 38.911 | 34.999   | 38.911   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 82       | 38.576 | 34.995   | 38.576   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 83       | 38.221 | 34.991   | 38.221   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 84       | 37.846 | 34.987   | 37.846   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 85       | 37.451 | 34.983   | 37.451   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 86       | 37.036 | 34.979   | 37.036   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 87       | 36.601 | 34.975   | 36.601   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 88       | 36.146 | 34.971   | 36.146   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 89       | 35.671 | 34.967   | 35.671   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 90       | 35.176 | 34.963   | 35.176   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 91       | 34.661 | 34.959   | 34.661   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 92       | 34.126 | 34.955   | 34.126   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 93       | 33.571 | 34.951   | 33.571   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 94       | 33.096 | 34.947   | 33.096   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 95       | 32.601 | 34.943   | 32.601   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 96       | 32.086 | 34.939   | 32.086   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 97       | 31.551 | 34.935   | 31.551   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 98       | 31.096 | 34.931   | 31.096   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 99       | 30.621 | 34.927   | 30.621   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |
| 100      | 30.126 | 34.923   | 30.126   | 24.004  | 42.312  | 48.140  | 52.447  | 1.700      |       |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   |
| M                  | DEG C  |          | UM/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  |
| 4                  | 21.545 | 35.153   | 5.56   | 104.6  | 0.6   | 0.04 | 0.0  | 0.00 | 23.544 |
| 17                 | 18.797 | 34.926   | 5.54   | 104.8  | 1.5   | 0.09 | 0.0  | 0.00 | 18.787 |
| 127                | 17.049 | 34.838   | 4.92   | 90.0   | 2.8   | 0.30 | 0.0  | 0.01 | 17.031 |
| 157                | 15.102 | 34.738   | 5.03   | 88.4   | 3.7   | 0.40 | 4.4  | 0.02 | 15.078 |
| 307                | 11.204 | 34.244   | 5.29   | 55.5   | 11.8  | 0.85 | 11.5 | 0.01 | 11.166 |
| 407                | 9.581  | 34.113   | 4.98   | 75.2   | 23.9  | 1.31 | 18.7 | 0.01 | 9.036  |
| 507                | 7.542  | 34.116   | 3.49   | 51.3   | 44.3  | 1.92 | 2.9  | 0.01 | 6.997  |
| 607                | 5.593  | 34.140   | 1.88   | 26.7   | 70.5  |      | 36.1 | 0.01 | 5.541  |
| 707                | 4.491  | 34.109   | 1.10   | 15.3   | 90.2  | 2.91 | 44.4 | 0.01 | 4.635  |
| 809                | 4.137  | 34.212   | 0.51   | 7.0    | 109.3 | 3.09 | 44.7 | 0.01 | 4.126  |
| 909                | 1.939  | 34.145   | 0.48   | 6.6    | 119.7 | 3.11 | 44.5 | 0.01 | 3.931  |
| 1009               | 1.672  | 34.419   | 0.65   | 8.8    | 124.7 | 3.13 | 44.2 | 0.01 | 3.598  |
| 1259               | 1.217  | 34.513   | 1.15   | 15.4   | 134.1 | 3.05 | 41.2 | 0.01 | 3.126  |
| 1507               | 2.728  | 34.555   | 1.14   | 17.9   | 145.9 |      | 42.9 | 0.01 | 2.621  |
| 1707               | 2.109  | 34.594   | 1.67   | 21.9   | 156.6 |      | 42.2 | 0.01 | 2.197  |
| 2007               | 2.065  | 34.513   | 1.90   | 23.5   | 164.1 |      | 41.7 | 0.02 | 1.925  |
| 2507               | 1.700  | 34.553   | 2.37   | 30.6   | 169.1 |      | 40.1 | 0.01 | 1.722  |
| 3006               | 1.553  | 34.655   | 2.19   | 35.8   | 172.4 |      | 39.0 | 0.01 | 1.710  |
| 3504               | 1.497  | 34.670   | 1.17   | 40.6   | 167.1 | 2.58 | 39.1 | 0.01 | 1.420  |
| 4001               | 1.479  | 34.687   | 1.19   | 43.4   | 160.3 | 2.53 | 37.4 | 0.01 | 1.152  |
| 4499               | 1.499  | 34.591   |        |        | 164.5 |      | 36.9 | 0.02 | 1.104  |
| 4995               | 1.508  | 34.590   | 1.72   | 47.5   | 148.4 | 2.42 | 36.4 | 0.01 | 1.162  |
| 5521               | 1.558  | 34.593   | 1.70   | 47.2   | 145.9 |      | 36.1 | 0.01 | 1.042  |

# MARATHON 2 STA. 21



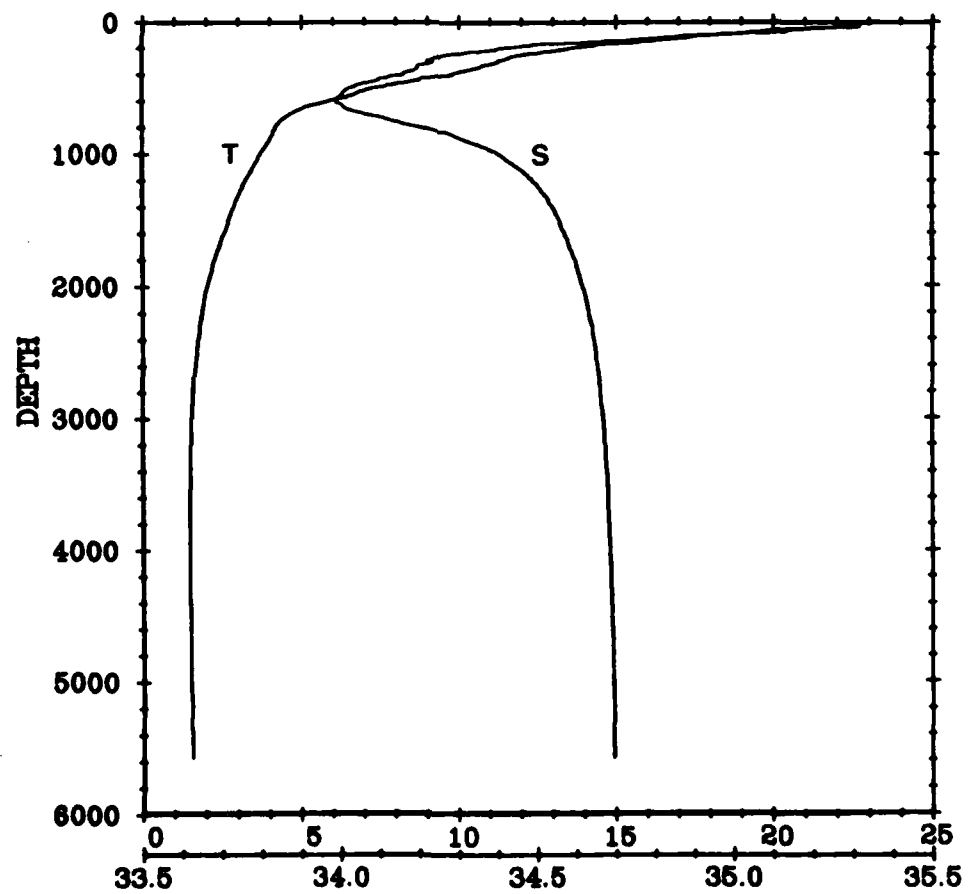
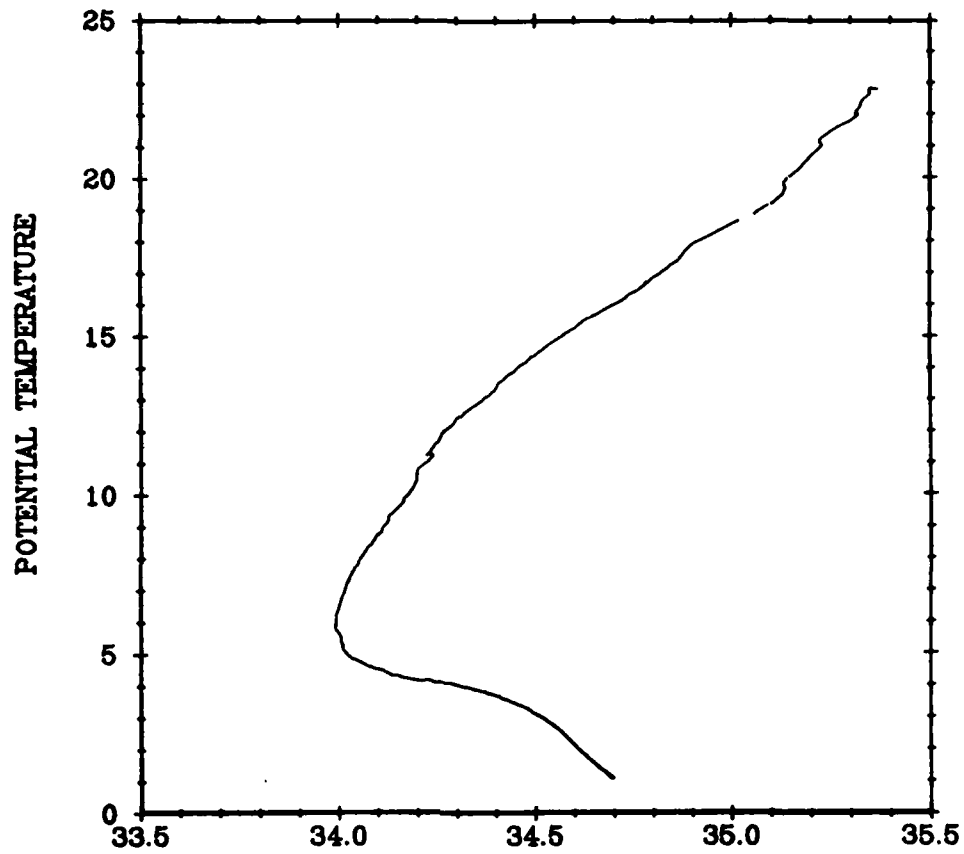
NO. 17 HAS WASHINGTON MARATHON LEG 11 STATION 11

LATITUDE LONGITUDE MO. DY. YR. START TIME SUTTER WIND SPEED AIR TEMP AIR HUM BAROM  
29 42 5N 142 0 0W 5 11 84 442 5572 100 20 20 70 70 30.0

| STATION | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC H | DEPTH |
|---------|--------|----------|----------|---------|---------|---------|---------|-----------|-------|
| DB      | DEG C  |          | DEG C    |         |         |         |         |           | M     |
| 20      | 22.401 | 35.350   | 22.201   | 24.249  | 32.402  | 40.402  | 48.402  | 1.000     | 1     |
| 21      | 22.273 | 35.320   | 22.269   | 24.387  | 32.765  | 40.765  | 48.765  | 1.002     | 19    |
| 40      | 21.825 | 35.294   | 21.818   | 24.494  | 32.895  | 40.895  | 48.895  | 1.002     | 39    |
| 60      | 21.363 | 35.173   | 21.362   | 24.802  | 33.239  | 41.239  | 49.239  | 1.009     | 59    |
| 80      | 19.403 | 35.123   | 19.419   | 25.101  | 33.458  | 41.559  | 49.552  | 1.249     | 79    |
| 100     | 18.154 | 34.941   | 18.137   | 25.194  | 33.703  | 41.845  | 49.874  | 1.327     | 99    |
| 120     | 16.890 | 34.677   | 16.867   | 25.530  | 34.119  | 42.216  | 49.937  | 1.419     | 119   |
| 140     | 15.671 | 34.419   | 15.643   | 25.812  | 34.426  | 42.591  | 49.944  | 1.507     | 139   |
| 160     | 14.407 | 34.274   | 14.374   | 26.011  | 34.747  | 43.001  | 49.963  | 1.584     | 159   |
| 180     | 13.101 | 34.227   | 13.263   | 26.126  | 34.896  | 43.281  | 49.921  | 1.664     | 179   |
| 200     | 11.808 | 34.135   | 11.566   | 26.227  | 35.045  | 43.418  | 49.621  | 1.730     | 199   |
| 220     | 9.781  | 34.132   | 9.735    | 26.339  | 35.173  | 43.469  | 49.625  | 1.787     | 219   |
| 240     | 8.435  | 34.139   | 8.589    | 26.469  | 35.355  | 43.848  | 49.740  | 1.835     | 239   |
| 260     | 7.462  | 34.129   | 7.411    | 26.597  | 35.516  | 44.181  | 49.826  | 1.874     | 259   |
| 280     | 6.946  | 34.189   | 6.994    | 26.767  | 35.719  | 44.391  | 49.921  | 1.907     | 279   |
| 300     | 4.691  | 34.262   | 4.642    | 26.972  | 35.945  | 44.704  | 49.912  | 1.932     | 299   |
| 320     | 4.195  | 34.377   | 4.115    | 27.133  | 36.210  | 44.924  | 49.875  | 1.950     | 319   |
| 340     | 3.997  | 34.475   | 3.930    | 27.248  | 36.474  | 45.054  | 49.857  | 1.954     | 339   |
| 360     | 3.723  | 34.539   | 3.650    | 27.343  | 36.461  | 45.174  | 49.822  | 1.950     | 359   |
| 380     | 3.498  | 34.456   | 3.418    | 27.424  | 36.513  | 45.254  | 49.804  | 1.941     | 379   |
| 400     | 3.259  | 34.487   | 3.173    | 27.490  | 36.612  | 45.316  | 49.792  | 1.927     | 399   |
| 420     | 3.169  | 34.512   | 2.977    | 27.499  | 36.631  | 45.394  | 49.725  | 1.910     | 419   |
| 440     | 2.889  | 34.516   | 2.791    | 27.534  | 36.695  | 45.448  | 49.751  | 1.876     | 439   |
| 460     | 2.724  | 34.554   | 2.619    | 27.563  | 36.714  | 45.495  | 49.775  | 1.839     | 459   |
| 480     | 2.598  | 34.567   | 2.497    | 27.585  | 36.741  | 45.510  | 49.787  | 1.799     | 479   |
| 500     | 2.411  | 34.591   | 2.314    | 27.611  | 36.797  | 45.574  | 49.895  | 1.757     | 499   |
| 520     | 2.284  | 34.593   | 2.190    | 27.633  | 36.828  | 45.612  | 49.744  | 1.703     | 519   |
| 540     | 2.161  | 34.604   | 2.031    | 27.652  | 36.854  | 45.645  | 49.913  | 1.656     | 539   |
| 560     | 2.055  | 34.613   | 1.918    | 27.668  | 36.876  | 45.672  | 49.796  | 1.619     | 559   |
| 580     | 1.944  | 34.621   | 1.800    | 27.685  | 36.910  | 45.702  | 49.709  | 1.569     | 579   |
| 600     | 1.877  | 34.629   | 1.726    | 27.696  | 36.924  | 45.720  | 49.823  | 1.418     | 599   |
| 620     | 1.809  | 34.616   | 1.649    | 27.707  | 36.910  | 45.740  | 49.815  | 1.457     | 619   |
| 640     | 1.759  | 34.641   | 1.591    | 27.715  | 36.941  | 45.754  | 49.769  | 1.514     | 639   |
| 660     | 1.709  | 34.647   | 1.513    | 27.724  | 36.913  | 45.769  | 49.428  | 1.561     | 659   |
| 680     | 1.674  | 34.672   | 1.491    | 27.732  | 36.941  | 45.779  | 49.295  | 1.507     | 679   |
| 700     | 1.632  | 34.655   | 1.440    | 27.738  | 36.971  | 45.792  | 49.497  | 1.453     | 699   |
| 720     | 1.597  | 34.659   | 1.397    | 27.744  | 36.990  | 45.803  | 49.547  | 1.499     | 719   |
| 740     | 1.578  | 34.652   | 1.369    | 27.749  | 36.936  | 45.811  | 49.874  | 1.743     | 739   |
| 760     | 1.562  | 34.666   | 1.334    | 27.754  | 36.944  | 45.820  | 49.523  | 1.799     | 759   |
| 780     | 1.515  | 34.669   | 1.308    | 27.759  | 36.999  | 45.827  | 49.359  | 1.832     | 779   |
| 800     | 1.522  | 34.671   | 1.285    | 27.761  | 37.014  | 45.831  | 49.315  | 1.877     | 799   |
| 820     | 1.512  | 34.673   | 1.266    | 27.764  | 37.078  | 45.838  | 49.308  | 1.921     | 819   |
| 840     | 1.504  | 34.675   | 1.248    | 27.767  | 37.012  | 45.842  | 49.325  | 1.965     | 839   |
| 860     | 1.497  | 34.678   | 1.224    | 27.771  | 37.017  | 45.849  | 49.176  | 1.910     | 859   |
| 880     | 1.486  | 34.679   | 1.210    | 27.773  | 37.020  | 45.852  | 49.314  | 1.954     | 879   |
| 900     | 1.482  | 34.691   | 1.196    | 27.776  | 37.023  | 45.856  | 49.377  | 1.998     | 899   |
| 920     | 1.483  | 34.692   | 1.186    | 27.777  | 37.025  | 45.859  | 49.586  | 1.943     | 919   |
| 940     | 1.481  | 34.693   | 1.173    | 27.779  | 37.027  | 45.862  | 49.746  | 1.887     | 939   |
| 960     | 1.480  | 34.694   | 1.162    | 27.781  | 37.029  | 45.865  | 49.919  | 1.832     | 959   |
| 980     | 1.479  | 34.695   | 1.150    | 27.782  | 37.032  | 45.868  | 49.090  | 1.877     | 979   |
| 1000    | 1.481  | 34.696   | 1.141    | 27.784  | 37.034  | 45.870  | 49.308  | 1.822     | 999   |
| 1020    | 1.483  | 34.697   | 1.131    | 27.785  | 37.036  | 45.872  | 49.525  | 1.768     | 1019  |
| 1040    | 1.485  | 34.698   | 1.122    | 27.786  | 37.037  | 45.875  | 49.741  | 1.713     | 1039  |
| 1060    | 1.487  | 34.698   | 1.112    | 27.787  | 37.039  | 45.876  | 49.026  | 1.759     | 1059  |
| 1080    | 1.490  | 34.699   | 1.104    | 27.789  | 37.041  | 45.879  | 49.257  | 1.705     | 1079  |
| 1100    | 1.491  | 34.699   | 1.093    | 27.790  | 37.043  | 45.881  | 49.453  | 1.652     | 1099  |
| 1120    | 1.495  | 34.692   | 1.085    | 27.791  | 37.044  | 45.883  | 49.770  | 1.598     | 1119  |
| 1140    | 1.499  | 34.691   | 1.077    | 27.792  | 37.046  | 45.885  | 49.016  | 1.645     | 1139  |
| 1160    | 1.502  | 34.692   | 1.068    | 27.793  | 37.047  | 45.887  | 49.245  | 1.592     | 1159  |
| 1180    | 1.508  | 34.692   | 1.061    | 27.794  | 37.048  | 45.889  | 49.596  | 1.740     | 1179  |
| 1200    | 1.515  | 34.693   | 1.056    | 27.795  | 37.050  | 45.890  | 49.896  | 1.788     | 1199  |
| 1220    | 1.523  | 34.693   | 1.051    | 27.795  | 37.050  | 45.891  | 49.294  | 1.836     | 1219  |
| 1240    | 1.532  | 34.694   | 1.047    | 27.796  | 37.052  | 45.893  | 49.623  | 1.884     | 1239  |
| 1260    | 1.544  | 34.694   | 1.046    | 27.797  | 37.052  | 45.893  | 49.089  | 1.933     | 1259  |
| 1280    | 1.558  | 34.694   | 1.046    | 27.796  | 37.052  | 45.893  | 49.393  | 1.982     | 1279  |
| 1300    | 1.569  | 34.694   | 1.046    | 27.797  | 37.052  | 45.893  | 50.011  | 4.145     | 1299  |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | FUSIN  |
| 1                  | 22.669 | 35.374   | 5.08   | 103.4  | 1.1   | 0.04 | 0.0  | 0.0  | 22.668 |
| 16                 | 20.429 | 35.179   | 5.33   | 104.1  | 1.8   | 0.05 | 0.0  | 0.0  | 20.418 |
| 116                | 18.797 | 34.923   | 5.41   | 101.0  | 2.3   | 0.10 | 0.0  | 0.0  | 18.079 |
| 156                | 15.923 | 34.578   | 5.01   | 89.5   | 4.3   | 0.35 | 3.0  | 0.07 | 15.898 |
| 205                | 13.656 | 34.419   | 5.16   | 97.9   | 6.9   | 0.31 | 6.6  | 0.01 | 13.627 |
| 314                | 11.196 | 34.214   | 5.39   | 96.9   | 12.2  | 0.80 | 13.9 | 0.00 | 11.198 |
| 471                | 9.495  | 34.140   | 4.90   | 76.2   | 22.7  | 1.19 | 1.7  | 0.00 | 9.449  |
| 524                | 7.281  | 34.021   | 3.77   | 55.7   | 42.6  | 1.92 | 2.6  | 0.00 | 7.232  |
| 635                | 5.717  | 33.991   | 2.47   | 35.2   | 46.0  | 2.48 | 3.4  | 0.00 | 5.655  |
| 706                | 4.607  | 34.076   | 1.20   | 16.6   | 32.1  | 2.87 | 4.1  | 0.00 | 4.552  |
| 817                | 4.190  | 34.257   | 0.53   | 7.3    | 139.2 | 3.09 | 43.9 | 0.00 | 4.129  |
| 926                | 4.208  | 34.311   | 0.34   | 4.7    | 119.4 | 3.15 | 44.6 | 0.00 | 3.940  |
| 1025               | 3.760  | 34.397   | 0.40   | 5.4    | 126.1 | 3.18 | 44.7 | 0.00 | 3.655  |
| 1254               | 3.159  | 34.499   | 0.90   | 12.1   | 139.1 | 3.09 | 43.9 | 0.00 | 3.068  |
| 1503               | 2.678  | 34.556   | 1.34   | 17.8   | 149.3 | 3.02 | 42.9 | 0.00 | 2.572  |
| 1750               | 2.329  | 34.598   | 1.58   | 20.7   | 158.4 | 2.95 | 42.3 | 0.00 | 2.206  |
| 1996               | 2.136  | 34.614   | 1.83   | 23.8   | 166.2 | 2.89 | 41.6 | 0.00 | 1.897  |
| 2493               | 1.707  | 34.645   | 2.33   | 30.1   | 174.1 | 2.78 | 40.2 | 0.00 | 1.510  |
| 2991               | 1.550  | 34.645   | 2.83   | 36.4   | 171.9 | 2.68 | 39.0 | 0.00 | 1.129  |
| 3491               | 1.493  | 34.677   | 3.16   | 40.5   | 166.4 | 2.60 | 38.0 | 0.00 | 1.222  |
| 3985               | 1.484  | 34.693   | 3.38   | 43.2   | 161.2 | 2.55 | 37.4 | 0.00 | 1.150  |
| 4490               | 1.487  | 34.687   | 3.44   | 43.9   |       |      | 36.7 | 0.02 | 1.124  |
| 4994               | 1.505  | 34.689   | 3.57   | 45.5   | 154.8 | 2.48 | 36.7 | 0.00 | 1.060  |
| 5579               | 1.569  | 34.691   | 3.74   | 47.7   | 149.3 | 2.48 | 36.2 | 0.01 | 1.045  |

# MARATHON 2 STA. 22

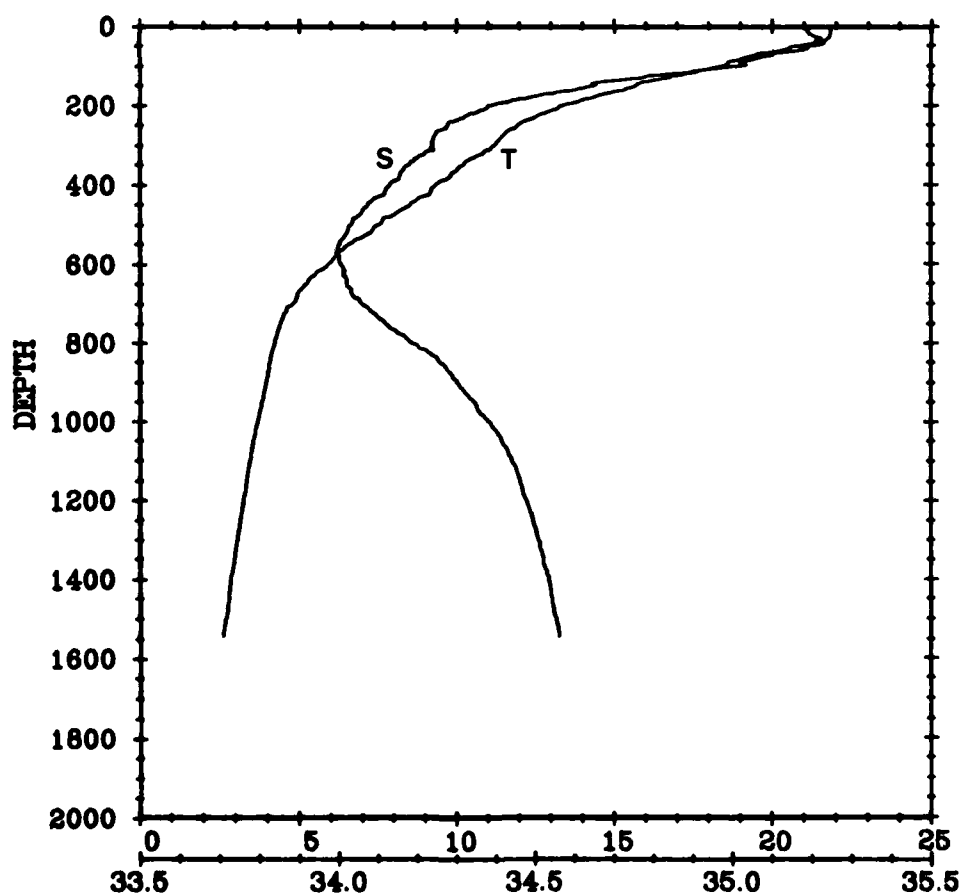
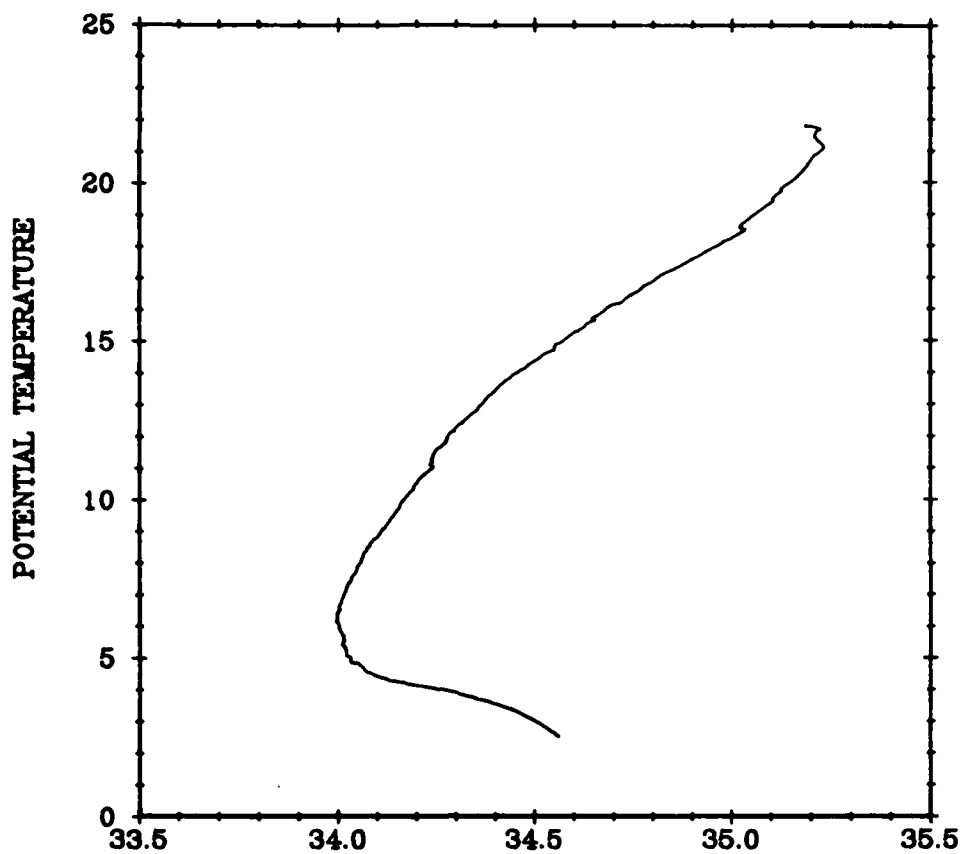


| LATITUDE | LONGITUDE | MO | DAY | YR   | START TIME | HUTCH | M | WIND | WIND | AIR TEMP | WET BULB | SEA W |
|----------|-----------|----|-----|------|------------|-------|---|------|------|----------|----------|-------|
|          |           |    |     |      | GMT        |       |   | DIR  | SPD  | DEG C    | DEG C    | DIR   |
| 29 23N   | 122 11W   | 12 | 34  | 1966 | 0000       | 000   |   |      | 00   | 22.0     | 19.0     | 100   |

| TIME | DATE | PRESS  | TEMP  | SALINITY | POT    | TEMP  | SIGMA | SIGMA | SIGMA | SIGMA | DYNAMIC | HT | DEPTH |
|------|------|--------|-------|----------|--------|-------|-------|-------|-------|-------|---------|----|-------|
|      |      | DB     | DEG C |          | DEG    |       |       |       |       |       |         |    | CM    |
| 1    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 2    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 3    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 4    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 5    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 6    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 7    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 8    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 9    | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 10   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 11   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 12   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 13   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 14   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 15   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 16   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 17   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 18   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 19   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 20   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 21   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 22   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 23   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 24   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 25   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 26   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 27   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 28   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 29   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |
| 30   | 1    | 1014.2 | 19.74 | 35.19    | 1014.2 | 19.74 | 19.41 | 4.175 | 4.174 | 4.174 | 1.175   | 0  | 0     |

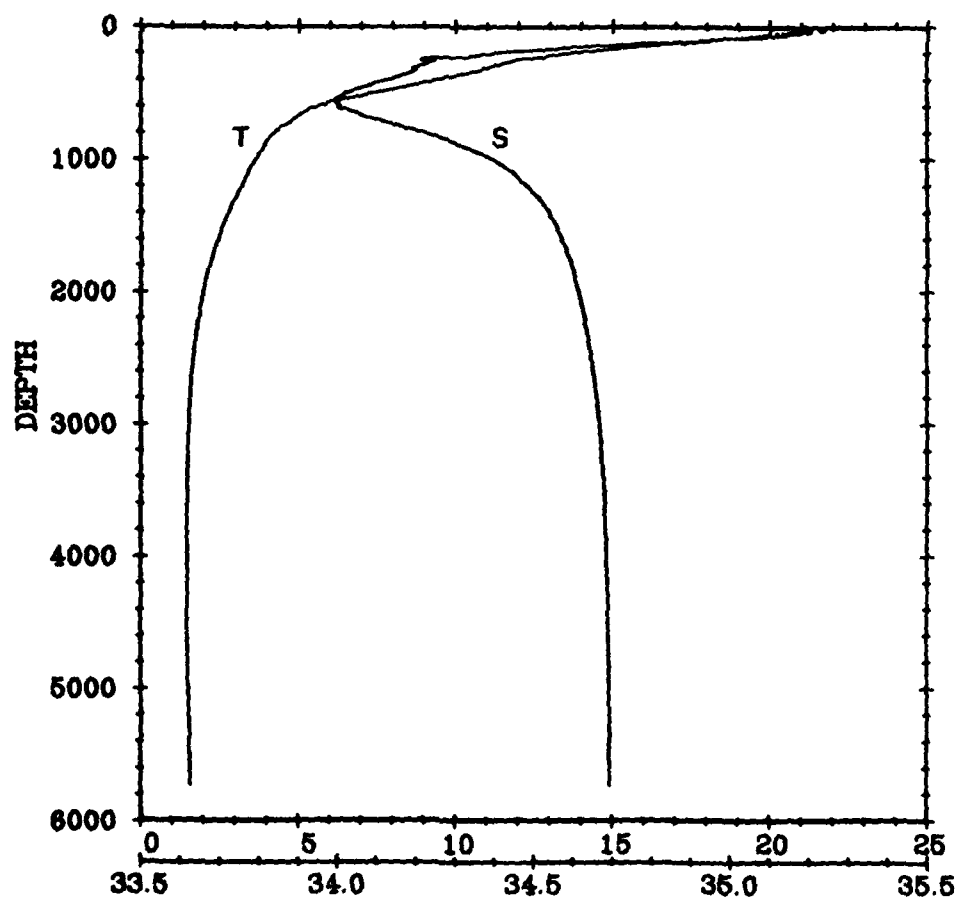
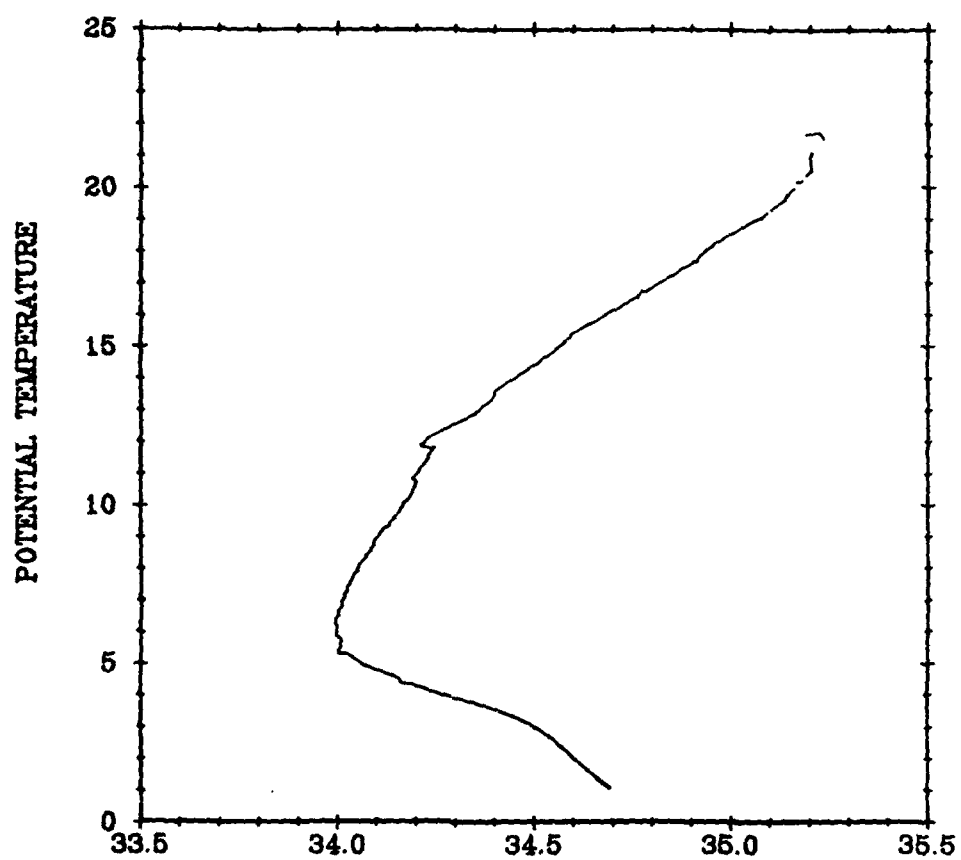
| NISKIN BOTTLE DATA |        |          |        |       |      |      |      |      |      |        |        |         |         |         |       |
|--------------------|--------|----------|--------|-------|------|------|------|------|------|--------|--------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS #2 | DATE  | SIG1 | P04  | W04  | N04  | TRIT | POT    | TEMP   | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | CELS   | PPT      | M/L    | +     | CM/L | MM/L | MM/L | MM/L | MM/L | CELS   | CELS   | KG/M3   | KG/M3   | KG/M3   | DB    |
| 3                  | 21.791 | 34.265   | 5.102  | 102.1 | 2.7  | 1.15 | 1.1  | 1.1  | 1.1  | 21.792 | 24.175 | 32.111  | 40.917  | 40.917  | 1.0   |
| 53                 | 20.419 | 35.193   | 5.313  | 102.1 | 2.7  | 1.15 | 1.1  | 1.1  | 1.1  | 20.423 | 24.199 | 31.224  | 40.259  | 40.259  | 1.0   |
| 102                | 18.107 | 35.110   | 6.111  | 102.1 | 2.7  | 1.15 | 1.1  | 1.1  | 1.1  | 18.152 | 24.193 | 31.155  | 40.929  | 40.929  | 1.0   |
| 145                | 16.114 | 34.112   | 5.319  | 97.1  | 1.7  | 1.12 | 1.1  | 1.1  | 1.1  | 16.318 | 24.129 | 34.129  | 44.210  | 44.210  | 1.0   |
| 169                | 14.112 | 34.495   | 1.112  | 95.5  | 6.7  | 1.52 | 1.9  | 1.1  | 1.1  | 14.147 | 25.125 | 34.111  | 42.941  | 42.941  | 1.0   |
| 171                | 14.118 | 34.167   | 9.112  | 99.3  | 1.7  | 1.41 | 1.1  | 1.1  | 1.1  | 14.121 | 25.179 | 34.117  | 44.291  | 44.291  | 1.0   |
| 243                | 11.411 | 34.273   | 7.410  | 99.1  | 1.1  | 1.1  | 9.2  | 1.1  | 1.1  | 11.179 | 26.116 | 34.119  | 41.116  | 41.116  | 1.0   |
| 281                | 11.192 | 34.245   | 4.414  | 99.2  | 1.1  | 1.13 | 1.1  | 1.1  | 1.1  | 11.146 | 26.125 | 34.191  | 41.111  | 41.111  | 1.0   |
| 397                | 4.124  | 34.192   | 4.911  | 7.1   | 27.2 | 1.13 | 1.1  | 1.1  | 1.1  | 4.187  | 26.147 | 35.213  | 41.111  | 41.111  | 1.0   |
| 441                | 3.149  | 34.142   | 4.210  | 62.3  | 16.4 | 1.46 | 1.1  | 1.1  | 1.1  | 3.121  | 26.161 | 35.198  | 44.111  | 44.111  | 1.0   |
| 519                | 1.114  | 33.993   | 2.910  | 41.1  | 18.9 | 2.27 | 1.1  | 1.1  | 1.1  | 1.128  | 26.150 | 35.153  | 44.111  | 44.111  | 1.0   |
| 713                | 0.115  | 34.131   | 1.112  | 24.1  | 19.2 | 1.19 | 1.1  | 1.1  | 1.1  | 0.111  | 26.117 | 35.162  | 44.111  | 44.111  | 1.0   |
| 771                | 4.125  | 34.133   | 0.94   | 11.9  | 1.1  | 1.12 | 4.6  | 1.1  | 1.1  | 4.157  | 26.169 | 36.159  | 44.111  | 44.111  | 1.0   |
| 369                | 1.992  | 34.295   | 0.15   | 4.9   | 1.1  | 1.19 | 4.4  | 1.1  | 1.1  | 1.127  | 27.225 | 36.111  | 44.111  | 44.111  | 1.0   |
| 364                | 3.115  | 34.162   | 1.12   | 4.4   | 1.1  | 1.1  | 4.4  | 1.1  | 1.1  | 3.165  | 27.113 | 36.110  | 44.111  | 44.111  | 1.0   |
| 1213               | 3.127  | 34.496   | 1.117  | 1.1   | 1.1  | 1.1  | 4.4  | 1.1  | 1.1  | 3.131  | 27.179 | 36.128  | 45.169  | 45.169  | 1.0   |
| 1444               | 2.595  | 34.152   | 1.116  | 18.0  | 1.1  | 1.1  | 4.4  | 1.1  | 1.1  | 2.489  | 26.181 | 36.119  | 45.111  | 45.111  | 1.0   |

# MARATHON 2 STA. 23





# MARATHON 2 STA. 24



| LATIT DE | LNGITUDE | MO | DAY | YR | START TIME | A TIME | WIND DIR | SPEED | AIR TEMP | WET BULB | BAR M |
|----------|----------|----|-----|----|------------|--------|----------|-------|----------|----------|-------|
|          |          |    |     |    | UT         | N      |          | KT    | DEG C    | DEG C    | HP    |
| 14 44 N  | 121 35 E | 12 | 04  |    | 024        | 16     | 0        | 0     | 27.4     | 27.4     | 1010  |

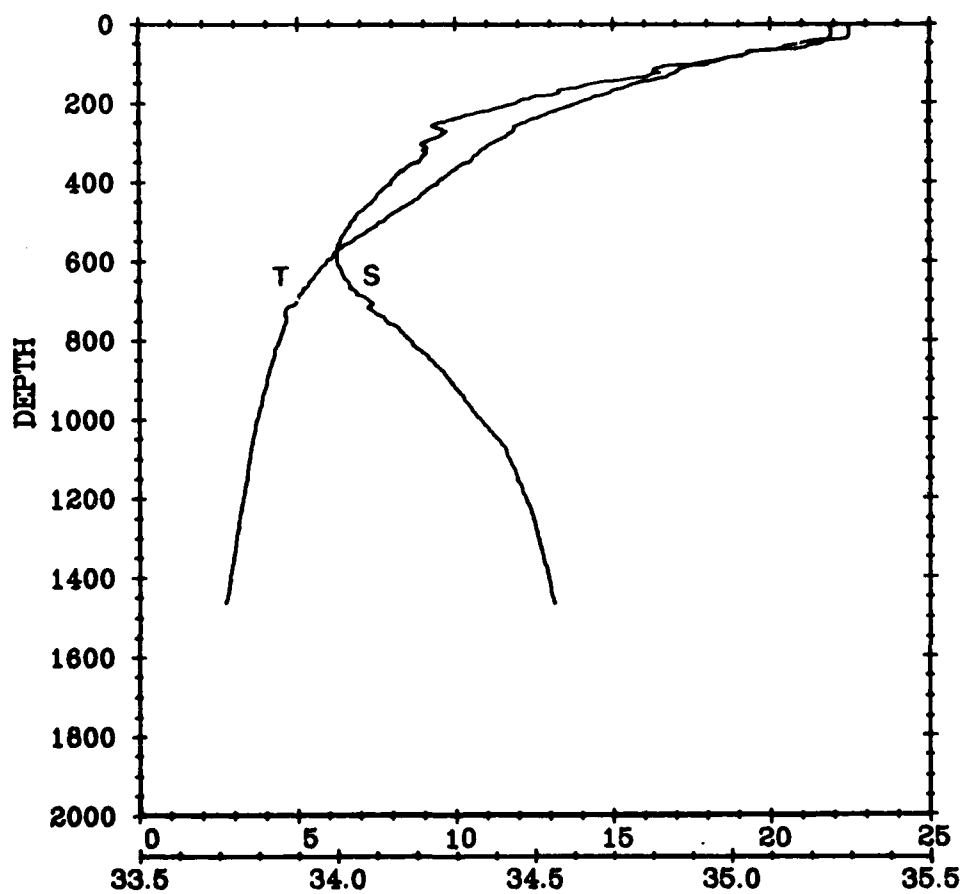
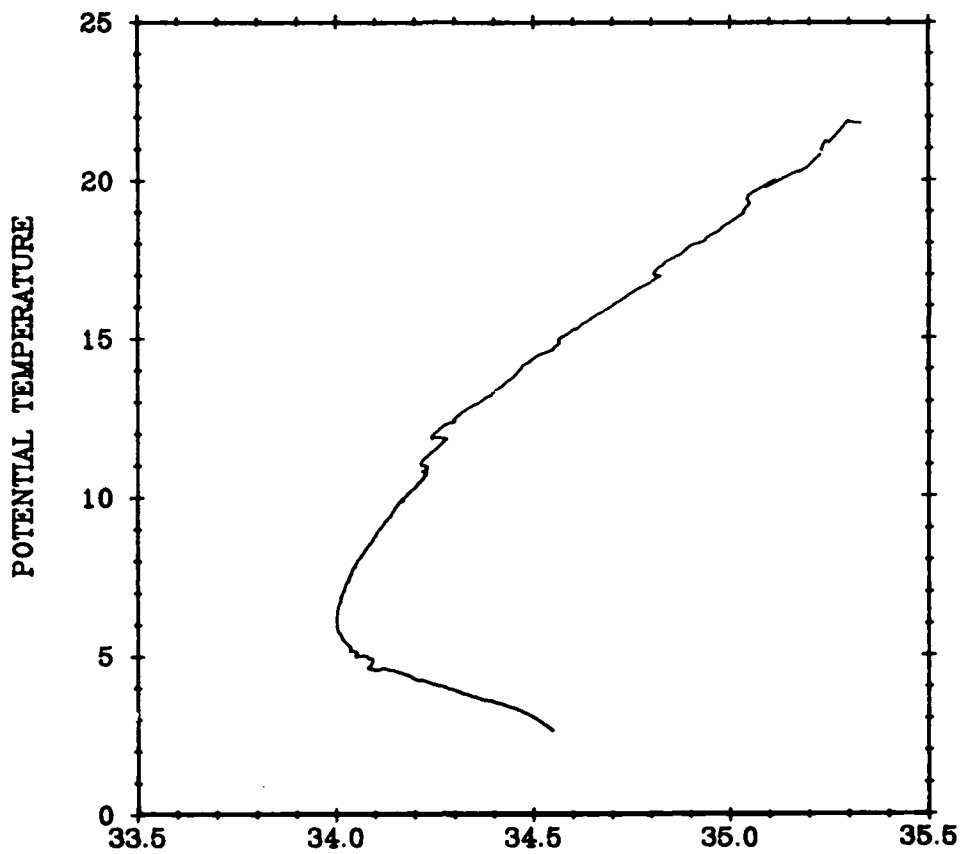
END PAGE

| WAVE | TEMP   | SALINITY | WAVE | TEMP   | SIGMA T | SIGMA T | SIGMA T | WAVE    | DYNAMIC HT | DEPTH |
|------|--------|----------|------|--------|---------|---------|---------|---------|------------|-------|
| DB   | DEG C  | PCT      | DB   | DEG C  | PCT     | PCT     | PCT     | PCT     | CM         | M     |
| 1    | 21.477 | 34.176   | 2    | 21.372 | 34.444  | 32.974  | 41.777  | 142.709 | 1.174      | 1     |
| 3    | 21.477 | 34.176   | 4    | 21.382 | 34.477  | 32.982  | 41.897  | 142.744 | 1.174      | 1     |
| 5    | 21.477 | 34.176   | 6    | 21.439 | 34.472  | 32.974  | 41.777  | 142.744 | 1.174      | 1     |
| 7    | 21.477 | 34.176   | 8    | 21.474 | 34.501  | 31.201  | 41.826  | 142.744 | 1.174      | 1     |
| 9    | 21.477 | 34.176   | 10   | 21.521 | 34.506  | 41.826  | 41.826  | 142.744 | 1.174      | 1     |
| 11   | 21.477 | 34.176   | 12   | 21.577 | 34.519  | 41.754  | 41.754  | 142.744 | 1.174      | 1     |
| 13   | 21.477 | 34.176   | 14   | 21.674 | 34.516  | 42.744  | 42.744  | 142.744 | 1.174      | 1     |
| 15   | 21.477 | 34.176   | 16   | 21.831 | 34.474  | 42.744  | 42.744  | 142.744 | 1.174      | 1     |
| 17   | 21.477 | 34.176   | 18   | 21.939 | 34.502  | 41.777  | 41.777  | 142.744 | 1.174      | 1     |
| 19   | 21.477 | 34.176   | 20   | 22.000 | 34.516  | 41.826  | 41.826  | 142.744 | 1.174      | 1     |
| 21   | 21.477 | 34.176   | 22   | 22.049 | 34.527  | 41.774  | 41.774  | 142.744 | 1.174      | 1     |
| 23   | 21.477 | 34.176   | 24   | 22.111 | 34.511  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 25   | 21.477 | 34.176   | 26   | 22.166 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 27   | 21.477 | 34.176   | 28   | 22.221 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 29   | 21.477 | 34.176   | 30   | 22.276 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 31   | 21.477 | 34.176   | 32   | 22.331 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 33   | 21.477 | 34.176   | 34   | 22.386 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 35   | 21.477 | 34.176   | 36   | 22.441 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 37   | 21.477 | 34.176   | 38   | 22.496 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 39   | 21.477 | 34.176   | 40   | 22.551 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 41   | 21.477 | 34.176   | 42   | 22.606 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 43   | 21.477 | 34.176   | 44   | 22.661 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 45   | 21.477 | 34.176   | 46   | 22.716 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 47   | 21.477 | 34.176   | 48   | 22.771 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 49   | 21.477 | 34.176   | 50   | 22.826 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 51   | 21.477 | 34.176   | 52   | 22.881 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 53   | 21.477 | 34.176   | 54   | 22.936 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 55   | 21.477 | 34.176   | 56   | 22.991 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 57   | 21.477 | 34.176   | 58   | 23.046 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 59   | 21.477 | 34.176   | 60   | 23.101 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 61   | 21.477 | 34.176   | 62   | 23.156 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 63   | 21.477 | 34.176   | 64   | 23.211 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 65   | 21.477 | 34.176   | 66   | 23.266 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 67   | 21.477 | 34.176   | 68   | 23.321 | 34.474  | 41.577  | 41.577  | 142.744 | 1.174      | 1     |
| 69   | 21.477 | 34.176   | 70   | 23.376 | 34.474  | 41.577  | 41.577  | 142.    |            |       |

## WICKEN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DOS  | CHL   | SAT   | PO4  | NO3  | NH2  | TRIT  | POT    | TEMP   | SIGMA T           | SIGMA 2           | SIGMA 4           | PRESS |
|-------|-------|----------|------|-------|-------|------|------|------|-------|--------|--------|-------------------|-------------------|-------------------|-------|
| M     | °C    | PSU      | µM   | µM    | %     | µM   | µM   | µM   | µM    | dbar   | °C     | kg/m <sup>3</sup> | kg/m <sup>3</sup> | kg/m <sup>3</sup> | db    |
| 0     | 21.49 | 35.244   | 0.13 | 112.9 | 2.5   | 0.13 | 0.0  | 0.01 | 3.19  | 21.464 | 24.479 | 32.370            | 40.920            |                   |       |
| 1     | 21.49 | 35.230   | 0.21 | 112.9 | 2.5   | 0.13 | 0.0  | 0.00 |       | 21.481 | 24.479 | 31.228            | 41.921            |                   | 13    |
| 2     | 21.49 | 35.213   | 0.19 | 112.9 | 2.9   | 0.19 | 0.0  | 0.00 | 3.44  | 21.481 | 25.101 | 31.549            | 42.103            |                   | 101   |
| 3     | 21.46 | 34.982   | 0.06 | 87.1  | 1.1   | 0.14 | 0.2  | 0.03 |       | 21.454 | 25.142 | 34.115            | 42.356            |                   | 140   |
| 4     | 21.44 | 34.912   | 0.11 | 4.83  | 0.5   | 0.50 | 0.9  | 0.01 |       | 14.487 | 25.121 | 34.352            | 42.611            |                   | 171   |
| 5     | 21.42 | 34.426   | 0.22 | 43.6  | 2.4   | 0.53 | 0.9  | 0.01 |       | 11.556 | 25.836 | 34.513            | 42.851            |                   | 199   |
| 6     | 21.44 | 34.217   | 0.17 | 33.1  | 0.5   | 0.56 | 0.9  | 0.01 |       | 11.912 | 26.010 | 34.759            | 43.102            |                   | 252   |
| 7     | 21.41 | 34.229   | 0.9  | 35.3  | 14.7  | 0.37 | 12.0 | 0.00 | 3.96  | 10.801 | 26.209 | 34.995            | 43.399            |                   | 324   |
| 8     | 21.39 | 34.248   | 0.44 | 1.1   | 21.5  | 1.47 | 16.0 | 0.00 |       | 9.601  | 26.354 | 35.193            | 43.643            |                   | 394   |
| 9     | 21.42 | 34.259   | 0.10 | 54.8  | 13.2  | 1.35 | 22.1 | 0.00 | 4.16  | 9.103  | 26.519 | 35.426            | 43.941            |                   | 473   |
| 10    | 21.40 | 34.112   | 0.13 | 44.9  | 14.0  | 1.32 | 30.5 | 0.00 | 2.89  | 4.355  | 26.718 | 35.706            | 44.297            |                   | 565   |
| 11    | 21.40 | 34.010   | 0.11 | 28.5  | 14.5  | 2.63 | 31.5 | 0.00 | 1.21  | 5.286  | 26.873 | 35.914            | 44.354            |                   | 649   |
| 12    | 21.40 | 34.193   | 0.19 | 16.4  | 12.9  | 2.60 | 41.1 | 0.00 | 0.26  | 4.556  | 26.998 | 36.074            | 44.748            |                   | 726   |
| 13    | 21.40 | 34.149   | 0.55 | 5     | 1.5   | 2.3  | 43.5 | 0.00 | 0.11  | 4.250  | 27.122 | 36.212            | 44.899            |                   | 924   |
| 14    | 21.37 | 34.212   | 0.31 | 4.2   | 1.7   | 1.1  | 44.6 | 0.01 | -0.13 | 3.909  | 27.232 | 36.339            | 45.143            |                   | 921   |
| 15    | 21.41 | 34.439   | 0.15 | 1     | 1.4   | 1.7  | 3.19 | 44.7 | 0.00  | 3.262  | 27.429 | 36.565            | 45.297            |                   | 1174  |
| 16    | 21.39 | 34.349   | 1.12 | 14.3  | 149.3 | 3.14 | 43.5 | 0.00 |       | 2.596  | 27.560 | 36.732            | 45.495            |                   | 1480  |

# MARATHON 2 STA. 25

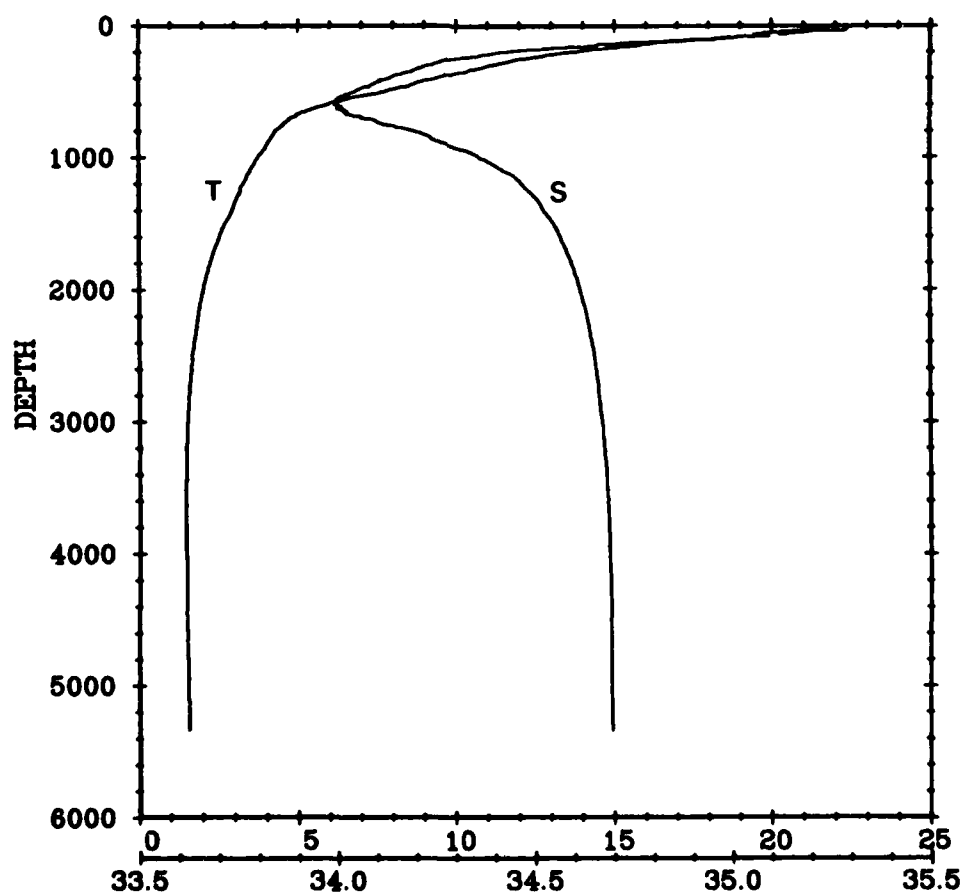
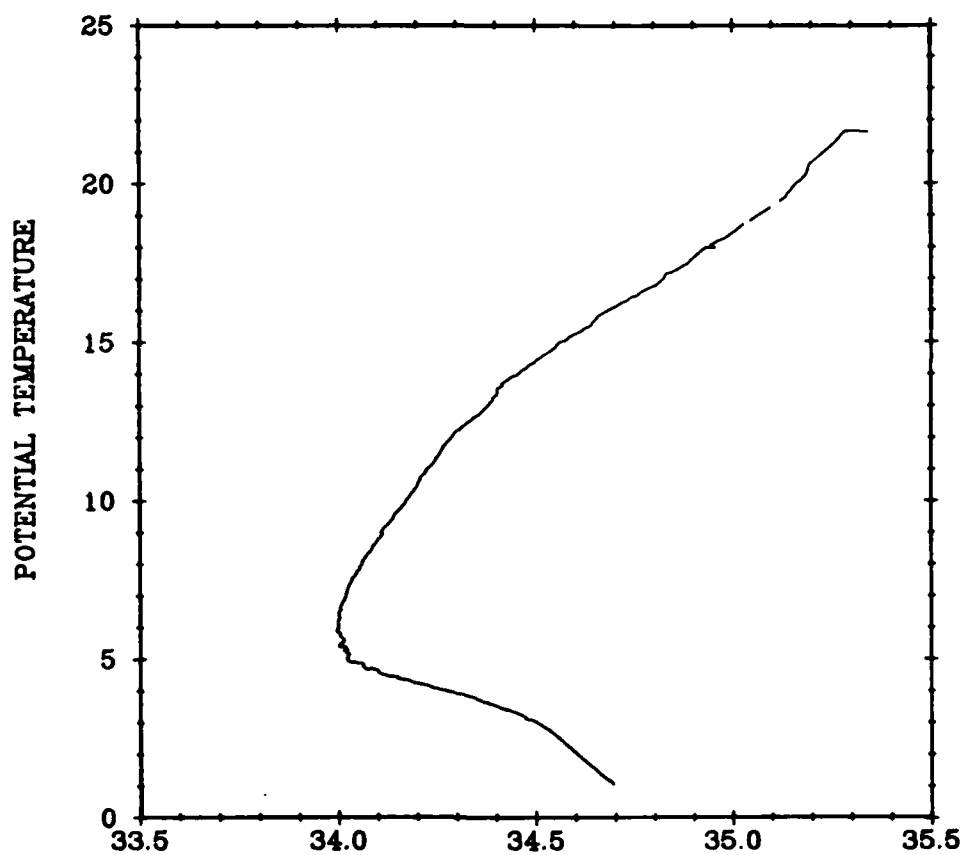


LATITUDE LONGITUDE MO DAY YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB DRY BULB  
 11 4 5N 162 1 3N 11 11 013 101 40 19 19.9 19.9 19.9 19.9

| STD DATA |        | POT TEMP | SIGMA 0 | SIGMA 1 | SIGMA 4 | SIGMA 10 | DYNAMIC HT | DEPTH |
|----------|--------|----------|---------|---------|---------|----------|------------|-------|
| PRESS    | TEMP   | DEG C    | KG/M3   | KG/M3   | KG/M3   | KG/M3    | CM         | M     |
| DB       | DEG C  |          |         |         |         |          |            |       |
| 1        | 21.681 | 16.101   | 21.681  | 24.146  | 12.143  | 47.479   | 138.101    | 1     |
| 20       | 21.675 | 16.101   | 21.675  | 24.152  | 12.143  | 47.465   | 140.101    | 10    |
| 40       | 21.124 | 16.142   | 21.124  | 24.148  | 12.151  | 47.114   | 129.878    | 19    |
| 60       | 19.892 | 16.101   | 19.892  | 24.161  | 12.153  | 47.151   | 127.103    | 29    |
| 80       | 19.177 | 16.170   | 19.177  | 25.142  | 12.14   | 47.153   | 125.102    | 39    |
| 100      | 18.103 | 16.167   | 18.103  | 25.102  | 12.104  | 47.149   | 123.128    | 49    |
| 120      | 16.745 | 16.164   | 16.720  | 25.142  | 12.115  | 47.138   | 123.178    | 59    |
| 140      | 15.757 | 16.125   | 15.729  | 25.101  | 12.112  | 47.163   | 124.189    | 69    |
| 160      | 12.243 | 16.115   | 12.210  | 26.101  | 12.147  | 47.188   | 125.110    | 79    |
| 180      | 11.225 | 16.114   | 11.189  | 26.149  | 12.122  | 47.119   | 125.189    | 89    |
| 200      | 10.109 | 16.139   | 10.082  | 26.201  | 12.101  | 47.103   | 125.103    | 99    |
| 220      | 9.437  | 16.114   | 9.392   | 26.317  | 12.125  | 47.185   | 127.214    | 109   |
| 240      | 8.401  | 16.190   | 8.371   | 26.454  | 12.103  | 47.146   | 127.104    | 119   |
| 260      | 7.804  | 16.149   | 7.764   | 26.558  | 12.148  | 47.108   | 127.107    | 129   |
| 280      | 5.957  | 16.199   | 5.920   | 26.714  | 12.191  | 47.141   | 127.107    | 139   |
| 300      | 4.328  | 16.162   | 4.284   | 26.957  | 12.124  | 47.182   | 127.102    | 149   |
| 320      | 4.101  | 16.190   | 4.054   | 27.115  | 12.105  | 47.192   | 127.109    | 159   |
| 340      | 4.045  | 16.179   | 3.999   | 27.212  | 12.115  | 47.114   | 127.107    | 169   |
| 360      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 179   |
| 380      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 189   |
| 400      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 199   |
| 420      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 209   |
| 440      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 219   |
| 460      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 229   |
| 480      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 239   |
| 500      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 249   |
| 520      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 259   |
| 540      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 269   |
| 560      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 279   |
| 580      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 289   |
| 600      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 299   |
| 620      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 309   |
| 640      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 319   |
| 660      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 329   |
| 680      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 339   |
| 700      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 349   |
| 720      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 359   |
| 740      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 369   |
| 760      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 379   |
| 780      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 389   |
| 800      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 399   |
| 820      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 409   |
| 840      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 419   |
| 860      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 429   |
| 880      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 439   |
| 900      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 449   |
| 920      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 459   |
| 940      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 469   |
| 960      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 479   |
| 980      | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 489   |
| 1000     | 1.504  | 16.158   | 1.458   | 27.118  | 12.125  | 47.117   | 127.107    | 499   |

| NISKIN BOTTLE DATA |        | POT TEMP | SIGMA 0 | SIGMA 1 | SIGMA 4 | PRESS |
|--------------------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | DEG C    | KG/M3   | KG/M3   | KG/M3   | DB    |
| 1                  | 21.612 | 16.293   | 21.612  | 24.150  | 12.148  | 1     |
| 16                 | 19.996 | 16.162   | 19.996  | 24.190  | 12.133  | 56    |
| 106                | 17.123 | 16.169   | 17.123  | 23.118  | 12.1852 | 176   |
| 102                | 16.107 | 16.143   | 16.107  | 23.170  | 12.170  | 182   |
| 202                | 16.143 | 16.174   | 16.143  | 23.170  | 12.170  | 202   |
| 302                | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 302   |
| 402                | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 402   |
| 502                | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 502   |
| 602                | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 602   |
| 702                | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 702   |
| 802                | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 802   |
| 902                | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 902   |
| 1002               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1002  |
| 1102               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1102  |
| 1202               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1202  |
| 1302               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1302  |
| 1402               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1402  |
| 1502               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1502  |
| 1602               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1602  |
| 1702               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1702  |
| 1802               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1802  |
| 1902               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 1902  |
| 2002               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2002  |
| 2102               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2102  |
| 2202               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2202  |
| 2302               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2302  |
| 2402               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2402  |
| 2502               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2502  |
| 2602               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2602  |
| 2702               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2702  |
| 2802               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2802  |
| 2902               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 2902  |
| 3002               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3002  |
| 3102               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3102  |
| 3202               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3202  |
| 3302               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3302  |
| 3402               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3402  |
| 3502               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3502  |
| 3602               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3602  |
| 3702               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3702  |
| 3802               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3802  |
| 3902               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 3902  |
| 4002               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4002  |
| 4102               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4102  |
| 4202               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4202  |
| 4302               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4302  |
| 4402               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4402  |
| 4502               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4502  |
| 4602               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4602  |
| 4702               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4702  |
| 4802               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4802  |
| 4902               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 4902  |
| 5002               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 5002  |
| 5102               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 5102  |
| 5202               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 5202  |
| 5302               | 16.101 | 16.150   | 16.101  | 23.170  | 12.170  | 5302  |

# MARATHON 2 STA. 26



R/V THOMAS WASHINGTON MARATHON LEG 11 STATION 11

LATITUDE LONGITUDE MO DY YR START TIME BUTTN WIND SPEED AIR TEMP WAT TEMP DRY W

24 48 112 00 W 1 11 94 1724 5 12 3 14 14.4 14.4 14.4

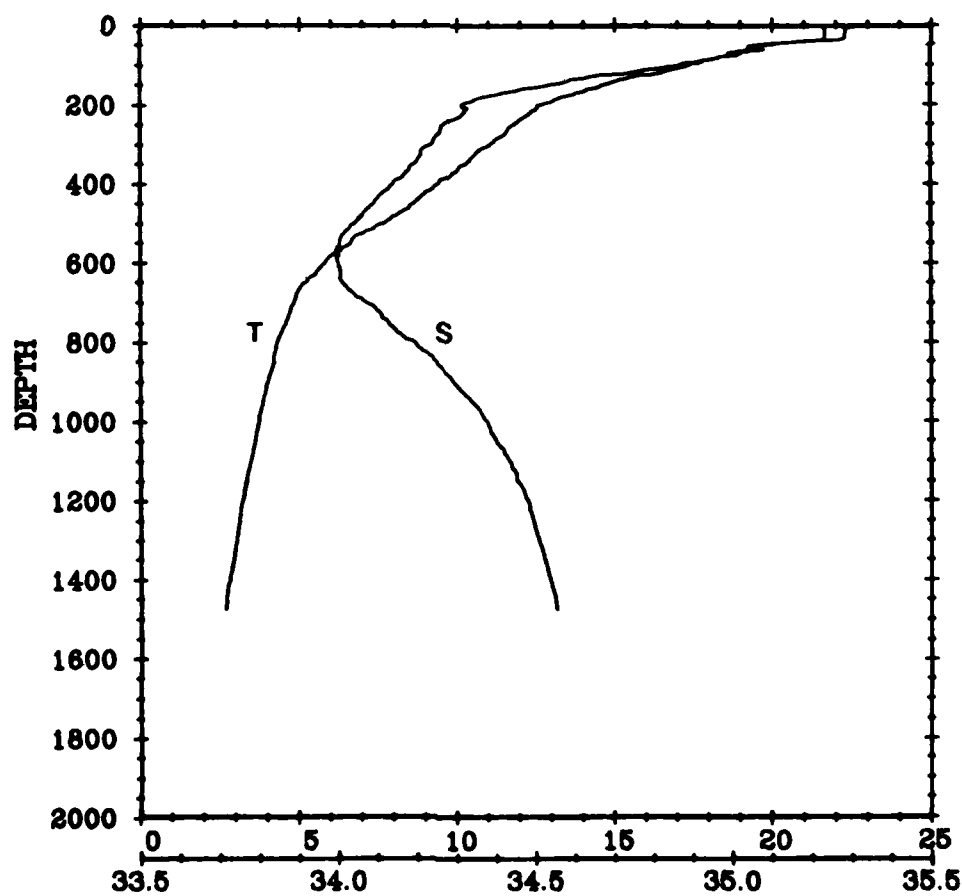
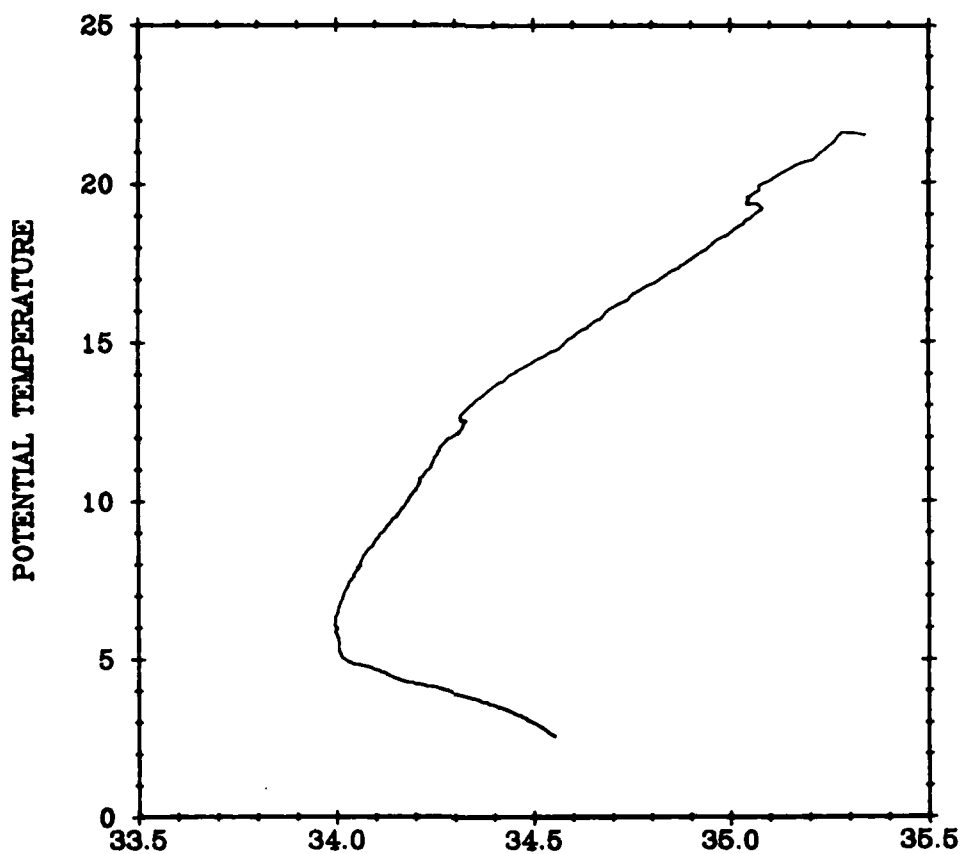
# WTD DATA

| DEPTH | TEMP   | SALINITY | POT TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | SIGMA  | DYNAMIC HT | DEPTH |
|-------|--------|----------|----------|---------|---------|---------|--------|------------|-------|
| 10    | 21.450 | 35.283   | 21.450   | 24.138  | 14.471  | 41.947  | 14.947 | 1.000      | 10    |
| 20    | 21.440 | 35.281   | 21.439   | 24.134  | 14.472  | 41.947  | 14.947 | 1.000      | 20    |
| 30    | 21.430 | 35.285   | 21.429   | 24.130  | 14.473  | 41.947  | 14.947 | 1.000      | 30    |
| 40    | 21.420 | 35.287   | 21.419   | 24.126  | 14.474  | 41.947  | 14.947 | 1.000      | 40    |
| 50    | 21.410 | 35.289   | 21.409   | 24.122  | 14.475  | 41.947  | 14.947 | 1.000      | 50    |
| 60    | 21.400 | 35.291   | 21.400   | 24.118  | 14.476  | 41.947  | 14.947 | 1.000      | 60    |
| 70    | 21.390 | 35.293   | 21.390   | 24.114  | 14.477  | 41.947  | 14.947 | 1.000      | 70    |
| 80    | 21.380 | 35.295   | 21.380   | 24.110  | 14.478  | 41.947  | 14.947 | 1.000      | 80    |
| 90    | 21.370 | 35.297   | 21.370   | 24.106  | 14.479  | 41.947  | 14.947 | 1.000      | 90    |
| 100   | 21.360 | 35.299   | 21.360   | 24.102  | 14.480  | 41.947  | 14.947 | 1.000      | 100   |
| 110   | 21.350 | 35.301   | 21.350   | 24.098  | 14.481  | 41.947  | 14.947 | 1.000      | 110   |
| 120   | 21.340 | 35.303   | 21.340   | 24.094  | 14.482  | 41.947  | 14.947 | 1.000      | 120   |
| 130   | 21.330 | 35.305   | 21.330   | 24.090  | 14.483  | 41.947  | 14.947 | 1.000      | 130   |
| 140   | 21.320 | 35.307   | 21.320   | 24.086  | 14.484  | 41.947  | 14.947 | 1.000      | 140   |
| 150   | 21.310 | 35.309   | 21.310   | 24.082  | 14.485  | 41.947  | 14.947 | 1.000      | 150   |
| 160   | 21.300 | 35.311   | 21.300   | 24.078  | 14.486  | 41.947  | 14.947 | 1.000      | 160   |
| 170   | 21.290 | 35.313   | 21.290   | 24.074  | 14.487  | 41.947  | 14.947 | 1.000      | 170   |
| 180   | 21.280 | 35.315   | 21.280   | 24.070  | 14.488  | 41.947  | 14.947 | 1.000      | 180   |
| 190   | 21.270 | 35.317   | 21.270   | 24.066  | 14.489  | 41.947  | 14.947 | 1.000      | 190   |
| 200   | 21.260 | 35.319   | 21.260   | 24.062  | 14.490  | 41.947  | 14.947 | 1.000      | 200   |
| 210   | 21.250 | 35.321   | 21.250   | 24.058  | 14.491  | 41.947  | 14.947 | 1.000      | 210   |
| 220   | 21.240 | 35.323   | 21.240   | 24.054  | 14.492  | 41.947  | 14.947 | 1.000      | 220   |
| 230   | 21.230 | 35.325   | 21.230   | 24.050  | 14.493  | 41.947  | 14.947 | 1.000      | 230   |
| 240   | 21.220 | 35.327   | 21.220   | 24.046  | 14.494  | 41.947  | 14.947 | 1.000      | 240   |
| 250   | 21.210 | 35.329   | 21.210   | 24.042  | 14.495  | 41.947  | 14.947 | 1.000      | 250   |
| 260   | 21.200 | 35.331   | 21.200   | 24.038  | 14.496  | 41.947  | 14.947 | 1.000      | 260   |
| 270   | 21.190 | 35.333   | 21.190   | 24.034  | 14.497  | 41.947  | 14.947 | 1.000      | 270   |
| 280   | 21.180 | 35.335   | 21.180   | 24.030  | 14.498  | 41.947  | 14.947 | 1.000      | 280   |
| 290   | 21.170 | 35.337   | 21.170   | 24.026  | 14.499  | 41.947  | 14.947 | 1.000      | 290   |
| 300   | 21.160 | 35.339   | 21.160   | 24.022  | 14.500  | 41.947  | 14.947 | 1.000      | 300   |
| 310   | 21.150 | 35.341   | 21.150   | 24.018  | 14.501  | 41.947  | 14.947 | 1.000      | 310   |
| 320   | 21.140 | 35.343   | 21.140   | 24.014  | 14.502  | 41.947  | 14.947 | 1.000      | 320   |
| 330   | 21.130 | 35.345   | 21.130   | 24.010  | 14.503  | 41.947  | 14.947 | 1.000      | 330   |
| 340   | 21.120 | 35.347   | 21.120   | 24.006  | 14.504  | 41.947  | 14.947 | 1.000      | 340   |
| 350   | 21.110 | 35.349   | 21.110   | 24.002  | 14.505  | 41.947  | 14.947 | 1.000      | 350   |
| 360   | 21.100 | 35.351   | 21.100   | 23.998  | 14.506  | 41.947  | 14.947 | 1.000      | 360   |

# NODDIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | SIG T  | SIG 2  | SIG 4  | SIG    | TRIT   | POT TEMP | SIGMA  | SIGMA 2 | SIGMA 4 | PRESS  |
|-------|--------|----------|--------|--------|--------|--------|--------|----------|--------|---------|---------|--------|
| 10    | 21.450 | 35.283   | 21.450 | 24.138 | 14.471 | 41.947 | 14.947 | 21.450   | 24.138 | 14.471  | 41.947  | 14.947 |
| 20    | 21.440 | 35.281   | 21.440 | 24.134 | 14.472 | 41.947 | 14.947 | 21.440   | 24.134 | 14.472  | 41.947  | 14.947 |
| 30    | 21.430 | 35.285   | 21.430 | 24.130 | 14.473 | 41.947 | 14.947 | 21.430   | 24.130 | 14.473  | 41.947  | 14.947 |
| 40    | 21.420 | 35.287   | 21.420 | 24.126 | 14.474 | 41.947 | 14.947 | 21.420   | 24.126 | 14.474  | 41.947  | 14.947 |
| 50    | 21.410 | 35.289   | 21.410 | 24.122 | 14.475 | 41.947 | 14.947 | 21.410   | 24.122 | 14.475  | 41.947  | 14.947 |
| 60    | 21.400 | 35.291   | 21.400 | 24.118 | 14.476 | 41.947 | 14.947 | 21.400   | 24.118 | 14.476  | 41.947  | 14.947 |
| 70    | 21.390 | 35.293   | 21.390 | 24.114 | 14.477 | 41.947 | 14.947 | 21.390   | 24.114 | 14.477  | 41.947  | 14.947 |
| 80    | 21.380 | 35.295   | 21.380 | 24.110 | 14.478 | 41.947 | 14.947 | 21.380   | 24.110 | 14.478  | 41.947  | 14.947 |
| 90    | 21.370 | 35.297   | 21.370 | 24.106 | 14.479 | 41.947 | 14.947 | 21.370   | 24.106 | 14.479  | 41.947  | 14.947 |
| 100   | 21.360 | 35.299   | 21.360 | 24.102 | 14.480 | 41.947 | 14.947 | 21.360   | 24.102 | 14.480  | 41.947  | 14.947 |
| 110   | 21.350 | 35.301   | 21.350 | 24.098 | 14.481 | 41.947 | 14.947 | 21.350   | 24.098 | 14.481  | 41.947  | 14.947 |
| 120   | 21.340 | 35.303   | 21.340 | 24.094 | 14.482 | 41.947 | 14.947 | 21.340   | 24.094 | 14.482  | 41.947  | 14.947 |
| 130   | 21.330 | 35.305   | 21.330 | 24.090 | 14.483 | 41.947 | 14.947 | 21.330   | 24.090 | 14.483  | 41.947  | 14.947 |
| 140   | 21.320 | 35.307   | 21.320 | 24.086 | 14.484 | 41.947 | 14.947 | 21.320   | 24.086 | 14.484  | 41.947  | 14.947 |
| 150   | 21.310 | 35.309   | 21.310 | 24.082 | 14.485 | 41.947 | 14.947 | 21.310   | 24.082 | 14.485  | 41.947  | 14.947 |
| 160   | 21.300 | 35.311   | 21.300 | 24.078 | 14.486 | 41.947 | 14.947 | 21.300   | 24.078 | 14.486  | 41.947  | 14.947 |
| 170   | 21.290 | 35.313   | 21.290 | 24.074 | 14.487 | 41.947 | 14.947 | 21.290   | 24.074 | 14.487  | 41.947  | 14.947 |
| 180   | 21.280 | 35.315   | 21.280 | 24.070 | 14.488 | 41.947 | 14.947 | 21.280   | 24.070 | 14.488  | 41.947  | 14.947 |
| 190   | 21.270 | 35.317   | 21.270 | 24.066 | 14.489 | 41.947 | 14.947 | 21.270   | 24.066 | 14.489  | 41.947  | 14.947 |
| 200   | 21.260 | 35.319   | 21.260 | 24.062 | 14.490 | 41.947 | 14.947 | 21.260   | 24.062 | 14.490  | 41.947  | 14.947 |
| 210   | 21.250 | 35.321   | 21.250 | 24.058 | 14.491 | 41.947 | 14.947 | 21.250   | 24.058 | 14.491  | 41.947  | 14.947 |
| 220   | 21.240 | 35.323   | 21.240 | 24.054 | 14.492 | 41.947 | 14.947 | 21.240   | 24.054 | 14.492  | 41.947  | 14.947 |
| 230   | 21.230 | 35.325   | 21.230 | 24.050 | 14.493 | 41.947 | 14.947 | 21.230   | 24.050 | 14.493  | 41.947  | 14.947 |
| 240   | 21.220 | 35.327   | 21.220 | 24.046 | 14.494 | 41.947 | 14.947 | 21.220   | 24.046 | 14.494  | 41.947  | 14.947 |
| 250   | 21.210 | 35.329   | 21.210 | 24.042 | 14.495 | 41.947 | 14.947 | 21.210   | 24.042 | 14.495  | 41.947  | 14.947 |
| 260   | 21.200 | 35.331   | 21.200 | 24.038 | 14.496 | 41.947 | 14.947 | 21.200   | 24.038 | 14.496  | 41.947  | 14.947 |
| 270   | 21.190 | 35.333   | 21.190 | 24.034 | 14.497 | 41.947 | 14.947 | 21.190   | 24.034 | 14.497  | 41.947  | 14.947 |
| 280   | 21.180 | 35.335   | 21.180 | 24.030 | 14.498 | 41.947 | 14.947 | 21.180   | 24.030 | 14.498  | 41.947  | 14.947 |
| 290   | 21.170 | 35.337   | 21.170 | 24.026 | 14.499 | 41.947 | 14.947 | 21.170   | 24.026 | 14.499  | 41.947  | 14.947 |
| 300   | 21.160 | 35.339   | 21.160 | 24.022 | 14.500 | 41.947 | 14.947 | 21.160   | 24.022 | 14.500  | 41.947  | 14.947 |
| 310   | 21.150 | 35.341   | 21.150 | 24.018 | 14.501 | 41.947 | 14.947 | 21.150   | 24.018 | 14.501  | 41.947  | 14.947 |
| 320   | 21.140 | 35.343   | 21.140 | 24.014 | 14.502 | 41.947 | 14.947 | 21.140   | 24.014 | 14.502  | 41.947  | 14.947 |
| 330   | 21.130 | 35.345   | 21.130 | 24.010 | 14.503 | 41.947 | 14.947 | 21.130   | 24.010 | 14.503  | 41.947  | 14.947 |
| 340   | 21.120 | 35.347   | 21.120 | 24.006 | 14.504 | 41.947 | 14.947 | 21.120   | 24.006 | 14.504  | 41.947  | 14.947 |
| 350   | 21.110 | 35.349   | 21.110 | 24.002 | 14.505 | 41.947 | 14.947 | 21.110   | 24.002 | 14.505  | 41.947  | 14.947 |
| 360   | 21.100 | 35.351   | 21.100 | 23.998 | 14.506 | 41.947 | 14.947 | 21.100   | 23.998 | 14.506  | 41.947  | 14.947 |

# MARATHON 2 STA. 27

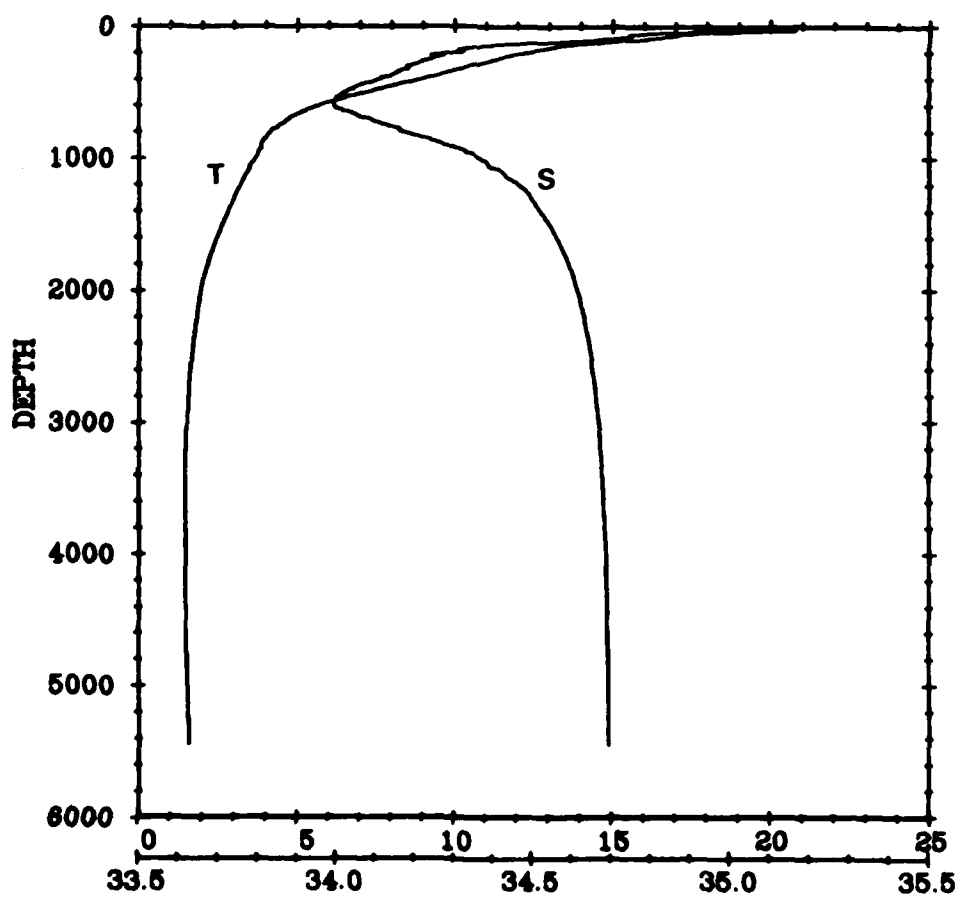
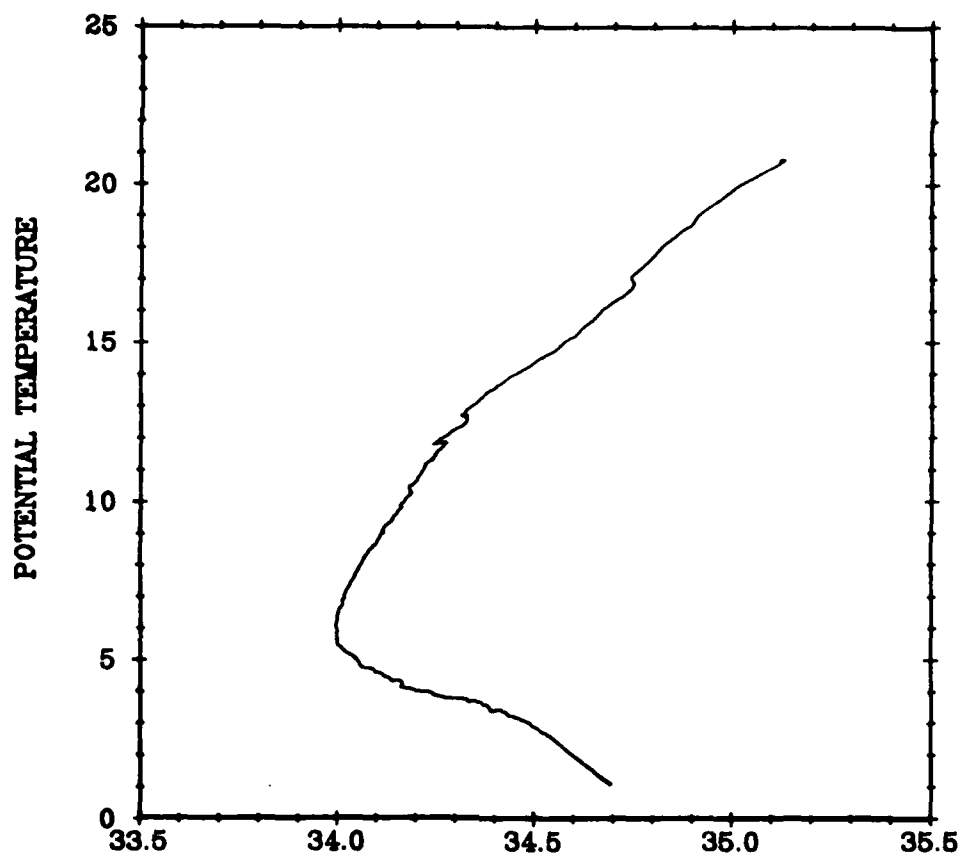


# R. W. THOMAS MARATHON LEISURE STATION

LATITUDE 12 41 N LONGITUDE 12 41 W DATE 12 14 1974 TIME 12 41 WIND 12 KTS SPEED 12 KTS AIR TEMP 12 C WET BULB 12 C HUMID 12 %

| WTD DATA |  | SALINITY | POT TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | SIGMA 6 | SIGMA 8 | SIGMA 10 | SIGMA 12 | SIGMA 14 | SIGMA 16 | SIGMA 18 | SIGMA 20 | SIGMA 22 | SIGMA 24 | SIGMA 26 | SIGMA 28 | SIGMA 30 | SIGMA 32 | SIGMA 34 | SIGMA 36 | SIGMA 38 | SIGMA 40 | SIGMA 42 | SIGMA 44 | SIGMA 46 | SIGMA 48 | SIGMA 50 | SIGMA 52 | SIGMA 54 | SIGMA 56 | SIGMA 58 | SIGMA 60 | SIGMA 62 | SIGMA 64 | SIGMA 66 | SIGMA 68 | SIGMA 70 | SIGMA 72 | SIGMA 74 | SIGMA 76 | SIGMA 78 | SIGMA 80 | SIGMA 82 | SIGMA 84 | SIGMA 86 | SIGMA 88 | SIGMA 90 | SIGMA 92 | SIGMA 94 | SIGMA 96 | SIGMA 98 | SIGMA 100 | SIGMA 102 | SIGMA 104 | SIGMA 106 | SIGMA 108 | SIGMA 110 | SIGMA 112 | SIGMA 114 | SIGMA 116 | SIGMA 118 | SIGMA 120 | SIGMA 122 | SIGMA 124 | SIGMA 126 | SIGMA 128 | SIGMA 130 | SIGMA 132 | SIGMA 134 | SIGMA 136 | SIGMA 138 | SIGMA 140 | SIGMA 142 | SIGMA 144 | SIGMA 146 | SIGMA 148 | SIGMA 150 | SIGMA 152 | SIGMA 154 | SIGMA 156 | SIGMA 158 | SIGMA 160 | SIGMA 162 | SIGMA 164 | SIGMA 166 | SIGMA 168 | SIGMA 170 | SIGMA 172 | SIGMA 174 | SIGMA 176 | SIGMA 178 | SIGMA 180 | SIGMA 182 | SIGMA 184 | SIGMA 186 | SIGMA 188 | SIGMA 190 | SIGMA 192 | SIGMA 194 | SIGMA 196 | SIGMA 198 | SIGMA 200 | SIGMA 202 | SIGMA 204 | SIGMA 206 | SIGMA 208 | SIGMA 210 | SIGMA 212 | SIGMA 214 | SIGMA 216 | SIGMA 218 | SIGMA 220 | SIGMA 222 | SIGMA 224 | SIGMA 226 | SIGMA 228 | SIGMA 230 | SIGMA 232 | SIGMA 234 | SIGMA 236 | SIGMA 238 | SIGMA 240 | SIGMA 242 | SIGMA 244 | SIGMA 246 | SIGMA 248 | SIGMA 250 | SIGMA 252 | SIGMA 254 | SIGMA 256 | SIGMA 258 | SIGMA 260 | SIGMA 262 | SIGMA 264 | SIGMA 266 | SIGMA 268 | SIGMA 270 | SIGMA 272 | SIGMA 274 | SIGMA 276 | SIGMA 278 | SIGMA 280 | SIGMA 282 | SIGMA 284 | SIGMA 286 | SIGMA 288 | SIGMA 290 | SIGMA 292 | SIGMA 294 | SIGMA 296 | SIGMA 298 | SIGMA 300 | SIGMA 302 | SIGMA 304 | SIGMA 306 | SIGMA 308 | SIGMA 310 | SIGMA 312 | SIGMA 314 | SIGMA 316 | SIGMA 318 | SIGMA 320 | SIGMA 322 | SIGMA 324 | SIGMA 326 | SIGMA 328 | SIGMA 330 | SIGMA 332 | SIGMA 334 | SIGMA 336 | SIGMA 338 | SIGMA 340 | SIGMA 342 | SIGMA 344 | SIGMA 346 | SIGMA 348 | SIGMA 350 | SIGMA 352 | SIGMA 354 | SIGMA 356 | SIGMA 358 | SIGMA 360 | SIGMA 362 | SIGMA 364 | SIGMA 366 | SIGMA 368 | SIGMA 370 | SIGMA 372 | SIGMA 374 | SIGMA 376 | SIGMA 378 | SIGMA 380 | SIGMA 382 | SIGMA 384 | SIGMA 386 | SIGMA 388 | SIGMA 390 | SIGMA 392 | SIGMA 394 | SIGMA 396 | SIGMA 398 | SIGMA 400 | SIGMA 402 | SIGMA 404 | SIGMA 406 | SIGMA 408 | SIGMA 410 | SIGMA 412 | SIGMA 414 | SIGMA 416 | SIGMA 418 | SIGMA 420 | SIGMA 422 | SIGMA 424 | SIGMA 426 | SIGMA 428 | SIGMA 430 | SIGMA 432 | SIGMA 434 | SIGMA 436 | SIGMA 438 | SIGMA 440 | SIGMA 442 | SIGMA 444 | SIGMA 446 | SIGMA 448 | SIGMA 450 | SIGMA 452 | SIGMA 454 | SIGMA 456 | SIGMA 458 | SIGMA 460 | SIGMA 462 | SIGMA 464 | SIGMA 466 | SIGMA 468 | SIGMA 470 | SIGMA 472 | SIGMA 474 | SIGMA 476 | SIGMA 478 | SIGMA 480 | SIGMA 482 | SIGMA 484 | SIGMA 486 | SIGMA 488 | SIGMA 490 | SIGMA 492 | SIGMA 494 | SIGMA 496 | SIGMA 498 | SIGMA 500 | SIGMA 502 | SIGMA 504 | SIGMA 506 | SIGMA 508 | SIGMA 510 | SIGMA 512 | SIGMA 514 | SIGMA 516 | SIGMA 518 | SIGMA 520 | SIGMA 522 | SIGMA 524 | SIGMA 526 | SIGMA 528 | SIGMA 530 | SIGMA 532 | SIGMA 534 | SIGMA 536 | SIGMA 538 | SIGMA 540 | SIGMA 542 | SIGMA 544 | SIGMA 546 | SIGMA 548 | SIGMA 550 | SIGMA 552 | SIGMA 554 | SIGMA 556 | SIGMA 558 | SIGMA 560 | SIGMA 562 | SIGMA 564 | SIGMA 566 | SIGMA 568 | SIGMA 570 | SIGMA 572 | SIGMA 574 | SIGMA 576 | SIGMA 578 | SIGMA 580 | SIGMA 582 | SIGMA 584 | SIGMA 586 | SIGMA 588 | SIGMA 590 | SIGMA 592 | SIGMA 594 | SIGMA 596 | SIGMA 598 | SIGMA 600 | SIGMA 602 | SIGMA 604 | SIGMA 606 | SIGMA 608 | SIGMA 610 | SIGMA 612 | SIGMA 614 | SIGMA 616 | SIGMA 618 | SIGMA 620 | SIGMA 622 | SIGMA 624 | SIGMA 626 | SIGMA 628 | SIGMA 630 | SIGMA 632 | SIGMA 634 | SIGMA 636 | SIGMA 638 | SIGMA 640 | SIGMA 642 | SIGMA 644 | SIGMA 646 | SIGMA 648 | SIGMA 650 | SIGMA 652 | SIGMA 654 | SIGMA 656 | SIGMA 658 | SIGMA 660 | SIGMA 662 | SIGMA 664 | SIGMA 666 | SIGMA 668 | SIGMA 670 | SIGMA 672 | SIGMA 674 | SIGMA 676 | SIGMA 678 | SIGMA 680 | SIGMA 682 | SIGMA 684 | SIGMA 686 | SIGMA 688 | SIGMA 690 | SIGMA 692 | SIGMA 694 | SIGMA 696 | SIGMA 698 | SIGMA 700 | SIGMA 702 | SIGMA 704 | SIGMA 706 | SIGMA 708 | SIGMA 710 | SIGMA 712 | SIGMA 714 | SIGMA 716 | SIGMA 718 | SIGMA 720 | SIGMA 722 | SIGMA 724 | SIGMA 726 | SIGMA 728 | SIGMA 730 | SIGMA 732 | SIGMA 734 | SIGMA 736 | SIGMA 738 | SIGMA 740 | SIGMA 742 | SIGMA 744 | SIGMA 746 | SIGMA 748 | SIGMA 750 | SIGMA 752 | SIGMA 754 | SIGMA 756 | SIGMA 758 | SIGMA 760 | SIGMA 762 | SIGMA 764 | SIGMA 766 | SIGMA 768 | SIGMA 770 | SIGMA 772 | SIGMA 774 | SIGMA 776 | SIGMA 778 | SIGMA 780 | SIGMA 782 | SIGMA 784 | SIGMA 786 | SIGMA 788 | SIGMA 790 | SIGMA 792 | SIGMA 794 | SIGMA 796 | SIGMA 798 | SIGMA 800 | SIGMA 802 | SIGMA 804 | SIGMA 806 | SIGMA 808 | SIGMA 810 | SIGMA 812 | SIGMA 814 | SIGMA 816 | SIGMA 818 | SIGMA 820 | SIGMA 822 | SIGMA 824 | SIGMA 826 | SIGMA 828 | SIGMA 830 | SIGMA 832 | SIGMA 834 | SIGMA 836 | SIGMA 838 | SIGMA 840 | SIGMA 842 | SIGMA 844 | SIGMA 846 | SIGMA 848 | SIGMA 850 | SIGMA 852 | SIGMA 854 | SIGMA 856 | SIGMA 858 | SIGMA 860 | SIGMA 862 | SIGMA 864 | SIGMA 866 | SIGMA 868 | SIGMA 870 | SIGMA 872 | SIGMA 874 | SIGMA 876 | SIGMA 878 | SIGMA 880 | SIGMA 882 | SIGMA 884 | SIGMA 886 | SIGMA 888 | SIGMA 890 | SIGMA 892 | SIGMA 894 | SIGMA 896 | SIGMA 898 | SIGMA 900 | SIGMA 902 | SIGMA 904 | SIGMA 906 | SIGMA 908 | SIGMA 910 | SIGMA 912 | SIGMA 914 | SIGMA 916 | SIGMA 918 | SIGMA 920 | SIGMA 922 | SIGMA 924 | SIGMA 926 | SIGMA 928 | SIGMA 930 | SIGMA 932 | SIGMA 934 | SIGMA 936 | SIGMA 938 | SIGMA 940 | SIGMA 942 | SIGMA 944 | SIGMA 946 | SIGMA 948 | SIGMA 950 | SIGMA 952 | SIGMA 954 | SIGMA 956 | SIGMA 958 | SIGMA 960 | SIGMA 962 | SIGMA 964 | SIGMA 966 | SIGMA 968 | SIGMA 970 | SIGMA 972 | SIGMA 974 | SIGMA 976 | SIGMA 978 | SIGMA 980 | SIGMA 982 | SIGMA 984 | SIGMA 986 | SIGMA 988 | SIGMA 990 | SIGMA 992 | SIGMA 994 | SIGMA 996 | SIGMA 998 | SIGMA 1000 | SIGMA 1002 | SIGMA 1004 | SIGMA 1006 | SIGMA 1008 | SIGMA 1010 | SIGMA 1012 | SIGMA 1014 | SIGMA 1016 | SIGMA 1018 | SIGMA 1020 | SIGMA 1022 | SIGMA 1024 | SIGMA 1026 | SIGMA 1028 | SIGMA 1030 | SIGMA 1032 | SIGMA 1034 | SIGMA 1036 | SIGMA 1038 | SIGMA 1040 | SIGMA 1042 | SIGMA 1044 | SIGMA 1046 | SIGMA 1048 | SIGMA 1050 | SIGMA 1052 | SIGMA 1054 | SIGMA 1056 | SIGMA 1058 | SIGMA 1060 | SIGMA 1062 | SIGMA 1064 | SIGMA 1066 | SIGMA 1068 | SIGMA 1070 | SIGMA 1072 | SIGMA 1074 | SIGMA 1076 | SIGMA 1078 | SIGMA 1080 | SIGMA 1082 | SIGMA 1084 | SIGMA 1086 | SIGMA 1088 | SIGMA 1090 | SIGMA 1092 | SIGMA 1094 | SIGMA 1096 | SIGMA 1098 | SIGMA 1100 | SIGMA 1102 | SIGMA 1104 | SIGMA 1106 | SIGMA 1108 | SIGMA 1110 | SIGMA 1112 | SIGMA 1114 | SIGMA 1116 | SIGMA 1118 | SIGMA 1120 | SIGMA 1122 | SIGMA 1124 | SIGMA 1126 | SIGMA 1128 | SIGMA 1130 | SIGMA 1132 | SIGMA 1134 | SIGMA 1136 | SIGMA 1138 | SIGMA 1140 | SIGMA 1142 | SIGMA 1144 | SIGMA 1146 | SIGMA 1148 | SIGMA 1150 |
|----------|--|----------|----------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--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# MARATHON 2 STA. 28



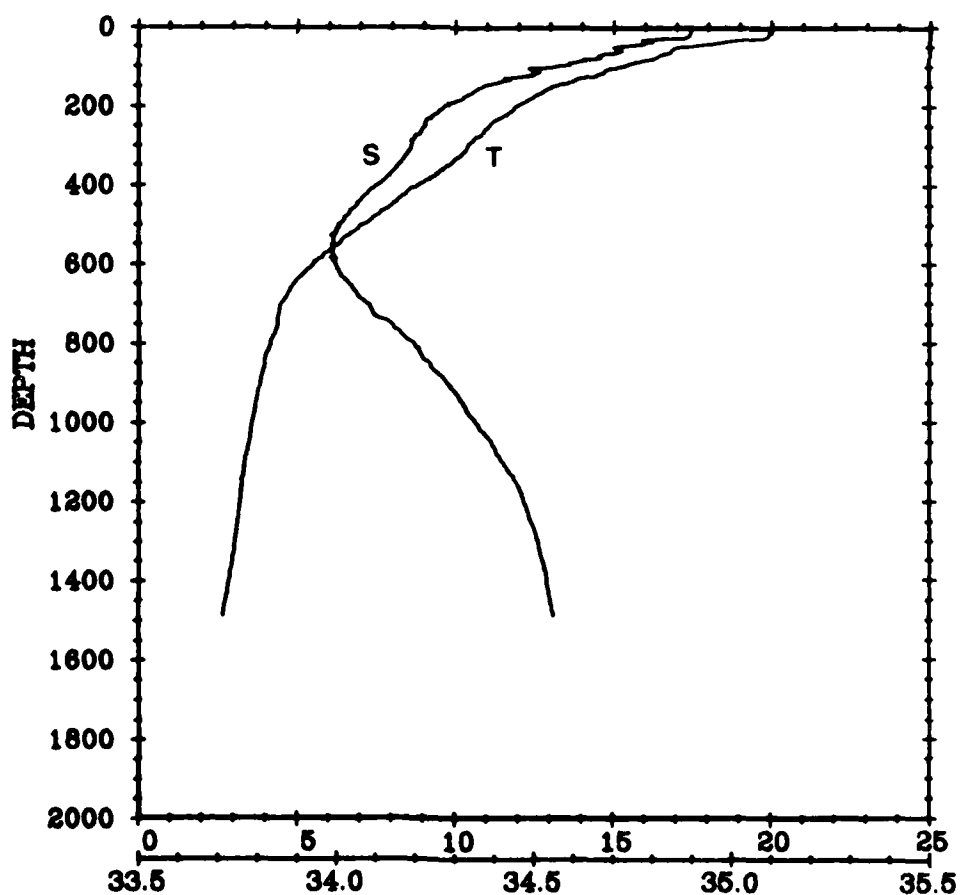
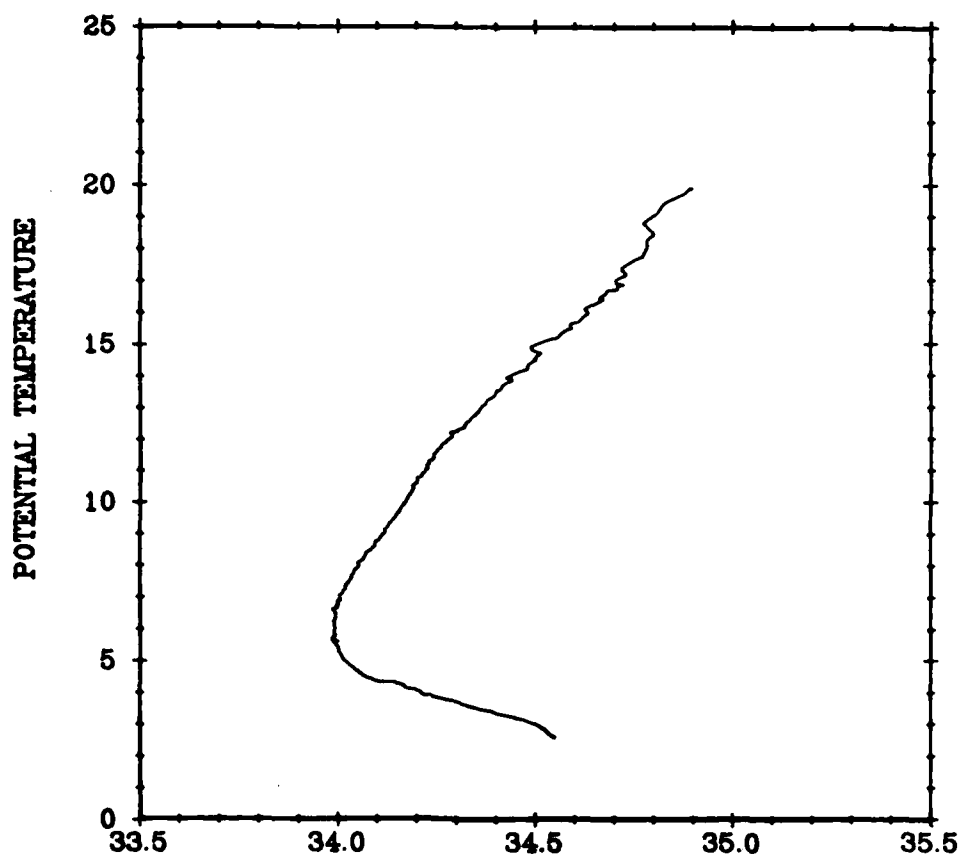
R/V THOMAS WASHINGTON MARATHON LED II STATION 14

| LATITUDE | LONGITUDE | MO-DY-YR | START TIME | BTDM | BTDM M | WIND | SPEED | AIR TEMP | WFT BULB | BAROM  |
|----------|-----------|----------|------------|------|--------|------|-------|----------|----------|--------|
| 11 54 N  | 152 10 W  | 1974 84  | 0724       | 421  | 421    | 100  | 10    | 19.4     | 15.7     | 1019.4 |

| STD DATA | TEMP   | SALINITY | POT TEMP | SIGMA T | SIGMA L | SIGMA 4 | SVA    | DYNAMIC HT | DEPTH |
|----------|--------|----------|----------|---------|---------|---------|--------|------------|-------|
| PRESS    | DB     | DEG C    | DEG C    | DEG C   | DEG C   | DEG C   | DEG C  | DEG C      | DEG C |
| 0        | 19.929 | 34.894   | 19.929   | 24.701  | 13.154  | 41.244  | 14.126 | 0          | 0     |
| 20       | 19.925 | 34.891   | 19.921   | 24.724  | 13.182  | 41.270  | 14.154 | 0          | 10    |
| 40       | 19.921 | 34.889   | 19.917   | 24.747  | 13.210  | 41.296  | 14.182 | 0          | 20    |
| 60       | 19.917 | 34.887   | 19.913   | 24.770  | 13.238  | 41.322  | 14.210 | 0          | 30    |
| 80       | 19.913 | 34.885   | 19.909   | 24.793  | 13.266  | 41.348  | 14.238 | 0          | 40    |
| 100      | 19.909 | 34.883   | 19.905   | 24.816  | 13.294  | 41.374  | 14.266 | 0          | 50    |
| 120      | 19.905 | 34.881   | 19.901   | 24.839  | 13.322  | 41.400  | 14.294 | 0          | 60    |
| 140      | 19.901 | 34.879   | 19.897   | 24.862  | 13.350  | 41.426  | 14.322 | 0          | 70    |
| 160      | 19.897 | 34.877   | 19.893   | 24.885  | 13.378  | 41.452  | 14.350 | 0          | 80    |
| 180      | 19.893 | 34.875   | 19.889   | 24.908  | 13.406  | 41.478  | 14.378 | 0          | 90    |
| 200      | 19.889 | 34.873   | 19.885   | 24.931  | 13.434  | 41.504  | 14.406 | 0          | 100   |
| 220      | 19.885 | 34.871   | 19.881   | 24.954  | 13.462  | 41.530  | 14.434 | 0          | 110   |
| 240      | 19.881 | 34.869   | 19.877   | 24.977  | 13.490  | 41.556  | 14.462 | 0          | 120   |
| 260      | 19.877 | 34.867   | 19.873   | 25.000  | 13.518  | 41.582  | 14.490 | 0          | 130   |
| 280      | 19.873 | 34.865   | 19.869   | 25.023  | 13.546  | 41.608  | 14.518 | 0          | 140   |
| 300      | 19.869 | 34.863   | 19.865   | 25.046  | 13.574  | 41.634  | 14.546 | 0          | 150   |
| 320      | 19.865 | 34.861   | 19.861   | 25.069  | 13.602  | 41.660  | 14.574 | 0          | 160   |
| 340      | 19.861 | 34.859   | 19.857   | 25.092  | 13.630  | 41.686  | 14.602 | 0          | 170   |
| 360      | 19.857 | 34.857   | 19.853   | 25.115  | 13.658  | 41.712  | 14.630 | 0          | 180   |
| 380      | 19.853 | 34.855   | 19.849   | 25.138  | 13.686  | 41.738  | 14.658 | 0          | 190   |
| 400      | 19.849 | 34.853   | 19.845   | 25.161  | 13.714  | 41.764  | 14.686 | 0          | 200   |
| 420      | 19.845 | 34.851   | 19.841   | 25.184  | 13.742  | 41.790  | 14.714 | 0          | 210   |
| 440      | 19.841 | 34.849   | 19.837   | 25.207  | 13.770  | 41.816  | 14.742 | 0          | 220   |
| 460      | 19.837 | 34.847   | 19.833   | 25.230  | 13.798  | 41.842  | 14.770 | 0          | 230   |
| 480      | 19.833 | 34.845   | 19.829   | 25.253  | 13.826  | 41.868  | 14.798 | 0          | 240   |
| 500      | 19.829 | 34.843   | 19.825   | 25.276  | 13.854  | 41.894  | 14.826 | 0          | 250   |
| 520      | 19.825 | 34.841   | 19.821   | 25.299  | 13.882  | 41.920  | 14.854 | 0          | 260   |
| 540      | 19.821 | 34.839   | 19.817   | 25.322  | 13.910  | 41.946  | 14.882 | 0          | 270   |
| 560      | 19.817 | 34.837   | 19.813   | 25.345  | 13.938  | 41.972  | 14.910 | 0          | 280   |
| 580      | 19.813 | 34.835   | 19.809   | 25.368  | 13.966  | 42.000  | 14.938 | 0          | 290   |
| 600      | 19.809 | 34.833   | 19.805   | 25.391  | 13.994  | 42.026  | 14.966 | 0          | 300   |
| 620      | 19.805 | 34.831   | 19.801   | 25.414  | 14.022  | 42.052  | 14.994 | 0          | 310   |
| 640      | 19.801 | 34.829   | 19.797   | 25.437  | 14.050  | 42.078  | 15.022 | 0          | 320   |
| 660      | 19.797 | 34.827   | 19.793   | 25.460  | 14.078  | 42.104  | 15.050 | 0          | 330   |
| 680      | 19.793 | 34.825   | 19.789   | 25.483  | 14.106  | 42.130  | 15.078 | 0          | 340   |
| 700      | 19.789 | 34.823   | 19.785   | 25.506  | 14.134  | 42.156  | 15.106 | 0          | 350   |
| 720      | 19.785 | 34.821   | 19.781   | 25.529  | 14.162  | 42.182  | 15.134 | 0          | 360   |
| 740      | 19.781 | 34.819   | 19.777   | 25.552  | 14.190  | 42.208  | 15.162 | 0          | 370   |
| 760      | 19.777 | 34.817   | 19.773   | 25.575  | 14.218  | 42.234  | 15.190 | 0          | 380   |
| 780      | 19.773 | 34.815   | 19.769   | 25.598  | 14.246  | 42.260  | 15.218 | 0          | 390   |
| 800      | 19.769 | 34.813   | 19.765   | 25.621  | 14.274  | 42.286  | 15.246 | 0          | 400   |
| 820      | 19.765 | 34.811   | 19.761   | 25.644  | 14.302  | 42.312  | 15.274 | 0          | 410   |
| 840      | 19.761 | 34.809   | 19.757   | 25.667  | 14.330  | 42.338  | 15.302 | 0          | 420   |
| 860      | 19.757 | 34.807   | 19.753   | 25.690  | 14.358  | 42.364  | 15.330 | 0          | 430   |
| 880      | 19.753 | 34.805   | 19.749   | 25.713  | 14.386  | 42.390  | 15.358 | 0          | 440   |
| 900      | 19.749 | 34.803   | 19.745   | 25.736  | 14.414  | 42.416  | 15.386 | 0          | 450   |
| 920      | 19.745 | 34.801   | 19.741   | 25.759  | 14.442  | 42.442  | 15.414 | 0          | 460   |
| 940      | 19.741 | 34.799   | 19.737   | 25.782  | 14.470  | 42.468  | 15.442 | 0          | 470   |
| 960      | 19.737 | 34.797   | 19.733   | 25.805  | 14.498  | 42.494  | 15.470 | 0          | 480   |
| 980      | 19.733 | 34.795   | 19.729   | 25.828  | 14.526  | 42.520  | 15.498 | 0          | 490   |
| 1000     | 19.729 | 34.793   | 19.725   | 25.851  | 14.554  | 42.546  | 15.526 | 0          | 500   |
| 1020     | 19.725 | 34.791   | 19.721   | 25.874  | 14.582  | 42.572  | 15.554 | 0          | 510   |
| 1040     | 19.721 | 34.789   | 19.717   | 25.897  | 14.610  | 42.598  | 15.582 | 0          | 520   |
| 1060     | 19.717 | 34.787   | 19.713   | 25.920  | 14.638  | 42.624  | 15.610 | 0          | 530   |
| 1080     | 19.713 | 34.785   | 19.709   | 25.943  | 14.666  | 42.650  | 15.638 | 0          | 540   |
| 1100     | 19.709 | 34.783   | 19.705   | 25.966  | 14.694  | 42.676  | 15.666 | 0          | 550   |
| 1120     | 19.705 | 34.781   | 19.701   | 25.989  | 14.722  | 42.702  | 15.694 | 0          | 560   |
| 1140     | 19.701 | 34.779   | 19.697   | 26.012  | 14.750  | 42.728  | 15.722 | 0          | 570   |
| 1160     | 19.697 | 34.777   | 19.693   | 26.035  | 14.778  | 42.754  | 15.750 | 0          | 580   |
| 1180     | 19.693 | 34.775   | 19.689   | 26.058  | 14.806  | 42.780  | 15.778 | 0          | 590   |
| 1200     | 19.689 | 34.773   | 19.685   | 26.081  | 14.834  | 42.806  | 15.806 | 0          | 600   |
| 1220     | 19.685 | 34.771   | 19.681   | 26.104  | 14.862  | 42.832  | 15.834 | 0          | 610   |
| 1240     | 19.681 | 34.769   | 19.677   | 26.127  | 14.890  | 42.858  | 15.862 | 0          | 620   |
| 1260     | 19.677 | 34.767   | 19.673   | 26.150  | 14.918  | 42.884  | 15.890 | 0          | 630   |
| 1280     | 19.673 | 34.765   | 19.669   | 26.173  | 14.946  | 42.910  | 15.918 | 0          | 640   |
| 1300     | 19.669 | 34.763   | 19.665   | 26.196  | 14.974  | 42.936  | 15.946 | 0          | 650   |
| 1320     | 19.665 | 34.761   | 19.661   | 26.219  | 15.002  | 42.962  | 15.974 | 0          | 660   |
| 1340     | 19.661 | 34.759   | 19.657   | 26.242  | 15.030  | 42.988  | 16.002 | 0          | 670   |
| 1360     | 19.657 | 34.757   | 19.653   | 26.265  | 15.058  | 43.014  | 16.030 | 0          | 680   |
| 1380     | 19.653 | 34.755   | 19.649   | 26.288  | 15.086  | 43.040  | 16.058 | 0          | 690   |
| 1400     | 19.649 | 34.753   | 19.645   | 26.311  | 15.114  | 43.066  | 16.086 | 0          | 700   |
| 1420     | 19.645 | 34.751   | 19.641   | 26.334  | 15.142  | 43.092  | 16.114 | 0          | 710   |
| 1440     | 19.641 | 34.749   | 19.637   | 26.357  | 15.170  | 43.118  | 16.142 | 0          | 720   |
| 1460     | 19.637 | 34.747   | 19.633   | 26.380  | 15.198  | 43.144  | 16.170 | 0          | 730   |
| 1480     | 19.633 | 34.745   | 19.629   | 26.403  | 15.226  | 43.170  | 16.198 | 0          | 740   |
| 1500     | 19.629 | 34.743   | 19.625   | 26.426  | 15.254  | 43.196  | 16.226 | 0          | 750   |
| 1520     | 19.625 | 34.741   | 19.621   | 26.449  | 15.282  | 43.222  | 16.254 | 0          | 760   |
| 1540     | 19.621 | 34.739   | 19.617   | 26.472  | 15.310  | 43.248  | 16.282 | 0          | 770   |
| 1560     | 19.617 | 34.737   | 19.613   | 26.495  | 15.338  | 43.274  | 16.310 | 0          | 780   |
| 1580     | 19.613 | 34.735   | 19.609   | 26.518  | 15.366  | 43.300  | 16.338 | 0          | 790   |
| 1600     | 19.609 | 34.733   | 19.605   | 26.541  | 15.394  | 43.326  | 16.366 | 0          | 800   |
| 1620     | 19.605 | 34.731   | 19.601   | 26.564  | 15.422  | 43.352  | 16.394 | 0          | 810   |
| 1640     | 19.601 | 34.729   | 19.597   | 26.587  | 15.450  | 43.378  | 16.422 | 0          | 820   |
| 1660     | 19.597 | 34.727   | 19.593   | 26.610  | 15.478  | 43.404  | 16.450 | 0          | 830   |
| 1680     | 19.593 | 34.725   | 19.589   | 26.633  | 15.506  | 43.430  | 16.478 | 0          | 840   |
| 1700     | 19.589 | 34.723   | 19.585   | 26.656  | 15.534  | 43.456  | 16.506 | 0          | 850   |
| 1720     | 19.585 | 34.721   | 19.581   | 26.679  | 15.562  | 43.482  | 16.534 | 0          | 860   |
| 1740     | 19.581 | 34.719   | 19.577   | 26.702  | 15.590  | 43.508  | 16.562 | 0          | 870   |
| 1760     | 19.577 | 34.717   | 19.573   | 26.725  | 15.618  | 43.534  | 16.590 | 0          | 880   |
| 1780     | 19.573 | 34.715   | 19.569   | 26.748  | 15.646  | 43.560  | 16.618 | 0          | 890   |
| 1800     | 19.569 | 34.713   | 19.565   | 26.771  | 15.674  | 43.586  | 16.646 | 0          | 900   |
| 1820     | 19.565 | 34.711   | 19.561   | 26.794  | 15.702  | 43.612  | 16.674 | 0          | 910   |
| 1840     | 19.561 | 34.709   | 19.557   | 26.817  | 15.730  | 43.638  | 16.702 | 0          | 920   |
| 1860     | 19.557 | 34.707   | 19.553   | 26.840  | 15.758  | 43.664  | 16.730 | 0          | 930   |
| 1880     | 19.553 | 34.705   | 19.549   | 26.863  | 15.786  | 43.690  | 16.758 | 0          | 940   |
| 1900     | 19.549 | 34.703   | 19.545   | 26.886  | 15.814  | 43.716  | 16.786 | 0          | 950   |
| 1920     | 19.545 | 34.701   | 19.541   | 26.909  | 15.842  | 43.742  | 16.814 | 0          | 960   |
| 1940     | 19.541 | 34.699   | 19.537   | 26.932  | 15.870  | 43.768  | 16.842 | 0          | 970   |
| 1960     | 19.537 | 34.697   | 19.533   | 26.955  | 15.898  | 43.794  | 16.870 | 0          | 980   |
| 1980     | 19.533 | 34.695   | 19.529   | 26.978  | 15.926  | 43.820  | 16.898 | 0          | 990   |
| 2000     | 19.529 | 34.693   | 19.525   | 27.001  | 15.954  | 43.846  | 16.926 | 0          | 1000  |

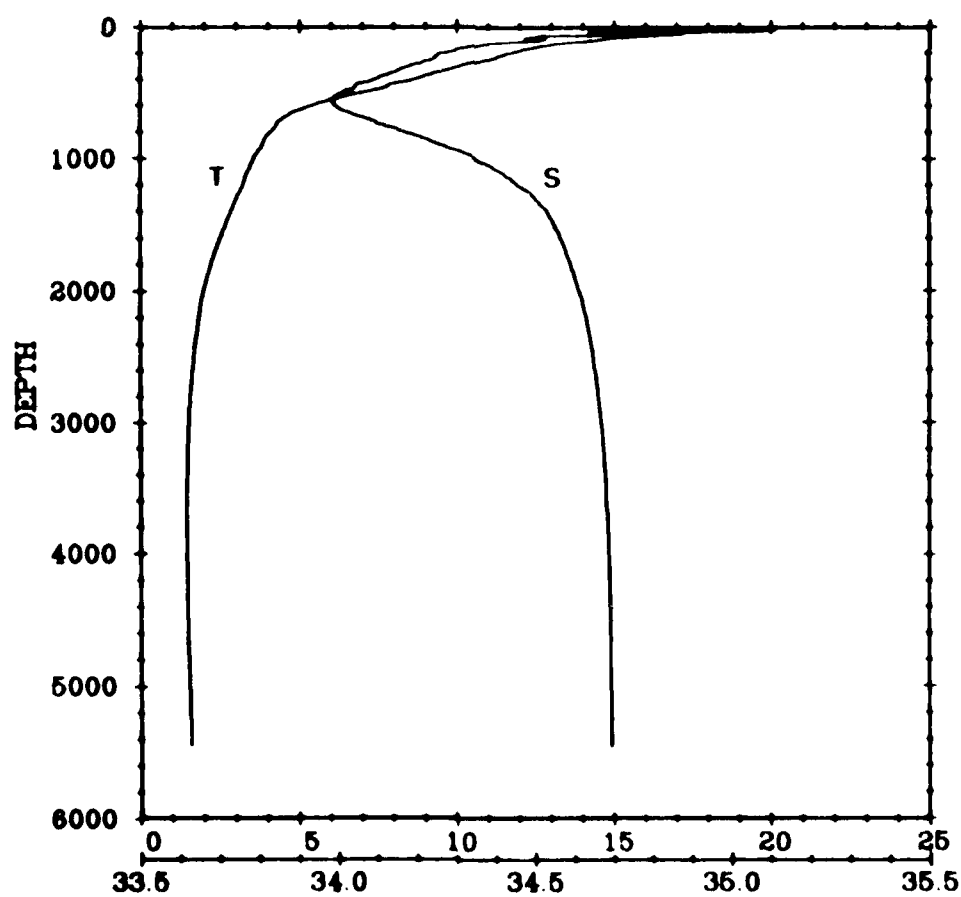
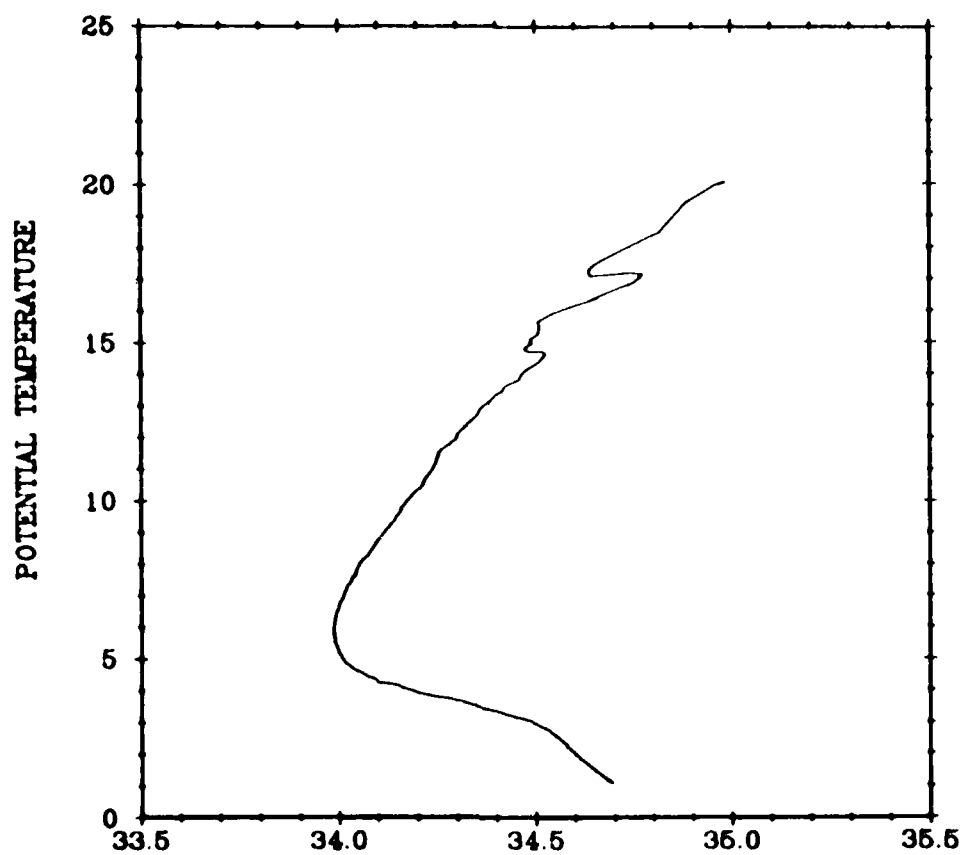
| NISKIN BOTTLE DATA |        | DIS C2   |      | O2 SAT |      | SIG3 |      | P04  |      | NO3  |      | NO2  |      | TRIT |      | POT TEMP |        | SIGMA T |        | SIGMA L |        | SIGMA 4 |        | PRESL  |  |
|--------------------|--------|----------|------|--------|------|------|------|------|------|------|------|------|------|------|------|----------|--------|---------|--------|---------|--------|---------|--------|--------|--|
| DEPTH              | TEMP   | SALINITY | ML L | ML L   | ML L | ML L | ML L | ML L | ML L | ML L | ML L | ML L | ML L | ML L | ML L | ML L     | DEG C  | DEG C   | DEG C  | DEG C   | DEG C  | DEG C   | DEG C  | DEG C  |  |
| 4                  | 19.934 | 34.894   | 5.33 | 103.0  | 4.1  | 0.07 | 0.0  | 0.00 | 0.0  | 0.00 | 0.0  | 0.00 | 0.0  | 0.00 | 0.0  | 0.00     | 19.933 | 24.700  | 13.153 | 41.242  | 14.125 | 41.242  | 14.125 | 41.242 |  |
| 50                 | 19.927 | 34.895   | 5.72 | 104.4  | 4.9  | 0.10 | 0.1  | 0.10 | 0.1  | 0.10 | 0.1  | 0.10 | 0.1  | 0.10 | 0.1  | 0.10     | 19.928 | 25.289  | 13.941 | 42.421  | 15.151 | 42.421  | 15.151 | 42.421 |  |
| 100                | 19.920 | 34.890   | 5.56 | 97.8   | 5.0  | 0.27 | 1.9  | 0.14 | 1.9  | 0.14 | 1.9  | 0.14 | 1.9  | 0.14 | 1.9  | 0.14     | 19.921 | 25.142  | 14.249 | 42.444  | 14.249 | 42.444  | 14.249 | 42.444 |  |
| 150                | 19.915 | 34.884   | 5.25 | 89.8   | 8.0  | 0.49 | 6.1  | 0.19 | 6.1  | 0.19 | 6.1  | 0.19 | 6.1  | 0.19 | 6.1  |          |        |         |        |         |        |         |        |        |  |

# MARATHON 2 STA. 29



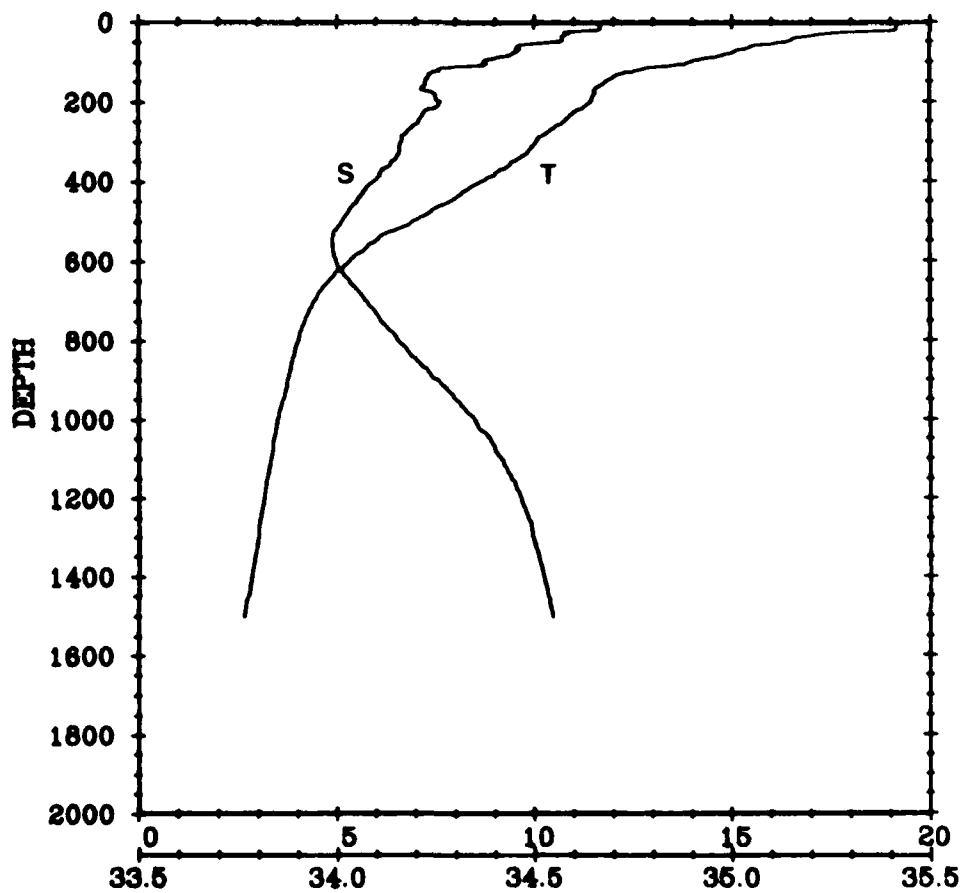
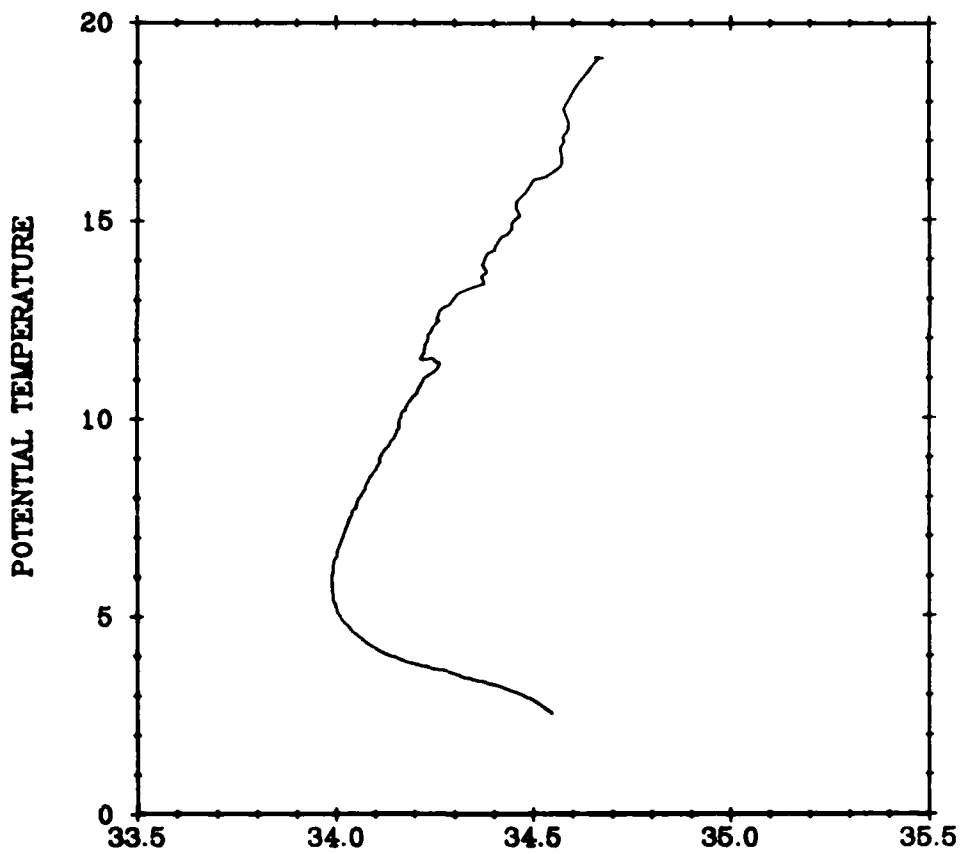
[illegible]

# MARATHON 2 STA. 30



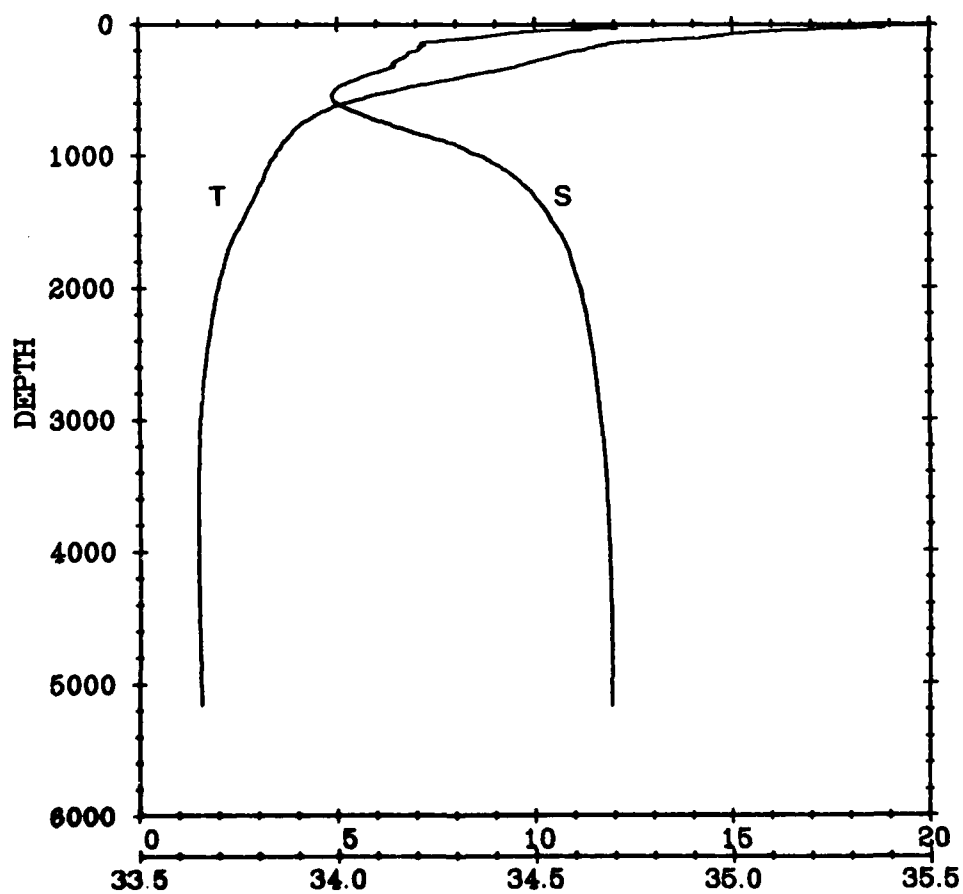
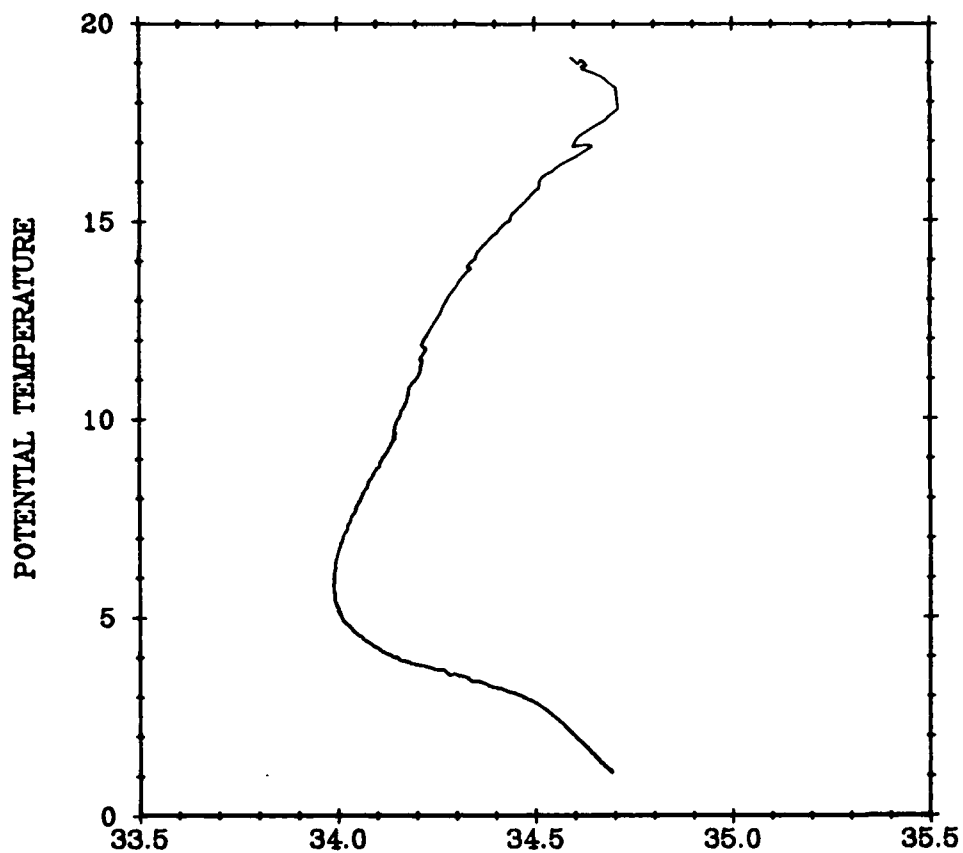
[illegible]

# MARATHON 2 STA. 31



| WICKEN BOTTLE DATA |               |          |                |                |                    |             |             |             |                |                    |         |         |         |             |
|--------------------|---------------|----------|----------------|----------------|--------------------|-------------|-------------|-------------|----------------|--------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C | SALINITY | DIS 22<br>ML/L | 24 SAT<br>ML/L | SIGMA<br>T<br>UM/L | P-4<br>UM/L | N-1<br>UM/L | N-2<br>UM/L | TRIT<br>TU/LIN | P-UT TEMP<br>DEG C | SIGMA 3 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
| 1                  | 17.215        | 34.419   |                | 17.1           |                    |             |             |             |                | 17.1               | 24.724  | 31.007  | 44.725  | 1.0         |
| 5                  | 16.119        | 34.360   |                | 17.1           | 1.9                | 0.12        | 1.0         | 1.0         |                | 17.1               | 24.705  | 31.076  | 44.745  | 1.5         |
| 10                 | 15.212        | 34.280   |                | 17.1           | 1.8                | 0.12        | 1.0         | 1.0         |                | 17.1               | 24.681  | 31.151  | 44.764  | 2.0         |
| 15                 | 14.397        | 34.199   | 5.51           | 99.6           | 10.7               | 0.71        | 8.9         | 1.0         |                | 17.1               | 24.657  | 31.227  | 44.784  | 2.5         |
| 20                 | 13.492        | 34.145   | 5.36           | 99.3           | 19.7               | 1.10        | 17.0        | 1.0         |                | 17.1               | 24.633  | 31.302  | 44.804  | 3.0         |
| 25                 | 12.570        | 34.074   | 4.50           | 63.0           | 31.1               | 1.44        | 27.9        | 1.0         |                | 17.1               | 24.609  | 31.378  | 44.824  | 3.5         |
| 30                 | 11.651        | 34.000   | 3.50           | 50.9           | 49.7               | 1.99        | 49.9        | 1.0         |                | 17.1               | 24.585  | 31.453  | 44.844  | 4.0         |
| 35                 | 10.731        | 34.000   | 3.50           | 50.9           | 71.1               | 2.53        | 74.0        | 1.0         |                | 17.1               | 24.561  | 31.529  | 44.864  | 4.5         |
| 40                 | 9.811         | 34.000   | 3.50           | 50.9           | 94.9               | 2.87        | 111.0       | 1.0         |                | 17.1               | 24.537  | 31.604  | 44.884  | 5.0         |
| 45                 | 8.891         | 34.000   | 3.50           | 50.9           | 113.4              | 3.15        | 141.9       | 1.0         |                | 17.1               | 24.513  | 31.680  | 44.904  | 5.5         |
| 50                 | 7.971         | 34.000   | 3.50           | 50.9           | 126.6              | 3.13        | 144.4       | 1.0         |                | 17.1               | 24.489  | 31.755  | 44.924  | 6.0         |
| 55                 | 7.051         | 34.000   | 3.50           | 50.9           | 131.2              | 3.21        | 145.1       | 1.0         |                | 17.1               | 24.465  | 31.831  | 44.944  | 6.5         |
| 60                 | 6.131         | 34.000   | 3.50           | 50.9           | 141.6              | 3.18        | 141.1       | 1.0         |                | 17.1               | 24.441  | 31.906  | 44.964  | 7.0         |
| 65                 | 5.211         | 34.000   | 3.50           | 50.9           | 145.9              | 3.10        | 144.1       | 1.0         |                | 17.1               | 24.417  | 31.982  | 44.984  | 7.5         |
| 70                 | 4.291         | 34.000   | 3.50           | 50.9           | 145.9              | 2.99        | 144.1       | 1.0         |                | 17.1               | 24.393  | 32.057  | 45.004  | 8.0         |
| 75                 | 3.371         | 34.000   | 3.50           | 50.9           | 145.9              | 2.91        | 142.1       | 1.0         |                | 17.1               | 24.369  | 32.133  | 45.024  | 8.5         |
| 80                 | 2.451         | 34.000   | 3.50           | 50.9           | 145.9              | 2.81        | 139.1       | 1.0         |                | 17.1               | 24.345  | 32.208  | 45.044  | 9.0         |
| 85                 | 1.531         | 34.000   | 3.50           | 50.9           | 145.9              | 2.71        | 136.1       | 1.0         |                | 17.1               | 24.321  | 32.284  | 45.064  | 9.5         |
| 90                 | 0.611         | 34.000   | 3.50           | 50.9           | 145.9              | 2.61        | 133.1       | 1.0         |                | 17.1               | 24.297  | 32.359  | 45.084  | 10.0        |
| 95                 | -0.309        | 34.000   | 3.50           | 50.9           | 145.9              | 2.55        | 130.1       | 1.0         |                | 17.1               | 24.273  | 32.435  | 45.104  | 10.5        |
| 100                | -1.389        | 34.000   | 3.50           | 50.9           | 145.9              | 2.45        | 127.1       | 1.0         |                | 17.1               | 24.249  | 32.510  | 45.124  | 11.0        |
| 105                | -2.469        | 34.000   | 3.50           | 50.9           | 145.9              | 2.35        | 124.1       | 1.0         |                | 17.1               | 24.225  | 32.586  | 45.144  | 11.5        |
| 110                | -3.549        | 34.000   | 3.50           | 50.9           | 145.9              | 2.25        | 121.1       | 1.0         |                | 17.1               | 24.201  | 32.661  | 45.164  | 12.0        |
| 115                | -4.629        | 34.000   | 3.50           | 50.9           | 145.9              | 2.15        | 118.1       | 1.0         |                | 17.1               | 24.177  | 32.737  | 45.184  | 12.5        |
| 120                | -5.709        | 34.000   | 3.50           | 50.9           | 145.9              | 2.05        | 115.1       | 1.0         |                | 17.1               | 24.153  | 32.812  | 45.204  | 13.0        |
| 125                | -6.789        | 34.000   | 3.50           | 50.9           | 145.9              | 1.95        | 112.1       | 1.0         |                | 17.1               | 24.129  | 32.888  | 45.224  | 13.5        |
| 130                | -7.869        | 34.000   | 3.50           | 50.9           | 145.9              | 1.85        | 109.1       | 1.0         |                | 17.1               | 24.105  | 32.963  | 45.244  | 14.0        |
| 135                | -8.949        | 34.000   | 3.50           | 50.9           | 145.9              | 1.75        | 106         |             |                |                    |         |         |         |             |

MARATHON 2 STA. 32

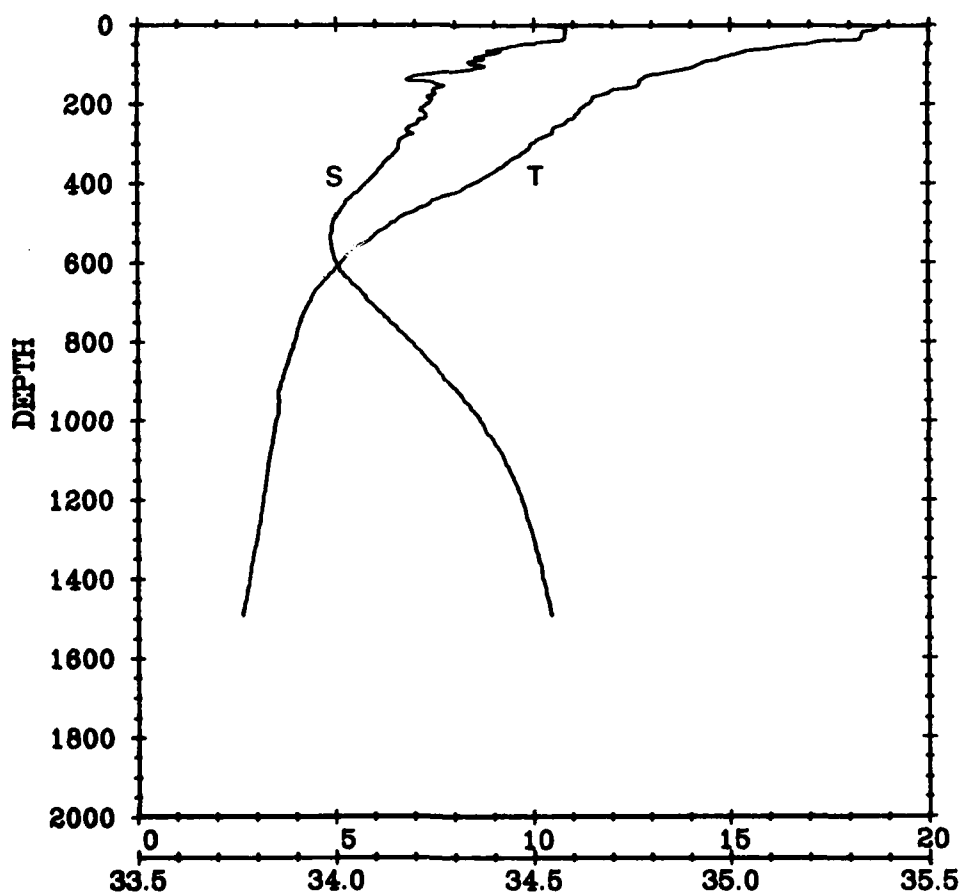
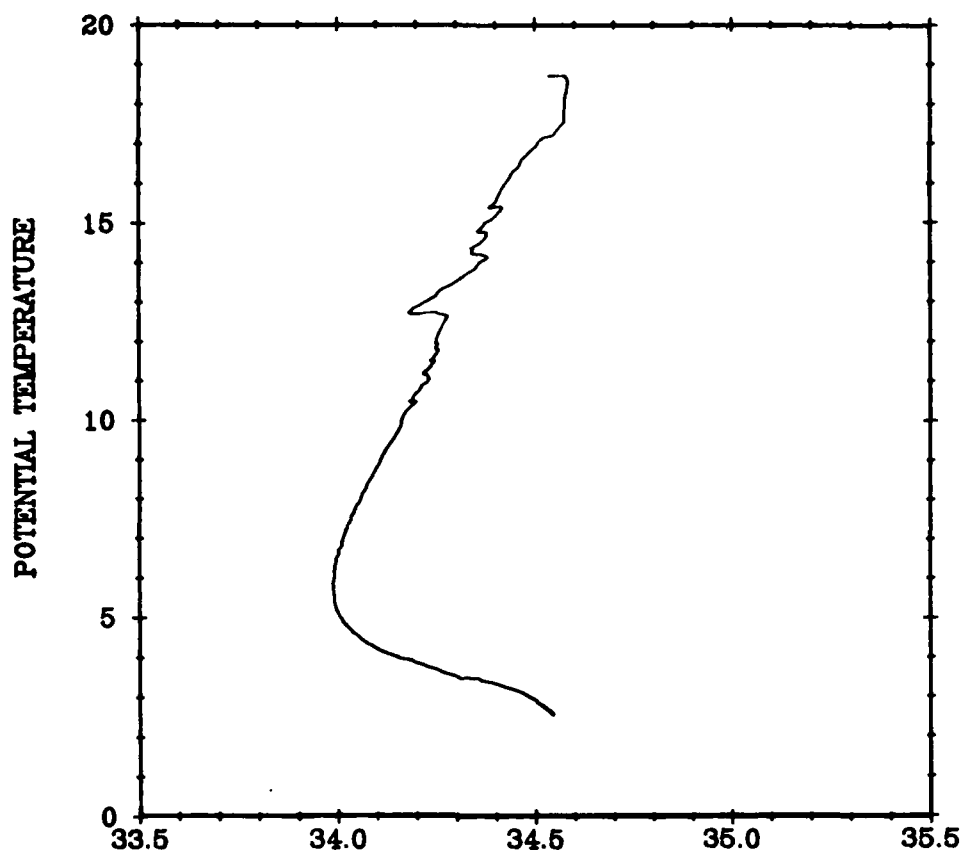


