

# **Coastal Ocean Dynamics Experiment CTD Data Report; 1979 to 1981**

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Canada



1984

**Canadian Data Report of  
Hydrography and Ocean Sciences  
No. 26**



Fisheries  
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## **Canadian Data Report Of Hydrography and Ocean Sciences**

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Les rapports statistiques sont produits à l'échelon régional mais sont numérotés et placés dans l'index à l'échelon national. Les demandes de rapports seront satisfaites par l'établissement auteur dont le nom figure sur la couverture et la page de titre. Les rapports épuisés seront fournis contre rétribution par des agents commerciaux.

Les établissements des Sciences et Levés océaniques dans les régions et à l'administration centrale ont cessé de publier leurs diverses séries de rapports depuis décembre 1981. Vous trouverez dans l'index des publications du volume 38 du *Journal canadien des sciences halieutiques et aquatiques*, la liste de ces publications ainsi que le dernier numéro paru dans chaque catégorie. La nouvelle série a commencé avec la publication du Rapport n° 1 en janvier 1982.

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Cat. No. FS 97-16/26      ISSN 0711-6721

Correct citation for this publication:

Lee, A.Y.P., D.J. Stucchi and H.J. Freeland, 1984. Coastal Ocean Dynamics Experiment CTD Data Report: 1979 to 1981. Can. Data Rep. Hydrogr. Ocean Sci: 26:330p.

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## ABSTRACT

Lee, A.Y.P., D.J. Stucchi and H.J. Freeland, 1984. Coastal Ocean Dynamics Experiment CTD Data Report: 1979 to 1981. Can. Data Rep. Hydrogr. Ocean Sci: 26:330p.

From January, 1979 to September 1981, as part of the Coastal Ocean Dynamics Experiment, the Coastal Zone Oceanography Group of the Institute of Ocean Sciences conducted 21 cruises off the southwest coast of Vancouver Island during which a total of 562 CTD (conductivity, temperature and depth) casts were obtained. This report describes the sampling program, the instrumentation used to collect the data, data processing procedures, and data quality. An index to the calibrated data files is also provided. The bulk of the report contains the listings of the CTD data and dissolved oxygen data at standard depths.

Key words: Salinity Profiles, temperature profiles, west coast Vancouver Island.

## RESUMÉ

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Au cours de 21 expéditions effectuées au large de la côte sud-ouest de l'île Vancouver, dans le cadre de l'expérience sur la dynamique océanique côtière, le Groupe d'étude de l'océanographie côtière de l'Institut des Sciences océaniques a réalisé 562 mouillages CTP (conductivité, température et profondeur). Le présent rapport traite du programme d'échantillonnage, des instruments utilisés pour la cueillette des données ainsi que des méthodes de traitement et de la qualité des données. Un index des fichiers de données calibrées est aussi présenté. La plus grande partie du rapport contient les listages des données CTP et des données sur l'oxygène dissous à des profondeurs normalisées.

Les mots clés: Profils de salinité, Profils de température, côte sud-ouest de l'île Vancouver.

## ACKNOWLEDGEMENTS

The vast majority of the data was collected by the personnel of the Coastal Zone Oceanography Group. We would like to thank R.H. Bigham, J.H. Meikle, D.G. Knigge-Seiberg, L.A.F. Spearing, and J.A. Stickland for their competent work on this project. We would also like to thank the personnel from the Offshore Oceanography Group and the Frozen Sea Research Group for the valuable assistance provided to us in our time of need. Finally we would like to thank the officers and crew of the C.S.S. Parizeau, C.S.S. Vector, Pandora II and C.F.A.V. Endeavour for their assistance and cooperation.





## INTRODUCTION

In January 1979, the Coastal Zone Oceanography Group at the Institute of Ocean Sciences (IOS) embarked on a physical oceanographic study of the continental shelf region off southern Vancouver Island. This was one component of the larger Coastal Ocean Dynamics Experiment, CODE, which involved a number of other groups from the Institute. Part of the CODE observational program entailed obtaining vertical profiles of temperature and salinity using a CTD (conductivity, temperature and depth) probe. Hydrocasts were also conducted to obtain seawater samples for dissolved oxygen content determinations. Reported here are the CTD data at standard depths and the dissolved oxygen content data collected during CODE by the personnel of the Coastal Zone Oceanography (CZO) Group. Also included in the report are a data index, description of the sampling program, instrumentation and data processing methods, and a discussion of data quality.

## SAMPLING PROGRAM

The synoptic program of CTD and dissolved oxygen content measurements was started in January 1979 and was terminated in September 1982. During this period, the personnel of the CZO Group carried out a total of 21 cruises in the CODE area. The number of stations sampled during each cruise varied over the life of the study, but some stations were routinely sampled; such as Line 1, stations 101 to 111. Vertical profiles of temperature and conductivity were obtained routinely at all stations, but seawater samples for dissolved oxygen content determinations were obtained only at selected stations. The positions of most of the stations sampled during CODE are shown in Figure 1, and details of the specific station sampled during each cruise, time, date, position, depth and number of dissolved oxygen samples obtained are indexed in Appendix 1. Code CTD data collected by the Offshore Oceanography Group have been published by Thomson et al (1984), and Hill et al (1982a, 1982b, 1983) have published data collected by the Ocean Ecology Division.

## INSTRUMENTATION

The instrumentation used to collect the data consisted of 1) a Guildline Instruments Ltd. model 8700 MK II CTD (conductivity, temperature and depth) probe and control console, 2) a programmable data acquisition system - PRODAS - built by McDonald-Detwiler Ltd., 3) a Hewlett-Packard XY<sub>1</sub>Y<sub>2</sub> plotter and, 4) a winch with seven-conductor cable and slip ring assembly.

The method of operation is straightforward. The CTD probe is lowered and raised through the water column at the rate of 1 to 1.5m s<sup>-1</sup>. Power for the probe is sent down the cable from the control console. The analogue data signals are sent up the cable (one conductor for each sensor plus a signal ground) through the slip ring assembly to the CTD deck unit and data acquisition system. In the CTD deck unit the temperature, conductivity and pressure signals are put through an analogue computer to calculate salinity and then fed to the XY<sub>1</sub>Y<sub>2</sub> plotter for a real time plot of the temperature and salinity profile.

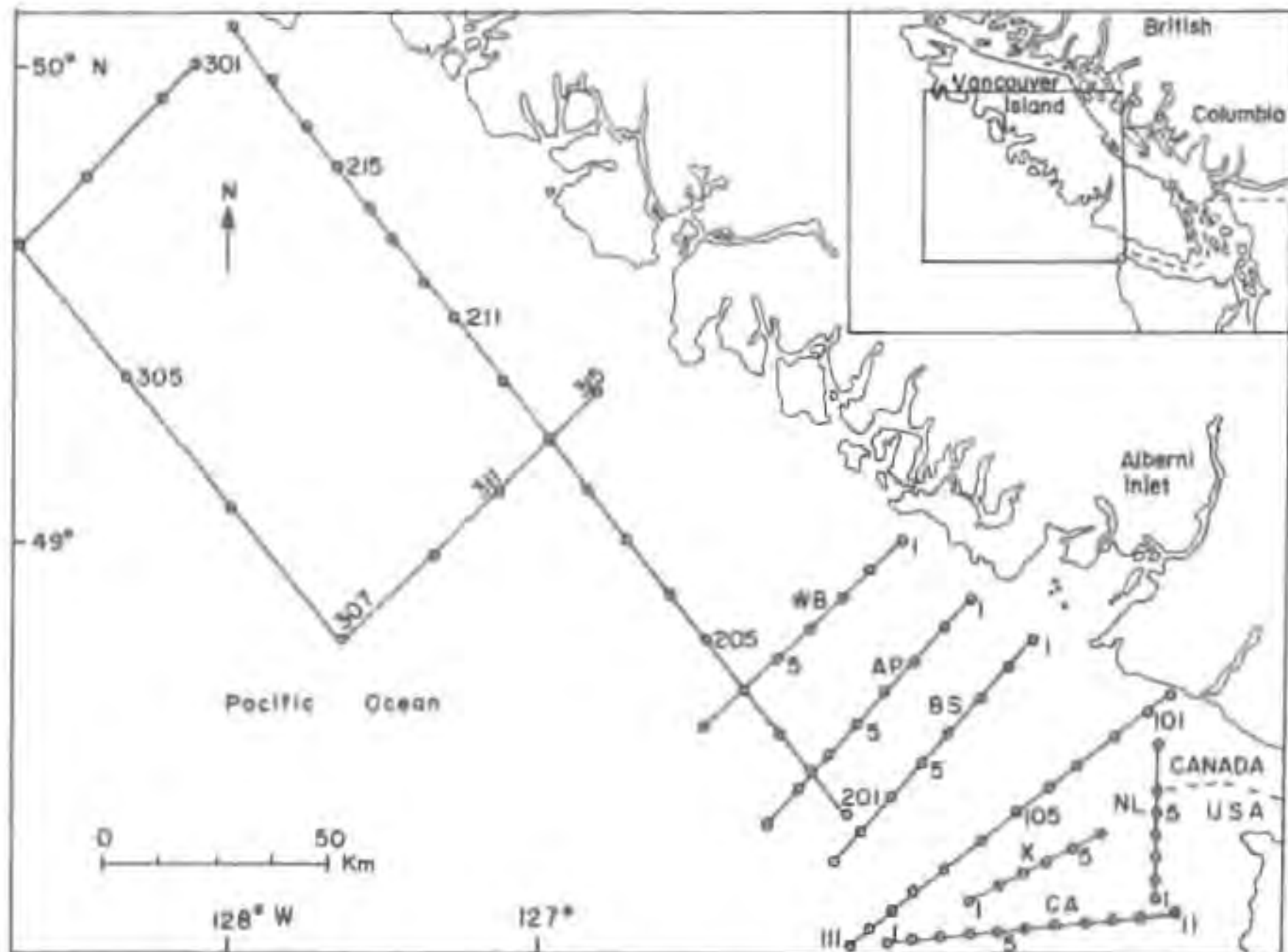


Figure 1. Map showing location of stations sampled during CODE.

The data acquisition system accepts the probe signals directly then multiplexes (1.2 ms/6 channel scan), digitizes (16 bit A-D converter), and sums for an integral number (usually 15) of 60 Hz power supply cycles - this corresponds to a 0.25 second summation. The number of summations, the summation for each sensor and those for the zero and reference voltages are then stored in a buffer, along with header information, and subsequently written onto nine-track (800 BPI) tape. A thermal printer is used to display, in real time, a small portion of this data and any error messages relating to the operation of the data acquisition system. The operation of the data acquisition system relies on a micro-processor which has been programmed to co-ordinate and perform input-output function, summation and diagnostic checks.

For the most part CZO Group's CTD system was used, however there were a number of occasions when CZO's CTD system failed and data was obtained by manually digitizing the  $XY_1Y_2$  plots, or when other CTD probes and systems were used. These departures from the norm and other relevant comments about the data are noted in the comments column of Table 1.

#### DATA PROCESSING

The processing of the data collected with the CTD system was carried out on the Univac 1106 computer at the Institute of Ocean Sciences. The processing is divided into four stages: 1) the conversion of the raw datalogger data, preliminary correction and calibration, and calculation of histograms, 2) manual editing of data, 3) final calibrations and calculations, and 4) data presentation. The data processing scheme is depicted in Figure 2.

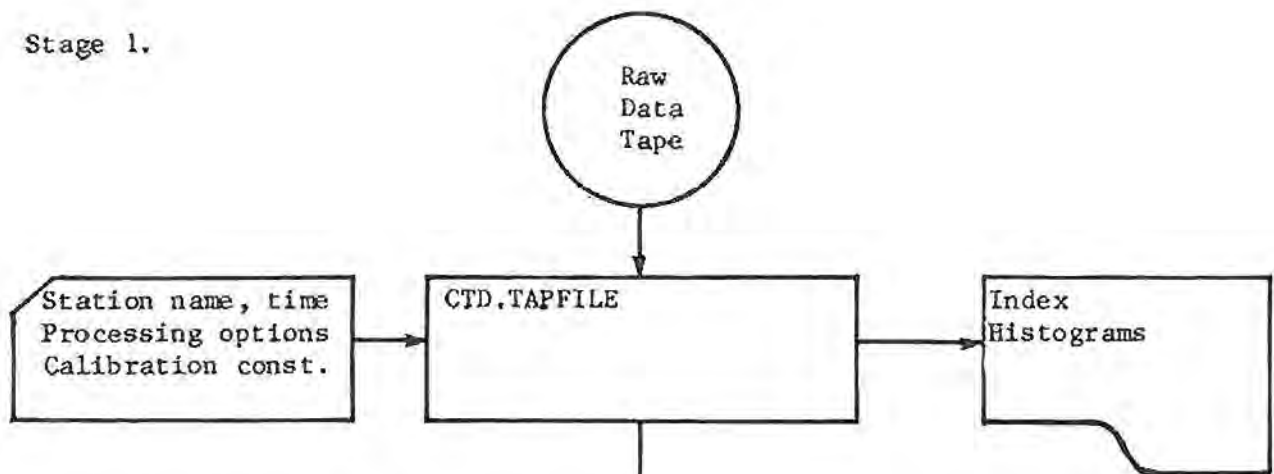
The first stage of the processing begins with the conversion of the data written by PRODAS to Univac word format. The data are next converted to voltage units, the reference voltages checked for drift and then preliminary calibration applied to convert voltage to physical units, of temperature, conductivity and pressure. Because the temperature sensor has a slower response time than the conductivity sensor, the temperature data is corrected for this time response mismatch between the sensors. (This time response correction to the temperature data was only applied when the slow response - 0.25s - thermometer was fitted on the CTD.) The pressure data are checked to ensure that not only do they monotonically increase with time but also that the CTD probe is descending through the water column at a minimum speed of  $0.5 \text{ m s}^{-1}$ . The data are rejected when the above criteria are not satisfied. The reasons for rejection of these data will be discussed in the next section. Next, salinity is calculated according to the IAPSO "Practical Salinity Scale" (UNESCO, 1981a). No units are used for salinity. The numbers given are salinity  $\times 10^3$ . The corrected data with brief headers are written to mass storage files. Finally first difference histograms of pressure, temperature and salinity are computed and listed out together with data records which have abnormally large first differences.

The second stage is the editing of the mass storage files. The histograms and editing information produced in stage one are used to determine what editing is to be done. Editing is performed manually and

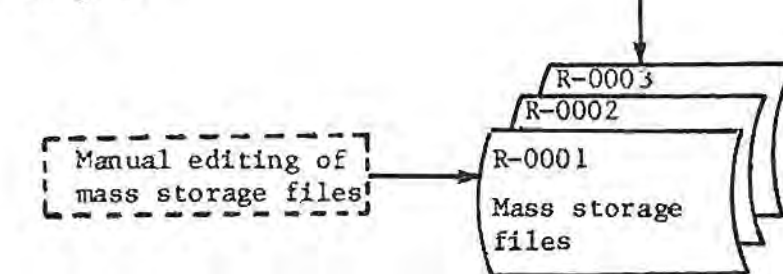
| CRUISE<br># | VESSEL         | DATE<br>YR/MO/DY | TIME<br>RESPONSE<br>CORRECTION | DESCENT<br>RATE<br>CUT-OFF | COMMENTS                                                                    |
|-------------|----------------|------------------|--------------------------------|----------------------------|-----------------------------------------------------------------------------|
| 1           | CEAV ENDEAVOUR | 79/01/30         | YES                            | YES                        | 12 HRS TIME SERIES AT STATION 106                                           |
| 2           | PANDORA II     | 79/03/08         | N/A                            | N/A                        | DIGITIZED XYY PLOTS-DATA QUALITY POOR<br>DATALOGGER (PRODAS) FAILURE        |
| 3           | CSS VECTOR     | 79/04/19         | YES                            | YES                        |                                                                             |
| 4           | CSS PARIZEAU   | 79/05/18         | YES                            | YES                        | 12 HRS TIME SERIES AT STATION 107                                           |
| 5           | PANDORA II     | 79/06/21         | YES                            | YES                        |                                                                             |
| 7           | CSS PARIZEAU   | 79/10/12         | YES                            | YES                        |                                                                             |
| 8           | CSS PARIZEAU   | 79/11/27         | YES                            | YES                        | OFFSHORE'S CTD AND WINCH USED<br>FOR W.C. STATIONS                          |
| 9           | CSS PARIZEAU   | 80/02/07         | YES                            | YES                        | OFFSHORE'S CTD AND WINCH USED<br>FOR W.C. STATIONS                          |
| 10          | PANDORA II     | 80/03/25         | YES                            | YES                        |                                                                             |
| 11          | CSS PARIZEAU   | 80/04/22         | YES                            | YES                        |                                                                             |
| 12          | CSS PARIZEAU   | 80/06/11         | NO                             | YES                        | OFFSHORE'S CTD PROBE (840447) +PRODAS<br>DATA QUALITY POOR -SLIP RING NOISE |
| 13          | CSS VECTOR     | 80/08/13         | NO                             | YES                        | NEW TEMP AND COND SENSORS INSTALLED                                         |
| 14          | CSS PARIZEAU   | 80/09/22         | NO                             | YES                        |                                                                             |
| 15          | CSS VECTOR     | 80/10/22         | NO                             | YES                        |                                                                             |
| 16          | CSS VECTOR     | 80/11/27         | NO                             | YES                        | POOR WEATHER AND SEA CONDITIONS                                             |
| 17          | CSS VECTOR     | 81/01/06         | NO                             | YES                        |                                                                             |
| 18          | CSS PARIZEAU   | 81/02/04         | NO                             | YES                        |                                                                             |
| 19          | CSS VECTOR     | 81/03/10         | NO                             | YES                        |                                                                             |
| 20          | CSS PARIZEAU   | 81/04/21         | NO                             | YES                        |                                                                             |
| 21          | CSS PARIZEAU   | 81/06/02         | NO                             | YES                        | OFFSHORE'S CTD SYSTEM USED                                                  |
| 22          | CSS PARIZEAU   | 81/09/05         | NO                             | YES                        |                                                                             |

TABLE 1.

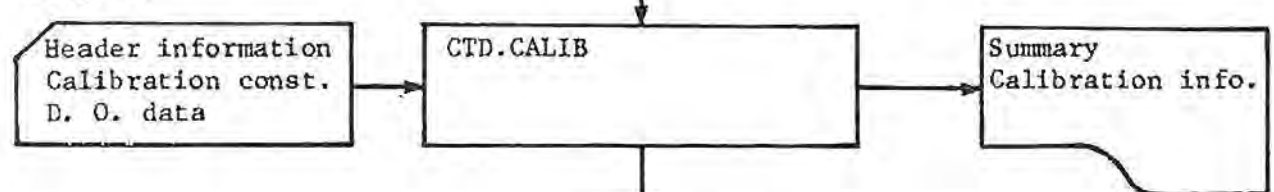
Stage 1.



Stage 2.



Stage 3.



Stage 4.

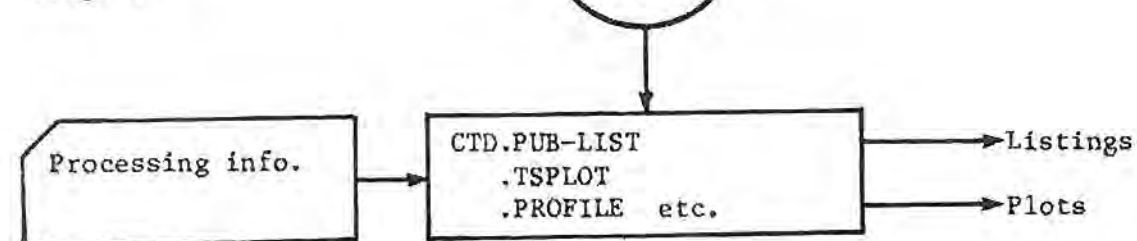


Figure 2. Data processing flow chart.



usually entails the deletion of data spikes or errors, i.e. data that exceeds predetermined first difference criteria for each sensor. The determination of the editing criteria will vary as the oceanographic state being sampled changes, but as with any editing scheme there will always be a subjective component and some data errors will pass uncorrected. Our experience with these CTD data has shown that the amount of editing performed on each file is small (0 to 5 data errors/profile) with the errors usually located in the top 20 metres of the profile.

In the third stage, the final calibrations are applied, and sigma-t ( $\sigma_t = [\rho(S,T,0) - 1000 \text{ kg m}^{-3}]$ ) and depth are computed. Sigma-t is computed using the new equation of state for seawater introduced by the UNESCO/ICES/SCOR/IAPSO joint panel on oceanographic standards (UNESCO 1981b). Depth is computed from pressure by the numerical integration of the hydrostatic pressure equation. All data is averaged over a one metre depth interval. The calibrated data is then written (unformatted) to nine track, 1600 BPI tape along with a header, which contains all the pertinent information about the particular CTD profile. The header includes: station name, position, time, date, pass number, cruise number, processing options, calibration constants, description of instrumentation, a comment field and any dissolved oxygen content data obtained at the station. Most of this header information is input in this third processing stage. One record of calibrated data is depicted below.

| Depth<br>(m) | Pressure<br>(db) | Salinity | Temperature<br>(°C) | Sigma-t<br>( $\text{kg m}^{-3}$ ) | Conductivity<br>Ratio |
|--------------|------------------|----------|---------------------|-----------------------------------|-----------------------|
|--------------|------------------|----------|---------------------|-----------------------------------|-----------------------|

The fourth and final stage of processing consists of a number of different programs which are used to present and display the data. Computer programs are available to produce profile plots, temperature-salinity (TS) diagrams, displacement plots, and various listing programs. The publication listing program was used to produce the standard depth listings contained in this report.

#### DATA QUALITY

Calibrations in the laboratory were performed on the temperature sensor. These consisted of either ice point determinations or calibrations over a range of temperatures using the Frozen Sea Research Group's temperature bath and 3 National Research Council (NRC) thermistors as standards or Offshore Oceanography Group's temperature bath. Checks on the conductivity circuit were performed by replacing the conductivity cell with a decade resistance box and running through the resistance range of interest.

The field checks of the temperature and conductivity sensors were obtained by placing a Niskin water sampling bottle with reversing thermometers on the 7 conductor cable, several metres above the probe. The probe and bottle were then positioned at a depth where vertical gradients in temperature and salinity were small. After a suitable stabilization period the bottle and thermometers were tripped, and simultaneously, the data from the data acquisition system were noted. Salinities determined from the

bottle sample, and temperatures from reversing thermometers were then compared with those computed from the CTD data. Differences were calculated between the Guildline CTD data and in situ bottle data. The mean salinity difference or offset was then incorporated as a correction to the salinity in the third data processing stage. The mean temperature difference or offset was not used to correct the data because of the relatively large uncertainty in the reversing thermometer temperature ( $\pm 0.02^{\circ}\text{C}$ ) and the large scatter in these differences (see Figure 3). The reversing thermometer data were used as an indicator for gross calibration shifts in the CTD temperature sensor. The statistics for the 2 years of in situ calibration data (153 samples) for different CTD probes and different temperature sensors indicate a mean temperature difference (CTD temperature-reversing thermometer reading) of  $-0.010^{\circ}\text{C}$  with a sample standard deviation of  $0.045^{\circ}\text{C}$  - four and one half times as large as the mean. The 95% confidence interval for the mean is  $-0.017$  to  $+0.003^{\circ}\text{C}$ . The plot of temperature differences versus depth in Figure 3 indicates that there may be a bias with depth, however the large scatter in these data makes a depth dependent correction unwarranted. The statistics for the salinity differences (corrected CTD salinity - in situ bottle salinity) for different CTD probes and different conductivity sensors (169 samples) show no mean offset because the salinity data for each cruise have been corrected for the mean offset observed for that cruise (Figure 4). The mean salinity offsets for each cruise were in the range of 0.006 to 0.092. The sample standard deviation of 0.013 indicates that the scatter of the salinity differences about the offsets is small. The plot of salinity differences versus depth in Figure 4 also indicates a possible bias with depth, however even if the depth dependence of the salinity difference is significant the correction would be small ( $\sim 0.006$  at 500m). The temperature and salinity differences plotted in Figures 3 and 4 are not exclusively from samples taken at the CODE stations, also included are the calibration samples from Alberni Inlet, Nootka Sound Inlets and Knight Inlet.

An important aspect of CTD data quality is related to the variable descent rate of the CTD probe caused by ship motion. It has been observed that when the CTD probe slows down or reverses its descent spikes or loops appear in the salinity data - spikes as large as 0.15 have been observed in regions where vertical gradients are large. This spiking problem may be a sensor time response mismatch problem as the time response of the conductivity sensor depends strongly on the descent rate of the probe (Perkin and Lewis 1982). Since we did not know how to correct the conductivity data we rejected the CTD data whenever the probe descent rate was less than  $0.5\text{ m s}^{-1}$ . The descent rate cut-off criterion, though arbitrarily chosen, reduced the occurrence of this spiking problem, but not all the salinity spikes in the thermocline were eliminated. Salinity spikes which gave rise to density inversions greater than  $0.02\text{ kg m}^{-3}$  over a one metre interval were corrected by linear interpolation.

Another problem area of the CTD data is in the near surface region (0 to 5m) where unrealistically large density inversions sometimes occur. These inversions may result from problems with the CTD and/or the manner in which profiles were taken from the vessels. It has been noted that if the conductivity cell is not properly cleaned and soaked prior to each cast large conductivity readings may occur at the start of the cast. Furthermore, during the cruises with the C.S.S. Parizeau and C.S.S. Vector the profiles were obtained from the stern directly in the propeller wash from these

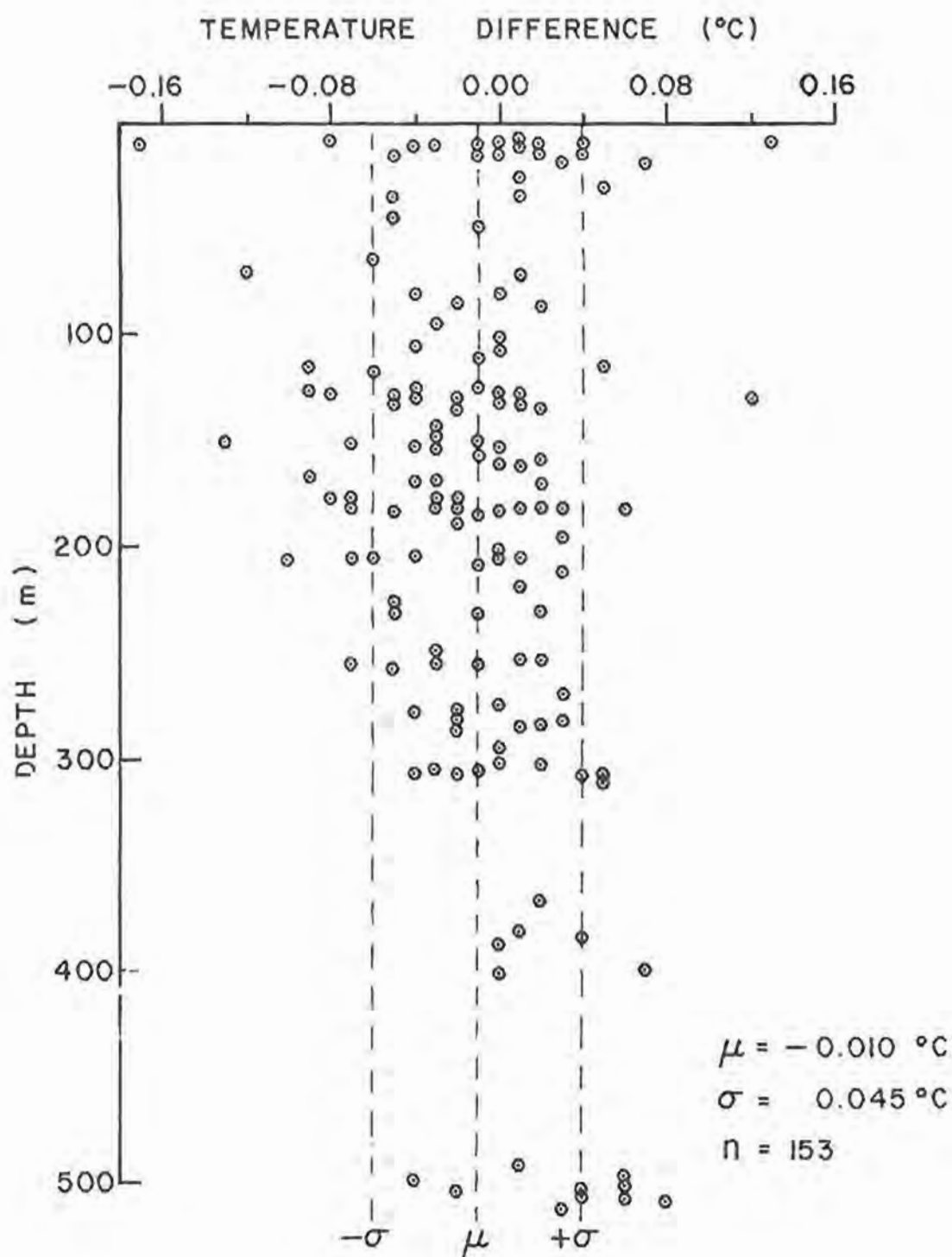


Figure 3 Temperature differences (Guildline CTD - reversing thermometers) for the period January 1979 to September 1981.



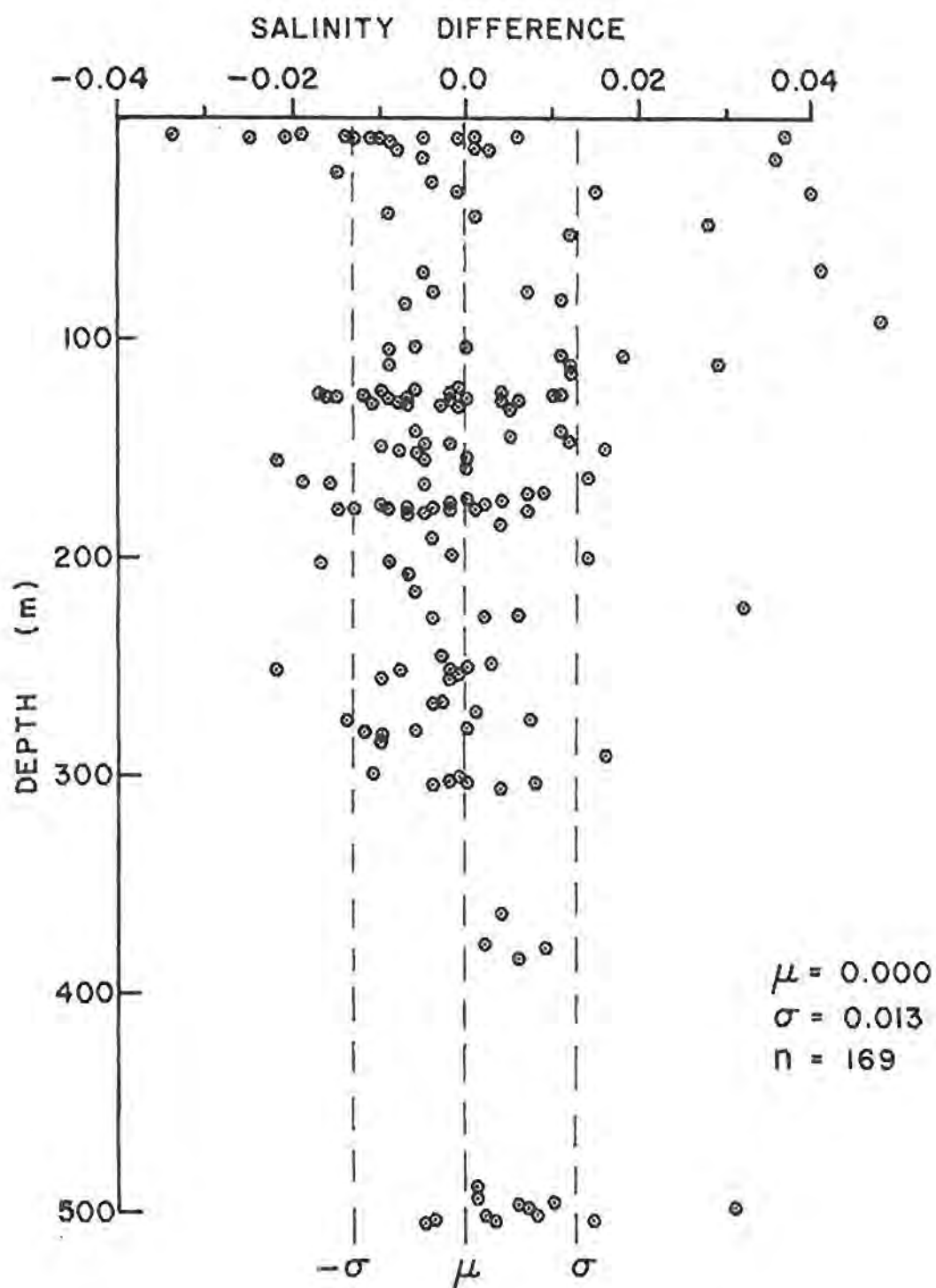


Figure 4 Salinity differences (corrected Guildline salinity - in situ bottle salinity) for the period from January 1979 to September 1981.

vessels. The constant stirring of the stratified surface waters by the propellers and the presence of bubbles in the wash may also have contributed to the spurious readings. Where possible these large inversions have been edited out, otherwise a comment describing the problem is included in the header.

The statement of data accuracy is necessarily ambiguous. The manufacturer states accuracies of  $\pm 0.01$  for equivalent salinity,  $\pm 0.01^{\circ}\text{C}$  for temperature and  $\pm 1.25$  db for pressure. From the static, *in situ* calibrations the accuracy of the salinity is only slightly poorer at  $\pm 0.013$ . It is difficult to comment upon the accuracy of the temperature data using the static, *in situ* calibrations because the large standard deviation of the temperature differences. This large scatter is probably due to the limited accuracy ( $\sim 0.02^{\circ}\text{C}$ ) of the reversing thermometers. When the CTD probe is descending through regions of large vertical gradients, and especially when the descent rate is varying due to ship motion the accuracy of the data deteriorates considerably, and the accuracies stated by the manufacturer are optimistic. Data quality has been observed to be poor in the top few metres of a number of profiles, but in the vast majority of profiles no abnormalities are present. Consequently it is difficult to assign an accuracy to these measurements given the transient nature of the problem. The problem of dynamic calibration of the temperature and conductivity sensor still remains.

#### DISSOLVED OXYGEN CONTENT DATA

Samples for dissolved oxygen content determination were obtained at standard depths using Niskin water sampling bottles. Samples were drawn, pickled and analyzed within 24 hours. A modified Winkler titration method (Strickland and Parsons 1965) was used to determine the dissolved oxygen content of the samples. Two titrations were done on each sample giving an accuracy of about  $\pm 0.02$  ml/l under ideal laboratory conditions.

The dissolved oxygen content (in units of ml/l) data is presented together with the CTD data at the appropriate depths.

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UNESCO 1981b. Background papers and supporting data on the International Equation of State of Seawater 1980. UNESCO Tech. Pap. in Mar. Sci., No.38. 192p.



Appendix 1. Index to calibrated data files on tape U00454, label: CSTL\* CODE.

| FILE<br>#   | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-------------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| -----       |         |                  |               |                 |                  |              |    |
| CRUISE # 01 |         |                  |               |                 |                  |              |    |
| 1           | 101     | 79/01/30         | 2224          | 48 39.00        | 125 2.50         | 54.5         | 0  |
| 2           | 102     | 79/01/30         | 2301          | 48 35.60        | 125 9.00         | 103.3        | 0  |
| 3           | 103     | 79/01/30         | 2342          | 48 32.20        | 125 15.50        | 103.1        | 0  |
| 4           | 104     | 79/01/31         | 0032          | 48 28.90        | 125 21.80        | 137.9        | 0  |
| 5           | 105     | 79/01/31         | 0119          | 48 25.50        | 125 28.30        | 122.0        | 0  |
| 6           | 106     | 79/01/31         | 0151          | 48 22.00        | 125 34.70        | 125.2        | 0  |
| 7           | 107     | 79/01/31         | 0236          | 48 18.60        | 125 41.20        | 138.1        | 0  |
| 8           | 108     | 79/01/31         | 0320          | 48 15.10        | 125 47.70        | 172.9        | 0  |
| 9           | 109     | 79/01/31         | 0359          | 48 12.90        | 125 52.00        | 394.0        | 0  |
| 10          | 110     | 79/01/31         | 0452          | 48 10.60        | 125 56.20        | 534.7        | 0  |
| 11          | 111     | 79/01/31         | 0533          | 48 8.50         | 126 0.00         | 550.3        | 0  |
| 12          | 108     | 79/01/31         | 0648          | 48 15.10        | 125 47.70        | 185.7        | 0  |
| 13          | 201     | 79/01/31         | 0803          | 48 25.00        | 125 59.80        | 177.8        | 0  |
| 14          | 202     | 79/01/31         | 0902          | 48 31.50        | 126 7.00         | 178.9        | 0  |
| 15          | 203     | 79/01/31         | 1004          | 48 35.80        | 126 12.70        | 496.0        | 0  |
| 16          | 204     | 79/01/31         | 1103          | 48 41.40        | 126 19.10        | 421.7        | 0  |
| 17          | 205     | 79/01/31         | 1204          | 48 48.00        | 126 26.00        | 261.3        | 0  |
| 18          | 206     | 79/01/31         | 1303          | 48 54.00        | 126 33.00        | 249.1        | 0  |
| 19          | 207     | 79/01/31         | 1402          | 49 1.30         | 126 41.80        | 199.4        | 0  |
| 20          | 208     | 79/01/31         | 1503          | 49 7.30         | 126 48.90        | 153.5        | 0  |
| 21          | 209     | 79/01/31         | 1601          | 49 13.70        | 126 57.10        | 150.9        | 0  |
| 22          | 210     | 79/01/31         | 1701          | 49 21.53        | 127 5.60         | 143.1        | 0  |
| 23          | 211     | 79/01/31         | 1759          | 49 28.37        | 127 13.72        | 156.8        | 0  |
| 24          | 212     | 79/01/31         | 1901          | 49 33.64        | 127 20.38        | 225.2        | 0  |
| 25          | 213     | 79/01/31         | 2002          | 49 38.80        | 127 27.00        | 401.9        | 0  |
| 26          | 214     | 79/01/31         | 2102          | 49 42.70        | 127 32.10        | 490.7        | 0  |
| 27          | 215     | 79/01/31         | 2205          | 49 47.60        | 127 36.90        | 134.1        | 0  |
| 28          | 216     | 79/01/31         | 2313          | 49 53.20        | 127 41.40        | 258.2        | 0  |
| 29          | 217     | 79/02/01         | 0005          | 49 59.10        | 127 48.40        | 502.8        | 0  |
| 30          | 218     | 79/02/01         | 0121          | 50 5.20         | 127 56.90        | 85.4         | 0  |
| 31          | 301     | 79/02/01         | 0216          | 50 1.00         | 128 6.00         | 501.7        | 0  |
| 32          | 302     | 79/02/01         | 0324          | 49 56.50        | 128 12.00        | 503.0        | 0  |
| 33          | 303     | 79/02/01         | 0501          | 49 47.00        | 128 28.00        | 546.2        | 0  |
| 34          | 304     | 79/02/01         | 0627          | 49 38.00        | 128 40.00        | 541.4        | 0  |
| 35          | 305     | 79/02/01         | 0844          | 49 21.00        | 128 19.00        | 539.7        | 0  |
| 36          | 306     | 79/02/01         | 1100          | 49 5.00         | 127 58.00        | 542.3        | 0  |
| 37          | 307     | 79/02/01         | 1258          | 48 48.00        | 127 37.00        | 522.7        | 0  |
| 38          | 309     | 79/02/01         | 1453          | 48 58.00        | 127 20.00        | 513.5        | 0  |
| 39          | 311     | 79/02/01         | 1620          | 49 6.00         | 127 8.00         | 550.4        | 0  |
| 40          | 313     | 79/02/01         | 1744          | 49 14.00        | 126 55.00        | 163.7        | 0  |
| 41          | 315     | 79/02/01         | 1841          | 49 20.00        | 126 46.00        | 105.9        | 0  |
| 42          | 106     | 79/02/03         | 0405          | 48 22.00        | 125 34.70        | 138.7        | 0  |
| 43          | 106     | 79/02/03         | 0430          | 48 22.00        | 125 34.70        | 135.1        | 0  |
| 44          | 106     | 79/02/03         | 0501          | 48 22.00        | 125 34.70        | 134.8        | 0  |
| 45          | 106     | 79/02/03         | 0531          | 48 22.00        | 125 34.70        | 132.2        | 0  |
| 46          | 106     | 79/02/03         | 0601          | 48 22.00        | 125 34.70        | 135.9        | 0  |
| 47          | 106     | 79/02/03         | 0631          | 48 22.00        | 125 34.70        | 131.2        | 0  |
| 48          | 106     | 79/02/03         | 0701          | 48 22.00        | 125 34.70        | 124.0        | 0  |



| FILE<br>#   | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-------------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 49          | 106     | 79/02/03         | 0731          | 48 22.00        | 125 34.70        | 145.1        | 0  |
| 50          | 106     | 79/02/03         | 0804          | 48 22.00        | 125 34.70        | 133.0        | 0  |
| 51          | 106     | 79/02/03         | 0830          | 48 22.00        | 125 34.70        | 134.1        | 0  |
| 52          | 106     | 79/02/03         | 0901          | 48 22.00        | 125 34.70        | 134.7        | 0  |
| 53          | 106     | 79/02/03         | 0934          | 48 22.00        | 125 34.70        | 134.1        | 0  |
| 54          | 106     | 79/02/03         | 1005          | 48 22.00        | 125 34.70        | 137.2        | 0  |
| 55          | 106     | 79/02/03         | 1029          | 48 22.00        | 125 34.70        | 134.0        | 0  |
| 56          | 106     | 79/02/03         | 1059          | 48 22.00        | 125 34.70        | 132.1        | 0  |
| 57          | 106     | 79/02/03         | 1131          | 48 22.00        | 125 34.70        | 129.7        | 0  |
| 58          | 106     | 79/02/03         | 1202          | 48 22.00        | 125 34.70        | 137.1        | 0  |
| 59          | 106     | 79/02/03         | 1229          | 48 22.00        | 125 34.70        | 138.1        | 0  |
| 60          | 106     | 79/02/03         | 1250          | 48 22.00        | 125 34.70        | 136.9        | 0  |
| 61          | 106     | 79/02/03         | 1328          | 48 22.00        | 125 34.70        | 138.9        | 0  |
| 62          | 106     | 79/02/03         | 1400          | 48 22.00        | 125 34.70        | 137.8        | 0  |
| 63          | 106     | 79/02/03         | 1430          | 48 22.00        | 125 34.70        | 138.0        | 0  |
| 64          | 106     | 79/02/03         | 1501          | 48 22.00        | 125 34.70        | 138.7        | 0  |
| 65          | 106     | 79/02/03         | 1532          | 48 22.00        | 125 34.70        | 136.9        | 0  |
| 66          | 106     | 79/02/03         | 1605          | 48 22.00        | 125 34.70        | 123.0        | 0  |
| 67          | 106     | 79/02/03         | 1630          | 48 22.00        | 125 34.70        | 127.0        | 0  |
| 68          | 111     | 79/02/03         | 1834          | 48 8.50         | 126 .00          | 532.3        | 0  |
| 69          | 110     | 79/02/03         | 1947          | 48 10.60        | 125 56.20        | 555.9        | 10 |
| 70          | 109     | 79/02/03         | 2033          | 48 12.90        | 125 52.00        | 522.5        | 9  |
| 71          | 108     | 79/02/03         | 2145          | 48 15.10        | 125 47.70        | 280.0        | 0  |
| 72          | 107     | 79/02/03         | 2225          | 48 18.60        | 125 41.20        | 140.0        | 5  |
| 73          | 106     | 79/02/03         | 2317          | 48 22.00        | 125 34.70        | 127.0        | 0  |
| 74          | 105     | 79/02/03         | 2356          | 48 25.50        | 125 28.30        | 124.9        | 5  |
| 75          | 104     | 79/02/04         | 0056          | 48 28.90        | 125 21.80        | 135.8        | 0  |
| 76          | 103     | 79/02/04         | 0140          | 48 32.20        | 125 15.50        | 106.3        | 4  |
| 77          | 102     | 79/02/04         | 0300          | 48 35.60        | 125 9.00         | 109.2        | 0  |
| 78          | 101     | 79/02/04         | 0410          | 48 39.00        | 125 2.50         | 55.7         | 2  |
| CRUISE # 02 |         |                  |               |                 |                  |              |    |
| 79          | 101     | 79/03/08         | 1727          | 48 39.00        | 125 2.50         | 60.7         | 0  |
| 80          | 102     | 79/03/08         | 1804          | 48 35.60        | 125 9.00         | 98.4         | 0  |
| 81          | 103     | 79/03/08         | 1842          | 48 32.20        | 125 15.50        | 102.4        | 0  |
| 82          | 104     | 79/03/08         | 1922          | 48 28.90        | 125 21.80        | 142.1        | 0  |
| 83          | 105     | 79/03/08         | 1959          | 48 25.50        | 125 28.30        | 127.2        | 0  |
| 84          | 106     | 79/03/08         | 2040          | 48 22.00        | 125 34.70        | 149.0        | 0  |
| 85          | 107     | 79/03/08         | 2119          | 48 18.60        | 125 41.20        | 148.0        | 0  |
| 86          | 108     | 79/03/08         | 2158          | 48 15.10        | 125 47.70        | 210.6        | 0  |
| 87          | 109     | 79/03/08         | 2227          | 48 12.90        | 125 52.00        | 428.7        | 0  |
| CRUISE # 03 |         |                  |               |                 |                  |              |    |
| 88          | 101     | 79/04/19         | 1219          | 48 39.00        | 125 2.50         | 50.7         | 0  |
| 89          | 102     | 79/04/19         | 1256          | 48 35.60        | 125 9.00         | 110.3        | 0  |
| 90          | 103     | 79/04/19         | 1342          | 48 32.20        | 125 15.50        | 112.1        | 0  |
| 91          | 104     | 79/04/19         | 1424          | 48 28.90        | 125 21.80        | 149.1        | 0  |
| 92          | 105     | 79/04/19         | 1510          | 48 25.50        | 125 28.30        | 151.0        | 4  |
| 93          | 106     | 79/04/19         | 1604          | 48 22.00        | 125 34.70        | 134.1        | 0  |
| 94          | 107     | 79/04/19         | 1649          | 48 18.60        | 125 41.20        | 138.1        | 0  |

| FILE<br>#   | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-------------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 95          | 108     | 79/04/19         | 1735          | 48 15.10        | 125 47.70        | 101.2        | 0  |
| 96          | 109     | 79/04/19         | 1830          | 48 12.90        | 125 52.00        | 498.9        | 0  |
| 97          | 110     | 79/04/19         | 1914          | 48 10.60        | 125 56.20        | 498.6        | 0  |
| 98          | 111     | 79/04/19         | 1953          | 48 8.50         | 126 .00          | 495.8        | 0  |
| CRUISE # 04 |         |                  |               |                 |                  |              |    |
| 99          | 111     | 79/05/18         | 1630          | 48 8.50         | 126 .00          | 491.0        | 10 |
| 100         | 110     | 79/05/18         | 1638          | 48 10.60        | 125 56.20        | 487.2        | 0  |
| 101         | 109     | 79/05/18         | 1730          | 48 12.90        | 125 52.00        | 494.8        | 10 |
| 102         | 108     | 79/05/18         | 1816          | 48 15.10        | 125 47.70        | 192.8        | 0  |
| 103         | 107     | 79/05/18         | 1914          | 48 18.60        | 125 41.20        | 131.2        | 4  |
| 104         | 106     | 79/05/18         | 2003          | 48 22.00        | 125 34.70        | 135.3        | 0  |
| 105         | 104     | 79/05/18         | 2141          | 48 28.90        | 125 21.80        | 138.2        | 0  |
| 106         | 103     | 79/05/18         | 2247          | 48 32.20        | 125 15.50        | 91.5         | 3  |
| 107         | 102     | 79/05/18         | 2355          | 48 35.60        | 125 9.00         | 81.3         | 0  |
| 108         | 101     | 79/05/19         | 0049          | 48 39.00        | 125 2.50         | 40.6         | 0  |
| 109         | 201     | 79/05/21         | 1009          | 48 25.00        | 125 59.80        | 222.1        | 0  |
| 110         | 202     | 79/05/21         | 1132          | 48 31.50        | 126 7.00         | 330.3        | 0  |
| 111         | 203     | 79/05/21         | 1253          | 48 35.80        | 126 12.70        | 164.7        | 0  |
| 112         | 204     | 79/05/21         | 1410          | 48 41.40        | 126 19.10        | 511.5        | 0  |
| 113         | 205     | 79/05/21         | 1534          | 48 48.00        | 126 26.00        | 172.5        | 0  |
| 114         | 206     | 79/05/21         | 1650          | 48 54.00        | 126 33.00        | 408.9        | 0  |
| 115         | 207     | 79/05/21         | 1826          | 49 1.30         | 126 41.80        | 150.0        | 0  |
| 116         | 208     | 79/05/21         | 1943          | 49 7.30         | 126 48.90        | 147.7        | 0  |
| 117         | 209     | 79/05/21         | 2100          | 49 13.70        | 126 57.10        | 139.0        | 0  |
| 118         | 210     | 79/05/21         | 2214          | 49 21.53        | 127 5.60         | 500.8        | 0  |
| 119         | 211     | 79/05/21         | 2344          | 49 28.37        | 127 13.72        | 507.8        | 0  |
| 120         | 212     | 79/05/22         | 0115          | 49 33.64        | 127 20.38        | 136.0        | 0  |
| 121         | 213     | 79/05/22         | 0236          | 49 38.80        | 127 27.00        | 354.0        | 0  |
| 122         | 214     | 79/05/22         | 0328          | 49 42.70        | 127 32.10        | 522.6        | 0  |
| 123         | 107     | 79/05/23         | 1300          | 48 18.60        | 125 41.20        | 147.2        | 0  |
| 124         | 107     | 79/05/23         | 1329          | 48 18.60        | 125 41.20        | 150.8        | 0  |
| 125         | 107     | 79/05/23         | 1400          | 48 18.60        | 125 41.20        | 150.8        | 0  |
| 126         | 107     | 79/05/23         | 1429          | 48 18.60        | 125 41.20        | 150.2        | 0  |
| 127         | 107     | 79/05/23         | 1500          | 48 18.60        | 125 41.20        | 141.8        | 0  |
| 128         | 107     | 79/05/23         | 1530          | 48 18.60        | 125 41.20        | 141.0        | 0  |
| 129         | 107     | 79/05/23         | 1600          | 48 18.60        | 125 41.20        | 141.9        | 0  |
| 130         | 107     | 79/05/23         | 1630          | 48 18.60        | 125 41.20        | 140.0        | 0  |
| 131         | 107     | 79/05/23         | 1700          | 48 18.60        | 125 41.20        | 142.8        | 0  |
| 132         | 107     | 79/05/23         | 1730          | 48 18.60        | 125 41.20        | 141.7        | 0  |
| 133         | 107     | 79/05/23         | 1800          | 48 18.60        | 125 41.20        | 146.1        | 0  |
| 134         | 107     | 79/05/23         | 1832          | 48 18.60        | 125 41.20        | 143.0        | 0  |
| 135         | 107     | 79/05/23         | 1902          | 48 18.60        | 125 41.20        | 137.1        | 0  |
| 136         | 107     | 79/05/23         | 1931          | 48 18.60        | 125 41.20        | 139.1        | 0  |
| 137         | 107     | 79/05/23         | 2004          | 48 18.60        | 125 41.20        | 138.2        | 0  |
| 138         | 107     | 79/05/23         | 2035          | 48 18.60        | 125 41.20        | 138.7        | 0  |
| 139         | 107     | 79/05/23         | 2101          | 48 18.60        | 125 41.20        | 138.2        | 0  |
| 140         | 107     | 79/05/23         | 2131          | 48 18.60        | 125 41.20        | 136.0        | 0  |
| 141         | 107     | 79/05/23         | 2205          | 48 18.60        | 125 41.20        | 136.0        | 0  |
| 142         | 107     | 79/05/23         | 2231          | 48 18.60        | 125 41.20        | 136.1        | 0  |

| FILE<br>#   | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-------------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 143         | 107     | 79/05/23         | 2300          | 48 18.60        | 125 41.20        | 151.1        | 0  |
| 144         | 107     | 79/05/23         | 2330          | 48 18.60        | 125 41.20        | 152.7        | 0  |
| 145         | 107     | 79/05/24         | 0000          | 48 18.60        | 125 41.20        | 152.1        | 0  |
| 146         | 107     | 79/05/24         | 0030          | 48 18.60        | 125 41.20        | 152.1        | 0  |
| 147         | 107     | 79/05/24         | 0101          | 48 18.60        | 125 41.20        | 150.0        | 0  |
| 148         | 111     | 79/05/24         | 0247          | 48 8.50         | 126 .00          | 503.7        | 0  |
| 149         | 110     | 79/05/24         | 0333          | 48 10.60        | 125 56.20        | 500.7        | 0  |
| 150         | 109     | 79/05/24         | 0445          | 48 12.90        | 125 52.00        | 435.6        | 0  |
| 151         | 108     | 79/05/24         | 0528          | 48 15.10        | 125 47.70        | 235.0        | 0  |
| 152         | 107     | 79/05/24         | 0607          | 48 18.60        | 125 41.20        | 142.1        | 0  |
| 153         | 106     | 79/05/24         | 0644          | 48 22.00        | 125 34.70        | 141.1        | 0  |
| 154         | 105     | 79/05/24         | 0722          | 48 25.50        | 125 28.30        | 113.3        | 0  |
| 155         | 104     | 79/05/24         | 0759          | 48 28.90        | 125 21.80        | 141.9        | 0  |
| 156         | 103     | 79/05/24         | 0838          | 48 32.20        | 125 15.50        | 114.3        | 0  |
| 157         | 102     | 79/05/24         | 0919          | 48 35.60        | 125 9.00         | 91.3         | 0  |
| 158         | 101     | 79/05/24         | 1003          | 48 39.00        | 125 2.50         | 45.8         | 0  |
| CRUISE # 05 |         |                  |               |                 |                  |              |    |
| 159         | 109     | 79/06/21         | 0028          | 48 12.90        | 125 52.00        | 417.5        | 0  |
| 160         | 108     | 79/06/22         | 0116          | 48 15.10        | 125 47.70        | 209.3        | 0  |
| 161         | 107     | 79/06/22         | 0202          | 48 18.60        | 125 41.20        | 145.8        | 0  |
| 162         | 106     | 79/06/22         | 0245          | 48 22.00        | 125 34.70        | 142.0        | 0  |
| 163         | 105     | 79/06/22         | 0332          | 48 25.50        | 125 28.30        | 130.7        | 0  |
| 164         | 104     | 79/06/22         | 0414          | 48 28.90        | 125 21.80        | 151.9        | 0  |
| 165         | 103     | 79/06/22         | 0504          | 48 32.20        | 125 15.50        | 112.9        | 0  |
| 166         | 102     | 79/06/22         | 0551          | 48 35.60        | 125 9.00         | 109.0        | 0  |
| 167         | 101     | 79/06/22         | 0643          | 48 39.00        | 125 2.50         | 51.9         | 0  |
| CRUISE # 07 |         |                  |               |                 |                  |              |    |
| 186         | 111     | 79/10/12         | 2111          | 48 8.50         | 126 .00          | 496.9        | 10 |
| 187         | 110     | 79/10/12         | 2243          | 48 10.60        | 125 56.20        | 497.7        | 0  |
| 188         | 109     | 79/10/12         | 2336          | 48 12.90        | 125 52.00        | 501.0        | 10 |
| 189         | 108     | 79/10/13         | 0113          | 48 15.10        | 125 47.70        | 225.4        | 0  |
| 190         | 107     | 79/10/13         | 0203          | 48 18.60        | 125 41.20        | 154.1        | 6  |
| 191         | 106     | 79/10/13         | 0310          | 48 22.00        | 125 34.70        | 148.8        | 0  |
| 192         | 105     | 79/10/13         | 0353          | 48 25.50        | 125 28.30        | 130.1        | 5  |
| 193         | 104     | 79/10/13         | 0453          | 48 28.90        | 125 21.80        | 148.9        | 0  |
| 194         | 103     | 79/10/13         | 0508          | 48 32.20        | 125 15.50        | 114.3        | 5  |
| 195         | 102     | 79/10/13         | 0646          | 48 35.60        | 125 9.00         | 110.0        | 0  |
| 196         | 101     | 79/10/13         | 0730          | 48 39.00        | 125 2.50         | 68.6         | 2  |
| CRUISE # 08 |         |                  |               |                 |                  |              |    |
| 197         | 111     | 79/11/27         | 1651          | 48 8.50         | 126 .00          | 500.7        | 10 |
| 198         | 110     | 79/11/27         | 1902          | 48 10.60        | 125 56.20        | 498.0        | 0  |
| 199         | 109     | 79/11/27         | 2014          | 48 12.90        | 125 52.00        | 396.8        | 0  |
| 200         | 108     | 79/11/27         | 2137          | 48 15.10        | 125 47.70        | 185.6        | 0  |
| 201         | 107     | 79/11/27         | 2323          | 48 18.60        | 125 41.20        | 131.3        | 0  |
| 202         | 106     | 79/11/28         | 0040          | 48 22.00        | 125 34.70        | 125.3        | 0  |
| 203         | 105     | 79/11/28         | 0150          | 48 25.50        | 125 28.30        | 141.1        | 0  |
| 204         | 104     | 79/11/28         | 0309          | 48 28.90        | 125 21.80        | 139.9        | 0  |

| FILE<br># | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-----------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 205       | 103     | 79/11/28         | 0407          | 48 32.20        | 125 15.50        | 92.3         | 0  |
| 206       | 102     | 79/11/28         | 0501          | 48 35.60        | 125 9.00         | 91.4         | 0  |
| 207       | 101     | 79/11/28         | 0542          | 48 39.00        | 125 2.50         | 39.9         | 0  |
| 208       | W.C. 25 | 79/12/01         | 1228          | 49 21.50        | 126 44.50        | 87.5         | 0  |
| 209       | W.C. 24 | 79/12/01         | 1344          | 49 15.50        | 126 53.00        | 114.1        | 0  |
| 210       | W.C. 23 | 79/12/01         | 1458          | 49 10.00        | 127 2.00         | 356.2        | 0  |
| 211       | W.C. 22 | 79/12/01         | 1601          | 49 4.50         | 127 11.00        | 1134.8       | 0  |
| 212       | W.C. 21 | 79/12/01         | 1746          | 48 59.00        | 127 19.50        | 1176.9       | 0  |
| 213       | W.C. 20 | 79/12/01         | 1932          | 48 53.50        | 127 29.00        | 1201.8       | 0  |
| 214       | W.C. 19 | 79/12/01         | 2101          | 48 48.00        | 127 37.50        | 1184.9       | 0  |
| 215       | W.C. 18 | 79/12/01         | 2252          | 48 42.00        | 127 46.00        | 1127.4       | 0  |
| 216       | W.C. 40 | 79/12/02         | 0611          | 49 31.50        | 128 52.50        | 1132.5       | 0  |
| 217       | W.C. 41 | 79/12/02         | 0803          | 49 36.50        | 128 44.50        | 1223.4       | 10 |
| 218       | W.C. 42 | 79/12/02         | 0952          | 49 42.00        | 128 36.50        | 1081.5       | 0  |
| 219       | W.C. 43 | 79/12/02         | 1112          | 49 47.00        | 128 28.50        | 1121.8       | 10 |
| 220       | W.C. 44 | 79/12/02         | 1305          | 49 51.50        | 128 20.50        | 1208.6       | 0  |
| 221       | W.C. 45 | 79/12/02         | 1413          | 49 57.00        | 128 12.50        | 1013.0       | 9  |
| 222       | W.C. 46 | 79/12/02         | 1614          | 50 1.50         | 128 5.50         | 639.3        | 0  |
| 223       | W.C. 47 | 79/12/02         | 1739          | 50 6.00         | 127 58.00        | 74.8         | 5  |