LATITUDE 1 12 1 5W LONGITUDE 1 12 1 5W START TIME 10:00 BOTTLE 10:00 WIND 10:00 SPEED 10:00 AIR TEMP 10:00 NET WULB 10:00 BATH 10:00

## STD DATA

| DEPTH | PRESS   | TEMP   | SALINITY | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA 4 | DYNAMIC HT | DEPTH |
|-------|---------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| 10    | 10.000  | 14.556 | 34.556   | 14.556   | 24.740  | 33.256  | 41.146  | 10.000  | 10.000     | 10    |
| 20    | 19.996  | 14.553 | 34.553   | 14.553   | 24.751  | 33.259  | 41.147  | 19.996  | 19.996     | 20    |
| 30    | 29.992  | 14.549 | 34.549   | 14.549   | 24.762  | 33.264  | 41.151  | 29.992  | 29.992     | 30    |
| 40    | 39.988  | 14.545 | 34.545   | 14.545   | 24.773  | 33.269  | 41.155  | 39.988  | 39.988     | 40    |
| 50    | 49.984  | 14.541 | 34.541   | 14.541   | 24.784  | 33.274  | 41.159  | 49.984  | 49.984     | 50    |
| 60    | 59.980  | 14.537 | 34.537   | 14.537   | 24.795  | 33.279  | 41.163  | 59.980  | 59.980     | 60    |
| 70    | 69.976  | 14.533 | 34.533   | 14.533   | 24.806  | 33.284  | 41.167  | 69.976  | 69.976     | 70    |
| 80    | 79.972  | 14.529 | 34.529   | 14.529   | 24.817  | 33.289  | 41.171  | 79.972  | 79.972     | 80    |
| 90    | 89.968  | 14.525 | 34.525   | 14.525   | 24.828  | 33.294  | 41.175  | 89.968  | 89.968     | 90    |
| 100   | 99.964  | 14.521 | 34.521   | 14.521   | 24.839  | 33.299  | 41.179  | 99.964  | 99.964     | 100   |
| 110   | 109.960 | 14.517 | 34.517   | 14.517   | 24.850  | 33.304  | 41.183  | 109.960 | 109.960    | 110   |
| 120   | 119.956 | 14.513 | 34.513   | 14.513   | 24.861  | 33.309  | 41.187  | 119.956 | 119.956    | 120   |
| 130   | 129.952 | 14.509 | 34.509   | 14.509   | 24.872  | 33.314  | 41.191  | 129.952 | 129.952    | 130   |
| 140   | 139.948 | 14.505 | 34.505   | 14.505   | 24.883  | 33.319  | 41.195  | 139.948 | 139.948    | 140   |
| 150   | 149.944 | 14.501 | 34.501   | 14.501   | 24.894  | 33.324  | 41.199  | 149.944 | 149.944    | 150   |
| 160   | 159.940 | 14.497 | 34.497   | 14.497   | 24.905  | 33.329  | 41.203  | 159.940 | 159.940    | 160   |
| 170   | 169.936 | 14.493 | 34.493   | 14.493   | 24.916  | 33.334  | 41.207  | 169.936 | 169.936    | 170   |
| 180   | 179.932 | 14.489 | 34.489   | 14.489   | 24.927  | 33.339  | 41.211  | 179.932 | 179.932    | 180   |
| 190   | 189.928 | 14.485 | 34.485   | 14.485   | 24.938  | 33.344  | 41.215  | 189.928 | 189.928    | 190   |
| 200   | 199.924 | 14.481 | 34.481   | 14.481   | 24.949  | 33.349  | 41.219  | 199.924 | 199.924    | 200   |
| 210   | 209.920 | 14.477 | 34.477   | 14.477   | 24.960  | 33.354  | 41.223  | 209.920 | 209.920    | 210   |
| 220   | 219.916 | 14.473 | 34.473   | 14.473   | 24.971  | 33.359  | 41.227  | 219.916 | 219.916    | 220   |
| 230   | 229.912 | 14.469 | 34.469   | 14.469   | 24.982  | 33.364  | 41.231  | 229.912 | 229.912    | 230   |
| 240   | 239.908 | 14.465 | 34.465   | 14.465   | 24.993  | 33.369  | 41.235  | 239.908 | 239.908    | 240   |
| 250   | 249.904 | 14.461 | 34.461   | 14.461   | 25.004  | 33.374  | 41.239  | 249.904 | 249.904    | 250   |
| 260   | 259.900 | 14.457 | 34.457   | 14.457   | 25.015  | 33.379  | 41.243  | 259.900 | 259.900    | 260   |
| 270   | 269.896 | 14.453 | 34.453   | 14.453   | 25.026  | 33.384  | 41.247  | 269.896 | 269.896    | 270   |
| 280   | 279.892 | 14.449 | 34.449   | 14.449   | 25.037  | 33.389  | 41.251  | 279.892 | 279.892    | 280   |
| 290   | 289.888 | 14.445 | 34.445   | 14.445   | 25.048  | 33.394  | 41.255  | 289.888 | 289.888    | 290   |
| 300   | 299.884 | 14.441 | 34.441   | 14.441   | 25.059  | 33.399  | 41.259  | 299.884 | 299.884    | 300   |
| 310   | 309.880 | 14.437 | 34.437   | 14.437   | 25.070  | 33.404  | 41.263  | 309.880 | 309.880    | 310   |
| 320   | 319.876 | 14.433 | 34.433   | 14.433   | 25.081  | 33.409  | 41.267  | 319.876 | 319.876    | 320   |
| 330   | 329.872 | 14.429 | 34.429   | 14.429   | 25.092  | 33.414  | 41.271  | 329.872 | 329.872    | 330   |
| 340   | 339.868 | 14.425 | 34.425   | 14.425   | 25.103  | 33.419  | 41.275  | 339.868 | 339.868    | 340   |
| 350   | 349.864 | 14.421 | 34.421   | 14.421   | 25.114  | 33.424  | 41.279  | 349.864 | 349.864    | 350   |
| 360   | 359.860 | 14.417 | 34.417   | 14.417   | 25.125  | 33.429  | 41.283  | 359.860 | 359.860    | 360   |
| 370   | 369.856 | 14.413 | 34.413   | 14.413   | 25.136  | 33.434  | 41.287  | 369.856 | 369.856    | 370   |
| 380   | 379.852 | 14.409 | 34.409   | 14.409   | 25.147  | 33.439  | 41.291  | 379.852 | 379.852    | 380   |
| 390   | 389.848 | 14.405 | 34.405   | 14.405   | 25.158  | 33.444  | 41.295  | 389.848 | 389.848    | 390   |
| 400   | 399.844 | 14.401 | 34.401   | 14.401   | 25.169  | 33.449  | 41.299  | 399.844 | 399.844    | 400   |
| 410   | 409.840 | 14.397 | 34.397   | 14.397   | 25.180  | 33.454  | 41.303  | 409.840 | 409.840    | 410   |
| 420   | 419.836 | 14.393 | 34.393   | 14.393   | 25.191  | 33.459  | 41.307  | 419.836 | 419.836    | 420   |
| 430   | 429.832 | 14.389 | 34.389   | 14.389   | 25.202  | 33.464  | 41.311  | 429.832 | 429.832    | 430   |
| 440   | 439.828 | 14.385 | 34.385   | 14.385   | 25.213  | 33.469  | 41.315  | 439.828 | 439.828    | 440   |
| 450   | 449.824 | 14.381 | 34.381   | 14.381   | 25.224  | 33.474  | 41.319  | 449.824 | 449.824    | 450   |
| 460   | 459.820 | 14.377 | 34.377   | 14.377   | 25.235  | 33.479  | 41.323  | 459.820 | 459.820    | 460   |
| 470   | 469.816 | 14.373 | 34.373   | 14.373   | 25.246  | 33.484  | 41.327  | 469.816 | 469.816    | 470   |
| 480   | 479.812 | 14.369 | 34.369   | 14.369   | 25.257  | 33.489  | 41.331  | 479.812 | 479.812    | 480   |
| 490   | 489.808 | 14.365 | 34.365   | 14.365   | 25.268  | 33.494  | 41.335  | 489.808 | 489.808    | 490   |
| 500   | 499.804 | 14.361 | 34.361   | 14.361   | 25.279  | 33.499  | 41.339  | 499.804 | 499.804    | 500   |
| 510   | 509.800 | 14.357 | 34.357   | 14.357   | 25.290  | 33.504  | 41.343  | 509.800 | 509.800    | 510   |
| 520   | 519.796 | 14.353 | 34.353   | 14.353   | 25.301  | 33.509  | 41.347  | 519.796 | 519.796    | 520   |
| 530   | 529.792 | 14.349 | 34.349   | 14.349   | 25.312  | 33.514  | 41.351  | 529.792 | 529.792    | 530   |
| 540   | 539.788 | 14.345 | 34.345   | 14.345   | 25.323  | 33.519  | 41.355  | 539.788 | 539.788    | 540   |
| 550   | 549.784 | 14.341 | 34.341   | 14.341   | 25.334  | 33.524  | 41.359  | 549.784 | 549.784    | 550   |
| 560   | 559.780 | 14.337 | 34.337   | 14.337   | 25.345  | 33.529  | 41.363  | 559.780 | 559.780    | 560   |
| 570   | 569.776 | 14.333 | 34.333   | 14.333   | 25.356  | 33.534  | 41.367  | 569.776 | 569.776    | 570   |
| 580   | 579.772 | 14.329 | 34.329   | 14.329   | 25.367  | 33.539  | 41.371  | 579.772 | 579.772    | 580   |
| 590   | 589.768 | 14.325 | 34.325   | 14.325   | 25.378  | 33.544  | 41.375  | 589.768 | 589.768    | 590   |
| 600   | 599.764 | 14.321 | 34.321   | 14.321   | 25.389  | 33.549  | 41.379  | 599.764 | 599.764    | 600   |
| 610   | 609.760 | 14.317 | 34.317   | 14.317   | 25.400  | 33.554  | 41.383  | 609.760 | 609.760    | 610   |
| 620   | 619.756 | 14.313 | 34.313   | 14.313   | 25.411  | 33.559  | 41.387  | 619.756 | 619.756    | 620   |
| 630   | 629.752 | 14.309 | 34.309   | 14.309   | 25.422  | 33.564  | 41.391  | 629.752 | 629.752    | 630   |
| 640   | 639.748 | 14.305 | 34.305   | 14.305   | 25.433  | 33.569  | 41.395  | 639.748 | 639.748    | 640   |
| 650   | 649.744 | 14.301 | 34.301   | 14.301   | 25.444  | 33.574  | 41.399  | 649.744 | 649.744    | 650   |
| 660   | 659.740 | 14.297 | 34.297   | 14.297   | 25.455  | 33.579  | 41.403  | 659.740 | 659.740    | 660   |
| 670   | 669.736 | 14.293 | 34.293   | 14.293   | 25.466  | 33.584  | 41.407  | 669.736 | 669.736    | 670   |
| 680   | 679.732 | 14.289 | 34.289   | 14.289   | 25.477  | 33.589  | 41.411  | 679.732 | 679.732    | 680   |
| 690   | 689.728 | 14.285 | 34.285   | 14.285   | 25.488  | 33.594  | 41.415  | 689.728 | 689.728    | 690   |
| 700   | 699.724 | 14.281 | 34.281   | 14.281   | 25.499  | 33.599  | 41.419  | 699.724 | 699.724    | 700   |
| 710   | 709.720 | 14.277 | 34.277   | 14.277   | 25.510  | 33.604  | 41.423  | 709.720 | 709.720    | 710   |
| 720   | 719.716 | 14.273 | 34.273   | 14.273   | 25.521  | 33.609  | 41.427  | 719.716 | 719.716    | 720   |
| 730   | 729.712 | 14.269 | 34.269   | 14.269   | 25.532  | 33.614  | 41.431  | 729.712 | 729.712    | 730   |
| 740   | 739.708 | 14.265 | 34.265   | 14.265   | 25.543  | 33.619  | 41.435  | 739.708 | 739.708    | 740   |
| 750   | 749.704 | 14.261 | 34.261   | 14.261   | 25.554  | 33.624  | 41.439  | 749.704 | 749.704    | 750   |
| 760   | 759.700 | 14.257 | 34.257   | 14.257   | 25.565  | 33.629  | 41.443  | 759.700 | 759.700    | 760   |
| 770   | 769.696 | 14.253 | 34.253   | 14.253   | 25.576  | 33.634  | 41.447  | 769.696 | 769.696    | 770   |
| 780   | 779.692 | 14.249 | 34.249   | 14.249   | 25.587  | 33.639  | 41.451  | 779.692 | 779.692    | 780   |
| 790   | 789.688 | 14.245 | 34.245   | 14.245   | 25.598  | 33.644  | 41.455  | 789.688 | 789.688    | 790   |
| 800   | 799.684 | 14.241 | 34.241   | 14.241   | 25.609  | 33.649  | 41.459  | 799.684 | 799.684    | 800   |
| 810   | 809.680 | 14.237 | 34.237   | 14.237   | 25.620  | 33.654  | 41.463  | 809.680 | 809.680    | 810   |
| 820   | 819.676 | 14.233 | 34.233   | 14.233   | 25.631  | 33.659  | 41.467  | 819.676 | 819.676    | 820   |
| 830   | 829.672 | 14.229 | 34.229   | 14.229   | 25.642  | 33.664  | 41.471  | 829.672 | 829.672    | 830   |
| 840   | 839.668 | 14.225 | 34.225   | 14.225   | 25.653  | 33.669  | 41.475  | 839.668 | 839.668    | 840   |
| 850   | 849.664 | 14.221 | 34.221   | 14.221   | 25.664  | 33.674  | 41.479  | 849.664 | 849.664    | 850   |
| 860   | 859.660 | 14.217 | 34.217   | 14.217   | 25.675  | 33.679  | 41.483  | 859.660 | 859.660    | 860   |
| 870   | 869.656 | 14.213 | 34.213   | 14.213   | 25.686  | 33.684  | 41.487  | 869.656 | 869.656    | 870   |
| 880   | 879.652 | 14.209 | 34.209   | 14.209   | 25.697  | 33.689  | 41.491  | 879.652 | 879.652    | 880   |
| 890   | 889.648 | 14.205 | 34.205   | 14.205   | 25.708  | 33.694  | 41.495  | 889.648 | 889.648    | 890   |
| 900   | 899.644 | 14.201 | 34.201   | 14.201   | 25.719  | 33.699  | 41.499  | 899.644 | 899.644    | 900   |
| 910   | 909.640 | 14.197 | 34.197   | 14.197   | 25.730  | 33.704  | 41.503  | 909.640 | 909.640    | 910   |
| 920   | 919.636 | 14.193 | 34.193   | 14.193   | 25.741  | 33.709  | 41.507  | 919.636 | 919.636    | 920   |
| 930   | 929.632 | 14.189 | 34.189   | 14.189   | 25.752  | 33.714  | 41.511  | 929.632 | 929.632    | 930   |
| 940   | 939.628 | 14.185 | 34.185   | 14.185   | 25.763  | 33.719  | 41.515  | 939.628 | 939.628    | 940   |
| 950   | 949.624 | 14.181 | 34.181   | 14.181   | 25.774  | 33.724  | 41.519  | 949.624 | 949.624    | 950   |
| 960   | 959.620 | 14.177 | 34.177   | 14.177   | 25.785  | 33.729  | 41.523  | 959.620 | 959.620    | 960   |
| 970   | 969.616 | 14.173 | 34.173   | 14.173   | 25.796  | 33.734  | 41.527  | 969.616 | 969.616    | 970   |
| 980   | 979.612 | 14.169 | 34.169   | 14.169   | 25.807  | 33.739  | 41.531  | 979.612 | 979.612    | 980   |
| 990   | 989.608 | 14.165 | 3        |          |         |         |         |         |            |       |

# MARATHON 2 STA. 33

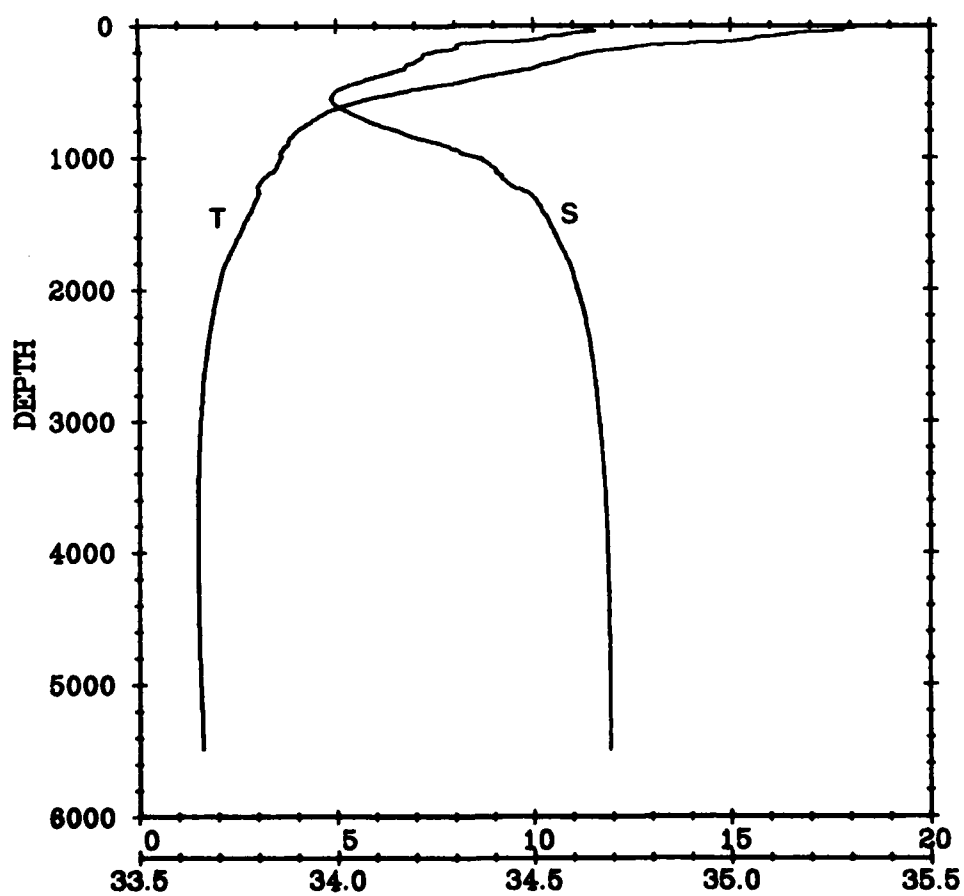
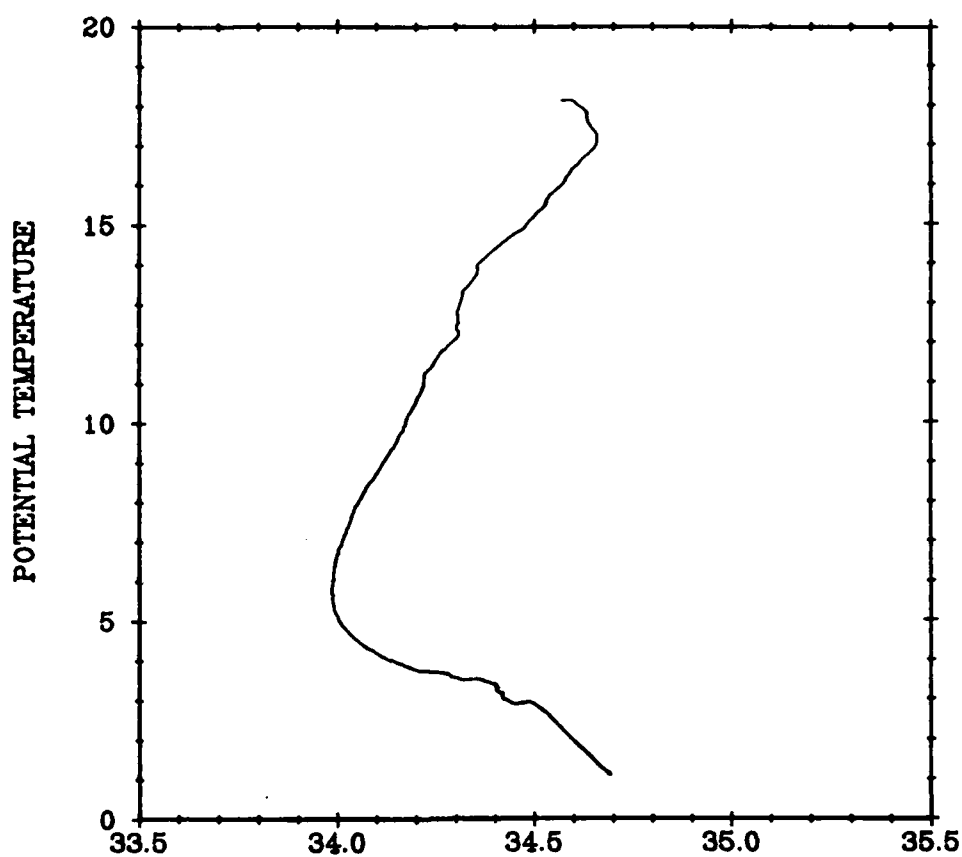


| LATITUDE | LONGITUDE | MO | DAY | HR | START TIME | BUTCH | WIND | SPEED | AIR TEMP | WET BULB | PAR M |
|----------|-----------|----|-----|----|------------|-------|------|-------|----------|----------|-------|
| 14 4 34  | 112 2 27  | 11 | 84  |    | 1212       | 1413  | 117  | 3     | 18.1     | 18.0     | 1220  |

## STD DATA

| PRESS    | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 1 | SIGMA 2 | SIGMA 3 | SIGMA 4 | SIGMA 5 | WIND | SPEED | AIR TEMP | WET BULB | PAR M |
|----------|--------|----------|----------|---------|---------|---------|---------|---------|---------|------|-------|----------|----------|-------|
| DB       | DEG C  |          | DEG C    |         |         |         |         |         |         | DIR  | KT    | DEG C    | DEG C    | 1000  |
| 18.129   | 14.730 | 34.930   | 18.129   | 24.930  | 24.930  | 24.930  | 24.930  | 24.930  | 24.930  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 20.177   | 14.742 | 34.924   | 17.989   | 25.012  | 25.012  | 25.012  | 25.012  | 25.012  | 25.012  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 40.177   | 14.744 | 34.940   | 17.447   | 25.113  | 25.113  | 25.113  | 25.113  | 25.113  | 25.113  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 60.165   | 14.743 | 34.931   | 16.583   | 25.122  | 25.122  | 25.122  | 25.122  | 25.122  | 25.122  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 80.165   | 14.744 | 34.939   | 15.931   | 25.125  | 25.125  | 25.125  | 25.125  | 25.125  | 25.125  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 100.165  | 14.743 | 34.923   | 15.484   | 25.128  | 25.128  | 25.128  | 25.128  | 25.128  | 25.128  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 120.165  | 14.743 | 34.913   | 15.051   | 25.131  | 25.131  | 25.131  | 25.131  | 25.131  | 25.131  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 140.165  | 14.743 | 34.905   | 14.626   | 25.132  | 25.132  | 25.132  | 25.132  | 25.132  | 25.132  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 160.165  | 14.743 | 34.897   | 14.201   | 25.133  | 25.133  | 25.133  | 25.133  | 25.133  | 25.133  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 180.165  | 14.743 | 34.889   | 13.776   | 25.134  | 25.134  | 25.134  | 25.134  | 25.134  | 25.134  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 200.165  | 14.743 | 34.881   | 13.351   | 25.135  | 25.135  | 25.135  | 25.135  | 25.135  | 25.135  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 220.165  | 14.743 | 34.873   | 12.926   | 25.136  | 25.136  | 25.136  | 25.136  | 25.136  | 25.136  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 240.165  | 14.743 | 34.865   | 12.501   | 25.137  | 25.137  | 25.137  | 25.137  | 25.137  | 25.137  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 260.165  | 14.743 | 34.857   | 12.076   | 25.138  | 25.138  | 25.138  | 25.138  | 25.138  | 25.138  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 280.165  | 14.743 | 34.849   | 11.651   | 25.139  | 25.139  | 25.139  | 25.139  | 25.139  | 25.139  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 300.165  | 14.743 | 34.841   | 11.226   | 25.140  | 25.140  | 25.140  | 25.140  | 25.140  | 25.140  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 320.165  | 14.743 | 34.833   | 10.801   | 25.141  | 25.141  | 25.141  | 25.141  | 25.141  | 25.141  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 340.165  | 14.743 | 34.825   | 10.376   | 25.142  | 25.142  | 25.142  | 25.142  | 25.142  | 25.142  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 360.165  | 14.743 | 34.817   | 9.951    | 25.143  | 25.143  | 25.143  | 25.143  | 25.143  | 25.143  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 380.165  | 14.743 | 34.809   | 9.526    | 25.144  | 25.144  | 25.144  | 25.144  | 25.144  | 25.144  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 400.165  | 14.743 | 34.801   | 9.101    | 25.145  | 25.145  | 25.145  | 25.145  | 25.145  | 25.145  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 420.165  | 14.743 | 34.793   | 8.676    | 25.146  | 25.146  | 25.146  | 25.146  | 25.146  | 25.146  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 440.165  | 14.743 | 34.785   | 8.251    | 25.147  | 25.147  | 25.147  | 25.147  | 25.147  | 25.147  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 460.165  | 14.743 | 34.777   | 7.826    | 25.148  | 25.148  | 25.148  | 25.148  | 25.148  | 25.148  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 480.165  | 14.743 | 34.769   | 7.401    | 25.149  | 25.149  | 25.149  | 25.149  | 25.149  | 25.149  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 500.165  | 14.743 | 34.761   | 6.976    | 25.150  | 25.150  | 25.150  | 25.150  | 25.150  | 25.150  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 520.165  | 14.743 | 34.753   | 6.551    | 25.151  | 25.151  | 25.151  | 25.151  | 25.151  | 25.151  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 540.165  | 14.743 | 34.745   | 6.126    | 25.152  | 25.152  | 25.152  | 25.152  | 25.152  | 25.152  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 560.165  | 14.743 | 34.737   | 5.701    | 25.153  | 25.153  | 25.153  | 25.153  | 25.153  | 25.153  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 580.165  | 14.743 | 34.729   | 5.276    | 25.154  | 25.154  | 25.154  | 25.154  | 25.154  | 25.154  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 600.165  | 14.743 | 34.721   | 4.851    | 25.155  | 25.155  | 25.155  | 25.155  | 25.155  | 25.155  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 620.165  | 14.743 | 34.713   | 4.426    | 25.156  | 25.156  | 25.156  | 25.156  | 25.156  | 25.156  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 640.165  | 14.743 | 34.705   | 4.001    | 25.157  | 25.157  | 25.157  | 25.157  | 25.157  | 25.157  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 660.165  | 14.743 | 34.697   | 3.576    | 25.158  | 25.158  | 25.158  | 25.158  | 25.158  | 25.158  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 680.165  | 14.743 | 34.689   | 3.151    | 25.159  | 25.159  | 25.159  | 25.159  | 25.159  | 25.159  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 700.165  | 14.743 | 34.681   | 2.726    | 25.160  | 25.160  | 25.160  | 25.160  | 25.160  | 25.160  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 720.165  | 14.743 | 34.673   | 2.301    | 25.161  | 25.161  | 25.161  | 25.161  | 25.161  | 25.161  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 740.165  | 14.743 | 34.665   | 1.876    | 25.162  | 25.162  | 25.162  | 25.162  | 25.162  | 25.162  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 760.165  | 14.743 | 34.657   | 1.451    | 25.163  | 25.163  | 25.163  | 25.163  | 25.163  | 25.163  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 780.165  | 14.743 | 34.649   | 1.026    | 25.164  | 25.164  | 25.164  | 25.164  | 25.164  | 25.164  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 800.165  | 14.743 | 34.641   | 0.601    | 25.165  | 25.165  | 25.165  | 25.165  | 25.165  | 25.165  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 820.165  | 14.743 | 34.633   | 0.176    | 25.166  | 25.166  | 25.166  | 25.166  | 25.166  | 25.166  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 840.165  | 14.743 | 34.625   | -0.249   | 25.167  | 25.167  | 25.167  | 25.167  | 25.167  | 25.167  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 860.165  | 14.743 | 34.617   | -0.674   | 25.168  | 25.168  | 25.168  | 25.168  | 25.168  | 25.168  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 880.165  | 14.743 | 34.609   | -1.099   | 25.169  | 25.169  | 25.169  | 25.169  | 25.169  | 25.169  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 900.165  | 14.743 | 34.601   | -1.524   | 25.170  | 25.170  | 25.170  | 25.170  | 25.170  | 25.170  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 920.165  | 14.743 | 34.593   | -1.949   | 25.171  | 25.171  | 25.171  | 25.171  | 25.171  | 25.171  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 940.165  | 14.743 | 34.585   | -2.374   | 25.172  | 25.172  | 25.172  | 25.172  | 25.172  | 25.172  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 960.165  | 14.743 | 34.577   | -2.799   | 25.173  | 25.173  | 25.173  | 25.173  | 25.173  | 25.173  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 980.165  | 14.743 | 34.569   | -3.224   | 25.174  | 25.174  | 25.174  | 25.174  | 25.174  | 25.174  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1000.165 | 14.743 | 34.561   | -3.649   | 25.175  | 25.175  | 25.175  | 25.175  | 25.175  | 25.175  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1020.165 | 14.743 | 34.553   | -4.074   | 25.176  | 25.176  | 25.176  | 25.176  | 25.176  | 25.176  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1040.165 | 14.743 | 34.545   | -4.499   | 25.177  | 25.177  | 25.177  | 25.177  | 25.177  | 25.177  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1060.165 | 14.743 | 34.537   | -4.924   | 25.178  | 25.178  | 25.178  | 25.178  | 25.178  | 25.178  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1080.165 | 14.743 | 34.529   | -5.349   | 25.179  | 25.179  | 25.179  | 25.179  | 25.179  | 25.179  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1100.165 | 14.743 | 34.521   | -5.774   | 25.180  | 25.180  | 25.180  | 25.180  | 25.180  | 25.180  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1120.165 | 14.743 | 34.513   | -6.199   | 25.181  | 25.181  | 25.181  | 25.181  | 25.181  | 25.181  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1140.165 | 14.743 | 34.505   | -6.624   | 25.182  | 25.182  | 25.182  | 25.182  | 25.182  | 25.182  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1160.165 | 14.743 | 34.497   | -7.049   | 25.183  | 25.183  | 25.183  | 25.183  | 25.183  | 25.183  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1180.165 | 14.743 | 34.489   | -7.474   | 25.184  | 25.184  | 25.184  | 25.184  | 25.184  | 25.184  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1200.165 | 14.743 | 34.481   | -7.899   | 25.185  | 25.185  | 25.185  | 25.185  | 25.185  | 25.185  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1220.165 | 14.743 | 34.473   | -8.324   | 25.186  | 25.186  | 25.186  | 25.186  | 25.186  | 25.186  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1240.165 | 14.743 | 34.465   | -8.749   | 25.187  | 25.187  | 25.187  | 25.187  | 25.187  | 25.187  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1260.165 | 14.743 | 34.457   | -9.174   | 25.188  | 25.188  | 25.188  | 25.188  | 25.188  | 25.188  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1280.165 | 14.743 | 34.449   | -9.599   | 25.189  | 25.189  | 25.189  | 25.189  | 25.189  | 25.189  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1300.165 | 14.743 | 34.441   | -10.024  | 25.190  | 25.190  | 25.190  | 25.190  | 25.190  | 25.190  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1320.165 | 14.743 | 34.433   | -10.449  | 25.191  | 25.191  | 25.191  | 25.191  | 25.191  | 25.191  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1340.165 | 14.743 | 34.425   | -10.874  | 25.192  | 25.192  | 25.192  | 25.192  | 25.192  | 25.192  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1360.165 | 14.743 | 34.417   | -11.299  | 25.193  | 25.193  | 25.193  | 25.193  | 25.193  | 25.193  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1380.165 | 14.743 | 34.409   | -11.724  | 25.194  | 25.194  | 25.194  | 25.194  | 25.194  | 25.194  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1400.165 | 14.743 | 34.401   | -12.149  | 25.195  | 25.195  | 25.195  | 25.195  | 25.195  | 25.195  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1420.165 | 14.743 | 34.393   | -12.574  | 25.196  | 25.196  | 25.196  | 25.196  | 25.196  | 25.196  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1440.165 | 14.743 | 34.385   | -12.999  | 25.197  | 25.197  | 25.197  | 25.197  | 25.197  | 25.197  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1460.165 | 14.743 | 34.377   | -13.424  | 25.198  | 25.198  | 25.198  | 25.198  | 25.198  | 25.198  | 117  | 3     | 18.1     | 18.0     | 1220  |
| 1480.165 | 14.743 | 34.369   | -13.849  | 25.199  | 25.199  | 25.199  | 25.199  | 25.199  | 25.199  | 117  | 3     | 18.1     | 18.0     | 1220  |

# MARATHON 2 STA. 34



LATITUDE 34 42 N LONGITUDE 122 15 W MO. DY. YR. 10 10 84 START TIME 1454 BOTTLE NO. 45 WIND 140 SPEED 15 AIR TEMP 56.0 SURF WIND DIR 190 SURF WIND S 120

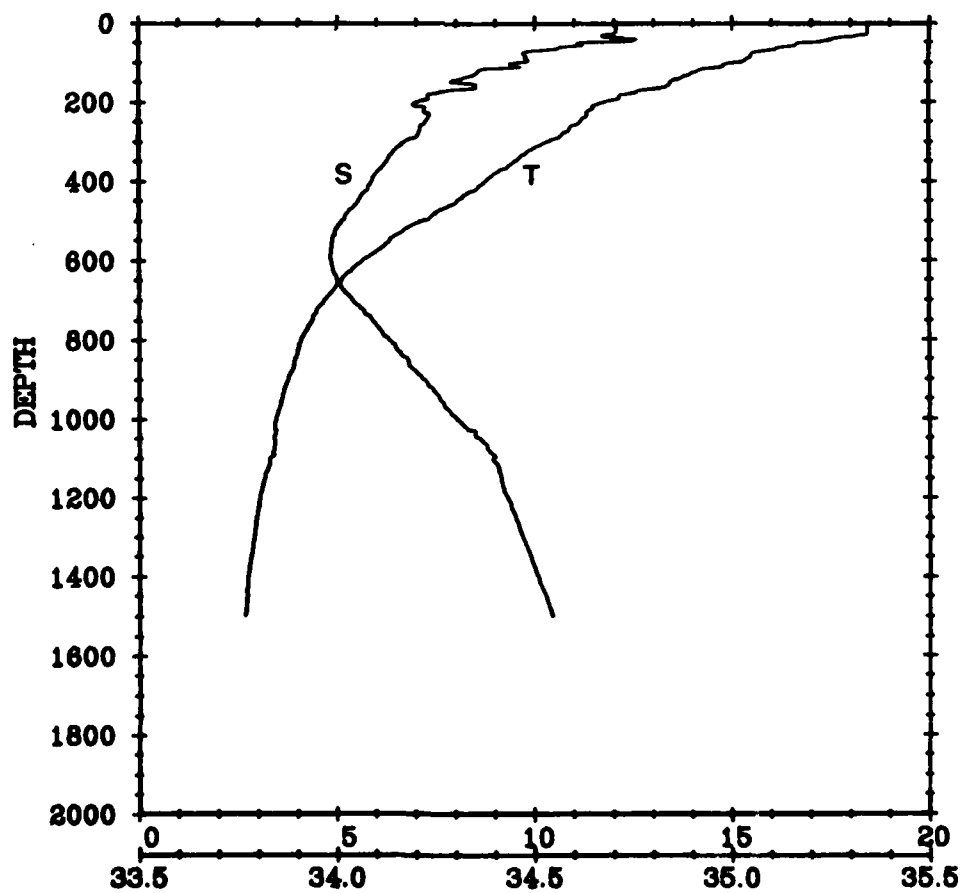
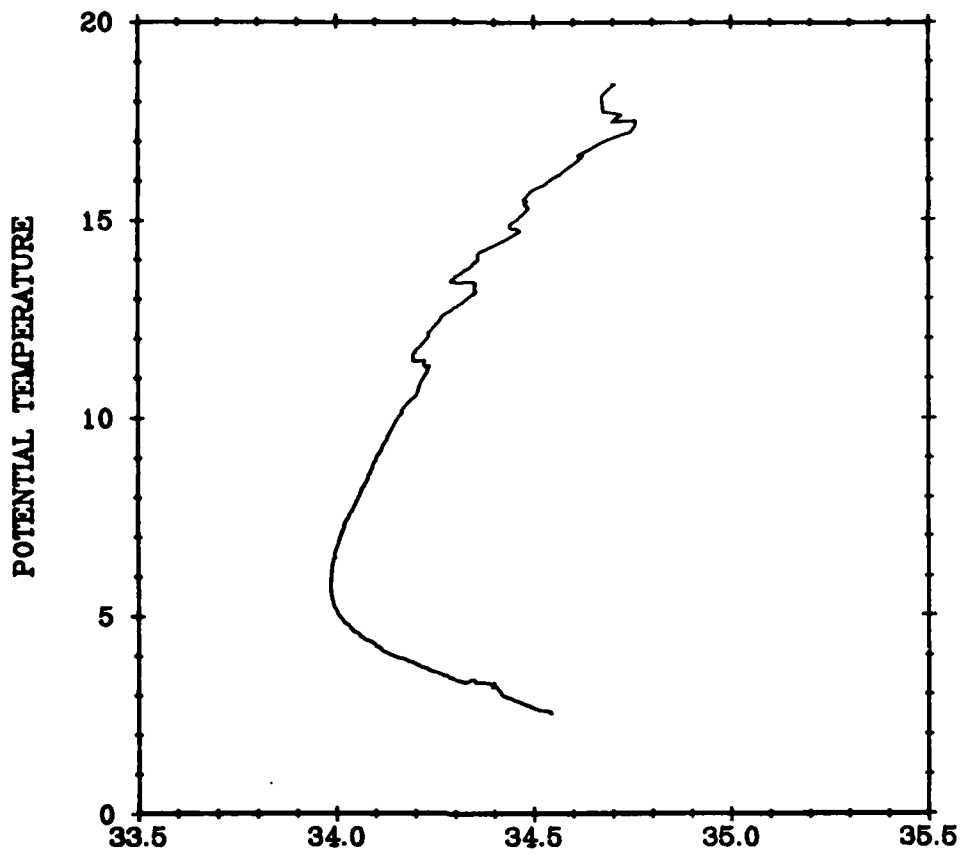
TO DATA

| DEPTH<br>M | TEMP<br>DEG C | SALINITY | POT TEMP<br>DEG C | SIGMA  | SIGMA 2 | SIGMA 4 | TA      | DYNAMIC HT | DEPTH<br>M |
|------------|---------------|----------|-------------------|--------|---------|---------|---------|------------|------------|
| 0          | 18.427        | 34.702   | 18.427            | 24.939 | 33.442  | 41.549  | 100.54  |            | 0          |
| 10         | 18.339        | 34.702   | 18.385            | 24.944 | 33.473  | 41.541  | 100.101 |            | 10         |
| 20         | 17.549        | 34.702   | 17.561            | 25.032 | 33.483  | 41.545  | 280.647 |            | 20         |
| 30         | 16.337        | 34.687   | 16.343            | 25.132 | 33.426  | 41.529  | 243.252 |            | 30         |
| 40         | 15.339        | 34.485   | 15.345            | 25.431 | 33.359  | 41.509  | 254.024 |            | 40         |
| 50         | 14.556        | 34.452   | 14.561            | 25.547 | 33.349  | 41.494  | 243.848 |            | 50         |
| 60         | 13.473        | 34.324   | 13.472            | 25.774 | 33.456  | 41.559  | 220.407 |            | 60         |
| 70         | 12.917        | 34.212   | 12.921            | 26.019 | 33.567  | 41.613  | 202.457 |            | 70         |
| 80         | 12.141        | 34.225   | 12.142            | 26.153 | 33.628  | 41.614  | 190.198 |            | 80         |
| 90         | 11.377        | 34.180   | 11.375            | 26.255 | 33.663  | 41.635  | 182.104 |            | 90         |
| 100        | 10.511        | 34.127   | 10.514            | 26.338 | 33.674  | 41.661  | 173.101 |            | 100        |
| 110        | 9.756         | 34.189   | 9.752             | 26.447 | 33.625  | 41.617  | 165.024 |            | 110        |
| 120        | 9.059         | 34.175   | 9.053             | 26.511 | 33.442  | 41.541  | 157.472 |            | 120        |
| 130        | 8.254         | 34.117   | 8.258             | 26.656 | 33.545  | 41.519  | 149.784 |            | 130        |
| 140        | 7.514         | 34.085   | 7.513             | 26.792 | 33.825  | 41.634  | 132.201 |            | 140        |
| 150        | 6.747         | 34.114   | 6.755             | 26.911 | 36.022  | 44.591  | 115.44  |            | 150        |
| 160        | 6.019         | 34.128   | 6.029             | 27.088 | 36.190  | 44.687  | 107.798 |            | 160        |
| 170        | 5.269         | 34.214   | 5.274             | 27.191 | 36.110  | 44.722  | 94.601  |            | 170        |
| 180        | 4.450         | 34.297   | 4.459             | 27.288 | 36.422  | 44.748  | 85.561  |            | 180        |
| 190        | 3.547         | 34.194   | 3.564             | 27.377 | 36.315  | 44.746  | 77.742  |            | 190        |
| 200        | 2.598         | 34.427   | 2.594             | 27.432 | 36.585  | 44.713  | 72.473  |            | 200        |
| 210        | 2.291         | 34.466   | 2.301             | 27.477 | 36.639  | 44.733  | 68.714  |            | 210        |
| 220        | 2.141         | 34.501   | 2.149             | 27.522 | 36.690  | 44.741  | 64.631  |            | 220        |
| 230        | 2.062         | 34.540   | 2.058             | 27.557 | 36.731  | 44.735  | 61.619  |            | 230        |
| 240        | 2.437         | 34.544   | 2.432             | 27.563 | 36.738  | 44.704  | 61.058  |            | 240        |

WISKIN BOTTLE DATA

| DEPTH<br>M | TEMP<br>DEG C | SALINITY | DIC 02<br>ML/L | 02 SAT<br>% | SIO3<br>UM/L | P04<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUPIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|------------|---------------|----------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| 0          | 18.339        | 34.702   | 5.49           | 103.2       | 3.7          | 0.10        | 0.1         | 0.10        | 18.589        | 24.937            | 33.414  | 41.544  |         | 0           |
| 10         | 16.913        | 34.701   | 5.71           | 104.1       | 3.7          | 0.10        | 0.1         | 0.10        | 16.928        | 25.103            | 33.856  | 42.109  |         | 51          |
| 20         | 14.924        | 34.447   | 5.72           | 100.1       | 4.5          | 0.22        | 0.8         | 0.46        | 14.909        | 25.366            | 34.192  | 42.444  |         | 111         |
| 30         | 13.630        | 34.326   | 5.59           | 95.3        | 5.9          | 0.39        | 4.0         | 0.03        | 13.661        | 25.737            | 34.411  | 42.757  |         | 174         |
| 40         | 12.922        | 34.320   | 5.40           | 90.6        | 8.5          | 0.56        | 7.0         | 0.02        | 12.999        | 25.887            | 34.390  | 42.913  |         | 237         |
| 50         | 11.973        | 34.323   | 5.52           | 90.5        | 9.8          | 0.67        | 8.7         | 0.01        | 11.947        | 26.015            | 34.750  | 43.104  |         | 301         |
| 60         | 11.115        | 34.226   | 5.50           | 88.7        | 13.0         | 0.79        | 10.9        | 0.01        | 11.094        | 26.156            | 34.932  | 43.324  |         | 350         |
| 70         | 10.431        | 34.189   | 5.34           | 84.9        | 16.2         | 0.92        | 13.1        | 0.01        | 10.448        | 26.242            | 35.046  | 43.450  |         | 400         |
| 80         | 9.816         | 34.191   | 4.50           | 77.4        | 27.8         | 1.35        | 19.7        | 0.01        | 9.763         | 26.444            | 35.321  | 43.877  |         | 451         |
| 90         | 9.157         | 34.121   | 4.03           | 73.7        | 41.3         | 1.73        | 24.9        | 0.01        | 9.109         | 26.605            | 35.549  | 44.048  |         | 500         |
| 100        | 8.546         | 33.995   | 2.85           | 40.6        | 63.5         | 2.29        | 32.8        | 0.01        | 8.715         | 26.787            | 35.807  | 44.428  |         | 550         |
| 110        | 8.059         | 34.042   | 1.59           | 22.1        | 88.4         | 2.75        | 39.5        | 0.00        | 8.614         | 26.959            | 36.033  | 44.714  |         | 600         |
| 120        | 4.100         | 34.129   | 0.89           | 12.2        | 175.8        | 2.99        | 42.7        | 0.00        | 4.040         | 27.089            | 36.191  | 44.899  |         | 650         |
| 130        | 3.795         | 34.206   | 0.54           | 7.3         | 119.6        | 3.09        | 44.1        | 0.00        | 3.720         | 27.183            | 36.300  | 45.012  |         | 702         |
| 140        | 3.450         | 34.299   | 0.30           | 4.0         | 132.1        | 3.15        | 45.1        | 0.00        | 3.379         | 27.290            | 36.424  | 45.152  |         | 750         |
| 150        | 2.943         | 34.452   | 0.32           | 4.3         | 150.5        |             | 45.4        | 0.00        | 2.956         | 27.461            | 36.620  | 45.311  |         | 1257        |
| 160        | 2.635         | 34.544   | 0.95           | 12.7        | 155.0        | 3.04        | 43.8        | 0.00        | 2.530         | 27.563            | 36.738  | 45.504  |         | 1510        |

# MARATHON 2 STA. 35

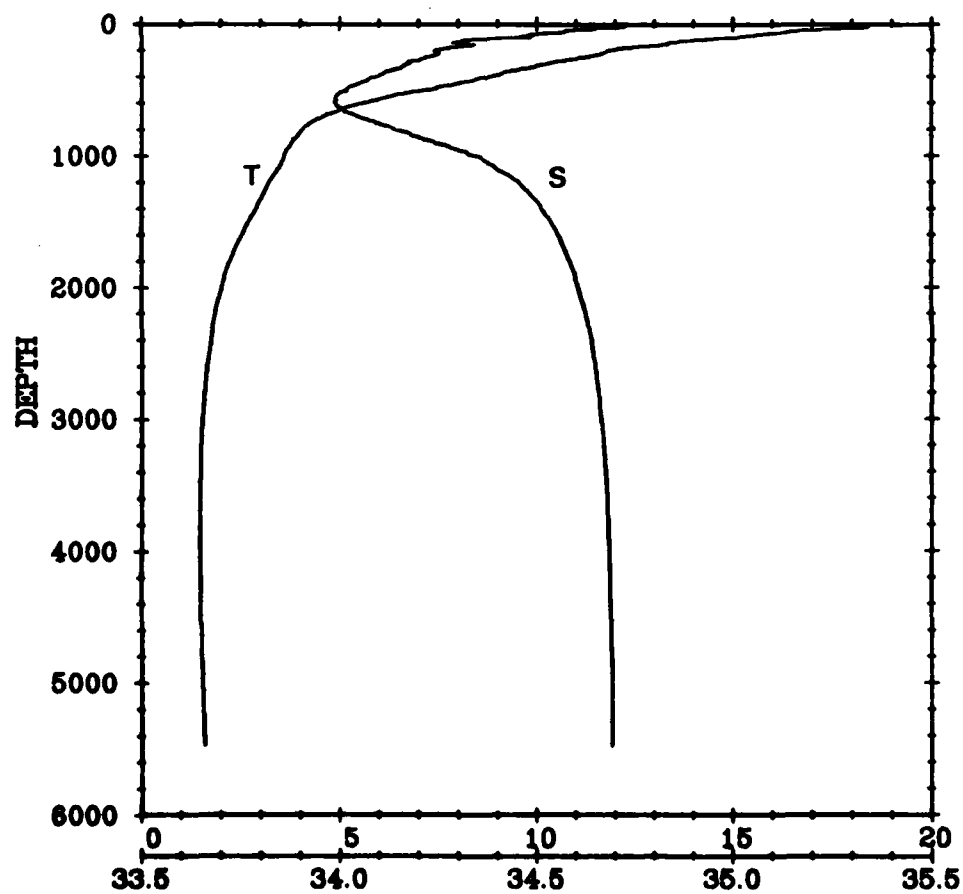
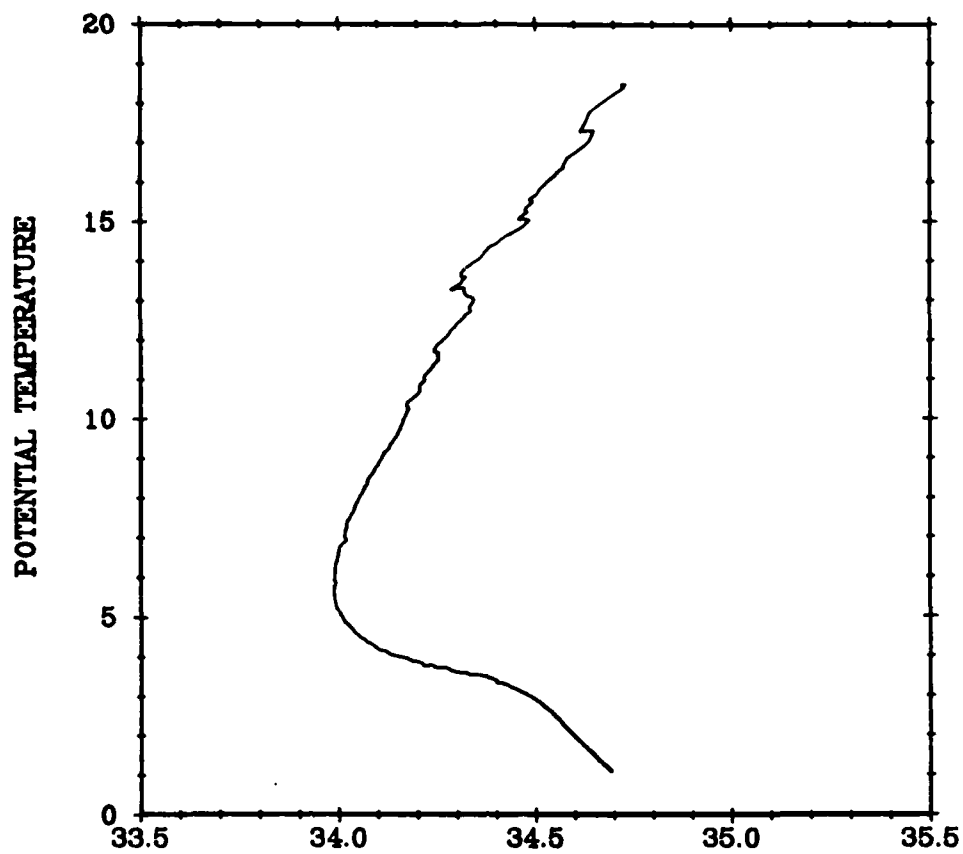


NO. 1 THOMAS W. WINN, JR. MARATHON 195-11 STATION 11

LATITUDE 11 00 00 N LONGITUDE 158 00 00 W MO. BY VR START TIME 11 00 00 RSTOM 11 00 WIND 11 00 SPEED 11 00 AIR TEMP 11 00 WET BULB 11 00 BAROM 11 00

| DEPTH  | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 1 | SIGMA 2 | SIGMA 3 | SIGMA 4 | SIGMA 5 | DYNAMIC HT | DEPTH |
|--------|--------|----------|----------|---------|---------|---------|---------|---------|---------|------------|-------|
| 0.0    | 18.459 | 34.724   | 24.948   | 24.948  | 33.407  | 41.594  | 289.104 | 1.001   |         |            | 1     |
| 10.0   | 18.312 | 34.721   | 24.949   | 24.958  | 33.403  | 41.610  | 288.715 | 1.001   |         |            | 19    |
| 20.0   | 18.165 | 34.718   | 24.950   | 24.962  | 33.397  | 41.624  | 288.326 | 1.001   |         |            | 39    |
| 30.0   | 18.018 | 34.715   | 24.951   | 24.965  | 33.391  | 41.638  | 287.937 | 1.001   |         |            | 59    |
| 40.0   | 17.871 | 34.712   | 24.952   | 24.968  | 33.385  | 41.652  | 287.548 | 1.001   |         |            | 79    |
| 50.0   | 17.724 | 34.709   | 24.953   | 24.971  | 33.379  | 41.666  | 287.159 | 1.001   |         |            | 99    |
| 60.0   | 17.577 | 34.706   | 24.954   | 24.974  | 33.373  | 41.680  | 286.770 | 1.001   |         |            | 119   |
| 70.0   | 17.430 | 34.703   | 24.955   | 24.977  | 33.367  | 41.694  | 286.381 | 1.001   |         |            | 139   |
| 80.0   | 17.283 | 34.700   | 24.956   | 24.980  | 33.361  | 41.708  | 285.992 | 1.001   |         |            | 159   |
| 90.0   | 17.136 | 34.697   | 24.957   | 24.983  | 33.355  | 41.722  | 285.603 | 1.001   |         |            | 179   |
| 100.0  | 16.989 | 34.694   | 24.958   | 24.986  | 33.349  | 41.736  | 285.214 | 1.001   |         |            | 199   |
| 110.0  | 16.842 | 34.691   | 24.959   | 24.989  | 33.343  | 41.750  | 284.825 | 1.001   |         |            | 219   |
| 120.0  | 16.695 | 34.688   | 24.960   | 24.992  | 33.337  | 41.764  | 284.436 | 1.001   |         |            | 239   |
| 130.0  | 16.548 | 34.685   | 24.961   | 24.995  | 33.331  | 41.778  | 284.047 | 1.001   |         |            | 259   |
| 140.0  | 16.401 | 34.682   | 24.962   | 24.998  | 33.325  | 41.792  | 283.658 | 1.001   |         |            | 279   |
| 150.0  | 16.254 | 34.679   | 24.963   | 25.001  | 33.319  | 41.806  | 283.269 | 1.001   |         |            | 299   |
| 160.0  | 16.107 | 34.676   | 24.964   | 25.004  | 33.313  | 41.820  | 282.880 | 1.001   |         |            | 319   |
| 170.0  | 15.960 | 34.673   | 24.965   | 25.007  | 33.307  | 41.834  | 282.491 | 1.001   |         |            | 339   |
| 180.0  | 15.813 | 34.670   | 24.966   | 25.010  | 33.301  | 41.848  | 282.102 | 1.001   |         |            | 359   |
| 190.0  | 15.666 | 34.667   | 24.967   | 25.013  | 33.295  | 41.862  | 281.713 | 1.001   |         |            | 379   |
| 200.0  | 15.519 | 34.664   | 24.968   | 25.016  | 33.289  | 41.876  | 281.324 | 1.001   |         |            | 399   |
| 210.0  | 15.372 | 34.661   | 24.969   | 25.019  | 33.283  | 41.890  | 280.935 | 1.001   |         |            | 419   |
| 220.0  | 15.225 | 34.658   | 24.970   | 25.022  | 33.277  | 41.904  | 280.546 | 1.001   |         |            | 439   |
| 230.0  | 15.078 | 34.655   | 24.971   | 25.025  | 33.271  | 41.918  | 280.157 | 1.001   |         |            | 459   |
| 240.0  | 14.931 | 34.652   | 24.972   | 25.028  | 33.265  | 41.932  | 279.768 | 1.001   |         |            | 479   |
| 250.0  | 14.784 | 34.649   | 24.973   | 25.031  | 33.259  | 41.946  | 279.379 | 1.001   |         |            | 499   |
| 260.0  | 14.637 | 34.646   | 24.974   | 25.034  | 33.253  | 41.960  | 278.990 | 1.001   |         |            | 519   |
| 270.0  | 14.490 | 34.643   | 24.975   | 25.037  | 33.247  | 41.974  | 278.601 | 1.001   |         |            | 539   |
| 280.0  | 14.343 | 34.640   | 24.976   | 25.040  | 33.241  | 41.988  | 278.212 | 1.001   |         |            | 559   |
| 290.0  | 14.196 | 34.637   | 24.977   | 25.043  | 33.235  | 41.999  | 277.823 | 1.001   |         |            | 579   |
| 300.0  | 14.049 | 34.634   | 24.978   | 25.046  | 33.229  | 42.013  | 277.434 | 1.001   |         |            | 599   |
| 310.0  | 13.902 | 34.631   | 24.979   | 25.049  | 33.223  | 42.027  | 277.045 | 1.001   |         |            | 619   |
| 320.0  | 13.755 | 34.628   | 24.980   | 25.052  | 33.217  | 42.041  | 276.656 | 1.001   |         |            | 639   |
| 330.0  | 13.608 | 34.625   | 24.981   | 25.055  | 33.211  | 42.055  | 276.267 | 1.001   |         |            | 659   |
| 340.0  | 13.461 | 34.622   | 24.982   | 25.058  | 33.205  | 42.069  | 275.878 | 1.001   |         |            | 679   |
| 350.0  | 13.314 | 34.619   | 24.983   | 25.061  | 33.199  | 42.083  | 275.489 | 1.001   |         |            | 699   |
| 360.0  | 13.167 | 34.616   | 24.984   | 25.064  | 33.193  | 42.097  | 275.100 | 1.001   |         |            | 719   |
| 370.0  | 13.020 | 34.613   | 24.985   | 25.067  | 33.187  | 42.111  | 274.711 | 1.001   |         |            | 739   |
| 380.0  | 12.873 | 34.610   | 24.986   | 25.070  | 33.181  | 42.125  | 274.322 | 1.001   |         |            | 759   |
| 390.0  | 12.726 | 34.607   | 24.987   | 25.073  | 33.175  | 42.139  | 273.933 | 1.001   |         |            | 779   |
| 400.0  | 12.579 | 34.604   | 24.988   | 25.076  | 33.169  | 42.153  | 273.544 | 1.001   |         |            | 799   |
| 410.0  | 12.432 | 34.601   | 24.989   | 25.079  | 33.163  | 42.167  | 273.155 | 1.001   |         |            | 819   |
| 420.0  | 12.285 | 34.598   | 24.990   | 25.082  | 33.157  | 42.181  | 272.766 | 1.001   |         |            | 839   |
| 430.0  | 12.138 | 34.595   | 24.991   | 25.085  | 33.151  | 42.195  | 272.377 | 1.001   |         |            | 859   |
| 440.0  | 11.991 | 34.592   | 24.992   | 25.088  | 33.145  | 42.209  | 271.988 | 1.001   |         |            | 879   |
| 450.0  | 11.844 | 34.589   | 24.993   | 25.091  | 33.139  | 42.223  | 271.599 | 1.001   |         |            | 899   |
| 460.0  | 11.697 | 34.586   | 24.994   | 25.094  | 33.133  | 42.237  | 271.210 | 1.001   |         |            | 919   |
| 470.0  | 11.550 | 34.583   | 24.995   | 25.097  | 33.127  | 42.251  | 270.821 | 1.001   |         |            | 939   |
| 480.0  | 11.403 | 34.580   | 24.996   | 25.100  | 33.121  | 42.265  | 270.432 | 1.001   |         |            | 959   |
| 490.0  | 11.256 | 34.577   | 24.997   | 25.103  | 33.115  | 42.279  | 270.043 | 1.001   |         |            | 979   |
| 500.0  | 11.109 | 34.574   | 24.998   | 25.106  | 33.109  | 42.293  | 269.654 | 1.001   |         |            | 999   |
| 510.0  | 10.962 | 34.571   | 24.999   | 25.109  | 33.103  | 42.307  | 269.265 | 1.001   |         |            | 1019  |
| 520.0  | 10.815 | 34.568   | 24.999   | 25.112  | 33.097  | 42.321  | 268.876 | 1.001   |         |            | 1039  |
| 530.0  | 10.668 | 34.565   | 24.999   | 25.115  | 33.091  | 42.335  | 268.487 | 1.001   |         |            | 1059  |
| 540.0  | 10.521 | 34.562   | 24.999   | 25.118  | 33.085  | 42.349  | 268.098 | 1.001   |         |            | 1079  |
| 550.0  | 10.374 | 34.559   | 24.999   | 25.121  | 33.079  | 42.363  | 267.709 | 1.001   |         |            | 1099  |
| 560.0  | 10.227 | 34.556   | 24.999   | 25.124  | 33.073  | 42.377  | 267.320 | 1.001   |         |            | 1119  |
| 570.0  | 10.080 | 34.553   | 24.999   | 25.127  | 33.067  | 42.391  | 266.931 | 1.001   |         |            | 1139  |
| 580.0  | 9.933  | 34.550   | 24.999   | 25.130  | 33.061  | 42.405  | 266.542 | 1.001   |         |            | 1159  |
| 590.0  | 9.786  | 34.547   | 24.999   | 25.133  | 33.055  | 42.419  | 266.153 | 1.001   |         |            | 1179  |
| 600.0  | 9.639  | 34.544   | 24.999   | 25.136  | 33.049  | 42.433  | 265.764 | 1.001   |         |            | 1199  |
| 610.0  | 9.492  | 34.541   | 24.999   | 25.139  | 33.043  | 42.447  | 265.375 | 1.001   |         |            | 1219  |
| 620.0  | 9.345  | 34.538   | 24.999   | 25.142  | 33.037  | 42.461  | 264.986 | 1.001   |         |            | 1239  |
| 630.0  | 9.198  | 34.535   | 24.999   | 25.145  | 33.031  | 42.475  | 264.597 | 1.001   |         |            | 1259  |
| 640.0  | 9.051  | 34.532   | 24.999   | 25.148  | 33.025  | 42.489  | 264.208 | 1.001   |         |            | 1279  |
| 650.0  | 8.904  | 34.529   | 24.999   | 25.151  | 33.019  | 42.503  | 263.819 | 1.001   |         |            | 1299  |
| 660.0  | 8.757  | 34.526   | 24.999   | 25.154  | 33.013  | 42.517  | 263.430 | 1.001   |         |            | 1319  |
| 670.0  | 8.610  | 34.523   | 24.999   | 25.157  | 33.007  | 42.531  | 263.041 | 1.001   |         |            | 1339  |
| 680.0  | 8.463  | 34.520   | 24.999   | 25.160  | 33.001  | 42.545  | 262.652 | 1.001   |         |            | 1359  |
| 690.0  | 8.316  | 34.517   | 24.999   | 25.163  | 32.995  | 42.559  | 262.263 | 1.001   |         |            | 1379  |
| 700.0  | 8.169  | 34.514   | 24.999   | 25.166  | 32.989  | 42.573  | 261.874 | 1.001   |         |            | 1399  |
| 710.0  | 8.022  | 34.511   | 24.999   | 25.169  | 32.983  | 42.587  | 261.485 | 1.001   |         |            | 1419  |
| 720.0  | 7.875  | 34.508   | 24.999   | 25.172  | 32.977  | 42.601  | 261.096 | 1.001   |         |            | 1439  |
| 730.0  | 7.728  | 34.505   | 24.999   | 25.175  | 32.971  | 42.615  | 260.707 | 1.001   |         |            | 1459  |
| 740.0  | 7.581  | 34.502   | 24.999   | 25.178  | 32.965  | 42.629  | 260.318 | 1.001   |         |            | 1479  |
| 750.0  | 7.434  | 34.499   | 24.999   | 25.181  | 32.959  | 42.643  | 259.929 | 1.001   |         |            | 1499  |
| 760.0  | 7.287  | 34.496   | 24.999   | 25.184  | 32.953  | 42.657  | 259.540 | 1.001   |         |            | 1519  |
| 770.0  | 7.140  | 34.493   | 24.999   | 25.187  | 32.947  | 42.671  | 259.151 | 1.001   |         |            | 1539  |
| 780.0  | 6.993  | 34.490   | 24.999   | 25.190  | 32.941  | 42.685  | 258.762 | 1.001   |         |            | 1559  |
| 790.0  | 6.846  | 34.487   | 24.999   | 25.193  | 32.935  | 42.699  | 258.373 | 1.001   |         |            | 1579  |
| 800.0  | 6.699  | 34.484   | 24.999   | 25.196  | 32.929  | 42.713  | 257.984 | 1.001   |         |            | 1599  |
| 810.0  | 6.552  | 34.481   | 24.999   | 25.199  | 32.923  | 42.727  | 257.595 | 1.001   |         |            | 1619  |
| 820.0  | 6.405  | 34.478   | 24.999   | 25.202  | 32.917  | 42.741  | 257.206 | 1.001   |         |            | 1639  |
| 830.0  | 6.258  | 34.475   | 24.999   | 25.205  | 32.911  | 42.755  | 256.817 | 1.001   |         |            | 1659  |
| 840.0  | 6.111  | 34.472   | 24.999   | 25.208  | 32.905  | 42.769  | 256.428 | 1.001   |         |            | 1679  |
| 850.0  | 5.964  | 34.469   | 24.999   | 25.211  | 32.899  | 42.783  | 256.039 | 1.001   |         |            | 1699  |
| 860.0  | 5.817  | 34.466   | 24.999   | 25.214  | 32.893  | 42.797  | 255.650 | 1.001   |         |            | 1719  |
| 870.0  | 5.670  | 34.463   | 24.999   | 25.217  | 32.887  | 42.811  | 255.261 | 1.001   |         |            | 1739  |
| 880.0  | 5.523  | 34.460   | 24.999   | 25.220  | 32.881  | 42.825  | 254.872 | 1.001   |         |            | 1759  |
| 890.0  | 5.376  | 34.457   | 24.999   | 25.223  | 32.875  | 42.839  | 254.483 | 1.001   |         |            | 1779  |
| 900.0  | 5.229  | 34.454   | 24.999   | 25.226  | 32.869  | 42.853  | 254.094 | 1.001   |         |            | 1799  |
| 910.0  | 5.082  | 34.451   | 24.999   | 25.229  | 32.863  | 42.867  | 253.705 | 1.001   |         |            | 1819  |
| 920.0  | 4.935  | 34.448   | 24.999   | 25.232  | 32.857  | 42.881  | 253.316 | 1.001   |         |            | 1839  |
| 930.0  | 4.788  | 34.445   | 24.999   | 25.235  | 32.851  | 42.895  | 252.927 | 1.001   |         |            | 1859  |
| 940.0  | 4.641  | 34.442   | 24.999   | 25.238  | 32.845  | 42.909  | 252.538 | 1.001   |         |            | 1879  |
| 950.0  | 4.494  | 34.439   | 24.999   | 25.241  | 32.839  | 42.923  | 252.149 | 1.001   |         |            | 1899  |
| 960.0  | 4.347  | 34.436   | 24.999   | 25.244  | 32.833  | 42.937  | 251.760 | 1.001   |         |            | 1919  |
| 970.0  | 4.200  | 34.433   | 24.999   | 25.247  | 32.827  | 42.951  | 251.371 | 1.001   |         |            | 1939  |
| 980.0  | 4.053  | 34.430   | 24.999   | 25.250  | 32.821  | 42.965  | 250.982 | 1.001   |         |            | 1959  |
| 990.0  | 3.906  | 34.427   | 24.999   | 25.253  | 32.815  | 42.979  | 250.593 | 1.001   |         |            | 1979  |
| 1000.0 | 3.759  | 34.424   | 24.999   | 25.256  | 32.809  | 42.993  |         |         |         |            |       |

# MARATHON 2 STA. 36



LATITUDE 14 10 00 N LONGITUDE 122 00 00 W WIND DIR 160 WIND SPEED 12 KTS AIR TEMP 24.4 C SURF TEMP 24.4 C SURF SAL 35.2

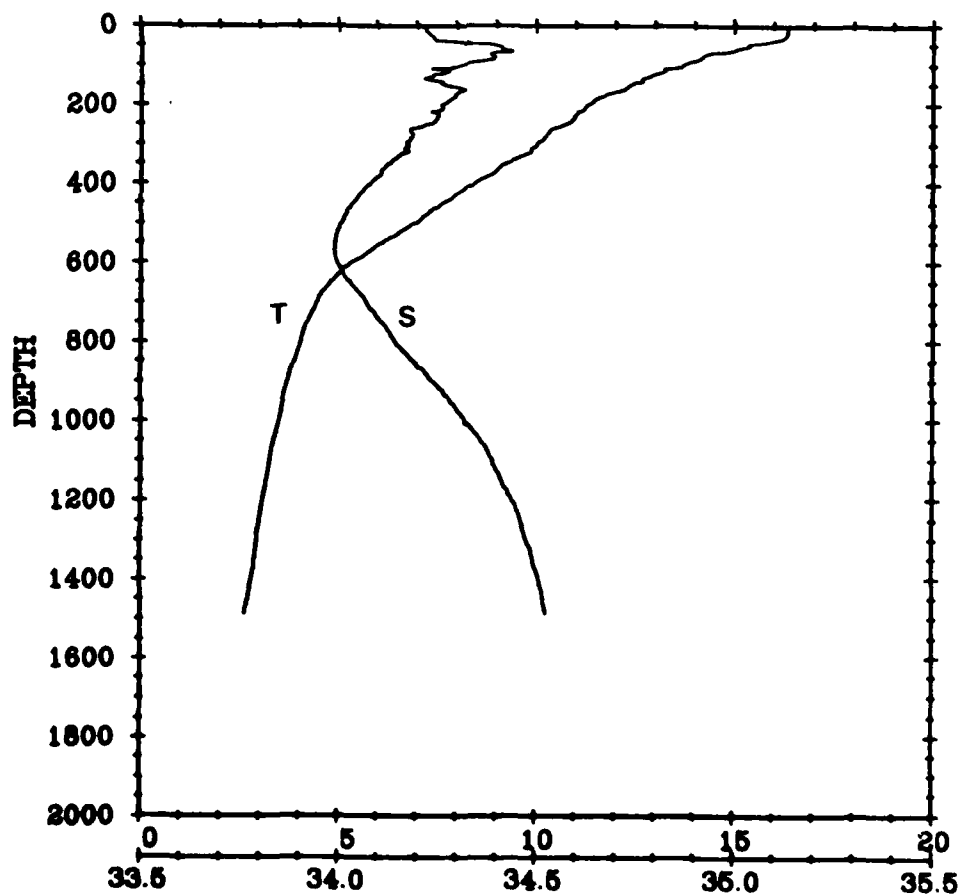
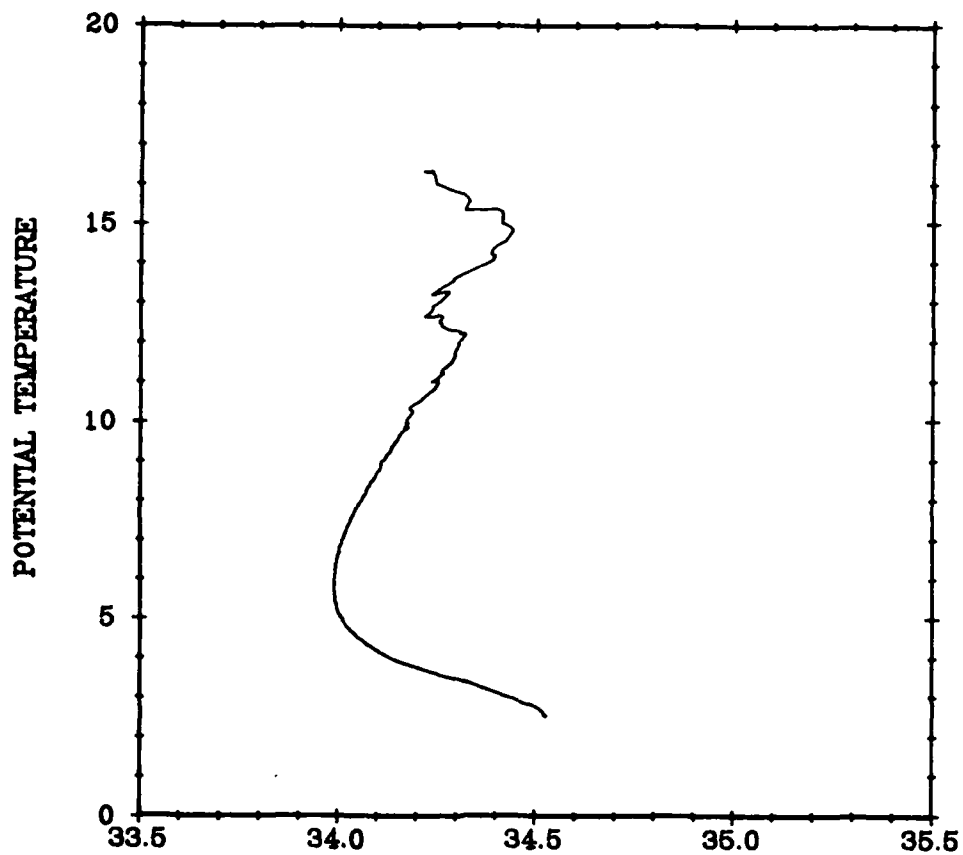
WTD DATA

| DEPTH<br>M | TEMP<br>C | SALINITY | POT TEMP<br>C | SIGMA T | SIGMA T | SIGMA T | SIGMA T | DYNAMIC HT<br>M | DEPTH<br>M |
|------------|-----------|----------|---------------|---------|---------|---------|---------|-----------------|------------|
| 0          | 24.4      | 35.2     | 25.11         | 25.174  | 33.651  | 41.861  | 19.148  | 1.00            | 0          |
| 10         | 24.3      | 35.2     | 25.107        | 25.185  | 33.663  | 41.873  | 19.111  | 1.00            | 10         |
| 20         | 24.2      | 35.2     | 25.104        | 25.196  | 33.674  | 41.884  | 19.074  | 1.00            | 20         |
| 30         | 24.1      | 35.2     | 25.101        | 25.207  | 33.685  | 41.895  | 19.037  | 1.00            | 30         |
| 40         | 24.0      | 35.2     | 25.098        | 25.218  | 33.696  | 41.906  | 18.999  | 1.00            | 40         |
| 50         | 23.9      | 35.2     | 25.095        | 25.229  | 33.707  | 41.917  | 18.962  | 1.00            | 50         |
| 60         | 23.8      | 35.2     | 25.092        | 25.240  | 33.718  | 41.928  | 18.924  | 1.00            | 60         |
| 70         | 23.7      | 35.2     | 25.089        | 25.251  | 33.729  | 41.939  | 18.887  | 1.00            | 70         |
| 80         | 23.6      | 35.2     | 25.086        | 25.262  | 33.740  | 41.950  | 18.849  | 1.00            | 80         |
| 90         | 23.5      | 35.2     | 25.083        | 25.273  | 33.751  | 41.961  | 18.812  | 1.00            | 90         |
| 100        | 23.4      | 35.2     | 25.080        | 25.284  | 33.762  | 41.972  | 18.774  | 1.00            | 100        |
| 110        | 23.3      | 35.2     | 25.077        | 25.295  | 33.773  | 41.983  | 18.737  | 1.00            | 110        |
| 120        | 23.2      | 35.2     | 25.074        | 25.306  | 33.784  | 41.994  | 18.699  | 1.00            | 120        |
| 130        | 23.1      | 35.2     | 25.071        | 25.317  | 33.795  | 42.005  | 18.662  | 1.00            | 130        |
| 140        | 23.0      | 35.2     | 25.068        | 25.328  | 33.806  | 42.016  | 18.624  | 1.00            | 140        |
| 150        | 22.9      | 35.2     | 25.065        | 25.339  | 33.817  | 42.027  | 18.587  | 1.00            | 150        |
| 160        | 22.8      | 35.2     | 25.062        | 25.350  | 33.828  | 42.038  | 18.549  | 1.00            | 160        |
| 170        | 22.7      | 35.2     | 25.059        | 25.361  | 33.839  | 42.049  | 18.512  | 1.00            | 170        |
| 180        | 22.6      | 35.2     | 25.056        | 25.372  | 33.850  | 42.060  | 18.474  | 1.00            | 180        |
| 190        | 22.5      | 35.2     | 25.053        | 25.383  | 33.861  | 42.071  | 18.437  | 1.00            | 190        |
| 200        | 22.4      | 35.2     | 25.050        | 25.394  | 33.872  | 42.082  | 18.399  | 1.00            | 200        |
| 210        | 22.3      | 35.2     | 25.047        | 25.405  | 33.883  | 42.093  | 18.362  | 1.00            | 210        |
| 220        | 22.2      | 35.2     | 25.044        | 25.416  | 33.894  | 42.104  | 18.324  | 1.00            | 220        |
| 230        | 22.1      | 35.2     | 25.041        | 25.427  | 33.905  | 42.115  | 18.287  | 1.00            | 230        |
| 240        | 22.0      | 35.2     | 25.038        | 25.438  | 33.916  | 42.126  | 18.249  | 1.00            | 240        |
| 250        | 21.9      | 35.2     | 25.035        | 25.449  | 33.927  | 42.137  | 18.212  | 1.00            | 250        |
| 260        | 21.8      | 35.2     | 25.032        | 25.460  | 33.938  | 42.148  | 18.174  | 1.00            | 260        |
| 270        | 21.7      | 35.2     | 25.029        | 25.471  | 33.949  | 42.159  | 18.137  | 1.00            | 270        |
| 280        | 21.6      | 35.2     | 25.026        | 25.482  | 33.960  | 42.170  | 18.099  | 1.00            | 280        |
| 290        | 21.5      | 35.2     | 25.023        | 25.493  | 33.971  | 42.181  | 18.062  | 1.00            | 290        |
| 300        | 21.4      | 35.2     | 25.020        | 25.504  | 33.982  | 42.192  | 18.024  | 1.00            | 300        |
| 310        | 21.3      | 35.2     | 25.017        | 25.515  | 33.993  | 42.203  | 17.987  | 1.00            | 310        |
| 320        | 21.2      | 35.2     | 25.014        | 25.526  | 34.004  | 42.214  | 17.949  | 1.00            | 320        |
| 330        | 21.1      | 35.2     | 25.011        | 25.537  | 34.015  | 42.225  | 17.912  | 1.00            | 330        |
| 340        | 21.0      | 35.2     | 25.008        | 25.548  | 34.026  | 42.236  | 17.874  | 1.00            | 340        |
| 350        | 20.9      | 35.2     | 25.005        | 25.559  | 34.037  | 42.247  | 17.837  | 1.00            | 350        |
| 360        | 20.8      | 35.2     | 25.002        | 25.570  | 34.048  | 42.258  | 17.799  | 1.00            | 360        |
| 370        | 20.7      | 35.2     | 25.000        | 25.581  | 34.059  | 42.269  | 17.762  | 1.00            | 370        |
| 380        | 20.6      | 35.2     | 25.000        | 25.592  | 34.070  | 42.280  | 17.724  | 1.00            | 380        |
| 390        | 20.5      | 35.2     | 25.000        | 25.603  | 34.081  | 42.291  | 17.687  | 1.00            | 390        |
| 400        | 20.4      | 35.2     | 25.000        | 25.614  | 34.092  | 42.302  | 17.649  | 1.00            | 400        |
| 410        | 20.3      | 35.2     | 25.000        | 25.625  | 34.103  | 42.313  | 17.612  | 1.00            | 410        |
| 420        | 20.2      | 35.2     | 25.000        | 25.636  | 34.114  | 42.324  | 17.574  | 1.00            | 420        |
| 430        | 20.1      | 35.2     | 25.000        | 25.647  | 34.125  | 42.335  | 17.537  | 1.00            | 430        |
| 440        | 20.0      | 35.2     | 25.000        | 25.658  | 34.136  | 42.346  | 17.499  | 1.00            | 440        |
| 450        | 19.9      | 35.2     | 25.000        | 25.669  | 34.147  | 42.357  | 17.462  | 1.00            | 450        |
| 460        | 19.8      | 35.2     | 25.000        | 25.680  | 34.158  | 42.368  | 17.424  | 1.00            | 460        |
| 470        | 19.7      | 35.2     | 25.000        | 25.691  | 34.169  | 42.379  | 17.387  | 1.00            | 470        |
| 480        | 19.6      | 35.2     | 25.000        | 25.702  | 34.180  | 42.390  | 17.349  | 1.00            | 480        |
| 490        | 19.5      | 35.2     | 25.000        | 25.713  | 34.191  | 42.401  | 17.312  | 1.00            | 490        |
| 500        | 19.4      | 35.2     | 25.000        | 25.724  | 34.202  | 42.412  | 17.274  | 1.00            | 500        |
| 510        | 19.3      | 35.2     | 25.000        | 25.735  | 34.213  | 42.423  | 17.237  | 1.00            | 510        |
| 520        | 19.2      | 35.2     | 25.000        | 25.746  | 34.224  | 42.434  | 17.199  | 1.00            | 520        |
| 530        | 19.1      | 35.2     | 25.000        | 25.757  | 34.235  | 42.445  | 17.162  | 1.00            | 530        |
| 540        | 19.0      | 35.2     | 25.000        | 25.768  | 34.246  | 42.456  | 17.124  | 1.00            | 540        |
| 550        | 18.9      | 35.2     | 25.000        | 25.779  | 34.257  | 42.467  | 17.087  | 1.00            | 550        |
| 560        | 18.8      | 35.2     | 25.000        | 25.790  | 34.268  | 42.478  | 17.049  | 1.00            | 560        |
| 570        | 18.7      | 35.2     | 25.000        | 25.801  | 34.279  | 42.489  | 17.012  | 1.00            | 570        |
| 580        | 18.6      | 35.2     | 25.000        | 25.812  | 34.290  | 42.500  | 16.974  | 1.00            | 580        |
| 590        | 18.5      | 35.2     | 25.000        | 25.823  | 34.301  | 42.511  | 16.937  | 1.00            | 590        |
| 600        | 18.4      | 35.2     | 25.000        | 25.834  | 34.312  | 42.522  | 16.899  | 1.00            | 600        |
| 610        | 18.3      | 35.2     | 25.000        | 25.845  | 34.323  | 42.533  | 16.862  | 1.00            | 610        |
| 620        | 18.2      | 35.2     | 25.000        | 25.856  | 34.334  | 42.544  | 16.824  | 1.00            | 620        |
| 630        | 18.1      | 35.2     | 25.000        | 25.867  | 34.345  | 42.555  | 16.787  | 1.00            | 630        |
| 640        | 18.0      | 35.2     | 25.000        | 25.878  | 34.356  | 42.566  | 16.749  | 1.00            | 640        |
| 650        | 17.9      | 35.2     | 25.000        | 25.889  | 34.367  | 42.577  | 16.712  | 1.00            | 650        |
| 660        | 17.8      | 35.2     | 25.000        | 25.900  | 34.378  | 42.588  | 16.674  | 1.00            | 660        |
| 670        | 17.7      | 35.2     | 25.000        | 25.911  | 34.389  | 42.599  | 16.637  | 1.00            | 670        |
| 680        | 17.6      | 35.2     | 25.000        | 25.922  | 34.400  | 42.610  | 16.599  | 1.00            | 680        |
| 690        | 17.5      | 35.2     | 25.000        | 25.933  | 34.411  | 42.621  | 16.562  | 1.00            | 690        |
| 700        | 17.4      | 35.2     | 25.000        | 25.944  | 34.422  | 42.632  | 16.524  | 1.00            | 700        |
| 710        | 17.3      | 35.2     | 25.000        | 25.955  | 34.433  | 42.643  | 16.487  | 1.00            | 710        |
| 720        | 17.2      | 35.2     | 25.000        | 25.966  | 34.444  | 42.654  | 16.449  | 1.00            | 720        |
| 730        | 17.1      | 35.2     | 25.000        | 25.977  | 34.455  | 42.665  | 16.412  | 1.00            | 730        |
| 740        | 17.0      | 35.2     | 25.000        | 25.988  | 34.466  | 42.676  | 16.374  | 1.00            | 740        |
| 750        | 16.9      | 35.2     | 25.000        | 25.999  | 34.477  | 42.687  | 16.337  | 1.00            | 750        |
| 760        | 16.8      | 35.2     | 25.000        | 26.010  | 34.488  | 42.698  | 16.299  | 1.00            | 760        |
| 770        | 16.7      | 35.2     | 25.000        | 26.021  | 34.499  | 42.709  | 16.262  | 1.00            | 770        |
| 780        | 16.6      | 35.2     | 25.000        | 26.032  | 34.510  | 42.720  | 16.224  | 1.00            | 780        |
| 790        | 16.5      | 35.2     | 25.000        | 26.043  | 34.521  | 42.731  | 16.187  | 1.00            | 790        |
| 800        | 16.4      | 35.2     | 25.000        | 26.054  | 34.532  | 42.742  | 16.149  | 1.00            | 800        |
| 810        | 16.3      | 35.2     | 25.000        | 26.065  | 34.543  | 42.753  | 16.112  | 1.00            | 810        |
| 820        | 16.2      | 35.2     | 25.000        | 26.076  | 34.554  | 42.764  | 16.074  | 1.00            | 820        |
| 830        | 16.1      | 35.2     | 25.000        | 26.087  | 34.565  | 42.775  | 16.037  | 1.00            | 830        |
| 840        | 16.0      | 35.2     | 25.000        | 26.098  | 34.576  | 42.786  | 15.999  | 1.00            | 840        |
| 850        | 15.9      | 35.2     | 25.000        | 26.109  | 34.587  | 42.797  | 15.962  | 1.00            | 850        |
| 860        | 15.8      | 35.2     | 25.000        | 26.120  | 34.598  | 42.808  | 15.924  | 1.00            | 860        |
| 870        | 15.7      | 35.2     | 25.000        | 26.131  | 34.609  | 42.819  | 15.887  | 1.00            | 870        |
| 880        | 15.6      | 35.2     | 25.000        | 26.142  | 34.620  | 42.830  | 15.849  | 1.00            | 880        |
| 890        | 15.5      | 35.2     | 25.000        | 26.153  | 34.631  | 42.841  | 15.812  | 1.00            | 890        |
| 900        | 15.4      | 35.2     | 25.000        | 26.164  | 34.642  | 42.852  | 15.774  | 1.00            | 900        |
| 910        | 15.3      | 35.2     | 25.000        | 26.175  | 34.653  | 42.863  | 15.737  | 1.00            | 910        |
| 920        | 15.2      | 35.2     | 25.000        | 26.186  | 34.664  | 42.874  | 15.699  | 1.00            | 920        |
| 930        | 15.1      | 35.2     | 25.000        | 26.197  | 34.675  | 42.885  | 15.662  | 1.00            | 930        |
| 940        | 15.0      | 35.2     | 25.000        | 26.208  | 34.686  | 42.896  | 15.624  | 1.00            | 940        |
| 950        | 14.9      | 35.2     | 25.000        | 26.219  | 34.697  | 42.907  | 15.587  | 1.00            | 950        |
| 960        | 14.8      | 35.2     | 25.000        | 26.230  | 34.708  | 42.918  | 15.549  | 1.00            | 960        |
| 970        | 14.7      | 35.2     | 25.000        | 26.241  | 34.719  | 42.929  | 15.512  | 1.00            | 970        |
| 980        | 14.6      | 35.2     | 25.000        | 26.252  | 34.730  | 42.940  | 15.474  | 1.00            | 980        |
| 990        | 14.5      | 35.2     | 25.000        | 26.263  | 34.741  | 42.951  | 15.437  | 1.00            | 990        |
| 1000       | 14.4      | 35.2     | 25.000        | 26.274  | 34.752  | 42.962  | 15.399  | 1.00            | 1000       |

WATER BOTTLE DATA

| DEPTH<br>M | TEMP<br>C | SALINITY | DIS O2<br>ML/L | O2 SAT<br>% | SIGMA T | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUB/L | POT TEMP<br>C | SIGMA T | SIGMA T | SIGMA T | PRESS<br>CB |
|------------|-----------|----------|----------------|-------------|---------|-------------|-------------|-------------|---------------|---------------|---------|---------|---------|-------------|
| 0          | 24.4      | 35.2     | 5.9            | 104.1       | 5.7     | 0.22        | 0.0         | 0.10        | 4.14          | 25.441        | 25.465  | 34.641  | 41.844  | 2           |
| 10         | 24.3      | 35.2     | 5.96           | 104.1       | 5.4     | 0.20        | 0.4         | 0.11        | 11.841        | 25.442        | 25.466  | 34.642  | 41.845  | 51          |
| 20         | 24.2      | 35.2     | 5.99           | 94.9        | 5.9     | 0.19        | 0.6         | 0.20        | 11.573        | 25.443        | 25.467  | 34.643  | 41.846  | 101         |
| 30         | 24.1      | 35.2     | 5.94           | 95.5        | 5.1     | 0.47        | 0.4         | 0.11        | 12.569        | 25.444        | 25.468  | 34.644  | 41.847  | 151         |
| 40         | 24.0      | 35.2     | 5.92           | 88.9        | 10.9    | 0.71        | 0.5         | 0.11        | 12.108        | 25.445        | 25.469  | 34.645  | 41.848  | 201         |
| 50         | 23.9      | 35.2     | 5.85           | 99.5        | 12.5    | 0.79        | 0.7         | 0.11        | 11.191        | 25.446        | 25.470  | 34.646  | 41.849  | 251         |
| 60         | 23.8      | 35.2     | 5.78           | 95.2        | 14.9    | 0.98        | 1.2         | 0.11        | 10.794        | 25.447        | 25.471  | 34.647  | 41.850  | 301         |
| 70         | 23.7      | 35.2     | 4.66           | 71.0        | 29.0    | 1.40        | 2.0         | 0.01        | 3.89          | 25.448        | 25.472  | 34.648  | 41.851  | 351         |
| 80         | 23.6      | 35.2     | 3.80           | 55.9        | 45.1    | 1.86        | 2.6         | 0.10        | 1.24          | 25.449        | 25.473  | 34.649  | 41.852  | 401         |
| 90         | 23.5      | 35.2     | 2.58           | 35.6        | 68.7    | 2.41        | 3.3         | 0.00        | 2.31          | 25.45         |         |         |         |             |

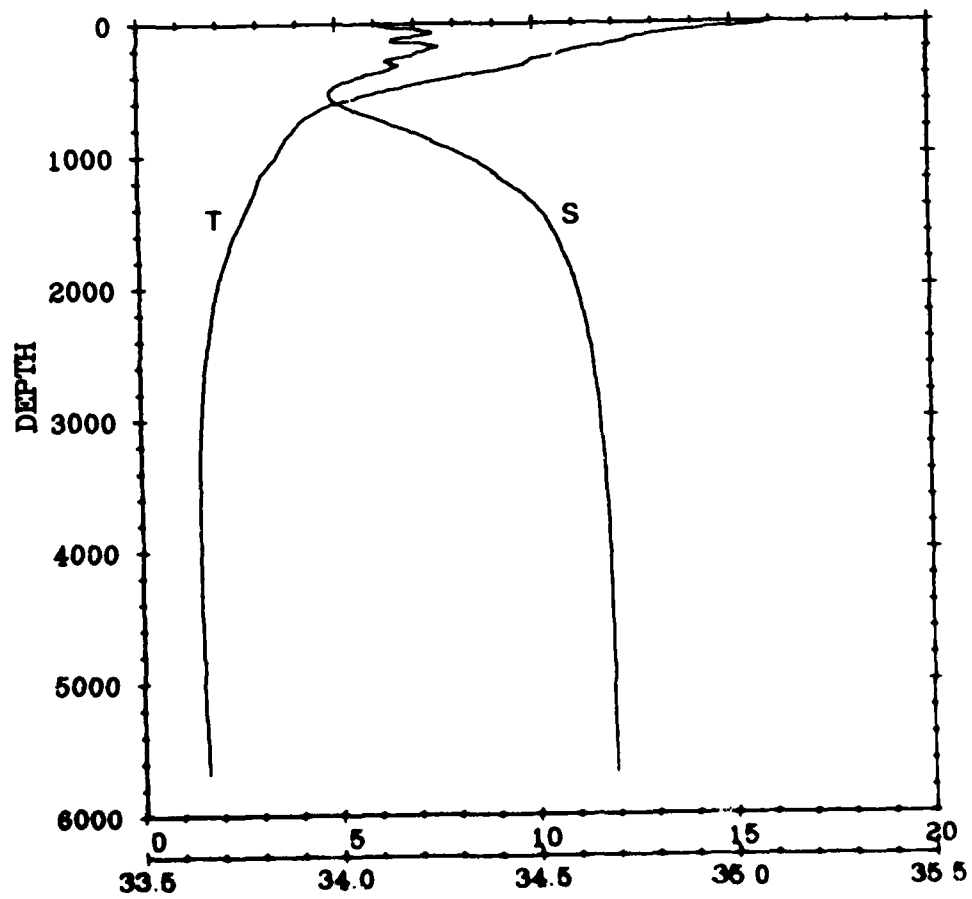
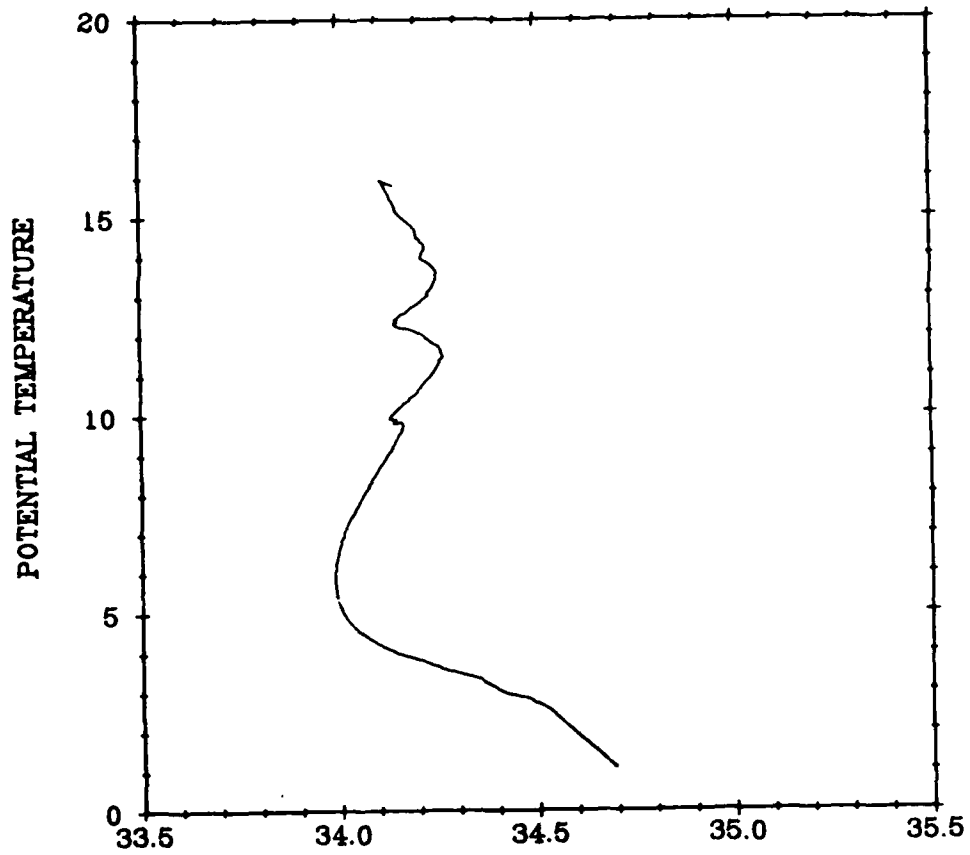
# MARATHON 2 STA. 37



[illegible]

| WIGGIN BUTTLE DATA |        |          |        |        |       |      |      |      |       |        |        |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|-------|--------|--------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SI03  | P04  | NO3  | NO2  | TRIT  | PHT    | TEMP   | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TURIN | DEG C  |        |         |         |         | DB    |
| 1                  | 11.356 | 34.210   | 5.68   | 101.2  | 5.4   | 0.15 | 0    | 0.10 |       | 15.354 | 25.174 | 13.657  | 41.839  |         | 1     |
| 5                  | 11.242 | 34.217   | 5.72   | 102.9  | 4.4   | 0.25 | 1    | 0.29 |       | 13.814 | 21.622 | 14.231  | 42.494  |         | 5     |
| 10                 | 11.099 | 34.270   | 5.82   | 96.9   | 7.2   | 0.44 | 4    | 0.14 |       | 12.184 | 21.319 | 14.350  | 42.936  |         | 10    |
| 15                 | 11.052 | 34.213   | 5.56   | 91.1   | 10.7  | 0.65 | 9    | 0.11 |       | 11.342 | 24.24  | 14.159  | 43.113  |         | 15    |
| 20                 | 11.100 | 34.215   | 5.58   | 89.4   | 14.6  | 0.82 | 11   | 0.10 |       | 10.465 | 24.427 | 14.147  | 43.471  |         | 20    |
| 25                 | 9.112  | 34.264   | 4.26   | 92.5   | 20.2  | 1.15 | 14   | 0.10 |       | 9.917  | 24.114 | 13.505  | 43.457  |         | 25    |
| 30                 | 8.218  | 34.277   | 4.45   | 67.1   | 13.8  | 1.53 | 21   | 0.10 |       | 8.115  | 24.59  | 13.116  | 43.961  |         | 30    |
| 35                 | 6.930  | 33.994   | 3.37   | 48.9   | 51.6  | 2.05 | 29   | 0.10 |       | 6.444  | 26.919 | 14.944  | 44.749  | 50.8    | 35    |
| 40                 | 7.271  | 33.939   | 2.35   | 3.1    | 74.0  | 2.51 | 15   | 0.10 |       | 4.454  | 27.102 | 16.037  | 44.769  | 70.9    | 40    |
| 45                 | 3.478  | 34.168   | 1.12   | 19.2   | 93.8  |      | 40   | 0.10 |       | 1.899  | 27.119 | 16.249  | 44.951  | 91.0    | 45    |
| 50                 | 3.379  | 34.173   | 0.67   | 9.2    | 111.8 | 3.05 | 43   | 0.10 |       | 1.452  | 27.231 | 16.156  | 45.711  | 91.1    | 50    |
| 55                 | 3.659  | 34.254   | 0.17   | 5.5    | 121.3 | 1.11 | 44   | 0.10 |       | 2.117  | 27.117 | 14.851  | 45.176  | 101.2   | 55    |
| 60                 | 3.462  | 34.154   | 1.23   | 1.1    | 121.3 | 1.27 | 45   | 0.10 |       | 3.899  | 27.418 | 16.615  | 45.165  | 126.5   | 60    |
| 65                 | 2.919  | 34.053   | 0.94   | 4.8    | 143.6 | 1.27 | 45   | 0.10 |       | 2.491  | 27.139 | 14.715  | 45.154  | 151.9   | 65    |
| 70                 | 2.939  | 34.153   | 1.16   | 11.7   | 158.2 | 1.13 | 44   | 0.10 |       | 2.172  | 27.229 | 16.929  | 45.617  | 177.2   | 70    |
| 75                 | 2.152  | 34.079   | 1.21   | 17.8   | 164.3 | 1.11 | 41   | 0.10 |       | 1.741  | 27.212 | 16.984  | 47.148  | 177.2   | 75    |
| 80                 | 2.450  | 34.247   | 1.07   | 4.4    | 171.2 | 2.93 | 47   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 207.2   | 80    |
| 85                 | 1.681  | 34.247   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 2.14   | 26.845 | 17.422  | 47.441  | 214.1   | 85    |
| 90                 | 1.481  | 34.055   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 244.1   | 90    |
| 95                 | 1.481  | 34.055   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 274.1   | 95    |
| 100                | 1.481  | 34.055   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 304.1   | 100   |
| 105                | 1.481  | 34.055   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 334.1   | 105   |
| 110                | 1.481  | 34.055   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 364.1   | 110   |
| 115                | 1.481  | 34.055   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 394.1   | 115   |
| 120                | 1.481  | 34.055   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 424.1   | 120   |
| 125                | 1.481  | 34.055   | 4.24   | 49.3   | 2.2   | 4.1  | 51   | 0.10 |       | 1.703  | 27.125 | 16.471  | 46.911  | 454     | 125   |

# MARATHON 2 STA. 38



| WICKIN BOTTLE DATA |        |          |        |        |      |      |      |      |        |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|------|------|------|------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | LOG ST | NO DAT | NO1  | NO4  | NO3  | NO2  | DRIT   | ROT TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | ANAL  |
| M                  | DEG C  | PROMT    | ML C   |        | MM L | MM L | MM L | MM L | TUBIN  | DEG C    |         |         |         | CM    |
| 1                  | 14.719 | 34.719   | 9.35   | 1.4    | 9    | 1.12 | 1    | 1.00 | 16.170 | 24.910   | 11.24   | 11.24   | 11.24   | 11.24 |
| 5                  | 14.474 | 34.474   | 9.34   | 1.5    | 5    | 1.20 | 1    | 1.00 | 14.719 | 25.216   | 11.24   | 11.24   | 11.24   | 11.24 |
| 10                 | 14.172 | 34.172   | 9.34   | 1.9    | 4    | 1.17 | 0    | 0.91 | 13.191 | 25.447   | 11.24   | 11.24   | 11.24   | 11.24 |
| 12                 | 14.431 | 34.431   | 9.34   | 1.5    | 4    | 1.48 | 1    | 1.02 | 12.466 | 25.318   | 11.24   | 11.24   | 11.24   | 11.24 |
| 15                 | 14.212 | 34.212   | 9.33   | 1.1    | 1    | 1.74 | 1    | 1.04 | 12.137 | 25.137   | 11.24   | 11.24   | 11.24   | 11.24 |
| 20                 | 14.022 | 34.022   | 9.29   | 1.0    | 1    | 1.84 | 1    | 1.3  | 11.348 | 25.203   | 11.24   | 11.24   | 11.24   | 11.24 |
| 25                 | 13.754 | 34.753   | 9.41   | 35     | 3    | 1.98 | 1    | 1.01 | 11.266 | 26.219   | 11.24   | 11.24   | 11.24   | 11.24 |
| 30                 | 9.514  | 34.519   | 9.17   | 30     | 2    | 1.13 | 1    | 1.01 | 9.510  | 26.347   | 11.24   | 11.24   | 11.24   | 11.24 |
| 40                 | 9.111  | 34.517   | 4.61   | 39     | 3    | 1.16 | 20   | 0.00 | 9.269  | 26.579   | 11.24   | 11.24   | 11.24   | 11.24 |
| 60                 | 6.471  | 34.446   | 1.61   | 12     | 3    | 1.32 | 28   | 1.00 | 4.545  | 26.524   | 11.24   | 11.24   | 11.24   | 11.24 |
| 80                 | 5.427  | 34.501   | 2.49   | 15     | 1    | 1.4  | 35   | 0.00 | 5.118  | 26.914   | 11.24   | 11.24   | 11.24   | 11.24 |
| 100                | 4.422  | 34.520   | 1.44   | 10     | 2    | 1.34 | 40   | 0.00 | 4.343  | 27.119   | 11.24   | 11.24   | 11.24   | 11.24 |
| 120                | 3.922  | 34.503   | 0.77   | 10     | 1    | 1.11 | 1.05 | 1.3  | 3.361  | 27.114   | 11.24   | 11.24   | 11.24   | 11.24 |
| 140                | 3.530  | 34.243   | 0.42   | 5      | 1    | 1.25 | 3.15 | 4.6  | 1.205  | 27.216   | 11.24   | 11.24   | 11.24   | 11.24 |
| 160                | 3.319  | 34.313   | 0.25   | 3      | 4    | 1.16 | 1.31 | 4.5  | 1.299  | 27.216   | 11.24   | 11.24   | 11.24   | 11.24 |
| 180                | 2.953  | 34.466   | 0.17   | 4      | 9    | 1.48 | 1.23 | 4.5  | 2.445  | 27.411   | 11.24   | 11.24   | 11.24   | 11.24 |
| 190                | 2.712  | 34.533   | 0.14   | 9      | 8    | 1.59 | 0    | 0.00 | 2.444  | 27.544   | 11.24   | 11.24   | 11.24   | 11.24 |

AD-A189 930

**PHYSICAL CHEMICAL AND CTD**

(CONDUCTIVITY/TEMPERATURE/DEPTH) DATA FROM THE (U)

2/3

UNCLASSIFIED

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F/G 8/8

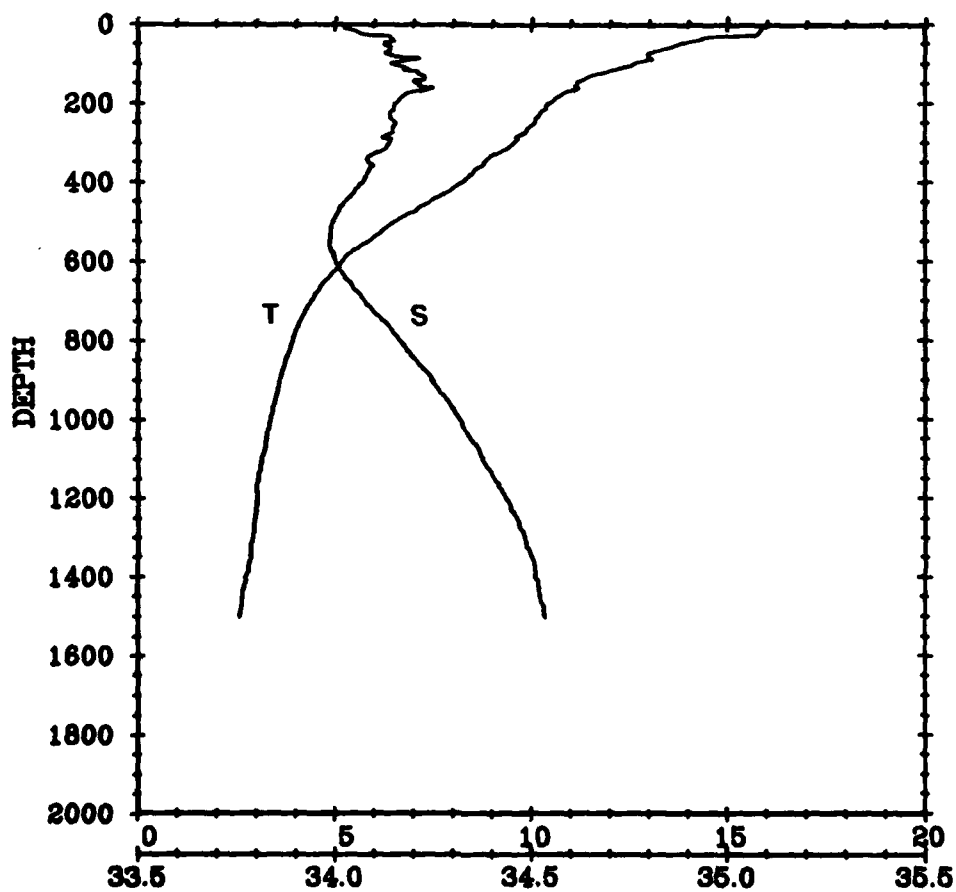
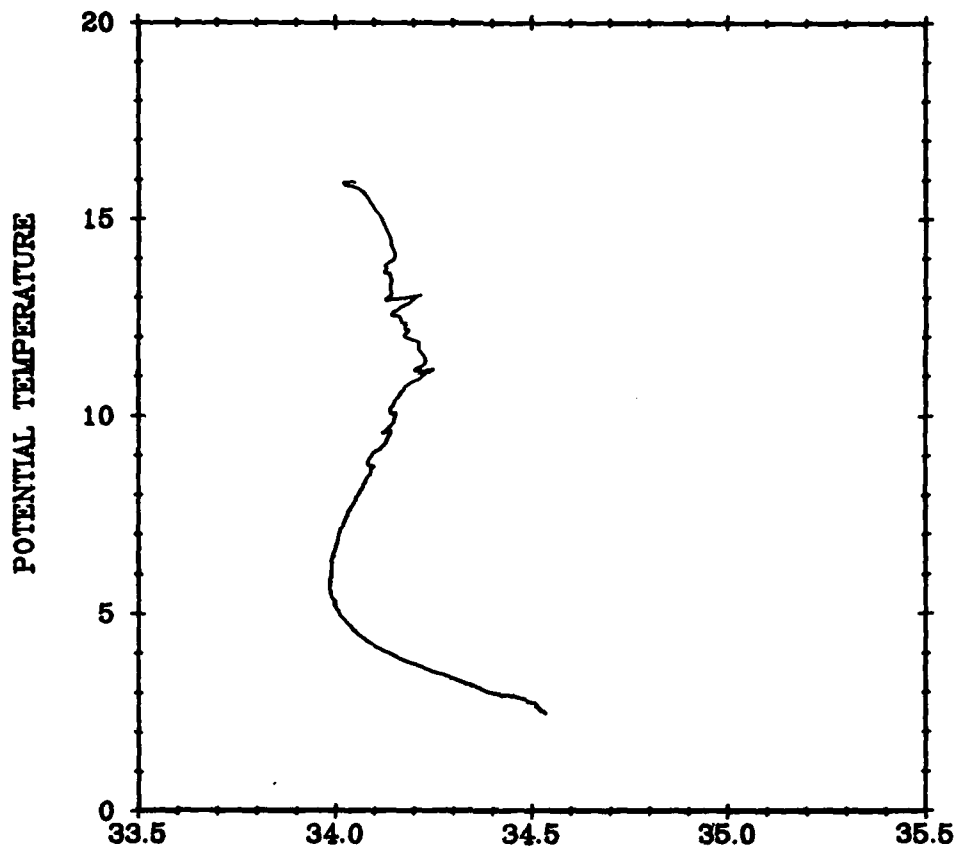
NL

A 10x10 grid of squares, with the top-left square missing, representing a 10x10 grid with a 1x1 hole.



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

# MARATHON 2 STA. 39



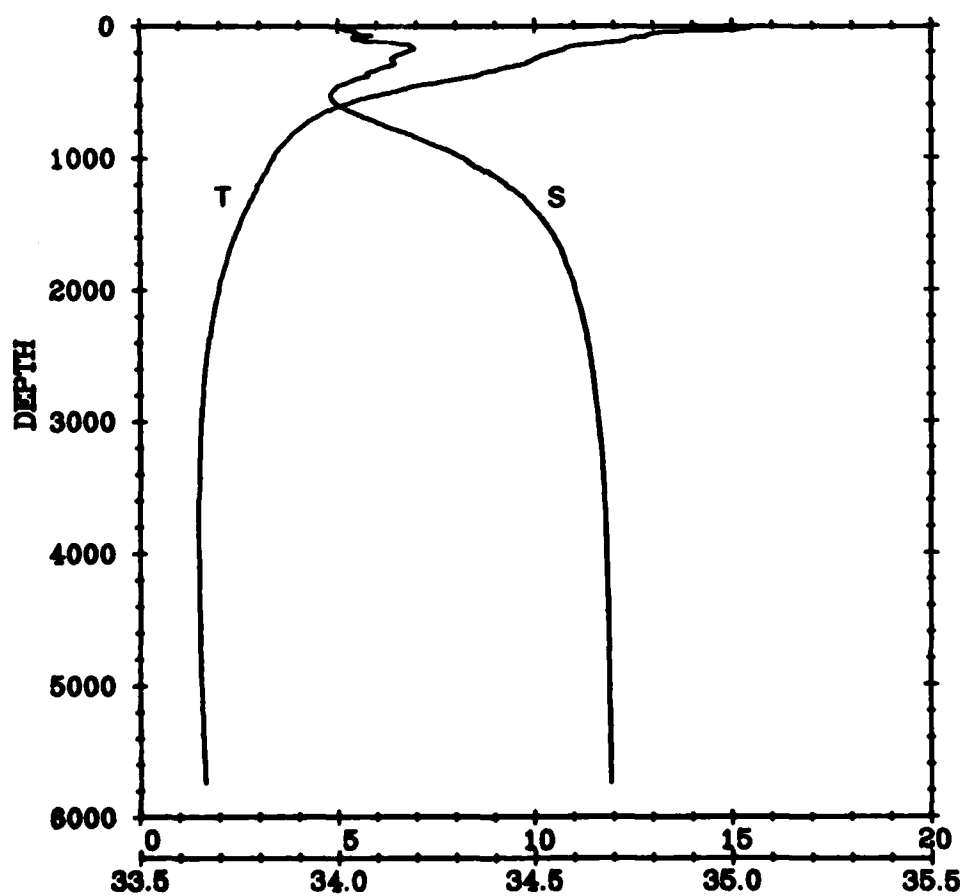
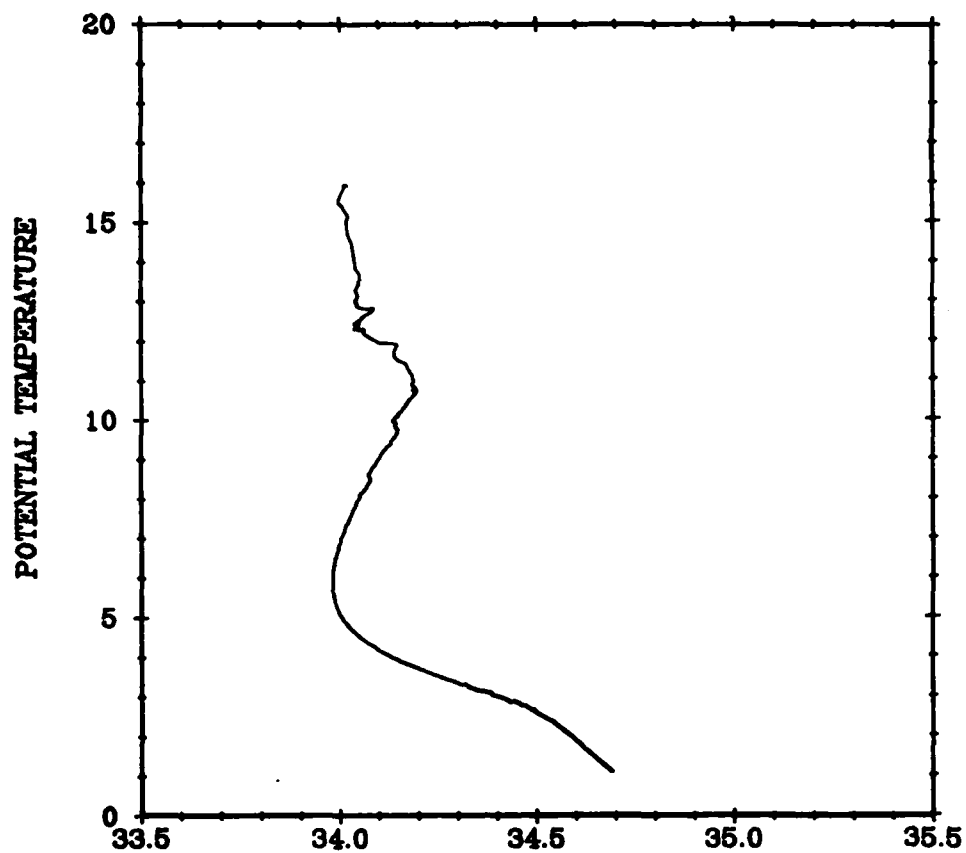
R/V THOMAS WASHINGTON MARATHON LEG II STATION 40

| LATITUDE | LONGITUDE | NOV/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|-----------|------------|--------|------|-------|----------|----------|--------|
|          |           |           | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 35 0 0N  | 151 59 2W | 5/17/84   | 324        | 5722   | 220  | 10    | 15 6     | 14 4     | 1019 0 |

| CTD DATA | PRESS  | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA   | DYNAMIC HT | DEPTH |
|----------|--------|--------|----------|----------|---------|---------|---------|-------|------------|-------|
| DB       | DEG C  |        | DEG C    |          |         |         | CL/TON  |       |            | M     |
| 0        | 15.912 | 34.010 | 15.912   | 25.030   | 33.629  | 41.856  | 291.962 | 0.000 |            | 0     |
| 20       | 15.358 | 34.008 | 15.355   | 25.110   | 33.746  | 41.988  | 283.014 | 0.057 |            | 19    |
| 40       | 14.285 | 34.032 | 14.279   | 25.331   | 34.036  | 42.114  | 259.679 | 0.112 |            | 39    |
| 60       | 12.991 | 34.045 | 12.985   | 25.657   | 34.360  | 42.584  | 233.942 | 0.161 |            | 59    |
| 80       | 12.694 | 34.065 | 12.683   | 25.732   | 34.447  | 42.781  | 227.313 | 0.207 |            | 79    |
| 100      | 12.377 | 34.046 | 12.364   | 25.779   | 34.507  | 42.853  | 223.287 | 0.252 |            | 99    |
| 120      | 11.390 | 34.181 | 11.072   | 25.125   | 34.903  | 43.296  | 191.197 | 0.356 |            | 149   |
| 140      | 10.509 | 34.176 | 10.484   | 25.226   | 35.028  | 43.444  | 182.959 | 0.450 |            | 198   |
| 160      | 10.021 | 34.137 | 9.992    | 25.290   | 35.103  | 43.539  | 178.623 | 0.540 |            | 248   |
| 180      | 9.613  | 34.139 | 9.579    | 25.350   | 35.191  | 43.544  | 172.795 | 0.628 |            | 298   |
| 200      | 9.274  | 34.087 | 9.236    | 25.429   | 35.304  | 43.787  | 165.920 | 0.712 |            | 347   |
| 220      | 8.162  | 34.055 | 8.121    | 25.514   | 35.420  | 43.934  | 158.191 | 0.793 |            | 397   |
| 240      | 7.206  | 34.009 | 7.163    | 25.616   | 35.567  | 44.123  | 149.511 | 0.870 |            | 447   |
| 260      | 6.493  | 33.985 | 6.439    | 25.695   | 35.680  | 44.268  | 141.051 | 0.942 |            | 496   |
| 280      | 5.182  | 33.996 | 5.133    | 25.854   | 35.913  | 44.561  | 124.707 | 1.075 |            | 595   |
| 300      | 4.424  | 34.065 | 4.371    | 27.004   | 36.091  | 44.774  | 111.399 | 1.193 |            | 694   |
| 320      | 3.951  | 34.151 | 3.892    | 27.122   | 36.232  | 44.936  | 100.469 | 1.299 |            | 793   |
| 340      | 3.619  | 34.233 | 3.555    | 27.221   | 36.347  | 45.066  | 91.392  | 1.395 |            | 892   |
| 360      | 3.352  | 34.309 | 3.282    | 27.307   | 36.447  | 45.179  | 83.448  | 1.483 |            | 991   |
| 380      | 3.178  | 34.363 | 3.101    | 27.357   | 36.515  | 45.256  | 78.158  | 1.564 |            | 1090  |
| 400      | 2.989  | 34.420 | 2.905    | 27.411   | 36.588  | 45.337  | 72.438  | 1.639 |            | 1189  |
| 420      | 2.849  | 34.466 | 2.759    | 27.481   | 36.645  | 45.401  | 68.050  | 1.709 |            | 1288  |
| 440      | 2.682  | 34.496 | 2.586    | 27.520   | 36.693  | 45.457  | 64.497  | 1.775 |            | 1386  |
| 460      | 2.526  | 34.525 | 2.424    | 27.557   | 36.738  | 45.510  | 61.101  | 1.838 |            | 1485  |
| 480      | 2.389  | 34.548 | 2.280    | 27.587   | 36.776  | 45.555  | 58.327  | 1.898 |            | 1584  |
| 500      | 2.263  | 34.565 | 2.148    | 27.612   | 36.808  | 45.594  | 56.009  | 1.955 |            | 1682  |
| 520      | 2.174  | 34.578 | 2.052    | 27.629   | 36.831  | 45.621  | 54.531  | 2.010 |            | 1781  |
| 540      | 2.074  | 34.591 | 1.945    | 27.648   | 36.855  | 45.651  | 52.817  | 2.054 |            | 1879  |
| 560      | 1.986  | 34.602 | 1.850    | 27.655   | 36.876  | 45.677  | 51.363  | 2.107 |            | 1978  |
| 580      | 1.920  | 34.610 | 1.776    | 27.677   | 36.892  | 45.696  | 50.362  | 2.157 |            | 2076  |
| 600      | 1.850  | 34.619 | 1.699    | 27.690   | 36.910  | 45.717  | 49.216  | 2.217 |            | 2174  |
| 620      | 1.790  | 34.626 | 1.631    | 27.700   | 36.924  | 45.735  | 48.316  | 2.265 |            | 2271  |
| 640      | 1.741  | 34.634 | 1.574    | 27.711   | 36.938  | 45.752  | 47.459  | 2.313 |            | 2371  |
| 660      | 1.696  | 34.639 | 1.521    | 27.719   | 36.948  | 45.765  | 46.952  | 2.360 |            | 2469  |
| 680      | 1.657  | 34.642 | 1.474    | 27.727   | 36.959  | 45.778  | 46.234  | 2.407 |            | 2567  |
| 700      | 1.625  | 34.649 | 1.434    | 27.733   | 36.968  | 45.789  | 45.937  | 2.453 |            | 2665  |
| 720      | 1.597  | 34.653 | 1.397    | 27.739   | 36.975  | 45.798  | 45.480  | 2.499 |            | 2763  |
| 740      | 1.574  | 34.657 | 1.365    | 27.745   | 36.983  | 45.807  | 45.179  | 2.544 |            | 2861  |
| 760      | 1.547  | 34.661 | 1.329    | 27.750   | 36.990  | 45.817  | 44.813  | 2.589 |            | 2959  |
| 780      | 1.530  | 34.664 | 1.303    | 27.755   | 36.996  | 45.824  | 44.647  | 2.634 |            | 3057  |
| 800      | 1.516  | 34.667 | 1.280    | 27.759   | 37.001  | 45.830  | 44.516  | 2.678 |            | 3155  |
| 820      | 1.504  | 34.669 | 1.258    | 27.762   | 37.006  | 45.836  | 44.478  | 2.723 |            | 3253  |
| 840      | 1.493  | 34.672 | 1.237    | 27.766   | 37.011  | 45.842  | 44.377  | 2.767 |            | 3351  |
| 860      | 1.488  | 34.674 | 1.222    | 27.768   | 37.014  | 45.846  | 44.432  | 2.812 |            | 3449  |
| 880      | 1.481  | 34.676 | 1.205    | 27.771   | 37.018  | 45.850  | 44.452  | 2.856 |            | 3546  |
| 900      | 1.474  | 34.679 | 1.188    | 27.774   | 37.022  | 45.855  | 44.468  | 2.901 |            | 3644  |
| 920      | 1.471  | 34.680 | 1.174    | 27.776   | 37.025  | 45.859  | 44.542  | 2.945 |            | 3742  |
| 940      | 1.472  | 34.681 | 1.165    | 27.778   | 37.027  | 45.862  | 44.746  | 2.990 |            | 3839  |
| 960      | 1.474  | 34.682 | 1.156    | 27.779   | 37.029  | 45.864  | 44.965  | 3.035 |            | 3937  |
| 980      | 1.478  | 34.683 | 1.149    | 27.781   | 37.030  | 45.866  | 45.216  | 3.080 |            | 4034  |
| 1000     | 1.483  | 34.683 | 1.142    | 27.781   | 37.031  | 45.867  | 45.552  | 3.125 |            | 4132  |
| 1020     | 1.487  | 34.685 | 1.135    | 27.783   | 37.034  | 45.870  | 45.731  | 3.171 |            | 4229  |
| 1040     | 1.493  | 34.685 | 1.130    | 27.784   | 37.034  | 45.871  | 46.084  | 3.217 |            | 4327  |
| 1060     | 1.499  | 34.686 | 1.124    | 27.785   | 37.036  | 45.873  | 46.368  | 3.263 |            | 4424  |
| 1080     | 1.504  | 34.687 | 1.117    | 27.786   | 37.037  | 45.875  | 46.635  | 3.309 |            | 4521  |
| 1100     | 1.512  | 34.687 | 1.113    | 27.786   | 37.038  | 45.875  | 47.023  | 3.356 |            | 4618  |
| 1120     | 1.519  | 34.687 | 1.108    | 27.787   | 37.039  | 45.875  | 47.395  | 3.403 |            | 4716  |
| 1140     | 1.527  | 34.688 | 1.104    | 27.788   | 37.040  | 45.878  | 47.716  | 3.451 |            | 4813  |
| 1160     | 1.535  | 34.688 | 1.099    | 27.788   | 37.040  | 45.879  | 48.108  | 3.499 |            | 4910  |
| 1180     | 1.545  | 34.688 | 1.097    | 27.788   | 37.041  | 45.879  | 48.536  | 3.547 |            | 5007  |
| 1200     | 1.555  | 34.689 | 1.094    | 27.789   | 37.042  | 45.880  | 48.997  | 3.596 |            | 5104  |
| 1220     | 1.566  | 34.689 | 1.092    | 27.789   | 37.042  | 45.881  | 49.347  | 3.645 |            | 5201  |
| 1240     | 1.577  | 34.690 | 1.090    | 27.790   | 37.043  | 45.882  | 49.731  | 3.695 |            | 5298  |
| 1260     | 1.589  | 34.690 | 1.089    | 27.790   | 37.043  | 45.882  | 50.204  | 3.745 |            | 5395  |
| 1280     | 1.602  | 34.690 | 1.089    | 27.790   | 37.043  | 45.882  | 50.698  | 3.795 |            | 5492  |
| 1300     | 1.615  | 34.690 | 1.088    | 27.790   | 37.043  | 45.882  | 51.194  | 3.846 |            | 5588  |
| 1320     | 1.628  | 34.690 | 1.088    | 27.790   | 37.043  | 45.882  | 51.694  | 3.897 |            | 5685  |
| 1340     | 1.637  | 34.691 | 1.089    | 27.791   | 37.044  | 45.883  | 51.944  | 3.927 |            | 5741  |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  | DEG C    |         |         |         | DB    |
| 1                  | 15.985 | 34.027   | 5.87   | 104.4  | 5.0   | 0.20 | 0.0  | 0.00 | 15.885 | 25.026   | 33.623  | 41.847  |         | 1     |
| 56                 | 13.065 | 34.041   | 6.11   | 102.5  | 4.7   | 0.28 | 0.7  | 0.44 | 13.057 | 25.639   | 34.340  | 42.561  |         | 56    |
| 105                | 12.564 | 34.093   | 5.74   | 95.4   | 5.3   | 0.42 | 4.3  | 0.22 | 12.550 | 25.779   | 34.499  | 42.838  |         | 105   |
| 155                | 11.232 | 34.236   | 5.48   | 88.6   | 12.2  | 0.78 | 10.8 | 0.01 | 11.213 | 26.143   | 34.913  | 43.300  |         | 155   |
| 204                | 10.617 | 34.201   | 5.55   | 89.6   | 11.8  | 0.78 | 11.7 | 0.01 | 10.592 | 26.226   | 35.023  | 43.435  |         | 205   |
| 254                | 9.662  | 34.141   | 5.25   | 82.0   | 19.6  | 1.07 | 15.1 | 0.20 | 9.627  | 26.344   | 35.183  | 43.633  |         | 255   |
| 304                | 7.991  | 34.045   | 4.48   | 67.3   | 33.6  | 1.51 | 21.8 | 0.20 | 7.950  | 26.531   | 35.446  | 43.967  |         | 305   |
| 354                | 6.492  | 33.987   | 3.53   | 51.2   | 51.5  | 1.99 | 28.6 | 0.20 | 6.446  | 26.695   | 35.680  | 44.268  |         | 355   |
| 404                | 5.160  | 34.999   | 2.34   | 32.9   | 75.4  | 2.44 | 35.6 | 0.01 | 5.111  | 26.869   | 35.919  | 44.568  |         | 405   |
| 454                | 4.413  | 34.068   | 1.42   | 19.6   | 94.1  | 2.79 | 40.3 | 0.00 | 4.359  | 27.007   | 36.094  | 44.777  |         | 455   |
| 504                | 3.913  | 34.158   | 0.75   | 12.2   | 111.3 | 3.00 | 43.3 | 0.00 | 3.854  | 27.131   | 36.242  | 44.948  |         | 505   |
| 554                | 3.563  | 34.250   | 0.40   | 5.4    | 126.7 | 3.09 | 44.7 | 0.00 | 3.499  | 27.240   | 36.368  | 45.090  |         | 555   |
| 604                | 3.123  | 34.315   | 0.26   | 3.5    | 137.0 | 3.17 | 45.3 | 0.00 | 3.253  | 27.315   | 36.455  | 45.189  |         | 605   |
| 654                | 2.980  | 34.442   | 0.25   | 3.3    | 152.3 | 3.17 | 45.7 | 0.00 | 2.794  | 27.458   | 36.621  | 45.375  |         | 655   |
| 704                | 2.548  | 34.532   | 0.73   | 9.6    | 158.4 | 3.10 | 44.6 | 0.00 | 2.445  | 27.560   | 36.740  | 45.511  |         | 705   |
| 754                | 2.214  | 34.576   | 1.13   | 14.8   | 169.6 | 3.02 | 43.6 | 0.00 | 2.095  | 27.624   | 36.823  | 45.611  |         | 755   |
| 804                | 1.973  | 34.604   | 1.46   | 19.0   | 175.2 | 2.96 | 42.7 | 0.00 | 1.838  | 27.667   | 36.879  | 45.680  |         | 805   |
| 854                | 1.679  | 34.643   | 2.16   | 27.9   | 176.3 | 2.80 | 40.8 | 0.00 | 1.506  | 27.723   | 36.953  | 45.771  |         | 855   |
| 904                | 1.533  | 34.664   | 2.76   | 35.4   | 168.8 | 2.69 | 39.1 | 0.00 | 1.317  | 27.753   | 36.994  | 45.821  |         | 905   |
| 954                | 1.482  | 34.677   | 3.11   | 39.8   | 165.8 | 2.60 | 38.1 | 0.00 | 1.219  | 27.771   | 37.017  | 45.849  |         | 955   |
| 1004               | 1.471  | 34.683   | 3.33   | 42.6   | 163.3 | 2.56 | 37.3 | 0.00 | 1.155  | 27.780   | 37.029  | 45.865  |         | 1005  |
| 1054               | 1.505  | 34.687   | 3.48   | 44.5   | 158.9 | 2.53 | 37.1 | 0.00 | 1.119  | 27.786   | 37.037  | 45.874  |         | 1055  |
| 1104               | 1.555  | 34.690   | 3.61   | 46.1   |       |      | 36.6 | 0.00 | 1.094  | 27.790   | 37.042  | 45.881  |         | 1105  |
| 1154               | 1.637  | 34.691   |        |        | 152.8 | 2.50 | 36.5 | 0.00 | 1.088  | 27.791   | 37.044  | 45.883  |         | 1155  |

# MARATHON 2 STA. 40



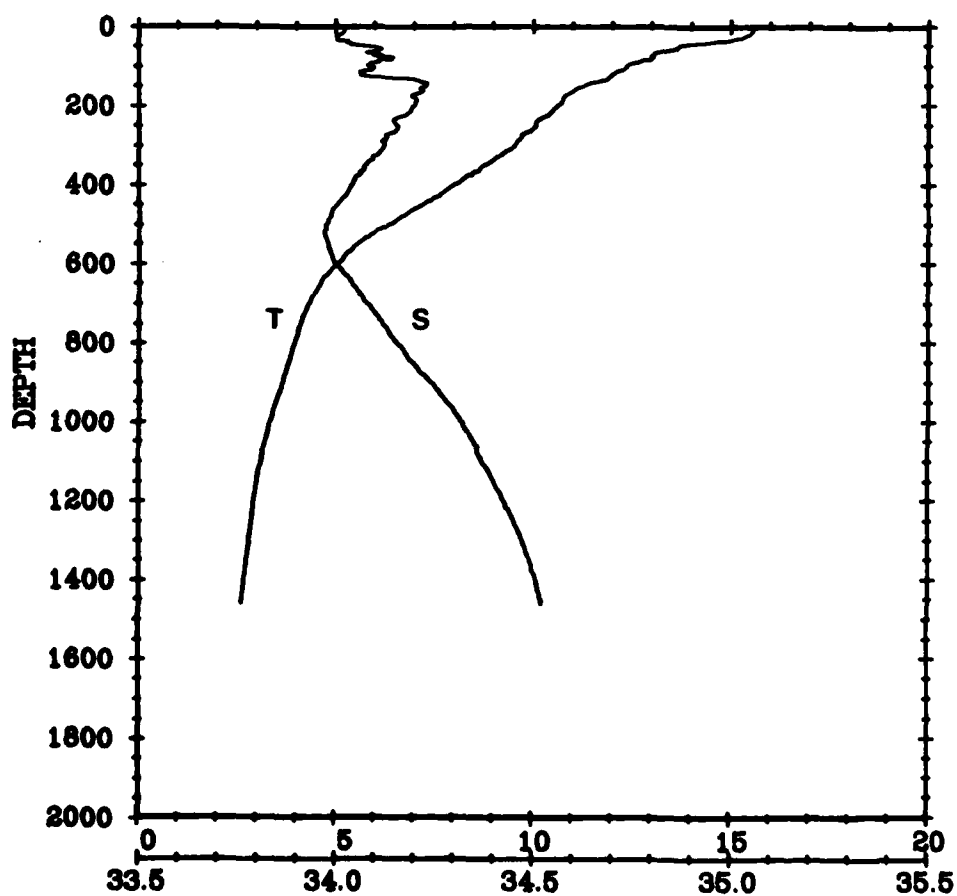
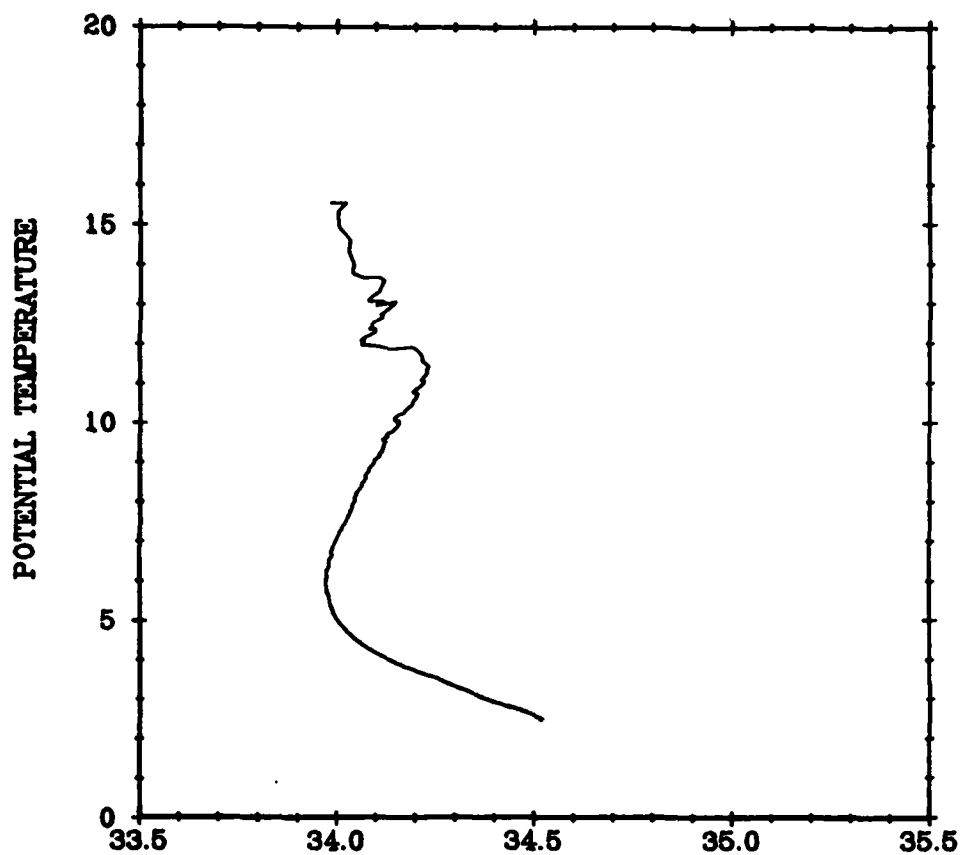
R/V THOMAS WASHINGTON MARATHON LEG II STATION 41

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BARCH  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 15 10 1N | 151 59 5W | 5/17/84  | 0942       | 579    | DIR  | KT    | DEG C    | DEG C    | MB     |
|          |           |          |            |        | 220  | 12    | 16.1     | 15.6     | 1017.6 |

| CTD DATA | PRESS  | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA   | DYNAMIC HT | DEPTH |
|----------|--------|--------|----------|----------|---------|---------|---------|-------|------------|-------|
| DB       | DEG C  |        | DEG C    |          |         |         | CL/TON  |       |            | M     |
| 0        | 15.545 | 34.315 | 15.545   | 25.093   | 33.702  | 41.938  | 285.930 | 0.000 |            | 0     |
| 20       | 15.422 | 34.313 | 15.399   | 25.124   | 33.739  | 41.979  | 283.575 | 0.457 |            | 19    |
| 40       | 14.451 | 34.329 | 14.445   | 25.344   | 33.992  | 42.265  | 263.255 | 0.112 |            | 39    |
| 60       | 13.457 | 34.397 | 13.399   | 25.514   | 34.301  | 42.609  | 238.065 | 0.162 |            | 59    |
| 80       | 12.949 | 34.422 | 12.938   | 25.726   | 34.430  | 42.744  | 227.935 | 0.208 |            | 79    |
| 100      | 12.419 | 34.094 | 12.406   | 25.808   | 34.534  | 42.878  | 220.531 | 0.251 |            | 99    |
| 150      | 11.327 | 34.222 | 11.308   | 26.114   | 34.882  | 43.265  | 192.521 | 0.156 |            | 149   |
| 200      | 10.610 | 34.200 | 10.606   | 26.223   | 35.020  | 43.430  | 183.158 | 0.450 |            | 198   |
| 250      | 10.050 | 34.153 | 10.021   | 26.287   | 35.109  | 43.544  | 177.922 | 0.541 |            | 248   |
| 300      | 9.532  | 34.121 | 9.499    | 26.150   | 35.194  | 43.630  | 172.805 | 0.628 |            | 298   |
| 350      | 8.813  | 34.081 | 8.776    | 25.434   | 35.311  | 43.797  | 165.316 | 0.713 |            | 347   |
| 400      | 8.056  | 34.042 | 8.015    | 25.319   | 35.431  | 43.949  | 157.574 | 0.794 |            | 397   |
| 450      | 7.257  | 34.007 | 7.214    | 26.607   | 35.556  | 44.109  | 149.378 | 0.870 |            | 447   |
| 500      | 6.420  | 33.978 | 6.375    | 26.697   | 35.686  | 44.277  | 140.726 | 0.943 |            | 496   |
| 600      | 5.091  | 33.997 | 5.043    | 26.875   | 35.929  | 44.581  | 123.519 | 1.075 |            | 595   |
| 700      | 4.337  | 34.077 | 4.284    | 27.022   | 36.113  | 44.800  | 109.566 | 1.192 |            | 694   |
| 800      | 3.957  | 34.151 | 3.898    | 27.121   | 36.231  | 44.935  | 100.517 | 1.297 |            | 793   |
| 900      | 3.645  | 34.235 | 3.580    | 27.220   | 36.344  | 45.063  | 91.528  | 1.393 |            | 892   |
| 1000     | 3.328  | 34.313 | 3.258    | 27.313   | 36.453  | 45.186  | 82.881  | 1.480 |            | 991   |
| 1100     | 3.112  | 34.367 | 3.036    | 27.377   | 36.528  | 45.271  | 77.116  | 1.560 |            | 1090  |
| 1200     | 2.928  | 34.421 | 2.845    | 27.437   | 36.597  | 45.349  | 71.673  | 1.634 |            | 1189  |
| 1300     | 2.796  | 34.467 | 2.707    | 27.486   | 36.653  | 45.412  | 67.371  | 1.704 |            | 1288  |
| 1400     | 2.668  | 34.502 | 2.572    | 27.526   | 36.699  | 45.464  | 63.893  | 1.769 |            | 1386  |
| 1474     | 2.571  | 34.521 | 2.470    | 27.549   | 36.729  | 45.498  | 61.778  | 1.816 |            | 1459  |

| WICKIN BOTTLE DATA | DIS 02 | O2 SAT | SIO3 | PO4   | NO3   | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|--------------------|--------|--------|------|-------|-------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | ML/L   | %      | UM/L | UM/L  | UM/L  | UM/L | TU9LN | DEG C    |         |         |         | DB    |
| 0                  | 15.543 | 34.225 | 5.91 | 104.4 | 5.8   | 0.20 | 0.0   | 15.543   | 25.101  | 33.710  | 41.946  | 0     |
| 52                 | 13.381 | 34.334 | 6.24 | 103.5 | 5.5   | 0.23 | 0.0   | 13.374   | 25.570  | 34.259  | 42.568  | 52    |
| 122                | 12.426 | 34.284 | 5.95 | 98.6  | 6.5   | 0.47 | 3.3   | 12.402   | 25.801  | 34.526  | 42.871  | 122   |
| 135                | 11.944 | 34.222 | 5.52 | 90.6  | 10.6  | 0.69 | 9.6   | 11.907   | 25.987  | 34.731  | 43.092  | 135   |
| 148                | 11.041 | 34.220 | 5.51 | 88.7  | 13.6  | 0.95 | 11.2  | 11.020   | 26.165  | 34.944  | 43.339  | 148   |
| 201                | 10.632 | 34.199 | 5.53 | 88.3  | 14.4  | 0.88 | 11.7  | 10.608   | 26.222  | 35.018  | 43.429  | 201   |
| 252                | 10.055 | 34.152 | 5.50 | 86.7  | 17.0  | 0.97 | 13.0  | 10.036   | 26.284  | 35.105  | 43.538  | 252   |
| 302                | 9.603  | 34.129 | 5.32 | 83.0  | 20.3  | 1.10 | 14.8  | 9.569    | 26.344  | 35.196  | 43.639  | 302   |
| 401                | 7.866  | 34.040 | 4.42 | 66.2  | 35.2  | 1.60 | 22.4  | 7.825    | 26.546  | 35.466  | 43.992  | 401   |
| 502                | 6.154  | 33.975 | 3.37 | 48.5  | 56.2  | 2.15 | 30.0  | 6.110    | 26.729  | 35.730  | 44.333  | 502   |
| 602                | 4.901  | 34.712 | 2.10 | 29.3  | 81.8  | 2.66 | 37.3  | 4.853    | 26.909  | 35.971  | 44.632  | 606   |
| 702                | 4.265  | 34.089 | 1.26 | 17.3  | 100.7 | 2.97 | 41.5  | 4.212    | 27.039  | 36.133  | 44.823  | 707   |
| 802                | 3.925  | 34.158 | 0.78 | 10.6  | 112.0 | 3.09 | 43.6  | 3.856    | 27.130  | 36.241  | 44.946  | 808   |
| 893                | 3.652  | 34.228 | 0.49 | 6.6   | 124.1 | 3.17 | 44.7  | 3.597    | 27.212  | 36.336  | 45.054  | 900   |
| 988                | 3.359  | 34.305 | 0.27 | 3.6   | 135.7 | 3.23 | 45.5  | 3.289    | 27.303  | 36.442  | 45.174  | 996   |
| 1225               | 2.891  | 34.437 | 0.26 | 3.5   | 154.9 | 3.26 | 46.0  | 2.806    | 27.451  | 36.615  | 45.369  | 1236  |
| 1458               | 2.573  | 34.521 | 0.67 | 8.9   | 163.3 |      | 45.2  | 2.472    | 27.549  | 36.728  | 45.498  | 1472  |

# MARATHON 2 STA. 41

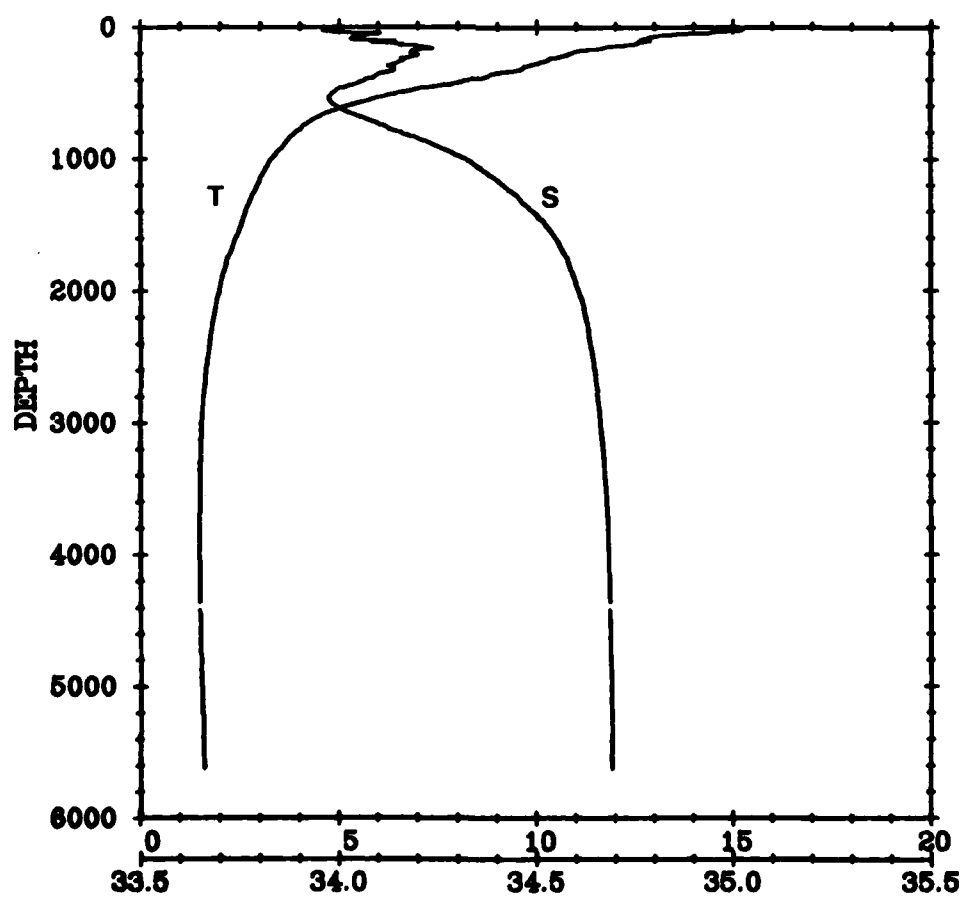
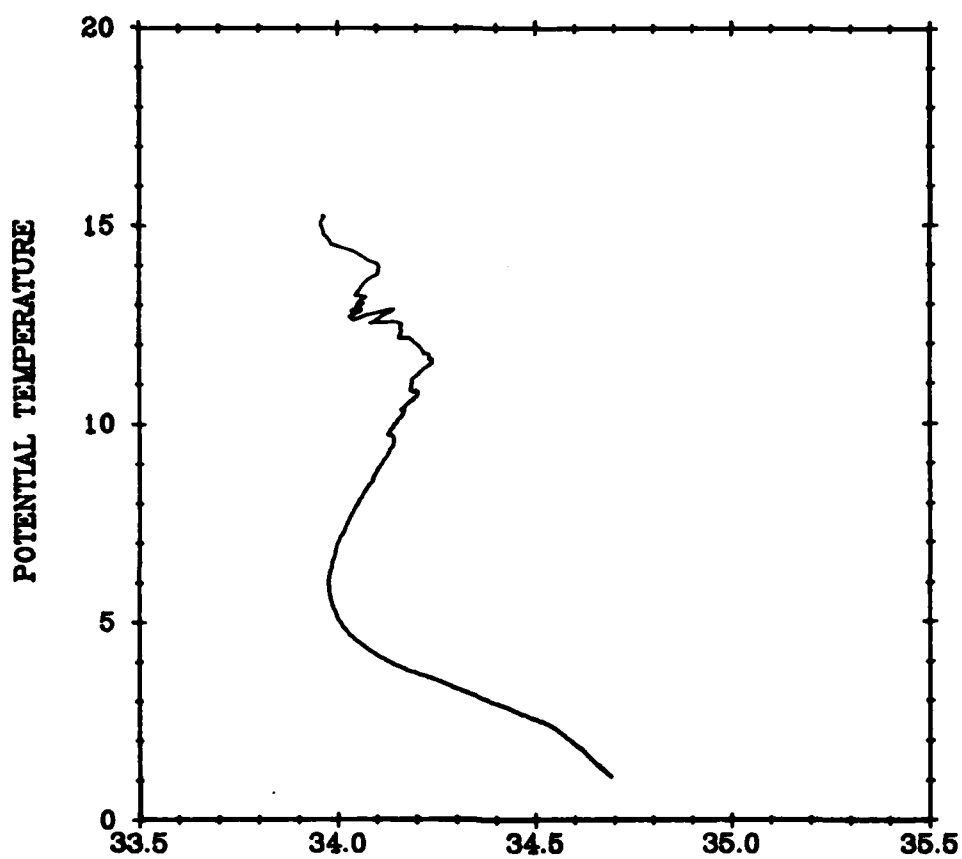


LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB SARGH  
 15 42 5N 151 19 9W 5-17/84 1610 5611 220 14 15.4 15.0 1015.9

| STD DATA | PRESS  | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA    | DYNAMIC HT | DEPTH |
|----------|--------|--------|----------|----------|---------|---------|---------|--------|------------|-------|
| DB       | DEG C  |        |          | DEG C    |         |         |         | CL TON |            | M     |
| 15       | 15.253 | 33.965 | 15.233   | 25.119   | 33.740  | 41.395  | 232.409 | 0.000  |            | 0     |
| 20       | 15.183 | 33.965 | 15.183   | 25.135   | 33.758  | 42.007  | 232.491 | 0.057  |            | 19    |
| 40       | 14.469 | 34.011 | 14.463   | 25.326   | 33.974  | 42.246  | 234.341 | 0.121  |            | 39    |
| 60       | 13.352 | 34.065 | 13.344   | 25.600   | 34.290  | 42.401  | 235.102 | 0.162  |            | 59    |
| 80       | 12.953 | 34.145 | 12.942   | 25.695   | 34.394  | 42.123  | 231.719 | 0.209  |            | 79    |
| 100      | 12.720 | 34.072 | 12.737   | 25.733   | 34.447  | 42.780  | 227.771 | 0.255  |            | 99    |
| 150      | 11.966 | 34.210 | 11.847   | 26.005   | 34.771  | 43.114  | 225.333 | 0.363  |            | 149   |
| 200      | 10.960 | 34.188 | 10.936   | 26.173   | 34.960  | 43.352  | 197.393 | 0.460  |            | 198   |
| 250      | 10.293 | 34.165 | 10.254   | 26.257   | 35.069  | 43.494  | 180.917 | 0.553  |            | 248   |
| 300      | 9.730  | 34.134 | 9.696    | 26.327   | 35.163  | 43.611  | 175.357 | 0.642  |            | 298   |
| 350      | 9.031  | 34.112 | 8.993    | 26.424   | 35.291  | 43.763  | 166.429 | 0.727  |            | 347   |
| 400      | 8.349  | 34.069 | 8.317    | 26.497   | 35.395  | 43.901  | 159.367 | 0.809  |            | 397   |
| 450      | 7.542  | 34.024 | 7.499    | 26.581   | 35.516  | 44.057  | 152.195 | 0.887  |            | 447   |
| 500      | 6.569  | 33.985 | 6.524    | 26.683   | 35.645  | 44.249  | 142.209 | 0.960  |            | 496   |
| 550      | 5.254  | 33.993 | 5.205    | 26.853   | 35.899  | 44.543  | 125.817 | 1.044  |            | 545   |
| 600      | 4.399  | 34.069 | 4.335    | 27.011   | 36.099  | 44.783  | 111.755 | 1.212  |            | 594   |
| 650      | 3.918  | 34.154 | 3.860    | 27.128   | 36.239  | 44.943  | 99.869  | 1.318  |            | 643   |
| 700      | 3.607  | 34.242 | 3.543    | 27.229   | 36.356  | 45.076  | 90.577  | 1.413  |            | 692   |
| 750      | 3.315  | 34.314 | 3.245    | 27.315   | 36.456  | 45.190  | 82.660  | 1.500  |            | 741   |
| 800      | 3.105  | 34.369 | 3.029    | 27.378   | 36.530  | 45.273  | 76.961  | 1.579  |            | 790   |
| 850      | 2.954  | 34.414 | 2.971    | 27.429   | 36.588  | 45.339  | 72.484  | 1.654  |            | 839   |
| 900      | 2.784  | 34.454 | 2.695    | 27.477   | 36.645  | 45.404  | 68.195  | 1.724  |            | 888   |
| 950      | 2.648  | 34.487 | 2.552    | 27.515   | 36.690  | 45.456  | 64.770  | 1.791  |            | 937   |
| 1000     | 2.540  | 34.521 | 2.438    | 27.552   | 36.733  | 45.504  | 61.558  | 1.854  |            | 986   |
| 1050     | 2.417  | 34.545 | 2.308    | 27.582   | 36.770  | 45.547  | 58.874  | 1.914  |            | 1035  |
| 1100     | 2.289  | 34.564 | 2.173    | 27.608   | 36.803  | 45.587  | 56.462  | 1.972  |            | 1084  |
| 1150     | 2.159  | 34.580 | 2.037    | 27.632   | 36.834  | 45.625  | 54.206  | 2.027  |            | 1133  |
| 1200     | 2.062  | 34.592 | 1.933    | 27.650   | 36.858  | 45.654  | 52.200  | 2.081  |            | 1182  |
| 1250     | 1.988  | 34.604 | 1.852    | 27.666   | 36.879  | 45.679  | 50.339  | 2.133  |            | 1231  |
| 1300     | 1.939  | 34.615 | 1.766    | 27.681   | 36.899  | 45.702  | 48.962  | 2.183  |            | 1280  |
| 1350     | 1.950  | 34.623 | 1.699    | 27.693   | 36.913  | 45.720  | 48.924  | 2.233  |            | 1329  |
| 1400     | 1.792  | 34.629 | 1.633    | 27.703   | 36.926  | 45.737  | 48.122  | 2.281  |            | 1378  |
| 1450     | 1.744  | 34.634 | 1.577    | 27.711   | 36.937  | 45.751  | 47.497  | 2.329  |            | 1427  |
| 1500     | 1.702  | 34.640 | 1.527    | 27.719   | 36.948  | 45.765  | 46.957  | 2.376  |            | 1476  |
| 1550     | 1.657  | 34.645 | 1.474    | 27.727   | 36.959  | 45.779  | 46.234  | 2.423  |            | 1525  |
| 1600     | 1.623  | 34.649 | 1.432    | 27.734   | 36.968  | 45.789  | 45.810  | 2.469  |            | 1574  |
| 1650     | 1.597  | 34.653 | 1.397    | 27.739   | 36.975  | 45.799  | 45.480  | 2.514  |            | 1623  |
| 1700     | 1.572  | 34.657 | 1.363    | 27.745   | 36.983  | 45.808  | 45.152  | 2.560  |            | 1672  |
| 1750     | 1.549  | 34.661 | 1.331    | 27.750   | 36.990  | 45.816  | 44.841  | 2.605  |            | 1721  |
| 1800     | 1.533  | 34.664 | 1.305    | 27.755   | 36.996  | 45.823  | 44.589  | 2.649  |            | 1770  |
| 1850     | 1.517  | 34.666 | 1.280    | 27.758   | 37.000  | 45.829  | 44.602  | 2.694  |            | 1819  |
| 1900     | 1.504  | 34.669 | 1.258    | 27.762   | 37.006  | 45.836  | 44.478  | 2.739  |            | 1868  |
| 1950     | 1.495  | 34.672 | 1.239    | 27.766   | 37.010  | 45.842  | 44.407  | 2.783  |            | 1917  |
| 2000     | 1.490  | 34.673 | 1.224    | 27.767   | 37.013  | 45.845  | 44.532  | 2.827  |            | 1966  |
| 2050     | 1.479  | 34.676 | 1.203    | 27.771   | 37.018  | 45.851  | 44.422  | 2.872  |            | 2015  |
| 2100     | 1.479  | 34.677 | 1.193    | 27.773   | 37.020  | 45.854  | 44.515  | 2.916  |            | 2064  |
| 2150     | 1.471  | 34.679 | 1.176    | 27.776   | 37.024  | 45.858  | 44.644  | 2.961  |            | 2113  |
| 2200     | 1.474  | 34.680 | 1.167    | 27.777   | 37.026  | 45.860  | 44.848  | 3.006  |            | 2162  |
| 2250     | 1.475  | 34.681 | 1.157    | 27.778   | 37.028  | 45.863  | 45.051  | 3.051  |            | 2211  |
| 2300     | 1.477  | 34.683 | 1.148    | 27.781   | 37.031  | 45.866  | 45.199  | 3.096  |            | 2260  |
| 2350     | 1.482  | 34.683 | 1.142    | 27.781   | 37.031  | 45.867  | 45.535  | 3.141  |            | 2309  |
| 2400     | 1.486  | 34.684 | 1.134    | 27.782   | 37.033  | 45.869  | 45.785  | 3.187  |            | 2358  |
| 2450     | 1.491  | 34.685 | 1.128    | 27.784   | 37.035  | 45.871  | 46.051  | 3.233  |            | 2407  |
| 2500     | 1.499  | 34.685 | 1.124    | 27.784   | 37.035  | 45.872  | 46.438  | 3.279  |            | 2456  |
| 2550     | 1.506  | 34.686 | 1.119    | 27.785   | 37.036  | 45.874  | 46.738  | 3.326  |            | 2505  |
| 2600     | 1.513  | 34.686 | 1.114    | 27.785   | 37.037  | 45.875  | 47.110  | 3.373  |            | 2554  |
| 2650     | 1.519  | 34.687 | 1.108    | 27.787   | 37.039  | 45.876  | 47.395  | 3.420  |            | 2603  |
| 2700     | 1.528  | 34.687 | 1.105    | 27.787   | 37.039  | 45.877  | 47.801  | 3.467  |            | 2652  |
| 2750     | 1.536  | 34.688 | 1.100    | 27.788   | 37.040  | 45.878  | 48.126  | 3.515  |            | 2701  |
| 2800     | 1.545  | 34.689 | 1.097    | 27.788   | 37.041  | 45.879  | 48.536  | 3.564  |            | 2750  |
| 2850     | 1.555  | 34.689 | 1.094    | 27.789   | 37.042  | 45.880  | 48.997  | 3.612  |            | 2799  |
| 2900     | 1.565  | 34.689 | 1.091    | 27.789   | 37.042  | 45.881  | 49.129  | 3.662  |            | 2848  |
| 2950     | 1.577  | 34.689 | 1.090    | 27.789   | 37.042  | 45.881  | 49.800  | 3.711  |            | 2897  |
| 3000     | 1.590  | 34.690 | 1.090    | 27.790   | 37.043  | 45.882  | 50.222  | 3.761  |            | 2946  |
| 3050     | 1.603  | 34.690 | 1.089    | 27.790   | 37.043  | 45.882  | 50.716  | 3.812  |            | 2995  |
| 3100     | 1.616  | 34.690 | 1.089    | 27.790   | 37.043  | 45.884  | 51.213  | 3.863  |            | 3044  |
| 3150     | 1.620  | 34.690 | 1.089    | 27.790   | 37.043  | 45.882  | 51.375  | 3.880  |            | 3093  |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |          |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|----------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUB IN | DEG C    |
| 1                  | 15.316 | 33.971   | 5.85   | 112.9  | 5.4   | 1.24 | 0.0  | 0.00 | 15.316 | 25.110   |
| 54                 | 11.577 | 34.098   | 6.02   | 102.2  | 5.6   | 0.27 | 0.0  | 0.07 | 11.571 | 25.579   |
| 102                | 12.671 | 34.105   | 5.76   | 96.0   | 6.0   | 0.42 | 4.2  | 0.02 | 12.656 | 25.768   |
| 154                | 11.452 | 34.249   | 5.42   | 98.5   | 11.7  | 0.74 | 9.9  | 0.01 | 11.612 | 26.075   |
| 204                | 10.809 | 34.189   | 5.56   | 89.1   | 13.2  | 0.77 | 11.0 | 0.01 | 10.784 | 26.183   |
| 303                | 9.680  | 34.134   | 5.33   | 83.3   | 19.1  | 1.36 | 14.6 | 0.01 | 9.645  | 26.335   |
| 400                | 8.452  | 34.075   | 4.66   | 70.8   | 29.2  | 1.42 | 20.2 | 0.00 | 8.410  | 26.486   |
| 497                | 6.670  | 33.989   | 3.68   | 53.6   | 47.4  | 1.74 | 27.7 | 0.00 | 6.624  | 26.673   |
| 596                | 5.222  | 33.996   | 2.39   | 33.6   | 73.3  | 2.45 | 35.4 | 0.00 | 5.173  | 26.859   |
| 697                | 4.443  | 34.063   | 1.42   | 19.6   | 92.7  | 2.83 | 40.4 | 0.00 | 4.399  | 27.000   |
| 795                | 3.942  | 34.150   | 0.78   | 10.6   | 108.6 | 3.33 | 43.4 | 0.00 | 3.883  | 27.122   |
| 894                | 3.454  | 34.228   | 0.45   | 6.1    | 121.7 | 3.10 | 44.7 | 0.00 | 3.589  | 27.213   |
| 993                | 3.419  | 34.292   | 0.29   | 3.9    | 128.6 | 3.18 | 45.3 | 0.00 | 3.347  | 27.288   |
| 1241               | 2.913  | 34.427   | 0.23   | 3.1    | 149.1 | 3.21 | 46.0 | 0.00 | 2.826  | 27.443   |
| 1489               | 2.547  | 34.523   | 0.63   | 8.3    | 160.1 | 3.15 | 45.1 | 0.00 | 2.444  | 27.553   |
| 1724               | 2.205  | 34.577   | 1.14   | 14.9   | 169.8 | 3.05 | 43.7 | 0.00 | 2.087  | 27.626   |
| 1960               | 1.988  | 34.606   | 1.52   | 19.8   | 174.1 | 2.96 | 42.8 | 0.00 | 1.853  | 27.667   |
| 2445               | 1.711  | 34.640   | 2.09   | 27.0   | 176.8 | 2.85 | 41.1 | 0.00 | 1.540  | 27.718   |
| 2935               | 1.556  | 34.662   | 2.65   | 34.0   | 173.8 | 2.72 | 39.5 | 0.00 | 1.340  | 27.750   |
| 3420               | 1.492  | 34.675   | 3.06   | 39.2   | 168.7 | 2.63 | 38.5 | 0.00 | 1.229  | 27.769   |
| 3922               | 1.476  | 34.683   | 3.32   | 42.5   | 164.4 | 2.57 | 37.7 | 0.00 | 1.159  | 27.780   |
| 4422               | 1.500  | 34.686   | 3.46   | 44.2   | 162.1 | 2.55 | 37.4 | 0.00 | 1.125  | 27.784   |
| 5019               | 1.547  | 34.689   | 3.59   | 45.8   | 155.5 |      | 36.9 | 0.00 | 1.097  | 27.789   |
| 5620               | 1.620  | 34.690   | 3.63   | 46.3   | 153.4 | 2.50 | 36.8 | 0.00 | 1.089  | 27.790   |

# MARATHON 2 STA. 42



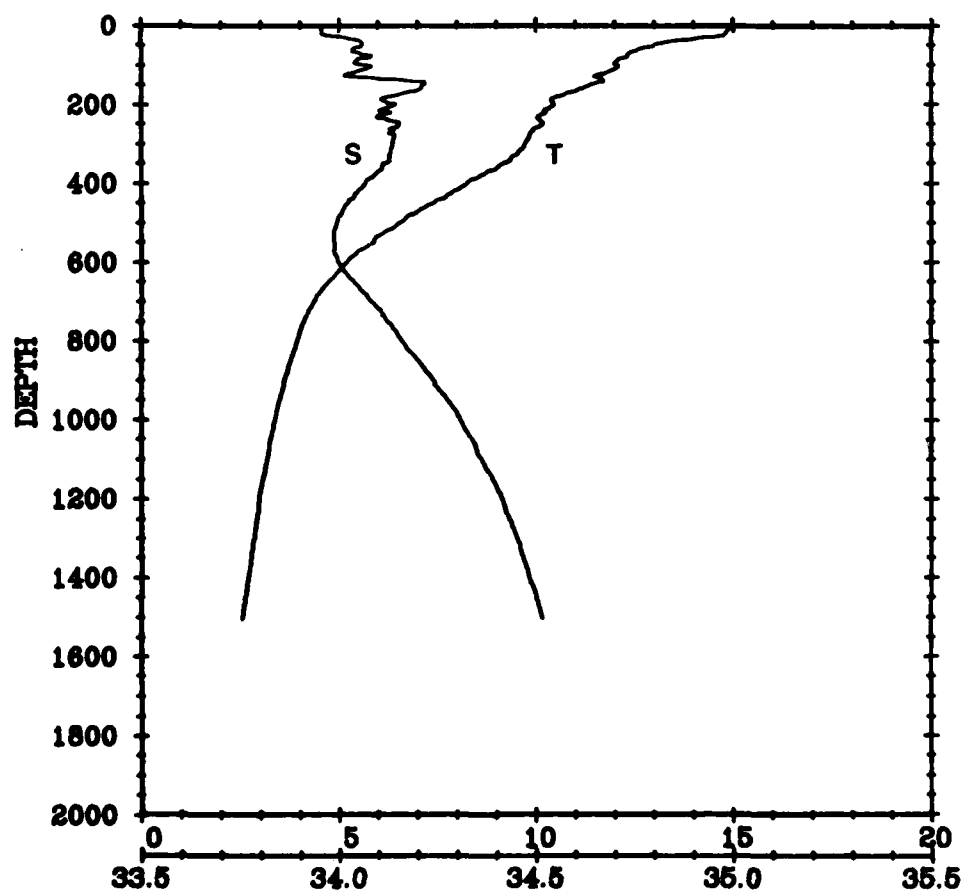
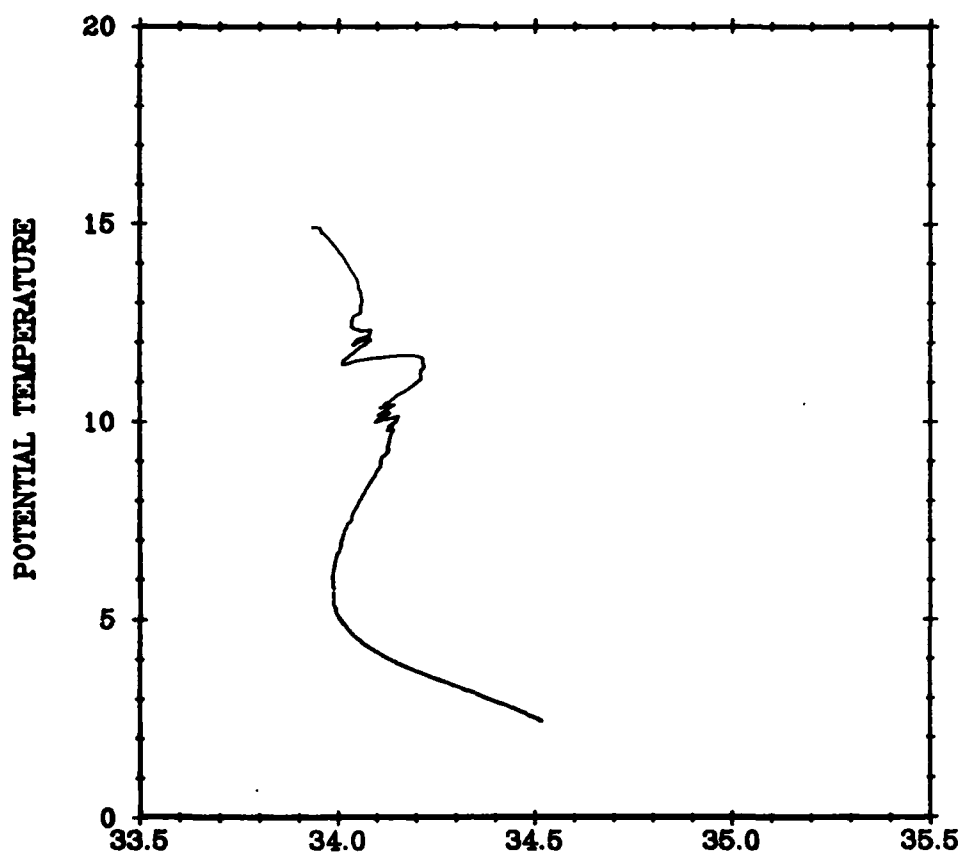
R/V THOMAS WASHINGTON MARATHON LEG 11 STATION 43

LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
16 3 2N 151 59 3W 5/17/84 2254 5529 210 15 19.4 17.2 1016.3

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |         |            |            |
| 0           | 14.898        | 33.949   | 14.898            | 25.195  | 33.818  | 42.076  | 277.200 | 0.000      | 0          |
| 20          | 14.709        | 33.965   | 14.706            | 25.219  | 33.878  | 42.143  | 272.679 | 0.155      | 19         |
| 40          | 13.545        | 34.341   | 13.539            | 25.542  | 34.224  | 42.528  | 244.357 | 0.407      | 39         |
| 60          | 12.655        | 34.543   | 12.647            | 25.722  | 34.438  | 42.774  | 227.719 | 0.154      | 59         |
| 80          | 12.228        | 34.560   | 12.219            | 25.818  | 34.551  | 42.903  | 219.041 | 0.199      | 79         |
| 100         | 12.028        | 34.058   | 12.015            | 25.855  | 34.596  | 42.955  | 215.036 | 0.242      | 99         |
| 120         | 11.410        | 34.204   | 11.391            | 25.095  | 34.849  | 43.230  | 195.312 | 0.345      | 149        |
| 140         | 10.401        | 34.128   | 10.377            | 25.207  | 35.014  | 43.435  | 184.599 | 0.440      | 198        |
| 160         | 10.113        | 34.143   | 10.084            | 26.259  | 35.088  | 43.520  | 179.703 | 0.511      | 248        |
| 180         | 9.725         | 34.116   | 9.691             | 26.329  | 35.156  | 43.614  | 174.827 | 0.620      | 298        |
| 200         | 9.192         | 34.119   | 9.154             | 26.404  | 35.264  | 43.734  | 168.435 | 0.705      | 347        |
| 220         | 8.269         | 34.068   | 8.228             | 26.508  | 35.410  | 43.919  | 158.834 | 0.787      | 397        |
| 240         | 7.413         | 34.024   | 7.369             | 26.599  | 35.540  | 44.187  | 150.334 | 0.865      | 446        |
| 260         | 6.582         | 33.994   | 6.536             | 26.639  | 35.670  | 44.253  | 141.718 | 0.938      | 496        |
| 280         | 5.198         | 33.997   | 5.149             | 26.851  | 35.911  | 44.558  | 124.829 | 1.071      | 595        |
| 300         | 4.355         | 34.079   | 4.302             | 27.022  | 36.112  | 44.797  | 109.627 | 1.188      | 694        |
| 320         | 3.921         | 34.158   | 3.863             | 27.130  | 36.242  | 44.947  | 99.606  | 1.293      | 793        |
| 340         | 3.608         | 34.237   | 3.544             | 27.225  | 36.351  | 45.072  | 90.960  | 1.388      | 892        |
| 360         | 3.360         | 34.305   | 3.290             | 27.304  | 36.442  | 45.174  | 83.834  | 1.475      | 991        |
| 380         | 3.167         | 34.357   | 3.090             | 27.364  | 36.512  | 45.253  | 78.478  | 1.556      | 1090       |
| 400         | 2.967         | 34.410   | 2.884             | 27.425  | 36.583  | 45.334  | 72.928  | 1.632      | 1189       |
| 420         | 2.816         | 34.449   | 2.746             | 27.467  | 36.633  | 45.399  | 69.230  | 1.703      | 1287       |
| 440         | 2.697         | 34.480   | 2.601             | 27.505  | 36.678  | 45.442  | 65.849  | 1.771      | 1386       |
| 460         | 2.559         | 34.512   | 2.456             | 27.543  | 36.724  | 45.494  | 62.440  | 1.835      | 1485       |
| 480         | 2.531         | 34.518   | 2.427             | 27.551  | 36.732  | 45.504  | 61.768  | 1.846      | 1503       |

| WISKIN BOTTLE DATA |               | SALINITY | DIS C2<br>ML/L | O2 SAT<br>% | SIO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUSIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |          |                |             |              |             |             |             |               |                   |         |         |         |             |
| 3                  | 14.844        | 33.942   | 4.53           | 105.0       | 5.6          | 0.20        | 0.0         | 0.00        | 14.844        | 25.191            | 33.826  | 42.086  | 3       |             |
| 12                 | 12.622        | 34.036   | 6.15           | 100.7       | 5.8          | 0.34        | 1.5         | 0.71        | 12.615        | 25.722            | 34.440  | 42.778  | 52      |             |
| 101                | 12.119        | 34.084   | 5.93           | 96.0        | 6.4          | 0.48        | 5.2         | 0.02        | 12.105        | 25.958            | 34.595  | 42.951  | 101     |             |
| 115                | 11.496        | 34.155   | 5.62           | 91.4        | 9.9          | 0.67        | 8.6         | 0.01        | 11.479        | 26.031            | 34.792  | 43.170  | 115     |             |
| 167                | 10.789        | 34.173   | 5.51           | 89.3        | 12.7         | 0.82        | 10.9        | 0.01        | 10.769        | 26.173            | 34.963  | 43.368  | 167     |             |
| 201                | 10.324        | 34.125   | 5.69           | 90.0        | 13.6         | 0.84        | 11.2        | 0.01        | 10.300        | 26.218            | 35.028  | 43.452  | 201     |             |
| 252                | 9.993         | 34.142   | 5.53           | 89.6        | 15.8         | 0.91        | 12.5        | 0.01        | 9.964         | 26.288            | 35.113  | 43.550  | 252     |             |
| 301                | 9.584         | 34.110   | 5.40           | 84.2        | 19.3         | 1.03        | 14.5        | 0.01        | 9.550         | 26.348            | 35.190  | 43.644  | 301     |             |
| 401                | 8.224         | 34.066   | 4.57           | 69.0        | 32.0         | 1.46        | 21.0        | 0.00        | 8.192         | 26.513            | 35.417  | 43.927  | 401     |             |
| 501                | 6.639         | 33.996   | 3.62           | 52.7        | 49.1         | 1.96        | 27.9        | 0.00        | 6.593         | 26.683            | 35.661  | 44.242  | 504     |             |
| 601                | 5.218         | 33.996   | 2.43           | 34.2        | 71.5         | 2.47        | 35.3        | 0.00        | 5.169         | 26.860            | 35.907  | 44.553  | 605     |             |
| 701                | 4.165         | 34.076   | 1.34           | 19.5        | 96.0         | 2.83        | 40.8        | 0.00        | 4.312         | 27.019            | 36.108  | 44.793  | 706     |             |
| 800                | 3.897         | 34.163   | 0.74           | 10.1        | 112.6        | 3.02        | 43.5        | 0.00        | 3.838         | 27.137            | 36.249  | 44.956  | 806     |             |
| 900                | 3.587         | 34.242   | 0.42           | 5.7         | 124.4        | 3.12        | 44.8        | 0.00        | 3.522         | 27.231            | 36.358  | 45.090  | 907     |             |
| 1000               | 3.344         | 34.308   | 0.29           | 3.9         | 134.5        | 3.16        | 45.4        | 0.00        | 3.273         | 27.307            | 36.447  | 45.179  | 1008    |             |
| 1252               | 2.992         | 34.435   | 0.25           | 3.3         | 152.0        | 3.19        | 45.9        | 0.00        | 2.895         | 27.452            | 36.614  | 45.368  | 1263    |             |
| 1501               | 2.534         | 34.518D  | 0.56           | 7.4         | 162.2        |             | 45.2        | 0.00        | 2.430         | 27.550            | 36.731  | 45.503  | 1515    |             |

# MARATHON 2 STA. 43



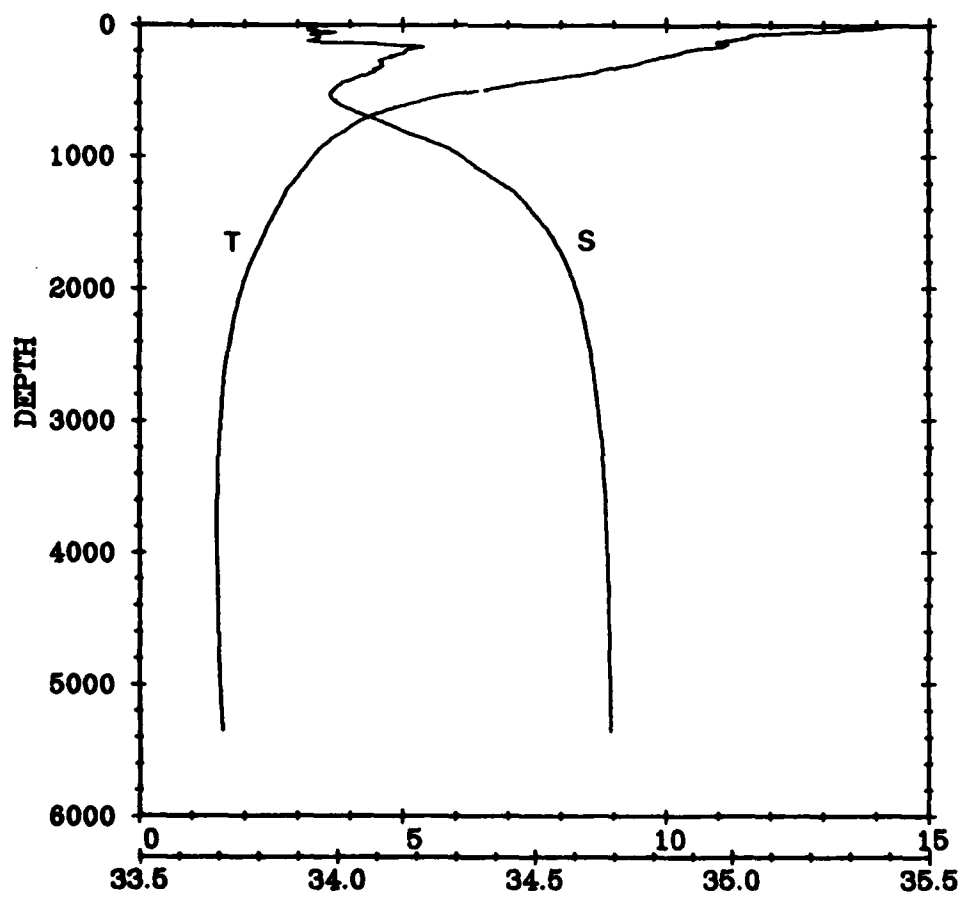
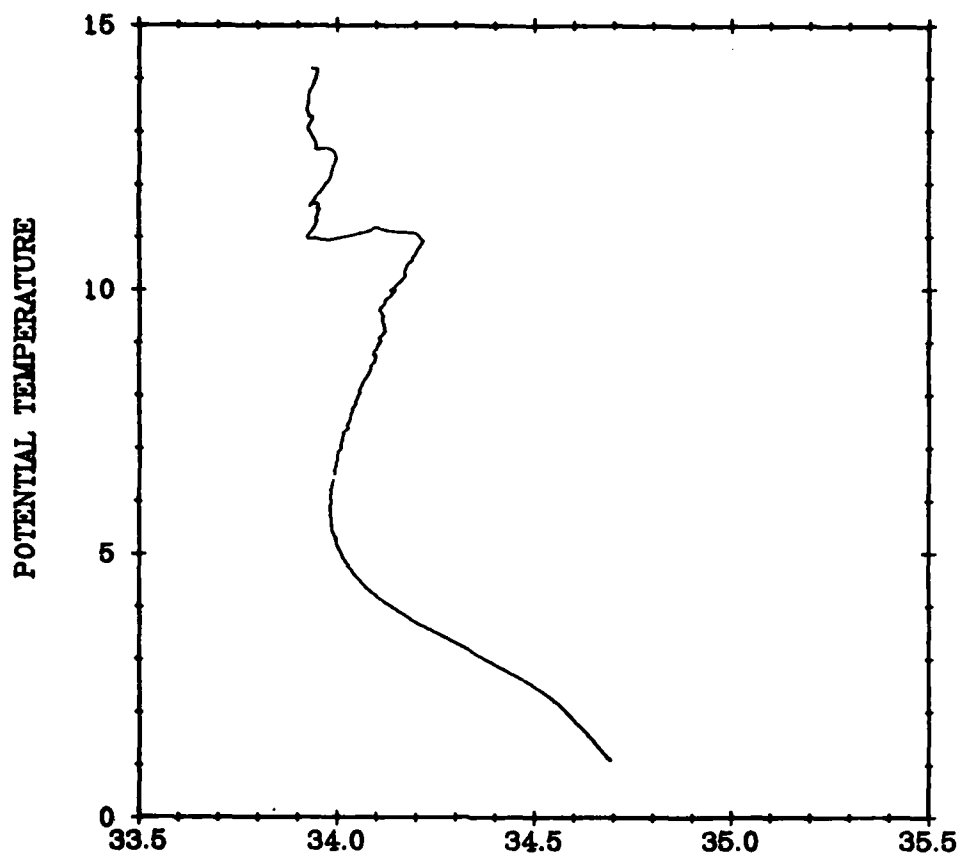
S/V THOMAS WASHINGTON MARATHON LEG II STATION 44

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | JMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 16 24 9N | 151 59 5W | 5/19/84  | 542        | 5374   | 210  | 20    | 15.6     | 15.0     | 1013.9 |

| CTD DATA | PRESS  | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA   | DYNAMIC HT | DEPTH |
|----------|--------|--------|----------|----------|---------|---------|---------|-------|------------|-------|
| DB       | DEG C  |        | DEG C    |          |         |         | CM/TON  |       |            | M     |
| 0        | 14.163 | 33.946 | 14.163   | 25.339   | 33.999  | 42.283  | 262.438 | 0.100 |            | 0     |
| 20       | 14.028 | 33.945 | 14.025   | 25.367   | 34.033  | 42.321  | 260.402 | 0.152 |            | 19    |
| 40       | 13.862 | 33.931 | 13.856   | 25.494   | 34.185  | 42.436  | 248.896 | 0.103 |            | 39    |
| 60       | 12.435 | 33.970 | 12.427   | 25.708   | 34.434  | 42.779  | 229.036 | 0.151 |            | 59    |
| 80       | 11.682 | 33.949 | 11.672   | 25.934   | 34.591  | 42.964  | 217.414 | 0.196 |            | 79    |
| 100      | 11.476 | 33.951 | 11.464   | 25.875   | 34.640  | 43.021  | 214.012 | 0.239 |            | 99    |
| 150      | 11.096 | 34.093 | 11.078   | 26.056   | 34.834  | 43.228  | 197.990 | 0.342 |            | 149   |
| 200      | 10.366 | 34.173 | 10.342   | 26.248   | 35.056  | 43.477  | 180.699 | 0.436 |            | 198   |
| 250      | 9.886  | 34.131 | 9.857    | 26.298   | 35.127  | 43.568  | 176.845 | 0.526 |            | 248   |
| 300      | 9.430  | 34.115 | 9.397    | 26.362   | 35.211  | 43.671  | 171.609 | 0.613 |            | 298   |
| 350      | 8.767  | 34.097 | 8.730    | 26.454   | 35.333  | 43.820  | 163.422 | 0.697 |            | 347   |
| 400      | 8.059  | 34.055 | 8.017    | 26.529   | 35.441  | 43.959  | 156.642 | 0.777 |            | 397   |
| 450      | 7.195  | 34.012 | 7.152    | 26.620   | 35.571  | 44.127  | 148.134 | 0.853 |            | 446   |
| 500      | 6.488  | 33.992 | 6.443    | 26.699   | 35.685  | 44.272  | 140.599 | 0.925 |            | 496   |
| 600      | 5.167  | 34.022 | 5.118    | 26.871   | 35.920  | 44.568  | 124.077 | 1.057 |            | 595   |
| 700      | 4.381  | 34.077 | 4.328    | 27.018   | 36.106  | 44.791  | 110.079 | 1.175 |            | 694   |
| 800      | 3.946  | 34.158 | 3.887    | 27.128   | 36.238  | 44.942  | 99.892  | 1.280 |            | 793   |
| 900      | 3.578  | 34.244 | 3.514    | 27.233   | 36.361  | 45.093  | 90.101  | 1.375 |            | 892   |
| 1000     | 3.327  | 34.311 | 3.257    | 27.311   | 36.452  | 45.135  | 83.018  | 1.461 |            | 991   |
| 1100     | 3.133  | 34.359 | 3.057    | 27.368   | 36.519  | 45.261  | 77.945  | 1.542 |            | 1090  |
| 1200     | 2.928  | 34.410 | 2.845    | 27.428   | 36.589  | 45.341  | 72.486  | 1.617 |            | 1189  |
| 1300     | 2.751  | 34.456 | 2.662    | 27.481   | 36.651  | 45.412  | 67.572  | 1.687 |            | 1287  |
| 1400     | 2.634  | 34.487 | 2.539    | 27.516   | 36.693  | 45.459  | 64.610  | 1.753 |            | 1386  |
| 1500     | 2.531  | 34.515 | 2.439    | 27.551   | 36.734  | 45.507  | 61.549  | 1.816 |            | 1485  |
| 1600     | 2.375  | 34.540 | 2.267    | 27.582   | 36.771  | 45.551  | 58.753  | 1.876 |            | 1583  |
| 1700     | 2.262  | 34.559 | 2.147    | 27.607   | 36.803  | 45.588  | 56.511  | 1.934 |            | 1682  |
| 1800     | 2.141  | 34.577 | 2.019    | 27.631   | 36.834  | 45.626  | 54.213  | 1.999 |            | 1780  |
| 1900     | 2.019  | 34.590 | 1.910    | 27.650   | 36.859  | 45.656  | 52.471  | 2.043 |            | 1879  |
| 2000     | 1.952  | 34.612 | 1.816    | 27.667   | 36.881  | 45.683  | 50.948  | 2.094 |            | 1977  |
| 2100     | 1.877  | 34.612 | 1.734    | 27.682   | 36.900  | 45.706  | 49.689  | 2.145 |            | 2076  |
| 2200     | 1.822  | 34.611 | 1.671    | 27.693   | 36.915  | 45.724  | 48.722  | 2.194 |            | 2174  |
| 2300     | 1.774  | 34.627 | 1.616    | 27.702   | 36.927  | 45.739  | 48.041  | 2.242 |            | 2272  |
| 2400     | 1.727  | 34.634 | 1.561    | 27.712   | 36.940  | 45.754  | 47.280  | 2.290 |            | 2371  |
| 2500     | 1.682  | 34.641 | 1.508    | 27.722   | 36.952  | 45.759  | 46.526  | 2.337 |            | 2469  |
| 2600     | 1.645  | 34.645 | 1.462    | 27.729   | 36.962  | 45.731  | 46.004  | 2.383 |            | 2567  |
| 2700     | 1.609  | 34.651 | 1.418    | 27.736   | 36.971  | 45.793  | 45.479  | 2.429 |            | 2665  |
| 2800     | 1.587  | 34.654 | 1.387    | 27.741   | 36.977  | 45.801  | 45.273  | 2.474 |            | 2763  |
| 2900     | 1.569  | 34.658 | 1.360    | 27.746   | 36.984  | 45.809  | 45.039  | 2.519 |            | 2861  |
| 3000     | 1.546  | 34.662 | 1.328    | 27.751   | 36.991  | 45.818  | 44.727  | 2.564 |            | 2959  |
| 3100     | 1.527  | 34.665 | 1.300    | 27.756   | 36.997  | 45.825  | 44.533  | 2.609 |            | 3057  |
| 3200     | 1.507  | 34.668 | 1.271    | 27.760   | 37.003  | 45.833  | 44.316  | 2.653 |            | 3155  |
| 3300     | 1.494  | 34.671 | 1.248    | 27.764   | 37.008  | 45.839  | 44.191  | 2.697 |            | 3253  |
| 3400     | 1.489  | 34.673 | 1.233    | 27.767   | 37.012  | 45.843  | 44.248  | 2.742 |            | 3351  |
| 3500     | 1.483  | 34.675 | 1.217    | 27.770   | 37.016  | 45.848  | 44.286  | 2.786 |            | 3448  |
| 3600     | 1.476  | 34.677 | 1.200    | 27.772   | 37.019  | 45.852  | 44.306  | 2.830 |            | 3546  |
| 3700     | 1.473  | 34.679 | 1.187    | 27.775   | 37.022  | 45.856  | 44.332  | 2.875 |            | 3644  |
| 3800     | 1.468  | 34.681 | 1.171    | 27.777   | 37.026  | 45.860  | 44.425  | 2.919 |            | 3741  |
| 3900     | 1.471  | 34.681 | 1.164    | 27.778   | 37.027  | 45.862  | 44.731  | 2.954 |            | 3839  |
| 4000     | 1.473  | 34.682 | 1.155    | 27.779   | 37.029  | 45.864  | 44.949  | 3.008 |            | 3936  |
| 4100     | 1.474  | 34.684 | 1.145    | 27.782   | 37.032  | 45.868  | 45.080  | 3.053 |            | 4034  |
| 4200     | 1.478  | 34.684 | 1.138    | 27.782   | 37.032  | 45.869  | 45.400  | 3.099 |            | 4131  |
| 4300     | 1.485  | 34.685 | 1.133    | 27.783   | 37.034  | 45.870  | 45.698  | 3.144 |            | 4229  |
| 4400     | 1.491  | 34.686 | 1.128    | 27.784   | 37.035  | 45.872  | 45.981  | 3.190 |            | 4326  |
| 4500     | 1.496  | 34.687 | 1.121    | 27.786   | 37.037  | 45.874  | 46.247  | 3.236 |            | 4423  |
| 4600     | 1.502  | 34.687 | 1.115    | 27.786   | 37.038  | 45.875  | 46.601  | 3.283 |            | 4521  |
| 4700     | 1.509  | 34.688 | 1.110    | 27.787   | 37.039  | 45.877  | 46.902  | 3.329 |            | 4618  |
| 4800     | 1.516  | 34.688 | 1.105    | 27.788   | 37.040  | 45.878  | 47.274  | 3.376 |            | 4715  |
| 4900     | 1.524  | 34.689 | 1.101    | 27.789   | 37.041  | 45.879  | 47.594  | 3.424 |            | 4812  |
| 5000     | 1.531  | 34.690 | 1.096    | 27.790   | 37.042  | 45.881  | 47.898  | 3.472 |            | 4909  |
| 5100     | 1.541  | 34.690 | 1.093    | 27.790   | 37.043  | 45.881  | 48.326  | 3.520 |            | 5006  |
| 5200     | 1.550  | 34.690 | 1.089    | 27.790   | 37.043  | 45.882  | 48.738  | 3.563 |            | 5103  |
| 5300     | 1.562  | 34.691 | 1.088    | 27.791   | 37.044  | 45.883  | 49.136  | 3.617 |            | 5200  |
| 5400     | 1.575  | 34.691 | 1.098    | 27.791   | 37.044  | 45.883  | 49.625  | 3.667 |            | 5297  |
| 5452     | 1.582  | 34.691 | 1.088    | 27.791   | 37.044  | 45.883  | 49.884  | 3.692 |            | 5348  |

| WISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUSIN  | DEG C    |         |         |         | DB    |
| 1                  | 13.593 | 33.890   | 6.27   | 106.3  | 5.5   | 0.31 | 2.8  | 0.33 | 13.543 | 25.416   | 34.101  | 42.407  |         | 1     |
| 51                 | 12.593 | 34.012   | 6.23   | 103.6  | 6.2   | 0.33 | 1.7  | 0.20 | 12.586 | 25.709   | 34.429  | 42.768  |         | 53    |
| 102                | 11.837 | 34.037   | 5.96   | 97.5   | 6.9   | 0.34 | 5.0  | 0.12 | 11.824 | 25.875   | 34.624  | 42.990  |         | 102   |
| 147                | 10.795 | 33.985   | 5.91   | 94.3   | 8.1   | 0.66 | 7.7  | 0.02 | 10.777 | 26.025   | 34.817  | 43.225  |         | 147   |
| 194                | 10.476 | 34.176   | 5.59   | 88.9   | 14.0  | 0.87 | 11.7 | 0.01 | 10.453 | 26.231   | 35.034  | 43.451  |         | 195   |
| 286                | 9.544  | 34.118   | 5.39   | 83.8   | 19.4  | 1.06 | 14.6 | 0.00 | 9.512  | 26.345   | 35.189  | 43.644  |         | 287   |
| 391                | 7.812  | 34.019   | 4.37   | 65.4   | 35.9  | 1.60 | 22.6 | 0.01 | 7.773  | 26.552   | 35.475  | 44.004  |         | 393   |
| 489                | 6.576  | 33.991   | 3.63   | 52.8   | 50.6  | 1.99 | 28.0 | 0.01 | 6.531  | 26.687   | 35.668  | 44.252  |         | 492   |
| 594                | 5.236  | 33.999   | 2.44   | 34.4   | 75.0  | 2.52 | 35.3 | 0.00 | 5.188  | 26.860   | 35.906  | 44.551  |         | 588   |
| 694                | 4.413  | 34.071   | 1.44   | 19.9   | 95.2  | 2.85 | 40.3 | 0.01 | 4.361  | 27.009   | 36.096  | 44.779  |         | 689   |
| 789                | 3.875  | 34.170   | 0.75   | 10.2   | 113.4 | 3.05 | 43.5 | 0.00 | 3.817  | 27.145   | 36.258  | 44.965  |         | 795   |
| 896                | 3.595  | 34.239   | 0.43   | 5.8    | 125.0 | 3.13 | 44.6 | 0.00 | 3.531  | 27.228   | 36.355  | 45.075  |         | 893   |
| 988                | 3.347  | 34.305   | 0.28   | 3.8    | 115.2 | 3.23 | 45.4 | 0.00 | 3.277  | 27.305   | 36.444  | 45.176  |         | 996   |
| 1224               | 2.975  | 34.416   | 0.23   | 3.1    | 154.4 | 3.25 | 45.9 | 0.00 | 2.920  | 27.435   | 36.597  | 45.350  |         | 1235  |
| 1439               | 2.594  | 34.497   | 0.45   | 5.9    | 161.1 | 3.21 | 45.5 | 0.00 | 2.483  | 27.529   | 36.708  | 45.477  |         | 1473  |
| 1699               | 2.253  | 34.561   | 0.95   | 12.4   | 168.1 | 3.11 | 44.3 | 0.00 | 2.136  | 27.679   | 36.806  | 45.592  |         | 1716  |
| 1919               | 2.005  | 34.596   | 1.31   | 17.1   | 176.0 | 3.02 | 43.0 | 0.00 | 1.872  | 27.658   | 36.868  | 45.668  |         | 1960  |
| 2457               | 1.704  | 34.638   | 2.07   | 26.7   | 177.7 | 2.86 | 41.2 | 0.00 | 1.530  | 27.717   | 36.946  | 45.762  |         | 2487  |
| 2969               | 1.541  | 34.663   | 2.73   | 35.1   | 170.1 | 2.72 | 39.4 | 0.00 | 1.322  | 27.752   | 36.992  | 45.819  |         | 3009  |
| 3505               | 1.483  | 34.676   | 3.12   | 40.0   | 166.1 | 2.63 | 38.2 | 0.00 | 1.211  | 27.771   | 37.017  | 45.849  |         | 3557  |
| 3959               | 1.477  | 34.682   | 3.33   | 42.6   | 166.5 | 2.58 | 37.7 | 0.00 | 1.156  | 27.779   | 37.028  | 45.864  |         | 4022  |
| 4395               | 1.495  | 34.687D  | 3.37   | 43.1   | 160.1 | 2.58 | 37.4 | 0.00 | 1.123  | 27.785   | 37.036  | 45.873  |         | 4470  |
| 4821               | 1.524  | 34.689   |        |        |       |      | 37.0 | 0.00 | 1.100  | 27.789   | 37.041  | 45.879  |         | 4908  |
| 5342               | 1.582  | 34.690   | 3.62   | 46.2   | 156.7 | 2.51 | 36.7 | 0.00 | 1.089  | 27.790   | 37.043  | 45.882  |         | 5445  |

# MARATHON 2 STA. 44



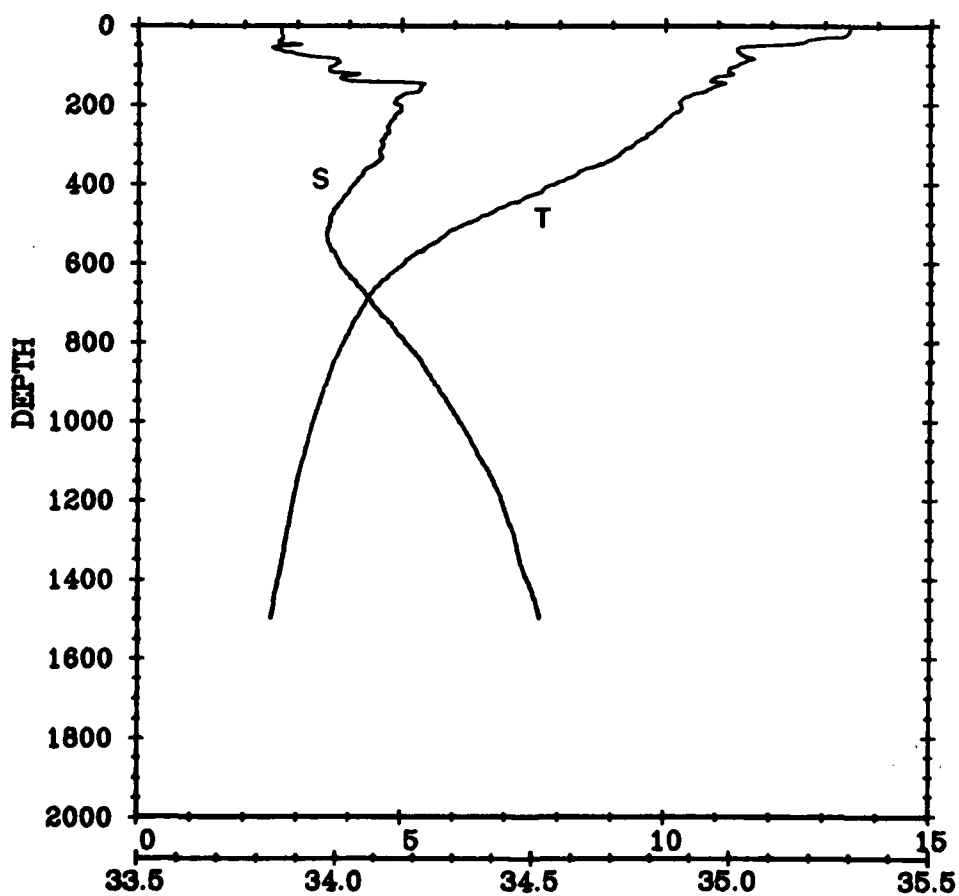
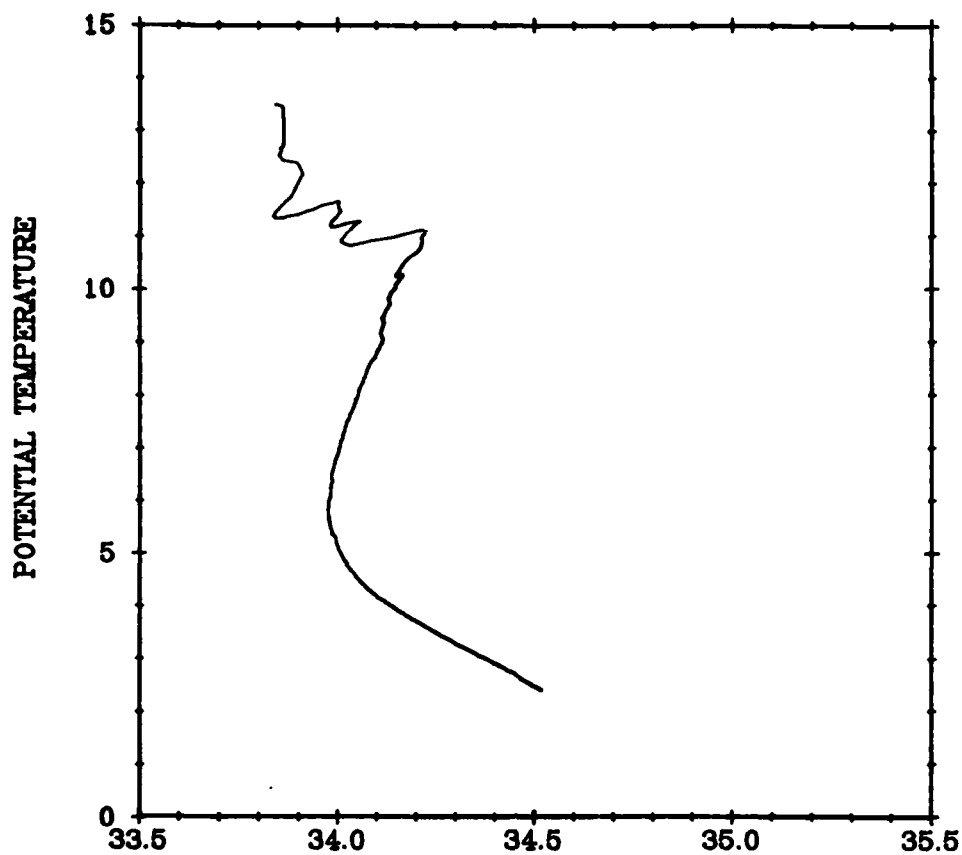
R/V THOMAS WASHINGTON MARATHON LEG 11 STATION 45

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 16 46 2N | 151 59 9W | 5/18/84  | 1600       | 5528   | 210  | 26    | 15.6     | 15.6     | 1011.9 |

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |         |            |            |
| 1           | 13.474        | 33.856   | 13.474            | 25.412  | 34.099  | 42.408  | 255.573 | 0.000      | 0          |
| 20          | 13.480        | 33.861   | 13.377            | 25.436  | 34.126  | 42.438  | 253.892 | 0.051      | 19         |
| 40          | 12.412        | 33.851   | 12.613            | 25.587  | 34.308  | 42.647  | 239.957 | 0.110      | 39         |
| 60          | 11.500        | 33.851   | 11.493            | 25.800  | 34.555  | 42.946  | 220.186 | 0.146      | 59         |
| 80          | 11.536        | 33.952   | 11.526            | 25.864  | 34.627  | 43.035  | 214.351 | 0.190      | 79         |
| 100         | 11.371        | 33.993   | 11.359            | 25.927  | 34.695  | 43.080  | 209.068 | 0.232      | 99         |
| 150         | 10.977        | 34.181   | 10.959            | 26.146  | 34.928  | 43.125  | 199.439 | 0.312      | 149        |
| 200         | 10.277        | 34.155   | 10.254            | 26.249  | 35.061  | 43.486  | 180.529 | 0.424      | 198        |
| 250         | 9.322         | 34.135   | 9.893             | 26.295  | 35.122  | 43.562  | 177.141 | 0.514      | 248        |
| 300         | 9.414         | 34.116   | 9.381             | 26.345  | 35.215  | 43.675  | 171.279 | 0.601      | 298        |
| 350         | 8.804         | 34.098   | 8.767             | 26.449  | 35.325  | 43.812  | 163.921 | 0.685      | 347        |
| 400         | 7.942         | 34.046   | 7.902             | 26.539  | 35.456  | 43.979  | 155.593 | 0.764      | 397        |
| 450         | 7.122         | 34.006   | 7.079             | 26.625  | 35.580  | 44.139  | 147.355 | 0.840      | 446        |
| 500         | 6.272         | 33.981   | 6.229             | 26.719  | 35.714  | 44.312  | 138.538 | 0.912      | 496        |
| 550         | 5.354         | 34.005   | 5.306             | 26.896  | 35.941  | 44.594  | 122.474 | 1.042      | 595        |
| 600         | 4.309         | 34.086   | 4.255             | 27.033  | 36.125  | 44.812  | 109.561 | 1.158      | 694        |
| 650         | 3.889         | 34.171   | 3.831             | 27.144  | 36.257  | 44.964  | 99.275  | 1.261      | 793        |
| 700         | 3.577         | 34.246   | 3.513             | 27.235  | 36.363  | 45.085  | 89.942  | 1.355      | 892        |
| 750         | 3.318         | 34.309   | 3.248             | 27.311  | 36.452  | 45.185  | 83.065  | 1.442      | 991        |
| 800         | 3.116         | 34.365   | 3.040             | 27.375  | 36.525  | 45.269  | 77.109  | 1.522      | 1090       |
| 850         | 2.929         | 34.417   | 2.846             | 27.433  | 36.594  | 45.346  | 71.980  | 1.597      | 1189       |
| 900         | 2.788         | 34.453   | 2.699             | 27.475  | 36.643  | 45.402  | 68.114  | 1.667      | 1287       |
| 950         | 2.657         | 34.480   | 2.561             | 27.509  | 36.684  | 45.449  | 65.189  | 1.734      | 1386       |
| 1000        | 2.517         | 34.515   | 2.415             | 27.549  | 36.732  | 45.504  | 61.734  | 1.797      | 1485       |
| 1050        | 2.501         | 34.518   | 2.398             | 27.553  | 36.736  | 45.510  | 61.190  | 1.805      | 1497       |

| NISKIN BOTTLE DATA |               | SALINITY | DIS O2<br>ML/L | O2 SAT | SIO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUBIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------|----------------|--------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |          |                |        |              |             |             |             |               |                   |         |         |         |             |
| 1                  | 13.432        | 33.855   | 5.29           | 106.4  | 5.6          | 0.28        | 0.7         | 0.02        | 13.432        | 25.420            | 34.109  | 42.418  | 1       |             |
| 51                 | 11.384        | 33.873   | 6.31           | 102.6  | 4.4          | 0.46        | 3.2         | 0.17        | 11.578        | 25.793            | 34.554  | 42.932  | 51      |             |
| 97                 | 11.266        | 33.947   | 6.09           | 98.4   | 7.0          | 0.53        | 5.2         | 0.23        | 11.254        | 25.926            | 34.698  | 43.088  | 97      |             |
| 126                | 11.184        | 34.082   | 5.77           | 93.2   | 9.1          | 0.66        | 8.0         | 0.01        | 11.169        | 26.031            | 34.805  | 43.196  | 126     |             |
| 159                | 10.577        | 34.177   | 5.59           | 89.0   | 14.2         | 0.38        | 11.6        | 0.01        | 10.558        | 26.213            | 35.012  | 43.425  | 159     |             |
| 197                | 10.153        | 34.141   | 5.62           | 88.7   | 15.2         | 0.99        | 12.2        | 0.01        | 10.130        | 26.259            | 35.076  | 43.577  | 197     |             |
| 243                | 9.710         | 34.105   | 5.63           | 88.0   | 16.8         | 0.95        | 12.9        | 0.01        | 9.682         | 26.307            | 35.144  | 43.692  | 244     |             |
| 291                | 9.322         | 34.110   | 5.25           | 81.3   | 21.7         | 1.11        | 15.7        | 0.01        | 9.290         | 26.375            | 35.229  | 43.693  | 292     |             |
| 399                | 7.552         | 34.026   | 4.27           | 63.5   | 38.0         | 1.44        | 23.6        | 0.01        | 7.513         | 26.580            | 35.514  | 44.355  | 401     |             |
| 491                | 6.160         | 33.974   | 3.31           | 47.5   | 57.4         | 2.14        | 35.4        | 0.05        | 6.007         | 26.741            | 35.748  | 44.355  | 496     |             |
| 593                | 5.144         | 34.105   | 2.30           | 32.2   | 77.2         | 2.54        | 36.1        | 0.00        | 4.996         | 26.887            | 35.943  | 44.596  | 597     |             |
| 675                | 4.408         | 34.066   | 1.45           | 20.0   | 94.0         | 2.90        | 40.3        | 0.00        | 4.356         | 27.006            | 36.093  | 44.776  | 680     |             |
| 748                | 4.087         | 34.127   | 1.06           | 14.5   | 125.0        | 2.94        | 42.1        | 0.00        | 4.031         | 27.088            | 36.191  | 44.889  | 753     |             |
| 861                | 3.459         | 34.224   | 0.50           | 6.8    | 123.3        | 3.10        | 44.3        | 0.00        | 3.597         | 27.209            | 36.333  | 45.051  | 870     |             |
| 961                | 3.406         | 34.286   | 0.32           | 4.3    | 132.7        | 3.14        | 45.1        | 0.00        | 3.337         | 27.284            | 36.420  | 45.150  | 971     |             |
| 1086               | 2.961         | 34.436   | 0.25           | 3.3    | 150.7        | 3.18        | 45.8        | 0.00        | 2.878         | 27.422            | 36.581  | 45.331  | 1196    |             |
| 1490               | 2.506         | 34.519   | 0.59           | 7.9    | 163.8        |             | 45.1        | 0.00        | 2.403         | 27.553            | 36.736  | 45.509  | 1504    |             |

# MARATHON 2 STA. 45



| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 17 6.5N  | 151 58.8W | 5/19/84  | 2224       | 519    | 25   | 17    | 15.6     | 15.3     | 1015.6 |

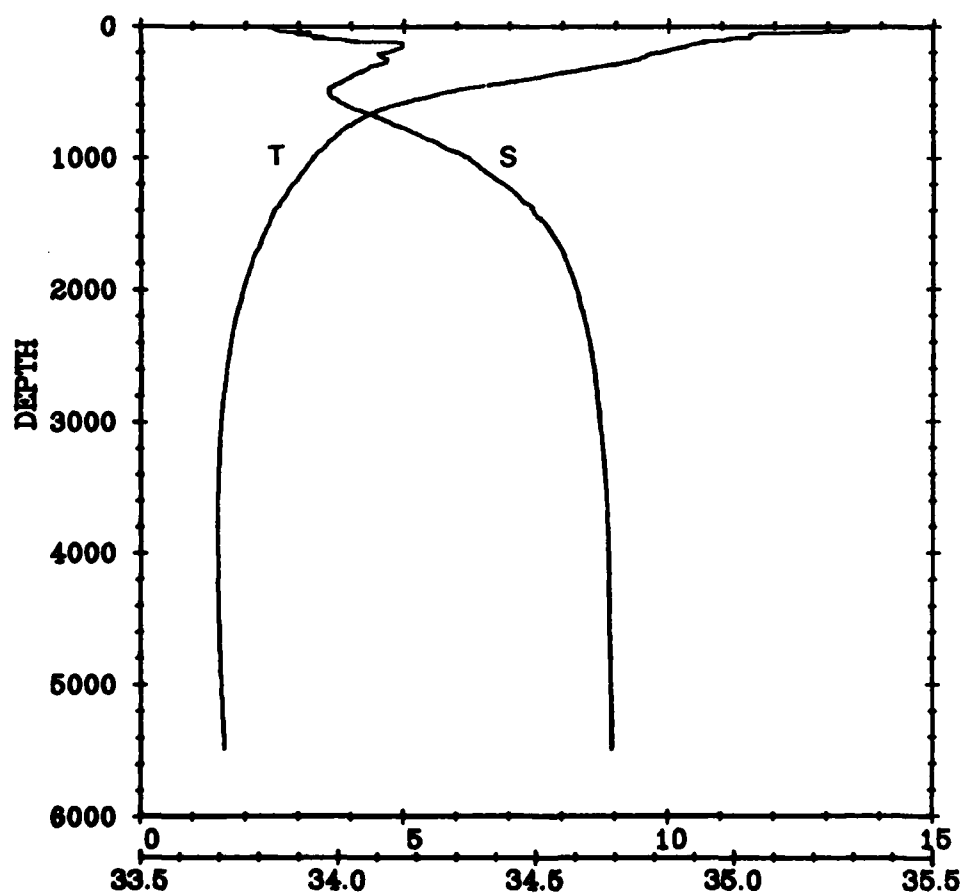
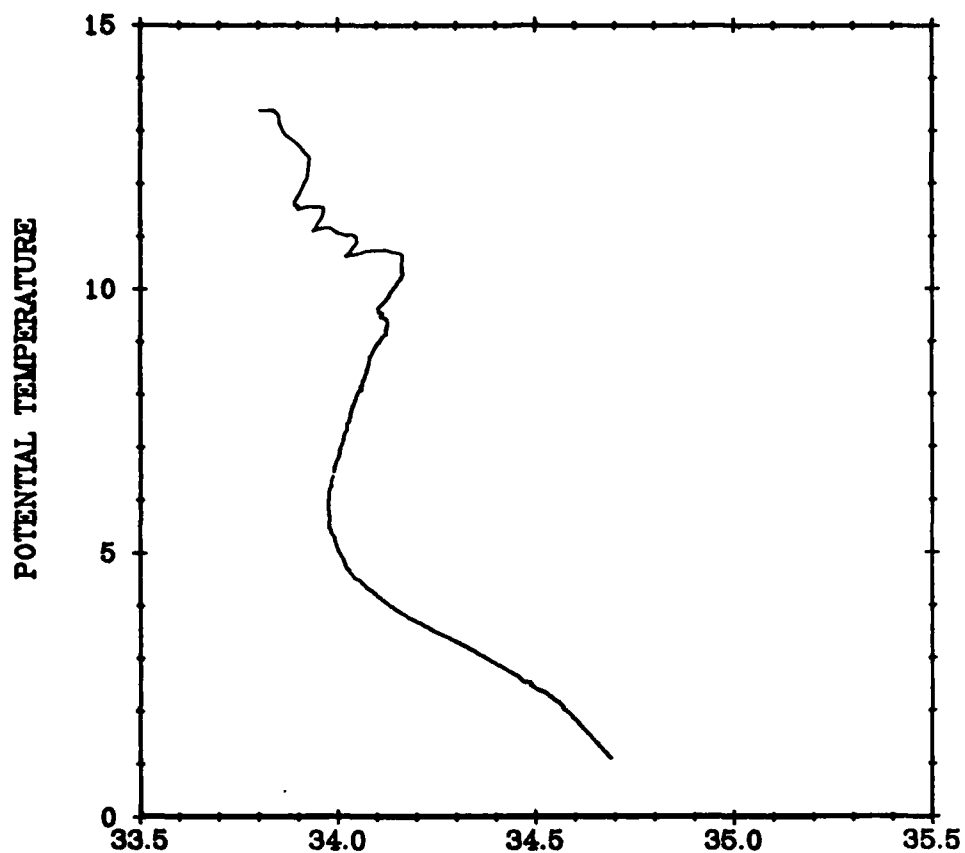
## CTD DATA

| PRESS | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
|-------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C  |          | DEG C    |         |         |         | CLUSTON |            | M     |
| 0     | 13.398 | 33.935   | 13.398   | 25.411  | 34.102  | 42.413  | 250.652 | 0.000      | 0     |
| 20    | 13.387 | 33.936   | 13.384   | 25.415  | 34.106  | 42.418  | 255.965 | 0.051      | 19    |
| 40    | 13.040 | 33.954   | 13.035   | 25.507  | 34.211  | 42.535  | 247.660 | 0.102      | 39    |
| 60    | 11.740 | 33.904   | 11.732   | 25.789  | 34.543  | 42.915  | 221.260 | 0.148      | 59    |
| 80    | 11.514 | 33.948   | 11.504   | 25.867  | 34.629  | 43.008  | 214.458 | 0.192      | 79    |
| 100   | 11.111 | 33.991   | 11.099   | 25.972  | 34.752  | 43.146  | 204.687 | 0.234      | 99    |
| 150   | 10.342 | 34.163   | 10.324   | 26.243  | 35.052  | 43.475  | 179.991 | 0.330      | 149   |
| 200   | 9.914  | 34.121   | 9.791    | 26.301  | 35.133  | 43.577  | 175.421 | 0.419      | 198   |
| 250   | 9.439  | 34.121   | 9.411    | 26.364  | 35.212  | 43.672  | 170.358 | 0.505      | 248   |
| 300   | 8.936  | 34.089   | 8.904    | 26.435  | 35.312  | 43.796  | 164.196 | 0.589      | 298   |
| 350   | 8.101  | 34.054   | 8.065    | 26.521  | 35.420  | 43.947  | 156.529 | 0.669      | 347   |
| 400   | 7.451  | 34.024   | 7.412    | 26.593  | 35.532  | 44.077  | 150.115 | 0.746      | 397   |
| 450   | 5.639  | 33.990   | 5.598    | 26.677  | 35.656  | 44.236  | 142.106 | 0.819      | 446   |
| 500   | 5.844  | 33.975   | 5.801    | 26.768  | 35.784  | 44.401  | 133.425 | 0.888      | 496   |
| 600   | 4.850  | 34.015   | 4.803    | 26.917  | 35.983  | 44.646  | 119.200 | 1.014      | 595   |
| 700   | 4.206  | 34.103   | 4.154    | 27.057  | 36.154  | 44.846  | 106.120 | 1.127      | 694   |
| 800   | 3.828  | 34.183   | 3.750    | 27.162  | 36.278  | 44.989  | 96.465  | 1.228      | 793   |
| 900   | 3.526  | 34.255   | 3.462    | 27.247  | 36.378  | 45.101  | 88.699  | 1.321      | 892   |
| 1000  | 3.273  | 34.324   | 3.203    | 27.327  | 36.470  | 45.205  | 81.448  | 1.406      | 991   |
| 1100  | 3.095  | 34.367   | 3.019    | 27.378  | 36.530  | 45.274  | 76.925  | 1.485      | 1090  |
| 1200  | 2.903  | 34.414   | 2.822    | 27.433  | 36.595  | 45.349  | 71.908  | 1.559      | 1189  |
| 1300  | 2.738  | 34.454   | 2.649    | 27.480  | 36.651  | 45.412  | 67.673  | 1.629      | 1287  |
| 1400  | 2.551  | 34.490   | 2.456    | 27.525  | 36.705  | 45.477  | 63.442  | 1.695      | 1386  |
| 1500  | 2.457  | 34.520   | 2.356    | 27.558  | 36.744  | 45.519  | 60.674  | 1.757      | 1485  |
| 1600  | 2.332  | 34.542   | 2.224    | 27.587  | 36.779  | 45.561  | 58.106  | 1.816      | 1583  |
| 1700  | 2.235  | 34.563   | 2.120    | 27.612  | 36.810  | 45.596  | 55.901  | 1.873      | 1682  |
| 1800  | 2.119  | 34.577   | 1.998    | 27.633  | 36.837  | 45.630  | 53.953  | 1.928      | 1780  |
| 1900  | 2.044  | 34.589   | 1.915    | 27.649  | 36.857  | 45.654  | 52.604  | 1.981      | 1879  |
| 2000  | 1.960  | 34.601   | 1.824    | 27.665  | 36.879  | 45.681  | 51.118  | 2.033      | 1977  |
| 2100  | 1.901  | 34.609   | 1.758    | 27.677  | 36.894  | 45.699  | 50.202  | 2.084      | 2076  |
| 2200  | 1.831  | 34.617   | 1.680    | 27.689  | 36.911  | 45.719  | 49.125  | 2.133      | 2174  |
| 2300  | 1.774  | 34.625   | 1.616    | 27.701  | 36.925  | 45.738  | 48.113  | 2.182      | 2272  |
| 2400  | 1.724  | 34.633   | 1.558    | 27.712  | 36.939  | 45.754  | 47.314  | 2.230      | 2370  |
| 2500  | 1.689  | 34.638   | 1.515    | 27.719  | 36.949  | 45.766  | 46.834  | 2.277      | 2469  |
| 2600  | 1.649  | 34.644   | 1.465    | 27.727  | 36.959  | 45.779  | 46.201  | 2.323      | 2567  |
| 2700  | 1.623  | 34.648   | 1.432    | 27.733  | 36.967  | 45.788  | 45.882  | 2.369      | 2665  |
| 2800  | 1.594  | 34.653   | 1.394    | 27.739  | 36.976  | 45.799  | 45.439  | 2.415      | 2761  |
| 2900  | 1.571  | 34.657   | 1.362    | 27.745  | 36.983  | 45.808  | 45.138  | 2.460      | 2861  |
| 3000  | 1.549  | 34.660   | 1.331    | 27.749  | 36.989  | 45.816  | 44.913  | 2.505      | 2959  |
| 3100  | 1.527  | 34.664   | 1.300    | 27.755  | 36.996  | 45.824  | 44.605  | 2.550      | 3057  |
| 3200  | 1.515  | 34.667   | 1.279    | 27.759  | 37.002  | 45.831  | 44.502  | 2.595      | 3155  |
| 3300  | 1.501  | 34.670   | 1.255    | 27.763  | 37.007  | 45.837  | 44.363  | 2.639      | 3252  |
| 3400  | 1.492  | 34.673   | 1.236    | 27.766  | 37.011  | 45.843  | 44.292  | 2.683      | 3350  |
| 3500  | 1.492  | 34.675   | 1.216    | 27.770  | 37.016  | 45.848  | 44.271  | 2.728      | 3448  |
| 3600  | 1.476  | 34.677   | 1.200    | 27.772  | 37.019  | 45.852  | 44.306  | 2.772      | 3546  |
| 3700  | 1.471  | 34.679   | 1.185    | 27.775  | 37.023  | 45.857  | 44.351  | 2.816      | 3643  |
| 3800  | 1.469  | 34.680   | 1.172    | 27.777  | 37.025  | 45.859  | 44.511  | 2.861      | 3741  |
| 3900  | 1.469  | 34.682   | 1.162    | 27.779  | 37.028  | 45.863  | 44.629  | 2.905      | 3838  |
| 4000  | 1.472  | 34.683   | 1.154    | 27.780  | 37.030  | 45.865  | 44.863  | 2.950      | 3936  |
| 4100  | 1.477  | 34.684   | 1.148    | 27.781  | 37.031  | 45.867  | 45.129  | 2.995      | 4033  |
| 4200  | 1.482  | 34.684   | 1.142    | 27.782  | 37.032  | 45.868  | 45.465  | 3.040      | 4131  |
| 4300  | 1.488  | 34.685   | 1.136    | 27.783  | 37.034  | 45.870  | 45.747  | 3.086      | 4228  |
| 4400  | 1.494  | 34.685   | 1.131    | 27.783  | 37.034  | 45.871  | 46.101  | 3.132      | 4326  |
| 4500  | 1.499  | 34.686   | 1.124    | 27.785  | 37.036  | 45.873  | 46.368  | 3.178      | 4423  |
| 4600  | 1.508  | 34.687   | 1.121    | 27.786  | 37.037  | 45.874  | 46.753  | 3.225      | 4520  |
| 4700  | 1.516  | 34.687   | 1.117    | 27.786  | 37.038  | 45.875  | 47.092  | 3.272      | 4617  |
| 4800  | 1.523  | 34.688   | 1.112    | 27.787  | 37.039  | 45.876  | 47.395  | 3.319      | 4715  |
| 4900  | 1.530  | 34.688   | 1.107    | 27.787  | 37.040  | 45.877  | 47.769  | 3.366      | 4812  |
| 5000  | 1.539  | 34.689   | 1.103    | 27.789  | 37.041  | 45.879  | 48.110  | 3.414      | 4909  |
| 5100  | 1.548  | 34.689   | 1.100    | 27.789  | 37.041  | 45.880  | 48.521  | 3.463      | 5006  |
| 5200  | 1.559  | 34.689   | 1.098    | 27.789  | 37.042  | 45.880  | 48.970  | 3.511      | 5103  |
| 5300  | 1.569  | 34.690   | 1.095    | 27.790  | 37.043  | 45.881  | 49.333  | 3.561      | 5200  |
| 5400  | 1.581  | 34.690   | 1.094    | 27.790  | 37.043  | 45.881  | 49.805  | 3.610      | 5297  |
| 5500  | 1.594  | 34.690   | 1.094    | 27.790  | 37.043  | 45.881  | 50.297  | 3.660      | 5394  |
| 5600  | 1.607  | 34.690   | 1.094    | 27.790  | 37.043  | 45.881  | 50.792  | 3.711      | 5491  |
| 5642  | 1.613  | 34.690   | 1.094    | 27.790  | 37.043  | 45.881  | 51.011  | 3.732      | 5531  |

## NISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | DIS O2 | O2 SAT | SI03  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  | DEG C    |         |         |         | DB    |
| 1     | 13.492 | 33.955   | 6.32   | 107.0  | 4.4   | 0.24 | 0.2  | 0.01 | 13.492 | 25.407   | 34.094  | 42.402  |         | 1     |
| 53    | 11.710 | 33.915   | 6.28   | 102.4  | 4.8   | 0.45 | 3.1  | 0.20 | 11.703 | 25.932   | 34.558  | 42.931  |         | 53    |
| 103   | 11.224 | 33.967   | 5.95   | 96.1   | 5.5   | 0.58 | 6.3  | 0.22 | 11.211 | 25.933   | 34.708  | 43.299  |         | 103   |
| 153   | 10.414 | 34.164   | 5.60   | 88.9   | 14.2  | 0.87 | 11.7 | 0.21 | 10.396 | 26.231   | 35.037  | 43.457  |         | 153   |
| 203   | 9.843  | 34.124   | 5.51   | 89.0   | 15.7  | 0.89 | 12.7 | 0.21 | 9.920  | 26.299   | 35.129  | 43.572  |         | 204   |
| 253   | 8.910  | 34.093   | 4.97   | 76.3   | 25.3  | 1.27 | 18.0 | 0.01 | 8.877  | 26.427   | 35.239  | 43.781  |         | 254   |
| 303   | 7.354  | 34.319   | 4.09   | 60.6   | 40.4  | 1.73 | 34.5 | 0.20 | 7.315  | 26.522   | 35.546  | 44.395  |         | 305   |
| 353   | 5.693  | 33.976   | 2.97   | 42.3   | 66.0  | 2.28 | 32.3 | 0.00 | 5.650  | 26.787   | 35.811  | 44.435  |         | 356   |
| 403   | 4.931  | 34.016   | 2.05   | 28.6   | 81.4  | 2.59 | 37.2 | 0.00 | 4.783  | 26.920   | 35.986  | 44.649  |         | 407   |
| 453   | 4.256  | 34.093   | 1.27   | 17.5   | 99.8  | 2.87 | 41.1 | 0.00 | 4.203  | 27.044   | 36.138  | 44.828  |         | 458   |
| 503   | 3.802  | 34.184   | 0.65   | 9.8    | 115.2 | 3.04 | 43.7 | 0.00 | 3.744  | 27.163   | 36.280  | 44.991  |         | 509   |
| 553   | 3.500  | 34.261   | 0.36   | 4.9    | 126.2 | 3.11 | 44.9 | 0.00 | 3.436  | 27.254   | 36.386  | 45.111  |         | 560   |
| 1003  | 1.260  | 34.327   | 0.23   | 3.1    | 135.8 | 3.19 | 45.4 | 0.00 | 3.189  | 27.330   | 36.474  | 45.210  |         | 1011  |
| 1251  | 2.799  | 34.435   | 0.23   | 3.1    | 154.6 | 3.20 | 45.8 | 0.00 | 2.713  | 27.460   | 36.627  | 45.385  |         | 1262  |
| 1496  | 2.464  | 34.519   | 0.56   | 7.4    | 164.8 | 3.13 | 45.2 | 0.00 | 2.361  | 27.557   | 36.742  | 45.517  |         | 1511  |
| 1748  | 2.181  | 34.568   | 0.98   | 12.8   | 171.1 | 3.05 | 43.9 | 0.00 | 2.061  | 27.621   | 36.821  | 45.511  |         | 1766  |
| 1997  | 1.948  | 34.603   | 1.39   | 18.1   | 174.2 | 2.96 | 43.1 | 0.00 | 1.811  | 27.668   | 36.882  | 45.584  |         | 2019  |
| 2498  | 1.691  | 34.639   | 2.08   | 26.8   | 174.8 | 2.84 | 41.1 | 0.00 | 1.515  | 27.719   | 36.949  | 45.766  |         | 2519  |
| 3027  | 1.536  | 34.664   | 2.76   | 35.4   | 170.4 | 2.69 | 39.2 | 0.00 | 1.312  | 27.754   | 36.995  | 45.822  |         | 3069  |
| 3511  | 1.479  | 34.676   | 3.13   | 40.1   | 164.9 | 2.60 | 38.1 | 0.00 | 1.207  | 27.771   | 37.017  | 45.850  |         | 3564  |
| 4054  | 1.477  | 34.684   | 3.35   | 42.8   | 165.3 | 2.54 | 37.5 | 0.00 | 1.145  | 27.781   | 37.031  | 45.867  |         | 4120  |
| 4546  | 1.510  | 34.687   | 3.44   | 44.0   | 160.7 | 2.53 | 37.2 | 0.00 | 1.120  | 27.786   | 37.037  | 45.874  |         | 4626  |
| 5041  | 1.553  | 34.689   | 3.55   | 45.3   | 156.1 |      | 36.8 | 0.01 | 1.100  | 27.789   | 37.041  | 45.879  |         | 5135  |
| 5530  | 1.614  | 34.690   | 3.59   | 45.8   | 155.3 | 2.48 | 36.8 | 0.01 | 1.095  | 27.790   | 37.042  | 45.881  |         | 5640  |

# MARATHON 2 STA. 46



| LATITUDE | LONGITUDE | MO/DY YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BARCH |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|-------|
| 17 27' N | 152 0' W  | 5.19.94  | 436        | 3563   | 350  | 10    | 12.8     | 11.1     | 1020  |

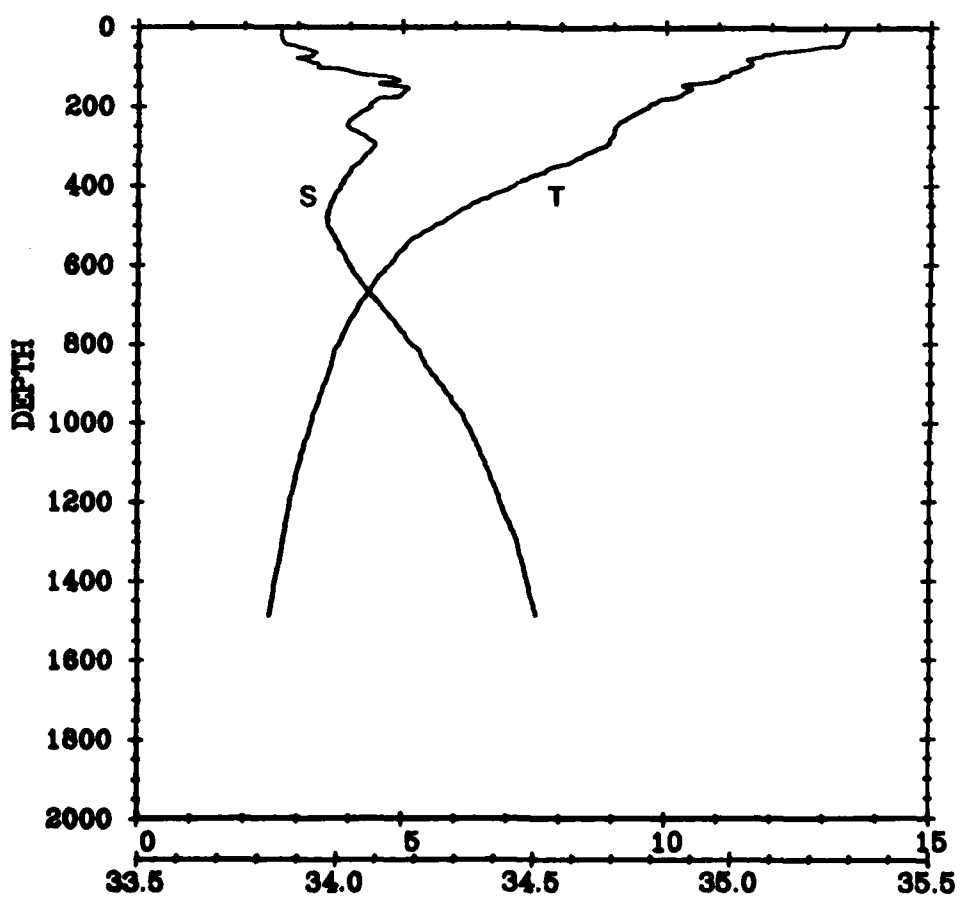
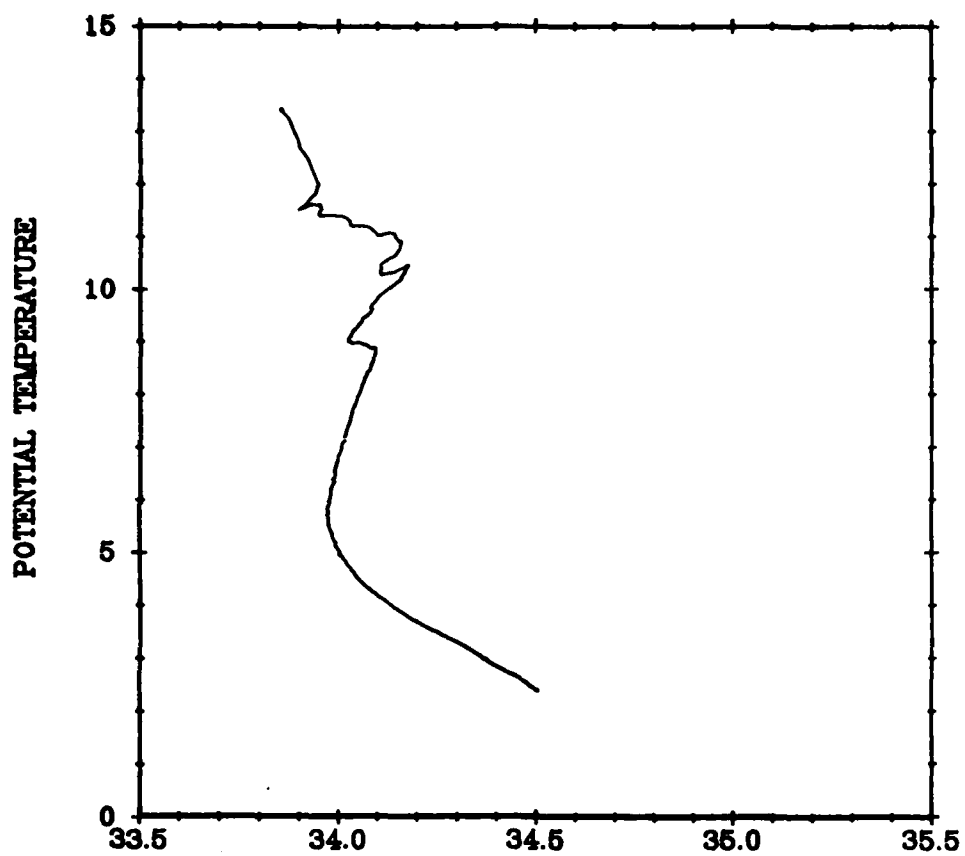
## STD DATA

| PRESS DB | TEMP DEG C | SALINITY | POT TEMP DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH M |
|----------|------------|----------|----------------|---------|---------|---------|---------|------------|---------|
| 0        | 13.418     | 33.855   | 13.418         | 25.423  | 34.112  | 42.427  | 214.565 | 0.000      | 0       |
| 20       | 13.387     | 33.858   | 13.384         | 25.432  | 34.122  | 42.434  | 254.247 | 0.251      | 19      |
| 40       | 13.258     | 33.869   | 13.253         | 25.467  | 34.162  | 42.479  | 251.454 | 0.101      | 39      |
| 60       | 12.314     | 33.925   | 12.325         | 25.593  | 34.423  | 42.773  | 230.460 | 0.150      | 59      |
| 80       | 11.664     | 33.932   | 11.654         | 25.817  | 34.575  | 42.949  | 229.032 | 0.195      | 79      |
| 100      | 11.506     | 33.961   | 11.494         | 25.877  | 34.641  | 43.021  | 221.804 | 0.238      | 99      |
| 150      | 10.437     | 34.143   | 10.419         | 26.211  | 35.016  | 43.435  | 193.055 | 0.337      | 149     |
| 200      | 9.662      | 34.083   | 9.640          | 26.297  | 35.136  | 43.587  | 175.776 | 0.427      | 198     |
| 250      | 9.064      | 34.027   | 9.037          | 26.351  | 35.217  | 43.693  | 171.401 | 0.514      | 248     |
| 300      | 8.832      | 34.090   | 8.800          | 26.438  | 35.313  | 43.798  | 164.051 | 0.597      | 298     |
| 350      | 8.014      | 34.049   | 7.979          | 26.530  | 35.443  | 43.963  | 155.616 | 0.677      | 347     |
| 400      | 7.110      | 34.010   | 7.092          | 26.626  | 35.581  | 44.140  | 146.639 | 0.753      | 397     |
| 450      | 6.299      | 33.982   | 6.259          | 26.715  | 35.710  | 44.306  | 139.173 | 0.824      | 446     |
| 500      | 5.657      | 33.974   | 5.615          | 26.790  | 35.815  | 44.441  | 131.130 | 0.891      | 496     |
| 600      | 4.757      | 34.027   | 4.710          | 26.937  | 36.006  | 44.673  | 117.276 | 1.016      | 595     |
| 700      | 4.193      | 34.105   | 4.141          | 27.060  | 36.157  | 44.857  | 105.822 | 1.127      | 694     |
| 800      | 3.794      | 34.184   | 3.736          | 27.164  | 36.281  | 44.993  | 96.233  | 1.228      | 793     |
| 900      | 3.522      | 34.255   | 3.458          | 27.248  | 36.378  | 45.102  | 88.654  | 1.321      | 892     |
| 1000     | 3.257      | 34.323   | 3.187          | 27.328  | 36.471  | 45.208  | 81.343  | 1.406      | 991     |
| 1100     | 3.045      | 34.370   | 2.969          | 27.385  | 36.540  | 45.285  | 76.142  | 1.484      | 1090    |
| 1200     | 2.866      | 34.411   | 2.784          | 27.434  | 36.599  | 45.354  | 71.114  | 1.558      | 1189    |
| 1300     | 2.724      | 34.452   | 2.636          | 27.480  | 36.651  | 45.414  | 67.662  | 1.628      | 1287    |
| 1400     | 2.597      | 34.480   | 2.502          | 27.514  | 36.692  | 45.460  | 64.701  | 1.694      | 1386    |
| 1500     | 2.475      | 34.504   | 2.373          | 27.544  | 36.729  | 45.504  | 62.059  | 1.758      | 1485    |
| 1604     | 2.469      | 34.506   | 2.367          | 27.546  | 36.731  | 45.506  | 61.863  | 1.760      | 1489    |

## NISKIN BOTTLE DATA

| DEPTH M | TEMP DEG C | SALINITY | DIS O2 ML/L | O2 SAT % | SIO3 UM/L | PO4 UM/L | NO3 UM/L | NO2 UM/L | TRIT TUBIN | POT TEMP DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS DB |
|---------|------------|----------|-------------|----------|-----------|----------|----------|----------|------------|----------------|---------|---------|---------|----------|
| 1       | 13.412     | 33.857   | 6.41        | 108.4    | 4.9       | 0.22     | 0.0      | 0.00     | 13.412     | 25.425         | 34.115  | 42.426  | 1       |          |
| 53      | 12.969     | 33.887   | 6.30        | 105.5    | 5.1       | 0.30     | 0.9      | 0.03     | 12.962     | 25.539         | 34.245  | 42.572  | 53      |          |
| 103     | 11.240     | 33.988   | 5.91        | 95.5     | 7.2       | 0.59     | 6.4      | 0.01     | 11.227     | 25.947         | 34.721  | 43.111  | 103     |          |
| 136     | 10.525     | 34.110   | 5.66        | 90.1     | 13.1      | 0.83     | 10.9     | 0.01     | 10.509     | 26.170         | 34.971  | 43.397  | 136     |          |
| 170     | 10.328     | 34.119   | 5.66        | 89.1     | 15.1      | 0.92     | 12.1     | 0.00     | 10.308     | 26.262         | 35.085  | 43.520  | 171     |          |
| 203     | 9.652      | 34.092   | 5.67        | 88.5     | 17.2      | 0.96     | 12.9     | 0.00     | 9.629      | 26.305         | 35.145  | 43.595  | 204     |          |
| 252     | 9.000      | 34.030   | 5.65        | 86.9     | 19.3      | 1.04     | 14.1     | 0.00     | 8.973      | 26.363         | 35.232  | 43.710  | 253     |          |
| 322     | 8.748      | 34.091   | 4.85        | 74.2     | 27.3      | 1.33     | 18.9     | 0.00     | 8.716      | 26.451         | 35.331  | 43.819  | 303     |          |
| 400     | 7.272      | 34.017   | 4.06        | 60.0     | 41.0      | 1.76     | 25.0     | 0.00     | 7.233      | 26.612         | 35.560  | 44.112  | 402     |          |
| 500     | 5.635      | 33.976   | 2.97        | 42.2     | 54.4      | 2.30     | 32.5     | 0.00     | 5.593      | 26.794         | 35.820  | 44.447  | 503     |          |
| 602     | 4.771      | 34.026   | 1.96        | 27.3     | 84.6      | 2.67     | 37.9     | 0.00     | 4.724      | 26.914         | 36.003  | 44.669  | 606     |          |
| 700     | 4.233      | 34.038   | 1.28        | 17.6     | 100.7     | 2.89     | 41.1     | 0.00     | 4.180      | 27.050         | 36.146  | 44.837  | 705     |          |
| 799     | 3.805      | 34.180   | 0.57        | 9.1      | 115.5     | 3.08     | 43.9     | 0.00     | 3.747      | 27.159         | 36.276  | 44.987  | 805     |          |
| 897     | 3.529      | 34.252   | 0.37        | 5.0      | 127.4     | 3.17     | 45.0     | 0.00     | 3.465      | 27.244         | 36.375  | 45.098  | 904     |          |
| 995     | 3.283      | 34.318   | 0.24        | 3.2      | 136.5     | 3.20     | 45.6     | 0.00     | 3.213      | 27.321         | 36.463  | 45.199  | 1003    |          |
| 1239    | 2.800      | 34.430   | 0.23        | 3.1      | 156.8     | 3.22     | 46.0     | 0.00     | 2.715      | 27.456         | 36.623  | 45.381  | 1250    |          |
| 1487    | 2.472      | 34.507   | 0.46        | 6.1      | 165.5     |          | 45.6     | 0.00     | 2.370      | 27.547         | 36.731  | 45.506  | 1501    |          |

# MARATHON 2 STA. 47



R/V THOMAS WASHINGTON MARATHON LEG II STATION 43

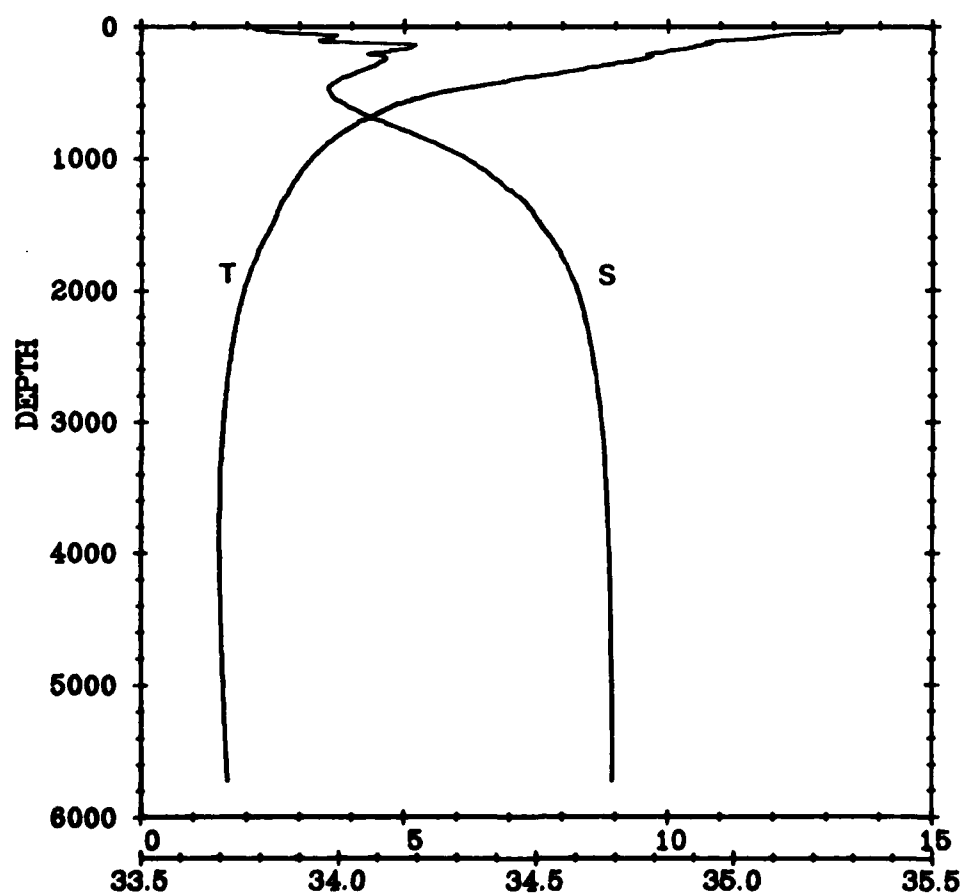
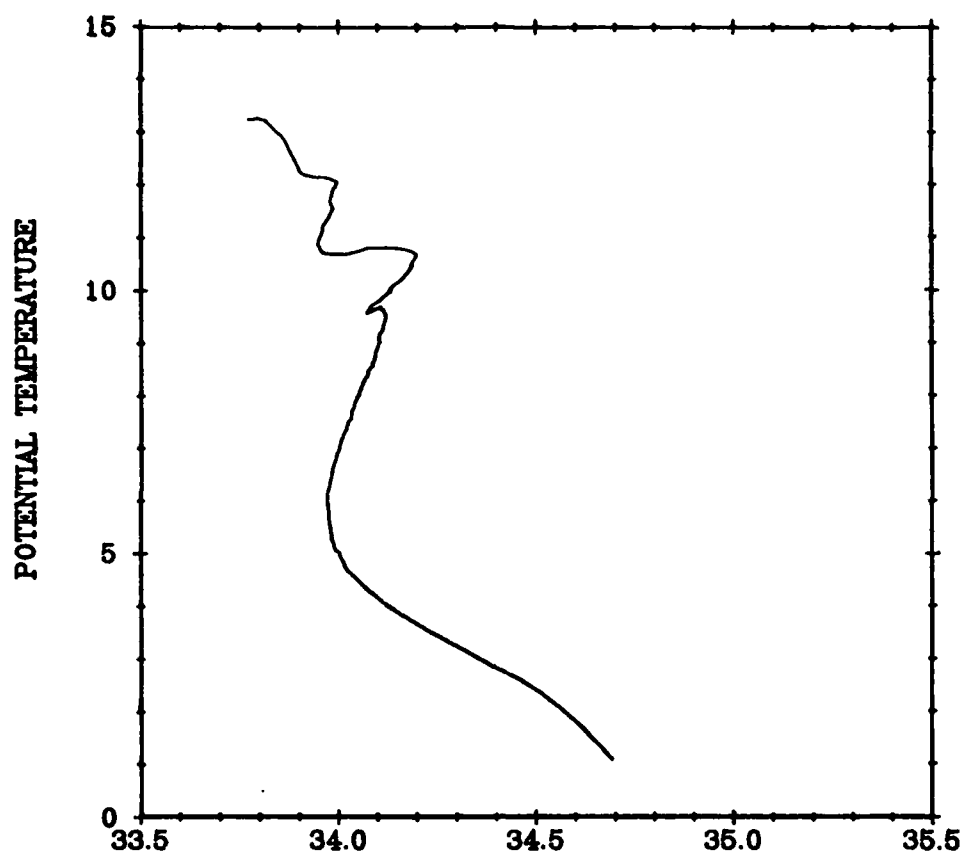
LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB SARCH  
 17 49 N 152 04 W 5/19/84 1016 5896 360 7 12.8 10.0 1025.7

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |         |            |            |
| 0           | 13.247        | 33.780   | 13.247            | 25.399  | 34.096  | 42.414  | 256.803 | 0.000      | 0          |
| 20          | 13.251        | 33.788   | 13.248            | 25.405  | 34.102  | 42.419  | 256.794 | 0.051      | 19         |
| 40          | 13.193        | 33.819   | 13.178            | 25.443  | 34.142  | 42.462  | 253.695 | 0.102      | 39         |
| 60          | 12.139        | 33.924   | 12.331            | 25.691  | 34.421  | 42.771  | 230.625 | 0.151      | 59         |
| 80          | 11.941        | 33.986   | 11.831            | 25.834  | 34.584  | 42.951  | 217.474 | 0.196      | 79         |
| 100         | 11.747        | 33.971   | 11.335            | 25.914  | 34.694  | 43.070  | 210.270 | 0.238      | 99         |
| 120         | 10.546        | 34.198   | 10.528            | 26.227  | 35.027  | 43.441  | 191.564 | 0.334      | 119        |
| 140         | 9.910         | 34.152   | 9.797             | 26.287  | 35.120  | 43.564  | 176.761 | 0.426      | 139        |
| 160         | 9.491         | 34.119   | 9.453             | 26.355  | 35.202  | 43.660  | 171.177 | 0.513      | 159        |
| 180         | 8.736         | 34.092   | 8.724             | 26.454  | 35.334  | 43.823  | 162.426 | 0.596      | 179        |
| 200         | 8.016         | 34.049   | 7.991             | 26.530  | 35.443  | 43.963  | 155.645 | 0.676      | 199        |
| 220         | 7.164         | 34.036   | 7.126             | 26.619  | 35.572  | 44.129  | 147.409 | 0.752      | 219        |
| 240         | 6.479         | 33.980   | 6.439             | 26.691  | 35.676  | 44.264  | 140.703 | 0.824      | 239        |
| 260         | 5.725         | 33.976   | 5.693             | 26.793  | 35.805  | 44.428  | 131.829 | 0.892      | 259        |
| 280         | 4.826         | 34.016   | 4.779             | 26.920  | 35.987  | 44.651  | 119.914 | 1.017      | 279        |
| 300         | 4.323         | 34.082   | 4.270             | 27.028  | 36.119  | 44.806  | 109.132 | 1.131      | 299        |
| 320         | 3.857         | 34.170   | 3.799             | 27.146  | 36.261  | 44.969  | 97.955  | 1.235      | 319        |
| 340         | 3.514         | 34.249   | 3.450             | 27.244  | 36.375  | 45.099  | 89.010  | 1.328      | 339        |
| 360         | 3.243         | 34.316   | 3.174             | 27.323  | 36.468  | 45.205  | 81.705  | 1.414      | 359        |
| 380         | 3.038         | 34.366   | 2.962             | 27.392  | 36.538  | 45.285  | 76.161  | 1.493      | 379        |
| 400         | 2.865         | 34.410   | 2.793             | 27.434  | 36.598  | 45.351  | 71.777  | 1.567      | 399        |
| 420         | 2.731         | 34.451   | 2.642             | 27.479  | 36.650  | 45.411  | 67.815  | 1.636      | 419        |
| 440         | 2.587         | 34.484   | 2.492             | 27.518  | 36.697  | 45.466  | 64.294  | 1.702      | 439        |
| 460         | 2.487         | 34.506   | 2.385             | 27.545  | 36.729  | 45.503  | 62.050  | 1.766      | 459        |
| 480         | 2.357         | 34.530   | 2.249             | 27.575  | 36.765  | 45.547  | 59.278  | 1.824      | 479        |
| 500         | 2.228         | 34.552   | 2.123             | 27.604  | 36.802  | 45.589  | 56.627  | 1.884      | 499        |
| 520         | 2.112         | 34.569   | 2.010             | 27.626  | 36.829  | 45.622  | 54.693  | 1.940      | 519        |
| 540         | 2.009         | 34.586   | 1.901             | 27.648  | 36.857  | 45.655  | 52.644  | 1.994      | 539        |
| 560         | 1.941         | 34.600   | 1.826             | 27.666  | 36.881  | 45.683  | 50.962  | 2.045      | 559        |
| 580         | 1.879         | 34.610   | 1.735             | 27.680  | 36.898  | 45.704  | 49.847  | 2.096      | 579        |
| 600         | 1.819         | 34.618   | 1.658             | 27.691  | 36.913  | 45.722  | 48.891  | 2.145      | 599        |
| 620         | 1.764         | 34.626   | 1.606             | 27.702  | 36.927  | 45.740  | 47.989  | 2.194      | 619        |
| 640         | 1.721         | 34.632   | 1.555             | 27.711  | 36.939  | 45.754  | 47.148  | 2.241      | 639        |
| 660         | 1.680         | 34.639   | 1.506             | 27.720  | 36.950  | 45.768  | 46.645  | 2.288      | 659        |
| 680         | 1.643         | 34.644   | 1.466             | 27.727  | 36.959  | 45.779  | 46.201  | 2.335      | 679        |
| 700         | 1.620         | 34.649   | 1.429             | 27.734  | 36.968  | 45.790  | 45.770  | 2.381      | 699        |
| 720         | 1.592         | 34.654   | 1.392             | 27.740  | 36.977  | 45.800  | 45.340  | 2.426      | 719        |
| 740         | 1.563         | 34.659   | 1.356             | 27.746  | 36.984  | 45.810  | 44.984  | 2.471      | 739        |
| 760         | 1.550         | 34.661   | 1.312             | 27.750  | 36.990  | 45.816  | 44.855  | 2.516      | 759        |
| 780         | 1.531         | 34.665   | 1.314             | 27.755  | 36.997  | 45.824  | 44.589  | 2.561      | 779        |
| 800         | 1.513         | 34.668   | 1.277             | 27.760  | 37.003  | 45.832  | 44.401  | 2.606      | 799        |
| 820         | 1.504         | 34.670   | 1.238             | 27.763  | 37.006  | 45.836  | 44.407  | 2.650      | 819        |
| 840         | 1.491         | 34.673   | 1.235             | 27.767  | 37.012  | 45.843  | 44.277  | 2.694      | 839        |
| 860         | 1.484         | 34.675   | 1.218             | 27.770  | 37.015  | 45.848  | 44.301  | 2.739      | 859        |
| 880         | 1.479         | 34.677   | 1.232             | 27.772  | 37.019  | 45.852  | 44.336  | 2.783      | 879        |
| 900         | 1.477         | 34.678   | 1.191             | 27.774  | 37.021  | 45.855  | 44.314  | 2.827      | 899        |
| 920         | 1.472         | 34.680   | 1.175             | 27.776  | 37.025  | 45.859  | 44.357  | 2.872      | 919        |
| 940         | 1.473         | 34.682   | 1.156             | 27.779  | 37.027  | 45.862  | 44.691  | 2.916      | 939        |
| 960         | 1.474         | 34.683   | 1.156             | 27.780  | 37.030  | 45.865  | 44.894  | 2.961      | 959        |
| 980         | 1.477         | 34.684   | 1.148             | 27.781  | 37.031  | 45.867  | 45.129  | 3.006      | 979        |
| 1000        | 1.481         | 34.684   | 1.141             | 27.782  | 37.032  | 45.868  | 45.449  | 3.052      | 999        |
| 1020        | 1.486         | 34.686   | 1.134             | 27.784  | 37.035  | 45.871  | 45.644  | 3.097      | 1019       |
| 1040        | 1.492         | 34.686   | 1.129             | 27.784  | 37.035  | 45.872  | 45.998  | 3.143      | 1039       |
| 1060        | 1.499         | 34.687   | 1.124             | 27.785  | 37.037  | 45.873  | 46.298  | 3.189      | 1059       |
| 1080        | 1.506         | 34.687   | 1.119             | 27.786  | 37.037  | 45.875  | 46.669  | 3.236      | 1079       |
| 1100        | 1.514         | 34.688   | 1.115             | 27.787  | 37.038  | 45.876  | 46.988  | 3.282      | 1099       |
| 1120        | 1.522         | 34.688   | 1.111             | 27.787  | 37.039  | 45.877  | 47.378  | 3.330      | 1119       |
| 1140        | 1.529         | 34.689   | 1.106             | 27.788  | 37.040  | 45.878  | 47.682  | 3.377      | 1139       |
| 1160        | 1.539         | 34.689   | 1.102             | 27.789  | 37.041  | 45.879  | 48.092  | 3.425      | 1159       |
| 1180        | 1.547         | 34.690   | 1.099             | 27.790  | 37.042  | 45.880  | 48.434  | 3.473      | 1179       |
| 1200        | 1.557         | 34.690   | 1.096             | 27.790  | 37.042  | 45.881  | 48.865  | 3.522      | 1199       |
| 1220        | 1.567         | 34.690   | 1.093             | 27.790  | 37.043  | 45.881  | 49.297  | 3.571      | 1219       |
| 1240        | 1.576         | 34.691   | 1.089             | 27.791  | 37.044  | 45.881  | 49.643  | 3.620      | 1239       |
| 1260        | 1.588         | 34.691   | 1.088             | 27.791  | 37.044  | 45.881  | 50.116  | 3.670      | 1259       |
| 1280        | 1.600         | 34.691   | 1.087             | 27.791  | 37.044  | 45.881  | 50.591  | 3.721      | 1279       |
| 1300        | 1.613         | 34.691   | 1.086             | 27.791  | 37.044  | 45.881  | 51.088  | 3.772      | 1299       |
| 1320        | 1.627         | 34.691   | 1.087             | 27.791  | 37.044  | 45.881  | 51.605  | 3.823      | 1319       |
| 1340        | 1.633         | 34.691   | 1.087             | 27.791  | 37.044  | 45.881  | 52.131  | 3.874      | 1339       |

## NISKIN BOTTLE DATA

| DEPTH<br>M | TEMP<br>DEG C | SALINITY | DIST O2<br>ML/L | O2 SAT<br>% | SIO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUBIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|------------|---------------|----------|-----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| 1          | 13.295        | 33.835   | 6.27            | 105.7       | 4.2          | 0.28        | 0.4         | 0.01        | 13.295        | 25.412            | 34.126  | 42.442  | 42.902  | 1           |
| 53         | 12.313        | 33.984   | 6.23            | 102.1       | 5.2          | 0.40        | 2.7         | 0.14        | 12.006        | 25.799            | 34.542  | 42.902  | 42.902  | 53          |
| 103        | 10.946        | 33.974   | 5.96            | 95.7        | 5.9          | 0.40        | 6.9         | 0.01        | 10.913        | 25.399            | 34.775  | 43.176  | 43.176  | 103         |
| 153        | 10.547        | 34.193   | 5.62            | 89.5        | 14.2         | 0.96        | 11.8        | 0.01        | 10.529        | 26.231            | 35.031  | 43.445  | 43.445  | 153         |
| 204        | 10.032        | 34.152   | 5.60            | 88.2        | 15.9         | 0.92        | 12.6        | 0.01        | 10.018        | 26.299            | 35.111  | 43.546  | 43.546  | 204         |
| 303        | 9.775         | 34.091   | 4.96            | 74.4        | 27.0         | 1.32        | 18.8        | 0.01        | 9.743         | 26.447            | 35.325  | 43.813  | 43.813  | 303         |
| 401        | 7.110         | 34.007   | 3.96            | 58.3        | 42.9         | 1.90        | 25.4        | 0.01        | 7.072         | 26.627            | 35.582  | 44.142  | 44.142  | 401         |
| 503        | 5.662         | 33.979   | 2.96            | 42.1        | 55.2         | 2.29        | 32.4        | 0.00        | 5.619         | 26.793            | 35.818  | 44.443  | 44.443  | 503         |
| 603        | 4.659         | 34.036   | 1.85            | 25.7        | 87.7         | 2.71        | 38.4        | 0.00        | 4.612         | 26.954            | 36.029  | 44.700  | 44.700  | 603         |
| 703        | 4.145         | 34.111   | 1.10            | 15.1        | 102.2        | 2.92        | 41.8        | 0.00        | 4.093         | 27.069            | 36.169  | 44.865  | 44.865  | 703         |
| 803        | 3.763         | 34.191   | 0.64            | 8.7         | 117.2        | 3.05        | 43.8        | 0.00        | 3.705         | 27.172            | 36.291  | 45.004  | 45.004  | 803         |
| 903        | 3.446         | 34.266   | 0.37            | 5.0         | 130.1        | 3.13        | 44.9        | 0.00        | 3.392         | 27.263            | 36.399  | 45.126  | 45.126  | 903         |
| 1202       | 3.196         | 34.330   | 0.25            | 3.4         | 140.9        | 3.20        | 45.5        | 0.00        | 3.126         | 27.339            | 36.486  | 45.225  | 45.225  | 1202        |
| 1252       | 2.785         | 34.437   | 0.25            | 3.3         | 154.8        | 3.21        | 45.8        | 0.00        | 2.699         | 27.462            | 36.631  | 45.390  | 45.390  | 1252        |
| 1502       | 2.448         | 34.515   | 0.53            | 7.0         | 164.1        | 3.15        | 45.3        | 0.00        | 2.345         | 27.555            | 36.741  | 45.517  | 45.517  | 1502        |
| 1753       | 2.168         | 34.566   | 0.94            | 12.3        | 171.4        | 3.08        | 44.2        | 0.00        | 2.048         | 27.620            | 36.822  | 45.612  | 45.612  | 1753        |
| 2203       | 1.942         | 34.602   | 1.18            | 17.9        | 178.1        | 3.00        | 43.1        | 0.00        | 1.804         | 27.668            | 36.882  | 45.685  | 45.685  | 2203        |
| 2503       | 1.691         | 34.640   | 2.12            | 27.3        | 175.6        | 2.94        | 41.1        | 0.00        | 1.503         | 27.721            | 36.951  | 45.769  | 45.769  | 2503        |
| 3002       | 1.546         | 34.663   | 2.75            | 35.3        | 169.5        | 2.71        | 39.3        | 0.00        | 1.324         | 27.752            | 36.992  | 45.819  | 45.819  | 3002        |
| 3501       | 1.486         | 34.676   | 3.14            | 40.2        | 166.5        | 2.62        | 38.3        | 0.00        | 1.214         | 27.770            | 37.016  | 45.849  | 45.849  | 3501        |
| 4001       | 1.478         | 34.683   | 3.34            | 42.7        | 164.5        | 2.57        | 37.4        | 0.00        | 1.152         | 27.780            | 37.030  | 45.865  | 45.865  | 4001        |
| 4500       | 1.505         | 34.687   | 3.47            | 44.3        | 159.1        | 2.56        | 37.2        | 0.00        | 1.120         | 27.786            | 37.037  | 45.874  | 45.874  | 4500        |
| 5098       | 1.557         | 34.690   | 3.56            | 45.5        | 153.2        |             | 36.8        | 0.00        | 1.097         | 27.790            | 37.042  | 45.880  | 45.880  | 5098        |
| 5726       | 1.633         | 34.691   | 3.63            | 46.3        | 152.2        | 2.50        | 36.6        | 0.00        | 1.087         | 27.791            | 37.044  | 45.883  | 45.883  | 5726        |

# MARATHON 2 STA. 48

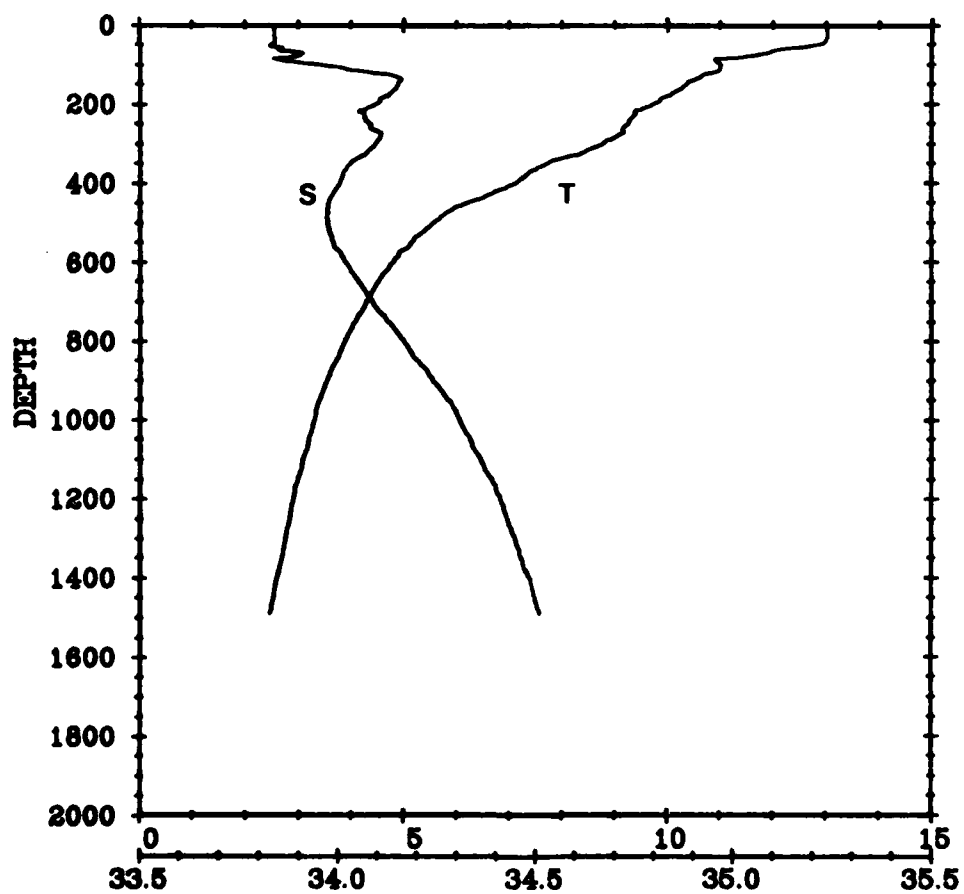
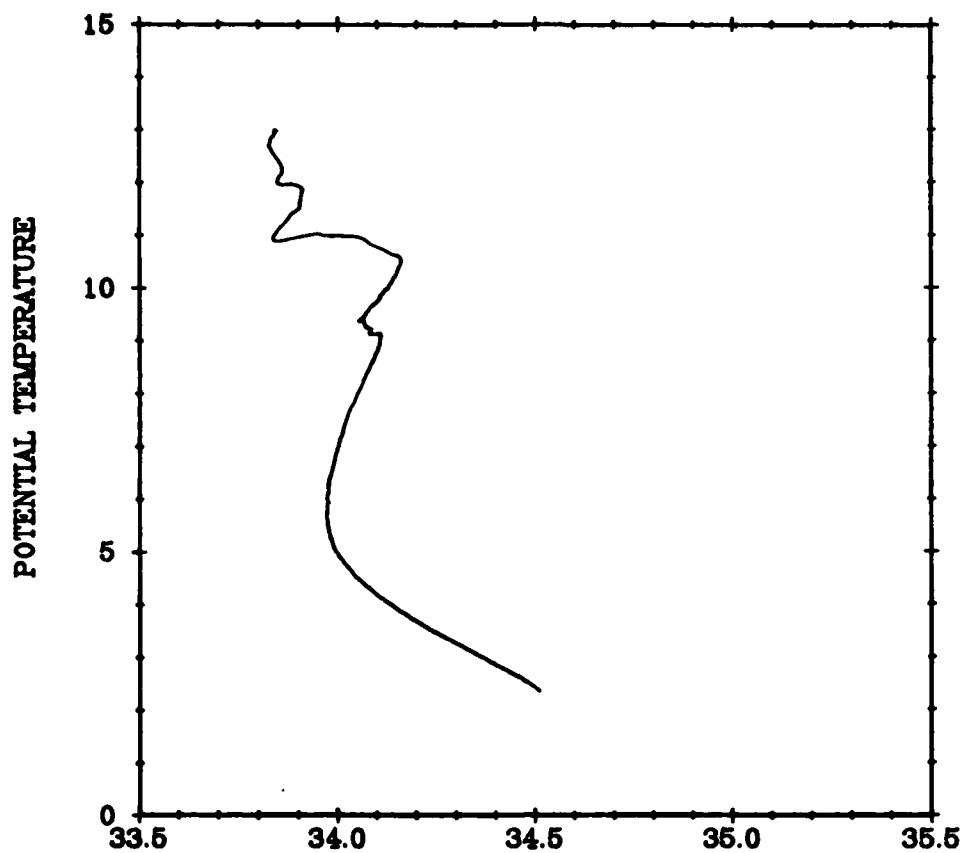


| LATITUDE | LONGITUDE | MO/DY/YR | START TIME GMT | BOTTOM M | WIND DIR | SPEED KT | AIR TEMP DEG C | WET BULB DEG C | SAROM MB |
|----------|-----------|----------|----------------|----------|----------|----------|----------------|----------------|----------|
| 18 8 3N  | 151 59 2W | 5/19/94  | 1642           | 4934     | 42       | 3        | 13.3           | 10.0           | 1027.4   |

| CTD DATA | SALINITY | POT TEMP DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH M |
|----------|----------|----------------|---------|---------|---------|---------|------------|---------|
| DB       |          |                |         |         |         |         |            |         |
| 0        | 33.938   | 13.942         | 25.495  | 34.203  | 42.525  | 247.595 | 0.000      | 0       |
| 20       | 33.941   | 13.941         | 25.494  | 34.199  | 42.525  | 248.314 | 0.050      | 19      |
| 40       | 33.939   | 12.955         | 25.503  | 34.210  | 42.538  | 247.994 | 0.094      | 39      |
| 60       | 33.953   | 12.277         | 25.646  | 34.380  | 42.732  | 234.966 | 0.148      | 59      |
| 80       | 33.979   | 11.400         | 25.831  | 34.594  | 42.984  | 217.721 | 0.193      | 79      |
| 100      | 33.939   | 10.978         | 25.954  | 34.739  | 43.119  | 206.441 | 0.235      | 99      |
| 150      | 34.153   | 10.346         | 26.232  | 35.142  | 43.461  | 181.077 | 0.332      | 149     |
| 200      | 34.096   | 9.722          | 26.293  | 35.128  | 43.576  | 176.152 | 0.421      | 198     |
| 250      | 34.078   | 9.222          | 26.361  | 35.218  | 43.686  | 170.526 | 0.508      | 248     |
| 300      | 34.097   | 8.761          | 26.449  | 35.326  | 43.813  | 162.912 | 0.591      | 298     |
| 350      | 34.034   | 7.738          | 26.554  | 35.478  | 44.028  | 153.213 | 0.670      | 347     |
| 400      | 34.204   | 7.104          | 26.622  | 35.574  | 44.132  | 147.251 | 0.746      | 397     |
| 450      | 33.976   | 6.229          | 26.715  | 35.710  | 44.328  | 138.225 | 0.817      | 446     |
| 500      | 33.973   | 5.555          | 26.796  | 35.824  | 44.453  | 130.452 | 0.884      | 496     |
| 600      | 34.017   | 4.768          | 26.922  | 35.989  | 44.654  | 118.779 | 1.009      | 595     |
| 700      | 34.084   | 4.263          | 27.030  | 36.122  | 44.809  | 108.802 | 1.122      | 694     |
| 800      | 34.164   | 3.839          | 27.138  | 36.250  | 44.957  | 98.887  | 1.225      | 793     |
| 900      | 34.239   | 3.492          | 27.232  | 36.361  | 45.083  | 90.225  | 1.321      | 892     |
| 1000     | 34.305   | 3.234          | 27.309  | 36.451  | 45.185  | 83.224  | 1.408      | 991     |
| 1100     | 34.357   | 3.023          | 27.370  | 36.522  | 45.266  | 77.711  | 1.488      | 1090    |
| 1200     | 34.407   | 2.821          | 27.428  | 36.590  | 45.343  | 72.449  | 1.563      | 1188    |
| 1300     | 34.443   | 2.675          | 27.469  | 36.639  | 45.399  | 68.790  | 1.634      | 1287    |
| 1400     | 34.479   | 2.520          | 27.512  | 36.689  | 45.457  | 64.932  | 1.701      | 1386    |
| 1500     | 34.509   | 2.372          | 27.548  | 36.733  | 45.507  | 61.680  | 1.764      | 1485    |
| 1506     | 34.512   | 2.356          | 27.552  | 36.737  | 45.513  | 61.305  | 1.768      | 1490    |

| NISKIN BOTTLE DATA | DIS O2 | O2 SAT | SIO3 | PO4   | NO3   | NO2  | TRIT | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS  |
|--------------------|--------|--------|------|-------|-------|------|------|----------|---------|---------|---------|--------|
| DEPTH              |        |        |      |       |       |      |      |          |         |         |         |        |
| M                  |        |        |      |       |       |      |      |          |         |         |         |        |
| 1                  | 13.024 | 33.935 | 6.29 | 105.5 | 4.0   | 0.28 | 0.4  | 0.02     | 13.044  | 25.486  | 34.197  | 42.516 |
| 52                 | 12.160 | 33.987 | 6.17 | 101.6 | 4.9   | 0.38 | 1.9  | 0.36     | 12.153  | 25.696  | 34.434  | 42.790 |
| 101                | 10.977 | 34.037 | 5.78 | 92.9  | 8.8   | 0.66 | 8.1  | 0.01     | 10.965  | 26.032  | 34.816  | 43.215 |
| 134                | 10.479 | 34.158 | 5.65 | 89.6  | 13.7  | 0.86 | 11.4 | 0.01     | 10.463  | 26.215  | 35.018  | 43.435 |
| 167                | 10.128 | 34.136 | 5.65 | 89.2  | 14.8  | 0.90 | 12.0 | 0.01     | 10.109  | 26.259  | 35.077  | 43.509 |
| 221                | 9.645  | 34.784 | 5.72 | 89.3  | 16.4  | 0.94 | 12.5 | 0.01     | 9.617   | 26.301  | 35.141  | 43.593 |
| 250                | 9.360  | 34.380 | 5.56 | 86.2  | 18.9  | 1.02 | 14.0 | 0.01     | 9.332   | 26.345  | 35.197  | 43.660 |
| 299                | 9.008  | 34.109 | 4.96 | 76.3  | 25.7  | 1.26 | 17.8 | 0.01     | 8.975   | 26.425  | 35.292  | 43.769 |
| 398                | 7.274  | 34.011 | 4.07 | 60.2  | 40.8  | 1.75 | 24.9 | 0.01     | 7.236   | 26.607  | 35.555  | 44.107 |
| 530                | 5.767  | 33.972 | 3.09 | 44.1  | 62.8  | 2.25 | 31.7 | 0.01     | 5.724   | 26.775  | 35.795  | 44.415 |
| 599                | 4.790  | 34.220 | 2.01 | 28.0  | 83.3  | 2.65 | 37.6 | 0.00     | 4.743   | 26.927  | 35.995  | 44.661 |
| 598                | 4.248  | 34.095 | 1.27 | 17.5  | 99.7  | 2.89 | 41.1 | 0.00     | 4.195   | 27.046  | 36.141  | 44.811 |
| 798                | 3.879  | 34.167 | 0.78 | 10.6  | 114.5 | 3.04 | 43.2 | 0.00     | 3.820   | 27.142  | 36.255  | 44.962 |
| 896                | 3.530  | 34.245 | 0.46 | 6.2   | 128.3 | 3.12 | 44.5 | 0.00     | 3.466   | 27.219  | 36.369  | 45.093 |
| 995                | 3.294  | 34.308 | 0.29 | 3.9   | 139.2 | 3.20 | 45.3 | 0.00     | 3.224   | 27.312  | 36.454  | 45.189 |
| 1217               | 2.828  | 34.428 | 0.26 | 3.5   | 156.7 | 3.21 | 45.9 | 0.00     | 2.743   | 27.451  | 36.617  | 45.374 |
| 1486               | 2.465  | 34.512 | 0.50 | 6.6   | 168.2 |      | 45.4 | 0.00     | 2.363   | 27.551  | 36.736  | 45.511 |

# MARATHON 2 STA. 49

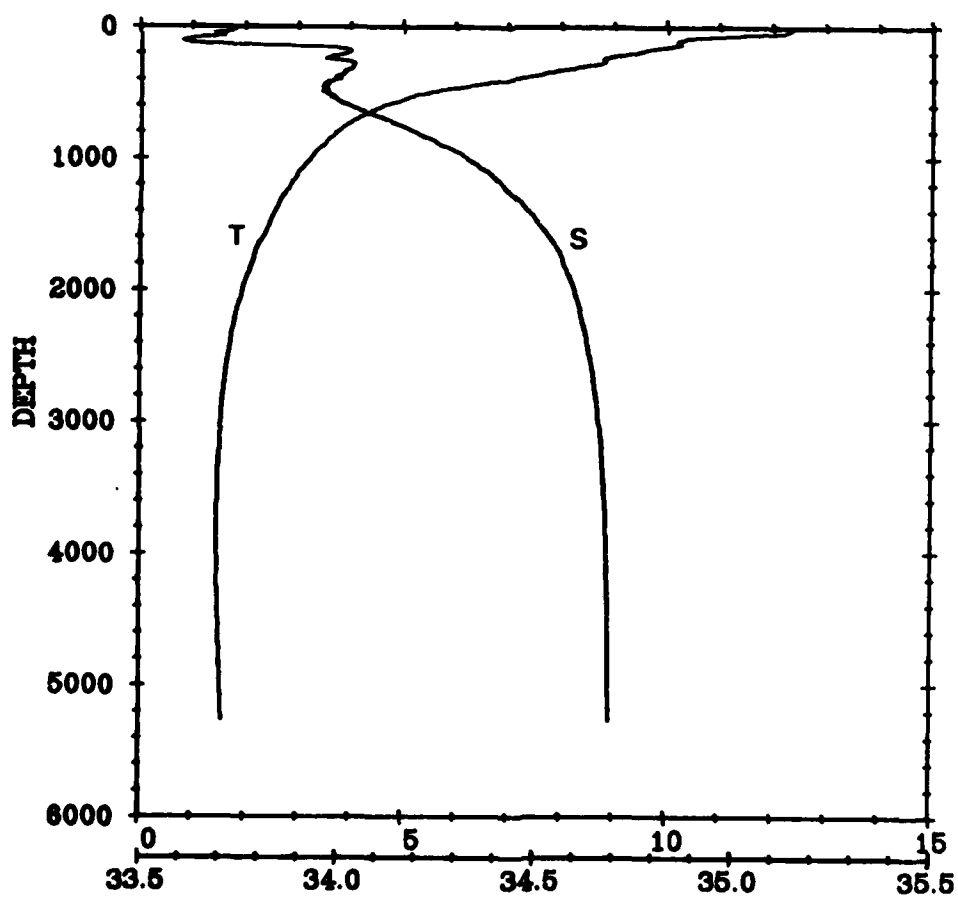
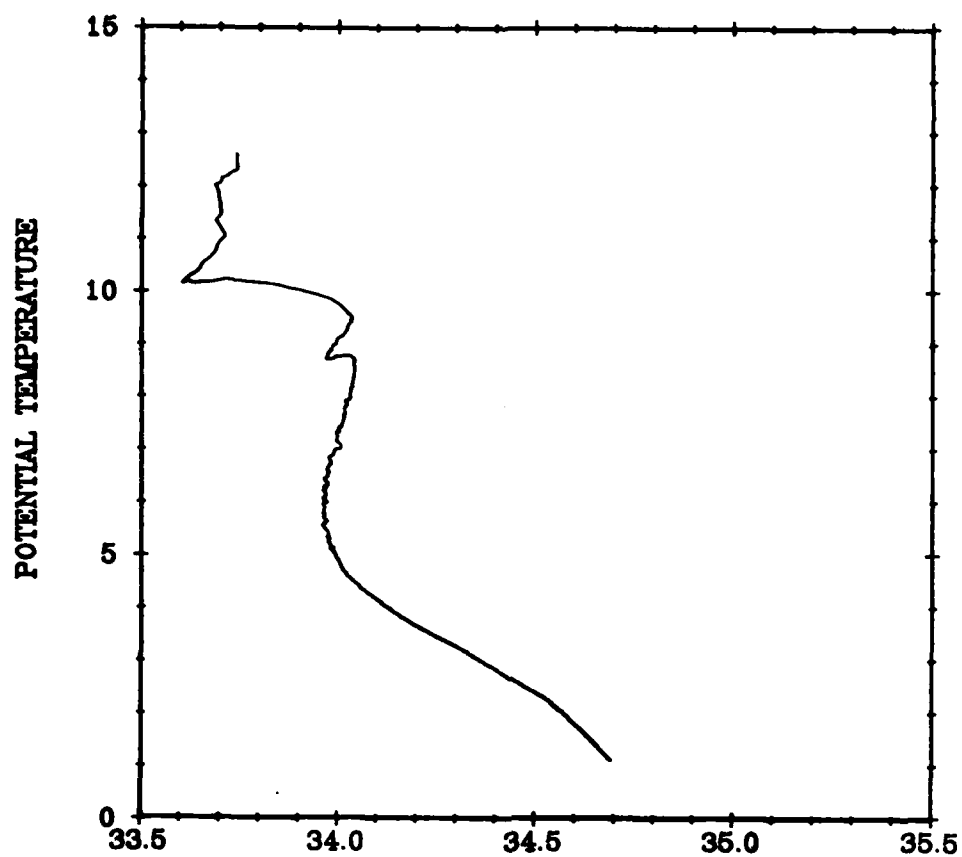


| LATITUDE | LONGITUDE | MO/DY-YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 19 30 3N | 152 0 3W  | 5-19-84  | 2224       | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 19 30 3N | 152 0 3W  | 5-19-84  | 2224       | 5255   | 180  | 4     | 15.5     | 11.1     | 1009.1 |

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA<br>CL/TON | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |               |            |            |
| 0           | 12.526        | 33.742   | 12.526            | 25.512  | 34.237  | 42.592  | 245.165       | 1.000      | 0          |
| 20          | 12.333        | 33.741   | 12.330            | 25.549  | 34.282  | 42.634  | 243.063       | 1.049      | 19         |
| 40          | 12.202        | 33.720   | 12.197            | 25.559  | 34.297  | 42.654  | 242.689       | 1.097      | 39         |
| 60          | 11.614        | 33.696   | 11.606            | 25.650  | 34.413  | 42.792  | 234.373       | 1.245      | 59         |
| 80          | 10.756        | 33.671   | 10.697            | 25.795  | 34.595  | 43.010  | 220.995       | 1.391      | 79         |
| 100         | 10.265        | 33.618   | 10.253            | 25.830  | 34.650  | 43.081  | 207.995       | 1.439      | 99         |
| 120         | 9.365         | 33.561   | 9.348             | 26.035  | 34.980  | 43.317  | 197.747       | 1.539      | 119        |
| 140         | 8.370         | 34.024   | 8.348             | 26.298  | 35.151  | 43.614  | 175.489       | 1.632      | 139        |
| 160         | 7.381         | 33.982   | 7.357             | 26.359  | 35.239  | 43.727  | 170.199       | 1.678      | 159        |
| 180         | 6.468         | 34.038   | 6.437             | 26.453  | 35.345  | 43.846  | 162.148       | 1.672      | 179        |
| 200         | 5.741         | 34.015   | 5.708             | 26.543  | 35.469  | 44.001  | 154.199       | 1.691      | 199        |
| 220         | 5.099         | 33.995   | 5.061             | 26.619  | 35.575  | 44.135  | 147.121       | 1.706      | 219        |
| 240         | 4.500         | 33.964   | 4.450             | 26.704  | 35.699  | 44.296  | 139.247       | 1.728      | 239        |
| 260         | 3.946         | 33.968   | 3.894             | 26.798  | 35.829  | 44.460  | 130.143       | 1.795      | 259        |
| 280         | 3.447         | 34.024   | 3.391             | 26.946  | 36.022  | 44.694  | 116.207       | 1.818      | 279        |
| 300         | 2.988         | 34.111   | 2.936             | 27.071  | 36.172  | 44.868  | 104.432       | 1.839      | 299        |
| 320         | 2.564         | 34.130   | 2.506             | 27.174  | 36.293  | 45.007  | 95.213        | 1.829      | 319        |
| 340         | 2.177         | 34.256   | 2.124             | 27.252  | 36.384  | 45.110  | 88.189        | 1.820      | 339        |
| 360         | 1.825         | 34.323   | 1.766             | 27.310  | 36.475  | 45.212  | 81.097        | 1.805      | 359        |
| 380         | 1.506         | 34.373   | 1.441             | 27.390  | 36.546  | 45.294  | 75.594        | 1.801      | 379        |
| 400         | 1.218         | 34.412   | 1.148             | 27.437  | 36.601  | 45.357  | 71.461        | 1.807      | 399        |
| 420         | 0.968         | 34.448   | 0.892             | 27.479  | 36.652  | 45.416  | 67.564        | 1.824      | 419        |
| 440         | 0.750         | 34.479   | 0.668             | 27.516  | 36.695  | 45.465  | 64.469        | 1.842      | 439        |
| 460         | 0.566         | 34.508   | 0.475             | 27.549  | 36.735  | 45.510  | 61.346        | 1.855      | 459        |
| 480         | 0.413         | 34.533   | 0.315             | 27.579  | 36.771  | 45.552  | 58.995        | 1.866      | 479        |
| 500         | 0.289         | 34.556   | 0.205             | 27.609  | 36.809  | 45.598  | 55.994        | 1.873      | 499        |
| 520         | 0.185         | 34.569   | 0.100             | 27.626  | 36.830  | 45.623  | 54.610        | 1.928      | 519        |
| 540         | 0.105         | 34.583   | 0.026             | 27.645  | 36.854  | 45.651  | 52.935        | 1.982      | 539        |
| 560         | 0.059         | 34.597   | 0.004             | 27.664  | 36.879  | 45.681  | 51.157        | 2.034      | 559        |
| 580         | 0.034         | 34.606   | 0.001             | 27.676  | 36.894  | 45.700  | 50.212        | 2.085      | 579        |
| 600         | 0.022         | 34.616   | 0.001             | 27.689  | 36.911  | 45.720  | 49.086        | 2.135      | 599        |
| 620         | 0.015         | 34.621   | 0.001             | 27.699  | 36.924  | 45.735  | 48.344        | 2.183      | 619        |
| 640         | 0.012         | 34.631   | 0.001             | 27.710  | 36.937  | 45.752  | 47.472        | 2.231      | 639        |
| 660         | 0.009         | 34.636   | 0.001             | 27.717  | 36.946  | 45.763  | 47.044        | 2.279      | 659        |
| 680         | 0.007         | 34.641   | 0.001             | 27.726  | 36.958  | 45.778  | 46.126        | 2.325      | 679        |
| 700         | 0.006         | 34.648   | 0.001             | 27.733  | 36.967  | 45.789  | 45.356        | 2.371      | 699        |
| 720         | 0.004         | 34.653   | 0.001             | 27.739  | 36.976  | 45.799  | 44.439        | 2.417      | 719        |
| 740         | 0.003         | 34.657   | 0.001             | 27.745  | 36.983  | 45.808  | 45.111        | 2.462      | 739        |
| 760         | 0.002         | 34.661   | 0.001             | 27.750  | 36.990  | 45.817  | 44.827        | 2.507      | 759        |
| 780         | 0.001         | 34.664   | 0.001             | 27.755  | 36.996  | 45.824  | 44.461        | 2.552      | 779        |
| 800         | 0.001         | 34.667   | 0.001             | 27.759  | 37.001  | 45.830  | 44.537        | 2.596      | 799        |
| 820         | 0.001         | 34.669   | 0.001             | 27.762  | 37.005  | 45.836  | 44.464        | 2.641      | 819        |
| 840         | 0.001         | 34.672   | 0.001             | 27.766  | 37.011  | 45.842  | 44.334        | 2.685      | 839        |
| 860         | 0.001         | 34.674   | 0.001             | 27.769  | 37.015  | 45.847  | 44.257        | 2.730      | 859        |
| 880         | 0.001         | 34.676   | 0.001             | 27.771  | 37.018  | 45.851  | 44.422        | 2.774      | 879        |
| 900         | 0.001         | 34.678   | 0.001             | 27.774  | 37.022  | 45.855  | 44.463        | 2.819      | 899        |
| 920         | 0.001         | 34.679   | 0.001             | 27.775  | 37.024  | 45.858  | 44.459        | 2.863      | 919        |
| 940         | 0.001         | 34.681   | 0.001             | 27.779  | 37.027  | 45.861  | 44.762        | 2.908      | 939        |
| 960         | 0.001         | 34.682   | 0.001             | 27.779  | 37.029  | 45.864  | 44.965        | 2.953      | 959        |
| 980         | 0.001         | 34.683   | 0.001             | 27.781  | 37.031  | 45.866  | 45.183        | 2.998      | 979        |
| 1000        | 0.001         | 34.684   | 0.001             | 27.782  | 37.032  | 45.868  | 45.481        | 3.043      | 999        |
| 1020        | 0.001         | 34.684   | 0.001             | 27.782  | 37.033  | 45.869  | 45.813        | 3.089      | 1019       |
| 1040        | 0.001         | 34.685   | 0.001             | 27.783  | 37.034  | 45.871  | 46.117        | 3.135      | 1039       |
| 1060        | 0.001         | 34.686   | 0.001             | 27.784  | 37.035  | 45.872  | 46.418        | 3.181      | 1059       |
| 1080        | 0.001         | 34.686   | 0.001             | 27.785  | 37.036  | 45.873  | 46.806        | 3.228      | 1079       |
| 1100        | 0.001         | 34.687   | 0.001             | 27.786  | 37.037  | 45.874  | 47.143        | 3.275      | 1099       |
| 1120        | 0.001         | 34.688   | 0.001             | 27.787  | 37.038  | 45.876  | 47.482        | 3.322      | 1119       |
| 1140        | 0.001         | 34.688   | 0.001             | 27.787  | 37.039  | 45.876  | 47.874        | 3.370      | 1139       |
| 1160        | 0.001         | 34.688   | 0.001             | 27.787  | 37.039  | 45.877  | 48.296        | 3.419      | 1159       |
| 1180        | 0.001         | 34.689   | 0.001             | 27.788  | 37.040  | 45.879  | 48.629        | 3.466      | 1179       |
| 1200        | 0.001         | 34.689   | 0.001             | 27.789  | 37.041  | 45.879  | 49.106        | 3.515      | 1199       |
| 1220        | 0.001         | 34.689   | 0.001             | 27.789  | 37.041  | 45.880  | 49.476        | 3.564      | 1219       |
| 1240        | 0.001         | 34.689   | 0.001             | 27.789  | 37.041  | 45.880  | 49.812        | 3.598      | 1239       |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |        |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUSIN  | DEG C    |         |         |         | DB    |
| 1                  | 12.610 | 33.745   | 6.34   | 105.3  | 3.0   | 0.35 | 1.4  | 0.04 | 12.610 | 25.498   | 34.220  | 42.561  |         | 1     |
| 57                 | 11.316 | 33.694   | 6.39   | 104.3  | 2.5   | 0.42 | 2.3  | 0.03 | 11.309 | 25.611   | 34.365  | 42.717  |         | 57    |
| 106                | 10.192 | 33.611   | 6.39   | 100.7  | 2.0   | 0.53 | 4.8  | 0.25 | 10.180 | 25.837   | 34.660  | 43.096  |         | 106   |
| 156                | 9.953  | 33.942   | 5.76   | 90.4   | 11.2  | 0.88 | 10.9 | 0.22 | 9.915  | 26.137   | 34.965  | 43.406  |         | 156   |
| 207                | 9.326  | 34.025   | 5.78   | 89.5   | 16.3  | 0.97 | 12.7 | 0.01 | 9.303  | 26.106   | 35.160  | 43.626  |         | 207   |
| 254                | 8.370  | 34.056   | 4.86   | 73.7   | 28.5  | 1.18 | 19.6 | 0.01 | 8.348  | 26.482   | 35.178  | 43.883  |         | 254   |
| 307                | 7.005  | 33.992   | 3.91   | 57.4   | 43.6  | 1.55 | 26.2 | 0.01 | 6.967  | 26.629   | 35.590  | 44.154  |         | 307   |
| 357                | 5.461  | 33.976   | 2.73   | 18.6   | 67.8  | 2.19 | 31.9 | 0.01 | 5.419  | 26.814   | 35.952  | 44.494  |         | 357   |
| 406                | 4.590  | 34.038   | 1.84   | 25.5   | 97.5  | 2.72 | 39.7 | 0.01 | 4.643  | 26.961   | 36.342  | 44.716  |         | 406   |
| 456                | 4.291  | 34.118   | 1.00   | 13.7   | 104.5 | 2.97 | 42.4 | 0.01 | 4.019  | 27.081   | 36.583  | 44.891  |         | 456   |
| 505                | 3.711  | 34.200   | 0.59   | 8.0    | 117.8 | 3.19 | 44.3 | 0.01 | 3.651  | 27.185   | 36.706  | 45.021  |         | 505   |
| 555                | 3.459  | 34.264   | 0.36   | 4.9    | 129.6 | 3.14 | 45.2 | 0.01 | 3.195  | 27.261   | 36.795  | 45.122  |         | 555   |
| 604                | 3.219  | 34.329   | 0.25   | 3.4    | 137.3 | 3.21 | 45.6 | 0.01 | 3.149  | 27.335   | 36.881  | 45.220  |         | 604   |
| 654                | 2.754  | 34.416   | 0.25   | 3.3    | 154.9 | 3.22 | 46.0 | 0.01 | 2.668  | 27.464   | 36.634  | 45.395  |         | 654   |
| 703                | 2.441  | 34.513   | 0.51   | 6.7    | 163.9 | 3.17 | 45.4 | 0.01 | 2.338  | 27.554   | 36.740  | 45.517  |         | 703   |
| 753                | 2.154  | 34.569   | 0.94   | 12.5   | 171.1 | 3.09 | 44.4 | 0.01 | 2.014  | 27.624   | 36.825  | 45.617  |         | 753   |
| 803                | 1.927  | 34.612   | 1.34   | 17.4   | 175.6 | 3.01 | 43.4 | 0.01 | 1.799  | 27.669   | 36.884  | 45.688  |         | 803   |
| 850                | 1.682  | 34.639   | 2.10   | 27.1   | 174.1 | 2.85 | 41.2 | 0.01 | 1.505  | 27.720   | 36.950  | 45.769  |         | 850   |
| 899                | 1.542  | 34.663   | 2.75   | 35.3   | 169.0 | 2.72 | 39.2 | 0.01 | 1.320  | 27.752   | 36.993  | 45.820  |         | 899   |
| 947                | 1.482  | 34.677   | 3.13   | 40.1   | 164.8 | 2.66 | 38.2 | 0.01 | 1.211  | 27.771   | 37.018  | 45.850  |         | 947   |
| 995                | 1.475  | 34.684   | 3.34   | 42.7   | 164.9 | 2.58 | 37.7 | 0.01 | 1.150  | 27.781   | 37.031  | 45.864  |         | 995   |
| 1043               | 1.509  | 34.687   | 3.43   | 43.8   | 162.2 | 2.57 | 37.4 | 0.01 | 1.125  | 27.795   | 37.036  | 45.873  |         | 1043  |
| 1091               | 1.554  | 34.688   | 3.51   | 44.8   | 160.6 | 2.57 | 37.1 | 0.01 | 1.101  | 27.787   | 37.039  | 45.877  |         | 1091  |
| 1139               | 1.581  | 34.689   | 3.56   | 45.5   | 157.7 | 2.53 | 36.7 | 0.01 | 1.098  | 27.789   | 37.041  | 45.879  |         | 1139  |