## CRUISE # 09

|     |         |          |      |          |           |        |    |
|-----|---------|----------|------|----------|-----------|--------|----|
| 224 | 101     | 80/02/07 | 1830 | 48 39.00 | 125 2.50  | 40.9   | 2  |
| 225 | 102     | 80/02/07 | 1930 | 48 35.60 | 125 9.00  | 103.3  | 0  |
| 226 | 103     | 80/02/07 | 2028 | 48 32.20 | 125 15.50 | 105.3  | 4  |
| 227 | 104     | 80/02/07 | 2136 | 48 28.90 | 125 21.80 | 142.1  | 0  |
| 228 | 105     | 80/02/07 | 2230 | 48 25.50 | 125 28.30 | 125.1  | 5  |
| 229 | 106     | 80/02/07 | 2340 | 48 22.00 | 125 34.70 | 121.1  | 0  |
| 230 | 107     | 80/02/08 | 0037 | 48 18.60 | 125 41.20 | 142.2  | 5  |
| 231 | 108     | 80/02/08 | 0145 | 48 15.10 | 125 47.70 | 144.1  | 0  |
| 232 | 109     | 80/02/08 | 0232 | 48 12.90 | 125 52.00 | 498.1  | 10 |
| 233 | 110     | 80/02/08 | 0353 | 48 10.60 | 125 56.20 | 499.7  | 0  |
| 234 | 111     | 80/02/08 | 0518 | 48 8.50  | 126 .00   | 496.0  | 10 |
| 235 | B.S. 8  | 80/02/08 | 0632 | 48 19.20 | 126 2.50  | 502.1  | 10 |
| 236 | B.S. 7  | 80/02/08 | 0753 | 48 23.80 | 125 57.40 | 408.7  | 0  |
| 237 | B.S. 6  | 80/02/08 | 0859 | 48 28.00 | 125 51.50 | 116.3  | 4  |
| 238 | B.S. 5  | 80/02/08 | 1000 | 48 32.20 | 125 45.70 | 81.5   | 0  |
| 239 | B.S. 4  | 80/02/08 | 1040 | 48 36.40 | 125 40.10 | 59.4   | 2  |
| 240 | B.S. 3  | 80/02/08 | 1126 | 48 40.40 | 125 34.50 | 178.9  | 0  |
| 241 | B.S. 2  | 80/02/08 | 1206 | 48 44.40 | 125 29.10 | 115.3  | 5  |
| 242 | B.S. 1  | 80/02/08 | 1257 | 48 48.20 | 125 23.70 | 93.2   | 0  |
| 243 | W.C. 09 | 80/02/11 | 0417 | 48 2.30  | 126 20.00 | 1147.6 | 0  |
| 244 | W.C. 10 | 80/02/11 | 0534 | 48 6.50  | 126 29.50 | 1207.3 | 0  |
| 245 | W.C. 11 | 80/02/11 | 0700 | 48 11.00 | 126 39.50 | 1177.0 | 0  |
| 246 | W.C. 12 | 80/02/11 | 0822 | 48 16.00 | 126 49.50 | 1206.4 | 0  |
| 247 | W.C. 13 | 80/02/11 | 0954 | 48 20.50 | 127 .00   | 1155.5 | 0  |
| 248 | W.C. 14 | 80/02/11 | 1114 | 48 25.00 | 127 9.50  | 1198.4 | 0  |
| 249 | W.C. 15 | 80/02/11 | 1301 | 48 30.00 | 127 20.00 | 1198.5 | 0  |
| 250 | W.C. 16 | 80/02/11 | 1416 | 48 34.50 | 127 30.00 | 1205.8 | 0  |
| 251 | W.C. 17 | 80/02/11 | 1536 | 48 39.50 | 127 40.00 | 1185.1 | 0  |
| 252 | W.C. 18 | 80/02/11 | 1646 | 48 42.00 | 127 46.00 | 1185.8 | 0  |

| FILE<br># | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-----------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 253       | W.C. 19 | 80/02/11         | 1821          | 48 48.00        | 127 37.50        | 1209.7       | 0  |
| 254       | W.C. 20 | 80/02/11         | 1925          | 48 53.50        | 127 29.00        | 1188.8       | 0  |
| 255       | W.C. 21 | 80/02/11         | 2115          | 48 59.00        | 127 19.50        | 1195.8       | 0  |
| 256       | W.C. 22 | 80/02/11         | 2301          | 49 4.50         | 127 11.00        | 1020.9       | 0  |
| 257       | W.C. 23 | 80/02/11         | 0027          | 49 10.00        | 127 2.00         | 373.8        | 0  |
| 258       | W.C. 24 | 80/02/12         | 0128          | 49 15.50        | 126 53.00        | 145.0        | 0  |
| 259       | W.C. 25 | 80/02/12         | 0436          | 49 21.50        | 126 44.50        | 85.5         | 0  |
| 260       | W.C. 56 | 80/02/12         | 0334          | 48 51.50        | 127 17.00        | 1189.7       | 0  |
| 261       | W.C. 57 | 80/02/13         | 0448          | 48 50.00        | 127 5.00         | 864.9        | 0  |
| 262       | W.C. 58 | 80/02/13         | 0611          | 48 48.50        | 126 52.50        | 309.6        | 0  |
| 263       | W.C. 59 | 80/02/13         | 0719          | 48 46.50        | 126 40.00        | 869.9        | 0  |
| 264       | W.C. 60 | 80/02/13         | 0832          | 48 45.50        | 126 27.50        | 467.1        | 0  |
| 265       | W.C. 61 | 80/02/13         | 0934          | 48 43.50        | 126 16.00        | 391.2        | 0  |
| 266       | W.C. 62 | 80/02/13         | 1038          | 48 41.50        | 126 2.50         | 112.4        | 0  |
| 267       | W.C. 63 | 80/02/13         | 1130          | 48 40.00        | 125 51.50        | 72.4         | 0  |
| 268       | W.C. 64 | 80/02/13         | 1220          | 48 38.50        | 125 40.00        | 54.6         | 0  |

## CRUISE # 10

|     |        |          |      |          |           |       |    |
|-----|--------|----------|------|----------|-----------|-------|----|
| 269 | 101    | 80/03/25 | 0831 | 48 39.00 | 125 2.50  | 44.5  | 2  |
| 270 | 102    | 80/03/25 | 0918 | 48 35.60 | 125 9.00  | 96.3  | 0  |
| 271 | 103    | 80/03/25 | 1001 | 48 32.20 | 125 15.50 | 103.5 | 4  |
| 272 | 104    | 80/03/25 | 1052 | 48 28.90 | 125 21.80 | 139.0 | 0  |
| 273 | 105    | 80/03/25 | 1226 | 48 25.50 | 125 28.30 | 114.2 | 4  |
| 274 | 106    | 80/03/25 | 1314 | 48 22.00 | 125 34.70 | 137.2 | 0  |
| 275 | 107    | 80/03/25 | 1415 | 48 18.60 | 125 41.20 | 145.8 | 5  |
| 276 | 108    | 80/03/25 | 1520 | 48 15.10 | 125 47.70 | 153.8 | 0  |
| 277 | 109    | 80/03/25 | 1553 | 48 12.90 | 125 52.00 | 493.7 | 10 |
| 278 | 110    | 80/03/25 | 1748 | 48 10.60 | 125 56.20 | 390.8 | 0  |
| 279 | 111    | 80/03/25 | 1842 | 48 8.50  | 126 .00   | 498.9 | 0  |
| 280 | B.S. 8 | 80/03/25 | 2040 | 48 19.20 | 126 2.50  | 497.9 | 0  |
| 281 | B.S. 7 | 80/03/25 | 2147 | 48 23.80 | 125 57.40 | 271.1 | 0  |
| 282 | B.S. 6 | 80/03/25 | 2235 | 48 28.00 | 125 51.50 | 128.1 | 0  |
| 283 | B.S. 5 | 80/03/25 | 2316 | 48 32.20 | 125 45.70 | 83.3  | 0  |
| 284 | B.S. 4 | 80/03/25 | 2357 | 48 36.40 | 125 40.10 | 56.7  | 0  |
| 285 | B.S. 3 | 80/03/26 | 0039 | 48 40.40 | 125 34.50 | 108.2 | 0  |
| 286 | B.S. 2 | 80/03/26 | 0117 | 48 44.40 | 125 29.10 | 116.4 | 0  |
| 287 | B.S. 1 | 80/03/26 | 0158 | 48 48.20 | 125 23.70 | 89.3  | 0  |

## CRUISE # 11

|     |     |          |      |          |           |       |    |
|-----|-----|----------|------|----------|-----------|-------|----|
| 288 | 101 | 80/04/22 | 1505 | 48 39.00 | 125 2.50  | 54.8  | 2  |
| 289 | 102 | 80/04/22 | 1555 | 48 35.60 | 125 9.00  | 102.5 | 0  |
| 290 | 103 | 80/04/22 | 1640 | 48 32.20 | 125 15.50 | 114.3 | 4  |
| 291 | 104 | 80/04/22 | 1736 | 48 28.90 | 125 21.80 | 149.6 | 0  |
| 292 | 105 | 80/04/22 | 1825 | 48 25.50 | 125 28.30 | 136.1 | 5  |
| 293 | 106 | 80/04/22 | 1919 | 48 22.00 | 125 34.70 | 80.6  | 0  |
| 294 | 107 | 80/04/22 | 2026 | 48 18.60 | 125 41.20 | 135.1 | 6  |
| 295 | 108 | 80/04/22 | 2130 | 48 15.10 | 125 47.70 | 205.2 | 0  |
| 296 | 109 | 80/04/22 | 2200 | 48 12.90 | 125 52.00 | 500.7 | 10 |
| 297 | 110 | 80/04/22 | 2325 | 48 10.60 | 125 56.20 | 495.8 | 0  |
| 298 | 111 | 80/04/22 | 0015 | 48 8.50  | 126 .00   | 495.0 | 10 |

| FILE<br># | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-----------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 299       | B.S. 8  | 80/04/23         | 0243          | 48 19.20        | 126 2.50         | 499.6        | 10 |
| 300       | B.S. 7  | 80/04/23         | 0419          | 48 23.80        | 125 57.40        | 416.9        | 0  |
| 301       | B.S. 6  | 80/04/23         | 0513          | 48 28.00        | 125 51.50        | 114.4        | 4  |
| 302       | B.S. 5  | 80/04/23         | 0617          | 48 32.20        | 125 45.70        | 81.3         | 0  |
| 303       | B.S. 4  | 80/04/23         | 0659          | 48 36.40        | 125 40.10        | 49.5         | 2  |
| 304       | B.S. 3  | 80/04/23         | 0741          | 48 40.40        | 125 34.50        | 175.9        | 0  |
| 305       | B.S. 2  | 80/04/23         | 0820          | 48 44.40        | 125 29.10        | 112.4        | 5  |
| 306       | B.S. 1  | 80/04/23         | 0911          | 48 48.20        | 125 23.70        | 92.4         | 0  |

## CRUISE # 12

|     |        |          |      |          |           |       |    |
|-----|--------|----------|------|----------|-----------|-------|----|
| 318 | 111    | 80/06/11 | 1842 | 48 8.50  | 126 .00   | 502.8 | 10 |
| 319 | 110    | 80/06/11 | 1950 | 48 10.60 | 125 56.20 | 505.7 | 0  |
| 320 | 109    | 80/06/11 | 2040 | 48 12.90 | 125 52.00 | 498.7 | 10 |
| 321 | 108    | 80/06/11 | 2210 | 48 15.10 | 125 47.70 | 209.1 | 0  |
| 322 | 107    | 80/06/11 | 2309 | 48 18.60 | 125 41.20 | 154.0 | 6  |
| 323 | 106    | 80/06/12 | 0021 | 48 22.00 | 125 34.70 | 145.9 | 0  |
| 324 | 105    | 80/06/12 | 0106 | 48 25.50 | 125 28.30 | 153.6 | 5  |
| 325 | 104    | 80/06/12 | 0211 | 48 28.90 | 125 21.80 | 150.1 | 0  |
| 326 | 103    | 80/06/12 | 0258 | 48 32.20 | 125 15.50 | 116.2 | 4  |
| 327 | 102    | 80/06/12 | 0401 | 48 35.60 | 125 9.00  | 103.3 | 0  |
| 328 | 101    | 80/06/12 | 0450 | 48 39.00 | 125 2.50  | 53.5  | 2  |
| 329 | 100    | 80/06/12 | 0531 | 48 40.50 | 125 .00   | 36.7  | 0  |
| 330 | B.S. 1 | 80/06/12 | 0707 | 48 48.20 | 125 23.70 | 83.5  | 0  |
| 331 | B.S. 2 | 80/06/12 | 0746 | 48 44.40 | 125 29.10 | 118.1 | 4  |
| 332 | B.S. 3 | 80/06/12 | 0845 | 48 40.40 | 125 34.50 | 176.9 | 0  |
| 333 | B.S. 4 | 80/06/12 | 0935 | 48 36.40 | 125 40.10 | 53.4  | 2  |
| 334 | B.S. 5 | 80/06/12 | 1025 | 48 32.20 | 125 45.70 | 84.1  | 0  |
| 335 | B.S. 6 | 80/06/12 | 1113 | 48 28.00 | 125 51.50 | 114.0 | 5  |
| 336 | B.S. 7 | 80/06/12 | 1214 | 48 23.80 | 125 57.40 | 440.2 | 0  |
| 337 | B.S. 8 | 80/06/12 | 1326 | 48 19.20 | 126 2.50  | 479.3 | 10 |
| 338 | A.P. 8 | 80/06/12 | 1532 | 48 24.40 | 126 15.42 | 503.0 | 10 |
| 339 | A.P. 7 | 80/06/12 | 1648 | 48 29.06 | 126 9.48  | 246.3 | 0  |
| 340 | A.P. 6 | 80/06/12 | 1741 | 48 33.24 | 126 4.00  | 133.0 | 5  |
| 341 | A.P. 5 | 80/06/12 | 1846 | 48 37.36 | 125 58.16 | 96.5  | 0  |
| 342 | A.P. 4 | 80/06/12 | 1937 | 48 41.41 | 125 52.38 | 63.6  | 3  |
| 343 | A.P. 3 | 80/06/12 | 2022 | 48 45.39 | 125 47.05 | 76.7  | 0  |
| 344 | A.P. 2 | 80/06/12 | 2108 | 48 49.32 | 125 41.36 | 52.8  | 2  |
| 345 | A.P. 1 | 80/06/12 | 2155 | 48 53.19 | 125 36.12 | 41.3  | 0  |
| 346 | W.B. 1 | 80/06/12 | 2320 | 49 1.12  | 125 50.08 | 40.8  | 2  |
| 347 | W.B. 2 | 80/06/12 | 0005 | 48 57.31 | 125 55.32 | 58.7  | 0  |
| 348 | W.B. 3 | 80/06/12 | 0050 | 48 53.43 | 126 1.01  | 73.5  | 3  |
| 349 | W.B. 4 | 80/06/12 | 0141 | 48 49.50 | 126 6.35  | 100.2 | 0  |
| 350 | W.B. 5 | 80/06/12 | 0232 | 48 45.51 | 126 12.14 | 132.1 | 6  |
| 351 | W.B. 6 | 80/06/12 | 0331 | 48 41.46 | 126 17.57 | 487.2 | 0  |
| 352 | W.B. 7 | 80/06/12 | 0424 | 48 37.34 | 126 23.47 | 502.5 | 10 |

## CRUISE # 13

|     |        |          |      |          |           |      |   |
|-----|--------|----------|------|----------|-----------|------|---|
| 363 | A.P. 1 | 80/08/13 | 1440 | 48 53.19 | 125 36.12 | 55.4 | 0 |
| 364 | A.P. 2 | 80/08/13 | 1518 | 48 49.32 | 125 41.36 | 53.2 | 2 |
| 365 | A.P. 3 | 80/08/13 | 1604 | 48 45.39 | 125 47.05 | 70.8 | 0 |

| FILE<br>#   | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-------------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 366         | A.P. 4  | 80/08/13         | 1645          | 48 41.41        | 125 52.38        | 64.5         | 3  |
| 367         | A.P. 5  | 80/08/13         | 1735          | 48 37.36        | 125 58.16        | 102.2        | 0  |
| 368         | A.P. 6  | 80/08/13         | 1819          | 48 33.24        | 126 4.00         | 137.7        | 5  |
| 369         | A.P. 7  | 80/08/13         | 1921          | 48 29.06        | 126 9.48         | 226.5        | 0  |
| 370         | A.P. 8  | 80/08/13         | 2017          | 48 24.40        | 126 15.42        | 484.0        | 0  |
| 371         | 111     | 80/08/13         | 2237          | 48 8.50         | 126 .00          | 510.6        | 0  |
| 372         | 110     | 80/08/13         | 2323          | 48 10.60        | 125 56.20        | 496.7        | 0  |
| 373         | 109     | 80/08/14         | 0008          | 48 12.90        | 125 52.00        | 499.0        | 0  |
| 374         | 108     | 80/08/14         | 0053          | 48 15.10        | 125 47.70        | 229.4        | 0  |
| 375         | 107     | 80/08/14         | 0144          | 48 18.60        | 125 41.20        | 152.8        | 7  |
| 376         | 106     | 80/08/14         | 0308          | 48 22.00        | 125 34.70        | 147.8        | 0  |
| 377         | 105     | 80/08/14         | 0348          | 48 25.50        | 125 28.30        | 132.1        | 6  |
| 378         | 104     | 80/08/14         | 0454          | 48 28.90        | 125 21.80        | 150.6        | 0  |
| 379         | 103     | 80/08/14         | 0532          | 48 32.20        | 125 15.50        | 103.4        | 4  |
| 380         | 102     | 80/08/14         | 0624          | 48 35.60        | 125 9.00         | 103.2        | 0  |
| 381         | 101     | 80/08/14         | 0710          | 48 39.00        | 125 2.50         | 44.7         | 3  |
| CRUISE # 14 |         |                  |               |                 |                  |              |    |
| 382         | A.P. 8  | 80/09/22         | 1500          | 48 24.40        | 126 15.42        | 497.1        | 10 |
| 383         | A.P. 7  | 80/09/22         | 1631          | 48 29.06        | 126 9.48         | 252.8        | 0  |
| 384         | A.P. 6  | 80/09/22         | 1725          | 48 33.24        | 126 4.00         | 147.1        | 5  |
| 385         | A.P. 5  | 80/09/22         | 1825          | 48 37.36        | 125 58.16        | 105.3        | 0  |
| 386         | A.P. 4  | 80/09/22         | 2014          | 48 41.41        | 125 52.38        | 60.6         | 3  |
| 387         | A.P. 3  | 80/09/22         | 2107          | 48 45.39        | 125 47.05        | 62.5         | 0  |
| 388         | A.P. 2  | 80/09/22         | 2147          | 48 49.32        | 125 41.36        | 50.9         | 2  |
| 389         | A.P. 1  | 80/09/22         | 2231          | 48 53.19        | 125 36.12        | 57.4         | 0  |
| 390         | B.S. 1  | 80/09/22         | 2337          | 48 48.20        | 125 23.70        | 81.1         | 0  |
| 391         | B.S. 2  | 80/09/22         | 2317          | 48 44.40        | 125 29.10        | 121.2        | 5  |
| 392         | B.S. 3  | 80/09/23         | 0010          | 48 40.40        | 125 34.50        | 188.8        | 0  |
| 393         | B.S. 4  | 80/09/23         | 0050          | 48 36.40        | 125 40.10        | 54.6         | 2  |
| 394         | B.S. 5  | 80/09/23         | 0148          | 48 32.20        | 125 45.70        | 89.5         | 0  |
| 395         | B.S. 6  | 80/09/23         | 0234          | 48 28.00        | 125 51.50        | 122.2        | 5  |
| 396         | B.S. 7  | 80/09/23         | 0325          | 48 23.80        | 125 57.40        | 344.4        | 0  |
| 397         | B.S. 8  | 80/09/23         | 0420          | 48 19.20        | 126 2.50         | 465.3        | 10 |
| 398         | 111     | 80/09/23         | 0635          | 48 8.50         | 126 .00          | 504.8        | 10 |
| 399         | 110     | 80/09/23         | 0752          | 48 10.60        | 125 56.20        | 527.7        | 0  |
| 400         | 109     | 80/09/23         | 0830          | 48 12.90        | 125 52.00        | 500.2        | 10 |
| 401         | 108     | 80/09/23         | 0921          | 48 15.10        | 125 47.70        | 223.3        | 0  |
| 402         | 107     | 80/09/23         | 1004          | 48 18.60        | 125 41.20        | 139.0        | 7  |
| 403         | 106     | 80/09/23         | 1058          | 48 22.00        | 125 34.70        | 146.1        | 0  |
| 404         | 105     | 80/09/23         | 1134          | 48 25.50        | 125 28.30        | 131.4        | 6  |
| 405         | 104     | 80/09/23         | 1232          | 48 28.90        | 125 21.80        | 154.0        | 0  |
| 406         | 103     | 80/09/23         | 1312          | 48 32.20        | 125 15.50        | 113.2        | 5  |
| 407         | 102     | 80/09/23         | 1403          | 48 35.60        | 125 9.00         | 108.2        | 0  |
| 408         | 101     | 80/09/23         | 1440          | 48 39.00        | 125 2.50         | 58.7         | 3  |
| 409         | N.L. 7  | 80/09/23         | 1520          | 48 34.35        | 125 .05          | 56.7         | 0  |
| 410         | N.L. 6  | 80/09/23         | 1612          | 48 28.11        | 124 59.57        | 95.1         | 4  |
| 411         | N.L. 5  | 80/09/23         | 1635          | 48 25.36        | 124 59.53        | 183.8        | 0  |
| 412         | N.L. 4  | 80/09/23         | 1704          | 48 23.00        | 124 59.49        | 258.0        | 8  |
| 413         | N.L. 3  | 80/09/23         | 1746          | 48 20.23        | 124 59.45        | 219.1        | 0  |



| FILE<br>#   | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-------------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 414         | N.L. 2  | 80/09/23         | 1820          | 48 17.45        | 124 59.40        | 265.0        | 8  |
| 415         | N.L. 1  | 80/09/23         | 1900          | 48 15.06        | 124 59.35        | 140.9        | 0  |
| 416         | C.A. 11 | 80/09/23         | 1924          | 48 13.21        | 124 56.37        | 135.0        | 0  |
| 417         | C.A. 10 | 80/09/23         | 1955          | 48 12.51        | 125 2.25         | 216.2        | 7  |
| 418         | C.A. 9  | 80/09/23         | 2039          | 48 12.24        | 125 8.11         | 100.1        | 0  |
| 419         | C.A. 8  | 80/09/23         | 2105          | 48 12.41        | 125 13.55        | 223.4        | 8  |
| 420         | C.A. 7  | 80/09/23         | 2156          | 48 11.37        | 125 19.38        | 98.3         | 0  |
| 421         | C.A. 6  | 80/09/23         | 2225          | 48 11.16        | 125 25.19        | 112.4        | 4  |
| 422         | C.A. 5  | 80/09/23         | 2304          | 48 10.57        | 125 30.58        | 143.0        | 0  |
| 423         | C.A. 4  | 80/09/23         | 2339          | 48 10.40        | 125 36.35        | 157.7        | 5  |
| 424         | C.A. 3  | 80/09/24         | 0022          | 48 10.26        | 125 42.11        | 348.2        | 0  |
| 425         | C.A. 2  | 80/09/24         | 0057          | 48 10.13        | 125 47.46        | 499.8        | 10 |
| 426         | C.A. 1  | 80/09/24         | 0216          | 48 10.02        | 125 53.18        | 504.7        | 0  |
| 427         | X. 1    | 80/09/24         | 0339          | 48 15.03        | 125 36.21        | 139.0        | 5  |
| 428         | X. 2    | 80/09/24         | 0416          | 48 16.42        | 125 30.43        | 128.9        | 0  |
| 429         | X. 3    | 80/09/24         | 0452          | 48 18.20        | 125 25.06        | 127.0        | 4  |
| 430         | X. 4    | 80/09/24         | 0531          | 48 19.58        | 125 19.30        | 112.2        | 0  |
| 431         | X. 5    | 80/09/24         | 0605          | 48 21.35        | 125 13.53        | 169.8        | 6  |
| 432         | X. 6    | 80/09/24         | 0754          | 48 23.12        | 125 8.17         | 99.4         | 0  |
| CRUISE # 15 |         |                  |               |                 |                  |              |    |
| 433         | 101     | 80/10/22         | 1857          | 48 39.00        | 125 2.50         | 53.4         | 3  |
| 434         | 102     | 80/10/22         | 1947          | 48 35.60        | 125 9.00         | 103.3        | 0  |
| 435         | 103     | 80/10/22         | 2030          | 48 32.20        | 125 15.50        | 103.4        | 5  |
| 436         | 104     | 80/10/22         | 2120          | 48 28.90        | 125 21.80        | 125.3        | 0  |
| 437         | 105     | 80/10/22         | 2208          | 48 25.50        | 125 28.30        | 153.8        | 7  |
| 438         | 106     | 80/10/22         | 2313          | 48 22.00        | 125 34.70        | 133.0        | 0  |
| 439         | 107     | 80/10/23         | 0003          | 48 18.60        | 125 41.20        | 141.9        | 7  |
| 440         | 108     | 80/10/23         | 0119          | 48 15.10        | 125 47.70        | 184.4        | 0  |
| 441         | 109     | 80/10/23         | 0153          | 48 12.90        | 125 52.00        | 397.0        | 0  |
| 442         | 110     | 80/10/23         | 0244          | 48 10.60        | 125 56.20        | 439.4        | 0  |
| CRUISE # 16 |         |                  |               |                 |                  |              |    |
| 443         | 101     | 80/11/27         | 1249          | 48 39.00        | 125 2.50         | 79.6         | 0  |
| CRUISE # 17 |         |                  |               |                 |                  |              |    |
| 444         | 101     | 81/01/06         | 0807          | 48 39.00        | 125 2.50         | 57.3         | 3  |
| 445         | 102     | 81/01/06         | 0912          | 48 35.60        | 125 9.00         | 113.3        | 0  |
| 446         | 103     | 81/01/06         | 0957          | 48 32.20        | 125 15.50        | 112.5        | 4  |
| 447         | 104     | 81/01/06         | 1048          | 48 28.90        | 125 21.80        | 150.0        | 0  |
| 448         | 105     | 81/01/06         | 1137          | 48 25.50        | 125 28.30        | 133.4        | 6  |
| 449         | 106     | 81/01/06         | 1229          | 48 22.00        | 125 34.70        | 147.0        | 0  |
| 450         | 107     | 81/01/06         | 1313          | 48 18.60        | 125 41.20        | 153.0        | 7  |
| 451         | 108     | 81/01/06         | 1410          | 48 15.10        | 125 47.70        | 231.4        | 0  |
| 452         | 109     | 81/01/06         | 1446          | 48 12.90        | 125 52.00        | 497.9        | 10 |
| CRUISE # 18 |         |                  |               |                 |                  |              |    |
| 453         | 101     | 81/02/04         | 1838          | 48 39.00        | 125 2.50         | 50.7         | 2  |
| 454         | 102     | 81/02/04         | 1946          | 48 35.60        | 125 9.00         | 104.4        | 0  |
| 455         | 103     | 81/02/04         | 2033          | 48 32.20        | 125 15.50        | 106.1        | 4  |

| FILE<br>#   | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MYDEP<br>(M) | DO |
|-------------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 456         | 104     | 81/02/04         | 2127          | 48 28.90        | 125 21.80        | 142.2        | 0  |
| 457         | 105     | 81/02/04         | 2220          | 48 25.50        | 125 28.30        | 146.0        | 6  |
| 458         | 106     | 81/02/04         | 2316          | 48 22.00        | 125 34.70        | 142.9        | 0  |
| 459         | 107     | 81/02/05         | 0010          | 48 18.60        | 125 41.20        | 142.9        | 6  |
| 460         | 108     | 81/02/05         | 0115          | 48 15.10        | 125 47.70        | 283.1        | 0  |
| 461         | 109     | 81/02/05         | 0201          | 48 12.90        | 125 52.00        | 447.5        | 10 |
| 462         | 110     | 81/02/05         | 0338          | 48 10.60        | 125 56.20        | 503.0        | 0  |
| 463         | 111     | 81/02/05         | 0424          | 48 8.50         | 126 0.00         | 496.7        | 10 |
| 464         | A.P. 8  | 81/02/05         | 0652          | 48 24.40        | 126 15.42        | 499.0        | 8  |
| 465         | A.P. 7  | 81/02/05         | 0828          | 48 29.06        | 126 9.48         | 251.3        | 0  |
| 466         | A.P. 6  | 81/02/05         | 0940          | 48 33.24        | 126 4.00         | 153.7        | 6  |
| 467         | A.P. 5  | 81/02/05         | 1042          | 48 37.36        | 125 58.16        | 110.4        | 0  |
| 468         | A.P. 4  | 81/02/05         | 1134          | 48 41.41        | 125 52.38        | 68.3         | 3  |
| 469         | A.P. 3  | 81/02/05         | 1229          | 48 45.39        | 125 47.05        | 65.5         | 0  |
| 470         | A.P. 2  | 81/02/05         | 1305          | 48 49.32        | 125 41.36        | 59.7         | 2  |
| 471         | A.P. 1  | 81/02/05         | 1345          | 48 53.19        | 125 36.12        | 52.6         | 0  |
| CRUISE # 19 |         |                  |               |                 |                  |              |    |
| 472         | 110     | 81/03/10         | 0830          | 48 10.60        | 125 56.20        | 501.8        | 0  |
| 473         | 109     | 81/03/10         | 0909          | 48 12.90        | 125 52.00        | 504.1        | 0  |
| 474         | 108     | 81/03/10         | 0950          | 48 15.10        | 125 47.70        | 207.8        | 0  |
| 475         | 107     | 81/03/10         | 1049          | 48 18.60        | 125 41.20        | 150.9        | 7  |
| 476         | 106     | 81/03/10         | 1217          | 48 22.00        | 125 34.70        | 143.1        | 0  |
| 477         | 105     | 81/03/10         | 1302          | 48 25.50        | 125 28.30        | 133.3        | 6  |
| 478         | 104     | 81/03/10         | 1407          | 48 28.90        | 125 21.80        | 147.1        | 0  |
| 479         | 103     | 81/03/10         | 1455          | 48 32.20        | 125 15.50        | 106.1        | 5  |
| 480         | 102     | 81/03/10         | 1552          | 48 35.60        | 125 9.00         | 114.4        | 0  |
| 481         | 101     | 81/03/10         | 1635          | 48 39.00        | 125 2.50         | 53.4         | 3  |
| CRUISE # 20 |         |                  |               |                 |                  |              |    |
| 482         | C.A. 11 | 81/04/21         | 1208          | 48 13.21        | 124 56.37        | 150.0        | 0  |
| 483         | C.A. 10 | 81/04/21         | 1250          | 48 12.51        | 125 2.25         | 201.8        | 8  |
| 484         | C.A. 9  | 81/04/21         | 1420          | 48 12.24        | 125 8.11         | 114.4        | 0  |
| 485         | C.A. 8  | 81/04/21         | 1502          | 48 12.41        | 125 13.55        | 132.2        | 0  |
| 486         | C.A. 7  | 81/04/21         | 1547          | 48 11.37        | 125 19.38        | 87.6         | 0  |
| 487         | C.A. 6  | 81/04/21         | 1625          | 48 11.16        | 125 25.19        | 117.1        | 5  |
| 488         | C.A. 5  | 81/04/21         | 1723          | 48 10.57        | 125 30.58        | 140.9        | 0  |
| 489         | C.A. 4  | 81/04/21         | 1805          | 48 10.40        | 125 36.35        | 164.9        | 0  |
| 490         | C.A. 3  | 81/04/21         | 1843          | 48 10.26        | 125 42.11        | 324.3        | 0  |
| 491         | C.A. 2  | 81/04/21         | 1933          | 48 10.13        | 125 47.46        | 509.9        | 8  |
| 492         | 109     | 81/04/21         | 2135          | 48 12.90        | 125 52.00        | 494.0        | 0  |
| 493         | 108     | 81/04/21         | 2218          | 48 15.10        | 125 47.70        | 206.4        | 0  |
| 494         | 107     | 81/04/21         | 2309          | 48 18.60        | 125 41.20        | 153.9        | 6  |
| 495         | 106     | 81/04/22         | 0021          | 48 22.00        | 125 34.70        | 122.9        | 0  |
| 496         | 105     | 81/04/22         | 0106          | 48 25.50        | 125 28.30        | 128.0        | 6  |
| 497         | 104     | 81/04/22         | 0220          | 48 28.90        | 125 21.80        | 149.1        | 0  |
| 498         | 103     | 81/04/22         | 0300          | 48 32.20        | 125 15.50        | 105.2        | 5  |
| 499         | 102     | 81/04/22         | 0351          | 48 35.60        | 125 9.00         | 104.3        | 0  |
| 500         | 101     | 81/04/22         | 0432          | 48 39.00        | 125 2.50         | 55.7         | 3  |
| CRUISE # 21 |         |                  |               |                 |                  |              |    |
| 534         | C.F. 1  | 81/06/02         | 0655          | 48 21.00        | 124 51.20        | 115.4        | 4  |

| FILE<br># | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | 00 |
|-----------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 535       | C.F. 2  | 81/06/02         | 0739          | 48 22.90        | 124 51.40        | 242.3        | 0  |
| 536       | C.F. 3  | 81/06/02         | 0812          | 48 25.50        | 124 51.60        | 283.5        | 9  |
| 537       | C.F. 4  | 81/06/02         | 0903          | 48 28.00        | 124 51.70        | 241.1        | 0  |
| 538       | C.F. 5  | 81/06/02         | 0952          | 48 31.10        | 124 51.80        | 141.0        | 6  |
| 539       | C.F. 6  | 81/06/02         | 1013          | 48 33.00        | 124 52.00        | 84.2         | 0  |
| 540       | C.F. 7  | 81/06/02         | 1039          | 48 35.50        | 124 52.20        | 57.5         | 3  |
| 541       | N.L. 7  | 81/06/02         | 1130          | 48 34.35        | 125 00.05        | 54.7         | 0  |
| 542       | N.L. 6  | 81/06/02         | 1220          | 48 28.11        | 124 59.57        | 89.4         | 5  |
| 543       | N.L. 5  | 81/06/02         | 1301          | 48 25.36        | 124 59.53        | 222.2        | 0  |
| 544       | N.L. 4  | 81/06/02         | 1330          | 48 23.00        | 124 59.49        | 231.3        | 8  |
| 545       | N.L. 3  | 81/06/02         | 1425          | 48 20.23        | 124 59.45        | 207.4        | 0  |
| 546       | N.L. 2  | 81/06/02         | 1509          | 48 17.45        | 124 59.40        | 260.0        | 9  |
| 547       | N.L. 1  | 81/06/02         | 1612          | 48 15.06        | 124 59.35        | 165.6        | 0  |
| 548       | C.A. 11 | 81/06/02         | 1643          | 48 13.21        | 124 56.37        | 127.0        | 0  |
| 549       | C.A. 10 | 81/06/02         | 1729          | 48 12.51        | 125 02.25        | 221.4        | 9  |
| 550       | C.A. 9  | 81/06/02         | 1843          | 48 12.24        | 125 08.11        | 108.1        | 0  |
| 551       | C.A. 8  | 81/06/02         | 1932          | 48 12.41        | 125 13.55        | 212.1        | 8  |
| 552       | C.A. 7  | 81/06/02         | 2044          | 48 11.37        | 125 19.38        | 103.2        | 0  |
| 553       | C.A. 6  | 81/06/02         | 2135          | 48 11.16        | 125 25.19        | 113.9        | 5  |
| 554       | C.A. 5  | 81/06/02         | 2230          | 48 10.57        | 125 30.58        | 137.1        | 0  |
| 555       | C.A. 4  | 81/06/02         | 2315          | 48 10.40        | 125 36.35        | 139.1        | 6  |
| 556       | C.A. 3  | 81/06/03         | 0005          | 48 10.26        | 125 42.11        | 370.1        | 0  |
| 557       | C.A. 2  | 81/06/03         | 0150          | 48 10.13        | 125 47.46        | 531.6        | 10 |
| 558       | C.A. 1  | 81/06/03         | 0215          | 48 10.02        | 125 53.18        | 528.8        | 0  |
| 559       | X. 1    | 81/06/03         | 0355          | 48 15.03        | 125 36.21        | 137.0        | 6  |
| 560       | X. 2    | 81/06/03         | 0446          | 48 16.42        | 125 30.43        | 117.3        | 0  |
| 561       | X. 3    | 81/06/03         | 0521          | 48 18.20        | 125 25.06        | 122.0        | 6  |
| 562       | X. 4    | 81/06/03         | 0609          | 48 19.58        | 125 19.30        | 100.1        | 0  |
| 563       | X. 5    | 81/06/03         | 0647          | 48 21.35        | 125 13.53        | 167.7        | 7  |
| 564       | X. 6    | 81/06/03         | 0745          | 48 23.12        | 125 08.17        | 106.3        | 0  |
| 565       | X. 7    | 81/06/03         | 0812          | 48 24.48        | 125 02.41        | 106.0        | 5  |
| 566       | 101     | 81/06/03         | 1842          | 48 39.00        | 125 02.50        | 54.5         | 3  |
| 567       | 102     | 81/06/03         | 1926          | 48 35.60        | 125 09.00        | 104.2        | 0  |
| 568       | 103     | 81/06/03         | 2002          | 48 32.20        | 125 15.50        | 105.2        | 5  |
| 569       | 104     | 81/06/03         | 2045          | 48 28.90        | 125 21.80        | 150.7        | 0  |
| 570       | 105     | 81/06/03         | 2131          | 48 25.50        | 125 28.30        | 129.9        | 6  |
| 571       | 106     | 81/06/03         | 2222          | 48 22.00        | 125 34.70        | 143.8        | 0  |
| 572       | 107     | 81/06/03         | 2315          | 48 18.60        | 125 41.20        | 147.0        | 6  |
| 573       | 108     | 81/06/04         | 0021          | 48 15.10        | 125 47.70        | 216.2        | 0  |
| 574       | 109     | 81/06/04         | 0100          | 48 12.90        | 125 52.00        | 512.0        | 10 |
| 575       | 110     | 81/06/04         | 0225          | 48 10.60        | 125 56.20        | 531.5        | 0  |
| 576       | 111     | 81/06/04         | 0334          | 48 08.50        | 126 00.00        | 500.1        | 10 |
| 577       | B.S. 8  | 81/06/04         | 1355          | 48 19.20        | 126 02.50        | 533.6        | 0  |
| 578       | B.S. 7  | 81/06/04         | 1456          | 48 23.80        | 125 57.40        | 429.3        | 0  |
| 579       | B.S. 6  | 81/06/04         | 1552          | 48 28.00        | 125 51.50        | 115.3        | 0  |
| 580       | B.S. 5  | 81/06/04         | 1637          | 48 32.20        | 125 45.70        | 82.3         | 0  |
| 581       | B.S. 4  | 81/06/04         | 1720          | 48 36.40        | 125 40.10        | 47.5         | 0  |
| 582       | B.S. 3  | 81/06/04         | 1801          | 48 40.40        | 125 34.50        | 177.8        | 0  |
| 583       | B.S. 2  | 81/06/04         | 1847          | 48 44.40        | 125 29.10        | 115.3        | 0  |
| 584       | B.S. 1  | 81/06/04         | 1926          | 48 48.20        | 125 23.70        | 84.4         | 0  |

| FILE<br>#   | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-------------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 585         | A.P. 1  | 81/06/04         | 2032          | 48 53.19        | 125 36.12        | 45.5         | 0  |
| 586         | A.P. 2  | 81/06/04         | 2106          | 48 49.32        | 125 41.36        | 47.5         | 0  |
| 587         | A.P. 3  | 81/06/04         | 2143          | 48 45.39        | 125 47.05        | 69.3         | 0  |
| 588         | A.P. 4  | 81/06/04         | 2219          | 48 41.41        | 125 52.38        | 64.7         | 0  |
| 589         | A.P. 5  | 81/06/04         | 2254          | 48 37.36        | 125 58.16        | 104.5        | 0  |
| 590         | A.P. 6  | 81/06/04         | 2330          | 48 33.24        | 126 4.00         | 140.9        | 0  |
| 591         | A.P. 7  | 81/06/05         | 0014          | 48 29.06        | 126 9.48         | 243.2        | 0  |
| 592         | A.P. 8  | 81/06/05         | 0100          | 48 24.40        | 126 15.42        | 533.6        | 0  |
| 593         | W.B. 7  | 81/06/05         | 0247          | 48 37.34        | 126 23.47        | 554.5        | 0  |
| 594         | W.B. 6  | 81/06/05         | 0355          | 48 41.46        | 126 17.57        | 503.6        | 0  |
| 595         | W.B. 5  | 81/06/05         | 0451          | 48 45.51        | 126 12.14        | 139.0        | 0  |
| 596         | W.B. 4  | 81/06/05         | 0538          | 48 49.50        | 126 6.35         | 96.5         | 0  |
| 597         | W.B. 3  | 81/06/05         | 0625          | 48 53.43        | 126 1.01         | 62.3         | 0  |
| 598         | W.B. 2  | 81/06/05         | 0705          | 48 57.31        | 125 55.32        | 48.8         | 0  |
| 599         | W.B. 1  | 81/06/05         | 0741          | 49 1.12         | 125 50.08        | 36.8         | 0  |
| 600         | 101     | 81/06/08         | 1915          | 48 39.00        | 125 2.50         | 57.4         | 0  |
| 601         | 102     | 81/06/08         | 1956          | 48 35.60        | 125 9.00         | 107.9        | 0  |
| 602         | 103     | 81/06/08         | 2105          | 48 32.20        | 125 15.50        | 108.9        | 5  |
| 603         | 104     | 81/06/08         | 2200          | 48 28.90        | 125 21.80        | 147.9        | 0  |
| 604         | 105     | 81/06/09         | 2306          | 48 25.50        | 125 28.30        | 131.1        | 6  |
| 605         | 106     | 81/06/09         | 0003          | 48 22.00        | 125 34.70        | 144.2        | 0  |
| 606         | 107     | 81/06/09         | 0056          | 48 18.60        | 125 41.20        | 152.9        | 7  |
| 607         | 108     | 81/06/09         | 0208          | 48 15.10        | 125 47.70        | 221.4        | 0  |
| 608         | 109     | 81/06/09         | 0243          | 48 12.90        | 125 52.00        | 504.7        | 10 |
| 609         | 110     | 81/06/09         | 0410          | 48 10.60        | 125 56.20        | 506.0        | 0  |
| 610         | 111     | 81/06/09         | 0450          | 48 8.50         | 126 .00          | 501.1        | 10 |
| 611         | 112     | 81/06/09         | 1022          | 48 5.60         | 126 5.80         | 1199.9       | 0  |
| CRUISE # 22 |         |                  |               |                 |                  |              |    |
| 612         | K.I. 1  | 81/09/05         | 0700          | 50 23.40        | 128 7.50         | 87.4         | 0  |
| 613         | K.I. 2  | 81/09/05         | 0742          | 50 20.00        | 128 13.80        | 165.8        | 0  |
| 614         | K.I. 3  | 81/09/05         | 0831          | 50 16.30        | 128 20.50        | 496.9        | 0  |
| 615         | K.I. 4  | 81/09/05         | 0939          | 50 12.60        | 128 27.00        | 496.8        | 0  |
| 616         | K.I. 5  | 81/09/05         | 1041          | 50 8.90         | 128 34.00        | 488.9        | 0  |
| 617         | K.I. 6  | 81/09/05         | 1143          | 50 5.00         | 128 40.80        | 495.7        | 0  |
| 618         | K.S. 1  | 81/09/05         | 1641          | 49 53.70        | 127 30.30        | 64.5         | 0  |
| 619         | K.S. 2  | 81/09/05         | 1717          | 49 50.00        | 127 36.00        | 93.3         | 0  |
| 620         | K.S. 3  | 81/09/05         | 1757          | 49 46.40        | 127 42.10        | 494.1        | 0  |
| 621         | K.S. 4  | 81/09/05         | 1845          | 49 42.70        | 127 48.30        | 495.1        | 0  |
| 622         | K.S. 5  | 81/09/05         | 1940          | 49 38.90        | 127 54.80        | 493.2        | 0  |
| 623         | K.S. 6  | 81/09/05         | 2035          | 49 35.00        | 128 1.10         | 487.0        | 0  |
| 624         | 101     | 81/09/06         | 1516          | 48 39.00        | 125 2.50         | 45.5         | 3  |
| 625         | 102     | 81/09/06         | 1607          | 48 35.60        | 125 9.00         | 106.3        | 0  |
| 626         | 103     | 81/09/06         | 1648          | 48 32.20        | 125 15.50        | 112.4        | 5  |
| 627         | 104     | 81/09/06         | 1735          | 48 28.90        | 125 21.80        | 139.9        | 0  |
| 628         | 105     | 81/09/06         | 1828          | 48 25.50        | 125 28.30        | 126.1        | 6  |
| 629         | 106     | 81/09/06         | 1919          | 48 22.00        | 125 34.70        | 141.9        | 0  |
| 630         | 107     | 81/09/06         | 2008          | 48 18.60        | 125 41.20        | 142.1        | 7  |
| 631         | 108     | 81/09/06         | 2111          | 48 15.10        | 125 47.70        | 201.3        | 0  |
| 632         | 109     | 81/09/06         | 2153          | 48 12.90        | 125 52.00        | 495.1        | 10 |

| FILE<br># | STATION | DATE<br>YR/MO/DY | TIME<br>(PST) | LATITUDE<br>(N) | LONGITUDE<br>(W) | MXDEP<br>(M) | DO |
|-----------|---------|------------------|---------------|-----------------|------------------|--------------|----|
| 633       | 110     | 81/09/06         | 2304          | 48 10.60        | 125 56.20        | 499.0        | 0  |
| 634       | 111     | 81/09/06         | 0710          | 48 8.50         | 126 .00          | 490.9        | 10 |

Data Listings 1979

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 39.00

DATE 30/ 1/79

TIME (PST) 2224

TAPE: U00454 -001

LONG W 125 2.50

PASS NO. 31

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.1   | 2.1   | 31.66 | 6.12 | 24.90   |
| 4.7   | 4.8   | 31.67 | 6.09 | 24.92   |
| 9.9   | 9.9   | 31.69 | 6.13 | 24.92   |
| 14.9  | 15.0  | 31.71 | 6.20 | 24.93   |
| 20.0  | 20.1  | 31.83 | 6.54 | 24.99   |
| 24.9  | 25.0  | 31.98 | 6.67 | 25.08   |
| 31.1  | 31.3  | 32.16 | 6.87 | 25.20   |
| 34.9  | 35.1  | 32.20 | 6.91 | 25.23   |
| 39.7  | 39.9  | 32.24 | 6.97 | 25.25   |
| 44.7  | 45.0  | 32.25 | 6.98 | 25.26   |
| 49.7  | 50.0  | 32.26 | 6.99 | 25.26   |
| 54.5  | 54.8  | 32.26 | 6.99 | 25.26   |

CRUISE NO: 01 CODE

LAT N 48 35.60

DATE 30/ 1/79

TIME (PST) 2301

TAPE: U00454 -002

LONG W 125 9.00

PASS NO. 33

STN: 102

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .7    | .7    | 32.07 | 6.49 | 25.18   |
| 2.0   | 2.0   | 32.07 | 6.50 | 25.18   |
| 4.9   | 5.0   | 32.07 | 6.48 | 25.18   |
| 9.9   | 9.9   | 32.12 | 6.60 | 25.21   |
| 14.8  | 14.9  | 32.12 | 6.60 | 25.21   |
| 19.9  | 20.0  | 32.12 | 6.60 | 25.21   |
| 24.9  | 25.0  | 32.13 | 6.62 | 25.21   |
| 30.2  | 30.3  | 32.21 | 6.79 | 25.25   |
| 34.9  | 35.1  | 32.23 | 6.85 | 25.26   |
| 39.8  | 40.0  | 32.25 | 6.86 | 25.28   |
| 44.6  | 44.9  | 32.26 | 6.86 | 25.28   |
| 49.8  | 50.0  | 32.31 | 6.89 | 25.31   |
| 59.8  | 60.1  | 32.46 | 7.09 | 25.41   |
| 69.4  | 69.9  | 32.61 | 7.26 | 25.51   |
| 79.6  | 80.0  | 32.62 | 7.27 | 25.51   |
| 90.2  | 90.8  | 32.73 | 7.40 | 25.58   |
| 101.0 | 101.6 | 32.93 | 7.57 | 25.71   |
| 103.3 | 104.0 | 32.98 | 7.61 | 25.74   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 32.20

DATE 30/ 1/79

TIME (PST) 2342

TAPE: U00454 -003

LONG W 125 15.50

PASS NO. 35

STN: 103

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .7    | .7    | 32.14 | 6.79 | 25.19   |
| 2.0   | 2.0   | 32.14 | 6.79 | 25.19   |
| 5.0   | 5.0   | 32.13 | 6.79 | 25.19   |
| 9.9   | 10.0  | 32.15 | 6.84 | 25.20   |
| 14.9  | 15.0  | 32.17 | 6.87 | 25.21   |
| 19.8  | 20.0  | 32.18 | 6.89 | 25.21   |
| 24.9  | 25.0  | 32.19 | 6.91 | 25.22   |
| 30.4  | 30.5  | 32.20 | 6.91 | 25.22   |
| 34.8  | 35.0  | 32.19 | 6.92 | 25.22   |
| 39.7  | 39.9  | 32.22 | 6.97 | 25.24   |
| 44.8  | 45.0  | 32.39 | 7.18 | 25.34   |
| 49.6  | 49.9  | 32.70 | 7.43 | 25.55   |
| 59.6  | 60.0  | 32.92 | 7.79 | 25.67   |
| 69.6  | 70.0  | 33.06 | 7.64 | 25.80   |
| 80.1  | 80.6  | 33.17 | 7.71 | 25.88   |
| 90.5  | 91.0  | 33.26 | 7.77 | 25.95   |
| 100.3 | 100.9 | 33.43 | 7.73 | 26.08   |
| 103.1 | 103.7 | 33.45 | 7.73 | 26.10   |