# MARATHON 2 STA. 50



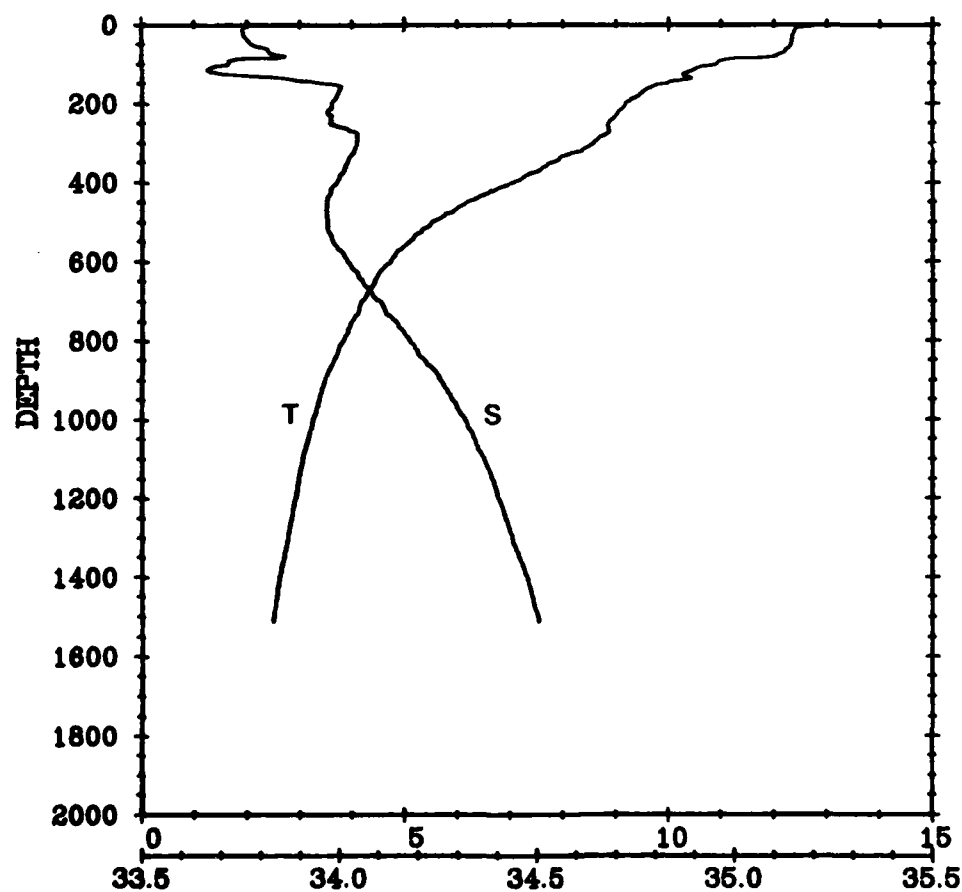
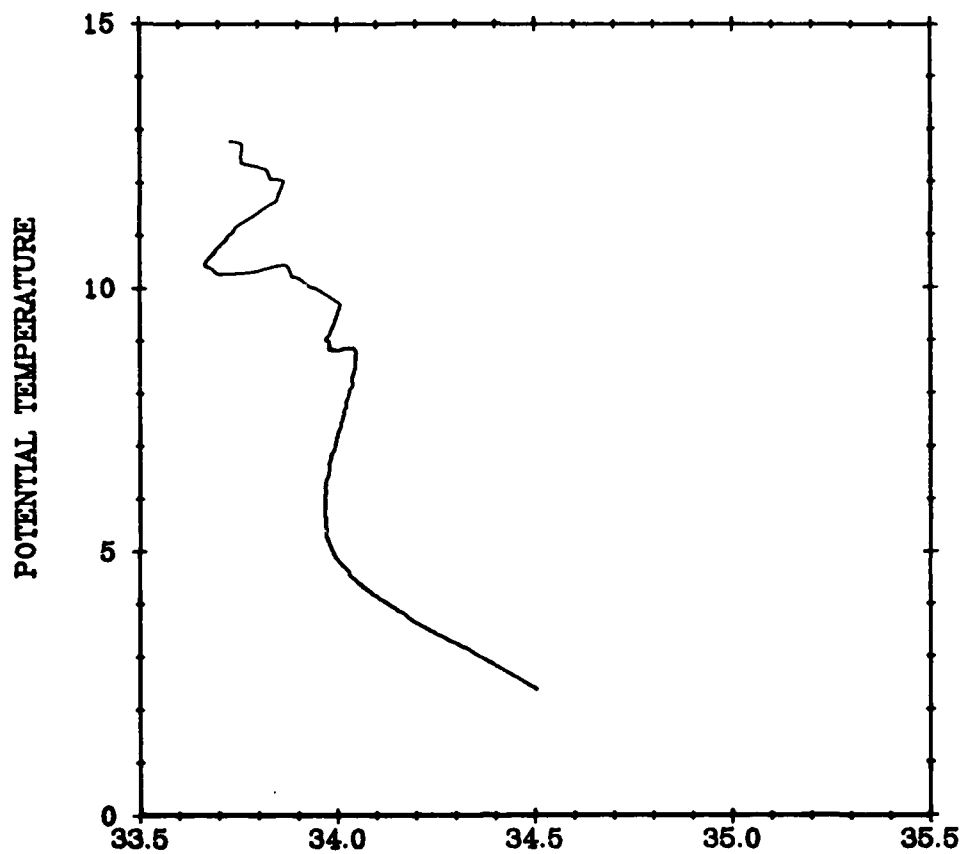
R/V THOMAS WASHINGTON MARATHON LEG II STATION 11

LATITUDE LONGITUDE MO-DY YR ST RT TIME BOTTOM WIND WIND DIR WIND SPEED AIR TEMP WET BULB BAROM  
 19 50 9N 151 54 1W 5/19/84 430 5358 LTD 7 12.8 10.7 1026.8

STD DATA  
 PRESS TEMP SALINITY POT TEMP SIGMA 0 SIGMA 2 SIGMA 4 CVA DYNAMIC HT DEPTH  
 DB DEG C DB DEG C M M M M M M M M M M  
 0 12.402 33.751 12.602 25.524 34.227 42.568 244.805 0.000 0.000 0.000  
 20 12.379 33.759 12.376 25.554 34.285 42.615 242.580 0.044 0.044 19  
 40 12.340 33.770 12.335 25.571 34.300 42.654 241.522 0.097 0.097 39  
 60 12.260 33.808 12.252 25.616 34.351 42.705 237.724 0.145 0.145 59  
 80 11.809 33.821 11.799 25.711 34.464 42.834 229.440 0.192 0.192 79  
 100 10.858 33.712 10.846 25.800 34.594 43.002 220.953 0.237 0.237 99  
 120 9.926 33.955 9.909 26.152 34.981 43.423 198.324 0.339 0.339 119  
 140 9.195 33.982 9.171 26.294 35.154 43.625 175.852 0.430 0.430 139  
 160 8.870 33.993 8.843 26.347 35.222 43.707 171.687 0.527 0.527 159  
 180 8.569 34.044 8.538 26.442 35.330 43.826 163.430 0.621 0.621 179  
 200 7.914 34.020 7.779 26.537 35.459 43.989 154.844 0.681 0.681 199  
 220 7.079 33.993 7.041 26.620 35.577 44.138 147.192 0.755 0.755 219  
 240 6.207 33.968 6.168 26.716 35.715 44.315 139.709 0.827 0.827 239  
 260 5.561 33.959 5.519 26.797 35.828 44.458 130.300 0.895 0.895 259  
 280 4.733 34.020 4.686 26.934 36.005 44.673 121.513 1.018 1.018 279  
 300 4.206 34.097 4.154 27.052 36.149 44.842 109.566 1.130 1.130 299  
 320 3.930 34.176 3.772 27.154 36.269 44.979 97.234 1.232 1.232 319  
 340 3.481 34.254 3.418 27.251 36.384 45.110 88.269 1.325 1.325 339  
 360 3.265 34.313 3.195 27.319 36.463 45.199 82.174 1.410 1.410 359  
 380 3.155 34.362 2.979 27.379 36.532 45.278 76.847 1.490 1.490 379  
 400 2.918 34.399 2.816 27.420 36.582 45.334 73.187 1.565 1.565 399  
 420 2.779 34.434 2.697 27.461 36.630 45.389 69.625 1.636 1.636 419  
 440 2.624 34.470 2.529 27.504 36.681 45.448 65.749 1.704 1.704 439  
 460 2.511 34.498 2.411 27.515 36.719 45.492 62.939 1.768 1.768 459  
 480 2.490 34.505 2.375 27.545 36.729 45.504 62.176 1.785 1.785 479

NISKIN BOTTLE DATA  
 DEPTH TEMP SALINITY DIS D2 D2 SAT SIO3 PO4 NO3 NO2 TRIT POT TEMP SIGMA 0 SIGMA 2 SIGMA 4 PRESS  
 M DEG C DB DEG C ML L A UM/L UM/L UM/L UM/L TUSIN DEG C M M M M M M M M M M  
 0 12.744 33.767 5.11 105.1 1.7 0.39 1.2 0.03 12.744 25.489 34.205 42.541 3  
 20 12.294 33.762 5.13 104.4 1.9 0.37 1.5 0.04 12.277 25.575 34.310 42.663 53  
 40 12.102 33.697 5.11 100.6 1.5 0.59 3.9 0.28 10.688 25.809 34.609 43.024 100  
 60 11.104 33.945 5.08 95.4 6.9 0.67 7.0 0.12 10.688 25.932 34.710 43.142 134  
 80 9.996 34.116 5.04 89.5 1.7 0.99 12.7 0.01 9.577 26.254 35.097 43.551 163  
 100 9.160 34.111 5.79 89.4 21.2 1.11 14.9 0.00 9.240 26.305 35.163 43.631 201  
 120 8.883 34.011 5.93 84.8 28.0 1.35 18.9 0.00 8.897 26.366 35.240 43.724 247  
 140 8.555 34.055 4.92 74.9 45.2 1.86 26.3 0.00 8.544 26.450 35.337 43.833 294  
 160 6.951 33.991 3.90 57.2 62.6 2.29 32.1 0.00 6.924 26.637 35.600 44.167 394  
 180 5.712 33.769 3.04 43.1 81.0 2.53 36.7 0.00 5.651 26.780 35.803 44.427 484  
 200 4.847 34.003 2.19 30.4 97.6 2.97 40.4 0.00 4.802 26.907 35.973 44.636 575  
 220 4.121 34.073 1.49 20.5 112.6 3.03 43.0 0.00 4.271 27.021 36.112 44.799 667  
 240 3.971 34.243 0.88 12.0 125.6 3.15 44.6 0.00 3.915 27.113 36.221 44.925 762  
 260 3.601 34.224 0.46 6.2 134.3 3.20 45.4 0.00 3.540 27.215 36.342 45.062 861  
 280 3.359 34.289 0.29 3.9 152.8 1.24 45.8 0.00 3.292 27.290 36.428 45.160 960  
 300 2.866 34.412 0.24 3.2 167.3 45.6 0.00 2.782 27.435 36.599 45.355 1227  
 320 2.482 34.506 0.47 6.2 167.3 45.6 0.00 2.378 27.545 36.729 45.504 1523

# MARATHON 2 STA. 51



ROY THOMAS WASHINGTON MARATHON LEG II STATION 52

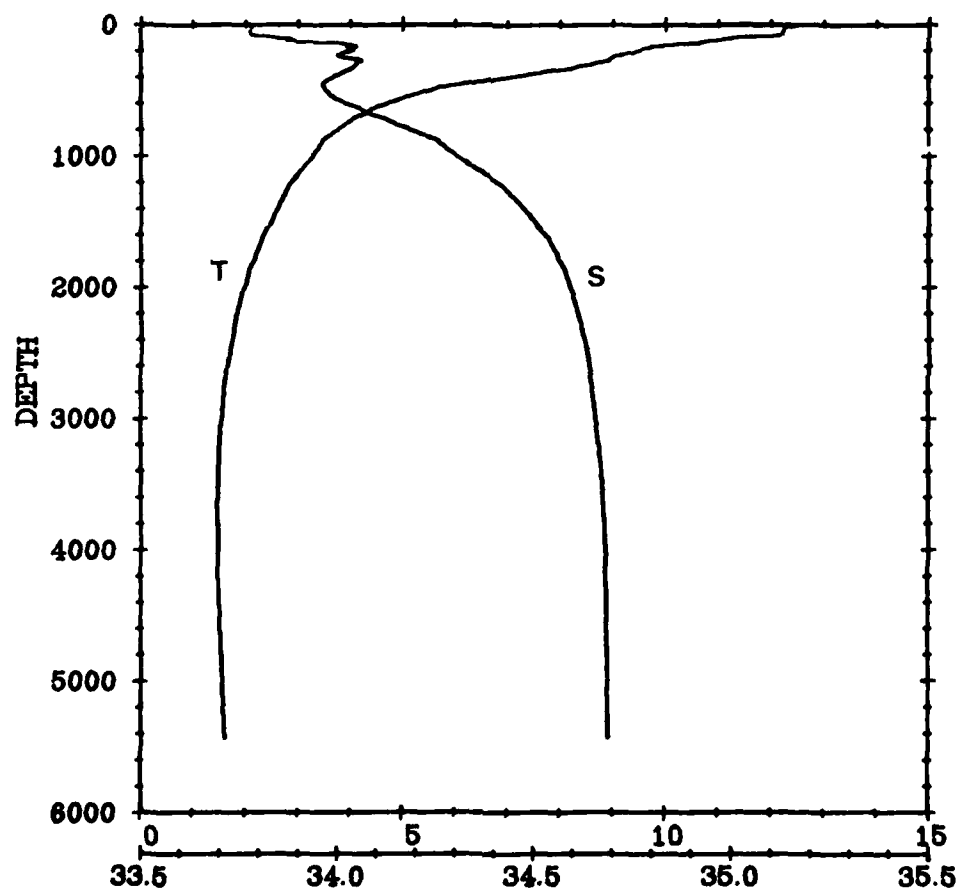
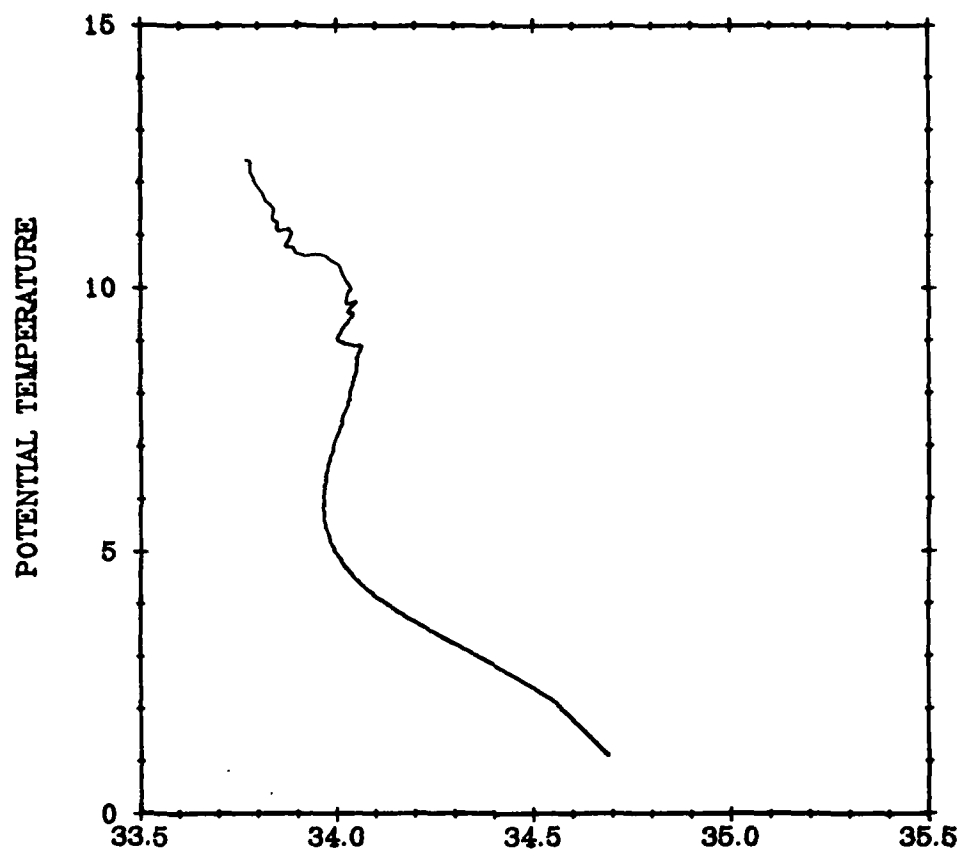
LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
19 14 3N 151 59 2W 5/20/94 1:42 3503 18: 20 12.8 11.7 1022.4

| CTD DATA | PRESS  | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA    | DYNAMIC HT | DEPTH |
|----------|--------|--------|----------|----------|---------|---------|---------|--------|------------|-------|
| DB       | DEG C  |        | DEG C    |          |         |         |         | CLUTCH |            | M     |
| 0        | 12.431 | 33.777 | 12.431   | 25.557   | 34.286  | 42.674  | 241.736 | 0.000  |            | 0     |
| 20       | 12.314 | 33.780 | 12.311   | 25.583   | 34.316  | 42.668  | 239.842 | 0.048  |            | 19    |
| 40       | 12.221 | 33.780 | 12.216   | 25.621   | 34.338  | 42.693  | 238.611 | 0.096  |            | 39    |
| 60       | 12.201 | 33.780 | 12.193   | 25.635   | 34.344  | 42.700  | 238.710 | 0.144  |            | 59    |
| 80       | 12.047 | 33.792 | 12.037   | 25.645   | 34.389  | 42.750  | 235.489 | 0.191  |            | 79    |
| 100      | 11.339 | 33.843 | 11.327   | 25.816   | 34.589  | 42.976  | 219.575 | 0.237  |            | 99    |
| 120      | 10.254 | 34.011 | 10.237   | 26.140   | 34.954  | 43.382  | 189.760 | 0.339  |            | 149   |
| 140      | 9.482  | 34.038 | 9.460    | 26.291   | 35.139  | 43.597  | 176.227 | 0.430  |            | 198   |
| 160      | 8.998  | 34.016 | 8.971    | 26.352   | 35.221  | 43.700  | 171.264 | 0.517  |            | 248   |
| 180      | 8.619  | 34.051 | 8.587    | 26.440   | 35.326  | 43.820  | 163.672 | 0.601  |            | 298   |
| 200      | 8.398  | 34.010 | 8.363    | 26.532   | 35.451  | 43.976  | 155.325 | 0.681  |            | 347   |
| 220      | 8.068  | 33.992 | 8.030    | 26.621   | 35.579  | 44.140  | 147.114 | 0.766  |            | 397   |
| 240      | 6.203  | 33.965 | 6.164    | 26.714   | 35.714  | 44.314  | 138.179 | 0.828  |            | 446   |
| 260      | 5.541  | 33.969 | 5.499    | 26.800   | 35.831  | 44.462  | 130.051 | 0.895  |            | 496   |
| 280      | 4.750  | 34.019 | 4.703    | 26.931   | 36.001  | 44.669  | 117.788 | 1.019  |            | 547   |
| 300      | 4.193  | 34.098 | 4.131    | 27.055   | 36.153  | 44.917  | 105.228 | 1.131  |            | 594   |
| 320      | 3.774  | 34.181 | 3.717    | 27.163   | 36.282  | 45.194  | 95.211  | 1.232  |            | 643   |
| 340      | 3.451  | 34.259 | 3.388    | 27.257   | 36.392  | 45.520  | 87.563  | 1.324  |            | 692   |
| 360      | 3.285  | 34.301 | 3.215    | 27.307   | 36.450  | 45.896  | 81.289  | 1.409  |            | 741   |
| 380      | 3.092  | 34.351 | 3.016    | 27.365   | 36.519  | 46.261  | 75.076  | 1.490  |            | 790   |
| 400      | 2.892  | 34.402 | 2.810    | 27.425   | 36.588  | 46.642  | 72.672  | 1.565  |            | 839   |
| 420      | 2.745  | 34.441 | 2.656    | 27.470   | 36.640  | 46.921  | 69.712  | 1.636  |            | 888   |
| 440      | 2.611  | 34.472 | 2.516    | 27.506   | 36.684  | 47.152  | 66.453  | 1.703  |            | 937   |
| 460      | 2.491  | 34.499 | 2.389    | 27.539   | 36.723  | 47.347  | 62.612  | 1.767  |            | 986   |
| 480      | 2.363  | 34.527 | 2.255    | 27.572   | 36.763  | 47.543  | 59.558  | 1.828  |            | 1035  |
| 500      | 2.265  | 34.548 | 2.150    | 27.598   | 36.794  | 47.749  | 57.354  | 1.887  |            | 1084  |
| 520      | 2.173  | 34.564 | 2.051    | 27.618   | 36.820  | 47.910  | 55.546  | 1.943  |            | 1133  |
| 540      | 2.060  | 34.581 | 1.931    | 27.641   | 36.849  | 48.045  | 53.381  | 1.998  |            | 1182  |
| 560      | 1.997  | 34.590 | 1.861    | 27.654   | 36.865  | 48.165  | 52.371  | 2.051  |            | 1231  |
| 580      | 1.908  | 34.601 | 1.765    | 27.670   | 36.887  | 48.291  | 50.871  | 2.102  |            | 1280  |
| 600      | 1.846  | 34.611 | 1.695    | 27.684   | 36.904  | 48.412  | 49.749  | 2.152  |            | 1329  |
| 620      | 1.790  | 34.619 | 1.631    | 27.695   | 36.918  | 48.530  | 48.924  | 2.202  |            | 1378  |
| 640      | 1.733  | 34.625 | 1.586    | 27.703   | 36.929  | 48.642  | 48.255  | 2.250  |            | 1427  |
| 660      | 1.712  | 34.633 | 1.527    | 27.714   | 36.943  | 48.759  | 47.365  | 2.298  |            | 1476  |
| 680      | 1.669  | 34.639 | 1.485    | 27.722   | 36.953  | 48.772  | 46.812  | 2.345  |            | 1525  |
| 700      | 1.635  | 34.644 | 1.443    | 27.729   | 36.962  | 48.783  | 46.311  | 2.392  |            | 1574  |
| 720      | 1.607  | 34.649 | 1.407    | 27.735   | 36.971  | 48.794  | 45.903  | 2.438  |            | 1623  |
| 740      | 1.584  | 34.652 | 1.375    | 27.740   | 36.977  | 48.802  | 45.676  | 2.484  |            | 1672  |
| 760      | 1.544  | 34.656 | 1.346    | 27.745   | 36.984  | 48.810  | 45.408  | 2.529  |            | 1721  |
| 780      | 1.541  | 34.660 | 1.314    | 27.751   | 36.992  | 48.819  | 45.389  | 2.574  |            | 1770  |
| 800      | 1.521  | 34.663 | 1.284    | 27.755   | 36.997  | 48.826  | 44.874  | 2.619  |            | 1819  |
| 820      | 1.507  | 34.667 | 1.261    | 27.760   | 37.004  | 48.834  | 44.665  | 2.664  |            | 1868  |
| 840      | 1.492  | 34.670 | 1.235    | 27.764   | 37.009  | 48.840  | 44.506  | 2.709  |            | 1917  |
| 860      | 1.484  | 34.672 | 1.218    | 27.767   | 37.013  | 48.845  | 44.515  | 2.753  |            | 1966  |
| 880      | 1.478  | 34.674 | 1.202    | 27.770   | 37.017  | 48.850  | 44.549  | 2.798  |            | 2015  |
| 900      | 1.474  | 34.676 | 1.188    | 27.772   | 37.020  | 48.854  | 44.610  | 2.842  |            | 2064  |
| 920      | 1.472  | 34.678 | 1.175    | 27.775   | 37.023  | 48.858  | 44.699  | 2.887  |            | 2113  |
| 940      | 1.477  | 34.679 | 1.170    | 27.776   | 37.025  | 48.859  | 44.966  | 2.932  |            | 2162  |
| 960      | 1.478  | 34.681 | 1.160    | 27.778   | 37.027  | 48.863  | 45.099  | 2.977  |            | 2211  |
| 980      | 1.479  | 34.682 | 1.150    | 27.780   | 37.030  | 48.865  | 45.302  | 3.022  |            | 2260  |
| 1000     | 1.485  | 34.683 | 1.144    | 27.781   | 37.031  | 48.867  | 45.584  | 3.068  |            | 2309  |
| 1020     | 1.492  | 34.683 | 1.140    | 27.781   | 37.031  | 48.868  | 45.954  | 3.113  |            | 2358  |
| 1040     | 1.500  | 34.684 | 1.136    | 27.782   | 37.033  | 48.869  | 46.271  | 3.159  |            | 2407  |
| 1060     | 1.508  | 34.684 | 1.133    | 27.782   | 37.033  | 48.870  | 46.659  | 3.206  |            | 2456  |
| 1080     | 1.517  | 34.685 | 1.130    | 27.784   | 37.034  | 48.871  | 46.995  | 3.253  |            | 2505  |
| 1100     | 1.525  | 34.685 | 1.126    | 27.784   | 37.035  | 48.872  | 47.386  | 3.300  |            | 2554  |
| 1120     | 1.534  | 34.686 | 1.123    | 27.785   | 37.036  | 48.873  | 47.726  | 3.347  |            | 2603  |
| 1140     | 1.543  | 34.686 | 1.119    | 27.785   | 37.036  | 48.874  | 48.116  | 3.395  |            | 2652  |
| 1160     | 1.554  | 34.686 | 1.118    | 27.785   | 37.037  | 48.874  | 48.584  | 3.444  |            | 2701  |
| 1180     | 1.563  | 34.687 | 1.114    | 27.786   | 37.038  | 48.875  | 48.929  | 3.493  |            | 2750  |
| 1200     | 1.574  | 34.687 | 1.113    | 27.786   | 37.038  | 48.875  | 49.180  | 3.542  |            | 2799  |
| 1220     | 1.585  | 34.687 | 1.111    | 27.786   | 37.038  | 48.876  | 49.834  | 3.591  |            | 2848  |
| 1240     | 1.596  | 34.687 | 1.109    | 27.787   | 37.038  | 48.876  | 50.289  | 3.641  |            | 2897  |
| 1260     | 1.608  | 34.688 | 1.107    | 27.787   | 37.039  | 48.877  | 50.696  | 3.692  |            | 2946  |
| 1280     | 1.613  | 34.687 | 1.108    | 27.787   | 37.039  | 48.876  | 50.944  | 3.709  |            | 2995  |

NISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TU/L   | DEG C    |         |         |         | DB    |
| 1     | 12.347 | 33.769   | 5.34   | 104.8  | 3.2   | 0.35 | 1.4  | 0.05 | 12.347 | 25.567   | 34.299  | 42.650  |         | 1     |
| 55    | 12.105 | 33.773   | 6.28   | 103.2  | 3.2   | 0.37 | 1.7  | 0.08 | 12.098 | 25.618   | 34.360  | 42.719  |         | 55    |
| 106   | 10.651 | 33.954   | 6.01   | 95.8   | 5.5   | 0.66 | 7.0  | 0.02 | 10.619 | 25.948   | 34.748  | 43.162  |         | 106   |
| 158   | 9.712  | 34.061   | 5.75   | 89.9   | 14.8  | 0.92 | 12.2 | 0.01 | 9.694  | 26.270   | 35.107  | 43.556  |         | 158   |
| 307   | 8.148  | 34.040   | 4.68   | 70.6   | 31.6  | 1.47 | 20.8 | 0.01 | 8.117  | 26.503   | 35.409  | 43.924  |         | 309   |
| 406   | 6.487  | 33.979   | 3.57   | 51.8   | 50.5  | 2.00 | 28.3 | 0.00 | 6.450  | 26.687   | 35.672  | 44.260  |         | 408   |
| 507   | 5.373  | 33.980   | 2.66   | 37.6   | 69.5  | 2.42 | 34.2 | 0.00 | 5.331  | 26.828   | 35.867  | 44.506  |         | 510   |
| 606   | 4.565  | 34.043   | 1.68   | 23.3   | 90.0  | 2.77 | 35.3 | 0.00 | 4.518  | 26.970   | 36.049  | 44.725  |         | 610   |
| 705   | 4.042  | 34.129   | 0.96   | 13.1   | 107.1 | 2.99 | 42.5 | 0.00 | 3.990  | 27.094   | 36.198  | 44.898  |         | 710   |
| 805   | 3.683  | 34.205   | 0.55   | 7.5    | 120.1 | 3.12 | 44.2 | 0.00 | 3.625  | 27.191   | 36.314  | 45.031  |         | 811   |
| 907   | 3.396  | 34.277   | 0.33   | 4.4    | 132.9 | 3.14 | 45.1 | 0.00 | 3.332  | 27.277   | 36.414  | 45.144  |         | 914   |
| 1011  | 3.218  | 34.322   | 0.25   | 3.4    | 138.8 | 3.19 | 45.5 | 0.00 | 3.149  | 27.330   | 36.475  | 45.215  |         | 1009  |
| 1244  | 2.799  | 34.431   | 0.26   | 3.5    | 154.4 | 3.22 | 45.9 | 0.00 | 2.713  | 27.457   | 36.624  | 45.382  |         | 1255  |
| 1510  | 2.474  | 34.507   | 0.47   | 6.2    | 167.1 | 3.17 | 45.5 | 0.00 | 2.371  | 27.546   | 36.731  | 45.526  |         | 1515  |
| 1749  | 2.198  | 34.565   | 0.98   | 12.8   | 172.8 | 3.09 | 44.1 | 0.00 | 2.068  | 27.618   | 36.819  | 45.607  |         | 1768  |
| 1996  | 1.960  | 34.601   | 1.36   | 17.7   | 180.2 | 2.99 | 41.2 | 0.00 | 1.823  | 27.666   | 36.879  | 45.681  |         | 2019  |
| 2497  | 1.693  | 34.638   | 2.07   | 26.7   | 179.1 | 2.85 | 38.3 | 0.00 | 1.516  | 27.719   | 36.948  | 45.765  |         | 2529  |
| 3495  | 1.452  | 34.676   | 3.12   | 40.0   | 170.9 | 2.63 | 38.3 | 0.00 | 1.211  | 27.771   | 37.017  | 45.849  |         | 3548  |
| 3945  | 1.478  | 34.683   | 3.29   | 42.1   | 171.9 | 2.59 | 37.9 | 0.00 | 1.153  | 27.780   | 37.030  | 45.865  |         | 4060  |
| 4487  | 1.515  | 34.686   | 3.36   | 42.9   | 174.1 | 2.57 | 37.5 | 0.00 | 1.132  | 27.784   | 37.034  | 45.871  |         | 4566  |
| 4969  | 1.560  | 34.687   | 3.43   | 43.8   | 168.9 |      | 37.2 | 0.00 | 1.116  | 27.786   | 37.037  | 45.875  |         | 5061  |
| 5425  | 1.613  | 34.688   | 3.51   | 44.8   | 166.0 | 2.52 | 37.1 | 0.00 | 1.108  | 27.787   | 37.039  | 45.877  |         | 5533  |

# MARATHON 2 STA. 52



R/V THOMAS WASHINGTON MARATHON LEG II STATION 13

LATITUDE LONGITUDE NO BY YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
13 11 0N 152 0 4W 5-20 84 1724 5107 240 22 17.7 17.7 1010.2

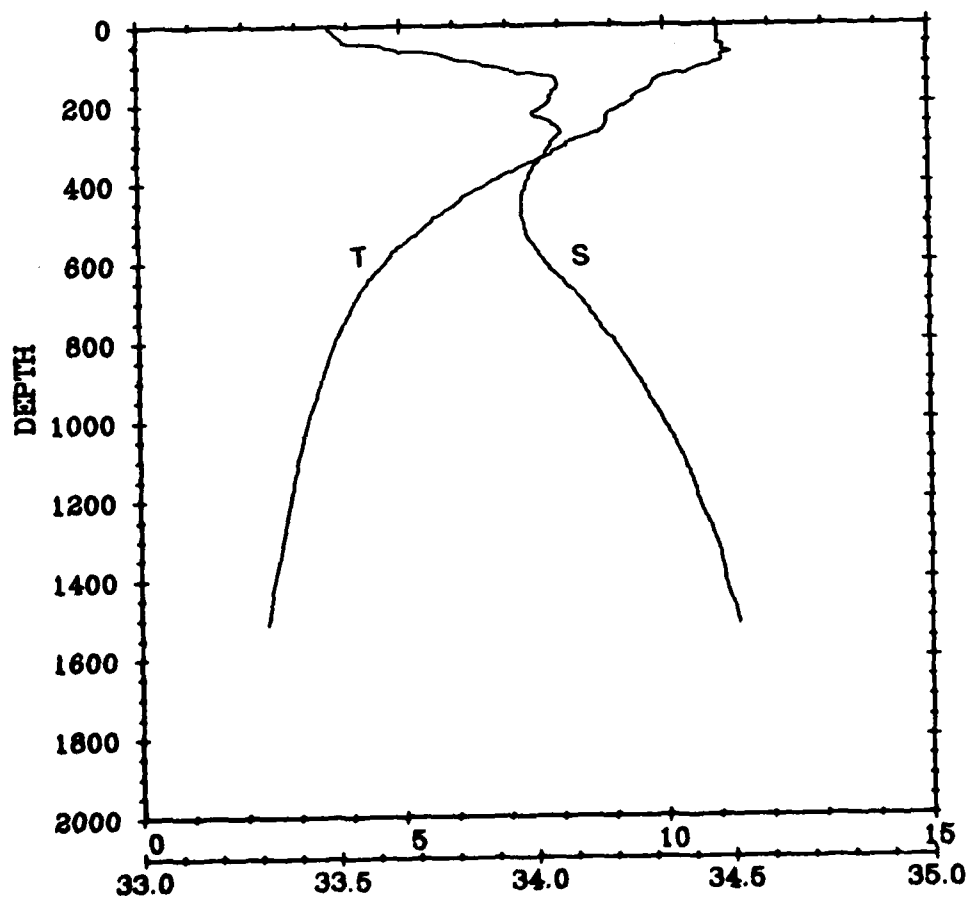
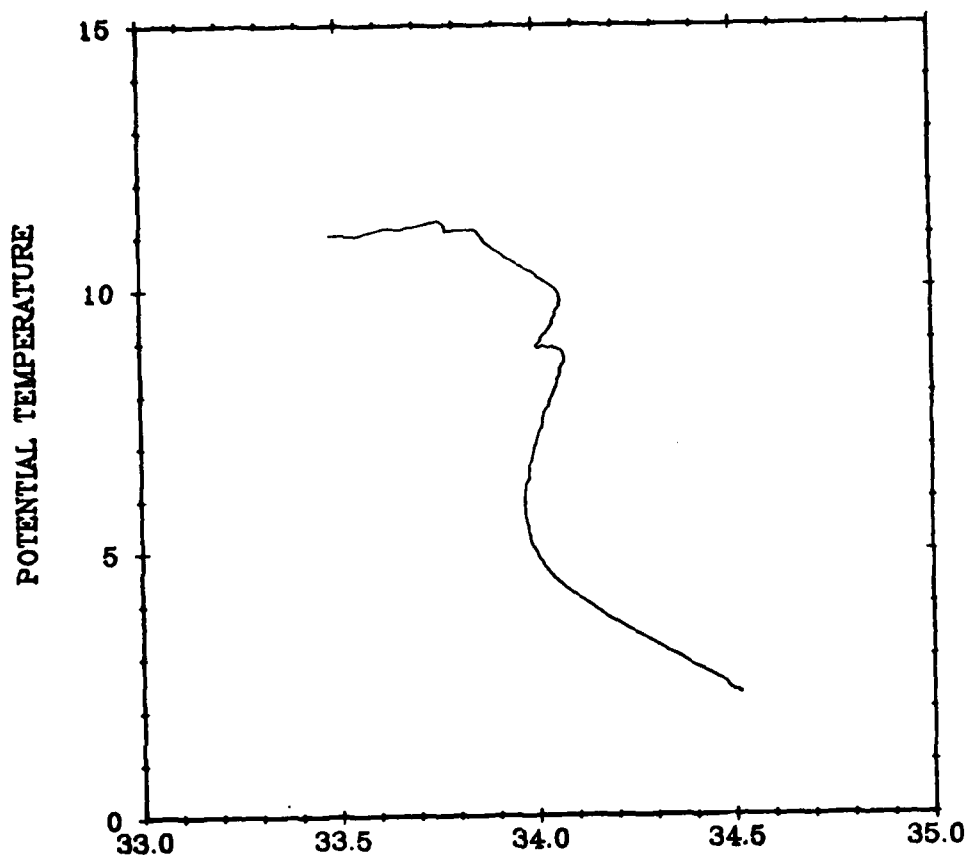
WTD DATA

| PRESS | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH |
|-------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C  |          | DEG C    |         |         |         | CG/TON  |            | M     |
| 1     | 11.145 | 33.494   | 11.135   | 27.589  | 34.178  | 42.792  | 238.713 | 0.000      | 0     |
| 20    | 11.135 | 33.497   | 11.133   | 27.600  | 34.189  | 42.792  | 238.173 | 0.049      | 19    |
| 40    | 11.143 | 33.531   | 11.138   | 27.625  | 34.414  | 42.817  | 236.218 | 0.093      | 39    |
| 60    | 11.161 | 33.650   | 11.154   | 27.697  | 34.479  | 42.876  | 229.870 | 0.144      | 59    |
| 80    | 11.192 | 33.792   | 11.142   | 27.702  | 34.582  | 42.978  | 220.194 | 0.187      | 79    |
| 100   | 10.929 | 33.971   | 10.917   | 27.912  | 34.777  | 43.103  | 210.418 | 0.237      | 99    |
| 120   | 9.827  | 34.263   | 9.793    | 28.257  | 35.030  | 43.536  | 178.499 | 0.327      | 119   |
| 140   | 9.102  | 34.537   | 9.290    | 28.319  | 35.175  | 43.641  | 173.456 | 0.415      | 139   |
| 160   | 8.989  | 34.746   | 8.960    | 28.394  | 35.257  | 43.751  | 167.255 | 0.500      | 159   |
| 180   | 8.183  | 34.748   | 8.149    | 28.504  | 35.419  | 43.922  | 157.107 | 0.581      | 179   |
| 200   | 7.483  | 34.714   | 7.446    | 28.590  | 35.518  | 44.051  | 150.501 | 0.658      | 199   |
| 220   | 6.683  | 33.992   | 6.653    | 28.664  | 35.639  | 44.218  | 142.688 | 0.732      | 219   |
| 240   | 5.759  | 33.970   | 5.720    | 28.726  | 35.742  | 44.349  | 135.941 | 0.801      | 239   |
| 260   | 5.146  | 33.916   | 5.114    | 28.814  | 35.816  | 44.456  | 129.593 | 0.868      | 259   |
| 280   | 4.474  | 34.226   | 4.640    | 28.944  | 36.017  | 44.637  | 126.812 | 0.991      | 279   |
| 300   | 4.103  | 34.221   | 4.283    | 27.991  | 36.143  | 44.691  | 123.626 | 1.111      | 299   |
| 320   | 3.264  | 34.298   | 3.669    | 27.192  | 36.302  | 45.017  | 94.423  | 1.200      | 319   |
| 340   | 2.459  | 34.252   | 3.196    | 27.259  | 36.393  | 45.120  | 87.410  | 1.291      | 339   |
| 360   | 1.210  | 34.321   | 3.141    | 27.310  | 36.477  | 45.213  | 80.367  | 1.375      | 359   |
| 380   | 1.004  | 34.374   | 2.913    | 27.392  | 36.548  | 45.297  | 75.433  | 1.453      | 379   |
| 400   | 2.874  | 34.411   | 2.792    | 27.414  | 36.597  | 45.352  | 71.404  | 1.527      | 399   |
| 420   | 2.117  | 34.480   | 2.629    | 27.479  | 36.651  | 45.417  | 67.731  | 1.597      | 419   |
| 440   | 2.164  | 34.480   | 2.469    | 27.517  | 36.697  | 45.467  | 64.727  | 1.663      | 439   |
| 460   | 2.442  | 34.529   | 2.341    | 27.551  | 36.737  | 45.513  | 61.312  | 1.725      | 459   |
| 480   | 2.402  | 34.516   | 2.299    | 27.560  | 36.749  | 45.527  | 57.496  | 1.745      | 479   |

NISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  | DEG C    |         |         |         | DB    |
| 1     | 11.393 | 33.431   | 6.59   | 106.4  | 3.6   | 0.52 | 4.0  | 0.07 | 4.16   | 11.893   | 25.575  | 34.377  | 42.781  | 1     |
| 43    | 10.848 | 33.466   | 6.56   | 104.8  | 3.2   | 0.53 | 4.0  | 0.08 | 10.843 | 25.609   | 34.406  | 42.818  | 43      |       |
| 102   | 10.954 | 33.879   | 5.90   | 94.5   | 7.6   | 0.62 | 7.3  | 0.02 | 10.842 | 25.930   | 34.722  | 43.128  | 112     |       |
| 136   | 11.181 | 34.040   | 5.70   | 89.8   | 14.2  | 0.85 | 11.5 | 0.02 | 4.14   | 10.767   | 26.191  | 35.013  | 43.447  | 136   |
| 169   | 9.700  | 34.267   | 5.73   | 89.5   | 16.8  | 1.94 | 12.4 | 0.01 |        | 9.681    | 26.277  | 35.115  | 43.564  | 170   |
| 201   | 8.897  | 34.707   | 5.55   | 85.1   | 21.7  | 1.13 | 15.1 | 0.00 |        | 8.870    | 26.385  | 35.258  | 43.741  | 202   |
| 301   | 8.127  | 34.048   | 4.67   | 70.4   | 33.1  | 1.48 | 21.2 | 0.00 |        | 8.096    | 26.512  | 35.420  | 43.935  | 303   |
| 402   | 6.239  | 33.971   | 3.53   | 50.9   | 55.6  | 2.09 | 29.6 | 0.00 |        | 6.202    | 26.714  | 35.711  | 44.310  | 404   |
| 501   | 3.217  | 33.984   | 2.60   | 36.6   | 74.7  | 2.50 | 35.1 | 0.00 | 2.76   | 3.176    | 26.949  | 35.896  | 44.542  | 504   |
| 599   | 4.523  | 34.747   | 1.71   | 23.7   | 91.0  | 2.79 | 39.6 | 0.00 | 1.41   | 4.477    | 26.978  | 36.069  | 44.737  | 602   |
| 698   | 4.161  | 34.129   | 1.03   | 14.1   | 109.0 | 3.10 | 42.5 | 0.00 | 0.56   | 4.009    | 27.092  | 36.196  | 44.895  | 701   |
| 797   | 3.709  | 34.201   | 0.60   | 8.1    | 122.6 | 3.12 | 44.5 | 0.00 | 0.10   | 3.651    | 27.186  | 36.307  | 45.022  | 803   |
| 890   | 3.462  | 34.262   | 0.38   | 5.1    | 133.0 | 3.19 | 45.2 | 0.00 | 0.11   | 3.399    | 27.259  | 36.392  | 45.119  | 897   |
| 986   | 3.221  | 34.318   | 0.36   | 4.8    | 143.4 | 3.20 | 45.6 | 0.00 | -0.13  | 3.152    | 27.327  | 36.472  | 45.211  | 993   |
| 1226  | 2.913  | 34.426   | 0.28   | 3.7    | 150.2 | 3.24 | 46.2 | 0.00 |        | 2.729    | 27.451  | 36.618  | 45.375  | 1217  |
| 1516  | 2.406  | 34.517   | 0.50   | 6.6    | 172.0 |      | 45.6 | 0.00 |        | 2.303    | 27.560  | 36.749  | 45.527  | 1511  |

# MARATHON 2 STA. 53



R/V THOMAS WASHINGTON MARATHON LEG II STATION 14

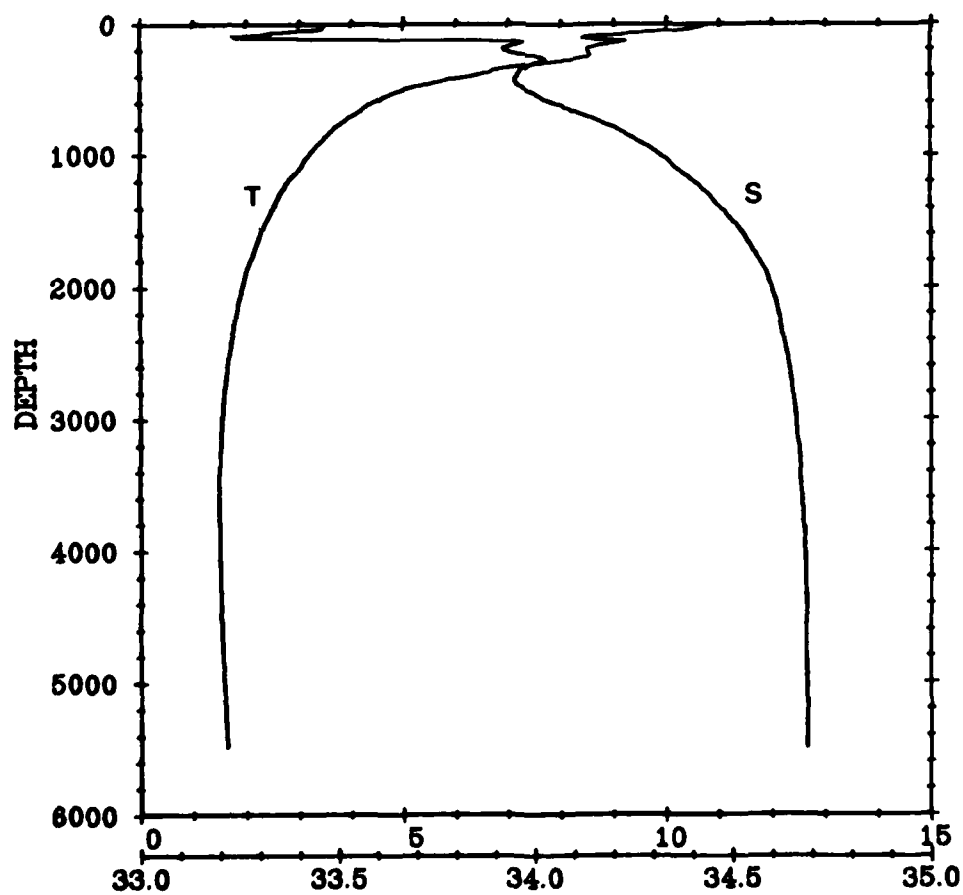
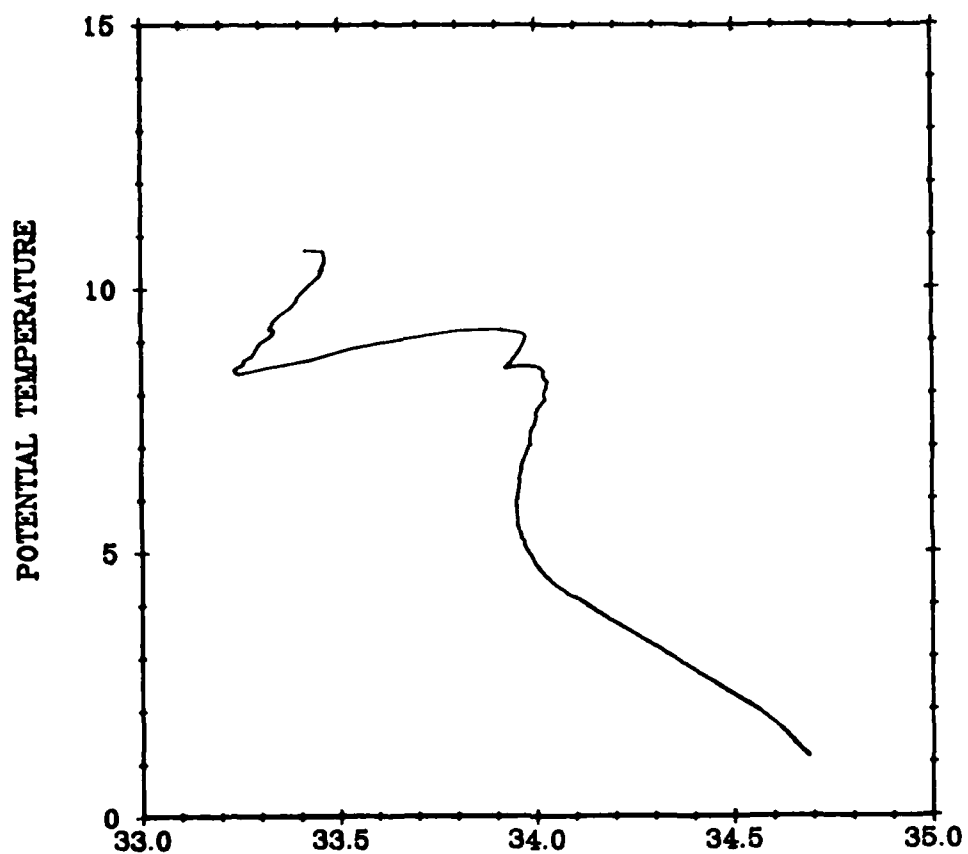
LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
19 52 30N 151 59 30W 5 21 84 4:18 5626 272 18 10.2 11.1 1011.2

| CTD DATA | PRESS    | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA    | DYNAMIC HT | DEPTH |
|----------|----------|--------|----------|----------|---------|---------|---------|--------|------------|-------|
| DB DEG C | DB DEG C | PSU    | DEG C    | DB DEG C | KG/M3   | KG/M3   | KG/M3   | CM/TON | M          | M     |
| 0        | 10.712   | 33.448 | 10.712   | 25.518   | 34.421  | 42.918  | 235.446 | 1.170  | 1.170      | 0     |
| 20       | 10.670   | 33.452 | 10.668   | 25.517   | 34.442  | 42.960  | 234.420 | 1.147  | 1.147      | 14    |
| 40       | 10.428   | 33.456 | 10.423   | 25.577   | 34.432  | 42.920  | 231.101 | 1.074  | 1.074      | 34    |
| 60       | 9.758    | 33.386 | 9.751    | 25.734   | 34.578  | 41.134  | 225.257 | 1.139  | 1.139      | 54    |
| 80       | 9.103    | 33.318 | 9.095    | 25.784   | 34.652  | 41.142  | 221.724 | 1.194  | 1.194      | 74    |
| 100      | 8.516    | 33.253 | 8.506    | 25.847   | 34.729  | 41.237  | 217.911 | 1.228  | 1.228      | 94    |
| 120      | 8.977    | 33.364 | 8.961    | 25.313   | 35.134  | 41.554  | 172.312 | 1.126  | 1.126      | 114   |
| 140      | 8.507    | 33.325 | 8.486    | 25.357   | 35.249  | 41.749  | 169.182 | 1.411  | 1.411      | 134   |
| 160      | 8.506    | 34.007 | 8.480    | 25.422   | 35.117  | 41.512  | 164.372 | 1.435  | 1.435      | 154   |
| 180      | 7.688    | 34.003 | 7.659    | 25.541   | 35.459  | 44.001  | 151.459 | 1.574  | 1.574      | 174   |
| 200      | 6.772    | 33.367 | 6.740    | 25.640   | 35.612  | 44.197  | 144.224 | 1.649  | 1.649      | 194   |
| 220      | 6.334    | 33.357 | 6.269    | 25.694   | 35.687  | 44.385  | 139.447 | 1.722  | 1.722      | 214   |
| 240      | 5.626    | 33.351 | 5.569    | 25.779   | 35.817  | 44.417  | 131.477 | 1.788  | 1.788      | 234   |
| 260      | 5.051    | 33.379 | 5.011    | 25.395   | 35.921  | 44.574  | 123.314 | 1.851  | 1.851      | 254   |
| 280      | 4.442    | 34.044 | 4.397    | 25.984   | 36.077  | 44.751  | 112.313 | 1.969  | 1.969      | 274   |
| 300      | 4.047    | 34.127 | 3.996    | 27.042   | 36.131  | 44.497  | 102.521 | 1.976  | 1.976      | 294   |
| 320      | 3.679    | 34.209 | 3.622    | 27.135   | 36.134  | 45.033  | 91.384  | 1.974  | 1.974      | 314   |
| 340      | 3.435    | 34.265 | 3.372    | 27.264   | 36.194  | 45.127  | 84.919  | 1.954  | 1.954      | 334   |
| 360      | 3.202    | 34.319 | 3.131    | 27.349   | 36.476  | 45.215  | 81.126  | 1.948  | 1.948      | 354   |
| 380      | 3.036    | 34.358 | 2.950    | 27.377   | 36.531  | 45.281  | 76.819  | 1.927  | 1.927      | 374   |
| 400      | 2.859    | 34.405 | 2.728    | 27.415   | 36.602  | 45.350  | 71.520  | 1.901  | 1.901      | 394   |
| 420      | 2.643    | 34.442 | 2.561    | 27.479   | 36.654  | 45.420  | 67.556  | 1.871  | 1.871      | 414   |
| 440      | 2.521    | 34.471 | 2.427    | 27.513   | 36.696  | 45.468  | 64.513  | 1.837  | 1.837      | 434   |
| 460      | 2.397    | 34.499 | 2.296    | 27.547   | 36.735  | 45.514  | 61.533  | 1.790  | 1.790      | 454   |
| 480      | 2.268    | 34.527 | 2.161    | 27.590   | 36.776  | 45.561  | 58.459  | 1.760  | 1.760      | 474   |
| 500      | 2.192    | 34.547 | 2.068    | 27.603   | 36.804  | 45.594  | 56.456  | 1.817  | 1.817      | 494   |
| 520      | 2.101    | 34.565 | 1.980    | 27.625   | 36.830  | 45.624  | 54.520  | 1.873  | 1.873      | 514   |
| 540      | 1.995    | 34.585 | 1.858    | 27.650   | 36.861  | 45.660  | 52.323  | 1.926  | 1.926      | 534   |
| 560      | 1.911    | 34.596 | 1.736    | 27.664   | 36.879  | 45.682  | 51.113  | 1.978  | 1.978      | 554   |
| 580      | 1.874    | 34.607 | 1.731    | 27.678   | 36.896  | 45.702  | 50.017  | 2.029  | 2.029      | 574   |
| 600      | 1.824    | 34.616 | 1.673    | 27.698   | 36.910  | 45.713  | 49.184  | 2.078  | 2.078      | 594   |
| 620      | 1.776    | 34.622 | 1.618    | 27.698   | 36.923  | 45.735  | 48.429  | 2.127  | 2.127      | 614   |
| 640      | 1.734    | 34.628 | 1.568    | 27.707   | 36.934  | 45.748  | 47.805  | 2.175  | 2.175      | 634   |
| 660      | 1.690    | 34.635 | 1.516    | 27.716   | 36.946  | 45.753  | 47.264  | 2.223  | 2.223      | 654   |
| 680      | 1.651    | 34.641 | 1.468    | 27.724   | 36.957  | 45.775  | 46.445  | 2.269  | 2.269      | 674   |
| 700      | 1.621    | 34.645 | 1.430    | 27.730   | 36.965  | 45.786  | 46.072  | 2.316  | 2.316      | 694   |
| 720      | 1.590    | 34.650 | 1.390    | 27.737   | 36.974  | 45.797  | 45.602  | 2.362  | 2.362      | 714   |
| 740      | 1.565    | 34.655 | 1.356    | 27.744   | 36.982  | 45.807  | 45.200  | 2.407  | 2.407      | 734   |
| 760      | 1.544    | 34.658 | 1.326    | 27.748   | 36.988  | 45.815  | 44.937  | 2.452  | 2.452      | 754   |
| 780      | 1.531    | 34.661 | 1.304    | 27.752   | 36.994  | 45.821  | 44.876  | 2.497  | 2.497      | 774   |
| 800      | 1.518    | 34.664 | 1.281    | 27.756   | 36.997  | 45.828  | 44.759  | 2.542  | 2.542      | 794   |
| 820      | 1.503    | 34.667 | 1.257    | 27.760   | 37.004  | 45.834  | 44.607  | 2.586  | 2.586      | 814   |
| 840      | 1.485    | 34.670 | 1.234    | 27.764   | 37.009  | 45.840  | 44.550  | 2.631  | 2.631      | 834   |
| 860      | 1.469    | 34.672 | 1.223    | 27.767   | 37.012  | 45.844  | 44.589  | 2.676  | 2.676      | 854   |
| 880      | 1.484    | 34.674 | 1.208    | 27.769   | 37.016  | 45.849  | 44.539  | 2.720  | 2.720      | 874   |
| 900      | 1.482    | 34.676 | 1.196    | 27.772   | 37.019  | 45.852  | 44.712  | 2.765  | 2.765      | 894   |
| 920      | 1.483    | 34.678 | 1.186    | 27.774   | 37.022  | 45.855  | 44.859  | 2.810  | 2.810      | 914   |
| 940      | 1.435    | 34.679 | 1.177    | 27.775   | 37.024  | 45.858  | 45.091  | 2.855  | 2.855      | 934   |
| 960      | 1.436    | 34.680 | 1.167    | 27.777   | 37.026  | 45.860  | 45.295  | 2.900  | 2.900      | 954   |
| 980      | 1.430    | 34.681 | 1.160    | 27.778   | 37.027  | 45.862  | 45.548  | 2.945  | 2.945      | 974   |
| 1000     | 1.485    | 34.682 | 1.154    | 27.779   | 37.029  | 45.864  | 45.877  | 2.991  | 2.991      | 994   |
| 1020     | 1.503    | 34.683 | 1.151    | 27.780   | 37.030  | 45.866  | 46.134  | 3.037  | 3.037      | 1014  |
| 1040     | 1.510    | 34.684 | 1.146    | 27.781   | 37.031  | 45.867  | 46.437  | 3.083  | 3.083      | 1034  |
| 1060     | 1.518    | 34.684 | 1.142    | 27.782   | 37.032  | 45.868  | 46.827  | 3.130  | 3.130      | 1054  |
| 1080     | 1.525    | 34.684 | 1.138    | 27.782   | 37.032  | 45.869  | 47.201  | 3.177  | 3.177      | 1074  |
| 1100     | 1.535    | 34.685 | 1.135    | 27.783   | 37.034  | 45.870  | 47.558  | 3.224  | 3.224      | 1094  |
| 1120     | 1.545    | 34.685 | 1.133    | 27.783   | 37.034  | 45.870  | 47.987  | 3.272  | 3.272      | 1114  |
| 1140     | 1.556    | 34.685 | 1.132    | 27.783   | 37.034  | 45.871  | 48.435  | 3.320  | 3.320      | 1134  |
| 1160     | 1.565    | 34.686 | 1.128    | 27.784   | 37.035  | 45.872  | 48.779  | 3.369  | 3.369      | 1154  |
| 1180     | 1.575    | 34.686 | 1.126    | 27.785   | 37.036  | 45.872  | 49.213  | 3.418  | 3.418      | 1174  |
| 1200     | 1.585    | 34.686 | 1.123    | 27.785   | 37.036  | 45.873  | 49.649  | 3.467  | 3.467      | 1194  |
| 1220     | 1.596    | 34.686 | 1.121    | 27.785   | 37.036  | 45.873  | 50.114  | 3.517  | 3.517      | 1214  |
| 1240     | 1.609    | 34.686 | 1.121    | 27.785   | 37.036  | 45.873  | 50.539  | 3.568  | 3.568      | 1234  |
| 1260     | 1.621    | 34.687 | 1.120    | 27.786   | 37.037  | 45.874  | 51.008  | 3.618  | 3.618      | 1254  |
| 1280     | 1.633    | 34.687 | 1.119    | 27.786   | 37.037  | 45.875  | 51.479  | 3.668  | 3.668      | 1274  |

NISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C  | PSU      | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN  | DEG C    | KG/M3   | KG/M3   | KG/M3   | DB    |
| 1     | 10.914 | 33.491   | 6.51   | 103.9  | 1.07  | 0.52 | 3.6  | 0.07 | 10.914 | 25.614   | 34.432  | 42.844  | 1       | 1     |
| 55    | 10.685 | 33.338   | 6.52   | 103.8  | 1.07  | 0.52 | 3.6  | 0.07 | 10.678 | 25.694   | 34.497  | 42.914  | 55      | 55    |
| 105   | 9.222  | 33.409   | 6.49   | 99.9   | 1.09  | 0.75 | 6.6  | 0.12 | 9.211  | 25.838   | 34.706  | 43.183  | 105     | 105   |
| 156   | 8.978  | 33.373   | 5.76   | 98.5   | 1.12  | 1.02 | 13.2 | 0.11 | 8.961  | 26.320   | 35.190  | 43.670  | 156     | 156   |
| 200   | 8.522  | 33.312   | 5.94   | 90.3   | 1.15  | 1.10 | 19.1 | 0.11 | 8.501  | 26.360   | 35.251  | 43.750  | 200     | 200   |
| 304   | 7.844  | 34.120   | 4.71   | 70.5   | 12.6  | 1.49 | 21.1 | 0.11 | 7.814  | 26.532   | 35.453  | 44.380  | 304     | 304   |
| 406   | 6.165  | 33.958   | 3.53   | 50.8   | 52.6  | 2.23 | 28.9 | 0.01 | 6.150  | 26.710   | 35.710  | 44.311  | 406     | 406   |
| 505   | 5.154  | 33.373   | 2.58   | 35.3   | 72.5  | 2.43 | 14.5 | 0.03 | 5.111  | 26.849   | 35.898  | 44.547  | 505     | 505   |
| 604   | 4.404  | 34.051   | 1.60   | 22.1   | 94.0  | 2.77 | 39.5 | 0.00 | 4.359  | 26.994   | 36.081  | 44.764  | 604     | 604   |
| 703   | 4.044  | 34.128   | 1.03   | 14.1   | 107.1 | 2.97 | 42.1 | 0.00 | 3.952  | 27.093   | 36.198  | 44.998  | 703     | 703   |
| 805   | 3.651  | 34.217   | 0.59   | 8.0    | 121.9 | 3.06 | 43.9 | 0.00 | 3.593  | 27.234   | 36.329  | 45.146  | 805     | 805   |
| 916   | 3.368  | 34.292   | 0.36   | 4.8    | 132.8 | 3.13 | 44.8 | 0.00 | 3.334  | 27.294   | 36.442  | 45.153  | 916     | 916   |
| 1005  | 3.122  | 34.339   | 0.28   | 3.7    | 141.2 | 3.18 | 45.2 | 0.00 | 3.052  | 27.353   | 36.503  | 45.246  | 1005    | 1005  |
| 1256  | 2.697  | 34.432   | 0.25   | 3.3    | 158.1 | 3.20 | 45.6 | 0.00 | 2.611  | 27.456   | 36.619  | 45.403  | 1256    | 1256  |
| 1506  | 2.379  | 34.506   | 0.41   | 5.4    | 170.0 | 3.16 | 45.5 | 0.00 | 2.277  | 27.553   | 36.743  | 45.721  | 1506    | 1506  |
| 1755  | 2.121  | 34.563   | 0.90   | 11.9   | 177.3 | 3.08 | 44.0 | 0.00 | 2.002  | 27.621   | 36.825  | 45.618  | 1755    | 1755  |
| 2006  | 1.938  | 34.599   | 1.34   | 17.4   | 193.2 | 2.99 | 43.0 | 0.00 | 1.800  | 27.666   | 36.890  | 45.683  | 2006    | 2006  |
| 2505  | 1.494  | 34.639   | 2.07   | 26.7   | 179.9 | 2.86 | 41.1 | 0.00 | 1.506  | 27.720   | 36.950  | 45.768  | 2505    | 2505  |
| 3003  | 1.541  | 34.662   | 2.67   | 34.3   | 174.5 | 2.73 | 39.3 | 0.00 | 1.319  | 27.752   | 36.992  | 45.819  | 3003    | 3003  |
| 3504  | 1.478  | 34.676   | 3.04   | 38.9   | 172.1 | 2.65 | 38.2 | 0.00 | 1.206  | 27.771   | 37.017  | 45.850  | 3504    | 3504  |
| 4002  | 1.488  | 34.683   | 3.22   | 41.2   | 174.8 | 2.60 | 37.9 | 0.00 | 1.162  | 27.780   | 37.028  | 45.863  | 4002    | 4002  |
| 4499  | 1.523  | 34.686   | 3.33   | 42.6   | 172.8 | 2.58 | 37.6 | 0.00 | 1.138  | 27.794   | 37.034  | 45.870  | 4499    | 4499  |
| 4994  | 1.572  | 34.687   | 3.38   | 43.2   | 167.0 |      | 37.4 | 0.00 | 1.124  | 27.785   | 37.036  | 45.873  | 5088    | 5088  |
| 5492  | 1.634  | 34.688   |        |        | 159.7 | 2.56 | 37.0 | 0.01 | 1.119  | 27.786   | 37.038  | 45.875  | 5602    | 5602  |

# MARATHON 2 STA. 54



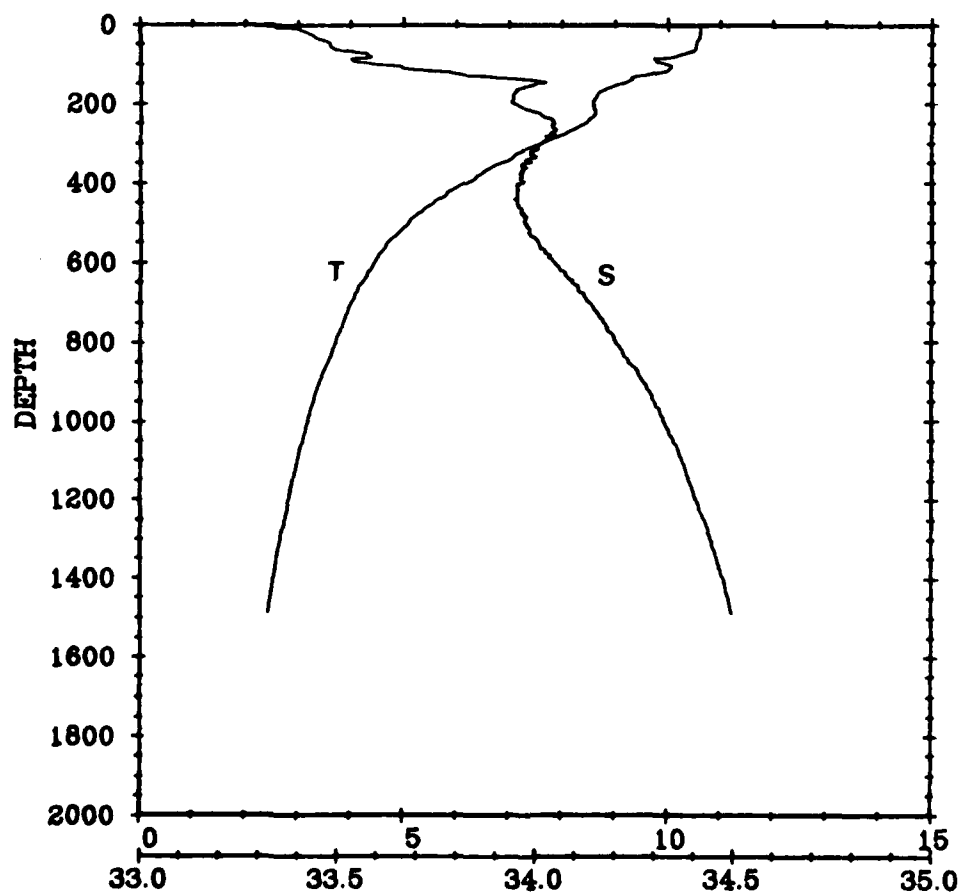
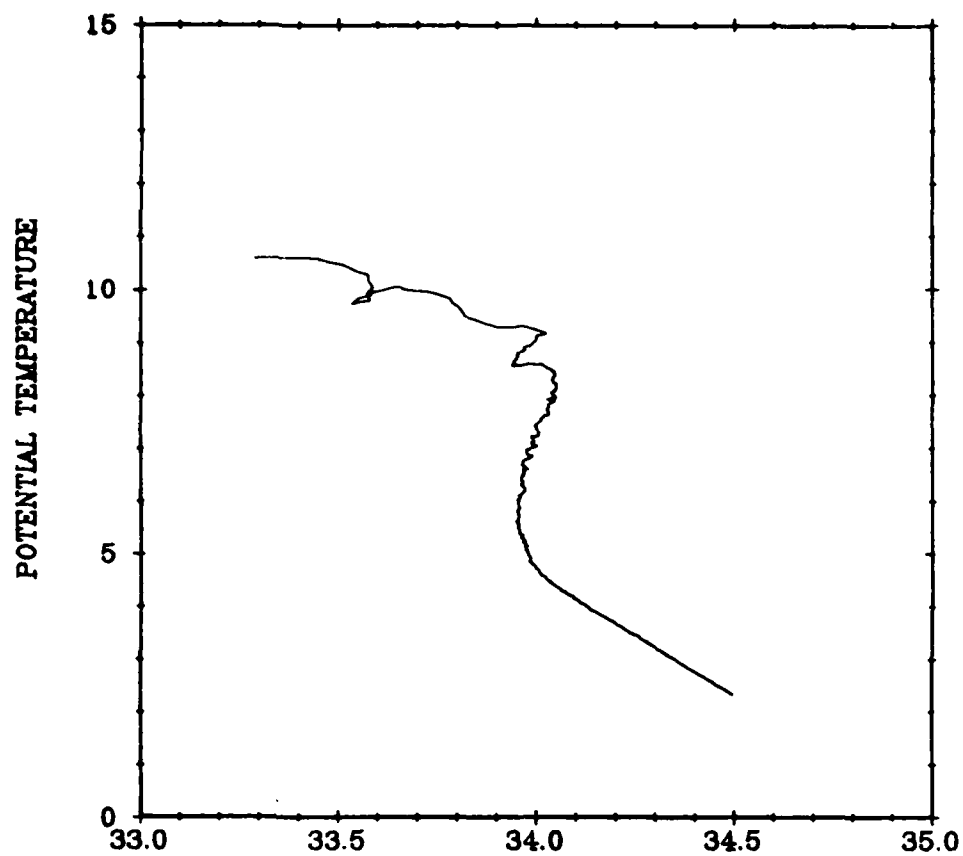
R. V. THOMAS WASHINGTON MARATHON LEG 11 STATION 11

LATITUDE LONGITUDE MO DAY YR START TIME BOTT M WIND SPEED AIR TEMP WET BULB BAR M  
 40 15.1N 152 0 14 5 21 84 111.9 4890 280 10 10 8.9 1011.4

| STD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA T | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |         |            |            |
| 10          | 10.405        | 33.338   | 10.405            | 25.541  | 14.160  | 42.193  | 142.119 | 1.143      | 19         |
| 20          | 10.602        | 33.415   | 10.598            | 25.513  | 14.421  | 44.343  | 235.934 | 1.143      | 19         |
| 30          | 10.556        | 33.460   | 10.551            | 25.656  | 14.465  | 44.889  | 231.482 | 1.143      | 19         |
| 40          | 10.487        | 33.497   | 10.480            | 25.847  | 14.519  | 42.474  | 229.806 | 1.143      | 19         |
| 50          | 10.380        | 33.544   | 10.371            | 25.829  | 14.547  | 41.298  | 218.542 | 1.143      | 19         |
| 60          | 9.934         | 33.593   | 9.923             | 25.871  | 14.705  | 41.101  | 214.197 | 1.143      | 19         |
| 70          | 9.105         | 33.591   | 9.089             | 26.324  | 15.109  | 41.503  | 172.865 | 1.143      | 149        |
| 80          | 8.581         | 33.547   | 8.559             | 26.363  | 15.251  | 41.748  | 169.140 | 1.143      | 149        |
| 90          | 8.417         | 34.141   | 8.391             | 26.452  | 15.357  | 41.859  | 160.500 | 1.143      | 248        |
| 100         | 7.619         | 34.119   | 7.609             | 26.541  | 15.491  | 44.127  | 150.598 | 1.143      | 297        |
| 110         | 6.891         | 33.978   | 6.859             | 26.633  | 15.549  | 44.168  | 147.112 | 1.143      | 347        |
| 120         | 6.229         | 33.962   | 6.194             | 26.719  | 15.776  | 44.305  | 139.110 | 1.143      | 397        |
| 130         | 5.601         | 33.952   | 5.564             | 26.778  | 15.977  | 44.405  | 131.482 | 1.143      | 446        |
| 140         | 5.116         | 33.973   | 5.076             | 26.852  | 16.105  | 44.505  | 124.578 | 1.143      | 496        |
| 150         | 4.455         | 34.040   | 4.425             | 26.979  | 16.263  | 44.744  | 112.944 | 1.143      | 595        |
| 160         | 4.317         | 34.127   | 4.286             | 27.093  | 16.399  | 44.849  | 104.115 | 1.143      | 694        |
| 170         | 3.714         | 34.198   | 3.677             | 27.181  | 16.502  | 45.110  | 94.107  | 1.143      | 793        |
| 180         | 3.437         | 34.265   | 3.374             | 27.264  | 16.599  | 45.127  | 84.456  | 1.143      | 892        |
| 190         | 3.195         | 34.319   | 3.126             | 27.330  | 16.677  | 45.217  | 75.748  | 1.143      | 991        |
| 200         | 2.944         | 34.364   | 2.919             | 27.395  | 16.742  | 45.292  | 65.118  | 1.143      | 1090       |
| 210         | 2.834         | 34.401   | 2.752             | 27.429  | 16.795  | 45.352  | 52.118  | 1.143      | 1189       |
| 220         | 2.676         | 34.439   | 2.598             | 27.474  | 16.848  | 45.403  | 48.281  | 1.143      | 1288       |
| 230         | 2.348         | 34.469   | 2.454             | 27.509  | 16.890  | 45.461  | 64.457  | 1.143      | 1386       |
| 240         | 2.437         | 34.494   | 2.336             | 27.539  | 16.726  | 45.503  | 62.159  | 1.143      | 1484       |
| 250         | 2.428         | 34.496   | 2.327             | 27.542  | 16.729  | 45.506  | 62.114  | 1.143      | 1486       |

| NEUTRIN BOTTLE DATA |               | DIS O2<br>ML/L | O2 SAT | SIG3  | PO4   | NO3  | NO2  | TRIT<br>TURBID | POT TEMP<br>DEG C | SIGMA T | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|---------------------|---------------|----------------|--------|-------|-------|------|------|----------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M          | TEMP<br>DEG C |                |        |       |       |      |      |                |                   |         |         |         |             |
| 1                   | 10.494        | 33.432         | 5.51   | 104.7 | 3.7   | 0.54 | 4.1  | 0.08           | 10.494            | 25.544  | 14.456  | 42.891  | 1           |
| 2                   | 10.468        | 33.443         | 5.58   | 104.2 | 3.4   | 0.59 | 4.1  | 0.08           | 10.462            | 25.458  | 14.471  | 42.892  | 12          |
| 3                   | 10.016        | 33.421         | 5.14   | 99.5  | 3.3   | 0.65 | 5.4  | 0.44           | 10.025            | 25.471  | 14.700  | 43.142  | 92          |
| 4                   | 9.702         | 33.454         | 5.39   | 89.9  | 19.7  | 1.05 | 13.0 | 0.01           | 8.685             | 26.349  | 15.231  | 43.723  | 143         |
| 5                   | 9.574         | 33.956         | 5.90   | 89.8  | 19.9  | 1.04 | 13.5 | 0.01           | 8.554             | 26.371  | 15.253  | 43.756  | 175         |
| 6                   | 9.111         | 34.142         | 4.76   | 75.1  | 29.8  | 1.39 | 19.1 | 0.01           | 9.295             | 26.479  | 15.378  | 43.895  | 247         |
| 7                   | 7.482         | 34.116         | 4.45   | 66.1  | 38.3  | 1.67 | 23.1 | 0.01           | 7.453             | 26.573  | 15.510  | 44.053  | 302         |
| 8                   | 5.930         | 33.953         | 3.20   | 45.7  | 58.8  | 2.19 | 30.7 | 0.01           | 5.794             | 26.751  | 15.768  | 44.326  | 400         |
| 9                   | 4.908         | 33.985         | 2.11   | 32.3  | 80.3  | 2.60 | 36.4 | 0.00           | 4.968             | 26.885  | 15.948  | 44.618  | 514         |
| 10                  | 3.740         | 34.195         | 0.80   | 10.9  | 119.5 | 3.07 | 43.5 | 0.00           | 3.684             | 27.179  | 16.297  | 45.011  | 782         |
| 11                  | 3.405         | 34.271         | 0.46   | 6.2   | 131.2 | 3.14 | 44.9 | 0.00           | 3.341             | 27.271  | 16.408  | 45.137  | 909         |
| 12                  | 3.211         | 34.316         | 0.33   | 4.4   | 142.4 | 3.18 | 45.1 | 0.00           | 3.142             | 27.326  | 16.472  | 45.211  | 994         |
| 13                  | 2.873         | 34.393         | 0.28   | 3.7   | 156.0 | 3.21 | 46.0 | 0.00           | 2.792             | 27.419  | 16.583  | 45.338  | 1124        |
| 14                  | 2.453         | 34.490         | 0.16   | 4.7   |       | 0.10 |      | 0.00           | 2.353             | 27.534  | 16.720  | 45.496  | 1480        |

# MARATHON 2 STA. 55

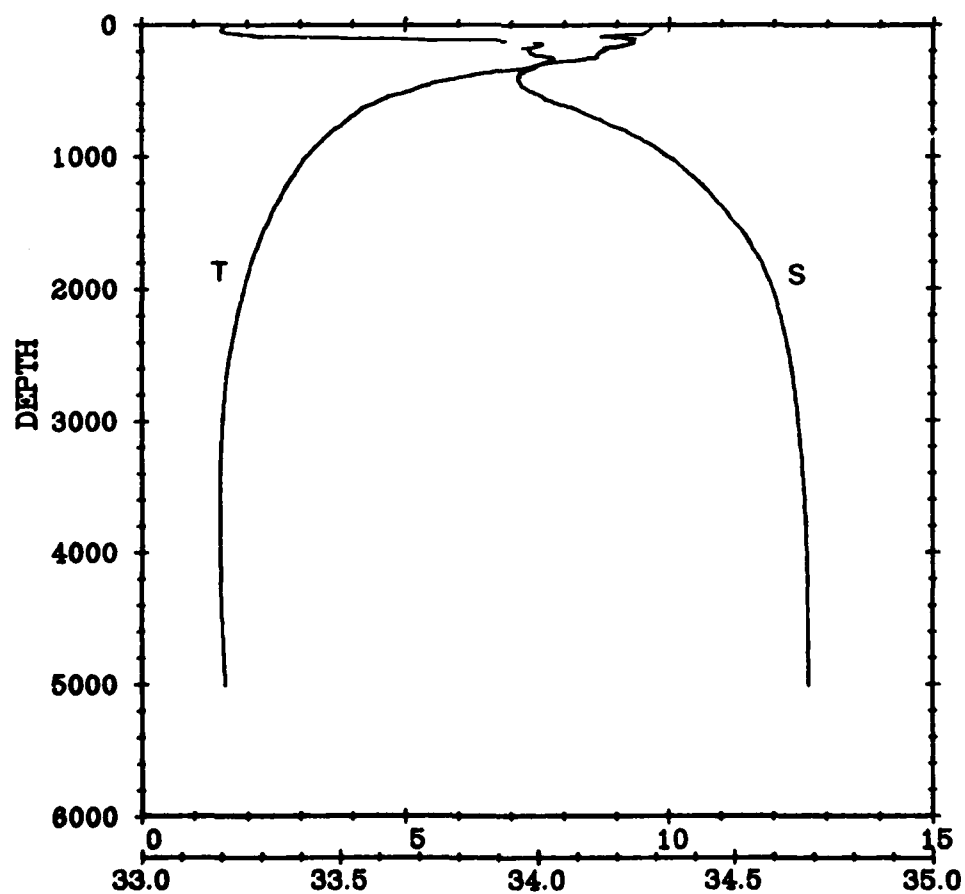
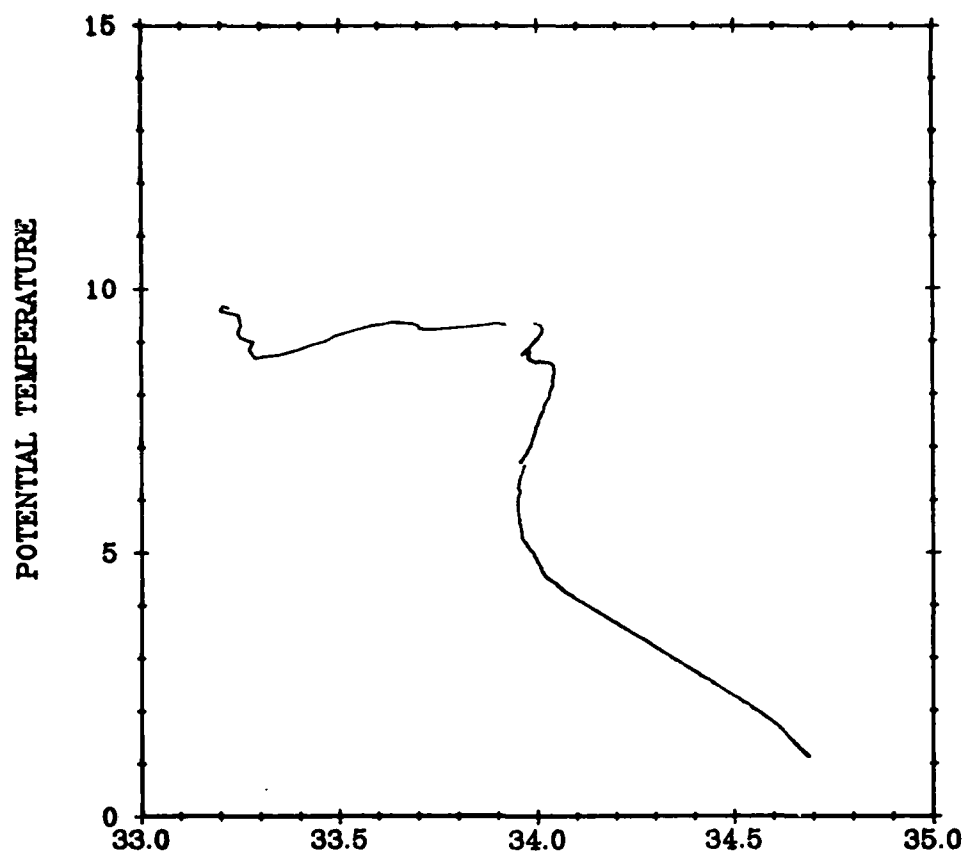


LATITUDE 40 37 4N LONGITUDE 121 59 0W NO. BY YR 1122 84 START TIME 116 BOTTOM 4993 WIND DIR 100 SPEED 1.9 AIR TEMP DEG C 24 NET BULB DEG C 12 BAROM MB 1022.2

| STD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |         |            |            |
| 0           | 9.580         | 33.210   | 9.560             | 25.611  | 34.462  | 42.924  | 206.540 | 1.001      | 0          |
| 20          | 9.564         | 33.217   | 9.552             | 25.628  | 34.459  | 42.927  | 207.295 | 1.047      | 19         |
| 40          | 9.533         | 33.204   | 9.529             | 25.612  | 34.464  | 42.927  | 207.403 | 1.093      | 39         |
| 60          | 9.558         | 33.210   | 9.551             | 25.629  | 34.484  | 42.951  | 206.153 | 1.142      | 59         |
| 80          | 9.555         | 33.261   | 9.546             | 25.734  | 34.656  | 43.088  | 206.423 | 1.188      | 79         |
| 100         | 9.539         | 33.460   | 9.529             | 25.909  | 34.797  | 43.267  | 210.339 | 1.242      | 99         |
| 120         | 9.512         | 34.011   | 9.516             | 26.309  | 35.149  | 43.617  | 173.150 | 1.328      | 119        |
| 140         | 9.442         | 33.979   | 9.421             | 26.363  | 35.244  | 43.751  | 169.110 | 1.414      | 139        |
| 160         | 9.471         | 34.034   | 9.447             | 26.433  | 35.320  | 43.847  | 163.160 | 1.497      | 159        |
| 180         | 9.477         | 34.010   | 9.458             | 26.554  | 35.484  | 44.121  | 152.251 | 1.576      | 179        |
| 200         | 9.489         | 33.971   | 9.466             | 26.628  | 35.594  | 44.164  | 145.491 | 1.657      | 199        |
| 220         | 9.413         | 33.952   | 9.418             | 26.715  | 35.718  | 44.323  | 137.347 | 1.721      | 219        |
| 240         | 9.494         | 33.957   | 9.457             | 26.795  | 35.829  | 44.452  | 129.794 | 1.788      | 239        |
| 260         | 9.415         | 33.958   | 9.436             | 26.854  | 35.955  | 44.555  | 124.426 | 1.851      | 259        |
| 280         | 9.433         | 34.248   | 9.488             | 26.989  | 36.074  | 44.756  | 111.932 | 1.969      | 279        |
| 300         | 9.456         | 34.134   | 9.455             | 27.152  | 36.259  | 44.920  | 101.837 | 2.066      | 299        |
| 320         | 9.466         | 34.210   | 9.469             | 27.197  | 36.321  | 45.038  | 92.853  | 2.153      | 319        |
| 340         | 9.395         | 34.275   | 9.412             | 27.276  | 36.414  | 45.145  | 85.641  | 2.231      | 339        |
| 360         | 9.344         | 34.325   | 9.375             | 27.140  | 36.490  | 45.212  | 79.864  | 2.345      | 359        |
| 380         | 9.245         | 34.371   | 9.270             | 27.195  | 36.555  | 45.176  | 74.955  | 2.423      | 379        |
| 400         | 9.290         | 34.428   | 9.299             | 27.439  | 36.628  | 45.368  | 70.974  | 2.496      | 399        |
| 420         | 9.219         | 34.441   | 9.251             | 27.479  | 36.655  | 45.421  | 67.517  | 2.565      | 419        |
| 440         | 9.237         | 34.471   | 9.203             | 27.515  | 36.699  | 45.472  | 64.212  | 2.631      | 439        |
| 460         | 9.289         | 34.495   | 9.287             | 27.545  | 36.714  | 45.513  | 61.652  | 2.694      | 459        |
| 480         | 9.261         | 34.525   | 9.254             | 27.579  | 36.775  | 45.561  | 58.936  | 2.754      | 479        |
| 500         | 9.279         | 34.544   | 9.265             | 27.601  | 36.902  | 45.592  | 56.642  | 2.811      | 499        |
| 520         | 9.280         | 34.565   | 9.259             | 27.626  | 36.833  | 45.629  | 54.373  | 2.867      | 519        |
| 540         | 9.213         | 34.578   | 9.285             | 27.643  | 36.853  | 45.652  | 53.038  | 2.921      | 539        |
| 560         | 9.240         | 34.592   | 9.205             | 27.660  | 36.875  | 45.677  | 51.734  | 2.973      | 559        |
| 580         | 9.283         | 34.574   | 9.240             | 27.674  | 36.892  | 45.698  | 50.346  | 3.024      | 579        |
| 600         | 9.210         | 34.513   | 9.279             | 27.696  | 36.908  | 45.716  | 49.404  | 3.074      | 599        |
| 620         | 9.275         | 34.622   | 9.217             | 27.698  | 36.923  | 45.735  | 48.417  | 3.123      | 619        |
| 640         | 9.228         | 34.529   | 9.262             | 27.708  | 36.935  | 45.750  | 47.456  | 3.171      | 639        |
| 660         | 9.278         | 34.576   | 9.204             | 27.718  | 36.948  | 45.766  | 46.237  | 3.219      | 659        |
| 680         | 9.279         | 34.542   | 9.256             | 27.726  | 36.975  | 45.779  | 46.202  | 3.264      | 679        |
| 700         | 9.203         | 34.647   | 9.214             | 27.733  | 36.969  | 45.791  | 45.716  | 3.310      | 699        |
| 720         | 9.230         | 34.652   | 9.280             | 27.740  | 36.977  | 45.801  | 45.323  | 3.356      | 719        |
| 740         | 9.259         | 34.675   | 9.250             | 27.744  | 36.993  | 45.808  | 45.118  | 3.401      | 739        |
| 760         | 9.241         | 34.679   | 9.223             | 27.749  | 36.990  | 45.816  | 44.873  | 3.446      | 759        |
| 780         | 9.221         | 34.653   | 9.294             | 27.754  | 36.996  | 45.825  | 44.592  | 3.491      | 779        |
| 800         | 9.208         | 34.665   | 9.272             | 27.758  | 37.001  | 45.830  | 44.545  | 3.535      | 799        |
| 820         | 9.298         | 34.669   | 9.252             | 27.762  | 37.076  | 45.837  | 44.392  | 3.580      | 819        |
| 840         | 9.288         | 34.670   | 9.224             | 27.764  | 37.010  | 45.841  | 44.447  | 3.624      | 839        |
| 860         | 9.280         | 34.674   | 9.214             | 27.769  | 37.015  | 45.848  | 44.313  | 3.669      | 859        |
| 880         | 9.277         | 34.675   | 9.201             | 27.771  | 37.018  | 45.851  | 44.392  | 3.713      | 879        |
| 900         | 9.277         | 34.677   | 9.191             | 27.773  | 37.020  | 45.854  | 44.585  | 3.758      | 899        |
| 920         | 9.278         | 34.679   | 9.181             | 27.775  | 37.023  | 45.857  | 44.721  | 3.802      | 919        |
| 940         | 9.280         | 34.680   | 9.172             | 27.776  | 37.025  | 45.859  | 44.942  | 3.847      | 939        |
| 960         | 9.282         | 34.681   | 9.164             | 27.778  | 37.027  | 45.862  | 45.162  | 3.892      | 959        |
| 980         | 9.287         | 34.682   | 9.157             | 27.779  | 37.029  | 45.864  | 45.430  | 3.937      | 979        |
| 1000        | 9.293         | 34.683   | 9.152             | 27.780  | 37.030  | 45.865  | 45.714  | 3.983      | 999        |
| 1020        | 9.299         | 34.683   | 9.147             | 27.781  | 37.031  | 45.866  | 46.069  | 4.029      | 1019       |
| 1040        | 9.308         | 34.684   | 9.144             | 27.782  | 37.032  | 45.868  | 46.403  | 4.075      | 1039       |
| 1060        | 9.317         | 34.685   | 9.141             | 27.783  | 37.033  | 45.869  | 46.740  | 4.122      | 1059       |
| 1080        | 9.328         | 34.685   | 9.140             | 27.784  | 37.034  | 45.869  | 47.182  | 4.168      | 1079       |
| 1100        | 9.339         | 34.686   | 9.139             | 27.784  | 37.034  | 45.870  | 47.557  | 4.216      | 1099       |
| 1120        | 9.351         | 34.686   | 9.139             | 27.784  | 37.034  | 45.870  | 48.021  | 4.264      | 1119       |
| 1140        | 9.362         | 34.686   | 9.138             | 27.784  | 37.034  | 45.870  | 48.471  | 4.312      | 1139       |
| 1160        | 9.374         | 34.686   | 9.137             | 27.784  | 37.034  | 45.870  | 48.940  | 4.361      | 1159       |
| 1180        | 9.386         | 34.686   | 9.137             | 27.784  | 37.034  | 45.871  | 49.411  | 4.410      | 1179       |
| 1200        | 9.387         | 34.686   | 9.136             | 27.784  | 37.034  | 45.871  | 49.450  | 4.414      | 1199       |

| NISKIN BOTTLE DATA |       |          |        |        |       |      |      |      |       |          |         |         |         |       |
|--------------------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP  | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUSIN | DEG C    |         |         |         | DB    |
| 1                  | 9.789 | 33.273   | 6.65   | 103.6  | 6.0   | 0.71 | 5.9  | 0.39 | 9.789 | 25.619   | 34.483  | 42.919  |         | 1     |
| 36                 | 9.759 | 33.266   | 6.66   | 103.7  | 6.2   | 0.73 | 6.0  | 0.39 | 9.753 | 25.619   | 34.485  | 42.943  |         | 36    |
| 117                | 9.710 | 33.514   | 6.28   | 96.3   | 7.1   | 0.96 | 9.4  | 0.32 | 9.999 | 25.955   | 34.810  | 43.315  | 107     |       |
| 157                | 9.700 | 33.972   | 5.80   | 89.1   | 17.9  | 1.03 | 13.4 | 0.22 | 9.953 | 26.321   | 35.191  | 43.671  | 157     |       |
| 226                | 9.629 | 33.966   | 5.89   | 89.6   | 19.2  | 1.03 | 13.5 | 0.32 | 9.937 | 26.373   | 35.260  | 43.755  | 207     |       |
| 327                | 7.496 | 34.005   | 4.50   | 66.9   | 37.3  | 1.63 | 22.8 | 0.01 | 7.466 | 26.570   | 35.507  | 44.049  | 329     |       |
| 426                | 9.714 | 33.954   | 3.36   | 48.1   | 57.9  | 2.16 | 30.4 | 0.01 | 7.879 | 26.741   | 35.754  | 44.369  | 429     |       |
| 526                | 9.700 | 33.995   | 2.39   | 33.3   | 77.8  | 2.56 | 35.9 | 0.01 | 4.930 | 26.879   | 35.938  | 44.595  | 509     |       |
| 626                | 9.256 | 34.062   | 1.53   | 21.1   | 96.2  | 2.84 | 40.1 | 0.00 | 4.810 | 27.038   | 36.097  | 44.793  | 610     |       |
| 726                | 9.388 | 34.140   | 0.98   | 13.4   | 110.0 | 2.99 | 42.4 | 0.00 | 3.916 | 27.109   | 36.216  | 44.919  | 711     |       |
| 825                | 9.552 | 34.215   | 0.61   | 8.3    | 122.4 | 3.29 | 44.0 | 0.00 | 3.554 | 27.202   | 36.326  | 45.044  | 811     |       |
| 923                | 9.397 | 34.274   | 0.43   | 5.8    | 132.2 | 3.13 | 44.8 | 0.00 | 3.333 | 27.274   | 36.411  | 45.141  | 910     |       |
| 1020               | 9.187 | 34.319   | 0.39   | 5.2    | 140.5 | 3.20 | 45.1 | 0.00 | 3.117 | 27.331   | 36.479  | 45.218  | 1029    |       |
| 1240               | 9.226 | 34.423   | 0.29   | 3.8    | 159.4 | 3.22 | 45.8 | 0.00 | 2.641 | 27.456   | 36.628  | 45.390  | 1252    |       |
| 1495               | 9.202 | 34.495   | 0.42   | 5.5    | 170.8 | 3.19 | 45.8 | 0.00 | 2.370 | 27.543   | 36.731  | 45.510  | 1510    |       |
| 1749               | 9.231 | 34.556   | 0.84   | 11.0   | 177.3 | 3.10 | 44.6 | 0.00 | 2.012 | 27.615   | 36.818  | 45.611  | 1758    |       |
| 1988               | 9.199 | 34.593   | 1.23   | 16.0   | 180.6 | 3.02 | 43.5 | 0.00 | 1.922 | 27.659   | 36.873  | 45.675  | 2011    |       |
| 2231               | 9.216 | 34.618   | 1.62   | 21.0   | 181.5 | 2.95 | 42.6 | 0.00 | 1.660 | 27.692   | 36.914  | 45.723  | 2259    |       |
| 2473               | 9.687 | 34.638   | 2.02   | 26.1   | 182.2 | 2.89 | 41.4 | 0.00 | 1.512 | 27.719   | 36.948  | 45.766  | 2504    |       |
| 2984               | 9.340 | 34.662   | 2.64   | 33.9   | 177.7 | 2.75 | 39.7 | 0.00 | 1.320 | 27.752   | 36.992  | 45.819  | 3026    |       |
| 3527               | 9.479 | 34.678   | 3.07   | 39.3   | 175.4 | 2.64 | 39.4 | 0.00 | 1.255 | 27.772   | 37.019  | 45.852  | 3581    |       |
| 4010               | 9.484 | 34.683   | 3.19   | 40.8   | 177.5 | 2.63 | 39.0 | 0.00 | 1.157 | 27.780   | 37.029  | 45.864  | 4016    |       |
| 4498               | 9.525 | 34.686   | 3.27   | 41.3   | 179.3 | 2.61 | 38.4 | 0.00 | 1.140 | 27.783   | 37.034  | 45.870  | 4498    |       |
| 5011               | 9.587 | 34.687   | 3.32   | 42.4   | 178.6 | 2.61 | 37.8 | 0.01 | 1.117 | 27.784   | 37.035  | 45.871  | 5016    |       |

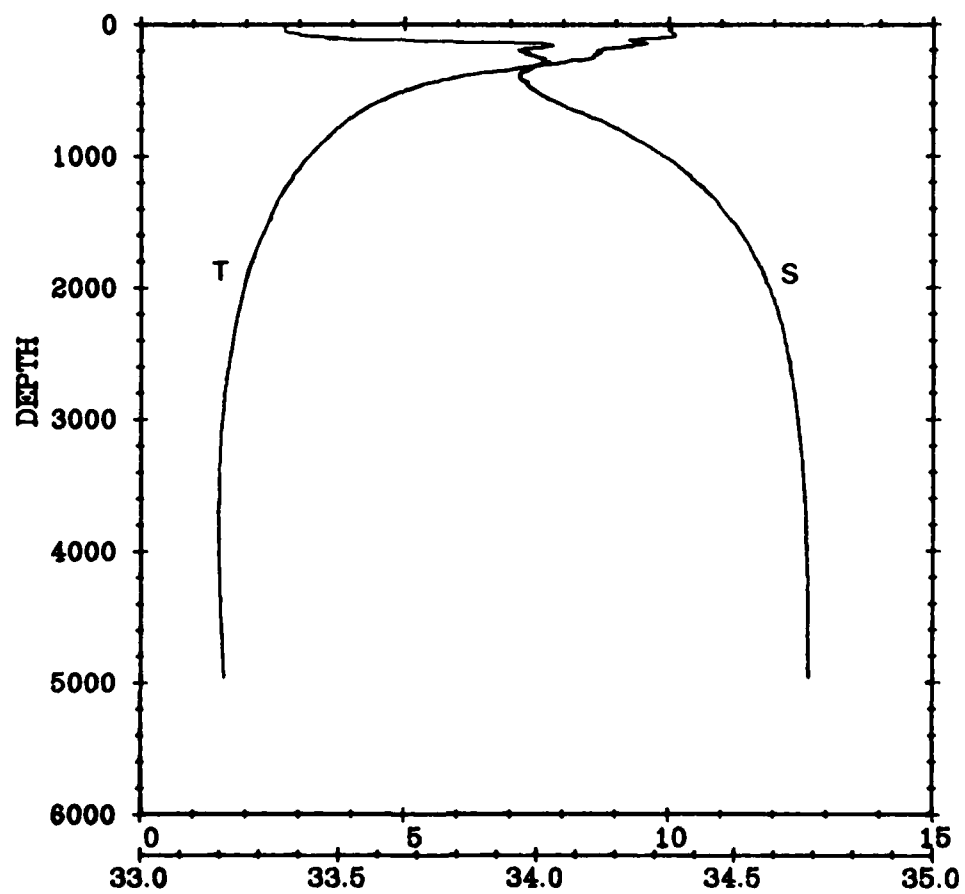
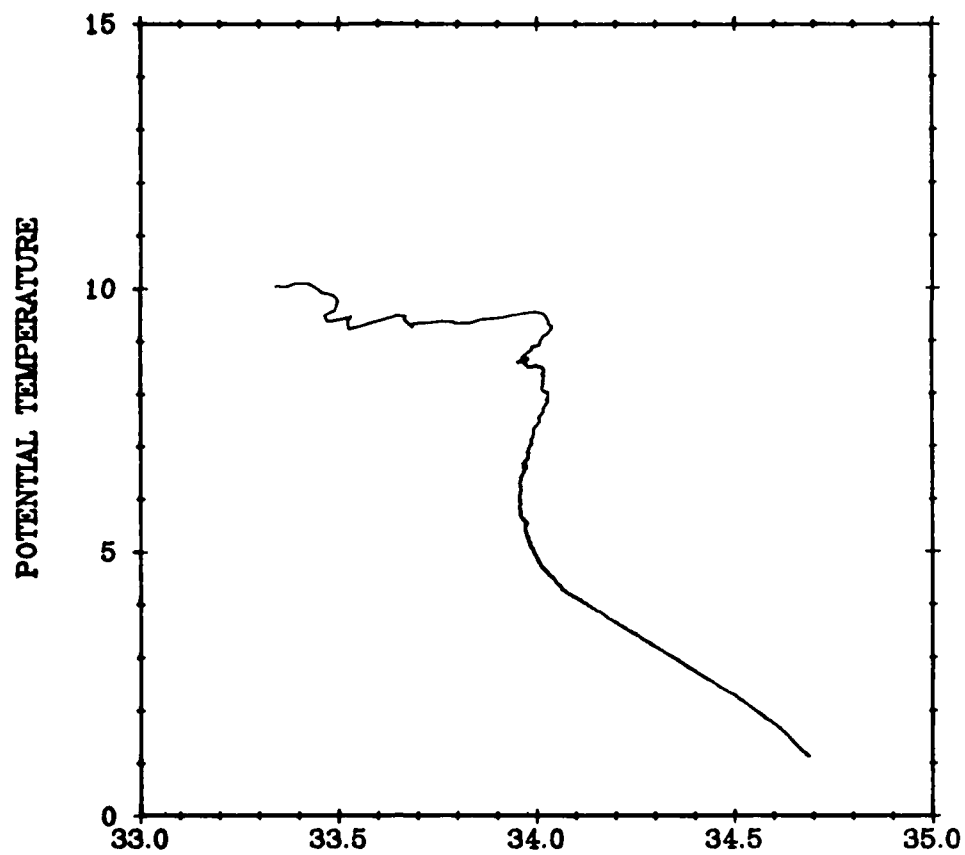
# MARATHON 2 STA. 56



LATITUDE LONGITUDE MO. DY. YR. START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BATHM  
40 5 5N 121 59 5W 122 94 1424 474 100 10 10 10 10 10 10 10 10

| STD DATA | TEMP   | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA    | DYNAMIC HT | DEPTH |
|----------|--------|----------|----------|---------|---------|---------|--------|------------|-------|
| DB       | DEG C  |          | DEG C    |         |         |         | CM     |            | M     |
| 1        | 22.156 | 33.159   | 22.136   | 25.694  | 14.497  | 42.942  | 22.156 | 1.100      | 1     |
| 20       | 22.154 | 33.163   | 22.132   | 25.689  | 14.124  | 42.945  | 22.154 | 1.146      | 19    |
| 40       | 22.159 | 33.164   | 22.134   | 25.689  | 14.124  | 42.947  | 22.159 | 1.214      | 39    |
| 60       | 22.151 | 33.164   | 22.134   | 25.692  | 14.124  | 42.948  | 22.151 | 1.274      | 59    |
| 80       | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.325      | 79    |
| 100      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.375      | 99    |
| 120      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.425      | 119   |
| 140      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.475      | 139   |
| 160      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.525      | 159   |
| 180      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.575      | 179   |
| 200      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.625      | 199   |
| 220      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.675      | 219   |
| 240      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.725      | 239   |
| 260      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.775      | 259   |
| 280      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.825      | 279   |
| 300      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.875      | 299   |
| 320      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.925      | 319   |
| 340      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 1.975      | 339   |
| 360      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.025      | 359   |
| 380      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.075      | 379   |
| 400      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.125      | 399   |
| 420      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.175      | 419   |
| 440      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.225      | 439   |
| 460      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.275      | 459   |
| 480      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.325      | 479   |
| 500      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.375      | 499   |
| 520      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.425      | 519   |
| 540      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.475      | 539   |
| 560      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.525      | 559   |
| 580      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.575      | 579   |
| 600      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.625      | 599   |
| 620      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.675      | 619   |
| 640      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.725      | 639   |
| 660      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.775      | 659   |
| 680      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.825      | 679   |
| 700      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.875      | 699   |
| 720      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.925      | 719   |
| 740      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 2.975      | 739   |
| 760      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.025      | 759   |
| 780      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.075      | 779   |
| 800      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.125      | 799   |
| 820      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.175      | 819   |
| 840      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.225      | 839   |
| 860      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.275      | 859   |
| 880      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.325      | 879   |
| 900      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.375      | 899   |
| 920      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.425      | 919   |
| 940      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.475      | 939   |
| 960      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.525      | 959   |
| 980      | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.575      | 979   |
| 1000     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.625      | 999   |
| 1020     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.675      | 1019  |
| 1040     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.725      | 1039  |
| 1060     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.775      | 1059  |
| 1080     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.825      | 1079  |
| 1100     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.875      | 1099  |
| 1120     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.925      | 1119  |
| 1140     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 3.975      | 1139  |
| 1160     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.025      | 1159  |
| 1180     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.075      | 1179  |
| 1200     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.125      | 1199  |
| 1220     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.175      | 1219  |
| 1240     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.225      | 1239  |
| 1260     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.275      | 1259  |
| 1280     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.325      | 1279  |
| 1300     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.375      | 1299  |
| 1320     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.425      | 1319  |
| 1340     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.475      | 1339  |
| 1360     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.525      | 1359  |
| 1380     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.575      | 1379  |
| 1400     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.625      | 1399  |
| 1420     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.675      | 1419  |
| 1440     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.725      | 1439  |
| 1460     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.775      | 1459  |
| 1480     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.825      | 1479  |
| 1500     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.875      | 1499  |
| 1520     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.925      | 1519  |
| 1540     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 4.975      | 1539  |
| 1560     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.025      | 1559  |
| 1580     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.075      | 1579  |
| 1600     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.125      | 1599  |
| 1620     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.175      | 1619  |
| 1640     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.225      | 1639  |
| 1660     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.275      | 1659  |
| 1680     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.325      | 1679  |
| 1700     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.375      | 1699  |
| 1720     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.425      | 1719  |
| 1740     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.475      | 1739  |
| 1760     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.525      | 1759  |
| 1780     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.575      | 1779  |
| 1800     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.625      | 1799  |
| 1820     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.675      | 1819  |
| 1840     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.725      | 1839  |
| 1860     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.775      | 1859  |
| 1880     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.825      | 1879  |
| 1900     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.875      | 1899  |
| 1920     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.925      | 1919  |
| 1940     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 5.975      | 1939  |
| 1960     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.025      | 1959  |
| 1980     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.075      | 1979  |
| 2000     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.125      | 1999  |
| 2020     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.175      | 2019  |
| 2040     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.225      | 2039  |
| 2060     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.275      | 2059  |
| 2080     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.325      | 2079  |
| 2100     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.375      | 2099  |
| 2120     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.425      | 2119  |
| 2140     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.475      | 2139  |
| 2160     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.525      | 2159  |
| 2180     | 22.155 | 33.162   | 22.136   | 25.693  | 14.124  | 42.950  | 22.155 | 6.575      | 2179  |
| 2200     | 22.155 | 33.162   | 22.136   | 25.693  |         |         |        |            |       |

# MARATHON 2 STA. 57



| LATITUDE | LONGITUDE | MO-DY-YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 41 59.1N | 152 11.1W | 5 21 84  | 105        | 1103   | 191  | 10    | 8.3      | 7.2      | 1022.1 |

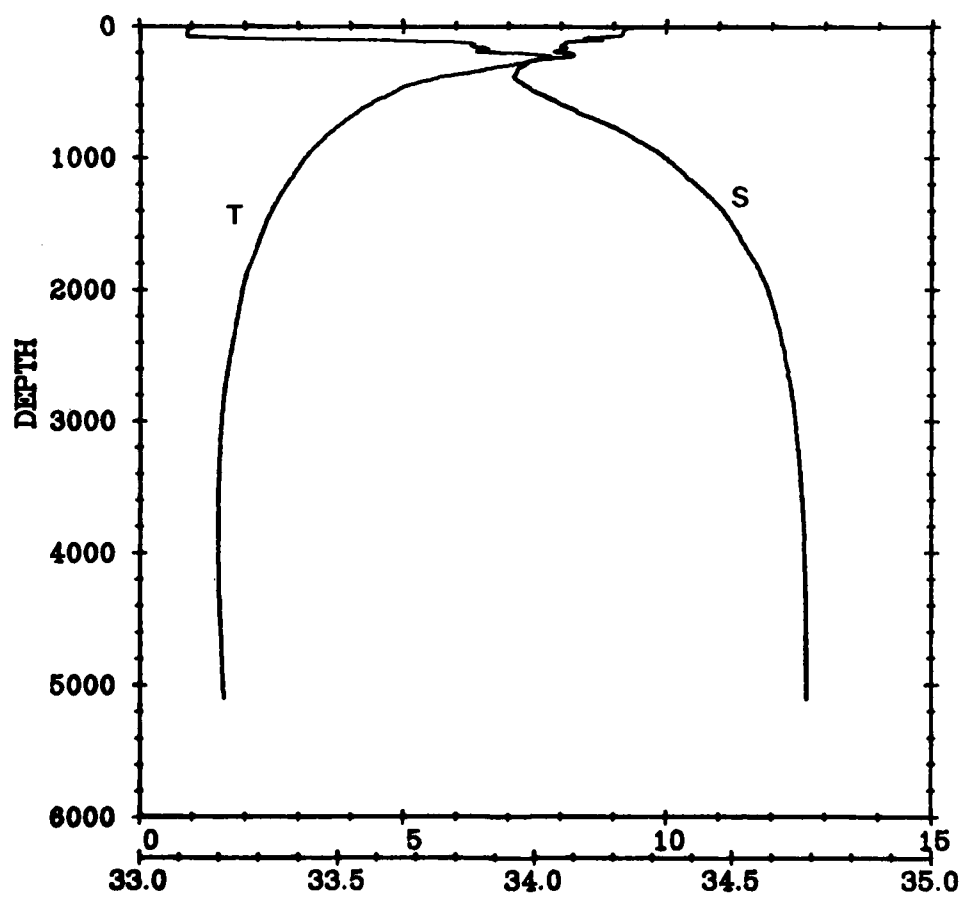
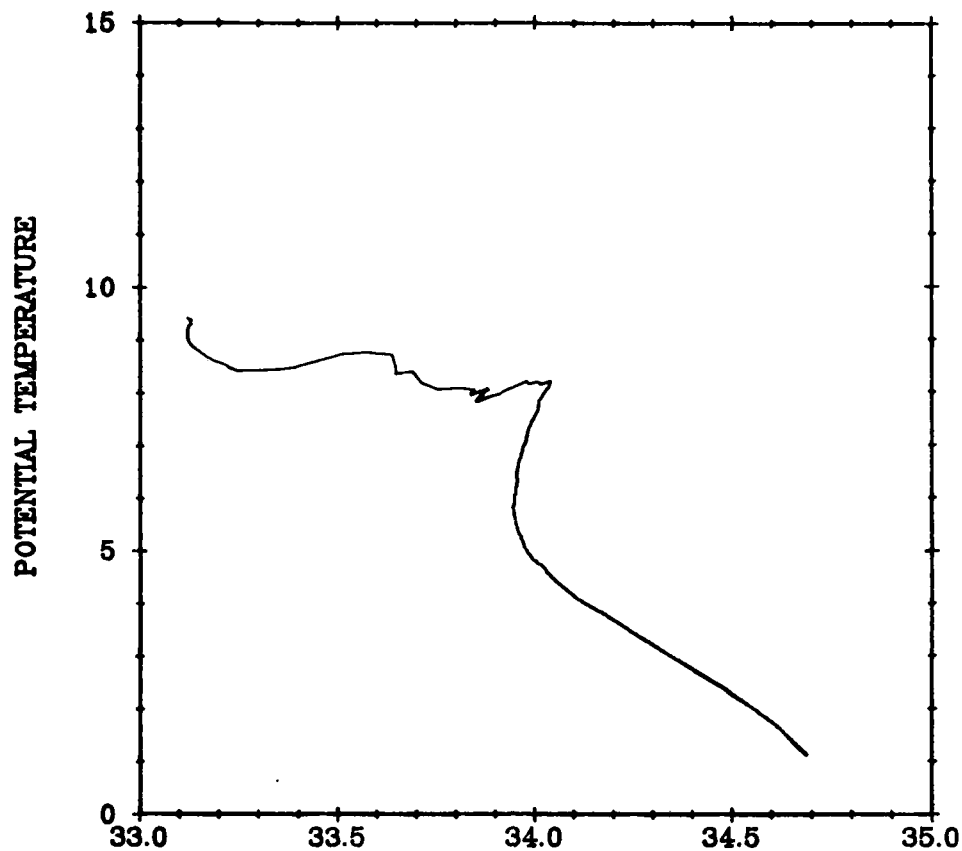
## STD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         | CL TON  |            | M     |
| 1     | 9.184 | 34.126   | 9.184    | 25.590  | 14.454  | 42.928  | 218.622 | 1.107      | 0     |
| 20    | 9.255 | 34.124   | 9.253    | 25.610  | 14.479  | 42.959  | 217.162 | 1.149      | 19    |
| 40    | 9.172 | 34.120   | 9.166    | 25.620  | 14.494  | 42.977  | 216.520 | 1.189      | 39    |
| 60    | 9.152 | 34.120   | 9.146    | 25.624  | 14.498  | 42.982  | 216.600 | 1.142      | 59    |
| 80    | 9.056 | 34.111   | 8.948    | 25.695  | 14.182  | 43.018  | 210.193 | 1.189      | 79    |
| 100   | 9.544 | 34.401   | 9.534    | 25.339  | 14.836  | 43.342  | 207.337 | 1.233      | 99    |
| 120   | 9.008 | 34.342   | 8.993    | 26.166  | 15.281  | 43.810  | 197.620 | 1.326      | 119   |
| 140   | 7.954 | 34.382   | 7.934    | 26.406  | 15.323  | 43.847  | 194.687 | 1.410      | 139   |
| 160   | 7.907 | 34.010   | 7.782    | 26.529  | 15.451  | 43.980  | 193.881 | 1.489      | 159   |
| 180   | 7.956 | 34.372   | 7.928    | 26.605  | 15.563  | 44.126  | 196.981 | 1.564      | 179   |
| 200   | 7.977 | 34.393   | 7.946    | 26.681  | 15.672  | 44.255  | 190.041 | 1.635      | 199   |
| 220   | 5.624 | 34.349   | 5.591    | 26.773  | 15.900  | 44.427  | 191.416 | 1.704      | 219   |
| 240   | 5.101 | 34.372   | 5.095    | 26.949  | 15.901  | 44.581  | 194.281 | 1.768      | 239   |
| 260   | 4.854 | 34.399   | 4.815    | 26.903  | 15.968  | 44.610  | 193.810 | 1.829      | 259   |
| 280   | 4.169 | 34.059   | 4.321    | 27.011  | 16.100  | 44.785  | 199.696 | 1.841      | 279   |
| 300   | 3.978 | 34.141   | 3.927    | 27.112  | 16.220  | 44.921  | 190.552 | 1.149      | 299   |
| 320   | 3.659 | 34.216   | 3.652    | 27.203  | 16.327  | 45.044  | 192.340 | 1.148      | 319   |
| 340   | 3.175 | 34.276   | 3.112    | 27.278  | 16.426  | 45.147  | 195.456 | 1.234      | 339   |
| 360   | 3.148 | 34.327   | 3.079    | 27.341  | 16.490  | 45.212  | 19.934  | 1.117      | 359   |
| 380   | 2.965 | 34.367   | 2.891    | 27.390  | 16.549  | 45.259  | 19.484  | 1.194      | 379   |
| 400   | 2.799 | 34.405   | 2.718    | 27.435  | 16.603  | 45.362  | 19.403  | 1.465      | 399   |
| 420   | 2.644 | 34.473   | 2.555    | 27.477  | 16.653  | 45.425  | 67.648  | 1.137      | 419   |
| 440   | 2.505 | 34.473   | 2.411    | 27.516  | 16.699  | 45.472  | 64.178  | 1.601      | 439   |
| 460   | 2.385 | 34.497   | 2.284    | 27.546  | 16.735  | 45.515  | 61.544  | 1.666      | 459   |
| 480   | 2.291 | 34.516   | 2.184    | 27.569  | 16.764  | 45.548  | 59.544  | 1.727      | 479   |
| 500   | 2.217 | 34.535   | 2.091    | 27.592  | 16.791  | 45.580  | 57.629  | 1.785      | 499   |
| 520   | 2.111 | 34.555   | 1.992    | 27.616  | 16.811  | 45.614  | 55.495  | 1.842      | 519   |
| 540   | 2.005 | 34.573   | 1.887    | 27.639  | 16.849  | 45.647  | 53.429  | 1.896      | 539   |
| 560   | 1.881 | 34.587   | 1.825    | 27.655  | 16.869  | 45.671  | 52.031  | 1.949      | 559   |
| 580   | 1.904 | 34.587   | 1.761    | 27.667  | 16.894  | 45.689  | 51.114  | 2.003      | 579   |
| 600   | 1.862 | 34.606   | 1.711    | 27.678  | 16.898  | 45.705  | 50.312  | 2.051      | 599   |
| 620   | 1.813 | 34.615   | 1.654    | 27.690  | 16.912  | 45.722  | 49.405  | 2.101      | 619   |
| 640   | 1.765 | 34.623   | 1.598    | 27.701  | 16.926  | 45.739  | 48.564  | 2.150      | 639   |
| 660   | 1.721 | 34.610   | 1.546    | 27.710  | 16.938  | 45.754  | 47.828  | 2.198      | 659   |
| 680   | 1.678 | 34.616   | 1.495    | 27.719  | 16.950  | 45.768  | 47.160  | 2.246      | 679   |
| 700   | 1.641 | 34.642   | 1.448    | 27.727  | 16.960  | 45.781  | 46.555  | 2.293      | 699   |
| 720   | 1.605 | 34.648   | 1.405    | 27.734  | 16.970  | 45.793  | 45.949  | 2.339      | 719   |
| 740   | 1.574 | 34.653   | 1.367    | 27.741  | 16.979  | 45.804  | 45.495  | 2.385      | 739   |
| 760   | 1.544 | 34.657   | 1.333    | 27.747  | 16.986  | 45.812  | 45.225  | 2.431      | 759   |
| 780   | 1.539 | 34.660   | 1.311    | 27.751  | 16.992  | 45.819  | 45.047  | 2.475      | 779   |
| 800   | 1.522 | 34.644   | 1.285    | 27.756  | 16.998  | 45.827  | 44.816  | 2.520      | 799   |
| 820   | 1.510 | 34.666   | 1.264    | 27.759  | 17.003  | 45.832  | 44.779  | 2.565      | 819   |
| 840   | 1.500 | 34.669   | 1.244    | 27.763  | 17.007  | 45.838  | 44.694  | 2.609      | 839   |
| 860   | 1.492 | 34.671   | 1.226    | 27.766  | 17.011  | 45.843  | 44.705  | 2.654      | 859   |
| 880   | 1.487 | 34.674   | 1.211    | 27.769  | 17.016  | 45.848  | 44.684  | 2.699      | 879   |
| 900   | 1.482 | 34.676   | 1.196    | 27.772  | 17.019  | 45.852  | 44.732  | 2.744      | 899   |
| 920   | 1.479 | 34.678   | 1.182    | 27.774  | 17.022  | 45.856  | 44.807  | 2.788      | 919   |
| 940   | 1.480 | 34.679   | 1.172    | 27.776  | 17.024  | 45.859  | 45.011  | 2.833      | 939   |
| 960   | 1.481 | 34.681   | 1.165    | 27.778  | 17.027  | 45.862  | 45.178  | 2.878      | 959   |
| 980   | 1.487 | 34.681   | 1.157    | 27.778  | 17.028  | 45.863  | 45.500  | 2.924      | 979   |
| 1000  | 1.493 | 34.682   | 1.152    | 27.780  | 17.029  | 45.865  | 45.784  | 2.969      | 999   |
| 1020  | 1.499 | 34.683   | 1.147    | 27.781  | 17.031  | 45.866  | 46.069  | 3.015      | 1019  |
| 1040  | 1.507 | 34.684   | 1.143    | 27.782  | 17.032  | 45.868  | 46.387  | 3.061      | 1039  |
| 1060  | 1.516 | 34.684   | 1.140    | 27.782  | 17.032  | 45.868  | 46.794  | 3.108      | 1059  |
| 1080  | 1.527 | 34.685   | 1.139    | 27.783  | 17.033  | 45.869  | 47.165  | 3.155      | 1079  |
| 1100  | 1.539 | 34.685   | 1.139    | 27.783  | 17.033  | 45.869  | 47.627  | 3.202      | 1099  |
| 1120  | 1.550 | 34.685   | 1.138    | 27.783  | 17.033  | 45.870  | 48.074  | 3.250      | 1119  |
| 1140  | 1.561 | 34.685   | 1.137    | 27.783  | 17.033  | 45.870  | 48.523  | 3.299      | 1139  |
| 1160  | 1.572 | 34.686   | 1.135    | 27.784  | 17.034  | 45.871  | 49.004  | 3.347      | 1159  |
| 1180  | 1.584 | 34.686   | 1.135    | 27.784  | 17.035  | 45.871  | 49.375  | 3.396      | 1179  |
| 1200  | 1.597 | 34.686   | 1.135    | 27.784  | 17.034  | 45.871  | 49.867  | 3.445      | 1199  |
| 1220  | 1.598 | 34.686   | 1.135    | 27.784  | 17.034  | 45.871  | 49.895  | 3.443      | 1219  |

## WICKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIS O2 | O2 SAT | SIO4  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUSIN | DEG C    |         |         |         | DB    |
| 1     | 9.120 | 34.131   | 6.79   | 104.5  | 10.5  | 0.84 | 7.4  | 0.10 | 9.120 | 25.604   | 14.471  | 42.948  |         | 1     |
| 49    | 9.165 | 34.124   | 6.79   | 104.3  | 10.4  | 0.84 | 7.5  | 0.10 | 9.160 | 25.612   | 14.504  | 42.989  |         | 49    |
| 99    | 9.030 | 34.114   | 6.79   | 102.9  | 11.4  | 0.90 | 7.4  | 0.15 | 9.021 | 25.716   | 14.614  | 43.119  |         | 99    |
| 112   | 9.034 | 34.579   | 6.23   | 95.4   | 9.5   | 0.91 | 10.0 | 0.03 | 9.022 | 26.019   | 14.896  | 43.192  |         | 112   |
| 152   | 9.118 | 34.842   | 6.08   | 91.4   | 19.0  | 1.05 | 13.6 | 0.01 | 9.103 | 26.164   | 15.279  | 43.811  |         | 152   |
| 219   | 9.166 | 34.372   | 5.93   | 83.4   | 24.7  | 1.21 | 16.5 | 0.01 | 9.144 | 26.445   | 15.152  | 43.856  |         | 219   |
| 294   | 7.723 | 34.386   | 4.54   | 67.1   | 19.1  | 1.65 | 23.2 | 0.00 | 7.245 | 26.595   | 15.534  | 44.736  |         | 294   |
| 375   | 5.720 | 34.349   | 3.25   | 46.3   | 61.4  | 2.22 | 31.2 | 0.01 | 5.687 | 26.761   | 15.783  | 44.436  |         | 375   |
| 500   | 4.936 | 34.011   | 2.26   | 21.4   | 92.8  | 2.61 | 36.8 | 0.00 | 4.796 | 26.906   | 15.972  | 44.635  |         | 500   |
| 598   | 4.376 | 34.068   | 1.95   | 21.5   | 97.7  | 2.92 | 40.1 | 0.00 | 4.331 | 27.010   | 16.199  | 44.783  |         | 598   |
| 696   | 3.958 | 34.150   | 1.05   | 14.3   | 112.7 | 2.95 | 42.2 | 0.00 | 3.907 | 27.129   | 16.228  | 44.932  |         | 696   |
| 793   | 3.691 | 34.214   | 0.74   | 10.0   | 123.1 | 3.04 | 43.7 | 0.00 | 3.624 | 27.198   | 16.121  | 45.018  |         | 793   |
| 899   | 3.192 | 34.279   | 0.42   | 5.7    | 135.3 | 3.15 | 44.9 | 0.00 | 3.119 | 27.279   | 16.417  | 45.147  |         | 899   |
| 998   | 3.179 | 34.323   | 0.32   | 4.3    | 144.8 | 3.18 | 45.4 | 0.00 | 3.109 | 27.335   | 16.493  | 45.223  |         | 998   |
| 1245  | 2.732 | 34.425   | 0.27   | 3.6    | 161.4 | 3.20 | 45.8 | 0.00 | 2.645 | 27.458   | 16.629  | 45.391  |         | 1245  |
| 1491  | 2.377 | 34.501   | 0.45   | 5.9    | 171.4 | 3.16 | 45.6 | 0.00 | 2.276 | 27.550   | 16.740  | 45.519  |         | 1491  |
| 1744  | 2.121 | 34.556   | 0.95   | 11.1   | 177.9 | 3.08 | 44.6 | 0.00 | 2.002 | 27.616   | 16.820  | 45.613  |         | 1744  |
| 1996  | 1.932 | 34.594   | 1.29   | 16.9   | 193.0 | 3.01 | 43.5 | 0.00 | 1.795 | 27.662   | 16.877  | 45.680  |         | 1996  |
| 2492  | 1.692 | 34.637   | 2.00   | 25.9   | 193.1 | 2.87 | 41.5 | 0.00 | 1.515 | 27.718   | 16.948  | 45.764  |         | 2492  |
| 2991  | 1.537 | 34.662   | 2.66   | 34.2   | 178.3 | 2.73 | 39.6 | 0.00 | 1.316 | 27.752   | 16.992  | 45.820  |         | 2991  |
| 3493  | 1.481 | 34.676   | 3.06   | 39.2   | 175.3 | 2.63 | 38.5 | 0.00 | 1.211 | 27.771   | 17.017  | 45.849  |         | 3493  |
| 3960  | 1.480 | 34.684   | 3.22   | 41.2   | 176.5 |      | 37.9 | 0.00 | 1.159 | 27.781   | 17.030  | 45.865  |         | 3960  |
| 4428  | 1.518 | 34.686   | 3.33   | 42.6   | 179.1 |      | 37.8 | 0.00 | 1.142 | 27.793   | 17.033  | 45.869  |         | 4428  |
| 5094  | 1.596 | 34.687   | 3.34   | 42.7   | 180.0 | 2.61 | 37.7 | 0.02 | 1.135 | 27.795   | 17.035  | 45.911  |         | 5094  |

# MARATHON 2 STA. 58



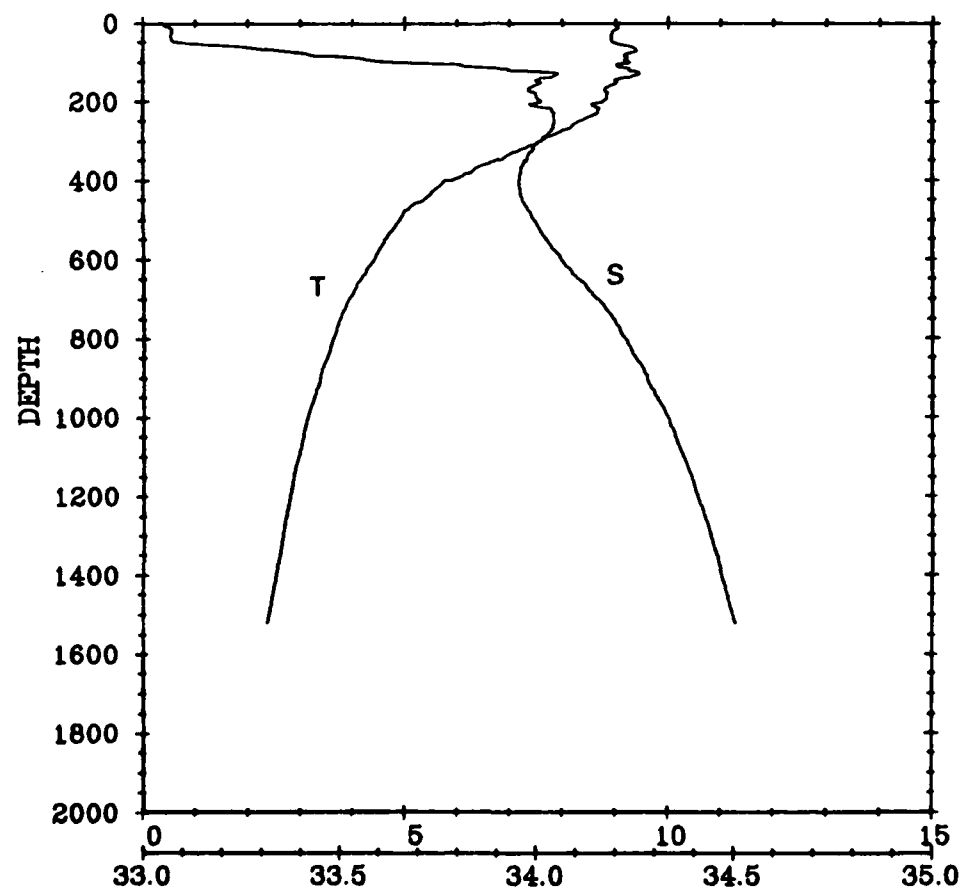
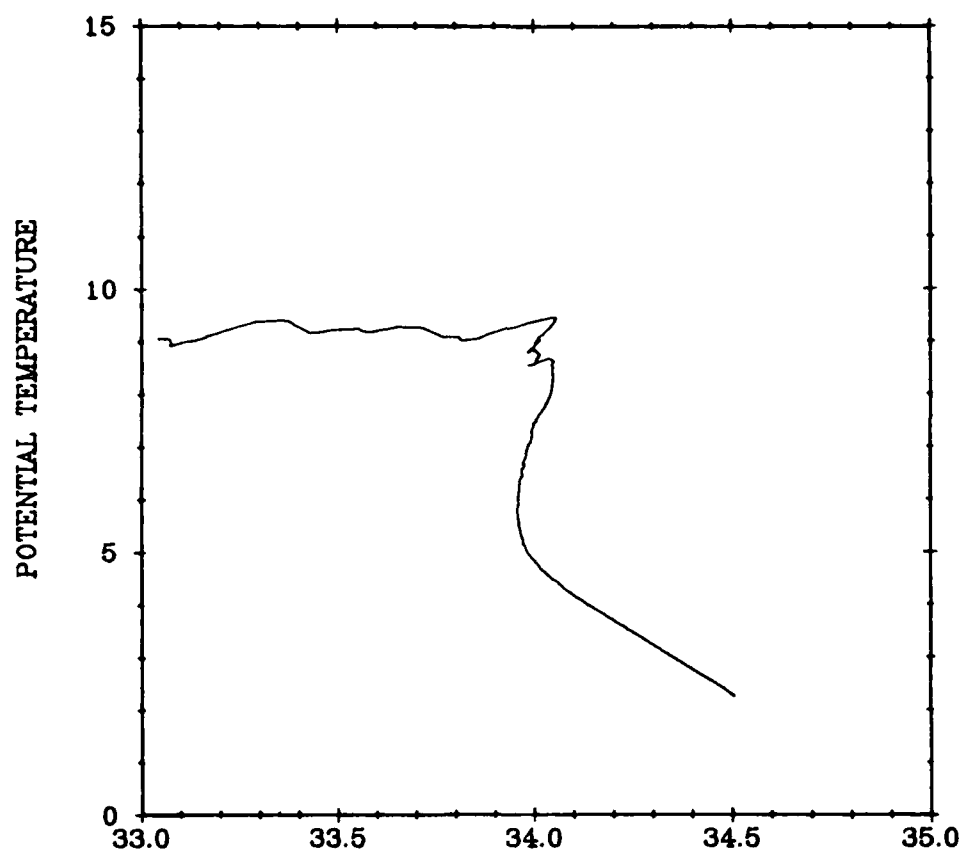
NEW THOMAS WASHINGTON MARATHON LEG 11 STATION 77

| LATITUDE | LONGITUDE | MO | DAY | YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----|-----|----|------------|--------|------|-------|----------|----------|--------|
| 41 18.3N | 121 59.1W | 5  | 23  | 84 | 1254       | 5000   | 100  | 10    | 22.2     | 6.1      | 1011.0 |

| STD DATA |       | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH |
|----------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| PRESS    | TEMP  |          |          |         |         |         |         |            |       |
| DB       | DEG C |          | DEG C    |         |         |         | CG TUN  |            | M     |
| 1        | 9.145 | 33.054   | 9.145    | 25.589  | 34.468  | 42.947  | 219.870 | 0.000      | 0     |
| 21       | 8.979 | 33.071   | 8.976    | 25.612  | 34.495  | 42.985  | 219.916 | 0.048      | 19    |
| 41       | 8.828 | 33.078   | 8.924    | 25.625  | 34.511  | 43.004  | 219.912 | 0.095      | 39    |
| 61       | 9.240 | 33.226   | 9.214    | 25.695  | 34.556  | 43.145  | 220.159 | 1.140      | 59    |
| 81       | 9.244 | 33.427   | 9.205    | 25.849  | 34.716  | 43.192  | 220.559 | 0.185      | 79    |
| 101      | 9.174 | 33.674   | 9.163    | 26.054  | 34.920  | 43.195  | 220.519 | 0.227      | 99    |
| 121      | 9.123 | 34.025   | 9.111    | 26.141  | 35.208  | 43.584  | 121.044 | 0.319      | 119   |
| 141      | 8.759 | 34.025   | 8.713    | 26.181  | 35.264  | 43.764  | 121.137 | 0.413      | 139   |
| 161      | 8.195 | 34.045   | 8.100    | 26.478  | 35.376  | 43.892  | 120.999 | 0.485      | 159   |
| 181      | 7.196 | 34.110   | 7.597    | 26.560  | 35.492  | 44.010  | 121.669 | 0.562      | 179   |
| 201      | 6.750 | 33.974   | 6.719    | 26.449  | 35.621  | 44.197  | 121.439 | 0.616      | 199   |
| 221      | 5.909 | 33.957   | 5.975    | 26.744  | 35.758  | 44.301  | 121.177 | 0.705      | 219   |
| 241      | 5.174 | 33.965   | 5.137    | 26.815  | 35.855  | 44.494  | 121.731 | 0.771      | 239   |
| 261      | 4.410 | 33.991   | 4.372    | 26.891  | 35.954  | 44.604  | 121.410 | 0.810      | 259   |
| 281      | 4.449 | 34.062   | 4.324    | 27.000  | 36.086  | 44.758  | 121.840 | 0.949      | 279   |
| 301      | 3.963 | 34.150   | 3.912    | 27.119  | 36.228  | 44.830  | 121.462 | 1.054      | 299   |
| 321      | 3.647 | 34.220   | 3.590    | 27.207  | 36.331  | 45.049  | 121.919 | 1.150      | 319   |
| 341      | 3.185 | 34.277   | 3.122    | 27.278  | 36.416  | 45.146  | 121.491 | 1.219      | 339   |
| 361      | 3.150 | 34.329   | 3.081    | 27.342  | 36.492  | 45.233  | 121.708 | 1.322      | 359   |
| 381      | 2.974 | 34.369   | 2.899    | 27.390  | 36.548  | 45.299  | 121.499 | 1.399      | 379   |
| 401      | 2.810 | 34.404   | 2.729    | 27.434  | 36.601  | 45.359  | 121.605 | 1.473      | 399   |
| 421      | 2.659 | 34.419   | 2.580    | 27.474  | 36.648  | 45.413  | 121.565 | 1.543      | 419   |
| 441      | 2.447 | 34.457   | 2.453    | 27.508  | 36.689  | 45.450  | 121.093 | 1.609      | 439   |
| 461      | 2.412 | 34.493   | 2.311    | 27.540  | 36.729  | 45.507  | 121.147 | 1.673      | 459   |
| 481      | 2.157 | 34.504   | 2.254    | 27.554  | 36.745  | 45.525  | 121.392 | 1.696      | 479   |

| NISKIN BOTTLE DATA |       | SALINITY | D13 O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|--------------------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP  |          |        |        |       |      |      |      |       |          |         |         |         |       |
| M                  | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUSIN | DEG C    |         |         |         | DB    |
| 3                  | 9.115 | 33.063   | 5.78   | 103.9  | 11.5  | 0.90 | 7.8  | 0.11 | 9.115 | 25.584   | 34.460  | 42.947  |         | 1     |
| 52                 | 9.195 | 33.159   | 5.73   | 103.4  | 9.4   | 0.88 | 7.5  | 0.14 | 9.189 | 25.647   | 34.519  | 43.001  |         | 52    |
| 101                | 9.232 | 33.711   | 6.06   | 93.5   | 9.6   | 0.86 | 10.3 | 0.02 | 9.221 | 26.074   | 34.936  | 43.404  |         | 101   |
| 142                | 9.176 | 34.035   | 5.79   | 89.4   | 17.8  | 1.06 | 13.1 | 0.01 | 9.161 | 26.337   | 35.197  | 43.669  |         | 142   |
| 163                | 8.789 | 33.993   | 5.86   | 99.7   | 18.4  | 1.04 | 13.2 | 0.01 | 8.772 | 26.358   | 35.236  | 43.724  |         | 164   |
| 203                | 8.614 | 34.012   | 5.53   | 94.1   | 22.5  | 1.11 | 15.3 | 0.01 | 8.593 | 26.409   | 35.294  | 43.789  |         | 204   |
| 245                | 8.148 | 34.045   | 4.98   | 75.5   | 28.8  | 1.37 | 18.9 | 0.00 | 8.323 | 26.476   | 35.374  | 43.879  |         | 246   |
| 297                | 7.503 | 34.002   | 4.59   | 68.2   | 16.2  | 1.60 | 22.3 | 0.00 | 7.474 | 26.566   | 35.503  | 44.040  |         | 299   |
| 395                | 5.928 | 33.959   | 3.42   | 49.0   | 57.3  | 2.14 | 30.0 | 0.00 | 5.894 | 26.743   | 35.756  | 44.168  |         | 397   |
| 492                | 4.893 | 33.994   | 2.30   | 32.1   | 77.3  | 2.58 | 35.2 | 0.00 | 4.854 | 26.894   | 35.957  | 44.618  |         | 495   |
| 590                | 4.444 | 34.058   | 1.63   | 22.5   | 93.7  | 2.79 | 39.4 | 0.00 | 4.399 | 26.995   | 36.080  | 44.761  |         | 594   |
| 687                | 3.980 | 34.147   | 0.98   | 13.4   | 110.0 | 2.99 | 42.1 | 0.00 | 3.930 | 27.115   | 36.222  | 44.825  |         | 692   |
| 789                | 3.651 | 34.219   | 0.64   | 8.7    | 122.3 | 3.28 | 43.6 | 0.00 | 3.595 | 27.206   | 36.310  | 45.048  |         | 794   |
| 879                | 3.405 | 34.271   | 0.43   | 5.8    | 132.1 | 3.45 | 44.6 | 0.00 | 3.343 | 27.273   | 36.409  | 45.139  |         | 880   |
| 984                | 3.152 | 34.326   | 0.34   | 4.6    | 141.4 | 3.28 | 45.2 | 0.00 | 3.094 | 27.338   | 36.487  | 45.229  |         | 992   |
| 1216               | 2.770 | 34.415   | 0.26   | 3.5    | 155.1 |      | 45.7 | 0.00 | 2.687 | 27.446   | 36.515  | 45.375  |         | 1227  |
| 1521               | 2.360 | 34.503   | 0.46   | 6.0    | 170.9 |      | 45.5 | 0.00 | 2.257 | 27.553   | 36.744  | 45.524  |         | 1537  |

# MARATHON 2 STA. 59

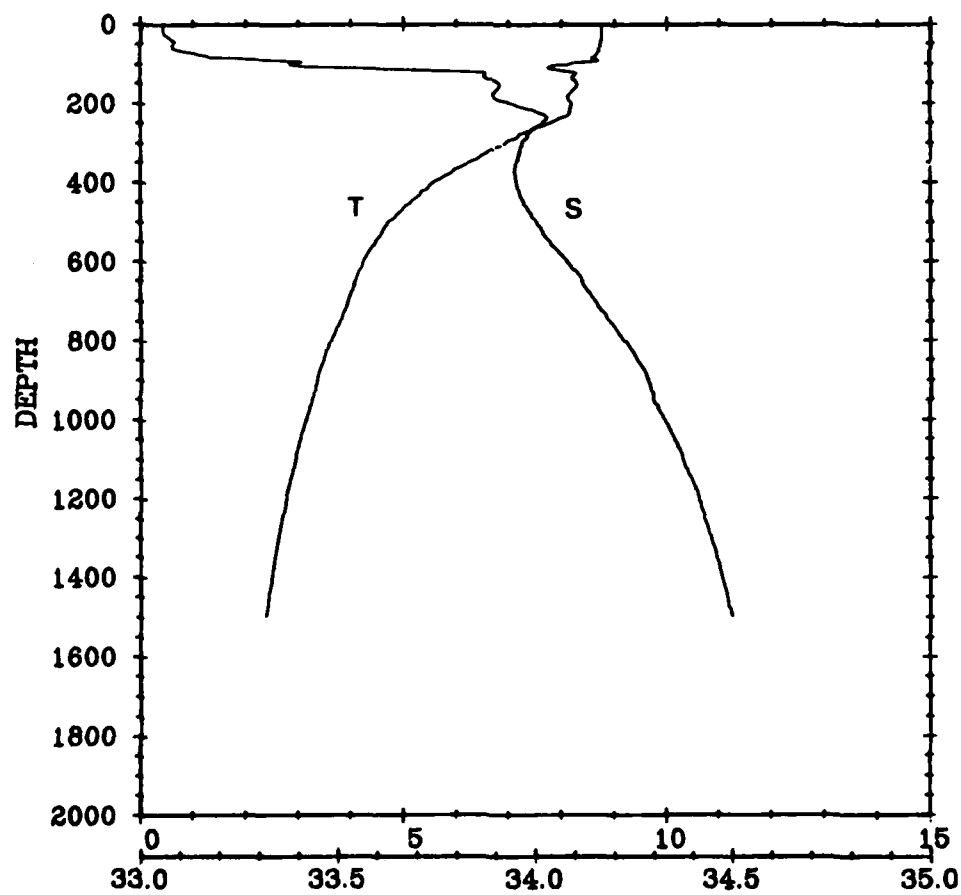
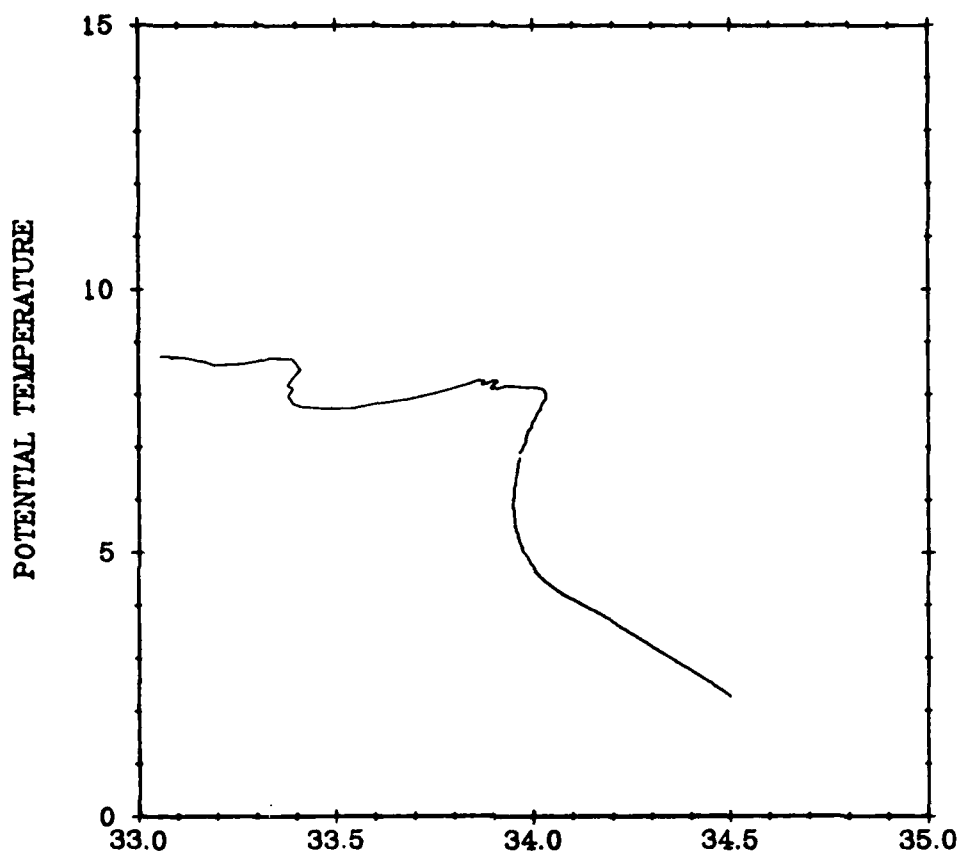


| LATITUDE | LONGITUDE | MO BY YR | START TIME | BATH M | WIND DIR | SPEED KT | AIR TEMP DEG C | WET BULB DEG C | BATH MB |
|----------|-----------|----------|------------|--------|----------|----------|----------------|----------------|---------|
| 42 27 N  | 151 53 W  | 5 24 94  | 043        | 101    | 220      | 16       | 14             | 11             | 100     |

| STATION | DATE | TIME  | TEMP  | SALINITY | POT TEMP | SIGMA T | SIGMA T | SIGMA T | SIGMA T | DYNAMIC HT | DEPTH |
|---------|------|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| NO      |      | CE    | CE    |          | CE       |         |         |         |         |            | M     |
| 1       | 9-14 | 11:10 | 9.145 | 25.531   | 14.531   | 43.131  | 234.215 | 1.011   |         |            | 1.0   |
| 2       | 9-14 | 11:15 | 9.147 | 25.615   | 14.531   | 43.132  | 234.444 | 1.041   |         |            | 1.9   |
| 3       | 9-14 | 11:20 | 9.147 | 25.654   | 14.547   | 43.147  | 234.162 | 1.014   |         |            | 2.9   |
| 4       | 9-14 | 11:25 | 9.149 | 25.665   | 14.563   | 43.165  | 234.146 | 1.047   |         |            | 3.9   |
| 5       | 9-14 | 11:30 | 9.145 | 25.747   | 14.543   | 43.143  | 232.146 | 1.015   |         |            | 4.9   |
| 6       | 9-14 | 11:35 | 9.203 | 25.948   | 14.591   | 43.141  | 231.377 | 1.223   |         |            | 5.9   |
| 7       | 9-14 | 11:40 | 9.229 | 26.374   | 15.276   | 43.196  | 235.931 | 1.321   |         |            | 6.9   |
| 8       | 9-14 | 11:45 | 9.151 | 26.415   | 15.322   | 43.316  | 235.888 | 1.404   |         |            | 7.9   |
| 9       | 9-14 | 11:50 | 9.153 | 26.508   | 15.491   | 43.393  | 233.317 | 1.443   |         |            | 8.9   |
| 10      | 9-14 | 11:55 | 6.919 | 26.646   | 15.573   | 44.144  | 247.921 | 1.513   |         |            | 9.9   |
| 11      | 9-14 | 12:00 | 6.249 | 26.694   | 15.684   | 44.295  | 248.715 | 1.622   |         |            | 10.9  |
| 12      | 9-14 | 12:05 | 5.583 | 26.777   | 15.924   | 44.431  | 231.917 | 1.677   |         |            | 11.9  |
| 13      | 9-14 | 12:10 | 5.102 | 26.841   | 15.993   | 44.742  | 232.907 | 1.701   |         |            | 12.9  |
| 14      | 9-14 | 12:15 | 4.729 | 26.916   | 15.897   | 44.514  | 222.155 | 1.811   |         |            | 13.9  |
| 15      | 9-14 | 12:20 | 4.277 | 27.128   | 16.128   | 44.915  | 227.774 | 1.944   |         |            | 14.9  |
| 16      | 9-14 | 12:25 | 3.914 | 27.147   | 16.226   | 44.929  | 217.174 | 2.019   |         |            | 15.9  |
| 17      | 9-14 | 12:30 | 3.585 | 27.207   | 16.131   | 45.107  | 91.918  | 2.144   |         |            | 16.9  |
| 18      | 9-14 | 12:35 | 3.256 | 27.284   | 16.422   | 45.154  | 94.979  | 2.221   |         |            | 17.9  |
| 19      | 9-14 | 12:40 | 3.139 | 27.316   | 16.482   | 45.226  | 91.278  | 2.281   |         |            | 18.9  |
| 20      | 9-14 | 12:45 | 2.919 | 27.394   | 16.554   | 45.103  | 78.105  | 2.393   |         |            | 19.9  |
| 21      | 9-14 | 12:50 | 2.692 | 27.444   | 16.613   | 45.103  | 71.557  | 2.416   |         |            | 20.9  |
| 22      | 9-14 | 12:55 | 2.557 | 27.479   | 16.656   | 45.422  | 67.412  | 2.505   |         |            | 21.9  |
| 23      | 9-14 | 13:00 | 2.317 | 27.514   | 16.697   | 45.471  | 64.345  | 2.591   |         |            | 22.9  |
| 24      | 9-14 | 13:05 | 2.292 | 27.544   | 16.734   | 45.513  | 61.779  | 2.654   |         |            | 23.9  |
| 25      | 9-14 | 13:10 | 2.272 | 27.549   | 16.742   | 45.529  | 61.295  | 2.652   |         |            | 24.9  |

| WICKIN BOTTLE DATA |       |          |  | DIS G2 |       |     |       | SIG3 |      |      |      | P04 |       |         |         | NO3     |       |  |  | NO2 |  |  |  | TRIT |  |  |  | POT TEMP |  |  |  | SIGMA 1 |  |  |  | SIGMA 2 |  |  |  | SIGMA 4 |  |  |  | PRESS |  |  |  |
|--------------------|-------|----------|--|--------|-------|-----|-------|------|------|------|------|-----|-------|---------|---------|---------|-------|--|--|-----|--|--|--|------|--|--|--|----------|--|--|--|---------|--|--|--|---------|--|--|--|---------|--|--|--|-------|--|--|--|
| DEPTH              | TEMP  | SALINITY |  | DIS G2 | G2    | JAT | SIG3  | P04  | NO3  | NO2  | TRIT | POT | TEMP  | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| DEC 3              | DEC 3 | DEC 3    |  | ML     | ML    |     | ML    | ML   | ML   | ML   | ML   | ML  | DEC 3 | ML      | ML      | ML      | LB    |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 2                  | 3.744 | 33.262   |  | 2.32   | 101.7 |     | 13.5  | 9.5  | 9.5  | 1.1  |      |     | 9.714 | 27.633  | 34.510  | 43.214  | 1.0   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 4                  | 3.743 | 33.191   |  | 6.33   | 103.9 |     | 13.5  | 9.4  | 9.5  | 1.1  |      |     | 9.713 | 27.655  | 34.448  | 43.249  | 4.9   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 101                | 3.614 | 33.213   |  | 6.39   | 100.0 |     | 14.0  | 9.2  | 9.7  | 1.0  |      |     | 9.509 | 26.928  | 34.224  | 43.249  | 111   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 132                | 3.263 | 33.393   |  | 6.45   | 99.2  |     | 13.6  | 1.19 | 13.6 | 0.02 |      |     | 9.351 | 26.140  | 35.249  | 43.764  | 132   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 157                | 3.283 | 33.421   |  | 6.71   | 99.9  |     | 13.7  | 1.16 | 13.6 | 1.1  |      |     | 9.211 | 26.178  | 35.280  | 43.740  | 159   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 197                | 3.291 | 33.393   |  | 6.71   | 99.9  |     | 14.4  | 1.09 | 13.7 | 1.1  |      |     | 9.211 | 26.191  | 35.311  | 43.921  | 199   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 248                | 3.323 | 34.121   |  | 4.30   | 71.9  |     | 31.5  | 1.1  | 1.1  | 1.1  |      |     | 9.299 | 26.536  | 36.458  | 43.466  | 249   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 293                | 3.531 | 33.913   |  | 4.49   | 66.0  |     | 43.1  | 1.1  | 1.1  | 1.1  |      |     | 9.704 | 26.679  | 35.568  | 44.211  | 293   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 343                | 3.510 | 33.953   |  | 3.13   | 44.5  |     | 62.6  | 2.2  | 31.9 | 0.01 |      |     | 9.577 | 26.779  | 35.871  | 44.414  | 344   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 492                | 4.794 | 33.946   |  | 2.22   | 30.9  |     | 91.4  | 2.62 | 16.4 | 1.0  |      |     | 4.754 | 26.971  | 36.973  | 44.441  | 493   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 595                | 4.210 | 34.181   |  | 1.43   | 19.7  |     | 100.6 | 2.35 | 40.4 | 0.00 |      |     | 4.156 | 27.106  | 36.131  | 44.511  | 599   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 682                | 3.955 | 34.150   |  | 1.12   | 13.9  |     | 101.2 | 2.9  | 42.1 | 0.00 |      |     | 3.975 | 27.121  | 36.229  | 44.572  | 687   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 806                | 3.540 | 34.241   |  | 0.55   | 7.4   |     | 125.7 | 2.10 | 44.0 | 0.00 |      |     | 3.493 | 27.234  | 36.363  | 45.199  | 813   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 939                | 3.140 | 34.293   |  | 0.37   | 5.0   |     | 134.9 | 3.14 | 44.1 | 0.00 |      |     | 3.277 | 27.291  | 36.431  | 45.241  | 947   |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 999                | 3.126 | 34.135   |  | 0.30   | 4.0   |     | 144.2 | 3.1  | 45.2 | 0.00 |      |     | 3.051 | 27.350  | 36.501  | 45.241  | 1078  |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 1221               | 2.721 | 34.427   |  | 1.27   | 3.6   |     | 159.0 | 4.6  | 45.6 | 0.00 |      |     | 2.617 | 27.461  | 36.631  | 45.741  | 1211  |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |
| 1495               | 2.375 | 34.551   |  | 0.44   | 3.9   |     | 172.5 | 4.5  | 45.1 | 0.00 |      |     | 2.274 | 27.550  | 36.740  | 45.740  | 1495  |  |  |     |  |  |  |      |  |  |  |          |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |       |  |  |  |

MARATHON 2 STA. 60



| LATITUDE | LONGITUDE | MO. DY. YR. | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|-------------|------------|--------|------|-------|----------|----------|--------|
| 42 53 2N | 131 59 9W | 5.24.94     | 1624       | 5149   | 20   | 12    | 19       | 19       | 1011.2 |

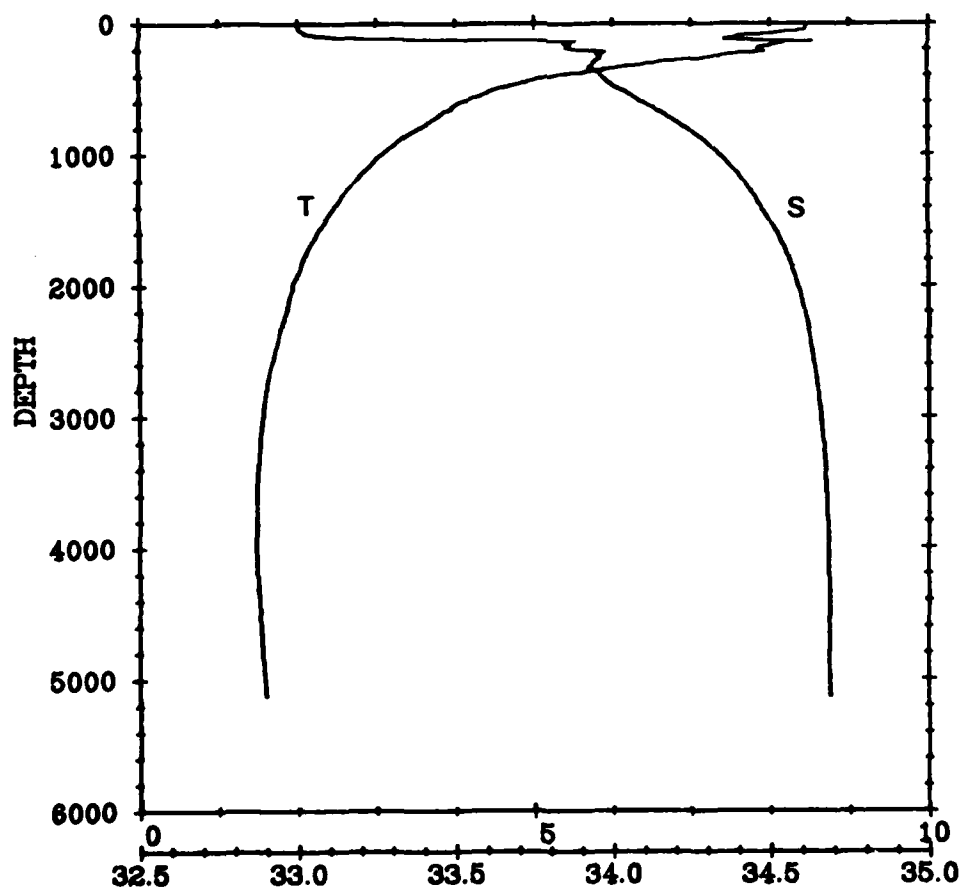
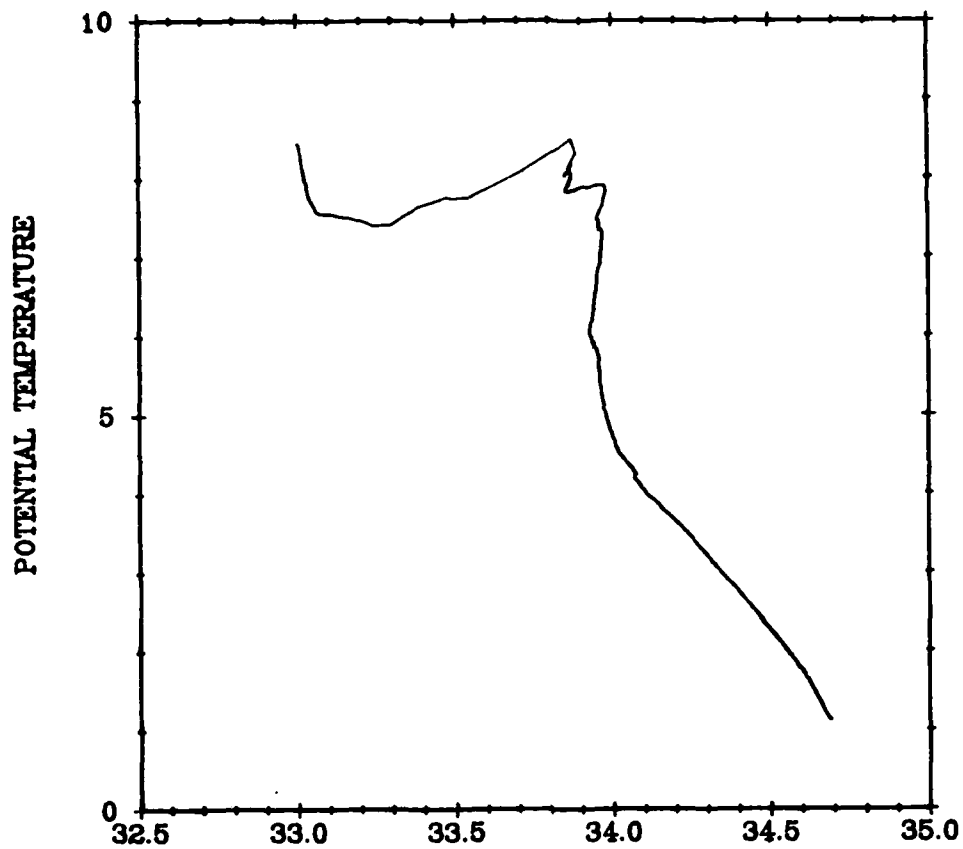
## STD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         | KG/CM   |            | M     |
| 1     | 8.448 | 33.201   | 8.448    | 25.638  | 34.545  | 43.050  | 204.074 | 1.100      | 0     |
| 20    | 8.456 | 33.203   | 8.454    | 25.639  | 34.546  | 43.050  | 204.074 | 1.100      | 19    |
| 40    | 8.444 | 33.204   | 8.442    | 25.640  | 34.549  | 43.054  | 204.087 | 1.104      | 39    |
| 60    | 8.269 | 33.203   | 8.263    | 25.675  | 34.591  | 43.113  | 201.084 | 1.140      | 59    |
| 80    | 7.942 | 33.229   | 7.934    | 25.735  | 34.666  | 43.212  | 205.175 | 1.195      | 79    |
| 100   | 7.590 | 33.279   | 7.581    | 25.925  | 34.771  | 43.341  | 207.992 | 1.230      | 99    |
| 120   | 8.157 | 33.927   | 8.152    | 26.154  | 35.262  | 43.777  | 208.791 | 1.327      | 119   |
| 140   | 7.880 | 33.883   | 7.860    | 26.417  | 35.318  | 43.856  | 203.554 | 1.420      | 139   |
| 160   | 7.168 | 33.960   | 7.144    | 26.552  | 35.475  | 44.144  | 201.407 | 1.489      | 159   |
| 180   | 6.585 | 33.944   | 6.558    | 26.545  | 35.627  | 44.210  | 192.761 | 1.563      | 179   |
| 200   | 5.942 | 33.937   | 5.932    | 26.721  | 35.712  | 44.344  | 190.921 | 1.632      | 199   |
| 220   | 5.294 | 33.965   | 5.262    | 26.925  | 35.868  | 44.510  | 185.210 | 1.699      | 219   |
| 240   | 4.924 | 33.988   | 4.881    | 26.987  | 35.948  | 44.618  | 180.074 | 1.767      | 239   |
| 260   | 4.573 | 34.020   | 4.535    | 26.950  | 36.129  | 44.704  | 174.691 | 1.834      | 259   |
| 280   | 4.123 | 34.093   | 4.179    | 27.057  | 36.157  | 44.854  | 167.054 | 1.924      | 279   |
| 300   | 3.821 | 34.169   | 3.773    | 27.148  | 36.264  | 44.974  | 165.985 | 1.974      | 299   |
| 320   | 3.581 | 34.233   | 3.525    | 27.224  | 36.371  | 45.072  | 160.210 | 2.027      | 319   |
| 340   | 3.302 | 34.295   | 3.240    | 27.300  | 36.442  | 45.176  | 155.214 | 2.074      | 339   |
| 360   | 3.099 | 34.338   | 3.031    | 27.354  | 36.506  | 45.250  | 150.477 | 2.127      | 359   |
| 380   | 2.914 | 34.379   | 2.844    | 27.403  | 36.565  | 45.318  | 145.718 | 2.167      | 379   |
| 400   | 2.734 | 34.425   | 2.673    | 27.447  | 36.617  | 45.379  | 140.757 | 2.207      | 399   |
| 420   | 2.615 | 34.448   | 2.528    | 27.485  | 36.664  | 45.432  | 135.751 | 2.251      | 419   |
| 440   | 2.499 | 34.473   | 2.409    | 27.517  | 36.700  | 45.474  | 130.695 | 2.292      | 439   |
| 460   | 2.379 | 34.497   | 2.279    | 27.546  | 36.735  | 45.515  | 125.614 | 2.335      | 459   |
| 480   | 2.266 | 34.522   | 2.159    | 27.576  | 36.772  | 45.558  | 120.514 | 2.379      | 479   |
| 500   | 2.177 | 34.542   | 2.059    | 27.600  | 36.801  | 45.593  | 115.414 | 2.425      | 499   |
| 520   | 2.096 | 34.560   | 1.965    | 27.622  | 36.828  | 45.623  | 110.314 | 2.471      | 519   |
| 540   | 2.026 | 34.574   | 1.898    | 27.639  | 36.848  | 45.646  | 105.214 | 2.517      | 539   |
| 560   | 1.943 | 34.586   | 1.808    | 27.655  | 36.859  | 45.672  | 100.109 | 2.561      | 559   |
| 580   | 1.901 | 34.600   | 1.760    | 27.670  | 36.887  | 45.692  | 95.000  | 2.607      | 579   |
| 600   | 1.863 | 34.607   | 1.712    | 27.679  | 36.899  | 45.706  | 90.250  | 2.654      | 599   |
| 620   | 1.807 | 34.617   | 1.648    | 27.692  | 36.915  | 45.725  | 85.191  | 2.698      | 619   |
| 640   | 1.745 | 34.624   | 1.593    | 27.701  | 36.927  | 45.740  | 80.491  | 2.745      | 639   |
| 660   | 1.727 | 34.630   | 1.552    | 27.709  | 36.938  | 45.753  | 75.706  | 2.785      | 659   |
| 680   | 1.682 | 34.637   | 1.499    | 27.719  | 36.950  | 45.769  | 70.740  | 2.828      | 679   |
| 700   | 1.638 | 34.644   | 1.445    | 27.729  | 36.962  | 45.782  | 65.771  | 2.871      | 699   |
| 720   | 1.605 | 34.649   | 1.405    | 27.735  | 36.971  | 45.794  | 60.817  | 2.915      | 719   |
| 740   | 1.579 | 34.654   | 1.370    | 27.742  | 36.980  | 45.804  | 55.864  | 2.958      | 739   |
| 760   | 1.559 | 34.658   | 1.340    | 27.747  | 36.987  | 45.813  | 50.911  | 2.996      | 759   |
| 780   | 1.540 | 34.661   | 1.313    | 27.752  | 36.992  | 45.820  | 45.958  | 3.031      | 779   |
| 800   | 1.521 | 34.665   | 1.284    | 27.757  | 36.999  | 45.828  | 40.995  | 3.066      | 799   |
| 820   | 1.508 | 34.667   | 1.262    | 27.760  | 37.004  | 45.834  | 36.032  | 3.101      | 819   |
| 840   | 1.496 | 34.670   | 1.240    | 27.764  | 37.009  | 45.840  | 31.069  | 3.135      | 839   |
| 860   | 1.488 | 34.673   | 1.222    | 27.767  | 37.013  | 45.845  | 26.106  | 3.169      | 859   |
| 880   | 1.480 | 34.675   | 1.204    | 27.770  | 37.017  | 45.850  | 21.143  | 3.204      | 879   |
| 900   | 1.473 | 34.677   | 1.192    | 27.773  | 37.020  | 45.854  | 16.180  | 3.239      | 899   |
| 920   | 1.476 | 34.679   | 1.179    | 27.775  | 37.023  | 45.858  | 11.217  | 3.274      | 919   |
| 940   | 1.473 | 34.680   | 1.168    | 27.777  | 37.026  | 45.860  | 6.254   | 3.309      | 939   |
| 960   | 1.479 | 34.682   | 1.160    | 27.779  | 37.028  | 45.863  | 1.291   | 3.341      | 959   |
| 980   | 1.483 | 34.683   | 1.154    | 27.780  | 37.030  | 45.865  | 0.000   | 3.379      | 979   |
| 1000  | 1.488 | 34.684   | 1.147    | 27.781  | 37.031  | 45.867  | 0.000   | 3.414      | 999   |
| 1020  | 1.495 | 34.685   | 1.143    | 27.783  | 37.033  | 45.869  | 0.000   | 3.449      | 1019  |
| 1040  | 1.501 | 34.685   | 1.139    | 27.783  | 37.033  | 45.869  | 0.000   | 3.484      | 1039  |
| 1060  | 1.513 | 34.686   | 1.138    | 27.784  | 37.034  | 45.870  | 0.000   | 3.519      | 1059  |
| 1080  | 1.523 | 34.686   | 1.136    | 27.784  | 37.034  | 45.871  | 0.000   | 3.554      | 1079  |
| 1100  | 1.534 | 34.686   | 1.135    | 27.784  | 37.035  | 45.871  | 0.000   | 3.589      | 1099  |
| 1120  | 1.546 | 34.687   | 1.134    | 27.785  | 37.035  | 45.872  | 0.000   | 3.624      | 1119  |
| 1140  | 1.557 | 34.687   | 1.133    | 27.785  | 37.035  | 45.872  | 0.000   | 3.659      | 1139  |
| 1160  | 1.568 | 34.687   | 1.131    | 27.785  | 37.036  | 45.872  | 0.000   | 3.694      | 1159  |
| 1180  | 1.580 | 34.687   | 1.131    | 27.785  | 37.036  | 45.872  | 0.000   | 3.729      | 1179  |
| 1200  | 1.592 | 34.687   | 1.130    | 27.785  | 37.036  | 45.873  | 0.000   | 3.764      | 1199  |
| 1220  | 1.596 | 34.688   | 1.130    | 27.786  | 37.037  | 45.873  | 0.000   | 3.799      | 1219  |

## WISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIS O2 | O2 SAT | SiO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUSIN | DEG C    |         |         |         | DB    |
| 1     | 8.395 | 32.994   | 6.85   | 103.1  | 14.1  | 0.97 | 9.1  | 0.10 | 8.185 | 25.634   | 34.544  | 43.052  | 1       |       |
| 21    | 8.407 | 33.009   | 6.84   | 103.2  | 13.9  | 0.97 | 9.2  | 0.10 | 8.404 | 25.651   | 34.560  | 43.066  | 21      |       |
| 54    | 8.277 | 33.014   | 6.85   | 103.0  | 14.2  | 0.99 | 9.3  | 0.11 | 8.272 | 25.675   | 34.589  | 43.112  | 54      |       |
| 107   | 7.394 | 33.295   | 6.61   | 97.6   | 15.2  | 1.17 | 11.8 | 0.07 | 7.394 | 26.015   | 34.967  | 43.523  | 107     |       |
| 153   | 6.092 | 33.957   | 6.35   | 91.1   | 18.2  | 1.05 | 13.6 | 0.01 | 6.077 | 26.313   | 35.284  | 43.852  | 153     |       |
| 188   | 7.946 | 33.853   | 6.06   | 95.7   | 19.2  | 1.07 | 13.9 | 0.01 | 7.847 | 26.396   | 35.317  | 43.845  | 188     |       |
| 291   | 6.788 | 33.953   | 4.47   | 60.3   | 40.5  | 1.74 | 24.2 | 0.01 | 6.761 | 26.626   | 35.597  | 44.171  | 291     |       |
| 338   | 5.590 | 33.959   | 3.05   | 43.3   | 63.4  | 2.27 | 32.1 | 0.01 | 5.557 | 26.785   | 35.913  | 44.442  | 338     |       |
| 515   | 4.700 | 34.024   | 2.11   | 29.3   | 82.5  | 2.52 | 37.3 | 0.00 | 4.691 | 26.921   | 35.993  | 44.562  | 515     |       |
| 612   | 4.199 | 34.181   | 1.40   | 19.2   | 99.5  | 2.84 | 40.5 | 0.00 | 4.154 | 27.039   | 36.136  | 44.829  | 612     |       |
| 695   | 3.964 | 34.156   | 1.01   | 13.8   | 110.8 | 2.95 | 42.2 | 0.00 | 3.914 | 27.134   | 36.247  | 44.955  | 700     |       |
| 783   | 3.651 | 34.215   | 0.75   | 10.2   | 121.7 | 3.00 | 43.2 | 0.00 | 3.595 | 27.203   | 36.327  | 45.045  | 789     |       |
| 890   | 3.421 | 34.269   | 0.54   | 7.3    | 129.1 | 3.08 | 44.1 | 0.00 | 3.359 | 27.268   | 36.404  | 45.113  | 887     |       |
| 966   | 3.207 | 34.317   | 0.40   | 5.4    | 139.4 | 3.11 | 44.9 | 0.00 | 3.140 | 27.327   | 36.473  | 45.212  | 974     |       |
| 1214  | 2.762 | 34.417   | 0.27   | 3.6    | 156.4 | 3.16 | 45.5 | 0.00 | 2.679 | 27.448   | 36.617  | 45.379  | 1225    |       |
| 1461  | 2.447 | 34.496   | 0.37   | 4.9    | 168.1 | 3.13 | 45.5 | 0.00 | 2.349 | 27.512   | 36.718  | 45.494  | 1476    |       |
| 1707  | 2.189 | 34.539   | 0.71   | 9.3    | 175.8 | 3.08 | 44.7 | 0.00 | 2.072 | 27.597   | 36.797  | 45.587  | 1726    |       |
| 1955  | 1.999 | 34.579   | 1.11   | 14.4   | 181.2 | 3.01 | 43.6 | 0.00 | 1.854 | 27.646   | 36.857  | 45.659  | 1979    |       |
| 2482  | 1.711 | 34.634   | 1.94   | 25.0   | 184.0 | 2.86 | 41.4 | 0.00 | 1.535 | 27.714   | 36.942  | 45.758  | 2514    |       |
| 2982  | 1.552 | 34.660   | 2.59   | 33.3   | 176.9 | 2.71 | 39.6 | 0.00 | 1.332 | 27.749   | 36.989  | 45.815  | 3024    |       |
| 3494  | 1.435 | 34.675   | 3.05   | 39.1   | 172.7 | 2.61 | 38.3 | 0.00 | 1.215 | 27.770   | 37.015  | 45.848  | 3518    |       |
| 3983  | 1.430 | 34.682   | 3.24   | 41.4   | 172.6 |      | 37.7 | 0.00 | 1.156 | 27.779   | 37.028  | 45.864  | 4049    |       |
| 4579  | 1.531 | 34.686   | 3.34   | 42.7   | 178.3 |      | 37.6 | 0.00 | 1.135 | 27.784   | 37.034  | 45.870  | 4662    |       |
| 5133  | 1.596 | 34.688   | 3.37   | 43.1   | 179.0 | 2.50 | 37.4 | 0.00 | 1.120 | 27.786   | 37.036  | 45.873  | 5233    |       |

# MARATHON 2 STA. 61



R V THOMAS WASHINGTON MARATHON LEG 11 STATION 52

| LATITUDE | LONGITUDE | MO/DY YR | START TIME | BUTTON | WIND DIR | SPEED | AIR TEMP | WFT BULB | BAROM |
|----------|-----------|----------|------------|--------|----------|-------|----------|----------|-------|
|          |           |          | GMT        | N      |          | KT    | DEG C    | FEET     | INB   |
| 43 21.0N | 152 0.4W  | 5/24/84  | 2148       | 4742   | 10       | 16    | 20.0     | 10.0     | 30.1  |

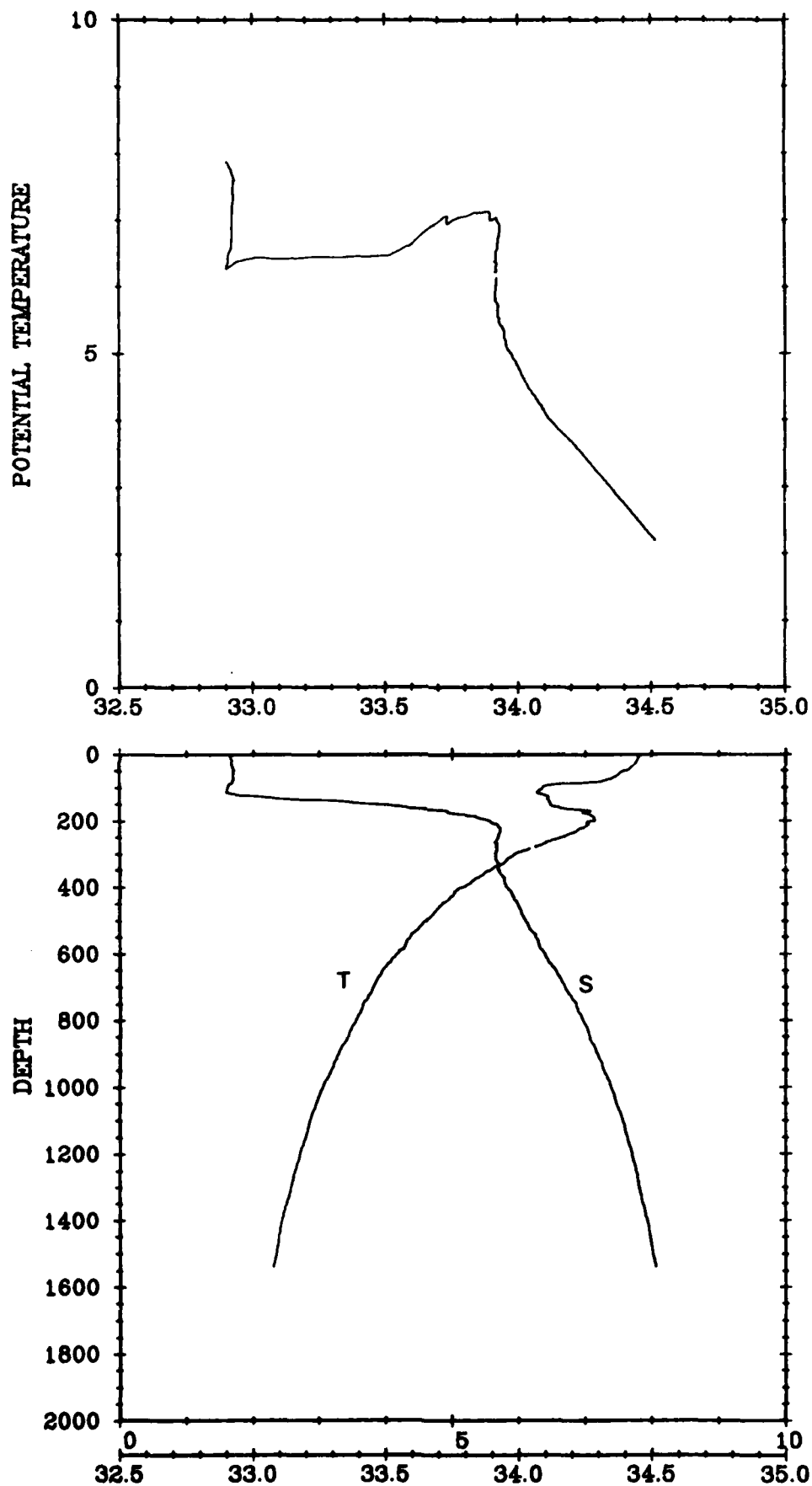
## STD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA 4 | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         | CT TUN  |            | M     |
| 0     | 7.822 | 32.911   | 7.822    | 25.659  | 34.547  | 43.139  | 232.242 | 1.000      | 0     |
| 20    | 7.665 | 32.913   | 7.753    | 25.673  | 34.613  | 43.158  | 231.139 | 1.046      | 19    |
| 40    | 7.675 | 32.926   | 7.672    | 25.642  | 34.611  | 43.194  | 229.670 | 1.092      | 39    |
| 60    | 7.532 | 32.927   | 7.496    | 25.718  | 34.671  | 43.226  | 227.191 | 1.138      | 59    |
| 80    | 7.150 | 32.924   | 7.143    | 25.745  | 34.713  | 43.155  | 223.228 | 1.183      | 79    |
| 100   | 6.402 | 32.907   | 6.393    | 25.810  | 34.854  | 43.450  | 215.251 | 1.227      | 99    |
| 120   | 6.102 | 33.432   | 6.489    | 26.252  | 35.241  | 43.837  | 177.976 | 1.265      | 119   |
| 140   | 5.100 | 33.893   | 7.081    | 26.528  | 35.435  | 44.046  | 152.740 | 1.418      | 139   |
| 160   | 6.641 | 33.923   | 6.619    | 26.622  | 35.500  | 44.181  | 144.176 | 1.482      | 159   |
| 180   | 5.948 | 33.913   | 5.943    | 26.713  | 35.713  | 44.125  | 137.119 | 1.552      | 179   |
| 200   | 5.554 | 33.926   | 5.525    | 26.752  | 35.731  | 44.424  | 131.697 | 1.620      | 199   |
| 220   | 5.155 | 33.936   | 5.123    | 26.813  | 35.894  | 44.532  | 125.130 | 1.684      | 219   |
| 240   | 4.863 | 33.996   | 4.828    | 26.899  | 35.961  | 44.625  | 119.140 | 1.745      | 239   |
| 260   | 4.622 | 34.126   | 4.684    | 26.970  | 35.026  | 44.699  | 114.408 | 1.814      | 259   |
| 280   | 4.193 | 34.196   | 4.149    | 27.052  | 35.149  | 44.842  | 105.625 | 1.914      | 279   |
| 300   | 3.823 | 34.171   | 3.773    | 27.151  | 35.247  | 44.577  | 95.887  | 1.916      | 299   |
| 320   | 3.561 | 34.239   | 3.525    | 27.210  | 35.358  | 45.030  | 89.617  | 1.918      | 319   |
| 340   | 3.303 | 34.293   | 3.241    | 27.249  | 35.440  | 45.174  | 81.198  | 1.915      | 339   |
| 360   | 3.074 | 34.344   | 3.006    | 27.341  | 35.514  | 45.259  | 74.757  | 1.915      | 359   |
| 380   | 2.873 | 34.388   | 2.799    | 27.415  | 35.578  | 45.333  | 62.900  | 1.915      | 379   |
| 400   | 2.717 | 34.422   | 2.616    | 27.456  | 35.629  | 45.391  | 59.239  | 1.922      | 399   |
| 420   | 2.535 | 34.455   | 2.498    | 27.490  | 35.657  | 45.438  | 56.448  | 1.929      | 419   |
| 440   | 2.490 | 34.479   | 2.357    | 27.525  | 35.711  | 45.487  | 61.112  | 1.954      | 439   |
| 460   | 2.355 | 34.501   | 2.255    | 27.551  | 35.743  | 45.524  | 60.907  | 1.916      | 459   |
| 480   | 2.295 | 34.515   | 2.191    | 27.548  | 35.752  | 45.546  | 59.448  | 1.948      | 479   |

## WATSKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIST | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 0     | 7.865 | 32.918   | 6.95 | 103.4  | 16.1  | 1.38 | 12.3 | 0.12 |       | 7.865    | 25.659  | 34.594  | 43.134  | 0     |
| 50    | 7.663 | 32.910   | 7.01 | 103.9  | 16.1  | 1.38 | 12.5 | 0.12 |       | 7.658    | 25.698  | 34.642  | 43.191  | 50    |
| 100   | 6.181 | 32.910   | 7.10 | 100.6  | 17.6  | 1.40 | 12.7 | 0.21 |       | 6.144    | 25.858  | 34.845  | 43.471  | 100   |
| 150   | 6.415 | 33.059   | 6.80 | 98.0   | 18.6  | 1.41 | 13.2 | 0.18 |       | 6.404    | 25.969  | 34.849  | 43.471  | 150   |
| 200   | 6.983 | 33.701   | 5.97 | 87.3   | 23.7  | 1.44 | 15.6 | 0.22 |       | 6.957    | 26.414  | 35.123  | 43.956  | 200   |
| 250   | 7.123 | 33.894   | 4.99 | 79.3   | 33.3  | 1.54 | 21.1 | 0.22 |       | 7.074    | 26.549  | 35.109  | 44.073  | 250   |
| 300   | 6.597 | 33.921   | 4.61 | 57.0   | 41.4  | 1.75 | 24.2 | 0.01 |       | 6.545    | 26.610  | 35.512  | 44.196  | 300   |
| 350   | 5.903 | 33.912   | 3.01 | 55.9   | 51.8  | 2.21 | 28.1 | 0.01 |       | 5.882    | 26.708  | 35.721  | 44.135  | 350   |
| 400   | 5.065 | 33.955   | 2.60 | 36.3   | 73.3  | 2.47 | 34.8 | 0.01 |       | 5.033    | 26.851  | 35.935  | 44.552  | 400   |
| 450   | 4.404 | 34.128   | 1.94 | 26.9   | 88.1  | 2.59 | 37.9 | 0.01 |       | 4.545    | 26.953  | 35.010  | 44.704  | 450   |
| 500   | 4.135 | 34.103   | 1.30 | 17.8   | 103.8 | 2.38 | 40.8 | 0.01 |       | 4.091    | 27.063  | 35.263  | 44.859  | 500   |
| 550   | 3.791 | 34.181   | 0.89 | 12.1   | 117.3 | 2.39 | 42.5 | 0.01 |       | 3.741    | 27.161  | 35.278  | 44.989  | 550   |
| 600   | 3.551 | 34.242   | 0.62 | 8.4    | 126.8 | 3.07 | 43.7 | 0.01 |       | 3.494    | 27.234  | 35.363  | 45.085  | 600   |
| 650   | 3.264 | 34.301   | 0.39 | 5.2    | 138.6 | 3.13 | 44.6 | 0.01 |       | 3.271    | 27.309  | 35.452  | 45.188  | 650   |
| 700   | 3.047 | 34.351   | 0.14 | 4.5    | 146.5 | 3.16 | 45.0 | 0.01 |       | 2.978    | 27.369  | 35.523  | 45.270  | 700   |
| 750   | 2.691 | 34.428   | 0.10 | 4.0    | 159.5 |      | 45.3 | 0.01 |       | 2.610    | 27.463  | 35.636  | 45.400  | 750   |
| 800   | 2.297 | 34.516   | 0.55 | 7.2    | 172.7 |      | 45.0 | 0.01 |       | 2.493    | 27.568  | 35.752  | 45.546  | 800   |

# MARATHON 2 STA. 62



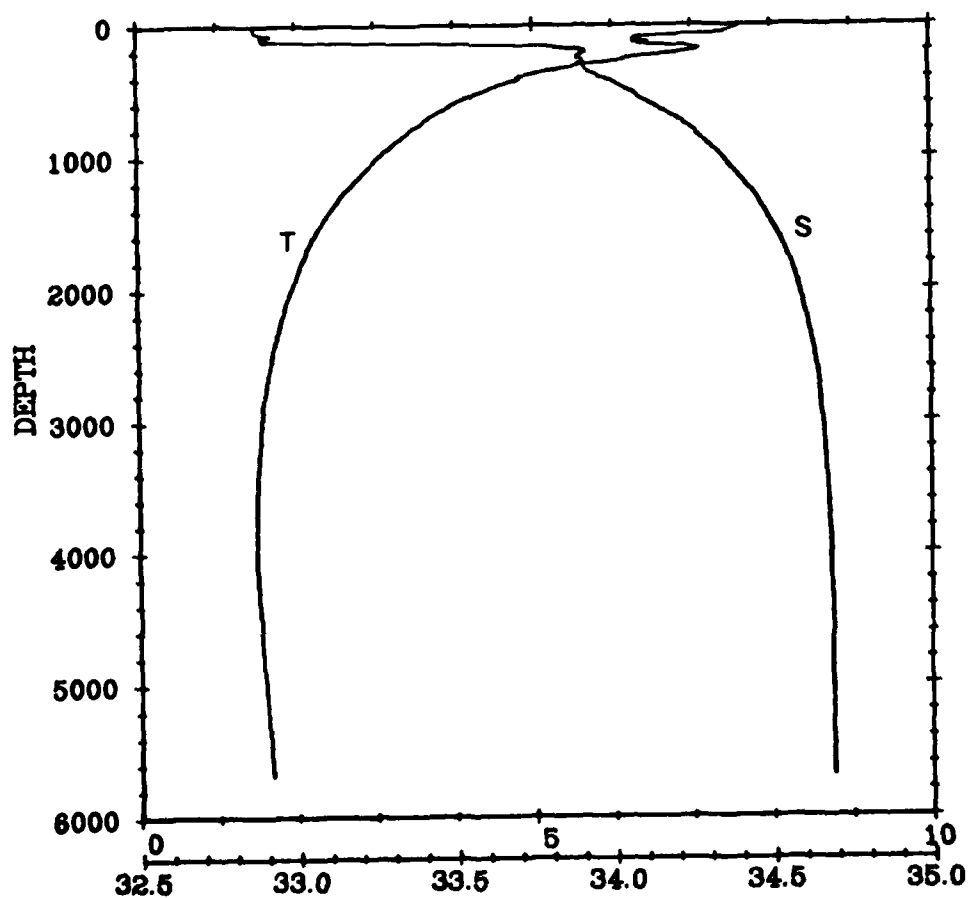
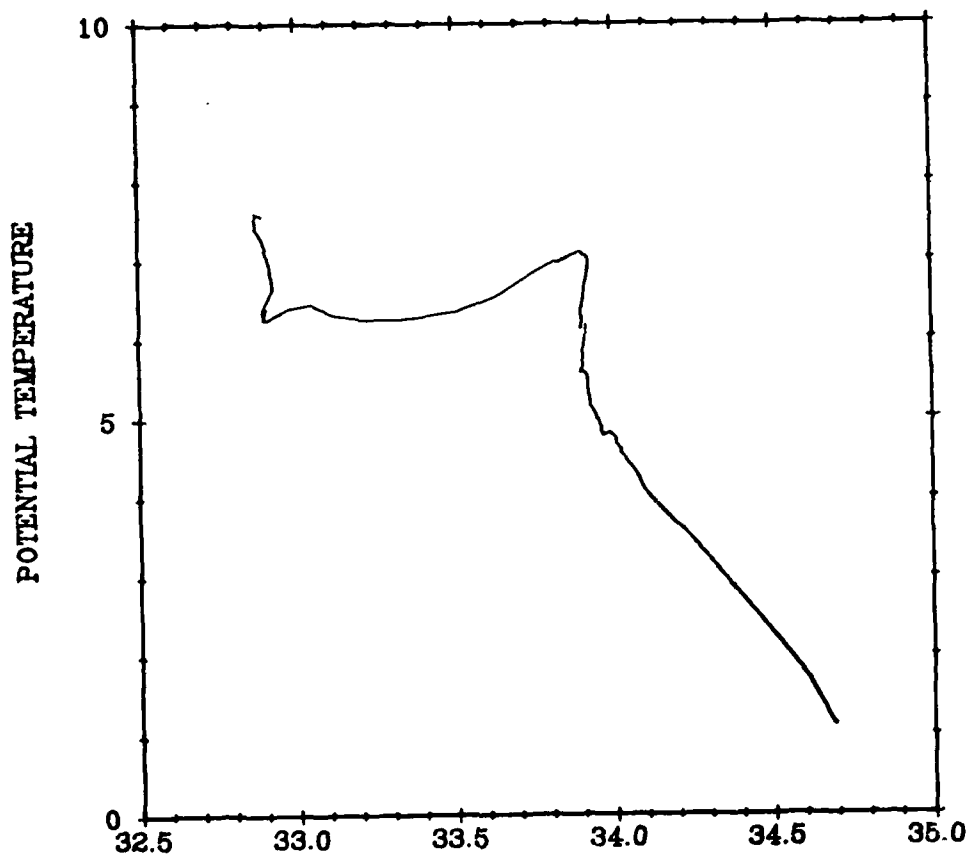
R/V THOMAS WASHINGTON MARATHON LED 11 STATION 61

LATITUDE LONGITUDE MO DY YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
43 49 TN 151 59 W 4/25/84 618 5639 20 12 2 2 5.1 1001.1

| DEPTH | PRESS | TEMP   | SALINITY | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA | DYNAMIC HT | DEPTH |
|-------|-------|--------|----------|----------|---------|---------|---------|-------|------------|-------|
| DB    | DEG C | DEG C  |          | DEG C    |         |         |         |       |            | M     |
| 1     | 7.519 | 32.973 | 7.519    | 25.660   | 34.610  | 43.190  | 232.100 | 1.000 |            | 1     |
| 2     | 7.532 | 32.969 | 7.530    | 25.661   | 34.610  | 43.193  | 232.224 | 0.046 |            | 19    |
| 4     | 7.476 | 32.971 | 7.472    | 25.678   | 34.631  | 43.190  | 232.941 | 0.091 |            | 79    |
| 6     | 7.122 | 32.985 | 7.116    | 25.710   | 34.671  | 43.216  | 228.129 | 0.139 |            | 59    |
| 8     | 6.754 | 32.969 | 6.747    | 25.806   | 34.793  | 43.393  | 219.251 | 0.183 |            | 79    |
| 10    | 6.326 | 32.995 | 6.319    | 25.851   | 34.859  | 43.468  | 215.242 | 0.227 |            | 99    |
| 12    | 6.456 | 33.544 | 6.493    | 26.342   | 35.332  | 43.923  | 169.436 | 0.323 |            | 149   |
| 14    | 7.228 | 33.914 | 7.010    | 26.562   | 35.522  | 44.256  | 149.465 | 0.403 |            | 179   |
| 16    | 6.271 | 33.895 | 6.249    | 26.648   | 35.645  | 44.243  | 141.517 | 0.475 |            | 199   |
| 18    | 5.955 | 33.900 | 5.940    | 26.728   | 35.754  | 44.379  | 134.405 | 0.544 |            | 219   |
| 20    | 5.238 | 33.904 | 5.190    | 26.802   | 35.849  | 44.496  | 127.738 | 0.612 |            | 249   |
| 22    | 4.845 | 33.964 | 4.814    | 26.875   | 35.941  | 44.504  | 121.017 | 0.672 |            | 279   |
| 24    | 4.646 | 34.017 | 4.612    | 26.939   | 36.015  | 44.595  | 115.274 | 0.731 |            | 299   |
| 26    | 4.421 | 34.053 | 4.394    | 26.991   | 36.079  | 44.761  | 110.506 | 0.789 |            | 319   |
| 28    | 4.010 | 34.121 | 3.957    | 27.090   | 36.197  | 44.898  | 101.720 | 0.894 |            | 339   |
| 30    | 3.703 | 34.195 | 3.664    | 27.181   | 36.302  | 45.016  | 93.660  | 0.991 |            | 359   |
| 32    | 3.466 | 34.255 | 3.410    | 27.252   | 36.385  | 45.110  | 87.108  | 1.090 |            | 379   |
| 34    | 3.266 | 34.300 | 3.204    | 27.309   | 36.451  | 45.197  | 82.472  | 1.167 |            | 399   |
| 36    | 3.066 | 34.343 | 2.999    | 27.361   | 36.505  | 45.260  | 77.743  | 1.247 |            | 419   |
| 38    | 2.913 | 34.379 | 2.838    | 27.404   | 36.556  | 45.319  | 74.018  | 1.323 |            | 439   |
| 40    | 2.747 | 34.415 | 2.666    | 27.448   | 36.618  | 45.382  | 70.189  | 1.395 |            | 459   |
| 42    | 2.592 | 34.450 | 2.505    | 27.490   | 36.669  | 45.437  | 66.326  | 1.463 |            | 479   |
| 44    | 2.469 | 34.474 | 2.375    | 27.520   | 36.708  | 45.480  | 63.596  | 1.528 |            | 499   |
| 46    | 2.332 | 34.498 | 2.252    | 27.549   | 36.741  | 45.522  | 61.094  | 1.591 |            | 519   |
| 48    | 2.244 | 34.521 | 2.137    | 27.577   | 36.775  | 45.561  | 59.616  | 1.650 |            | 539   |
| 50    | 2.151 | 34.541 | 2.037    | 27.601   | 36.804  | 45.595  | 58.316  | 1.709 |            | 559   |
| 52    | 2.077 | 34.557 | 1.956    | 27.620   | 36.827  | 45.622  | 57.924  | 1.764 |            | 579   |
| 54    | 2.011 | 34.571 | 1.891    | 27.637   | 36.848  | 45.646  | 57.527  | 1.818 |            | 599   |
| 56    | 1.949 | 34.584 | 1.813    | 27.653   | 36.867  | 45.669  | 57.229  | 1.871 |            | 619   |
| 58    | 1.890 | 34.596 | 1.747    | 27.668   | 36.885  | 45.691  | 57.015  | 1.922 |            | 639   |
| 60    | 1.839 | 34.606 | 1.687    | 27.680   | 36.901  | 45.709  | 56.814  | 1.973 |            | 659   |
| 62    | 1.795 | 34.616 | 1.626    | 27.692   | 36.916  | 45.727  | 56.611  | 2.022 |            | 679   |
| 64    | 1.741 | 34.623 | 1.574    | 27.702   | 36.929  | 45.743  | 56.457  | 2.071 |            | 699   |
| 66    | 1.690 | 34.632 | 1.516    | 27.714   | 36.944  | 45.761  | 56.282  | 2.119 |            | 719   |
| 68    | 1.639 | 34.639 | 1.475    | 27.722   | 36.954  | 45.773  | 56.153  | 2.166 |            | 739   |
| 70    | 1.622 | 34.644 | 1.431    | 27.729   | 36.964  | 45.785  | 56.158  | 2.212 |            | 759   |
| 72    | 1.598 | 34.648 | 1.398    | 27.735   | 36.971  | 45.794  | 56.154  | 2.258 |            | 779   |
| 74    | 1.574 | 34.651 | 1.365    | 27.741   | 36.980  | 45.804  | 56.167  | 2.304 |            | 799   |
| 76    | 1.555 | 34.657 | 1.337    | 27.747   | 36.986  | 45.812  | 56.211  | 2.349 |            | 819   |
| 78    | 1.537 | 34.661 | 1.310    | 27.752   | 36.993  | 45.820  | 56.261  | 2.394 |            | 839   |
| 80    | 1.529 | 34.663 | 1.292    | 27.755   | 36.997  | 45.825  | 56.298  | 2.439 |            | 859   |
| 82    | 1.514 | 34.666 | 1.268    | 27.759   | 37.002  | 45.832  | 56.337  | 2.484 |            | 879   |
| 84    | 1.504 | 34.668 | 1.248    | 27.762   | 37.005  | 45.837  | 56.374  | 2.529 |            | 899   |
| 86    | 1.489 | 34.672 | 1.223    | 27.767   | 37.012  | 45.844  | 56.389  | 2.574 |            | 919   |
| 88    | 1.482 | 34.674 | 1.206    | 27.770   | 37.015  | 45.849  | 56.409  | 2.618 |            | 939   |
| 90    | 1.476 | 34.676 | 1.190    | 27.772   | 37.020  | 45.853  | 56.441  | 2.663 |            | 959   |
| 92    | 1.475 | 34.678 | 1.179    | 27.775   | 37.023  | 45.857  | 56.471  | 2.708 |            | 979   |
| 94    | 1.473 | 34.680 | 1.166    | 27.777   | 37.025  | 45.861  | 56.492  | 2.753 |            | 999   |
| 96    | 1.474 | 34.681 | 1.156    | 27.778   | 37.028  | 45.865  | 56.516  | 2.798 |            | 1019  |
| 98    | 1.490 | 34.682 | 1.151    | 27.780   | 37.029  | 45.865  | 56.518  | 2.843 |            | 1039  |
| 100   | 1.494 | 34.683 | 1.143    | 27.781   | 37.031  | 45.867  | 56.568  | 2.889 |            | 1059  |
| 102   | 1.492 | 34.684 | 1.140    | 27.782   | 37.032  | 45.869  | 56.584  | 2.934 |            | 1079  |
| 104   | 1.500 | 34.685 | 1.136    | 27.783   | 37.034  | 45.870  | 56.600  | 2.980 |            | 1099  |
| 106   | 1.509 | 34.685 | 1.134    | 27.783   | 37.034  | 45.870  | 56.606  | 3.025 |            | 1119  |
| 108   | 1.520 | 34.685 | 1.133    | 27.783   | 37.034  | 45.870  | 56.646  | 3.073 |            | 1139  |
| 110   | 1.531 | 34.686 | 1.132    | 27.784   | 37.035  | 45.871  | 56.680  | 3.120 |            | 1159  |
| 112   | 1.542 | 34.686 | 1.130    | 27.784   | 37.035  | 45.872  | 56.719  | 3.168 |            | 1179  |
| 114   | 1.554 | 34.686 | 1.130    | 27.784   | 37.035  | 45.872  | 56.759  | 3.216 |            | 1199  |
| 116   | 1.565 | 34.686 | 1.128    | 27.784   | 37.035  | 45.872  | 56.799  | 3.265 |            | 1219  |
| 118   | 1.577 | 34.687 | 1.128    | 27.785   | 37.036  | 45.873  | 56.840  | 3.314 |            | 1239  |
| 120   | 1.589 | 34.687 | 1.127    | 27.785   | 37.036  | 45.873  | 56.880  | 3.363 |            | 1259  |
| 122   | 1.601 | 34.687 | 1.126    | 27.785   | 37.036  | 45.873  | 56.920  | 3.413 |            | 1279  |
| 124   | 1.614 | 34.687 | 1.126    | 27.785   | 37.036  | 45.873  | 56.960  | 3.463 |            | 1299  |
| 126   | 1.629 | 34.687 | 1.127    | 27.785   | 37.036  | 45.873  | 57.000  | 3.514 |            | 1319  |
| 128   | 1.641 | 34.687 | 1.126    | 27.785   | 37.036  | 45.873  | 57.040  | 3.566 |            | 1339  |
| 130   | 1.654 | 34.687 | 1.126    | 27.785   | 37.036  | 45.873  | 57.080  | 3.618 |            | 1359  |
| 132   | 1.666 | 34.687 | 1.124    | 27.785   | 37.037  | 45.873  | 57.120  | 3.670 |            | 1379  |
| 134   | 1.667 | 34.688 | 1.125    | 27.786   | 37.037  | 45.874  | 57.160  | 3.672 |            | 1399  |

| DEPTH | TEMP  | SALINITY | DIC O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TURBIN | DEG C    |         |         |         | DB    |
| 1     | 7.564 | 32.977   | 7.74   | 104.1  | 17.2  | 1.09 | 10.6 | 0.11 | 7.564  | 25.669   | 34.619  | 43.173  |         | 1     |
| 48    | 7.494 | 32.976   | 7.74   | 103.9  | 17.2  | 1.09 | 10.6 | 0.11 | 7.489  | 25.678   | 34.631  | 43.189  |         | 48    |
| 100   | 6.716 | 32.925   | 6.99   | 100.8  | 19.1  | 1.17 | 11.7 | 0.20 | 6.497  | 25.851   | 34.850  | 43.450  |         | 100   |
| 134   | 6.478 | 33.124   | 6.83   | 99.5   | 19.3  | 1.18 | 12.6 | 0.24 | 6.466  | 25.933   | 34.911  | 43.512  |         | 134   |
| 200   | 7.067 | 33.909   | 5.14   | 75.6   | 33.8  | 1.53 | 21.2 | 0.21 | 7.019  | 26.553   | 35.511  | 44.073  |         | 201   |
| 300   | 5.546 | 33.870   | 3.86   | 54.7   | 54.2  | 2.07 | 29.1 | 0.00 | 5.521  | 26.724   | 35.736  | 44.387  |         | 302   |
| 399   | 4.956 | 33.842   | 2.44   | 34.1   | 76.6  | 2.51 | 35.6 | 0.00 | 4.925  | 26.877   | 35.917  | 44.594  |         | 402   |
| 496   | 4.405 | 34.157   | 1.55   | 22.8   | 93.6  | 2.77 | 39.1 | 0.00 | 4.363  | 26.998   | 36.094  | 44.767  |         | 499   |
| 502   | 3.969 | 34.132   | 1.14   | 15.6   | 109.2 | 2.92 | 41.7 | 0.00 | 3.924  | 27.104   | 36.211  | 44.915  |         | 506   |
| 702   | 3.594 | 34.206   | 0.80   | 10.9   | 120.2 | 3.02 | 43.0 | 0.00 | 3.634  | 27.191   | 36.313  | 45.010  |         | 707   |
| 800   | 3.434 | 34.264   | 0.59   | 8.0    | 129.7 | 3.07 | 44.2 | 0.00 | 3.378  | 27.262   | 36.397  | 45.125  |         | 807   |
| 896   | 3.228 | 34.311   | 0.41   | 5.5    | 138.2 | 3.12 | 44.7 | 0.00 | 3.166  | 27.320   | 36.468  | 45.252  |         | 894   |
| 995   | 3.025 | 34.359   | 0.33   | 4.4    | 148.2 | 3.16 | 45.1 | 0.00 | 2.917  | 27.379   | 36.536  | 45.384  |         | 994   |
| 1244  | 2.641 | 34.442   | 0.12   | 4.2    | 160.7 | 3.17 | 45.4 | 0.00 | 2.557  | 27.479   | 36.634  | 45.422  |         | 1254  |
| 1492  | 2.345 | 34.503   | 0.09   | 6.4    | 170.3 | 3.14 | 45.2 | 0.00 | 2.244  | 27.554   | 36.745  | 45.527  |         | 1506  |
| 1749  | 2.125 | 34.550   | 0.01   | 10.4   | 175.8 | 3.17 | 44.5 | 0.00 | 2.006  | 27.611   | 36.814  | 45.607  |         | 1768  |
| 1991  | 1.957 | 34.585   | 1.18   | 13.3   | 179.5 | 3.00 | 43.5 | 0.00 | 1.920  | 27.653   | 36.857  | 45.668  |         | 2014  |
| 2485  | 1.709 | 34.631   | 1.93   | 24.9   | 180.0 | 2.97 | 41.4 | 0.00 | 1.692  | 27.712   | 36.940  | 45.757  |         | 2517  |
| 2988  | 1.559 | 34.659   | 2.60   | 33.4   | 180.6 | 2.73 | 39.4 | 0.00 | 1.337  | 27.748   | 36.998  | 45.813  |         | 3031  |
| 3494  | 1.495 | 34.675   | 3.08   | 39.4   | 170.1 | 2.65 | 38.2 | 0.00 | 1.215  | 27.770   | 37.015  | 45.848  |         | 3518  |
| 3972  | 1.475 | 34.683   | 3.12   | 42.5   | 170.4 | 2.59 | 37.6 | 0.00 | 1.153  | 27.780   | 37.030  | 45.865  |         | 4038  |
| 4464  | 1.514 | 34.685   | 3.14   | 42.7   | 171.1 |      | 37.5 | 0.00 | 1.133  | 27.783   | 37.033  | 45.870  |         | 4544  |
| 4948  | 1.570 | 34.686   | 3.18   | 43.2   | 172.9 |      | 37.3 | 0.00 | 1.128  | 27.784   | 37.035  | 45.872  |         | 5042  |
| 5684  | 1.667 | 34.687   | 3.19   | 43.3   | 174.2 | 2.59 | 37.4 | 0.00 | 1.125  | 27.785   | 37.036  | 45.873  |         | 5802  |

# MARATHON 2 STA. 63



LATITUDE 11 45 N LONGITUDE 112 10 W MO DY YR 1 25 84 START TIME 1112 BOTTOM M 5095 WIND DIR 170 SPEED 2 KT AIR TEMP DEG C 12 WET BULB DEG C 6.1 BAROM 1023.0

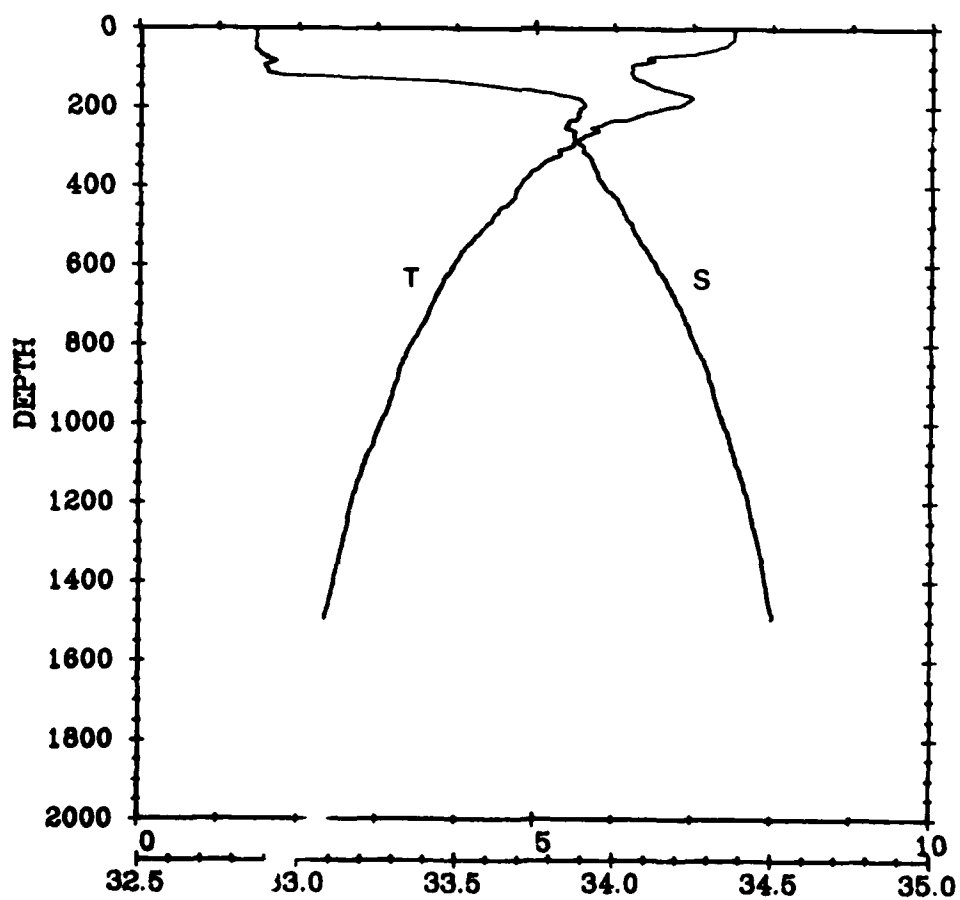
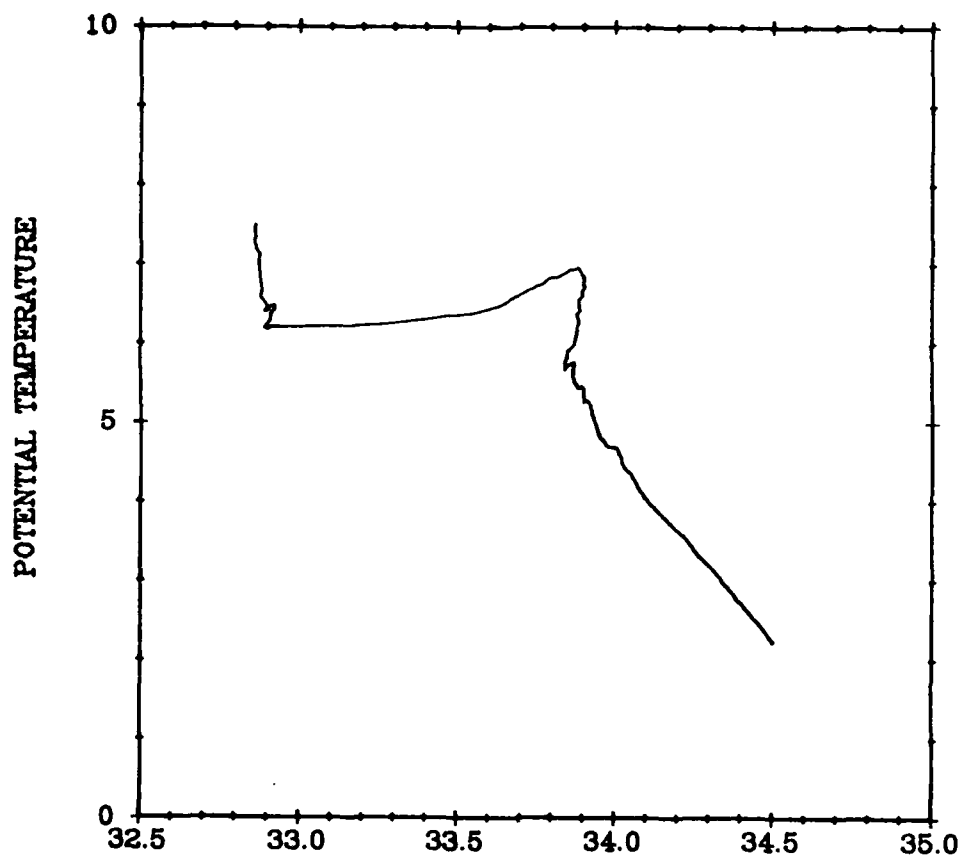
STD DATA

| PRESS DB | TEMP DEG C | SALINITY | POT TEMP DEG C | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH M |
|----------|------------|----------|----------------|---------|---------|---------|---------|------------|---------|
| 1        | 7.496      | 32.962   | 7.496          | 25.667  | 34.520  | 43.177  | 211.314 | 0.000      | 0       |
| 20       | 7.497      | 32.961   | 7.495          | 25.668  | 34.521  | 43.178  | 211.316 | 0.046      | 19      |
| 40       | 7.421      | 32.961   | 7.417          | 25.677  | 34.534  | 43.195  | 210.956 | 0.193      | 39      |
| 60       | 7.193      | 32.970   | 7.179          | 25.731  | 34.703  | 43.279  | 225.121 | 0.138      | 59      |
| 80       | 6.482      | 32.905   | 6.475          | 25.838  | 34.838  | 43.447  | 225.147 | 0.182      | 79      |
| 100      | 6.231      | 32.995   | 6.225          | 25.863  | 34.875  | 43.489  | 224.108 | 0.225      | 99      |
| 120      | 6.517      | 33.527   | 6.514          | 26.404  | 35.391  | 43.982  | 163.107 | 0.320      | 119     |
| 140      | 6.715      | 33.996   | 6.697          | 26.590  | 35.565  | 44.143  | 146.665 | 0.357      | 139     |
| 160      | 6.791      | 33.948   | 6.770          | 26.671  | 35.691  | 44.311  | 119.224 | 0.469      | 159     |
| 180      | 6.407      | 33.993   | 6.403          | 26.750  | 35.787  | 44.423  | 132.135 | 0.537      | 179     |
| 200      | 6.167      | 33.933   | 6.140          | 26.825  | 35.880  | 44.512  | 125.136 | 0.601      | 199     |
| 220      | 4.795      | 33.964   | 4.765          | 26.880  | 35.949  | 44.614  | 121.455 | 0.663      | 219     |
| 240      | 4.615      | 34.016   | 4.595          | 26.944  | 36.028  | 44.697  | 118.140 | 0.741      | 239     |
| 260      | 4.384      | 34.050   | 4.347          | 26.994  | 36.082  | 44.766  | 115.114 | 0.779      | 259     |
| 280      | 3.969      | 34.128   | 3.926          | 27.130  | 36.208  | 44.912  | 110.745 | 0.883      | 279     |
| 300      | 3.545      | 34.198   | 3.446          | 27.184  | 36.305  | 45.021  | 103.114 | 0.980      | 299     |
| 320      | 3.449      | 34.254   | 3.393          | 27.253  | 36.387  | 45.104  | 97.196  | 1.071      | 319     |
| 340      | 3.240      | 34.303   | 3.179          | 27.312  | 36.457  | 45.194  | 91.965  | 1.155      | 339     |
| 360      | 3.161      | 34.341   | 2.993          | 27.360  | 36.514  | 45.260  | 87.887  | 1.235      | 359     |
| 380      | 2.950      | 34.394   | 2.786          | 27.413  | 36.577  | 45.333  | 83.164  | 1.311      | 379     |
| 400      | 2.690      | 34.425   | 2.610          | 27.461  | 36.634  | 45.398  | 69.718  | 1.381      | 399     |
| 420      | 2.575      | 34.450   | 2.489          | 27.492  | 36.671  | 45.441  | 66.174  | 1.449      | 419     |
| 440      | 2.470      | 34.477   | 2.365          | 27.521  | 36.709  | 45.484  | 63.161  | 1.514      | 439     |
| 460      | 2.342      | 34.500   | 2.242          | 27.552  | 36.744  | 45.525  | 60.833  | 1.576      | 459     |
| 480      | 2.128      | 34.500   | 2.227          | 27.553  | 36.746  | 45.528  | 60.731  | 1.583      | 479     |

WICKIN BOTTLE DATA

| DEPTH M | TEMP DEG C | SALINITY | DIST 02 | 02 SAT | SIG03 | P04  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS DB |
|---------|------------|----------|---------|--------|-------|------|------|------|-------|----------|---------|---------|---------|----------|
| 2       | 7.464      | 32.968   | 7.02    | 103.5  | 17.3  | 1.14 | 11.1 | 0.11 | 4.46  | 7.464    | 25.676  | 34.430  | 43.189  | 2        |
| 49      | 7.196      | 32.963   | 7.04    | 103.6  | 17.0  | 1.14 | 11.0 | 0.11 |       | 7.196    | 25.684  | 34.442  | 43.204  | 49       |
| 101     | 6.344      | 32.910   | 7.01    | 100.7  | 18.0  | 1.21 | 12.1 | 0.20 |       | 6.333    | 25.950  | 34.867  | 43.475  | 101      |
| 153     | 6.169      | 32.941   | 6.99    | 100.0  | 18.4  | 1.24 | 12.8 | 0.22 | 4.11  | 6.157    | 25.899  | 34.914  | 43.530  | 153      |
| 205     | 6.124      | 33.519   | 5.92    | 105.8  | 25.5  | 1.39 | 18.1 | 0.02 |       | 6.507    | 25.412  | 35.410  | 43.991  | 205      |
| 257     | 6.977      | 33.901   | 5.08    | 74.4   | 35.2  | 1.59 | 22.1 | 0.02 |       | 6.979    | 26.574  | 35.541  | 44.101  | 257      |
| 289     | 5.870      | 33.948   | 4.69    | 67.0   | 44.2  | 1.84 | 25.5 | 0.00 |       | 5.849    | 26.561  | 35.577  | 44.294  | 289      |
| 341     | 5.477      | 33.993   | 3.72    | 52.7   | 55.4  | 2.12 | 29.9 | 0.00 |       | 5.403    | 26.737  | 35.772  | 44.405  | 341      |
| 393     | 4.820      | 33.959   | 2.41    | 33.6   | 76.9  | 2.54 | 35.3 | 0.00 | 2.35  | 4.789    | 26.874  | 35.940  | 44.505  | 393      |
| 445     | 4.416      | 34.054   | 1.63    | 23.2   | 94.1  | 2.76 | 39.6 | 0.00 | 1.66  | 4.369    | 26.995  | 36.182  | 44.564  | 445      |
| 497     | 3.997      | 34.127   | 1.19    | 16.1   | 108.5 | 2.91 | 41.8 | 0.00 | 1.51  | 3.944    | 27.047  | 36.205  | 44.607  | 497      |
| 549     | 3.704      | 34.194   | 0.87    | 11.8   | 119.5 | 3.00 | 43.0 | 0.00 | 0.64  | 3.667    | 27.179  | 36.300  | 44.615  | 549      |
| 601     | 3.460      | 34.256   | 0.65    | 8.8    | 130.0 | 3.07 | 44.0 | 0.00 | 0.19  | 3.404    | 27.253  | 36.387  | 44.613  | 601      |
| 653     | 3.247      | 34.305   | 0.50    | 6.7    | 138.2 | 3.11 | 44.7 | 0.00 | -0.05 | 3.183    | 27.313  | 36.458  | 44.615  | 653      |
| 705     | 3.179      | 34.341   | 0.41    | 5.5    | 144.7 | 3.13 | 45.0 | 0.00 | -0.06 | 3.011    | 27.358  | 36.511  | 44.625  | 705      |
| 757     | 2.667      | 34.435   | 0.31    | 4.1    | 162.1 |      | 45.7 | 0.00 |       | 2.679    | 27.471  | 36.646  | 44.621  | 757      |
| 809     | 2.327      | 34.505   | 0.49    | 6.4    | 172.9 |      | 45.4 | 0.00 |       | 2.226    | 27.557  | 36.750  | 44.531  | 809      |

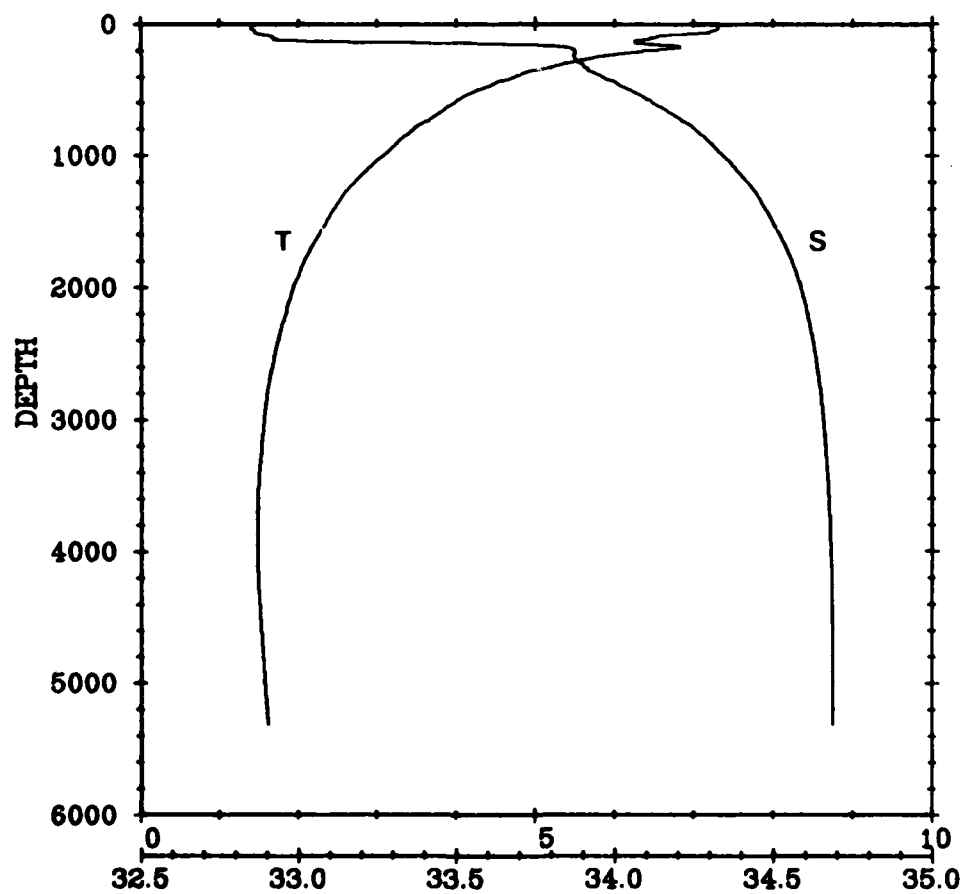
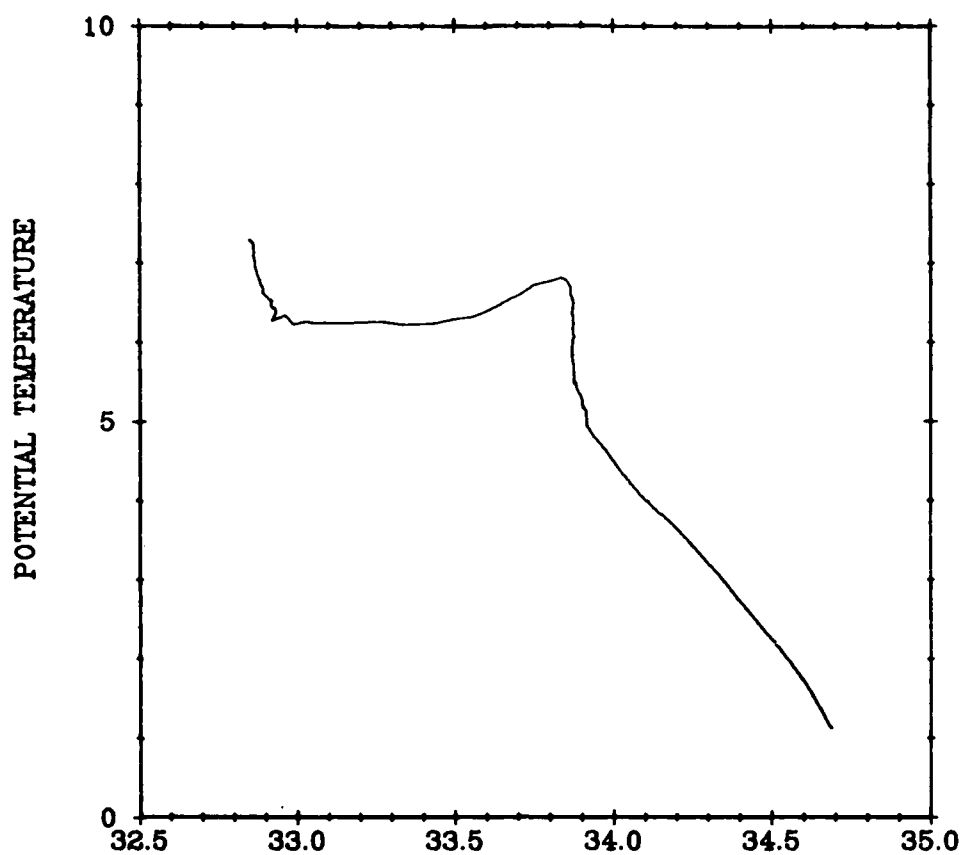
# MARATHON 2 STA. 64



| STATION | DATE | TIME    | TEMP    | SALINITY | POT TEMP | SIGMA T | SIGMA T | SIGMA T  | SIGMA T | DYNAMIC HT | DEPTH |
|---------|------|---------|---------|----------|----------|---------|---------|----------|---------|------------|-------|
| NO      |      | CELS    | CELS    |          | CELS     |         |         |          |         |            | M     |
| 41      | 1994 | 12 39.1 | 12 39.1 | 35.934   | 27 39.6  | 34 59.5 | 43 21.7 | 229 17.5 | 1 710   |            |       |
| 42      | 1994 | 12 39.2 | 12 39.2 | 35.930   | 27 39.0  | 34 59.4 | 43 21.1 | 229 16.1 | 1 746   |            | 19    |
| 43      | 1994 | 12 39.3 | 12 39.4 | 35.928   | 27 38.5  | 34 59.3 | 43 20.9 | 229 15.0 | 1 782   |            | 19    |
| 44      | 1994 | 12 39.4 | 12 39.5 | 35.925   | 27 38.0  | 34 59.2 | 43 20.4 | 229 13.2 | 1 818   |            | 19    |
| 45      | 1994 | 12 39.5 | 12 39.6 | 35.921   | 27 37.6  | 34 59.1 | 43 20.0 | 229 12.0 | 1 854   |            | 19    |
| 46      | 1994 | 12 39.6 | 12 39.7 | 35.918   | 27 37.2  | 34 59.0 | 43 19.6 | 229 10.8 | 1 890   |            | 19    |
| 47      | 1994 | 12 39.7 | 12 39.8 | 35.914   | 27 36.8  | 34 58.9 | 43 19.2 | 229 9.6  | 1 926   |            | 19    |
| 48      | 1994 | 12 39.8 | 12 39.9 | 35.911   | 27 36.4  | 34 58.8 | 43 18.8 | 229 8.4  | 1 962   |            | 19    |
| 49      | 1994 | 12 39.9 | 12 40.0 | 35.907   | 27 36.0  | 34 58.7 | 43 18.4 | 229 7.2  | 1 998   |            | 19    |
| 50      | 1994 | 12 40.0 | 12 40.1 | 35.904   | 27 35.6  | 34 58.6 | 43 18.0 | 229 6.0  | 2 034   |            | 19    |
| 51      | 1994 | 12 40.1 | 12 40.2 | 35.901   | 27 35.2  | 34 58.5 | 43 17.6 | 229 4.8  | 2 070   |            | 19    |
| 52      | 1994 | 12 40.2 | 12 40.3 | 35.897   | 27 34.8  | 34 58.4 | 43 17.2 | 229 3.6  | 2 106   |            | 19    |
| 53      | 1994 | 12 40.3 | 12 40.4 | 35.894   | 27 34.4  | 34 58.3 | 43 16.8 | 229 2.4  | 2 142   |            | 19    |
| 54      | 1994 | 12 40.4 | 12 40.5 | 35.891   | 27 34.0  | 34 58.2 | 43 16.4 | 229 1.2  | 2 178   |            | 19    |
| 55      | 1994 | 12 40.5 | 12 40.6 | 35.887   | 27 33.6  | 34 58.1 | 43 16.0 | 229 0.0  | 2 214   |            | 19    |
| 56      | 1994 | 12 40.6 | 12 40.7 | 35.884   | 27 33.2  | 34 58.0 | 43 15.6 | 228 9.6  | 2 250   |            | 19    |
| 57      | 1994 | 12 40.7 | 12 40.8 | 35.881   | 27 32.8  | 34 57.9 | 43 15.2 | 228 8.4  | 2 286   |            | 19    |
| 58      | 1994 | 12 40.8 | 12 40.9 | 35.877   | 27 32.4  | 34 57.8 | 43 14.8 | 228 7.2  | 2 322   |            | 19    |
| 59      | 1994 | 12 40.9 | 12 41.0 | 35.874   | 27 32.0  | 34 57.7 | 43 14.4 | 228 6.0  | 2 358   |            | 19    |
| 60      | 1994 | 12 41.0 | 12 41.1 | 35.871   | 27 31.6  | 34 57.6 | 43 14.0 | 228 4.8  | 2 394   |            | 19    |
| 61      | 1994 | 12 41.1 | 12 41.2 | 35.867   | 27 31.2  | 34 57.5 | 43 13.6 | 228 3.6  | 2 430   |            | 19    |
| 62      | 1994 | 12 41.2 | 12 41.3 | 35.864   | 27 30.8  | 34 57.4 | 43 13.2 | 228 2.4  | 2 466   |            | 19    |
| 63      | 1994 | 12 41.3 | 12 41.4 | 35.861   | 27 30.4  | 34 57.3 | 43 12.8 | 228 1.2  | 2 502   |            | 19    |
| 64      | 1994 | 12 41.4 | 12 41.5 | 35.858   | 27 30.0  | 34 57.2 | 43 12.4 | 228 0.0  | 2 538   |            | 19    |
| 65      | 1994 | 12 41.5 | 12 41.6 | 35.854   | 27 29.6  | 34 57.1 | 43 12.0 | 227 9.6  | 2 574   |            | 19    |
| 66      | 1994 | 12 41.6 | 12 41.7 | 35.851   | 27 29.2  | 34 57.0 | 43 11.6 | 227 8.4  | 2 610   |            | 19    |
| 67      | 1994 | 12 41.7 | 12 41.8 | 35.848   | 27 28.8  | 34 56.9 | 43 11.2 | 227 7.2  | 2 646   |            | 19    |
| 68      | 1994 | 12 41.8 | 12 41.9 | 35.844   | 27 28.4  | 34 56.8 | 43 10.8 | 227 6.0  | 2 682   |            | 19    |
| 69      | 1994 | 12 41.9 | 12 42.0 | 35.841   | 27 28.0  | 34 56.7 | 43 10.4 | 227 4.8  | 2 718   |            | 19    |
| 70      | 1994 | 12 42.0 | 12 42.1 | 35.838   | 27 27.6  | 34 56.6 | 43 10.0 | 227 3.6  | 2 754   |            | 19    |
| 71      | 1994 | 12 42.1 | 12 42.2 | 35.834   | 27 27.2  | 34 56.5 | 43 09.6 | 227 2.4  | 2 790   |            | 19    |
| 72      | 1994 | 12 42.2 | 12 42.3 | 35.831   | 27 26.8  | 34 56.4 | 43 09.2 | 227 1.2  | 2 826   |            | 19    |
| 73      | 1994 | 12 42.3 | 12 42.4 | 35.827   | 27 26.4  | 34 56.3 | 43 08.8 | 227 0.0  | 2 862   |            | 19    |
| 74      | 1994 | 12 42.4 | 12 42.5 | 35.824   | 27 26.0  | 34 56.2 | 43 08.4 | 226 9.6  | 2 898   |            | 19    |
| 75      | 1994 | 12 42.5 | 12 42.6 | 35.821   | 27 25.6  | 34 56.1 | 43 08.0 | 226 8.4  | 2 934   |            | 19    |
| 76      | 1994 | 12 42.6 | 12 42.7 | 35.817   | 27 25.2  | 34 56.0 | 43 07.6 | 226 7.2  | 2 970   |            | 19    |
| 77      | 1994 | 12 42.7 | 12 42.8 | 35.814   | 27 24.8  | 34 55.9 | 43 07.2 | 226 6.0  | 3 006   |            | 19    |
| 78      | 1994 | 12 42.8 | 12 42.9 | 35.811   | 27 24.4  | 34 55.8 | 43 06.8 | 226 4.8  | 3 042   |            | 19    |
| 79      | 1994 | 12 42.9 | 12 43.0 | 35.807   | 27 24.0  | 34 55.7 | 43 06.4 | 226 3.6  | 3 078   |            | 19    |
| 80      | 1994 | 12 43.0 | 12 43.1 | 35.804   | 27 23.6  | 34 55.6 | 43 06.0 | 226 2.4  | 3 114   |            | 19    |
| 81      | 1994 | 12 43.1 | 12 43.2 | 35.801   | 27 23.2  | 34 55.5 | 43 05.6 | 226 1.2  | 3 150   |            | 19    |
| 82      | 1994 | 12 43.2 | 12 43.3 | 35.797   | 27 22.8  | 34 55.4 | 43 05.2 | 226 0.0  | 3 186   |            | 19    |
| 83      | 1994 | 12 43.3 | 12 43.4 | 35.794   | 27 22.4  | 34 55.3 | 43 04.8 | 225 9.6  | 3 222   |            | 19    |
| 84      | 1994 | 12 43.4 | 12 43.5 | 35.791   | 27 22.0  | 34 55.2 | 43 04.4 | 225 8.4  | 3 258   |            | 19    |
| 85      | 1994 | 12 43.5 | 12 43.6 | 35.787   | 27 21.6  | 34 55.1 | 43 04.0 | 225 7.2  | 3 294   |            | 19    |
| 86      | 1994 | 12 43.6 | 12 43.7 | 35.784   | 27 21.2  | 34 55.0 | 43 03.6 | 225 6.0  | 3 330   |            | 19    |
| 87      | 1994 | 12 43.7 | 12 43.8 | 35.781   | 27 20.8  | 34 54.9 | 43 03.2 | 225 4.8  | 3 366   |            | 19    |
| 88      | 1994 | 12 43.8 | 12 43.9 | 35.777   | 27 20.4  | 34 54.8 | 43 02.8 | 225 3.6  | 3 402   |            | 19    |
| 89      | 1994 | 12 43.9 | 12 44.0 | 35.774   | 27 20.0  | 34 54.7 | 43 02.4 | 225 2.4  | 3 438   |            | 19    |
| 90      | 1994 | 12 44.0 | 12 44.1 | 35.771   | 27 19.6  | 34 54.6 | 43 02.0 | 225 1.2  | 3 474   |            | 19    |
| 91      | 1994 | 12 44.1 | 12 44.2 | 35.767   | 27 19.2  | 34 54.5 | 43 01.6 | 225 0.0  | 3 510   |            | 19    |
| 92      | 1994 | 12 44.2 | 12 44.3 | 35.764   | 27 18.8  | 34 54.4 | 43 01.2 | 224 9.6  | 3 546   |            | 19    |
| 93      | 1994 | 12 44.3 | 12 44.4 | 35.761   | 27 18.4  | 34 54.3 | 43 00.8 | 224 8.4  | 3 582   |            | 19    |
| 94      | 1994 | 12 44.4 | 12 44.5 | 35.758   | 27 18.0  | 34 54.2 | 43 00.4 | 224 7.2  | 3 618   |            | 19    |
| 95      | 1994 | 12 44.5 | 12 44.6 | 35.754   | 27 17.6  | 34 54.1 | 43 00.0 | 224 6.0  | 3 654   |            | 19    |
| 96      | 1994 | 12 44.6 | 12 44.7 | 35.751   | 27 17.2  | 34 54.0 | 43 00.0 | 224 4.8  | 3 690   |            | 19    |
| 97      | 1994 | 12 44.7 | 12 44.8 | 35.748   | 27 16.8  | 34 53.9 | 43 00.0 | 224 3.6  | 3 726   |            | 19    |
| 98      | 1994 | 12 44.8 | 12 44.9 | 35.744   | 27 16.4  | 34 53.8 | 43 00.0 | 224 2.4  | 3 762   |            | 19    |
| 99      | 1994 | 12 44.9 | 12 45.0 | 35.741   | 27 16.0  | 34 53.7 | 43 00.0 | 224 1.2  | 3 798   |            | 19    |
| 100     | 1994 | 12 45.0 | 12 45.1 | 35.738   | 27 15.6  | 34 53.6 | 43 00.0 | 224 0.0  | 3 834   |            | 19    |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |       |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SI03  | P04  | N03  | N02  | TRIT  | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TU/IN | DEG C    |         |         |         | DB    |
| 1                  | 19.99  | 32.961   | 7.04   | 103.7  | 1.17  | 1.15 | 11.2 | 0.12 |       | 19.99    | 25.681  | 34.637  | 43.199  | 1     |
| 51                 | 19.246 | 32.966   | 7.05   | 103.4  | 1.17  | 1.16 | 11.2 | 0.12 |       | 19.241   | 25.705  | 34.670  | 43.219  | 51    |
| 101                | 19.161 | 32.935   | 7.06   | 100.7  | 1.18  | 1.16 | 12.7 | 0.13 |       | 19.161   | 25.692  | 34.923  | 43.195  | 101   |
| 151                | 19.254 | 33.469   | 6.24   | 89.9   | 2.21  | 1.14 | 14.9 | 0.02 |       | 19.242   | 26.113  | 35.315  | 43.920  | 145   |
| 192                | 19.584 | 33.874   | 5.10   | 74.3   | 3.47  | 1.42 | 22.9 | 0.01 |       | 19.587   | 26.577  | 35.563  | 44.133  | 143   |
| 234                | 19.197 | 33.894   | 3.49   | 49.3   | 56.9  | 2.20 | 33.8 | 0.01 |       | 19.193   | 26.133  | 35.794  | 44.412  | 239   |
| 191                | 19.161 | 33.957   | 2.32   | 32.3   | 7.7   | 2.57 | 36.5 | 0.00 |       | 19.160   | 26.974  | 35.948  | 44.616  | 193   |
| 171                | 19.359 | 34.135   | 1.68   | 23.2   | 9.3   | 2.37 | 39.5 | 0.00 |       | 19.353   | 26.985  | 36.074  | 44.761  | 171   |
| 131                | 19.479 | 34.122   | 1.14   | 16.6   | 176.9 | 2.93 | 41.7 | 0.00 |       | 19.475   | 27.094  | 36.202  | 44.925  | 131   |
| 114                | 19.743 | 34.199   | 0.87   | 11.8   | 118.0 | 3.00 | 42.6 | 0.00 |       | 19.743   | 27.172  | 36.291  | 45.005  | 114   |
| 102                | 19.819 | 34.263   | 0.59   | 8.7    | 110.0 | 3.07 | 43.8 | 0.00 |       | 19.819   | 27.261  | 36.346  | 45.123  | 102   |
| 101                | 19.263 | 34.372   | 0.50   | 6.7    | 115.9 | 3.08 | 44.3 | 0.00 |       | 19.262   | 27.109  | 36.452  | 45.199  | 101   |
| 105                | 19.112 | 34.361   | 0.34   | 4.5    | 145.6 | 3.13 | 45.0 | 0.00 |       | 19.112   | 27.181  | 36.536  | 45.284  | 105   |
| 1239               | 19.248 | 34.442   | 0.36   | 4.8    | 139.7 | 3.14 | 45.2 | 0.00 |       | 19.244   | 27.490  | 36.656  | 45.481  | 1231  |
| 1494               | 19.135 | 34.526   | 0.30   | 6.6    | 111.3 | 3.12 | 45.2 | 0.00 |       | 19.135   | 27.755  | 36.749  | 45.711  | 1491  |
| 1711               | 19.174 | 34.574   | 0.82   | 1.7    | 107.9 | 3.12 | 44.4 | 0.00 |       | 19.174   | 27.671  | 36.829  | 45.823  | 1711  |
| 2016               | 19.192 | 34.594   | 1.26   | 1.6    | 119.3 | 2.92 | 43.2 | 0.00 |       | 19.192   | 27.664  | 36.920  | 45.894  | 2016  |
| 2417               | 19.594 | 34.634   | 1.96   | 25.3   | 191.7 | 2.92 | 41.4 | 0.00 |       | 19.587   | 27.715  | 36.945  | 45.762  | 2415  |
| 2711               | 19.551 | 34.659   | 2.65   | 34.0   | 1.75  | 2.77 | 39.5 | 0.00 |       | 19.550   | 27.749  | 36.989  | 45.915  | 2710  |
| 1976               | 19.486 | 34.675   | 1.88   | 39.4   | 169.4 | 2.60 | 39.2 | 0.00 |       | 19.487   | 27.669  | 37.015  | 45.947  | 1976  |
| 1414               | 19.477 | 34.692   | 3.33   | 42.6   | 171.2 | 2.55 | 37.5 | 0.00 |       | 19.477   | 27.780  | 37.029  | 45.967  | 1412  |
| 1444               | 19.513 | 34.696   | 3.33   | 42.6   |       |      | 37.6 | 0.00 |       | 19.513   | 27.784  | 37.034  | 45.971  | 1444  |
| 1414               | 19.564 | 34.696   | 3.37   | 43.1   | 174.9 |      | 37.4 | 0.00 |       | 19.564   | 27.783  | 37.035  | 45.972  | 1412  |
| 3305               | 19.511 | 34.689   | 3.41   | 43.6   | 175.2 | 2.33 | 37.4 | 0.00 |       | 19.512   | 27.786  | 37.037  | 45.974  | 3305  |

# MARATHON 2 STA. 65



R. V. THOMAS WASHINGTON MARATHON LEG 11 STATION 44

| LATITUDE | LONGITUDE | MO-DY-YR | START TIME | BOTTLE | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 44 12.4N | 171 59.3W | 4 25 84  | 2112       | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 44 12.4N | 171 59.3W | 4 25 84  | 2112       | 1299   | 170  | 10    | 10.0     | 9.9      | 1022.0 |

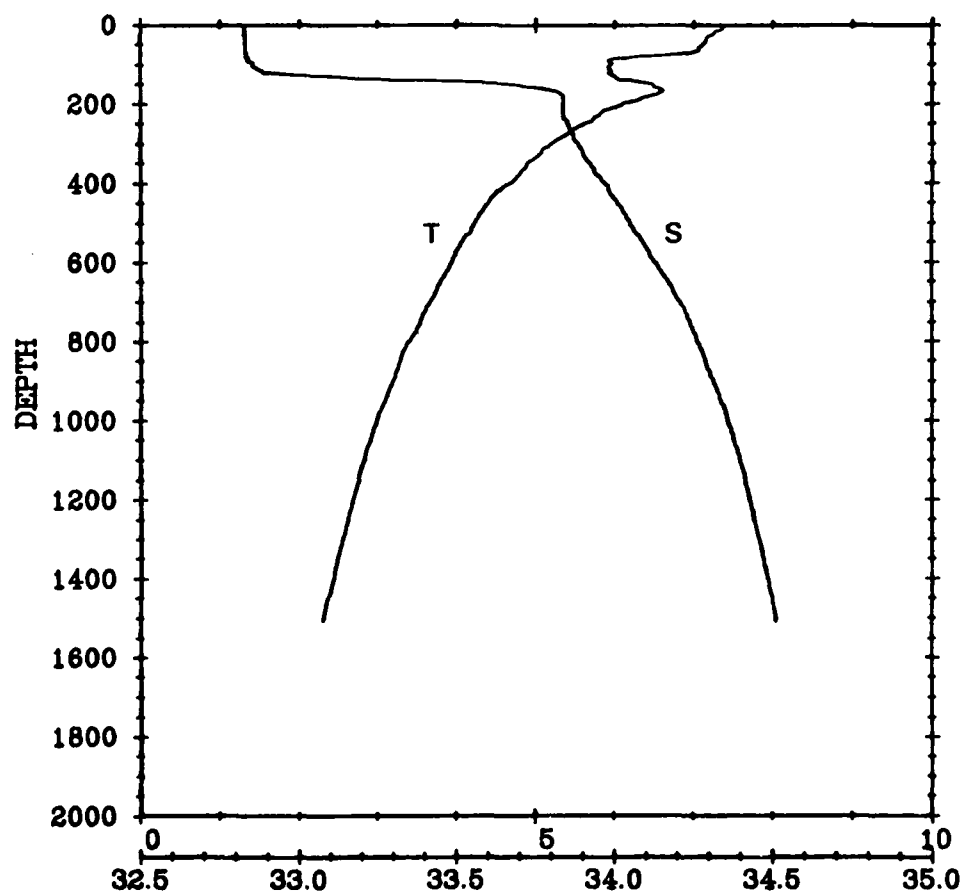
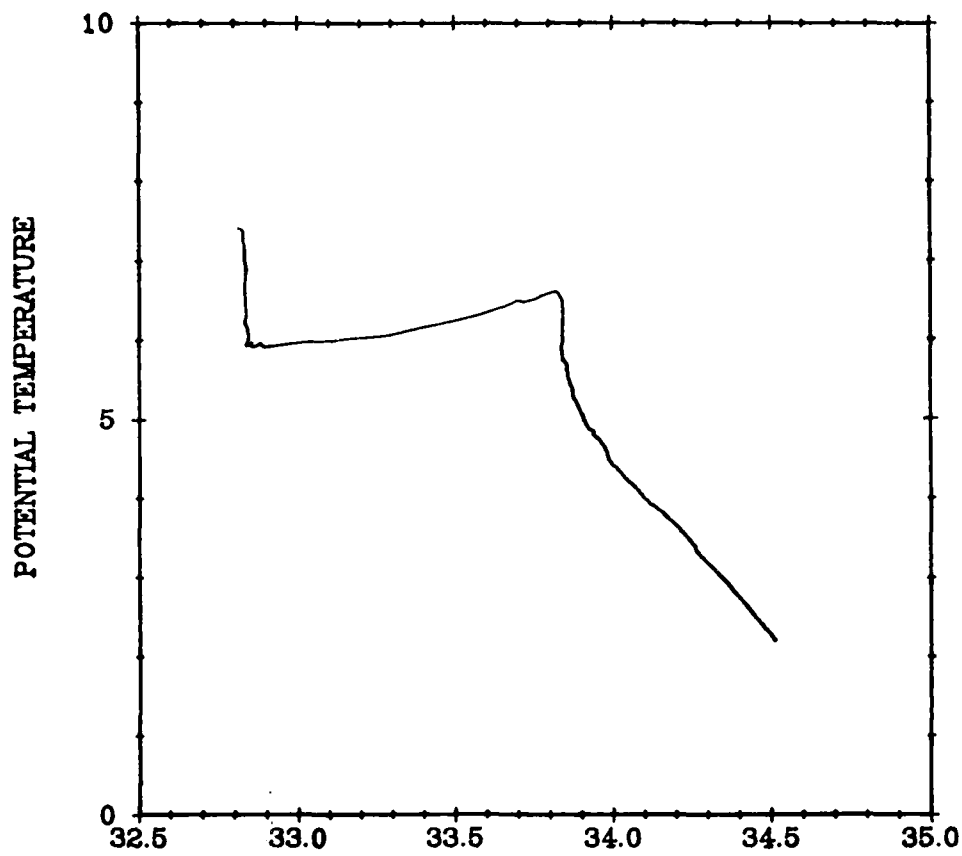
## STD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA 6            | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|--------------------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         |         | KG/CM <sup>3</sup> |            | M     |
| 1     | 12.7  | 32.926   | 12.7     | 25.655  | 34.614  | 43.177  | 232.474 | 1.020              |            | 1     |
| 2     | 12.6  | 32.929   | 12.6     | 25.673  | 34.637  | 43.210  | 231.141 | 1.046              |            | 19    |
| 4     | 12.5  | 32.932   | 12.5     | 25.690  | 34.660  | 43.243  | 229.628 | 1.072              |            | 39    |
| 6     | 12.4  | 32.934   | 12.4     | 25.708  | 34.674  | 43.256  | 228.541 | 1.104              |            | 59    |
| 8     | 12.3  | 32.937   | 12.3     | 25.721  | 34.675  | 43.261  | 227.145 | 1.130              |            | 79    |
| 10    | 12.2  | 32.939   | 12.2     | 25.742  | 34.691  | 43.271  | 225.848 | 1.227              |            | 99    |
| 12    | 12.1  | 32.944   | 12.1     | 25.761  | 34.703  | 43.294  | 224.543 | 1.321              |            | 119   |
| 14    | 12.0  | 32.941   | 12.0     | 25.769  | 34.721  | 43.324  | 223.652 | 1.398              |            | 139   |
| 16    | 11.9  | 32.934   | 11.9     | 25.725  | 34.720  | 43.347  | 221.027 | 1.455              |            | 159   |
| 18    | 11.8  | 32.934   | 11.8     | 25.758  | 34.825  | 44.462  | 220.101 | 1.505              |            | 179   |
| 20    | 11.7  | 32.921   | 11.7     | 25.832  | 34.894  | 44.514  | 219.078 | 1.614              |            | 199   |
| 22    | 11.6  | 32.916   | 11.6     | 25.894  | 34.967  | 44.579  | 218.038 | 1.711              |            | 219   |
| 24    | 11.5  | 32.909   | 11.5     | 25.949  | 35.045  | 44.793  | 216.971 | 1.771              |            | 239   |
| 26    | 11.4  | 32.904   | 11.4     | 26.002  | 35.112  | 44.815  | 215.507 | 1.878              |            | 259   |
| 28    | 11.3  | 32.894   | 11.3     | 26.054  | 35.179  | 44.818  | 214.038 | 1.974              |            | 279   |
| 30    | 11.2  | 32.884   | 11.2     | 26.102  | 35.246  | 44.826  | 212.574 | 2.054              |            | 299   |
| 32    | 11.1  | 32.874   | 11.1     | 26.141  | 35.313  | 44.827  | 211.062 | 2.143              |            | 319   |
| 34    | 11.0  | 32.864   | 11.0     | 26.179  | 35.376  | 44.824  | 209.597 | 2.226              |            | 339   |
| 36    | 10.9  | 32.854   | 10.9     | 26.216  | 35.439  | 44.817  | 208.079 | 2.300              |            | 359   |
| 38    | 10.8  | 32.844   | 10.8     | 26.251  | 35.494  | 44.807  | 206.744 | 2.370              |            | 379   |
| 40    | 10.7  | 32.834   | 10.7     | 26.282  | 35.544  | 44.844  | 205.848 | 2.438              |            | 399   |
| 42    | 10.6  | 32.824   | 10.6     | 26.312  | 35.594  | 44.890  | 204.997 | 2.503              |            | 419   |
| 44    | 10.5  | 32.814   | 10.5     | 26.340  | 35.643  | 44.915  | 204.005 | 2.561              |            | 439   |
| 46    | 10.4  | 32.804   | 10.4     | 26.365  | 35.689  | 44.942  | 202.998 | 2.617              |            | 459   |

## WATKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | SIG 02 | O2 SAT | SIG0  | P04  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 3     | 12.7  | 32.936   | 12.7   | 104.0  | 17.5  | 1.13 | 11.3 | 0.11 | 7.071 | 25.664   | 34.623  | 43.196  |         | 1     |
| 9     | 12.6  | 32.936   | 12.6   | 103.7  | 17.2  | 1.16 | 11.4 | 0.11 | 7.108 | 25.700   | 34.671  | 43.246  |         | 19    |
| 15    | 12.5  | 32.938   | 12.5   | 103.8  | 16.2  | 1.25 | 12.7 | 0.18 | 6.107 | 25.867   | 34.891  | 43.515  |         | 39    |
| 21    | 12.4  | 32.951   | 12.4   | 99.4   | 13.0  | 1.29 | 13.6 | 0.23 | 5.961 | 25.938   | 34.962  | 43.587  |         | 59    |
| 27    | 12.3  | 32.954   | 12.3   | 79.5   | 10.3  | 1.53 | 20.5 | 0.11 | 6.562 | 26.100   | 35.487  | 44.069  |         | 79    |
| 33    | 12.2  | 32.945   | 12.2   | 72.5   | 10.2  | 1.70 | 23.1 | 0.11 | 6.223 | 26.412   | 35.617  | 44.209  |         | 99    |
| 39    | 12.1  | 32.930   | 12.1   | 64.3   | 45.0  | 1.89 | 26.1 | 0.11 | 5.759 | 26.674   | 35.694  | 44.315  |         | 119   |
| 45    | 12.0  | 32.920   | 12.0   | 48.9   | 59.6  | 2.21 | 31.0 | 0.10 | 5.238 | 26.760   | 35.805  | 44.450  |         | 139   |
| 51    | 11.9  | 32.915   | 11.9   | 31.3   | 78.6  | 2.60 | 36.7 | 0.10 | 4.680 | 26.891   | 35.963  | 44.632  |         | 159   |
| 57    | 11.8  | 32.912   | 11.8   | 21.3   | 95.9  | 2.82 | 39.9 | 0.10 | 4.205 | 27.011   | 36.105  | 44.797  |         | 179   |
| 63    | 11.7  | 32.911   | 11.7   | 14.9   | 109.2 | 2.94 | 41.6 | 0.10 | 3.892 | 27.106   | 36.215  | 44.920  |         | 199   |
| 69    | 11.6  | 32.907   | 11.6   | 11.3   | 121.1 | 3.02 | 42.9 | 0.10 | 3.623 | 27.193   | 36.315  | 45.032  |         | 219   |
| 75    | 11.5  | 32.904   | 11.5   | 8.9    | 130.3 | 3.07 | 43.6 | 0.10 | 3.348 | 27.268   | 36.404  | 45.123  |         | 239   |
| 81    | 11.4  | 32.915   | 11.4   | 7.0    | 138.7 | 3.10 | 44.1 | 0.10 | 3.127 | 27.327   | 36.475  | 45.214  |         | 259   |
| 87    | 11.3  | 32.911   | 11.3   | 5.6    | 145.6 | 3.11 | 44.5 | 0.10 | 2.926 | 27.382   | 36.519  | 45.288  |         | 279   |
| 93    | 11.2  | 32.909   | 11.2   | 4.8    | 151.8 |      | 45.1 | 0.10 | 2.731 | 27.482   | 36.650  | 45.426  |         | 299   |
| 99    | 11.1  | 32.904   | 11.1   | 5.6    | 173.6 |      | 44.9 | 0.10 | 2.503 | 27.563   | 36.757  | 45.541  |         | 319   |

# MARATHON 2 STA. 66

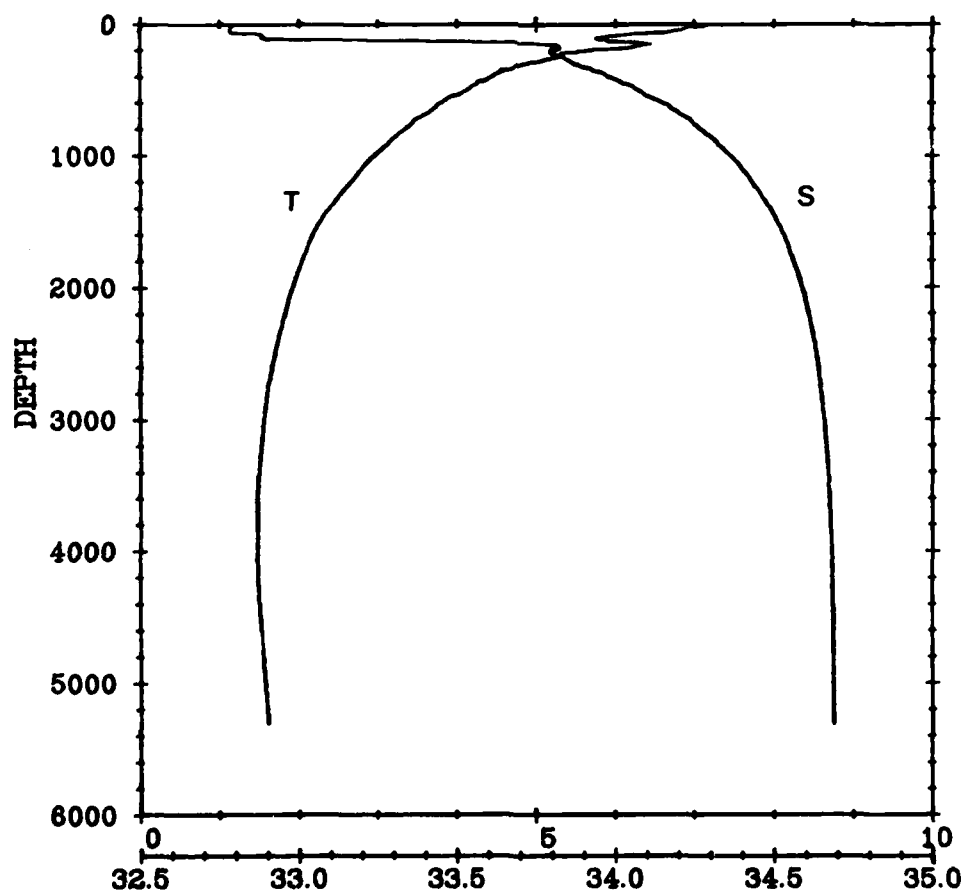
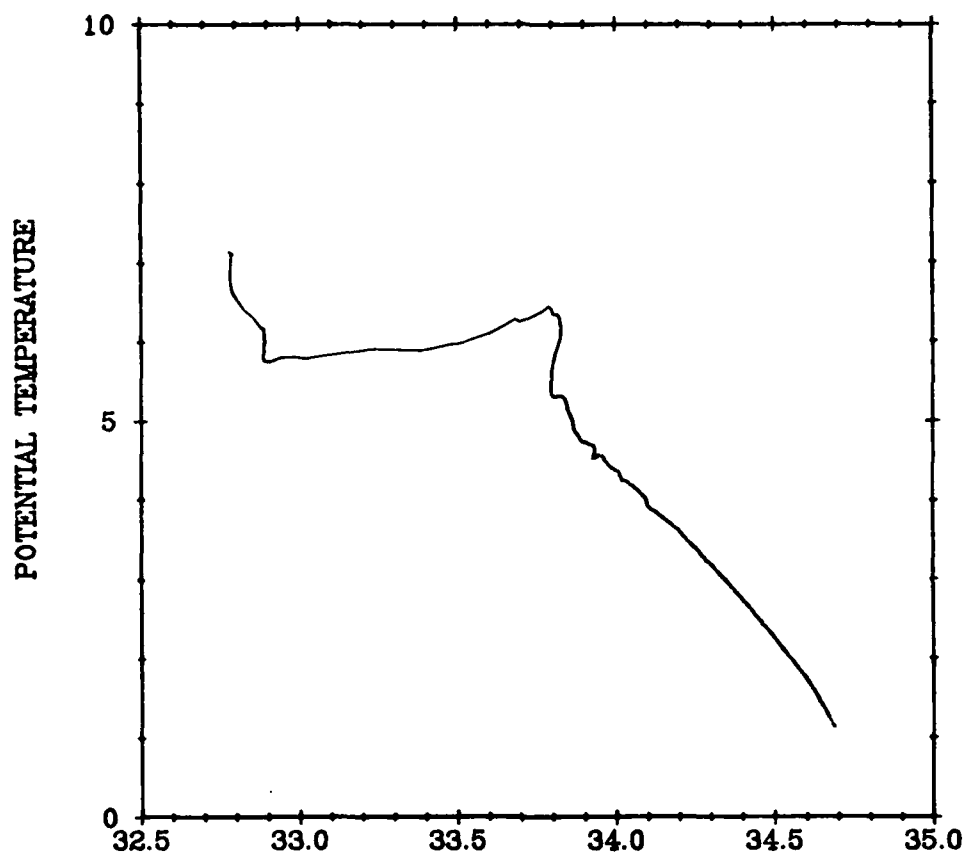


| STD DATA |      |                |            |           |             |             |      |             |             |
|----------|------|----------------|------------|-----------|-------------|-------------|------|-------------|-------------|
| STATION  | TEMP | WIND DIRECTION | WIND SPEED | WIND GUST | WIND DIR. 2 | WIND DIR. 1 | WIND | WINDSPEED 1 | WINDSPEED 2 |
| 1        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 2        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 3        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 4        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 5        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 6        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 7        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 8        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 9        | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 10       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 11       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 12       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 13       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 14       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 15       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 16       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 17       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 18       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 19       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 20       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 21       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 22       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 23       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 24       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 25       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 26       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 27       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 28       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 29       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 30       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 31       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 32       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 33       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 34       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 35       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 36       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 37       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 38       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        | 10.0        |
| 39       | 10.0 | 100            | 10.0       | 10.0      | 100         | 100         | 10.0 | 10.0        |             |

[illegible]

| WUSKIN BOTTLE DATA |        |          |        |        |       |      |      |      |       |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIG 32 | 02 SAT | SIG3  | P04  | N03  | N02  | TRIT  | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | MLP    | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 0                  | 11.193 | 32.793   | 7.14   | 104.4  | 19.9  | 1.16 | 11.2 | 7.13 | 7.198 | 25.560   | 34.672  | 43.218  |         | 1     |
| 1                  | 5.796  | 32.794   | 7.16   | 103.9  | 19.9  | 1.17 | 11.3 | 7.10 | 6.792 | 25.511   | 34.689  | 43.218  |         | 49    |
| 44                 | 5.814  | 32.844   | 7.09   | 100.6  | 19.7  | 1.26 | 12.8 | 7.21 | 5.826 | 25.973   | 34.706  | 43.540  |         | 94    |
| 147                | 6.018  | 33.336   | 5.86   | 94.0   | 29.2  | 4.19 | 17.4 | 7.01 | 6.245 | 26.438   | 35.448  | 44.059  |         | 150   |
| 194                | 5.979  | 33.821   | 4.97   | 71.0   | 41.8  | 1.75 | 24.2 | 7.00 | 1.362 | 26.638   | 35.954  | 44.717  |         | 199   |
| 291                | 5.772  | 33.969   | 3.25   | 45.5   | 63.4  | 2.29 | 32.4 | 7.00 | 4.979 | 26.791   | 35.940  | 44.726  |         | 293   |
| 390                | 4.435  | 33.894   | 1.94   | 26.9   | 96.9  | 2.70 | 38.4 | 7.00 | 4.465 | 26.718   | 36.721  | 44.711  |         | 400   |
| 493                | 4.116  | 34.181   | 1.41   | 19.3   | 111.3 | 2.85 | 40.9 | 7.00 | 4.100 | 27.044   | 36.144  | 44.819  |         | 502   |
| 507                | 3.797  | 34.152   | 0.99   | 13.5   | 116.6 | 2.97 | 42.6 | 7.00 | 3.794 | 27.144   | 36.261  | 44.972  |         | 605   |
| 609                | 3.759  | 34.224   | 0.82   | 11.1   | 125.2 |      | 43.5 | 7.00 | 3.320 | 27.217   | 36.345  | 45.066  |         | 706   |
| 709                | 3.124  | 34.291   | 0.66   | 8.9    | 133.9 | 3.19 | 44.1 | 7.00 | 1.269 | 27.296   | 36.426  | 45.159  |         | 806   |
| 809                | 3.114  | 34.137   | 1.51   | 6.9    | 142.6 | 3.11 | 44.4 | 7.00 | 2.372 | 27.344   | 36.493  | 45.216  |         | 908   |
| 909                | 2.840  | 34.173   | 0.40   | 5.1    | 150.8 | 3.16 | 45.1 | 7.00 | 2.075 | 27.396   | 36.555  | 45.307  |         | 1006  |
| 1245               | 2.499  | 34.449   | 0.30   | 4.6    | 164.6 | 3.19 | 47.9 | 7.00 | 2.305 | 27.489   | 36.667  | 45.416  |         | 1258  |
| 1494               | 2.744  | 34.521   | 0.55   | 2.1    | 174.3 | 1.14 | 48.6 | 7.00 | 2.194 | 27.566   | 36.760  | 45.544  |         | 1510  |
| 1791               | 2.191  | 34.593   | 0.96   | 1.2    | 185.6 | 2.37 | 44.9 | 7.00 | 1.963 | 27.622   | 36.826  | 45.621  |         | 1763  |
| 2091               | 1.991  | 34.591   | 1.24   | 1.6    | 193.1 | 3.03 | 44.9 | 7.00 | 1.795 | 27.660   | 36.855  | 45.679  |         | 2016  |
| 2397               | 1.639  | 34.635   | 2.11   | 20.9   | 192.1 | 3.07 | 47.7 | 7.00 | 1.712 | 27.716   | 36.946  | 45.637  |         | 2329  |
| 2698               | 2.019  | 34.519   | 2.07   | 13.4   | 198.3 | 4.45 | 40.3 | 7.00 | 1.942 | 27.747   | 36.986  | 45.922  |         | 3129  |
| 2949               | 1.994  | 34.614   | 3.10   | 38.6   | 172.0 | 4.55 | 39.5 | 7.00 | 2.214 | 27.769   | 37.714  | 45.945  |         | 3540  |
| 3249               | 1.419  | 34.591   | 3.11   | 42.3   | 171.4 | 2.60 | 37.9 | 7.00 | 1.105 | 27.780   | 37.729  | 45.965  |         | 4043  |
| 3496               | 1.111  | 34.666   | 1.37   | 43.1   | 174.2 |      | 37.8 | 7.00 | 1.112 | 27.794   | 37.734  | 45.871  |         | 4563  |
| 4099               | 1.077  | 34.597   | 3.40   | 43.4   | 176.2 |      | 37.7 | 7.00 | 1.125 | 27.785   | 37.716  | 45.971  |         | 5086  |
| 5000               | 1.611  | 34.598   | 3.40   | 43.4   | 176.0 | 2.58 | 37.5 | 7.00 | 1.126 | 27.796   | 37.737  | 45.874  |         | 5481  |

# MARATHON 2 STA. 67

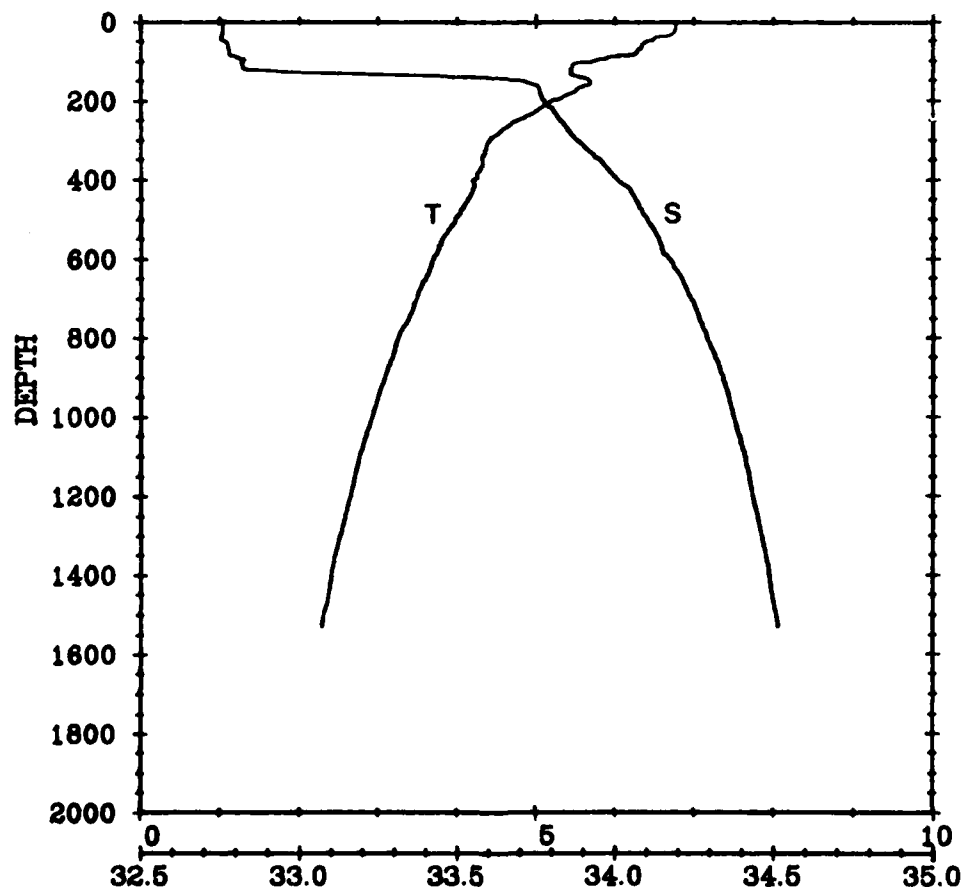
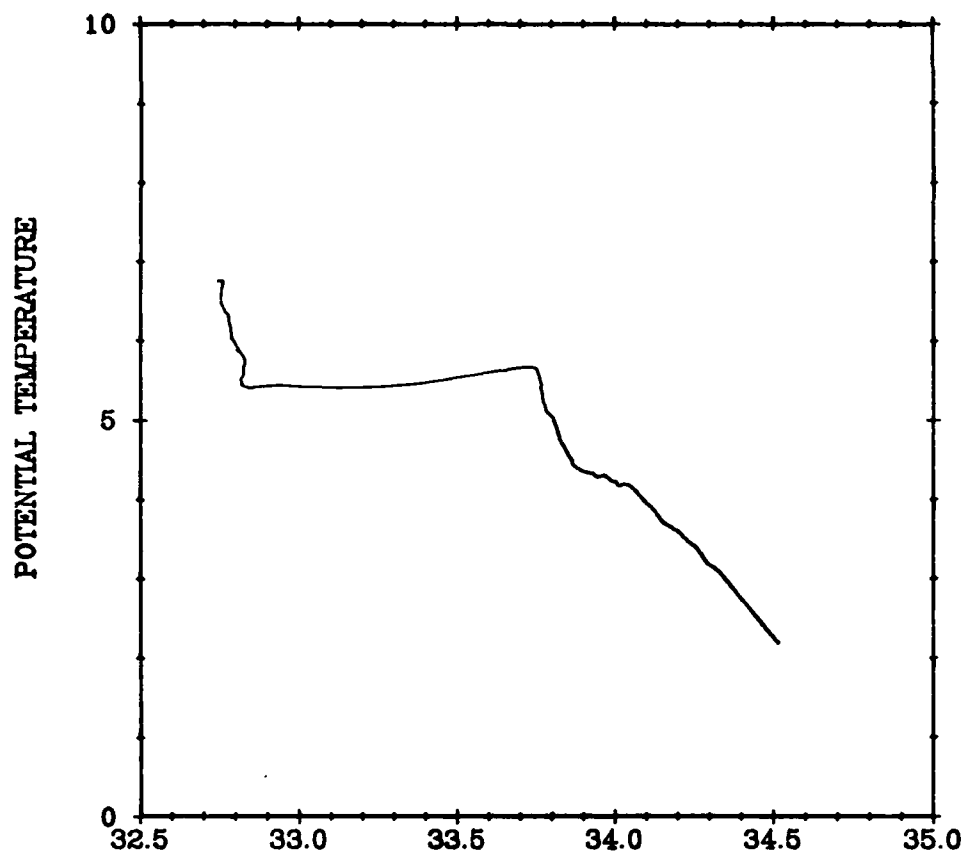


LATITUDE LONGITUDE MO DY YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB PAROM  
 45 11' N 150 54' W 26 94 1128 1322 180 12 9 2 12 9

| STD DATA |       |          |          |         |         |         |         |         |       |
|----------|-------|----------|----------|---------|---------|---------|---------|---------|-------|
| PRESS    | TEMP  | SALINITY | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA 4 | DYNAMIC | DEPTH |
| DB       | DEG C |          | DEG C    |         |         |         | DB      | HT      | M     |
| 1        | 4.768 | 32.754   | 5.748    | 27.692  | 34.671  | 43.252  | 229.454 | 1.000   | 1     |
| 20       | 5.752 | 32.753   | 5.750    | 27.687  | 34.676  | 43.259  | 229.491 | 1.000   | 19    |
| 40       | 5.557 | 32.755   | 5.554    | 27.710  | 34.729  | 43.310  | 229.440 | 1.000   | 39    |
| 60       | 5.343 | 32.774   | 5.340    | 27.752  | 34.740  | 43.377  | 229.386 | 1.000   | 59    |
| 80       | 5.190 | 32.792   | 5.187    | 27.773  | 34.794  | 43.401  | 229.344 | 1.000   | 79    |
| 100      | 5.107 | 32.807   | 5.104    | 27.865  | 34.904  | 43.442  | 229.297 | 1.000   | 99    |
| 120      | 5.048 | 32.858   | 5.045    | 27.917  | 35.057  | 44.494  | 229.331 | 1.000   | 119   |
| 140      | 5.210 | 33.177   | 5.214    | 26.680  | 35.728  | 44.373  | 229.493 | 1.000   | 139   |
| 160      | 4.771 | 33.827   | 4.772    | 26.773  | 35.844  | 44.612  | 229.447 | 1.000   | 159   |
| 180      | 4.417 | 33.873   | 4.395    | 26.853  | 35.941  | 44.625  | 229.448 | 1.000   | 179   |
| 200      | 4.327 | 33.943   | 4.242    | 26.909  | 36.011  | 44.700  | 229.391 | 1.000   | 199   |
| 220      | 4.225 | 34.106   | 4.196    | 26.975  | 36.072  | 44.763  | 229.355 | 1.000   | 219   |
| 240      | 4.119 | 34.154   | 4.106    | 27.011  | 36.111  | 44.825  | 229.329 | 1.000   | 239   |
| 260      | 3.982 | 34.199   | 3.946    | 27.075  | 36.133  | 44.895  | 229.285 | 1.000   | 259   |
| 280      | 3.705 | 34.257   | 3.653    | 27.157  | 36.279  | 44.994  | 229.363 | 1.000   | 279   |
| 300      | 3.487 | 34.237   | 3.439    | 27.215  | 36.367  | 45.132  | 229.461 | 1.000   | 299   |
| 320      | 3.278 | 34.299   | 3.204    | 27.299  | 36.442  | 45.173  | 229.524 | 1.000   | 319   |
| 340      | 3.191 | 34.319   | 3.130    | 27.355  | 36.507  | 45.251  | 229.571 | 1.000   | 339   |
| 360      | 2.914 | 34.373   | 2.957    | 27.397  | 36.557  | 45.308  | 229.576 | 1.000   | 359   |
| 380      | 2.775 | 34.407   | 2.702    | 27.418  | 36.607  | 45.367  | 229.418 | 1.000   | 379   |
| 400      | 2.559 | 34.432   | 2.579    | 27.459  | 36.644  | 45.409  | 229.358 | 1.000   | 399   |
| 420      | 2.332 | 34.458   | 2.446    | 27.501  | 36.693  | 45.454  | 229.319 | 1.000   | 419   |
| 440      | 2.401 | 34.483   | 2.318    | 27.533  | 36.722  | 45.499  | 229.231 | 1.000   | 439   |
| 460      | 2.124 | 34.504   | 2.224    | 27.556  | 36.749  | 45.532  | 229.134 | 1.000   | 459   |
| 480      | 2.277 | 34.524   | 2.174    | 27.558  | 36.754  | 45.549  | 229.288 | 1.000   | 479   |

| WIGGIN BOTTLE DATA |       |          |        |        |       |      |      |      |       |
|--------------------|-------|----------|--------|--------|-------|------|------|------|-------|
| DEPTH              | TEMP  | SALINITY | DIS C2 | O2 SAT | SIG1  | PC4  | NO3  | NO2  | TRIT  |
| M                  | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN |
| 2                  | 5.745 | 32.751   | 7.45   | 104.4  | 20.5  | 1.22 | 12.2 | 0.12 | 5.745 |
| 43                 | 5.425 | 32.751   | 7.28   | 104.4  | 20.5  | 1.23 | 12.3 | 0.12 | 5.415 |
| 101                | 5.919 | 32.805   | 7.13   | 100.2  | 21.2  | 1.32 | 13.7 | 0.18 | 5.431 |
| 129                | 5.110 | 33.403   | 5.49   | 93.3   | 32.1  | 1.60 | 20.7 | 0.32 | 5.500 |
| 155                | 5.910 | 33.753   | 5.10   | 72.4   | 42.1  | 1.80 | 24.7 | 0.01 | 5.499 |
| 201                | 5.115 | 33.795   | 4.50   | 61.1   | 57.5  | 1.99 | 21.9 | 0.01 | 5.299 |
| 231                | 4.955 | 33.875   | 3.23   | 44.9   | 65.4  | 2.37 | 31.5 | 0.01 | 4.677 |
| 258                | 4.410 | 33.879   | 2.54   | 35.1   | 74.7  | 2.57 | 35.6 | 0.01 | 4.458 |
| 404                | 4.251 | 34.106   | 1.70   | 23.8   | 91.9  | 2.79 | 39.8 | 0.01 | 4.224 |
| 497                | 3.971 | 34.102   | 1.22   | 16.7   | 106.4 | 2.92 | 42.7 | 0.00 | 3.936 |
| 507                | 3.492 | 34.112   | 0.93   | 12.4   | 117.4 | 2.98 | 42.9 | 0.00 | 3.650 |
| 645                | 3.486 | 34.214   | 0.77   | 10.4   | 127.7 | 3.04 | 43.5 | 0.00 | 3.438 |
| 795                | 3.279 | 34.284   | 0.67   | 9.3    | 135.0 | 3.07 | 43.9 | 0.00 | 3.224 |
| 892                | 3.118 | 34.315   | 0.51   | 6.3    | 142.5 | 3.11 | 44.6 | 0.00 | 3.047 |
| 1001               | 2.920 | 34.375   | 0.44   | 5.9    | 149.9 | 3.13 | 44.9 | 0.00 | 2.852 |
| 1240               | 2.595 | 34.445   | 0.39   | 5.2    | 162.9 |      | 45.4 | 0.00 | 2.512 |
| 1500               | 2.275 | 34.514   | 0.50   | 7.9    | 174.8 |      | 45.1 | 0.00 | 2.172 |

# MARATHON 2 STA. 68

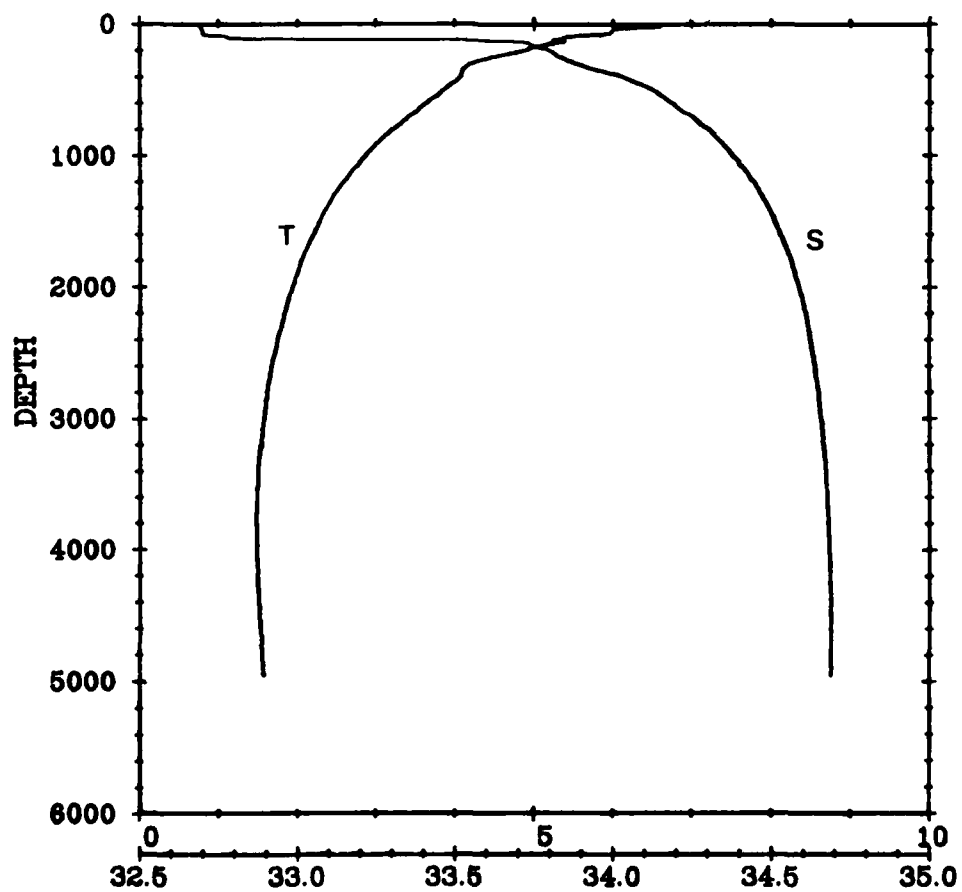
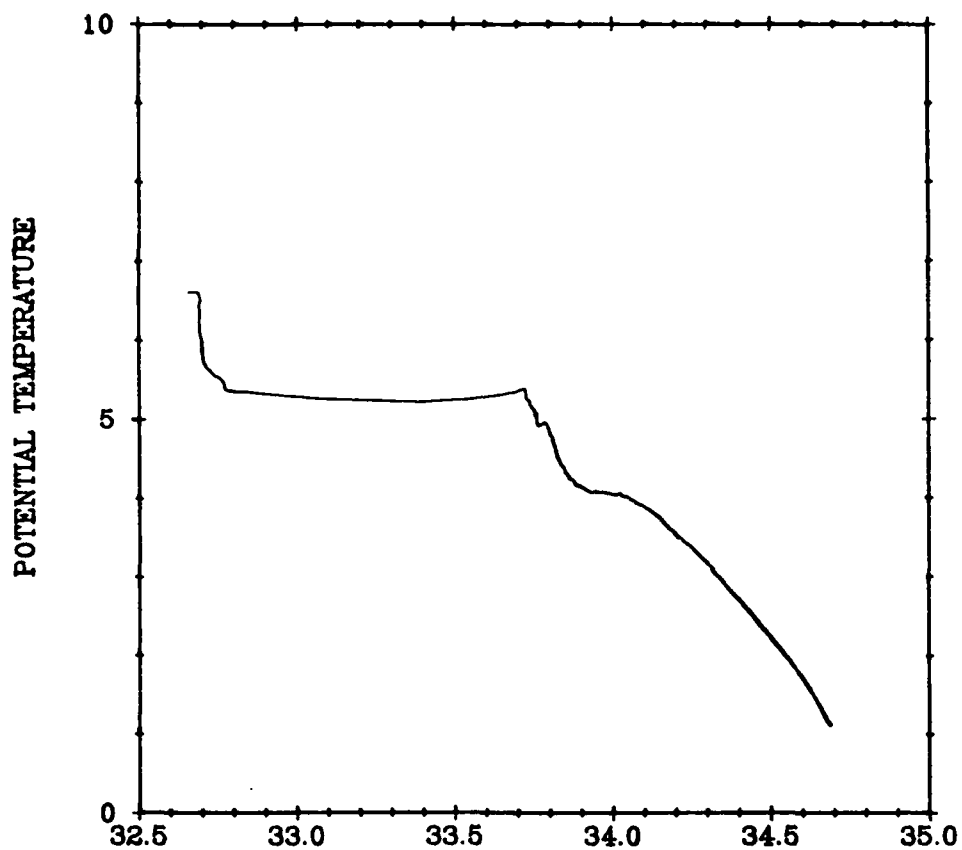


| LATITUDE | LONGITUDE | MO | DAY | HR | START TIME | BATT M | WIND | DEPDT | AIR TEMP | WAT SURF | MAX D |
|----------|-----------|----|-----|----|------------|--------|------|-------|----------|----------|-------|
|          |           |    |     |    | TIME       |        | DIR  |       |          |          |       |
| 42 14 N  | 151 34 W  | 1  | 26  | 84 | 1200       | 100    | 100  | 10    | 59.7     | 59.7     | 1.0   |

[illegible]

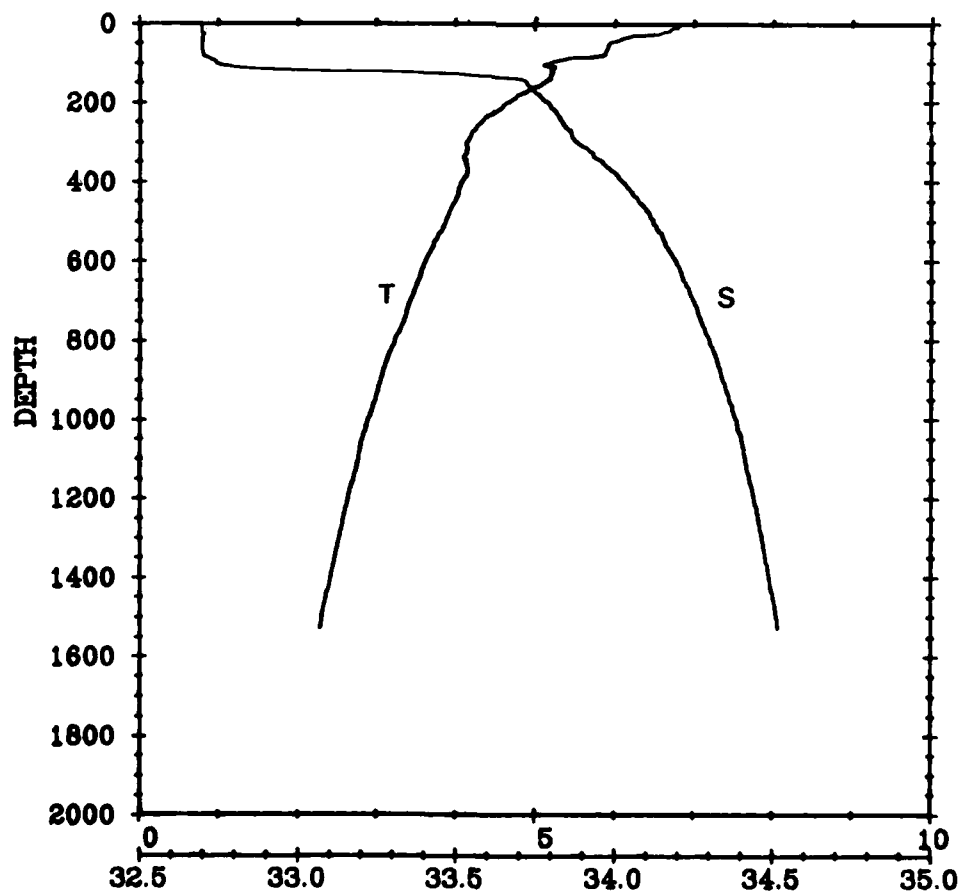
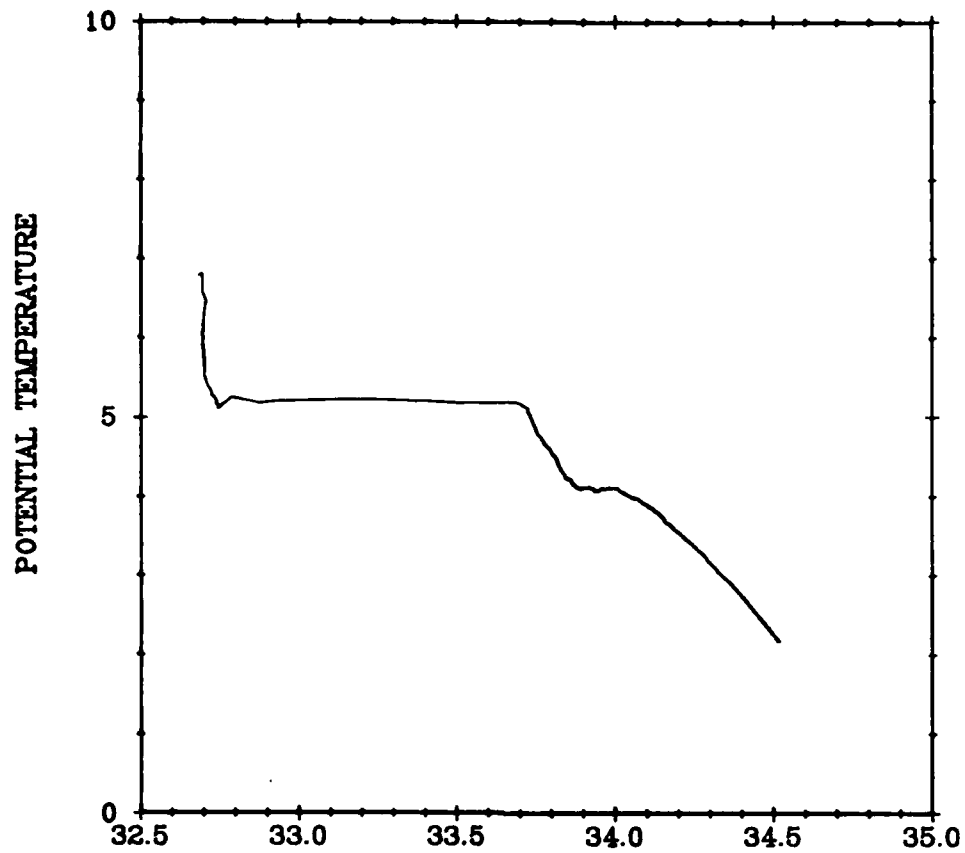
| WIGGIN BOTTLE DATA |       |          |       |        |       |      |      |       |      |          |         |         |         |       |
|--------------------|-------|----------|-------|--------|-------|------|------|-------|------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP  | SALINITY | DIST  | SAT    | SIG1  | P04  | H01  | H02   | TRIT | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C | PROMIL   | ML/0  | PROMIL | UM/L  | UM/L | UM/L | UM/L  | THIN | DEG C    |         |         |         | DB    |
| 1                  | 6.739 | 32.699   | 7.425 | 104.9  | 23.0  | 1.27 | 12.3 | 12.3  |      | 6.738    | 25.645  | 34.637  | 43.232  | 1     |
| 2                  | 6.713 | 32.699   | 7.27  | 105.0  | 21.2  |      | 12.5 | 12.2  |      | 6.610    | 25.657  | 34.654  | 43.253  | 19    |
| 3                  | 6.700 | 32.701   | 7.35  | 104.6  | 21.2  |      | 12.8 | 11.1  |      | 6.495    | 25.738  | 34.765  | 43.192  | 45    |
| 4                  | 6.704 | 32.759   | 7.12  | 99.6   | 22.1  |      | 14.2 | 11.2  |      | 6.265    | 25.969  | 34.430  | 43.590  | 99    |
| 145                | 1.372 | 33.756   | 5.02  | 70.9   | 42.6  |      | 25.2 | 10.0  |      | 5.160    | 26.647  | 35.689  | 44.329  | 145   |
| 146                | 4.919 | 33.755   | 5.00  | 71.2   | 51.2  |      | 28.6 | 10.01 |      | 4.924    | 26.715  | 35.779  | 44.440  | 196   |
| 246                | 4.224 | 33.980   | 2.31  | 31.7   | 73.4  | 2.66 | 37.9 | 10.0  |      | 4.203    | 26.974  | 35.972  | 44.646  | 299   |
| 346                | 4.015 | 34.109   | 1.32  | 20.9   | 94.7  | 2.87 | 40.9 | 10.01 |      | 4.137    | 26.994  | 36.109  | 44.799  | 399   |
| 446                | 3.900 | 34.122   | 1.03  | 14.0   | 109.4 | 2.95 | 42.4 | 10.0  |      | 3.773    | 27.110  | 36.227  | 44.917  | 501   |
| 544                | 3.615 | 34.143   | 0.94  | 11.4   | 119.3 | 3.01 | 43.2 | 10.0  |      | 3.374    | 27.187  | 36.312  | 45.012  | 599   |
| 640                | 3.349 | 34.257   | 0.69  | 9.3    | 130.9 | 3.02 | 43.7 | 10.0  |      | 3.151    | 27.250  | 36.396  | 45.125  | 696   |
| 737                | 3.212 | 34.319   | 0.57  | 7.6    | 139.0 | 3.08 | 44.1 | 10.0  |      | 3.148    | 27.320  | 36.466  | 45.235  | 794   |
| 831                | 3.075 | 34.353   | 0.51  | 6.8    | 146.7 | 3.12 | 44.5 | 10.0  |      | 2.945    | 27.374  | 36.530  | 45.278  | 899   |
| 933                | 2.942 | 34.384   | 0.46  | 6.1    | 153.1 | 3.13 | 44.9 | 10.0  |      | 2.795    | 27.412  | 36.575  | 45.310  | 1002  |
| 1247               | 2.719 | 34.461   | 0.44  | 5.9    | 165.2 | 3.15 | 45.2 | 10.0  |      | 2.435    | 27.506  | 36.638  | 45.460  | 1247  |
| 1469               | 2.510 | 34.739   | 0.45  | 4.4    | 173.9 | 3.12 | 45.1 | 10.0  |      | 2.212    | 27.561  | 36.754  | 45.517  | 1494  |
| 1759               | 4.303 | 34.553   | 0.45  | 11.1   | 180.7 | 3.16 | 44.4 | 10.0  |      | 1.993    | 27.625  | 36.819  | 45.513  | 1728  |
| 2012               | 4.347 | 34.587   | 1.19  | 17.5   | 184.2 | 2.99 | 43.6 | 10.0  |      | 1.802    | 27.656  | 36.871  | 45.573  | 2225  |
| 2312               | 4.346 | 34.512   | 1.25  | 17.6   | 185.4 | 2.97 | 41.4 | 10.0  |      | 1.725    | 27.715  | 36.929  | 45.592  | 2646  |
| 2571               | 4.361 | 34.561   | 2.71  | 14.7   | 175.3 | 2.70 | 39.3 | 10.0  |      | 1.169    | 27.751  | 36.991  | 45.919  | 3146  |
| 3776               | 4.490 | 34.676   | 3.15  | 40.3   | 170.9 | 2.61 | 38.1 | 10.0  |      | 1.201    | 27.771  | 37.128  | 45.951  | 3633  |
| 4192               | 4.492 | 34.681   | 3.30  | 42.2   | 170.3 |      | 37.6 | 10.0  |      | 1.147    | 27.781  | 37.177  | 45.964  | 4153  |
| 4676               | 4.725 | 34.697   | 3.38  | 43.2   | 175.7 |      | 37.4 | 10.0  |      | 1.126    | 27.795  | 37.136  | 45.913  | 4701  |
| 5444               | 4.765 | 34.489   | 3.43  | 41.3   | 174.4 | 2.54 | 37.3 | 10.0  |      | 1.121    | 27.786  | 37.117  | 45.815  | 5144  |

# MARATHON 2 STA. 69



| WICKIN BOTTLE DATA |       |          |        |        |                  |                 |                 |                 |       |          |         |         |         |       |
|--------------------|-------|----------|--------|--------|------------------|-----------------|-----------------|-----------------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP  | SALINITY | DIG 02 | 02 SAT | SiO <sub>2</sub> | PO <sub>4</sub> | NO <sub>3</sub> | NO <sub>2</sub> | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C |          | UMOL   | %      | UMOL             | UMOL            | UMOL            | UMOL            | TUBIN | DEG C    |         |         |         | DB    |
| 1                  | 4.917 | 34.771   | 7.33   | 106.6  | 21.0             | 1.27            | 12.8            | 0.11            |       | 4.917    | 25.630  | 34.516  | 43.203  | 3     |
| 5                  | 4.437 | 34.750   | 7.13   | 104.2  | 20.9             | 1.30            | 13.3            | 0.10            |       | 4.793    | 25.744  | 34.73   | 43.403  | 31    |
| 9                  | 4.152 | 34.743   | 7.13   | 99.5   | 21.6             | 1.19            | 14.6            | 0.12            |       | 4.146    | 25.870  | 34.918  | 43.604  | 27    |
| 12.5               | 3.198 | 33.454   | 5.4    | 80.5   | 33.3             | 1.72            | 22.4            | 0.04            |       | 3.188    | 26.428  | 35.493  | 44.116  | 126   |
| 15                 | 4.333 | 33.740   | 4.77   | 66.6   | 46.4             | 1.98            | 27.2            | 0.1             |       | 4.321    | 26.685  | 35.749  | 44.410  | 162   |
| 17                 | 4.664 | 33.731   | 3.95   | 53.6   | 55.6             | 2.24            | 31.2            | 0.07            |       | 4.649    | 26.748  | 35.824  | 44.493  | 189   |
| 24                 | 4.339 | 33.835   | 2.83   | 39.0   | 67.8             | 2.34            | 35.6            | 0.00            |       | 4.321    | 26.826  | 35.939  | 44.607  | 249   |
| 27                 | 4.121 | 33.870   | 2.13   | 29.2   | 80.2             | 2.73            | 39.5            | 0.01            |       | 4.100    | 26.893  | 35.996  | 44.694  | 279   |
| 33.5               | 4.019 | 34.226   | 1.47   | 20.1   | 95.4             | 2.89            | 40.8            | 0.00            |       | 4.050    | 27.056  | 36.110  | 44.938  | 398   |
| 37                 | 3.974 | 34.222   | 1.11   | 15.1   | 108.3            | 2.97            | 42.1            | 0.01            |       | 3.939    | 27.104  | 36.217  | 44.924  | 514   |
| 39.9               | 3.614 | 34.187   | 0.95   | 11.3   | 119.0            | 3.03            | 43.0            | 0.00            |       | 3.593    | 27.190  | 36.305  | 45.023  | 514   |
| 43.1               | 3.431 | 34.249   | 0.72   | 9.7    | 125.4            | 3.07            | 43.8            | 0.00            |       | 3.394    | 27.249  | 36.384  | 45.112  | 633   |
| 47.3               | 3.199 | 34.205   | 0.50   | 9.1    | 135.6            | 3.11            | 44.0            | 0.00            |       | 3.144    | 27.317  | 36.463  | 45.202  | 810   |
| 49.9               | 3.140 | 34.344   | 0.52   | 7.7    | 140.0            | 3.13            | 44.4            | 0.00            |       | 2.979    | 27.363  | 36.519  | 45.264  | 916   |
| 53.8               | 2.874 | 34.398   | 0.37   | 4.9    | 151.5            | 3.15            | 45.0            | 0.00            |       | 2.807    | 27.414  | 36.577  | 45.331  | 1007  |
| 124.1              | 2.571 | 34.455   | 0.34   | 4.5    | 163.2            |                 | 45.4            | 0.00            |       | 2.488    | 27.495  | 36.674  | 45.444  | 1204  |
| 152.8              | 2.571 | 34.519   | 0.61   | 8.0    | 173.7            |                 | 45.0            | 0.00            |       | 2.168    | 27.573  | 36.769  | 45.553  | 1534  |

# MARATHON 2 STA. 70



R/V THOMAS HARRINGTON STATION 11

LATITUDE 11 14 N LONGITUDE 151 14 W DATE 20 04 START TIME 00 00 END TIME 01 00 WIND DIR 010 WIND SPCD 10 KTS AIR TEMP 20.0 C WET BULB 19.5 C RH 85 %