CRUISE NO: 01 CODE

LAT N 48 28.90

DATE 31/ 1/79

TIME (PST) 0032

TAPE: U00454 -004

LONG W 125 21.80

PASS NO. 37

STN: 104

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 32.23 | 6.97 | 25.24   |
| 2.2   | 2.2   | 32.23 | 6.97 | 25.24   |
| 5.0   | 5.0   | 32.23 | 6.97 | 25.24   |
| 10.0  | 10.0  | 32.23 | 6.97 | 25.24   |
| 14.9  | 15.0  | 32.23 | 6.97 | 25.24   |
| 19.8  | 19.9  | 32.23 | 6.97 | 25.24   |
| 24.8  | 25.0  | 32.23 | 7.00 | 25.24   |
| 29.7  | 29.9  | 32.32 | 7.15 | 25.29   |
| 34.9  | 35.1  | 32.69 | 7.71 | 25.50   |
| 39.8  | 40.0  | 32.83 | 8.03 | 25.57   |
| 44.8  | 45.0  | 32.98 | 7.90 | 25.70   |
| 49.7  | 50.0  | 33.07 | 7.84 | 25.78   |
| 59.7  | 60.0  | 33.23 | 7.88 | 25.90   |
| 69.7  | 70.1  | 33.33 | 7.91 | 25.98   |
| 79.6  | 80.1  | 33.48 | 7.81 | 26.11   |
| 90.4  | 91.0  | 33.59 | 7.75 | 26.20   |
| 100.3 | 100.9 | 33.65 | 7.80 | 26.25   |
| 110.3 | 111.0 | 33.69 | 7.74 | 26.29   |
| 120.2 | 121.0 | 33.70 | 7.73 | 26.29   |
| 130.0 | 130.9 | 33.71 | 7.68 | 26.31   |
| 137.9 | 138.9 | 33.71 | 7.65 | 26.31   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 25.50

DATE 31/ 1/79

TIME (PST) 0119

TAPE: U00454 -005

LONG W 125 28.30

PASS NO. 39

STN: 105

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .1    | .1    | 32.25 | 6.93 | 25.27   |
| 2.0   | 2.0   | 32.25 | 6.93 | 25.27   |
| 4.9   | 5.0   | 32.26 | 6.93 | 25.27   |
| 10.0  | 10.0  | 32.26 | 6.94 | 25.27   |
| 14.9  | 15.0  | 32.26 | 6.94 | 25.27   |
| 19.9  | 20.0  | 32.26 | 6.93 | 25.27   |
| 25.0  | 25.2  | 32.26 | 6.93 | 25.27   |
| 29.9  | 30.0  | 32.28 | 6.92 | 25.29   |
| 34.8  | 35.1  | 32.30 | 6.98 | 25.29   |
| 39.8  | 40.0  | 32.70 | 7.57 | 25.54   |
| 44.8  | 45.0  | 32.96 | 8.06 | 25.67   |
| 49.6  | 49.9  | 33.03 | 8.04 | 25.72   |
| 60.1  | 60.5  | 33.25 | 7.90 | 25.92   |
| 70.5  | 70.9  | 33.43 | 7.84 | 26.07   |
| 79.5  | 80.0  | 33.51 | 7.77 | 26.14   |
| 90.4  | 91.0  | 33.55 | 7.79 | 26.17   |
| 100.6 | 101.3 | 33.57 | 7.84 | 26.18   |
| 110.2 | 110.9 | 33.61 | 7.82 | 26.21   |
| 120.3 | 121.1 | 33.63 | 7.80 | 26.23   |
| 122.0 | 122.8 | 33.64 | 7.79 | 26.24   |

CRUISE NO: 01 CODE

LAT N 48 22.00

DATE 31/ 1/79

TIME (PST) 0151

TAPE: U00454 -006

LONG W 125 34.70

PASS NO. 41

STN: 106

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .4    | .4    | 32.18 | 6.78 | 25.23   |
| 2.7   | 2.7   | 32.18 | 6.78 | 25.23   |
| 5.0   | 5.0   | 32.18 | 6.78 | 25.23   |
| 10.1  | 10.1  | 32.19 | 6.80 | 25.24   |
| 14.9  | 15.0  | 32.19 | 6.81 | 25.23   |
| 19.9  | 20.0  | 32.19 | 6.85 | 25.23   |
| 24.8  | 25.0  | 32.24 | 6.94 | 25.26   |
| 29.8  | 30.0  | 32.28 | 6.96 | 25.28   |
| 34.8  | 35.1  | 32.31 | 6.90 | 25.31   |
| 39.8  | 40.1  | 32.43 | 7.13 | 25.38   |
| 44.7  | 45.0  | 32.64 | 7.37 | 25.51   |
| 49.7  | 50.0  | 32.81 | 7.62 | 25.61   |
| 59.6  | 60.0  | 33.23 | 7.88 | 25.91   |
| 69.5  | 70.0  | 33.33 | 7.86 | 25.98   |
| 79.5  | 80.0  | 33.38 | 7.84 | 26.03   |
| 90.4  | 91.0  | 33.48 | 7.82 | 26.11   |
| 100.4 | 101.0 | 33.49 | 7.81 | 26.12   |
| 110.3 | 111.0 | 33.55 | 7.79 | 26.17   |
| 120.1 | 120.9 | 33.63 | 7.75 | 26.23   |
| 125.2 | 126.0 | 33.63 | 7.75 | 26.23   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 18.60  
 DATE 31/ 1/79  
 TIME (PST) 0236

TAPE: U00454 -007  
 LONG W 125 41.20  
 PASS NO. 43  
 STN: 107

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .4    | .4    | 31.49 | 6.36 | 24.74   |
| 2.1   | 2.1   | 31.48 | 6.36 | 24.73   |
| 5.0   | 5.1   | 31.48 | 6.37 | 24.73   |
| 10.0  | 10.0  | 31.50 | 6.41 | 24.74   |
| 14.9  | 15.0  | 31.69 | 6.81 | 24.84   |
| 19.9  | 20.0  | 32.00 | 7.35 | 25.01   |
| 24.9  | 25.0  | 32.19 | 7.65 | 25.12   |
| 29.8  | 30.0  | 32.31 | 7.91 | 25.17   |
| 34.8  | 35.0  | 32.34 | 7.96 | 25.19   |
| 39.8  | 40.0  | 32.43 | 8.14 | 25.24   |
| 44.9  | 45.2  | 32.42 | 8.00 | 25.25   |
| 49.7  | 50.0  | 32.53 | 8.40 | 25.28   |
| 59.8  | 60.1  | 32.59 | 8.38 | 25.33   |
| 69.6  | 70.0  | 32.67 | 8.07 | 25.43   |
| 80.4  | 80.9  | 33.00 | 7.99 | 25.71   |
| 90.5  | 91.0  | 33.21 | 7.94 | 25.88   |
| 100.3 | 100.9 | 33.37 | 7.85 | 26.02   |
| 110.3 | 111.0 | 33.54 | 7.88 | 26.14   |
| 120.3 | 121.0 | 33.68 | 7.73 | 26.28   |
| 130.2 | 131.1 | 33.84 | 7.63 | 26.41   |
| 138.1 | 139.0 | 33.84 | 7.60 | 26.43   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 15.10

DATE 31/ 1/79

TIME (PST) 0320

TAPE: U00454 -008

LONG W 125 47.70

PASS NO. 45

STN: 108

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 31.44 | 6.54 | 24.68   |
| 1.8   | 1.8   | 31.44 | 6.54 | 24.68   |
| 5.0   | 5.0   | 31.46 | 6.59 | 24.69   |
| 9.7   | 9.7   | 31.56 | 6.76 | 24.75   |
| 14.9  | 15.0  | 31.66 | 6.87 | 24.81   |
| 20.0  | 20.1  | 31.78 | 7.04 | 24.88   |
| 25.0  | 25.2  | 31.79 | 7.02 | 24.89   |
| 30.9  | 31.0  | 31.82 | 7.05 | 24.91   |
| 34.8  | 34.9  | 32.02 | 7.50 | 25.00   |
| 39.9  | 40.1  | 32.32 | 8.03 | 25.17   |
| 44.7  | 45.0  | 32.51 | 8.28 | 25.28   |
| 49.5  | 49.8  | 32.56 | 8.30 | 25.31   |
| 60.0  | 60.3  | 32.66 | 8.10 | 25.42   |
| 69.7  | 70.1  | 32.81 | 8.27 | 25.52   |
| 80.4  | 80.9  | 33.05 | 8.31 | 25.70   |
| 89.5  | 90.0  | 33.29 | 8.29 | 25.89   |
| 100.5 | 101.1 | 33.47 | 8.24 | 26.04   |
| 110.3 | 111.0 | 33.55 | 8.22 | 26.10   |
| 120.3 | 121.1 | 33.62 | 8.16 | 26.17   |
| 130.2 | 131.0 | 33.66 | 8.15 | 26.20   |
| 140.1 | 141.0 | 33.72 | 8.04 | 26.26   |
| 150.1 | 151.1 | 33.77 | 7.95 | 26.32   |
| 160.0 | 161.1 | 33.82 | 7.91 | 26.36   |
| 169.8 | 171.0 | 33.86 | 7.74 | 26.42   |
| 172.9 | 174.0 | 33.88 | 7.62 | 26.45   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 12.90

DATE 31/ 1/79

TIME (PST) 0359

TAPE: UDD454 -009

LONG W 125 52.00

PASS NO. 47

STN: 109

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .4    | .4    | 31.78 | 6.92 | 24.89   |
| 2.0   | 2.0   | 31.77 | 6.93 | 24.89   |
| 5.0   | 5.0   | 31.77 | 6.93 | 24.89   |
| 10.0  | 10.1  | 31.77 | 6.92 | 24.89   |
| 14.9  | 15.0  | 31.78 | 6.99 | 24.89   |
| 20.0  | 20.1  | 31.89 | 7.15 | 24.95   |
| 24.9  | 25.0  | 31.94 | 7.22 | 24.98   |
| 29.9  | 30.0  | 32.14 | 7.75 | 25.06   |
| 34.8  | 35.0  | 32.37 | 8.12 | 25.20   |
| 39.8  | 40.0  | 32.47 | 8.29 | 25.25   |
| 44.7  | 45.0  | 32.51 | 8.34 | 25.27   |
| 49.7  | 50.0  | 32.54 | 8.37 | 25.29   |
| 59.7  | 60.0  | 32.60 | 8.36 | 25.34   |
| 69.6  | 70.0  | 32.80 | 8.17 | 25.52   |
| 80.4  | 80.9  | 32.97 | 8.18 | 25.65   |
| 90.4  | 91.0  | 33.14 | 8.25 | 25.78   |
| 99.6  | 100.2 | 33.34 | 8.29 | 25.93   |
| 110.3 | 111.0 | 33.48 | 8.19 | 26.06   |
| 120.3 | 121.0 | 33.60 | 8.04 | 26.17   |
| 130.3 | 131.1 | 33.68 | 7.97 | 26.24   |
| 140.1 | 141.0 | 33.77 | 7.81 | 26.34   |
| 150.0 | 150.9 | 33.81 | 7.74 | 26.38   |
| 160.0 | 161.0 | 33.87 | 7.59 | 26.45   |
| 170.0 | 171.1 | 33.89 | 7.58 | 26.46   |
| 179.8 | 181.0 | 33.92 | 7.49 | 26.50   |
| 189.7 | 191.0 | 33.94 | 7.45 | 26.52   |
| 199.7 | 201.0 | 33.95 | 7.38 | 26.54   |
| 224.5 | 226.1 | 33.97 | 7.12 | 26.60   |
| 250.3 | 252.1 | 34.00 | 6.93 | 26.64   |
| 274.9 | 276.9 | 34.00 | 6.67 | 26.68   |
| 299.8 | 301.9 | 34.01 | 6.24 | 26.75   |
| 324.7 | 327.1 | 34.05 | 6.02 | 26.80   |
| 350.4 | 353.0 | 34.07 | 5.61 | 26.86   |
| 375.2 | 378.0 | 34.08 | 5.40 | 26.90   |
| 394.0 | 397.1 | 34.09 | 5.35 | 26.91   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 10.60

DATE 31/ 1/79

TIME (PST) 0452

TAPE: U00454 -010

LONG W 125 56.20

PASS NO. 49

STN: 110

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 32.20 | 7.54 | 25.14   |
| 2.1   | 2.1   | 32.20 | 7.54 | 25.14   |
| 4.9   | 5.0   | 32.20 | 7.55 | 25.14   |
| 10.0  | 10.0  | 32.20 | 7.55 | 25.14   |
| 15.0  | 15.1  | 32.32 | 7.89 | 25.19   |
| 19.9  | 20.0  | 32.38 | 7.91 | 25.23   |
| 24.8  | 24.9  | 32.39 | 7.94 | 25.24   |
| 29.8  | 29.9  | 32.42 | 7.95 | 25.26   |
| 35.5  | 35.7  | 32.43 | 7.92 | 25.27   |
| 39.8  | 40.1  | 32.45 | 7.94 | 25.28   |
| 44.7  | 45.0  | 32.48 | 7.98 | 25.30   |
| 49.6  | 49.9  | 32.52 | 8.11 | 25.31   |
| 59.7  | 60.1  | 32.76 | 8.32 | 25.47   |
| 70.2  | 70.6  | 32.87 | 8.32 | 25.56   |
| 79.5  | 79.9  | 33.08 | 8.34 | 25.72   |
| 90.4  | 91.0  | 33.23 | 8.38 | 25.83   |
| 100.3 | 100.9 | 33.44 | 8.29 | 26.01   |
| 110.3 | 111.0 | 33.53 | 8.24 | 26.09   |
| 120.4 | 121.1 | 33.64 | 8.13 | 26.19   |
| 130.1 | 130.9 | 33.74 | 7.87 | 26.30   |
| 140.8 | 141.7 | 33.79 | 7.79 | 26.36   |
| 150.1 | 151.1 | 33.83 | 7.74 | 26.40   |
| 160.0 | 161.1 | 33.85 | 7.67 | 26.42   |
| 169.8 | 171.0 | 33.86 | 7.47 | 26.46   |
| 179.9 | 181.1 | 33.89 | 7.35 | 26.50   |
| 189.7 | 191.0 | 33.92 | 7.27 | 26.53   |
| 199.7 | 201.0 | 33.93 | 7.17 | 26.56   |
| 225.4 | 227.0 | 33.98 | 7.05 | 26.61   |
| 250.2 | 252.0 | 33.99 | 6.82 | 26.65   |
| 275.1 | 277.0 | 34.01 | 6.67 | 26.69   |
| 299.9 | 302.1 | 34.00 | 6.43 | 26.71   |
| 324.6 | 327.0 | 34.02 | 6.30 | 26.74   |
| 349.4 | 352.0 | 34.03 | 6.17 | 26.77   |
| 375.1 | 378.0 | 34.03 | 6.02 | 26.79   |
| 399.9 | 403.0 | 34.05 | 5.80 | 26.83   |
| 424.6 | 427.9 | 34.07 | 5.53 | 26.88   |
| 449.5 | 453.0 | 34.10 | 5.18 | 26.94   |
| 475.2 | 479.0 | 34.13 | 4.94 | 26.99   |
| 499.8 | 503.8 | 34.15 | 4.75 | 27.03   |
| 534.7 | 539.1 | 34.18 | 4.60 | 27.07   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 8.50  
 DATE 31/ 1/79  
 TIME (PST) 0533

TAPE: U00454 -011  
 LONG W 126 .00  
 PASS NO. 51  
 STN: 111

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 32.52 | 7.98 | 25.33   |
| 2.0   | 2.0   | 32.52 | 7.97 | 25.33   |
| 5.0   | 5.1   | 32.51 | 7.99 | 25.32   |
| 9.9   | 10.0  | 32.52 | 7.99 | 25.33   |
| 14.9  | 15.0  | 32.53 | 8.04 | 25.33   |
| 20.2  | 20.3  | 32.53 | 8.04 | 25.33   |
| 24.9  | 25.0  | 32.53 | 8.03 | 25.33   |
| 29.8  | 30.0  | 32.53 | 8.03 | 25.33   |
| 34.8  | 35.0  | 32.53 | 8.03 | 25.33   |
| 39.8  | 40.1  | 32.53 | 8.04 | 25.33   |
| 44.7  | 45.0  | 32.60 | 8.17 | 25.37   |
| 49.8  | 50.1  | 32.73 | 8.36 | 25.44   |
| 59.7  | 60.0  | 33.12 | 8.33 | 25.75   |
| 69.7  | 70.2  | 33.23 | 8.34 | 25.83   |
| 80.5  | 81.0  | 33.39 | 8.26 | 25.98   |
| 90.4  | 91.0  | 33.44 | 8.26 | 26.02   |
| 100.4 | 101.0 | 33.55 | 8.19 | 26.11   |
| 110.0 | 110.7 | 33.71 | 8.04 | 26.26   |
| 120.2 | 121.0 | 33.79 | 7.95 | 26.33   |
| 130.0 | 130.9 | 33.84 | 7.77 | 26.40   |
| 140.1 | 141.0 | 33.85 | 7.73 | 26.41   |
| 149.9 | 150.9 | 33.87 | 7.69 | 26.44   |
| 159.8 | 160.9 | 33.88 | 7.66 | 26.45   |
| 169.9 | 171.0 | 33.91 | 7.59 | 26.48   |
| 179.8 | 181.1 | 33.92 | 7.56 | 26.49   |
| 189.8 | 191.1 | 33.93 | 7.49 | 26.51   |
| 199.7 | 201.0 | 33.95 | 7.40 | 26.54   |
| 224.6 | 226.2 | 33.98 | 7.15 | 26.59   |
| 250.2 | 252.0 | 34.00 | 6.90 | 26.64   |
| 274.9 | 276.9 | 34.01 | 6.72 | 26.68   |
| 299.6 | 301.8 | 34.01 | 6.51 | 26.71   |
| 324.7 | 327.1 | 34.03 | 6.34 | 26.74   |
| 350.3 | 352.9 | 34.04 | 6.18 | 26.77   |
| 375.1 | 378.0 | 34.05 | 6.02 | 26.80   |
| 399.9 | 403.0 | 34.05 | 5.77 | 26.83   |
| 424.7 | 428.0 | 34.06 | 5.62 | 26.86   |
| 450.4 | 454.0 | 34.08 | 5.35 | 26.91   |
| 475.1 | 478.9 | 34.09 | 5.23 | 26.93   |
| 500.0 | 504.0 | 34.11 | 4.99 | 26.98   |
| 550.3 | 554.9 | 34.16 | 4.72 | 27.04   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 15.10  
 DATE 31/ 1/79  
 TIME (PST) 0648

TAPE: U00454 -012  
 LONG W 125 47.70  
 PASS NO. 53  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 31.76 | 6.89 | 24.88   |
| 2.0   | 2.0   | 31.76 | 6.90 | 24.89   |
| 4.9   | 4.9   | 31.77 | 6.91 | 24.89   |
| 10.0  | 10.0  | 31.76 | 6.93 | 24.88   |
| 14.9  | 15.0  | 31.81 | 7.01 | 24.91   |
| 19.9  | 20.0  | 31.85 | 7.05 | 24.93   |
| 24.8  | 24.9  | 31.85 | 7.08 | 24.93   |
| 29.9  | 30.0  | 31.92 | 7.27 | 24.96   |
| 34.9  | 35.1  | 32.36 | 8.07 | 25.20   |
| 39.8  | 40.0  | 32.54 | 8.35 | 25.29   |
| 44.8  | 45.1  | 32.57 | 8.39 | 25.31   |
| 49.9  | 50.1  | 32.67 | 8.31 | 25.40   |
| 59.7  | 60.1  | 32.91 | 8.24 | 25.60   |
| 69.6  | 70.1  | 33.05 | 8.24 | 25.71   |
| 80.5  | 81.0  | 33.19 | 8.27 | 25.81   |
| 90.4  | 91.0  | 33.28 | 8.28 | 25.88   |
| 100.4 | 101.0 | 33.40 | 8.26 | 25.98   |
| 110.2 | 110.8 | 33.54 | 8.25 | 26.09   |
| 120.3 | 121.0 | 33.65 | 8.18 | 26.19   |
| 130.2 | 131.0 | 33.74 | 8.10 | 26.27   |
| 140.1 | 141.0 | 33.78 | 7.98 | 26.32   |
| 150.1 | 151.1 | 33.82 | 7.90 | 26.36   |
| 159.9 | 161.0 | 33.85 | 7.82 | 26.40   |
| 169.9 | 171.0 | 33.86 | 7.76 | 26.42   |
| 179.7 | 180.9 | 33.86 | 7.75 | 26.42   |
| 185.7 | 186.9 | 33.87 | 7.74 | 26.42   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 25.00  
 DATE 31/ 1/79  
 TIME (PST) 0803

TAPE: U00454 -013  
 LONG W 125 59.80  
 PASS NO. 55  
 STN: 201

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 32.09 | 6.84 | 25.15   |
| 2.1   | 2.1   | 32.09 | 6.83 | 25.15   |
| 4.9   | 5.0   | 32.08 | 6.84 | 25.14   |
| 10.0  | 10.1  | 32.09 | 6.83 | 25.15   |
| 15.5  | 15.6  | 32.16 | 6.88 | 25.20   |
| 19.9  | 20.1  | 32.27 | 6.92 | 25.28   |
| 25.1  | 25.2  | 32.29 | 6.93 | 25.29   |
| 29.8  | 30.0  | 32.29 | 6.93 | 25.30   |
| 34.7  | 34.9  | 32.29 | 6.94 | 25.30   |
| 39.6  | 39.9  | 32.37 | 7.04 | 25.34   |
| 45.5  | 45.7  | 32.62 | 7.90 | 25.42   |
| 49.7  | 50.0  | 32.78 | 8.10 | 25.52   |
| 59.6  | 60.0  | 33.10 | 8.24 | 25.75   |
| 70.2  | 70.7  | 33.27 | 8.10 | 25.90   |
| 79.4  | 79.9  | 33.38 | 8.03 | 26.00   |
| 89.5  | 90.1  | 33.52 | 7.88 | 26.13   |
| 99.3  | 99.9  | 33.61 | 7.65 | 26.23   |
| 110.0 | 110.7 | 33.69 | 7.74 | 26.29   |
| 120.3 | 121.0 | 33.77 | 7.85 | 26.33   |
| 130.2 | 131.1 | 33.78 | 7.83 | 26.34   |
| 140.1 | 141.0 | 33.79 | 7.76 | 26.36   |
| 150.7 | 151.7 | 33.80 | 7.71 | 26.38   |
| 159.9 | 161.0 | 33.82 | 7.67 | 26.40   |
| 169.9 | 171.0 | 33.86 | 7.58 | 26.44   |
| 177.8 | 179.0 | 33.87 | 7.57 | 26.45   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 31.50

DATE 31/ 1/79

TIME (PST) 0902

TAPE: U00454 -014

LONG W 126 7.00

PASS NO. 57

STN: 202

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 31.99 | 6.81 | 25.08   |
| 2.0   | 2.0   | 31.99 | 6.81 | 25.08   |
| 5.1   | 5.1   | 31.99 | 6.82 | 25.08   |
| 9.9   | 10.0  | 31.99 | 6.81 | 25.08   |
| 15.0  | 15.1  | 31.99 | 6.81 | 25.08   |
| 19.7  | 19.9  | 32.02 | 6.94 | 25.08   |
| 24.8  | 25.0  | 32.24 | 7.23 | 25.21   |
| 29.7  | 29.9  | 32.35 | 7.37 | 25.29   |
| 34.9  | 35.1  | 32.46 | 7.57 | 25.35   |
| 39.7  | 40.0  | 32.59 | 7.74 | 25.42   |
| 44.7  | 45.0  | 32.64 | 7.79 | 25.45   |
| 49.6  | 49.9  | 32.70 | 7.80 | 25.50   |
| 59.6  | 60.0  | 32.98 | 8.29 | 25.65   |
| 69.6  | 70.0  | 33.17 | 8.20 | 25.81   |
| 79.6  | 80.1  | 33.31 | 8.25 | 25.91   |
| 90.4  | 91.0  | 33.43 | 8.08 | 26.03   |
| 100.4 | 101.1 | 33.54 | 7.92 | 26.14   |
| 110.3 | 111.0 | 33.58 | 7.71 | 26.20   |
| 120.3 | 121.0 | 33.64 | 7.63 | 26.26   |
| 130.7 | 131.5 | 33.66 | 7.56 | 26.29   |
| 140.2 | 141.1 | 33.75 | 7.60 | 26.36   |
| 150.0 | 151.0 | 33.85 | 7.48 | 26.44   |
| 160.0 | 161.0 | 33.88 | 7.39 | 26.48   |
| 169.9 | 171.1 | 33.93 | 7.15 | 26.56   |
| 178.9 | 180.1 | 33.93 | 7.14 | 26.56   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 35.80

DATE 31/ 1/79

TIME (PST) 1004

TAPE: U00454 -015

LONG W 126 12.70

PASS NO. 59

STN: 203

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 32.22 | 7.40 | 25.18   |
| 2.0   | 2.0   | 32.22 | 7.40 | 25.18   |
| 4.9   | 5.0   | 32.22 | 7.40 | 25.17   |
| 9.9   | 10.0  | 32.22 | 7.40 | 25.18   |
| 15.0  | 15.1  | 32.26 | 7.47 | 25.20   |
| 19.9  | 20.0  | 32.31 | 7.63 | 25.22   |
| 24.8  | 25.0  | 32.32 | 7.65 | 25.22   |
| 29.8  | 30.0  | 32.34 | 7.70 | 25.23   |
| 34.9  | 35.1  | 32.34 | 7.71 | 25.23   |
| 39.8  | 40.1  | 32.34 | 7.71 | 25.23   |
| 44.7  | 45.0  | 32.35 | 7.71 | 25.23   |
| 49.7  | 50.0  | 32.35 | 7.71 | 25.23   |
| 59.6  | 60.0  | 32.38 | 7.80 | 25.25   |
| 69.6  | 70.1  | 32.70 | 8.28 | 25.43   |
| 80.5  | 81.0  | 32.90 | 8.38 | 25.57   |
| 90.2  | 90.7  | 33.21 | 8.43 | 25.81   |
| 100.5 | 101.1 | 33.48 | 8.29 | 26.04   |
| 110.3 | 111.0 | 33.59 | 8.22 | 26.13   |
| 120.2 | 121.0 | 33.66 | 8.11 | 26.20   |
| 130.3 | 131.1 | 33.69 | 8.00 | 26.25   |
| 140.1 | 141.0 | 33.77 | 7.77 | 26.34   |
| 150.1 | 151.1 | 33.84 | 7.49 | 26.44   |
| 160.8 | 161.8 | 33.91 | 7.50 | 26.49   |
| 170.0 | 171.1 | 33.91 | 7.44 | 26.50   |
| 179.9 | 181.1 | 33.92 | 7.39 | 26.52   |
| 189.8 | 191.1 | 33.92 | 7.37 | 26.52   |
| 199.6 | 201.0 | 33.96 | 7.21 | 26.57   |
| 224.6 | 226.2 | 33.97 | 6.90 | 26.63   |
| 250.2 | 252.0 | 34.00 | 6.63 | 26.68   |
| 275.0 | 277.0 | 34.02 | 6.39 | 26.73   |
| 299.9 | 302.1 | 34.02 | 6.21 | 26.75   |
| 324.6 | 327.0 | 34.03 | 5.95 | 26.80   |
| 350.0 | 352.7 | 34.05 | 5.70 | 26.84   |
| 375.1 | 378.0 | 34.05 | 5.63 | 26.85   |
| 400.0 | 403.1 | 34.06 | 5.49 | 26.88   |
| 424.6 | 427.9 | 34.08 | 5.33 | 26.91   |
| 450.3 | 453.8 | 34.09 | 5.20 | 26.94   |
| 475.2 | 479.0 | 34.11 | 5.07 | 26.96   |
| 496.0 | 500.0 | 34.14 | 4.87 | 27.01   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 41.40  
 DATE 31/ 1/79  
 TIME (PST) 1103

TAPE: U00454 -016  
 LONG W 126 19.10  
 PASS NO. 61  
 STN: 204

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 32.34 | 7.55 | 25.25   |
| 2.0   | 2.0   | 32.34 | 7.55 | 25.25   |
| 5.2   | 5.2   | 32.34 | 7.54 | 25.25   |
| 9.9   | 10.0  | 32.34 | 7.54 | 25.25   |
| 14.7  | 14.8  | 32.34 | 7.55 | 25.25   |
| 19.8  | 19.9  | 32.34 | 7.55 | 25.25   |
| 24.8  | 24.9  | 32.35 | 7.55 | 25.26   |
| 29.8  | 30.0  | 32.34 | 7.55 | 25.25   |
| 34.9  | 35.1  | 32.34 | 7.54 | 25.25   |
| 39.8  | 40.0  | 32.34 | 7.54 | 25.25   |
| 44.8  | 45.1  | 32.34 | 7.54 | 25.25   |
| 49.6  | 49.9  | 32.34 | 7.54 | 25.25   |
| 59.6  | 59.9  | 32.41 | 7.77 | 25.28   |
| 69.6  | 70.0  | 32.91 | 8.41 | 25.57   |
| 80.5  | 81.0  | 33.12 | 8.42 | 25.74   |
| 90.5  | 91.0  | 33.39 | 8.25 | 25.97   |
| 100.4 | 101.0 | 33.45 | 8.18 | 26.03   |
| 110.4 | 111.0 | 33.51 | 8.06 | 26.10   |
| 120.2 | 121.0 | 33.61 | 7.90 | 26.20   |
| 130.2 | 131.0 | 33.67 | 7.72 | 26.27   |
| 140.1 | 141.0 | 33.72 | 7.54 | 26.34   |
| 150.1 | 151.1 | 33.81 | 7.61 | 26.40   |
| 160.0 | 161.0 | 33.90 | 7.64 | 26.46   |
| 169.8 | 171.0 | 33.91 | 7.53 | 26.49   |
| 179.7 | 180.9 | 33.92 | 7.40 | 26.51   |
| 189.6 | 190.9 | 33.94 | 7.31 | 26.54   |
| 199.6 | 201.0 | 33.95 | 7.19 | 26.57   |
| 225.4 | 226.9 | 33.98 | 6.97 | 26.62   |
| 250.3 | 252.1 | 33.99 | 6.72 | 26.66   |
| 275.0 | 277.0 | 34.01 | 6.62 | 26.69   |
| 299.9 | 302.1 | 34.01 | 6.43 | 26.72   |
| 324.6 | 327.0 | 34.02 | 6.30 | 26.74   |
| 350.4 | 353.0 | 34.03 | 6.10 | 26.77   |
| 375.2 | 379.0 | 34.03 | 5.94 | 26.79   |
| 399.9 | 403.0 | 34.04 | 5.77 | 26.83   |
| 421.7 | 425.0 | 34.05 | 5.63 | 26.85   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 48.00  
 DATE 31/ 1/79  
 TIME (PST) 1204

TAPE: U00454 -017  
 LONG W 126 26.00  
 PASS NO. 63  
 STN: 205

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 32.21 | 7.46 | 25.16   |
| 1.7   | 1.7   | 32.21 | 7.46 | 25.16   |
| 4.9   | 4.9   | 32.21 | 7.46 | 25.16   |
| 10.2  | 10.3  | 32.21 | 7.44 | 25.16   |
| 14.9  | 14.9  | 32.20 | 7.49 | 25.15   |
| 19.9  | 20.0  | 32.21 | 7.48 | 25.16   |
| 24.9  | 25.0  | 32.21 | 7.49 | 25.16   |
| 29.8  | 30.0  | 32.22 | 7.53 | 25.16   |
| 34.8  | 35.0  | 32.24 | 7.58 | 25.17   |
| 39.7  | 40.0  | 32.29 | 7.74 | 25.18   |
| 44.7  | 45.0  | 32.39 | 8.07 | 25.22   |
| 49.6  | 49.9  | 32.42 | 8.10 | 25.23   |
| 59.7  | 60.0  | 32.58 | 8.28 | 25.34   |
| 69.6  | 70.0  | 32.95 | 8.34 | 25.61   |
| 79.5  | 80.0  | 33.15 | 8.38 | 25.77   |
| 90.5  | 91.0  | 33.37 | 8.28 | 25.96   |
| 100.4 | 101.0 | 33.50 | 7.99 | 26.10   |
| 110.4 | 111.1 | 33.60 | 7.95 | 26.18   |
| 120.4 | 121.2 | 33.66 | 7.88 | 26.24   |
| 130.2 | 131.0 | 33.71 | 7.83 | 26.29   |
| 140.0 | 140.9 | 33.79 | 7.71 | 26.37   |
| 150.0 | 151.0 | 33.83 | 7.59 | 26.42   |
| 159.9 | 161.0 | 33.87 | 7.56 | 26.45   |
| 169.9 | 171.1 | 33.89 | 7.49 | 26.48   |
| 179.8 | 181.1 | 33.90 | 7.42 | 26.50   |
| 189.6 | 190.9 | 33.92 | 7.33 | 26.52   |
| 199.7 | 201.1 | 33.94 | 7.25 | 26.55   |
| 225.4 | 227.0 | 33.98 | 6.93 | 26.63   |
| 250.3 | 252.1 | 34.00 | 6.54 | 26.70   |
| 261.3 | 263.1 | 34.00 | 6.40 | 26.71   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 54.00

DATE 31/ 1/79

TIME (PST) 1303

TAPE: U00454 -018

LONG W 126 33.00

PASS NO. 65

STN: 206

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 31.96 | 7.09 | 25.01   |
| 2.0   | 2.0   | 31.96 | 7.09 | 25.01   |
| 4.9   | 5.0   | 31.96 | 7.09 | 25.01   |
| 10.1  | 10.1  | 31.96 | 7.10 | 25.01   |
| 14.9  | 15.0  | 31.96 | 7.07 | 25.02   |
| 19.9  | 20.0  | 32.08 | 7.23 | 25.09   |
| 24.9  | 25.0  | 32.11 | 7.28 | 25.11   |
| 29.7  | 29.9  | 32.31 | 7.65 | 25.21   |
| 34.9  | 35.1  | 32.37 | 7.67 | 25.26   |
| 39.8  | 40.0  | 32.38 | 7.68 | 25.26   |
| 44.7  | 45.0  | 32.38 | 7.68 | 25.26   |
| 49.7  | 50.0  | 32.38 | 7.70 | 25.26   |
| 59.6  | 60.0  | 32.62 | 8.06 | 25.40   |
| 69.6  | 70.1  | 32.89 | 8.28 | 25.58   |
| 80.4  | 80.9  | 33.40 | 8.25 | 25.98   |
| 90.0  | 90.5  | 33.45 | 8.20 | 26.03   |
| 100.4 | 101.0 | 33.52 | 8.09 | 26.10   |
| 110.3 | 111.0 | 33.67 | 7.88 | 26.25   |
| 120.3 | 121.1 | 33.74 | 7.78 | 26.32   |
| 130.5 | 131.3 | 33.75 | 7.66 | 26.34   |
| 140.0 | 140.9 | 33.78 | 7.71 | 26.36   |
| 150.1 | 151.1 | 33.82 | 7.72 | 26.39   |
| 160.0 | 161.0 | 33.83 | 7.69 | 26.40   |
| 170.0 | 171.1 | 33.84 | 7.66 | 26.41   |
| 179.9 | 181.1 | 33.84 | 7.62 | 26.42   |
| 189.7 | 191.0 | 33.85 | 7.58 | 26.44   |
| 199.7 | 201.1 | 33.88 | 7.45 | 26.47   |
| 225.5 | 227.1 | 33.90 | 7.34 | 26.51   |
| 249.1 | 250.9 | 33.99 | 6.79 | 26.65   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 1.30  
 DATE 31/ 1/79  
 TIME (PST) 1402

TAPE: U00454 -019  
 LONG W 126 41.80  
 PASS NO. 67  
 STN: 207

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .6    | .6    | 32.06 | 7.18 | 25.08   |
| 2.0   | 2.0   | 32.06 | 7.18 | 25.09   |
| 4.9   | 4.9   | 32.07 | 7.17 | 25.09   |
| 10.6  | 10.6  | 32.07 | 7.17 | 25.09   |
| 14.8  | 14.9  | 32.07 | 7.17 | 25.09   |
| 19.8  | 19.9  | 32.08 | 7.17 | 25.10   |
| 24.8  | 24.9  | 32.16 | 7.40 | 25.13   |
| 29.8  | 30.0  | 32.23 | 7.49 | 25.17   |
| 34.9  | 35.1  | 32.31 | 7.57 | 25.23   |
| 39.8  | 40.1  | 32.32 | 7.55 | 25.24   |
| 44.8  | 45.0  | 32.34 | 7.58 | 25.25   |
| 49.7  | 50.0  | 32.35 | 7.60 | 25.25   |
| 59.7  | 60.1  | 32.43 | 7.81 | 25.28   |
| 70.5  | 70.9  | 32.75 | 8.16 | 25.48   |
| 80.6  | 81.0  | 33.06 | 8.29 | 25.71   |
| 90.5  | 91.0  | 33.36 | 8.37 | 25.94   |
| 99.5  | 100.1 | 33.53 | 8.12 | 26.11   |
| 110.3 | 111.0 | 33.61 | 7.97 | 26.19   |
| 119.3 | 120.0 | 33.66 | 7.95 | 26.23   |
| 130.1 | 131.0 | 33.74 | 8.03 | 26.29   |
| 140.0 | 140.9 | 33.80 | 7.94 | 26.34   |
| 150.0 | 151.0 | 33.85 | 7.86 | 26.40   |
| 159.9 | 161.0 | 33.86 | 7.66 | 26.43   |
| 169.8 | 171.0 | 33.88 | 7.51 | 26.47   |
| 179.7 | 180.9 | 33.90 | 7.46 | 26.49   |
| 189.8 | 191.0 | 33.92 | 7.39 | 26.51   |
| 199.4 | 200.7 | 33.95 | 7.21 | 26.56   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 7.30

DATE 31/ 1/79

TIME (PST) 1503

TAPE: U00454 -020

LONG W 126 48.90

PASS NO. 69

STN: 208

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.0   | 2.0   | 32.27 | 7.36 | 25.22   |
| 4.9   | 4.9   | 32.27 | 7.36 | 25.22   |
| 9.7   | 9.8   | 32.28 | 7.34 | 25.23   |
| 15.0  | 15.0  | 32.27 | 7.34 | 25.23   |
| 19.8  | 19.9  | 32.28 | 7.34 | 25.23   |
| 24.9  | 25.0  | 32.28 | 7.34 | 25.23   |
| 29.8  | 30.0  | 32.45 | 7.74 | 25.31   |
| 34.7  | 34.9  | 32.68 | 8.03 | 25.45   |
| 39.9  | 40.2  | 32.82 | 8.00 | 25.56   |
| 44.6  | 44.9  | 32.86 | 8.08 | 25.58   |
| 49.7  | 50.0  | 32.94 | 8.17 | 25.63   |
| 59.6  | 60.0  | 33.14 | 8.35 | 25.76   |
| 69.7  | 70.1  | 33.25 | 8.17 | 25.87   |
| 79.6  | 80.1  | 33.40 | 7.97 | 26.03   |
| 90.5  | 91.1  | 33.56 | 7.84 | 26.17   |
| 100.4 | 101.1 | 33.63 | 7.78 | 26.23   |
| 110.2 | 110.9 | 33.66 | 7.75 | 26.26   |
| 120.4 | 121.1 | 33.73 | 7.71 | 26.32   |
| 130.0 | 130.9 | 33.75 | 7.68 | 26.34   |
| 140.0 | 141.0 | 33.83 | 7.51 | 26.43   |
| 150.1 | 151.1 | 33.89 | 7.40 | 26.49   |
| 153.5 | 154.6 | 33.89 | 7.40 | 26.49   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 13.70  
 DATE 31/ 1/79  
 TIME (PST) 1601

TAPE: U00454 -021  
 LONG W 126 57.10  
 PASS NO. 71  
 SYN: 209

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 32.18 | 6.96 | 25.20   |
| 2.0   | 2.1   | 32.18 | 6.96 | 25.20   |
| 5.0   | 5.0   | 32.18 | 6.96 | 25.20   |
| 10.0  | 10.0  | 32.18 | 6.91 | 25.21   |
| 14.8  | 14.9  | 32.18 | 6.91 | 25.22   |
| 20.0  | 20.1  | 32.19 | 6.91 | 25.22   |
| 24.9  | 25.0  | 32.19 | 6.91 | 25.22   |
| 29.8  | 30.0  | 32.23 | 6.94 | 25.25   |
| 34.7  | 34.9  | 32.26 | 6.96 | 25.26   |
| 39.8  | 40.0  | 32.33 | 7.18 | 25.29   |
| 44.7  | 44.9  | 32.56 | 7.38 | 25.45   |
| 49.7  | 50.0  | 32.88 | 7.79 | 25.65   |
| 59.7  | 60.1  | 33.15 | 8.16 | 25.80   |
| 69.6  | 70.0  | 33.35 | 8.11 | 25.96   |
| 80.5  | 81.0  | 33.46 | 8.00 | 26.07   |
| 90.5  | 91.0  | 33.60 | 7.99 | 26.18   |
| 100.4 | 101.0 | 33.69 | 7.95 | 26.25   |
| 110.3 | 111.1 | 33.77 | 7.78 | 26.34   |
| 120.1 | 120.9 | 33.83 | 7.66 | 26.40   |
| 130.2 | 131.1 | 33.85 | 7.62 | 26.43   |
| 140.0 | 141.0 | 33.87 | 7.58 | 26.45   |
| 150.0 | 151.0 | 33.90 | 7.46 | 26.49   |
| 150.9 | 151.9 | 33.90 | 7.45 | 26.49   |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 21.53  
 DATE 31/ 1/79  
 TIME (PST) 1701

TAPE: U00454 -022  
 LONG W 127 5.60  
 PASS NO. 73  
 STN: 210

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 32.29 | 7.04 | 25.28   |
| 2.0   | 2.0   | 32.28 | 7.03 | 25.27   |
| 5.0   | 5.1   | 32.28 | 7.04 | 25.27   |
| 10.1  | 10.1  | 32.29 | 7.04 | 25.28   |
| 15.0  | 15.1  | 32.29 | 7.05 | 25.28   |
| 19.9  | 20.0  | 32.30 | 7.07 | 25.29   |
| 24.9  | 25.0  | 32.31 | 7.07 | 25.29   |
| 29.7  | 29.9  | 32.32 | 7.11 | 25.29   |
| 34.7  | 34.9  | 32.34 | 7.18 | 25.30   |
| 39.9  | 40.1  | 32.39 | 7.30 | 25.32   |
| 44.7  | 44.9  | 32.44 | 7.44 | 25.34   |
| 49.6  | 49.9  | 32.47 | 7.47 | 25.37   |
| 59.6  | 60.0  | 32.52 | 7.52 | 25.40   |
| 69.6  | 70.0  | 32.66 | 7.66 | 25.49   |
| 80.5  | 81.0  | 33.03 | 7.95 | 25.74   |
| 90.5  | 91.0  | 33.11 | 7.87 | 25.81   |
| 99.4  | 100.0 | 33.35 | 7.95 | 25.99   |
| 110.3 | 110.9 | 33.60 | 7.79 | 26.21   |
| 120.3 | 121.0 | 33.72 | 7.73 | 26.31   |
| 130.0 | 130.9 | 33.81 | 7.56 | 26.41   |
| 140.0 | 140.9 | 33.86 | 7.48 | 26.45   |
| 143.1 | 144.0 | 33.87 | 7.45 | 26.47   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 28.37  
 DATE 31/ 1/79  
 TIME (PST) 1759

TAPE: U00454 -023  
 LONG W 127 13.72  
 PASS NO. 75  
 STN: 211

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .1    | .1    | 32.22 | 7.26 | 25.20   |
| 2.0   | 2.0   | 32.25 | 7.26 | 25.22   |
| 4.9   | 5.0   | 32.25 | 7.26 | 25.22   |
| 10.0  | 10.1  | 32.26 | 7.26 | 25.23   |
| 14.9  | 15.0  | 32.29 | 7.30 | 25.25   |
| 19.9  | 20.0  | 32.31 | 7.30 | 25.26   |
| 24.9  | 25.0  | 32.31 | 7.30 | 25.26   |
| 29.8  | 30.0  | 32.31 | 7.30 | 25.27   |
| 34.8  | 35.0  | 32.32 | 7.33 | 25.27   |
| 39.8  | 40.0  | 32.38 | 7.51 | 25.29   |
| 44.6  | 44.8  | 32.41 | 7.63 | 25.30   |
| 50.0  | 50.3  | 32.61 | 7.94 | 25.41   |
| 59.6  | 60.0  | 32.75 | 7.83 | 25.53   |
| 69.7  | 70.1  | 32.90 | 7.87 | 25.65   |
| 79.5  | 80.0  | 33.14 | 7.94 | 25.82   |
| 90.4  | 91.0  | 33.37 | 8.11 | 25.98   |
| 100.5 | 101.1 | 33.54 | 7.98 | 26.13   |
| 110.2 | 110.9 | 33.68 | 7.90 | 26.25   |
| 120.2 | 121.0 | 33.76 | 7.87 | 26.32   |
| 130.1 | 130.9 | 33.81 | 7.73 | 26.38   |
| 140.2 | 141.1 | 33.82 | 7.66 | 26.40   |
| 150.1 | 151.1 | 33.87 | 7.51 | 26.46   |
| 156.8 | 157.9 | 33.87 | 7.49 | 26.46   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 33.64

DATE 31/ 1/79

TIME (PST) 1901

TAPE: U00454 -024

LONG W 127 20.38

PASS NO. 77

STN: 212

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 32.05 | 6.47 | 25.17   |
| 2.0   | 2.0   | 32.05 | 6.47 | 25.16   |
| 5.0   | 5.0   | 32.05 | 6.47 | 25.16   |
| 10.1  | 10.1  | 32.05 | 6.47 | 25.16   |
| 14.8  | 14.9  | 32.05 | 6.49 | 25.17   |
| 19.9  | 20.0  | 32.11 | 6.60 | 25.20   |
| 24.9  | 25.0  | 32.24 | 7.01 | 25.24   |
| 29.6  | 29.8  | 32.37 | 7.21 | 25.32   |
| 34.8  | 35.0  | 32.38 | 7.22 | 25.32   |
| 39.8  | 40.0  | 32.38 | 7.21 | 25.33   |
| 44.9  | 45.1  | 32.39 | 7.22 | 25.34   |
| 49.8  | 50.1  | 32.42 | 7.27 | 25.36   |
| 60.0  | 60.3  | 32.73 | 7.61 | 25.55   |
| 69.7  | 70.1  | 33.01 | 8.01 | 25.71   |
| 79.5  | 80.0  | 33.27 | 8.13 | 25.90   |
| 90.5  | 91.0  | 33.52 | 8.17 | 26.09   |
| 99.3  | 100.0 | 33.53 | 7.94 | 26.13   |
| 109.8 | 110.5 | 33.64 | 7.92 | 26.22   |
| 119.2 | 120.0 | 33.69 | 7.92 | 26.26   |
| 130.1 | 130.9 | 33.76 | 7.85 | 26.33   |
| 140.1 | 141.0 | 33.82 | 7.75 | 26.39   |
| 150.0 | 151.0 | 33.87 | 7.57 | 26.45   |
| 160.0 | 161.1 | 33.89 | 7.58 | 26.46   |
| 169.8 | 171.0 | 33.90 | 7.50 | 26.49   |
| 179.8 | 181.1 | 33.90 | 7.45 | 26.49   |
| 189.7 | 191.0 | 33.93 | 7.31 | 26.54   |
| 199.4 | 200.7 | 33.95 | 7.19 | 26.56   |
| 225.2 | 226.8 | 33.97 | 7.06 | 26.60   |
| 225.2 | 226.8 | 33.97 | 7.06 | 26.60   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 38.80  
 DATE 31/ 1/79  
 TIME (PST) 2002

TAPE: U00454 -025  
 LONG W 127 27.00  
 PASS NO. 79  
 STN: 213

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .7    | .7    | 32.18 | 7.00 | 25.20   |
| 2.1   | 2.1   | 32.18 | 6.99 | 25.20   |
| 5.0   | 5.0   | 32.17 | 6.99 | 25.20   |
| 9.9   | 9.9   | 32.18 | 7.00 | 25.20   |
| 15.0  | 15.1  | 32.17 | 7.00 | 25.20   |
| 19.8  | 19.9  | 32.17 | 7.01 | 25.19   |
| 24.8  | 25.0  | 32.18 | 7.04 | 25.19   |
| 29.9  | 30.0  | 32.18 | 7.04 | 25.19   |
| 34.8  | 35.0  | 32.21 | 7.13 | 25.20   |
| 39.9  | 40.1  | 32.26 | 7.30 | 25.22   |
| 44.8  | 45.0  | 32.35 | 7.39 | 25.28   |
| 49.8  | 50.1  | 32.39 | 7.48 | 25.30   |
| 59.7  | 60.0  | 32.54 | 7.54 | 25.41   |
| 70.5  | 70.9  | 32.70 | 7.66 | 25.52   |
| 79.6  | 80.1  | 33.06 | 8.17 | 25.73   |
| 90.4  | 90.9  | 33.39 | 8.07 | 26.00   |
| 100.4 | 101.0 | 33.54 | 8.06 | 26.12   |
| 110.3 | 111.0 | 33.67 | 7.95 | 26.24   |
| 120.3 | 121.0 | 33.74 | 7.84 | 26.31   |
| 130.1 | 130.9 | 33.79 | 7.79 | 26.36   |
| 140.1 | 141.0 | 33.85 | 7.72 | 26.41   |
| 150.0 | 151.0 | 33.87 | 7.61 | 26.45   |
| 160.0 | 161.0 | 33.91 | 7.53 | 26.48   |
| 169.9 | 171.0 | 33.92 | 7.46 | 26.51   |
| 179.8 | 181.1 | 33.94 | 7.35 | 26.54   |
| 189.6 | 190.9 | 33.95 | 7.33 | 26.55   |
| 200.4 | 201.7 | 33.96 | 7.19 | 26.58   |
| 225.4 | 227.0 | 33.96 | 7.15 | 26.58   |
| 250.3 | 252.0 | 33.98 | 7.02 | 26.61   |
| 275.0 | 277.0 | 33.99 | 6.66 | 26.67   |
| 299.9 | 302.1 | 34.00 | 6.48 | 26.70   |
| 324.7 | 327.1 | 33.99 | 6.41 | 26.71   |
| 350.6 | 353.2 | 33.99 | 6.29 | 26.72   |
| 375.3 | 378.1 | 34.01 | 6.31 | 26.73   |
| 399.9 | 403.0 | 34.00 | 6.06 | 26.76   |
| 401.9 | 405.0 | 33.97 | 6.04 | 26.73   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 42.70  
 DATE 31/ 1/79  
 TIME (PST) 2102

TAPE: U00454 -026  
 LONG W 127 32.10  
 PASS NO. 81  
 STN: 214

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .6    | .6    | 32.27 | 7.09 | 25.26   |
| 2.0   | 2.0   | 32.26 | 7.09 | 25.25   |
| 5.0   | 5.1   | 32.26 | 7.09 | 25.25   |
| 10.1  | 10.1  | 32.26 | 7.09 | 25.25   |
| 15.0  | 15.1  | 32.26 | 7.10 | 25.25   |
| 20.0  | 20.1  | 32.27 | 7.10 | 25.25   |
| 24.8  | 24.9  | 32.27 | 7.11 | 25.25   |
| 29.8  | 30.0  | 32.27 | 7.15 | 25.25   |
| 34.8  | 35.0  | 32.28 | 7.16 | 25.26   |
| 39.8  | 40.0  | 32.37 | 7.34 | 25.30   |
| 44.7  | 45.0  | 32.37 | 7.34 | 25.31   |
| 49.8  | 50.1  | 32.38 | 7.36 | 25.31   |
| 59.7  | 60.1  | 32.49 | 7.49 | 25.38   |
| 69.3  | 69.7  | 32.72 | 7.91 | 25.50   |
| 80.3  | 80.8  | 32.82 | 8.00 | 25.56   |
| 89.5  | 90.1  | 33.36 | 8.28 | 25.95   |
| 100.5 | 101.1 | 33.51 | 8.13 | 26.09   |
| 110.4 | 111.1 | 33.64 | 8.04 | 26.20   |
| 120.4 | 121.1 | 33.75 | 7.93 | 26.31   |
| 130.1 | 131.0 | 33.81 | 7.81 | 26.37   |
| 140.1 | 141.1 | 33.87 | 7.63 | 26.44   |
| 150.0 | 151.0 | 33.88 | 7.54 | 26.47   |
| 160.0 | 161.0 | 33.89 | 7.49 | 26.48   |
| 169.9 | 171.1 | 33.90 | 7.43 | 26.50   |
| 179.9 | 181.1 | 33.93 | 7.26 | 26.54   |
| 189.7 | 191.0 | 33.94 | 7.18 | 26.56   |
| 199.5 | 200.9 | 33.96 | 7.13 | 26.59   |
| 225.4 | 227.0 | 33.98 | 6.86 | 26.64   |
| 250.2 | 252.0 | 33.98 | 6.75 | 26.65   |
| 275.1 | 277.1 | 34.00 | 6.58 | 26.69   |
| 299.9 | 302.1 | 34.00 | 6.36 | 26.72   |
| 324.6 | 327.0 | 33.97 | 5.87 | 26.75   |
| 350.3 | 352.9 | 33.96 | 5.45 | 26.80   |
| 375.2 | 378.0 | 34.02 | 5.68 | 26.82   |
| 399.9 | 403.0 | 34.03 | 5.64 | 26.83   |
| 424.6 | 427.9 | 34.04 | 5.56 | 26.85   |
| 449.6 | 453.1 | 34.07 | 5.35 | 26.90   |
| 475.1 | 478.9 | 34.09 | 5.14 | 26.94   |
| 490.7 | 494.6 | 34.10 | 5.04 | 26.96   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 47.60  
 DATE 31/ 1/79  
 TIME (PST) 2205

TAPE: U00454 -027  
 LONG W 127 36.90  
 PASS NO. 83  
 STN: 215

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 32.30 | 7.10 | 25.28   |
| 1.9   | 1.9   | 32.29 | 7.07 | 25.28   |
| 5.0   | 5.0   | 32.30 | 7.08 | 25.28   |
| 9.7   | 9.8   | 32.31 | 7.08 | 25.29   |
| 14.9  | 15.0  | 32.32 | 7.12 | 25.30   |
| 19.9  | 20.1  | 32.34 | 7.19 | 25.30   |
| 24.9  | 25.0  | 32.35 | 7.21 | 25.31   |
| 29.8  | 30.0  | 32.38 | 7.23 | 25.32   |
| 34.7  | 34.9  | 32.41 | 7.28 | 25.34   |
| 39.7  | 40.0  | 32.46 | 7.35 | 25.37   |
| 44.7  | 45.0  | 32.46 | 7.37 | 25.37   |
| 49.7  | 50.0  | 32.48 | 7.39 | 25.38   |
| 59.7  | 60.0  | 32.63 | 7.60 | 25.48   |
| 69.6  | 70.0  | 32.70 | 7.61 | 25.53   |
| 80.5  | 80.9  | 33.12 | 7.98 | 25.80   |
| 90.4  | 91.0  | 33.20 | 7.89 | 25.88   |
| 100.3 | 101.0 | 33.39 | 7.96 | 26.02   |
| 110.2 | 110.9 | 33.51 | 7.85 | 26.13   |
| 120.1 | 120.9 | 33.88 | 7.44 | 26.48   |
| 130.2 | 131.1 | 33.93 | 7.24 | 26.54   |
| 134.1 | 134.9 | 33.93 | 7.23 | 26.55   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 53.20