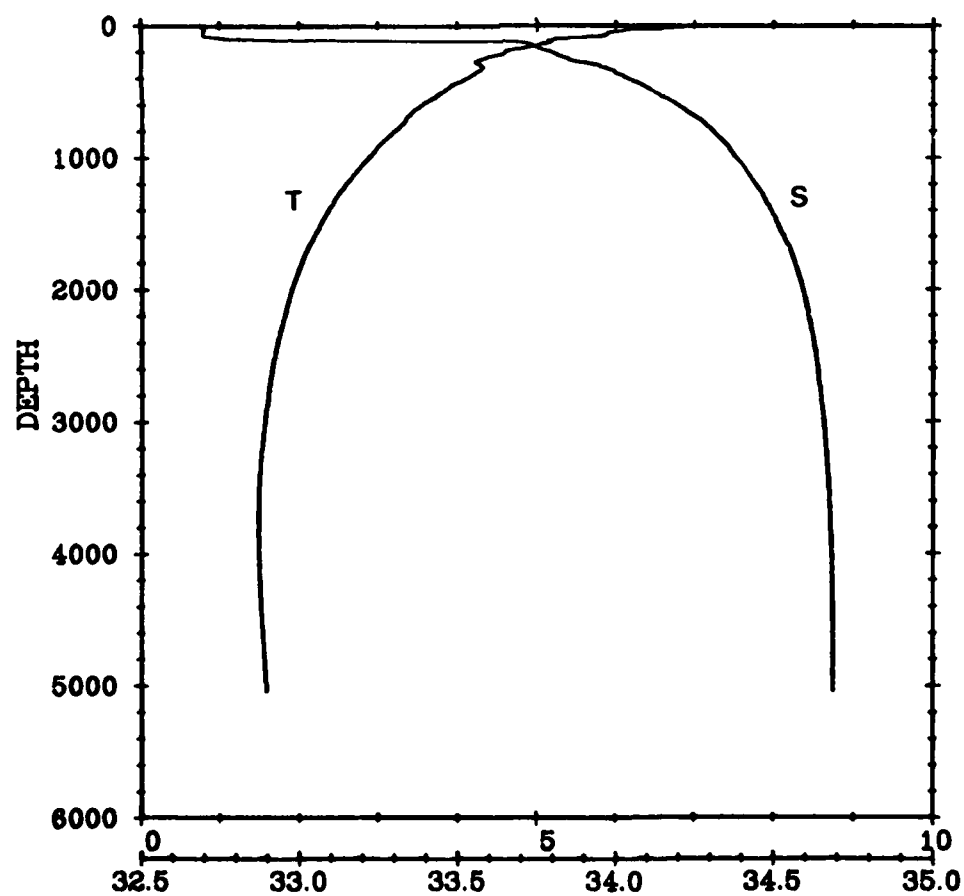
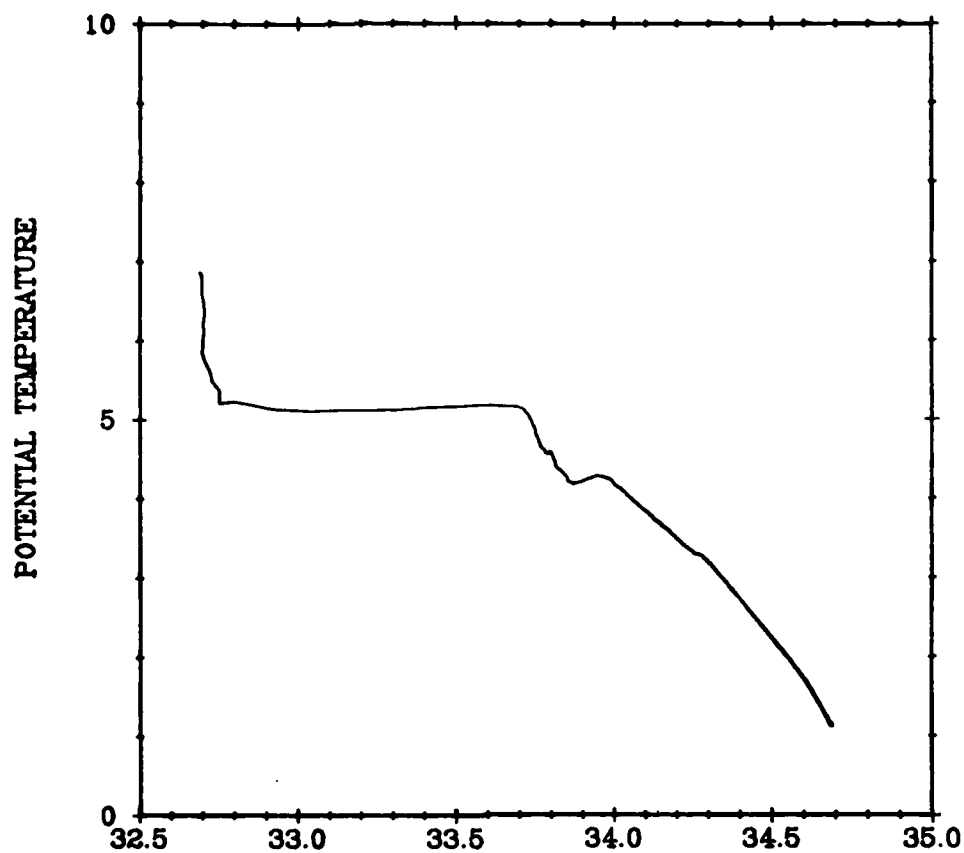
CTD DATA

| PRESS<br>DB | TEMP<br>DEG C | SALINITY | POT TEMP<br>DEG C | SIGMA T | SIGMA T | SIGMA T | SIGMA T | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| 1           | 20.00         | 34.90    | 20.00             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 0          |
| 2           | 19.99         | 34.90    | 19.99             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 1          |
| 3           | 19.98         | 34.90    | 19.98             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 2          |
| 4           | 19.97         | 34.90    | 19.97             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 3          |
| 5           | 19.96         | 34.90    | 19.96             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 4          |
| 6           | 19.95         | 34.90    | 19.95             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 5          |
| 7           | 19.94         | 34.90    | 19.94             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 6          |
| 8           | 19.93         | 34.90    | 19.93             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 7          |
| 9           | 19.92         | 34.90    | 19.92             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 8          |
| 10          | 19.91         | 34.90    | 19.91             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 9          |
| 11          | 19.90         | 34.90    | 19.90             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 10         |
| 12          | 19.89         | 34.90    | 19.89             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 11         |
| 13          | 19.88         | 34.90    | 19.88             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 12         |
| 14          | 19.87         | 34.90    | 19.87             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 13         |
| 15          | 19.86         | 34.90    | 19.86             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 14         |
| 16          | 19.85         | 34.90    | 19.85             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 15         |
| 17          | 19.84         | 34.90    | 19.84             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 16         |
| 18          | 19.83         | 34.90    | 19.83             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 17         |
| 19          | 19.82         | 34.90    | 19.82             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 18         |
| 20          | 19.81         | 34.90    | 19.81             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 19         |
| 21          | 19.80         | 34.90    | 19.80             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 20         |
| 22          | 19.79         | 34.90    | 19.79             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 21         |
| 23          | 19.78         | 34.90    | 19.78             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 22         |
| 24          | 19.77         | 34.90    | 19.77             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 23         |
| 25          | 19.76         | 34.90    | 19.76             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 24         |
| 26          | 19.75         | 34.90    | 19.75             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 25         |
| 27          | 19.74         | 34.90    | 19.74             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 26         |
| 28          | 19.73         | 34.90    | 19.73             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 27         |
| 29          | 19.72         | 34.90    | 19.72             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 28         |
| 30          | 19.71         | 34.90    | 19.71             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 29         |
| 31          | 19.70         | 34.90    | 19.70             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 30         |
| 32          | 19.69         | 34.90    | 19.69             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 31         |
| 33          | 19.68         | 34.90    | 19.68             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 32         |
| 34          | 19.67         | 34.90    | 19.67             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 33         |
| 35          | 19.66         | 34.90    | 19.66             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 34         |
| 36          | 19.65         | 34.90    | 19.65             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 35         |
| 37          | 19.64         | 34.90    | 19.64             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 36         |
| 38          | 19.63         | 34.90    | 19.63             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 37         |
| 39          | 19.62         | 34.90    | 19.62             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 38         |
| 40          | 19.61         | 34.90    | 19.61             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 39         |
| 41          | 19.60         | 34.90    | 19.60             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 40         |
| 42          | 19.59         | 34.90    | 19.59             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 41         |
| 43          | 19.58         | 34.90    | 19.58             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 42         |
| 44          | 19.57         | 34.90    | 19.57             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 43         |
| 45          | 19.56         | 34.90    | 19.56             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 44         |
| 46          | 19.55         | 34.90    | 19.55             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 45         |
| 47          | 19.54         | 34.90    | 19.54             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 46         |
| 48          | 19.53         | 34.90    | 19.53             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 47         |
| 49          | 19.52         | 34.90    | 19.52             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 48         |
| 50          | 19.51         | 34.90    | 19.51             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 49         |
| 51          | 19.50         | 34.90    | 19.50             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 50         |
| 52          | 19.49         | 34.90    | 19.49             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 51         |
| 53          | 19.48         | 34.90    | 19.48             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 52         |
| 54          | 19.47         | 34.90    | 19.47             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 53         |
| 55          | 19.46         | 34.90    | 19.46             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 54         |
| 56          | 19.45         | 34.90    | 19.45             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 55         |
| 57          | 19.44         | 34.90    | 19.44             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 56         |
| 58          | 19.43         | 34.90    | 19.43             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 57         |
| 59          | 19.42         | 34.90    | 19.42             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 58         |
| 60          | 19.41         | 34.90    | 19.41             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 59         |
| 61          | 19.40         | 34.90    | 19.40             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 60         |
| 62          | 19.39         | 34.90    | 19.39             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 61         |
| 63          | 19.38         | 34.90    | 19.38             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 62         |
| 64          | 19.37         | 34.90    | 19.37             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 63         |
| 65          | 19.36         | 34.90    | 19.36             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 64         |
| 66          | 19.35         | 34.90    | 19.35             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 65         |
| 67          | 19.34         | 34.90    | 19.34             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 66         |
| 68          | 19.33         | 34.90    | 19.33             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 67         |
| 69          | 19.32         | 34.90    | 19.32             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 68         |
| 70          | 19.31         | 34.90    | 19.31             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 69         |
| 71          | 19.30         | 34.90    | 19.30             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 70         |
| 72          | 19.29         | 34.90    | 19.29             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 71         |
| 73          | 19.28         | 34.90    | 19.28             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 72         |
| 74          | 19.27         | 34.90    | 19.27             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 73         |
| 75          | 19.26         | 34.90    | 19.26             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 74         |
| 76          | 19.25         | 34.90    | 19.25             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 75         |
| 77          | 19.24         | 34.90    | 19.24             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 76         |
| 78          | 19.23         | 34.90    | 19.23             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 77         |
| 79          | 19.22         | 34.90    | 19.22             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 78         |
| 80          | 19.21         | 34.90    | 19.21             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 79         |
| 81          | 19.20         | 34.90    | 19.20             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 80         |
| 82          | 19.19         | 34.90    | 19.19             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 81         |
| 83          | 19.18         | 34.90    | 19.18             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 82         |
| 84          | 19.17         | 34.90    | 19.17             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 83         |
| 85          | 19.16         | 34.90    | 19.16             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 84         |
| 86          | 19.15         | 34.90    | 19.15             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 85         |
| 87          | 19.14         | 34.90    | 19.14             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 86         |
| 88          | 19.13         | 34.90    | 19.13             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 87         |
| 89          | 19.12         | 34.90    | 19.12             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 88         |
| 90          | 19.11         | 34.90    | 19.11             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 89         |
| 91          | 19.10         | 34.90    | 19.10             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 90         |
| 92          | 19.09         | 34.90    | 19.09             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 91         |
| 93          | 19.08         | 34.90    | 19.08             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 92         |
| 94          | 19.07         | 34.90    | 19.07             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 93         |
| 95          | 19.06         | 34.90    | 19.06             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 94         |
| 96          | 19.05         | 34.90    | 19.05             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 95         |
| 97          | 19.04         | 34.90    | 19.04             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 96         |
| 98          | 19.03         | 34.90    | 19.03             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 97         |
| 99          | 19.02         | 34.90    | 19.02             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 98         |
| 100         | 19.01         | 34.90    | 19.01             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 99         |
| 101         | 19.00         | 34.90    | 19.00             | 20.00   | 20.00   | 20.00   | 20.00   | 0.00       | 100        |

NISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIG 02 | 02 DAT | ST01  | P04  | N03  | N02  | TRIT  | POT TEMP | SIGMA T | SIGMA T | SIGMA T | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | MO/L   |        | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 1     | 6.357 | 32.703   | 1.36   | 106.9  | 22.8  | 1.24 | 12.6 | 0.13 | 0.957 | 25.629   | 34.914  | 43.202  |         |       |
| 49    | 5.359 | 32.703   | 1.39   | 105.1  | 22.8  | 1.26 | 13.0 | 0.11 | 0.955 | 25.743   | 34.772  | 43.202  | 49      |       |
| 99    | 5.199 | 32.719   | 1.44   | 99.5   | 23.5  | 1.34 | 14.3 | 0.12 | 1.042 | 25.973   | 34.743  | 43.512  | 99      |       |
| 144   | 4.144 | 33.716   | 4.75   | 56.9   | 44.5  | 1.39 | 27.1 | 0.11 | 4.907 | 26.683   | 33.407  | 44.420  | 144     |       |
| 211   | 4.512 | 33.910   | 3.33   | 46.1   | 54.1  | 2.36 | 33.4 | 0.11 | 4.507 | 26.785   | 33.369  | 44.447  | 211     |       |
| 291   | 4.269 | 33.925   | 2.18   | 22.5   | 91.5  | 2.69 | 39.5 | 0.10 | 4.247 | 26.905   | 33.210  | 44.631  | 291     |       |
| 495   | 4.258 | 34.043   | 1.45   | 19.2   | 99.9  | 3.99 | 45.6 | 0.10 | 4.115 | 27.127   | 33.101  | 44.830  | 495     |       |
| 1095  | 3.791 | 34.126   | 1.35   | 14.1   | 112.9 | 2.99 | 42.9 | 0.12 | 3.715 | 27.135   | 33.233  | 44.444  | 1095    |       |
| 1395  | 3.784 | 34.159   | 0.92   | 11.4   | 115.9 | 3.12 | 42.8 | 0.12 | 1.701 | 27.1294  | 33.164  | 44.442  | 1395    |       |
| 1495  | 3.755 | 34.257   | 0.93   | 9.4    | 125.9 | 3.17 | 44.5 | 0.10 | 1.727 | 27.149   | 33.149  | 45.129  | 1495    |       |
| 1593  | 3.427 | 34.318   | 0.35   | 7.4    | 135.9 | 3.18 | 44.5 | 0.10 | 1.522 | 27.118   | 33.443  | 45.201  | 1593    |       |
| 2097  | 2.779 | 34.351   | 0.45   | 6.1    | 145.4 | 4.5  | 0.10 | 0.10 | 2.919 | 27.149   | 33.523  | 45.269  | 2095    |       |
| 2496  | 2.945 | 34.399   | 0.44   | 5.6    | 155.9 | 3.14 | 45.2 | 0.10 | 2.748 | 27.165   | 33.578  | 45.331  | 2495    |       |
| 2524  | 2.524 | 34.462   | 0.44   | 5.9    | 165.1 | 3.16 | 45.3 | 0.10 | 2.441 | 27.504   | 36.585  | 45.457  | 2524    |       |
| 2493  | 2.291 | 34.514   | 0.61   | 8.1    | 171.2 | 3.12 | 45.1 | 0.10 | 2.179 | 27.568   | 36.763  | 45.477  | 2494    |       |
| 1741  | 2.771 | 34.561   | 0.90   | 11.7   | 175.4 | 3.06 | 44.2 | 0.10 | 1.953 | 27.623   | 36.929  | 45.625  | 1741    |       |
| 1993  | 1.927 | 34.591   | 1.21   | 15.7   | 183.2 | 2.99 | 43.4 | 0.10 | 1.791 | 27.559   | 36.875  | 45.678  | 1994    |       |
| 2217  | 1.503 | 34.615   | 1.57   | 21.3   | 191.1 | 2.91 | 42.5 | 0.10 | 1.649 | 27.690   | 36.913  | 45.721  | 2266    |       |
| 2495  | 1.697 | 34.615   | 1.97   | 25.4   | 191.4 | 2.93 | 41.4 | 0.10 | 1.526 | 27.16    | 36.945  | 45.762  | 2495    |       |
| 2495  | 1.565 | 34.659   | 1.56   | 23.5   | 191.4 | 3.19 | 41.9 | 0.10 | 1.345 | 27.188   | 36.966  | 45.813  | 2495    |       |
| 1812  | 1.493 | 34.676   | 3.12   | 19.1   | 191.1 | 2.61 | 39.3 | 0.10 | 1.215 | 27.177   | 37.016  | 45.949  | 1816    |       |
| 1493  | 1.419 | 34.694   | 1.28   | 41.9   | 191.4 | 3.17 | 37.1 | 0.10 | 1.071 | 27.191   | 37.010  | 45.967  | 1493    |       |
| 445   | 1.591 | 34.697   | 1.44   | 42.7   | 192.1 | 3.15 | 37.5 | 0.10 | 1.107 | 27.184   | 37.015  | 45.971  | 4449    |       |
| 1044  | 1.701 | 34.693   | 3.45   | 43.5   | 191.1 | 2.77 | 37.4 | 0.10 | 1.127 | 27.187   | 37.017  | 45.974  | 1044    |       |

# MARATHON 2 STA. 71



R V THOMAS WASHINGTON MARATHON LEG 11 STATION 1

LATITUDE LONGITUDE MO DY YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAR M  
 41 57 N 121 59 W 8 27 84 1256 1444 250 18 6.1 6.1 1014.6

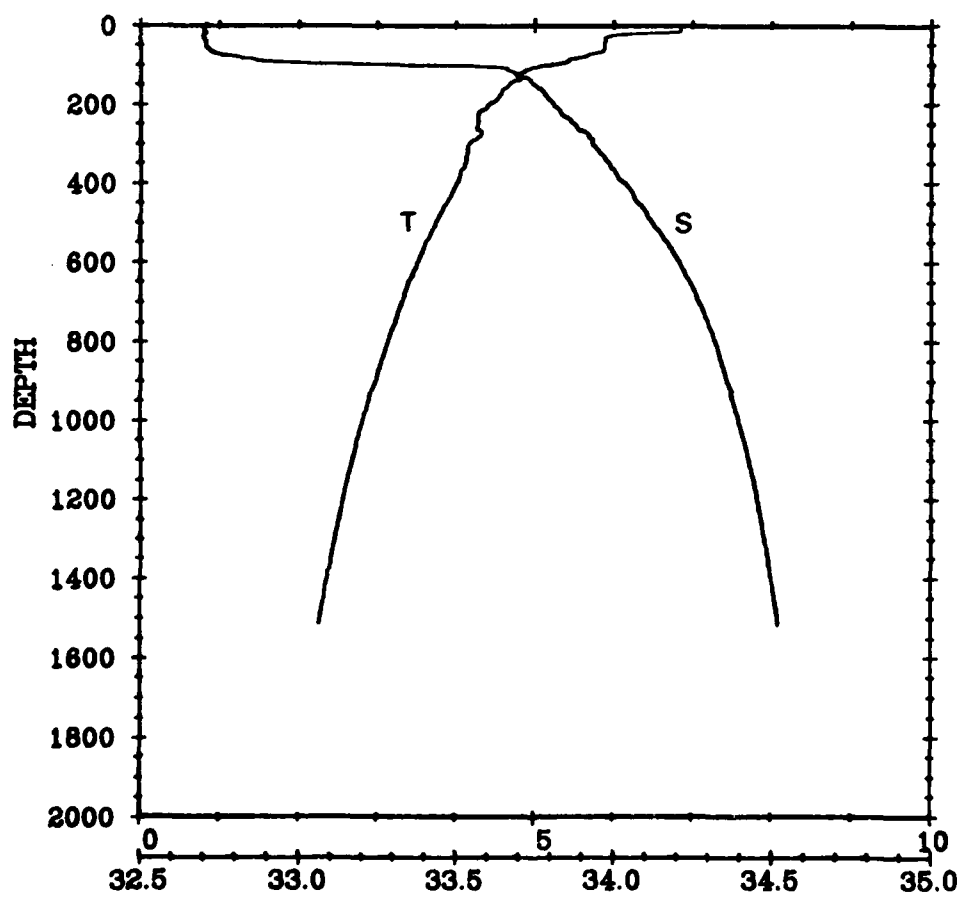
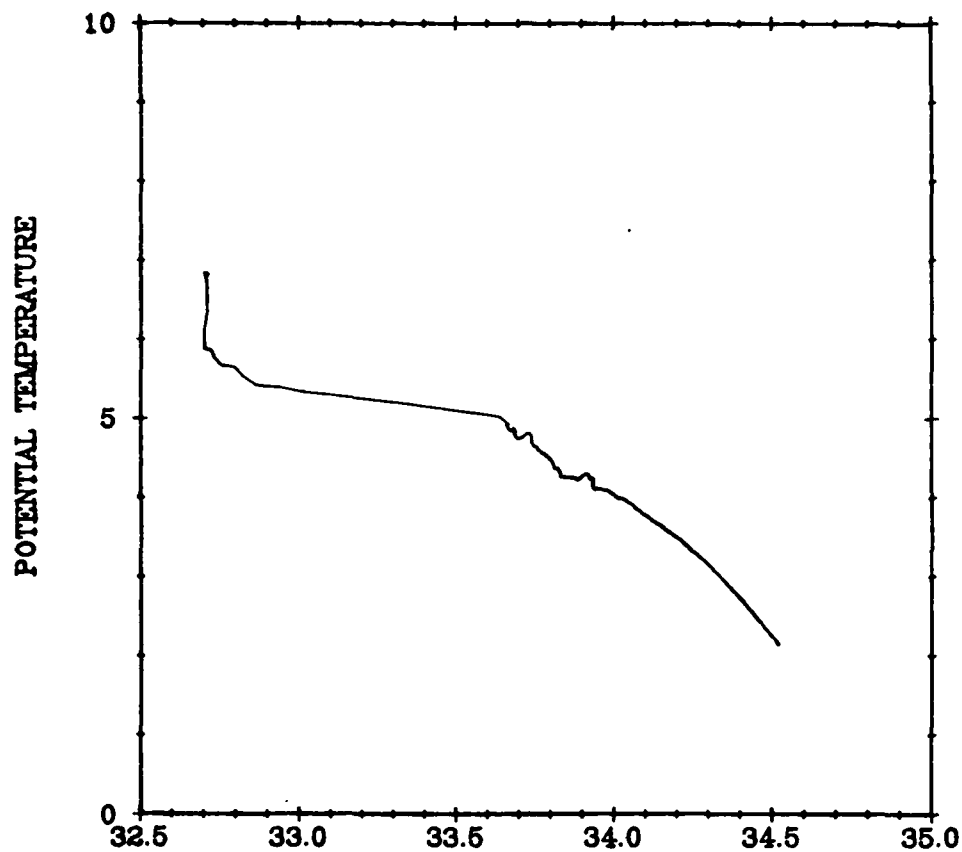
## STD DATA

| DEPTH | PRESS | TEMP   | SALINITY | POT TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH |
|-------|-------|--------|----------|----------|---------|---------|---------|---------|------------|-------|
| M     | DB    | DEG C  |          | DEG C    |         |         |         | CTD     |            | M     |
| 1     | 984   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 1     |
| 2     | 985   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 2     |
| 3     | 986   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 3     |
| 4     | 987   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 4     |
| 5     | 988   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 5     |
| 6     | 989   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 6     |
| 7     | 990   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 7     |
| 8     | 991   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 8     |
| 9     | 992   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 9     |
| 10    | 993   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 10    |
| 11    | 994   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 11    |
| 12    | 995   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 12    |
| 13    | 996   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 13    |
| 14    | 997   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 14    |
| 15    | 998   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 15    |
| 16    | 999   | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 16    |
| 17    | 1000  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 17    |
| 18    | 1001  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 18    |
| 19    | 1002  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 19    |
| 20    | 1003  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 20    |
| 21    | 1004  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 21    |
| 22    | 1005  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 22    |
| 23    | 1006  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 23    |
| 24    | 1007  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 24    |
| 25    | 1008  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 25    |
| 26    | 1009  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 26    |
| 27    | 1010  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 27    |
| 28    | 1011  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 28    |
| 29    | 1012  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 29    |
| 30    | 1013  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 30    |
| 31    | 1014  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 31    |
| 32    | 1015  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 32    |
| 33    | 1016  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 33    |
| 34    | 1017  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 34    |
| 35    | 1018  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 35    |
| 36    | 1019  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 36    |
| 37    | 1020  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 37    |
| 38    | 1021  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 38    |
| 39    | 1022  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 39    |
| 40    | 1023  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 40    |
| 41    | 1024  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 41    |
| 42    | 1025  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 42    |
| 43    | 1026  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 43    |
| 44    | 1027  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 44    |
| 45    | 1028  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 45    |
| 46    | 1029  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 46    |
| 47    | 1030  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 47    |
| 48    | 1031  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 48    |
| 49    | 1032  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 49    |
| 50    | 1033  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 50    |
| 51    | 1034  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 51    |
| 52    | 1035  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 52    |
| 53    | 1036  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 53    |
| 54    | 1037  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 54    |
| 55    | 1038  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 55    |
| 56    | 1039  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 56    |
| 57    | 1040  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 57    |
| 58    | 1041  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 58    |
| 59    | 1042  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 59    |
| 60    | 1043  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 60    |
| 61    | 1044  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 61    |
| 62    | 1045  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 62    |
| 63    | 1046  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 63    |
| 64    | 1047  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 64    |
| 65    | 1048  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 65    |
| 66    | 1049  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 66    |
| 67    | 1050  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 67    |
| 68    | 1051  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 68    |
| 69    | 1052  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 69    |
| 70    | 1053  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 70    |
| 71    | 1054  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 71    |
| 72    | 1055  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 72    |
| 73    | 1056  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 73    |
| 74    | 1057  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 74    |
| 75    | 1058  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 75    |
| 76    | 1059  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 76    |
| 77    | 1060  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 77    |
| 78    | 1061  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 78    |
| 79    | 1062  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 79    |
| 80    | 1063  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 80    |
| 81    | 1064  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 81    |
| 82    | 1065  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 82    |
| 83    | 1066  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 83    |
| 84    | 1067  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 84    |
| 85    | 1068  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 85    |
| 86    | 1069  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 86    |
| 87    | 1070  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 87    |
| 88    | 1071  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 88    |
| 89    | 1072  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 89    |
| 90    | 1073  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 90    |
| 91    | 1074  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 91    |
| 92    | 1075  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 92    |
| 93    | 1076  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 93    |
| 94    | 1077  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 94    |
| 95    | 1078  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 95    |
| 96    | 1079  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 96    |
| 97    | 1080  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 97    |
| 98    | 1081  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 98    |
| 99    | 1082  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 99    |
| 100   | 1083  | 12.105 | 35.632   | 14.517   | 41.215  | 234.672 |         |         |            | 100   |

## NICKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | O2 SAT | SIGMA T | POT  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|---------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   |         | UM/L | UM/L | UM/L | TURB  | DEG C    |         |         |         | DB    |
| 1     | 984   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.800 | 25.636   | 34.624  | 43.214  |         |       |
| 2     | 985   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.804 | 25.636   | 34.624  | 43.214  |         |       |
| 3     | 986   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.808 | 25.636   | 34.624  | 43.214  |         |       |
| 4     | 987   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.812 | 25.636   | 34.624  | 43.214  |         |       |
| 5     | 988   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.816 | 25.636   | 34.624  | 43.214  |         |       |
| 6     | 989   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.820 | 25.636   | 34.624  | 43.214  |         |       |
| 7     | 990   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.824 | 25.636   | 34.624  | 43.214  |         |       |
| 8     | 991   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.828 | 25.636   | 34.624  | 43.214  |         |       |
| 9     | 992   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.832 | 25.636   | 34.624  | 43.214  |         |       |
| 10    | 993   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.836 | 25.636   | 34.624  | 43.214  |         |       |
| 11    | 994   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.840 | 25.636   | 34.624  | 43.214  |         |       |
| 12    | 995   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.844 | 25.636   | 34.624  | 43.214  |         |       |
| 13    | 996   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.848 | 25.636   | 34.624  | 43.214  |         |       |
| 14    | 997   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.852 | 25.636   | 34.624  | 43.214  |         |       |
| 15    | 998   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.856 | 25.636   | 34.624  | 43.214  |         |       |
| 16    | 999   | 12.103   | 106.3  | 22.2    | 1.23 | 12.5 | 0.13 | 5.860 | 25.636   | 34.624  | 43.214  |         |       |
| 17    | 1000  | 12.103   | 106.3  | 22.2    |      |      |      |       |          |         |         |         |       |

# MARATHON 2 STA. 73

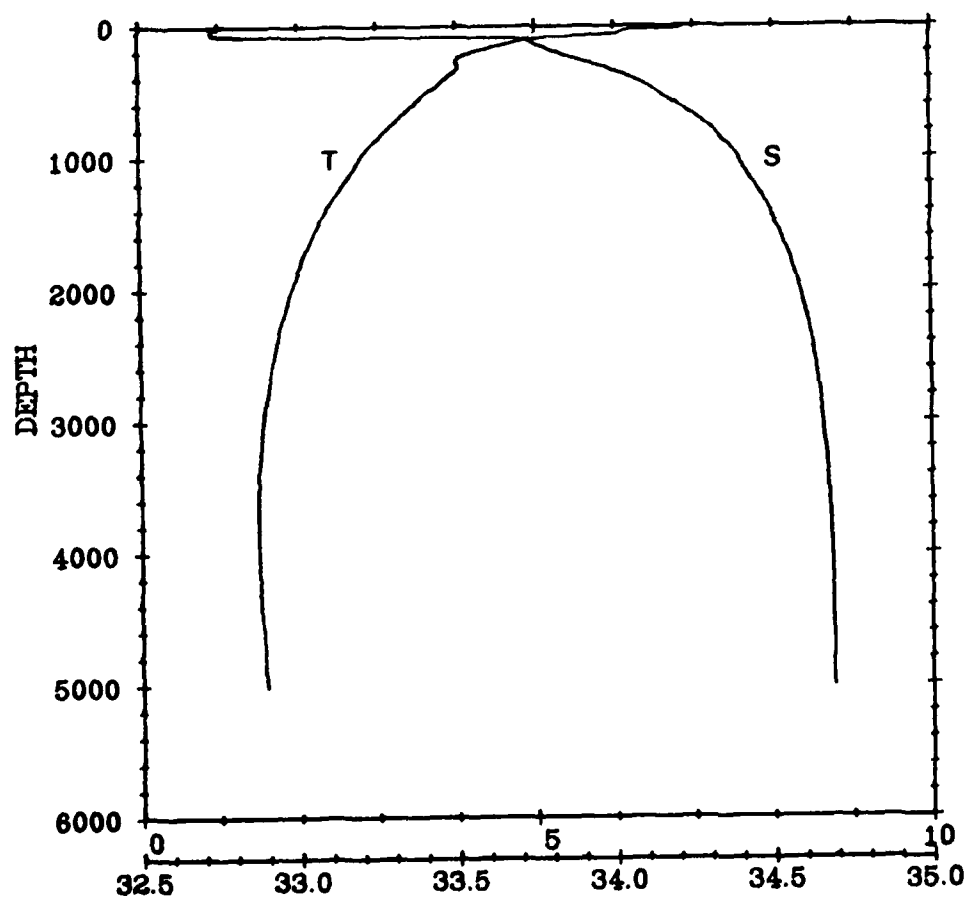
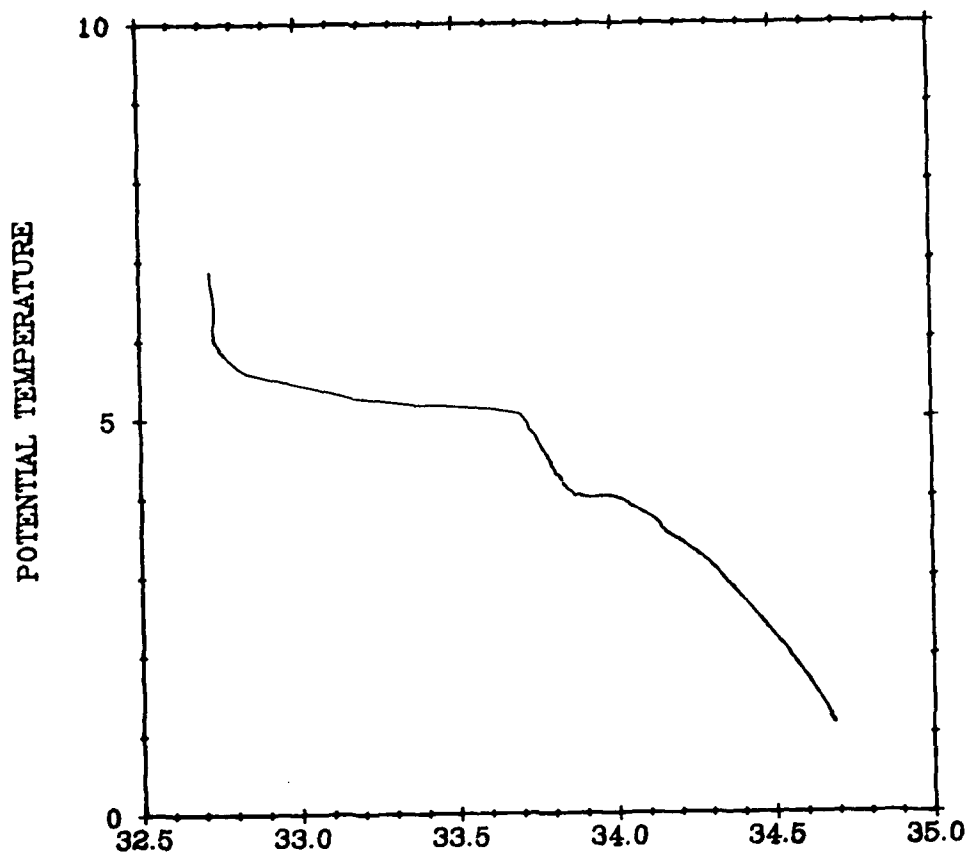


| LATITUDE   | LONGITUDE   | MO | DAY | YR | START TIME | BOTTLE | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|------------|-------------|----|-----|----|------------|--------|------|-------|----------|----------|--------|
| 41 41.00 N | 141 19.00 W | 5  | 27  | 94 | 1924       | 5019   | 200  | KT    | DEG C    | DEG C    | 1019.0 |

| STD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |         |            |            |
| 1           | 5.977         | 32.124   | 5.977             | 25.643  | 34.627  | 43.217  | 222.427 | 1.022      | 1          |
| 20          | 5.972         | 32.125   | 5.970             | 25.655  | 34.642  | 43.232  | 222.799 | 1.047      | 19         |
| 40          | 5.970         | 32.125   | 5.968             | 25.667  | 34.657  | 43.247  | 223.170 | 1.072      | 39         |
| 60          | 5.968         | 32.141   | 5.968             | 25.665  | 34.659  | 43.444  | 222.701 | 1.130      | 59         |
| 80          | 5.965         | 32.970   | 5.949             | 25.604  | 37.049  | 43.492  | 220.247 | 1.230      | 79         |
| 100         | 5.962         | 37.650   | 5.917             | 25.602  | 37.112  | 44.107  | 142.647 | 1.214      | 99         |
| 120         | 4.999         | 37.772   | 4.989             | 25.643  | 37.928  | 44.604  | 171.245 | 1.232      | 119        |
| 140         | 4.245         | 37.922   | 4.256             | 25.923  | 38.909  | 44.607  | 123.479 | 1.145      | 139        |
| 160         | 4.245         | 37.933   | 4.229             | 25.935  | 38.932  | 44.707  | 117.717 | 1.146      | 159        |
| 180         | 4.218         | 37.952   | 4.217             | 25.952  | 38.952  | 44.759  | 112.162 | 1.145      | 179        |
| 200         | 4.213         | 37.952   | 4.213             | 25.952  | 38.952  | 44.812  | 107.735 | 1.145      | 199        |
| 220         | 3.994         | 34.220   | 3.965             | 27.122  | 35.166  | 44.822  | 103.375 | 1.171      | 219        |
| 240         | 3.787         | 34.102   | 3.754             | 27.145  | 35.203  | 44.924  | 99.628  | 1.162      | 239        |
| 260         | 3.574         | 34.178   | 3.540             | 27.167  | 35.240  | 44.977  | 96.102  | 1.167      | 259        |
| 280         | 3.497         | 34.203   | 3.449             | 27.207  | 35.739  | 45.164  | 93.490  | 1.160      | 279        |
| 300         | 3.370         | 34.248   | 3.256             | 27.277  | 36.428  | 45.152  | 91.890  | 1.150      | 299        |
| 320         | 3.119         | 34.120   | 3.055             | 27.335  | 36.487  | 45.229  | 78.704  | 1.092      | 319        |
| 340         | 2.942         | 34.150   | 2.892             | 27.185  | 36.544  | 45.296  | 74.514  | 1.078      | 339        |
| 360         | 2.798         | 34.194   | 2.732             | 27.425  | 36.593  | 45.351  | 71.331  | 1.091      | 359        |
| 380         | 2.755         | 34.416   | 2.612             | 27.452  | 36.624  | 45.387  | 68.945  | 1.111      | 379        |
| 400         | 2.693         | 34.442   | 2.519             | 27.493  | 36.661  | 45.430  | 66.339  | 1.119      | 399        |
| 420         | 2.471         | 34.453   | 2.397             | 27.104  | 36.699  | 45.473  | 63.574  | 1.284      | 419        |
| 440         | 2.162         | 34.492   | 2.270             | 27.443  | 36.734  | 45.544  | 61.166  | 1.346      | 439        |
| 460         | 2.287         | 34.510   | 2.191             | 27.365  | 36.760  | 45.544  | 59.194  | 1.406      | 459        |
| 480         | 2.197         | 34.529   | 2.091             | 27.696  | 36.786  | 45.575  | 57.391  | 1.465      | 479        |
| 500         | 2.120         | 34.545   | 2.017             | 27.607  | 36.811  | 45.604  | 55.883  | 1.522      | 499        |
| 520         | 2.149         | 34.567   | 1.928             | 27.425  | 36.873  | 45.630  | 54.253  | 1.577      | 519        |
| 540         | 1.987         | 34.577   | 1.859             | 27.641  | 36.853  | 45.653  | 53.144  | 1.610      | 539        |
| 560         | 1.932         | 34.584   | 1.797             | 27.454  | 36.869  | 45.672  | 52.022  | 1.683      | 559        |
| 580         | 1.875         | 34.597   | 1.732             | 27.463  | 36.896  | 45.693  | 50.924  | 1.734      | 579        |
| 600         | 1.829         | 34.604   | 1.678             | 27.479  | 36.911  | 45.710  | 50.147  | 1.785      | 599        |
| 620         | 1.779         | 34.614   | 1.615             | 27.492  | 36.917  | 45.720  | 49.397  | 1.834      | 619        |
| 640         | 1.714         | 34.622   | 1.568             | 27.102  | 36.929  | 45.744  | 49.240  | 1.893      | 639        |
| 660         | 1.704         | 34.628   | 1.510             | 27.109  | 36.939  | 45.755  | 47.766  | 1.931      | 659        |
| 680         | 1.666         | 34.635   | 1.493             | 27.119  | 36.930  | 45.769  | 47.178  | 1.979      | 679        |
| 700         | 1.637         | 34.641   | 1.445             | 27.126  | 36.960  | 45.780  | 46.575  | 2.025      | 699        |
| 720         | 1.611         | 34.645   | 1.411             | 27.133  | 36.968  | 45.741  | 46.174  | 2.072      | 719        |
| 740         | 1.591         | 34.651   | 1.392             | 27.139  | 36.976  | 45.801  | 45.344  | 2.118      | 739        |
| 760         | 1.567         | 34.655   | 1.349             | 27.144  | 36.991  | 45.809  | 45.222  | 2.163      | 759        |
| 780         | 1.546         | 34.659   | 1.319             | 27.154  | 36.990  | 45.821  | 45.231  | 2.209      | 779        |
| 800         | 1.524         | 34.663   | 1.298             | 27.155  | 36.997  | 45.826  | 44.911  | 2.254      | 799        |
| 820         | 1.512         | 34.665   | 1.256             | 27.159  | 37.102  | 45.832  | 44.908  | 2.299      | 819        |
| 840         | 1.497         | 34.659   | 1.243             | 27.155  | 37.107  | 45.838  | 44.687  | 2.341      | 839        |
| 860         | 1.491         | 34.671   | 1.225             | 27.155  | 37.111  | 45.843  | 44.690  | 2.399      | 859        |
| 880         | 1.492         | 34.674   | 1.206             | 27.157  | 37.105  | 45.849  | 44.679  | 2.433      | 879        |
| 900         | 1.491         | 34.675   | 1.195             | 27.157  | 37.109  | 45.854  | 44.710  | 2.477      | 899        |
| 920         | 1.479         | 34.677   | 1.182             | 27.171  | 37.121  | 45.856  | 44.710  | 2.522      | 919        |
| 940         | 1.492         | 34.679   | 1.172             | 27.176  | 37.124  | 45.859  | 44.713  | 2.567      | 939        |
| 960         | 1.492         | 34.680   | 1.164             | 27.177  | 37.126  | 45.861  | 44.713  | 2.612      | 959        |
| 980         | 1.485         | 34.682   | 1.156             | 27.179  | 37.129  | 45.864  | 44.714  | 2.658      | 979        |
| 1000        | 1.492         | 34.682   | 1.151             | 27.180  | 37.129  | 45.865  | 44.769  | 2.700      | 999        |
| 1020        | 1.497         | 34.683   | 1.145             | 27.182  | 37.131  | 45.867  | 46.035  | 2.749      | 1019       |
| 1040        | 1.526         | 34.684   | 1.142             | 27.182  | 37.132  | 45.869  | 46.370  | 2.795      | 1039       |
| 1060        | 1.511         | 34.685   | 1.138             | 27.183  | 37.133  | 45.870  | 46.673  | 2.842      | 1059       |
| 1080        | 1.541         | 34.685   | 1.136             | 27.183  | 37.134  | 45.870  | 47.197  | 2.899      | 1079       |
| 1100        | 1.512         | 34.685   | 1.133             | 27.183  | 37.134  | 45.871  | 47.587  | 2.916      | 1099       |
| 1120        | 1.541         | 34.686   | 1.129             | 27.184  | 37.135  | 45.872  | 47.948  | 2.994      | 1119       |
| 1140        | 1.562         | 34.687   | 1.128             | 27.185  | 37.136  | 45.873  | 48.225  | 3.032      | 1139       |
| 1160        | 1.563         | 34.687   | 1.127             | 27.185  | 37.136  | 45.873  | 48.475  | 3.080      | 1159       |
| 1180        | 1.575         | 34.687   | 1.126             | 27.185  | 37.136  | 45.873  | 49.144  | 3.129      | 1179       |
| 1200        | 1.576         | 34.687   | 1.125             | 27.185  | 37.136  | 45.873  | 49.193  | 3.135      | 1199       |

| NISKIN BOTTLE DATA |               |          |                |             |               |             |             |             |               |                   |             |
|--------------------|---------------|----------|----------------|-------------|---------------|-------------|-------------|-------------|---------------|-------------------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C | SALINITY | SIG 02<br>ML/L | O2 SAT<br>% | SIG03<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUSIN | POT TEMP<br>DEG C | PRESS<br>DB |
| 1                  | 5.938         | 32.737   | 7.25           | 105.5       | 20.5          | 1.23        | 12.5        | 0.11        | 5.938         | 25.645            | 34.625      |
| 19                 | 5.999         | 32.734   | 7.26           | 105.6       | 21.4          | 1.23        | 12.5        | 0.11        | 5.897         | 25.648            | 34.631      |
| 39                 | 5.183         | 32.740   |                |             | 21.4          | 1.25        | 13.1        | 0.10        | 5.049         | 25.761            | 34.784      |
| 59                 | 5.109         | 33.672   | 5.07           | 71.1        | 42.4          | 1.36        | 25.7        | 0.04        | 5.100         | 25.611            | 35.667      |
| 79                 | 4.645         | 33.767   | 3.92           | 54.4        | 57.2          | 2.21        | 31.0        | 0.01        | 4.634         | 25.739            | 35.916      |
| 99                 | 4.364         | 33.806   | 3.09           | 42.4        | 67.5          | 2.45        | 34.6        | 0.00        | 4.350         | 25.800            | 35.892      |
| 119                | 4.129         | 33.912   | 1.89           | 25.3        | 86.6          | 2.76        | 39.7        | 0.00        | 4.108         | 26.920            | 36.127      |
| 139                | 3.457         | 34.037   | 1.11           | 17.9        | 99.4          | 2.91        | 41.5        | 0.00        | 3.929         | 27.027            | 36.137      |
| 159                | 3.724         | 34.136   | 0.90           | 12.2        | 114.5         | 2.98        | 42.9        | 0.00        | 3.669         | 27.132            | 36.254      |
| 179                | 3.467         | 34.212   | 0.73           | 9.9         | 123.5         | 3.03        | 43.4        | 0.00        | 3.426         | 27.216            | 36.349      |
| 199                | 3.311         | 34.263   | 0.67           | 9.1         | 131.1         | 3.03        | 43.9        | 0.00        | 3.269         | 27.272            | 36.412      |
| 219                | 3.125         | 34.321   | 0.57           | 7.6         | 138.9         | 3.06        | 44.2        | 0.00        | 3.071         | 27.336            | 36.497      |
| 239                | 2.974         | 34.355   | 0.50           | 5.7         | 142.5         | 3.09        | 44.5        | 0.00        | 2.911         | 27.379            | 36.536      |
| 259                | 2.817         | 34.391   | 0.46           | 5.1         | 149.1         | 3.10        | 44.7        | 0.00        | 2.740         | 27.421            | 36.597      |
| 279                | 2.627         | 34.458   | 0.43           | 5.7         | 160.6         | 3.11        | 45.1        | 0.00        | 2.445         | 27.501            | 36.693      |
| 299                | 2.432         | 34.512   | 0.51           | 7.3         | 170.8         | 3.19        | 45.0        | 0.00        | 2.132         | 27.565            | 36.761      |
| 319                | 2.253         | 34.552   | 0.93           | 10.9        | 176.5         | 3.23        | 44.4        | 0.00        | 1.995         | 27.614            | 36.819      |
| 339                | 1.932         | 34.587   | 1.27           | 15.7        | 176.5         | 2.47        | 43.4        | 0.00        | 1.795         | 27.656            | 36.971      |
| 359                | 1.695         | 34.632   | 1.97           | 25.4        | 179.9         | 2.93        | 41.2        | 0.00        | 1.519         | 27.713            | 36.948      |
| 379                | 1.573         | 34.655   | 2.52           | 32.4        | 174.5         | 2.72        | 39.8        | 0.00        | 1.360         | 27.743            | 36.981      |
| 399                | 1.487         | 34.675   | 3.07           | 39.3        | 148.0         | 2.41        | 39.1        | 0.00        | 1.220         | 27.769            | 37.115      |
| 419                | 1.491         | 34.692   | 3.25           | 41.5        | 171.2         |             | 37.7        | 0.00        | 1.261         | 27.779            | 37.129      |
| 439                | 1.511         | 34.696   | 3.34           | 42.7        | 171.3         |             | 37.6        | 0.00        | 1.261         | 27.784            | 37.134      |
| 459                | 1.576         | 34.698   | 3.40           | 43.4        | 171.6         | 2.73        | 37.5        | 0.00        | 1.126         | 27.795            | 37.137      |

# MARATHON 2 STA. 74



R/V THOMAS WASHINGTON MARATHON LEI 11 STATION 1

LATITUDE LONGITUDE HT BY VR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB HUMIDITY  
 49 52.2N 150 11W 4 28 34 274 478 200 10 12.0 12.0 100.0

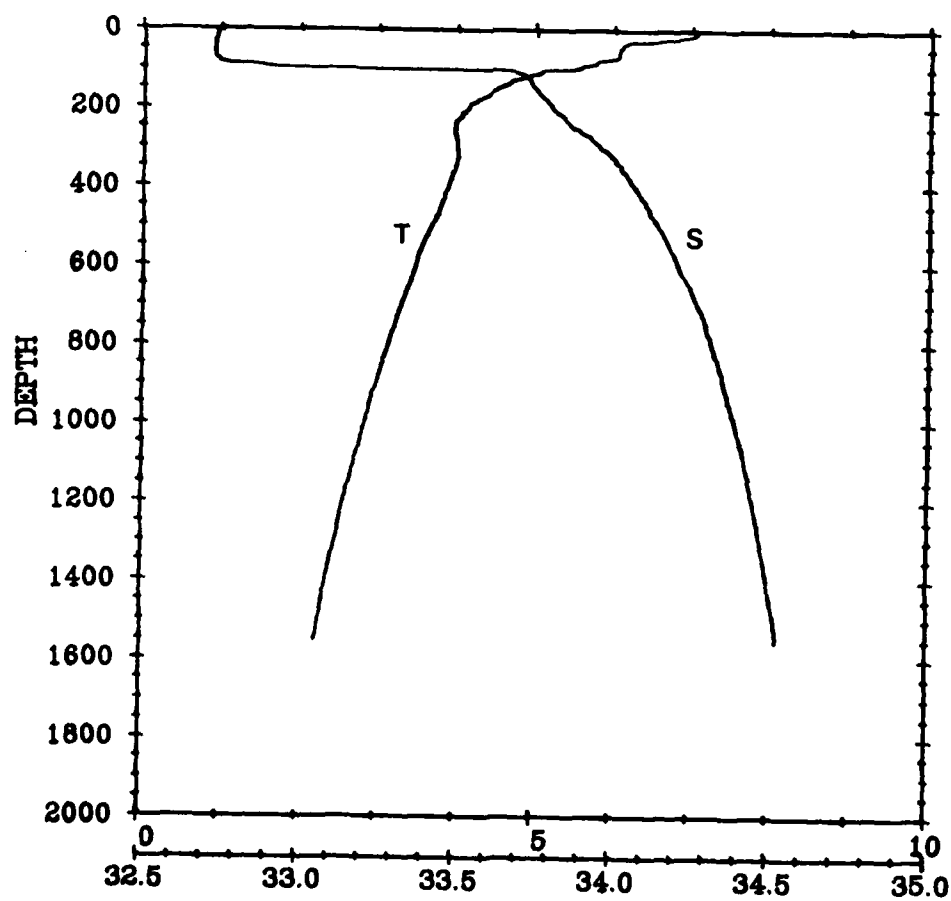
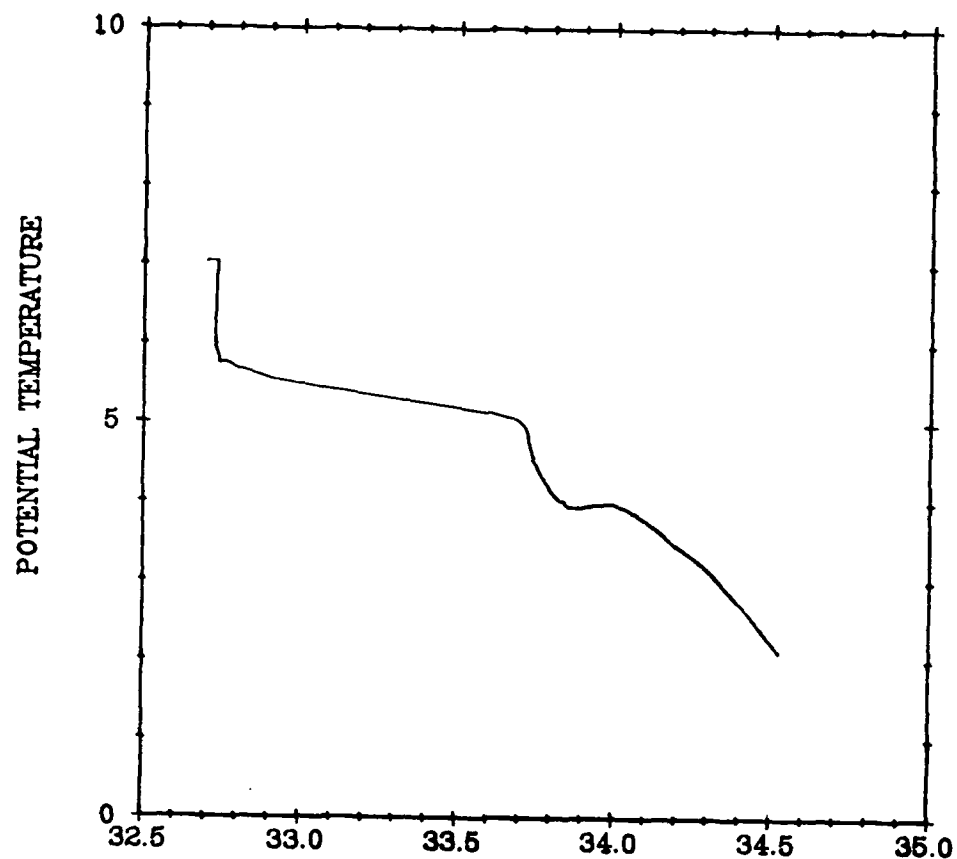
## STD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA T | SIGMA T | SIGMA T | SIGMA T | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         |         |            | M     |
| 2     | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 2     |
| 10    | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 10    |
| 20    | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 20    |
| 40    | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 40    |
| 60    | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 60    |
| 80    | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 80    |
| 100   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 100   |
| 120   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 120   |
| 140   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 140   |
| 160   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 160   |
| 180   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 180   |
| 200   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 200   |
| 220   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 220   |
| 240   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 240   |
| 260   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 260   |
| 280   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 280   |
| 300   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 300   |
| 320   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 320   |
| 340   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 340   |
| 360   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 360   |
| 380   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 380   |
| 400   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 400   |
| 420   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 420   |
| 440   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 440   |
| 460   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 460   |
| 480   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 480   |
| 500   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 500   |
| 520   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 520   |
| 540   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 540   |
| 560   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 560   |
| 580   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 580   |
| 600   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 600   |
| 620   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 620   |
| 640   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 640   |
| 660   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 660   |
| 680   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 680   |
| 700   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 700   |
| 720   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 720   |
| 740   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 740   |
| 760   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 760   |
| 780   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 780   |
| 800   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 800   |
| 820   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 820   |
| 840   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 840   |
| 860   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 860   |
| 880   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 880   |
| 900   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 900   |
| 920   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 920   |
| 940   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 940   |
| 960   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 960   |
| 980   | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 980   |
| 1000  | 12.12 | 34.124   | 12.12    | 25.613  | 44.399  | 43.179  | 43.179  | 1.101      | 1000  |

## NISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIS O2 | O2 SAT | SIGMA T | POT  | NO1  | NO2  | TRIT   | POT TEMP | SIGMA T | SIGMA T | SIGMA T | PRESS |
|-------|-------|----------|--------|--------|---------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L    | UM/L | UM/L | UM/L | TURBIN | DEG C    |         |         |         | DB    |
| 2     | 12.12 | 34.124   | 1.23   | 105.5  | 21.2    | 1.21 | 12.5 | 0.12 | 1.129  | 25.613   | 44.399  | 43.179  | 43.179  | 2     |
| 10    | 12.12 | 34.124   | 1.22   | 102.9  | 21.1    | 1.23 | 13.3 | 0.10 | 1.142  | 25.613   | 44.399  | 43.179  | 43.179  | 10    |
| 20    | 12.12 | 34.124   | 1.24   | 79.4   | 16.1    | 1.72 | 22.3 | 0.17 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 20    |
| 30    | 12.12 | 34.124   | 1.24   | 58.8   | 14.3    | 2.11 | 29.8 | 0.01 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 30    |
| 40    | 12.12 | 34.124   | 1.21   | 44.1   | 10.9    | 2.42 | 34.3 | 0.11 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 40    |
| 50    | 12.12 | 34.124   | 1.21   | 36.1   | 7.4     | 2.57 | 36.5 | 0.11 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 50    |
| 60    | 12.12 | 34.124   | 1.21   | 26.3   | 3.6     | 2.77 | 39.5 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 60    |
| 70    | 12.12 | 34.124   | 1.21   | 21.9   | 2.3     | 2.93 | 40.4 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 70    |
| 80    | 12.12 | 34.124   | 1.10   | 15.0   | 1.0     | 2.95 | 42.1 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 80    |
| 90    | 12.12 | 34.124   | 0.88   | 11.3   | 1.1     | 2.99 | 42.9 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 90    |
| 100   | 12.12 | 34.124   | 0.76   | 10.1   | 1.2     | 3.03 | 43.3 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 100   |
| 110   | 12.12 | 34.124   | 0.65   | 8.7    | 1.3     | 3.05 | 43.7 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 110   |
| 120   | 12.12 | 34.124   | 0.57   | 7.5    | 1.3     | 3.08 | 44.0 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 120   |
| 130   | 12.12 | 34.124   | 0.54   | 7.2    | 1.4     | 3.10 | 44.3 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 130   |
| 140   | 12.12 | 34.124   | 0.45   | 6.0    | 1.5     | 3.12 | 44.6 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 140   |
| 150   | 12.12 | 34.124   | 0.40   | 5.3    | 1.6     | 3.12 | 45.1 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 150   |
| 160   | 12.12 | 34.124   | 0.53   | 8.2    | 1.7     | 3.12 | 44.7 | 0.10 | 1.141  | 26.117   | 44.401  | 44.401  | 44.401  | 160   |

# MARATHON 2 STA. 75

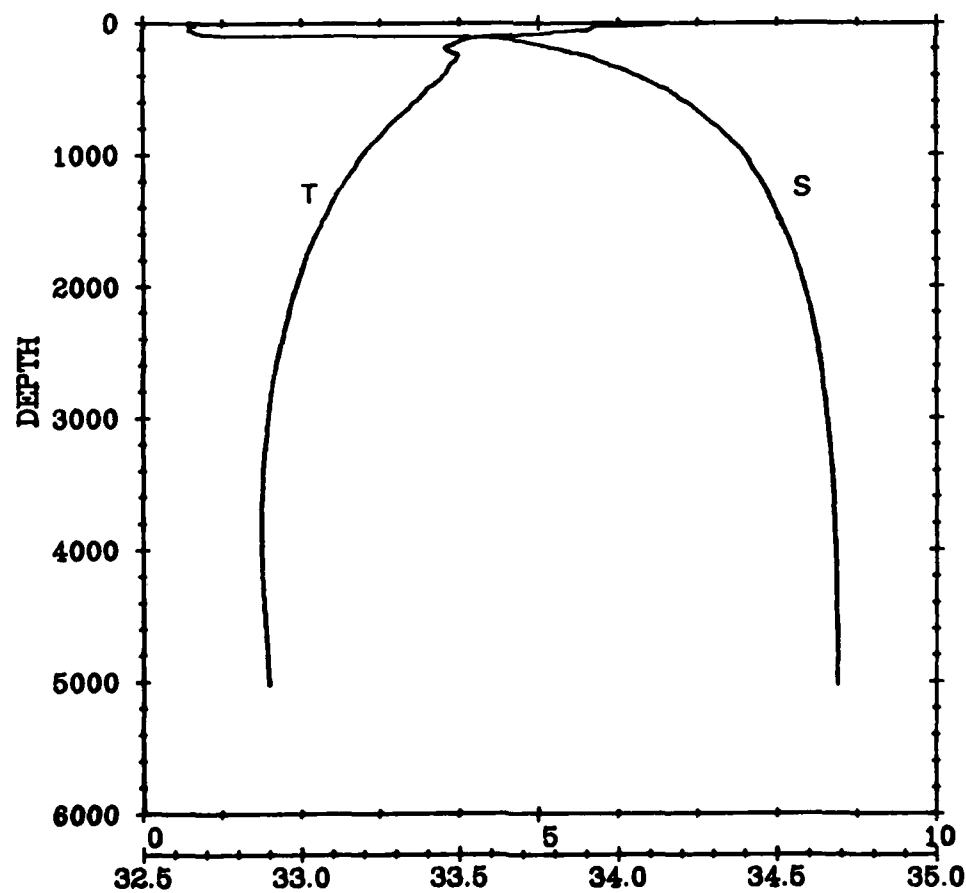
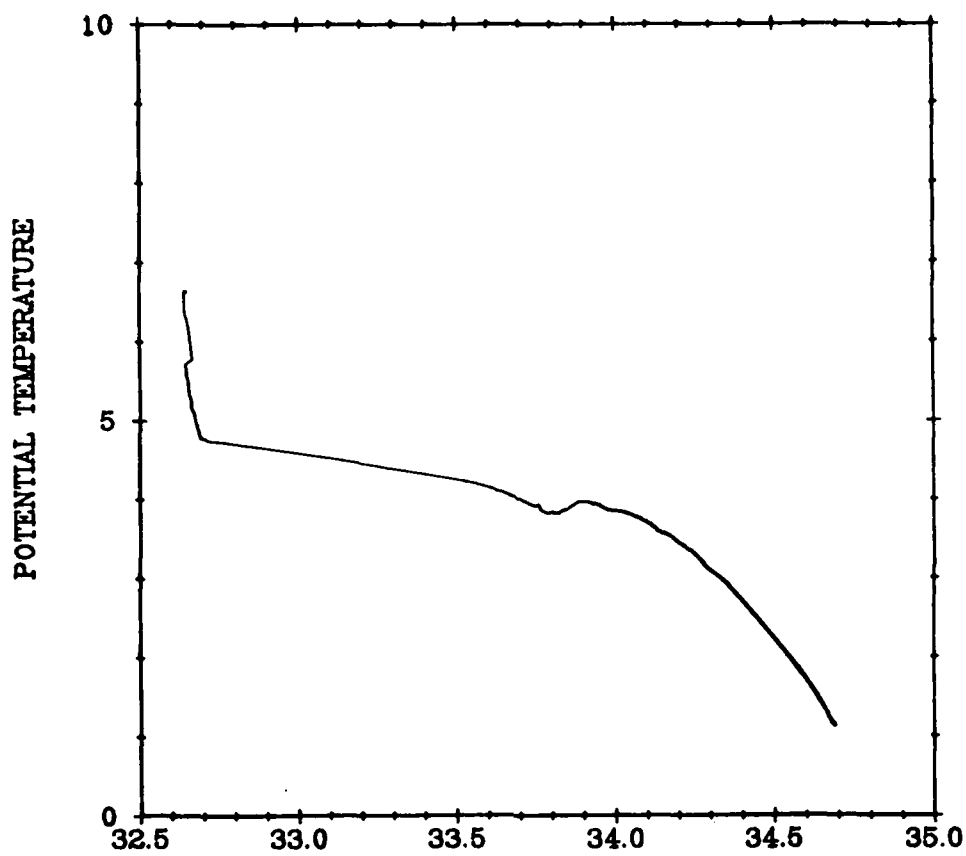


| LATITUDE | LONGITUDE | MO | DAY | YR | START TIME | BOTTLE | WIND | WAVE | AIR TEMP | WAT TEMP | WAT TEMP | WAT TEMP |
|----------|-----------|----|-----|----|------------|--------|------|------|----------|----------|----------|----------|
| 49 19 N  | 121 59 W  | 5  | 23  | 94 | 100        | 4-95   | 210  | 11   | 50.2     | 49.2     | 48.2     | 47.2     |

## STD DATA

| PRESS | TEMP   | SALINITY | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 3 | SIGMA 4 | SIGMA 5 | WAT TEMP | WAT TEMP | WAT TEMP | WAT TEMP |
|-------|--------|----------|----------|---------|---------|---------|---------|---------|----------|----------|----------|----------|
| DB    | DEG C  |          | DEG C    |         |         |         |         |         | DEG C    | DEG C    | DEG C    | DEG C    |
| 1     | 5.458  | 32.644   | 5.458    | 25.624  | 34.624  | 43.624  | 52.624  | 61.624  | 49.2     | 48.2     | 47.2     | 46.2     |
| 20    | 5.321  | 32.646   | 5.299    | 25.656  | 34.656  | 43.656  | 52.656  | 61.656  | 49.2     | 48.2     | 47.2     | 46.2     |
| 40    | 5.179  | 32.646   | 5.157    | 25.702  | 34.702  | 43.702  | 52.702  | 61.702  | 49.2     | 48.2     | 47.2     | 46.2     |
| 60    | 5.032  | 32.652   | 5.010    | 25.748  | 34.748  | 43.748  | 52.748  | 61.748  | 49.2     | 48.2     | 47.2     | 46.2     |
| 80    | 4.884  | 32.652   | 4.862    | 25.794  | 34.794  | 43.794  | 52.794  | 61.794  | 49.2     | 48.2     | 47.2     | 46.2     |
| 100   | 4.737  | 32.652   | 4.715    | 25.840  | 34.840  | 43.840  | 52.840  | 61.840  | 49.2     | 48.2     | 47.2     | 46.2     |
| 120   | 4.590  | 32.652   | 4.568    | 25.886  | 34.886  | 43.886  | 52.886  | 61.886  | 49.2     | 48.2     | 47.2     | 46.2     |
| 140   | 4.443  | 32.652   | 4.421    | 25.932  | 34.932  | 43.932  | 52.932  | 61.932  | 49.2     | 48.2     | 47.2     | 46.2     |
| 160   | 4.296  | 32.652   | 4.274    | 25.978  | 34.978  | 43.978  | 52.978  | 61.978  | 49.2     | 48.2     | 47.2     | 46.2     |
| 180   | 4.149  | 32.652   | 4.127    | 26.024  | 35.024  | 44.024  | 53.024  | 62.024  | 49.2     | 48.2     | 47.2     | 46.2     |
| 200   | 4.002  | 32.652   | 3.980    | 26.070  | 35.070  | 44.070  | 53.070  | 62.070  | 49.2     | 48.2     | 47.2     | 46.2     |
| 220   | 3.855  | 32.652   | 3.833    | 26.116  | 35.116  | 44.116  | 53.116  | 62.116  | 49.2     | 48.2     | 47.2     | 46.2     |
| 240   | 3.708  | 32.652   | 3.686    | 26.162  | 35.162  | 44.162  | 53.162  | 62.162  | 49.2     | 48.2     | 47.2     | 46.2     |
| 260   | 3.561  | 32.652   | 3.539    | 26.208  | 35.208  | 44.208  | 53.208  | 62.208  | 49.2     | 48.2     | 47.2     | 46.2     |
| 280   | 3.414  | 32.652   | 3.392    | 26.254  | 35.254  | 44.254  | 53.254  | 62.254  | 49.2     | 48.2     | 47.2     | 46.2     |
| 300   | 3.267  | 32.652   | 3.245    | 26.300  | 35.300  | 44.300  | 53.300  | 62.300  | 49.2     | 48.2     | 47.2     | 46.2     |
| 320   | 3.120  | 32.652   | 3.098    | 26.346  | 35.346  | 44.346  | 53.346  | 62.346  | 49.2     | 48.2     | 47.2     | 46.2     |
| 340   | 2.973  | 32.652   | 2.951    | 26.392  | 35.392  | 44.392  | 53.392  | 62.392  | 49.2     | 48.2     | 47.2     | 46.2     |
| 360   | 2.826  | 32.652   | 2.804    | 26.438  | 35.438  | 44.438  | 53.438  | 62.438  | 49.2     | 48.2     | 47.2     | 46.2     |
| 380   | 2.679  | 32.652   | 2.657    | 26.484  | 35.484  | 44.484  | 53.484  | 62.484  | 49.2     | 48.2     | 47.2     | 46.2     |
| 400   | 2.532  | 32.652   | 2.510    | 26.530  | 35.530  | 44.530  | 53.530  | 62.530  | 49.2     | 48.2     | 47.2     | 46.2     |
| 420   | 2.385  | 32.652   | 2.363    | 26.576  | 35.576  | 44.576  | 53.576  | 62.576  | 49.2     | 48.2     | 47.2     | 46.2     |
| 440   | 2.238  | 32.652   | 2.216    | 26.622  | 35.622  | 44.622  | 53.622  | 62.622  | 49.2     | 48.2     | 47.2     | 46.2     |
| 460   | 2.091  | 32.652   | 2.069    | 26.668  | 35.668  | 44.668  | 53.668  | 62.668  | 49.2     | 48.2     | 47.2     | 46.2     |
| 480   | 1.944  | 32.652   | 1.922    | 26.714  | 35.714  | 44.714  | 53.714  | 62.714  | 49.2     | 48.2     | 47.2     | 46.2     |
| 500   | 1.797  | 32.652   | 1.775    | 26.760  | 35.760  | 44.760  | 53.760  | 62.760  | 49.2     | 48.2     | 47.2     | 46.2     |
| 520   | 1.650  | 32.652   | 1.628    | 26.806  | 35.806  | 44.806  | 53.806  | 62.806  | 49.2     | 48.2     | 47.2     | 46.2     |
| 540   | 1.503  | 32.652   | 1.481    | 26.852  | 35.852  | 44.852  | 53.852  | 62.852  | 49.2     | 48.2     | 47.2     | 46.2     |
| 560   | 1.356  | 32.652   | 1.334    | 26.898  | 35.898  | 44.898  | 53.898  | 62.898  | 49.2     | 48.2     | 47.2     | 46.2     |
| 580   | 1.209  | 32.652   | 1.187    | 26.944  | 35.944  | 44.944  | 53.944  | 62.944  | 49.2     | 48.2     | 47.2     | 46.2     |
| 600   | 1.062  | 32.652   | 1.040    | 26.990  | 35.990  | 44.990  | 53.990  | 62.990  | 49.2     | 48.2     | 47.2     | 46.2     |
| 620   | 0.915  | 32.652   | 0.893    | 27.036  | 36.036  | 45.036  | 54.036  | 63.036  | 49.2     | 48.2     | 47.2     | 46.2     |
| 640   | 0.768  | 32.652   | 0.746    | 27.082  | 36.082  | 45.082  | 54.082  | 63.082  | 49.2     | 48.2     | 47.2     | 46.2     |
| 660   | 0.621  | 32.652   | 0.599    | 27.128  | 36.128  | 45.128  | 54.128  | 63.128  | 49.2     | 48.2     | 47.2     | 46.2     |
| 680   | 0.474  | 32.652   | 0.452    | 27.174  | 36.174  | 45.174  | 54.174  | 63.174  | 49.2     | 48.2     | 47.2     | 46.2     |
| 700   | 0.327  | 32.652   | 0.305    | 27.220  | 36.220  | 45.220  | 54.220  | 63.220  | 49.2     | 48.2     | 47.2     | 46.2     |
| 720   | 0.180  | 32.652   | 0.158    | 27.266  | 36.266  | 45.266  | 54.266  | 63.266  | 49.2     | 48.2     | 47.2     | 46.2     |
| 740   | 0.033  | 32.652   | 0.011    | 27.312  | 36.312  | 45.312  | 54.312  | 63.312  | 49.2     | 48.2     | 47.2     | 46.2     |
| 760   | -0.124 | 32.652   | -0.102   | 27.358  | 36.358  | 45.358  | 54.358  | 63.358  | 49.2     | 48.2     | 47.2     | 46.2     |
| 780   | -0.277 | 32.652   | -0.255   | 27.404  | 36.404  | 45.404  | 54.404  | 63.404  | 49.2     | 48.2     | 47.2     | 46.2     |
| 800   | -0.430 | 32.652   | -0.408   | 27.450  | 36.450  | 45.450  | 54.450  | 63.450  | 49.2     | 48.2     | 47.2     | 46.2     |
| 820   | -0.583 | 32.652   | -0.561   | 27.496  | 36.496  | 45.496  | 54.496  | 63.496  | 49.2     | 48.2     | 47.2     | 46.2     |
| 840   | -0.736 | 32.652   | -0.714   | 27.542  | 36.542  | 45.542  | 54.542  | 63.542  | 49.2     | 48.2     | 47.2     | 46.2     |
| 860   | -0.889 | 32.652   | -0.867   | 27.588  | 36.588  | 45.588  | 54.588  | 63.588  | 49.2     | 48.2     | 47.2     | 46.2     |
| 880   | -1.042 | 32.652   | -1.020   | 27.634  | 36.634  | 45.634  | 54.634  | 63.634  | 49.2     | 48.2     | 47.2     | 46.2     |
| 900   | -1.195 | 32.652   | -1.173   | 27.680  | 36.680  | 45.680  | 54.680  | 63.680  | 49.2     | 48.2     | 47.2     | 46.2     |
| 920   | -1.348 | 32.652   | -1.326   | 27.726  | 36.726  | 45.726  | 54.726  | 63.726  | 49.2     | 48.2     | 47.2     | 46.2     |
| 940   | -1.501 | 32.652   | -1.479   | 27.772  | 36.772  | 45.772  | 54.772  | 63.772  | 49.2     | 48.2     | 47.2     | 46.2     |
| 960   | -1.654 | 32.652   | -1.632   | 27.818  | 36.818  | 45.818  | 54.818  | 63.818  | 49.2     | 48.2     | 47.2     | 46.2     |
| 980   | -1.807 | 32.652   | -1.785   | 27.864  | 36.864  | 45.864  | 54.864  | 63.864  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1000  | -1.960 | 32.652   | -1.938   | 27.910  | 36.910  | 45.910  | 54.910  | 63.910  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1020  | -2.113 | 32.652   | -2.091   | 27.956  | 36.956  | 45.956  | 54.956  | 63.956  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1040  | -2.266 | 32.652   | -2.244   | 28.002  | 37.002  | 46.002  | 55.002  | 64.002  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1060  | -2.419 | 32.652   | -2.397   | 28.048  | 37.048  | 46.048  | 55.048  | 64.048  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1080  | -2.572 | 32.652   | -2.550   | 28.094  | 37.094  | 46.094  | 55.094  | 64.094  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1100  | -2.725 | 32.652   | -2.703   | 28.140  | 37.140  | 46.140  | 55.140  | 64.140  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1120  | -2.878 | 32.652   | -2.856   | 28.186  | 37.186  | 46.186  | 55.186  | 64.186  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1140  | -3.031 | 32.652   | -3.009   | 28.232  | 37.232  | 46.232  | 55.232  | 64.232  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1160  | -3.184 | 32.652   | -3.162   | 28.278  | 37.278  | 46.278  | 55.278  | 64.278  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1180  | -3.337 | 32.652   | -3.315   | 28.324  | 37.324  | 46.324  | 55.324  | 64.324  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1200  | -3.490 | 32.652   | -3.468   | 28.370  | 37.370  | 46.370  | 55.370  | 64.370  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1220  | -3.643 | 32.652   | -3.621   | 28.416  | 37.416  | 46.416  | 55.416  | 64.416  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1240  | -3.796 | 32.652   | -3.774   | 28.462  | 37.462  | 46.462  | 55.462  | 64.462  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1260  | -3.949 | 32.652   | -3.927   | 28.508  | 37.508  | 46.508  | 55.508  | 64.508  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1280  | -4.102 | 32.652   | -4.080   | 28.554  | 37.554  | 46.554  | 55.554  | 64.554  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1300  | -4.255 | 32.652   | -4.233   | 28.600  | 37.600  | 46.600  | 55.600  | 64.600  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1320  | -4.408 | 32.652   | -4.386   | 28.646  | 37.646  | 46.646  | 55.646  | 64.646  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1340  | -4.561 | 32.652   | -4.539   | 28.692  | 37.692  | 46.692  | 55.692  | 64.692  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1360  | -4.714 | 32.652   | -4.692   | 28.738  | 37.738  | 46.738  | 55.738  | 64.738  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1380  | -4.867 | 32.652   | -4.845   | 28.784  | 37.784  | 46.784  | 55.784  | 64.784  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1400  | -5.020 | 32.652   | -4.998   | 28.830  | 37.830  | 46.830  | 55.830  | 64.830  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1420  | -5.173 | 32.652   | -5.151   | 28.876  | 37.876  | 46.876  | 55.876  | 64.876  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1440  | -5.326 | 32.652   | -5.304   | 28.922  | 37.922  | 46.922  | 55.922  | 64.922  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1460  | -5.479 | 32.652   | -5.457   | 28.968  | 37.968  | 46.968  | 55.968  | 64.968  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1480  | -5.632 | 32.652   | -5.610   | 29.014  | 38.014  | 47.014  | 56.014  | 65.014  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1500  | -5.785 | 32.652   | -5.763   | 29.060  | 38.060  | 47.060  | 56.060  | 65.060  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1520  | -5.938 | 32.652   | -5.916   | 29.106  | 38.106  | 47.106  | 56.106  | 65.106  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1540  | -6.091 | 32.652   | -6.069   | 29.152  | 38.152  | 47.152  | 56.152  | 65.152  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1560  | -6.244 | 32.652   | -6.222   | 29.198  | 38.198  | 47.198  | 56.198  | 65.198  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1580  | -6.397 | 32.652   | -6.375   | 29.244  | 38.244  | 47.244  | 56.244  | 65.244  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1600  | -6.550 | 32.652   | -6.528   | 29.290  | 38.290  | 47.290  | 56.290  | 65.290  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1620  | -6.703 | 32.652   | -6.681   | 29.336  | 38.336  | 47.336  | 56.336  | 65.336  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1640  | -6.856 | 32.652   | -6.834   | 29.382  | 38.382  | 47.382  | 56.382  | 65.382  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1660  | -7.009 | 32.652   | -6.987   | 29.428  | 38.428  | 47.428  | 56.428  | 65.428  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1680  | -7.162 | 32.652   | -7.140   | 29.474  | 38.474  | 47.474  | 56.474  | 65.474  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1700  | -7.315 | 32.652   | -7.293   | 29.520  | 38.520  | 47.520  | 56.520  | 65.520  | 49.2     | 48.2     | 47.2     | 46.2     |
| 1720  | -7.468 | 32.652   | -7.446   | 29.566  | 38.566  | 47.566  | 56.566  | 65.566  | 49.2     | 48.      |          |          |

# MARATHON 2 STA. 76

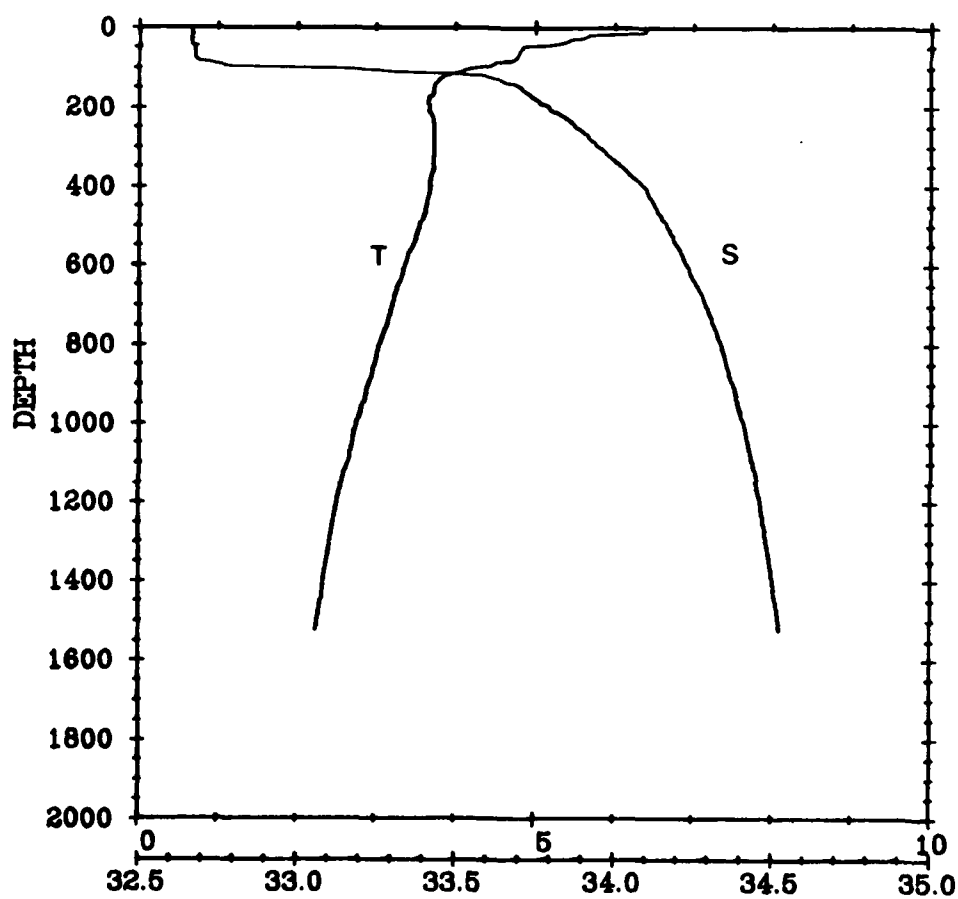
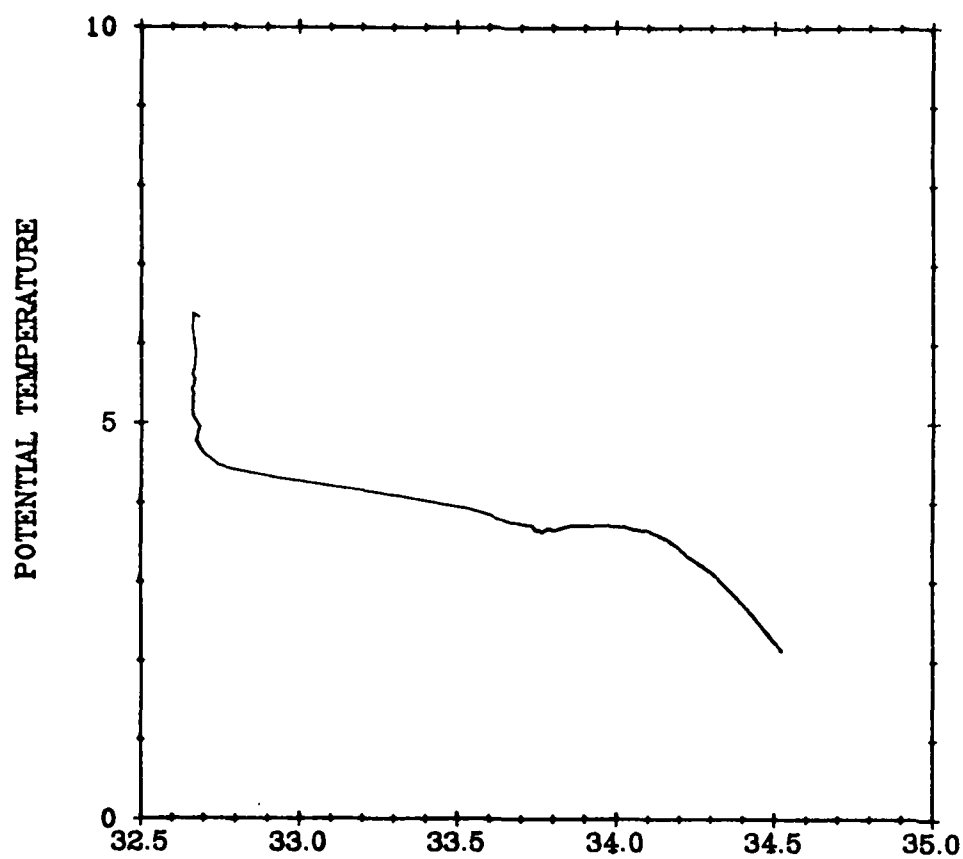


| LATITUDE | LONGITUDE | MO | DAY | YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | SEA W |
|----------|-----------|----|-----|----|------------|--------|------|-------|----------|----------|-------|
|          |           |    |     |    | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | DIR   |
| 44 47.8N | 102 1.0W  | 5  | 28  | 84 | 1804       | 4887   | 40   | 0     | 2        | 14       | 100   |

| STATION | DATE | PRESS | TEMP   | SALINITY | POT. TEMP | SIGMA T | SIGMA 2 | SIGMA 4 | SUA    | DYNAMIC HT | DEPTH |
|---------|------|-------|--------|----------|-----------|---------|---------|---------|--------|------------|-------|
|         |      | DB    | DEG C  |          | DEG       |         |         |         | FL TON |            | M     |
| 1       | 1    | 9.354 | 12.571 | 3.144    | 27.999    | 14.977  | 43.248  | 43.248  | 1.177  | 1.177      | 1.177 |
| 2       | 2    | 9.377 | 12.567 | 3.149    | 28.126    | 14.979  | 43.342  | 43.342  | 1.174  | 1.174      | 1.174 |
| 3       | 3    | 9.356 | 12.564 | 3.153    | 28.193    | 14.983  | 43.345  | 43.345  | 1.174  | 1.174      | 1.174 |
| 4       | 4    | 9.372 | 12.574 | 3.159    | 28.347    | 14.985  | 43.507  | 43.507  | 1.164  | 1.164      | 1.164 |
| 5       | 5    | 9.491 | 12.674 | 3.195    | 28.992    | 14.984  | 43.672  | 43.672  | 1.154  | 1.154      | 1.154 |
| 6       | 6    | 9.412 | 12.668 | 3.195    | 28.139    | 15.216  | 43.949  | 43.949  | 1.152  | 1.152      | 1.152 |
| 7       | 7    | 9.335 | 12.677 | 3.196    | 28.777    | 15.933  | 44.622  | 44.622  | 1.145  | 1.145      | 1.145 |
| 8       | 8    | 9.569 | 13.780 | 3.455    | 28.855    | 16.994  | 44.756  | 44.756  | 1.139  | 1.139      | 1.139 |
| 9       | 9    | 9.311 | 13.977 | 3.714    | 26.422    | 16.345  | 44.752  | 44.752  | 1.143  | 1.143      | 1.143 |
| 10      | 10   | 9.714 | 13.945 | 3.714    | 26.376    | 16.378  | 44.874  | 44.874  | 1.139  | 1.139      | 1.139 |
| 11      | 11   | 9.319 | 14.217 | 3.695    | 27.123    | 16.277  | 44.873  | 44.873  | 1.144  | 1.144      | 1.144 |
| 12      | 12   | 9.575 | 14.226 | 3.648    | 27.244    | 16.218  | 44.937  | 44.937  | 1.153  | 1.153      | 1.153 |
| 13      | 13   | 9.527 | 14.125 | 3.676    | 27.131    | 16.216  | 44.974  | 44.974  | 1.154  | 1.154      | 1.154 |
| 14      | 14   | 9.554 | 14.154 | 3.640    | 27.169    | 16.219  | 45.021  | 45.021  | 1.162  | 1.162      | 1.162 |
| 15      | 15   | 9.365 | 14.227 | 3.625    | 27.314    | 16.376  | 45.127  | 45.127  | 1.161  | 1.161      | 1.161 |
| 16      | 16   | 9.207 | 14.237 | 3.660    | 27.321    | 16.447  | 45.146  | 45.146  | 1.165  | 1.165      | 1.165 |
| 17      | 17   | 9.347 | 14.333 | 2.994    | 27.353    | 16.507  | 45.231  | 45.231  | 1.176  | 1.176      | 1.176 |
| 18      | 18   | 9.317 | 14.369 | 2.957    | 27.395    | 16.566  | 45.329  | 45.329  | 1.175  | 1.175      | 1.175 |
| 19      | 19   | 9.265 | 14.473 | 2.999    | 27.435    | 16.634  | 45.364  | 45.364  | 1.173  | 1.173      | 1.173 |
| 20      | 20   | 9.265 | 14.431 | 2.979    | 27.463    | 16.643  | 45.479  | 45.479  | 1.173  | 1.173      | 1.173 |
| 21      | 21   | 9.520 | 14.453 | 2.441    | 27.572    | 16.614  | 45.456  | 45.456  | 1.179  | 1.179      | 1.179 |
| 22      | 22   | 9.426 | 14.479 | 2.341    | 27.527    | 16.714  | 45.490  | 45.490  | 1.184  | 1.184      | 1.184 |
| 23      | 23   | 9.343 | 14.497 | 2.251    | 27.349    | 16.745  | 45.421  | 45.421  | 1.191  | 1.191      | 1.191 |
| 24      | 24   | 9.267 | 14.515 | 2.168    | 27.373    | 16.766  | 45.531  | 45.531  | 1.194  | 1.194      | 1.194 |
| 25      | 25   | 9.231 | 14.523 | 2.129    | 27.379    | 16.777  | 45.564  | 45.564  | 1.195  | 1.195      | 1.195 |

| WISKIN BOTTLE DATA |       |          |        |        |       |      |      |      |        |          |         |         |         |       |
|--------------------|-------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP  | SALINITY | DIS O2 | O2 SAT | DIS1  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C |          | ML/L   | %      | UMOL  | UM/L | UMOL | UMOL | TURBIN | DEG C    |         |         |         | DB    |
| 2                  | 6.355 | 32.670   | 1.43   | 1.6    | 2.4   | 1.15 | 2.4  | 0.15 | 4.65   | 6.355    | 25.657  | 34.976  | 43.235  | 1.0   |
| 23                 | 5.529 | 32.639   | 1.47   | 1.6    | 2.4   | 1.16 | 2.4  | 0.15 | 4.65   | 5.526    | 25.747  | 34.917  | 43.466  | 2.0   |
| 57                 | 4.798 | 32.681   | 1.42   | 1.1    | 2.4   | 1.43 | 2.5  | 0.12 | 4.65   | 4.794    | 25.960  | 34.946  | 43.624  | 4.0   |
| 109                | 4.269 | 33.298   | 5.27   | 1.9    | 46.9  | 2.13 | 25.9 | 0.35 | 4.43   | 4.261    | 26.426  | 35.741  | 44.251  | 1.19  |
| 138                | 3.697 | 33.740   | 3.11   | 1.4    | 2.0   | 35.4 | 0.00 | 0.00 | 3.19   | 3.687    | 26.799  | 35.720  | 44.641  | 1.19  |
| 215                | 3.664 | 33.917   | 2.14   | 2.4    | 94.4  | 2.41 | 44.2 | 0.00 | 3.19   | 3.650    | 26.890  | 36.117  | 44.734  | 2.07  |
| 251                | 3.725 | 33.912   | 1.70   | 20.4   | 93.2  | 2.43 | 42.0 | 0.00 | 2.76   | 3.719    | 26.942  | 36.465  | 44.792  | 2.52  |
| 303                | 3.713 | 33.966   | 1.14   | 16.2   | 99.1  | 2.39 | 42.9 | 0.00 | 2.19   | 3.710    | 26.992  | 36.115  | 44.811  | 2.55  |
| 404                | 3.669 | 34.195   | 0.87   | 11.9   | 113.3 | 3.13 | 41.4 | 0.00 | 1.99   | 3.641    | 27.112  | 36.226  | 44.941  | 3.07  |
| 504                | 3.519 | 34.111   | 0.74   | 10.4   | 121.6 | 3.15 | 41.6 | 0.00 | 1.48   | 3.514    | 27.176  | 36.116  | 44.924  | 3.19  |
| 603                | 3.355 | 34.231   | 1.65   | 8.9    | 121.6 | 3.15 | 41.8 | 0.00 | 1.18   | 3.314    | 27.242  | 36.181  | 45.112  | 3.19  |
| 699                | 3.197 | 34.290   | 0.69   | 9.1    | 137.2 | 3.11 | 44.0 | 0.00 | 1.27   | 3.170    | 27.314  | 36.151  | 45.184  | 3.15  |
| 800                | 3.137 | 34.315   | 0.62   | 9.2    | 142.9 | 3.19 | 44.1 | 0.00 | 1.28   | 2.983    | 27.356  | 36.120  | 45.257  | 3.07  |
| 895                | 2.895 | 34.373   | 0.55   | 7.3    | 149.7 | 3.11 | 44.5 | 0.00 | 1.20   | 2.815    | 27.397  | 36.161  | 45.314  | 3.4   |
| 1124               | 2.703 | 34.418   | 0.48   | 6.4    | 157.0 | 3.13 | 44.9 | 0.00 | 1.25   | 2.635    | 27.483  | 36.620  | 45.367  | 10.34 |
| 1245               | 2.452 | 34.473   | 0.51   | 6.7    | 165.7 | 3.11 | 45.0 | 0.00 | 2.16   | 2.459    | 27.520  | 36.715  | 45.407  | 12.59 |
| 1523               | 2.229 | 34.523   | 0.74   | 9.7    | 172.7 | 3.11 | 44.6 | 0.00 | 2.12   | 2.259    | 27.519  | 36.711  | 45.504  | 10.4  |

# MARATHON 2 STA. 77



| LATITUDE | LONGITUDE | MO | DAY | HR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | NET BULB | HAXIM  |
|----------|-----------|----|-----|----|------------|--------|------|-------|----------|----------|--------|
| 10 10 LN | 151 19 LW | 5  | 29  | 94 | 2124       | 5110   | 110  | 110   | 2        | 6.1      | 1021.0 |

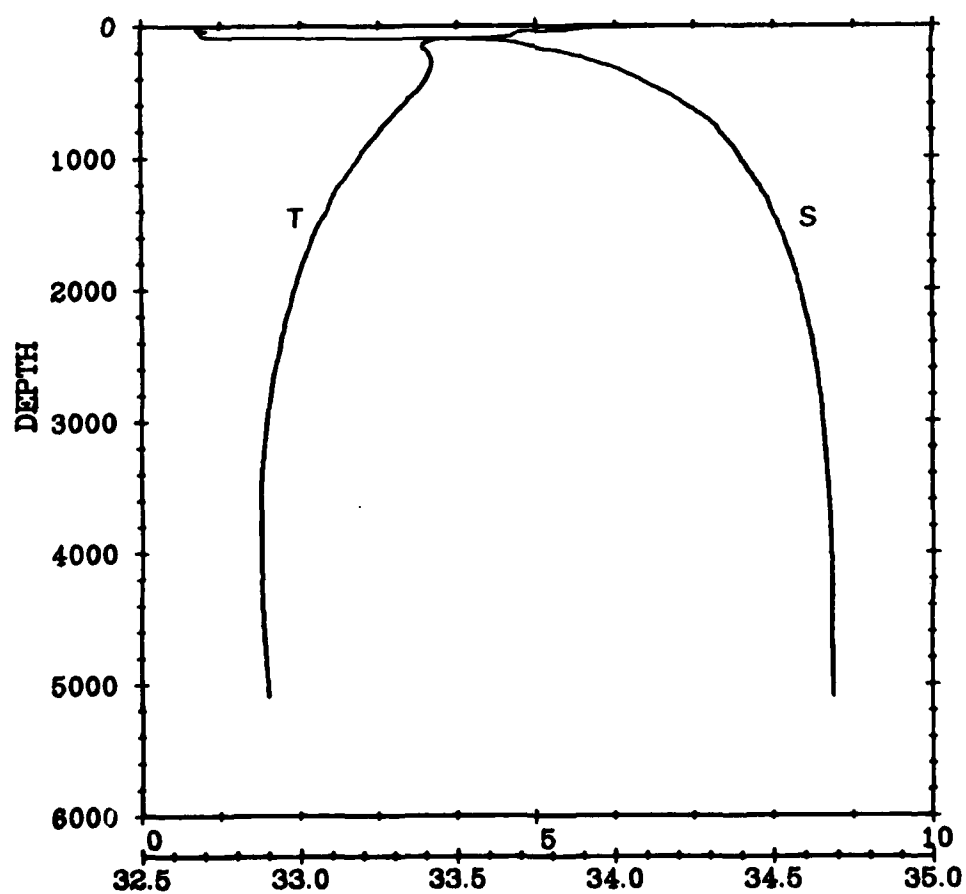
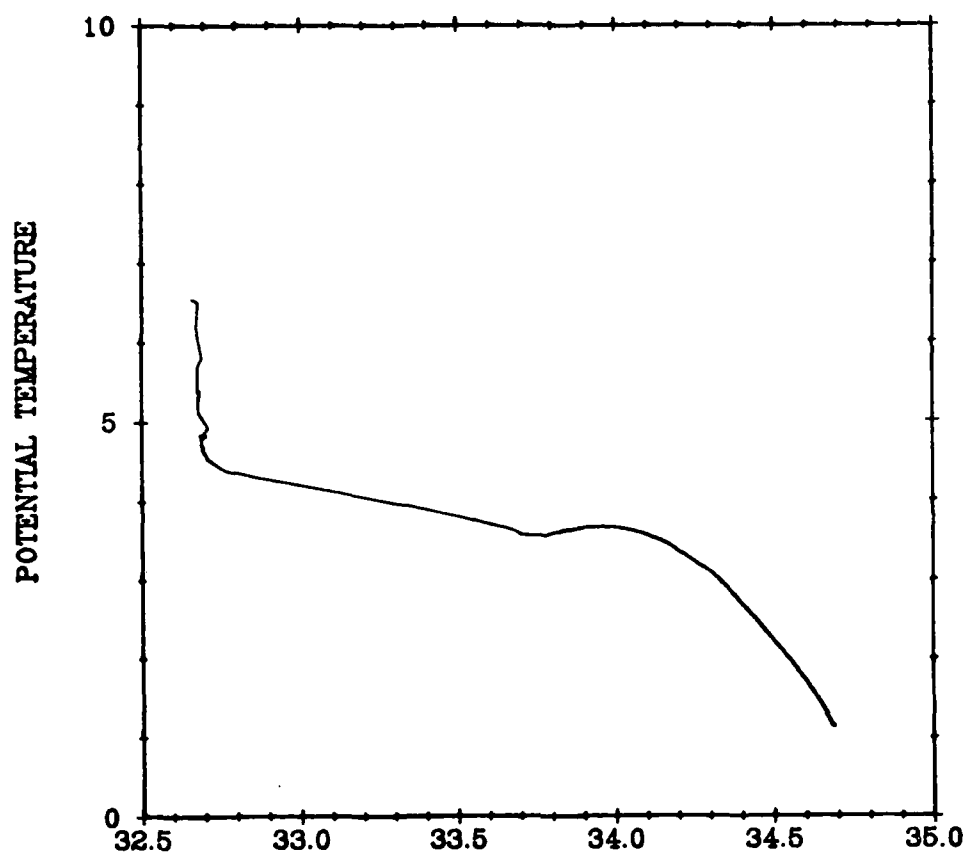
## STD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         |         |         |            | M     |
| 1     | 5.454 | 32.674   | 5.404    | 25.678  | 34.663  | 43.264  | 232.144 | 1.107   |            | 1     |
| 20    | 5.705 | 32.674   | 5.703    | 25.755  | 34.796  | 43.437  | 223.200 | 1.046   |            | 19    |
| 40    | 5.933 | 32.688   | 5.930    | 25.819  | 34.914  | 43.586  | 215.128 | 1.039   |            | 39    |
| 60    | 6.145 | 32.691   | 6.141    | 25.873  | 34.963  | 43.648  | 208.250 | 1.072   |            | 59    |
| 80    | 6.441 | 32.706   | 6.437    | 25.916  | 34.970  | 43.681  | 202.105 | 1.104   |            | 79    |
| 100   | 6.664 | 33.139   | 6.657    | 26.340  | 35.487  | 44.167  | 159.201 | 1.212   |            | 99    |
| 120   | 6.669 | 33.124   | 6.659    | 26.915  | 35.949  | 44.675  | 123.470 | 1.243   |            | 119   |
| 140   | 6.815 | 33.318   | 6.822    | 26.920  | 36.128  | 44.751  | 105.997 | 1.345   |            | 139   |
| 160   | 6.882 | 33.910   | 6.865    | 26.973  | 36.378  | 44.797  | 101.112 | 1.402   |            | 159   |
| 180   | 6.990 | 33.973   | 6.977    | 27.022  | 36.127  | 44.844  | 107.116 | 1.456   |            | 179   |
| 200   | 6.665 | 34.129   | 6.642    | 27.070  | 36.174  | 44.893  | 102.971 | 1.509   |            | 199   |
| 220   | 6.624 | 34.276   | 6.597    | 27.042  | 36.218  | 44.938  | 99.998  | 1.560   |            | 219   |
| 240   | 6.574 | 34.113   | 6.544    | 27.106  | 36.251  | 44.977  | 96.489  | 1.608   |            | 239   |
| 260   | 6.509 | 34.155   | 6.475    | 27.166  | 36.299  | 45.022  | 93.146  | 1.656   |            | 259   |
| 280   | 6.344 | 34.225   | 6.304    | 27.238  | 36.378  | 45.100  | 89.923  | 1.746   |            | 279   |
| 300   | 6.191 | 34.289   | 6.154    | 27.305  | 36.453  | 45.192  | 87.135  | 1.831   |            | 299   |
| 320   | 6.132 | 34.333   | 6.099    | 27.355  | 36.510  | 45.266  | 84.849  | 1.909   |            | 319   |
| 340   | 6.092 | 34.369   | 6.033    | 27.346  | 36.559  | 45.312  | 82.114  | 1.984   |            | 339   |
| 360   | 6.057 | 34.397   | 6.001    | 27.411  | 36.599  | 45.359  | 79.497  | 2.056   |            | 359   |
| 380   | 6.059 | 34.423   | 6.007    | 27.461  | 36.635  | 45.401  | 77.173  | 2.125   |            | 379   |
| 400   | 6.036 | 34.451   | 6.007    | 27.495  | 36.676  | 45.447  | 75.104  | 2.191   |            | 399   |
| 420   | 6.029 | 34.477   | 6.014    | 27.525  | 36.713  | 45.490  | 73.413  | 2.257   |            | 419   |
| 440   | 6.047 | 34.493   | 6.025    | 27.544  | 36.736  | 45.517  | 72.425  | 2.317   |            | 439   |
| 460   | 6.057 | 34.514   | 6.038    | 27.570  | 36.766  | 45.552  | 70.819  | 2.377   |            | 459   |
| 480   | 6.077 | 34.532   | 6.057    | 27.591  | 36.792  | 45.592  | 69.257  | 2.435   |            | 479   |
| 500   | 6.113 | 34.546   | 6.090    | 27.608  | 36.813  | 45.625  | 67.728  | 2.491   |            | 499   |
| 520   | 6.149 | 34.560   | 6.128    | 27.626  | 36.834  | 45.651  | 66.289  | 2.546   |            | 519   |
| 540   | 6.186 | 34.573   | 6.165    | 27.641  | 36.853  | 45.671  | 64.937  | 2.600   |            | 539   |
| 560   | 6.223 | 34.584   | 6.204    | 27.654  | 36.868  | 45.687  | 63.667  | 2.652   |            | 559   |
| 580   | 6.261 | 34.593   | 6.242    | 27.665  | 36.883  | 45.699  | 62.468  | 2.704   |            | 579   |
| 600   | 6.299 | 34.602   | 6.280    | 27.676  | 36.897  | 45.709  | 61.339  | 2.755   |            | 599   |
| 620   | 6.337 | 34.612   | 6.319    | 27.689  | 36.912  | 45.721  | 60.269  | 2.805   |            | 619   |
| 640   | 6.375 | 34.622   | 6.357    | 27.699  | 36.925  | 45.731  | 59.258  | 2.854   |            | 639   |
| 660   | 6.413 | 34.632   | 6.395    | 27.706  | 36.934  | 45.740  | 58.296  | 2.902   |            | 659   |
| 680   | 6.451 | 34.642   | 6.433    | 27.714  | 36.945  | 45.750  | 57.381  | 2.950   |            | 679   |
| 700   | 6.489 | 34.653   | 6.471    | 27.723  | 36.956  | 45.759  | 56.512  | 3.000   |            | 699   |
| 720   | 6.527 | 34.664   | 6.509    | 27.729  | 36.964  | 45.766  | 55.688  | 3.044   |            | 719   |
| 740   | 6.565 | 34.674   | 6.547    | 27.735  | 36.972  | 45.775  | 54.905  | 3.091   |            | 739   |
| 760   | 6.603 | 34.684   | 6.585    | 27.741  | 36.979  | 45.784  | 54.165  | 3.137   |            | 759   |
| 780   | 6.641 | 34.693   | 6.623    | 27.747  | 36.986  | 45.792  | 53.465  | 3.183   |            | 779   |
| 800   | 6.679 | 34.703   | 6.661    | 27.751  | 36.992  | 45.800  | 52.802  | 3.229   |            | 799   |
| 820   | 6.717 | 34.713   | 6.699    | 27.755  | 36.997  | 45.808  | 52.175  | 3.274   |            | 819   |
| 840   | 6.755 | 34.723   | 6.737    | 27.760  | 37.004  | 45.814  | 51.581  | 3.319   |            | 839   |
| 860   | 6.793 | 34.733   | 6.775    | 27.764  | 37.009  | 45.819  | 51.024  | 3.364   |            | 859   |
| 880   | 6.831 | 34.743   | 6.813    | 27.767  | 37.012  | 45.824  | 50.500  | 3.409   |            | 879   |
| 900   | 6.869 | 34.753   | 6.851    | 27.769  | 37.015  | 45.829  | 50.000  | 3.454   |            | 899   |
| 920   | 6.907 | 34.763   | 6.889    | 27.771  | 37.018  | 45.831  | 49.527  | 3.499   |            | 919   |
| 940   | 6.945 | 34.773   | 6.927    | 27.773  | 37.021  | 45.834  | 49.080  | 3.545   |            | 939   |
| 960   | 6.983 | 34.783   | 6.965    | 27.775  | 37.023  | 45.837  | 48.657  | 3.590   |            | 959   |
| 980   | 7.021 | 34.793   | 7.003    | 27.777  | 37.025  | 45.840  | 48.259  | 3.636   |            | 979   |
| 1000  | 7.059 | 34.803   | 7.041    | 27.779  | 37.027  | 45.842  | 47.884  | 3.682   |            | 999   |
| 1020  | 7.097 | 34.813   | 7.079    | 27.780  | 37.027  | 45.843  | 47.532  | 3.728   |            | 1019  |
| 1040  | 7.135 | 34.823   | 7.117    | 27.780  | 37.029  | 45.845  | 47.200  | 3.774   |            | 1039  |
| 1060  | 7.173 | 34.833   | 7.155    | 27.780  | 37.029  | 45.845  | 46.888  | 3.820   |            | 1059  |
| 1080  | 7.211 | 34.843   | 7.193    | 27.780  | 37.029  | 45.845  | 46.596  | 3.866   |            | 1079  |
| 1100  | 7.249 | 34.853   | 7.231    | 27.780  | 37.029  | 45.845  | 46.324  | 3.912   |            | 1099  |
| 1120  | 7.287 | 34.863   | 7.269    | 27.780  | 37.029  | 45.845  | 46.072  | 3.958   |            | 1119  |
| 1140  | 7.325 | 34.873   | 7.307    | 27.780  | 37.029  | 45.845  | 45.840  | 4.004   |            | 1139  |
| 1160  | 7.363 | 34.883   | 7.345    | 27.780  | 37.029  | 45.845  | 45.628  | 4.050   |            | 1159  |
| 1180  | 7.401 | 34.893   | 7.383    | 27.780  | 37.029  | 45.845  | 45.436  | 4.096   |            | 1179  |
| 1200  | 7.439 | 34.903   | 7.421    | 27.780  | 37.029  | 45.845  | 45.254  | 4.142   |            | 1199  |
| 1220  | 7.477 | 34.913   | 7.459    | 27.780  | 37.029  | 45.845  | 45.082  | 4.188   |            | 1219  |
| 1240  | 7.515 | 34.923   | 7.497    | 27.780  | 37.029  | 45.845  | 44.920  | 4.234   |            | 1239  |
| 1260  | 7.553 | 34.933   | 7.535    | 27.780  | 37.029  | 45.845  | 44.768  | 4.280   |            | 1259  |
| 1280  | 7.591 | 34.943   | 7.573    | 27.780  | 37.029  | 45.845  | 44.626  | 4.326   |            | 1279  |
| 1300  | 7.629 | 34.953   | 7.611    | 27.780  | 37.029  | 45.845  | 44.494  | 4.372   |            | 1299  |
| 1320  | 7.667 | 34.963   | 7.649    | 27.780  | 37.029  | 45.845  | 44.372  | 4.418   |            | 1319  |
| 1340  | 7.705 | 34.973   | 7.687    | 27.780  | 37.029  | 45.845  | 44.260  | 4.464   |            | 1339  |
| 1360  | 7.743 | 34.983   | 7.725    | 27.780  | 37.029  | 45.845  | 44.158  | 4.510   |            | 1359  |
| 1380  | 7.781 | 34.993   | 7.763    | 27.780  | 37.029  | 45.845  | 44.066  | 4.556   |            | 1379  |
| 1400  | 7.819 | 35.003   | 7.801    | 27.780  | 37.029  | 45.845  | 43.984  | 4.602   |            | 1399  |
| 1420  | 7.857 | 35.013   | 7.839    | 27.780  | 37.029  | 45.845  | 43.912  | 4.648   |            | 1419  |
| 1440  | 7.895 | 35.023   | 7.877    | 27.780  | 37.029  | 45.845  | 43.850  | 4.694   |            | 1439  |
| 1460  | 7.933 | 35.033   | 7.915    | 27.780  | 37.029  | 45.845  | 43.798  | 4.740   |            | 1459  |
| 1480  | 7.971 | 35.043   | 7.953    | 27.780  | 37.029  | 45.845  | 43.756  | 4.786   |            | 1479  |
| 1500  | 8.009 | 35.053   | 7.991    | 27.780  | 37.029  | 45.845  | 43.724  | 4.832   |            | 1499  |
| 1520  | 8.047 | 35.063   | 8.029    | 27.780  | 37.029  | 45.845  | 43.692  | 4.878   |            | 1519  |
| 1540  | 8.085 | 35.073   | 8.067    | 27.780  | 37.029  | 45.845  | 43.670  | 4.924   |            | 1539  |
| 1560  | 8.123 | 35.083   | 8.105    | 27.780  | 37.029  | 45.845  | 43.658  | 4.970   |            | 1559  |
| 1580  | 8.161 | 35.093   | 8.143    | 27.780  | 37.029  | 45.845  | 43.656  | 5.016   |            | 1579  |
| 1600  | 8.199 | 35.103   | 8.181    | 27.780  | 37.029  | 45.845  | 43.664  | 5.062   |            | 1599  |

## WISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIS O2 | O2 SAT | SIG 0 | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 1     | 5.454 | 32.683   | 7.14   | 136.9  | 26.4  | 1.35 | 14.3 | 2.19 | 5.997 | 25.596   | 34.575  | 43.157  |         | 1     |
| 10    | 5.439 | 32.692   | 7.11   | 135.5  | 26.8  | 1.37 | 14.6 | 2.15 | 5.416 | 25.599   | 34.943  | 43.496  |         | 11    |
| 20    | 5.456 | 32.695   | 7.14   | 131.4  | 27.0  | 1.44 | 15.6 | 2.13 | 4.752 | 25.575   | 34.964  | 43.649  |         | 21    |
| 30    | 5.433 | 33.214   | 5.78   | 59.2   | 49.4  | 2.77 | 27.3 | 0.09 | 4.226 | 26.379   | 35.496  | 44.278  |         | 31    |
| 40    | 5.611 | 33.677   | 3.11   | 42.0   | 71.7  | 2.58 | 35.7 | 0.02 | 3.601 | 26.703   | 35.906  | 44.611  |         | 41    |
| 50    | 5.989 | 33.791   | 2.26   | 29.2   | 91.3  | 2.92 | 40.1 | 0.01 | 3.574 | 26.860   | 35.992  | 44.719  |         | 51    |
| 60    | 6.691 | 33.956   | 1.22   | 10.8   | 121.0 | 3.00 | 41.4 | 0.01 | 3.671 | 26.999   | 36.123  | 44.912  |         | 61    |
| 70    | 6.633 | 34.070   | 0.75   | 10.2   | 113.8 | 3.07 | 43.9 | 0.01 | 3.676 | 27.086   | 36.211  | 44.991  |         | 71    |
| 80    | 6.513 | 34.156   | 0.67   | 9.1    | 124.2 | 3.06 | 43.8 | 0.01 | 3.492 | 27.167   | 36.297  | 45.122  |         | 81    |
| 90    | 6.404 | 34.217   | 0.43   | 8.5    | 114.7 | 3.06 | 43.8 | 0.00 | 3.264 | 27.252   | 36.393  | 45.107  |         | 91    |
| 100   | 6.190 | 34.284   | 0.36   | 9.9    | 119.7 | 3.06 | 43.8 | 0.00 | 3.144 | 27.320   | 36.447  | 45.135  |         | 101   |
| 110   | 6.107 | 34.343   | 0.58   | 7.7    | 147.6 | 3.07 | 44.1 | 0.00 | 2.953 | 27.365   | 36.521  | 45.269  |         | 111   |
| 120   | 6.069 | 34.379   | 0.56   | 7.7    | 154.3 | 3.11 | 44.4 | 0.00 | 2.809 | 27.426   | 36.569  | 45.123  |         | 121   |
| 130   | 6.031 | 34.428   | 0.50   | 6.6    | 159.8 | 3.12 | 44.6 | 0.00 | 2.666 | 27.442   | 36.613  | 45.174  |         | 131   |
| 140   | 6.052 | 34.472   | 0.51   | 6.7    | 171.0 | 3.12 | 44.9 | 0.00 | 2.569 | 27.519   | 36.704  | 45.179  |         | 141   |
| 150   | 6.227 | 34.523   | 0.72   | 9.4    | 178.4 | 3.08 | 44.5 | 0.00 | 2.427 | 27.579   | 36.777  | 45.564  |         | 151   |
| 160   | 6.071 | 34.559   | 0.93   | 12.1   | 132.0 | 3.04 | 44.1 | 0.00 | 1.952 | 27.621   | 36.829  | 45.623  |         | 161   |
| 170   | 6.046 | 34.585   | 1.19   | 15.5   | 136.6 | 3.00 | 43.5 | 0.00 | 1.811 |          |         |         |         |       |

# MARATHON 2 STA. 78



R V THOMAS WASHINGTON MARATHON LEI 11 STATION 19

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAR M |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|-------|
| 50 42 4N | 152 1 17W | 5 22-84  | 0429       | 4493   | 210  | 11    | 83       | 82       | 1014  |

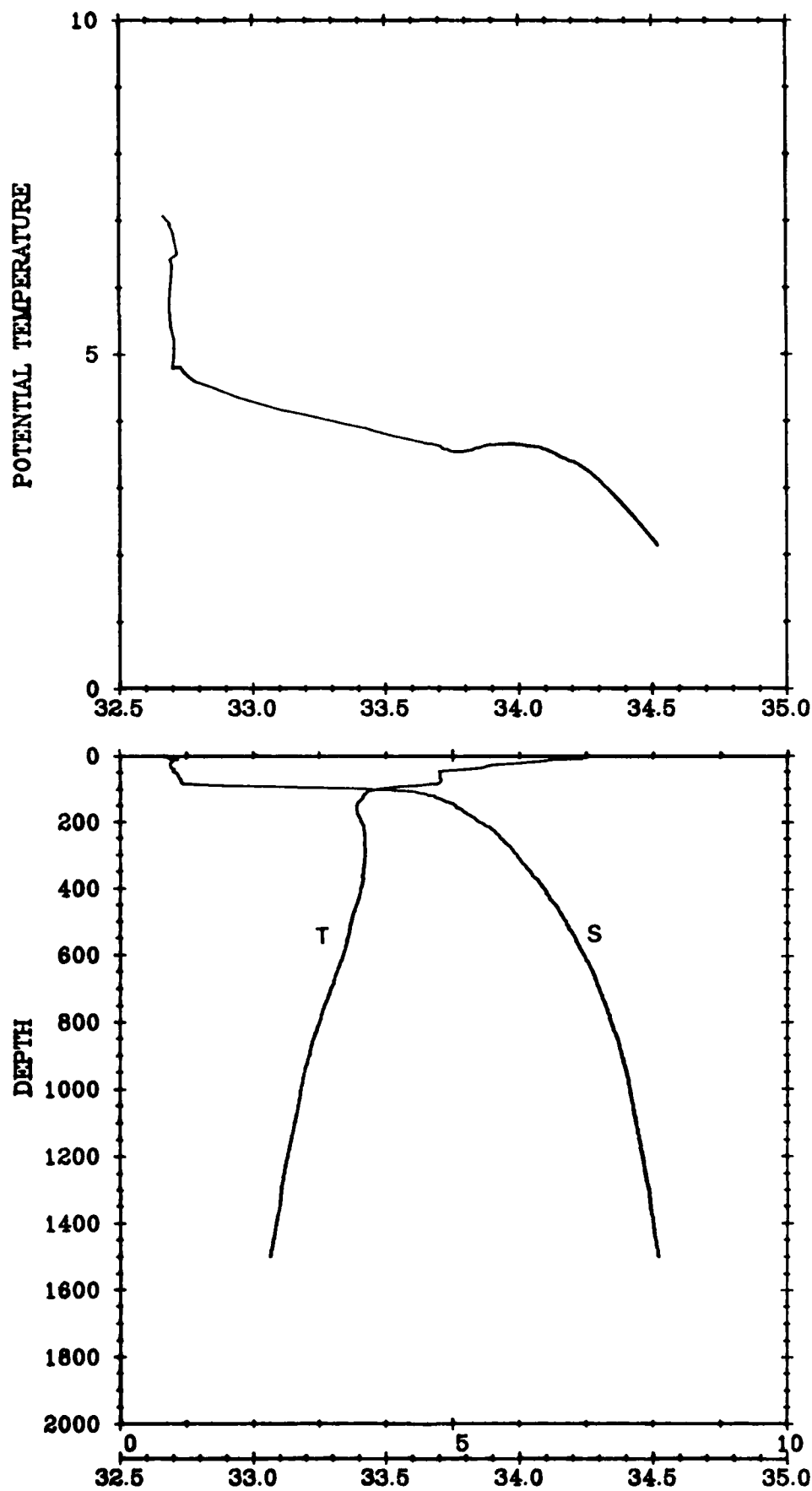
## STD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         | 10 TON  |            | M     |
| 0     | 4 903 | 32 686   | 6 921    | 25 607  | 14 784  | 41 074  | 117 152 | 0.00       | 0     |
| 20    | 4 083 | 32 695   | 6 081    | 25 722  | 14 744  | 41 167  | 126 168 | 1.046      | 10    |
| 40    | 5 189 | 32 693   | 5 185    | 25 811  | 14 897  | 41 262  | 139 154 | 2.091      | 19    |
| 60    | 4 819 | 32 718   | 4 805    | 25 898  | 14 974  | 41 356  | 149 183 | 3.131      | 29    |
| 80    | 4 134 | 32 752   | 4 128    | 25 911  | 15 020  | 41 428  | 159 168 | 4.170      | 39    |
| 100   | 3 991 | 33 027   | 3 984    | 26 407  | 15 575  | 44 298  | 187 091 | 5.211      | 49    |
| 120   | 3 559 | 33 756   | 3 549    | 26 841  | 15 875  | 44 712  | 193 494 | 6.240      | 149   |
| 140   | 3 427 | 33 852   | 3 414    | 26 911  | 16 041  | 44 763  | 194 746 | 7.140      | 199   |
| 160   | 3 679 | 33 912   | 3 662    | 26 970  | 16 196  | 44 814  | 197 629 | 8.196      | 249   |
| 180   | 3 681 | 33 944   | 3 661    | 27 016  | 16 240  | 44 858  | 199 745 | 9.101      | 299   |
| 200   | 3 654 | 34 040   | 3 635    | 27 060  | 16 285  | 44 914  | 199 124 | 10.073     | 349   |
| 220   | 3 620 | 34 091   | 3 593    | 27 104  | 16 230  | 44 950  | 198 233 | 11.002     | 399   |
| 240   | 3 549 | 34 133   | 3 519    | 27 144  | 16 274  | 44 937  | 197 710 | 12.000     | 449   |
| 260   | 3 475 | 34 172   | 3 445    | 27 183  | 16 216  | 44 942  | 197 424 | 13.047     | 499   |
| 280   | 3 352 | 34 240   | 3 312    | 27 250  | 16 188  | 44 920  | 197 785 | 14.035     | 549   |
| 300   | 3 178 | 34 296   | 3 131    | 27 311  | 16 459  | 44 948  | 197 482 | 15.018     | 599   |
| 320   | 3 003 | 34 342   | 2 950    | 27 365  | 16 521  | 45 069  | 197 374 | 16.097     | 649   |
| 340   | 2 847 | 34 391   | 2 789    | 27 410  | 16 574  | 45 130  | 197 347 | 17.071     | 699   |
| 360   | 2 719 | 34 410   | 2 653    | 27 445  | 16 616  | 45 178  | 197 020 | 18.041     | 749   |
| 380   | 2 629 | 34 433   | 2 567    | 27 472  | 16 648  | 45 414  | 196 909 | 19.014     | 799   |
| 400   | 2 525 | 34 456   | 2 446    | 27 500  | 16 691  | 45 453  | 196 614 | 20.075     | 849   |
| 420   | 2 428 | 34 479   | 2 342    | 27 526  | 16 713  | 45 489  | 196 198 | 21.238     | 899   |
| 440   | 2 350 | 34 496   | 2 258    | 27 547  | 16 738  | 45 519  | 195 797 | 22.170     | 949   |
| 460   | 2 261 | 34 516   | 2 162    | 27 571  | 16 767  | 45 552  | 195 717 | 23.140     | 999   |
| 480   | 2 243 | 34 520   | 2 142    | 27 576  | 16 773  | 45 559  | 195 310 | 24.171     | 1049  |

## NISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIS O2 | O2 SAT | SIG3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 53    | 4 915 | 32 725   | 7 30   | 101 0  | 28 4  | 1 50 | 16 6 | 0 12 | 4 911 | 25 893   | 14 978  | 41 659  | 117     | 53    |
| 105   | 3 725 | 33 513   | 3 38   | 45 9   | 64 5  | 2 54 | 25 6 | 0 12 | 3 698 | 26 713   | 15 841  | 44 563  | 125     | 105   |
| 137   | 3 548 | 33 756   | 2 31   | 31 2   | 79 7  | 2 80 | 39 8 | 0 11 | 3 549 | 26 840   | 15 974  | 44 701  | 118     | 137   |
| 170   | 3 383 | 33 825   | 1 31   | 24 5   | 94 1  | 2 88 | 41 7 | 0 11 | 3 572 | 26 886   | 16 018  | 44 743  | 101     | 170   |
| 202   | 3 547 | 33 885   | 1 10   | 17 6   | 91 5  | 2 96 | 42 8 | 0 11 | 3 654 | 26 934   | 16 060  | 44 785  | 204     | 202   |
| 234   | 3 679 | 33 950   | 0 92   | 10 3   | 99 2  | 3 04 | 44 0 | 0 11 | 3 692 | 26 991   | 16 110  | 44 828  | 236     | 234   |
| 266   | 3 579 | 34 014   | 0 99   | 10 1   | 103 9 | 3 06 | 44 0 | 0 11 | 3 658 | 27 028   | 16 152  | 44 870  | 268     | 266   |
| 298   | 3 604 | 34 097   | 0 82   | 11 1   | 112 0 | 3 02 | 43 7 | 0 11 | 3 577 | 27 110   | 16 217  | 44 959  | 300     | 298   |
| 330   | 3 470 | 34 174   | 0 70   | 9 5    | 121 4 | 3 04 | 43 9 | 0 10 | 3 416 | 27 185   | 16 308  | 45 044  | 332     | 330   |
| 362   | 3 157 | 34 218   | 0 65   | 8 8    | 123 4 | 3 05 | 43 9 | 0 10 | 3 116 | 27 248   | 16 386  | 45 117  | 364     | 362   |
| 394   | 3 157 | 34 301   | 0 56   | 7 5    | 133 1 | 3 08 | 44 2 | 0 10 | 3 110 | 27 317   | 16 465  | 45 206  | 396     | 394   |
| 426   | 2 990 | 34 345   | 0 54   | 7 2    | 144 5 | 3 10 | 44 5 | 0 10 | 2 916 | 27 369   | 16 526  | 45 279  | 428     | 426   |
| 458   | 2 818 | 34 383   | 0 48   | 6 4    | 151 3 | 3 11 | 44 7 | 0 10 | 2 778 | 27 412   | 16 577  | 45 333  | 460     | 458   |
| 491   | 2 726 | 34 410   | 0 47   | 6 2    | 155 1 | 3 11 | 44 9 | 0 10 | 2 660 | 27 444   | 16 616  | 45 374  | 493     | 491   |
| 524   | 2 454 | 34 470   | 0 49   | 6 5    | 165 8 |      | 45 0 | 0 10 | 2 382 | 27 516   | 16 701  | 45 456  | 525     | 524   |
| 556   | 2 241 | 34 519   | 0 70   | 7 2    | 172 8 |      | 44 7 | 0 10 | 2 141 | 27 575   | 16 772  | 45 559  | 557     | 556   |

# MARATHON 2 STA. 79

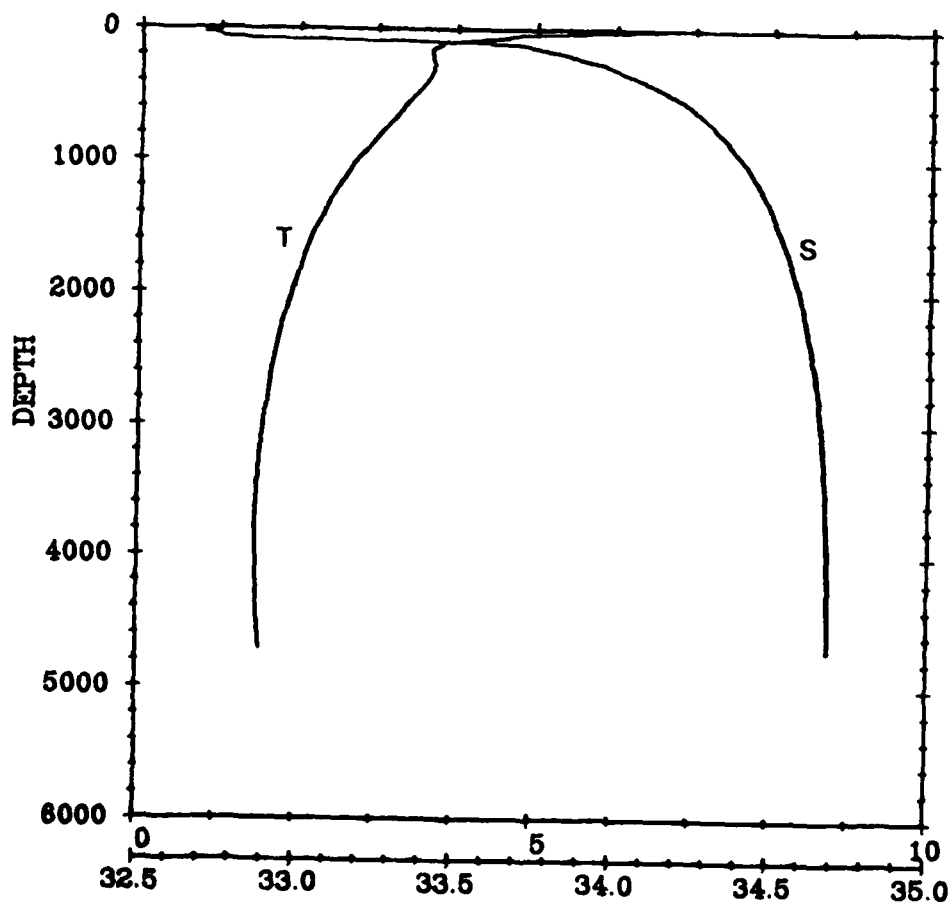
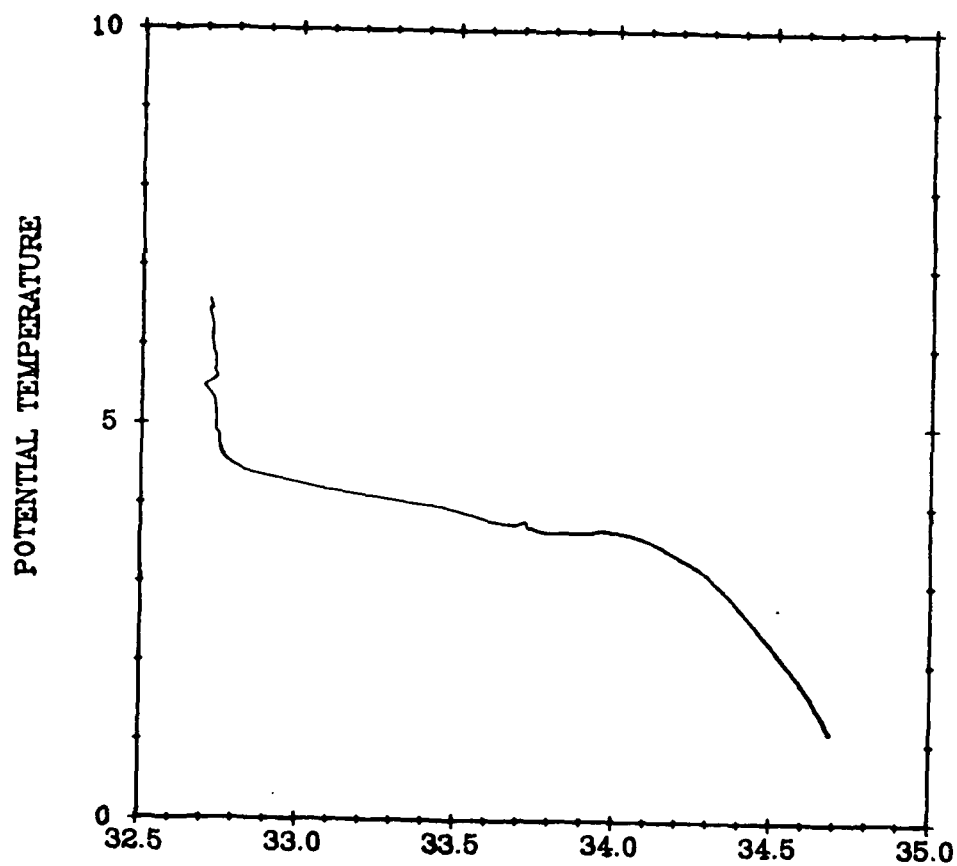


LATITUDE 16 22 N LONGITUDE 122 00 W MO BY YR 5 29 94 START TIME 1702 BOTTOM 4781 WIND DIR 270 SPEED 10 AIR TEMP 20.0 WET BULB 19.1 BATHY 1024

## STD DATA

| DEPTH<br>M | PRESS<br>DB | TEMP<br>DEG C | SALINITY | POT TEMP<br>DEG C | SIGMA 1 | SIGMA 2 | SIGMA 4 | SVA<br>CLATON | DYNAMIC HT | DEPTH<br>M |
|------------|-------------|---------------|----------|-------------------|---------|---------|---------|---------------|------------|------------|
| 1          | 4.777       | 16.154        | 34.757   | 16.157            | 25.679  | 34.679  | 43.274  | 212.251       | 1.001      | 1          |
| 2          | 4.777       | 16.154        | 34.757   | 16.157            | 25.742  | 34.753  | 43.334  | 224.435       | 1.043      | 2          |
| 3          | 4.777       | 16.154        | 34.757   | 16.157            | 25.805  | 34.823  | 43.396  | 233.597       | 1.089      | 3          |
| 4          | 4.777       | 16.154        | 34.757   | 16.157            | 25.867  | 34.894  | 43.461  | 246.442       | 1.131      | 4          |
| 5          | 4.777       | 16.154        | 34.757   | 16.157            | 25.929  | 34.965  | 43.526  | 254.857       | 1.170      | 5          |
| 10         | 4.777       | 16.154        | 34.757   | 16.157            | 26.022  | 35.043  | 43.669  | 262.257       | 1.274      | 10         |
| 15         | 4.777       | 16.154        | 34.757   | 16.157            | 26.099  | 35.126  | 43.746  | 266.001       | 1.333      | 15         |
| 20         | 4.777       | 16.154        | 34.757   | 16.157            | 26.165  | 35.202  | 43.821  | 269.722       | 1.390      | 20         |
| 25         | 4.777       | 16.154        | 34.757   | 16.157            | 26.231  | 35.278  | 43.897  | 273.421       | 1.444      | 25         |
| 30         | 4.777       | 16.154        | 34.757   | 16.157            | 26.294  | 35.354  | 43.972  | 277.097       | 1.497      | 30         |
| 35         | 4.777       | 16.154        | 34.757   | 16.157            | 26.357  | 35.430  | 44.047  | 280.751       | 1.547      | 35         |
| 40         | 4.777       | 16.154        | 34.757   | 16.157            | 26.419  | 35.506  | 44.122  | 284.384       | 1.595      | 40         |
| 45         | 4.777       | 16.154        | 34.757   | 16.157            | 26.482  | 35.582  | 44.197  | 287.997       | 1.642      | 45         |
| 50         | 4.777       | 16.154        | 34.757   | 16.157            | 26.544  | 35.658  | 44.272  | 291.589       | 1.687      | 50         |
| 55         | 4.777       | 16.154        | 34.757   | 16.157            | 26.607  | 35.734  | 44.347  | 295.160       | 1.731      | 55         |
| 60         | 4.777       | 16.154        | 34.757   | 16.157            | 26.669  | 35.810  | 44.422  | 298.711       | 1.774      | 60         |
| 65         | 4.777       | 16.154        | 34.757   | 16.157            | 26.732  | 35.886  | 44.497  | 302.241       | 1.816      | 65         |
| 70         | 4.777       | 16.154        | 34.757   | 16.157            | 26.794  | 35.962  | 44.572  | 305.751       | 1.857      | 70         |
| 75         | 4.777       | 16.154        | 34.757   | 16.157            | 26.857  | 36.038  | 44.647  | 309.241       | 1.897      | 75         |
| 80         | 4.777       | 16.154        | 34.757   | 16.157            | 26.919  | 36.114  | 44.722  | 312.711       | 1.937      | 80         |
| 85         | 4.777       | 16.154        | 34.757   | 16.157            | 26.982  | 36.190  | 44.797  | 316.160       | 1.977      | 85         |
| 90         | 4.777       | 16.154        | 34.757   | 16.157            | 27.044  | 36.266  | 44.872  | 319.589       | 2.016      | 90         |
| 95         | 4.777       | 16.154        | 34.757   | 16.157            | 27.107  | 36.342  | 44.947  | 322.997       | 2.054      | 95         |
| 100        | 4.777       | 16.154        | 34.757   | 16.157            | 27.169  | 36.418  | 45.022  | 326.384       | 2.092      | 100        |
| 105        | 4.777       | 16.154        | 34.757   | 16.157            | 27.232  | 36.494  | 45.097  | 329.751       | 2.129      | 105        |
| 110        | 4.777       | 16.154        | 34.757   | 16.157            | 27.294  | 36.570  | 45.172  | 333.097       | 2.166      | 110        |
| 115        | 4.777       | 16.154        | 34.757   | 16.157            | 27.357  | 36.646  | 45.247  | 336.421       | 2.202      | 115        |
| 120        | 4.777       | 16.154        | 34.757   | 16.157            | 27.419  | 36.722  | 45.322  | 339.721       | 2.237      | 120        |
| 125        | 4.777       | 16.154        | 34.757   | 16.157            | 27.482  | 36.798  | 45.397  | 342.997       | 2.272      | 125        |
| 130        | 4.777       | 16.154        | 34.757   | 16.157            | 27.544  | 36.874  | 45.472  | 346.241       | 2.307      | 130        |
| 135        | 4.777       | 16.154        | 34.757   | 16.157            | 27.607  | 36.950  | 45.547  | 349.460       | 2.341      | 135        |
| 140        | 4.777       | 16.154        | 34.757   | 16.157            | 27.669  | 37.026  | 45.622  | 352.660       | 2.375      | 140        |
| 145        | 4.777       | 16.154        | 34.757   | 16.157            | 27.732  | 37.102  | 45.697  | 355.834       | 2.408      | 145        |
| 150        | 4.777       | 16.154        | 34.757   | 16.157            | 27.794  | 37.178  | 45.772  | 358.984       | 2.441      | 150        |
| 155        | 4.777       | 16.154        | 34.757   | 16.157            | 27.857  | 37.254  | 45.847  | 362.109       | 2.474      | 155        |
| 160        | 4.777       | 16.154        | 34.757   | 16.157            | 27.919  | 37.330  | 45.922  | 365.211       | 2.507      | 160        |
| 165        | 4.777       | 16.154        | 34.757   | 16.157            | 27.982  | 37.406  | 45.997  | 368.297       | 2.539      | 165        |
| 170        | 4.777       | 16.154        | 34.757   | 16.157            | 28.044  | 37.482  | 46.072  | 371.360       | 2.571      | 170        |
| 175        | 4.777       | 16.154        | 34.757   | 16.157            | 28.107  | 37.558  | 46.147  | 374.401       | 2.603      | 175        |
| 180        | 4.777       | 16.154        | 34.757   | 16.157            | 28.169  | 37.634  | 46.222  | 377.421       | 2.635      | 180        |
| 185        | 4.777       | 16.154        | 34.757   | 16.157            | 28.232  | 37.710  | 46.297  | 380.421       | 2.667      | 185        |
| 190        | 4.777       | 16.154        | 34.757   | 16.157            | 28.294  | 37.786  | 46.372  | 383.397       | 2.698      | 190        |
| 195        | 4.777       | 16.154        | 34.757   | 16.157            | 28.357  | 37.862  | 46.447  | 386.341       | 2.729      | 195        |
| 200        | 4.777       | 16.154        | 34.757   | 16.157            | 28.419  | 37.938  | 46.522  | 389.260       | 2.760      | 200        |
| 205        | 4.777       | 16.154        | 34.757   | 16.157            | 28.482  | 38.014  | 46.597  | 392.159       | 2.791      | 205        |
| 210        | 4.777       | 16.154        | 34.757   | 16.157            | 28.544  | 38.090  | 46.672  | 395.034       | 2.822      | 210        |
| 215        | 4.777       | 16.154        | 34.757   | 16.157            | 28.607  | 38.166  | 46.747  | 397.884       | 2.852      | 215        |
| 220        | 4.777       | 16.154        | 34.757   | 16.157            | 28.669  | 38.242  | 46.822  | 400.711       | 2.882      | 220        |
| 225        | 4.777       | 16.154        | 34.757   | 16.157            | 28.732  | 38.318  | 46.897  | 403.511       | 2.912      | 225        |
| 230        | 4.777       | 16.154        | 34.757   | 16.157            | 28.794  | 38.394  | 46.972  | 406.284       | 2.941      | 230        |
| 235        | 4.777       | 16.154        | 34.757   | 16.157            | 28.857  | 38.470  | 47.047  | 409.034       | 2.970      | 235        |
| 240        | 4.777       | 16.154        | 34.757   | 16.157            | 28.919  | 38.546  | 47.122  | 411.759       | 2.999      | 240        |
| 245        | 4.777       | 16.154        | 34.757   | 16.157            | 28.982  | 38.622  | 47.197  | 414.459       | 3.028      | 245        |
| 250        | 4.777       | 16.154        | 34.757   | 16.157            | 29.044  | 38.698  | 47.272  | 417.134       | 3.057      | 250        |
| 255        | 4.777       | 16.154        | 34.757   | 16.157            | 29.107  | 38.774  | 47.347  | 419.784       | 3.085      | 255        |
| 260        | 4.777       | 16.154        | 34.757   | 16.157            | 29.169  | 38.850  | 47.422  | 422.409       | 3.113      | 260        |
| 265        | 4.777       | 16.154        | 34.757   | 16.157            | 29.232  | 38.926  | 47.497  | 424.997       | 3.141      | 265        |
| 270        | 4.777       | 16.154        | 34.757   | 16.157            | 29.294  | 39.002  | 47.572  | 427.559       | 3.168      | 270        |
| 275        | 4.777       | 16.154        | 34.757   | 16.157            | 29.357  | 39.078  | 47.647  | 430.097       | 3.195      | 275        |
| 280        | 4.777       | 16.154        | 34.757   | 16.157            | 29.419  | 39.154  | 47.722  | 432.611       | 3.222      | 280        |
| 285        | 4.777       | 16.154        | 34.757   | 16.157            | 29.482  | 39.230  | 47.797  | 435.097       | 3.248      | 285        |
| 290        | 4.777       | 16.154        | 34.757   | 16.157            | 29.544  | 39.306  | 47.872  | 437.559       | 3.274      | 290        |
| 295        | 4.777       | 16.154        | 34.757   | 16.157            | 29.607  | 39.382  | 47.947  | 440.001       | 3.299      | 295        |
| 300        | 4.777       | 16.154        | 34.757   | 16.157            | 29.669  | 39.458  | 48.022  | 442.421       | 3.324      | 300        |
| 305        | 4.777       | 16.154        | 34.757   | 16.157            | 29.732  | 39.534  | 48.097  | 444.821       | 3.349      | 305        |
| 310        | 4.777       | 16.154        | 34.757   | 16.157            | 29.794  | 39.610  | 48.172  | 447.197       | 3.373      | 310        |
| 315        | 4.777       | 16.154        | 34.757   | 16.157            | 29.857  | 39.686  | 48.247  | 449.541       | 3.397      | 315        |
| 320        | 4.777       | 16.154        | 34.757   | 16.157            | 29.919  | 39.762  | 48.322  | 451.860       | 3.420      | 320        |
| 325        | 4.777       | 16.154        | 34.757   | 16.157            | 29.982  | 39.838  | 48.397  | 454.159       | 3.443      | 325        |
| 330        | 4.777       | 16.154        | 34.757   | 16.157            | 30.044  | 39.914  | 48.472  | 456.434       | 3.466      | 330        |
| 335        | 4.777       | 16.154        | 34.757   | 16.157            | 30.107  | 39.990  | 48.547  | 458.684       | 3.488      | 335        |
| 340        | 4.777       | 16.154        | 34.757   | 16.157            | 30.169  | 40.066  | 48.622  | 460.909       | 3.510      | 340        |
| 345        | 4.777       | 16.154        | 34.757   | 16.157            | 30.232  | 40.142  | 48.697  | 463.109       | 3.532      | 345        |
| 350        | 4.777       | 16.154        | 34.757   | 16.157            | 30.294  | 40.218  | 48.772  | 465.284       | 3.553      | 350        |
| 355        | 4.777       | 16.154        | 34.757   | 16.157            | 30.357  | 40.294  | 48.847  | 467.434       | 3.574      | 355        |
| 360        | 4.777       | 16.154        | 34.757   | 16.157            | 30.419  | 40.370  | 48.922  | 469.559       | 3.595      | 360        |
| 365        | 4.777       | 16.154        | 34.757   | 16.157            | 30.482  | 40.446  | 48.997  | 471.659       | 3.615      | 365        |
| 370        | 4.777       | 16.154        | 34.757   | 16.157            | 30.544  | 40.522  | 49.072  | 473.734       | 3.635      | 370        |
| 375        | 4.777       | 16.154        | 34.757   | 16.157            | 30.607  | 40.598  | 49.147  | 475.784       | 3.655      | 375        |
| 380        | 4.777       | 16.154        | 34.757   | 16.157            | 30.669  | 40.674  | 49.222  | 477.809       | 3.675      | 380        |
| 385        | 4.777       | 16.154        | 34.757   | 16.157            | 30.732  | 40.750  | 49.297  | 479.809       | 3.694      | 385        |
| 390        | 4.777       | 16.154        | 34.757   | 16.157            | 30.794  | 40.826  | 49.372  | 481.784       | 3.713      | 390        |
| 395        | 4.777       | 16.154        | 34.757   | 16.157            | 30.857  | 40.902  | 49.447  | 483.734       | 3.732      | 395        |
| 400        | 4.777       | 16.154        | 34.757   | 16.157            | 30.919  | 40.978  | 49.522  | 485.659       | 3.751      | 400        |
| 405        | 4.777       | 16.154        | 34.757   | 16.157            | 30.982  | 41.054  | 49.597  | 487.559       | 3.769      | 405        |
| 410        | 4.777       | 16.154        | 34.757   | 16.157            | 31.044  | 41.130  | 49.672  | 489.434       | 3.787      | 410        |
| 415        | 4.777       | 16.154        | 34.757   | 16.157            | 31.107  | 41.206  | 49.747  | 491.284       | 3.805      | 415        |
| 420        | 4.777       | 16.154        | 34.757   | 16.157            | 31.169  | 41.282  | 49.822  | 493.109       | 3.823      | 420        |
| 425        | 4.777       | 16.154        | 34.757   | 16.157            | 31.232  | 41.358  | 49.897  | 494.909       | 3.841      | 425        |
| 430        | 4.777       | 16.154        | 34.757   | 16.157            | 31.294  | 41.434  | 49.972  | 496.684       | 3.858      | 430        |
| 435        | 4.777       | 16.154        | 34.757   | 16.157            | 31.357  | 41.510  | 50.047  | 498.434       | 3.875      | 435        |
| 440        | 4.777       | 16.154        | 34.757   | 16.157            | 31.419  | 41.586  | 50.122  | 500.159       | 3.892      | 440        |
| 445        | 4.777       | 16.154        | 34.757   | 16.157            | 31.482  | 41.662  | 50.197  | 501.859       | 3.909      | 445        |
| 450        | 4.777       | 16.154        | 34.757   | 16.157            | 31.544  | 41.738  | 50.272  | 503.534       | 3.926      | 450        |
| 455        | 4.777       | 16.154        | 34.757   | 16.157            | 31.607  | 41.814  | 50.347  | 505.184       | 3.942      | 455        |
| 460        | 4.777       | 16.154        | 34.757   | 16.157            | 31.669  | 41.890  | 50.422  | 506.809       | 3.958      | 460        |
| 465        | 4.777       | 16.154        | 34.757   | 16.157            | 31.732  | 41.966  | 50.497  | 508.409       | 3.974      | 465        |
| 470        | 4.777       | 16.154        | 34.757   | 16.157            | 31.794  | 42.042  | 50.572  | 510.001       | 3.989      | 470        |
| 475        | 4.777       | 16.154        | 34.757   | 16.157            | 31.857  | 42.118  | 50.647  | 511.574       | 3.999      | 475        |
| 480        | 4.777       | 16.154        | 34.757   | 16.157            | 31.919  | 42.194  | 50.722  | 513.124       | 4.009      | 480        |
| 485        | 4.777       | 16.154        | 34.757   | 16.157            | 31.982  | 42.270  | 50.797  | 514.659       | 4.018      | 485        |
| 490        | 4.777       | 16.154        | 34.757   | 16.157            | 32.044  | 42.346  | 50.872  |               |            |            |

# MARATHON 2 STA. 80



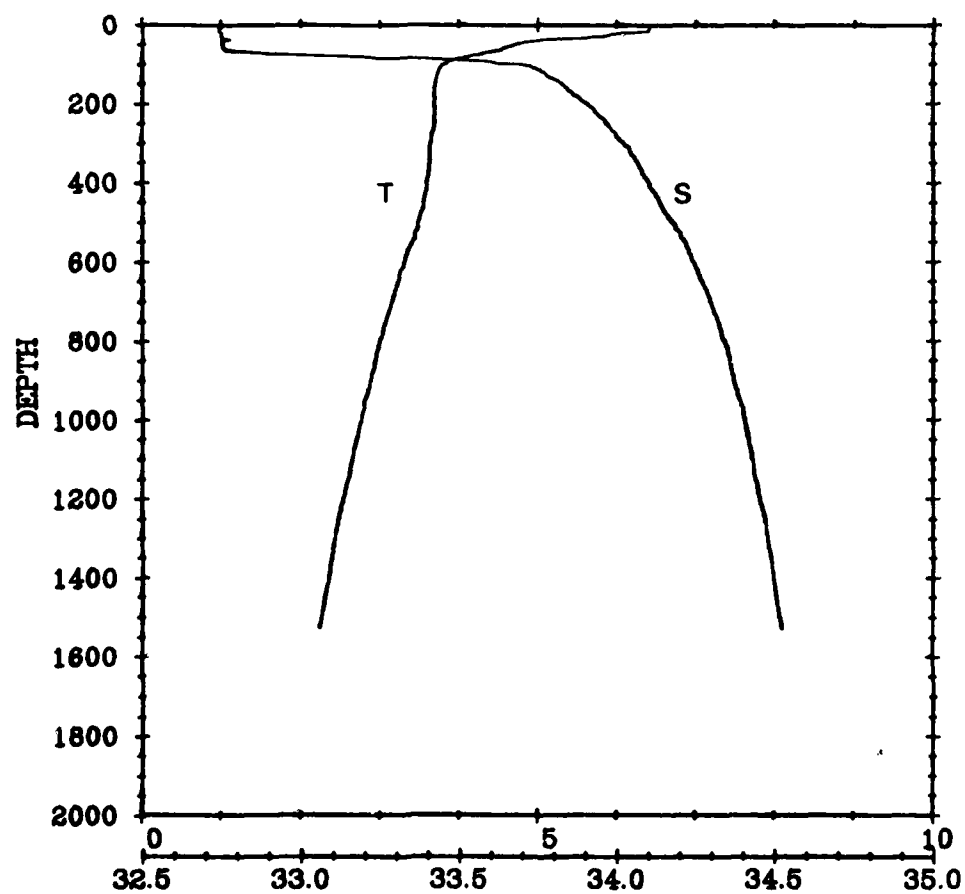
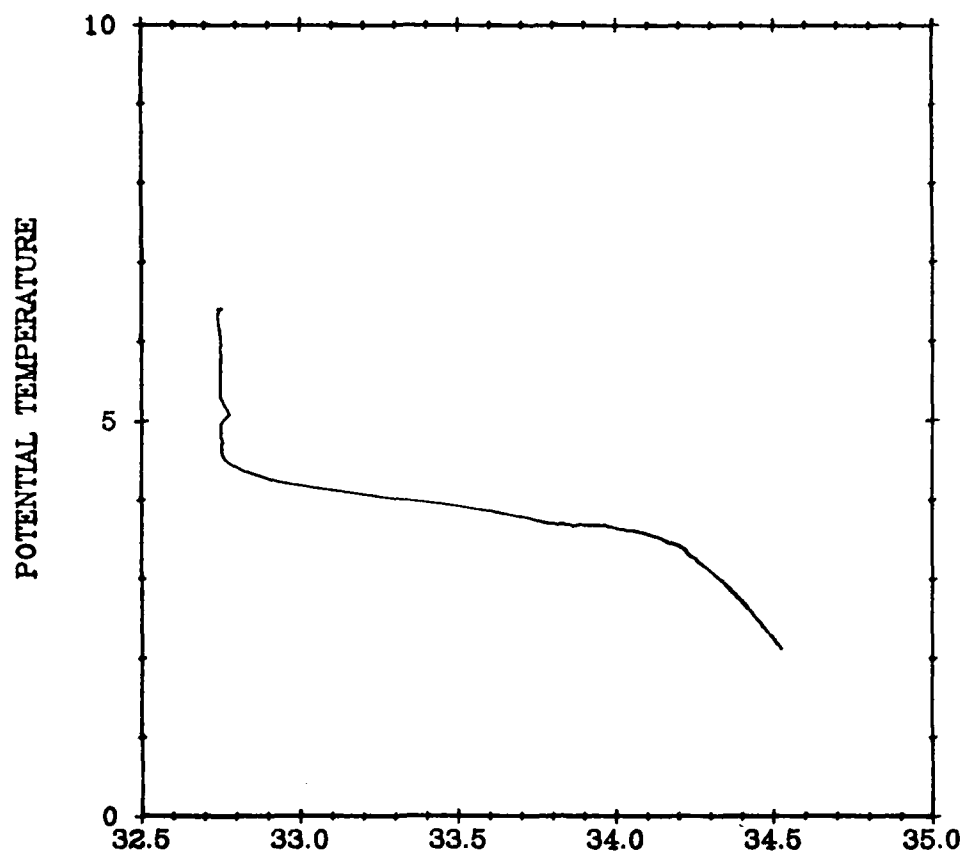
U.S. THOMAS WASHINGTON MARATHON LEG II STATION #.

LATITUDE LONGITUDE MO-DY-YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BARM  
 11 40 N 151 59 W 3 29 94 1648 4545 210 10 10 10 10 1024

| STD DATA    |               | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 1 | SIGMA 4 | SIGMA   | DVA   | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|-------------------|---------|---------|---------|---------|-------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |                   |         |         |         |         |       |            |            |
| 0           | 5 409         | 32 746            | 25 721  | 34 737  | 43 334  | 224 190 | 0 300 | 0          |            |
| 10          | 5 409         | 32 747            | 25 720  | 34 730  | 43 401  | 222 171 | 0 247 | 10         |            |
| 20          | 5 401         | 32 755            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 20         |            |
| 30          | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 30         |            |
| 40          | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 40         |            |
| 50          | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 50         |            |
| 60          | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 60         |            |
| 70          | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 70         |            |
| 80          | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 80         |            |
| 90          | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 90         |            |
| 100         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 100        |            |
| 110         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 110        |            |
| 120         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 120        |            |
| 130         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 130        |            |
| 140         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 140        |            |
| 150         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 150        |            |
| 160         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 160        |            |
| 170         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 170        |            |
| 180         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 180        |            |
| 190         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 190        |            |
| 200         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 200        |            |
| 210         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 210        |            |
| 220         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 220        |            |
| 230         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 230        |            |
| 240         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 240        |            |
| 250         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 250        |            |
| 260         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 260        |            |
| 270         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 270        |            |
| 280         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 280        |            |
| 290         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 290        |            |
| 300         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 300        |            |
| 310         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 310        |            |
| 320         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 320        |            |
| 330         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 330        |            |
| 340         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 340        |            |
| 350         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 350        |            |
| 360         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 360        |            |
| 370         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 370        |            |
| 380         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 380        |            |
| 390         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 390        |            |
| 400         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 400        |            |
| 410         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 410        |            |
| 420         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 420        |            |
| 430         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 430        |            |
| 440         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 440        |            |
| 450         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 450        |            |
| 460         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 460        |            |
| 470         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 470        |            |
| 480         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 480        |            |
| 490         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 490        |            |
| 500         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 500        |            |
| 510         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 510        |            |
| 520         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 520        |            |
| 530         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 530        |            |
| 540         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 540        |            |
| 550         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 550        |            |
| 560         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 560        |            |
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| 580         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 580        |            |
| 590         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 590        |            |
| 600         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 600        |            |
| 610         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 610        |            |
| 620         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 620        |            |
| 630         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 630        |            |
| 640         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 640        |            |
| 650         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 650        |            |
| 660         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 660        |            |
| 670         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 670        |            |
| 680         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 680        |            |
| 690         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 690        |            |
| 700         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 700        |            |
| 710         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 710        |            |
| 720         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 720        |            |
| 730         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 730        |            |
| 740         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 740        |            |
| 750         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 750        |            |
| 760         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 760        |            |
| 770         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 770        |            |
| 780         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 780        |            |
| 790         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 790        |            |
| 800         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 800        |            |
| 810         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 810        |            |
| 820         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 820        |            |
| 830         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 830        |            |
| 840         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 840        |            |
| 850         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 850        |            |
| 860         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 860        |            |
| 870         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 870        |            |
| 880         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 880        |            |
| 890         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 890        |            |
| 900         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 900        |            |
| 910         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 910        |            |
| 920         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 920        |            |
| 930         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 930        |            |
| 940         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 940        |            |
| 950         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 950        |            |
| 960         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 960        |            |
| 970         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 970        |            |
| 980         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 980        |            |
| 990         | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 990        |            |
| 1000        | 5 401         | 32 752            | 25 728  | 34 735  | 43 423  | 221 125 | 0 198 | 1000       |            |

| WISKIN BOTTLE DATA |               | DIS O2<br>ML/L | O2 SAT<br>% | SI03<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUSIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 1 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |                |             |              |             |             |             |               |                   |         |         |         |             |
| 0                  | 5 377         | 7 42           | 105.6       | 28.7         | 1.44        | 15.2        | 0.17        | 6 377         | 25 726            | 34 733  | 43 342  | 3       |             |
| 10                 | 5 351         | 7 39           | 105.6       | 28.7         | 1.43        | 15.2        | 0.17        | 6 350         | 25 729            | 34 738  | 43 348  | 11      |             |
| 20                 | 5 351         | 7 41           | 102.2       | 30.5         | 1.51        | 15.6        | 0.13        | 4 681         | 25 931            | 35 022  | 43 710  | 49      |             |
| 30                 | 5 319         | 2 79           | 37.9        | 70.2         | 2.56        | 38.1        | 0.01        | 3 811         | 26 742            | 35 854  | 44 580  | 99      |             |
| 40                 | 5 311         | 1 63           | 22.1        | 83.8         | 2.82        | 42.8        | 0.00        | 3 691         | 26 979            | 36 004  | 44 724  | 147     |             |
| 50                 | 5 311         | 1 15           | 15.6        | 91.9         | 3.11        | 44.1        | 0.00        | 3 670         | 26 943            | 36 059  | 44 787  | 200     |             |
| 60                 | 5 353         | 0 84           | 11.4        | 105.5        | 3.07        | 44.9        | 0.00        | 3 635         | 27 036            | 36 161  | 44 880  | 301     |             |
| 70                 | 5 393         | 0 78           | 10.6        | 114.6        | 3.05        | 44.7        | 0.00        | 3 566         | 27 115            | 36 242  | 44 954  | 400     |             |
| 80                 | 5 486         | 0 70           | 9.5         | 122.0        | 3.05        | 44.7        | 0.00        | 3 453         | 27 187            | 36 319  | 45 044  | 495     |             |
| 90                 | 5 291         | 0 59           | 7.9         | 132.1        | 3.09        | 45.1        | 0.00        | 3 251         | 27 262            | 36 404  | 45 138  | 596     |             |
| 100                | 5 155         | 0 59           | 7.9         | 138.7        | 3.09        | 45.1        | 0.00        | 3 109         | 27 312            | 36 461  | 45 201  | 696     |             |
| 110                | 5 020         | 0 54           | 7.2         | 142.2        | 3.11        | 45.2        | 0.00        | 3 010         | 27 357            | 36 512  | 45 260  | 800     |             |
| 120                | 2 985         | 0 51           | 6.8         | 145.2        | 3.13        | 45.5        | 0.00        | 2 825         | 27 399            | 36 561  | 45 315  | 906     |             |
| 130                | 2 770         | 0 47           | 6.2         | 152.6        | 3.13        | 45.9        | 0.00        | 2 705         | 27 434            | 36 602  | 45 362  | 986     |             |
| 140                | 2 470         | 0 51           | 6.7         | 154.8        | 3.12        | 45.9        | 0.00        | 2 398         | 27 515            | 36 699  | 45 473  | 1247    |             |
| 150                | 2 232         | 0 75           | 9.9         | 172.4        |             | 45.4</      |             |               |                   |         |         |         |             |

# MARATHON 2 STA. 81



LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB SALIN M  
 12 44 N 151 53 W 1 24 94 2124 4351 210 14 16.9 16.9 16.9 16.9

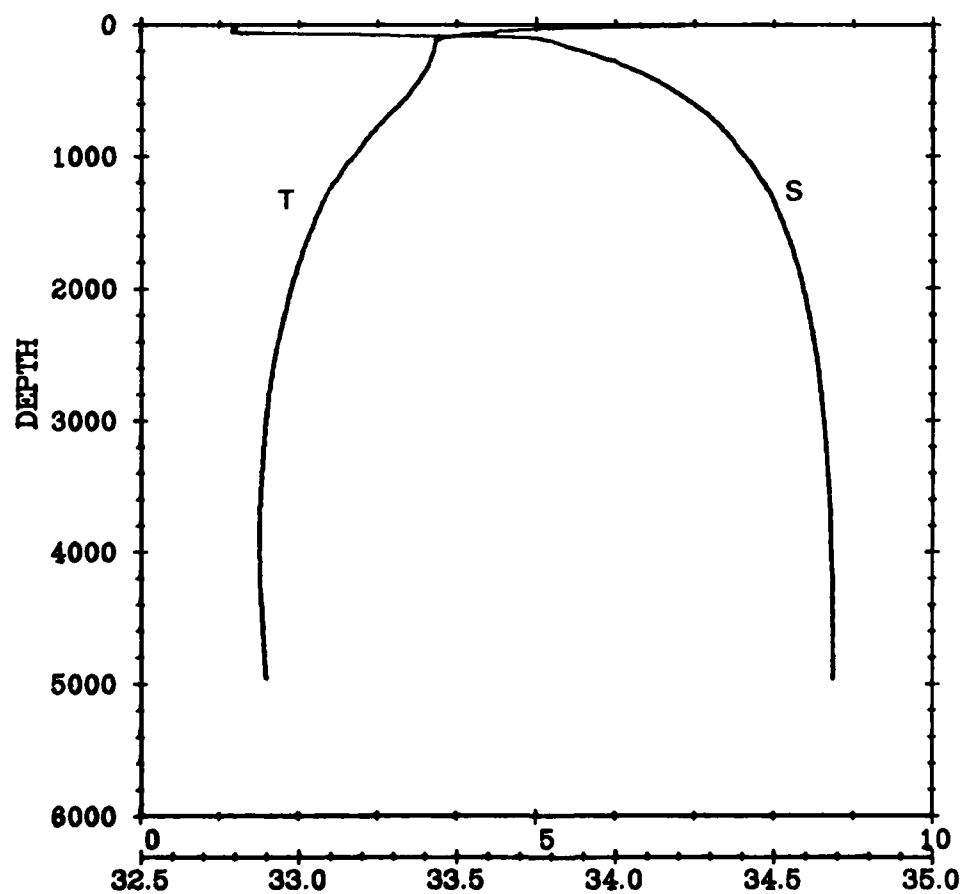
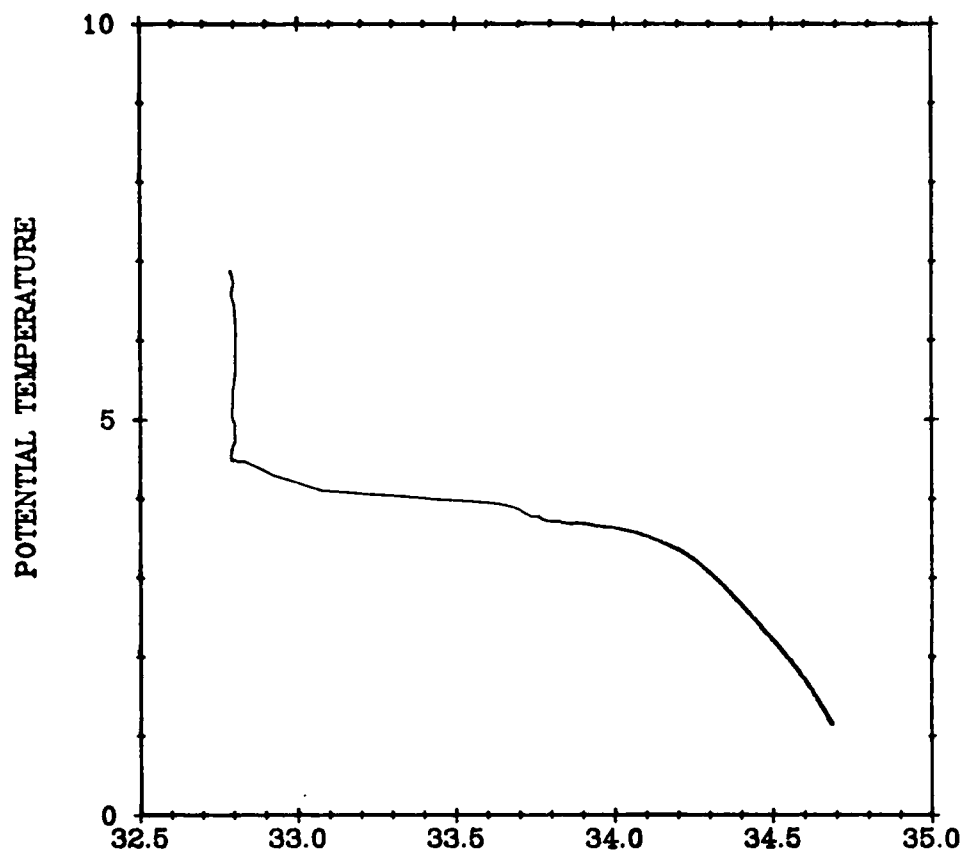
STD DATA

| DEPT | TEMP  | SALINITY | POT TEMP | SIGMA 1 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH |
|------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB   | DEG C |          | DEG C    |         |         |         | ML TON  |            | M     |
| 0    | 16.94 | 34.94    | 16.94    | 25.994  | 26.073  | 43.265  | 228.615 | 0.171      | 0     |
| 10   | 16.93 | 34.93    | 16.93    | 25.997  | 26.076  | 43.268  | 228.618 | 0.171      | 10    |
| 20   | 16.92 | 34.92    | 16.92    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 20    |
| 30   | 16.91 | 34.91    | 16.91    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 30    |
| 40   | 16.90 | 34.90    | 16.90    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 40    |
| 50   | 16.89 | 34.89    | 16.89    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 50    |
| 60   | 16.88 | 34.88    | 16.88    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 60    |
| 70   | 16.87 | 34.87    | 16.87    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 70    |
| 80   | 16.86 | 34.86    | 16.86    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 80    |
| 90   | 16.85 | 34.85    | 16.85    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 90    |
| 100  | 16.84 | 34.84    | 16.84    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 100   |
| 110  | 16.83 | 34.83    | 16.83    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 110   |
| 120  | 16.82 | 34.82    | 16.82    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 120   |
| 130  | 16.81 | 34.81    | 16.81    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 130   |
| 140  | 16.80 | 34.80    | 16.80    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 140   |
| 150  | 16.79 | 34.79    | 16.79    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 150   |
| 160  | 16.78 | 34.78    | 16.78    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 160   |
| 170  | 16.77 | 34.77    | 16.77    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 170   |
| 180  | 16.76 | 34.76    | 16.76    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 180   |
| 190  | 16.75 | 34.75    | 16.75    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 190   |
| 200  | 16.74 | 34.74    | 16.74    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 200   |
| 210  | 16.73 | 34.73    | 16.73    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 210   |
| 220  | 16.72 | 34.72    | 16.72    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 220   |
| 230  | 16.71 | 34.71    | 16.71    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 230   |
| 240  | 16.70 | 34.70    | 16.70    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 240   |
| 250  | 16.69 | 34.69    | 16.69    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 250   |
| 260  | 16.68 | 34.68    | 16.68    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 260   |
| 270  | 16.67 | 34.67    | 16.67    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 270   |
| 280  | 16.66 | 34.66    | 16.66    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 280   |
| 290  | 16.65 | 34.65    | 16.65    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 290   |
| 300  | 16.64 | 34.64    | 16.64    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 300   |
| 310  | 16.63 | 34.63    | 16.63    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 310   |
| 320  | 16.62 | 34.62    | 16.62    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 320   |
| 330  | 16.61 | 34.61    | 16.61    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 330   |
| 340  | 16.60 | 34.60    | 16.60    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 340   |
| 350  | 16.59 | 34.59    | 16.59    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 350   |
| 360  | 16.58 | 34.58    | 16.58    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 360   |
| 370  | 16.57 | 34.57    | 16.57    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 370   |
| 380  | 16.56 | 34.56    | 16.56    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 380   |
| 390  | 16.55 | 34.55    | 16.55    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 390   |
| 400  | 16.54 | 34.54    | 16.54    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 400   |
| 410  | 16.53 | 34.53    | 16.53    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 410   |
| 420  | 16.52 | 34.52    | 16.52    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 420   |
| 430  | 16.51 | 34.51    | 16.51    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 430   |
| 440  | 16.50 | 34.50    | 16.50    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 440   |
| 450  | 16.49 | 34.49    | 16.49    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 450   |
| 460  | 16.48 | 34.48    | 16.48    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 460   |
| 470  | 16.47 | 34.47    | 16.47    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 470   |
| 480  | 16.46 | 34.46    | 16.46    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 480   |
| 490  | 16.45 | 34.45    | 16.45    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 490   |
| 500  | 16.44 | 34.44    | 16.44    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 500   |
| 510  | 16.43 | 34.43    | 16.43    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 510   |
| 520  | 16.42 | 34.42    | 16.42    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 520   |
| 530  | 16.41 | 34.41    | 16.41    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 530   |
| 540  | 16.40 | 34.40    | 16.40    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 540   |
| 550  | 16.39 | 34.39    | 16.39    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 550   |
| 560  | 16.38 | 34.38    | 16.38    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 560   |
| 570  | 16.37 | 34.37    | 16.37    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 570   |
| 580  | 16.36 | 34.36    | 16.36    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 580   |
| 590  | 16.35 | 34.35    | 16.35    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 590   |
| 600  | 16.34 | 34.34    | 16.34    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 600   |
| 610  | 16.33 | 34.33    | 16.33    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 610   |
| 620  | 16.32 | 34.32    | 16.32    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 620   |
| 630  | 16.31 | 34.31    | 16.31    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 630   |
| 640  | 16.30 | 34.30    | 16.30    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 640   |
| 650  | 16.29 | 34.29    | 16.29    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 650   |
| 660  | 16.28 | 34.28    | 16.28    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 660   |
| 670  | 16.27 | 34.27    | 16.27    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 670   |
| 680  | 16.26 | 34.26    | 16.26    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 680   |
| 690  | 16.25 | 34.25    | 16.25    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 690   |
| 700  | 16.24 | 34.24    | 16.24    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 700   |
| 710  | 16.23 | 34.23    | 16.23    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 710   |
| 720  | 16.22 | 34.22    | 16.22    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 720   |
| 730  | 16.21 | 34.21    | 16.21    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 730   |
| 740  | 16.20 | 34.20    | 16.20    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 740   |
| 750  | 16.19 | 34.19    | 16.19    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 750   |
| 760  | 16.18 | 34.18    | 16.18    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 760   |
| 770  | 16.17 | 34.17    | 16.17    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 770   |
| 780  | 16.16 | 34.16    | 16.16    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 780   |
| 790  | 16.15 | 34.15    | 16.15    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 790   |
| 800  | 16.14 | 34.14    | 16.14    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 800   |
| 810  | 16.13 | 34.13    | 16.13    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 810   |
| 820  | 16.12 | 34.12    | 16.12    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 820   |
| 830  | 16.11 | 34.11    | 16.11    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 830   |
| 840  | 16.10 | 34.10    | 16.10    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 840   |
| 850  | 16.09 | 34.09    | 16.09    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 850   |
| 860  | 16.08 | 34.08    | 16.08    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 860   |
| 870  | 16.07 | 34.07    | 16.07    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 870   |
| 880  | 16.06 | 34.06    | 16.06    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 880   |
| 890  | 16.05 | 34.05    | 16.05    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 890   |
| 900  | 16.04 | 34.04    | 16.04    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 900   |
| 910  | 16.03 | 34.03    | 16.03    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 910   |
| 920  | 16.02 | 34.02    | 16.02    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 920   |
| 930  | 16.01 | 34.01    | 16.01    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 930   |
| 940  | 16.00 | 34.00    | 16.00    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 940   |
| 950  | 15.99 | 33.99    | 15.99    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 950   |
| 960  | 15.98 | 33.98    | 15.98    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 960   |
| 970  | 15.97 | 33.97    | 15.97    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 970   |
| 980  | 15.96 | 33.96    | 15.96    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 980   |
| 990  | 15.95 | 33.95    | 15.95    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 990   |
| 1000 | 15.94 | 33.94    | 15.94    | 25.999  | 26.078  | 43.270  | 228.620 | 0.171      | 1000  |

WISKIN BOTTLE DATA

| DEPTH | TEMP   | SALINITY | DIS  | O2    | SIO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|--------|----------|------|-------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C  |          | ML/L | SAT   | UM/L  | UM/L | UM/L | UM/L | TU81N | DEG C    |         |         |         | DB    |
| 0     | 16.978 | 32.799   | 7.33 | 106.6 | 29.9  | 1.43 | 15.8 | 0.18 | 6.878 | 25.701   | 34.684  | 43.269  | 4       |       |
| 10    | 16.988 | 32.798   | 7.35 | 106.9 | 29.3  | 1.43 | 15.8 | 0.18 | 6.897 | 25.700   | 34.682  | 43.267  | 9       |       |
| 20    | 16.995 | 32.799   | 7.51 | 104.4 | 27.2  | 1.45 | 16.0 | 0.19 | 5.002 | 25.930   | 35.025  | 43.676  | 37      |       |
| 30    | 16.990 | 32.934   | 7.24 | 99.5  | 31.3  | 1.60 | 18.2 | 0.18 | 4.485 | 26.014   | 35.114  | 43.810  | 67      |       |
| 40    | 16.988 | 33.900   | 1.71 | 23.2  | 82.5  | 2.90 | 42.0 | 0.01 | 3.709 | 26.861   | 35.995  | 44.704  | 110     |       |
| 50    | 16.977 | 33.883   | 1.06 | 14.4  | 92.5  | 3.03 | 44.3 | 0.01 | 3.694 | 26.928   | 36.052  | 44.771  | 194     |       |
| 60    | 16.966 | 34.011   | 0.71 | 9.6   | 105.6 | 3.09 | 45.0 | 0.01 | 3.626 | 27.037   | 36.162  | 44.882  | 295     |       |
| 70    | 16.955 | 34.155   | 0.63 | 3.9   | 119.5 | 3.09 | 44.9 | 0.01 | 3.529 | 27.169   | 36.268  | 44.973  | 396     |       |
| 80    | 16.945 | 34.244   | 0.58 | 7.8   | 125.5 | 3.09 | 44.9 | 0.00 | 3.401 | 27.293   | 36.324  | 45.056  | 498     |       |
| 90    | 16.938 | 34.244   | 0.46 | 6.2   | 133.6 | 3.10 | 45.1 | 0.00 | 3.259 | 27.258   | 36.399  | 45.133  | 602     |       |
| 100   | 16.928 | 34.300   | 0.51 | 6.9   | 140.0 | 3.10 | 44.9 | 0.00 | 3.273 | 27.320   | 36.470  | 45.212  | 704     |       |
| 110   | 16.919 | 34.340   | 0.51 | 6.8   | 145.8 | 3.10 | 45.0 | 0.00 | 2.926 | 27.165   | 36.522  | 45.271  | 801     |       |
| 120   | 16.924 | 34.379   | 0.47 | 6.3   | 151.5 | 3.12 | 45.1 | 0.00 | 2.765 | 27.400   | 36.576  | 45.333  | 906     |       |
| 130   | 16.917 | 34.407   | 0.50 | 6.6   | 156.7 | 3.12 | 45.2 | 0.00 | 2.641 | 27.443   | 36.615  | 45.378  | 1003    |       |
| 140   | 16.914 | 34.400   | 0.58 | 7.6   | 166.6 | 3.11 | 44.9 | 0.00 | 2.355 | 27.518   | 36.704  | 45.481  | 1219    |       |
| 150   | 16.912 | 34.529   | 0.93 | 10.9  | 174.5 | 3.06 | 44.5 | 0.00 | 2.089 | 27.597   | 36.787  | 45.576  | 1510    |       |
| 160   | 16.908 | 34.505   | 1.10 | 14.3  | 177.6 | 3.01 | 43.9 | 0.00 | 1.915 | 27.630   | 36.838  | 45.636  | 1764    |       |
| 170   | 16.903 | 34.592   |      |       | 179.7 | 2.95 | 43.2 | 0.00 | 1.768 | 27.663   | 36.879  | 45.684  | 2005    |       |
| 180   | 16.896 | 34.632   | 2.01 | 25.9  | 180.3 | 2.84 | 41.4 | 0.00 | 1.524 | 27.713   | 36.942  | 45.759  | 2521    |       |
| 190   | 16.883 | 34.656   | 2.55 | 32.8  | 177.2 | 2.79 | 39.9 | 0.00 | 1.262 | 27.744   | 36.982  | 45.807  | 3028    |       |
| 200   | 16.872 | 34.676   | 3.01 | 38.6  | 174.6 | 2.69 | 38.6 | 0.00 | 1.231 | 27.769   | 37.014  | 45.846  | 3528    |       |
| 210   | 16.860 | 34.680   | 3.21 | 41.1  | 173.6 | 2.53 | 38.1 | 0.00 | 1.181 | 27.776   | 37.024  | 45.858  | 4037    |       |
| 220   | 16.843 | 34.685   | 3.31 | 42.3  | 176.0 |      | 37.9 | 0.00 | 1.152 | 27.782   | 37.031  | 45.867  | 4549    |       |
| 230   | 16.834 | 34.685   | 3.34 | 42.7  | 174.9 | 2.56 | 37.5 | 0.00 | 1.141 | 27.783   | 37.033  | 45.869  | 5055    |       |

# MARATHON 2 STA. 82



| LATITUDE | LONGITUDE | MO | DAY | YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----|-----|----|------------|--------|------|-------|----------|----------|--------|
|          |           |    |     |    | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MM     |
| 52 32.2N | 152 06W   | 5  | 10  | 94 | 510        | 4467   | 270  | 15    | 5        | 4        | 1022.4 |

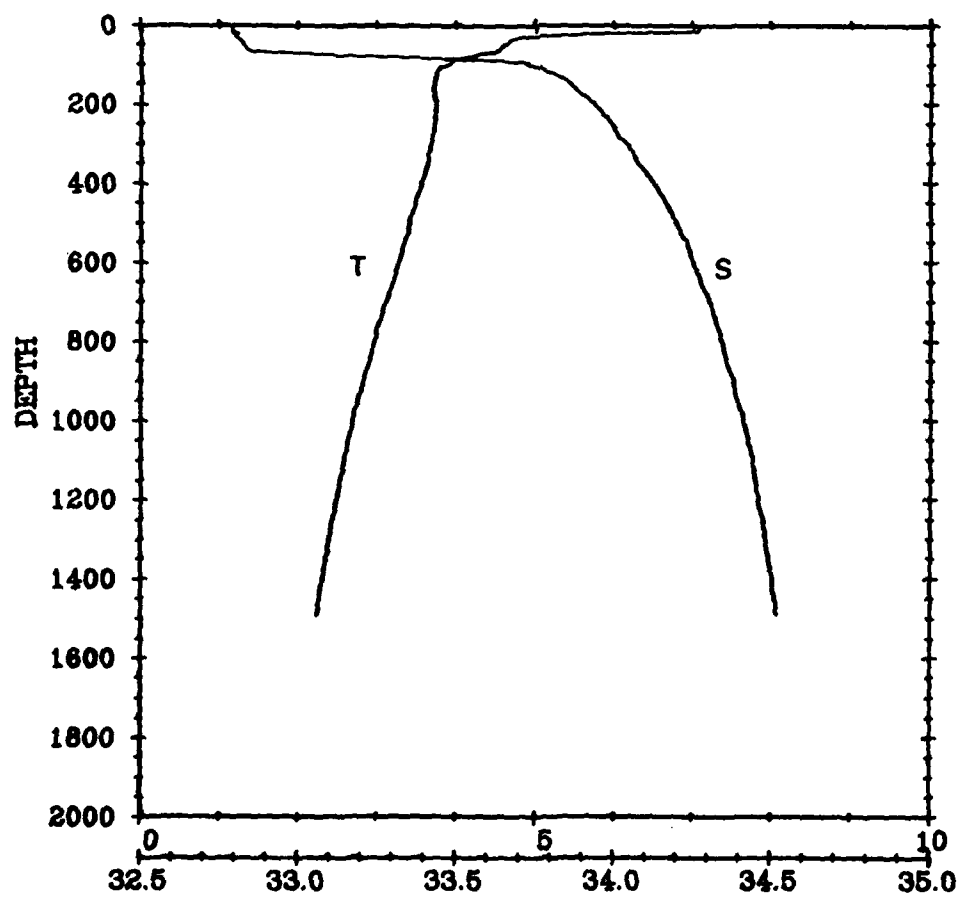
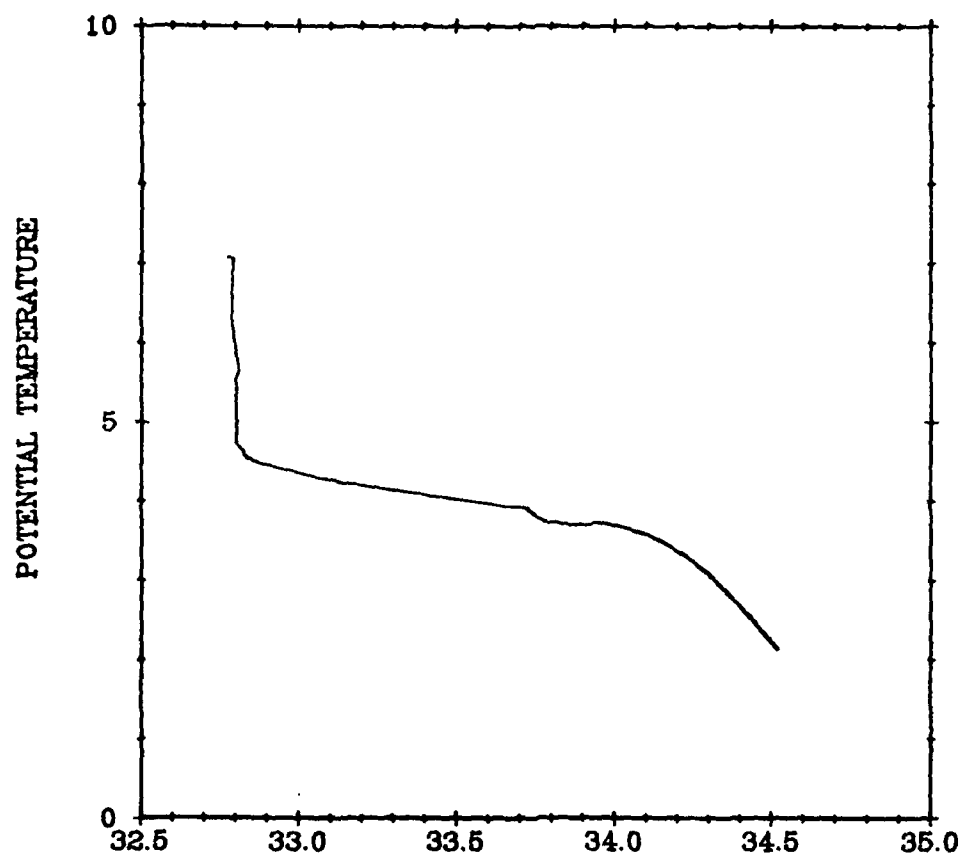
## STD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         | CM/TON  |            | M     |
| 0     | 1.59  | 32.788   | 1.063    | 25.648  | 34.543  | 43.220  | 231.199 | 0.100      | 0     |
| 20    | 1.58  | 32.797   | 1.066    | 25.792  | 34.819  | 43.426  | 219.722 | 0.045      | 19    |
| 40    | 1.52  | 32.814   | 1.079    | 25.973  | 35.062  | 43.747  | 202.575 | 0.187      | 39    |
| 60    | 1.544 | 32.848   | 1.090    | 26.219  | 35.317  | 43.979  | 199.167 | 0.127      | 59    |
| 80    | 1.34  | 33.257   | 1.119    | 26.392  | 35.491  | 44.135  | 194.139 | 0.154      | 79    |
| 100   | 1.392 | 33.704   | 1.385    | 26.767  | 35.884  | 44.596  | 127.727 | 0.191      | 99    |
| 120   | 1.715 | 33.862   | 1.705    | 26.910  | 36.015  | 44.753  | 114.494 | 0.253      | 119   |
| 140   | 1.741 | 33.934   | 1.728    | 26.966  | 36.087  | 44.803  | 109.710 | 0.309      | 139   |
| 160   | 1.724 | 33.939   | 1.707    | 27.011  | 36.133  | 44.849  | 105.792 | 0.363      | 159   |
| 180   | 1.697 | 34.036   | 1.660    | 27.053  | 36.177  | 44.895  | 102.206 | 0.415      | 179   |
| 200   | 1.635 | 34.074   | 1.612    | 27.089  | 36.214  | 44.933  | 99.282  | 0.466      | 199   |
| 220   | 1.565 | 34.125   | 1.539    | 27.136  | 36.265  | 44.987  | 95.135  | 0.514      | 219   |
| 240   | 1.491 | 34.163   | 1.461    | 27.174  | 36.306  | 45.031  | 91.897  | 0.561      | 239   |
| 260   | 1.415 | 34.195   | 1.382    | 27.207  | 36.343  | 45.072  | 89.089  | 0.605      | 259   |
| 280   | 1.275 | 34.250   | 1.235    | 27.265  | 36.407  | 45.143  | 84.243  | 0.693      | 279   |
| 300   | 1.117 | 34.302   | 1.071    | 27.322  | 36.472  | 45.215  | 79.401  | 0.775      | 299   |
| 320   | 0.970 | 34.341   | 0.917    | 27.367  | 36.525  | 45.274  | 75.504  | 0.852      | 319   |
| 340   | 0.831 | 34.377   | 0.774    | 27.408  | 36.573  | 45.329  | 72.097  | 0.926      | 339   |
| 360   | 0.697 | 34.409   | 0.632    | 27.446  | 36.618  | 45.381  | 68.861  | 0.997      | 359   |
| 380   | 0.586 | 34.438   | 0.514    | 27.479  | 36.657  | 45.426  | 66.076  | 1.064      | 379   |
| 400   | 0.491 | 34.458   | 0.412    | 27.504  | 36.687  | 45.461  | 64.097  | 1.129      | 399   |
| 420   | 0.399 | 34.480   | 0.314    | 27.530  | 36.718  | 45.496  | 61.972  | 1.192      | 419   |
| 440   | 0.317 | 34.499   | 0.225    | 27.552  | 36.745  | 45.528  | 60.148  | 1.253      | 439   |
| 460   | 0.243 | 34.515   | 0.144    | 27.572  | 36.769  | 45.555  | 58.607  | 1.313      | 459   |
| 480   | 0.233 | 34.519   | 0.134    | 27.576  | 36.773  | 45.560  | 58.236  | 1.317      | 479   |

## NISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 3     | 1.568 | 32.799   | 7.31   | 106.8  | 31.1  | 1.48 | 16.5 | 0.16 | 7.068 | 25.676   | 34.550  | 43.227  |         | 3     |
| 15    | 1.546 | 32.798   | 7.32   | 106.9  | 31.3  | 1.48 | 16.5 | 0.16 | 7.045 | 25.678   | 34.553  | 43.231  |         | 15    |
| 34    | 1.519 | 32.802   | 7.62   | 106.5  | 31.3  | 1.50 | 16.9 | 0.16 | 5.215 | 25.909   | 34.972  | 43.634  |         | 34    |
| 61    | 1.594 | 32.825   | 7.32   | 100.9  | 33.1  | 1.59 | 18.5 | 0.14 | 4.390 | 25.995   | 35.190  | 43.781  |         | 61    |
| 101   | 1.507 | 33.486   | 3.49   | 47.6   | 62.3  | 2.48 | 34.4 | 0.07 | 4.043 | 26.577   | 35.690  | 44.397  |         | 101   |
| 154   | 1.727 | 33.852   | 1.31   | 11.8   | 99.0  | 2.96 | 43.0 | 0.07 | 3.727 | 26.901   | 36.225  | 44.742  |         | 154   |
| 204   | 1.745 | 33.932   | 0.80   | 10.9   | 94.3  | 3.08 | 44.7 | 0.07 | 3.731 | 26.964   | 36.085  | 44.801  |         | 205   |
| 302   | 1.573 | 34.241   | 0.58   | 7.9    | 108.4 | 3.11 | 44.9 | 0.07 | 3.553 | 27.058   | 36.192  | 44.970  |         | 304   |
| 401   | 1.552 | 34.128   | 0.33   | 7.2    | 118.5 | 3.10 | 44.6 | 0.07 | 3.524 | 27.140   | 36.269  | 44.992  |         | 404   |
| 497   | 1.414 | 34.198   | 0.50   | 6.7    | 125.1 | 3.11 | 44.5 | 0.00 | 3.181 | 27.209   | 36.145  | 45.074  |         | 501   |
| 597   | 1.281 | 34.250   | 0.51   | 6.9    | 131.5 | 3.10 | 44.5 | 0.00 | 3.241 | 27.264   | 36.406  | 45.141  |         | 602   |
| 697   | 1.129 | 34.299   | 0.50   | 5.7    | 137.2 | 3.09 | 44.5 | 0.00 | 3.382 | 27.318   | 36.468  | 45.210  |         | 703   |
| 804   | 0.961 | 34.344   | 0.49   | 6.5    | 145.6 | 3.10 | 44.5 | 0.00 | 2.908 | 27.370   | 36.528  | 45.278  |         | 811   |
| 905   | 0.925 | 34.379   | 0.54   | 7.2    | 146.9 | 3.11 | 44.7 | 0.00 | 2.765 | 27.410   | 36.576  | 45.333  |         | 914   |
| 1001  | 0.698 | 34.411   | 0.50   | 6.6    | 153.3 | 3.09 | 44.7 | 0.00 | 2.532 | 27.448   | 36.620  | 45.383  |         | 1011  |
| 1251  | 0.431 | 34.474   | 0.60   | 7.9    | 159.2 | 3.08 | 44.7 | 0.00 | 2.148 | 27.522   | 36.708  | 45.495  |         | 1254  |
| 1493  | 0.235 | 34.520   | 0.76   | 10.0   | 168.0 |      | 44.5 | 0.00 | 2.136 | 27.576   | 36.773  | 45.560  |         | 1505  |

# MARATHON 2 STA. 83

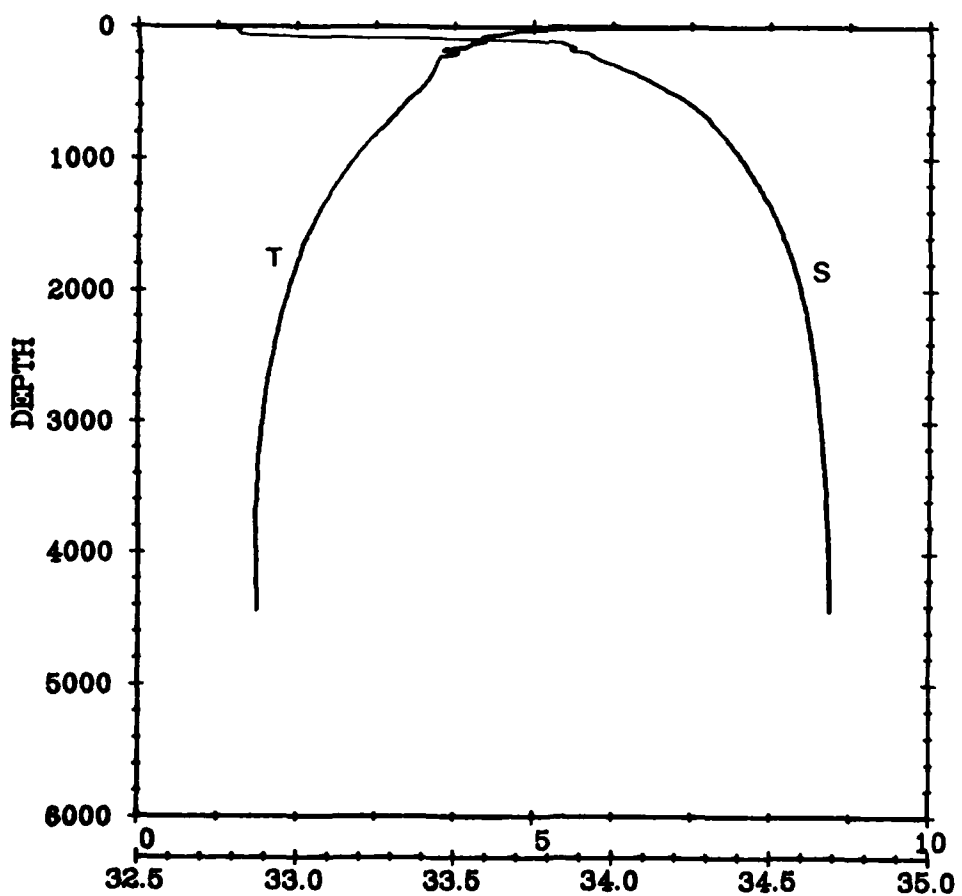
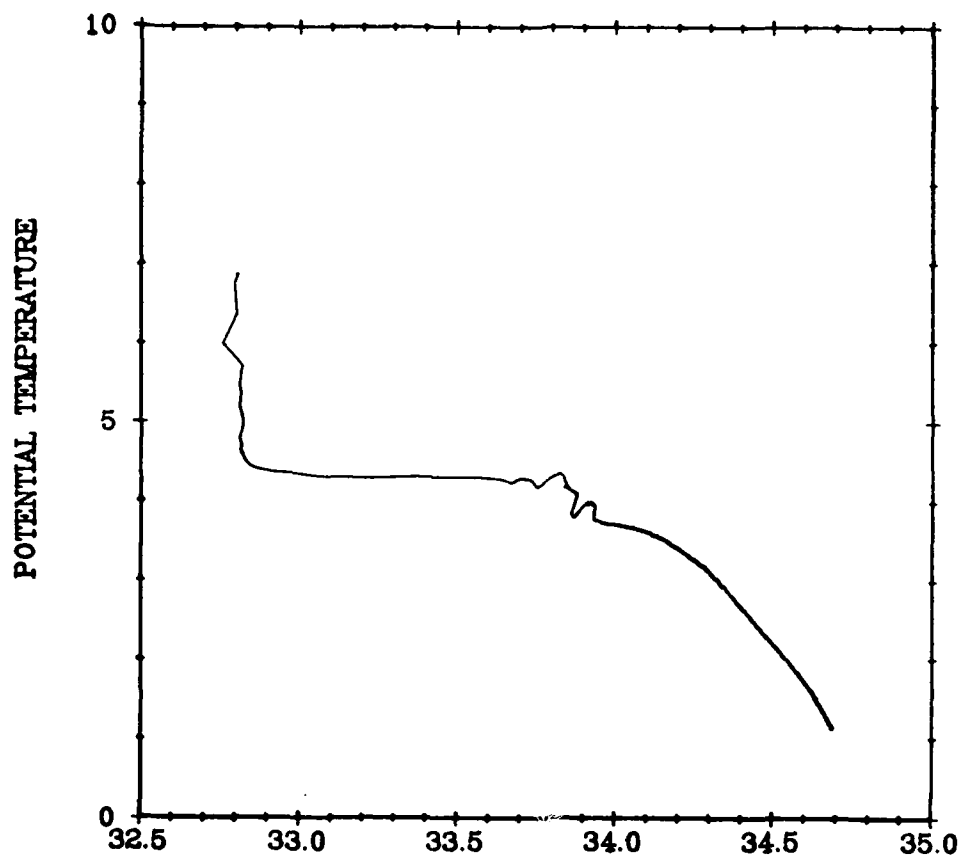


| LATITUDE   | LONGITUDE   | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|------------|-------------|----------|------------|--------|------|-------|----------|----------|--------|
| 52 39 30 N | 121 13 40 W | 5-13-84  | 1136       | 4448   | 240  | 16    | 12       | 10       | 1021.4 |

| STD DATA |       |          |          |         |         |         |         |            |       |
|----------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| PRESS    | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
| DB       | DEG C |          | DEG C    |         |         |         | CL/TON  |            | M     |
| 0        | 6.821 | 32.832   | 6.821    | 25.712  | 34.697  | 43.295  | 22.7091 | 0.000      | 0     |
| 20       | 5.705 | 32.837   | 5.703    | 25.856  | 34.835  | 43.534  | 213.383 | 0.044      | 19    |
| 40       | 4.780 | 32.856   | 4.777    | 25.969  | 35.034  | 43.736  | 203.036 | 0.085      | 39    |
| 60       | 4.529 | 32.842   | 4.525    | 26.016  | 35.114  | 43.828  | 199.466 | 0.126      | 59    |
| 80       | 4.343 | 33.122   | 4.337    | 26.258  | 35.361  | 44.060  | 175.861 | 0.163      | 79    |
| 100      | 4.294 | 33.628   | 4.287    | 26.665  | 35.763  | 44.456  | 137.445 | 0.195      | 99    |
| 120      | 4.143 | 33.867   | 4.133    | 26.871  | 35.973  | 44.670  | 118.362 | 0.269      | 119   |
| 140      | 3.992 | 33.912   | 3.978    | 26.923  | 36.032  | 44.736  | 113.867 | 0.317      | 139   |
| 160      | 3.770 | 33.951   | 3.753    | 26.977  | 36.097  | 44.811  | 109.105 | 0.372      | 159   |
| 180      | 3.712 | 34.037   | 3.712    | 27.025  | 36.147  | 44.862  | 104.405 | 0.426      | 179   |
| 200      | 3.692 | 34.058   | 3.668    | 27.070  | 36.193  | 44.910  | 101.059 | 0.477      | 199   |
| 220      | 3.646 | 34.099   | 3.619    | 27.108  | 36.232  | 44.951  | 97.899  | 0.527      | 219   |
| 240      | 3.582 | 34.139   | 3.552    | 27.146  | 36.274  | 44.995  | 94.824  | 0.575      | 239   |
| 260      | 3.503 | 34.175   | 3.469    | 27.183  | 36.314  | 45.039  | 91.887  | 0.622      | 259   |
| 280      | 3.422 | 34.246   | 3.382    | 27.257  | 36.397  | 45.130  | 89.027  | 0.710      | 279   |
| 300      | 3.372 | 34.297   | 3.325    | 27.313  | 36.460  | 45.200  | 86.344  | 0.743      | 299   |
| 320      | 3.313 | 34.334   | 3.260    | 27.357  | 36.513  | 45.261  | 83.875  | 0.811      | 319   |
| 340      | 2.859 | 34.371   | 2.800    | 27.401  | 36.565  | 45.320  | 82.318  | 0.846      | 339   |
| 360      | 2.725 | 34.400   | 2.659    | 27.437  | 36.608  | 45.369  | 80.827  | 0.877      | 359   |
| 380      | 2.607 | 34.428   | 2.535    | 27.469  | 36.647  | 45.414  | 79.401  | 0.906      | 379   |
| 400      | 2.490 | 34.454   | 2.411    | 27.501  | 36.684  | 45.458  | 78.033  | 0.931      | 399   |
| 420      | 2.386 | 34.478   | 2.301    | 27.529  | 36.718  | 45.497  | 76.717  | 0.955      | 419   |
| 440      | 2.285 | 34.501   | 2.193    | 27.556  | 36.751  | 45.535  | 75.445  | 0.975      | 439   |
| 460      | 2.207 | 34.519   | 2.108    | 27.578  | 36.777  | 45.565  | 74.207  | 0.997      | 459   |
| 480      | 2.124 | 34.539   | 2.019    | 27.601  | 36.805  | 45.597  | 73.009  | 1.011      | 479   |
| 500      | 2.058 | 34.554   | 1.945    | 27.619  | 36.826  | 45.622  | 71.843  | 1.024      | 499   |
| 520      | 1.994 | 34.568   | 1.874    | 27.635  | 36.846  | 45.646  | 70.703  | 1.035      | 519   |
| 540      | 1.942 | 34.580   | 1.815    | 27.650  | 36.864  | 45.666  | 69.687  | 1.044      | 539   |
| 560      | 1.897 | 34.591   | 1.752    | 27.663  | 36.881  | 45.686  | 68.698  | 1.054      | 559   |
| 580      | 1.844 | 34.600   | 1.702    | 27.674  | 36.894  | 45.702  | 67.761  | 1.065      | 579   |
| 600      | 1.794 | 34.610   | 1.644    | 27.687  | 36.910  | 45.721  | 66.875  | 1.074      | 599   |
| 620      | 1.762 | 34.617   | 1.624    | 27.695  | 36.921  | 45.733  | 66.017  | 1.083      | 619   |
| 640      | 1.722 | 34.624   | 1.556    | 27.704  | 36.932  | 45.747  | 65.192  | 1.092      | 639   |
| 660      | 1.692 | 34.630   | 1.518    | 27.712  | 36.942  | 45.759  | 64.392  | 1.099      | 659   |
| 680      | 1.659 | 34.636   | 1.476    | 27.720  | 36.952  | 45.771  | 63.611  | 1.097      | 679   |
| 700      | 1.627 | 34.642   | 1.435    | 27.728  | 36.962  | 45.783  | 62.849  | 1.094      | 699   |
| 720      | 1.604 | 34.647   | 1.404    | 27.734  | 36.970  | 45.792  | 62.107  | 1.099      | 719   |
| 740      | 1.585 | 34.651   | 1.376    | 27.739  | 36.976  | 45.801  | 61.382  | 1.095      | 739   |
| 760      | 1.571 | 34.655   | 1.353    | 27.744  | 36.981  | 45.808  | 60.677  | 1.091      | 759   |
| 780      | 1.547 | 34.659   | 1.320    | 27.749  | 36.990  | 45.817  | 60.000  | 1.086      | 779   |
| 800      | 1.532 | 34.663   | 1.295    | 27.754  | 36.996  | 45.824  | 59.343  | 1.081      | 799   |
| 820      | 1.516 | 34.666   | 1.270    | 27.759  | 37.002  | 45.831  | 58.703  | 1.076      | 819   |
| 840      | 1.504 | 34.669   | 1.248    | 27.762  | 37.007  | 45.838  | 58.077  | 1.071      | 839   |
| 860      | 1.497 | 34.671   | 1.231    | 27.765  | 37.011  | 45.842  | 57.467  | 1.066      | 859   |
| 880      | 1.488 | 34.674   | 1.212    | 27.769  | 37.016  | 45.848  | 56.870  | 1.061      | 879   |
| 900      | 1.484 | 34.676   | 1.198    | 27.772  | 37.019  | 45.852  | 56.287  | 1.056      | 899   |
| 920      | 1.480 | 34.678   | 1.183    | 27.774  | 37.022  | 45.856  | 55.717  | 1.051      | 919   |
| 940      | 1.480 | 34.680   | 1.172    | 27.776  | 37.025  | 45.859  | 55.160  | 1.046      | 939   |
| 960      | 1.483 | 34.681   | 1.165    | 27.778  | 37.027  | 45.862  | 54.615  | 1.041      | 959   |
| 980      | 1.486 | 34.682   | 1.156    | 27.779  | 37.029  | 45.864  | 54.082  | 1.036      | 979   |
| 1000     | 1.488 | 34.683   | 1.147    | 27.781  | 37.031  | 45.866  | 53.560  | 1.031      | 999   |
| 1020     | 1.491 | 34.685   | 1.139    | 27.783  | 37.033  | 45.869  | 53.047  | 1.026      | 1019  |
| 1040     | 1.495 | 34.685   | 1.132    | 27.783  | 37.034  | 45.871  | 52.543  | 1.021      | 1039  |
| 1060     | 1.500 | 34.687   | 1.125    | 27.785  | 37.036  | 45.873  | 52.047  | 1.016      | 1059  |
| 1080     | 1.504 | 34.687   | 1.126    | 27.785  | 37.036  | 45.873  | 51.559  | 1.011      | 1079  |

| NISKIN BOTTLE DATA |       |          |        |        |       |      |      |      |       |
|--------------------|-------|----------|--------|--------|-------|------|------|------|-------|
| DEPTH              | TEMP  | SALINITY | DIS O2 | O2 SAT | SIO3  | PC4  | NO3  | NO2  | TRIT  |
| M                  | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN |
| 1                  | 6.874 | 32.812   | 7.29   | 106.0  | 33.0  | 1.32 | 17.2 | 0.19 | 6.974 |
| 54                 | 4.620 | 32.823   | 7.27   | 100.2  | 32.9  | 1.62 | 19.4 | 0.20 | 4.616 |
| 125                | 4.311 | 33.724   | 2.26   | 31.1   | 70.3  | 2.72 | 38.6 | 0.31 | 4.304 |
| 155                | 4.129 | 33.877   | 1.33   | 18.2   | 82.6  | 2.95 | 42.3 | 0.31 | 4.118 |
| 209                | 4.021 | 33.931   | 0.97   | 13.3   | 90.0  | 3.24 | 43.6 | 0.00 | 4.006 |
| 322                | 3.729 | 34.014   | 0.54   | 7.3    | 104.8 | 3.15 | 45.4 | 0.00 | 3.728 |
| 405                | 3.638 | 34.112   | 0.48   | 6.5    | 114.5 | 3.13 | 45.0 | 0.00 | 3.620 |
| 499                | 3.497 | 34.191   | 0.42   | 5.7    | 122.9 | 3.15 | 45.0 | 0.00 | 3.463 |
| 604                | 3.314 | 34.254   | 0.41   | 5.5    | 132.1 | 3.14 | 45.1 | 0.00 | 3.273 |
| 699                | 3.166 | 34.303   | 0.38   | 5.1    | 140.3 | 3.16 | 45.0 | 0.00 | 3.119 |
| 797                | 3.009 | 34.339   | 0.43   | 5.7    | 146.9 | 3.15 | 45.1 | 0.00 | 2.956 |
| 897                | 2.855 | 34.376   | 0.44   | 5.9    | 151.2 | 3.14 | 45.1 | 0.00 | 2.795 |
| 991                | 2.725 | 34.404   | 0.47   | 6.2    | 158.6 | 3.15 | 45.0 | 0.00 | 2.639 |
| 1040               | 2.432 | 34.471   | 0.60   | 7.9    | 168.0 | 3.12 | 44.6 | 0.00 | 2.350 |
| 1077               | 2.210 | 34.522   | 0.84   | 11.0   | 174.3 | 3.07 | 44.3 | 0.00 | 2.112 |
| 1099               | 2.024 | 34.564   | 1.19   | 15.5   | 177.8 | 3.02 | 43.4 | 0.00 | 1.907 |
| 1095               | 1.894 | 34.595   | 1.49   | 19.3   | 179.1 | 2.96 | 42.6 | 0.00 | 1.749 |
| 1071               | 1.722 | 34.628   | 1.96   | 25.3   | 178.8 | 2.86 | 41.3 | 0.00 | 1.556 |
| 1061               | 1.604 | 34.650   | 2.43   | 31.3   | 177.5 | 2.77 | 40.1 | 0.00 | 1.404 |
| 1059               | 1.512 | 34.665   | 2.82   | 36.2   | 174.5 | 2.70 | 39.1 | 0.00 | 1.295 |
| 1050               | 1.488 | 34.676   | 3.11   | 39.9   | 172.7 | 2.64 | 39.3 | 0.00 | 1.211 |
| 1046               | 1.483 | 34.682   | 3.29   | 42.1   | 171.9 | 2.60 | 37.8 | 0.00 | 1.163 |
| 1035               | 1.491 | 34.684   | 3.35   | 42.8   | 172.1 | 2.63 | 37.5 | 0.00 | 1.143 |
| 1044               | 1.504 | 34.687   | 3.41   | 43.6   | 172.4 | 2.66 | 37.3 | 0.00 | 1.126 |

# MARATHON 2 STA. 84



LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAR-M  
 1 20 1N 151 59 4W 5 31 94 1943 4511 200 20 2 2 1019

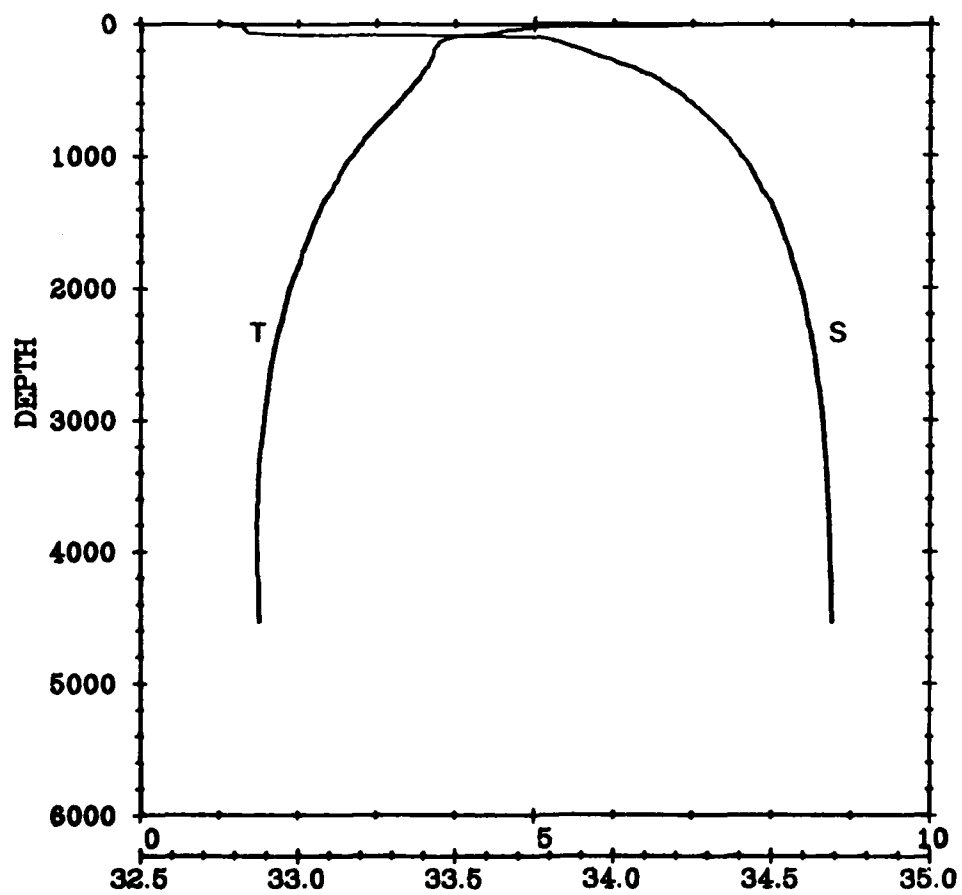
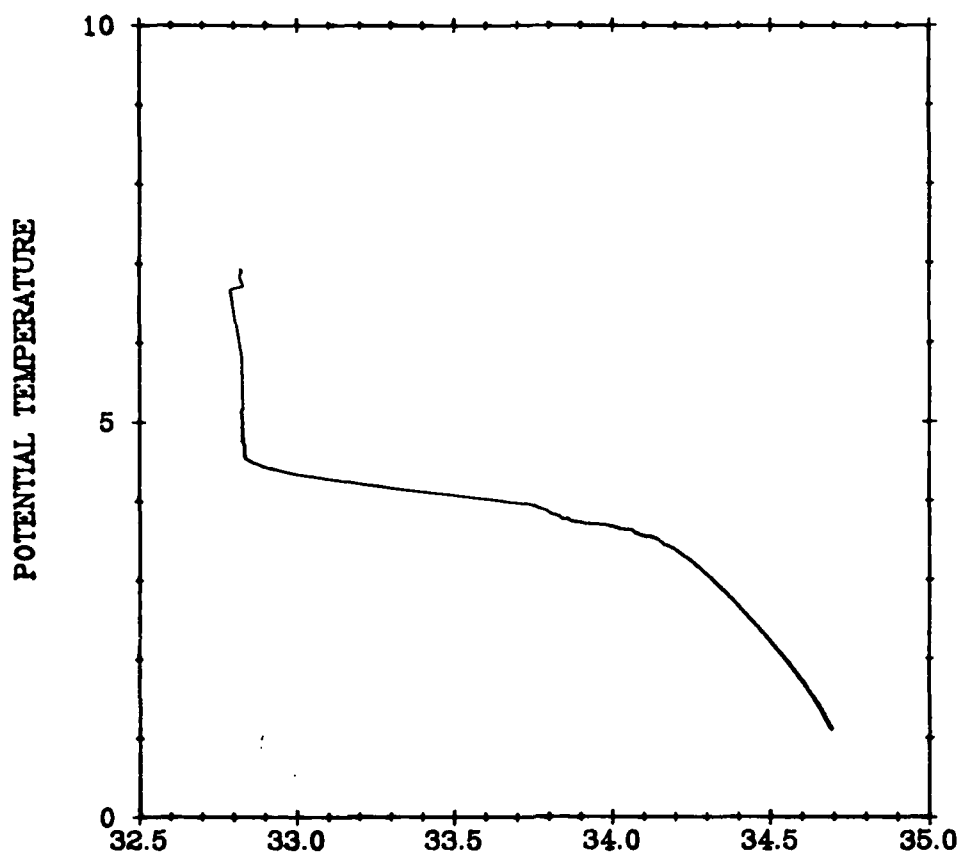
## WTD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA   | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         | DB      |            | M     |
| 0     | 5.997 | 32.821   | 5.997    | 25.717  | 14.438  | 41.282  | 225.617 | 1.000      | 0     |
| 20    | 5.927 | 32.822   | 5.925    | 25.841  | 14.459  | 41.498  | 215.014 | 1.044      | 19    |
| 40    | 4.814 | 32.829   | 4.911    | 25.975  | 15.059  | 41.719  | 202.411 | 1.086      | 39    |
| 60    | 4.575 | 32.836   | 4.571    | 26.105  | 15.102  | 41.794  | 199.596 | 1.126      | 59    |
| 80    | 4.385 | 32.834   | 4.379    | 26.144  | 15.247  | 41.746  | 195.571 | 1.165      | 79    |
| 100   | 3.999 | 33.546   | 3.992    | 26.711  | 15.323  | 44.510  | 133.141 | 1.197      | 99    |
| 120   | 3.781 | 33.841   | 3.770    | 26.889  | 16.110  | 44.725  | 115.576 | 1.278      | 119   |
| 140   | 3.724 | 33.905   | 3.711    | 26.944  | 16.167  | 44.84   | 111.725 | 1.316      | 139   |
| 160   | 3.709 | 33.961   | 3.692    | 26.991  | 16.114  | 44.811  | 107.747 | 1.351      | 159   |
| 180   | 3.668 | 34.115   | 3.648    | 27.139  | 16.163  | 44.882  | 103.888 | 1.424      | 179   |
| 200   | 3.618 | 34.175   | 3.595    | 27.192  | 16.219  | 44.940  | 99.916  | 1.471      | 199   |
| 220   | 3.579 | 34.127   | 3.552    | 27.139  | 16.167  | 44.990  | 94.916  | 1.521      | 219   |
| 240   | 3.492 | 34.157   | 3.462    | 27.169  | 16.101  | 47.727  | 92.175  | 1.571      | 239   |
| 260   | 3.427 | 34.192   | 3.394    | 27.204  | 16.139  | 48.049  | 89.191  | 1.611      | 259   |
| 280   | 3.293 | 34.246   | 3.243    | 27.261  | 16.403  | 48.138  | 84.624  | 1.714      | 279   |
| 300   | 3.124 | 34.294   | 3.079    | 27.315  | 16.465  | 48.201  | 81.177  | 1.781      | 299   |
| 320   | 2.959 | 34.336   | 2.916    | 27.363  | 16.721  | 48.201  | 77.866  | 1.841      | 319   |
| 340   | 2.824 | 34.373   | 2.765    | 27.406  | 16.771  | 48.828  | 74.171  | 1.891      | 339   |
| 360   | 2.710 | 34.403   | 2.645    | 27.440  | 16.812  | 49.174  | 69.444  | 1.941      | 359   |
| 380   | 2.576 | 34.435   | 2.504    | 27.478  | 16.856  | 49.425  | 66.171  | 1.991      | 379   |
| 400   | 2.495 | 34.456   | 2.415    | 27.502  | 16.885  | 49.498  | 64.247  | 1.941      | 399   |
| 420   | 2.398 | 34.479   | 2.311    | 27.524  | 16.911  | 49.446  | 62.173  | 1.891      | 419   |
| 440   | 2.287 | 34.504   | 2.195    | 27.559  | 16.951  | 49.411  | 59.446  | 1.841      | 439   |
| 460   | 2.212 | 34.521   | 2.119    | 27.579  | 16.979  | 49.465  | 57.416  | 1.791      | 459   |
| 480   | 2.148 | 34.535   | 2.042    | 27.597  | 16.999  | 49.500  | 55.412  | 1.741      | 479   |
| 500   | 2.079 | 34.561   | 1.965    | 27.615  | 16.922  | 49.515  | 53.914  | 1.691      | 499   |
| 520   | 2.029 | 34.561   | 1.919    | 27.629  | 16.838  | 49.476  | 51.921  | 1.641      | 519   |
| 540   | 1.979 | 34.577   | 1.875    | 27.646  | 16.859  | 49.460  | 50.514  | 1.591      | 539   |
| 560   | 1.924 | 34.589   | 1.799    | 27.650  | 16.877  | 49.531  | 48.711  | 1.541      | 559   |
| 580   | 1.855 | 34.600   | 1.712    | 27.670  | 16.890  | 49.500  | 46.716  | 1.491      | 579   |
| 600   | 1.816 | 34.608   | 1.655    | 27.691  | 16.905  | 49.715  | 44.916  | 1.441      | 599   |
| 620   | 1.776 | 34.615   | 1.613    | 27.691  | 16.918  | 49.711  | 44.844  | 1.391      | 619   |
| 640   | 1.727 | 34.625   | 1.561    | 27.705  | 16.932  | 49.471  | 43.911  | 1.341      | 639   |
| 660   | 1.692 | 34.632   | 1.513    | 27.714  | 16.943  | 49.560  | 43.119  | 1.341      | 659   |
| 680   | 1.661 | 34.639   | 1.473    | 27.721  | 16.953  | 49.702  | 42.711  | 1.391      | 679   |
| 700   | 1.607 | 34.643   | 1.445    | 27.728  | 16.961  | 49.782  | 42.410  | 1.341      | 699   |
| 720   | 1.511 | 34.648   | 1.411    | 27.734  | 16.970  | 49.792  | 42.039  | 1.391      | 719   |
| 740   | 1.588 | 34.652   | 1.379    | 27.740  | 16.977  | 49.801  | 42.111  | 1.341      | 739   |
| 760   | 1.564 | 34.657   | 1.346    | 27.746  | 16.985  | 49.811  | 42.116  | 1.291      | 759   |
| 780   | 1.548 | 34.661   | 1.321    | 27.751  | 16.991  | 49.818  | 42.116  | 1.241      | 779   |
| 800   | 1.529 | 34.665   | 1.292    | 27.756  | 16.998  | 49.825  | 42.844  | 1.191      | 799   |
| 820   | 1.512 | 34.668   | 1.265    | 27.760  | 17.004  | 49.834  | 42.650  | 1.208      | 819   |
| 840   | 1.502 | 34.671   | 1.245    | 27.764  | 17.009  | 49.839  | 42.591  | 1.252      | 839   |
| 860   | 1.492 | 34.673   | 1.226    | 27.767  | 17.013  | 49.845  | 42.552  | 1.297      | 859   |
| 880   | 1.486 | 34.676   | 1.210    | 27.771  | 17.017  | 49.850  | 42.527  | 1.342      | 879   |
| 900   | 1.484 | 34.678   | 1.199    | 27.773  | 17.021  | 49.853  | 42.620  | 1.386      | 899   |
| 920   | 1.482 | 34.679   | 1.195    | 27.775  | 17.023  | 49.856  | 42.783  | 1.431      | 919   |
| 940   | 1.481 | 34.681   | 1.173    | 27.777  | 17.025  | 49.860  | 42.987  | 1.476      | 939   |
| 960   | 1.483 | 34.682   | 1.165    | 27.779  | 17.028  | 49.862  | 43.108  | 1.521      | 959   |
| 980   | 1.484 | 34.684   | 1.155    | 27.781  | 17.030  | 49.866  | 43.241  | 1.566      | 979   |
| 1000  | 1.486 | 34.684   | 1.145    | 27.782  | 17.032  | 49.867  | 43.500  | 1.611      | 999   |
| 1020  | 1.485 | 34.685   | 1.140    | 27.783  | 17.033  | 49.869  | 43.852  | 1.657      | 1019  |
| 1040  | 1.488 | 34.686   | 1.134    | 27.794  | 17.035  | 49.871  | 44.097  | 1.703      | 1039  |
| 1060  | 1.503 | 34.687   | 1.128    | 27.785  | 17.036  | 49.873  | 44.355  | 1.749      | 1059  |
| 1080  | 1.506 | 34.688   | 1.119    | 27.787  | 17.038  | 49.875  | 44.599  | 1.796      | 1079  |
| 1100  | 1.505 | 34.688   | 1.116    | 27.787  | 17.038  | 49.876  | 44.632  | 1.805      | 1099  |

## NISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|-------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TURBID | DEG C    |         |         |         | DB    |
| 1     | 5.956 | 32.825   | 7.37   | 105.4  | 31.8  | 1.49 | 15.9 | 0.18 | 3.99   | 5.956    | 25.710  | 14.688  | 41.210  | 1     |
| 21    | 5.909 | 32.825   | 7.55   | 107.3  | 32.5  | 1.50 | 17.2 | 0.17 |        | 5.905    | 25.846  | 14.875  | 41.504  | 21    |
| 49    | 4.631 | 32.835   | 7.38   | 101.9  | 33.4  | 1.59 | 18.5 | 0.16 |        | 4.679    | 25.994  | 15.084  | 41.770  | 49    |
| 98    | 3.997 | 33.662   | 2.51   | 34.2   | 71.5  | 2.69 | 39.4 | 0.01 | 3.65   | 3.990    | 26.723  | 15.835  | 44.542  | 98    |
| 149   | 3.773 | 33.844   | 1.34   | 18.2   | 87.3  | 2.98 | 42.9 | 0.00 | 2.61   | 3.763    | 26.890  | 16.011  | 44.727  | 149   |
| 197   | 3.727 | 33.904   | 0.95   | 12.9   | 94.6  | 3.06 | 44.3 | 0.00 | 2.36   | 3.714    | 26.943  | 16.266  | 44.793  | 197   |
| 244   | 3.713 | 33.956   | 0.74   | 10.0   | 100.3 | 3.09 | 44.8 | 0.00 | 1.91   | 3.697    | 26.986  | 16.129  | 44.826  | 244   |
| 294   | 3.677 | 34.011   | 0.69   | 9.4    | 106.9 | 3.11 | 44.8 | 0.00 | 1.40   | 3.657    | 27.034  | 16.158  | 44.898  | 294   |
| 345   | 3.563 | 34.125   | 0.52   | 7.0    | 119.1 | 3.11 | 44.8 | 0.00 | 0.89   | 3.536    | 27.117  | 16.256  | 44.988  | 345   |
| 399   | 3.424 | 34.196   | 0.47   | 6.3    | 127.3 | 3.12 | 44.8 | 0.00 | 0.50   | 3.390    | 27.207  | 16.342  | 45.070  | 399   |
| 455   | 3.295 | 34.246   | 0.48   | 6.5    | 132.2 | 3.10 | 44.7 | 0.00 | 0.41   | 3.245    | 27.260  | 16.403  | 45.137  | 455   |
| 503   | 3.126 | 34.296   | 0.49   | 6.6    | 136.9 | 3.10 | 44.7 | 0.00 | 0.11   | 3.080    | 27.316  | 16.465  | 45.208  | 503   |
| 598   | 2.963 | 34.340   |        |        | 143.9 | 3.12 | 44.8 | 0.00 | 0.21   | 2.910    | 27.366  | 16.524  | 45.275  | 598   |
| 695   | 2.820 | 34.376   | 0.52   | 6.9    | 147.1 | 3.11 | 44.7 | 0.00 | 0.09   | 2.761    | 27.408  | 16.574  | 45.331  | 695   |
| 797   | 2.707 | 34.406   | 0.53   | 7.0    | 153.1 | 3.10 | 44.7 | 0.00 |        | 2.641    | 27.441  | 16.614  | 45.377  | 797   |
| 1249  | 2.418 | 34.472   | 0.61   | 8.0    | 160.1 | 3.09 | 44.4 | 0.00 |        | 2.355    | 27.520  | 16.776  | 45.482  | 1249  |
| 1574  | 2.200 | 34.526   | 0.84   | 11.0   | 170.4 | 3.06 | 44.2 | 0.00 |        | 2.150    | 27.584  | 16.783  | 45.571  | 1574  |
| 1726  | 2.056 | 34.560   | 1.19   | 14.2   | 173.6 | 3.02 | 43.6 | 0.00 |        | 1.940    | 27.624  | 16.811  | 45.627  | 1726  |
| 2009  | 1.980 | 34.595   | 1.50   | 19.5   |       | 2.95 | 42.7 | 0.00 |        | 1.743    | 27.667  | 16.885  | 45.690  | 2009  |
| 2491  | 1.685 | 34.635   | 2.09   | 27.0   | 174.0 | 2.82 | 41.0 | 0.00 |        | 1.508    | 27.717  | 16.947  | 45.764  | 2491  |
| 2942  | 1.579 | 34.660   | 2.66   | 34.2   | 174.0 | 2.70 | 39.5 | 0.00 |        | 1.337    | 27.749  | 16.988  | 45.814  | 2942  |
| 3495  | 1.496 | 34.670   | 3.09   | 39.6   |       | 2.63 | 38.3 | 0.00 |        | 1.215    | 27.770  | 17.016  | 45.848  | 3495  |
| 4046  | 1.484 | 34.683   | 3.30   | 42.2   | 171.1 |      | 37.7 | 0.00 |        | 1.153    | 27.780  | 17.030  | 45.865  | 4046  |
| 4533  | 1.504 | 34.688   | 3.45   | 44.2   |       | 2.54 | 37.1 | 0.00 |        | 1.116    | 27.787  | 17.038  | 45.876  | 4533  |

# MARATHON 2 STA. 85



DATE: 11/11/84 TIME: 08:00 LATITUDE: 34 11 N LONGITUDE: 121 09 W DEPTH: 1000 M WIND: 210 KTS SPEED: 19 KTS AIR TEMP: 9.1 DEG C SURF WAVE: 9.1 M BAROM: 1014.2

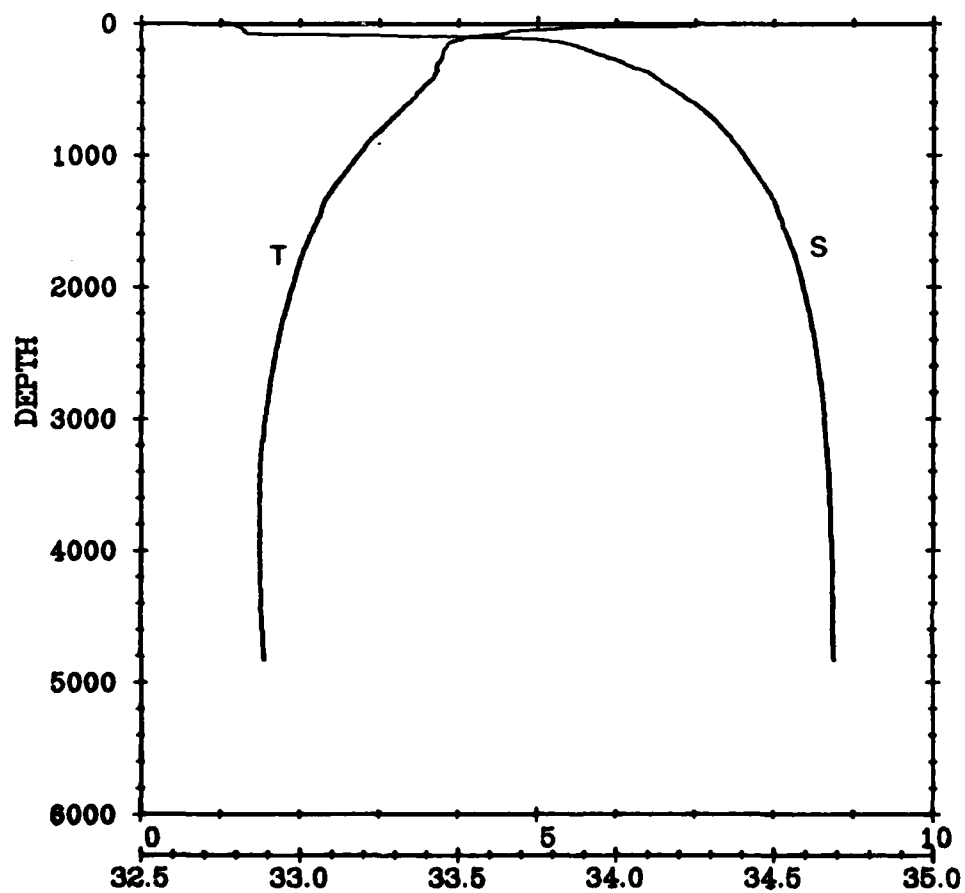
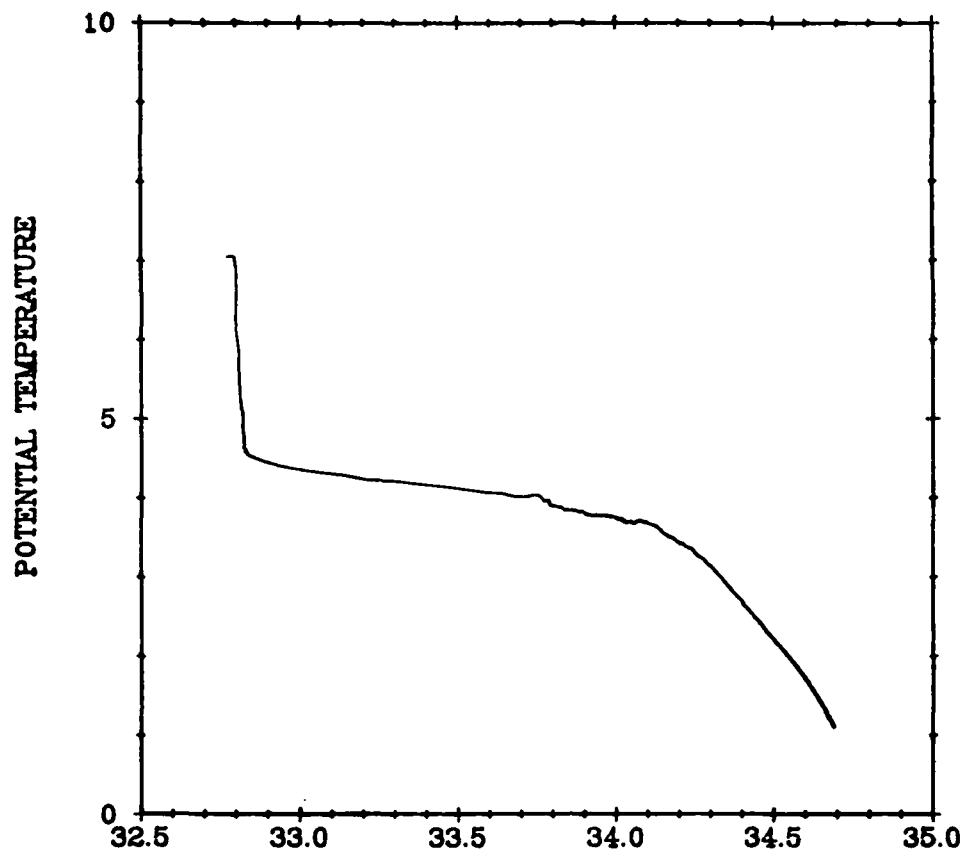
WATER DATA

| DEPTH | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| M     | DEG C |          | DEG C    |         |         |         |         |            | M     |
| 0     | 12.22 | 34.742   | 12.22    | 15.477  | 14.453  | 43.212  | 210.175 | 1.770      | 0     |
| 10    | 12.39 | 34.741   | 12.39    | 15.443  | 14.419  | 43.319  | 224.447 | 1.745      | 10    |
| 20    | 12.55 | 34.740   | 12.55    | 15.410  | 14.385  | 43.444  | 237.591 | 1.719      | 20    |
| 30    | 12.71 | 34.739   | 12.71    | 15.376  | 14.351  | 43.578  | 249.619 | 1.693      | 30    |
| 40    | 12.87 | 34.738   | 12.87    | 15.342  | 14.317  | 43.722  | 260.534 | 1.667      | 40    |
| 50    | 13.03 | 34.737   | 13.03    | 15.308  | 14.283  | 43.876  | 270.344 | 1.641      | 50    |
| 60    | 13.19 | 34.736   | 13.19    | 15.274  | 14.249  | 44.040  | 279.054 | 1.615      | 60    |
| 70    | 13.35 | 34.735   | 13.35    | 15.240  | 14.215  | 44.214  | 286.664 | 1.589      | 70    |
| 80    | 13.51 | 34.734   | 13.51    | 15.206  | 14.181  | 44.398  | 293.174 | 1.563      | 80    |
| 90    | 13.67 | 34.733   | 13.67    | 15.172  | 14.147  | 44.592  | 298.584 | 1.537      | 90    |
| 100   | 13.83 | 34.732   | 13.83    | 15.138  | 14.113  | 44.796  | 302.894 | 1.511      | 100   |
| 110   | 13.99 | 34.731   | 13.99    | 15.104  | 14.079  | 44.999  | 306.104 | 1.485      | 110   |
| 120   | 14.15 | 34.730   | 14.15    | 15.070  | 14.045  | 45.213  | 308.214 | 1.459      | 120   |
| 130   | 14.31 | 34.729   | 14.31    | 15.036  | 14.011  | 45.437  | 309.224 | 1.433      | 130   |
| 140   | 14.47 | 34.728   | 14.47    | 15.002  | 13.977  | 45.671  | 309.134 | 1.407      | 140   |
| 150   | 14.63 | 34.727   | 14.63    | 14.968  | 13.943  | 45.915  | 307.944 | 1.381      | 150   |
| 160   | 14.79 | 34.726   | 14.79    | 14.934  | 13.909  | 46.169  | 305.654 | 1.355      | 160   |
| 170   | 14.95 | 34.725   | 14.95    | 14.900  | 13.875  | 46.433  | 302.264 | 1.329      | 170   |
| 180   | 15.11 | 34.724   | 15.11    | 14.866  | 13.841  | 46.707  | 297.774 | 1.303      | 180   |
| 190   | 15.27 | 34.723   | 15.27    | 14.832  | 13.807  | 46.991  | 292.184 | 1.277      | 190   |
| 200   | 15.43 | 34.722   | 15.43    | 14.798  | 13.773  | 47.285  | 285.494 | 1.251      | 200   |
| 210   | 15.59 | 34.721   | 15.59    | 14.764  | 13.739  | 47.589  | 277.704 | 1.225      | 210   |
| 220   | 15.75 | 34.720   | 15.75    | 14.730  | 13.705  | 47.903  | 268.814 | 1.199      | 220   |
| 230   | 15.91 | 34.719   | 15.91    | 14.696  | 13.671  | 48.227  | 258.824 | 1.173      | 230   |
| 240   | 16.07 | 34.718   | 16.07    | 14.662  | 13.637  | 48.561  | 247.734 | 1.147      | 240   |
| 250   | 16.23 | 34.717   | 16.23    | 14.628  | 13.603  | 48.905  | 235.544 | 1.121      | 250   |
| 260   | 16.39 | 34.716   | 16.39    | 14.594  | 13.569  | 49.259  | 222.254 | 1.095      | 260   |
| 270   | 16.55 | 34.715   | 16.55    | 14.560  | 13.535  | 49.623  | 207.864 | 1.069      | 270   |
| 280   | 16.71 | 34.714   | 16.71    | 14.526  | 13.501  | 50.007  | 192.374 | 1.043      | 280   |
| 290   | 16.87 | 34.713   | 16.87    | 14.492  | 13.467  | 50.401  | 175.784 | 1.017      | 290   |
| 300   | 17.03 | 34.712   | 17.03    | 14.458  | 13.433  | 50.815  | 158.094 | 0.991      | 300   |
| 310   | 17.19 | 34.711   | 17.19    | 14.424  | 13.399  | 51.249  | 139.304 | 0.965      | 310   |
| 320   | 17.35 | 34.710   | 17.35    | 14.390  | 13.365  | 51.703  | 119.414 | 0.939      | 320   |
| 330   | 17.51 | 34.709   | 17.51    | 14.356  | 13.331  | 52.177  | 98.424  | 0.913      | 330   |
| 340   | 17.67 | 34.708   | 17.67    | 14.322  | 13.297  | 52.671  | 76.334  | 0.887      | 340   |
| 350   | 17.83 | 34.707   | 17.83    | 14.288  | 13.263  | 53.185  | 53.144  | 0.861      | 350   |
| 360   | 17.99 | 34.706   | 17.99    | 14.254  | 13.229  | 53.719  | 28.854  | 0.835      | 360   |
| 370   | 18.15 | 34.705   | 18.15    | 14.220  | 13.195  | 54.273  | 3.564   | 0.809      | 370   |
| 380   | 18.31 | 34.704   | 18.31    | 14.186  | 13.161  | 54.847  |         | 0.783      | 380   |
| 390   | 18.47 | 34.703   | 18.47    | 14.152  | 13.127  | 55.441  |         | 0.757      | 390   |
| 400   | 18.63 | 34.702   | 18.63    | 14.118  | 13.093  | 56.055  |         | 0.731      | 400   |
| 410   | 18.79 | 34.701   | 18.79    | 14.084  | 13.059  | 56.689  |         | 0.705      | 410   |
| 420   | 18.95 | 34.700   | 18.95    | 14.050  | 13.025  | 57.343  |         | 0.679      | 420   |
| 430   | 19.11 | 34.699   | 19.11    | 14.016  | 12.991  | 58.017  |         | 0.653      | 430   |
| 440   | 19.27 | 34.698   | 19.27    | 13.982  | 12.957  | 58.711  |         | 0.627      | 440   |
| 450   | 19.43 | 34.697   | 19.43    | 13.948  | 12.923  | 59.425  |         | 0.601      | 450   |
| 460   | 19.59 | 34.696   | 19.59    | 13.914  | 12.889  | 60.159  |         | 0.575      | 460   |
| 470   | 19.75 | 34.695   | 19.75    | 13.880  | 12.855  | 60.913  |         | 0.549      | 470   |
| 480   | 19.91 | 34.694   | 19.91    | 13.846  | 12.821  | 61.687  |         | 0.523      | 480   |
| 490   | 20.07 | 34.693   | 20.07    | 13.812  | 12.787  | 62.481  |         | 0.497      | 490   |
| 500   | 20.23 | 34.692   | 20.23    | 13.778  | 12.753  | 63.295  |         | 0.471      | 500   |
| 510   | 20.39 | 34.691   | 20.39    | 13.744  | 12.719  | 64.129  |         | 0.445      | 510   |
| 520   | 20.55 | 34.690   | 20.55    | 13.710  | 12.685  | 64.983  |         | 0.419      | 520   |
| 530   | 20.71 | 34.689   | 20.71    | 13.676  | 12.651  | 65.857  |         | 0.393      | 530   |
| 540   | 20.87 | 34.688   | 20.87    | 13.642  | 12.617  | 66.751  |         | 0.367      | 540   |
| 550   | 21.03 | 34.687   | 21.03    | 13.608  | 12.583  | 67.665  |         | 0.341      | 550   |
| 560   | 21.19 | 34.686   | 21.19    | 13.574  | 12.549  | 68.599  |         | 0.315      | 560   |
| 570   | 21.35 | 34.685   | 21.35    | 13.540  | 12.515  | 69.553  |         | 0.289      | 570   |
| 580   | 21.51 | 34.684   | 21.51    | 13.506  | 12.481  | 70.527  |         | 0.263      | 580   |
| 590   | 21.67 | 34.683   | 21.67    | 13.472  | 12.447  | 71.521  |         | 0.237      | 590   |
| 600   | 21.83 | 34.682   | 21.83    | 13.438  | 12.413  | 72.535  |         | 0.211      | 600   |
| 610   | 21.99 | 34.681   | 21.99    | 13.404  | 12.379  | 73.569  |         | 0.185      | 610   |
| 620   | 22.15 | 34.680   | 22.15    | 13.370  | 12.345  | 74.623  |         | 0.159      | 620   |
| 630   | 22.31 | 34.679   | 22.31    | 13.336  | 12.311  | 75.697  |         | 0.133      | 630   |
| 640   | 22.47 | 34.678   | 22.47    | 13.302  | 12.277  | 76.791  |         | 0.107      | 640   |
| 650   | 22.63 | 34.677   | 22.63    | 13.268  | 12.243  | 77.905  |         | 0.081      | 650   |
| 660   | 22.79 | 34.676   | 22.79    | 13.234  | 12.209  | 79.039  |         | 0.055      | 660   |
| 670   | 22.95 | 34.675   | 22.95    | 13.200  | 12.175  | 80.193  |         | 0.029      | 670   |
| 680   | 23.11 | 34.674   | 23.11    | 13.166  | 12.141  | 81.367  |         | 0.003      | 680   |
| 690   | 23.27 | 34.673   | 23.27    | 13.132  | 12.107  | 82.561  |         |            | 690   |
| 700   | 23.43 | 34.672   | 23.43    | 13.098  | 12.073  | 83.775  |         |            | 700   |
| 710   | 23.59 | 34.671   | 23.59    | 13.064  | 12.039  | 85.009  |         |            | 710   |
| 720   | 23.75 | 34.670   | 23.75    | 13.030  | 12.005  | 86.263  |         |            | 720   |
| 730   | 23.91 | 34.669   | 23.91    | 13.000  | 11.971  | 87.537  |         |            | 730   |
| 740   | 24.07 | 34.668   | 24.07    | 12.966  | 11.937  | 88.831  |         |            | 740   |
| 750   | 24.23 | 34.667   | 24.23    | 12.932  | 11.903  | 90.145  |         |            | 750   |
| 760   | 24.39 | 34.666   | 24.39    | 12.898  | 11.869  | 91.479  |         |            | 760   |
| 770   | 24.55 | 34.665   | 24.55    | 12.864  | 11.835  | 92.833  |         |            | 770   |
| 780   | 24.71 | 34.664   | 24.71    | 12.830  | 11.801  | 94.207  |         |            | 780   |
| 790   | 24.87 | 34.663   | 24.87    | 12.796  | 11.767  | 95.601  |         |            | 790   |
| 800   | 25.03 | 34.662   | 25.03    | 12.762  | 11.733  | 97.015  |         |            | 800   |
| 810   | 25.19 | 34.661   | 25.19    | 12.728  | 11.699  | 98.449  |         |            | 810   |
| 820   | 25.35 | 34.660   | 25.35    | 12.694  | 11.665  | 99.903  |         |            | 820   |
| 830   | 25.51 | 34.659   | 25.51    | 12.660  | 11.631  | 101.377 |         |            | 830   |
| 840   | 25.67 | 34.658   | 25.67    | 12.626  | 11.597  | 102.871 |         |            | 840   |
| 850   | 25.83 | 34.657   | 25.83    | 12.592  | 11.563  | 104.385 |         |            | 850   |
| 860   | 25.99 | 34.656   | 25.99    | 12.558  | 11.529  | 105.919 |         |            | 860   |
| 870   | 26.15 | 34.655   | 26.15    | 12.524  | 11.495  | 107.473 |         |            | 870   |
| 880   | 26.31 | 34.654   | 26.31    | 12.490  | 11.461  | 109.047 |         |            | 880   |
| 890   | 26.47 | 34.653   | 26.47    | 12.456  | 11.427  | 110.641 |         |            | 890   |
| 900   | 26.63 | 34.652   | 26.63    | 12.422  | 11.393  | 112.255 |         |            | 900   |
| 910   | 26.79 | 34.651   | 26.79    | 12.388  | 11.359  | 113.889 |         |            | 910   |
| 920   | 26.95 | 34.650   | 26.95    | 12.354  | 11.325  | 115.543 |         |            | 920   |
| 930   | 27.11 | 34.649   | 27.11    | 12.320  | 11.291  | 117.217 |         |            | 930   |
| 940   | 27.27 | 34.648   | 27.27    | 12.286  | 11.257  | 118.911 |         |            | 940   |
| 950   | 27.43 | 34.647   | 27.43    | 12.252  | 11.223  | 120.625 |         |            | 950   |
| 960   | 27.59 | 34.646   | 27.59    | 12.218  | 11.189  | 122.359 |         |            | 960   |
| 970   | 27.75 | 34.645   | 27.75    | 12.184  | 11.155  | 124.113 |         |            | 970   |
| 980   | 27.91 | 34.644   | 27.91    | 12.150  | 11.121  | 125.887 |         |            | 980   |
| 990   | 28.07 | 34.643   | 28.07    | 12.116  | 11.087  | 127.681 |         |            | 990   |
| 1000  | 28.23 | 34.642   | 28.23    | 12.082  | 11.053  | 129.495 |         |            | 1000  |

WISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIST | 02    | 02    | SIG0 | P04  | W03  | NO2  | TRIT   | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|------|-------|-------|------|------|------|------|--------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L |       |       | UM/L | UM/L | UM/L | UM/L | TU/LIN | DEG C    |         |         |         | DB    |
| 1     | 6.999 | 32.813   | 7.31 | 106.6 | 31.9  | 1.48 | 16.7 | 1.19 |      |        | 6.999    | 25.639  | 34.666  | 43.246  | 1     |
| 12    | 6.999 | 32.811   | 7.32 | 106.4 | 32.1  | 1.49 | 16.7 | 1.19 |      |        | 6.999    | 25.688  | 34.665  | 43.245  | 12    |
| 20    | 6.963 | 32.816   | 7.29 | 106.3 | 32.1  | 1.49 | 16.7 | 1.17 |      |        | 6.963    | 25.903  | 34.959  | 43.614  | 20    |
| 30    | 4.601 | 32.811   | 7.26 | 105.7 | 33.4  | 1.60 | 18.0 | 1.20 |      |        | 4.597    | 26.001  | 35.096  | 43.726  | 30    |
| 40    | 3.012 | 33.814   | 1.57 | 21.4  | 93.1  | 2.43 | 41.7 | 1.01 |      |        | 3.892    | 26.846  | 35.961  | 44.671  | 40    |
| 50    | 1.333 | 33.915   | 0.76 | 12.3  | 96.2  | 3.10 | 44.5 | 1.01 |      |        | 3.918    | 26.957  | 36.074  | 44.785  | 50    |
| 60    | 3.019 | 34.016   | 0.57 | 7.8   | 107.4 | 3.11 | 44.5 | 1.01 |      |        | 3.799    | 27.056  | 36.173  | 44.894  | 60    |
| 70    | 3.657 | 34.118   | 0.46 | 6.2   | 117.9 | 3.11 | 44.6 | 1.01 |      |        | 3.623    | 27.138  | 36.262  | 44.995  | 70    |
| 80    | 3.512 | 34.199   | 0.40 | 5.4   | 125.9 | 3.11 | 44.4 | 1.01 |      |        | 3.478    | 27.201  | 36.311  | 45.055  | 80    |
| 90    | 3.165 | 34.249   | 0.37 | 5.0   | 131.7 | 3.12 | 44.7 | 1.00 |      |        | 3.125    | 27.255  | 36.392  | 45.121  | 90    |
| 100   | 3.116 | 34.218   | 0.42 | 5.6   | 137.7 | 3.12 | 44.7 | 1.00 |      |        | 3.129    | 27.313  | 36.460  | 45.200  | 100   |
| 110   | 2.999 | 34.142   | 0.39 | 5.1   | 146.5 | 3.12 | 44.9 | 1.00 |      |        | 2.946    | 27.367  | 36.521  | 45.239  | 110   |
| 120   | 2.933 | 34.119   | 0.44 | 5.9   | 151.5 | 3.12 | 44.9 | 1.00 |      |        | 2.774    | 27.410  | 36.574  | 45.311  | 120   |
| 130   | 2.712 | 34.177   | 0.47 | 6.2   | 157.2 | 3.12 | 44.9 | 1.00 |      |        | 2.647    | 27.443  | 36.615  | 45.377  | 130   |
| 140   | 2.424 | 34.175   | 0.52 | 9.2   | 166.1 | 3.09 | 44.5 | 1.00 |      |        | 2.323    | 27.525  | 36.713  | 45.490  | 140   |
| 150   | 2.177 | 34.528   | 0.99 | 11.6  | 172.2 | 3.14 | 44.3 | 1.00 |      |        | 2.071    | 27.598  | 36.89   | 45.578  | 150   |
| 160   | 1.999 | 34.568   | 1.19 | 15.4  | 175.9 | 2.98 | 41.2 | 1.00 |      |        | 1.982    | 27.635  | 36.845  | 45.644  | 160   |
| 170   | 1.977 | 34.595   | 1.49 | 19.2  | 176.9 | 2.94 | 42.5 | 1.00 |      |        | 1.741    | 27.618  | 36.886  | 45.692  | 170   |
| 180   | 1.699 | 34.613   | 2.07 | 26.7  | 177.0 | 2.82 | 40.8 | 1.00 |      |        | 1.512    | 27.715  | 36.945  | 45.762  | 180   |
| 190   | 1.764 | 34.677   | 2.64 | 33.9  | 173.8 | 2.71 | 39.5 | 1.00 |      |        | 1.343    | 27.746  | 36.985  | 45.811  | 190   |
| 200   | 1.494 | 34.675   | 3.14 | 39.9  | 173.8 | 2.43 | 39.3 | 1.00 |      |        | 1.225    | 27.769  | 37.014  | 45.846  | 200   |
| 210   | 1.491 | 34.680   | 3.25 | 41.6  | 171.6 | 2.19 | 37.5 | 1.00 |      |        | 1.168    | 27.777  | 37.025  | 45.850  | 210   |
| 220   | 1.516 | 34.694   | 3.19 | 43.2  | 170.4 | 2.16 | 37.3 | 1.00 |      |        | 1.136    | 27.792  | 37.032  | 45.869  | 220   |
| 230   | 1.547 | 34.699   | 3.45 | 44.1  | 169.5 | 2.14 | 37.0 | 1.00 |      |        | 1.114    | 27.798  | 37.039  | 45.877  | 230   |

# MARATHON 2 STA. 86

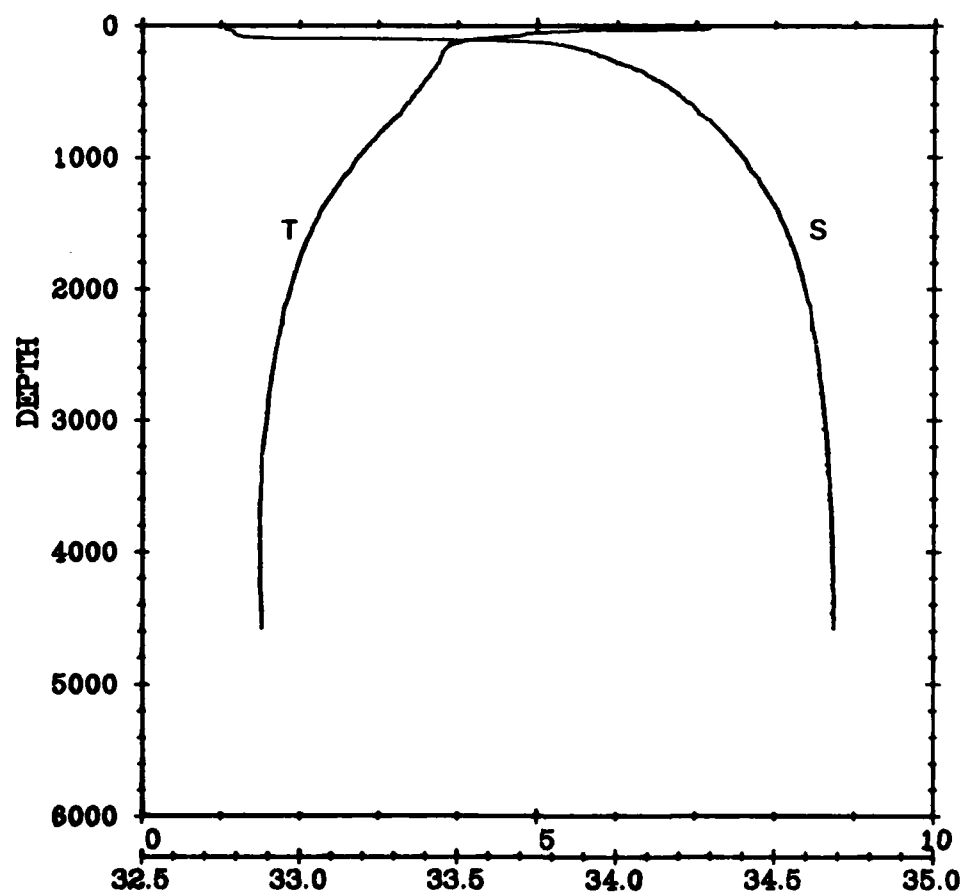
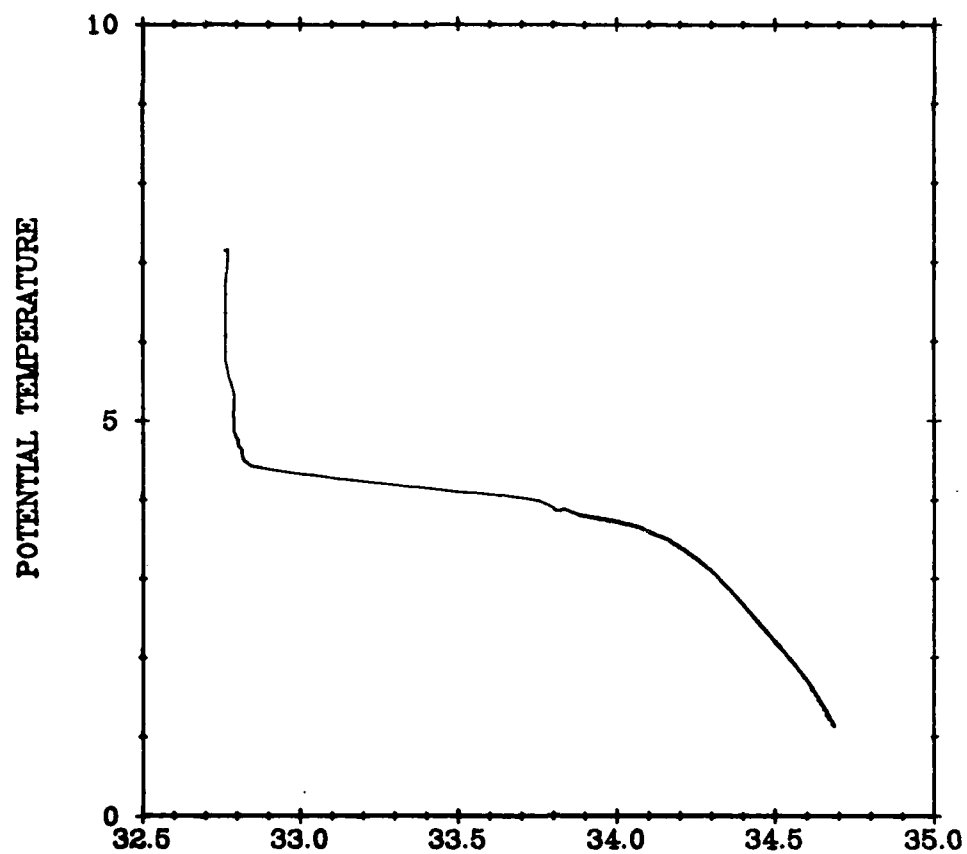


| LATITUDE | LONGITUDE | MO-DY-YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
| 14 00 N  | 151 35 W  | 5-31-84  | 0942       | 4502   | 200  | 19    | 2        | 2        | 1110.9 |

## CTD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 1 | SIGMA 2 | SIGMA 4 | SVA    | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|--------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         |         | CM/TON |            | M     |
| 0     | 1.160 | 32.768   | 1.160    | 25.640  | 34.609  | 43.183  | 231.442 | 1.000  |            | 0     |
| 20    | 1.161 | 32.770   | 1.161    | 25.635  | 34.629  | 43.208  | 232.111 | 1.041  |            | 19    |
| 40    | 1.162 | 32.773   | 1.162    | 25.631  | 34.644  | 43.226  | 232.777 | 1.081  |            | 39    |
| 60    | 1.163 | 32.773   | 1.163    | 25.627  | 34.659  | 43.245  | 233.442 | 1.121  |            | 59    |
| 80    | 1.164 | 32.774   | 1.164    | 25.623  | 34.674  | 43.264  | 234.107 | 1.161  |            | 79    |
| 100   | 1.165 | 32.774   | 1.165    | 25.619  | 34.689  | 43.283  | 234.772 | 1.201  |            | 99    |
| 120   | 1.166 | 32.775   | 1.166    | 25.615  | 34.704  | 43.302  | 235.437 | 1.241  |            | 119   |
| 140   | 1.167 | 32.775   | 1.167    | 25.611  | 34.719  | 43.321  | 236.102 | 1.281  |            | 139   |
| 160   | 1.168 | 32.776   | 1.168    | 25.607  | 34.734  | 43.340  | 236.767 | 1.321  |            | 159   |
| 180   | 1.169 | 32.776   | 1.169    | 25.603  | 34.749  | 43.359  | 237.432 | 1.361  |            | 179   |
| 200   | 1.170 | 32.777   | 1.170    | 25.600  | 34.764  | 43.378  | 238.097 | 1.401  |            | 199   |
| 220   | 1.171 | 32.777   | 1.171    | 25.596  | 34.779  | 43.397  | 238.762 | 1.441  |            | 219   |
| 240   | 1.172 | 32.778   | 1.172    | 25.592  | 34.794  | 43.416  | 239.427 | 1.481  |            | 239   |
| 260   | 1.173 | 32.778   | 1.173    | 25.588  | 34.809  | 43.435  | 240.092 | 1.521  |            | 259   |
| 280   | 1.174 | 32.779   | 1.174    | 25.584  | 34.824  | 43.454  | 240.757 | 1.561  |            | 279   |
| 300   | 1.175 | 32.779   | 1.175    | 25.580  | 34.839  | 43.473  | 241.422 | 1.601  |            | 299   |
| 320   | 1.176 | 32.780   | 1.176    | 25.576  | 34.854  | 43.492  | 242.087 | 1.641  |            | 319   |
| 340   | 1.177 | 32.780   | 1.177    | 25.572  | 34.869  | 43.511  | 242.752 | 1.681  |            | 339   |
| 360   | 1.178 | 32.781   | 1.178    | 25.568  | 34.884  | 43.530  | 243.417 | 1.721  |            | 359   |
| 380   | 1.179 | 32.781   | 1.179    | 25.564  | 34.899  | 43.549  | 244.082 | 1.761  |            | 379   |
| 400   | 1.180 | 32.782   | 1.180    | 25.560  | 34.914  | 43.568  | 244.747 | 1.801  |            | 399   |
| 420   | 1.181 | 32.782   | 1.181    | 25.556  | 34.929  | 43.587  | 245.412 | 1.841  |            | 419   |
| 440   | 1.182 | 32.783   | 1.182    | 25.552  | 34.944  | 43.606  | 246.077 | 1.881  |            | 439   |
| 460   | 1.183 | 32.783   | 1.183    | 25.548  | 34.959  | 43.625  | 246.742 | 1.921  |            | 459   |
| 480   | 1.184 | 32.784   | 1.184    | 25.544  | 34.974  | 43.644  | 247.407 | 1.961  |            | 479   |
| 500   | 1.185 | 32.784   | 1.185    | 25.540  | 34.989  | 43.663  | 248.072 | 2.001  |            | 499   |
| 520   | 1.186 | 32.785   | 1.186    | 25.536  | 35.004  | 43.682  | 248.737 | 2.041  |            | 519   |
| 540   | 1.187 | 32.785   | 1.187    | 25.532  | 35.019  | 43.701  | 249.402 | 2.081  |            | 539   |
| 560   | 1.188 | 32.786   | 1.188    | 25.528  | 35.034  | 43.720  | 250.067 | 2.121  |            | 559   |
| 580   | 1.189 | 32.786   | 1.189    | 25.524  | 35.049  | 43.739  | 250.732 | 2.161  |            | 579   |
| 600   | 1.190 | 32.787   | 1.190    | 25.520  | 35.064  | 43.758  | 251.397 | 2.201  |            | 599   |
| 620   | 1.191 | 32.787   | 1.191    | 25.516  | 35.079  | 43.777  | 252.062 | 2.241  |            | 619   |
| 640   | 1.192 | 32.788   | 1.192    | 25.512  | 35.094  | 43.796  | 252.727 | 2.281  |            | 639   |
| 660   | 1.193 | 32.788   | 1.193    | 25.508  | 35.109  | 43.815  | 253.392 | 2.321  |            | 659   |
| 680   | 1.194 | 32.789   | 1.194    | 25.504  | 35.124  | 43.834  | 254.057 | 2.361  |            | 679   |
| 700   | 1.195 | 32.789   | 1.195    | 25.500  | 35.139  | 43.853  | 254.722 | 2.401  |            | 699   |
| 720   | 1.196 | 32.790   | 1.196    | 25.496  | 35.154  | 43.872  | 255.387 | 2.441  |            | 719   |
| 740   | 1.197 | 32.790   | 1.197    | 25.492  | 35.169  | 43.891  | 256.052 | 2.481  |            | 739   |
| 760   | 1.198 | 32.791   | 1.198    | 25.488  | 35.184  | 43.910  | 256.717 | 2.521  |            | 759   |
| 780   | 1.199 | 32.791   | 1.199    | 25.484  | 35.199  | 43.929  | 257.382 | 2.561  |            | 779   |
| 800   | 1.200 | 32.792   | 1.200    | 25.480  | 35.214  | 43.948  | 258.047 | 2.601  |            | 799   |
| 820   | 1.201 | 32.792   | 1.201    | 25.476  | 35.229  | 43.967  | 258.712 | 2.641  |            | 819   |
| 840   | 1.202 | 32.793   | 1.202    | 25.472  | 35.244  | 43.986  | 259.377 | 2.681  |            | 839   |
| 860   | 1.203 | 32.793   | 1.203    | 25.468  | 35.259  | 44.005  | 260.042 | 2.721  |            | 859   |
| 880   | 1.204 | 32.794   | 1.204    | 25.464  | 35.274  | 44.024  | 260.707 | 2.761  |            | 879   |
| 900   | 1.205 | 32.794   | 1.205    | 25.460  | 35.289  | 44.043  | 261.372 | 2.801  |            | 899   |
| 920   | 1.206 | 32.795   | 1.206    | 25.456  | 35.304  | 44.062  | 262.037 | 2.841  |            | 919   |
| 940   | 1.207 | 32.795   | 1.207    | 25.452  | 35.319  | 44.081  | 262.702 | 2.881  |            | 939   |
| 960   | 1.208 | 32.796   | 1.208    | 25.448  | 35.334  | 44.100  | 263.367 | 2.921  |            | 959   |
| 980   | 1.209 | 32.796   | 1.209    | 25.444  | 35.349  | 44.119  | 264.032 | 2.961  |            | 979   |
| 1000  | 1.210 | 32.797   | 1.210    | 25.440  | 35.364  | 44.138  | 264.697 | 3.001  |            | 999   |
| 1020  | 1.211 | 32.797   | 1.211    | 25.436  | 35.379  | 44.157  | 265.362 | 3.041  |            | 1019  |
| 1040  | 1.212 | 32.798   | 1.212    | 25.432  | 35.394  | 44.176  | 266.027 | 3.081  |            | 1039  |
| 1060  | 1.213 | 32.798   | 1.213    | 25.428  | 35.409  | 44.195  | 266.692 | 3.121  |            | 1059  |
| 1080  | 1.214 | 32.799   | 1.214    | 25.424  | 35.424  | 44.214  | 267.357 | 3.161  |            | 1079  |
| 1100  | 1.215 | 32.799   | 1.215    | 25.420  | 35.439  | 44.233  | 268.022 | 3.201  |            | 1099  |
| 1120  | 1.216 | 32.800   | 1.216    | 25.416  | 35.454  | 44.252  | 268.687 | 3.241  |            | 1119  |
| 1140  | 1.217 | 32.800   | 1.217    | 25.412  | 35.469  | 44.271  | 269.352 | 3.281  |            | 1139  |
| 1160  | 1.218 | 32.801   | 1.218    | 25.408  | 35.484  | 44.290  | 270.017 | 3.321  |            | 1159  |
| 1180  | 1.219 | 32.801   | 1.219    | 25.404  | 35.499  | 44.309  | 270.682 | 3.361  |            | 1179  |
| 1200  | 1.220 | 32.802   | 1.220    | 25.400  | 35.514  | 44.328  | 271.347 | 3.401  |            | 1199  |
| 1220  | 1.221 | 32.802   | 1.221    | 25.396  | 35.529  | 44.347  | 272.012 | 3.441  |            | 1219  |
| 1240  | 1.222 | 32.803   | 1.222    | 25.392  | 35.544  | 44.366  | 272.677 | 3.481  |            | 1239  |
| 1260  | 1.223 | 32.803   | 1.223    | 25.388  | 35.559  | 44.385  | 273.342 | 3.521  |            | 1259  |
| 1280  | 1.224 | 32.804   | 1.224    | 25.384  | 35.574  | 44.404  | 274.007 | 3.561  |            | 1279  |
| 1300  | 1.225 | 32.804   | 1.225    | 25.380  | 35.589  | 44.423  | 274.672 | 3.601  |            | 1299  |
| 1320  | 1.226 | 32.805   | 1.226    | 25.376  | 35.604  | 44.442  | 275.337 | 3.641  |            | 1319  |
| 1340  | 1.227 | 32.805   | 1.227    | 25.372  | 35.619  | 44.461  | 276.002 | 3.681  |            | 1339  |
| 1360  | 1.228 | 32.806   | 1.228    | 25.368  | 35.634  | 44.480  | 276.667 | 3.721  |            | 1359  |
| 1380  | 1.229 | 32.806   | 1.229    | 25.364  | 35.649  | 44.499  | 277.332 | 3.761  |            | 1379  |
| 1400  | 1.230 | 32.807   | 1.230    | 25.360  | 35.664  | 44.518  | 277.997 | 3.801  |            | 1399  |
| 1420  | 1.231 | 32.807   | 1.231    | 25.356  | 35.679  | 44.537  | 278.662 | 3.841  |            | 1419  |
| 1440  | 1.232 | 32.808   | 1.232    | 25.352  | 35.694  | 44.556  | 279.327 | 3.881  |            | 1439  |
| 1460  | 1.233 | 32.808   | 1.233    | 25.348  | 35.709  | 44.575  | 279.992 | 3.921  |            | 1459  |
| 1480  | 1.234 | 32.809   | 1.234    | 25.344  | 35.724  | 44.594  | 280.657 | 3.961  |            | 1479  |
| 1500  | 1.235 | 32.809   | 1.235    | 25.340  | 35.739  | 44.613  | 281.322 | 4.001  |            | 1499  |
| 1520  | 1.236 | 32.810   | 1.236    | 25.336  | 35.754  | 44.632  | 281.987 | 4.041  |            | 1519  |
| 1540  | 1.237 | 32.810   | 1.237    | 25.332  | 35.769  | 44.651  | 282.652 | 4.081  |            | 1539  |
| 1560  | 1.238 | 32.811   | 1.238    | 25.328  | 35.784  | 44.670  | 283.317 | 4.121  |            | 1559  |
| 1580  | 1.239 | 32.811   | 1.239    | 25.324  | 35.799  | 44.689  | 283.982 | 4.161  |            | 1579  |
| 1600  | 1.240 | 32.812   | 1.240    | 25.320  | 35.814  | 44.708  | 284.647 | 4.201  |            | 1599  |
| 1620  | 1.241 | 32.812   | 1.241    | 25.316  | 35.829  | 44.727  | 285.312 | 4.241  |            | 1619  |
| 1640  | 1.242 | 32.813   | 1.242    | 25.312  | 35.844  | 44.746  | 285.977 | 4.281  |            | 1639  |
| 1660  | 1.243 | 32.813   | 1.243    | 25.308  | 35.859  | 44.765  | 286.642 | 4.321  |            | 1659  |
| 1680  | 1.244 | 32.814   | 1.244    | 25.304  | 35.874  | 44.784  | 287.307 | 4.361  |            | 1679  |
| 1700  | 1.245 | 32.814   | 1.245    | 25.300  | 35.889  | 44.803  | 287.972 | 4.401  |            | 1699  |
| 1720  | 1.246 | 32.815   | 1.246    | 25.296  | 35.904  | 44.822  | 288.637 | 4.441  |            | 1719  |
| 1740  | 1.247 | 32.815   | 1.247    | 25.292  | 35.919  | 44.841  | 289.302 | 4.481  |            | 1739  |
| 1760  | 1.248 | 32.816   | 1.248    | 25.288  | 35.934  | 44.860  | 289.967 | 4.521  |            | 1759  |
| 1780  | 1.249 | 32.816   | 1.249    | 25.284  | 35.949  | 44.879  | 290.632 | 4.561  |            | 1779  |
| 1800  | 1.250 | 32.817   | 1.250    | 25.280  | 35.964  | 44.898  | 291.297 | 4.601  |            | 1799  |
| 1820  | 1.251 | 32.817   | 1.251    | 25.276  | 35.979  | 44.917  | 291.962 | 4.641  |            | 1819  |
| 1840  | 1.252 | 32.818   | 1.252    | 25.272  | 35.994  | 44.936  | 292.627 | 4.681  |            | 1839  |
| 1860  | 1.253 | 32.818   | 1.253    | 25.268  | 36.009  | 44.955  | 293.292 | 4.721  |            | 1859  |
| 1880  | 1.254 | 32.819   | 1.254    | 25.264  | 36.024  | 44.974  | 293.957 | 4.761  |            | 1879  |
| 1900  | 1.255 | 32.819   | 1.255    | 25.260  | 36.039  | 44.993  | 294.622 | 4.801  |            | 1899  |
| 1920  | 1.256 | 32.820   | 1.256    | 25.256  | 36.054  | 45.012  | 295.287 | 4.841  |            | 1919  |
| 1940  | 1.257 | 32.820   | 1.257    | 25.252  | 36.069  | 45.031  | 295.952 | 4.881  |            | 1939  |
| 1960  | 1.258 | 32.821   | 1.258    | 25.248  | 36.084  | 45.050  | 296.617 | 4.921  |            | 1959  |
| 1980  | 1.259 | 32.821   | 1.259    | 25.244  | 36.099  | 45.069  | 297.282 | 4.961  |            | 1979  |
| 2000  | 1.260 | 32.822   | 1.260    | 25.240  | 36.114  | 45.088  | 297.947 | 5.001  |            | 1999  |
| 2020  | 1.261 | 32.822   | 1.261    | 25.236  | 36.129  | 45.107  | 298.612 | 5.041  |            | 2019  |
| 2040  | 1.262 | 32.823   | 1.262    | 25.232  | 36.144  | 45.126  | 299.277 | 5.081  |            | 2039  |
| 2060  | 1.263 | 32.823   | 1.263    | 25.228  | 36.159  | 45.145  | 300.000 | 5.121  |            | 2059  |
| 2080  | 1.264 | 32.824   | 1.264    | 25.224  | 36.174  | 45.164  | 300.665 | 5.161  |            | 2079  |
| 2100  | 1.265 | 32.824   | 1.265    | 25.220  | 36.189  | 45.183  | 301.330 |        |            |       |

# MARATHON 2 STA. 87



| LATITUDE | LONGITUDE | MO | DAY | YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----|-----|----|------------|--------|------|-------|----------|----------|--------|
| 14 28 IN | 180 57 3W | 5  | 31  | 84 | 1980       | 4155   | 200  | 12    | 8.3      | 8.3      | 1018.5 |

| DEPTH | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         |         |            | M     |
| 1     | 14.9  | 32.743   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 1     |
| 2     | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 2     |
| 3     | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 3     |
| 4     | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 4     |
| 5     | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 5     |
| 6     | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 6     |
| 7     | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 7     |
| 8     | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 8     |
| 9     | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 9     |
| 10    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 10    |
| 11    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 11    |
| 12    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 12    |
| 13    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 13    |
| 14    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 14    |
| 15    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 15    |
| 16    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 16    |
| 17    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 17    |
| 18    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 18    |
| 19    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 19    |
| 20    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 20    |
| 21    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 21    |
| 22    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 22    |
| 23    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 23    |
| 24    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 24    |
| 25    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 25    |
| 26    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 26    |
| 27    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 27    |
| 28    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 28    |
| 29    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 29    |
| 30    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 30    |
| 31    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 31    |
| 32    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 32    |
| 33    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 33    |
| 34    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 34    |
| 35    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 35    |
| 36    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 36    |
| 37    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 37    |
| 38    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 38    |
| 39    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 39    |
| 40    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 40    |
| 41    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 41    |
| 42    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 42    |
| 43    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 43    |
| 44    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 44    |
| 45    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 45    |
| 46    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 46    |
| 47    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 47    |
| 48    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 48    |
| 49    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 49    |
| 50    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 50    |
| 51    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 51    |
| 52    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 52    |
| 53    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 53    |
| 54    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 54    |
| 55    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 55    |
| 56    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 56    |
| 57    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 57    |
| 58    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 58    |
| 59    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 59    |
| 60    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 60    |
| 61    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 61    |
| 62    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 62    |
| 63    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 63    |
| 64    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 64    |
| 65    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 65    |
| 66    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 66    |
| 67    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 67    |
| 68    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 68    |
| 69    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 69    |
| 70    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 70    |
| 71    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 71    |
| 72    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 72    |
| 73    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 73    |
| 74    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 74    |
| 75    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 75    |
| 76    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 76    |
| 77    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 77    |
| 78    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 78    |
| 79    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 79    |
| 80    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 80    |
| 81    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 81    |
| 82    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 82    |
| 83    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 83    |
| 84    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 84    |
| 85    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 85    |
| 86    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 86    |
| 87    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 87    |
| 88    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 88    |
| 89    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 89    |
| 90    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 90    |
| 91    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 91    |
| 92    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 92    |
| 93    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 93    |
| 94    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 94    |
| 95    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 95    |
| 96    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 96    |
| 97    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 97    |
| 98    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 98    |
| 99    | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 99    |
| 100   | 14.9  | 32.744   | 14.9     | 25.625  | 34.596  | 43.171  | 51.746  | 0.000      | 100   |

| NISKIN BOTTLE DATA |        |          |        |        |       |      |      |      |       |          |         |         |         |       |
|--------------------|--------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|---------|-------|
| DEPTH              | TEMP   | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
| M                  | DEG C  |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 1                  | 14.74  | 32.755   | 7.17   | 105.0  | 29.2  | 1.42 | 15.9 | 0.21 | 7.174 | 25.627   | 34.596  | 43.170  |         | 1     |
| 48                 | 14.973 | 32.786   | 7.39   | 102.5  | 29.8  | 1.51 | 17.1 | 0.16 | 4.969 | 25.924   | 35.000  | 43.673  |         | 48    |
| 2                  | 14.749 | 32.816   | 7.10   | 100.9  | 31.9  | 1.58 | 18.3 | 0.18 | 4.743 | 25.972   | 35.059  | 43.743  |         | 72    |
| 122                | 14.129 | 33.317   | 4.11   | 56.2   | 55.3  | 2.30 | 31.5 | 0.06 | 4.182 | 26.445   | 35.552  | 44.255  |         | 102   |
| 151                | 13.705 | 33.809   | 2.53   | 20.8   | 82.2  | 2.92 | 42.2 | 0.01 | 3.895 | 26.849   | 35.964  | 44.674  |         | 152   |
| 195                | 13.814 | 33.891   | 0.95   | 12.9   | 90.6  | 3.06 | 44.2 | 0.01 | 3.801 | 26.924   | 36.042  | 44.755  |         | 196   |
| 248                | 13.778 | 33.962   | 0.61   | 8.3    | 99.4  | 3.12 | 45.2 | 0.01 | 3.761 | 26.984   | 36.104  | 44.818  |         | 250   |
| 293                | 13.742 | 34.014   | 0.56   | 7.6    | 102.8 | 3.13 | 45.2 | 0.01 | 3.722 | 27.030   | 36.150  | 44.865  |         | 301   |
| 339                | 13.623 | 34.102   | 0.51   | 6.9    | 115.6 | 3.10 | 45.0 | 0.01 | 3.596 | 27.112   | 36.238  | 44.958  |         | 402   |
| 496                | 13.473 | 34.180   | 0.46   | 6.2    | 125.1 | 3.09 | 44.8 | 0.00 | 3.439 | 27.189   | 36.322  | 45.048  |         | 500   |
| 593                | 13.320 | 34.241   | 0.46   | 6.2    | 132.2 | 3.09 | 44.9 | 0.00 | 3.280 | 27.253   | 36.393  | 45.126  |         | 598   |
| 589                | 13.189 | 34.283   | 0.43   | 5.8    | 140.0 | 3.09 | 44.9 | 0.00 | 3.143 | 27.300   | 36.447  | 45.196  |         | 695   |
| 792                | 13.053 | 34.322   | 0.41   | 5.5    | 143.2 | 3.11 | 44.8 | 0.00 | 3.001 | 27.344   | 36.497  | 45.243  |         | 789   |
| 991                | 12.938 | 34.363   | 0.45   | 6.0    | 150.4 | 3.11 | 44.8 | 0.00 | 2.839 | 27.391   | 36.553  | 45.306  |         | 990   |
| 1212               | 12.700 | 34.409   | 0.47   | 6.2    | 153.6 | 3.11 | 44.8 | 0.00 | 2.633 | 27.446   | 36.618  | 45.391  |         | 1022  |
| 1236               | 12.524 | 34.466   | 0.58   | 11.6   | 153.6 | 3.11 | 44.8 | 0.00 | 2.372 | 27.514   | 36.699  | 45.474  |         | 1249  |
| 1530               | 12.195 | 34.525   | 0.86   | 11.6   | 174.2 | 3.02 | 44.2 | 0.00 | 2.095 | 27.695   | 36.783  | 45.572  |         | 1515  |
| 1732               | 12.046 | 34.563   | 1.09   | 14.2   | 175.1 | 2.99 | 43.4 | 0.00 | 1.930 | 27.625   | 36.833  | 45.629  |         | 1751  |
| 2011               | 11.896 | 34.592   | 1.44   | 18.7   | 178.3 | 2.94 | 42.6 | 0.00 | 1.759 | 27.663   | 36.880  | 45.685  |         | 2017  |
| 2494               | 11.687 | 34.631   | 2.09   | 27.0   | 177.5 | 2.81 | 41.0 | 0.00 | 1.510 | 27.716   | 36.946  | 45.763  |         | 2529  |
| 2983               | 11.567 | 34.657   | 2.63   | 33.8   | 177.8 | 2.70 | 39.5 | 0.00 | 1.346 | 27.746   | 36.985  | 45.810  |         | 3029  |
| 3464               | 11.500 | 34.673   | 3.02   | 38.7   | 174.5 | 2.62 | 38.3 | 0.00 | 1.232 | 27.767   | 37.012  | 45.843  |         | 3521  |
| 3931               | 11.438 | 34.680   | 3.21   | 41.1   | 173.6 | 2.59 | 37.7 | 0.00 | 1.180 | 27.776   | 37.024  | 45.858  |         | 4001  |
| 4266               | 11.304 | 34.683   | 3.28   | 41.9   | 175.4 | 2.57 | 37.6 | 0.00 | 1.159 | 27.780   | 37.029  | 45.864  |         | 4244  |

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PHYSICAL CHEMICAL AND CTD  
(CONDUCTIVITY/TEMPERATURE/DEPTH) DATA FROM THE... (U)  
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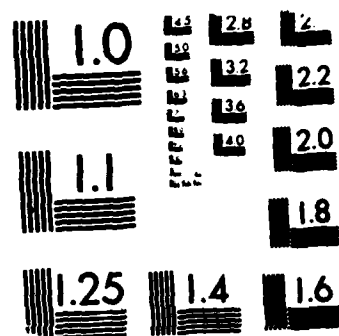
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F/G 8/8

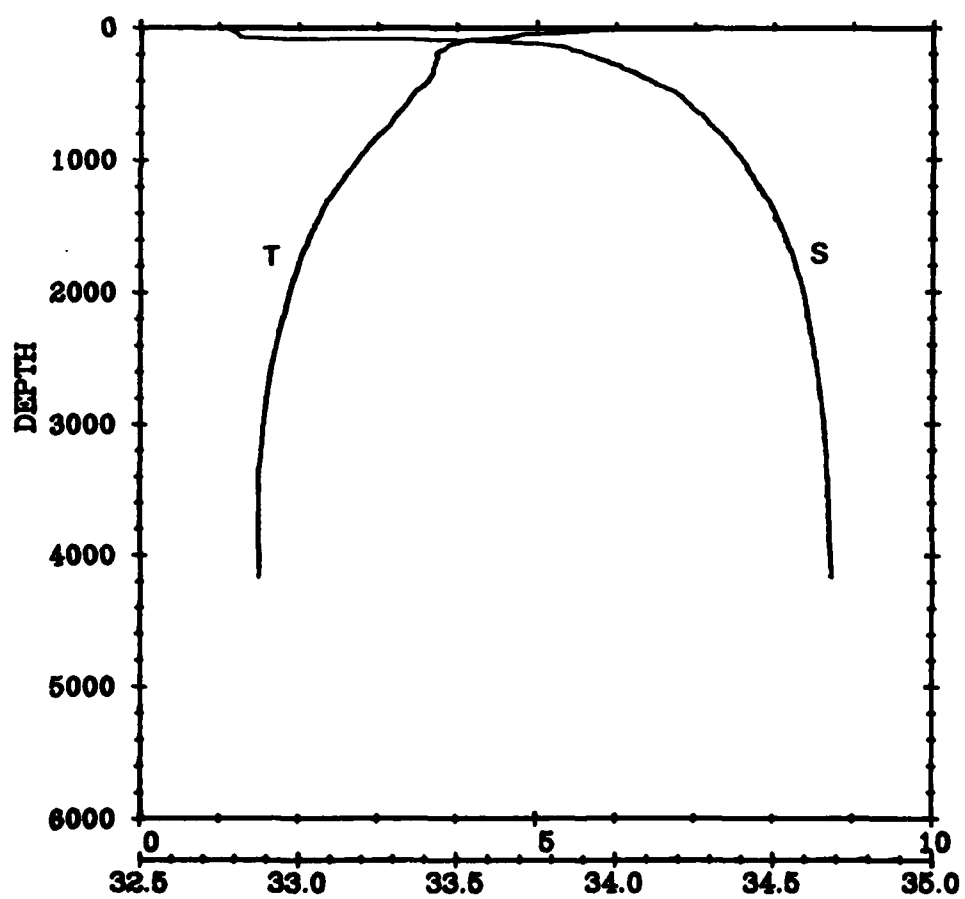
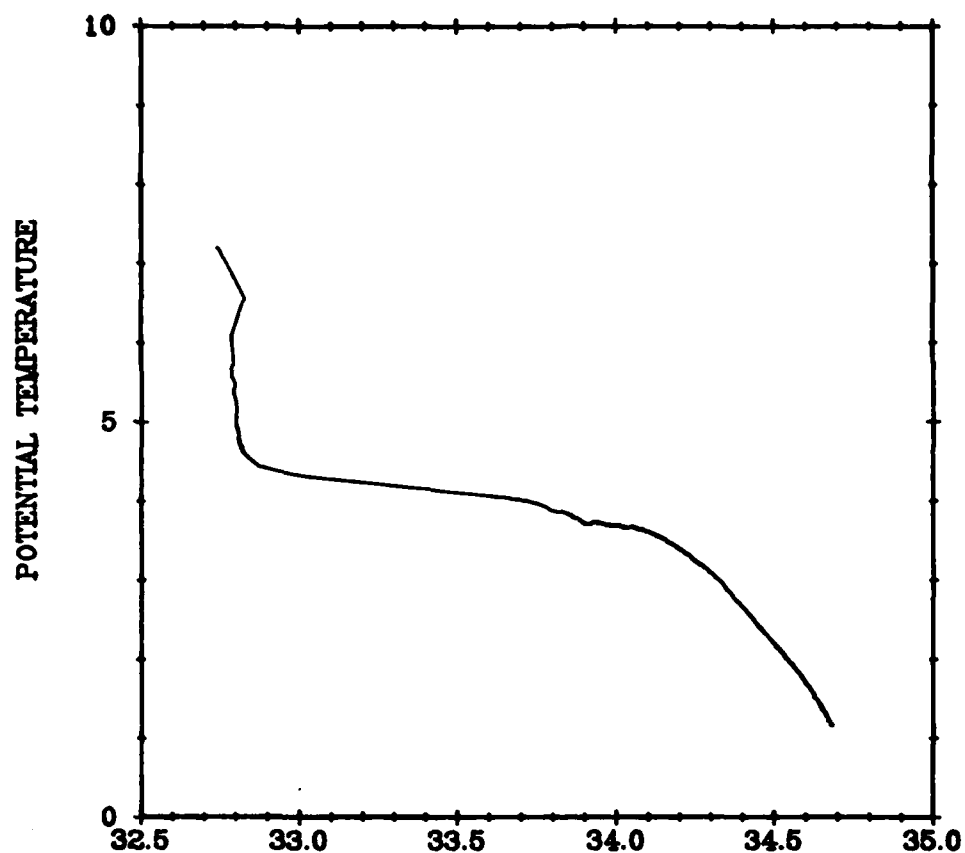
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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

# MARATHON 2 STA. 88



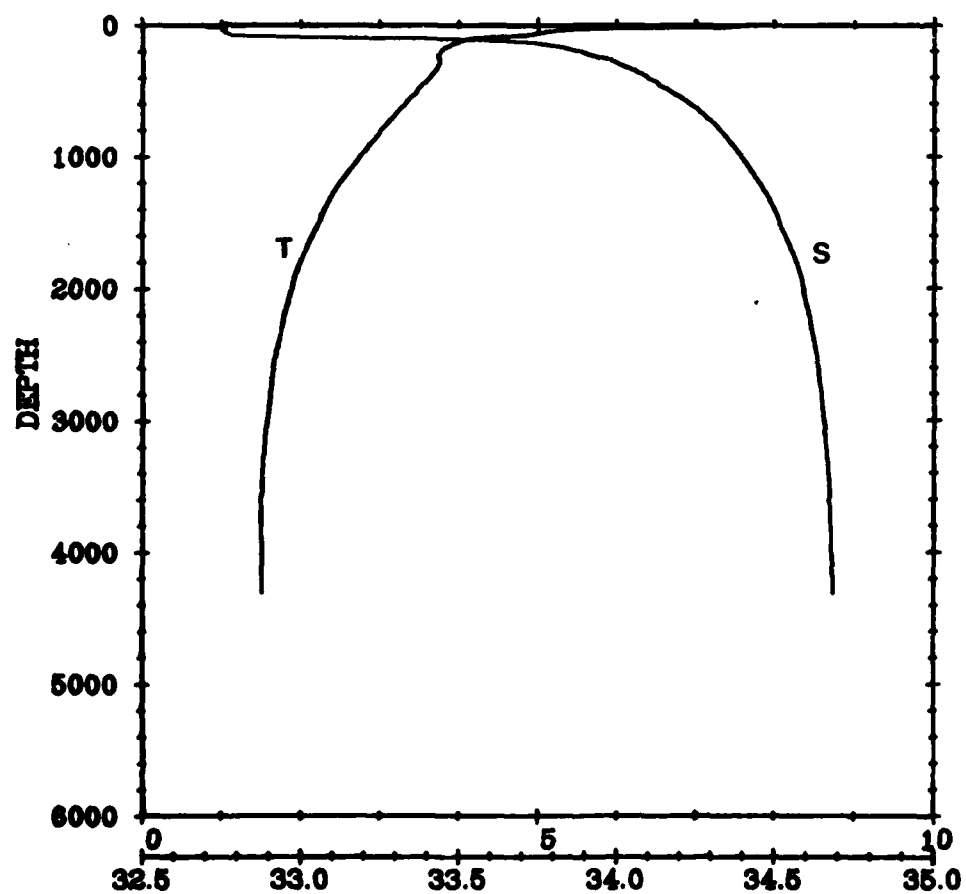
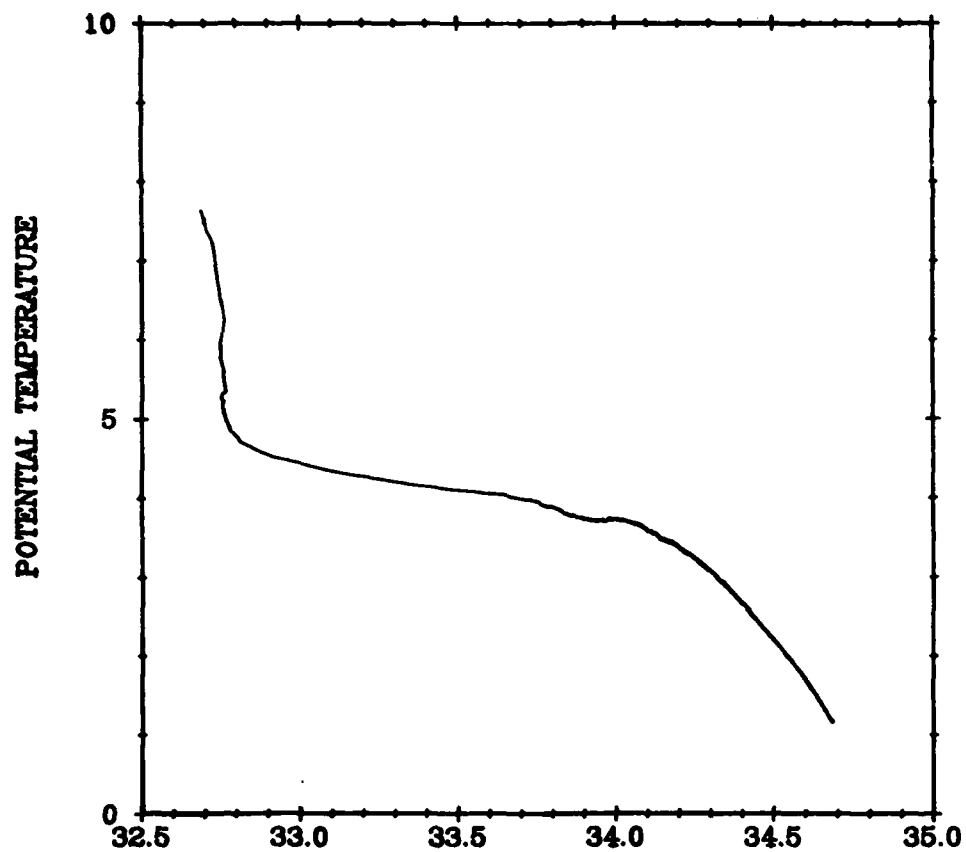
| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 54 40.2N | 152 5 3W  | 5/11/84  | 2219       | 4316   | 20   | 2     | 12.2     | 10.6     | 1011.2 |

| CTD DATA |       |          |          |         |         |         |         |            |       |  |  |
|----------|-------|----------|----------|---------|---------|---------|---------|------------|-------|--|--|
| PRESS    | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |  |  |
| DB       | DEG C |          | DEG C    |         |         |         | CL/TON  |            | M     |  |  |
| 0        | 7.526 | 32.637   | 7.526    | 25.533  | 34.487  | 43.046  | 244.043 | 0.000      | 0     |  |  |
| 20       | 6.832 | 32.727   | 6.830    | 25.651  | 34.637  | 43.226  | 233.090 | 0.048      | 19    |  |  |
| 40       | 5.377 | 32.758   | 5.374    | 25.856  | 34.912  | 43.567  | 213.794 | 0.092      | 39    |  |  |
| 60       | 5.040 | 32.764   | 5.036    | 25.899  | 34.972  | 43.643  | 209.865 | 0.135      | 59    |  |  |
| 80       | 4.759 | 32.823   | 4.753    | 25.977  | 35.063  | 43.746  | 202.629 | 0.176      | 79    |  |  |
| 100      | 4.284 | 33.216   | 4.277    | 26.339  | 35.444  | 44.144  | 168.350 | 0.213      | 99    |  |  |
| 150      | 3.915 | 33.779   | 3.905    | 26.325  | 35.940  | 44.649  | 122.696 | 0.286      | 148   |  |  |
| 200      | 3.771 | 33.881   | 3.758    | 26.920  | 36.041  | 44.756  | 113.991 | 0.345      | 198   |  |  |
| 250      | 3.733 | 33.952   | 3.716    | 26.981  | 36.103  | 44.819  | 108.661 | 0.401      | 247   |  |  |
| 300      | 3.746 | 34.008   | 3.726    | 27.025  | 36.145  | 44.850  | 104.971 | 0.454      | 297   |  |  |
| 350      | 3.698 | 34.057   | 3.674    | 27.069  | 36.191  | 44.918  | 101.195 | 0.506      | 346   |  |  |
| 400      | 3.633 | 34.095   | 3.606    | 27.106  | 36.231  | 44.951  | 98.065  | 0.555      | 396   |  |  |
| 450      | 3.554 | 34.131   | 3.524    | 27.142  | 36.272  | 44.995  | 94.936  | 0.604      | 445   |  |  |
| 500      | 3.475 | 34.167   | 3.441    | 27.179  | 36.312  | 45.038  | 91.798  | 0.650      | 495   |  |  |
| 600      | 3.327 | 34.230   | 3.287    | 27.244  | 36.384  | 45.117  | 85.274  | 0.739      | 594   |  |  |
| 700      | 3.172 | 34.282   | 3.125    | 27.301  | 36.448  | 45.189  | 81.464  | 0.823      | 693   |  |  |
| 800      | 3.015 | 34.327   | 2.962    | 27.351  | 36.507  | 45.255  | 77.119  | 0.903      | 792   |  |  |
| 900      | 2.889 | 34.362   | 2.830    | 27.391  | 36.553  | 45.307  | 73.804  | 0.978      | 890   |  |  |
| 1000     | 2.758 | 34.394   | 2.692    | 27.429  | 36.598  | 45.358  | 70.623  | 1.050      | 989   |  |  |
| 1100     | 2.637 | 34.423   | 2.565    | 27.463  | 36.639  | 45.405  | 67.736  | 1.119      | 1088  |  |  |
| 1200     | 2.508 | 34.450   | 2.429    | 27.496  | 36.679  | 45.451  | 64.874  | 1.186      | 1186  |  |  |
| 1300     | 2.391 | 34.477   | 2.306    | 27.528  | 36.717  | 45.495  | 62.105  | 1.249      | 1285  |  |  |
| 1400     | 2.303 | 34.498   | 2.211    | 27.553  | 36.746  | 45.529  | 60.766  | 1.310      | 1383  |  |  |
| 1500     | 2.235 | 34.514   | 2.136    | 27.571  | 36.769  | 45.556  | 58.591  | 1.370      | 1482  |  |  |
| 1600     | 2.155 | 34.532   | 2.049    | 27.593  | 36.795  | 45.586  | 56.806  | 1.427      | 1580  |  |  |
| 1700     | 2.078 | 34.549   | 1.965    | 27.613  | 36.819  | 45.614  | 55.101  | 1.483      | 1679  |  |  |
| 1800     | 2.001 | 34.566   | 1.881    | 27.633  | 36.844  | 45.643  | 53.372  | 1.539      | 1777  |  |  |
| 1900     | 1.937 | 34.580   | 1.810    | 27.650  | 36.865  | 45.667  | 51.988  | 1.590      | 1875  |  |  |
| 2000     | 1.892 | 34.589   | 1.757    | 27.661  | 36.878  | 45.684  | 51.175  | 1.642      | 1974  |  |  |
| 2100     | 1.853 | 34.598   | 1.711    | 27.672  | 36.892  | 45.699  | 50.417  | 1.693      | 2072  |  |  |
| 2200     | 1.806 | 34.607   | 1.656    | 27.683  | 36.906  | 45.716  | 49.544  | 1.743      | 2170  |  |  |
| 2300     | 1.770 | 34.615   | 1.612    | 27.693  | 36.918  | 45.730  | 48.863  | 1.792      | 2268  |  |  |
| 2400     | 1.733 | 34.622   | 1.567    | 27.702  | 36.929  | 45.744  | 48.227  | 1.840      | 2366  |  |  |
| 2500     | 1.695 | 34.630   | 1.520    | 27.712  | 36.941  | 45.758  | 47.491  | 1.888      | 2464  |  |  |
| 2600     | 1.656 | 34.635   | 1.483    | 27.719  | 36.950  | 45.769  | 47.275  | 1.935      | 2562  |  |  |
| 2700     | 1.642 | 34.640   | 1.450    | 27.725  | 36.958  | 45.779  | 46.711  | 1.982      | 2660  |  |  |
| 2800     | 1.620 | 34.645   | 1.420    | 27.731  | 36.966  | 45.788  | 46.367  | 2.029      | 2758  |  |  |
| 2900     | 1.601 | 34.649   | 1.392    | 27.735  | 36.973  | 45.796  | 46.125  | 2.075      | 2856  |  |  |
| 3000     | 1.583 | 34.653   | 1.364    | 27.742  | 36.980  | 45.804  | 45.898  | 2.121      | 2954  |  |  |
| 3100     | 1.561 | 34.657   | 1.333    | 27.747  | 36.987  | 45.813  | 45.585  | 2.167      | 3052  |  |  |
| 3200     | 1.546 | 34.660   | 1.309    | 27.751  | 36.992  | 45.820  | 45.445  | 2.212      | 3149  |  |  |
| 3300     | 1.531 | 34.664   | 1.284    | 27.756  | 36.998  | 45.827  | 45.226  | 2.258      | 3247  |  |  |
| 3400     | 1.519 | 34.667   | 1.263    | 27.760  | 37.004  | 45.833  | 45.115  | 2.303      | 3345  |  |  |
| 3500     | 1.512 | 34.670   | 1.246    | 27.763  | 37.008  | 45.839  | 45.073  | 2.348      | 3442  |  |  |
| 3600     | 1.506 | 34.672   | 1.229    | 27.766  | 37.012  | 45.843  | 45.113  | 2.393      | 3540  |  |  |
| 3700     | 1.504 | 34.674   | 1.217    | 27.769  | 37.015  | 45.847  | 45.209  | 2.438      | 3637  |  |  |
| 3800     | 1.503 | 34.675   | 1.206    | 27.770  | 37.017  | 45.850  | 45.390  | 2.484      | 3735  |  |  |
| 3900     | 1.504 | 34.677   | 1.196    | 27.772  | 37.020  | 45.853  | 45.530  | 2.529      | 3832  |  |  |
| 4000     | 1.508 | 34.678   | 1.189    | 27.774  | 37.021  | 45.855  | 45.786  | 2.575      | 3930  |  |  |
| 4100     | 1.510 | 34.680   | 1.180    | 27.775  | 37.024  | 45.858  | 45.940  | 2.621      | 4027  |  |  |
| 4200     | 1.512 | 34.681   | 1.171    | 27.777  | 37.026  | 45.861  | 46.163  | 2.667      | 4124  |  |  |
| 4300     | 1.514 | 34.682   | 1.161    | 27.779  | 37.028  | 45.863  | 46.385  | 2.713      | 4221  |  |  |
| 4400     | 1.519 | 34.683   | 1.155    | 27.780  | 37.030  | 45.865  | 46.657  | 2.759      | 4319  |  |  |
| 4500     | 1.519 | 34.683   | 1.155    | 27.780  | 37.030  | 45.865  | 46.657  | 2.759      | 4319  |  |  |

| NISKIN BOTTLE DATA |       |          |        |        |       |      |      |      |        |          |         |
|--------------------|-------|----------|--------|--------|-------|------|------|------|--------|----------|---------|
| DEPTH              | TEMP  | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT   | POT TEMP | SIGMA 0 |
| M                  | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TURBIN | DEG C    |         |
| 1                  | 7.696 | 32.701   | 7.12   | 105.5  | 25.7  | 1.38 | 14.4 | 0.20 | 7.696  | 25.512   | 34.458  |
| 11                 | 7.456 | 32.705   | 7.15   | 105.3  | 26.0  | 1.38 | 14.5 | 0.20 | 7.455  | 25.549   | 34.506  |
| 31                 | 5.733 | 32.759   | 7.56   | 107.0  | 28.7  | 1.46 | 16.0 | 0.20 | 5.731  | 25.815   | 34.853  |
| 57                 | 5.070 | 32.765   | 7.40   | 103.0  | 29.6  | 1.51 | 16.9 | 0.18 | 5.066  | 25.896   | 34.968  |
| 88                 | 4.552 | 32.887   | 6.55   | 90.1   | 35.6  | 1.74 | 20.4 | 0.22 | 4.546  | 26.050   | 35.146  |
| 155                | 3.900 | 33.798D  |        |        |       |      |      |      | 3.889  | 26.841   | 35.957  |
| 195                | 3.773 | 33.875D  |        |        |       |      |      |      | 3.760  | 26.915   | 36.036  |
| 298                | 3.749 | 34.007   | 0.56   | 7.6    | 102.7 | 3.14 | 45.0 | 0.01 | 3.729  | 27.021   | 36.144  |
| 394                | 3.635 | 34.094   | 0.51   | 6.9    | 114.2 | 3.14 | 44.8 | 0.01 | 3.608  | 27.105   | 36.230  |
| 496                | 3.473 | 34.170   | 0.49   | 6.6    | 122.6 | 3.12 | 44.5 | 0.00 | 3.439  | 27.181   | 36.314  |
| 599                | 3.322 | 34.234   | 0.49   | 6.6    | 131.2 | 3.10 | 44.2 | 0.00 | 3.282  | 27.248   | 36.388  |
| 698                | 3.167 | 34.286   | 0.48   | 6.4    | 138.0 | 3.11 | 44.6 | 0.00 | 3.120  | 27.304   | 36.452  |
| 789                | 3.021 | 34.329   | 0.44   | 5.9    | 143.2 | 3.15 | 44.7 | 0.00 | 2.968  | 27.352   | 36.508  |
| 885                | 2.903 | 34.363   | 0.40   | 5.3    | 147.7 | 3.15 | 44.8 | 0.00 | 2.844  | 27.391   | 36.552  |
| 995                | 2.751 | 34.398   | 0.45   | 6.0    | 151.7 | 3.14 | 44.7 | 0.00 | 2.687  | 27.432   | 36.602  |
| 1228               | 2.458 | 34.466   | 0.59   | 7.8    | 163.8 | 3.11 | 44.6 | 0.00 | 2.377  | 27.513   | 36.698  |
| 1490               | 2.214 | 34.518   | 0.82   | 10.7   | 169.2 | 3.07 | 44.1 | 0.00 | 2.135  | 27.575   | 36.772  |
| 1747               | 2.028 | 34.564   |        |        | 172.0 | 3.01 | 43.4 | 0.00 | 1.910  | 27.629   | 36.838  |
| 1985               | 1.889 | 34.594   | 1.44   | 18.7   | 174.4 | 2.96 | 42.6 | 0.00 | 1.754  | 27.666   | 36.883  |
| 2467               | 1.693 | 34.633   | 2.06   | 26.6   | 176.3 | 2.84 | 41.0 | 0.00 | 1.519  | 27.714   | 36.944  |
| 2982               | 1.577 | 34.658   | 2.58   | 33.2   | 170.8 | 2.74 | 39.4 | 0.00 | 1.356  | 27.746   | 36.984  |
| 3481               | 1.512 | 34.672   | 2.98   | 38.2   | 171.4 | 2.66 | 38.4 | 0.00 | 1.242  | 27.765   | 37.010  |
| 3966               | 1.508 | 34.679   | 3.21   | 41.1   | 172.7 | 2.61 | 37.7 | 0.00 | 1.185  | 27.775   | 37.022  |
| 4318               | 1.519 | 34.684   | 3.28   | 41.9   | 172.7 | 2.59 | 37.6 | 0.00 | 1.156  | 27.781   | 37.030  |

| SIGMA 4 | PRESS |
|---------|-------|
| 43.009  | 1     |
| 43.069  | 11    |
| 43.491  | 31    |
| 43.637  | 57    |
| 43.837  | 88    |
| 44.666  | 156   |
| 44.751  | 196   |
| 44.859  | 290   |
| 44.949  | 397   |
| 45.041  | 500   |
| 45.121  | 604   |
| 45.192  | 704   |
| 45.255  | 796   |
| 45.305  | 894   |
| 45.362  | 1005  |
| 45.471  | 1241  |
| 45.559  | 1507  |
| 45.636  | 1768  |
| 45.698  | 2011  |
| 45.761  | 2502  |
| 45.809  | 3028  |
| 45.841  | 3539  |
| 45.856  | 4036  |
| 45.865  | 4398  |