DATE 31/ 1/79

TIME (PST) 2313

TAPE: U00454 -028

LONG W 127 41.40

PASS NO. 85

STN: 216

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.1   | 2.1   | 32.35 | 7.06 | 25.32   |
| 5.0   | 5.0   | 32.36 | 7.07 | 25.33   |
| 9.9   | 10.0  | 32.35 | 7.07 | 25.32   |
| 14.9  | 15.0  | 32.34 | 7.07 | 25.32   |
| 19.9  | 20.0  | 32.35 | 7.07 | 25.32   |
| 24.9  | 25.0  | 32.35 | 7.09 | 25.32   |
| 29.8  | 30.0  | 32.35 | 7.09 | 25.32   |
| 34.7  | 34.9  | 32.37 | 7.15 | 25.33   |
| 39.6  | 39.8  | 32.46 | 7.39 | 25.37   |
| 44.7  | 45.0  | 32.63 | 7.56 | 25.48   |
| 49.7  | 50.0  | 32.68 | 7.60 | 25.51   |
| 59.7  | 60.0  | 33.09 | 7.92 | 25.79   |
| 69.5  | 70.0  | 33.29 | 7.94 | 25.94   |
| 79.7  | 80.2  | 33.48 | 7.65 | 26.14   |
| 90.4  | 91.0  | 33.54 | 7.59 | 26.19   |
| 100.4 | 101.0 | 33.59 | 7.60 | 26.22   |
| 110.3 | 111.0 | 33.71 | 7.53 | 26.33   |
| 120.3 | 121.0 | 33.78 | 7.37 | 26.41   |
| 130.1 | 131.0 | 33.82 | 7.25 | 26.46   |
| 140.1 | 141.0 | 33.94 | 7.31 | 26.54   |
| 150.1 | 151.1 | 33.94 | 7.16 | 26.57   |
| 159.6 | 160.7 | 33.96 | 7.01 | 26.60   |
| 169.8 | 171.0 | 33.95 | 6.83 | 26.62   |
| 179.8 | 181.0 | 33.96 | 6.80 | 26.63   |
| 189.7 | 191.1 | 33.96 | 6.70 | 26.64   |
| 199.6 | 201.0 | 33.97 | 6.61 | 26.66   |
| 225.4 | 227.0 | 33.98 | 6.38 | 26.70   |
| 250.2 | 252.1 | 33.99 | 6.18 | 26.73   |
| 258.2 | 260.1 | 33.99 | 6.13 | 26.74   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 59.10  
 DATE 1/ 2/79  
 TIME (PST) 0005

TAPE: UOD454 -029  
 LONG W 127 48.40  
 PASS NO. 87  
 STN: 217

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .7    | .7    | 31.62 | 6.06 | 24.88   |
| 3.0   | 3.0   | 31.62 | 6.06 | 24.88   |
| 5.0   | 5.0   | 31.62 | 6.06 | 24.88   |
| 9.9   | 10.0  | 31.62 | 6.06 | 24.88   |
| 14.9  | 15.0  | 31.63 | 6.07 | 24.88   |
| 20.0  | 20.1  | 31.84 | 6.31 | 25.02   |
| 25.0  | 25.1  | 32.21 | 6.86 | 25.24   |
| 29.8  | 30.0  | 32.33 | 7.05 | 25.31   |
| 34.8  | 35.0  | 32.40 | 7.17 | 25.35   |
| 39.7  | 40.0  | 32.45 | 7.34 | 25.37   |
| 44.7  | 45.0  | 32.52 | 7.40 | 25.42   |
| 49.6  | 49.9  | 32.56 | 7.45 | 25.44   |
| 59.6  | 59.9  | 33.12 | 7.72 | 25.84   |
| 70.6  | 71.0  | 33.46 | 7.69 | 26.11   |
| 79.6  | 80.1  | 33.53 | 7.60 | 26.18   |
| 90.4  | 91.0  | 33.59 | 7.53 | 26.24   |
| 100.4 | 101.0 | 33.66 | 7.62 | 26.28   |
| 110.1 | 110.8 | 33.76 | 7.47 | 26.38   |
| 120.2 | 121.0 | 33.80 | 7.42 | 26.42   |
| 130.1 | 131.0 | 33.83 | 7.37 | 26.45   |
| 140.2 | 141.1 | 33.84 | 7.31 | 26.46   |
| 150.1 | 151.1 | 33.87 | 7.24 | 26.49   |
| 159.9 | 161.0 | 33.88 | 7.15 | 26.52   |
| 169.9 | 171.0 | 33.90 | 6.96 | 26.56   |
| 179.7 | 180.9 | 33.94 | 6.75 | 26.62   |
| 189.7 | 191.0 | 33.95 | 6.63 | 26.65   |
| 199.6 | 201.0 | 33.96 | 6.58 | 26.65   |
| 225.5 | 227.1 | 33.97 | 6.46 | 26.68   |
| 250.1 | 251.9 | 33.98 | 6.34 | 26.70   |
| 274.9 | 276.9 | 33.98 | 6.24 | 26.72   |
| 299.7 | 302.0 | 34.01 | 5.75 | 26.80   |
| 324.6 | 327.1 | 34.02 | 5.58 | 26.83   |
| 350.5 | 353.1 | 34.03 | 5.48 | 26.85   |
| 375.1 | 378.0 | 34.04 | 5.38 | 26.87   |
| 399.9 | 403.0 | 34.04 | 5.34 | 26.88   |
| 424.6 | 428.0 | 34.07 | 5.15 | 26.92   |
| 450.3 | 453.9 | 34.11 | 4.85 | 26.99   |
| 475.2 | 479.1 | 34.11 | 4.83 | 26.99   |
| 499.9 | 503.9 | 34.13 | 4.69 | 27.02   |
| 502.8 | 506.9 | 34.13 | 4.70 | 27.02   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 50 5.20

DATE 1/ 2/79

TIME (PST) 0121

TAPE: U00454 -030

LONG W 127 56.90

PASS NO. 89

STN: 218

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 31.55 | 5.87 | 24.85   |
| 1.9   | 1.9   | 31.55 | 5.86 | 24.85   |
| 4.9   | 4.9   | 31.55 | 5.85 | 24.85   |
| 10.0  | 10.1  | 31.55 | 5.87 | 24.84   |
| 15.0  | 15.1  | 31.74 | 6.17 | 24.96   |
| 19.9  | 20.0  | 31.75 | 6.19 | 24.96   |
| 24.7  | 24.9  | 31.90 | 6.56 | 25.04   |
| 29.7  | 29.9  | 31.94 | 6.60 | 25.06   |
| 34.8  | 35.0  | 31.95 | 6.63 | 25.07   |
| 39.7  | 40.0  | 31.96 | 6.63 | 25.08   |
| 44.8  | 45.1  | 31.97 | 6.64 | 25.08   |
| 49.8  | 50.0  | 32.05 | 6.75 | 25.13   |
| 59.6  | 59.9  | 32.37 | 7.13 | 25.33   |
| 69.6  | 70.0  | 32.83 | 7.39 | 25.66   |
| 79.5  | 79.9  | 33.58 | 7.37 | 26.25   |
| 85.4  | 85.9  | 33.61 | 7.37 | 26.28   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 50 1.00  
 DATE 1/ 2/79  
 TIME (PST) 0216

TAPE: U00454 -031  
 LONG W 128 6.00  
 PASS NO. 91  
 STN: 301

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 31.74 | 6.11 | 24.96   |
| 1.9   | 1.9   | 31.74 | 6.11 | 24.96   |
| 5.0   | 5.1   | 31.74 | 6.11 | 24.97   |
| 10.0  | 10.0  | 31.75 | 6.11 | 24.97   |
| 15.0  | 15.0  | 31.75 | 6.11 | 24.97   |
| 20.0  | 20.1  | 31.76 | 6.12 | 24.98   |
| 24.8  | 25.0  | 32.16 | 6.85 | 25.20   |
| 29.8  | 30.0  | 32.37 | 7.22 | 25.32   |
| 34.8  | 35.0  | 32.40 | 7.33 | 25.33   |
| 39.8  | 40.1  | 32.50 | 7.44 | 25.39   |
| 44.7  | 45.0  | 32.58 | 7.39 | 25.46   |
| 48.7  | 49.0  | 32.62 | 7.41 | 25.49   |
| 60.6  | 61.0  | 32.96 | 7.72 | 25.72   |
| 69.5  | 69.9  | 33.19 | 7.84 | 25.88   |
| 79.6  | 80.1  | 33.49 | 7.95 | 26.09   |
| 90.4  | 91.0  | 33.54 | 7.82 | 26.16   |
| 100.2 | 100.8 | 33.60 | 7.81 | 26.20   |
| 110.4 | 111.1 | 33.69 | 7.80 | 26.27   |
| 120.2 | 121.0 | 33.73 | 7.69 | 26.32   |
| 130.0 | 130.8 | 33.75 | 7.50 | 26.37   |
| 140.0 | 140.9 | 33.80 | 7.50 | 26.41   |
| 150.1 | 151.1 | 33.83 | 7.41 | 26.44   |
| 160.1 | 161.2 | 33.85 | 7.39 | 26.46   |
| 170.0 | 171.1 | 33.87 | 7.40 | 26.47   |
| 180.0 | 181.3 | 33.89 | 7.37 | 26.50   |
| 189.6 | 190.9 | 33.90 | 7.29 | 26.52   |
| 199.6 | 201.0 | 33.91 | 7.19 | 26.54   |
| 225.4 | 227.0 | 33.94 | 6.92 | 26.60   |
| 250.2 | 252.0 | 33.95 | 6.79 | 26.63   |
| 275.1 | 277.1 | 33.97 | 6.59 | 26.66   |
| 299.7 | 301.9 | 33.98 | 6.40 | 26.69   |
| 325.4 | 327.9 | 33.99 | 6.27 | 26.72   |
| 350.3 | 352.9 | 34.00 | 6.11 | 26.75   |
| 375.2 | 378.1 | 34.01 | 6.01 | 26.77   |
| 400.0 | 403.1 | 34.02 | 5.82 | 26.80   |
| 424.7 | 428.1 | 34.04 | 5.61 | 26.85   |
| 450.3 | 453.9 | 34.05 | 5.42 | 26.88   |
| 475.2 | 479.0 | 34.06 | 5.27 | 26.90   |
| 499.9 | 503.9 | 34.08 | 5.07 | 26.94   |
| 501.8 | 505.8 | 34.08 | 5.06 | 26.94   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 56.50

DATE 1/ 2/79

TIME (PST) 0324

TAPE: U00454 -032

LONG W 128 12.00

PASS NO. 93

STN: 302

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 32.19 | 6.70 | 25.25   |
| 2.1   | 2.1   | 32.19 | 6.70 | 25.25   |
| 5.0   | 5.0   | 32.19 | 6.70 | 25.25   |
| 10.0  | 10.0  | 32.19 | 6.71 | 25.25   |
| 14.9  | 15.0  | 32.20 | 6.71 | 25.25   |
| 19.9  | 20.0  | 32.21 | 6.74 | 25.26   |
| 24.9  | 25.0  | 32.26 | 6.92 | 25.27   |
| 29.8  | 29.9  | 32.47 | 7.26 | 25.40   |
| 34.8  | 35.0  | 32.67 | 7.44 | 25.53   |
| 39.9  | 40.2  | 32.81 | 7.52 | 25.62   |
| 44.8  | 45.0  | 32.94 | 7.68 | 25.70   |
| 49.7  | 50.0  | 33.13 | 7.82 | 25.84   |
| 59.5  | 59.9  | 33.41 | 7.84 | 26.05   |
| 69.8  | 70.2  | 33.55 | 7.77 | 26.17   |
| 79.5  | 80.0  | 33.69 | 7.61 | 26.30   |
| 90.4  | 91.0  | 33.77 | 7.50 | 26.38   |
| 100.4 | 101.0 | 33.80 | 7.48 | 26.41   |
| 110.3 | 111.0 | 33.81 | 7.42 | 26.43   |
| 120.2 | 121.0 | 33.83 | 7.39 | 26.45   |
| 130.1 | 131.0 | 33.86 | 7.38 | 26.47   |
| 140.1 | 141.0 | 33.87 | 7.32 | 26.49   |
| 150.0 | 151.0 | 33.89 | 7.25 | 26.51   |
| 159.9 | 161.0 | 33.91 | 7.21 | 26.53   |
| 169.8 | 171.0 | 33.91 | 7.18 | 26.54   |
| 179.8 | 181.1 | 33.93 | 7.13 | 26.56   |
| 189.6 | 190.9 | 33.93 | 7.11 | 26.56   |
| 199.5 | 200.9 | 33.93 | 7.07 | 26.57   |
| 225.6 | 227.2 | 33.95 | 6.96 | 26.60   |
| 250.2 | 252.1 | 33.96 | 6.83 | 26.63   |
| 275.0 | 277.0 | 33.98 | 6.70 | 26.65   |
| 299.9 | 302.1 | 33.99 | 6.51 | 26.69   |
| 325.4 | 327.9 | 34.00 | 6.36 | 26.72   |
| 350.3 | 353.0 | 34.01 | 6.21 | 26.75   |
| 375.1 | 378.0 | 34.01 | 6.00 | 26.77   |
| 399.9 | 403.0 | 34.02 | 5.76 | 26.81   |
| 424.4 | 427.7 | 34.03 | 5.65 | 26.83   |
| 450.5 | 454.1 | 34.05 | 5.46 | 26.87   |
| 475.3 | 479.1 | 34.07 | 5.32 | 26.90   |
| 499.9 | 504.0 | 34.08 | 5.16 | 26.93   |
| 503.0 | 507.1 | 34.08 | 5.15 | 26.93   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 47.00

DATE 1/ 2/79

TIME (PST) 0501

TAPE: U00454 -033

LONG W 128 28.00

PASS NO. 95

STN: 303

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .1    | .1    | 32.40 | 6.93 | 25.39   |
| 2.1   | 2.1   | 32.43 | 6.93 | 25.41   |
| 4.9   | 4.9   | 32.43 | 6.94 | 25.41   |
| 9.9   | 10.0  | 32.43 | 6.94 | 25.41   |
| 14.8  | 14.9  | 32.44 | 6.97 | 25.41   |
| 19.9  | 20.0  | 32.45 | 6.98 | 25.42   |
| 24.9  | 25.0  | 32.46 | 7.01 | 25.42   |
| 29.8  | 30.0  | 32.47 | 7.06 | 25.42   |
| 34.9  | 35.1  | 32.47 | 7.06 | 25.42   |
| 39.9  | 40.2  | 32.47 | 7.07 | 25.42   |
| 44.7  | 45.0  | 32.48 | 7.08 | 25.43   |
| 49.7  | 50.0  | 32.53 | 7.19 | 25.45   |
| 59.6  | 60.0  | 32.95 | 7.70 | 25.71   |
| 69.5  | 70.0  | 33.25 | 7.61 | 25.96   |
| 80.5  | 81.0  | 33.44 | 7.65 | 26.10   |
| 89.5  | 90.1  | 33.52 | 7.63 | 26.16   |
| 100.3 | 100.9 | 33.66 | 7.85 | 26.25   |
| 110.8 | 111.5 | 33.75 | 7.85 | 26.32   |
| 120.3 | 121.1 | 33.84 | 7.79 | 26.39   |
| 130.1 | 131.0 | 33.86 | 7.72 | 26.42   |
| 140.2 | 141.1 | 33.89 | 7.63 | 26.45   |
| 149.9 | 151.0 | 33.90 | 7.55 | 26.48   |
| 159.9 | 160.9 | 33.91 | 7.46 | 26.50   |
| 170.0 | 171.2 | 33.93 | 7.31 | 26.53   |
| 179.9 | 181.1 | 33.93 | 7.21 | 26.55   |
| 189.7 | 191.0 | 33.94 | 7.19 | 26.56   |
| 199.6 | 201.0 | 33.96 | 7.14 | 26.58   |
| 225.3 | 226.9 | 33.98 | 6.92 | 26.62   |
| 249.3 | 251.1 | 33.98 | 6.66 | 26.67   |
| 275.0 | 277.0 | 33.99 | 6.43 | 26.70   |
| 299.8 | 302.0 | 34.01 | 6.17 | 26.75   |
| 324.6 | 327.0 | 34.01 | 5.87 | 26.79   |
| 350.3 | 353.0 | 34.03 | 5.63 | 26.83   |
| 375.1 | 378.0 | 34.04 | 5.43 | 26.87   |
| 399.9 | 403.0 | 34.06 | 5.35 | 26.89   |
| 424.6 | 428.0 | 34.07 | 5.19 | 26.92   |
| 450.5 | 454.1 | 34.08 | 5.04 | 26.95   |
| 475.1 | 478.9 | 34.09 | 4.90 | 26.97   |
| 499.9 | 503.9 | 34.10 | 4.80 | 26.99   |
| 546.3 | 550.8 | 34.13 | 4.76 | 27.02   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 38.00

DATE 1/ 2/79

TIME (PST) 0627

TAPE: U00454 -034

LONG W 128 40.00

PASS NO. 97

STN: 304

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 32.49 | 7.27 | 25.41   |
| 2.0   | 2.0   | 32.49 | 7.27 | 25.41   |
| 5.0   | 5.0   | 32.49 | 7.28 | 25.41   |
| 9.9   | 10.0  | 32.49 | 7.28 | 25.41   |
| 15.0  | 15.1  | 32.49 | 7.28 | 25.41   |
| 19.8  | 19.9  | 32.49 | 7.28 | 25.41   |
| 24.8  | 25.0  | 32.49 | 7.27 | 25.41   |
| 30.2  | 30.3  | 32.49 | 7.28 | 25.41   |
| 34.7  | 34.9  | 32.49 | 7.29 | 25.41   |
| 39.8  | 40.0  | 32.49 | 7.30 | 25.41   |
| 44.7  | 45.0  | 32.49 | 7.30 | 25.41   |
| 49.6  | 49.9  | 32.49 | 7.30 | 25.41   |
| 59.8  | 60.1  | 32.49 | 7.30 | 25.40   |
| 69.6  | 70.0  | 32.82 | 7.56 | 25.63   |
| 80.3  | 80.8  | 33.25 | 7.78 | 25.93   |
| 90.4  | 90.9  | 33.39 | 7.51 | 26.08   |
| 100.3 | 101.0 | 33.51 | 7.51 | 26.18   |
| 110.1 | 110.8 | 33.65 | 7.57 | 26.28   |
| 120.3 | 121.1 | 33.66 | 7.36 | 26.32   |
| 130.0 | 130.9 | 33.69 | 7.27 | 26.36   |
| 140.1 | 141.1 | 33.78 | 7.26 | 26.42   |
| 150.0 | 151.0 | 33.84 | 7.25 | 26.47   |
| 159.8 | 160.9 | 33.86 | 7.17 | 26.50   |
| 169.7 | 170.9 | 33.89 | 7.05 | 26.54   |
| 179.9 | 181.1 | 33.91 | 6.95 | 26.57   |
| 189.6 | 190.9 | 33.92 | 6.87 | 26.59   |
| 199.6 | 201.0 | 33.93 | 6.77 | 26.61   |
| 225.4 | 227.0 | 33.95 | 6.61 | 26.65   |
| 250.1 | 251.9 | 33.95 | 6.30 | 26.69   |
| 275.0 | 277.0 | 33.96 | 6.06 | 26.72   |
| 299.7 | 301.9 | 33.99 | 5.87 | 26.77   |
| 324.6 | 327.0 | 33.96 | 5.49 | 26.80   |
| 350.3 | 355.0 | 33.98 | 5.32 | 26.83   |
| 375.1 | 378.0 | 33.99 | 5.11 | 26.86   |
| 400.0 | 403.1 | 33.99 | 4.97 | 26.88   |
| 424.7 | 428.0 | 34.02 | 4.87 | 26.91   |
| 450.2 | 453.8 | 34.03 | 4.73 | 26.94   |
| 475.2 | 479.1 | 34.05 | 4.69 | 26.96   |
| 499.9 | 504.0 | 34.09 | 4.80 | 26.98   |
| 541.4 | 545.9 | 34.09 | 4.38 | 27.03   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 21.00

DATE 1/ 2/79

TIME (PST) 0844

TAPE: U00454 -035

LONG W 128 19.00

PASS NO. 99

STN: 305

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .9    | 1.0   | 32.59 | 7.86 | 25.40   |
| 2.0   | 2.0   | 32.59 | 7.85 | 25.40   |
| 5.0   | 5.0   | 32.59 | 7.86 | 25.40   |
| 10.0  | 10.0  | 32.59 | 7.86 | 25.40   |
| 15.0  | 15.1  | 32.59 | 7.86 | 25.40   |
| 20.0  | 20.1  | 32.59 | 7.86 | 25.41   |
| 24.8  | 25.0  | 32.59 | 7.86 | 25.40   |
| 29.8  | 30.0  | 32.59 | 7.86 | 25.40   |
| 34.8  | 35.0  | 32.59 | 7.87 | 25.40   |
| 39.7  | 40.0  | 32.59 | 7.87 | 25.40   |
| 44.8  | 45.1  | 32.59 | 7.87 | 25.40   |
| 49.4  | 49.7  | 32.59 | 7.87 | 25.40   |
| 59.5  | 59.9  | 32.59 | 7.87 | 25.40   |
| 69.6  | 70.0  | 32.59 | 7.87 | 25.40   |
| 80.5  | 80.9  | 32.59 | 7.87 | 25.40   |
| 90.4  | 91.0  | 32.99 | 7.59 | 25.76   |
| 100.4 | 101.0 | 33.17 | 7.45 | 25.91   |
| 110.2 | 110.9 | 33.38 | 7.28 | 26.11   |
| 120.2 | 121.0 | 33.51 | 7.05 | 26.24   |
| 130.1 | 130.9 | 33.66 | 7.15 | 26.34   |
| 140.1 | 141.0 | 33.77 | 7.09 | 26.44   |
| 150.0 | 151.0 | 33.83 | 7.08 | 26.49   |
| 159.9 | 161.0 | 33.86 | 7.02 | 26.52   |
| 169.9 | 171.1 | 33.89 | 6.94 | 26.55   |
| 179.7 | 180.9 | 33.91 | 6.88 | 26.58   |
| 189.6 | 190.9 | 33.93 | 6.87 | 26.60   |
| 199.7 | 201.0 | 33.96 | 6.82 | 26.63   |
| 225.4 | 227.0 | 33.98 | 6.53 | 26.68   |
| 250.3 | 252.1 | 33.95 | 6.22 | 26.69   |
| 275.0 | 277.0 | 33.97 | 6.02 | 26.74   |
| 299.7 | 302.0 | 33.98 | 5.89 | 26.77   |
| 324.6 | 327.0 | 34.00 | 5.73 | 26.80   |
| 350.4 | 353.1 | 34.02 | 5.59 | 26.83   |
| 375.2 | 378.1 | 34.04 | 5.42 | 26.87   |
| 399.8 | 402.9 | 34.05 | 5.30 | 26.89   |
| 424.8 | 428.1 | 34.06 | 5.08 | 26.92   |
| 450.3 | 453.9 | 34.08 | 4.97 | 26.95   |
| 474.9 | 478.7 | 34.10 | 4.86 | 26.98   |
| 499.9 | 504.0 | 34.12 | 4.72 | 27.01   |
| 539.7 | 544.1 | 34.14 | 4.55 | 27.04   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 5.00

DATE 1/ 2/79

TIME (PST) 1100

TAPE: U00454 -036

LONG W 127 58.00

PASS NO.101

STN: 306

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 32.62 | 8.02 | 25.40   |
| 2.1   | 2.1   | 32.62 | 8.02 | 25.40   |
| 5.0   | 5.1   | 32.62 | 8.02 | 25.40   |
| 10.1  | 10.2  | 32.62 | 8.03 | 25.40   |
| 15.1  | 15.1  | 32.62 | 8.03 | 25.40   |
| 19.9  | 20.0  | 32.62 | 8.03 | 25.40   |
| 24.9  | 25.1  | 32.62 | 8.03 | 25.40   |
| 30.0  | 30.1  | 32.62 | 8.03 | 25.40   |
| 34.8  | 35.0  | 32.62 | 8.03 | 25.40   |
| 39.8  | 40.1  | 32.62 | 8.03 | 25.40   |
| 44.8  | 45.0  | 32.62 | 8.03 | 25.40   |
| 49.6  | 49.9  | 32.62 | 8.03 | 25.40   |
| 59.6  | 59.9  | 32.62 | 8.03 | 25.40   |
| 69.5  | 70.0  | 32.62 | 8.04 | 25.40   |
| 80.3  | 80.8  | 32.62 | 8.04 | 25.40   |
| 90.5  | 91.0  | 32.62 | 8.04 | 25.40   |
| 100.3 | 100.9 | 32.99 | 7.72 | 25.74   |
| 110.3 | 111.0 | 33.14 | 7.31 | 25.92   |
| 120.3 | 121.0 | 33.26 | 7.17 | 26.02   |
| 130.2 | 131.0 | 33.39 | 7.18 | 26.12   |
| 140.1 | 141.0 | 33.50 | 7.02 | 26.24   |
| 150.0 | 151.0 | 33.60 | 7.01 | 26.31   |
| 159.9 | 161.0 | 33.65 | 6.96 | 26.36   |
| 170.0 | 171.1 | 33.76 | 6.99 | 26.45   |
| 179.9 | 181.1 | 33.80 | 6.92 | 26.49   |
| 189.7 | 191.0 | 33.84 | 6.83 | 26.53   |
| 199.6 | 201.0 | 33.87 | 6.70 | 26.57   |
| 225.4 | 227.0 | 33.90 | 6.38 | 26.64   |
| 250.2 | 252.0 | 33.91 | 6.07 | 26.68   |
| 275.1 | 277.1 | 33.92 | 5.65 | 26.74   |
| 299.8 | 302.0 | 33.92 | 5.45 | 26.77   |
| 324.7 | 327.1 | 33.92 | 5.28 | 26.79   |
| 350.4 | 353.1 | 33.94 | 5.02 | 26.83   |
| 375.0 | 377.9 | 33.96 | 4.87 | 26.87   |
| 399.9 | 403.0 | 33.99 | 4.79 | 26.90   |
| 424.7 | 428.0 | 34.04 | 4.90 | 26.93   |
| 450.5 | 454.1 | 34.04 | 4.63 | 26.96   |
| 475.2 | 479.0 | 34.07 | 4.56 | 26.99   |
| 500.0 | 504.0 | 34.09 | 4.53 | 27.01   |
| 542.3 | 546.7 | 34.12 | 4.41 | 27.05   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 48.00  
 DATE 1/ 2/79  
 TIME (PST) 1258

TAPE: U00454 -037  
 LONG W 127 37.00  
 PASS NO.103  
 STN: 307

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 32.49 | 7.15 | 25.43   |
| 1.9   | 1.9   | 32.50 | 7.15 | 25.43   |
| 5.0   | 5.0   | 32.50 | 7.15 | 25.43   |
| 9.9   | 9.9   | 32.49 | 7.15 | 25.43   |
| 14.8  | 14.9  | 32.49 | 7.14 | 25.43   |
| 19.9  | 20.0  | 32.50 | 7.16 | 25.43   |
| 24.7  | 24.9  | 32.50 | 7.15 | 25.43   |
| 29.9  | 30.1  | 32.50 | 7.16 | 25.43   |
| 34.8  | 35.0  | 32.49 | 7.16 | 25.43   |
| 39.6  | 39.8  | 32.50 | 7.16 | 25.43   |
| 44.7  | 45.0  | 32.50 | 7.16 | 25.43   |
| 49.8  | 50.1  | 32.50 | 7.16 | 25.43   |
| 59.5  | 59.9  | 32.50 | 7.17 | 25.43   |
| 69.6  | 70.0  | 32.75 | 7.48 | 25.58   |
| 79.4  | 79.9  | 33.19 | 7.61 | 25.91   |
| 90.4  | 91.0  | 33.43 | 7.58 | 26.10   |
| 100.6 | 101.3 | 33.59 | 7.53 | 26.24   |
| 110.4 | 111.1 | 33.68 | 7.47 | 26.31   |
| 120.2 | 121.0 | 33.74 | 7.43 | 26.37   |
| 130.1 | 130.9 | 33.82 | 7.52 | 26.42   |
| 140.0 | 141.0 | 33.87 | 7.54 | 26.46   |
| 150.0 | 151.0 | 33.90 | 7.49 | 26.48   |
| 159.9 | 161.0 | 33.91 | 7.45 | 26.50   |
| 169.8 | 171.0 | 33.92 | 7.33 | 26.52   |
| 179.9 | 181.1 | 33.93 | 7.29 | 26.54   |
| 189.7 | 191.0 | 33.93 | 7.24 | 26.55   |
| 199.7 | 201.1 | 33.94 | 7.14 | 26.57   |
| 225.5 | 227.1 | 33.95 | 6.89 | 26.61   |
| 250.2 | 252.0 | 33.97 | 6.70 | 26.65   |
| 275.0 | 277.0 | 33.98 | 6.58 | 26.67   |
| 300.3 | 302.6 | 33.98 | 6.46 | 26.69   |
| 324.5 | 327.0 | 34.00 | 6.26 | 26.73   |
| 350.4 | 353.1 | 34.00 | 6.11 | 26.75   |
| 375.2 | 378.1 | 34.01 | 5.97 | 26.78   |
| 399.8 | 402.9 | 34.01 | 5.60 | 26.82   |
| 424.6 | 427.9 | 34.02 | 5.43 | 26.85   |
| 450.4 | 454.0 | 34.04 | 5.32 | 26.88   |
| 475.2 | 479.0 | 34.08 | 5.23 | 26.92   |
| 499.9 | 504.0 | 34.10 | 5.10 | 26.95   |
| 522.7 | 526.9 | 34.11 | 4.94 | 26.98   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 58.00

DATE 1/ 2/79

TIME (PST) 1453

TAPE: U00454 -038

LONG W 127 20.00

PASS NO.105

STN: 309

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .4    | .4    | 32.49 | 7.51 | 25.37   |
| 1.9   | 1.9   | 32.49 | 7.52 | 25.37   |
| 4.9   | 5.0   | 32.49 | 7.52 | 25.37   |
| 10.1  | 10.1  | 32.50 | 7.55 | 25.37   |
| 14.9  | 15.0  | 32.50 | 7.54 | 25.38   |
| 19.9  | 20.0  | 32.50 | 7.56 | 25.37   |
| 24.9  | 25.0  | 32.50 | 7.59 | 25.37   |
| 29.8  | 30.0  | 32.51 | 7.60 | 25.38   |
| 34.9  | 35.1  | 32.51 | 7.60 | 25.38   |
| 39.8  | 40.0  | 32.51 | 7.60 | 25.38   |
| 44.7  | 45.0  | 32.51 | 7.59 | 25.38   |
| 49.6  | 49.9  | 32.51 | 7.62 | 25.37   |
| 59.4  | 59.7  | 32.52 | 7.63 | 25.38   |
| 69.6  | 70.0  | 32.52 | 7.65 | 25.38   |
| 80.5  | 81.0  | 32.60 | 7.70 | 25.43   |
| 89.5  | 90.1  | 32.96 | 7.54 | 25.74   |
| 99.6  | 100.2 | 33.15 | 7.25 | 25.93   |
| 110.4 | 111.1 | 33.25 | 7.24 | 26.01   |
| 120.2 | 121.0 | 33.38 | 7.13 | 26.13   |
| 130.2 | 131.0 | 33.47 | 7.06 | 26.21   |
| 140.1 | 141.0 | 33.62 | 6.97 | 26.34   |
| 150.0 | 151.0 | 33.73 | 6.88 | 26.44   |
| 159.9 | 161.0 | 33.78 | 6.79 | 26.49   |
| 169.8 | 171.0 | 33.83 | 6.78 | 26.53   |
| 179.8 | 181.1 | 33.84 | 6.72 | 26.55   |
| 189.5 | 190.8 | 33.87 | 6.68 | 26.57   |
| 199.7 | 201.0 | 33.90 | 6.60 | 26.60   |
| 225.5 | 227.1 | 33.91 | 6.30 | 26.66   |
| 250.3 | 252.1 | 33.92 | 6.07 | 26.69   |
| 275.0 | 277.0 | 33.92 | 5.77 | 26.73   |
| 299.8 | 302.0 | 33.92 | 5.48 | 26.76   |
| 324.6 | 327.0 | 33.91 | 5.28 | 26.78   |
| 350.4 | 355.0 | 33.92 | 5.02 | 26.82   |
| 375.1 | 378.0 | 33.94 | 4.82 | 26.85   |
| 399.8 | 402.9 | 33.96 | 4.82 | 26.88   |
| 424.4 | 427.7 | 34.00 | 4.71 | 26.91   |
| 449.6 | 453.1 | 34.01 | 4.57 | 26.94   |
| 475.2 | 479.0 | 34.04 | 4.51 | 26.97   |
| 499.9 | 503.9 | 34.07 | 4.51 | 26.99   |
| 513.5 | 517.7 | 34.08 | 4.49 | 27.00   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 49 6.00  
 DATE 1/ 2/79  
 TIME (PST) 1620

TAPE: U00454 -039  
 LONG W 127 8.00  
 PASS NO.107  
 STN: 311

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.0   | 1.0   | 32.21 | 7.06 | 25.22   |
| 2.0   | 2.0   | 32.21 | 7.06 | 25.21   |
| 5.0   | 5.1   | 32.21 | 7.04 | 25.21   |
| 9.9   | 10.0  | 32.21 | 7.02 | 25.22   |
| 14.9  | 15.0  | 32.22 | 7.03 | 25.22   |
| 20.0  | 20.1  | 32.22 | 7.03 | 25.23   |
| 24.8  | 25.0  | 32.23 | 7.04 | 25.23   |
| 29.7  | 29.9  | 32.23 | 7.03 | 25.23   |
| 35.0  | 35.2  | 32.23 | 7.03 | 25.24   |
| 39.8  | 40.0  | 32.25 | 7.05 | 25.25   |
| 44.8  | 45.0  | 32.40 | 7.59 | 25.29   |
| 49.8  | 50.1  | 32.46 | 7.63 | 25.33   |
| 59.6  | 59.9  | 32.71 | 7.71 | 25.52   |
| 69.7  | 70.1  | 33.15 | 7.94 | 25.83   |
| 79.5  | 80.0  | 33.43 | 8.22 | 26.01   |
| 90.5  | 91.0  | 33.54 | 8.08 | 26.12   |
| 100.3 | 101.0 | 33.67 | 7.99 | 26.23   |
| 110.4 | 111.1 | 33.73 | 7.91 | 26.29   |
| 120.3 | 121.0 | 33.80 | 7.78 | 26.36   |
| 130.2 | 131.0 | 33.84 | 7.71 | 26.41   |
| 140.1 | 141.0 | 33.86 | 7.62 | 26.44   |
| 150.1 | 151.1 | 33.88 | 7.51 | 26.47   |
| 160.0 | 161.0 | 33.90 | 7.47 | 26.49   |
| 169.9 | 171.0 | 33.93 | 7.39 | 26.53   |
| 179.7 | 180.9 | 33.95 | 7.29 | 26.55   |
| 189.7 | 191.0 | 33.95 | 7.25 | 26.56   |
| 199.6 | 201.0 | 33.96 | 7.18 | 26.57   |
| 225.4 | 227.0 | 33.98 | 7.00 | 26.61   |
| 250.2 | 252.0 | 33.99 | 6.68 | 26.67   |
| 274.9 | 276.9 | 33.98 | 6.32 | 26.71   |
| 299.6 | 301.8 | 33.95 | 5.91 | 26.73   |
| 325.5 | 327.9 | 33.96 | 5.70 | 26.77   |
| 350.4 | 353.0 | 33.99 | 5.61 | 26.80   |
| 375.1 | 378.0 | 33.95 | 5.05 | 26.84   |
| 399.9 | 403.0 | 33.96 | 4.96 | 26.86   |
| 424.7 | 428.0 | 34.00 | 5.05 | 26.88   |
| 450.5 | 454.1 | 34.07 | 5.25 | 26.91   |
| 475.1 | 479.0 | 34.09 | 5.17 | 26.94   |
| 500.0 | 504.0 | 34.10 | 5.03 | 26.96   |
| 550.4 | 554.9 | 34.13 | 4.79 | 27.01   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 49 14.00

DATE 1/ 2/79

TIME (PST) 1744

TAPE: U00454 -040

LONG W 126 55.00

PASS NO.109

STN: 313

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 32.19 | 7.06 | 25.20   |
| 2.0   | 2.0   | 32.21 | 7.06 | 25.22   |
| 5.0   | 5.0   | 32.21 | 7.05 | 25.21   |
| 9.9   | 10.0  | 32.21 | 7.09 | 25.21   |
| 15.0  | 15.1  | 32.21 | 7.08 | 25.21   |
| 19.8  | 20.0  | 32.21 | 7.10 | 25.21   |
| 24.9  | 25.0  | 32.21 | 7.10 | 25.21   |
| 29.8  | 29.9  | 32.21 | 7.08 | 25.21   |
| 34.8  | 35.0  | 32.22 | 7.09 | 25.22   |
| 39.7  | 40.0  | 32.23 | 7.12 | 25.23   |
| 44.6  | 44.9  | 32.39 | 7.38 | 25.32   |
| 49.6  | 49.9  | 32.63 | 7.72 | 25.46   |
| 59.6  | 60.0  | 32.78 | 7.62 | 25.58   |
| 69.5  | 70.0  | 33.24 | 8.09 | 25.88   |
| 80.5  | 81.0  | 33.41 | 8.06 | 26.02   |
| 90.4  | 91.0  | 33.54 | 7.95 | 26.13   |
| 100.4 | 101.1 | 33.65 | 7.88 | 26.23   |
| 110.4 | 111.1 | 33.75 | 7.75 | 26.33   |
| 120.3 | 121.0 | 33.76 | 7.74 | 26.34   |
| 130.1 | 131.0 | 33.84 | 7.64 | 26.42   |
| 140.2 | 141.1 | 33.87 | 7.58 | 26.45   |
| 150.1 | 151.1 | 33.89 | 7.49 | 26.48   |
| 159.8 | 160.9 | 33.90 | 7.45 | 26.49   |
| 163.7 | 164.8 | 33.90 | 7.45 | 26.49   |

COASTAL ZONE OCEANOGRAPHY  
CRUISE NO: 01 CODE  
LAT N 49 20.00  
DATE 1/ 2/79  
TIME (PST) 1841

TAPE: U00454 -041  
LONG W 126 46.00  
PASS NO.111  
STN: 315

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 31.94 | 6.46 | 25.08   |
| 2.0   | 2.0   | 31.95 | 6.46 | 25.08   |
| 5.0   | 5.0   | 31.96 | 6.46 | 25.10   |
| 10.0  | 10.0  | 31.93 | 6.47 | 25.07   |
| 14.9  | 15.0  | 31.96 | 6.50 | 25.09   |
| 20.0  | 20.1  | 32.00 | 6.70 | 25.10   |
| 24.8  | 25.0  | 32.01 | 6.70 | 25.11   |
| 29.8  | 30.0  | 32.21 | 7.16 | 25.20   |
| 34.8  | 35.0  | 32.24 | 7.27 | 25.21   |
| 39.7  | 40.0  | 32.34 | 7.43 | 25.27   |
| 44.7  | 45.0  | 32.37 | 7.48 | 25.29   |
| 49.7  | 50.0  | 32.40 | 7.53 | 25.30   |
| 59.7  | 60.1  | 32.47 | 7.55 | 25.36   |
| 69.7  | 70.1  | 32.53 | 7.58 | 25.40   |
| 80.5  | 80.9  | 32.79 | 7.76 | 25.57   |
| 90.5  | 91.0  | 32.95 | 7.65 | 25.72   |
| 100.3 | 100.9 | 33.29 | 7.60 | 25.99   |
| 105.9 | 106.6 | 33.41 | 7.60 | 26.08   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 8.50

DATE 3/ 2/79

TIME (PST) 1834

TAPE: U00454 -068

LONG W 126 .00

PASS NO.205

STN: 111

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .1    | .1    | 32.16 | 7.41 | 25.13   |
| 2.0   | 2.0   | 32.17 | 7.39 | 25.14   |
| 4.9   | 4.9   | 32.17 | 7.48 | 25.13   |
| 9.9   | 9.9   | 32.26 | 7.56 | 25.19   |
| 14.9  | 15.0  | 32.44 | 7.97 | 25.27   |
| 19.8  | 20.0  | 32.55 | 8.12 | 25.33   |
| 24.9  | 25.1  | 32.54 | 7.89 | 25.36   |
| 29.8  | 30.0  | 32.55 | 7.88 | 25.37   |
| 34.8  | 35.0  | 32.57 | 7.90 | 25.38   |
| 39.8  | 40.1  | 32.57 | 7.90 | 25.38   |
| 44.7  | 45.0  | 32.60 | 7.95 | 25.39   |
| 49.6  | 49.9  | 32.69 | 8.09 | 25.45   |
| 59.6  | 60.0  | 33.12 | 8.25 | 25.76   |
| 69.6  | 70.1  | 33.36 | 8.30 | 25.94   |
| 79.5  | 80.0  | 33.49 | 8.16 | 26.07   |
| 90.4  | 91.0  | 33.58 | 8.00 | 26.16   |
| 100.4 | 101.0 | 33.65 | 7.92 | 26.23   |
| 110.3 | 111.0 | 33.73 | 7.77 | 26.31   |
| 120.3 | 121.1 | 33.80 | 7.63 | 26.38   |
| 130.2 | 131.0 | 33.87 | 7.63 | 26.44   |
| 140.1 | 141.0 | 33.90 | 7.57 | 26.47   |
| 150.0 | 151.0 | 33.91 | 7.32 | 26.52   |
| 159.9 | 161.0 | 33.94 | 7.31 | 26.54   |
| 169.9 | 171.0 | 33.96 | 7.27 | 26.57   |
| 179.8 | 181.0 | 33.97 | 7.23 | 26.58   |
| 189.8 | 191.1 | 34.00 | 7.14 | 26.62   |
| 199.6 | 201.0 | 33.99 | 6.95 | 26.63   |
| 225.4 | 227.0 | 34.01 | 6.74 | 26.68   |
| 250.2 | 252.0 | 34.02 | 6.61 | 26.70   |
| 275.0 | 277.0 | 34.04 | 6.46 | 26.74   |
| 299.8 | 302.1 | 34.05 | 6.30 | 26.77   |
| 324.6 | 327.0 | 34.06 | 6.15 | 26.79   |
| 350.3 | 353.0 | 34.08 | 5.90 | 26.84   |
| 375.1 | 378.0 | 34.02 | 5.39 | 26.86   |
| 399.9 | 403.1 | 34.02 | 5.12 | 26.89   |
| 424.7 | 428.0 | 34.09 | 5.24 | 26.93   |
| 450.4 | 454.0 | 34.12 | 5.23 | 26.95   |
| 475.1 | 479.0 | 34.13 | 5.09 | 26.98   |
| 500.0 | 504.0 | 34.13 | 4.91 | 27.00   |
| 532.3 | 536.7 | 34.16 | 4.79 | 27.03   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 10.60  
 DATE 3/ 2/79  
 TIME (PST) 1947

TAPE: U00454 -069  
 LONG W 125 56.20  
 PASS NO.208  
 STN: 110

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .2    | .2    | 32.05 | 7.08 | 25.09   |        |
| 2.0   | 2.0   | 32.06 | 7.09 | 25.09   |        |
| 4.9   | 5.0   | 32.05 | 7.09 | 25.09   |        |
| 9.9   | 10.0  | 32.06 | 7.07 | 25.10   |        |
| 15.0  | 15.1  | 32.09 | 6.93 | 25.14   |        |
| 19.9  | 20.0  | 32.26 | 7.49 | 25.20   |        |
| 24.8  | 25.0  | 32.35 | 7.31 | 25.29   | 6.50   |
| 29.7  | 29.9  | 32.52 | 8.04 | 25.32   |        |
| 34.9  | 35.1  | 32.62 | 8.23 | 25.38   |        |
| 39.7  | 39.9  | 32.63 | 8.15 | 25.39   |        |
| 44.8  | 45.1  | 32.66 | 8.05 | 25.43   |        |
| 49.5  | 49.8  | 32.68 | 8.00 | 25.45   | 6.40   |
| 59.7  | 60.0  | 32.78 | 8.10 | 25.52   |        |
| 69.6  | 70.1  | 33.04 | 8.23 | 25.70   |        |
| 74.6  | 75.0  | 33.15 | 8.25 | 25.79   | 4.19   |
| 79.7  | 80.2  | 33.27 | 8.24 | 25.89   |        |
| 89.5  | 90.0  | 33.44 | 8.10 | 26.03   |        |
| 100.4 | 101.0 | 33.62 | 8.07 | 26.18   | 3.73   |
| 110.3 | 111.0 | 33.73 | 8.01 | 26.28   |        |
| 120.2 | 121.0 | 33.77 | 7.70 | 26.35   |        |
| 125.1 | 125.9 | 33.79 | 7.64 | 26.38   | 3.15   |
| 130.2 | 131.0 | 33.82 | 7.61 | 26.40   |        |
| 140.1 | 141.0 | 33.86 | 7.55 | 26.45   |        |
| 150.1 | 151.1 | 33.89 | 7.52 | 26.48   | 3.06   |
| 159.9 | 161.0 | 33.93 | 7.49 | 26.51   |        |
| 169.9 | 171.0 | 33.96 | 7.39 | 26.55   |        |
| 179.8 | 181.0 | 33.97 | 7.16 | 26.59   |        |
| 189.8 | 191.1 | 33.98 | 7.07 | 26.61   |        |
| 200.5 | 201.9 | 33.98 | 6.98 | 26.62   | 2.64   |
| 225.5 | 227.1 | 34.01 | 6.77 | 26.67   |        |
| 250.2 | 252.0 | 34.01 | 6.43 | 26.72   | 2.37   |
| 275.0 | 277.0 | 34.00 | 6.10 | 26.76   |        |
| 299.8 | 302.0 | 34.01 | 6.00 | 26.78   |        |
| 324.6 | 327.1 | 34.05 | 5.99 | 26.81   |        |
| 350.2 | 352.9 | 34.07 | 5.85 | 26.84   | 1.55   |
| 375.2 | 378.1 | 34.08 | 5.72 | 26.87   |        |
| 400.1 | 403.2 | 34.09 | 5.52 | 26.90   |        |
| 424.5 | 427.9 | 34.11 | 5.39 | 26.92   |        |
| 450.3 | 453.9 | 34.12 | 5.21 | 26.95   |        |
| 475.2 | 479.0 | 34.13 | 5.05 | 26.98   |        |
| 500.0 | 504.0 | 34.14 | 4.96 | 27.00   | .88    |
| 555.9 | 560.5 | 34.18 | 4.67 | 27.06   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 12.90

DATE 3/ 2/79

TIME (PST) 2033

TAPE: U00454 -070

LONG W 125 52.00

PASS NO. 209

STN: 109

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .3    | .3    | 32.09 | 7.00 | 25.13   |        |
| 2.1   | 2.1   | 32.10 | 7.01 | 25.13   |        |
| 4.9   | 5.0   | 32.13 | 6.98 | 25.16   |        |
| 9.9   | 10.0  | 32.14 | 6.96 | 25.18   |        |
| 14.9  | 15.0  | 32.18 | 7.11 | 25.19   |        |
| 19.9  | 20.0  | 32.41 | 7.96 | 25.25   |        |
| 24.8  | 24.9  | 32.56 | 8.32 | 25.32   | 6.79   |
| 29.9  | 30.0  | 32.61 | 8.30 | 25.35   |        |
| 34.8  | 35.0  | 32.62 | 8.21 | 25.37   |        |
| 39.8  | 40.0  | 32.65 | 7.70 | 25.47   |        |
| 44.7  | 44.9  | 32.79 | 8.22 | 25.51   |        |
| 49.8  | 50.1  | 32.90 | 8.14 | 25.61   | 5.91   |
| 59.6  | 60.0  | 33.04 | 8.27 | 25.69   |        |
| 69.6  | 70.0  | 33.28 | 8.29 | 25.88   |        |
| 74.6  | 75.1  | 33.37 | 8.23 | 25.96   | 4.65   |
| 80.5  | 81.0  | 33.43 | 8.18 | 26.02   |        |
| 90.4  | 91.0  | 33.56 | 8.06 | 26.13   |        |
| 100.3 | 100.9 | 33.61 | 8.09 | 26.17   | 3.55   |
| 110.3 | 111.0 | 33.67 | 8.00 | 26.23   |        |
| 120.2 | 121.0 | 33.76 | 7.88 | 26.32   |        |
| 125.2 | 126.0 | 33.78 | 7.87 | 26.33   | 3.18   |
| 130.1 | 131.0 | 33.80 | 7.85 | 26.36   |        |
| 140.1 | 141.0 | 33.86 | 7.82 | 26.41   |        |
| 150.0 | 151.0 | 33.90 | 7.70 | 26.45   | 2.60   |
| 160.0 | 161.0 | 33.90 | 7.65 | 26.46   |        |
| 169.8 | 171.0 | 33.91 | 7.53 | 26.49   |        |
| 179.8 | 181.0 | 33.95 | 7.36 | 26.54   |        |
| 189.7 | 191.0 | 33.97 | 7.24 | 26.57   |        |
| 199.7 | 201.1 | 33.97 | 7.17 | 26.59   | 2.60   |
| 225.4 | 227.0 | 34.00 | 6.98 | 26.64   |        |
| 250.1 | 251.9 | 34.02 | 6.74 | 26.68   | 2.18   |
| 275.1 | 277.1 | 34.03 | 6.53 | 26.72   |        |
| 299.7 | 302.0 | 34.04 | 6.38 | 26.75   |        |
| 325.5 | 327.9 | 34.06 | 6.09 | 26.80   |        |
| 350.3 | 353.0 | 34.07 | 5.82 | 26.84   | 1.45   |
| 375.1 | 378.0 | 34.07 | 5.61 | 26.87   |        |
| 399.9 | 403.0 | 34.09 | 5.39 | 26.91   |        |
| 424.6 | 427.9 | 34.10 | 5.18 | 26.94   |        |
| 450.4 | 454.0 | 34.10 | 4.77 | 26.99   |        |
| 475.1 | 478.9 | 34.13 | 4.66 | 27.03   |        |
| 499.9 | 504.0 | 34.17 | 4.76 | 27.05   |        |
| 522.5 | 526.8 | 34.18 | 4.72 | 27.06   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 01 CODE  
 LAT N 48 15.10  
 DATE 3/ 2/79  
 TIME (PST) 2145

TAPE: U00454 -071  
 LONG W 125 47.70  
 PASS NO.211  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 31.91 | 6.98 | 24.99   |
| 2.0   | 2.0   | 31.91 | 6.98 | 24.99   |
| 5.0   | 5.0   | 31.91 | 6.98 | 24.99   |
| 10.0  | 10.0  | 31.96 | 7.05 | 25.02   |
| 14.9  | 15.0  | 32.11 | 6.93 | 25.16   |
| 20.0  | 20.1  | 32.14 | 6.93 | 25.18   |
| 24.6  | 24.8  | 32.16 | 6.96 | 25.19   |
| 29.8  | 30.0  | 32.32 | 7.94 | 25.18   |
| 34.8  | 35.0  | 32.53 | 7.63 | 25.39   |
| 39.7  | 40.0  | 32.54 | 7.55 | 25.41   |
| 44.8  | 45.1  | 32.63 | 7.62 | 25.47   |
| 49.8  | 50.1  | 32.73 | 7.73 | 25.54   |
| 59.5  | 59.9  | 32.95 | 7.90 | 25.68   |
| 69.6  | 70.0  | 33.23 | 8.28 | 25.85   |
| 80.6  | 81.1  | 33.46 | 8.16 | 26.04   |
| 90.5  | 91.1  | 33.56 | 8.20 | 26.11   |
| 100.2 | 100.9 | 33.62 | 8.17 | 26.17   |
| 110.3 | 111.0 | 33.70 | 8.10 | 26.24   |
| 120.2 | 121.0 | 33.75 | 8.05 | 26.29   |
| 130.3 | 131.1 | 33.80 | 7.87 | 26.35   |
| 139.9 | 140.9 | 33.83 | 7.89 | 26.37   |
| 150.1 | 151.1 | 33.86 | 7.82 | 26.40   |
| 160.0 | 161.0 | 33.87 | 7.80 | 26.42   |
| 170.0 | 171.2 | 33.89 | 7.72 | 26.45   |
| 179.6 | 180.8 | 33.93 | 7.48 | 26.51   |
| 189.7 | 191.0 | 33.96 | 7.29 | 26.56   |
| 199.6 | 201.0 | 33.99 | 7.02 | 26.62   |
| 225.5 | 227.1 | 34.01 | 6.76 | 26.67   |
| 250.3 | 252.1 | 34.03 | 6.54 | 26.72   |
| 275.0 | 277.1 | 34.03 | 6.47 | 26.73   |
| 280.0 | 282.0 | 34.03 | 6.47 | 26.73   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 18.60

DATE 3/ 2/79

TIME (PST) 2225

TAPE: U00454 -072

LONG W 125 41.20

PASS NO.213

STN: 107

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .8    | .8    | 31.94 | 7.10 | 25.00   |        |
| 2.0   | 2.0   | 31.94 | 7.11 | 25.00   |        |
| 5.0   | 5.0   | 31.94 | 7.10 | 25.00   |        |
| 10.1  | 10.1  | 31.94 | 7.10 | 25.00   |        |
| 15.0  | 15.0  | 32.12 | 7.36 | 25.11   |        |
| 19.9  | 20.0  | 32.21 | 7.56 | 25.15   |        |
| 24.9  | 25.0  | 32.42 | 8.13 | 25.24   | 6.69   |
| 29.9  | 30.1  | 32.58 | 8.33 | 25.33   |        |
| 34.9  | 35.1  | 32.62 | 8.31 | 25.37   |        |
| 39.9  | 40.1  | 32.64 | 8.30 | 25.38   |        |
| 44.6  | 44.9  | 32.66 | 8.29 | 25.39   |        |
| 49.6  | 49.9  | 32.67 | 8.29 | 25.40   | 6.05   |
| 59.7  | 60.0  | 32.75 | 8.22 | 25.48   |        |
| 70.5  | 70.9  | 33.00 | 8.21 | 25.67   |        |
| 74.6  | 75.1  | 33.15 | 8.26 | 25.78   | 4.34   |
| 79.5  | 80.0  | 33.32 | 8.27 | 25.92   |        |
| 90.3  | 90.9  | 33.53 | 8.21 | 26.09   |        |
| 100.4 | 101.0 | 33.65 | 8.03 | 26.21   | 3.40   |
| 110.3 | 111.0 | 33.70 | 7.95 | 26.26   |        |
| 120.3 | 121.1 | 33.70 | 7.82 | 26.28   |        |
| 125.2 | 126.0 | 33.79 | 7.78 | 26.35   | 2.82   |
| 130.2 | 131.1 | 33.80 | 7.72 | 26.38   |        |
| 140.0 | 140.9 | 33.81 | 7.69 | 26.39   |        |

CRUISE NO: 01 CODE

LAT N 48 22.00

DATE 3/ 2/79

TIME (PST) 2317

TAPE: U00454 -073

LONG W 125 34.70

PASS NO.215

STN: 106

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 32.15 | 6.81 | 25.20   |
| 2.2   | 2.2   | 32.16 | 6.85 | 25.21   |
| 4.9   | 4.9   | 32.16 | 6.86 | 25.21   |
| 10.1  | 10.2  | 32.17 | 6.85 | 25.21   |
| 15.0  | 15.0  | 32.20 | 6.86 | 25.23   |
| 19.9  | 20.1  | 32.20 | 6.85 | 25.23   |
| 24.9  | 25.0  | 32.25 | 6.79 | 25.28   |
| 29.8  | 30.0  | 32.38 | 7.23 | 25.33   |
| 34.8  | 35.0  | 32.46 | 7.15 | 25.40   |
| 39.8  | 40.0  | 32.55 | 7.39 | 25.44   |
| 44.5  | 44.8  | 32.75 | 7.58 | 25.57   |
| 49.8  | 50.1  | 32.82 | 7.70 | 25.61   |
| 59.6  | 60.0  | 33.17 | 7.85 | 25.86   |
| 69.6  | 70.0  | 33.37 | 7.86 | 26.02   |
| 79.6  | 80.1  | 33.46 | 7.83 | 26.09   |
| 90.5  | 91.1  | 33.61 | 7.79 | 26.22   |
| 100.3 | 100.9 | 33.79 | 7.72 | 26.37   |
| 110.3 | 111.0 | 33.81 | 7.70 | 26.38   |
| 120.2 | 121.0 | 33.81 | 7.69 | 26.39   |
| 127.0 | 127.8 | 33.81 | 7.69 | 26.38   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 25.50

DATE 3/ 2/79

TIME (PST) 2356

TAPE: U00454 -074

LONG W 125 28.30

PASS NO.217

STN: 105

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .5    | .5    | 32.30 | 6.74 | 25.33   |        |
| 2.1   | 2.1   | 32.30 | 6.74 | 25.33   |        |
| 4.9   | 4.9   | 32.30 | 6.74 | 25.33   |        |
| 10.0  | 10.1  | 32.31 | 6.75 | 25.34   |        |
| 14.9  | 15.0  | 32.34 | 6.78 | 25.35   |        |
| 19.8  | 19.9  | 32.37 | 6.83 | 25.37   |        |
| 24.8  | 24.9  | 32.74 | 7.56 | 25.57   | 5.49   |
| 29.9  | 30.1  | 32.97 | 7.84 | 25.70   |        |
| 34.8  | 35.0  | 33.08 | 7.88 | 25.78   |        |
| 39.7  | 40.0  | 33.14 | 7.89 | 25.83   |        |
| 44.8  | 45.0  | 33.19 | 7.89 | 25.87   |        |
| 49.7  | 50.0  | 33.24 | 7.91 | 25.90   | 4.23   |
| 59.7  | 60.0  | 33.49 | 7.84 | 26.11   |        |
| 69.5  | 70.0  | 33.56 | 7.79 | 26.18   |        |
| 74.5  | 75.0  | 33.58 | 7.78 | 26.20   | 3.30   |
| 80.3  | 80.8  | 33.59 | 7.78 | 26.20   |        |
| 90.3  | 90.8  | 33.66 | 7.76 | 26.26   |        |
| 100.4 | 101.0 | 33.74 | 7.72 | 26.33   | 2.85   |
| 109.3 | 110.1 | 33.76 | 7.71 | 26.35   |        |
| 120.2 | 121.0 | 33.78 | 7.70 | 26.36   |        |
| 124.9 | 125.8 | 33.78 | 7.70 | 26.36   |        |

CRUISE NO: 01 CODE

LAT N 48 28.90

DATE 4/ 2/79

TIME (PST) 0056

TAPE: U00454 -075

LONG W 125 21.80

PASS NO.219

STN: 104

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .4    | .4    | 32.17 | 6.88 | 25.21   |
| 1.9   | 1.9   | 32.17 | 6.88 | 25.21   |
| 5.0   | 5.0   | 32.18 | 6.88 | 25.21   |
| 9.7   | 9.7   | 32.18 | 6.88 | 25.21   |
| 14.8  | 14.9  | 32.19 | 6.87 | 25.22   |
| 19.7  | 19.9  | 32.30 | 6.98 | 25.29   |
| 24.8  | 24.9  | 32.61 | 7.63 | 25.45   |
| 29.8  | 30.0  | 32.92 | 7.84 | 25.66   |
| 34.6  | 34.8  | 33.06 | 7.86 | 25.78   |
| 39.7  | 40.0  | 33.20 | 7.90 | 25.88   |
| 44.7  | 45.0  | 33.25 | 7.89 | 25.91   |
| 49.7  | 50.0  | 33.28 | 7.89 | 25.95   |
| 59.6  | 60.0  | 33.33 | 7.89 | 25.98   |
| 69.6  | 70.1  | 33.42 | 7.88 | 26.05   |
| 79.6  | 80.1  | 33.53 | 7.85 | 26.14   |
| 90.4  | 91.0  | 33.58 | 7.83 | 26.18   |
| 100.4 | 101.1 | 33.59 | 7.80 | 26.20   |
| 110.2 | 110.9 | 33.64 | 7.76 | 26.24   |
| 120.2 | 121.0 | 33.70 | 7.70 | 26.30   |
| 130.1 | 130.9 | 33.74 | 7.67 | 26.34   |
| 135.8 | 136.7 | 33.75 | 7.68 | 26.34   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 32.20

DATE 4/ 2/79

TIME (PST) 0140

TAPE: U00454 -076

LONG W 125 15.50

PASS NO.221

STN: 103

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .7    | .7    | 32.19 | 6.71 | 25.25   |        |
| 2.1   | 2.2   | 32.19 | 6.73 | 25.25   |        |
| 4.9   | 5.0   | 32.19 | 6.72 | 25.24   |        |
| 10.0  | 10.1  | 32.21 | 6.75 | 25.26   |        |
| 15.0  | 15.1  | 32.27 | 6.98 | 25.27   |        |
| 19.8  | 19.9  | 32.48 | 7.15 | 25.42   |        |
| 24.9  | 25.0  | 32.56 | 7.07 | 25.49   | 5.52   |
| 29.7  | 29.9  | 32.69 | 7.27 | 25.57   |        |
| 34.8  | 35.0  | 32.93 | 7.52 | 25.72   |        |
| 39.8  | 40.0  | 32.97 | 7.55 | 25.75   |        |
| 44.8  | 45.0  | 33.08 | 7.72 | 25.81   |        |
| 49.7  | 50.0  | 33.15 | 7.79 | 25.85   | 4.40   |
| 59.7  | 60.1  | 33.23 | 7.86 | 25.90   |        |
| 69.6  | 70.0  | 33.37 | 7.90 | 26.01   |        |
| 75.4  | 75.9  | 33.44 | 7.92 | 26.06   | 3.79   |
| 80.5  | 81.0  | 33.48 | 7.88 | 26.10   |        |
| 90.5  | 91.1  | 33.54 | 7.84 | 26.16   |        |
| 100.3 | 100.9 | 33.56 | 7.81 | 26.17   | 3.30   |
| 106.3 | 107.0 | 33.60 | 7.71 | 26.22   |        |

CRUISE NO: 01 CODE

LAT N 48 35.60

DATE 4/ 2/79

TIME (PST) 0300

TAPE: U00454 -077

LONG W 125 9.00

PASS NO.223

STN: 102

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .6    | .6    | 32.45 | 6.85 | 25.43   |
| 2.1   | 2.2   | 32.44 | 6.85 | 25.43   |
| 5.0   | 5.0   | 32.45 | 6.85 | 25.43   |
| 10.0  | 10.0  | 32.45 | 6.86 | 25.43   |
| 14.8  | 14.9  | 32.47 | 6.88 | 25.44   |
| 19.9  | 20.1  | 32.48 | 6.89 | 25.45   |
| 24.7  | 24.9  | 32.49 | 6.89 | 25.46   |
| 29.9  | 30.0  | 32.49 | 6.89 | 25.46   |
| 34.8  | 35.0  | 32.49 | 6.86 | 25.46   |
| 39.8  | 40.0  | 32.62 | 6.96 | 25.55   |
| 44.7  | 45.0  | 32.66 | 6.98 | 25.58   |
| 49.8  | 50.1  | 32.77 | 7.11 | 25.65   |
| 59.6  | 60.0  | 32.94 | 7.36 | 25.75   |
| 69.6  | 70.0  | 33.08 | 7.53 | 25.84   |
| 80.5  | 81.0  | 33.19 | 7.63 | 25.91   |
| 90.5  | 91.0  | 33.31 | 7.66 | 26.00   |
| 100.4 | 101.0 | 33.39 | 7.68 | 26.06   |
| 109.2 | 109.9 | 33.41 | 7.69 | 26.07   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 01 CODE

LAT N 48 39.00

DATE 4/ 2/79

TIME (PST) 0410

TAPE: U00454 -078

LONG W 125 2.50

PASS NO. 225

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .9    | .9    | 31.98 | 6.46 | 25.11   |        |
| 2.3   | 2.3   | 32.05 | 6.38 | 25.18   |        |
| 5.0   | 5.0   | 32.05 | 6.38 | 25.18   |        |
| 10.0  | 10.0  | 32.05 | 6.39 | 25.18   |        |
| 14.9  | 15.0  | 32.05 | 6.39 | 25.18   |        |
| 19.9  | 20.0  | 32.08 | 6.43 | 25.19   |        |
| 24.9  | 25.1  | 32.10 | 6.48 | 25.20   | 5.78   |
| 30.0  | 30.2  | 32.13 | 6.49 | 25.23   |        |
| 34.7  | 34.9  | 32.22 | 6.61 | 25.28   |        |
| 39.9  | 40.1  | 32.40 | 6.86 | 25.39   |        |
| 44.8  | 45.0  | 32.53 | 7.01 | 25.47   |        |
| 49.7  | 50.0  | 32.68 | 7.11 | 25.58   | 5.03   |
| 55.7  | 56.0  | 32.73 | 7.17 | 25.61   |        |

CRUISE NO: 02 CODE

LAT N 48 39.00

DATE 8/ 3/79

TIME (PST) 1727

TAPE: U00454 -079

LONG W 125 2.50

PASS NO. 31

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 29.02 | 8.75 | 22.48   |
| 2.0   | 2.0   | 29.43 | 8.53 | 22.83   |
| 5.0   | 5.0   | 29.57 | 8.54 | 22.94   |
| 10.0  | 10.0  | 29.85 | 8.47 | 23.17   |
| 15.0  | 15.0  | 29.86 | 8.43 | 23.18   |
| 19.9  | 20.0  | 30.01 | 8.32 | 23.31   |
| 24.9  | 25.0  | 30.45 | 8.24 | 23.67   |
| 29.9  | 30.0  | 30.95 | 7.40 | 24.18   |
| 34.9  | 35.0  | 31.29 | 7.13 | 24.48   |
| 39.8  | 40.0  | 31.38 | 7.13 | 24.55   |
| 44.8  | 45.0  | 31.65 | 8.00 | 24.64   |
| 49.8  | 50.0  | 31.65 | 8.03 | 24.64   |
| 60.2  | 60.5  | 31.70 | 8.08 | 24.67   |
| 60.7  | 61.0  | 31.70 | 8.08 | 24.67   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 02 CODE  
 LAT N 48 35.60  
 DATE 8/ 3/79  
 TIME (PST) 1804

TAPE: U00454 -080  
 LONG W 125 9.00  
 PASS NO. 33  
 STN: 102

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 28.73 | 8.70 | 22.26   |
| 2.0   | 2.0   | 28.73 | 8.72 | 22.25   |
| 5.0   | 5.0   | 29.02 | 8.64 | 22.49   |
| 10.0  | 10.0  | 30.35 | 8.63 | 23.54   |
| 14.9  | 15.0  | 31.43 | 8.63 | 24.38   |
| 19.9  | 20.0  | 31.83 | 8.57 | 24.70   |
| 24.9  | 25.0  | 32.13 | 8.44 | 24.96   |
| 29.9  | 30.0  | 32.36 | 8.49 | 25.13   |
| 34.8  | 35.0  | 32.48 | 8.42 | 25.23   |
| 39.8  | 40.0  | 32.52 | 8.49 | 25.25   |
| 44.8  | 45.0  | 32.54 | 8.49 | 25.27   |
| 50.2  | 50.5  | 32.56 | 8.49 | 25.29   |
| 60.2  | 60.5  | 32.60 | 8.50 | 25.32   |
| 70.1  | 70.5  | 32.59 | 8.50 | 25.31   |
| 80.1  | 80.5  | 32.60 | 8.50 | 25.32   |
| 90.0  | 90.5  | 32.72 | 8.44 | 25.42   |
| 98.4  | 99.0  | 32.78 | 8.38 | 25.48   |

CRUISE NO: 02 CODE  
 LAT N 48 32.20  
 DATE 8/ 3/79  
 TIME (PST) 1842

TAPE: U00454 -081  
 LONG W 125 15.50  
 PASS NO. 35  
 STN: 103

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 31.19 | 8.93 | 24.15   |
| 2.0   | 2.0   | 31.49 | 8.80 | 24.40   |
| 5.0   | 5.0   | 31.79 | 8.69 | 24.65   |
| 10.0  | 10.0  | 32.18 | 8.57 | 24.98   |
| 14.9  | 15.0  | 32.37 | 8.50 | 25.14   |
| 19.9  | 20.0  | 32.50 | 8.48 | 25.24   |
| 24.9  | 25.0  | 32.61 | 8.41 | 25.34   |
| 29.8  | 30.0  | 32.65 | 8.38 | 25.37   |
| 34.8  | 35.0  | 32.69 | 8.26 | 25.42   |
| 39.8  | 40.0  | 32.70 | 8.23 | 25.43   |
| 45.2  | 45.5  | 32.70 | 8.23 | 25.44   |
| 50.2  | 50.5  | 32.71 | 8.22 | 25.45   |
| 60.2  | 60.5  | 32.73 | 8.18 | 25.46   |
| 70.1  | 70.5  | 32.74 | 8.17 | 25.48   |
| 80.0  | 80.5  | 32.77 | 8.18 | 25.49   |
| 90.0  | 90.5  | 32.79 | 8.18 | 25.52   |
| 99.9  | 100.5 | 32.82 | 8.15 | 25.54   |
| 102.4 | 103.0 | 32.83 | 8.13 | 25.55   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 02 CODE

LAT N 48 28.90

DATE 8/ 3/79

TIME (PST) 1922

TAPE: U00454 -082

LONG W 125 21.80

PASS NO. 37

STN: 104

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.0   | 1.0   | 32.57 | 8.27 | 25.33   |
| 2.0   | 2.0   | 32.57 | 8.27 | 25.33   |
| 5.0   | 5.0   | 32.62 | 8.29 | 25.36   |
| 9.9   | 10.0  | 32.71 | 8.24 | 25.44   |
| 14.9  | 15.0  | 32.71 | 8.21 | 25.45   |
| 19.9  | 20.0  | 32.72 | 8.22 | 25.46   |
| 24.9  | 25.0  | 32.74 | 8.15 | 25.48   |
| 29.8  | 30.0  | 32.76 | 8.12 | 25.50   |
| 34.8  | 35.0  | 32.78 | 8.11 | 25.52   |
| 39.8  | 40.0  | 32.78 | 8.10 | 25.52   |
| 45.2  | 45.5  | 32.78 | 8.09 | 25.52   |
| 50.2  | 50.5  | 32.78 | 8.09 | 25.52   |
| 60.1  | 60.5  | 32.80 | 8.07 | 25.54   |
| 70.1  | 70.5  | 32.81 | 8.04 | 25.55   |
| 80.0  | 80.5  | 32.82 | 8.03 | 25.56   |
| 89.9  | 90.5  | 32.85 | 8.02 | 25.58   |
| 99.9  | 100.5 | 32.88 | 8.04 | 25.61   |
| 109.8 | 110.5 | 32.91 | 8.05 | 25.63   |
| 120.2 | 121.0 | 32.93 | 8.04 | 25.65   |
| 130.2 | 131.0 | 32.97 | 8.05 | 25.67   |
| 140.1 | 141.0 | 32.97 | 8.06 | 25.67   |
| 142.1 | 143.0 | 32.97 | 8.06 | 25.67   |

CRUISE NO: 02 CODE

LAT N 48 25.50

DATE 8/ 3/79

TIME (PST) 1959

TAPE: U00454 -083

LONG W 125 28.30

PASS NO. 39

STN: 105

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 32.22 | 8.34 | 25.04   |
| 2.0   | 2.0   | 32.22 | 8.35 | 25.04   |
| 5.0   | 5.0   | 32.22 | 8.35 | 25.04   |
| 9.9   | 10.0  | 32.26 | 8.23 | 25.09   |
| 14.9  | 15.0  | 32.46 | 8.18 | 25.25   |
| 19.9  | 20.0  | 32.60 | 8.23 | 25.36   |
| 24.9  | 25.0  | 32.64 | 8.21 | 25.39   |
| 29.8  | 30.0  | 32.66 | 8.20 | 25.41   |
| 34.8  | 35.0  | 32.68 | 8.19 | 25.43   |
| 39.8  | 40.0  | 32.71 | 8.14 | 25.46   |
| 45.2  | 45.5  | 32.72 | 8.15 | 25.46   |
| 50.2  | 50.5  | 32.73 | 8.14 | 25.47   |
| 60.1  | 60.5  | 32.74 | 8.03 | 25.50   |
| 70.1  | 70.5  | 32.75 | 8.05 | 25.51   |
| 80.0  | 80.5  | 32.81 | 8.08 | 25.54   |
| 90.0  | 90.5  | 32.81 | 8.09 | 25.54   |
| 99.9  | 100.5 | 32.82 | 8.09 | 25.55   |
| 109.8 | 110.5 | 32.85 | 8.08 | 25.57   |
| 119.8 | 120.5 | 32.87 | 8.07 | 25.60   |
| 127.2 | 128.0 | 32.96 | 8.13 | 25.65   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 02 CODE

LAT N 48 22.00

DATE 8/ 3/79

TIME (PST) 2040

TAPE: UDD454 -084

LONG W 125 34.70

PASS NO. 41

STN: 106

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 32.47 | 8.28 | 25.25   |
| 2.0   | 2.0   | 32.48 | 8.28 | 25.25   |
| 5.0   | 5.0   | 32.64 | 8.26 | 25.38   |
| 9.9   | 10.0  | 32.73 | 8.36 | 25.44   |
| 14.9  | 15.0  | 32.78 | 8.39 | 25.47   |
| 19.9  | 20.0  | 32.78 | 8.39 | 25.47   |
| 24.9  | 25.0  | 32.78 | 8.37 | 25.48   |
| 29.8  | 30.0  | 32.78 | 8.35 | 25.48   |
| 34.8  | 35.0  | 32.78 | 8.33 | 25.48   |
| 39.8  | 40.0  | 32.78 | 8.32 | 25.49   |
| 45.2  | 45.5  | 32.77 | 8.31 | 25.48   |
| 50.2  | 50.5  | 32.77 | 8.27 | 25.49   |
| 60.1  | 60.5  | 32.80 | 8.21 | 25.52   |
| 70.1  | 70.5  | 32.83 | 8.20 | 25.54   |
| 80.0  | 80.5  | 32.89 | 8.16 | 25.60   |
| 89.9  | 90.5  | 32.90 | 8.13 | 25.61   |
| 99.9  | 100.5 | 32.91 | 8.16 | 25.61   |
| 109.8 | 110.5 | 32.96 | 8.16 | 25.65   |
| 120.2 | 121.0 | 32.98 | 8.17 | 25.67   |
| 130.2 | 131.0 | 33.08 | 8.17 | 25.74   |
| 140.1 | 141.0 | 33.32 | 8.16 | 25.94   |
| 149.0 | 150.0 | 33.43 | 8.10 | 26.03   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 02 CODE  
 LAT N 48 18.60  
 DATE 8/ 3/79  
 TIME (PST) 2119

TAPE: U00454 -085  
 LONG W 125 41.20  
 PASS NO. 43  
 STN: 107

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 32.73 | 8.51 | 25.42   |
| 2.0   | 2.0   | 32.73 | 8.51 | 25.42   |
| 5.0   | 5.0   | 32.73 | 8.51 | 25.42   |
| 9.9   | 10.0  | 32.73 | 8.50 | 25.42   |
| 14.9  | 15.0  | 32.73 | 8.51 | 25.42   |
| 19.9  | 20.0  | 32.74 | 8.49 | 25.43   |
| 24.9  | 25.0  | 32.75 | 8.45 | 25.44   |
| 29.8  | 30.0  | 32.75 | 8.47 | 25.44   |
| 34.8  | 35.0  | 32.75 | 8.47 | 25.44   |
| 39.8  | 40.0  | 32.75 | 8.46 | 25.44   |
| 45.2  | 45.5  | 32.77 | 8.45 | 25.45   |
| 50.2  | 50.5  | 32.78 | 8.48 | 25.46   |
| 60.1  | 60.5  | 32.90 | 8.59 | 25.54   |
| 70.1  | 70.5  | 32.97 | 8.58 | 25.60   |
| 80.0  | 80.5  | 33.02 | 8.47 | 25.65   |
| 89.9  | 90.5  | 33.05 | 8.43 | 25.68   |
| 99.9  | 100.5 | 33.05 | 8.48 | 25.68   |
| 109.8 | 110.5 | 33.14 | 8.53 | 25.73   |
| 120.2 | 121.0 | 33.15 | 8.53 | 25.74   |
| 130.2 | 131.0 | 33.15 | 8.40 | 25.76   |
| 140.1 | 141.0 | 33.70 | 7.95 | 26.26   |
| 148.0 | 149.0 | 33.78 | 7.84 | 26.34   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 02 CODE

LAT N 48 15.10

DATE 8/ 3/79

TIME (PST) 2158

TAPE: U00454 -086

LONG W 125 47.70

PASS NO. 45

STN: 108

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 32.74 | 8.36 | 25.45   |
| 2.0   | 2.0   | 32.74 | 8.44 | 25.43   |
| 5.0   | 5.0   | 32.73 | 8.44 | 25.43   |
| 9.9   | 10.0  | 32.74 | 8.40 | 25.44   |
| 14.9  | 15.0  | 32.72 | 8.36 | 25.43   |
| 19.9  | 20.0  | 32.74 | 8.31 | 25.46   |
| 24.9  | 25.0  | 32.75 | 8.31 | 25.46   |
| 29.8  | 30.0  | 32.75 | 8.31 | 25.46   |
| 34.8  | 35.0  | 32.76 | 8.28 | 25.47   |
| 39.8  | 40.0  | 32.77 | 8.26 | 25.49   |
| 45.2  | 45.5  | 32.79 | 8.24 | 25.50   |
| 50.2  | 50.5  | 32.83 | 8.24 | 25.54   |
| 60.1  | 60.5  | 32.82 | 8.18 | 25.54   |
| 70.1  | 70.5  | 32.85 | 8.15 | 25.56   |
| 80.0  | 80.5  | 32.87 | 8.13 | 25.58   |
| 89.9  | 90.5  | 32.90 | 8.15 | 25.60   |
| 99.9  | 100.5 | 32.91 | 8.18 | 25.61   |
| 109.8 | 110.5 | 32.98 | 8.16 | 25.67   |
| 120.2 | 121.0 | 33.20 | 8.24 | 25.83   |
| 130.2 | 131.0 | 33.36 | 8.27 | 25.95   |
| 140.1 | 141.0 | 33.64 | 8.10 | 26.19   |
| 150.0 | 151.0 | 33.67 | 8.02 | 26.23   |
| 160.0 | 161.0 | 33.72 | 7.92 | 26.28   |
| 169.9 | 171.0 | 33.74 | 7.88 | 26.31   |
| 179.8 | 181.0 | 33.75 | 7.84 | 26.32   |
| 190.2 | 191.5 | 33.78 | 7.78 | 26.35   |
| 200.1 | 201.5 | 33.78 | 7.75 | 26.35   |
| 210.6 | 212.0 | 33.78 | 7.48 | 26.39   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 02 CODE

LAT N 48 12.90

DATE 8/ 3/79

TIME (PST) 2227

TAPE: U00454 -087

LONG W 125 52.00

PASS NO. 47

STN: 109

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 32.76 | 8.47 | 25.45   |
| 2.0   | 2.0   | 32.76 | 8.47 | 25.44   |
| 5.0   | 5.0   | 32.75 | 8.47 | 25.44   |
| 9.9   | 10.0  | 32.74 | 8.47 | 25.44   |
| 14.9  | 15.0  | 32.74 | 8.40 | 25.44   |
| 19.9  | 20.0  | 32.75 | 8.33 | 25.46   |
| 24.9  | 25.0  | 32.75 | 8.33 | 25.46   |
| 29.8  | 30.0  | 32.75 | 8.31 | 25.47   |
| 34.8  | 35.0  | 32.76 | 8.30 | 25.47   |
| 39.8  | 40.0  | 32.77 | 8.20 | 25.49   |
| 45.2  | 45.5  | 32.79 | 8.18 | 25.52   |
| 50.2  | 50.5  | 32.82 | 8.13 | 25.55   |
| 60.1  | 60.5  | 32.88 | 8.13 | 25.59   |
| 70.1  | 70.5  | 32.91 | 8.13 | 25.61   |
| 80.0  | 80.5  | 32.91 | 8.13 | 25.61   |
| 89.9  | 90.5  | 32.96 | 8.16 | 25.65   |
| 99.9  | 100.5 | 33.08 | 8.23 | 25.73   |
| 109.8 | 110.5 | 33.23 | 8.47 | 25.81   |
| 120.2 | 121.0 | 33.29 | 8.47 | 25.86   |
| 130.2 | 131.0 | 33.36 | 8.43 | 25.92   |
| 140.1 | 141.0 | 33.47 | 8.34 | 26.03   |
| 150.0 | 151.0 | 33.67 | 8.14 | 26.21   |
| 160.0 | 161.0 | 33.71 | 8.13 | 26.24   |
| 169.9 | 171.0 | 33.74 | 8.08 | 26.27   |
| 179.8 | 181.0 | 33.75 | 8.00 | 26.29   |
| 190.2 | 191.5 | 33.76 | 8.00 | 26.30   |
| 200.1 | 201.5 | 33.77 | 7.93 | 26.32   |
| 225.0 | 226.5 | 33.82 | 7.66 | 26.40   |
| 250.3 | 252.0 | 33.84 | 7.39 | 26.45   |
| 275.0 | 277.0 | 33.85 | 7.05 | 26.51   |
| 299.8 | 302.0 | 33.86 | 6.54 | 26.58   |
| 325.1 | 327.5 | 33.87 | 6.08 | 26.65   |
| 349.9 | 352.5 | 33.91 | 5.73 | 26.73   |
| 375.2 | 378.0 | 33.91 | 5.61 | 26.74   |
| 400.0 | 403.0 | 33.91 | 5.48 | 26.76   |
| 425.2 | 428.5 | 33.90 | 5.32 | 26.77   |
| 428.7 | 432.0 | 33.90 | 5.28 | 26.77   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 03 CODE

LAT N 48 39.00

DATE 19/ 4/79

TIME (PST) 1219

TAPE: U00454 -088

LONG W 125 2.50

PASS NO. 1

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .2    | .2    | 31.55 | 8.67 | 24.47   |
| 1.8   | 1.8   | 31.55 | 8.63 | 24.48   |
| 5.0   | 5.0   | 31.64 | 8.56 | 24.56   |
| 10.0  | 10.0  | 31.67 | 8.51 | 24.59   |
| 14.9  | 14.9  | 31.73 | 8.46 | 24.64   |
| 19.9  | 20.0  | 31.82 | 8.39 | 24.72   |
| 24.9  | 25.0  | 32.03 | 8.38 | 24.89   |
| 29.8  | 30.0  | 32.18 | 8.26 | 25.03   |
| 34.8  | 35.0  | 32.21 | 8.23 | 25.05   |
| 39.9  | 40.1  | 32.24 | 8.23 | 25.08   |
| 44.7  | 44.9  | 32.29 | 8.23 | 25.12   |
| 49.7  | 50.0  | 32.30 | 8.23 | 25.12   |
| 49.7  | 50.0  | 32.30 | 8.23 | 25.12   |

CRUISE NO: 03 CODE

LAT N 48 35.60

DATE 19/ 4/79

TIME (PST) 1256

TAPE: U00454 -089

LONG W 125 9.00

PASS NO. 3

STN: 102

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .9    | .9    | 32.05 | 8.60 | 24.87   |
| 2.0   | 2.0   | 32.04 | 8.60 | 24.87   |
| 5.0   | 5.0   | 32.05 | 8.50 | 24.88   |
| 10.0  | 10.0  | 32.09 | 8.40 | 24.93   |
| 14.9  | 15.0  | 32.10 | 8.39 | 24.95   |
| 20.0  | 20.1  | 32.15 | 8.34 | 24.99   |
| 24.7  | 24.9  | 32.23 | 8.27 | 25.06   |
| 29.8  | 29.9  | 32.30 | 8.22 | 25.13   |
| 34.7  | 34.9  | 32.38 | 8.15 | 25.20   |
| 39.8  | 40.0  | 32.42 | 8.16 | 25.23   |
| 44.7  | 45.0  | 32.51 | 8.15 | 25.30   |
| 49.7  | 50.0  | 32.58 | 8.17 | 25.35   |
| 59.6  | 60.0  | 32.58 | 8.17 | 25.35   |
| 69.6  | 70.0  | 32.58 | 8.17 | 25.35   |
| 80.4  | 80.9  | 32.61 | 8.12 | 25.38   |
| 90.4  | 90.9  | 32.73 | 8.06 | 25.48   |
| 100.4 | 101.0 | 33.06 | 8.00 | 25.75   |
| 110.3 | 110.9 | 33.44 | 7.84 | 26.07   |
| 110.3 | 110.9 | 33.44 | 7.84 | 26.07   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 03 CODE

LAT N 48 32.20

DATE 19/ 4/79

TIME (PST) 1342

TAPE: U00454 -090

LONG W 125 15.50

PASS NO. 5

STN: 103

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .1    | .1    | 32.22 | 8.61 | 25.01   |
| 2.0   | 2.0   | 32.22 | 8.59 | 25.00   |
| 4.9   | 5.0   | 32.22 | 8.60 | 25.00   |
| 10.0  | 10.0  | 32.24 | 8.47 | 25.04   |
| 14.9  | 14.9  | 32.30 | 8.27 | 25.12   |
| 19.8  | 19.9  | 32.43 | 8.09 | 25.24   |
| 24.8  | 25.0  | 32.50 | 8.05 | 25.30   |
| 29.8  | 29.9  | 32.60 | 8.04 | 25.38   |
| 34.8  | 35.0  | 32.74 | 8.04 | 25.49   |
| 39.7  | 40.0  | 32.86 | 8.01 | 25.59   |
| 44.8  | 45.1  | 33.01 | 8.00 | 25.71   |
| 49.7  | 49.9  | 33.03 | 8.00 | 25.73   |
| 59.7  | 60.1  | 33.13 | 7.98 | 25.81   |
| 69.7  | 70.1  | 33.22 | 7.95 | 25.89   |
| 79.5  | 80.0  | 33.29 | 7.93 | 25.94   |
| 89.6  | 90.1  | 33.45 | 7.84 | 26.08   |
| 100.3 | 101.0 | 33.52 | 7.79 | 26.14   |
| 110.3 | 111.0 | 33.60 | 7.71 | 26.21   |
| 112.1 | 112.9 | 33.60 | 7.71 | 26.22   |

CRUISE NO: 03 CODE

LAT N 48 28.90

DATE 19/ 4/79

TIME (PST) 1424

TAPE: U00454 -091

LONG W 125 21.80

PASS NO. 7

STN: 104

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 31.88 | 8.80 | 24.71   |
| 2.0   | 2.0   | 31.88 | 8.80 | 24.71   |
| 4.9   | 4.9   | 31.91 | 8.75 | 24.74   |
| 10.0  | 10.1  | 32.27 | 8.30 | 25.09   |
| 15.0  | 15.1  | 32.32 | 8.25 | 25.14   |
| 19.8  | 19.9  | 32.34 | 8.22 | 25.16   |
| 24.8  | 24.9  | 32.50 | 8.06 | 25.30   |
| 29.8  | 30.0  | 32.59 | 7.95 | 25.39   |
| 34.9  | 35.1  | 32.69 | 8.01 | 25.46   |
| 39.7  | 39.9  | 32.81 | 8.05 | 25.55   |
| 44.8  | 45.0  | 32.89 | 8.05 | 25.61   |
| 49.7  | 50.0  | 32.97 | 8.00 | 25.68   |
| 59.6  | 60.0  | 33.12 | 7.97 | 25.81   |
| 69.7  | 70.1  | 33.36 | 8.14 | 25.97   |
| 80.5  | 81.0  | 33.48 | 8.09 | 26.07   |
| 90.4  | 90.9  | 33.58 | 8.01 | 26.16   |
| 100.3 | 101.0 | 33.64 | 7.96 | 26.22   |
| 110.4 | 111.1 | 33.69 | 7.90 | 26.26   |
| 120.2 | 121.0 | 33.70 | 7.88 | 26.27   |
| 130.0 | 130.8 | 33.72 | 7.84 | 26.29   |
| 140.1 | 141.0 | 33.74 | 7.81 | 26.31   |
| 149.1 | 150.1 | 33.75 | 7.78 | 26.32   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 03 CODE  
 LAT N 48 25.50  
 DATE 19/ 4/79  
 TIME (PST) 1510

TAPE: U00454 -092  
 LONG W 125 28.30  
 PASS NO. 9  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .5    | .5    | 31.88 | 8.86 | 24.70   |        |
| 1.9   | 2.0   | 31.88 | 8.86 | 24.70   |        |
| 4.7   | 4.7   | 31.89 | 8.84 | 24.71   |        |
| 10.2  | 10.3  | 31.91 | 8.78 | 24.74   |        |
| 14.9  | 15.0  | 32.21 | 8.55 | 25.00   |        |
| 19.8  | 19.9  | 32.28 | 8.40 | 25.08   |        |
| 24.9  | 25.0  | 32.37 | 8.17 | 25.19   |        |
| 29.9  | 30.0  | 32.44 | 8.08 | 25.25   |        |
| 34.8  | 35.0  | 32.52 | 8.11 | 25.32   |        |
| 39.9  | 40.1  | 32.66 | 8.09 | 25.42   |        |
| 44.7  | 45.0  | 32.70 | 8.07 | 25.46   |        |
| 49.6  | 49.9  | 32.75 | 8.06 | 25.50   | 5.06   |
| 59.7  | 60.1  | 32.81 | 8.04 | 25.55   |        |
| 69.7  | 70.1  | 32.98 | 7.98 | 25.69   |        |
| 74.7  | 75.1  | 33.15 | 8.01 | 25.82   | 4.32   |
| 79.5  | 80.0  | 33.28 | 8.06 | 25.92   |        |
| 90.5  | 91.0  | 33.56 | 8.05 | 26.14   |        |
| 100.3 | 100.9 | 33.62 | 7.99 | 26.19   | 3.18   |
| 110.3 | 111.0 | 33.66 | 7.93 | 26.23   |        |
| 120.2 | 121.0 | 33.73 | 7.81 | 26.30   |        |
| 125.2 | 126.0 | 33.76 | 7.76 | 26.33   | 2.63   |
| 130.2 | 131.1 | 33.77 | 7.74 | 26.34   |        |
| 140.0 | 140.9 | 33.78 | 7.73 | 26.35   |        |
| 150.0 | 151.0 | 33.79 | 7.70 | 26.37   |        |
| 150.0 | 151.0 | 33.79 | 7.70 | 26.37   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 03 CODE

LAT N 48 22.00

DATE 19/ 4/79

TIME (PST) 1604

TAPE: U00454 -093

LONG W 125 34.70

PASS NO. 11

STN: 106

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .4    | .4    | 32.17 | 8.91 | 24.92   |
| 2.0   | 2.0   | 32.17 | 8.91 | 24.92   |
| 4.9   | 4.9   | 32.18 | 8.90 | 24.93   |
| 9.9   | 10.0  | 32.20 | 8.90 | 24.95   |
| 14.9  | 15.0  | 32.48 | 8.93 | 25.16   |
| 19.9  | 20.0  | 32.60 | 8.94 | 25.25   |
| 25.0  | 25.1  | 32.61 | 8.88 | 25.27   |
| 29.7  | 29.9  | 32.62 | 8.68 | 25.30   |
| 34.7  | 34.9  | 32.65 | 8.58 | 25.34   |
| 39.7  | 39.9  | 32.73 | 8.56 | 25.41   |
| 44.7  | 44.9  | 32.75 | 8.53 | 25.43   |
| 49.6  | 49.9  | 32.76 | 8.50 | 25.44   |
| 59.7  | 60.0  | 32.84 | 8.34 | 25.53   |
| 69.6  | 70.0  | 33.02 | 8.30 | 25.67   |
| 79.4  | 79.9  | 33.18 | 8.33 | 25.80   |
| 90.0  | 90.6  | 33.27 | 8.24 | 25.88   |
| 100.4 | 101.0 | 33.33 | 8.17 | 25.94   |
| 110.3 | 111.0 | 33.75 | 7.67 | 26.34   |
| 120.2 | 120.9 | 33.86 | 7.38 | 26.47   |
| 130.0 | 130.9 | 33.91 | 7.17 | 26.54   |
| 134.1 | 134.9 | 33.91 | 7.16 | 26.54   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 03 CODE

LAT N 48 18.60

DATE 19/ 4/79

TIME (PST) 1649

TAPE: U00454 -094

LONG W 125 41.20

PASS NO. 13

STN: 107

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .3    | .3    | 32.24 | 8.92 | 24.97   |
| 2.0   | 2.0   | 32.24 | 8.92 | 24.97   |
| 5.0   | 5.0   | 32.24 | 8.92 | 24.98   |
| 10.2  | 10.3  | 32.25 | 8.92 | 24.98   |
| 14.9  | 15.0  | 32.25 | 8.91 | 24.98   |
| 19.9  | 20.0  | 32.35 | 8.73 | 25.09   |
| 24.7  | 24.9  | 32.49 | 8.74 | 25.19   |
| 29.8  | 30.0  | 32.57 | 8.83 | 25.25   |
| 34.8  | 35.0  | 32.61 | 8.85 | 25.28   |
| 39.7  | 39.9  | 32.62 | 8.83 | 25.29   |
| 44.7  | 45.0  | 32.64 | 8.76 | 25.31   |
| 49.7  | 50.0  | 32.72 | 8.75 | 25.38   |
| 59.6  | 60.0  | 32.93 | 8.65 | 25.55   |
| 69.6  | 70.0  | 33.02 | 8.54 | 25.64   |
| 80.6  | 81.1  | 33.20 | 8.35 | 25.81   |
| 90.5  | 91.0  | 33.35 | 8.14 | 25.96   |
| 100.4 | 101.0 | 33.59 | 8.02 | 26.16   |
| 110.3 | 111.0 | 33.74 | 7.90 | 26.30   |
| 120.3 | 121.0 | 33.81 | 7.81 | 26.37   |
| 130.0 | 130.9 | 33.88 | 7.46 | 26.47   |
| 138.1 | 139.0 | 33.88 | 7.38 | 26.49   |

CRUISE NO: 03 CODE

LAT N 48 15.10

DATE 19/ 4/79

TIME (PST) 1735

TAPE: U00454 -095

LONG W 125 47.70

PASS NO. 14

STN: 108

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .8    | .8    | 32.31 | 8.94 | 25.03   |
| 1.9   | 1.9   | 32.32 | 8.94 | 25.03   |
| 5.0   | 5.0   | 32.34 | 8.94 | 25.05   |
| 10.1  | 10.1  | 32.36 | 8.94 | 25.06   |
| 15.0  | 15.1  | 32.38 | 8.94 | 25.08   |
| 19.9  | 20.1  | 32.39 | 8.93 | 25.09   |
| 24.9  | 25.0  | 32.40 | 8.91 | 25.10   |
| 29.8  | 30.0  | 32.46 | 8.80 | 25.17   |
| 34.9  | 35.1  | 32.57 | 8.82 | 25.25   |
| 39.7  | 39.9  | 32.61 | 8.78 | 25.28   |
| 44.6  | 44.9  | 32.67 | 8.65 | 25.35   |
| 49.7  | 50.0  | 32.72 | 8.69 | 25.39   |
| 59.8  | 60.1  | 32.91 | 8.60 | 25.55   |
| 69.5  | 69.9  | 33.08 | 8.50 | 25.70   |
| 80.6  | 81.1  | 33.40 | 8.26 | 25.98   |
| 89.5  | 90.0  | 33.51 | 8.00 | 26.11   |
| 100.3 | 101.0 | 33.58 | 7.67 | 26.21   |
| 101.2 | 101.8 | 33.59 | 7.65 | 26.22   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 03 CODE  
 LAT N 48 12.90  
 DATE 19/ 4/79  
 TIME (PST) 1830

TAPE: U00454 -096  
 LONG W 125 52.00  
 PASS NO. 16  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .8    | .8    | 32.58 | 8.99 | 25.23   |
| 2.0   | 2.0   | 32.58 | 9.01 | 25.23   |
| 5.0   | 5.0   | 32.59 | 8.99 | 25.23   |
| 10.0  | 10.0  | 32.59 | 8.99 | 25.23   |
| 14.9  | 15.0  | 32.59 | 8.99 | 25.23   |
| 19.9  | 20.1  | 32.59 | 8.99 | 25.23   |
| 24.8  | 25.0  | 32.58 | 8.96 | 25.23   |
| 29.9  | 30.0  | 32.58 | 8.91 | 25.24   |
| 34.8  | 35.0  | 32.58 | 8.86 | 25.25   |
| 39.8  | 40.0  | 32.64 | 8.88 | 25.29   |
| 44.7  | 45.0  | 32.65 | 8.86 | 25.30   |
| 49.5  | 49.8  | 32.65 | 8.84 | 25.30   |
| 59.6  | 59.9  | 32.82 | 8.92 | 25.43   |
| 69.5  | 69.9  | 32.94 | 8.82 | 25.54   |
| 80.5  | 80.9  | 33.16 | 8.47 | 25.76   |
| 90.4  | 91.0  | 33.41 | 8.33 | 25.98   |
| 100.4 | 101.0 | 33.52 | 8.03 | 26.11   |
| 110.4 | 111.1 | 33.58 | 7.87 | 26.18   |
| 120.3 | 121.0 | 33.64 | 7.82 | 26.24   |
| 130.1 | 130.9 | 33.73 | 7.65 | 26.33   |
| 140.0 | 140.9 | 33.78 | 7.54 | 26.38   |
| 149.9 | 150.9 | 33.83 | 7.38 | 26.45   |
| 160.0 | 161.1 | 33.84 | 7.08 | 26.50   |
| 169.9 | 171.0 | 33.82 | 6.97 | 26.50   |
| 179.9 | 181.1 | 33.88 | 6.84 | 26.56   |
| 189.7 | 191.0 | 33.88 | 6.79 | 26.57   |
| 199.6 | 201.0 | 33.90 | 6.64 | 26.60   |
| 225.4 | 227.0 | 33.91 | 6.37 | 26.65   |
| 250.3 | 252.1 | 33.93 | 6.12 | 26.70   |
| 275.0 | 277.0 | 33.97 | 6.05 | 26.73   |
| 299.7 | 302.0 | 33.94 | 5.64 | 26.76   |
| 324.6 | 327.0 | 33.95 | 5.38 | 26.80   |
| 350.3 | 352.9 | 33.96 | 5.21 | 26.83   |
| 375.3 | 378.2 | 34.00 | 5.24 | 26.85   |
| 399.9 | 403.0 | 34.01 | 5.08 | 26.88   |
| 424.7 | 428.0 | 34.05 | 5.00 | 26.92   |
| 450.4 | 453.9 | 34.08 | 5.01 | 26.95   |
| 475.1 | 478.9 | 34.10 | 4.91 | 26.97   |
| 498.9 | 502.9 | 34.11 | 4.86 | 26.99   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 03 CODE

LAT N 48 10.60

DATE 19/ 4/79

TIME (PST) 1914

TAPE: U00454 -097

LONG W 125 56.20

PASS NO. 18

STN: 110

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 32.35 | 8.88 | 25.06   |
| 2.1   | 2.1   | 32.50 | 8.84 | 25.18   |
| 4.8   | 4.8   | 32.51 | 8.84 | 25.20   |
| 10.2  | 10.2  | 32.53 | 8.85 | 25.21   |
| 14.8  | 14.8  | 32.54 | 8.85 | 25.22   |
| 20.0  | 20.1  | 32.59 | 8.96 | 25.24   |
| 24.8  | 25.0  | 32.63 | 9.01 | 25.27   |
| 29.8  | 30.0  | 32.64 | 9.00 | 25.27   |
| 34.8  | 35.0  | 32.64 | 9.00 | 25.27   |
| 39.7  | 39.9  | 32.68 | 9.14 | 25.29   |
| 44.7  | 45.0  | 32.70 | 9.17 | 25.29   |
| 49.7  | 50.0  | 32.70 | 9.19 | 25.29   |
| 59.6  | 60.0  | 32.74 | 9.10 | 25.34   |
| 70.5  | 70.9  | 32.93 | 8.57 | 25.57   |
| 80.4  | 80.9  | 33.17 | 8.28 | 25.80   |
| 90.4  | 91.0  | 33.40 | 7.84 | 26.04   |
| 100.3 | 100.9 | 33.56 | 7.98 | 26.15   |
| 110.2 | 110.9 | 33.64 | 7.82 | 26.23   |
| 120.2 | 121.0 | 33.72 | 7.74 | 26.31   |
| 130.2 | 131.0 | 33.74 | 7.49 | 26.36   |
| 140.0 | 141.0 | 33.80 | 7.56 | 26.40   |
| 150.0 | 151.0 | 33.81 | 7.42 | 26.43   |
| 159.8 | 160.9 | 33.85 | 7.32 | 26.47   |
| 169.9 | 171.1 | 33.90 | 7.24 | 26.52   |
| 180.4 | 181.6 | 33.91 | 7.10 | 26.55   |
| 189.8 | 191.1 | 33.88 | 6.84 | 26.56   |
| 199.7 | 201.1 | 33.92 | 6.89 | 26.58   |
| 225.5 | 227.1 | 33.91 | 6.45 | 26.64   |
| 250.1 | 251.9 | 33.91 | 6.06 | 26.69   |
| 274.9 | 276.9 | 33.93 | 5.81 | 26.73   |
| 299.8 | 302.0 | 33.95 | 5.64 | 26.77   |
| 324.7 | 327.2 | 33.95 | 5.40 | 26.80   |
| 350.3 | 352.9 | 33.96 | 5.29 | 26.82   |
| 375.2 | 378.1 | 33.98 | 5.14 | 26.85   |
| 400.0 | 403.1 | 34.02 | 5.13 | 26.88   |
| 424.7 | 428.1 | 34.03 | 5.01 | 26.90   |
| 450.4 | 454.0 | 34.06 | 5.00 | 26.93   |
| 474.9 | 478.7 | 34.05 | 4.68 | 26.96   |
| 498.6 | 502.7 | 34.09 | 4.73 | 26.98   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 03 CODE  
 LAT N 48 8.50  
 DATE 19/ 4/79  
 TIME (PST) 1953

TAPE: U00454 -098  
 LONG W 126 .00  
 PASS NO. 20  
 STN: 111

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .8    | .8    | 32.43 | 8.92 | 25.12   |
| 2.0   | 2.0   | 32.50 | 8.83 | 25.19   |
| 4.8   | 4.9   | 32.52 | 8.83 | 25.20   |
| 10.0  | 10.0  | 32.52 | 8.83 | 25.21   |
| 14.9  | 15.0  | 32.52 | 8.83 | 25.21   |
| 19.9  | 20.1  | 32.53 | 8.83 | 25.21   |
| 24.9  | 25.0  | 32.53 | 8.83 | 25.21   |
| 30.0  | 30.1  | 32.53 | 8.80 | 25.22   |
| 34.8  | 35.0  | 32.52 | 8.74 | 25.22   |
| 39.8  | 40.1  | 32.54 | 8.66 | 25.25   |
| 44.6  | 44.9  | 32.62 | 8.83 | 25.28   |
| 49.8  | 50.0  | 32.63 | 8.84 | 25.29   |
| 60.4  | 60.8  | 32.79 | 8.28 | 25.50   |
| 69.7  | 70.1  | 33.09 | 7.98 | 25.78   |
| 79.6  | 80.1  | 33.23 | 7.87 | 25.91   |
| 90.4  | 91.0  | 33.35 | 7.73 | 26.02   |
| 100.3 | 100.9 | 33.51 | 7.71 | 26.14   |
| 110.4 | 111.1 | 33.60 | 7.43 | 26.26   |
| 120.3 | 121.1 | 33.67 | 7.50 | 26.30   |
| 130.1 | 131.0 | 33.75 | 7.48 | 26.37   |
| 140.0 | 140.9 | 33.77 | 7.48 | 26.38   |
| 150.0 | 151.0 | 33.79 | 7.36 | 26.42   |
| 160.0 | 161.0 | 33.85 | 7.42 | 26.46   |
| 169.9 | 171.1 | 33.87 | 7.32 | 26.49   |
| 179.8 | 181.0 | 33.91 | 7.22 | 26.53   |
| 189.6 | 190.9 | 33.93 | 7.15 | 26.56   |
| 199.6 | 201.0 | 33.95 | 7.09 | 26.58   |
| 225.4 | 227.0 | 33.98 | 6.91 | 26.63   |
| 250.1 | 251.9 | 33.93 | 6.35 | 26.67   |
| 275.1 | 277.1 | 33.93 | 5.91 | 26.72   |
| 299.7 | 301.9 | 33.92 | 5.65 | 26.75   |
| 324.6 | 327.1 | 33.94 | 5.57 | 26.77   |
| 350.4 | 353.0 | 33.97 | 5.52 | 26.80   |
| 375.2 | 378.1 | 33.96 | 5.18 | 26.83   |
| 399.8 | 402.9 | 33.99 | 5.12 | 26.86   |
| 424.7 | 428.0 | 34.03 | 5.08 | 26.90   |
| 450.4 | 454.0 | 34.04 | 4.94 | 26.92   |
| 475.4 | 479.2 | 34.07 | 4.84 | 26.96   |
| 495.9 | 499.9 | 34.09 | 4.76 | 26.99   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 8.50

DATE 18/ 5/79

TIME (PST) 1630

TAPE: U00454 -099

LONG W 126 .00

PASS NO. 1

STN: 111

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .3    | .3    | 32.57 | 11.37 | 24.82   |        |
| 2.1   | 2.2   | 32.58 | 11.37 | 24.83   |        |
| 4.9   | 4.9   | 32.56 | 11.37 | 24.82   |        |
| 10.0  | 10.0  | 32.57 | 11.35 | 24.82   |        |
| 14.8  | 14.9  | 32.55 | 11.30 | 24.82   |        |
| 19.8  | 20.0  | 32.56 | 11.09 | 24.86   |        |
| 24.8  | 25.0  | 32.53 | 10.21 | 24.99   | 5.85   |
| 29.9  | 30.0  | 32.65 | 9.73  | 25.16   |        |
| 34.7  | 34.9  | 32.70 | 9.18  | 25.29   |        |
| 39.8  | 40.0  | 32.77 | 9.18  | 25.35   |        |
| 44.8  | 45.1  | 32.80 | 9.14  | 25.37   |        |
| 49.8  | 50.1  | 32.79 | 8.69  | 25.44   | 5.98   |
| 59.8  | 60.1  | 32.92 | 8.37  | 25.59   |        |
| 69.8  | 70.2  | 33.21 | 8.44  | 25.81   |        |
| 74.6  | 75.0  | 33.26 | 8.40  | 25.85   | 4.97   |
| 79.6  | 80.0  | 33.35 | 8.29  | 25.94   |        |
| 90.3  | 90.9  | 33.53 | 8.19  | 26.09   |        |
| 99.5  | 100.1 | 33.59 | 8.15  | 26.15   | 3.44   |
| 110.3 | 111.0 | 33.68 | 8.03  | 26.24   |        |
| 120.3 | 121.0 | 33.74 | 8.01  | 26.28   |        |
| 129.2 | 130.0 | 33.77 | 7.84  | 26.33   |        |
| 140.0 | 140.9 | 33.81 | 7.81  | 26.37   |        |
| 150.1 | 151.1 | 33.86 | 7.80  | 26.41   | 2.89   |
| 159.8 | 160.9 | 33.89 | 7.68  | 26.45   |        |
| 169.8 | 171.0 | 33.90 | 7.59  | 26.47   |        |
| 179.7 | 180.9 | 33.94 | 7.47  | 26.52   |        |
| 189.7 | 191.0 | 33.95 | 7.36  | 26.54   |        |
| 199.5 | 200.9 | 33.96 | 7.27  | 26.56   | 1.73   |
| 224.7 | 226.3 | 33.97 | 7.04  | 26.61   |        |
| 250.2 | 252.0 | 33.99 | 6.76  | 26.65   | 1.52   |
| 275.1 | 277.1 | 34.00 | 6.48  | 26.70   |        |
| 299.9 | 302.1 | 33.99 | 6.23  | 26.73   | 2.12   |
| 324.6 | 327.0 | 33.98 | 6.00  | 26.75   |        |
| 350.5 | 353.1 | 34.00 | 5.89  | 26.78   |        |
| 375.2 | 378.0 | 34.02 | 5.82  | 26.80   |        |
| 399.8 | 402.9 | 34.05 | 5.67  | 26.84   | 1.12   |
| 424.7 | 428.0 | 34.07 | 5.54  | 26.87   |        |
| 450.4 | 453.9 | 34.08 | 5.35  | 26.91   |        |
| 475.4 | 479.2 | 34.10 | 5.21  | 26.94   |        |
| 491.0 | 495.0 | 34.10 | 5.07  | 26.95   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 04 CODE  
 LAT N 48 10.60  
 DATE 18/ 5/79  
 TIME (PST) 1638

TAPE: U00454 -100  
 LONG W 125 56.20  
 PASS NO. 3  
 STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 32.43 | 11.39 | 24.71   |
| 5.0   | 5.1   | 32.43 | 11.39 | 24.70   |
| 9.8   | 9.9   | 32.43 | 11.39 | 24.71   |
| 14.9  | 15.0  | 32.57 | 10.84 | 24.92   |
| 20.0  | 20.1  | 32.61 | 10.61 | 24.99   |
| 25.0  | 25.1  | 32.63 | 10.40 | 25.04   |
| 29.8  | 30.0  | 32.64 | 9.80  | 25.15   |
| 34.8  | 35.0  | 32.65 | 9.49  | 25.21   |
| 39.9  | 40.1  | 32.65 | 9.12  | 25.27   |
| 44.6  | 44.9  | 32.74 | 9.24  | 25.31   |
| 49.9  | 50.1  | 32.76 | 8.99  | 25.37   |
| 59.7  | 60.1  | 32.89 | 8.71  | 25.51   |
| 69.6  | 70.0  | 33.04 | 8.35  | 25.68   |
| 79.5  | 80.0  | 33.30 | 8.11  | 25.93   |
| 90.4  | 90.9  | 33.41 | 8.04  | 26.02   |
| 100.3 | 100.9 | 33.52 | 7.92  | 26.13   |
| 110.3 | 111.0 | 33.62 | 7.88  | 26.21   |
| 119.4 | 120.2 | 33.67 | 7.77  | 26.26   |
| 130.3 | 131.1 | 33.76 | 7.81  | 26.33   |
| 140.1 | 141.0 | 33.79 | 7.65  | 26.38   |
| 150.0 | 150.9 | 33.88 | 7.74  | 26.43   |
| 159.9 | 160.9 | 33.91 | 7.59  | 26.48   |
| 169.9 | 171.0 | 33.93 | 7.47  | 26.51   |
| 179.8 | 181.0 | 33.93 | 7.36  | 26.53   |
| 189.9 | 191.2 | 33.95 | 7.26  | 26.55   |
| 199.8 | 201.2 | 33.96 | 7.13  | 26.58   |
| 225.4 | 227.0 | 33.96 | 6.86  | 26.62   |
| 250.3 | 252.1 | 33.94 | 6.44  | 26.66   |
| 275.0 | 277.0 | 33.94 | 6.15  | 26.70   |
| 299.7 | 301.9 | 33.99 | 6.15  | 26.74   |
| 324.6 | 327.0 | 33.99 | 5.87  | 26.77   |
| 350.4 | 353.0 | 34.00 | 5.63  | 26.81   |
| 375.1 | 378.0 | 34.03 | 5.58  | 26.84   |
| 399.9 | 403.0 | 34.04 | 5.40  | 26.87   |
| 424.7 | 428.0 | 34.06 | 5.26  | 26.90   |
| 450.4 | 454.0 | 34.09 | 5.11  | 26.94   |
| 475.1 | 478.9 | 34.10 | 5.02  | 26.96   |
| 487.2 | 491.1 | 34.10 | 4.95  | 26.97   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 12.90