# MARATHON 2 STA. 89

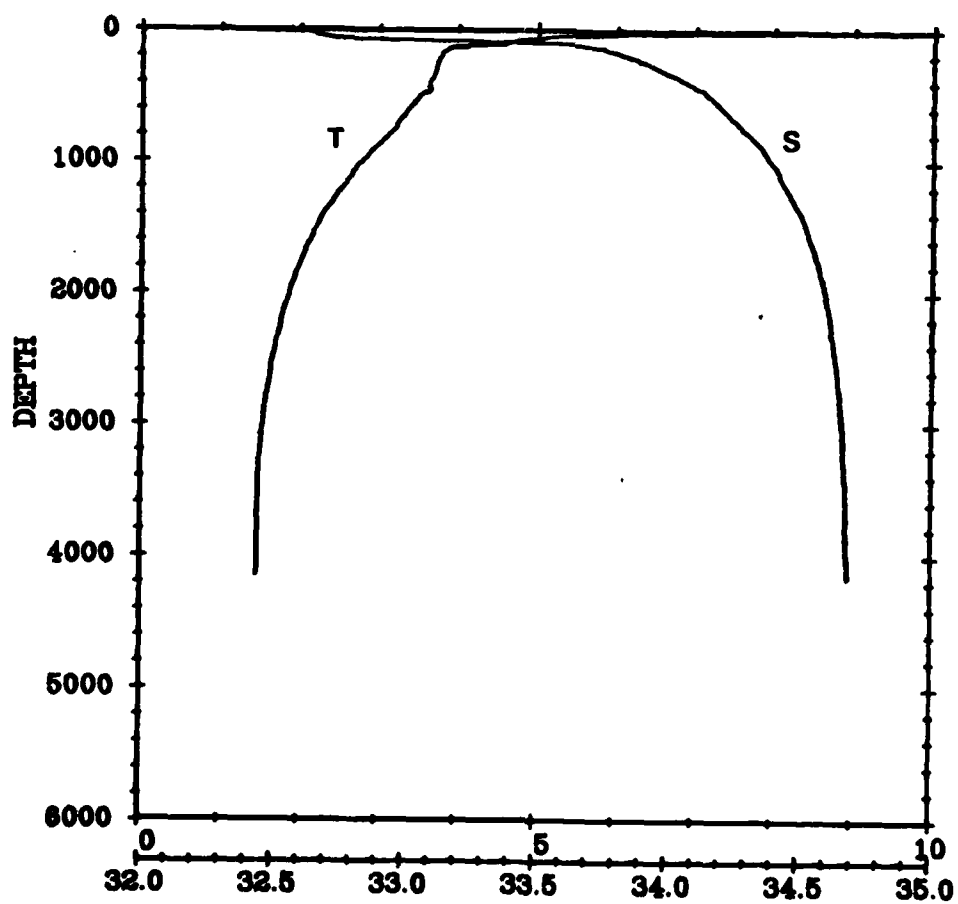
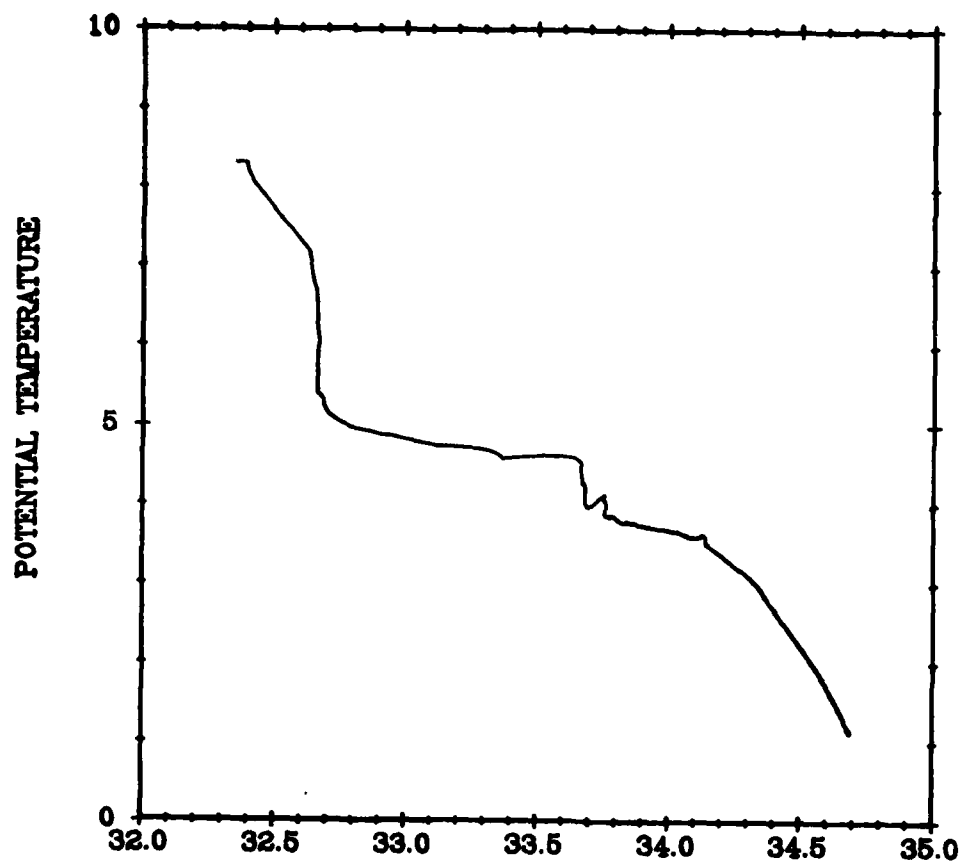


| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 54 57 4N | 152 23 9W | 6/ 1/84  | 518        | 4127   | 50   | 13    | 23       | 18       | 1013.5 |

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA<br>CM/CM | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|--------------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |              |            |            |
| 0           | 8.284         | 32.387   | 8.284             | 25.181  | 34.135  | 42.635  | 277.516      | 0.000      | 0          |
| 20          | 7.343         | 32.344   | 7.341             | 25.439  | 34.403  | 42.972  | 251.141      | 0.053      | 19         |
| 40          | 5.635         | 32.667   | 5.632             | 25.754  | 34.799  | 43.443  | 223.513      | 0.101      | 39         |
| 60          | 5.115         | 32.725   | 5.111             | 25.860  | 34.930  | 43.597  | 213.604      | 0.144      | 59         |
| 80          | 4.822         | 33.013   | 4.817             | 26.125  | 35.235  | 43.882  | 188.635      | 0.195      | 79         |
| 100         | 4.625         | 33.462   | 4.618             | 26.498  | 35.582  | 44.262  | 153.147      | 0.219      | 99         |
| 150         | 3.998         | 33.766   | 3.988             | 26.916  | 35.932  | 44.642  | 123.507      | 0.288      | 148        |
| 200         | 3.794         | 33.846   | 3.781             | 26.890  | 36.011  | 44.725  | 116.950      | 0.348      | 198        |
| 250         | 3.740         | 33.912   | 3.723             | 26.949  | 36.071  | 44.787  | 111.736      | 0.405      | 247        |
| 300         | 3.720         | 33.956   | 3.700             | 26.994  | 36.116  | 44.833  | 107.862      | 0.460      | 297        |
| 350         | 3.693         | 34.024   | 3.669             | 27.043  | 36.167  | 44.884  | 103.619      | 0.513      | 346        |
| 400         | 3.642         | 34.369   | 3.615             | 27.084  | 36.210  | 44.929  | 100.105      | 0.564      | 396        |
| 450         | 3.638         | 34.115   | 3.607             | 27.122  | 36.247  | 44.956  | 96.997       | 0.613      | 445        |
| 500         | 3.528         | 34.149   | 3.494             | 27.160  | 36.290  | 45.014  | 93.691       | 0.661      | 495        |
| 600         | 3.394         | 34.206   | 3.354             | 27.219  | 36.356  | 45.086  | 88.762       | 0.752      | 594        |
| 700         | 3.254         | 34.258   | 3.237             | 27.274  | 36.418  | 45.154  | 84.111       | 0.839      | 693        |
| 800         | 3.135         | 34.308   | 3.081             | 27.325  | 36.475  | 45.217  | 79.797       | 0.921      | 792        |
| 900         | 2.958         | 34.355   | 2.898             | 27.379  | 36.538  | 45.289  | 75.056       | 0.998      | 890        |
| 1000        | 2.798         | 34.389   | 2.732             | 27.421  | 36.588  | 45.346  | 71.496       | 1.071      | 989        |
| 1100        | 2.655         | 34.420   | 2.583             | 27.459  | 36.634  | 45.399  | 68.153       | 1.141      | 1088       |
| 1200        | 2.549         | 34.447   | 2.470             | 27.490  | 36.671  | 45.441  | 65.542       | 1.208      | 1186       |
| 1300        | 2.428         | 34.473   | 2.343             | 27.522  | 36.709  | 45.485  | 62.808       | 1.272      | 1285       |
| 1400        | 2.302         | 34.501   | 2.210             | 27.555  | 36.749  | 45.532  | 59.834       | 1.333      | 1383       |
| 1500        | 2.215         | 34.520   | 2.116             | 27.578  | 36.776  | 45.564  | 57.924       | 1.392      | 1482       |
| 1600        | 2.146         | 34.536   | 2.040             | 27.597  | 36.799  | 45.591  | 56.410       | 1.450      | 1580       |
| 1700        | 2.065         | 34.554   | 1.952             | 27.618  | 36.825  | 45.621  | 54.595       | 1.505      | 1679       |
| 1800        | 1.998         | 34.568   | 1.878             | 27.635  | 36.846  | 45.645  | 53.190       | 1.559      | 1777       |
| 1900        | 1.936         | 34.581   | 1.809             | 27.651  | 36.865  | 45.668  | 51.903       | 1.611      | 1875       |
| 2000        | 1.877         | 34.594   | 1.743             | 27.667  | 36.884  | 45.690  | 50.629       | 1.663      | 1974       |
| 2100        | 1.835         | 34.602   | 1.693             | 27.677  | 36.897  | 45.706  | 49.905       | 1.713      | 2072       |
| 2200        | 1.796         | 34.613   | 1.636             | 27.690  | 36.913  | 45.724  | 48.859       | 1.762      | 2170       |
| 2300        | 1.757         | 34.619   | 1.599             | 27.697  | 36.923  | 45.736  | 48.409       | 1.811      | 2268       |
| 2400        | 1.714         | 34.627   | 1.548             | 27.707  | 36.936  | 45.751  | 47.622       | 1.859      | 2366       |
| 2500        | 1.680         | 34.633   | 1.526             | 27.715  | 36.946  | 45.763  | 47.080       | 1.906      | 2464       |
| 2600        | 1.649         | 34.640   | 1.466             | 27.724  | 36.956  | 45.776  | 46.490       | 1.953      | 2562       |
| 2700        | 1.629         | 34.644   | 1.438             | 27.729  | 36.963  | 45.784  | 46.251       | 2.000      | 2660       |
| 2800        | 1.594         | 34.650   | 1.394             | 27.737  | 36.974  | 45.797  | 45.656       | 2.045      | 2758       |
| 2900        | 1.567         | 34.655   | 1.358             | 27.744  | 36.982  | 45.807  | 45.228       | 2.091      | 2856       |
| 3000        | 1.552         | 34.659   | 1.334             | 27.748  | 36.988  | 45.814  | 45.026       | 2.136      | 2954       |
| 3100        | 1.531         | 34.663   | 1.304             | 27.754  | 36.995  | 45.821  | 44.733       | 2.181      | 3052       |
| 3200        | 1.519         | 34.665   | 1.282             | 27.757  | 36.999  | 45.828  | 44.702       | 2.226      | 3149       |
| 3300        | 1.504         | 34.667   | 1.258             | 27.760  | 37.004  | 45.834  | 44.621       | 2.270      | 3247       |
| 3400        | 1.485         | 34.670   | 1.239             | 27.764  | 37.012  | 45.840  | 44.550       | 2.315      | 3345       |
| 3500        | 1.492         | 34.672   | 1.226             | 27.766  | 37.012  | 45.844  | 44.633       | 2.359      | 3442       |
| 3600        | 1.487         | 34.675   | 1.211             | 27.770  | 37.016  | 45.849  | 44.613       | 2.404      | 3540       |
| 3700        | 1.484         | 34.677   | 1.198             | 27.772  | 37.019  | 45.853  | 44.692       | 2.449      | 3637       |
| 3800        | 1.484         | 34.678   | 1.187             | 27.774  | 37.022  | 45.855  | 44.394       | 2.494      | 3735       |
| 3900        | 1.490         | 34.678   | 1.182             | 27.774  | 37.022  | 45.856  | 45.240       | 2.539      | 3832       |
| 4000        | 1.491         | 34.680   | 1.172             | 27.777  | 37.025  | 45.859  | 45.175       | 2.584      | 3930       |
| 4100        | 1.487         | 34.682   | 1.157             | 27.779  | 37.029  | 45.864  | 45.430       | 2.629      | 4027       |
| 4200        | 1.479         | 34.685   | 1.139             | 27.783  | 37.033  | 45.869  | 45.346       | 2.675      | 4124       |
| 4228        | 1.473         | 34.685   | 1.130             | 27.784  | 37.034  | 45.871  | 45.319       | 2.687      | 4151       |

| NISKIN BOTTLE DATA |               | DIS O2 | O2 SAT | SIO3  | PO4   | NO3  | NO2  | TRIT | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|--------------------|---------------|--------|--------|-------|-------|------|------|------|----------|---------|---------|---------|-------|
| DEPTH<br>M         | TEMP<br>DEG C |        |        |       |       |      |      |      |          |         |         |         |       |
| 11                 | 8.244         | 32.476 | 7.34   | 109.9 | 10.3  | 0.80 | 3.6  | 0.06 | 8.244    | 25.257  | 34.191  | 42.711  | 1     |
| 11                 | 7.974         | 32.531 | 7.34   | 109.3 | 14.9  | 0.93 | 6.2  | 0.08 | 7.973    | 25.339  | 34.275  | 42.917  | 11    |
| 31                 | 5.970         | 32.671 | 7.62   | 108.4 | 23.1  | 1.24 | 12.2 | 0.16 | 5.967    | 25.717  | 34.745  | 43.373  | 31    |
| 56                 | 4.875         | 32.797 | 6.82   | 94.5  | 29.4  | 1.56 | 17.3 | 0.22 | 4.869    | 25.943  | 35.324  | 43.702  | 76    |
| 97                 | 4.287         | 33.283 | 4.35   | 59.6  | 53.1  | 2.25 | 30.0 | 0.05 | 4.280    | 26.392  | 35.495  | 44.194  | 97    |
| 130                | 3.972         | 33.692 | 2.25   | 30.7  | 73.2  | 2.79 | 39.6 | 0.01 | 3.963    | 26.750  | 35.863  | 44.571  | 130   |
| 192                | 3.762         | 33.870 | 1.15   | 15.6  | 90.5  | 3.03 | 43.9 | 0.00 | 3.749    | 26.912  | 36.034  | 44.750  | 193   |
| 261                | 3.727         | 33.943 | 0.78   | 10.6  | 99.4  | 3.13 | 44.8 | 0.00 | 3.709    | 26.974  | 36.097  | 44.813  | 263   |
| 345                | 3.684         | 34.027 | 0.63   | 8.5   | 105.6 | 3.15 | 45.1 | 0.00 | 3.661    | 27.046  | 36.170  | 44.887  | 347   |
| 423                | 3.605         | 34.098 | 0.56   | 7.6   | 116.4 | 3.16 | 44.7 | 0.00 | 3.575    | 27.111  | 36.238  | 44.958  | 426   |
| 598                | 3.315         | 34.227 | 0.48   | 6.5   | 129.1 | 3.14 | 45.0 | 0.00 | 3.295    | 27.241  | 36.380  | 45.113  | 603   |
| 690                | 3.259         | 34.266 | 0.43   | 5.8   | 138.1 | 3.15 | 45.2 | 0.00 | 3.212    | 27.280  | 36.423  | 45.159  | 696   |
| 794                | 3.124         | 34.320 | 0.36   | 4.9   | 144.1 | 3.18 | 45.4 | 0.00 | 3.050    | 27.338  | 36.489  | 45.232  | 801   |
| 888                | 2.966         | 34.349 | 0.41   | 5.5   | 149.1 | 3.17 | 45.3 | 0.00 | 2.906    | 27.374  | 36.532  | 45.282  | 897   |
| 1007               | 2.796         | 34.391 | 0.42   | 5.6   | 154.3 | 3.17 | 45.4 | 0.00 | 2.719    | 27.424  | 36.592  | 45.351  | 1017  |
| 1217               | 2.489         | 34.458 | 0.54   | 7.1   | 165.1 | 3.15 | 45.0 | 0.00 | 2.407    | 27.504  | 36.688  | 45.461  | 1250  |
| 1535               | 2.175         | 34.529 | 0.86   | 11.2  | 174.3 | 3.09 | 44.5 | 0.00 | 2.073    | 27.588  | 36.789  | 45.579  | 1553  |
| 1742               | 2.002         | 34.567 | 1.20   | 15.6  | 176.7 | 3.04 | 43.8 | 0.00 | 1.885    | 27.634  | 36.844  | 45.643  | 1763  |
| 2002               | 1.873         | 34.596 | 1.49   | 19.3  | 177.1 | 2.98 | 42.9 | 0.00 | 1.736    | 27.668  | 36.886  | 45.693  | 2028  |
| 2473               | 1.681         | 34.633 | 2.10   | 27.1  | 176.9 | 2.87 | 41.3 | 0.00 | 1.506    | 27.715  | 36.945  | 45.763  | 2508  |
| 2961               | 1.550         | 34.659 | 2.66   | 34.2  | 175.5 | 2.75 | 39.6 | 0.00 | 1.332    | 27.749  | 36.988  | 45.814  | 3006  |
| 3471               | 1.498         | 34.673 | 3.06   | 39.2  | 171.3 | 2.66 | 38.6 | 0.00 | 1.220    | 27.768  | 37.013  | 45.845  | 3529  |
| 3996               | 1.490         | 34.691 | 3.21   | 41.1  | 171.3 | 2.63 | 38.1 | 0.00 | 1.176    | 27.777  | 37.025  | 45.860  | 3965  |
| 4151               | 1.472         | 34.685 | 3.40   | 43.5  | 168.9 | 2.60 | 37.4 | 0.00 | 1.129    | 27.783  | 37.034  | 45.871  | 4227  |

# MARATHON 2 STA. 90



| LATITUDE | LONGITUDE | MO/DY/YR | START TIME GMT | BOTTOM M | WIND DIR | SPEED KT | AIR TEMP DEG C | WET BULB DEG C | BAROM MB |
|----------|-----------|----------|----------------|----------|----------|----------|----------------|----------------|----------|
| 55 13 9N | 152 31 5W | 5/ 1/84  | 1218           | 4451     | 70       | 8        | 8 9            | 7 8            | 1016 5   |

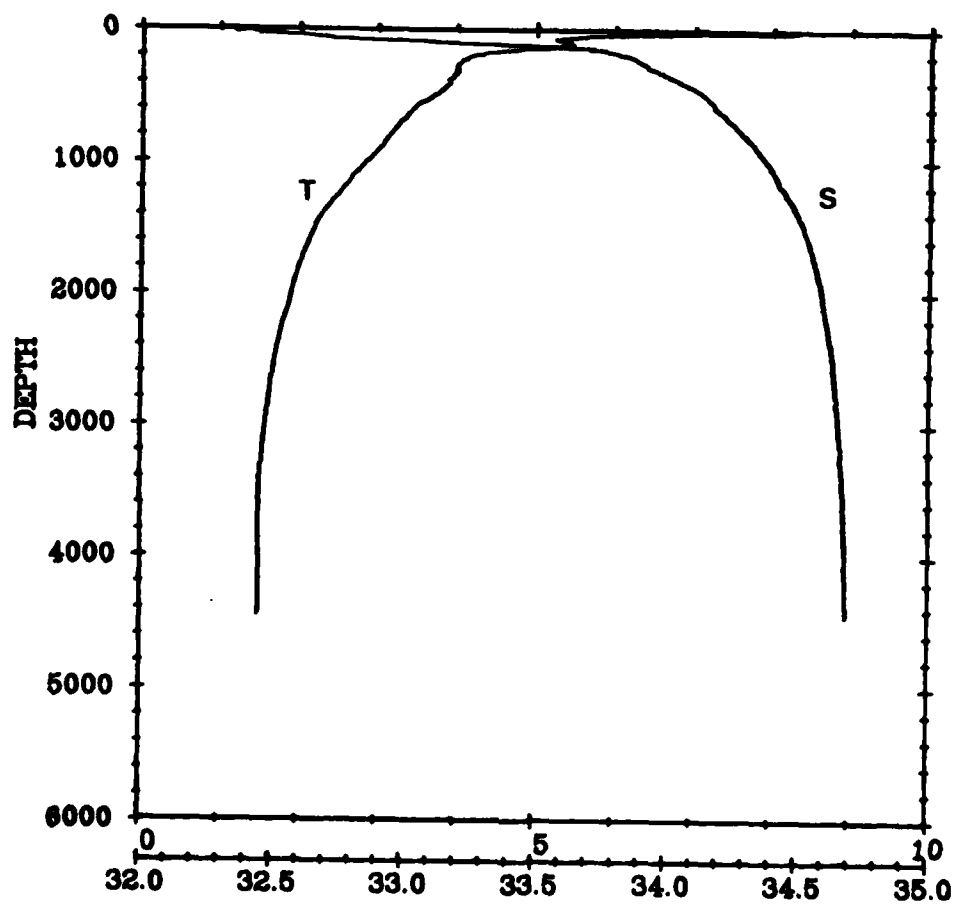
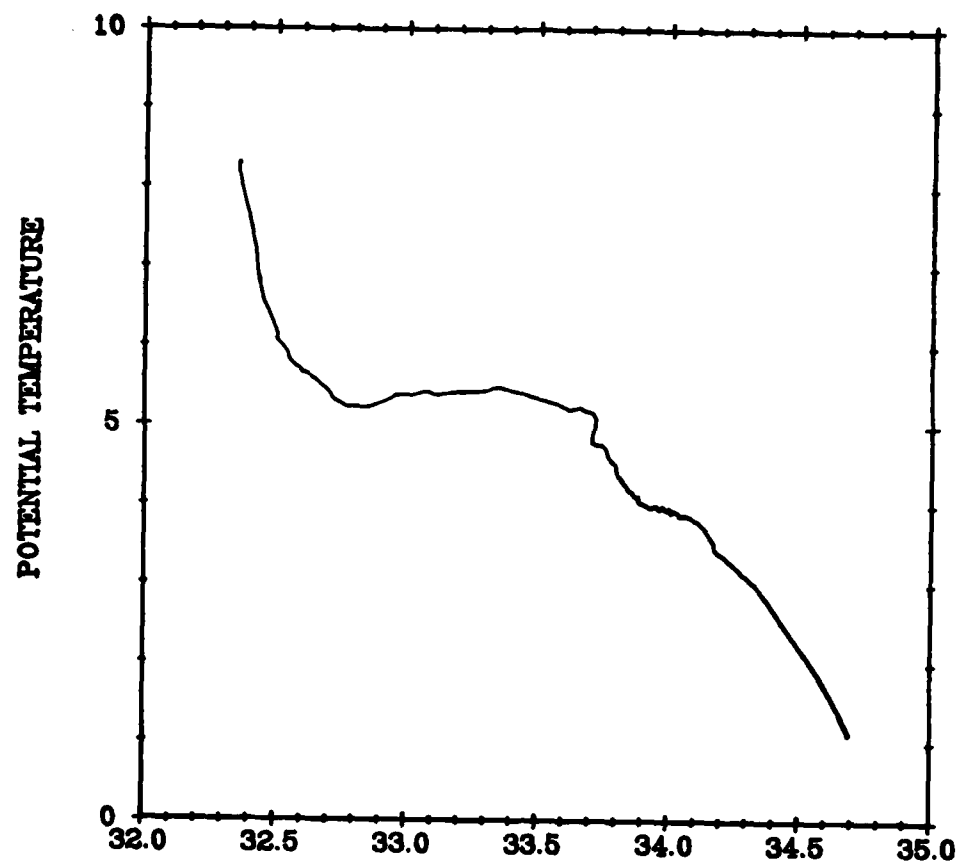
## CTD DATA

| PRESS DB | TEMP DEG C | SALINITY | POT TEMP DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH M |
|----------|------------|----------|----------------|---------|---------|---------|---------|------------|---------|
| 0        | 8.308      | 32.357   | 9.308          | 25.154  | 34.077  | 42.607  | 280.110 | 0.000      | 0       |
| 20       | 7.597      | 32.394   | 7.595          | 25.286  | 34.241  | 42.850  | 267.927 | 0.355      | 19      |
| 40       | 6.129      | 32.513   | 6.125          | 25.576  | 34.600  | 43.223  | 243.407 | 0.106      | 39      |
| 60       | 5.479      | 32.677   | 5.474          | 25.780  | 34.831  | 43.484  | 221.207 | 0.152      | 59      |
| 80       | 5.298      | 32.860   | 5.292          | 25.946  | 35.008  | 43.662  | 205.646 | 0.194      | 79      |
| 100      | 5.113      | 33.142   | 5.105          | 26.156  | 35.205  | 43.853  | 185.964 | 0.234      | 99      |
| 120      | 4.942      | 33.413   | 4.931          | 26.461  | 35.727  | 44.388  | 138.385 | 0.315      | 148     |
| 140      | 4.223      | 33.944   | 4.209          | 26.845  | 35.943  | 44.637  | 121.318 | 0.380      | 198     |
| 160      | 4.018      | 33.897   | 4.021          | 26.907  | 36.014  | 44.716  | 115.874 | 0.439      | 247     |
| 180      | 3.995      | 33.939   | 3.974          | 26.945  | 36.054  | 44.757  | 112.690 | 0.496      | 297     |
| 200      | 3.967      | 33.999   | 3.943          | 26.996  | 36.105  | 44.810  | 108.312 | 0.551      | 347     |
| 220      | 3.891      | 34.043   | 3.863          | 27.044  | 36.156  | 44.864  | 104.179 | 0.604      | 396     |
| 240      | 3.835      | 34.100   | 3.804          | 27.090  | 36.205  | 44.915  | 100.115 | 0.656      | 445     |
| 260      | 3.730      | 34.139   | 3.695          | 27.132  | 36.252  | 44.966  | 96.545  | 0.705      | 495     |
| 280      | 3.456      | 34.184   | 3.415          | 27.195  | 36.329  | 45.057  | 91.753  | 0.749      | 544     |
| 300      | 3.312      | 34.241   | 3.265          | 27.255  | 36.396  | 45.110  | 85.989  | 0.827      | 593     |
| 320      | 3.164      | 34.289   | 3.110          | 27.307  | 36.456  | 45.197  | 81.520  | 0.871      | 642     |
| 340      | 3.040      | 34.337   | 2.980          | 27.358  | 36.512  | 45.259  | 77.271  | 0.910      | 690     |
| 360      | 2.915      | 34.375   | 2.808          | 27.403  | 36.567  | 45.321  | 73.289  | 0.951      | 739     |
| 380      | 2.717      | 34.408   | 2.644          | 27.444  | 36.615  | 45.379  | 69.713  | 0.997      | 788     |
| 400      | 2.589      | 34.436   | 2.510          | 27.478  | 36.657  | 45.425  | 66.794  | 1.045      | 836     |
| 420      | 2.447      | 34.467   | 2.351          | 27.515  | 36.701  | 45.477  | 63.461  | 1.100      | 885     |
| 440      | 2.308      | 34.498   | 2.215          | 27.552  | 36.746  | 45.528  | 60.122  | 1.152      | 933     |
| 460      | 2.209      | 34.521   | 2.110          | 27.579  | 36.778  | 45.566  | 57.782  | 1.451      | 1482    |
| 480      | 2.137      | 34.538   | 2.031          | 27.599  | 36.802  | 45.594  | 56.100  | 1.509      | 1580    |
| 500      | 2.067      | 34.553   | 1.954          | 27.617  | 36.824  | 45.620  | 54.582  | 1.564      | 1679    |
| 520      | 2.009      | 34.566   | 1.889          | 27.633  | 36.843  | 45.642  | 53.455  | 1.613      | 1777    |
| 540      | 1.956      | 34.578   | 1.829          | 27.647  | 36.860  | 45.662  | 52.360  | 1.670      | 1875    |
| 560      | 1.909      | 34.588   | 1.774          | 27.659  | 36.875  | 45.680  | 51.453  | 1.722      | 1974    |
| 580      | 1.872      | 34.596   | 1.729          | 27.669  | 36.888  | 45.694  | 50.795  | 1.774      | 2072    |
| 600      | 1.826      | 34.606   | 1.675          | 27.681  | 36.902  | 45.712  | 49.864  | 1.824      | 2170    |
| 620      | 1.780      | 34.614   | 1.622          | 27.691  | 36.915  | 45.728  | 49.062  | 1.873      | 2268    |
| 640      | 1.739      | 34.622   | 1.573          | 27.702  | 36.928  | 45.743  | 48.304  | 1.922      | 2366    |
| 660      | 1.712      | 34.630   | 1.527          | 27.711  | 36.941  | 45.757  | 47.582  | 1.970      | 2464    |
| 680      | 1.676      | 34.635   | 1.491          | 27.718  | 36.949  | 45.767  | 47.205  | 2.017      | 2562    |
| 700      | 1.651      | 34.640   | 1.459          | 27.724  | 36.957  | 45.777  | 46.813  | 2.064      | 2660    |
| 720      | 1.632      | 34.644   | 1.431          | 27.729  | 36.964  | 45.785  | 46.601  | 2.111      | 2758    |
| 740      | 1.609      | 34.649   | 1.399          | 27.736  | 36.972  | 45.795  | 46.234  | 2.157      | 2856    |
| 760      | 1.593      | 34.653   | 1.374          | 27.741  | 36.979  | 45.803  | 45.927  | 2.204      | 2954    |
| 780      | 1.570      | 34.657   | 1.342          | 27.745  | 36.985  | 45.811  | 45.712  | 2.249      | 3051    |
| 800      | 1.550      | 34.661   | 1.313          | 27.752  | 36.992  | 45.820  | 45.431  | 2.295      | 3149    |
| 820      | 1.535      | 34.665   | 1.288          | 27.756  | 36.999  | 45.827  | 45.212  | 2.340      | 3247    |
| 840      | 1.523      | 34.668   | 1.266          | 27.760  | 37.004  | 45.833  | 45.103  | 2.386      | 3344    |
| 860      | 1.511      | 34.672   | 1.245          | 27.764  | 37.008  | 45.839  | 45.050  | 2.431      | 3442    |
| 880      | 1.500      | 34.673   | 1.231          | 27.767  | 37.012  | 45.844  | 45.011  | 2.476      | 3540    |
| 900      | 1.502      | 34.675   | 1.215          | 27.770  | 37.016  | 45.849  | 45.109  | 2.521      | 3637    |
| 920      | 1.502      | 34.676   | 1.205          | 27.771  | 37.019  | 45.851  | 45.304  | 2.566      | 3734    |
| 940      | 1.504      | 34.679   | 1.196          | 27.773  | 37.021  | 45.854  | 45.459  | 2.611      | 3832    |
| 960      | 1.505      | 34.679   | 1.186          | 27.775  | 37.022  | 45.856  | 45.668  | 2.657      | 3929    |
| 980      | 1.507      | 34.680   | 1.177          | 27.776  | 37.025  | 45.859  | 45.891  | 2.703      | 4027    |
| 1000     | 1.510      | 34.681   | 1.169          | 27.778  | 37.026  | 45.861  | 46.110  | 2.749      | 4124    |
| 1020     | 1.514      | 34.682   | 1.161          | 27.779  | 37.028  | 45.863  | 46.385  | 2.795      | 4221    |
| 1040     | 1.515      | 34.684   | 1.151          | 27.781  | 37.031  | 45.866  | 46.520  | 2.841      | 4318    |
| 1060     | 1.498      | 34.687   | 1.123          | 27.786  | 37.037  | 45.874  | 46.281  | 2.888      | 4415    |
| 1080     | 1.494      | 34.688   | 1.115          | 27.787  | 37.038  | 45.876  | 46.224  | 2.903      | 4447    |

## WATSKIN BOTTLE DATA

| DEPTH M | TEMP DEG C | SALINITY | DIC O2 ML/L | O2 SAT % | SIO3 UM/L | PO4 UM/L | NO3 UM/L | NO2 UM/L | TRIT TUSIN | POT TEMP DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS DB |
|---------|------------|----------|-------------|----------|-----------|----------|----------|----------|------------|----------------|---------|---------|---------|----------|
| 1       | 8.276      | 32.364   | 7.20        | 107.8    | 11.1      | 0.85     | 4.6      | 0.10     | 8.276      | 25.164         | 34.088  | 42.619  | 1       |          |
| 45      | 6.122      | 32.523   | 6.97        | 98.0     | 19.2      | 1.20     | 11.3     | 0.29     | 6.118      | 25.581         | 34.604  | 43.228  | 45      |          |
| 99      | 5.438      | 33.195   | 4.72        | 66.5     | 40.7      | 1.92     | 25.4     | 0.32     | 5.430      | 26.195         | 35.242  | 43.887  | 99      |          |
| 129     | 5.297      | 33.542   | 3.57        | 50.2     | 51.0      | 2.23     | 31.0     | 0.32     | 5.287      | 26.487         | 35.535  | 44.192  | 129     |          |
| 163     | 4.654      | 33.766   | 2.43        | 33.7     | 66.8      | 2.59     | 37.0     | 0.31     | 4.642      | 26.737         | 35.814  | 44.488  | 164     |          |
| 177     | 4.316      | 33.826   | 1.92        | 26.4     | 76.0      | 2.77     | 39.8     | 0.31     | 4.302      | 26.921         | 35.915  | 44.604  | 198     |          |
| 247     | 4.090      | 33.885   | 1.39        | 19.0     | 85.0      | 2.92     | 42.2     | 0.31     | 4.073      | 26.992         | 35.996  | 44.696  | 249     |          |
| 297     | 4.000      | 33.741   | 1.02        | 13.9     | 91.5      | 3.00     | 43.4     | 0.31     | 3.979      | 26.946         | 36.054  | 44.758  | 299     |          |
| 395     | 3.878      | 34.047   | 0.71        | 9.7      | 103.3     | 3.06     | 44.2     | 0.30     | 3.850      | 27.043         | 36.157  | 44.865  | 398     |          |
| 494     | 3.729      | 34.145   | 0.53        | 7.2      | 115.7     | 3.09     | 44.5     | 0.30     | 3.695      | 27.137         | 36.257  | 44.971  | 499     |          |
| 593     | 3.428      | 34.198   | 0.49        | 6.6      | 126.7     | 3.11     | 44.7     | 0.30     | 3.388      | 27.209         | 36.344  | 45.073  | 598     |          |
| 691     | 3.271      | 34.257   | 0.46        | 6.2      | 135.8     | 3.13     | 44.7     | 0.30     | 3.224      | 27.271         | 36.414  | 45.150  | 697     |          |
| 789     | 3.139      | 34.302   | 0.42        | 5.6      | 140.7     | 3.13     | 44.9     | 0.30     | 3.086      | 27.320         | 36.469  | 45.211  | 796     |          |
| 875     | 3.046      | 34.336   | 0.39        | 5.2      | 145.0     | 3.14     | 44.9     | 0.30     | 2.987      | 27.356         | 36.510  | 45.257  | 884     |          |
| 994     | 2.844      | 34.384   | 0.41        | 5.5      | 152.4     | 3.14     | 45.1     | 0.30     | 2.777      | 27.413         | 36.578  | 45.314  | 1004    |          |
| 1218    | 2.521      | 34.455   | 0.55        | 7.3      | 163.1     | 3.12     | 44.9     | 0.30     | 2.439      | 27.499         | 36.691  | 45.453  | 1251    |          |
| 1487    | 2.218      | 34.521   | 0.92        | 10.7     | 172.8     | 3.06     | 44.3     | 0.30     | 2.119      | 27.578         | 36.775  | 45.564  | 1504    |          |
| 1726    | 2.335      | 34.363   | 1.13        | 14.7     | 177.1     | 3.02     | 43.5     | 0.30     | 1.919      | 27.628         | 36.836  | 45.634  | 1747    |          |
| 1994    | 1.879      | 34.596   | 1.48        | 19.2     | 177.4     | 2.96     | 42.9     | 0.30     | 1.742      | 27.668         | 36.886  | 45.691  | 2020    |          |
| 2555    | 1.686      | 34.635   | 2.08        | 25.8     | 177.3     | 2.93     | 41.1     | 0.30     | 1.507      | 27.717         | 36.947  | 45.764  | 2551    |          |
| 2998    | 1.576      | 34.657   | 2.51        | 33.5     | 175.2     | 2.74     | 39.6     | 0.30     | 1.354      | 27.745         | 36.984  | 45.809  | 3044    |          |
| 3493    | 1.515      | 34.673   | 3.01        | 38.6     | 172.6     | 2.66     | 38.4     | 0.30     | 1.235      | 27.767         | 37.011  | 45.843  | 3551    |          |
| 3937    | 1.524      | 34.680   | 3.19        | 40.8     | 170.0     | 2.61     | 38.0     | 0.30     | 1.182      | 27.776         | 37.024  | 45.857  | 4028    |          |
| 4446    | 1.494      | 34.688   | 3.46        | 44.2     | 167.8     | 2.55     | 37.1     | 0.30     | 1.116      | 27.787         | 37.038  | 45.875  | 4531    |          |

# MARATHON 2 STA. 91



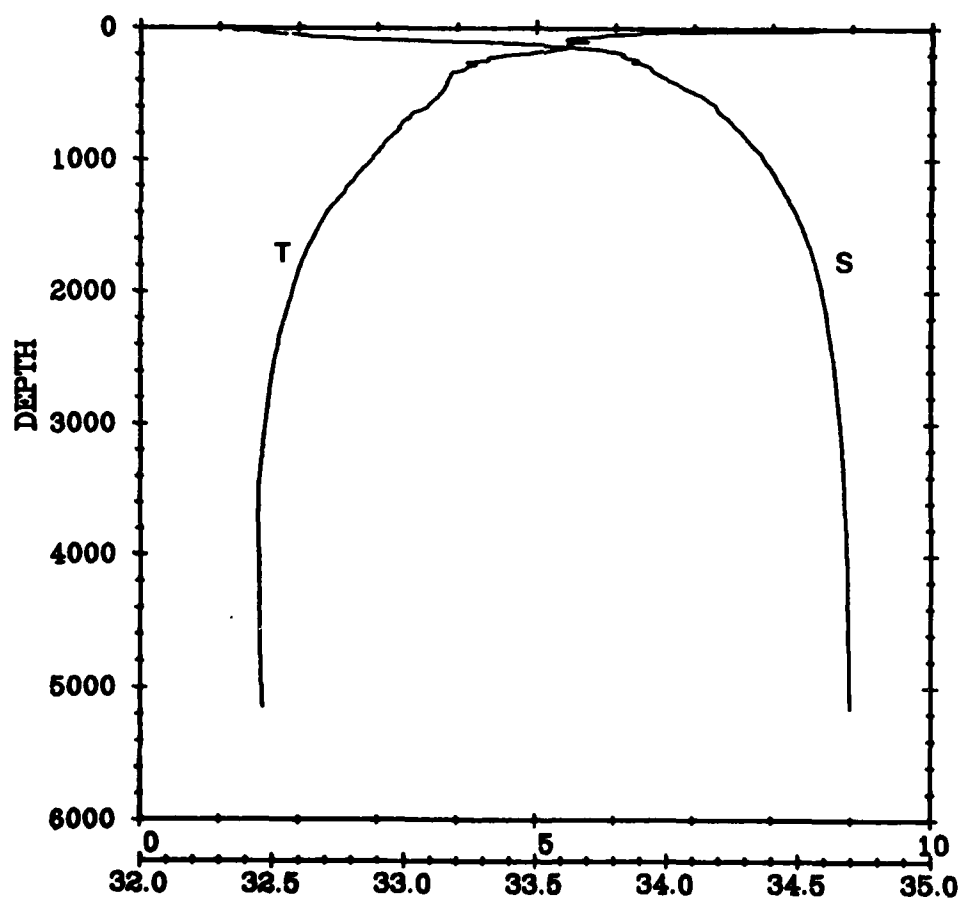
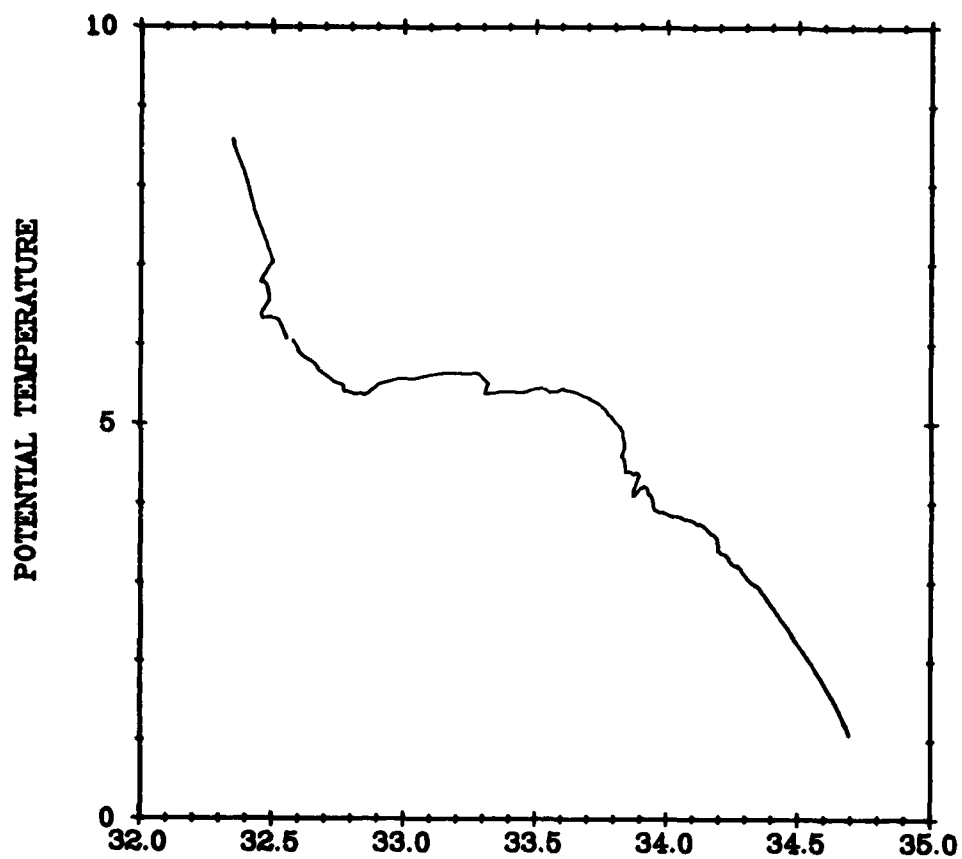
## R/V THOMAS WASHINGTON MARATHON LEG II STATION 92

LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
 55 25.6N 152 38.1W 6/ 1/84 1900 5155 150 5 11.1 8.9 1019.3

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA<br>CL/TON | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |               |            |            |
| 0           | 8.569         | 32.351   | 8.569             | 25.110  | 34.022  | 42.541  | 284.255       | 0.000      | 0          |
| 20          | 7.805         | 32.408   | 7.803             | 25.267  | 34.213  | 42.763  | 269.657       | 0.055      | 19         |
| 40          | 6.328         | 32.506   | 6.325             | 25.542  | 34.556  | 43.171  | 243.680       | 0.107      | 39         |
| 60          | 5.829         | 32.630   | 5.824             | 25.702  | 34.738  | 43.374  | 228.714       | 0.154      | 59         |
| 80          | 5.471         | 32.791   | 5.465             | 25.872  | 34.923  | 43.573  | 212.755       | 0.198      | 79         |
| 100         | 5.590         | 33.125   | 5.582             | 26.122  | 35.162  | 43.802  | 189.255       | 0.238      | 99         |
| 150         | 5.391         | 33.641   | 5.379             | 26.554  | 35.597  | 44.238  | 148.835       | 0.323      | 148        |
| 200         | 4.844         | 33.829   | 4.829             | 26.766  | 35.833  | 44.498  | 129.107       | 0.392      | 198        |
| 250         | 4.367         | 33.885   | 4.349             | 26.863  | 35.953  | 44.640  | 120.213       | 0.455      | 247        |
| 300         | 4.140         | 33.932   | 4.119             | 26.924  | 36.026  | 44.723  | 114.727       | 0.513      | 297        |
| 350         | 3.927         | 33.962   | 3.903             | 26.970  | 36.083  | 44.789  | 110.668       | 0.570      | 347        |
| 400         | 3.883         | 34.006   | 3.855             | 27.010  | 36.124  | 44.833  | 107.314       | 0.624      | 396        |
| 450         | 3.851         | 34.057   | 3.820             | 27.054  | 36.170  | 44.879  | 103.560       | 0.677      | 446        |
| 500         | 3.787         | 34.109   | 3.752             | 27.103  | 36.220  | 44.932  | 99.390        | 0.728      | 495        |
| 600         | 3.621         | 34.185   | 3.580             | 27.180  | 36.305  | 45.025  | 92.721        | 0.824      | 594        |
| 700         | 3.363         | 34.233   | 3.315             | 27.244  | 36.382  | 45.114  | 87.126        | 0.914      | 693        |
| 800         | 3.221         | 34.283   | 3.167             | 27.297  | 36.443  | 45.181  | 82.574        | 0.999      | 792        |
| 900         | 3.058         | 34.324   | 2.997             | 27.346  | 36.500  | 45.246  | 78.431        | 1.079      | 890        |
| 1000        | 2.927         | 34.367   | 2.860             | 27.392  | 36.553  | 45.305  | 74.445        | 1.155      | 989        |
| 1100        | 2.767         | 34.401   | 2.694             | 27.434  | 36.603  | 45.363  | 70.776        | 1.228      | 1088       |
| 1200        | 2.630         | 34.430   | 2.550             | 27.470  | 36.646  | 45.413  | 67.687        | 1.297      | 1186       |
| 1300        | 2.503         | 34.459   | 2.417             | 27.504  | 36.688  | 45.461  | 64.671        | 1.363      | 1285       |
| 1400        | 2.364         | 34.488   | 2.271             | 27.540  | 36.730  | 45.510  | 61.484        | 1.427      | 1383       |
| 1500        | 2.270         | 34.509   | 2.171             | 27.565  | 36.760  | 45.545  | 59.354        | 1.487      | 1482       |
| 1600        | 2.185         | 34.528   | 2.079             | 27.587  | 36.788  | 45.577  | 57.443        | 1.545      | 1580       |
| 1700        | 2.098         | 34.547   | 1.985             | 27.610  | 36.815  | 45.609  | 55.481        | 1.602      | 1679       |
| 1800        | 2.027         | 34.562   | 1.907             | 27.628  | 36.838  | 45.635  | 53.970        | 1.657      | 1777       |
| 1900        | 1.971         | 34.574   | 1.843             | 27.643  | 36.855  | 45.656  | 52.831        | 1.710      | 1875       |
| 2000        | 1.919         | 34.585   | 1.784             | 27.656  | 36.872  | 45.676  | 51.793        | 1.762      | 1974       |
| 2100        | 1.871         | 34.595   | 1.728             | 27.668  | 36.887  | 45.693  | 50.855        | 1.814      | 2072       |
| 2200        | 1.824         | 34.605   | 1.673             | 27.680  | 36.902  | 45.711  | 49.912        | 1.864      | 2170       |
| 2300        | 1.782         | 34.613   | 1.624             | 27.691  | 36.915  | 45.727  | 49.160        | 1.914      | 2268       |
| 2400        | 1.745         | 34.621   | 1.578             | 27.700  | 36.927  | 45.741  | 48.454        | 1.962      | 2366       |
| 2500        | 1.709         | 34.629   | 1.534             | 27.710  | 36.939  | 45.755  | 47.745        | 2.010      | 2464       |
| 2600        | 1.675         | 34.635   | 1.492             | 27.718  | 36.949  | 45.767  | 47.194        | 2.058      | 2562       |
| 2700        | 1.654         | 34.639   | 1.462             | 27.723  | 36.956  | 45.774  | 46.945        | 2.105      | 2660       |
| 2800        | 1.632         | 34.644   | 1.431             | 27.729  | 36.964  | 45.785  | 46.601        | 2.152      | 2758       |
| 2900        | 1.610         | 34.649   | 1.400             | 27.736  | 36.972  | 45.795  | 46.248        | 2.198      | 2856       |
| 3000        | 1.587         | 34.654   | 1.368             | 27.742  | 36.980  | 45.804  | 45.871        | 2.244      | 2954       |
| 3100        | 1.563         | 34.658   | 1.335             | 27.748  | 36.987  | 45.813  | 45.542        | 2.290      | 3051       |
| 3200        | 1.545         | 34.662   | 1.308             | 27.753  | 36.994  | 45.821  | 45.288        | 2.335      | 3149       |
| 3300        | 1.529         | 34.665   | 1.282             | 27.757  | 36.999  | 45.828  | 45.125        | 2.381      | 3247       |
| 3400        | 1.514         | 34.669   | 1.258             | 27.762  | 37.006  | 45.836  | 44.899        | 2.426      | 3344       |
| 3500        | 1.505         | 34.671   | 1.239             | 27.765  | 37.010  | 45.841  | 44.898        | 2.470      | 3442       |
| 3600        | 1.500         | 34.673   | 1.224             | 27.767  | 37.013  | 45.845  | 44.951        | 2.515      | 3540       |
| 3700        | 1.495         | 34.676   | 1.208             | 27.771  | 37.017  | 45.850  | 44.930        | 2.560      | 3637       |
| 3800        | 1.493         | 34.677   | 1.196             | 27.772  | 37.020  | 45.853  | 45.094        | 2.605      | 3735       |
| 3900        | 1.492         | 34.679   | 1.184             | 27.775  | 37.023  | 45.857  | 45.200        | 2.650      | 3832       |
| 4000        | 1.494         | 34.680   | 1.175             | 27.776  | 37.025  | 45.859  | 45.423        | 2.696      | 3929       |
| 4100        | 1.496         | 34.682   | 1.166             | 27.779  | 37.027  | 45.862  | 45.574        | 2.741      | 4027       |
| 4200        | 1.498         | 34.683   | 1.157             | 27.780  | 37.029  | 45.865  | 45.795        | 2.787      | 4124       |
| 4300        | 1.500         | 34.684   | 1.148             | 27.781  | 37.031  | 45.867  | 46.015        | 2.833      | 4221       |
| 4400        | 1.504         | 34.685   | 1.140             | 27.783  | 37.033  | 45.869  | 46.267        | 2.879      | 4318       |
| 4500        | 1.506         | 34.686   | 1.131             | 27.784  | 37.035  | 45.872  | 46.485        | 2.925      | 4415       |
| 4600        | 1.508         | 34.687   | 1.121             | 27.786  | 37.037  | 45.874  | 46.703        | 2.972      | 4513       |
| 4700        | 1.513         | 34.688   | 1.114             | 27.787  | 37.039  | 45.876  | 46.970        | 3.019      | 4610       |
| 4800        | 1.515         | 34.689   | 1.104             | 27.788  | 37.041  | 45.879  | 47.187        | 3.066      | 4707       |
| 4900        | 1.519         | 34.689   | 1.096             | 27.789  | 37.042  | 45.880  | 47.506        | 3.113      | 4804       |
| 5000        | 1.523         | 34.690   | 1.088             | 27.790  | 37.043  | 45.892  | 47.756        | 3.161      | 4901       |
| 5100        | 1.528         | 34.691   | 1.080             | 27.792  | 37.045  | 45.894  | 48.024        | 3.209      | 4998       |
| 5200        | 1.536         | 34.692   | 1.076             | 27.793  | 37.047  | 45.886  | 48.345        | 3.257      | 5094       |
| 5244        | 1.540         | 34.693   | 1.074             | 27.794  | 37.048  | 45.887  | 48.459        | 3.278      | 5137       |

| NISKIN BOTTLE DATA |               | SALINITY | DIS O2<br>ML/L | O2 SAT<br>% | SIO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUSIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |          |                |             |              |             |             |             |               |                   |         |         |         |             |
| 1                  | 8.691         | 32.363   | 7.52           | 113.7       | 5.3          | 0.69        | 2.6         | 0.12        | 8.691         | 25.101            | 34.007  | 42.520  | 1       |             |
| 52                 | 5.907         | 32.597   | 6.65           | 94.4        | 21.2         | 1.34        | 11.4        | 0.26        | 5.913         | 25.666            | 34.699  | 43.331  | 50      |             |
| 171                | 5.628         | 33.291   | 5.24           | 14.1        | 34.3         | 1.78        | 21.9        | 0.22        | 5.620         | 26.019            | 35.259  | 43.699  | 111     |             |
| 147                | 5.406         | 33.619   | 3.20           | 45.2        | 54.0         |             | 31.9        | 0.01        | 5.394         | 26.535            | 35.577  | 44.219  | 148     |             |
| 197                | 4.915         | 33.927   | 2.46           | 34.4        | 65.2         |             | 36.2        | 0.01        | 4.910         | 26.754            | 35.917  | 44.477  | 198     |             |
| 247                | 4.399         | 33.867   | 1.79           | 24.7        | 77.4         |             | 39.7        | 0.01        | 4.381         | 26.945            | 35.934  | 44.619  | 249     |             |
| 294                | 4.138         | 33.924   | 1.47           | 20.2        | 93.0         | 2.88        | 41.7        | 0.01        | 4.177         | 26.912            | 36.013  | 44.704  | 296     |             |
| 390                | 3.904         | 33.996   | 0.81           | 11.3        | 99.1         | 3.06        | 44.0        | 0.00        | 3.877         | 27.000            | 36.111  | 44.820  | 393     |             |
| 495                | 3.792         | 34.103   | 0.58           | 7.9         | 109.7        | 3.08        | 44.3        | 0.00        | 3.757         | 27.097            | 36.215  | 44.926  | 499     |             |
| 590                | 3.643         | 34.179   | 0.44           | 6.0         | 119.6        | 3.11        | 44.7        | 0.00        | 3.602         | 27.173            | 36.297  | 45.015  | 545     |             |
| 691                | 3.394         | 34.224   | 0.48           | 6.5         | 130.0        | 3.10        | 44.7        | 0.00        | 3.346         | 27.233            | 36.370  | 45.100  | 697     |             |
| 787                | 3.251         | 34.282   | 0.41           | 5.5         | 137.7        | 3.11        | 44.9        | 0.00        | 3.197         | 27.294            | 36.438  | 45.174  | 794     |             |
| 888                | 3.058         | 34.329   | 0.43           | 5.7         | 144.1        | 3.14        | 44.8        | 0.00        | 2.998         | 27.350            | 36.503  | 45.249  | 897     |             |
| 980                | 2.946         | 34.364   | 0.38           | 5.1         | 149.3        | 3.15        | 44.9        | 0.00        | 2.890         | 27.388            | 36.548  | 45.299  | 990     |             |
| 1228               | 2.584         | 34.443   | 0.49           | 6.5         | 162.1        | 3.13        | 45.0        | 0.00        | 2.502         | 27.484            | 36.663  | 45.432  | 1241    |             |
| 1524               | 2.276         | 34.509   | 0.76           | 10.0        | 169.9        | 3.09        | 44.4        | 0.00        | 2.173         | 27.564            | 36.760  | 45.545  | 1542    |             |
| 1743               | 2.067         | 34.556   | 1.06           | 13.8        | 174.2        | 3.03        | 43.7        | 0.00        | 1.949         | 27.620            | 36.827  | 45.623  | 1764    |             |
| 1988               | 1.924         | 34.586   | 1.40           | 18.2        | 175.7        | 2.97        | 43.0        | 0.00        | 1.788         | 27.656            | 36.872  | 45.676  | 2014    |             |
| 2513               | 1.690         | 34.634   | 2.09           | 27.0        | 179.6        | 2.85        | 41.0        | 0.00        | 1.511         | 27.716            | 36.945  | 45.763  | 2549    |             |
| 2996               | 1.580         | 34.656   | 2.59           | 33.3        | 174.6        | 2.74        | 39.6        | 0.00        | 1.358         | 27.744            | 36.983  | 45.808  | 3042    |             |
| 3496               | 1.508         | 34.673   | 3.01           | 38.6        | 172.9        | 2.64        | 38.4        | 0.00        | 1.236         | 27.766            | 37.011  | 45.842  | 3554    |             |
| 3978               | 1.495         | 34.681   | 3.25           | 41.6        | 170.4        | 2.61        | 37.8        | 0.00        | 1.171         | 27.777            | 37.026  | 45.860  | 4049    |             |
| 4427               | 1.505         | 34.685   | 3.41           | 43.6        | 166.8        | 2.57        | 37.3        | 0.00        | 1.129         | 27.783            | 37.034  | 45.871  | 4511    |             |
| 5136               | 1.540         | 34.691   | 3.63           | 46.3        | 160.0        | 2.52        | 36.5        | 0.00        | 1.075         | 27.792            | 37.046  | 45.885  | 5242    |             |

# MARATHON 2 STA. 92



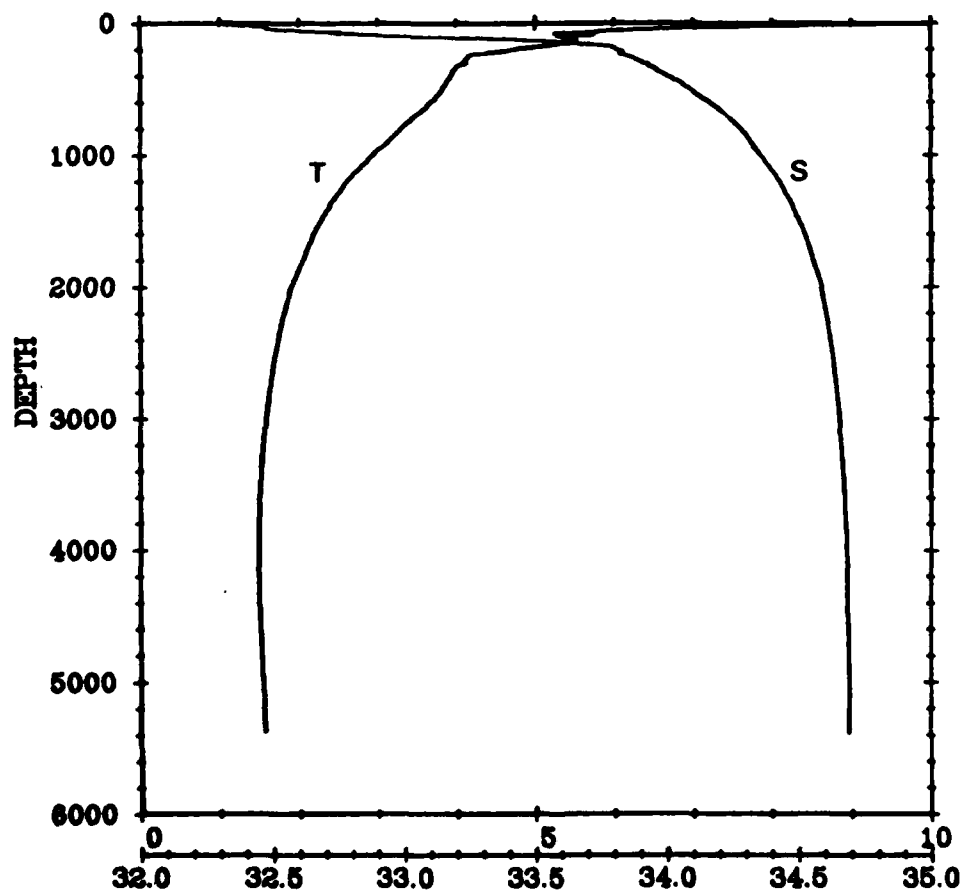
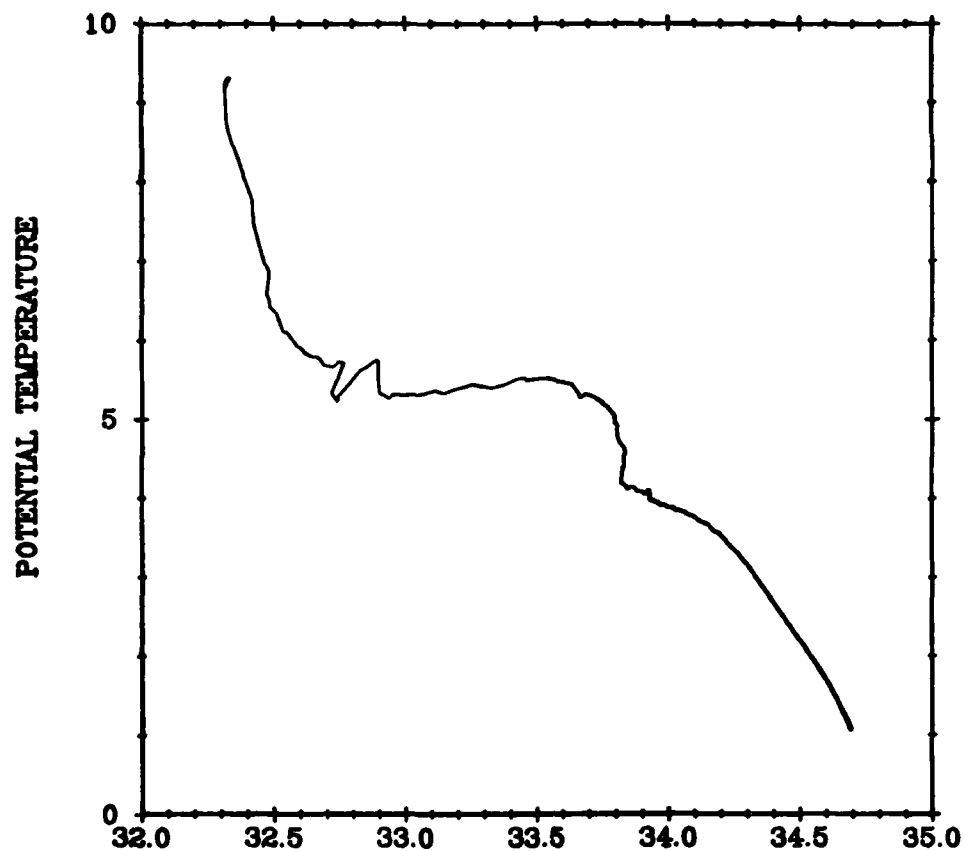
R/V THOMAS WASHINGTON MARATHON LEG II STATION 93

| LATITUDE | LONGITUDE | MO/OY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 55 35.9N | 152 46.3W | 6/ 2/84  | 154        | 5377   | 130  | 4     | 14.4     | 10.6     | 1019.3 |

| CTD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA<br>CL/TON | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |               |            |            |
| 0           | 9.123         | 32.326   | 9.123             | 25.006  | 33.893  | 42.389  | 294.197       | 0.000      | 0          |
| 20          | 8.013         | 32.387   | 8.011             | 25.221  | 34.157  | 42.699  | 274.066       | 0.057      | 19         |
| 40          | 6.676         | 32.482   | 6.673             | 25.479  | 34.476  | 43.076  | 249.730       | 0.109      | 39         |
| 60          | 5.892         | 32.625   | 5.887             | 25.690  | 34.723  | 43.356  | 229.819       | 0.157      | 59         |
| 80          | 5.526         | 32.786   | 5.520             | 25.861  | 34.910  | 43.557  | 213.751       | 0.202      | 79         |
| 100         | 5.405         | 32.978   | 5.397             | 26.027  | 35.079  | 43.729  | 198.179       | 0.243      | 99         |
| 150         | 5.425         | 33.622   | 5.413             | 26.535  | 35.576  | 44.216  | 150.649       | 0.330      | 148        |
| 200         | 4.779         | 33.812   | 4.764             | 26.760  | 35.831  | 44.498  | 129.666       | 0.400      | 198        |
| 250         | 4.162         | 33.849   | 4.144             | 26.856  | 35.957  | 44.654  | 120.758       | 0.463      | 247        |
| 300         | 4.095         | 33.909   | 4.074             | 26.911  | 36.015  | 44.714  | 115.980       | 0.522      | 297        |
| 350         | 3.976         | 33.958   | 3.952             | 26.962  | 36.072  | 44.776  | 111.478       | 0.579      | 347        |
| 400         | 3.922         | 33.999   | 3.894             | 27.001  | 36.113  | 44.819  | 108.247       | 0.634      | 396        |
| 450         | 3.875         | 34.049   | 3.844             | 27.046  | 36.160  | 44.868  | 104.412       | 0.687      | 446        |
| 500         | 3.822         | 34.087   | 3.787             | 27.082  | 36.198  | 44.908  | 101.407       | 0.738      | 495        |
| 600         | 3.680         | 34.160   | 3.638             | 27.154  | 36.277  | 44.994  | 95.217        | 0.837      | 594        |
| 700         | 3.494         | 34.225   | 3.446             | 27.225  | 36.357  | 45.082  | 89.121        | 0.929      | 693        |
| 800         | 3.305         | 34.279   | 3.250             | 27.286  | 36.428  | 45.162  | 83.773        | 1.015      | 792        |
| 900         | 3.137         | 34.319   | 3.076             | 27.335  | 36.484  | 45.227  | 79.655        | 1.097      | 890        |
| 1000        | 2.954         | 34.356   | 2.887             | 27.381  | 36.541  | 45.292  | 75.555        | 1.174      | 989        |
| 1100        | 2.784         | 34.394   | 2.710             | 27.427  | 36.595  | 45.355  | 71.480        | 1.248      | 1088       |
| 1200        | 2.626         | 34.429   | 2.546             | 27.469  | 36.646  | 45.413  | 67.717        | 1.318      | 1186       |
| 1300        | 2.506         | 34.455   | 2.420             | 27.501  | 36.684  | 45.457  | 65.000        | 1.384      | 1285       |
| 1400        | 2.383         | 34.481   | 2.290             | 27.531  | 36.723  | 45.501  | 62.213        | 1.448      | 1383       |
| 1500        | 2.288         | 34.503   | 2.189             | 27.558  | 36.753  | 45.537  | 60.000        | 1.509      | 1482       |
| 1600        | 2.198         | 34.523   | 2.090             | 27.582  | 36.782  | 45.571  | 57.937        | 1.568      | 1580       |
| 1700        | 2.117         | 34.540   | 2.004             | 27.603  | 36.807  | 45.600  | 56.215        | 1.625      | 1679       |
| 1800        | 2.057         | 34.554   | 1.936             | 27.619  | 36.827  | 45.624  | 54.908        | 1.680      | 1777       |
| 1900        | 1.981         | 34.570   | 1.853             | 27.639  | 36.851  | 45.651  | 53.243        | 1.734      | 1875       |
| 2000        | 1.908         | 34.585   | 1.773             | 27.657  | 36.873  | 45.678  | 51.660        | 1.787      | 1974       |
| 2100        | 1.867         | 34.594   | 1.724             | 27.668  | 36.887  | 45.693  | 50.880        | 1.838      | 2072       |
| 2200        | 1.823         | 34.603   | 1.673             | 27.679  | 36.901  | 45.710  | 50.046        | 1.889      | 2170       |
| 2300        | 1.776         | 34.613   | 1.618             | 27.691  | 36.916  | 45.728  | 49.084        | 1.938      | 2268       |
| 2400        | 1.743         | 34.620   | 1.576             | 27.700  | 36.926  | 45.741  | 48.500        | 1.987      | 2366       |
| 2500        | 1.712         | 34.626   | 1.537             | 27.707  | 36.936  | 45.752  | 48.001        | 2.035      | 2464       |
| 2600        | 1.677         | 34.633   | 1.494             | 27.716  | 36.947  | 45.766  | 47.364        | 2.083      | 2562       |
| 2700        | 1.654         | 34.637   | 1.462             | 27.722  | 36.954  | 45.774  | 47.090        | 2.130      | 2660       |
| 2800        | 1.626         | 34.643   | 1.425             | 27.729  | 36.964  | 45.786  | 46.593        | 2.177      | 2758       |
| 2900        | 1.599         | 34.648   | 1.390             | 27.736  | 36.972  | 45.796  | 46.169        | 2.223      | 2856       |
| 3000        | 1.581         | 34.652   | 1.362             | 27.741  | 36.979  | 45.804  | 45.931        | 2.269      | 2954       |
| 3100        | 1.564         | 34.656   | 1.336             | 27.746  | 36.986  | 45.812  | 45.699        | 2.315      | 3051       |
| 3200        | 1.543         | 34.660   | 1.306             | 27.751  | 36.993  | 45.820  | 45.402        | 2.361      | 3149       |
| 3300        | 1.531         | 34.663   | 1.284             | 27.755  | 36.997  | 45.826  | 45.298        | 2.406      | 3247       |
| 3400        | 1.516         | 34.666   | 1.260             | 27.759  | 37.003  | 45.833  | 45.143        | 2.451      | 3344       |
| 3500        | 1.506         | 34.669   | 1.240             | 27.763  | 37.008  | 45.839  | 45.055        | 2.496      | 3442       |
| 3600        | 1.498         | 34.671   | 1.222             | 27.766  | 37.012  | 45.844  | 45.063        | 2.541      | 3540       |
| 3700        | 1.491         | 34.674   | 1.204             | 27.770  | 37.016  | 45.849  | 45.011        | 2.586      | 3637       |
| 3800        | 1.486         | 34.676   | 1.189             | 27.772  | 37.020  | 45.854  | 45.057        | 2.631      | 3735       |
| 3900        | 1.481         | 34.678   | 1.173             | 27.775  | 37.023  | 45.859  | 45.099        | 2.677      | 3832       |
| 4000        | 1.480         | 34.680   | 1.162             | 27.777  | 37.026  | 45.861  | 45.201        | 2.722      | 3929       |
| 4100        | 1.482         | 34.681   | 1.153             | 27.779  | 37.028  | 45.864  | 45.420        | 2.767      | 4027       |
| 4200        | 1.483         | 34.682   | 1.142             | 27.780  | 37.030  | 45.866  | 45.622        | 2.813      | 4124       |
| 4300        | 1.485         | 34.683   | 1.133             | 27.782  | 37.032  | 45.869  | 45.839        | 2.858      | 4221       |
| 4400        | 1.490         | 34.684   | 1.127             | 27.783  | 37.034  | 45.871  | 46.104        | 2.904      | 4318       |
| 4500        | 1.494         | 34.685   | 1.119             | 27.784  | 37.036  | 45.873  | 46.354        | 2.950      | 4416       |
| 4600        | 1.499         | 34.686   | 1.112             | 27.786  | 37.037  | 45.875  | 46.619        | 2.997      | 4513       |
| 4700        | 1.505         | 34.686   | 1.106             | 27.786  | 37.038  | 45.876  | 46.973        | 3.044      | 4610       |
| 4800        | 1.510         | 34.687   | 1.099             | 27.787  | 37.040  | 45.878  | 47.239        | 3.091      | 4707       |
| 4900        | 1.516         | 34.688   | 1.093             | 27.788  | 37.041  | 45.880  | 47.523        | 3.138      | 4804       |
| 5000        | 1.524         | 34.688   | 1.089             | 27.789  | 37.042  | 45.882  | 47.913        | 3.186      | 4901       |
| 5100        | 1.531         | 34.689   | 1.083             | 27.790  | 37.043  | 45.883  | 48.216        | 3.234      | 4998       |
| 5200        | 1.540         | 34.689   | 1.080             | 27.790  | 37.044  | 45.883  | 48.625        | 3.282      | 5094       |
| 5300        | 1.549         | 34.690   | 1.076             | 27.791  | 37.045  | 45.885  | 48.967        | 3.331      | 5191       |
| 5400        | 1.558         | 34.690   | 1.072             | 27.792  | 37.045  | 45.885  | 49.179        | 3.380      | 5288       |
| 5492        | 1.568         | 34.690   | 1.070             | 27.792  | 37.046  | 45.885  | 49.792        | 3.426      | 5377       |

| WISKIN BOTTLE DATA |               | SALINITY | DIS O2<br>ML/L | O2 SAT<br>% | SIO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUBIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
|--------------------|---------------|----------|----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C |          |                |             |              |             |             |             |               |                   |         |         |         |             |
| 1                  | 9.800         | 32.322   | 7.73           | 119.8       | 2.3          | 0.55        | 1.0         | 0.13        | 3.800         | 24.895            | 33.752  | 42.220  | 1       |             |
| 50                 | 6.124         | 32.531   | 6.71           | 95.5        | 19.8         | 1.24        | 12.2        | 0.32        | 6.020         | 25.600            | 34.627  | 43.256  | 50      |             |
| 99                 | 5.584         | 32.935   | 5.16           | 75.6        | 31.4         | 1.72        | 21.3        | 0.02        | 5.576         | 25.972            | 35.016  | 43.658  | 99      |             |
| 146                | 5.552         | 33.577   | 3.19           | 47.9        | 51.1         | 2.24        | 31.2        | 0.01        | 5.540         | 26.484            | 35.520  | 44.155  | 147     |             |
| 191                | 4.945         | 33.799   | 2.53           | 35.4        | 63.9         | 2.51        | 16.1        | 0.01        | 4.930         | 26.730            | 35.752  | 44.452  | 192     |             |
| 292                | 4.182         | 33.909   | 1.17           | 18.8        | 94.9         | 2.91        | 41.9        | 0.01        | 4.161         | 26.902            | 36.001  | 44.696  | 294     |             |
| 392                | 3.931         | 34.009   | 0.75           | 10.2        | 99.8         | 3.06        | 44.2        | 0.01        | 3.903         | 27.008            | 36.119  | 44.925  | 395     |             |
| 492                | 3.778         | 34.102   | 0.59           | 8.0         | 107.5        | 3.39        | 44.5        | 0.01        | 3.744         | 27.099            | 36.216  | 44.928  | 496     |             |
| 589                | 3.631         | 34.178   | 0.46           | 6.2         | 119.5        | 3.11        | 44.7        | 0.00        | 3.590         | 27.173            | 36.298  | 45.017  | 594     |             |
| 691                | 3.453         | 34.239   | 0.39           | 5.3         | 128.2        | 3.13        | 44.9        | 0.00        | 3.405         | 27.247            | 36.373  | 45.100  | 697     |             |
| 789                | 3.279         | 34.286   | 0.37           | 5.0         | 135.7        | 3.14        | 45.0        | 0.00        | 3.225         | 27.294            | 36.437  | 45.172  | 796     |             |
| 885                | 3.110         | 34.326   | 0.36           | 4.8         | 143.1        | 3.13        | 45.1        | 0.00        | 3.050         | 27.343            | 36.494  | 45.237  | 894     |             |
| 985                | 2.942         | 34.361   | 0.39           | 5.2         | 149.8        | 3.15        | 45.1        | 0.00        | 2.875         | 27.386            | 36.546  | 45.298  | 995     |             |
| 1231               | 2.572         | 34.443   | 0.49           | 6.5         | 160.6        | 3.13        | 45.0        | 0.00        | 2.489         | 27.485            | 36.665  | 45.434  | 1244    |             |
| 1500               | 2.272         | 34.508   | 0.73           | 9.6         | 169.2        | 3.09        | 44.5        | 0.00        | 2.171         | 27.564            | 36.759  | 45.544  | 1517    |             |
| 1726               | 2.086         | 34.550   | 1.05           | 13.7        | 174.0        | 3.02        | 43.8        | 0.00        | 1.967         | 27.614            | 36.820  | 45.615  | 1747    |             |
| 1967               | 1.924         | 34.584   | 1.37           | 17.8        | 177.1        | 2.96        | 43.0        | 0.00        | 1.790         | 27.655            | 36.870  | 45.674  | 1992    |             |
| 2466               | 1.719         | 34.628   | 2.01           | 26.0        | 177.3        | 2.84        | 43.4        | 0.00        | 1.544         | 27.708            | 36.937  | 45.752  | 2501    |             |
| 2964               | 1.594         | 34.655   | 2.56           | 32.9        | 171.0        | 2.74        | 39.6        | 0.00        | 1.365         | 27.743            | 36.981  | 45.805  | 3010    |             |
| 3444               | 1.475         | 34.671   | 2.99           | 38.3        | 169.6        | 2.64        | 38.5        | 0.00        | 1.239         | 27.765            | 37.009  | 45.840  | 3501    |             |
| 3921               | 1.488         | 34.679   | 3.27           | 41.8        | 169.6        | 2.59        | 37.8        | 0.00        | 1.171         | 27.776            | 37.024  | 45.859  | 3993    |             |
| 4418               | 1.494         | 34.683   | 3.46           | 44.2        | 164.8        | 2.54        | 37.0        | 0.00        | 1.120         | 27.784            | 37.035  | 45.873  | 4502    |             |
| 4880               | 1.523         | 34.688   | 3.58           | 45.7        | 160.4        | 2.53        | 36.7        | 0.00        | 1.091         | 27.788            | 37.041  | 45.880  | 4978    |             |
| 5375               | 1.568         | 34.691   | 3.66           | 46.7        | 157.3        | 2.51        | 36.4        | 0.00        | 1.071         | 27.792            | 37.046  | 45.886  | 5489    |             |

# MARATHON 2 STA. 93

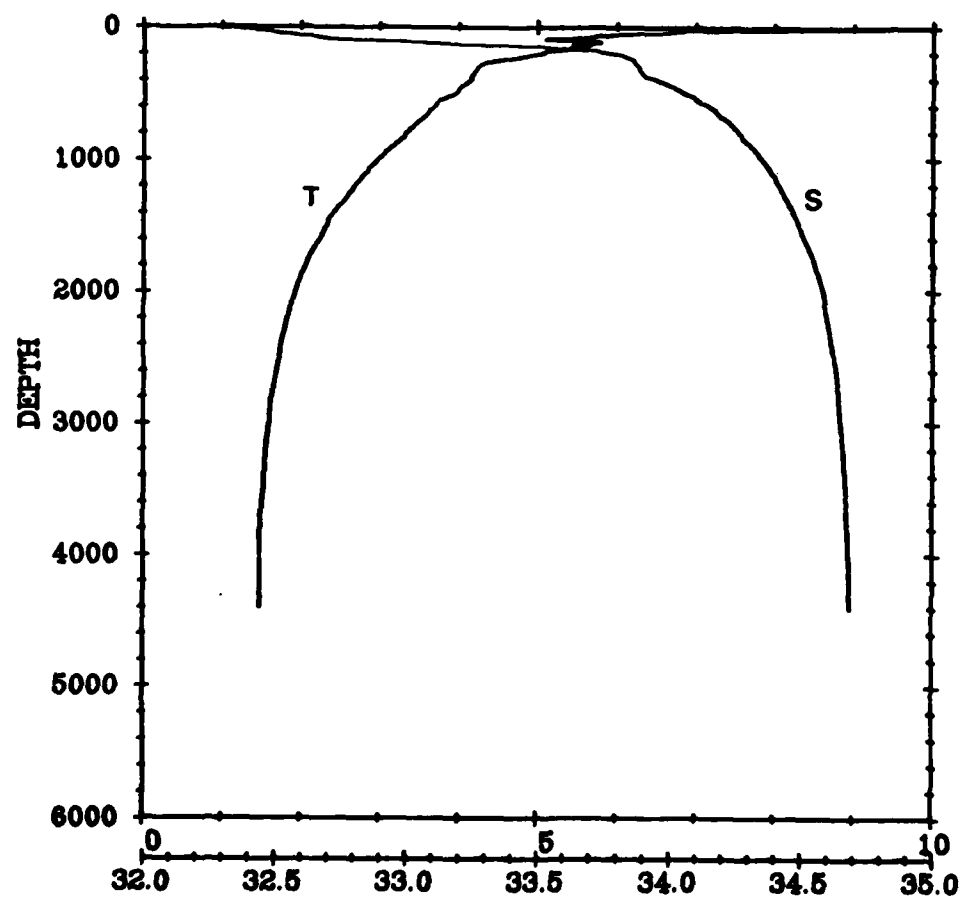
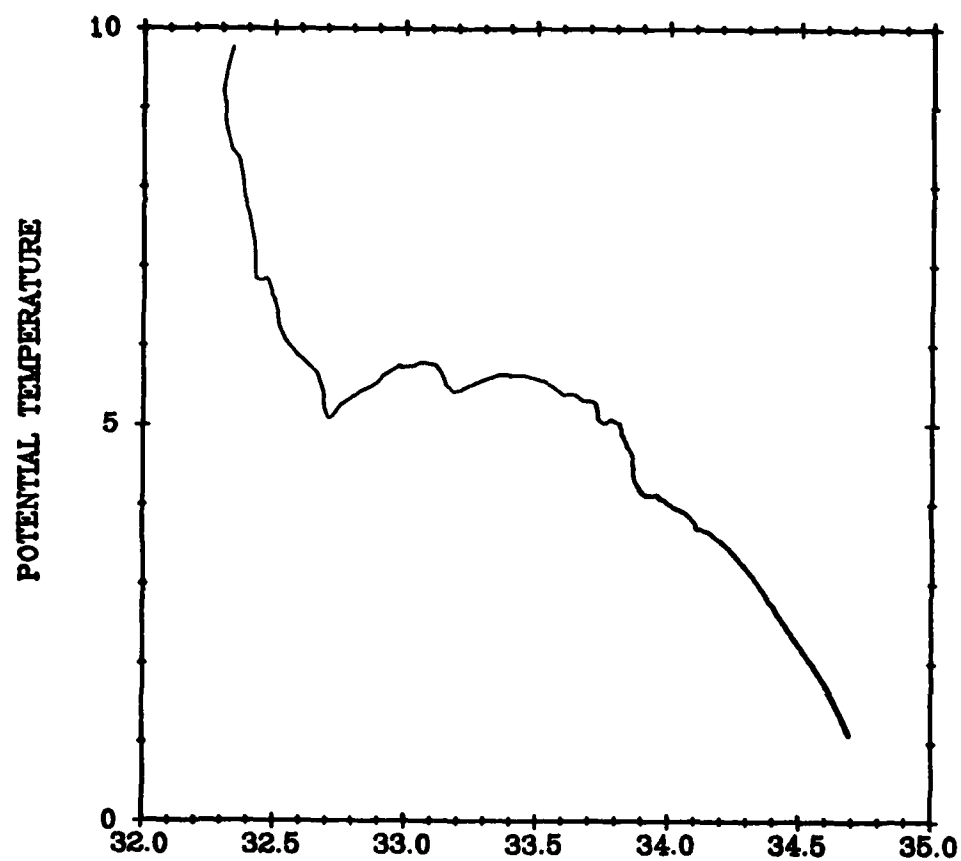


R/V THOMAS WASHINGTON MARATHON LEO II STATION 94  
 LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
 55 46.6N 152 53.0W 5/ 2/84 0806 4405 140 10 8 9 7 8 1019 0

| CTD DATA PRESS DB | TEMP DEG C | SALINITY | POT TEMP DEG C | SIGMA 3 | SIGMA 2 | SIGMA 4 | SVA CL/TON | DYNAMIC HT | DEPTH M |
|-------------------|------------|----------|----------------|---------|---------|---------|------------|------------|---------|
| 0                 | 9.251      | 32.320   | 9.251          | 24.981  | 33.863  | 42.354  | 296.555    | 0.000      | 0       |
| 10                | 9.844      | 32.386   | 7.842          | 25.244  | 34.188  | 42.718  | 271.829    | 0.057      | 19      |
| 20                | 6.619      | 32.487   | 6.616          | 25.492  | 34.492  | 43.093  | 248.500    | 0.109      | 39      |
| 30                | 5.970      | 32.574   | 5.965          | 25.641  | 34.671  | 43.301  | 234.554    | 0.157      | 59      |
| 40                | 5.510      | 32.670   | 5.504          | 25.771  | 34.823  | 43.472  | 222.277    | 0.203      | 79      |
| 50                | 5.386      | 32.814   | 5.378          | 25.900  | 34.955  | 43.609  | 210.273    | 0.246      | 99      |
| 60                | 5.572      | 33.479   | 5.560          | 26.405  | 35.441  | 44.076  | 163.063    | 0.339      | 148     |
| 70                | 5.056      | 33.775   | 5.041          | 26.700  | 35.757  | 44.412  | 135.517    | 0.414      | 198     |
| 80                | 4.592      | 33.859   | 4.574          | 26.818  | 35.888  | 44.574  | 124.582    | 0.479      | 248     |
| 90                | 4.242      | 33.878   | 4.221          | 26.871  | 35.991  | 44.661  | 119.851    | 0.540      | 297     |
| 100               | 4.177      | 33.893   | 4.152          | 26.890  | 36.037  | 44.734  | 114.624    | 0.598      | 347     |
| 110               | 4.142      | 33.945   | 4.113          | 26.935  | 36.101  | 44.802  | 109.417    | 0.658      | 396     |
| 120               | 4.029      | 34.004   | 3.997          | 26.994  | 36.149  | 44.854  | 105.562    | 0.714      | 446     |
| 130               | 3.952      | 34.050   | 3.917          | 27.039  | 36.265  | 44.980  | 96.338     | 0.768      | 495     |
| 140               | 3.701      | 34.148   | 3.659          | 27.143  | 36.340  | 45.063  | 90.563     | 0.869      | 544     |
| 150               | 3.538      | 34.263   | 3.489          | 27.210  | 36.407  | 45.139  | 85.558     | 0.962      | 593     |
| 160               | 3.360      | 34.309   | 3.305          | 27.268  | 36.469  | 45.209  | 80.973     | 1.050      | 642     |
| 170               | 3.190      | 34.350   | 3.129          | 27.322  | 36.529  | 45.277  | 76.567     | 1.134      | 691     |
| 180               | 3.006      | 34.386   | 2.938          | 27.372  | 36.581  | 45.338  | 72.308     | 1.212      | 740     |
| 190               | 2.842      | 34.414   | 2.768          | 27.416  | 36.624  | 45.388  | 68.132     | 1.287      | 789     |
| 200               | 2.699      | 34.440   | 2.619          | 27.451  | 36.662  | 45.432  | 64.031     | 1.358      | 838     |
| 210               | 2.580      | 34.469   | 2.493          | 27.483  | 36.705  | 45.481  | 60.000     | 1.426      | 887     |
| 220               | 2.441      | 34.493   | 2.348          | 27.518  | 36.739  | 45.521  | 56.148     | 1.492      | 936     |
| 230               | 2.334      | 34.511   | 2.234          | 27.547  | 36.765  | 45.551  | 52.468     | 1.554      | 985     |
| 240               | 2.236      | 34.533   | 2.149          | 27.568  | 36.796  | 45.587  | 48.957     | 1.615      | 1034    |
| 250               | 2.159      | 34.552   | 2.045          | 27.594  | 36.823  | 45.618  | 45.587     | 1.673      | 1083    |
| 260               | 2.076      | 34.568   | 1.955          | 27.616  | 36.847  | 45.647  | 42.354     | 1.729      | 1132    |
| 270               | 1.997      | 34.581   | 1.869          | 27.636  | 36.867  | 45.670  | 39.269     | 1.784      | 1181    |
| 280               | 1.915      | 34.592   | 1.800          | 27.652  | 36.883  | 45.689  | 36.229     | 1.837      | 1230    |
| 290               | 1.835      | 34.600   | 1.742          | 27.665  | 36.895  | 45.703  | 33.246     | 1.888      | 1279    |
| 300               | 1.855      | 34.609   | 1.694          | 27.675  | 36.909  | 45.719  | 30.317     | 1.939      | 1328    |
| 310               | 1.847      | 34.618   | 1.645          | 27.686  | 36.922  | 45.735  | 27.448     | 1.989      | 1377    |
| 320               | 1.804      | 34.624   | 1.595          | 27.697  | 36.932  | 45.748  | 24.629     | 2.039      | 1426    |
| 330               | 1.762      | 34.631   | 1.555          | 27.704  | 36.943  | 45.761  | 21.857     | 2.087      | 1475    |
| 340               | 1.710      | 34.634   | 1.511          | 27.713  | 36.953  | 45.772  | 19.132     | 2.135      | 1524    |
| 350               | 1.635      | 34.642   | 1.474          | 27.721  | 36.962  | 45.783  | 16.457     | 2.183      | 1573    |
| 360               | 1.666      | 34.647   | 1.433          | 27.728  | 36.970  | 45.792  | 13.832     | 2.230      | 1622    |
| 370               | 1.634      | 34.650   | 1.404          | 27.734  | 36.975  | 45.799  | 11.257     | 2.277      | 1671    |
| 380               | 1.614      | 34.654   | 1.380          | 27.738  | 36.981  | 45.807  | 8.732      | 2.323      | 1720    |
| 390               | 1.599      | 34.659   | 1.352          | 27.743  | 36.989  | 45.817  | 6.257      | 2.369      | 1769    |
| 400               | 1.580      | 34.662   | 1.320          | 27.749  | 36.995  | 45.823  | 3.832      | 2.415      | 1818    |
| 410               | 1.537      | 34.665   | 1.296          | 27.754  | 37.000  | 45.830  | 1.457      | 2.461      | 1867    |
| 420               | 1.543      | 34.668   | 1.274          | 27.757  | 37.005  | 45.835  | 0.032      | 2.506      | 1916    |
| 430               | 1.531      | 34.671   | 1.255          | 27.761  | 37.010  | 45.842  | 0.000      | 2.551      | 1965    |
| 440               | 1.522      | 34.674   | 1.233          | 27.765  | 37.016  | 45.848  | 0.000      | 2.597      | 2014    |
| 450               | 1.510      | 34.677   | 1.212          | 27.769  | 37.019  | 45.852  | 0.000      | 2.642      | 2063    |
| 460               | 1.499      | 34.679   | 1.196          | 27.772  | 37.024  | 45.859  | 0.000      | 2.687      | 2112    |
| 470               | 1.493      | 34.682   | 1.173          | 27.776  | 37.025  | 45.861  | 0.000      | 2.732      | 2161    |
| 480               | 1.482      | 34.685   | 1.153          | 27.777  | 37.025  | 45.865  | 0.000      | 2.777      | 2210    |
| 490               | 1.481      | 34.688   | 1.149          | 27.780  | 37.032  | 45.868  | 0.000      | 2.823      | 2259    |
| 500               | 1.478      | 34.691   | 1.139          | 27.781  | 37.034  | 45.871  | 0.000      | 2.868      | 2308    |
| 510               | 1.479      | 34.693   | 1.128          | 27.784  | 37.035  | 45.873  | 0.000      | 2.914      | 2357    |
| 520               | 1.480      | 34.695   | 1.121          | 27.784  | 37.039  | 45.877  | 0.000      | 2.959      | 2406    |
| 530               | 1.484      | 34.687   | 1.106          | 27.787  | 37.039  | 45.877  | 0.000      | 2.998      | 2455    |

|                    |       |          |        |        |        |        |      |      |       |          |         |         |         |          |
|--------------------|-------|----------|--------|--------|--------|--------|------|------|-------|----------|---------|---------|---------|----------|
| 300                | 1.480 | 14.685   | 1.121  | 27.787 | 17.239 | 45.577 |      |      |       |          |         |         |         |          |
| 4400               | 1.484 | 14.687   | 1.106  |        |        |        |      |      |       |          |         |         |         |          |
| 4494               | 1.479 | 14.687   |        |        |        |        |      |      |       |          |         |         |         |          |
| MISKIN BOTTLE DATA |       |          |        |        |        |        |      |      |       |          |         |         |         |          |
| DEPTH              | TEMP  | SALINITY | DIS O3 | O2 SAT | SIG01  | PO4    | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS DB |
| M                  | DEG C |          | ML/L   | %      | UM/L   | UM/L   | UM/L | UM/L | TUBIN | DEG C    |         |         |         |          |
| 1                  | 9.423 | 32.296   | 7.75   | 119.2  | 1.6    | 0.47   | 0.7  | 0.02 | 9.423 | 24.935   | 33.809  | 42.293  | 1       | 21       |
| 21                 | 8.401 | 32.342   | 7.41   | 114.3  | 1.4    | 0.73   | 2.5  | 0.08 | 8.199 | 25.129   | 34.048  | 42.574  | 21      | 54       |
| 31                 | 6.210 | 32.512   | 6.84   | 97.8   | 20.0   | 1.19   | 11.3 | 0.27 | 6.225 | 25.559   | 34.578  | 43.197  | 31      | 103      |
| 41                 | 5.413 | 32.799   | 6.32   | 88.7   | 29.7   | 1.56   | 18.4 | 0.31 | 5.405 | 25.885   | 34.938  | 43.591  | 41      | 158      |
| 51                 | 5.095 | 33.778   | 3.79   | 53.7   | 48.2   | 2.14   | 29.3 | 0.12 | 5.625 | 26.154   | 35.397  | 44.320  | 51      | 204      |
| 61                 | 4.465 | 33.857   | 2.52   | 35.3   | 64.3   | 2.55   | 36.4 | 0.00 | 5.079 | 26.698   | 35.752  | 44.426  | 61      | 254      |
| 71                 | 4.283 | 33.873   | 1.85   | 25.6   | 77.4   | 2.81   | 40.4 | 0.00 | 4.447 | 26.830   | 35.915  | 44.598  | 71      | 300      |
| 81                 | 4.129 | 33.940   | 1.54   | 22.5   | 81.9   | 2.85   | 41.5 | 0.00 | 4.262 | 26.863   | 35.958  | 44.648  | 81      | 403      |
| 91                 | 3.974 | 34.032   | 1.19   | 15.3   | 91.7   | 2.97   | 44.7 | 0.00 | 4.170 | 26.933   | 36.035  | 44.732  | 91      | 503      |
| 101                | 3.720 | 34.142   | 0.81   | 11.1   | 101.8  | 3.10   | 45.2 | 0.00 | 3.939 | 27.022   | 36.132  | 44.835  | 101     | 601      |
| 111                | 3.564 | 34.207   | 0.56   | 7.5    | 117.8  | 3.14   | 45.6 | 0.00 | 3.658 | 27.138   | 36.260  | 44.976  | 111     | 701      |
| 121                | 3.427 | 34.251   | 0.44   | 5.0    | 125.9  | 3.18   | 45.7 | 0.00 | 3.515 | 27.204   | 36.332  | 45.054  | 121     | 799      |
| 131                | 3.314 | 34.261   | 0.40   | 5.4    | 134.3  | 3.19   | 45.7 | 0.00 | 3.319 | 27.266   | 36.471  | 45.193  | 131     | 898      |
| 141                | 3.229 | 34.299   | 0.39   | 5.2    | 142.2  | 3.19   | 45.7 | 0.00 | 3.165 | 27.310   | 36.455  | 45.272  | 141     | 1011     |
| 151                | 3.173 | 34.345   | 0.37   | 4.9    | 147.9  | 3.19   | 45.7 | 0.00 | 2.954 | 27.369   | 36.524  | 45.422  | 151     | 1257     |
| 161                | 3.123 | 34.345   | 0.32   | 6.3    | 153.0  | 3.12   | 45.3 | 0.00 | 2.519 | 27.476   | 36.603  | 45.523  | 161     | 1514     |
| 171                | 3.003 | 34.434   | 0.29   | 9.1    | 177.1  | 3.07   | 44.6 | 0.00 | 2.233 | 27.548   | 36.741  | 45.607  | 171     | 1758     |
| 181                | 2.834 | 34.546   | 0.28   | 12.9   | 179.0  | 3.01   | 43.4 | 0.00 | 1.991 | 27.559   | 36.871  | 45.675  | 181     | 2039     |
| 191                | 2.629 | 34.629   | 0.25   | 17.9   | 180.5  | 2.88   | 41.8 | 0.00 | 1.787 | 27.556   | 36.939  | 45.755  | 191     | 2551     |
| 201                | 2.415 | 34.654   | 0.24   | 26.3   | 179.4  | 2.77   | 40.3 | 0.00 | 1.531 | 27.710   | 36.939  | 45.824  | 201     | 3055     |
| 211                | 2.199 | 34.668   | 0.23   | 32.8   | 175.2  | 2.59   | 39.2 | 0.00 | 1.367 | 27.742   | 36.980  | 45.835  | 211     | 3494     |
| 221                | 1.980 | 34.683   | 0.27   | 37.8   | 170.5  | 2.53   | 38.0 | 0.00 | 1.254 | 27.761   | 37.026  | 45.861  | 221     | 3989     |
| 231                | 1.760 | 34.687   | 0.27   | 41.8   | 165.7  | 2.57   | 37.4 | 0.00 | 1.163 | 27.777   | 37.038  | 45.876  | 231     | 4477     |
| 241                | 1.540 | 34.687   | 0.27   | 44.5   | 165.7  | 2.57   | 37.4 | 0.00 | 1.108 | 27.787   | 37.038  | 45.876  | 241     |          |

# MARATHON 2 STA. 94



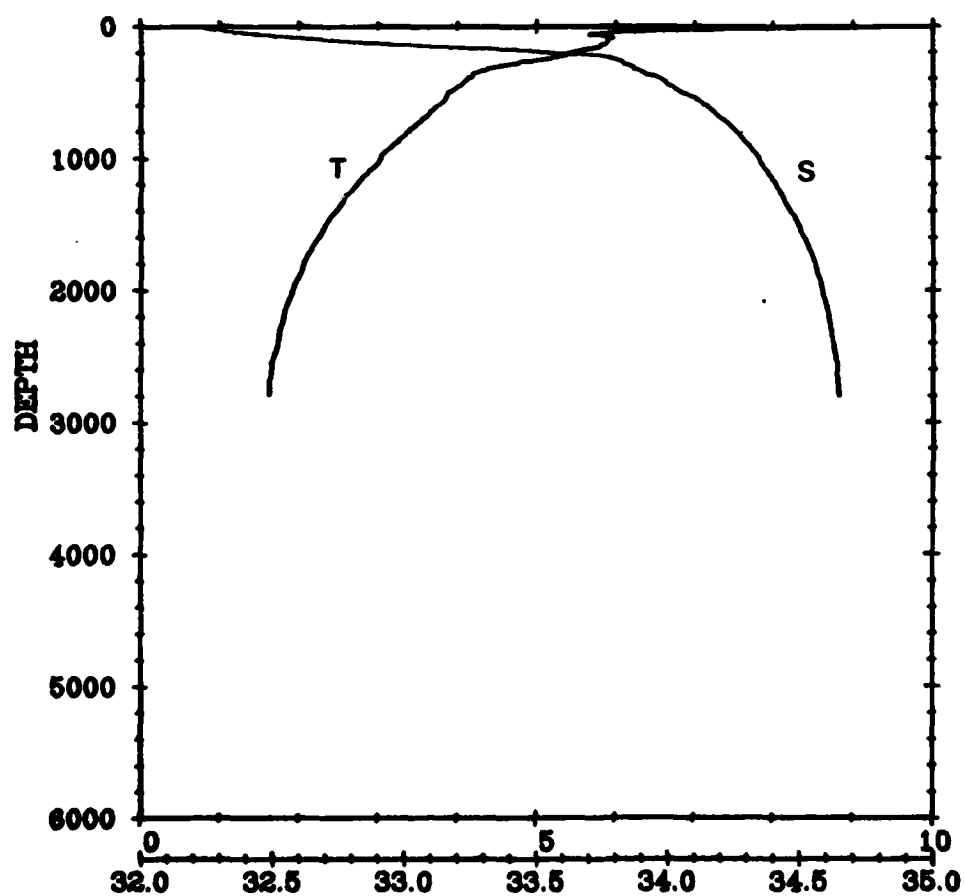
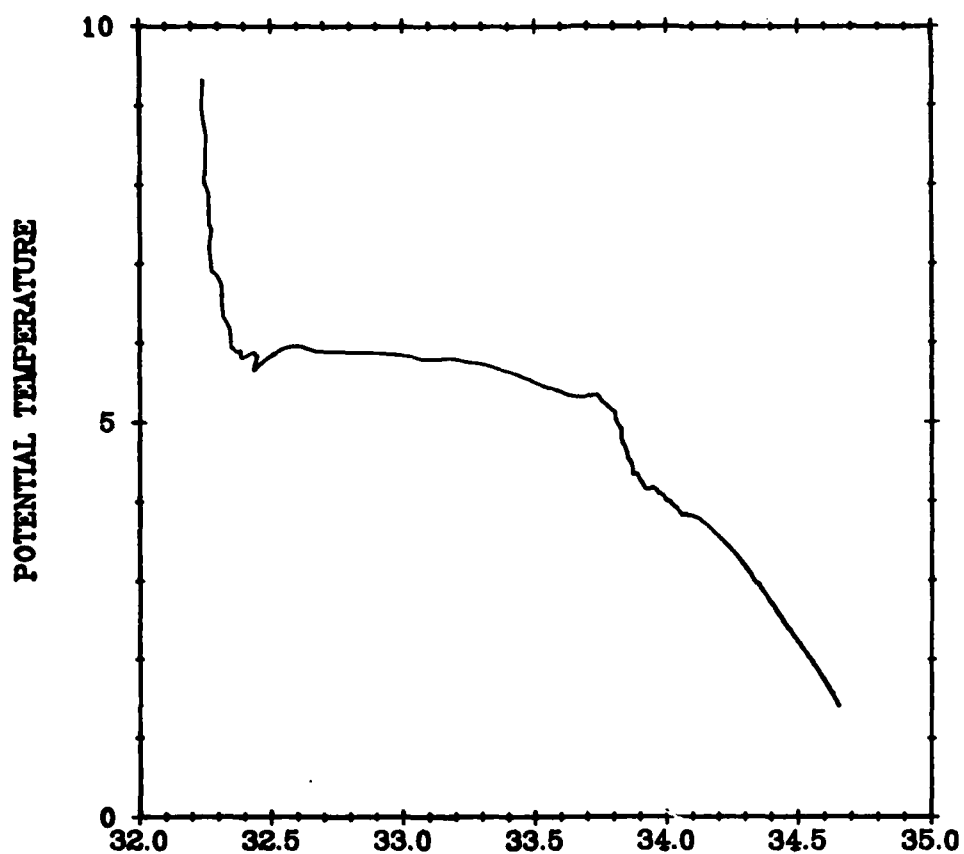
R/V THOMAS WASHINGTON MARATHON LEG II STATION 95

LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
55 56.38 152 57.6W 6/ 2/84 1336 2665 140 8 8.3 7.2 1015.9

| CTD DATA |       |          |          |         |         |         |         |            |       |
|----------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DEP      | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH |
| DB       | DEG C |          | DEG C    |         |         |         | CL/TOW  |            | M     |
| 0        | 9.205 | 32.241   | 9.205    | 24.927  | 33.811  | 42.305  | 301.746 | 0.000      | 0     |
| 20       | 7.763 | 32.263   | 7.761    | 25.159  | 34.109  | 42.663  | 279.919 | 0.058      | 19    |
| 40       | 6.277 | 32.336   | 6.274    | 25.414  | 34.433  | 43.053  | 255.813 | 0.112      | 39    |
| 60       | 5.800 | 32.428   | 5.795    | 25.546  | 34.586  | 43.226  | 243.537 | 0.162      | 59    |
| 80       | 5.901 | 32.538   | 5.895    | 25.620  | 34.655  | 43.288  | 236.660 | 0.210      | 79    |
| 100      | 5.916 | 32.667   | 5.908    | 25.721  | 34.752  | 43.384  | 227.376 | 0.256      | 99    |
| 150      | 5.816 | 33.088   | 5.804    | 26.066  | 35.096  | 43.726  | 195.201 | 0.362      | 148   |
| 200      | 5.458 | 33.547   | 5.442    | 26.472  | 35.513  | 44.153  | 157.192 | 0.450      | 198   |
| 250      | 5.125 | 33.798   | 5.106    | 26.710  | 35.764  | 44.416  | 135.099 | 0.523      | 248   |
| 300      | 4.587 | 33.853   | 4.565    | 26.814  | 35.894  | 44.571  | 125.446 | 0.588      | 297   |
| 350      | 4.266 | 33.902   | 4.241    | 26.888  | 35.984  | 44.675  | 118.743 | 0.649      | 347   |
| 400      | 4.137 | 33.970   | 4.108    | 26.956  | 36.057  | 44.754  | 112.699 | 0.707      | 396   |
| 450      | 4.041 | 34.001   | 4.009    | 26.991  | 36.097  | 44.798  | 109.770 | 0.763      | 446   |
| 500      | 3.904 | 34.047   | 3.869    | 27.042  | 36.154  | 44.861  | 105.271 | 0.816      | 495   |
| 600      | 3.777 | 34.138   | 3.735    | 27.127  | 36.245  | 44.958  | 97.903  | 0.918      | 594   |
| 700      | 3.594 | 34.200   | 3.545    | 27.195  | 36.322  | 45.043  | 92.064  | 1.013      | 693   |
| 800      | 3.398 | 34.257   | 3.343    | 27.260  | 36.397  | 45.127  | 86.418  | 1.102      | 792   |
| 900      | 3.212 | 34.301   | 3.150    | 27.313  | 36.460  | 45.198  | 81.808  | 1.186      | 890   |
| 1000     | 3.032 | 34.344   | 2.964    | 27.365  | 36.520  | 45.267  | 77.296  | 1.266      | 989   |
| 1100     | 2.902 | 34.373   | 2.828    | 27.400  | 36.562  | 45.316  | 74.331  | 1.342      | 1088  |
| 1200     | 2.739 | 34.407   | 2.658    | 27.442  | 36.613  | 45.375  | 70.593  | 1.414      | 1186  |
| 1300     | 2.591 | 34.437   | 2.504    | 27.479  | 36.658  | 45.427  | 67.276  | 1.483      | 1285  |
| 1400     | 2.487 | 34.462   | 2.393    | 27.509  | 36.693  | 45.467  | 64.783  | 1.549      | 1384  |
| 1500     | 2.352 | 34.492   | 2.252    | 27.544  | 36.736  | 45.517  | 61.536  | 1.612      | 1482  |
| 1600     | 2.266 | 34.511   | 2.159    | 27.567  | 36.764  | 45.549  | 59.623  | 1.673      | 1580  |
| 1700     | 2.159 | 34.534   | 2.045    | 27.595  | 36.797  | 45.588  | 57.143  | 1.731      | 1679  |
| 1800     | 2.066 | 34.554   | 1.945    | 27.619  | 36.826  | 45.622  | 55.014  | 1.787      | 1777  |
| 1900     | 2.005 | 34.567   | 1.877    | 27.634  | 36.845  | 45.645  | 53.748  | 1.842      | 1876  |
| 2000     | 1.929 | 34.583   | 1.794    | 27.654  | 36.869  | 45.672  | 52.059  | 1.895      | 1974  |
| 2100     | 1.870 | 34.595   | 1.727    | 27.668  | 36.887  | 45.694  | 50.843  | 1.946      | 2072  |
| 2200     | 1.808 | 34.608   | 1.658    | 27.684  | 36.906  | 45.716  | 49.496  | 1.996      | 2170  |
| 2300     | 1.768 | 34.615   | 1.610    | 27.693  | 36.918  | 45.730  | 48.838  | 2.045      | 2268  |
| 2400     | 1.731 | 34.623   | 1.565    | 27.703  | 36.930  | 45.745  | 48.129  | 2.094      | 2366  |
| 2500     | 1.695 | 34.630   | 1.520    | 27.712  | 36.941  | 45.758  | 47.491  | 2.142      | 2464  |
| 2600     | 1.647 | 34.639   | 1.464    | 27.723  | 36.956  | 45.775  | 46.536  | 2.189      | 2562  |
| 2700     | 1.636 | 34.642   | 1.444    | 27.727  | 36.961  | 45.781  | 46.489  | 2.235      | 2660  |
| 2800     | 1.620 | 34.646   | 1.420    | 27.732  | 36.967  | 45.789  | 46.295  | 2.282      | 2758  |
| 2834     | 1.619 | 34.647   | 1.415    | 27.733  | 36.968  | 45.790  | 46.314  | 2.297      | 2791  |

| NISKIN BOTTLE DATA |       |          |        |        |       |      |      |      |       |          |         |         |          |
|--------------------|-------|----------|--------|--------|-------|------|------|------|-------|----------|---------|---------|----------|
| DEPTH              | TEMP  | SALINITY | DIS O2 | O2 SAT | SIO3  | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4  |
| M                  | DEG C |          | ML/L   | %      | UM/L  | UM/L | UM/L | UM/L | TUSIN | DEG C    |         |         | PRESS DB |
| 1                  | 9.054 | 32.252   | 7.55   | 115.0  | 1.7   | 0.36 | 0.0  | 0.00 | 4.72  | 9.054    | 24.959  | 33.850  | 42.350   |
| 21                 | 8.390 | 32.249   | 7.81   | 117.1  | 1.2   | 0.35 | 0.0  | 0.00 |       | 8.348    | 25.063  | 33.986  | 42.516   |
| 50                 | 6.060 | 32.390   | 6.51   | 92.6   | 20.1  | 1.26 | 11.8 | 2.18 | 4.69  | 6.356    | 25.484  | 34.512  | 43.141   |
| 100                | 5.910 | 32.652   | 6.00   | 85.2   | 27.4  | 1.45 | 17.0 | 0.03 | 4.36  | 5.902    | 25.709  | 34.741  | 43.373   |
| 148                | 5.530 | 33.028   | 4.81   | 68.3   | 38.7  | 1.81 | 23.3 | 0.02 | 4.20  | 5.818    | 26.017  | 35.247  | 43.677   |
| 197                | 5.491 | 33.575   | 3.31   | 46.8   | 53.9  | 2.24 | 31.8 | 0.01 | 3.80  | 5.475    | 26.490  | 35.529  | 44.167   |
| 246                | 5.036 | 33.795   | 2.58   | 36.1   | 65.5  | 2.49 | 36.4 | 0.00 | 3.65  | 5.317    | 26.718  | 35.776  | 44.432   |
| 297                | 4.589 | 33.848   | 2.04   | 28.3   | 74.4  | 2.68 | 38.9 | 0.00 | 3.09  | 4.567    | 26.810  | 35.890  | 44.566   |
| 399                | 4.157 | 33.970   | 1.12   | 15.4   | 93.4  | 2.94 | 42.9 | 0.00 | 1.91  | 4.128    | 26.954  | 36.054  | 44.750   |
| 497                | 3.943 | 34.057   | 0.73   | 10.0   | 106.0 | 3.04 | 44.3 | 0.00 | 1.08  | 3.908    | 27.045  | 36.156  | 44.861   |
| 593                | 3.808 | 34.127   | 0.56   | 7.6    | 114.1 | 3.04 | 44.8 | 0.00 | 0.71  | 3.766    | 27.115  | 36.232  | 44.943   |
| 699                | 3.594 | 34.197   | 0.44   | 6.0    | 124.8 | 3.08 | 45.2 | 0.00 | 0.36  | 3.545    | 27.193  | 36.320  | 45.041   |
| 795                | 3.417 | 34.255   | 0.38   | 5.1    | 133.4 | 3.12 | 45.3 | 0.00 | 0.24  | 3.361    | 27.257  | 36.392  | 45.121   |
| 888                | 3.225 | 34.301   | 0.38   | 5.1    | 141.3 | 3.14 | 45.4 | 0.00 | 0.24  | 3.164    | 27.312  | 36.457  | 45.196   |
| 1061               | 2.935 | 34.365   | 0.40   | 5.3    | 152.7 | 3.13 | 45.4 | 0.00 | 0.01  | 2.862    | 27.391  | 36.551  | 45.303   |
| 1248               | 2.657 | 34.424   | 0.48   | 6.4    | 162.3 | 3.13 | 45.4 | 0.00 |       | 2.572    | 27.463  | 36.638  | 45.404   |
| 1503               | 2.349 | 34.492   | 0.69   | 9.1    | 172.7 | 3.08 | 44.8 | 0.00 |       | 2.247    | 27.545  | 36.736  | 45.518   |
| 1740               | 2.108 | 34.546   | 1.02   | 13.3   | 178.2 | 3.02 | 44.1 | 0.00 |       | 1.990    | 27.609  | 36.813  | 45.607   |
| 2020               | 1.914 | 34.587   | 1.42   | 18.4   | 193.3 | 2.97 | 43.1 | 0.00 |       | 1.775    | 27.658  | 36.874  | 45.678   |
| 2307               | 1.748 | 34.621   | 1.86   | 24.0   | 185.9 | 2.87 | 41.7 | 0.00 |       | 1.587    | 27.699  | 36.926  | 45.739   |
| 2567               | 1.648 | 34.642   | 2.21   | 28.5   | 186.1 | 2.81 | 40.9 | 0.00 |       | 1.465    | 27.725  | 36.958  | 45.777   |
| 2690               | 1.630 | 34.643   | 2.30   | 29.6   | 185.5 | 2.79 | 40.6 | 0.00 |       | 1.437    | 27.728  | 36.962  | 45.783   |
| 2790               | 1.619 | 34.647   | 2.36   | 30.4   | 194.8 | 2.77 | 40.4 | 0.00 |       | 1.416    | 27.733  | 36.968  | 45.790   |

# MARATHON 2 STA. 95



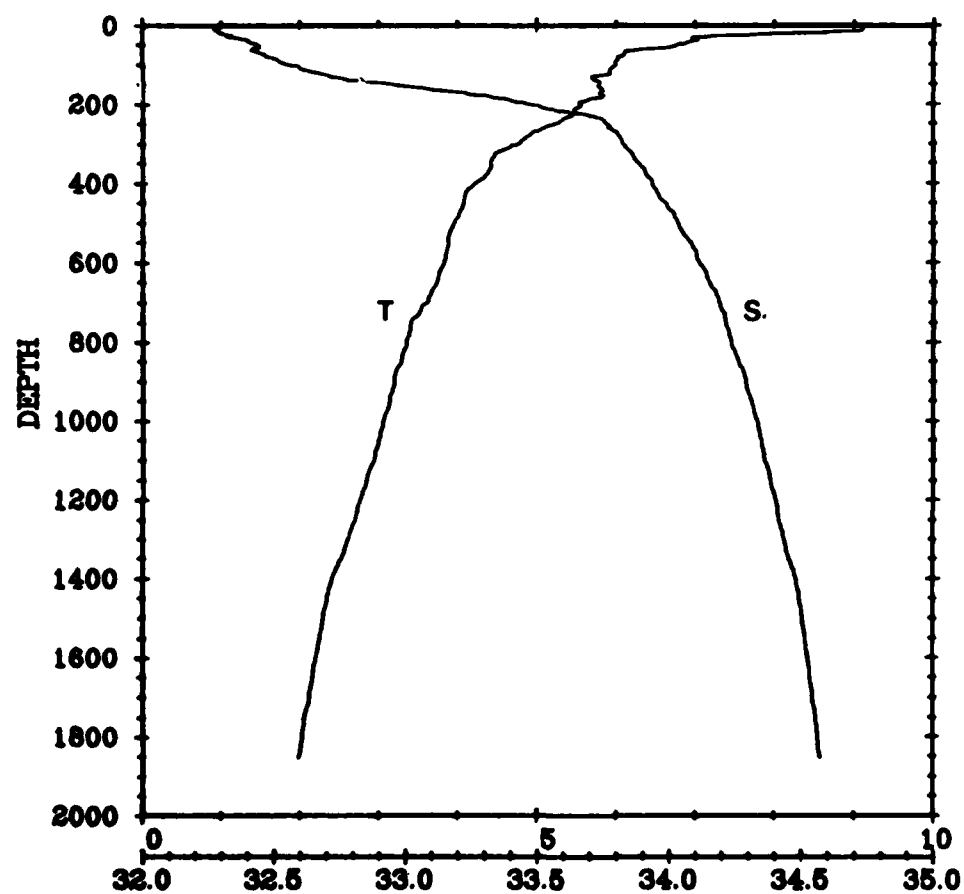
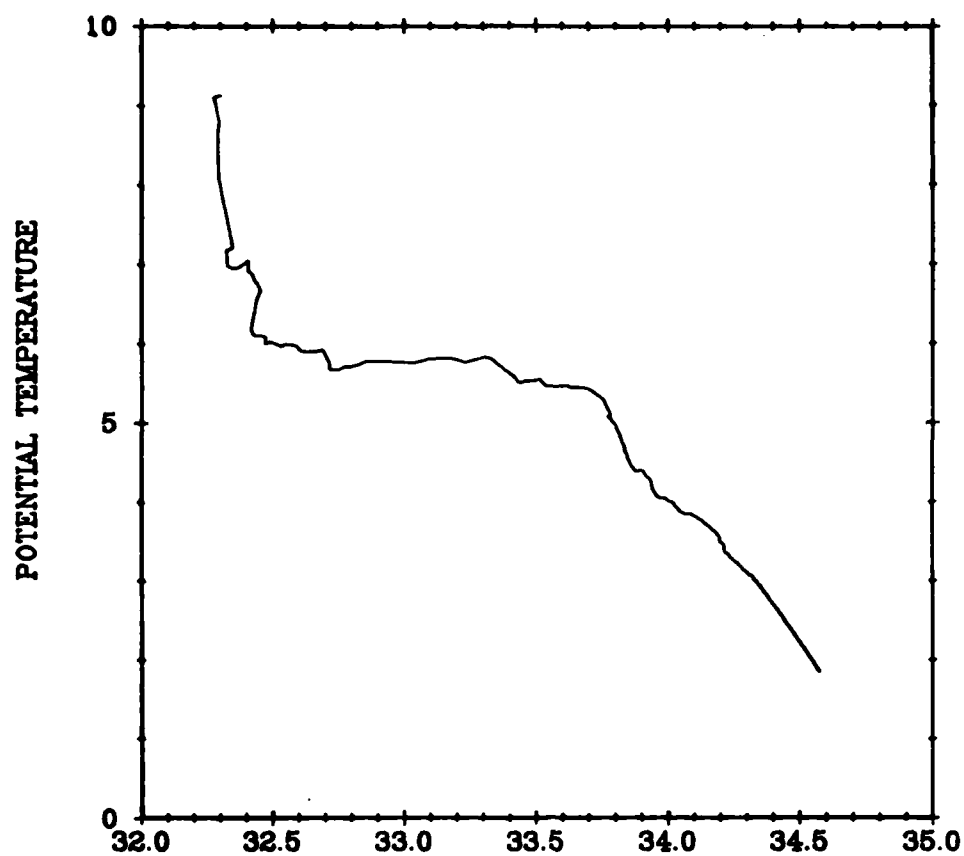
ROY THOMAS WASHINGTON MARATHON LEG 11 STATION 96

LATITUDE LONGITUDE MO/DY/YR START TIME BOTTOM WIND SPEED AIR TEMP WET BULB BAROM  
56 4 0N 151 2 0W 6/2/94 1824 1931 10 16 24.4 24.3 1011.5

| STD DATA    |               | SALINITY | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | SIGMA 6 | DYNAMIC HT | DEPTH<br>M |
|-------------|---------------|----------|-------------------|---------|---------|---------|---------|------------|------------|
| PRESS<br>DB | TEMP<br>DEG C |          |                   |         |         |         |         |            |            |
| 0           | 9.386         | 32.281   | 9.386             | 24.977  | 33.866  | 42.164  | 49.939  | 0.000      | 0          |
| 20          | 8.138         | 32.305   | 9.136             | 25.138  | 34.070  | 42.508  | 281.911 | 0.008      | 19         |
| 40          | 6.941         | 32.397   | 6.937             | 25.377  | 34.361  | 42.952  | 259.415 | 0.012      | 39         |
| 60          | 6.421         | 32.415   | 6.416             | 25.475  | 34.485  | 43.097  | 250.352 | 0.013      | 59         |
| 80          | 6.050         | 32.480   | 6.043             | 25.557  | 34.584  | 43.212  | 242.756 | 0.012      | 79         |
| 100         | 5.780         | 32.556   | 5.972             | 25.625  | 34.655  | 43.285  | 235.448 | 0.010      | 99         |
| 120         | 5.575         | 32.929   | 5.763             | 25.945  | 34.990  | 43.614  | 226.626 | 0.011      | 119        |
| 140         | 5.562         | 33.457   | 5.546             | 26.399  | 35.426  | 44.062  | 165.143 | 0.044      | 139        |
| 160         | 5.240         | 33.761   | 5.220             | 26.668  | 35.716  | 44.363  | 139.190 | 0.040      | 159        |
| 180         | 4.770         | 33.826   | 4.747             | 26.773  | 35.844  | 44.512  | 129.494 | 0.037      | 179        |
| 200         | 4.421         | 33.882   | 4.395             | 26.856  | 35.944  | 44.628  | 121.919 | 0.035      | 199        |
| 220         | 4.254         | 33.936   | 4.225             | 26.917  | 36.013  | 44.704  | 115.515 | 0.030      | 219        |
| 240         | 4.077         | 33.982   | 4.045             | 26.972  | 36.076  | 44.776  | 110.579 | 0.027      | 239        |
| 260         | 3.965         | 34.032   | 3.930             | 27.023  | 36.133  | 44.838  | 107.047 | 0.024      | 259        |
| 280         | 3.835         | 34.114   | 3.793             | 27.102  | 36.218  | 44.928  | 103.323 | 0.024      | 279        |
| 300         | 3.621         | 34.189   | 3.572             | 27.184  | 36.310  | 45.129  | 99.176  | 0.022      | 299        |
| 320         | 3.357         | 34.235   | 3.302             | 27.247  | 36.386  | 45.118  | 97.610  | 0.012      | 319        |
| 340         | 3.189         | 34.290   | 3.128             | 27.307  | 36.454  | 45.194  | 82.375  | 0.011      | 339        |
| 360         | 3.067         | 34.330   | 2.999             | 27.350  | 36.504  | 45.250  | 78.719  | 0.008      | 359        |
| 380         | 2.945         | 34.362   | 2.870             | 27.388  | 36.548  | 45.299  | 75.622  | 0.005      | 379        |
| 400         | 2.777         | 34.399   | 2.696             | 27.432  | 36.601  | 45.361  | 71.677  | 0.004      | 399        |
| 420         | 2.629         | 34.433   | 2.542             | 27.473  | 36.650  | 45.417  | 67.956  | 0.003      | 419        |
| 440         | 2.431         | 34.475   | 2.339             | 27.524  | 36.711  | 45.489  | 63.193  | 0.004      | 439        |
| 460         | 2.299         | 34.503   | 2.199             | 27.558  | 36.752  | 45.535  | 60.124  | 0.006      | 459        |
| 480         | 2.216         | 34.522   | 2.109             | 27.590  | 36.779  | 45.567  | 58.240  | 0.005      | 479        |
| 500         | 2.125         | 34.541   | 2.012             | 27.603  | 36.807  | 45.600  | 56.274  | 0.002      | 499        |
| 520         | 2.035         | 34.560   | 1.916             | 27.626  | 36.835  | 45.632  | 54.222  | 0.001      | 519        |
| 540         | 1.975         | 34.573   | 1.849             | 27.641  | 36.854  | 45.654  | 52.956  | 0.000      | 539        |

| NISKIN BOTTLE DATA |               |          |                 |             |              |             |             |             |               |                   |         |         |         |             |
|--------------------|---------------|----------|-----------------|-------------|--------------|-------------|-------------|-------------|---------------|-------------------|---------|---------|---------|-------------|
| DEPTH<br>M         | TEMP<br>DEG C | SALINITY | DIST C2<br>ML/L | O2 SAT<br>% | SIO3<br>UM/L | PO4<br>UM/L | NO3<br>UM/L | NO2<br>UM/L | TRIT<br>TUBIN | POT TEMP<br>DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS<br>DB |
| 2                  | 9.164         | 32.276   | 7.57            | 115.5       | 1.0          | 0.46        | 0.1         | 0.00        |               | 9.164             | 24.960  | 33.846  | 42.341  | 2           |
| 47                 | 6.628         | 32.360D  | 7.23            | 104.2       | 11.8         | 0.97        | 5.1         | 0.13        |               | 6.624             | 25.389  | 34.390  | 42.993  | 47          |
| 99                 | 5.977         | 32.528   | 6.58            | 92.3        | 21.4         | 1.30        | 13.2        | 0.21        |               | 5.999             | 25.595  | 34.530  | 43.264  | 99          |
| 147                | 5.797         | 32.774   | 5.59            | 79.2        | 31.1         | 1.61        | 19.5        | 0.04        |               | 5.785             | 25.820  | 34.856  | 43.491  | 147         |
| 195                | 5.820         | 33.370   | 3.79            | 53.9        | 47.0         | 2.10        | 28.6        | 0.01        |               | 5.804             | 26.289  | 35.314  | 43.940  | 195         |
| 248                | 5.126         | 33.735   | 2.79            | 39.3        | 60.0         | 2.41        | 34.2        | 0.00        |               | 5.106             | 26.637  | 35.681  | 44.325  | 248         |
| 293                | 4.788         | 33.823   | 2.27            | 31.5        | 69.5         | 2.62        | 37.5        | 0.00        |               | 4.766             | 26.769  | 35.839  | 44.556  | 293         |
| 390                | 4.293         | 33.924   | 1.39            | 19.1        | 87.3         | 2.89        | 41.6        | 0.00        |               | 4.265             | 26.903  | 35.997  | 44.687  | 390         |
| 505                | 3.945         | 34.043   | 0.78            | 10.6        | 105.1        | 3.04        | 43.9        | 0.00        |               | 3.909             | 27.034  | 36.145  | 44.850  | 505         |
| 591                | 3.936         | 34.112   | 0.55            | 5           | 113.5        | 3.07        | 44.4        | 0.00        |               | 3.794             | 27.101  | 36.216  | 44.926  | 591         |
| 721                | 3.604         | 34.182   | 0.44            | 6.0         | 124.9        | 3.11        | 44.9        | 0.00        |               | 3.555             | 27.180  | 36.307  | 45.027  | 707         |
| 791                | 3.367         | 34.240   | 0.42            | 5.7         | 135.3        | 3.12        | 45.1        | 0.00        |               | 3.312             | 27.250  | 36.388  | 45.119  | 799         |
| 911                | 3.183         | 34.291   | 0.41            | 5.5         | 143.4        | 3.13        | 45.2        | 0.00        |               | 3.120             | 27.308  | 36.456  | 45.196  | 920         |
| 1022               | 3.033         | 34.342   | 0.38            | 5.1         | 150.1        | 3.13        | 45.1        | 0.00        |               | 2.963             | 27.363  | 36.519  | 45.266  | 1032        |
| 1248               | 2.709         | 34.415   | 0.47            | 6.2         | 162.6        | 3.14        | 45.2        | 0.00        |               | 2.624             | 27.451  | 36.624  | 45.387  | 1261        |
| 1484               | 2.291         | 34.504   | 0.78            | 10.2        | 175.9        | 3.17        | 44.6        | 0.00        |               | 2.191             | 27.559  | 36.753  | 45.537  | 1501        |
| 1724               | 2.090         | 34.549   | 1.03            | 13.4        | 179.9        | 3.03        | 43.9        | 0.00        |               | 1.974             | 27.612  | 36.818  | 45.613  | 1745        |
| 1951               | 1.974         | 34.572   | 1.26            | 16.4        | 192.1        | 2.97        | 43.2        | 0.00        |               | 1.849             | 27.641  | 36.853  | 45.653  | 1974        |

# MARATHON 2 STA. 96



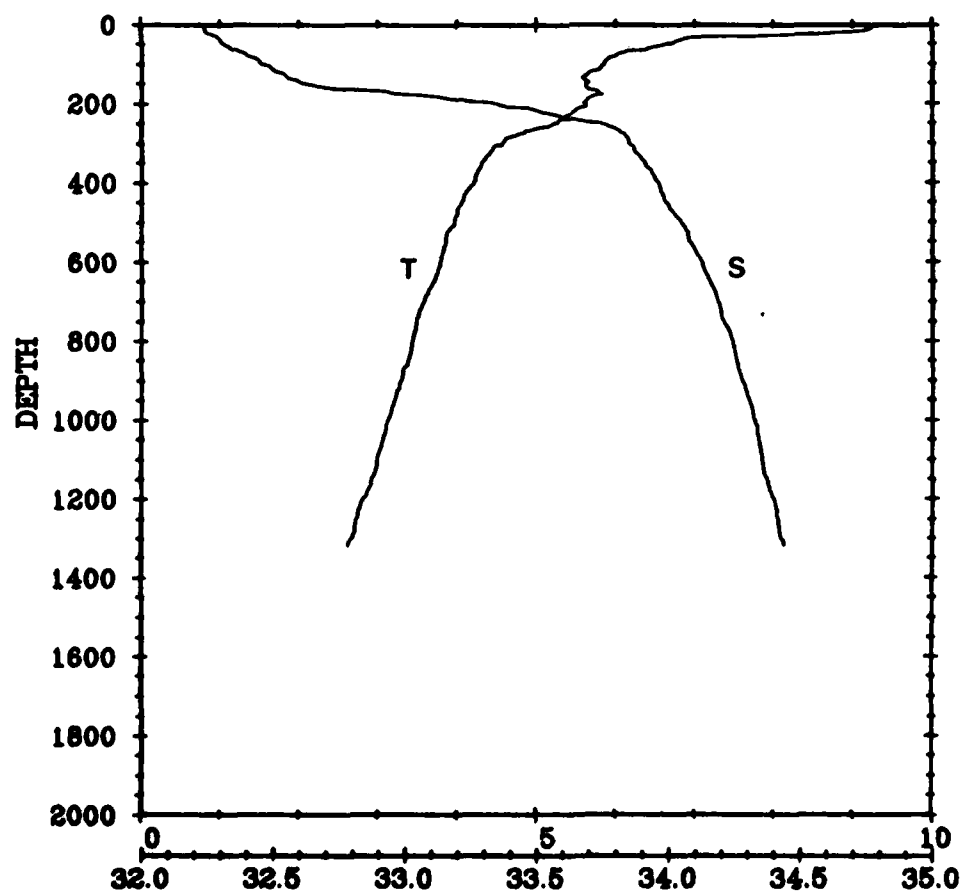
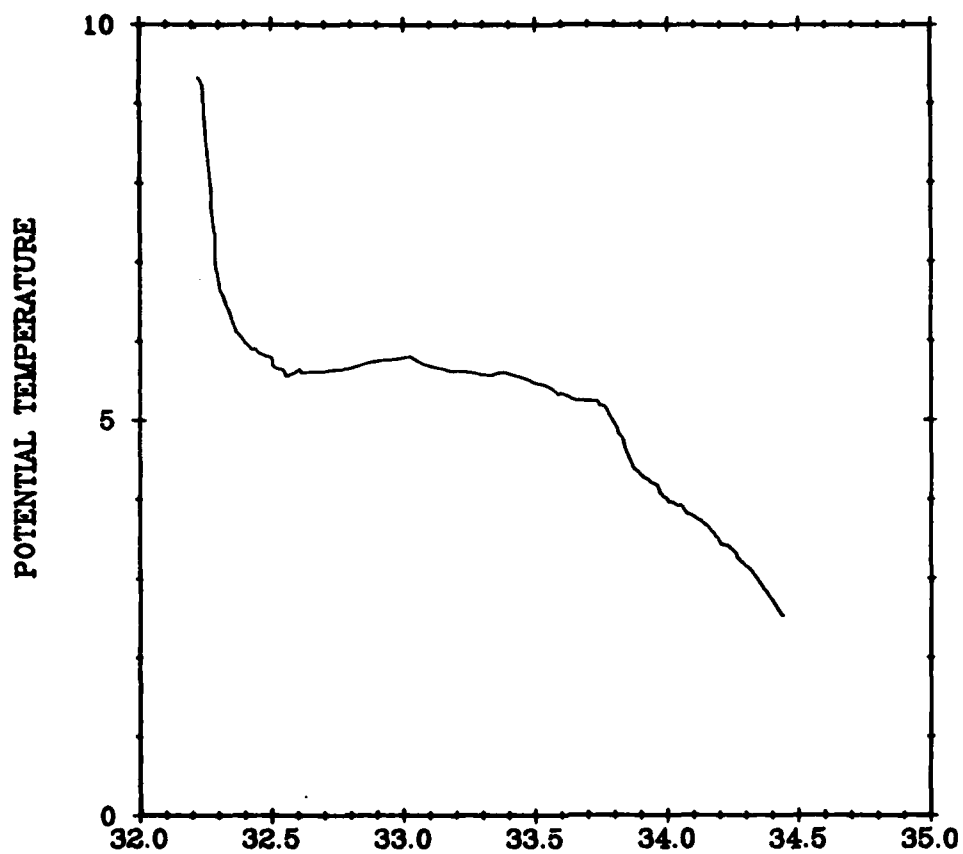
R/V THOMAS WASHINGTON MARATHON LEG II STATION 97

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | IN     |
| 56 12.0N | 153 7.7W  | 6/2/84   | 2242       | 1340   | 100  | 16    | 11.7     | 9.4      | 1012.2 |

| CTD DATA | POT TEMP   | SIGMA 0  | SIGMA 2        | SIGMA 4 | SVA     | DYNAMIC HT | DEPTH   |
|----------|------------|----------|----------------|---------|---------|------------|---------|
| PRESS DB | TEMP DEG C | SALINITY | POT TEMP DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4    | CL/TON  |
| 0        | 9.217      | 32.239   | 9.237          | 24.920  | 33.903  | 42.296     | 102.373 |
| 20       | 8.543      | 32.255   | 8.541          | 25.040  | 33.954  | 42.475     | 291.347 |
| 40       | 6.957      | 32.297   | 6.954          | 25.310  | 34.101  | 42.995     | 265.839 |
| 60       | 6.372      | 32.340   | 6.367          | 25.406  | 34.420  | 43.035     | 256.876 |
| 80       | 5.969      | 32.409   | 5.962          | 25.310  | 34.543  | 43.176     | 247.115 |
| 100      | 5.840      | 32.461   | 5.832          | 25.367  | 34.626  | 43.243     | 241.931 |
| 150      | 5.624      | 32.525   | 5.612          | 25.723  | 34.770  | 43.415     | 227.644 |
| 200      | 5.611      | 33.107   | 5.595          | 26.264  | 35.102  | 43.938     | 176.942 |
| 250      | 5.216      | 33.709   | 5.216          | 26.526  | 35.676  | 44.324     | 143.108 |
| 300      | 4.569      | 33.951   | 4.547          | 26.915  | 35.896  | 44.573     | 125.399 |
| 350      | 4.312      | 33.925   | 4.287          | 26.935  | 35.979  | 44.568     | 119.015 |
| 400      | 4.205      | 33.954   | 4.176          | 26.936  | 36.134  | 44.719     | 114.629 |
| 450      | 4.057      | 33.997   | 4.025          | 26.978  | 36.183  | 44.794     | 110.989 |
| 500      | 3.961      | 34.042   | 3.926          | 27.032  | 36.142  | 44.946     | 106.257 |
| 600      | 3.781      | 34.119   | 3.739          | 27.112  | 36.230  | 44.942     | 99.164  |
| 700      | 3.581      | 34.183   | 3.532          | 27.183  | 36.311  | 45.033     | 93.140  |
| 800      | 3.438      | 34.239   | 3.383          | 27.242  | 36.377  | 45.115     | 89.133  |
| 900      | 3.293      | 34.274   | 3.231          | 27.284  | 36.427  | 45.162     | 84.701  |
| 1000     | 3.138      | 34.323   | 3.069          | 27.338  | 36.489  | 45.211     | 80.020  |
| 1100     | 2.990      | 34.355   | 2.919          | 27.379  | 36.536  | 45.255     | 76.674  |
| 1200     | 2.838      | 34.390   | 2.756          | 27.420  | 36.586  | 45.343     | 72.954  |
| 1300     | 2.681      | 34.422   | 2.593          | 27.460  | 36.634  | 45.399     | 69.393  |
| 1332     | 2.608      | 34.438   | 2.518          | 27.479  | 36.657  | 45.425     | 67.563  |

| WISKIN BOTTLE DATA | POT TEMP   | SIGMA 0  | SIGMA 2        | SIGMA 4 | PRESS   |         |          |
|--------------------|------------|----------|----------------|---------|---------|---------|----------|
| DEPTH M            | TEMP DEG C | SALINITY | POT TEMP DEG C | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS DB |
| 1                  | 9.250      | 32.250   | 9.250          | 24.925  | 33.907  | 42.298  | 1        |
| 9                  | 9.256      | 32.247   | 9.255          | 24.923  | 33.904  | 42.297  | 9        |
| 47                 | 6.793      | 32.301   | 6.789          | 25.321  | 34.115  | 42.912  | 47       |
| 146                | 5.479      | 32.629   | 5.468          | 25.727  | 34.781  | 43.434  | 146      |
| 196                | 5.637      | 33.217   | 5.601          | 26.183  | 35.217  | 43.950  | 196      |
| 296                | 4.640      | 33.944   | 4.618          | 26.801  | 35.979  | 44.533  | 296      |
| 393                | 4.212      | 33.958   | 4.184          | 26.938  | 36.036  | 44.729  | 393      |
| 493                | 3.955      | 34.037   | 3.930          | 27.027  | 36.137  | 44.841  | 493      |
| 588                | 3.803      | 34.108   | 3.761          | 27.101  | 36.218  | 44.929  | 588      |
| 689                | 3.625      | 34.180   | 3.576          | 27.176  | 36.302  | 45.021  | 689      |
| 788                | 3.416      | 34.237   | 3.361          | 27.242  | 36.379  | 45.117  | 788      |
| 891                | 3.276      | 34.279   | 3.214          | 27.290  | 36.433  | 45.169  | 891      |
| 975                | 3.142      | 34.321   | 3.074          | 27.336  | 36.486  | 45.228  | 975      |
| 1213               | 2.771      | 34.402   | 2.698          | 27.436  | 36.604  | 45.365  | 1213     |
| 1315               | 2.605      | 34.438   | 2.516          | 27.479  | 36.657  | 45.426  | 1315     |

# MARATHON 2 STA. 97



R/V THOMAS WASHINGTON MARATHON LEG II STATION 98

| LATITUDE | LONGITUDE | MO/DY/YR | START TIME | BOTTOM | WIND | SPEED | AIR TEMP | WET BULB | BAROM  |
|----------|-----------|----------|------------|--------|------|-------|----------|----------|--------|
|          |           |          | GMT        | M      | DIR  | KT    | DEG C    | DEG C    | MB     |
| 56 13 0N | 153 12 4W | 6/ 3/84  | 210        | 103    | 100  | 16    | 9 4      | 8 9      | 1010 5 |

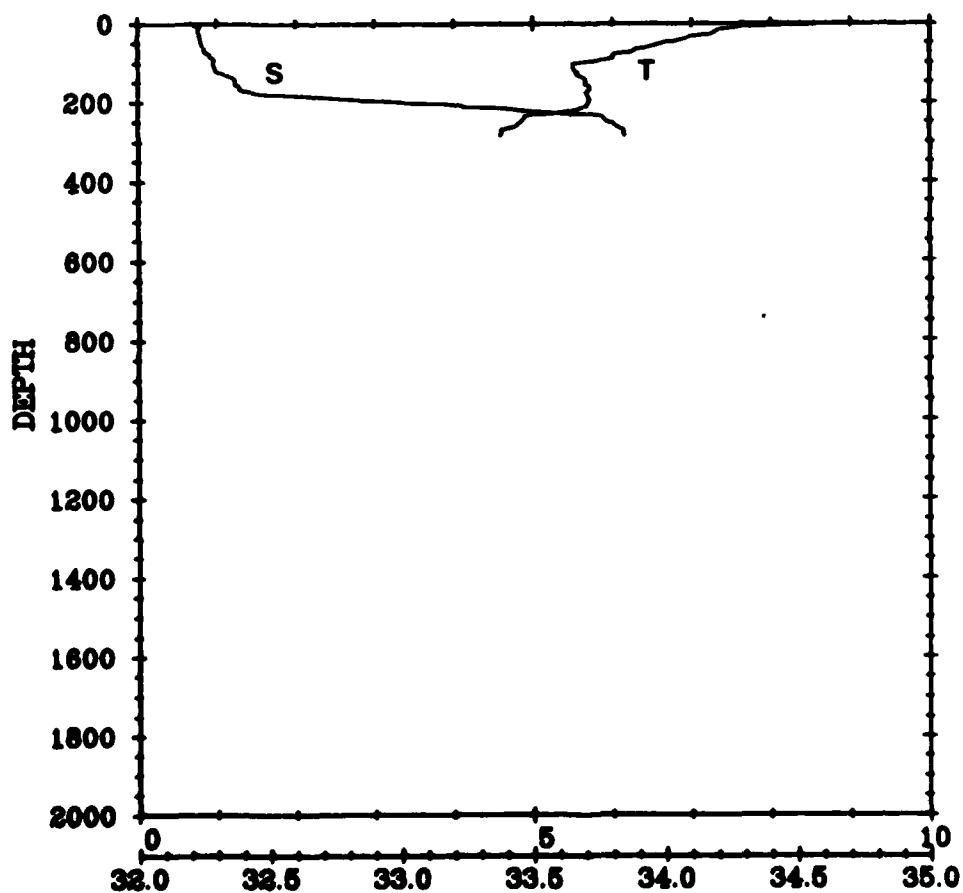
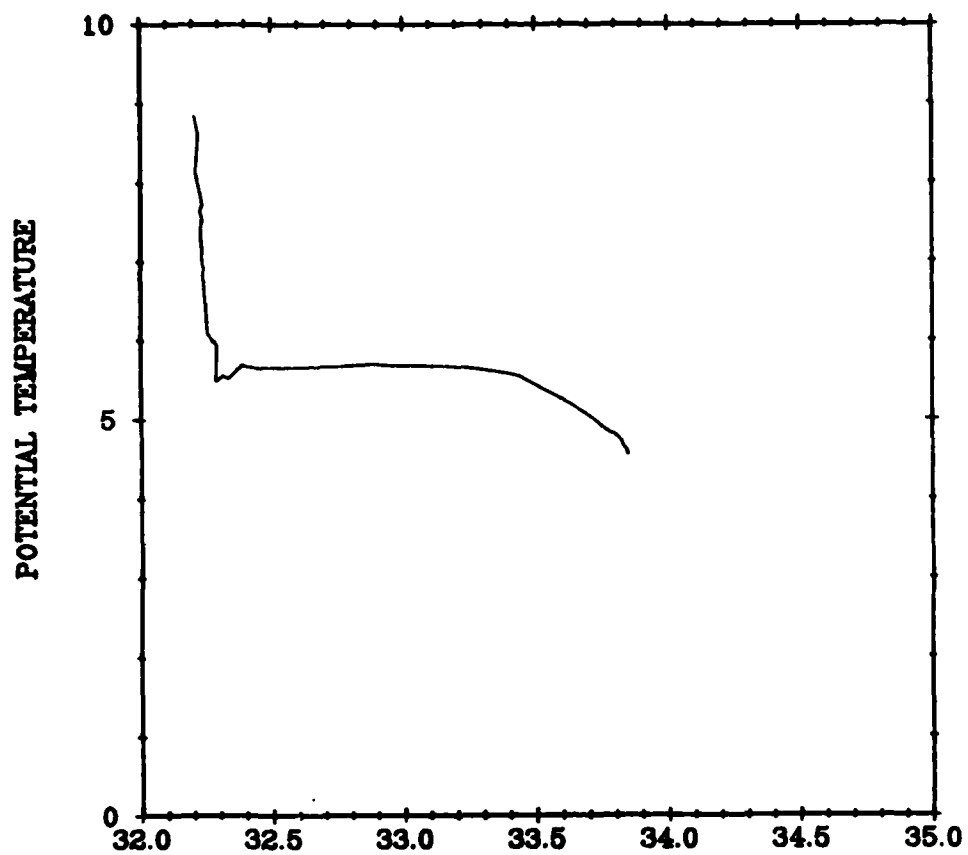
CTD DATA

| PRESS | TEMP  | SALINITY | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | SWA     | DYNAMIC HT | DEPTH |
|-------|-------|----------|----------|---------|---------|---------|---------|------------|-------|
| DB    | DEG C |          | DEG C    |         |         |         | CL/TON  |            | M     |
| 0     | 8 295 | 32 220   | 8 295    | 25 349  | 33 974  | 42 526  | 290 149 | 0 000      | 0     |
| 20    | 7 352 | 32 231   | 7 350    | 25 191  | 34 160  | 42 713  | 276 861 | 0 057      | 19    |
| 40    | 6 884 | 32 240   | 6 881    | 25 261  | 34 252  | 42 846  | 270 445 | 0 111      | 39    |
| 60    | 6 443 | 32 249   | 6 438    | 25 125  | 34 317  | 42 951  | 264 554 | 0 165      | 59    |
| 80    | 6 068 | 32 270   | 6 061    | 25 189  | 34 419  | 43 049  | 258 712 | 0 217      | 79    |
| 100   | 5 681 | 32 289   | 5 673    | 25 450  | 34 479  | 43 147  | 253 003 | 0 268      | 99    |
| 120   | 5 563 | 32 372   | 5 551    | 25 518  | 34 567  | 43 214  | 247 056 | 0 393      | 148   |
| 140   | 5 701 | 32 964   | 5 695    | 25 982  | 35 020  | 43 657  | 203 667 | 0 506      | 198   |
| 160   | 4 854 | 33 735   | 4 835    | 26 731  | 35 798  | 44 463  | 133 010 | 0 590      | 248   |
| 186   | 4 589 | 33 846   | 4 568    | 26 809  | 35 888  | 44 565  | 125 861 | 0 637      | 283   |

WISKIN BOTTLE DATA

| DEPTH | TEMP  | SALINITY | DIS O2 | O2 SAT | SIO3 | PO4  | NO3  | NO2  | TRIT  | POT TEMP | SIGMA 0 | SIGMA 2 | SIGMA 4 | PRESS |
|-------|-------|----------|--------|--------|------|------|------|------|-------|----------|---------|---------|---------|-------|
| M     | DEG C |          | ML/L   | %      | UM/L | UM/L | UM/L | UM/L | TUBIN | DEG C    |         |         |         | DB    |
| 1     | 9 334 | 32 243   | 7 68   | 117 7  | 1 4  | 0 43 | 0 1  | 0 01 |       | 9 334    | 24 908  | 33 787  | 42 275  | 1     |
| 17    | 7 465 | 32 237   | 7 85   | 115 3  | 6 9  | 0 45 | 2 1  | 0 07 |       | 7 463    | 25 180  | 34 144  | 42 712  | 17    |
| 45    | 6 779 | 32 245   | 7 45   | 107 1  | 11 8 | 0 49 | 4 5  | 0 12 |       | 6 775    | 25 279  | 34 275  | 42 873  | 45    |
| 87    | 5 649 | 32 278   | 6 84   | 96 3   | 22 4 | 1 26 | 10 0 | 0 22 |       | 5 642    | 25 445  | 34 496  | 43 144  | 87    |
| 140   | 5 681 | 32 382   | 6 58   | 92 1   | 21 9 | 1 35 | 12 7 | 0 22 |       | 5 670    | 25 524  | 34 571  | 43 218  | 141   |
| 223   | 5 674 | 33 237   | 4 17   | 59 1   | 44 4 | 2 24 | 26 8 | 0 03 |       | 5 657    | 26 231  | 35 236  | 43 870  | 224   |
| 254   | 4 813 | 33 808   | 2 31   | 32 2   | 59 6 | 2 43 | 37 0 | 0 02 |       | 4 794    | 26 753  | 35 822  | 44 489  | 255   |
| 281   | 4 594 | 33 949   | 2 03   | 28 1   | 5 4  | 2 72 | 38 5 | 0 02 |       | 4 573    | 26 810  | 35 890  | 44 566  | 283   |

# MARATHON 2 STA. 98



END

DATE

FILMED

4-88

DTIC