DATE 18/ 5/79

TIME (PST) 1730

TAPE: U00454 -101

LONG W 125 52.00

PASS NO. 5

STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 1.8   | 1.8   | 32.30 | 11.20 | 24.64   |        |
| 5.0   | 5.0   | 32.30 | 11.20 | 24.64   |        |
| 9.9   | 9.9   | 32.31 | 11.21 | 24.64   |        |
| 14.9  | 15.0  | 32.31 | 11.21 | 24.65   |        |
| 19.7  | 19.8  | 32.60 | 10.72 | 24.96   |        |
| 24.8  | 25.0  | 32.55 | 9.98  | 25.04   | 6.81   |
| 29.6  | 29.8  | 32.58 | 9.61  | 25.13   |        |
| 34.8  | 34.9  | 32.64 | 9.04  | 25.27   |        |
| 39.9  | 40.1  | 32.63 | 8.88  | 25.29   |        |
| 44.7  | 45.0  | 32.66 | 8.83  | 25.31   |        |
| 49.6  | 49.9  | 32.69 | 8.86  | 25.34   | 6.40   |
| 59.7  | 60.0  | 32.78 | 8.61  | 25.44   |        |
| 69.6  | 70.0  | 32.99 | 8.39  | 25.64   |        |
| 74.6  | 75.1  | 33.09 | 8.32  | 25.73   | 2.99   |
| 79.5  | 80.0  | 33.13 | 8.12  | 25.79   |        |
| 90.4  | 91.0  | 33.45 | 8.02  | 26.05   |        |
| 100.4 | 101.0 | 33.57 | 7.84  | 26.18   | 3.67   |
| 110.3 | 111.0 | 33.63 | 7.79  | 26.23   |        |
| 120.2 | 120.9 | 33.70 | 7.69  | 26.30   |        |
| 130.0 | 130.8 | 33.74 | 7.48  | 26.36   |        |
| 140.1 | 141.1 | 33.78 | 7.43  | 26.40   |        |
| 150.0 | 151.0 | 33.81 | 7.33  | 26.44   | 1.51   |
| 160.1 | 161.1 | 33.81 | 7.34  | 26.44   |        |
| 170.1 | 171.2 | 33.86 | 7.15  | 26.50   |        |
| 179.7 | 180.9 | 33.88 | 7.10  | 26.53   |        |
| 189.8 | 191.1 | 33.91 | 7.02  | 26.56   |        |
| 199.7 | 201.0 | 33.92 | 6.87  | 26.59   | 1.35   |
| 224.5 | 226.1 | 33.96 | 6.68  | 26.65   |        |
| 250.2 | 252.0 | 33.98 | 6.40  | 26.70   | 2.01   |
| 275.2 | 277.1 | 33.99 | 6.14  | 26.74   |        |
| 299.6 | 301.8 | 34.00 | 5.93  | 26.78   | 1.57   |
| 324.6 | 327.1 | 34.02 | 5.77  | 26.81   |        |
| 350.4 | 355.1 | 34.02 | 5.57  | 26.84   |        |
| 375.6 | 378.5 | 34.03 | 5.24  | 26.88   |        |
| 399.9 | 403.0 | 34.05 | 5.12  | 26.91   | 1.78   |
| 424.7 | 428.0 | 34.09 | 4.96  | 26.96   |        |
| 450.4 | 454.0 | 34.11 | 4.84  | 26.99   |        |
| 475.2 | 479.0 | 34.12 | 4.79  | 27.01   |        |
| 494.8 | 498.8 | 34.13 | 4.76  | 27.01   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 04 CODE  
 LAT N 48 15.10  
 DATE 18/ 5/79  
 TIME (PST) 1816

TAPE: U00454 -102  
 LONG W 125 47.70  
 PASS NO. 7  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.1   | 2.1   | 32.13 | 11.09 | 24.53   |
| 5.0   | 5.1   | 32.13 | 11.08 | 24.53   |
| 9.8   | 9.9   | 32.14 | 11.08 | 24.53   |
| 15.1  | 15.1  | 32.35 | 10.91 | 24.73   |
| 20.1  | 20.2  | 32.49 | 10.22 | 24.95   |
| 24.9  | 25.1  | 32.53 | 10.36 | 24.97   |
| 29.9  | 30.1  | 32.55 | 9.95  | 25.05   |
| 35.5  | 35.7  | 32.60 | 8.95  | 25.25   |
| 40.6  | 40.8  | 32.63 | 8.78  | 25.30   |
| 44.8  | 45.0  | 32.64 | 8.62  | 25.33   |
| 49.7  | 50.0  | 32.73 | 8.52  | 25.42   |
| 59.6  | 59.9  | 32.97 | 8.22  | 25.65   |
| 69.7  | 70.1  | 33.14 | 8.15  | 25.79   |
| 80.5  | 81.0  | 33.28 | 8.10  | 25.91   |
| 90.4  | 90.9  | 33.39 | 8.02  | 26.01   |
| 100.3 | 101.0 | 33.58 | 7.89  | 26.17   |
| 110.3 | 111.0 | 33.59 | 7.85  | 26.19   |
| 119.4 | 120.2 | 33.61 | 7.83  | 26.21   |
| 130.3 | 131.2 | 33.74 | 7.72  | 26.32   |
| 140.2 | 141.1 | 33.77 | 7.69  | 26.35   |
| 149.9 | 150.9 | 33.84 | 7.57  | 26.42   |
| 160.0 | 161.0 | 33.88 | 7.47  | 26.47   |
| 169.7 | 170.9 | 33.90 | 7.38  | 26.50   |
| 179.7 | 180.9 | 33.92 | 7.26  | 26.53   |
| 189.7 | 191.0 | 33.93 | 7.20  | 26.55   |
| 192.8 | 194.1 | 33.93 | 7.17  | 26.55   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 18.60

DATE 18/ 5/79

TIME (PST) 1914

TAPE: U00454 -103

LONG W 125 41.20

PASS NO. 9

STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .3    | .3    | 31.33 | 11.34 | 23.87   |        |
| 1.9   | 1.9   | 31.39 | 11.35 | 23.91   |        |
| 4.9   | 4.9   | 31.38 | 11.35 | 23.90   |        |
| 9.9   | 10.0  | 31.40 | 11.34 | 23.92   |        |
| 14.9  | 14.9  | 32.10 | 10.84 | 24.55   |        |
| 19.9  | 20.0  | 32.17 | 10.34 | 24.69   |        |
| 24.9  | 25.1  | 32.20 | 10.06 | 24.76   | 6.49   |
| 30.4  | 30.5  | 32.29 | 9.66  | 24.90   |        |
| 34.7  | 34.9  | 32.36 | 9.41  | 24.99   |        |
| 39.7  | 39.9  | 32.46 | 9.11  | 25.11   |        |
| 44.6  | 44.9  | 32.56 | 8.85  | 25.23   |        |
| 49.6  | 49.8  | 32.63 | 8.62  | 25.32   | 3.04   |
| 59.8  | 60.1  | 32.74 | 8.33  | 25.45   |        |
| 69.6  | 70.0  | 32.92 | 8.21  | 25.61   |        |
| 74.6  | 75.0  | 33.17 | 8.13  | 25.82   | 4.32   |
| 79.5  | 79.9  | 33.29 | 8.08  | 25.92   |        |
| 90.5  | 91.0  | 33.47 | 7.93  | 26.08   |        |
| 100.4 | 101.0 | 33.60 | 7.81  | 26.20   | 3.32   |
| 109.3 | 110.0 | 33.73 | 7.65  | 26.33   |        |
| 120.3 | 121.1 | 33.86 | 7.25  | 26.49   |        |
| 129.3 | 130.1 | 33.94 | 6.83  | 26.61   |        |
| 131.2 | 132.0 | 33.93 | 6.81  | 26.61   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 22.00

DATE 18/ 5/79

TIME (PST) 2003

TAPE: U00454 -104

LONG W 125 34.70

PASS NO. 11

STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .2    | .2    | 31.09 | 11.61 | 23.63   |
| 2.1   | 2.1   | 31.14 | 11.59 | 23.67   |
| 5.1   | 5.1   | 31.13 | 11.59 | 23.66   |
| 9.9   | 9.9   | 31.13 | 11.60 | 23.66   |
| 14.9  | 15.0  | 31.35 | 11.27 | 23.89   |
| 19.8  | 19.9  | 31.79 | 10.25 | 24.41   |
| 24.9  | 25.0  | 32.14 | 9.37  | 24.82   |
| 29.8  | 30.0  | 32.19 | 9.27  | 24.88   |
| 34.6  | 34.8  | 32.24 | 9.18  | 24.94   |
| 39.7  | 39.9  | 32.33 | 8.92  | 25.04   |
| 44.7  | 45.0  | 32.54 | 8.51  | 25.27   |
| 49.8  | 50.0  | 32.62 | 8.35  | 25.35   |
| 59.7  | 60.0  | 32.85 | 8.19  | 25.56   |
| 70.5  | 70.9  | 33.06 | 8.10  | 25.74   |
| 79.6  | 80.1  | 33.17 | 8.13  | 25.82   |
| 89.6  | 90.1  | 33.39 | 7.87  | 26.03   |
| 99.7  | 100.3 | 33.52 | 7.75  | 26.15   |
| 110.1 | 110.8 | 33.59 | 7.64  | 26.22   |
| 120.3 | 121.0 | 33.86 | 6.81  | 26.55   |
| 130.3 | 131.1 | 33.94 | 6.38  | 26.67   |
| 135.3 | 136.1 | 33.95 | 6.28  | 26.69   |

CRUISE NO: 04 CODE

LAT N 48 28.90

DATE 18/ 5/79

TIME (PST) 2141

TAPE: U00454 -105

LONG W 125 21.80

PASS NO. 13

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 29.99 | 11.71 | 22.76   |
| 2.1   | 2.1   | 30.69 | 11.71 | 23.30   |
| 4.9   | 4.9   | 30.70 | 11.71 | 23.30   |
| 9.9   | 9.9   | 31.23 | 10.41 | 23.94   |
| 15.2  | 15.2  | 31.33 | 10.04 | 24.08   |
| 19.9  | 20.0  | 31.50 | 9.65  | 24.28   |
| 24.8  | 24.9  | 31.73 | 9.05  | 24.55   |
| 29.9  | 30.0  | 31.81 | 8.90  | 24.64   |
| 34.9  | 35.1  | 32.06 | 8.68  | 24.87   |
| 39.7  | 39.9  | 32.23 | 8.52  | 25.02   |
| 44.8  | 45.0  | 32.35 | 8.44  | 25.13   |
| 49.9  | 50.1  | 32.37 | 8.42  | 25.15   |
| 59.6  | 59.9  | 32.61 | 8.28  | 25.36   |
| 69.7  | 70.0  | 32.88 | 8.13  | 25.59   |
| 79.5  | 80.0  | 33.14 | 8.07  | 25.81   |
| 89.4  | 89.9  | 33.36 | 7.89  | 26.00   |
| 100.5 | 101.0 | 33.50 | 7.73  | 26.14   |
| 109.2 | 109.9 | 33.58 | 7.68  | 26.20   |
| 120.3 | 121.1 | 33.78 | 7.14  | 26.44   |
| 130.3 | 131.1 | 33.84 | 7.02  | 26.51   |
| 138.2 | 139.0 | 33.87 | 6.87  | 26.55   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 32.20

DATE 18/ 5/79

TIME (PST) 2247

TAPE: U00454 -106

LONG W 125 15.50

PASS NO. 15

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .8    | .9    | 30.89 | 11.41 | 23.51   |        |
| 2.0   | 2.0   | 30.89 | 11.40 | 23.51   |        |
| 5.0   | 5.0   | 30.90 | 11.41 | 23.51   |        |
| 10.0  | 10.0  | 30.94 | 11.31 | 23.56   |        |
| 15.0  | 15.1  | 31.56 | 9.84  | 24.29   |        |
| 19.9  | 20.0  | 31.74 | 9.35  | 24.52   |        |
| 25.0  | 25.1  | 32.06 | 8.85  | 24.84   | 5.96   |
| 29.7  | 29.8  | 32.14 | 8.77  | 24.92   |        |
| 35.2  | 35.4  | 32.40 | 8.70  | 25.13   |        |
| 39.9  | 40.1  | 32.61 | 8.51  | 25.32   |        |
| 45.0  | 45.2  | 32.64 | 8.46  | 25.35   |        |
| 50.4  | 50.7  | 32.75 | 8.32  | 25.46   | 5.04   |
| 59.8  | 60.1  | 32.94 | 8.15  | 25.63   |        |
| 69.7  | 70.1  | 33.10 | 8.01  | 25.79   |        |
| 74.5  | 74.9  | 33.26 | 7.89  | 25.92   | 3.13   |
| 80.2  | 80.7  | 33.45 | 7.73  | 26.10   |        |
| 90.5  | 91.0  | 33.54 | 7.65  | 26.18   |        |
| 91.5  | 92.1  | 33.53 | 7.65  | 26.18   |        |

CRUISE NO: 04 CODE

LAT N 48 35.60

DATE 18/ 5/79

TIME (PST) 2355

TAPE: U00454 -107

LONG W 125 9.00

PASS NO. 17

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .5    | .5    | 31.37 | 10.33 | 24.07   |
| 1.8   | 1.8   | 31.38 | 10.34 | 24.08   |
| 5.1   | 5.1   | 31.38 | 10.33 | 24.08   |
| 10.0  | 10.0  | 31.57 | 10.18 | 24.25   |
| 15.0  | 15.1  | 31.77 | 9.76  | 24.47   |
| 20.0  | 20.1  | 31.97 | 9.33  | 24.70   |
| 24.9  | 25.0  | 32.14 | 9.03  | 24.88   |
| 29.9  | 30.0  | 32.28 | 8.76  | 25.03   |
| 34.7  | 34.9  | 32.35 | 8.57  | 25.11   |
| 39.9  | 40.1  | 32.40 | 8.52  | 25.16   |
| 44.8  | 45.0  | 32.56 | 8.43  | 25.30   |
| 49.6  | 49.9  | 32.80 | 8.20  | 25.52   |
| 59.7  | 60.1  | 32.96 | 8.12  | 25.65   |
| 69.7  | 70.1  | 33.19 | 7.92  | 25.86   |
| 79.5  | 79.9  | 33.45 | 7.66  | 26.11   |
| 81.3  | 81.8  | 33.50 | 7.61  | 26.15   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 39.00

DATE 19/ 5/79

TIME (PST) 0049

TAPE: U00454 -108

LONG W 125 2.50

PASS NO. 19

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .8    | .8    | 31.74 | 9.98 | 24.41   |
| 2.1   | 2.1   | 31.74 | 9.97 | 24.41   |
| 5.0   | 5.0   | 31.75 | 9.97 | 24.42   |
| 10.0  | 10.1  | 32.01 | 9.20 | 24.75   |
| 15.0  | 15.1  | 32.10 | 8.96 | 24.85   |
| 19.7  | 19.8  | 32.25 | 8.72 | 25.01   |
| 24.8  | 25.0  | 32.44 | 8.52 | 25.19   |
| 29.9  | 30.1  | 32.74 | 8.27 | 25.46   |
| 34.8  | 35.0  | 32.90 | 8.15 | 25.60   |
| 39.8  | 40.0  | 33.11 | 7.99 | 25.79   |
| 39.8  | 40.0  | 33.11 | 7.99 | 25.79   |

CRUISE NO: 04 CODE

LAT N 48 25.00

DATE 21/ 5/79

TIME (PST) 1009

TAPE: U00454 -109

LONG W 125 59.80

PASS NO. 53

STN: 201

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 31.56 | 11.78 | 23.96   |
| 1.9   | 1.9   | 31.56 | 11.68 | 23.98   |
| 4.9   | 5.0   | 31.55 | 11.80 | 23.95   |
| 9.8   | 9.8   | 32.11 | 10.77 | 24.57   |
| 14.8  | 14.9  | 32.32 | 9.81  | 24.89   |
| 20.2  | 20.3  | 32.38 | 9.58  | 24.98   |
| 24.9  | 25.0  | 32.43 | 9.22  | 25.07   |
| 29.7  | 29.9  | 32.50 | 8.92  | 25.17   |
| 34.9  | 35.1  | 32.62 | 8.60  | 25.32   |
| 39.9  | 40.1  | 32.78 | 8.33  | 25.48   |
| 44.7  | 44.9  | 32.86 | 8.23  | 25.56   |
| 49.7  | 50.0  | 32.95 | 8.18  | 25.64   |
| 59.5  | 59.8  | 33.13 | 8.12  | 25.79   |
| 70.1  | 70.5  | 33.33 | 8.03  | 25.96   |
| 79.5  | 80.0  | 33.48 | 7.93  | 26.09   |
| 90.4  | 91.0  | 33.56 | 7.86  | 26.17   |
| 100.5 | 101.1 | 33.67 | 7.78  | 26.26   |
| 110.4 | 111.1 | 33.74 | 7.70  | 26.33   |
| 120.5 | 121.3 | 33.78 | 7.63  | 26.37   |
| 130.1 | 131.0 | 33.84 | 7.53  | 26.43   |
| 140.1 | 141.1 | 33.86 | 7.43  | 26.46   |
| 150.0 | 151.0 | 33.88 | 7.35  | 26.49   |
| 160.1 | 161.2 | 33.90 | 7.29  | 26.51   |
| 169.9 | 171.1 | 33.93 | 7.12  | 26.56   |
| 179.8 | 181.0 | 33.95 | 6.85  | 26.61   |
| 189.6 | 190.9 | 33.95 | 6.70  | 26.64   |
| 199.6 | 201.0 | 33.96 | 6.55  | 26.66   |
| 222.1 | 223.7 | 33.97 | 6.37  | 26.69   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 31.50

DATE 21/ 5/79

TIME (PST) 1132

TAPE: U00454 -110

LONG W 126 7.00

PASS NO. 55

STN: 202

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .8    | .9    | 31.61 | 11.95 | 23.97   |
| 2.0   | 2.0   | 31.64 | 11.80 | 24.02   |
| 5.0   | 5.0   | 31.74 | 11.49 | 24.15   |
| 9.7   | 9.8   | 31.83 | 11.09 | 24.30   |
| 14.8  | 14.9  | 31.93 | 10.99 | 24.39   |
| 20.0  | 20.1  | 32.14 | 10.40 | 24.65   |
| 24.8  | 24.9  | 32.29 | 9.90  | 24.86   |
| 29.7  | 29.9  | 32.36 | 9.70  | 24.94   |
| 34.8  | 35.0  | 32.48 | 8.89  | 25.16   |
| 39.8  | 40.0  | 32.61 | 8.40  | 25.34   |
| 44.7  | 45.0  | 32.70 | 8.19  | 25.45   |
| 49.7  | 50.0  | 32.86 | 8.08  | 25.58   |
| 60.2  | 60.5  | 33.21 | 7.99  | 25.87   |
| 69.5  | 69.9  | 33.35 | 8.00  | 25.98   |
| 79.7  | 80.1  | 33.41 | 7.96  | 26.04   |
| 90.4  | 90.9  | 33.48 | 7.90  | 26.10   |
| 100.3 | 100.9 | 33.56 | 7.80  | 26.17   |
| 110.1 | 110.8 | 33.75 | 7.55  | 26.36   |
| 120.3 | 121.0 | 33.81 | 7.39  | 26.43   |
| 130.1 | 130.9 | 33.87 | 7.20  | 26.50   |
| 140.0 | 140.9 | 33.89 | 7.14  | 26.53   |
| 150.0 | 151.0 | 33.89 | 7.10  | 26.53   |
| 159.9 | 161.0 | 33.90 | 7.03  | 26.55   |
| 169.8 | 171.0 | 33.94 | 6.65  | 26.63   |
| 179.8 | 181.0 | 33.96 | 6.44  | 26.68   |
| 190.2 | 191.5 | 33.97 | 6.28  | 26.70   |
| 199.7 | 201.1 | 33.97 | 6.07  | 26.73   |
| 225.4 | 227.0 | 33.98 | 5.81  | 26.77   |
| 250.1 | 251.9 | 34.01 | 5.47  | 26.84   |
| 275.0 | 277.0 | 34.02 | 5.42  | 26.85   |
| 299.8 | 302.0 | 34.02 | 5.36  | 26.86   |
| 324.6 | 327.0 | 34.04 | 5.25  | 26.88   |
| 330.3 | 332.9 | 34.04 | 5.24  | 26.89   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 35.80

DATE 21/ 5/79

TIME (PST) 1253

TAPE: U00454 -111

LONG W 126 12.70

PASS NO. 57

STN: 203

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .2    | .2    | 31.30 | 12.00 | 23.72   |
| 2.1   | 2.1   | 31.32 | 11.93 | 23.75   |
| 5.0   | 5.0   | 31.34 | 11.91 | 23.77   |
| 10.0  | 10.0  | 31.33 | 11.72 | 23.79   |
| 14.9  | 15.0  | 31.57 | 11.25 | 24.07   |
| 19.9  | 20.0  | 31.91 | 10.63 | 24.44   |
| 25.0  | 25.1  | 32.20 | 9.85  | 24.79   |
| 29.9  | 30.1  | 32.36 | 9.33  | 25.00   |
| 34.9  | 35.0  | 32.44 | 9.00  | 25.11   |
| 39.8  | 40.0  | 32.64 | 8.51  | 25.35   |
| 44.7  | 45.0  | 32.73 | 8.36  | 25.44   |
| 49.8  | 50.1  | 32.80 | 8.29  | 25.51   |
| 60.0  | 60.3  | 33.05 | 8.16  | 25.72   |
| 69.6  | 70.0  | 33.23 | 8.05  | 25.88   |
| 79.5  | 80.0  | 33.32 | 7.96  | 25.96   |
| 90.5  | 91.0  | 33.67 | 7.71  | 26.27   |
| 100.4 | 101.0 | 33.68 | 7.66  | 26.29   |
| 110.2 | 110.9 | 33.76 | 7.48  | 26.38   |
| 120.3 | 121.0 | 33.89 | 7.18  | 26.52   |
| 130.2 | 131.0 | 33.92 | 7.04  | 26.56   |
| 140.0 | 140.9 | 33.93 | 6.90  | 26.59   |
| 150.0 | 151.0 | 33.94 | 6.74  | 26.62   |
| 160.0 | 161.0 | 33.97 | 6.43  | 26.69   |
| 164.7 | 165.8 | 33.99 | 6.31  | 26.72   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 41.40

DATE 21/ 5/79

TIME (PST) 1410

TAPE: U00454 -112

LONG W 126 19.10

PASS NO. 59

STN: 204

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .4    | .4    | 31.62 | 11.84 | 24.00   |
| 2.1   | 2.1   | 31.71 | 11.74 | 24.09   |
| 5.0   | 5.1   | 31.69 | 11.73 | 24.07   |
| 10.0  | 10.1  | 31.72 | 11.27 | 24.18   |
| 15.0  | 15.0  | 31.82 | 10.77 | 24.35   |
| 20.0  | 20.1  | 32.09 | 10.05 | 24.67   |
| 24.9  | 25.0  | 32.21 | 9.57  | 24.84   |
| 29.8  | 29.9  | 32.40 | 9.05  | 25.08   |
| 34.9  | 35.1  | 32.55 | 8.59  | 25.26   |
| 39.8  | 40.0  | 32.70 | 8.28  | 25.43   |
| 44.7  | 44.9  | 32.78 | 8.22  | 25.50   |
| 49.7  | 50.0  | 32.81 | 8.23  | 25.52   |
| 59.6  | 60.0  | 33.06 | 8.08  | 25.74   |
| 69.7  | 70.1  | 33.32 | 7.96  | 25.96   |
| 79.5  | 80.0  | 33.41 | 7.90  | 26.04   |
| 90.4  | 90.9  | 33.56 | 7.82  | 26.17   |
| 100.3 | 100.9 | 33.64 | 7.73  | 26.25   |
| 110.3 | 110.9 | 33.68 | 7.68  | 26.29   |
| 120.1 | 120.9 | 33.76 | 7.56  | 26.36   |
| 130.1 | 130.9 | 33.84 | 7.47  | 26.44   |
| 140.1 | 141.0 | 33.87 | 7.28  | 26.49   |
| 150.1 | 151.1 | 33.89 | 7.20  | 26.52   |
| 159.9 | 161.0 | 33.91 | 7.06  | 26.55   |
| 169.9 | 171.0 | 33.91 | 7.04  | 26.56   |
| 179.8 | 181.0 | 33.92 | 7.01  | 26.57   |
| 189.7 | 191.0 | 33.92 | 6.94  | 26.58   |
| 199.7 | 201.0 | 33.95 | 6.75  | 26.63   |
| 225.5 | 227.1 | 33.96 | 6.20  | 26.71   |
| 250.3 | 252.0 | 34.00 | 5.94  | 26.77   |
| 274.9 | 276.9 | 34.02 | 5.62  | 26.83   |
| 299.9 | 302.1 | 34.03 | 5.52  | 26.85   |
| 324.5 | 327.0 | 34.04 | 5.41  | 26.87   |
| 350.2 | 352.9 | 34.06 | 5.33  | 26.89   |
| 375.2 | 378.1 | 34.07 | 5.22  | 26.91   |
| 399.8 | 402.9 | 34.09 | 5.04  | 26.95   |
| 424.5 | 427.8 | 34.11 | 4.88  | 26.98   |
| 450.2 | 453.8 | 34.12 | 4.76  | 27.01   |
| 475.2 | 479.1 | 34.12 | 4.69  | 27.02   |
| 500.0 | 504.1 | 34.14 | 4.64  | 27.04   |
| 511.5 | 515.7 | 34.15 | 4.63  | 27.04   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 48.00

DATE 21/ 5/79

TIME (PST) 1534

TAPE: U00454 -113

LONG W 126 26.00

PASS NO. 61

STN: 205

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 31.73 | 11.86 | 24.08   |
| 2.1   | 2.1   | 31.73 | 11.55 | 24.13   |
| 4.8   | 4.9   | 31.72 | 11.60 | 24.12   |
| 10.0  | 10.0  | 31.72 | 11.40 | 24.15   |
| 15.0  | 15.0  | 31.73 | 11.09 | 24.22   |
| 19.8  | 19.9  | 31.80 | 10.89 | 24.31   |
| 25.0  | 25.1  | 32.31 | 9.67  | 24.91   |
| 29.9  | 30.0  | 32.42 | 9.30  | 25.06   |
| 34.8  | 35.0  | 32.53 | 8.75  | 25.22   |
| 39.8  | 40.0  | 32.55 | 8.55  | 25.27   |
| 44.7  | 44.9  | 32.59 | 8.45  | 25.31   |
| 49.7  | 49.9  | 32.65 | 8.30  | 25.39   |
| 59.7  | 60.0  | 32.83 | 8.08  | 25.56   |
| 69.7  | 70.1  | 32.96 | 7.96  | 25.68   |
| 79.7  | 80.2  | 33.29 | 7.93  | 25.95   |
| 89.5  | 90.0  | 33.50 | 7.80  | 26.13   |
| 100.3 | 100.9 | 33.57 | 7.80  | 26.18   |
| 110.3 | 111.0 | 33.72 | 7.68  | 26.32   |
| 120.3 | 121.0 | 33.78 | 7.59  | 26.38   |
| 130.2 | 131.1 | 33.82 | 7.47  | 26.43   |
| 140.1 | 141.0 | 33.84 | 7.43  | 26.44   |
| 150.0 | 151.0 | 33.87 | 7.28  | 26.49   |
| 160.0 | 161.0 | 33.92 | 6.99  | 26.57   |
| 169.9 | 171.0 | 33.93 | 6.82  | 26.60   |
| 172.5 | 173.6 | 33.94 | 6.78  | 26.61   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 04 CODE  
 LAT N 48 54.00  
 DATE 21/ 5/79  
 TIME (PST) 1650

TAPE: U00454 -114  
 LONG W 126 33.00  
 PASS NO. 63  
 STN: 206

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 31.43 | 11.35 | 23.94   |
| 2.1   | 2.1   | 31.44 | 11.31 | 23.96   |
| 4.9   | 5.0   | 31.45 | 11.30 | 23.96   |
| 10.0  | 10.0  | 31.43 | 11.26 | 23.95   |
| 14.9  | 14.9  | 31.59 | 10.54 | 24.20   |
| 19.9  | 20.0  | 31.77 | 10.12 | 24.41   |
| 24.6  | 24.7  | 32.06 | 9.49  | 24.74   |
| 29.8  | 29.9  | 32.20 | 9.29  | 24.88   |
| 34.8  | 35.0  | 32.33 | 9.02  | 25.03   |
| 39.8  | 40.0  | 32.57 | 8.41  | 25.30   |
| 44.7  | 44.9  | 32.64 | 8.28  | 25.38   |
| 49.9  | 50.1  | 32.76 | 8.15  | 25.49   |
| 59.7  | 60.0  | 32.90 | 8.02  | 25.62   |
| 69.7  | 70.1  | 33.12 | 7.96  | 25.81   |
| 79.6  | 80.0  | 33.34 | 7.94  | 25.98   |
| 89.5  | 90.0  | 33.48 | 7.83  | 26.11   |
| 100.3 | 100.9 | 33.58 | 7.81  | 26.19   |
| 110.5 | 111.1 | 33.63 | 7.78  | 26.23   |
| 120.3 | 121.1 | 33.73 | 7.66  | 26.33   |
| 130.1 | 130.9 | 33.76 | 7.57  | 26.36   |
| 139.9 | 140.8 | 33.83 | 7.43  | 26.44   |
| 150.2 | 151.1 | 33.86 | 7.30  | 26.48   |
| 159.9 | 161.0 | 33.89 | 7.17  | 26.53   |
| 169.8 | 171.0 | 33.91 | 7.01  | 26.56   |
| 179.8 | 181.0 | 33.93 | 6.91  | 26.59   |
| 189.7 | 190.9 | 33.96 | 6.58  | 26.65   |
| 199.7 | 201.1 | 33.96 | 6.49  | 26.67   |
| 225.5 | 227.0 | 33.97 | 6.25  | 26.71   |
| 250.3 | 252.1 | 33.97 | 5.95  | 26.75   |
| 275.1 | 277.1 | 33.99 | 5.85  | 26.77   |
| 299.8 | 302.0 | 34.01 | 5.70  | 26.81   |
| 324.7 | 327.1 | 34.02 | 5.63  | 26.83   |
| 350.3 | 352.9 | 34.03 | 5.57  | 26.84   |
| 375.1 | 378.0 | 34.05 | 5.38  | 26.88   |
| 399.9 | 403.0 | 34.05 | 5.34  | 26.88   |
| 408.9 | 412.0 | 34.05 | 5.33  | 26.89   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 49 1.30

DATE 21/ 5/79

TIME (PST) 1826

TAPE: U00454 -115

LONG W 126 41.80

PASS NO. 65

STN: 207

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .9    | .9    | 31.82 | 11.33 | 24.24   |
| 2.0   | 2.0   | 31.80 | 11.24 | 24.25   |
| 5.0   | 5.0   | 31.81 | 11.26 | 24.25   |
| 10.0  | 10.1  | 31.85 | 11.06 | 24.32   |
| 15.0  | 15.0  | 32.09 | 10.25 | 24.64   |
| 19.9  | 20.0  | 32.33 | 9.30  | 24.99   |
| 25.0  | 25.1  | 32.43 | 8.97  | 25.11   |
| 29.8  | 30.0  | 32.50 | 8.75  | 25.20   |
| 34.8  | 35.0  | 32.53 | 8.55  | 25.26   |
| 39.8  | 40.0  | 32.60 | 8.39  | 25.33   |
| 44.8  | 45.0  | 32.73 | 8.25  | 25.45   |
| 49.8  | 50.1  | 32.81 | 8.16  | 25.53   |
| 59.7  | 60.0  | 33.02 | 8.01  | 25.72   |
| 69.6  | 70.0  | 33.14 | 7.98  | 25.82   |
| 80.5  | 80.9  | 33.28 | 7.89  | 25.94   |
| 90.5  | 91.0  | 33.47 | 7.77  | 26.11   |
| 100.3 | 101.0 | 33.63 | 7.76  | 26.23   |
| 110.3 | 111.0 | 33.73 | 7.62  | 26.34   |
| 120.4 | 121.1 | 33.77 | 7.56  | 26.37   |
| 130.4 | 131.3 | 33.80 | 7.50  | 26.41   |
| 140.1 | 141.0 | 33.83 | 7.21  | 26.47   |
| 150.0 | 151.0 | 33.90 | 6.98  | 26.56   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 49 7.30

DATE 21/ 5/79

TIME (PST) 1943

TAPE: U00454 -116

LONG W 126 48.90

PASS NO. 67

STN: 208

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.9   | 1.9   | 31.69 | 12.19 | 23.99   |
| 5.0   | 5.0   | 31.68 | 11.83 | 24.05   |
| 9.8   | 9.9   | 31.75 | 11.05 | 24.24   |
| 15.0  | 15.1  | 32.14 | 9.92  | 24.74   |
| 19.9  | 20.0  | 32.23 | 9.50  | 24.87   |
| 24.8  | 24.9  | 32.33 | 9.27  | 24.99   |
| 29.7  | 29.9  | 32.43 | 8.61  | 25.17   |
| 34.8  | 35.0  | 32.51 | 8.42  | 25.26   |
| 39.9  | 40.1  | 32.64 | 8.17  | 25.40   |
| 44.8  | 45.0  | 32.77 | 8.01  | 25.52   |
| 49.8  | 50.1  | 32.84 | 7.98  | 25.58   |
| 59.6  | 60.0  | 32.96 | 7.96  | 25.68   |
| 69.6  | 70.0  | 33.32 | 7.86  | 25.98   |
| 80.5  | 81.0  | 33.41 | 7.83  | 26.05   |
| 90.4  | 91.0  | 33.58 | 7.58  | 26.22   |
| 100.5 | 101.1 | 33.67 | 7.46  | 26.31   |
| 110.4 | 111.0 | 33.83 | 7.07  | 26.49   |
| 120.2 | 121.0 | 33.90 | 6.92  | 26.57   |
| 130.2 | 131.0 | 33.94 | 6.69  | 26.63   |
| 140.0 | 140.9 | 33.96 | 6.57  | 26.66   |
| 147.7 | 148.7 | 33.96 | 6.48  | 26.67   |

CRUISE NO: 04 CODE

LAT N 49 13.70

DATE 21/ 5/79

TIME (PST) 2100

TAPE: U00454 -117

LONG W 126 57.10

PASS NO. 69

STN: 209

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .4    | .4    | 31.71 | 11.64 | 24.10   |
| 2.1   | 2.1   | 31.68 | 11.61 | 24.09   |
| 4.9   | 4.9   | 31.67 | 11.65 | 24.07   |
| 10.0  | 10.0  | 31.81 | 11.06 | 24.29   |
| 15.0  | 15.1  | 31.92 | 10.29 | 24.50   |
| 20.0  | 20.1  | 32.09 | 9.55  | 24.75   |
| 24.9  | 25.0  | 32.22 | 9.19  | 24.91   |
| 29.8  | 29.9  | 32.33 | 9.01  | 25.03   |
| 34.8  | 35.0  | 32.67 | 8.42  | 25.38   |
| 39.7  | 39.9  | 32.83 | 8.16  | 25.55   |
| 44.7  | 44.9  | 33.02 | 7.93  | 25.73   |
| 49.7  | 50.0  | 33.12 | 7.89  | 25.81   |
| 59.6  | 60.0  | 33.30 | 7.80  | 25.97   |
| 69.5  | 69.9  | 33.46 | 7.66  | 26.12   |
| 79.6  | 80.0  | 33.68 | 7.45  | 26.32   |
| 90.5  | 91.0  | 33.75 | 7.38  | 26.38   |
| 100.3 | 101.0 | 33.77 | 7.33  | 26.40   |
| 110.3 | 111.0 | 33.80 | 7.31  | 26.43   |
| 120.3 | 121.1 | 33.86 | 7.17  | 26.50   |
| 130.0 | 130.8 | 33.89 | 7.12  | 26.53   |
| 139.1 | 140.0 | 33.93 | 6.95  | 26.58   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 49 21.53

DATE 21/ 5/79

TIME (PST) 2214

TAPE: U00454 -118

LONG W 127 5.60

PASS NO. 71

STN: 210

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .5    | .5    | 31.83 | 11.19 | 24.28   |
| 2.0   | 2.0   | 31.85 | 11.18 | 24.29   |
| 5.0   | 5.0   | 31.83 | 11.20 | 24.27   |
| 9.8   | 9.9   | 31.84 | 11.16 | 24.29   |
| 14.9  | 15.0  | 31.94 | 10.80 | 24.43   |
| 19.8  | 19.9  | 32.01 | 10.40 | 24.55   |
| 24.9  | 25.0  | 32.16 | 9.43  | 24.83   |
| 29.8  | 30.0  | 32.26 | 9.10  | 24.96   |
| 34.9  | 35.1  | 32.33 | 8.89  | 25.05   |
| 39.7  | 39.9  | 32.48 | 8.67  | 25.20   |
| 44.7  | 45.0  | 32.65 | 8.42  | 25.37   |
| 49.8  | 50.0  | 32.89 | 8.06  | 25.61   |
| 59.7  | 60.0  | 33.14 | 7.89  | 25.83   |
| 69.6  | 70.0  | 33.41 | 7.68  | 26.07   |
| 79.5  | 80.0  | 33.57 | 7.50  | 26.23   |
| 89.5  | 90.0  | 33.77 | 7.42  | 26.39   |
| 100.4 | 101.0 | 33.80 | 7.28  | 26.44   |
| 110.3 | 111.0 | 33.86 | 7.12  | 26.51   |
| 120.2 | 121.0 | 33.90 | 6.98  | 26.56   |
| 130.2 | 131.0 | 33.91 | 6.92  | 26.58   |
| 140.1 | 141.0 | 33.92 | 6.86  | 26.59   |
| 150.1 | 151.1 | 33.93 | 6.81  | 26.60   |
| 160.0 | 161.1 | 33.94 | 6.75  | 26.62   |
| 169.9 | 171.1 | 33.95 | 6.69  | 26.64   |
| 179.8 | 181.0 | 33.95 | 6.61  | 26.65   |
| 189.7 | 191.0 | 33.96 | 6.52  | 26.67   |
| 199.6 | 201.0 | 33.96 | 6.49  | 26.67   |
| 225.3 | 226.9 | 33.98 | 6.17  | 26.72   |
| 250.3 | 252.1 | 33.98 | 6.05  | 26.74   |
| 275.1 | 277.2 | 34.00 | 5.80  | 26.79   |
| 299.7 | 301.9 | 34.00 | 5.62  | 26.81   |
| 324.5 | 326.9 | 34.00 | 5.50  | 26.83   |
| 350.2 | 352.9 | 34.02 | 5.36  | 26.86   |
| 375.1 | 378.0 | 34.03 | 5.23  | 26.88   |
| 399.8 | 402.9 | 34.05 | 5.14  | 26.91   |
| 424.6 | 428.0 | 34.07 | 4.95  | 26.95   |
| 450.5 | 454.1 | 34.08 | 4.80  | 26.97   |
| 475.0 | 478.9 | 34.10 | 4.71  | 26.99   |
| 499.9 | 504.0 | 34.11 | 4.61  | 27.01   |
| 499.9 | 504.0 | 34.11 | 4.61  | 27.01   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 04 CODE  
 LAT N 49 28.37  
 DATE 21/ 5/79  
 TIME (PST) 2344

TAPE: U00454 -119  
 LONG W 127 13.72  
 PASS NO. 73  
 STN: 211

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .5    | .5    | 32.10 | 10.97 | 24.53   |
| 2.1   | 2.1   | 32.10 | 10.97 | 24.53   |
| 5.0   | 5.0   | 32.09 | 10.95 | 24.52   |
| 10.0  | 10.0  | 32.11 | 10.92 | 24.54   |
| 14.9  | 15.0  | 32.07 | 10.63 | 24.56   |
| 20.0  | 20.1  | 32.06 | 10.20 | 24.63   |
| 24.9  | 25.0  | 32.22 | 9.70  | 24.84   |
| 29.8  | 30.0  | 32.30 | 9.45  | 24.94   |
| 34.9  | 35.1  | 32.38 | 8.84  | 25.09   |
| 39.8  | 40.0  | 32.48 | 8.47  | 25.23   |
| 44.9  | 45.1  | 32.60 | 8.09  | 25.38   |
| 49.6  | 49.9  | 32.69 | 8.00  | 25.46   |
| 59.7  | 60.0  | 32.87 | 7.71  | 25.65   |
| 69.6  | 70.0  | 33.02 | 7.71  | 25.76   |
| 80.5  | 81.0  | 33.27 | 7.78  | 25.95   |
| 90.4  | 91.0  | 33.50 | 7.72  | 26.14   |
| 100.3 | 101.0 | 33.58 | 7.60  | 26.22   |
| 110.3 | 111.0 | 33.70 | 7.44  | 26.33   |
| 120.3 | 121.0 | 33.75 | 7.37  | 26.39   |
| 130.2 | 131.0 | 33.82 | 7.22  | 26.46   |
| 140.0 | 140.9 | 33.85 | 7.08  | 26.51   |
| 149.9 | 150.9 | 33.90 | 6.91  | 26.57   |
| 159.9 | 161.0 | 33.92 | 6.84  | 26.59   |
| 169.9 | 171.0 | 33.94 | 6.70  | 26.62   |
| 179.7 | 180.9 | 33.94 | 6.63  | 26.64   |
| 189.7 | 191.0 | 33.96 | 6.43  | 26.68   |
| 199.7 | 201.1 | 33.98 | 6.15  | 26.73   |
| 225.5 | 227.1 | 33.99 | 5.86  | 26.78   |
| 250.3 | 252.1 | 34.00 | 5.64  | 26.81   |
| 275.0 | 277.0 | 34.00 | 5.50  | 26.83   |
| 299.9 | 302.1 | 34.02 | 5.48  | 26.84   |
| 324.6 | 327.0 | 34.03 | 5.43  | 26.86   |
| 350.3 | 353.0 | 34.04 | 5.29  | 26.88   |
| 375.1 | 378.0 | 34.06 | 5.09  | 26.92   |
| 399.9 | 403.0 | 34.07 | 4.88  | 26.95   |
| 424.6 | 428.0 | 34.08 | 4.79  | 26.97   |
| 450.3 | 453.9 | 34.09 | 4.70  | 26.99   |
| 475.2 | 479.1 | 34.11 | 4.59  | 27.02   |
| 499.9 | 504.0 | 34.13 | 4.49  | 27.05   |
| 507.8 | 511.9 | 34.13 | 4.48  | 27.05   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 04 CODE  
 LAT N 49 33.64  
 DATE 22/ 5/79  
 TIME (PST) 0115

TAPE: U00454 -120  
 LONG W 127 20.38  
 PASS NO. 75  
 STN: 212

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .2    | .2    | 31.75 | 11.30 | 24.20   |
| 2.1   | 2.1   | 31.81 | 11.14 | 24.27   |
| 5.0   | 5.0   | 31.83 | 11.16 | 24.29   |
| 9.9   | 9.9   | 31.96 | 10.40 | 24.51   |
| 15.0  | 15.1  | 32.03 | 9.94  | 24.65   |
| 19.8  | 19.9  | 32.31 | 9.17  | 24.99   |
| 24.8  | 24.9  | 32.48 | 8.71  | 25.19   |
| 29.8  | 29.9  | 32.62 | 8.50  | 25.34   |
| 34.9  | 35.0  | 32.79 | 8.25  | 25.51   |
| 39.8  | 40.1  | 33.01 | 8.04  | 25.70   |
| 44.8  | 45.1  | 33.09 | 7.93  | 25.79   |
| 49.7  | 50.0  | 33.30 | 7.70  | 25.98   |
| 59.7  | 60.1  | 33.63 | 7.40  | 26.29   |
| 70.5  | 70.9  | 33.78 | 7.35  | 26.41   |
| 79.7  | 80.2  | 33.80 | 7.35  | 26.43   |
| 90.4  | 91.0  | 33.82 | 7.28  | 26.46   |
| 100.2 | 100.9 | 33.82 | 7.17  | 26.47   |
| 110.2 | 111.0 | 33.87 | 6.89  | 26.54   |
| 120.3 | 121.1 | 33.92 | 6.71  | 26.61   |
| 130.0 | 130.9 | 33.94 | 6.56  | 26.65   |
| 136.0 | 136.9 | 33.95 | 6.49  | 26.66   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 49 38.80

DATE 22/ 5/79

TIME (PST) 0236

TAPE: U00454 -121

LONG W 127 27.00

PASS NO. 77

STN: 213

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.1   | 3.1   | 31.81 | 10.90 | 24.32   |
| 4.9   | 4.9   | 31.81 | 10.89 | 24.31   |
| 10.0  | 10.0  | 31.80 | 10.79 | 24.32   |
| 14.8  | 14.9  | 31.83 | 10.51 | 24.40   |
| 19.6  | 19.7  | 31.93 | 10.01 | 24.56   |
| 24.8  | 24.9  | 32.43 | 8.97  | 25.11   |
| 29.7  | 29.9  | 32.47 | 8.86  | 25.16   |
| 35.5  | 35.7  | 32.69 | 8.50  | 25.39   |
| 39.7  | 39.9  | 32.80 | 8.35  | 25.50   |
| 44.8  | 45.1  | 33.15 | 7.84  | 25.85   |
| 49.8  | 50.1  | 33.17 | 7.82  | 25.87   |
| 59.6  | 60.0  | 33.53 | 7.48  | 26.19   |
| 69.7  | 70.1  | 33.72 | 7.25  | 26.38   |
| 80.4  | 80.9  | 33.90 | 6.88  | 26.57   |
| 90.5  | 91.1  | 33.92 | 6.63  | 26.62   |
| 100.3 | 100.9 | 33.93 | 6.51  | 26.64   |
| 110.4 | 111.1 | 33.94 | 6.39  | 26.67   |
| 120.2 | 121.0 | 33.95 | 6.35  | 26.68   |
| 130.2 | 131.0 | 33.95 | 6.30  | 26.69   |
| 140.0 | 141.0 | 33.95 | 6.28  | 26.69   |
| 149.9 | 150.9 | 33.95 | 6.26  | 26.69   |
| 160.0 | 161.1 | 33.95 | 6.25  | 26.69   |
| 169.8 | 171.0 | 33.96 | 6.21  | 26.70   |
| 179.6 | 180.9 | 33.96 | 6.18  | 26.71   |
| 189.6 | 190.9 | 33.96 | 6.13  | 26.72   |
| 199.6 | 201.0 | 33.97 | 6.10  | 26.73   |
| 225.4 | 227.0 | 33.99 | 5.88  | 26.77   |
| 250.2 | 252.0 | 34.01 | 5.55  | 26.83   |
| 275.0 | 277.1 | 34.02 | 5.42  | 26.85   |
| 299.9 | 302.2 | 34.02 | 5.35  | 26.86   |
| 324.6 | 327.1 | 34.03 | 5.33  | 26.87   |
| 350.3 | 353.0 | 34.03 | 5.27  | 26.88   |
| 354.0 | 356.8 | 34.04 | 5.26  | 26.88   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 49 42.70

DATE 22/ 5/79

TIME (PST) 0328

TAPE: U00454 -122

LONG W 127 32.10

PASS -NO. 79

STN: 214

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .1    | .1    | 31.91 | 10.80 | 24.41   |
| 2.4   | 2.4   | 31.91 | 10.80 | 24.40   |
| 5.0   | 5.0   | 31.91 | 10.81 | 24.40   |
| 10.1  | 10.1  | 31.91 | 10.79 | 24.41   |
| 15.0  | 15.1  | 32.00 | 10.80 | 24.48   |
| 19.9  | 20.0  | 32.00 | 10.47 | 24.53   |
| 24.9  | 25.0  | 32.16 | 9.71  | 24.78   |
| 29.8  | 30.0  | 32.23 | 9.27  | 24.91   |
| 34.7  | 34.9  | 32.31 | 8.97  | 25.02   |
| 39.8  | 40.0  | 32.39 | 8.88  | 25.09   |
| 44.7  | 44.9  | 32.50 | 8.49  | 25.24   |
| 49.7  | 50.0  | 32.62 | 8.24  | 25.37   |
| 59.6  | 60.0  | 32.95 | 7.91  | 25.68   |
| 69.6  | 70.0  | 33.34 | 7.70  | 26.02   |
| 79.6  | 80.1  | 33.54 | 7.46  | 26.21   |
| 90.5  | 91.0  | 33.79 | 7.05  | 26.46   |
| 100.2 | 100.8 | 33.84 | 7.00  | 26.51   |
| 110.3 | 111.0 | 33.91 | 6.81  | 26.59   |
| 120.4 | 121.1 | 33.93 | 6.69  | 26.62   |
| 130.2 | 131.0 | 33.95 | 6.58  | 26.65   |
| 140.2 | 141.1 | 33.96 | 6.55  | 26.66   |
| 149.9 | 150.9 | 33.96 | 6.46  | 26.67   |
| 159.9 | 160.9 | 33.96 | 6.42  | 26.68   |
| 169.8 | 171.0 | 33.97 | 6.27  | 26.70   |
| 179.9 | 181.1 | 33.97 | 6.20  | 26.71   |
| 189.7 | 191.0 | 33.97 | 6.05  | 26.73   |
| 199.6 | 201.0 | 33.98 | 5.90  | 26.76   |
| 225.4 | 227.0 | 34.01 | 5.64  | 26.81   |
| 250.3 | 252.1 | 34.02 | 5.53  | 26.84   |
| 275.0 | 277.0 | 34.03 | 5.39  | 26.86   |
| 299.8 | 302.0 | 34.04 | 5.23  | 26.89   |
| 325.5 | 328.0 | 34.06 | 5.07  | 26.92   |
| 350.3 | 353.0 | 34.06 | 4.97  | 26.94   |
| 375.0 | 377.9 | 34.07 | 4.85  | 26.96   |
| 399.9 | 403.1 | 34.09 | 4.76  | 26.98   |
| 424.7 | 428.1 | 34.09 | 4.70  | 26.99   |
| 450.5 | 454.1 | 34.10 | 4.68  | 27.00   |
| 475.1 | 479.0 | 34.13 | 4.57  | 27.03   |
| 499.9 | 504.0 | 34.15 | 4.46  | 27.06   |
| 522.7 | 527.0 | 34.16 | 4.40  | 27.07   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 8.50

DATE 24/ 5/79

TIME (PST) 0247

TAPE: U00454 -148

LONG W 126 .00

PASS NO. 83

STN: 111

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 32.51 | 11.97 | 24.66   |
| 5.0   | 5.1   | 32.51 | 11.97 | 24.66   |
| 10.0  | 10.0  | 32.51 | 11.96 | 24.66   |
| 15.0  | 15.0  | 32.50 | 11.84 | 24.68   |
| 19.9  | 20.0  | 32.55 | 11.46 | 24.79   |
| 24.7  | 24.9  | 32.55 | 11.27 | 24.82   |
| 29.9  | 30.0  | 32.63 | 9.99  | 25.10   |
| 34.7  | 34.9  | 32.65 | 9.64  | 25.18   |
| 39.7  | 39.9  | 32.71 | 9.14  | 25.30   |
| 44.8  | 45.1  | 32.76 | 9.11  | 25.35   |
| 49.7  | 50.0  | 32.78 | 9.00  | 25.38   |
| 59.7  | 60.0  | 32.86 | 8.83  | 25.47   |
| 69.6  | 70.0  | 33.00 | 8.60  | 25.61   |
| 79.5  | 80.0  | 33.29 | 8.27  | 25.89   |
| 90.4  | 90.9  | 33.42 | 8.08  | 26.02   |
| 100.4 | 101.0 | 33.53 | 8.05  | 26.12   |
| 110.4 | 111.0 | 33.63 | 8.03  | 26.19   |
| 120.2 | 121.0 | 33.69 | 7.83  | 26.27   |
| 130.2 | 131.0 | 33.73 | 7.63  | 26.33   |
| 140.2 | 141.1 | 33.79 | 7.59  | 26.38   |
| 150.0 | 151.0 | 33.83 | 7.48  | 26.44   |
| 160.1 | 161.1 | 33.87 | 7.36  | 26.48   |
| 169.8 | 170.9 | 33.90 | 7.30  | 26.51   |
| 179.8 | 181.1 | 33.93 | 7.12  | 26.56   |
| 189.8 | 191.0 | 33.93 | 6.96  | 26.58   |
| 199.7 | 201.0 | 33.94 | 6.87  | 26.60   |
| 224.6 | 226.1 | 33.95 | 6.68  | 26.64   |
| 250.2 | 252.0 | 33.96 | 6.35  | 26.68   |
| 275.1 | 277.1 | 33.97 | 6.17  | 26.72   |
| 299.9 | 302.1 | 33.99 | 5.94  | 26.76   |
| 324.7 | 327.1 | 34.00 | 5.80  | 26.79   |
| 350.5 | 353.2 | 34.02 | 5.67  | 26.82   |
| 375.0 | 377.9 | 34.03 | 5.53  | 26.84   |
| 400.0 | 403.1 | 34.03 | 5.31  | 26.87   |
| 424.8 | 428.1 | 34.06 | 5.24  | 26.90   |
| 450.4 | 453.9 | 34.08 | 5.10  | 26.94   |
| 475.2 | 479.0 | 34.10 | 4.93  | 26.97   |
| 500.0 | 504.0 | 34.12 | 4.74  | 27.01   |
| 503.7 | 507.8 | 34.12 | 4.72  | 27.01   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 10.60

DATE 24/ 5/79

TIME (PST) 0333

TAPE: U00454 -149

LONG W 125 56.20

PASS NO. 85

SYN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 32.07 | 11.42 | 24.42   |
| 4.9   | 5.0   | 32.06 | 11.43 | 24.42   |
| 9.9   | 10.0  | 32.23 | 11.45 | 24.54   |
| 14.9  | 15.0  | 32.28 | 11.23 | 24.62   |
| 19.9  | 20.0  | 32.26 | 11.02 | 24.64   |
| 25.0  | 25.1  | 32.28 | 10.76 | 24.70   |
| 29.5  | 29.7  | 32.36 | 10.20 | 24.86   |
| 34.8  | 35.0  | 32.56 | 9.19  | 25.18   |
| 39.8  | 40.0  | 32.61 | 8.84  | 25.27   |
| 44.7  | 44.9  | 32.65 | 8.64  | 25.33   |
| 49.8  | 50.0  | 32.67 | 8.47  | 25.37   |
| 59.6  | 60.0  | 32.76 | 8.27  | 25.48   |
| 69.5  | 69.9  | 32.99 | 8.16  | 25.68   |
| 79.6  | 80.0  | 33.18 | 7.98  | 25.85   |
| 90.5  | 91.0  | 33.41 | 7.99  | 26.03   |
| 100.3 | 100.9 | 33.54 | 7.89  | 26.15   |
| 110.2 | 110.9 | 33.57 | 7.85  | 26.18   |
| 120.3 | 121.0 | 33.67 | 7.80  | 26.26   |
| 130.4 | 131.2 | 33.73 | 7.70  | 26.32   |
| 140.3 | 141.2 | 33.78 | 7.69  | 26.37   |
| 149.8 | 150.8 | 33.85 | 7.59  | 26.43   |
| 159.9 | 161.0 | 33.87 | 7.49  | 26.46   |
| 169.9 | 171.0 | 33.89 | 7.29  | 26.51   |
| 179.8 | 181.0 | 33.90 | 7.25  | 26.52   |
| 189.8 | 191.0 | 33.92 | 7.15  | 26.55   |
| 199.6 | 200.9 | 33.94 | 7.06  | 26.58   |
| 225.4 | 227.0 | 33.97 | 6.62  | 26.66   |
| 250.3 | 252.1 | 33.97 | 6.30  | 26.70   |
| 275.0 | 276.9 | 33.98 | 6.14  | 26.73   |
| 299.8 | 302.0 | 33.99 | 5.92  | 26.77   |
| 324.6 | 327.0 | 34.00 | 5.73  | 26.80   |
| 350.3 | 352.9 | 34.04 | 5.53  | 26.85   |
| 375.1 | 377.9 | 34.04 | 5.38  | 26.88   |
| 400.0 | 403.1 | 34.05 | 5.24  | 26.90   |
| 424.7 | 428.0 | 34.07 | 5.09  | 26.93   |
| 449.6 | 453.1 | 34.08 | 4.97  | 26.95   |
| 475.0 | 478.8 | 34.09 | 4.87  | 26.97   |
| 500.0 | 504.0 | 34.12 | 4.72  | 27.01   |
| 500.0 | 504.0 | 34.12 | 4.72  | 27.01   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 12.90

DATE 24/ 5/79

TIME (PST) 0445

TAPE: U00454 -150

LONG W 125 52.00

PASS NO. 87

STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .6    | .6    | 31.76 | 11.76 | 24.12   |
| 2.0   | 2.0   | 31.75 | 11.75 | 24.11   |
| 4.9   | 4.9   | 31.75 | 11.75 | 24.11   |
| 9.9   | 9.9   | 31.80 | 11.63 | 24.17   |
| 14.8  | 14.9  | 31.96 | 11.27 | 24.37   |
| 19.9  | 20.0  | 32.03 | 11.43 | 24.39   |
| 24.8  | 25.0  | 32.10 | 10.90 | 24.54   |
| 29.8  | 29.9  | 32.12 | 10.73 | 24.59   |
| 34.8  | 35.0  | 32.41 | 9.59  | 25.00   |
| 39.8  | 40.0  | 32.49 | 9.12  | 25.14   |
| 44.7  | 44.9  | 32.58 | 8.70  | 25.27   |
| 49.7  | 50.0  | 32.68 | 8.42  | 25.39   |
| 59.6  | 59.9  | 32.80 | 8.32  | 25.50   |
| 69.7  | 70.1  | 32.96 | 8.17  | 25.65   |
| 79.6  | 80.1  | 33.15 | 8.14  | 25.80   |
| 89.5  | 90.0  | 33.39 | 7.97  | 26.02   |
| 99.6  | 100.2 | 33.51 | 7.90  | 26.12   |
| 110.4 | 111.1 | 33.62 | 7.79  | 26.22   |
| 120.5 | 121.2 | 33.65 | 7.76  | 26.25   |
| 130.3 | 131.1 | 33.70 | 7.67  | 26.30   |
| 140.1 | 141.0 | 33.75 | 7.62  | 26.35   |
| 150.0 | 151.0 | 33.78 | 7.53  | 26.39   |
| 160.0 | 161.1 | 33.85 | 7.41  | 26.46   |
| 169.9 | 171.0 | 33.89 | 7.23  | 26.51   |
| 179.8 | 181.0 | 33.92 | 7.07  | 26.56   |
| 189.7 | 190.9 | 33.94 | 6.93  | 26.60   |
| 199.6 | 200.9 | 33.95 | 6.94  | 26.60   |
| 225.5 | 227.0 | 33.96 | 6.69  | 26.65   |
| 250.0 | 251.8 | 33.99 | 6.30  | 26.72   |
| 275.1 | 277.1 | 34.00 | 6.03  | 26.76   |
| 300.0 | 302.2 | 34.01 | 5.81  | 26.80   |
| 324.6 | 327.0 | 34.03 | 5.62  | 26.83   |
| 350.3 | 352.9 | 34.05 | 5.29  | 26.89   |
| 375.1 | 378.0 | 34.07 | 5.11  | 26.92   |
| 399.9 | 403.0 | 34.10 | 4.92  | 26.97   |
| 424.7 | 428.0 | 34.10 | 4.91  | 26.97   |
| 435.6 | 439.0 | 34.10 | 4.89  | 26.98   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 04 CODE  
 LAT N 48 15.10  
 DATE 24/ 5/79  
 TIME (PST) 0528

TAPE: U00454 -151  
 LONG W 125 47.70  
 PASS NO. 1  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.9   | 5.0   | 31.50 | 12.18 | 23.84   |
| 10.0  | 10.0  | 31.49 | 12.18 | 23.83   |
| 14.9  | 15.0  | 31.59 | 11.90 | 23.97   |
| 20.0  | 20.1  | 31.81 | 11.33 | 24.23   |
| 24.9  | 25.1  | 31.93 | 10.67 | 24.44   |
| 29.9  | 30.0  | 32.12 | 10.06 | 24.69   |
| 34.9  | 35.1  | 32.37 | 9.26  | 25.02   |
| 39.9  | 40.1  | 32.46 | 8.95  | 25.14   |
| 44.7  | 45.0  | 32.58 | 8.66  | 25.28   |
| 49.7  | 49.9  | 32.65 | 8.52  | 25.36   |
| 59.7  | 60.0  | 32.82 | 8.29  | 25.52   |
| 69.7  | 70.1  | 32.96 | 8.10  | 25.66   |
| 79.5  | 79.9  | 33.12 | 8.12  | 25.78   |
| 90.5  | 91.0  | 33.25 | 8.05  | 25.90   |
| 100.3 | 100.9 | 33.42 | 7.97  | 26.04   |
| 110.2 | 110.9 | 33.56 | 7.89  | 26.16   |
| 120.3 | 121.1 | 33.69 | 7.74  | 26.28   |
| 130.3 | 131.1 | 33.75 | 7.64  | 26.34   |
| 140.3 | 141.1 | 33.80 | 7.51  | 26.40   |
| 150.0 | 151.0 | 33.84 | 7.40  | 26.45   |
| 159.9 | 161.0 | 33.86 | 7.30  | 26.48   |
| 169.9 | 171.0 | 33.91 | 7.12  | 26.54   |
| 179.8 | 181.0 | 33.91 | 7.10  | 26.55   |
| 189.7 | 191.0 | 33.94 | 6.96  | 26.59   |
| 199.6 | 201.0 | 33.94 | 6.84  | 26.61   |
| 224.5 | 226.1 | 33.95 | 6.72  | 26.63   |
| 235.0 | 236.6 | 33.96 | 6.57  | 26.66   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 18.60

DATE 24/ 5/79

TIME (PST) 0607

TAPE: U00454 -152

LONG W 125 41.20

PASS NO. 3

STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .7    | .7    | 31.47 | 12.17 | 23.82   |
| 2.0   | 2.0   | 31.47 | 12.17 | 23.82   |
| 5.0   | 5.0   | 31.47 | 12.18 | 23.82   |
| 10.0  | 10.1  | 31.54 | 12.18 | 23.87   |
| 15.0  | 15.1  | 31.78 | 11.50 | 24.19   |
| 19.9  | 20.0  | 31.86 | 11.28 | 24.29   |
| 24.9  | 25.0  | 31.99 | 10.83 | 24.46   |
| 29.9  | 30.0  | 32.08 | 10.53 | 24.58   |
| 34.9  | 35.0  | 32.22 | 9.86  | 24.81   |
| 39.8  | 40.0  | 32.44 | 8.50  | 25.19   |
| 44.9  | 45.1  | 32.57 | 8.26  | 25.33   |
| 49.7  | 50.0  | 32.67 | 8.29  | 25.40   |
| 59.7  | 60.0  | 32.88 | 8.17  | 25.59   |
| 69.6  | 70.0  | 32.98 | 8.07  | 25.68   |
| 79.6  | 80.1  | 33.27 | 7.99  | 25.92   |
| 90.5  | 91.0  | 33.42 | 7.92  | 26.05   |
| 100.5 | 101.0 | 33.66 | 7.65  | 26.28   |
| 110.4 | 111.1 | 33.68 | 7.62  | 26.30   |
| 120.3 | 121.0 | 33.83 | 7.36  | 26.45   |
| 130.1 | 131.0 | 33.84 | 7.34  | 26.46   |
| 139.9 | 140.8 | 33.90 | 7.05  | 26.55   |
| 142.1 | 143.0 | 33.91 | 7.04  | 26.55   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 04 CODE  
 LAT N 48 22.00  
 DATE 24/ 5/79  
 TIME (PST) 0644

TAPE: U00454 -153  
 LONG W 125 34.70  
 PASS NO. 5  
 STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .6    | .6    | 31.16 | 11.89 | 23.63   |
| 2.0   | 2.0   | 31.15 | 11.88 | 23.62   |
| 4.9   | 4.9   | 31.14 | 11.90 | 23.61   |
| 10.0  | 10.0  | 31.49 | 10.84 | 24.08   |
| 15.0  | 15.1  | 31.29 | 11.25 | 23.84   |
| 20.0  | 20.0  | 31.83 | 9.67  | 24.53   |
| 24.8  | 24.9  | 31.92 | 9.31  | 24.66   |
| 29.9  | 30.0  | 32.12 | 8.97  | 24.87   |
| 34.8  | 35.0  | 32.22 | 8.83  | 24.97   |
| 39.8  | 40.0  | 32.48 | 8.54  | 25.22   |
| 44.9  | 45.1  | 32.58 | 8.40  | 25.32   |
| 49.8  | 50.0  | 32.67 | 8.20  | 25.42   |
| 59.8  | 60.1  | 32.82 | 8.20  | 25.54   |
| 69.5  | 69.9  | 33.09 | 8.14  | 25.76   |
| 79.5  | 80.0  | 33.53 | 7.84  | 26.15   |
| 90.4  | 90.9  | 33.61 | 7.55  | 26.25   |
| 100.4 | 101.0 | 33.79 | 7.06  | 26.46   |
| 110.4 | 111.1 | 33.90 | 6.74  | 26.59   |
| 120.2 | 121.0 | 33.92 | 6.52  | 26.63   |
| 130.2 | 131.0 | 33.93 | 6.49  | 26.65   |
| 140.0 | 140.9 | 33.95 | 6.36  | 26.68   |
| 141.1 | 142.0 | 33.95 | 6.34  | 26.68   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 25.50

DATE 24/ 5/79

TIME (PST) 0722

TAPE: U00454 -154

LONG W 125 28.30

PASS NO. 7

STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 31.36 | 11.24 | 23.90   |
| 2.0   | 2.0   | 31.36 | 11.28 | 23.90   |
| 5.1   | 5.1   | 31.38 | 11.20 | 23.92   |
| 10.0  | 10.0  | 31.53 | 10.82 | 24.10   |
| 15.0  | 15.0  | 31.84 | 10.07 | 24.48   |
| 19.9  | 20.0  | 31.87 | 9.78  | 24.55   |
| 24.9  | 25.0  | 32.05 | 8.98  | 24.82   |
| 29.9  | 30.1  | 32.21 | 8.82  | 24.96   |
| 34.9  | 35.1  | 32.31 | 8.72  | 25.06   |
| 39.9  | 40.1  | 32.40 | 8.66  | 25.14   |
| 44.8  | 45.0  | 32.47 | 8.59  | 25.20   |
| 49.8  | 50.1  | 32.61 | 8.41  | 25.34   |
| 59.7  | 60.0  | 32.80 | 8.25  | 25.51   |
| 69.6  | 70.0  | 33.09 | 8.06  | 25.77   |
| 80.4  | 80.9  | 33.30 | 8.00  | 25.94   |
| 89.6  | 90.1  | 33.74 | 7.24  | 26.39   |
| 100.5 | 101.1 | 33.85 | 6.87  | 26.53   |
| 110.4 | 111.1 | 33.92 | 6.57  | 26.63   |
| 113.3 | 114.0 | 33.92 | 6.55  | 26.63   |

CRUISE NO: 04 CODE

LAT N 48 28.90

DATE 24/ 5/79

TIME (PST) 0759

TAPE: U00454 -155

LONG W 125 21.80

PASS NO. 9

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .5    | .5    | 30.97 | 12.07 | 23.45   |
| 2.3   | 2.3   | 30.98 | 12.05 | 23.46   |
| 4.9   | 4.9   | 30.98 | 12.04 | 23.46   |
| 10.0  | 10.0  | 31.36 | 10.90 | 23.96   |
| 15.0  | 15.0  | 31.69 | 9.95  | 24.38   |
| 20.0  | 20.1  | 31.86 | 9.47  | 24.59   |
| 24.8  | 24.9  | 32.05 | 9.02  | 24.81   |
| 29.8  | 30.0  | 32.27 | 8.86  | 25.00   |
| 34.8  | 35.0  | 32.35 | 8.75  | 25.08   |
| 39.9  | 40.1  | 32.49 | 8.50  | 25.23   |
| 44.8  | 45.1  | 32.57 | 8.44  | 25.31   |
| 49.8  | 50.1  | 32.74 | 8.30  | 25.46   |
| 59.6  | 59.9  | 32.90 | 8.23  | 25.60   |
| 69.6  | 70.0  | 33.24 | 7.98  | 25.90   |
| 79.5  | 80.0  | 33.36 | 7.86  | 26.01   |
| 90.4  | 90.9  | 33.51 | 7.65  | 26.15   |
| 100.3 | 100.9 | 33.66 | 7.43  | 26.31   |
| 110.4 | 111.1 | 33.79 | 7.15  | 26.44   |
| 120.2 | 120.9 | 33.83 | 6.99  | 26.50   |
| 130.1 | 130.9 | 33.89 | 6.75  | 26.58   |
| 140.1 | 141.0 | 33.90 | 6.68  | 26.60   |
| 141.9 | 142.8 | 33.90 | 6.68  | 26.60   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 04 CODE

LAT N 48 32.20

DATE 24/ 5/79

TIME (PST) 0838

TAPE: U00454 -156

LONG W 125 15.50

PASS NO. 11

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .8    | .8    | 30.24 | 12.32 | 22.84   |
| 2.1   | 2.1   | 30.24 | 12.25 | 22.86   |
| 5.0   | 5.0   | 30.28 | 12.30 | 22.88   |
| 10.0  | 10.0  | 31.32 | 11.21 | 23.88   |
| 15.1  | 15.1  | 31.56 | 10.52 | 24.18   |
| 19.9  | 20.0  | 31.83 | 9.76  | 24.52   |
| 24.9  | 25.0  | 31.96 | 9.47  | 24.67   |
| 29.8  | 29.9  | 32.11 | 9.15  | 24.84   |
| 34.7  | 34.8  | 32.14 | 9.05  | 24.88   |
| 39.8  | 40.0  | 32.28 | 8.88  | 25.01   |
| 44.8  | 45.0  | 32.44 | 8.68  | 25.17   |
| 49.9  | 50.2  | 32.50 | 8.60  | 25.22   |
| 59.7  | 60.0  | 32.70 | 8.38  | 25.41   |
| 69.5  | 69.9  | 32.93 | 8.27  | 25.61   |
| 79.6  | 80.0  | 33.03 | 8.17  | 25.70   |
| 90.5  | 91.0  | 33.53 | 7.55  | 26.18   |
| 99.5  | 100.1 | 33.66 | 7.32  | 26.32   |
| 110.2 | 110.9 | 33.67 | 7.30  | 26.34   |
| 114.3 | 115.0 | 33.67 | 7.30  | 26.33   |

CRUISE NO: 04 CODE

LAT N 48 35.60

DATE 24/ 5/79

TIME (PST) 0919

TAPE: U00454 -157

LONG W 125 9.00

PASS NO. 13

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .9    | .9    | 31.88 | 10.42 | 24.45   |
| 2.1   | 2.1   | 31.89 | 10.38 | 24.46   |
| 5.0   | 5.0   | 31.90 | 10.02 | 24.54   |
| 10.0  | 10.0  | 32.01 | 9.62  | 24.68   |
| 15.1  | 15.1  | 32.02 | 9.34  | 24.74   |
| 19.9  | 20.0  | 32.05 | 9.07  | 24.80   |
| 24.8  | 25.0  | 32.13 | 8.90  | 24.89   |
| 29.8  | 30.0  | 32.16 | 8.86  | 24.92   |
| 34.8  | 35.0  | 32.18 | 8.85  | 24.93   |
| 39.8  | 40.0  | 32.21 | 8.80  | 24.97   |
| 44.9  | 45.2  | 32.32 | 8.68  | 25.07   |
| 49.9  | 50.2  | 32.46 | 8.46  | 25.22   |
| 59.6  | 60.0  | 32.72 | 8.19  | 25.46   |
| 69.6  | 70.0  | 32.94 | 8.03  | 25.65   |
| 79.6  | 80.1  | 33.03 | 7.95  | 25.73   |
| 90.5  | 91.0  | 33.42 | 7.55  | 26.10   |
| 91.3  | 91.8  | 33.43 | 7.55  | 26.11   |

COASTAL ZONE OCEANOGRAPHY  
CRUISE NO: 04 CODE  
LAT N 48 39.00  
DATE 24/ 5/79  
TIME (FST) 1003

TAPE: U00454 -158  
LONG W 125 2.50  
PASS NO. 15  
STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .2    | .2    | 31.55 | 11.28 | 24.04   |
| 2.0   | 2.0   | 31.60 | 11.00 | 24.13   |
| 5.0   | 5.1   | 31.66 | 10.91 | 24.19   |
| 9.9   | 10.0  | 32.04 | 9.54  | 24.72   |
| 15.0  | 15.1  | 32.10 | 9.12  | 24.83   |
| 19.8  | 19.9  | 32.16 | 8.88  | 24.91   |
| 24.9  | 25.0  | 32.17 | 8.84  | 24.93   |
| 29.9  | 30.0  | 32.17 | 8.83  | 24.93   |
| 34.8  | 35.0  | 32.18 | 8.81  | 24.94   |
| 39.8  | 40.0  | 32.20 | 8.77  | 24.97   |
| 44.9  | 45.1  | 32.26 | 8.70  | 25.02   |
| 44.9  | 45.1  | 32.26 | 8.70  | 25.02   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 05 CODE

LAT N 48 12.90

DATE 21/ 6/79

TIME (PST) 0028

TAPE: U00454 -159

LONG W 125 52.00

PASS NO. 33

STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .7    | .7    | 32.20 | 13.07 | 24.22   |
| 2.1   | 2.1   | 32.19 | 13.05 | 24.21   |
| 4.9   | 5.0   | 32.18 | 13.17 | 24.18   |
| 10.1  | 10.1  | 32.19 | 13.16 | 24.19   |
| 15.0  | 15.0  | 32.22 | 12.01 | 24.43   |
| 19.9  | 20.0  | 32.20 | 11.61 | 24.49   |
| 25.0  | 25.1  | 32.23 | 11.09 | 24.61   |
| 29.8  | 29.9  | 32.31 | 10.25 | 24.81   |
| 34.8  | 35.0  | 32.49 | 8.67  | 25.20   |
| 39.7  | 39.9  | 32.60 | 8.38  | 25.34   |
| 44.8  | 45.0  | 32.64 | 8.30  | 25.38   |
| 49.8  | 50.0  | 32.74 | 8.02  | 25.50   |
| 59.8  | 60.1  | 33.03 | 7.66  | 25.78   |
| 69.6  | 70.0  | 33.36 | 7.75  | 26.02   |
| 79.6  | 80.0  | 33.51 | 7.69  | 26.15   |
| 90.5  | 91.0  | 33.65 | 7.62  | 26.27   |
| 100.4 | 101.1 | 33.75 | 7.57  | 26.36   |
| 110.4 | 111.1 | 33.82 | 7.47  | 26.42   |
| 120.1 | 120.9 | 33.82 | 7.44  | 26.43   |
| 130.2 | 131.1 | 33.83 | 7.39  | 26.45   |
| 140.2 | 141.1 | 33.88 | 7.35  | 26.49   |
| 150.1 | 151.1 | 33.91 | 7.31  | 26.52   |
| 159.9 | 161.0 | 33.92 | 7.24  | 26.53   |
| 169.9 | 171.1 | 33.95 | 7.10  | 26.58   |
| 179.7 | 180.9 | 33.96 | 6.95  | 26.61   |
| 189.8 | 191.1 | 33.96 | 6.78  | 26.63   |
| 199.5 | 200.9 | 33.96 | 6.55  | 26.66   |
| 225.4 | 227.0 | 33.98 | 6.34  | 26.71   |
| 250.2 | 252.0 | 33.98 | 6.14  | 26.73   |
| 274.9 | 276.9 | 33.99 | 5.91  | 26.76   |
| 299.8 | 302.0 | 34.02 | 5.71  | 26.81   |
| 324.6 | 327.1 | 34.03 | 5.48  | 26.85   |
| 350.4 | 353.0 | 34.04 | 5.36  | 26.88   |
| 375.2 | 378.1 | 34.06 | 5.27  | 26.90   |
| 399.9 | 403.0 | 34.09 | 5.22  | 26.93   |
| 417.5 | 420.8 | 34.09 | 5.16  | 26.93   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 05 CODE

LAT N 48 15.10

DATE 22/ 6/79

TIME (PST) 0116

TAPE: U00454 -160

LONG W 125 47.70

PASS NO. 35

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .6    | .6    | 32.09 | 13.27 | 24.09   |
| 2.1   | 2.1   | 32.11 | 13.25 | 24.11   |
| 4.9   | 4.9   | 32.11 | 13.25 | 24.11   |
| 10.0  | 10.0  | 32.12 | 13.04 | 24.16   |
| 14.8  | 14.9  | 32.15 | 12.42 | 24.30   |
| 19.9  | 20.0  | 32.36 | 9.99  | 24.89   |
| 24.9  | 25.0  | 32.46 | 9.05  | 25.12   |
| 29.8  | 29.9  | 32.56 | 8.41  | 25.30   |
| 34.9  | 35.1  | 32.58 | 8.36  | 25.32   |
| 40.0  | 40.2  | 32.61 | 8.26  | 25.36   |
| 44.8  | 45.1  | 32.66 | 8.15  | 25.42   |
| 49.8  | 50.1  | 32.75 | 8.03  | 25.50   |
| 59.7  | 60.1  | 33.07 | 7.74  | 25.80   |
| 69.6  | 70.0  | 33.24 | 7.69  | 25.94   |
| 80.4  | 80.9  | 33.56 | 7.57  | 26.21   |
| 90.5  | 91.0  | 33.65 | 7.55  | 26.28   |
| 100.3 | 100.9 | 33.76 | 7.41  | 26.39   |
| 110.3 | 111.0 | 33.82 | 7.32  | 26.45   |
| 120.1 | 120.9 | 33.88 | 7.15  | 26.52   |
| 130.0 | 130.9 | 33.87 | 7.14  | 26.51   |
| 140.1 | 141.1 | 33.92 | 6.98  | 26.57   |
| 150.1 | 151.1 | 33.93 | 6.91  | 26.59   |
| 159.8 | 160.9 | 33.95 | 6.88  | 26.61   |
| 169.8 | 170.9 | 33.95 | 6.86  | 26.62   |
| 179.7 | 181.0 | 33.96 | 6.77  | 26.63   |
| 190.2 | 191.5 | 33.96 | 6.62  | 26.66   |
| 199.7 | 201.1 | 33.96 | 6.50  | 26.67   |
| 209.3 | 210.7 | 33.96 | 6.48  | 26.67   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 05 CODE

LAT N 48 18.60

DATE 22/ 6/79

TIME (PST) 0202

TAPE: U00454 -161

LONG W 125 41.20

PASS NO. 37

STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .7    | .7    | 31.92 | 12.87 | 24.03   |
| 2.0   | 2.0   | 31.91 | 12.69 | 24.06   |
| 5.0   | 5.0   | 31.90 | 12.56 | 24.08   |
| 9.9   | 10.0  | 31.94 | 12.63 | 24.10   |
| 14.9  | 15.0  | 31.96 | 11.70 | 24.29   |
| 19.9  | 20.0  | 32.17 | 10.49 | 24.66   |
| 24.9  | 25.0  | 32.51 | 8.91  | 25.18   |
| 29.8  | 30.0  | 32.59 | 8.51  | 25.31   |
| 34.9  | 35.0  | 32.65 | 8.35  | 25.38   |
| 40.0  | 40.2  | 32.81 | 8.11  | 25.54   |
| 44.8  | 45.0  | 32.95 | 7.98  | 25.67   |
| 49.6  | 49.9  | 33.10 | 7.87  | 25.80   |
| 59.6  | 60.0  | 33.43 | 7.61  | 26.10   |
| 69.7  | 70.1  | 33.58 | 7.49  | 26.23   |
| 79.5  | 80.0  | 33.76 | 7.37  | 26.39   |
| 89.5  | 90.1  | 33.79 | 7.34  | 26.42   |
| 100.6 | 101.3 | 33.85 | 7.26  | 26.48   |
| 110.3 | 111.0 | 33.88 | 7.18  | 26.51   |
| 120.2 | 121.0 | 33.90 | 7.08  | 26.55   |
| 130.3 | 131.1 | 33.92 | 6.95  | 26.58   |
| 140.1 | 141.1 | 33.93 | 6.69  | 26.62   |
| 145.8 | 146.8 | 33.95 | 6.68  | 26.63   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 05 CODE

LAT N 48 22.00

DATE 22/ 6/79

TIME (PST) 0245

TAPE: U00454 -162

LONG W 125 34.70

PASS NO. 39

STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.9   | 1.9   | 32.02 | 12.54 | 24.17   |
| 4.9   | 4.9   | 32.01 | 12.54 | 24.17   |
| 9.9   | 10.0  | 32.02 | 11.17 | 24.43   |
| 14.8  | 14.9  | 32.09 | 9.86  | 24.71   |
| 20.0  | 20.1  | 32.14 | 9.39  | 24.82   |
| 24.9  | 25.0  | 32.29 | 9.07  | 24.99   |
| 29.9  | 30.1  | 32.44 | 8.76  | 25.16   |
| 34.8  | 35.0  | 32.60 | 8.54  | 25.31   |
| 39.8  | 40.0  | 32.80 | 8.31  | 25.50   |
| 44.7  | 44.9  | 32.91 | 8.30  | 25.59   |
| 49.8  | 50.0  | 33.07 | 8.07  | 25.75   |
| 59.8  | 60.1  | 33.30 | 7.73  | 25.98   |
| 69.6  | 70.0  | 33.45 | 7.48  | 26.13   |
| 80.4  | 80.9  | 33.53 | 7.32  | 26.22   |
| 90.5  | 91.0  | 33.66 | 7.16  | 26.35   |
| 100.3 | 100.9 | 33.81 | 6.82  | 26.51   |
| 110.2 | 110.9 | 33.88 | 6.61  | 26.59   |
| 120.3 | 121.1 | 33.93 | 6.43  | 26.65   |
| 130.0 | 130.9 | 33.94 | 6.39  | 26.67   |
| 140.1 | 141.0 | 33.95 | 6.34  | 26.68   |
| 142.0 | 142.9 | 33.96 | 6.32  | 26.69   |

CRUISE NO: 05 CODE

LAT N 48 25.50

DATE 22/ 6/79

TIME (PST) 0332

TAPE: U00454 -163

LONG W 125 28.30

PASS NO. 41

STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.9   | 5.0   | 32.38 | 10.86 | 24.76   |
| 10.0  | 10.0  | 32.42 | 9.99  | 24.94   |
| 14.9  | 15.0  | 32.48 | 9.54  | 25.06   |
| 19.9  | 20.0  | 32.63 | 9.07  | 25.25   |
| 24.8  | 25.0  | 32.85 | 8.52  | 25.51   |
| 29.8  | 30.0  | 32.97 | 8.16  | 25.66   |
| 34.8  | 35.0  | 33.06 | 8.03  | 25.75   |
| 39.9  | 40.1  | 33.14 | 7.88  | 25.83   |
| 44.8  | 45.1  | 33.27 | 7.72  | 25.95   |
| 49.7  | 50.0  | 33.30 | 7.68  | 25.99   |
| 59.7  | 60.1  | 33.37 | 7.59  | 26.06   |
| 69.6  | 70.0  | 33.47 | 7.42  | 26.16   |
| 79.5  | 80.0  | 33.64 | 7.12  | 26.33   |
| 90.4  | 91.0  | 33.66 | 7.09  | 26.36   |
| 100.2 | 100.9 | 33.74 | 6.92  | 26.44   |
| 110.4 | 111.1 | 33.81 | 6.75  | 26.52   |
| 120.2 | 121.0 | 33.88 | 6.54  | 26.60   |
| 130.1 | 131.0 | 33.92 | 6.38  | 26.65   |
| 130.7 | 131.6 | 33.92 | 6.38  | 26.65   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 05 CODE

LAT N 48 28.90

DATE 22/ 6/79

TIME (PST) 0414

TAPE: U00454 -164

LONG W 125 21.80

PASS NO. 43

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 32.18 | 11.36 | 24.52   |
| 5.0   | 5.0   | 32.18 | 11.08 | 24.57   |
| 9.9   | 9.9   | 32.43 | 10.28 | 24.90   |
| 15.0  | 15.0  | 32.66 | 9.20  | 25.26   |
| 20.0  | 20.1  | 32.85 | 8.68  | 25.49   |
| 24.8  | 24.9  | 32.93 | 8.45  | 25.59   |
| 29.7  | 29.9  | 33.02 | 8.29  | 25.68   |
| 34.7  | 34.9  | 33.23 | 7.91  | 25.90   |
| 39.8  | 40.1  | 33.41 | 7.59  | 26.08   |
| 45.0  | 45.2  | 33.45 | 7.51  | 26.13   |
| 49.7  | 50.0  | 33.50 | 7.40  | 26.19   |
| 59.7  | 60.1  | 33.69 | 7.01  | 26.39   |
| 70.5  | 71.0  | 33.77 | 6.83  | 26.48   |
| 80.5  | 81.0  | 33.83 | 6.67  | 26.54   |
| 89.4  | 90.0  | 33.86 | 6.56  | 26.58   |
| 100.4 | 101.1 | 33.88 | 6.52  | 26.60   |
| 110.3 | 111.1 | 33.91 | 6.42  | 26.64   |
| 120.0 | 120.9 | 33.92 | 6.35  | 26.66   |
| 130.0 | 130.9 | 33.94 | 6.29  | 26.68   |
| 140.0 | 141.0 | 33.95 | 6.25  | 26.69   |
| 149.9 | 151.0 | 33.95 | 6.24  | 26.69   |
| 151.9 | 152.9 | 33.94 | 6.25  | 26.69   |

CRUISE NO: 05 CODE

LAT N 48 32.20

DATE 22/ 6/79

TIME (PST) 0504

TAPE: U00454 -165

LONG W 125 15.50

PASS NO. 45

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .8    | .8    | 32.21 | 11.86 | 24.45   |
| 2.0   | 2.0   | 32.22 | 11.85 | 24.46   |
| 4.9   | 5.0   | 32.25 | 11.80 | 24.49   |
| 10.0  | 10.0  | 32.42 | 10.86 | 24.80   |
| 14.9  | 15.0  | 32.54 | 9.86  | 25.06   |
| 19.9  | 20.0  | 32.73 | 9.07  | 25.33   |
| 25.0  | 25.2  | 32.82 | 8.83  | 25.44   |
| 29.8  | 30.0  | 33.07 | 8.32  | 25.72   |
| 34.8  | 35.0  | 33.13 | 8.19  | 25.78   |
| 39.9  | 40.1  | 33.31 | 7.81  | 25.98   |
| 44.9  | 45.1  | 33.40 | 7.60  | 26.08   |
| 49.8  | 50.1  | 33.49 | 7.44  | 26.17   |
| 59.6  | 60.0  | 33.59 | 7.23  | 26.28   |
| 69.7  | 70.1  | 33.73 | 6.93  | 26.43   |
| 80.3  | 80.8  | 33.84 | 6.64  | 26.56   |
| 90.4  | 91.0  | 33.87 | 6.56  | 26.59   |
| 100.3 | 101.0 | 33.88 | 6.50  | 26.61   |
| 110.3 | 111.1 | 33.90 | 6.46  | 26.63   |
| 112.9 | 113.7 | 33.90 | 6.46  | 26.62   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 05 CODE

LAT N 48 35.60

DATE 22/ 6/79

TIME (PST) 0551

TAPE: U00454 -166

LONG W 125 9.00

PASS NO. 47

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.1   | 2.1   | 32.01 | 10.33 | 24.57   |
| 4.9   | 5.0   | 32.03 | 10.25 | 24.59   |
| 10.0  | 10.0  | 32.04 | 10.02 | 24.64   |
| 15.5  | 15.6  | 32.28 | 9.25  | 24.95   |
| 20.1  | 20.2  | 32.42 | 9.13  | 25.08   |
| 25.0  | 25.1  | 32.46 | 9.15  | 25.11   |
| 30.0  | 30.1  | 32.50 | 8.89  | 25.18   |
| 34.9  | 35.1  | 32.64 | 8.62  | 25.33   |
| 39.7  | 39.9  | 32.70 | 8.36  | 25.42   |
| 44.6  | 44.9  | 32.76 | 8.25  | 25.48   |
| 49.6  | 49.9  | 32.86 | 8.11  | 25.58   |
| 59.5  | 59.9  | 33.16 | 7.85  | 25.85   |
| 69.5  | 69.9  | 33.32 | 7.65  | 26.01   |
| 79.5  | 80.0  | 33.60 | 7.12  | 26.30   |
| 90.4  | 91.0  | 33.66 | 7.00  | 26.36   |
| 100.3 | 100.9 | 33.77 | 6.89  | 26.47   |
| 109.0 | 109.7 | 33.79 | 6.76  | 26.50   |

CRUISE NO: 05 CODE

LAT N 48 39.00

DATE 22/ 6/79

TIME (PST) 0643

TAPE: U00454 -167

LONG W 125 2.50

PASS NO. 49

STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .9    | .9    | 32.02 | 10.03 | 24.62   |
| 2.1   | 2.1   | 32.04 | 10.01 | 24.65   |
| 4.9   | 4.9   | 32.05 | 10.00 | 24.65   |
| 10.4  | 10.4  | 32.04 | 10.01 | 24.64   |
| 15.0  | 15.1  | 32.05 | 9.93  | 24.66   |
| 19.9  | 20.0  | 32.05 | 9.87  | 24.67   |
| 24.9  | 25.0  | 32.18 | 9.15  | 24.89   |
| 29.9  | 30.1  | 32.19 | 9.04  | 24.91   |
| 34.9  | 35.0  | 32.22 | 8.99  | 24.94   |
| 39.8  | 40.0  | 32.43 | 8.66  | 25.16   |
| 44.7  | 44.9  | 32.52 | 8.55  | 25.24   |
| 49.8  | 50.1  | 32.56 | 8.49  | 25.29   |
| 51.9  | 52.2  | 32.55 | 8.50  | 25.28   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 07 CODE

LAT N 48 8.50

DATE 12/10/79

TIME (PST) 2111

TAPE: U00454 -186

LONG W 126 .00

PASS NO. 1

STN: 111

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .3    | .3    | 32.27 | 16.26 | 23.60   |        |
| 2.8   | 2.9   | 32.27 | 16.26 | 23.59   |        |
| 5.1   | 5.1   | 32.27 | 16.26 | 23.59   |        |
| 10.0  | 10.1  | 32.27 | 16.26 | 23.59   |        |
| 14.8  | 14.8  | 32.27 | 16.26 | 23.60   |        |
| 19.7  | 19.8  | 32.30 | 15.99 | 23.68   |        |
| 24.9  | 25.0  | 32.42 | 13.36 | 24.32   | 6.43   |
| 29.9  | 30.0  | 32.56 | 10.64 | 24.94   |        |
| 34.9  | 35.0  | 32.59 | 10.39 | 25.01   |        |
| 39.9  | 40.1  | 32.69 | 10.26 | 25.11   |        |
| 44.6  | 44.8  | 32.71 | 9.65  | 25.22   |        |
| 49.7  | 50.0  | 32.72 | 9.19  | 25.31   | 6.63   |
| 59.7  | 60.1  | 32.80 | 8.68  | 25.44   |        |
| 69.6  | 70.0  | 32.95 | 8.45  | 25.60   |        |
| 74.7  | 75.1  | 33.02 | 8.39  | 25.67   | 5.31   |
| 79.6  | 80.0  | 33.11 | 8.28  | 25.75   |        |
| 90.5  | 91.0  | 33.24 | 8.17  | 25.86   |        |
| 100.1 | 100.7 | 33.41 | 7.92  | 26.04   | 4.39   |
| 110.5 | 111.1 | 33.54 | 7.80  | 26.16   |        |
| 120.3 | 121.0 | 33.62 | 7.72  | 26.24   |        |
| 125.3 | 126.0 | 33.67 | 7.71  | 26.27   | 3.76   |
| 130.2 | 131.0 | 33.70 | 7.71  | 26.30   |        |
| 140.2 | 141.0 | 33.78 | 7.56  | 26.38   |        |
| 150.1 | 151.1 | 33.82 | 7.51  | 26.42   | 3.27   |
| 160.3 | 161.3 | 33.85 | 7.45  | 26.45   |        |
| 169.9 | 171.0 | 33.87 | 7.34  | 26.48   |        |
| 179.8 | 181.0 | 33.88 | 7.33  | 26.50   |        |
| 189.8 | 191.1 | 33.89 | 7.26  | 26.51   |        |
| 199.7 | 201.0 | 33.92 | 7.21  | 26.54   | 3.06   |
| 225.4 | 226.9 | 33.95 | 6.94  | 26.60   |        |
| 250.2 | 252.0 | 33.96 | 6.66  | 26.65   | 2.84   |
| 275.0 | 277.0 | 33.98 | 6.45  | 26.69   |        |
| 299.7 | 301.8 | 33.99 | 6.22  | 26.73   | 2.23   |
| 324.7 | 327.0 | 34.00 | 5.94  | 26.77   |        |
| 350.3 | 352.9 | 34.02 | 5.75  | 26.81   |        |
| 375.1 | 377.9 | 34.04 | 5.64  | 26.84   |        |
| 399.9 | 403.0 | 34.04 | 5.46  | 26.86   |        |
| 424.8 | 428.1 | 34.05 | 5.25  | 26.90   |        |
| 450.4 | 453.9 | 34.08 | 5.18  | 26.92   |        |
| 475.3 | 479.1 | 34.09 | 5.08  | 26.95   |        |
| 496.9 | 500.9 | 34.11 | 4.98  | 26.97   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 07 CODE  
 LAT N 48.10.60  
 DATE 12/10/79  
 TIME (PST) 2243

TAPE: U00454 -187  
 LONG W 125 56.20  
 PASS NO. 3  
 STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.9   | 1.9   | 32.24 | 16.16 | 23.59   |
| 5.0   | 5.0   | 32.23 | 16.16 | 23.59   |
| 10.0  | 10.1  | 32.23 | 16.16 | 23.59   |
| 14.9  | 15.0  | 32.24 | 16.16 | 23.59   |
| 20.0  | 20.1  | 32.25 | 16.14 | 23.61   |
| 24.8  | 24.9  | 32.53 | 12.04 | 24.67   |
| 29.9  | 30.0  | 32.63 | 11.21 | 24.90   |
| 34.9  | 35.1  | 32.66 | 10.08 | 25.11   |
| 39.7  | 39.9  | 32.68 | 9.79  | 25.18   |
| 44.7  | 44.9  | 32.71 | 9.23  | 25.29   |
| 49.7  | 49.9  | 32.76 | 8.75  | 25.40   |
| 59.7  | 60.0  | 32.90 | 8.33  | 25.58   |
| 69.5  | 69.9  | 33.06 | 8.13  | 25.73   |
| 79.5  | 80.0  | 33.20 | 7.99  | 25.87   |
| 90.4  | 90.9  | 33.37 | 7.78  | 26.03   |
| 100.5 | 101.1 | 33.42 | 7.74  | 26.07   |
| 110.3 | 111.0 | 33.61 | 7.62  | 26.24   |
| 120.3 | 121.0 | 33.70 | 7.54  | 26.32   |
| 130.2 | 131.0 | 33.76 | 7.49  | 26.37   |
| 140.2 | 141.1 | 33.78 | 7.46  | 26.40   |
| 150.0 | 151.0 | 33.82 | 7.40  | 26.44   |
| 160.1 | 161.1 | 33.86 | 7.30  | 26.48   |
| 169.9 | 171.0 | 33.88 | 7.21  | 26.51   |
| 179.8 | 181.0 | 33.91 | 7.19  | 26.54   |
| 189.6 | 190.9 | 33.93 | 7.13  | 26.56   |
| 199.7 | 201.0 | 33.94 | 7.08  | 26.57   |
| 224.6 | 226.1 | 33.96 | 6.84  | 26.63   |
| 250.2 | 252.0 | 33.98 | 6.60  | 26.67   |
| 275.0 | 277.0 | 33.99 | 6.40  | 26.70   |
| 299.7 | 301.9 | 33.99 | 6.24  | 26.73   |
| 324.6 | 327.0 | 34.01 | 6.11  | 26.76   |
| 350.3 | 353.0 | 34.02 | 5.74  | 26.81   |
| 375.2 | 378.0 | 34.03 | 5.61  | 26.84   |
| 399.9 | 402.9 | 34.05 | 5.39  | 26.88   |
| 424.8 | 428.1 | 34.06 | 5.25  | 26.91   |
| 449.6 | 453.1 | 34.08 | 5.12  | 26.93   |
| 475.2 | 479.0 | 34.10 | 5.04  | 26.96   |
| 497.7 | 501.7 | 34.12 | 4.94  | 26.99   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 07 CODE

LAT N 48 12.90

DATE 12/10/79

TIME (PST) 2336

TAPE: U00454 - -188

LONG W 125 52.00

PASS NO. 5

STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.3   | 2.3   | 32.23 | 16.16 | 23.59   |        |
| 5.0   | 5.0   | 32.23 | 16.17 | 23.58   |        |
| 9.8   | 9.9   | 32.23 | 16.17 | 23.58   |        |
| 15.0  | 15.1  | 32.47 | 13.71 | 24.30   |        |
| 19.9  | 20.0  | 32.69 | 12.20 | 24.76   |        |
| 25.0  | 25.1  | 32.72 | 10.50 | 25.09   | 7.60   |
| 29.9  | 30.0  | 32.69 | 9.89  | 25.17   |        |
| 34.9  | 35.0  | 32.71 | 9.59  | 25.23   |        |
| 39.7  | 39.9  | 32.71 | 9.08  | 25.32   |        |
| 44.7  | 45.0  | 32.74 | 8.84  | 25.38   |        |
| 49.8  | 50.1  | 32.76 | 8.64  | 25.42   | 5.99   |
| 59.7  | 60.1  | 32.79 | 8.59  | 25.45   |        |
| 69.6  | 70.0  | 33.00 | 8.13  | 25.69   |        |
| 75.4  | 75.8  | 33.07 | 8.06  | 25.75   | 5.14   |
| 79.5  | 79.9  | 33.13 | 7.97  | 25.81   |        |
| 90.5  | 91.0  | 33.32 | 7.82  | 25.98   |        |
| 100.6 | 101.2 | 33.47 | 7.70  | 26.12   | 3.97   |
| 110.3 | 111.0 | 33.56 | 7.62  | 26.20   |        |
| 120.2 | 120.9 | 33.64 | 7.64  | 26.26   |        |
| 125.2 | 126.0 | 33.69 | 7.63  | 26.30   | 3.34   |
| 130.2 | 131.0 | 33.74 | 7.59  | 26.34   |        |
| 140.0 | 140.9 | 33.81 | 7.47  | 26.42   |        |
| 150.1 | 151.1 | 33.84 | 7.33  | 26.46   | 2.41   |
| 159.9 | 161.0 | 33.86 | 7.30  | 26.48   |        |
| 169.8 | 170.9 | 33.88 | 7.25  | 26.51   |        |
| 179.8 | 181.0 | 33.90 | 7.18  | 26.53   |        |
| 189.7 | 191.0 | 33.92 | 7.15  | 26.55   |        |
| 199.6 | 200.9 | 33.94 | 7.08  | 26.58   | 2.86   |
| 225.5 | 227.1 | 33.97 | 6.83  | 26.63   |        |
| 250.3 | 252.0 | 33.99 | 6.63  | 26.67   | 2.29   |
| 275.1 | 277.1 | 33.99 | 6.39  | 26.71   |        |
| 299.8 | 302.0 | 33.99 | 6.26  | 26.73   | 2.04   |
| 324.7 | 327.1 | 34.00 | 6.11  | 26.75   |        |
| 350.4 | 353.0 | 34.01 | 6.01  | 26.77   |        |
| 375.3 | 378.1 | 34.02 | 5.81  | 26.80   |        |
| 399.9 | 403.0 | 34.03 | 5.62  | 26.84   |        |
| 424.6 | 427.9 | 34.04 | 5.52  | 26.85   |        |
| 450.4 | 454.0 | 34.05 | 5.32  | 26.89   | 1.28   |
| 475.3 | 479.1 | 34.08 | 5.16  | 26.93   |        |
| 499.7 | 503.7 | 34.11 | 4.95  | 26.98   |        |
| 499.7 | 503.7 | 34.11 | 4.95  | 26.98   |        |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 07 CODE

LAT N 48 15.10

DATE 13/10/79

TIME (PST) 0113

TAPE: U00454 -189

LONG W 125 47.70

PASS NO. 8

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .1    | .1    | 32.36 | 16.19 | 23.68   |
| 2.0   | 2.0   | 32.37 | 16.19 | 23.69   |
| 5.0   | 5.0   | 32.37 | 16.19 | 23.69   |
| 9.9   | 9.9   | 32.37 | 16.19 | 23.69   |
| 15.0  | 15.1  | 32.37 | 16.19 | 23.69   |
| 19.8  | 19.9  | 32.34 | 15.88 | 23.73   |
| 24.9  | 25.0  | 32.67 | 11.88 | 24.81   |
| 29.9  | 30.0  | 32.66 | 10.78 | 25.00   |
| 34.8  | 34.9  | 32.66 | 10.46 | 25.05   |
| 39.8  | 40.0  | 32.70 | 9.49  | 25.24   |
| 44.8  | 45.0  | 32.71 | 9.31  | 25.28   |
| 49.8  | 50.0  | 32.74 | 8.93  | 25.36   |
| 59.7  | 60.0  | 32.89 | 8.38  | 25.56   |
| 70.3  | 70.7  | 33.01 | 8.17  | 25.69   |
| 79.5  | 80.0  | 33.27 | 7.87  | 25.93   |
| 89.6  | 90.1  | 33.40 | 7.78  | 26.06   |
| 100.5 | 101.1 | 33.53 | 7.69  | 26.17   |
| 110.2 | 110.9 | 33.66 | 7.62  | 26.28   |
| 120.2 | 120.9 | 33.69 | 7.60  | 26.31   |
| 130.1 | 130.9 | 33.71 | 7.58  | 26.32   |
| 140.2 | 141.1 | 33.78 | 7.47  | 26.39   |
| 150.1 | 151.0 | 33.82 | 7.39  | 26.43   |
| 160.0 | 161.0 | 33.83 | 7.37  | 26.45   |
| 169.8 | 170.9 | 33.85 | 7.25  | 26.48   |
| 180.7 | 181.9 | 33.87 | 7.13  | 26.51   |
| 189.7 | 191.0 | 33.88 | 7.11  | 26.52   |
| 199.6 | 200.9 | 33.88 | 7.11  | 26.52   |
| 225.4 | 226.9 | 33.92 | 6.90  | 26.59   |
| 225.4 | 226.9 | 33.92 | 6.90  | 26.59   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 07 CODE  
 LAT N 48 18.60  
 DATE 13/10/79  
 TIME (PST) 0203

TAPE: U00454 -190  
 LONG W 125 41.20  
 PASS NO. 10  
 STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .1    | .1    | 31.97 | 14.97 | 23.64   |        |
| 2.0   | 2.0   | 31.97 | 14.97 | 23.65   |        |
| 5.0   | 5.0   | 31.98 | 14.97 | 23.65   |        |
| 9.9   | 9.9   | 32.08 | 15.17 | 23.69   |        |
| 15.0  | 15.0  | 32.08 | 14.68 | 23.79   |        |
| 19.9  | 20.0  | 32.23 | 13.01 | 24.25   |        |
| 25.0  | 25.1  | 32.37 | 11.39 | 24.66   | 6.00   |
| 30.0  | 30.1  | 32.46 | 10.20 | 24.94   |        |
| 34.8  | 35.0  | 32.59 | 9.18  | 25.20   |        |
| 39.8  | 40.0  | 32.70 | 8.65  | 25.37   |        |
| 44.8  | 45.0  | 32.77 | 8.40  | 25.46   |        |
| 49.7  | 49.9  | 32.85 | 8.24  | 25.56   | 5.29   |
| 59.7  | 60.0  | 32.94 | 8.13  | 25.64   |        |
| 69.6  | 70.0  | 33.12 | 7.97  | 25.80   |        |
| 74.6  | 75.0  | 33.17 | 7.94  | 25.85   | 4.70   |
| 79.5  | 79.9  | 33.25 | 7.86  | 25.92   |        |
| 90.5  | 91.1  | 33.43 | 7.68  | 26.09   |        |
| 100.3 | 100.9 | 33.53 | 7.65  | 26.18   | 3.96   |
| 110.1 | 110.8 | 33.61 | 7.63  | 26.24   |        |
| 120.2 | 120.9 | 33.68 | 7.60  | 26.30   |        |
| 125.2 | 126.0 | 33.71 | 7.53  | 26.33   | 3.22   |
| 130.2 | 131.1 | 33.76 | 7.48  | 26.38   |        |
| 140.1 | 140.9 | 33.86 | 7.24  | 26.49   |        |
| 149.9 | 150.9 | 33.88 | 7.12  | 26.53   | 2.58   |
| 154.1 | 155.1 | 33.89 | 7.07  | 26.54   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 07 CODE  
 LAT N 48 22.00  
 DATE 13/10/79  
 TIME (PST) 0310

TAPE: U00454 -191  
 LONG W 125 34.70  
 PASS NO. 12  
 STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .4    | .4    | 32.23 | 12.71 | 24.31   |
| 2.1   | 2.1   | 32.24 | 12.70 | 24.32   |
| 4.7   | 4.8   | 32.24 | 12.68 | 24.32   |
| 9.9   | 10.0  | 32.25 | 12.16 | 24.43   |
| 14.8  | 14.9  | 32.31 | 11.66 | 24.57   |
| 19.9  | 20.0  | 32.54 | 10.47 | 24.95   |
| 24.9  | 25.0  | 32.53 | 10.09 | 25.01   |
| 29.9  | 30.0  | 32.70 | 9.56  | 25.23   |
| 34.7  | 34.9  | 32.82 | 9.09  | 25.40   |
| 39.8  | 40.0  | 32.89 | 8.64  | 25.52   |
| 44.9  | 45.1  | 33.02 | 8.36  | 25.67   |
| 49.7  | 49.9  | 33.06 | 8.08  | 25.74   |
| 59.7  | 60.0  | 33.35 | 7.97  | 25.99   |
| 69.7  | 70.1  | 33.48 | 7.65  | 26.13   |
| 79.6  | 80.1  | 33.61 | 7.42  | 26.26   |
| 89.6  | 90.1  | 33.67 | 7.26  | 26.34   |
| 100.3 | 100.9 | 33.76 | 7.19  | 26.42   |
| 110.3 | 111.0 | 33.82 | 7.20  | 26.46   |
| 120.3 | 121.0 | 33.88 | 7.10  | 26.52   |
| 130.1 | 131.0 | 33.90 | 7.06  | 26.55   |
| 140.1 | 141.0 | 33.90 | 7.05  | 26.55   |
| 148.9 | 149.9 | 33.90 | 7.04  | 26.55   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 07 CODE  
 LAT N 48 25.50  
 DATE 13/10/79  
 TIME (PST) 0353

TAPE: U00454 -192  
 LONG W 125 28.30  
 PASS NO. 14  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .5    | .5    | 32.28 | 12.65 | 24.36   |        |
| 1.6   | 1.6   | 32.29 | 12.64 | 24.37   |        |
| 5.0   | 5.0   | 32.27 | 12.65 | 24.35   |        |
| 10.6  | 10.6  | 32.38 | 11.66 | 24.62   |        |
| 15.0  | 15.0  | 32.44 | 10.96 | 24.79   |        |
| 19.9  | 20.0  | 32.54 | 10.43 | 24.96   |        |
| 24.8  | 25.0  | 32.65 | 9.90  | 25.14   | 3.84   |
| 29.8  | 30.0  | 32.91 | 9.05  | 25.48   |        |
| 34.9  | 35.1  | 33.00 | 8.78  | 25.59   |        |
| 39.9  | 40.1  | 33.15 | 8.41  | 25.77   |        |
| 44.6  | 44.9  | 33.28 | 8.14  | 25.90   |        |
| 49.6  | 49.9  | 33.42 | 7.83  | 26.06   | 2.59   |
| 59.7  | 60.0  | 33.61 | 7.42  | 26.27   |        |
| 69.6  | 70.1  | 33.66 | 7.32  | 26.32   |        |
| 74.5  | 75.0  | 33.68 | 7.27  | 26.35   | 2.09   |
| 79.5  | 80.0  | 33.70 | 7.24  | 26.36   |        |
| 90.4  | 91.0  | 33.71 | 7.21  | 26.38   |        |
| 100.4 | 101.0 | 33.75 | 7.14  | 26.41   | 1.92   |
| 110.2 | 110.9 | 33.79 | 7.05  | 26.46   |        |
| 120.3 | 121.1 | 33.81 | 7.02  | 26.48   |        |
| 125.3 | 126.2 | 33.82 | 7.01  | 26.49   | 1.66   |
| 130.2 | 131.0 | 33.82 | 6.99  | 26.49   |        |
| 130.2 | 131.0 | 33.82 | 6.99  | 26.49   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 07 CODE  
 LAT N 48 28.90  
 DATE 13/10/79  
 TIME (PST) 0453

TAPE: U00454 -193  
 LONG W 125 21.80  
 PASS NO. 16  
 STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 32.19 | 12.39 | 24.34   |
| 2.0   | 2.0   | 32.20 | 12.35 | 24.35   |
| 4.9   | 4.9   | 32.19 | 12.36 | 24.34   |
| 10.2  | 10.3  | 32.30 | 11.21 | 24.64   |
| 15.0  | 15.1  | 32.41 | 10.31 | 24.88   |
| 20.1  | 20.2  | 32.59 | 9.77  | 25.11   |
| 25.5  | 25.6  | 32.77 | 9.42  | 25.31   |
| 29.8  | 29.9  | 32.84 | 9.24  | 25.39   |
| 34.8  | 35.0  | 33.00 | 8.83  | 25.58   |
| 39.5  | 39.8  | 33.08 | 8.64  | 25.67   |
| 44.8  | 45.0  | 33.20 | 8.34  | 25.81   |
| 49.7  | 50.0  | 33.31 | 8.08  | 25.93   |
| 59.6  | 60.0  | 33.53 | 7.56  | 26.19   |
| 69.5  | 69.9  | 33.63 | 7.35  | 26.30   |
| 80.4  | 80.9  | 33.72 | 7.17  | 26.39   |
| 90.3  | 90.9  | 33.79 | 7.04  | 26.46   |
| 100.3 | 100.9 | 33.85 | 7.00  | 26.52   |
| 110.4 | 111.1 | 33.86 | 6.98  | 26.53   |
| 120.3 | 121.1 | 33.87 | 6.90  | 26.54   |
| 130.2 | 131.0 | 33.88 | 6.88  | 26.55   |
| 140.1 | 141.1 | 33.88 | 6.88  | 26.56   |
| 148.9 | 149.9 | 33.88 | 6.88  | 26.56   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 07 CODE

LAT N 48 32.20

DATE 13/10/79

TIME (PST) 0508

TAPE: U00454 -194

LONG W 125 15.50

PASS NO. 18

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .9    | .9    | 32.47 | 11.19 | 24.78   |        |
| 2.0   | 2.0   | 32.42 | 11.06 | 24.76   |        |
| 5.1   | 5.2   | 32.38 | 10.86 | 24.76   |        |
| 10.0  | 10.0  | 32.54 | 10.57 | 24.94   |        |
| 14.6  | 14.7  | 32.68 | 9.60  | 25.21   |        |
| 19.8  | 19.9  | 32.75 | 9.39  | 25.30   |        |
| 24.9  | 25.0  | 32.79 | 9.29  | 25.34   | 4.16   |
| 29.8  | 30.0  | 32.82 | 9.15  | 25.39   |        |
| 34.8  | 35.0  | 32.93 | 8.82  | 25.52   |        |
| 39.7  | 39.9  | 32.99 | 8.63  | 25.60   |        |
| 44.7  | 44.9  | 33.06 | 8.47  | 25.68   |        |
| 49.9  | 50.2  | 33.11 | 8.36  | 25.74   | 4.13   |
| 59.6  | 60.0  | 33.24 | 8.05  | 25.89   |        |
| 69.5  | 70.0  | 33.44 | 7.68  | 26.10   |        |
| 75.5  | 76.0  | 33.47 | 7.64  | 26.13   | 3.54   |
| 80.5  | 81.0  | 33.57 | 7.50  | 26.23   |        |
| 90.6  | 91.2  | 33.67 | 7.33  | 26.33   |        |
| 100.4 | 101.0 | 33.73 | 7.23  | 26.39   | 2.28   |
| 110.4 | 111.1 | 33.79 | 7.10  | 26.46   |        |
| 114.3 | 115.0 | 33.79 | 7.10  | 26.46   |        |

CRUISE NO: 07 CODE

LAT N 48 35.60

DATE 13/10/79

TIME (PST) 0646

TAPE: U00454 -195

LONG W 125 9.00

PASS NO. 20

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .9    | .9    | 32.51 | 10.10 | 24.99   |
| 2.0   | 2.0   | 32.52 | 10.09 | 25.00   |
| 5.1   | 5.2   | 32.53 | 10.02 | 25.02   |
| 9.9   | 10.0  | 32.52 | 10.05 | 25.01   |
| 14.8  | 14.9  | 32.61 | 9.74  | 25.13   |
| 20.0  | 20.1  | 32.68 | 9.44  | 25.23   |
| 24.9  | 25.0  | 32.75 | 9.14  | 25.34   |
| 29.9  | 30.1  | 32.76 | 9.10  | 25.35   |
| 34.9  | 35.1  | 32.78 | 9.03  | 25.38   |
| 39.7  | 40.0  | 32.79 | 9.01  | 25.39   |
| 44.5  | 44.7  | 32.84 | 8.96  | 25.44   |
| 49.7  | 50.0  | 32.88 | 8.86  | 25.48   |
| 59.7  | 60.0  | 33.04 | 8.59  | 25.65   |
| 69.5  | 69.9  | 33.14 | 8.40  | 25.76   |
| 79.6  | 80.0  | 33.31 | 7.97  | 25.95   |
| 89.5  | 90.0  | 33.58 | 7.49  | 26.23   |
| 100.3 | 100.9 | 33.67 | 7.33  | 26.33   |
| 110.0 | 110.7 | 33.69 | 7.31  | 26.34   |
| 110.0 | 110.7 | 33.69 | 7.31  | 26.34   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 07 CODE

LAT N 48 39.00

DATE 13/10/79

TIME (PST) 0730

TAPE: U00454 -196

LONG W 125 2.50

PASS NO. 22

SYN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.0   | 2.0   | 31.98 | 9.91 | 24.61   |        |
| 4.9   | 5.0   | 32.04 | 9.85 | 24.67   |        |
| 9.9   | 10.0  | 32.24 | 9.55 | 24.87   |        |
| 14.9  | 14.9  | 32.28 | 9.42 | 24.93   |        |
| 19.9  | 20.0  | 32.37 | 9.27 | 25.02   |        |
| 25.0  | 25.1  | 32.48 | 9.02 | 25.14   | 3.44   |
| 29.9  | 30.0  | 32.48 | 8.99 | 25.15   |        |
| 34.9  | 35.1  | 32.50 | 8.96 | 25.17   |        |
| 39.9  | 40.1  | 32.49 | 8.95 | 25.17   |        |
| 44.7  | 45.0  | 32.52 | 8.90 | 25.20   |        |
| 49.7  | 50.0  | 32.53 | 8.89 | 25.20   | 3.33   |
| 59.7  | 60.0  | 32.54 | 8.87 | 25.21   |        |
| 68.6  | 69.0  | 32.76 | 8.61 | 25.43   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 08 CODE

LAT N 48 8.50

DATE 27/11/79

TIME (PST) 1651

TAPE: U00454 -197

LONG W 126 .00

PASS NO. 1

STN: 111

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 1.0   | 1.0   | 32.51 | 11.71 | 24.71   |        |
| 2.1   | 2.1   | 32.50 | 11.70 | 24.70   |        |
| 5.0   | 5.1   | 32.49 | 11.69 | 24.70   |        |
| 9.9   | 10.0  | 32.47 | 11.70 | 24.69   |        |
| 14.9  | 15.0  | 32.47 | 11.70 | 24.68   |        |
| 19.9  | 20.0  | 32.47 | 11.70 | 24.68   |        |
| 24.7  | 24.8  | 32.47 | 11.70 | 24.68   | 6.24   |
| 30.0  | 30.2  | 32.47 | 11.70 | 24.68   |        |
| 34.7  | 34.9  | 32.47 | 11.70 | 24.68   |        |
| 39.8  | 40.1  | 32.48 | 11.70 | 24.69   |        |
| 44.9  | 45.1  | 32.48 | 11.65 | 24.70   |        |
| 49.7  | 50.0  | 32.73 | 10.39 | 25.11   | 6.24   |
| 59.5  | 59.8  | 32.78 | 9.05  | 25.37   |        |
| 69.7  | 70.1  | 32.92 | 8.83  | 25.52   |        |
| 75.5  | 76.0  | 32.99 | 8.67  | 25.59   | 5.77   |
| 80.5  | 80.9  | 33.01 | 8.65  | 25.62   |        |
| 90.5  | 91.0  | 33.12 | 8.52  | 25.72   |        |
| 100.4 | 101.0 | 33.29 | 8.17  | 25.91   | 5.05   |
| 110.4 | 111.0 | 33.46 | 8.04  | 26.06   |        |
| 120.2 | 120.9 | 33.56 | 8.00  | 26.14   |        |
| 125.2 | 126.0 | 33.57 | 7.99  | 26.16   | 4.00   |
| 130.4 | 131.2 | 33.61 | 7.94  | 26.19   |        |
| 140.1 | 140.9 | 33.68 | 7.87  | 26.26   |        |
| 150.1 | 151.0 | 33.75 | 7.66  | 26.34   | 3.68   |
| 160.1 | 161.1 | 33.79 | 7.45  | 26.40   |        |
| 170.5 | 171.6 | 33.84 | 7.33  | 26.46   |        |
| 179.9 | 181.0 | 33.85 | 7.26  | 26.48   |        |
| 189.8 | 191.1 | 33.87 | 7.14  | 26.51   |        |
| 199.7 | 201.0 | 33.88 | 7.02  | 26.54   | 3.55   |
| 225.4 | 227.0 | 33.93 | 6.73  | 26.62   |        |
| 250.1 | 251.9 | 33.95 | 6.47  | 26.66   | 3.14   |
| 275.2 | 277.1 | 33.95 | 6.10  | 26.71   |        |
| 299.8 | 302.0 | 33.97 | 6.00  | 26.74   | 2.88   |
| 324.7 | 327.1 | 33.99 | 5.85  | 26.78   |        |
| 350.4 | 353.0 | 34.00 | 5.63  | 26.81   |        |
| 375.2 | 378.0 | 34.02 | 5.50  | 26.84   |        |
| 400.1 | 403.2 | 34.05 | 5.39  | 26.88   |        |
| 424.8 | 428.0 | 34.06 | 5.22  | 26.91   |        |
| 449.4 | 452.9 | 34.09 | 5.19  | 26.94   |        |
| 475.3 | 479.1 | 34.10 | 5.06  | 26.96   |        |
| 500.0 | 504.0 | 34.13 | 4.93  | 26.99   | .92    |
| 500.0 | 504.0 | 34.13 | 4.93  | 26.99   |        |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 08 CODE

LAT N 48 10.60

DATE 27/11/79

TIME (PST) 1902

TAPE: U00454 -198

LONG W 125 56.20

PASS NO- 3

STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.1   | 2.1   | 32.55 | 11.54 | 24.77   |
| 4.9   | 4.9   | 32.52 | 11.52 | 24.75   |
| 10.0  | 10.0  | 32.49 | 11.52 | 24.73   |
| 15.4  | 15.5  | 32.49 | 11.53 | 24.73   |
| 19.7  | 19.8  | 32.49 | 11.53 | 24.73   |
| 24.8  | 24.9  | 32.49 | 11.53 | 24.73   |
| 29.8  | 29.9  | 32.49 | 11.53 | 24.73   |
| 34.7  | 34.9  | 32.49 | 11.53 | 24.73   |
| 39.8  | 40.1  | 32.50 | 11.53 | 24.74   |
| 44.8  | 45.0  | 32.51 | 11.52 | 24.75   |
| 49.7  | 50.0  | 32.65 | 10.69 | 25.01   |
| 59.8  | 60.1  | 32.77 | 9.52  | 25.29   |
| 70.2  | 70.6  | 32.87 | 8.57  | 25.52   |
| 80.1  | 80.5  | 32.95 | 8.47  | 25.60   |
| 90.1  | 90.6  | 33.17 | 8.32  | 25.80   |
| 100.5 | 101.1 | 33.38 | 8.16  | 25.98   |
| 110.3 | 110.9 | 33.50 | 8.14  | 26.08   |
| 119.4 | 120.1 | 33.59 | 8.09  | 26.16   |
| 130.2 | 131.0 | 33.66 | 8.00  | 26.22   |
| 140.0 | 140.9 | 33.72 | 7.86  | 26.29   |
| 150.1 | 151.0 | 33.76 | 7.77  | 26.33   |
| 159.9 | 160.9 | 33.85 | 7.72  | 26.41   |
| 170.4 | 171.5 | 33.90 | 7.57  | 26.47   |
| 179.8 | 181.0 | 33.92 | 7.41  | 26.51   |
| 189.6 | 190.8 | 33.92 | 7.19  | 26.54   |
| 199.7 | 201.0 | 33.94 | 7.05  | 26.58   |
| 224.5 | 226.1 | 33.96 | 6.74  | 26.64   |
| 250.4 | 252.1 | 33.98 | 6.46  | 26.69   |
| 275.1 | 277.1 | 33.98 | 6.23  | 26.72   |
| 299.9 | 302.0 | 33.99 | 6.02  | 26.75   |
| 324.6 | 327.0 | 34.00 | 5.84  | 26.79   |
| 349.9 | 352.5 | 34.02 | 5.64  | 26.83   |
| 375.4 | 378.2 | 34.05 | 5.45  | 26.87   |
| 399.8 | 402.8 | 34.07 | 5.30  | 26.90   |
| 424.7 | 428.0 | 34.10 | 5.24  | 26.93   |
| 450.5 | 454.1 | 34.11 | 5.07  | 26.96   |
| 475.1 | 478.9 | 34.13 | 4.94  | 26.99   |
| 498.0 | 502.0 | 34.15 | 4.83  | 27.02   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 08 CODE

LAT N 48 12.90

DATE 27/11/79

TIME (PST) 2014

TAPE: U00454 -199

LONG W 125 52.00

PASS NO. 5

STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.4   | 4.4   | 32.43 | 11.56 | 24.67   |
| 5.0   | 5.0   | 32.45 | 11.56 | 24.69   |
| 10.0  | 10.1  | 32.47 | 11.56 | 24.71   |
| 14.9  | 15.0  | 32.47 | 11.56 | 24.71   |
| 19.8  | 19.9  | 32.47 | 11.56 | 24.71   |
| 24.9  | 25.0  | 32.47 | 11.56 | 24.70   |
| 29.8  | 30.0  | 32.47 | 11.57 | 24.70   |
| 34.9  | 35.1  | 32.46 | 11.57 | 24.70   |
| 39.7  | 39.9  | 32.47 | 11.57 | 24.70   |
| 44.8  | 45.0  | 32.56 | 11.42 | 24.80   |
| 49.8  | 50.1  | 32.74 | 10.55 | 25.10   |
| 59.6  | 59.9  | 32.99 | 9.41  | 25.48   |
| 69.6  | 69.9  | 33.01 | 8.59  | 25.63   |
| 79.5  | 80.0  | 33.06 | 8.51  | 25.68   |
| 90.3  | 90.9  | 33.16 | 8.56  | 25.75   |
| 100.0 | 100.5 | 33.32 | 8.52  | 25.88   |
| 110.2 | 110.9 | 33.39 | 8.47  | 25.94   |
| 120.2 | 120.9 | 33.62 | 8.18  | 26.16   |
| 130.1 | 130.9 | 33.68 | 7.81  | 26.27   |
| 139.4 | 140.2 | 33.69 | 7.79  | 26.28   |
| 150.0 | 150.9 | 33.76 | 7.68  | 26.35   |
| 160.0 | 161.1 | 33.79 | 7.60  | 26.39   |
| 169.7 | 170.8 | 33.83 | 7.53  | 26.42   |
| 179.8 | 181.0 | 33.87 | 7.54  | 26.46   |
| 189.9 | 191.2 | 33.88 | 7.50  | 26.47   |
| 199.8 | 201.1 | 33.90 | 7.37  | 26.50   |
| 225.4 | 227.0 | 33.92 | 7.12  | 26.55   |
| 250.2 | 251.9 | 33.96 | 7.06  | 26.59   |
| 275.2 | 277.1 | 33.99 | 6.68  | 26.67   |
| 299.6 | 301.8 | 33.96 | 6.25  | 26.70   |
| 324.9 | 327.3 | 33.97 | 5.96  | 26.74   |
| 350.5 | 353.1 | 33.98 | 5.85  | 26.77   |
| 375.2 | 378.1 | 34.00 | 5.75  | 26.80   |
| 396.8 | 399.8 | 34.02 | 5.60  | 26.83   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 08 CODE

LAT N 48 15.10

DATE 27/11/79

TIME (PST) 2137

TAPE: U00454 -200

LONG W 125 47.70

PASS NO. 7

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.5   | 2.6   | 32.41 | 12.00 | 24.58   |
| 4.8   | 4.9   | 32.41 | 12.00 | 24.58   |
| 9.9   | 9.9   | 32.41 | 12.01 | 24.58   |
| 14.9  | 15.0  | 32.41 | 12.00 | 24.58   |
| 19.8  | 19.9  | 32.41 | 12.00 | 24.58   |
| 24.9  | 25.0  | 32.41 | 12.00 | 24.58   |
| 29.8  | 30.0  | 32.42 | 12.00 | 24.59   |
| 34.9  | 35.1  | 32.43 | 11.94 | 24.61   |
| 39.8  | 40.0  | 32.44 | 11.88 | 24.63   |
| 44.7  | 44.9  | 32.48 | 11.80 | 24.67   |
| 49.7  | 50.0  | 32.64 | 11.31 | 24.89   |
| 59.6  | 59.9  | 32.95 | 10.43 | 25.28   |
| 69.8  | 70.1  | 33.08 | 8.74  | 25.66   |
| 80.4  | 80.9  | 33.26 | 8.66  | 25.81   |
| 90.4  | 90.9  | 33.39 | 8.37  | 25.96   |
| 100.5 | 101.1 | 33.40 | 8.37  | 25.97   |
| 110.3 | 111.0 | 33.54 | 8.13  | 26.11   |
| 120.4 | 121.1 | 33.65 | 7.88  | 26.23   |
| 130.2 | 131.0 | 33.69 | 7.83  | 26.27   |
| 139.9 | 140.7 | 33.71 | 7.76  | 26.30   |
| 150.6 | 151.5 | 33.72 | 7.74  | 26.31   |
| 160.5 | 161.5 | 33.73 | 7.73  | 26.32   |
| 169.9 | 171.0 | 33.73 | 7.73  | 26.32   |
| 179.9 | 181.0 | 33.73 | 7.73  | 26.32   |
| 185.6 | 186.8 | 33.73 | 7.74  | 26.31   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 08 CODE

LAT N 48 18.60

DATE 27/11/79

TIME (PST) 2323

TAPE: U00454 -201

LONG W 125 41.20

PASS NO. 9

STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.5   | 2.6   | 32.43 | 11.92 | 24.61   |
| 5.0   | 5.1   | 32.41 | 11.92 | 24.60   |
| 10.0  | 10.0  | 32.41 | 11.93 | 24.60   |
| 14.9  | 15.0  | 32.41 | 11.92 | 24.60   |
| 19.9  | 20.0  | 32.41 | 11.92 | 24.60   |
| 24.8  | 24.9  | 32.41 | 11.92 | 24.60   |
| 29.9  | 30.1  | 32.41 | 11.92 | 24.59   |
| 34.8  | 35.0  | 32.41 | 11.93 | 24.60   |
| 39.7  | 39.9  | 32.42 | 11.94 | 24.60   |
| 44.8  | 45.0  | 32.42 | 11.94 | 24.60   |
| 49.8  | 50.0  | 32.48 | 11.88 | 24.66   |
| 59.5  | 59.8  | 32.90 | 10.66 | 25.20   |
| 69.7  | 70.1  | 33.18 | 9.54  | 25.61   |
| 79.6  | 80.1  | 33.28 | 8.99  | 25.77   |
| 90.5  | 91.0  | 33.36 | 8.60  | 25.90   |
| 100.5 | 101.0 | 33.44 | 8.03  | 26.05   |
| 110.0 | 110.7 | 33.49 | 7.97  | 26.09   |
| 120.3 | 121.0 | 33.51 | 7.96  | 26.11   |
| 130.3 | 131.1 | 33.52 | 7.95  | 26.12   |
| 131.3 | 132.1 | 33.53 | 7.95  | 26.13   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 08 CODE  
 LAT N 48 22.00  
 DATE 28/11/79  
 TIME (PST) 0040

TAPE: U00454 -202  
 LONG W 125 34.70  
 PASS NO. 11  
 STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 32.34 | 11.90 | 24.55   |
| 4.9   | 5.0   | 32.34 | 11.91 | 24.54   |
| 10.0  | 10.1  | 32.34 | 11.91 | 24.55   |
| 15.0  | 15.1  | 32.34 | 11.91 | 24.54   |
| 20.6  | 20.7  | 32.34 | 11.93 | 24.54   |
| 25.5  | 25.6  | 32.34 | 11.93 | 24.54   |
| 29.8  | 30.0  | 32.36 | 11.96 | 24.55   |
| 34.9  | 35.1  | 32.38 | 11.96 | 24.56   |
| 40.4  | 40.6  | 32.42 | 11.99 | 24.59   |
| 44.6  | 44.9  | 32.58 | 11.92 | 24.73   |
| 49.8  | 50.1  | 32.68 | 11.31 | 24.92   |
| 59.7  | 60.0  | 32.77 | 10.79 | 25.08   |
| 69.8  | 70.1  | 32.85 | 10.37 | 25.22   |
| 79.7  | 80.1  | 33.11 | 9.42  | 25.58   |
| 90.5  | 91.0  | 33.25 | 8.81  | 25.78   |
| 100.4 | 101.0 | 33.36 | 8.39  | 25.93   |
| 110.3 | 110.9 | 33.42 | 8.04  | 26.03   |
| 120.3 | 121.0 | 33.45 | 8.00  | 26.06   |
| 125.3 | 126.1 | 33.47 | 7.98  | 26.07   |

CRUISE NO: 08 CODE  
 LAT N 48 25.50  
 DATE 28/11/79  
 TIME (PST) 0150

TAPE: U00454 -203  
 LONG W 125 28.30  
 PASS NO. 13  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 32.20 | 12.10 | 24.40   |
| 4.9   | 4.9   | 32.20 | 12.10 | 24.40   |
| 9.9   | 9.9   | 32.20 | 12.10 | 24.40   |
| 15.1  | 15.2  | 32.20 | 12.11 | 24.40   |
| 20.0  | 20.1  | 32.20 | 12.12 | 24.40   |
| 24.9  | 25.0  | 32.21 | 12.12 | 24.40   |
| 29.9  | 30.0  | 32.20 | 12.12 | 24.40   |
| 34.8  | 35.0  | 32.20 | 12.17 | 24.39   |
| 39.9  | 40.1  | 32.33 | 12.16 | 24.49   |
| 44.7  | 45.0  | 32.42 | 12.25 | 24.55   |
| 49.8  | 50.1  | 32.50 | 12.13 | 24.63   |
| 59.7  | 60.0  | 32.54 | 11.93 | 24.70   |
| 69.6  | 70.0  | 32.62 | 11.52 | 24.83   |
| 80.4  | 80.8  | 32.86 | 10.24 | 25.24   |
| 89.5  | 90.0  | 32.99 | 9.86  | 25.41   |
| 100.4 | 101.0 | 33.17 | 8.94  | 25.69   |
| 110.4 | 111.0 | 33.24 | 8.68  | 25.79   |
| 120.3 | 121.0 | 33.38 | 8.33  | 25.95   |
| 130.3 | 131.0 | 33.42 | 8.23  | 26.00   |
| 140.7 | 141.5 | 33.43 | 8.17  | 26.02   |
| 141.1 | 142.0 | 33.43 | 8.16  | 26.02   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 08 CODE

LAT N 48 28.90

DATE 28/11/79

TIME (PST) 0309

TAPE: U00454 -204

LONG W 125 21.80

PASS NO. 15

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.8   | 2.8   | 32.19 | 11.94 | 24.42   |
| 5.0   | 5.0   | 32.18 | 11.93 | 24.42   |
| 9.9   | 10.0  | 32.18 | 11.92 | 24.42   |
| 14.8  | 14.9  | 32.18 | 11.93 | 24.42   |
| 20.0  | 20.1  | 32.18 | 11.93 | 24.42   |
| 25.1  | 25.2  | 32.20 | 11.94 | 24.42   |
| 29.9  | 30.0  | 32.22 | 11.98 | 24.44   |
| 34.8  | 35.0  | 32.22 | 11.98 | 24.44   |
| 39.8  | 40.0  | 32.26 | 12.03 | 24.46   |
| 45.0  | 45.2  | 32.26 | 12.05 | 24.46   |
| 49.8  | 50.1  | 32.32 | 12.14 | 24.49   |
| 59.7  | 60.0  | 32.43 | 12.25 | 24.55   |
| 69.8  | 70.2  | 32.51 | 12.17 | 24.63   |
| 79.6  | 80.0  | 32.70 | 11.59 | 24.88   |
| 90.5  | 91.0  | 32.86 | 10.47 | 25.20   |
| 99.5  | 100.0 | 32.81 | 9.71  | 25.29   |
| 110.4 | 111.1 | 32.97 | 9.28  | 25.49   |
| 119.9 | 120.5 | 33.09 | 9.08  | 25.61   |
| 130.3 | 131.1 | 33.28 | 8.52  | 25.85   |
| 139.9 | 140.7 | 33.35 | 8.34  | 25.93   |

CRUISE NO: 08 CODE

LAT N 48 32.20

DATE 28/11/79

TIME (PST) 0407

TAPE: U00454 -205

LONG W 125 15.50

PASS NO. 17

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.1   | 2.1   | 31.58 | 11.61 | 24.01   |
| 4.9   | 5.0   | 31.59 | 11.62 | 24.02   |
| 9.9   | 10.0  | 31.58 | 11.60 | 24.01   |
| 15.0  | 15.0  | 31.65 | 11.66 | 24.05   |
| 19.9  | 19.9  | 31.62 | 11.66 | 24.03   |
| 24.9  | 25.1  | 31.62 | 11.66 | 24.03   |
| 29.9  | 30.0  | 31.70 | 11.76 | 24.07   |
| 34.9  | 35.0  | 31.75 | 11.79 | 24.10   |
| 39.6  | 39.8  | 31.84 | 11.89 | 24.16   |
| 44.8  | 45.0  | 31.96 | 11.99 | 24.23   |
| 49.8  | 50.1  | 32.15 | 12.17 | 24.35   |
| 59.5  | 59.8  | 32.37 | 12.48 | 24.46   |
| 69.8  | 70.1  | 32.40 | 12.31 | 24.51   |
| 79.5  | 79.9  | 32.49 | 12.22 | 24.60   |
| 90.3  | 90.7  | 32.55 | 11.60 | 24.76   |
| 92.3  | 92.7  | 32.55 | 11.40 | 24.80   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 08 CODE

LAT N 48 35.60

DATE 28/11/79

TIME (PST) 0501

TAPE: U00454 -206

LONG W 125 9.00

PASS NO. 19

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.1   | 2.1   | 31.08 | 10.86 | 23.75   |
| 4.9   | 4.9   | 31.08 | 10.86 | 23.75   |
| 10.0  | 10.0  | 31.07 | 10.88 | 23.74   |
| 14.9  | 14.9  | 31.10 | 10.90 | 23.76   |
| 19.9  | 20.0  | 31.13 | 10.96 | 23.78   |
| 25.0  | 25.1  | 31.16 | 11.04 | 23.78   |
| 29.9  | 30.0  | 31.32 | 11.25 | 23.87   |
| 35.4  | 35.6  | 31.67 | 11.65 | 24.07   |
| 39.9  | 40.0  | 31.82 | 11.70 | 24.18   |
| 44.8  | 45.0  | 31.93 | 11.77 | 24.25   |
| 49.8  | 50.0  | 32.03 | 11.98 | 24.29   |
| 59.4  | 59.7  | 32.29 | 12.22 | 24.45   |
| 69.8  | 70.1  | 32.40 | 12.25 | 24.52   |
| 79.7  | 80.0  | 32.49 | 11.71 | 24.69   |
| 89.5  | 90.0  | 32.48 | 10.90 | 24.84   |
| 91.4  | 91.8  | 32.49 | 10.88 | 24.84   |

CRUISE NO: 08 CODE

LAT N 48 39.00

DATE 28/11/79

TIME (PST) 0542

TAPE: U00454 -207

LONG W 125 2.50

PASS NO. 21

STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.3   | 2.3   | 31.51 | 11.14 | 24.04   |
| 4.9   | 4.9   | 31.51 | 11.13 | 24.04   |
| 9.9   | 10.0  | 31.52 | 11.18 | 24.04   |
| 14.9  | 15.0  | 31.63 | 11.27 | 24.11   |
| 20.1  | 20.2  | 31.72 | 11.47 | 24.14   |
| 24.8  | 24.9  | 31.88 | 11.71 | 24.22   |
| 29.9  | 30.0  | 31.96 | 11.82 | 24.27   |
| 34.8  | 34.9  | 32.07 | 11.83 | 24.34   |
| 39.9  | 40.1  | 32.16 | 11.74 | 24.43   |

Data Listings 1980



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 39.00

DATE 7/ 2/80

TIME (PST) 1830

TAPE: U00454 -224

LONG W 125 2.50

PASS NO. 1

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 10.0  | 10.0  | 29.39 | 7.56 | 22.93   |        |
| 14.6  | 14.7  | 30.10 | 8.00 | 23.43   |        |
| 20.0  | 20.1  | 30.21 | 8.12 | 23.50   |        |
| 25.2  | 25.3  | 30.24 | 8.11 | 23.52   | 6.74   |
| 29.9  | 30.0  | 30.56 | 8.03 | 23.79   |        |
| 34.7  | 34.9  | 30.76 | 8.02 | 23.94   |        |
| 39.8  | 39.9  | 30.89 | 7.99 | 24.05   |        |
| 39.8  | 39.9  | 30.89 | 7.99 | 24.05   |        |

CRUISE NO: 09 CODE

LAT N 48 35.60

DATE 7/ 2/80

TIME (PST) 1930

TAPE: U00454 -225

LONG W 125 9.00

PASS NO. 4

STN: 102

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.3   | 2.3   | 27.01 | 7.16 | 21.11   |
| 5.2   | 5.3   | 28.08 | 7.46 | 21.91   |
| 9.9   | 9.9   | 30.31 | 7.94 | 23.60   |
| 15.0  | 15.0  | 30.87 | 8.02 | 24.03   |
| 19.9  | 20.0  | 30.93 | 8.04 | 24.08   |
| 24.9  | 25.0  | 31.04 | 8.10 | 24.15   |
| 29.9  | 30.0  | 31.30 | 8.25 | 24.33   |
| 34.9  | 35.1  | 31.46 | 8.27 | 24.46   |
| 39.6  | 39.7  | 31.53 | 8.37 | 24.49   |
| 44.8  | 45.0  | 31.67 | 8.53 | 24.58   |
| 49.8  | 50.0  | 31.73 | 8.57 | 24.63   |
| 59.7  | 60.0  | 31.92 | 9.04 | 24.70   |
| 69.6  | 70.0  | 32.23 | 9.53 | 24.87   |
| 79.6  | 80.0  | 32.29 | 9.59 | 24.90   |
| 89.6  | 90.1  | 32.39 | 9.59 | 24.98   |
| 100.5 | 101.0 | 32.40 | 9.55 | 25.00   |
| 103.3 | 103.8 | 32.50 | 9.49 | 25.09   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 32.20

DATE 7/ 2/80

TIME (PST) 2028

TAPE: U00454 -226

LONG W 125 15.50

PASS NO. 6

STN: 103

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.6   | 2.6   | 31.02 | 9.38 | 23.95   |        |
| 5.0   | 5.0   | 31.12 | 9.41 | 24.02   |        |
| 10.0  | 10.0  | 31.25 | 9.38 | 24.13   |        |
| 15.3  | 15.3  | 31.66 | 9.19 | 24.48   |        |
| 20.0  | 20.1  | 31.64 | 8.46 | 24.57   |        |
| 24.9  | 25.0  | 31.78 | 8.67 | 24.65   | 6.09   |
| 29.8  | 30.0  | 31.86 | 8.36 | 24.76   |        |
| 34.8  | 35.0  | 31.88 | 8.28 | 24.79   |        |
| 39.8  | 40.0  | 31.95 | 8.33 | 24.83   |        |
| 44.8  | 45.0  | 32.25 | 9.38 | 24.91   |        |
| 49.8  | 50.1  | 32.28 | 9.43 | 24.93   | 6.25   |
| 59.6  | 60.0  | 32.36 | 9.57 | 24.96   |        |
| 69.7  | 70.1  | 32.46 | 9.62 | 25.04   |        |
| 74.8  | 75.2  | 32.48 | 9.60 | 25.05   | 6.25   |
| 79.6  | 80.0  | 32.50 | 9.60 | 25.07   |        |
| 89.4  | 89.9  | 32.53 | 9.54 | 25.10   |        |
| 100.5 | 101.1 | 32.55 | 9.52 | 25.12   | 6.17   |
| 105.3 | 105.9 | 32.57 | 9.51 | 25.14   |        |

CRUISE NO: 09 CODE

LAT N 48 28.90

DATE 7/ 2/80

TIME (PST) 2136

TAPE: U00454 -227

LONG W 125 21.80

PASS NO. 8

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.7   | 1.7   | 32.30 | 9.90  | 24.86   |
| 5.0   | 5.0   | 32.50 | 9.91  | 25.02   |
| 9.9   | 9.9   | 32.56 | 9.90  | 25.07   |
| 15.0  | 15.1  | 32.59 | 9.89  | 25.09   |
| 19.8  | 19.9  | 32.64 | 10.03 | 25.10   |
| 24.9  | 25.1  | 32.67 | 10.11 | 25.12   |
| 29.8  | 30.0  | 32.67 | 10.02 | 25.13   |
| 34.9  | 35.1  | 32.65 | 9.95  | 25.13   |
| 39.9  | 40.1  | 32.65 | 9.85  | 25.14   |
| 45.1  | 45.4  | 32.67 | 9.72  | 25.18   |
| 49.7  | 50.0  | 32.71 | 9.75  | 25.21   |
| 59.6  | 60.0  | 32.76 | 9.76  | 25.25   |
| 69.6  | 70.0  | 32.79 | 9.61  | 25.30   |
| 79.5  | 80.0  | 32.96 | 9.63  | 25.42   |
| 90.4  | 90.9  | 32.96 | 9.42  | 25.46   |
| 100.4 | 101.0 | 33.00 | 9.19  | 25.52   |
| 110.4 | 111.1 | 33.06 | 9.03  | 25.60   |
| 120.3 | 121.0 | 33.10 | 8.77  | 25.67   |
| 130.3 | 131.1 | 33.22 | 8.63  | 25.79   |
| 140.1 | 141.0 | 33.25 | 8.58  | 25.82   |
| 142.1 | 143.0 | 33.26 | 8.58  | 25.82   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 25.50

DATE 7/ 2/80

TIME (PST) 2230

TAPE: U00454 -228

LONG W 125 28.30

PASS NO. 10

STN: 105

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .9    | .9    | 32.48 | 9.60 | 25.06   |        |
| 2.0   | 2.0   | 32.49 | 9.67 | 25.05   |        |
| 4.9   | 5.0   | 32.45 | 9.65 | 25.02   |        |
| 9.9   | 9.9   | 32.37 | 9.70 | 24.95   |        |
| 14.9  | 15.0  | 32.50 | 9.84 | 25.03   |        |
| 19.9  | 20.0  | 32.62 | 9.84 | 25.13   |        |
| 24.8  | 25.0  | 32.64 | 9.82 | 25.14   | 6.34   |
| 30.4  | 30.5  | 32.65 | 9.77 | 25.16   |        |
| 34.7  | 34.9  | 32.66 | 9.77 | 25.16   |        |
| 39.8  | 40.0  | 32.66 | 9.77 | 25.16   |        |
| 44.8  | 45.1  | 32.66 | 9.74 | 25.17   |        |
| 49.6  | 49.9  | 32.66 | 9.71 | 25.18   | 6.34   |
| 59.6  | 59.9  | 32.69 | 9.55 | 25.22   |        |
| 69.7  | 70.1  | 32.73 | 9.53 | 25.26   |        |
| 74.6  | 75.0  | 32.77 | 9.47 | 25.30   | 6.13   |
| 79.6  | 80.1  | 32.83 | 9.40 | 25.36   |        |
| 89.6  | 90.1  | 32.99 | 9.38 | 25.48   |        |
| 100.3 | 100.9 | 33.14 | 9.37 | 25.61   | 4.02   |
| 110.2 | 110.9 | 33.22 | 9.14 | 25.70   |        |
| 120.4 | 121.1 | 33.35 | 8.94 | 25.83   |        |
| 125.1 | 125.9 | 33.39 | 8.77 | 25.90   | 4.02   |
| 125.1 | 125.9 | 33.39 | 8.77 | 25.90   |        |

CRUISE NO: 09 CODE

LAT N 48 22.00

DATE 7/ 2/80

TIME (PST) 2340

TAPE: U00454 -229

LONG W 125 34.70

PASS NO. 14

STN: 106

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 3.8   | 3.8   | 32.51 | 9.38 | 25.11   |
| 5.0   | 5.0   | 32.52 | 9.38 | 25.12   |
| 9.9   | 9.9   | 32.54 | 9.38 | 25.13   |
| 15.0  | 15.1  | 32.57 | 9.45 | 25.15   |
| 19.8  | 19.9  | 32.59 | 9.46 | 25.16   |
| 24.9  | 25.0  | 32.59 | 9.45 | 25.16   |
| 29.8  | 29.9  | 32.59 | 9.45 | 25.16   |
| 34.8  | 35.0  | 32.59 | 9.46 | 25.16   |
| 39.9  | 40.1  | 32.61 | 9.50 | 25.17   |
| 44.7  | 45.0  | 32.62 | 9.50 | 25.18   |
| 49.6  | 49.9  | 32.62 | 9.50 | 25.18   |
| 59.8  | 60.2  | 32.63 | 9.52 | 25.18   |
| 70.6  | 71.0  | 32.70 | 9.56 | 25.23   |
| 79.5  | 80.0  | 32.80 | 9.48 | 25.32   |
| 90.3  | 90.9  | 33.00 | 9.40 | 25.49   |
| 100.3 | 100.9 | 33.15 | 9.03 | 25.67   |
| 110.2 | 110.9 | 33.34 | 8.82 | 25.85   |
| 120.2 | 120.9 | 33.43 | 8.70 | 25.94   |
| 121.1 | 121.9 | 33.44 | 8.69 | 25.94   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 18.60

DATE 8/ 2/80

TIME (PST) 0037

TAPE: U00454 -230

LONG W 125 41.20

PASS NO. 16

STN: 107

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 5.3   | 5.3   | 32.29 | 9.04 | 24.99   |        |
| 9.7   | 9.7   | 32.29 | 9.05 | 24.99   |        |
| 15.0  | 15.0  | 32.31 | 9.09 | 25.00   |        |
| 20.1  | 20.2  | 32.37 | 9.21 | 25.03   |        |
| 24.9  | 25.0  | 32.43 | 9.32 | 25.06   | 6.37   |
| 29.9  | 30.1  | 32.49 | 9.43 | 25.09   |        |
| 34.7  | 34.9  | 32.51 | 9.44 | 25.10   |        |
| 39.8  | 40.0  | 32.51 | 9.45 | 25.10   |        |
| 44.7  | 45.0  | 32.55 | 9.50 | 25.13   |        |
| 49.7  | 50.0  | 32.62 | 9.58 | 25.17   | 6.29   |
| 59.6  | 59.9  | 32.72 | 9.70 | 25.23   |        |
| 69.6  | 70.0  | 32.77 | 9.72 | 25.26   |        |
| 74.6  | 75.0  | 32.87 | 9.69 | 25.35   | 5.58   |
| 79.7  | 80.2  | 32.98 | 9.63 | 25.44   |        |
| 90.4  | 91.0  | 33.24 | 9.22 | 25.71   |        |
| 100.3 | 100.9 | 33.43 | 8.93 | 25.90   | 4.02   |
| 110.2 | 110.9 | 33.57 | 8.64 | 26.06   |        |
| 120.2 | 121.0 | 33.63 | 8.45 | 26.13   |        |
| 125.2 | 126.0 | 33.65 | 8.42 | 26.15   | 3.34   |
| 130.2 | 131.0 | 33.67 | 8.30 | 26.18   |        |
| 140.0 | 140.9 | 33.67 | 8.21 | 26.20   |        |
| 142.2 | 143.1 | 33.67 | 8.21 | 26.20   |        |

CRUISE NO: 09 CODE

LAT N 48 15.10

DATE 8/ 2/80

TIME (PST) 0145

TAPE: U00454 -231

LONG W 125 47.70

PASS NO. 18

STN: 108

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.6   | 2.6   | 32.50 | 9.33 | 25.11   |
| 5.0   | 5.0   | 32.50 | 9.32 | 25.11   |
| 10.0  | 10.1  | 32.49 | 9.32 | 25.10   |
| 14.8  | 14.9  | 32.49 | 9.33 | 25.10   |
| 19.9  | 20.1  | 32.49 | 9.33 | 25.11   |
| 24.8  | 24.9  | 32.50 | 9.34 | 25.11   |
| 29.9  | 30.1  | 32.51 | 9.35 | 25.11   |
| 34.8  | 35.0  | 32.53 | 9.38 | 25.12   |
| 39.7  | 39.9  | 32.57 | 9.46 | 25.15   |
| 44.7  | 45.0  | 32.62 | 9.53 | 25.17   |
| 49.7  | 50.0  | 32.76 | 9.73 | 25.25   |
| 59.6  | 60.0  | 32.86 | 9.84 | 25.31   |
| 69.5  | 69.9  | 33.00 | 9.60 | 25.46   |
| 79.5  | 80.0  | 33.26 | 9.21 | 25.72   |
| 90.5  | 91.0  | 33.43 | 8.90 | 25.90   |
| 100.4 | 101.0 | 33.55 | 8.65 | 26.04   |
| 110.1 | 110.8 | 33.59 | 8.55 | 26.09   |
| 120.2 | 120.9 | 33.63 | 8.45 | 26.13   |
| 130.2 | 131.1 | 33.67 | 8.31 | 26.19   |
| 140.1 | 141.0 | 33.70 | 8.23 | 26.22   |
| 144.1 | 145.1 | 33.71 | 8.19 | 26.24   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 09 CODE  
 LAT N 48 12.90  
 DATE 8/ 2/80  
 TIME (PST) 0232

TAPE: U00454 -232  
 LONG W 125 52.00  
 PASS NO. 20  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 1.7   | 1.7   | 32.59 | 9.22 | 25.20   |        |
| 5.0   | 5.0   | 32.58 | 9.22 | 25.19   |        |
| 9.9   | 10.0  | 32.57 | 9.24 | 25.18   |        |
| 15.3  | 15.4  | 32.63 | 9.36 | 25.21   |        |
| 19.9  | 20.0  | 32.64 | 9.38 | 25.21   |        |
| 24.9  | 25.0  | 32.64 | 9.39 | 25.21   | 6.43   |
| 29.9  | 30.1  | 32.65 | 9.42 | 25.22   |        |
| 34.9  | 35.1  | 32.66 | 9.42 | 25.22   |        |
| 39.7  | 39.9  | 32.66 | 9.43 | 25.22   |        |
| 44.7  | 44.9  | 32.67 | 9.46 | 25.22   |        |
| 49.6  | 49.9  | 32.69 | 9.49 | 25.24   | 6.42   |
| 59.7  | 60.1  | 32.77 | 9.34 | 25.32   |        |
| 69.6  | 70.0  | 32.86 | 9.44 | 25.37   |        |
| 74.6  | 75.0  | 32.95 | 9.19 | 25.48   | 3.33   |
| 79.5  | 80.0  | 33.03 | 9.17 | 25.55   |        |
| 90.2  | 90.8  | 33.45 | 8.70 | 25.95   |        |
| 100.3 | 100.9 | 33.60 | 8.18 | 26.15   | 4.13   |
| 110.3 | 111.0 | 33.71 | 8.03 | 26.25   |        |
| 119.2 | 120.0 | 33.75 | 8.02 | 26.29   |        |
| 125.2 | 126.0 | 33.78 | 7.98 | 26.32   | 6.05   |
| 130.2 | 131.1 | 33.80 | 7.94 | 26.34   |        |
| 140.3 | 141.2 | 33.80 | 7.87 | 26.35   |        |
| 150.1 | 151.0 | 33.83 | 7.79 | 26.39   | 2.96   |
| 159.9 | 161.0 | 33.84 | 7.80 | 26.39   |        |
| 169.9 | 171.1 | 33.85 | 7.78 | 26.41   |        |
| 179.8 | 181.0 | 33.86 | 7.75 | 26.41   |        |
| 189.7 | 191.0 | 33.86 | 7.63 | 26.44   |        |
| 199.7 | 201.1 | 33.87 | 7.61 | 26.44   | 2.82   |
| 224.5 | 226.1 | 33.92 | 7.36 | 26.52   |        |
| 250.2 | 252.0 | 33.94 | 7.06 | 26.57   | 2.79   |
| 275.0 | 276.9 | 33.98 | 7.00 | 26.62   |        |
| 299.7 | 301.9 | 33.98 | 6.50 | 26.69   | 2.39   |
| 324.7 | 327.1 | 33.99 | 6.15 | 26.74   |        |
| 349.5 | 352.2 | 34.01 | 6.04 | 26.76   |        |
| 375.3 | 378.2 | 34.02 | 5.89 | 26.79   |        |
| 399.9 | 403.0 | 34.03 | 5.71 | 26.83   |        |
| 424.8 | 428.1 | 34.05 | 5.57 | 26.86   |        |
| 449.6 | 453.1 | 34.06 | 5.35 | 26.89   |        |
| 475.4 | 479.2 | 34.08 | 5.12 | 26.94   |        |
| 498.1 | 502.1 | 34.10 | 5.02 | 26.96   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 10.60

DATE 8/ 2/80

TIME (PST) 0353

TAPE: U00454 -233

LONG W 125 56.20

PASS NO. 22

STN: 110

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.8   | 2.8   | 32.68 | 9.44 | 25.23   |
| 5.1   | 5.1   | 32.68 | 9.44 | 25.24   |
| 10.0  | 10.0  | 32.68 | 9.44 | 25.24   |
| 14.9  | 15.0  | 32.69 | 9.46 | 25.24   |
| 19.9  | 20.0  | 32.70 | 9.47 | 25.24   |
| 24.9  | 25.0  | 32.68 | 9.47 | 25.23   |
| 29.8  | 30.0  | 32.69 | 9.47 | 25.24   |
| 34.8  | 35.0  | 32.69 | 9.47 | 25.24   |
| 39.8  | 40.1  | 32.70 | 9.47 | 25.24   |
| 44.7  | 44.9  | 32.72 | 9.43 | 25.27   |
| 49.6  | 49.9  | 32.75 | 9.30 | 25.31   |
| 59.7  | 60.0  | 32.78 | 9.28 | 25.34   |
| 69.6  | 70.0  | 32.83 | 9.22 | 25.39   |
| 79.5  | 80.0  | 33.35 | 8.97 | 25.83   |
| 90.5  | 91.0  | 33.46 | 8.74 | 25.96   |
| 100.3 | 100.9 | 33.54 | 8.51 | 26.06   |
| 110.2 | 110.9 | 33.62 | 8.36 | 26.14   |
| 120.3 | 121.1 | 33.68 | 8.23 | 26.21   |
| 130.2 | 131.0 | 33.75 | 8.08 | 26.28   |
| 140.0 | 140.9 | 33.79 | 7.96 | 26.33   |
| 150.0 | 151.0 | 33.82 | 7.92 | 26.36   |
| 159.8 | 160.9 | 33.82 | 7.83 | 26.38   |
| 169.9 | 171.0 | 33.84 | 7.76 | 26.40   |
| 179.9 | 181.1 | 33.86 | 7.66 | 26.43   |
| 189.8 | 191.1 | 33.89 | 7.46 | 26.48   |
| 199.8 | 201.2 | 33.89 | 7.15 | 26.53   |
| 225.5 | 227.0 | 33.95 | 7.05 | 26.58   |
| 250.3 | 252.1 | 33.97 | 6.60 | 26.66   |
| 274.9 | 276.9 | 33.97 | 6.29 | 26.70   |
| 299.8 | 302.0 | 33.96 | 6.14 | 26.71   |
| 324.6 | 327.0 | 33.99 | 6.07 | 26.75   |
| 350.3 | 353.0 | 33.99 | 5.95 | 26.76   |
| 375.0 | 377.9 | 34.01 | 5.89 | 26.79   |
| 400.0 | 403.1 | 33.99 | 5.54 | 26.81   |
| 424.7 | 428.0 | 33.99 | 5.34 | 26.84   |
| 450.3 | 453.9 | 34.03 | 5.15 | 26.89   |
| 475.3 | 479.1 | 34.06 | 5.21 | 26.91   |
| 499.7 | 503.8 | 34.09 | 5.11 | 26.94   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 09 CODE  
 LAT N 48 8.50  
 DATE 8/ 2/80  
 TIME (PST) 0518

TAPE: U00454 -234  
 LONG W 126 .00  
 PASS NO. 24  
 STN: 111

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 5.0   | 5.0   | 32.67 | 9.46 | 25.22   |        |
| 10.1  | 10.1  | 32.67 | 9.46 | 25.23   |        |
| 14.8  | 14.9  | 32.67 | 9.46 | 25.23   |        |
| 20.0  | 20.1  | 32.67 | 9.47 | 25.22   |        |
| 24.9  | 25.0  | 32.67 | 9.47 | 25.22   | 6.48   |
| 29.8  | 29.9  | 32.67 | 9.47 | 25.23   |        |
| 34.9  | 35.1  | 32.67 | 9.47 | 25.22   |        |
| 39.9  | 40.1  | 32.67 | 9.47 | 25.23   |        |
| 44.8  | 45.0  | 32.67 | 9.47 | 25.23   |        |
| 49.8  | 50.1  | 32.68 | 9.48 | 25.23   | 6.45   |
| 59.9  | 60.2  | 32.76 | 9.26 | 25.32   |        |
| 69.6  | 70.0  | 32.80 | 9.24 | 25.36   |        |
| 74.6  | 75.1  | 32.93 | 9.26 | 25.46   | 5.37   |
| 80.4  | 80.9  | 33.30 | 8.97 | 25.79   |        |
| 90.3  | 90.8  | 33.45 | 8.36 | 26.00   |        |
| 100.4 | 101.0 | 33.63 | 8.48 | 26.13   | 3.99   |
| 110.3 | 111.0 | 33.64 | 8.16 | 26.18   |        |
| 120.4 | 121.1 | 33.63 | 7.71 | 26.24   |        |
| 125.2 | 126.0 | 33.65 | 7.59 | 26.27   | 4.15   |
| 130.1 | 130.9 | 33.68 | 7.58 | 26.30   |        |
| 140.2 | 141.1 | 33.74 | 7.60 | 26.34   |        |
| 150.0 | 151.0 | 33.80 | 7.39 | 26.42   | 3.69   |
| 159.9 | 160.9 | 33.85 | 7.31 | 26.47   |        |
| 169.8 | 171.0 | 33.88 | 7.24 | 26.50   |        |
| 179.9 | 181.2 | 33.88 | 7.13 | 26.52   |        |
| 189.8 | 191.1 | 33.90 | 7.11 | 26.54   |        |
| 199.7 | 201.1 | 33.92 | 6.96 | 26.58   | 2.97   |
| 225.4 | 227.0 | 33.94 | 6.71 | 26.62   |        |
| 250.2 | 252.0 | 33.94 | 6.50 | 26.65   | 2.67   |
| 275.0 | 277.0 | 33.95 | 6.27 | 26.69   |        |
| 299.8 | 302.0 | 33.95 | 6.06 | 26.72   | 2.38   |
| 325.4 | 327.9 | 33.96 | 5.86 | 26.75   |        |
| 350.3 | 352.9 | 33.97 | 5.66 | 26.78   |        |
| 375.2 | 378.0 | 33.98 | 5.44 | 26.82   |        |
| 399.9 | 402.9 | 34.00 | 5.23 | 26.86   |        |
| 424.6 | 427.9 | 34.01 | 5.11 | 26.88   |        |
| 450.5 | 454.0 | 34.04 | 4.99 | 26.92   |        |
| 475.2 | 479.0 | 34.07 | 4.98 | 26.94   |        |
| 496.1 | 500.0 | 34.09 | 4.94 | 26.97   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 19.20

DATE 8/ 2/80

TIME (PST) 0632

TAPE: U00454 -235

LONG W 126 2.50

PASS NO. 26

STN: B.S. 8

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 5.0   | 5.1   | 32.55 | 9.25 | 25.16   |        |
| 9.9   | 10.0  | 32.57 | 9.28 | 25.17   |        |
| 14.9  | 15.0  | 32.59 | 9.20 | 25.20   |        |
| 19.8  | 20.0  | 32.61 | 9.19 | 25.22   |        |
| 24.8  | 24.9  | 32.61 | 9.20 | 25.22   | 6.51   |
| 29.7  | 29.9  | 32.62 | 9.20 | 25.22   |        |
| 34.8  | 35.0  | 32.62 | 9.20 | 25.22   |        |
| 39.8  | 40.0  | 32.62 | 9.19 | 25.23   |        |
| 44.8  | 45.0  | 32.62 | 9.19 | 25.23   |        |
| 49.6  | 49.9  | 32.65 | 9.14 | 25.26   | 6.43   |
| 59.6  | 60.0  | 32.80 | 9.29 | 25.35   |        |
| 69.7  | 70.1  | 33.13 | 9.20 | 25.63   |        |
| 74.6  | 75.1  | 33.29 | 8.90 | 25.80   | 4.52   |
| 79.5  | 80.0  | 33.32 | 8.94 | 25.82   |        |
| 89.5  | 90.1  | 33.49 | 8.61 | 26.00   |        |
| 100.2 | 100.8 | 33.57 | 8.50 | 26.08   | 4.18   |
| 110.3 | 111.0 | 33.60 | 7.93 | 26.18   |        |
| 120.3 | 121.1 | 33.71 | 7.78 | 26.30   |        |
| 125.2 | 126.0 | 33.76 | 7.84 | 26.33   | 3.55   |
| 130.3 | 131.1 | 33.81 | 7.85 | 26.36   |        |
| 139.0 | 139.9 | 33.83 | 7.85 | 26.38   |        |
| 150.7 | 151.7 | 33.87 | 7.79 | 26.42   | 2.84   |
| 159.9 | 161.0 | 33.88 | 7.60 | 26.45   |        |
| 170.0 | 171.1 | 33.90 | 7.48 | 26.49   |        |
| 179.9 | 181.1 | 33.90 | 7.41 | 26.50   |        |
| 189.8 | 191.1 | 33.91 | 7.39 | 26.51   |        |
| 199.7 | 201.0 | 33.92 | 7.30 | 26.53   | 2.56   |
| 225.4 | 227.0 | 33.94 | 7.10 | 26.58   |        |
| 250.1 | 251.9 | 33.95 | 7.08 | 26.58   | 2.48   |
| 275.0 | 277.0 | 33.97 | 7.04 | 26.60   |        |
| 299.8 | 302.0 | 33.96 | 6.58 | 26.66   | 2.48   |
| 324.6 | 327.0 | 33.97 | 6.27 | 26.70   |        |
| 349.6 | 352.2 | 33.97 | 5.89 | 26.76   |        |
| 375.3 | 378.2 | 33.98 | 5.70 | 26.79   |        |
| 399.9 | 403.0 | 34.00 | 5.44 | 26.83   |        |
| 424.8 | 428.1 | 34.05 | 5.40 | 26.87   |        |
| 450.3 | 453.8 | 34.05 | 5.36 | 26.88   |        |
| 475.1 | 478.9 | 34.06 | 5.25 | 26.90   |        |
| 500.1 | 504.1 | 34.09 | 5.14 | 26.94   | .39    |
| 502.1 | 506.1 | 34.10 | 5.08 | 26.96   |        |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 23.80

DATE 8/ 2/80

TIME (PST) 0753

TAPE: U00454 -236

LONG W 125 57.40

PASS NO. 28

STN: B.S. 7

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.8   | 1.8   | 32.42 | 9.29 | 25.05   |
| 5.1   | 5.1   | 32.42 | 9.28 | 25.06   |
| 9.9   | 10.0  | 32.42 | 9.27 | 25.06   |
| 14.9  | 15.0  | 32.43 | 9.29 | 25.06   |
| 20.1  | 20.2  | 32.43 | 9.29 | 25.07   |
| 24.9  | 25.0  | 32.43 | 9.30 | 25.06   |
| 29.8  | 30.0  | 32.44 | 9.34 | 25.07   |
| 34.8  | 35.0  | 32.52 | 9.44 | 25.11   |
| 39.8  | 40.0  | 32.54 | 9.45 | 25.13   |
| 44.7  | 44.9  | 32.61 | 9.51 | 25.17   |
| 50.3  | 50.6  | 32.67 | 9.54 | 25.21   |
| 59.8  | 60.1  | 32.72 | 9.59 | 25.24   |
| 69.5  | 69.9  | 32.82 | 9.60 | 25.32   |
| 79.5  | 79.9  | 33.13 | 9.73 | 25.54   |
| 89.5  | 90.0  | 33.38 | 9.42 | 25.78   |
| 100.4 | 101.0 | 33.57 | 8.87 | 26.02   |
| 110.5 | 111.1 | 33.63 | 8.74 | 26.09   |
| 120.3 | 121.1 | 33.72 | 8.40 | 26.21   |
| 130.5 | 131.3 | 33.74 | 8.28 | 26.25   |
| 140.1 | 141.0 | 33.78 | 8.22 | 26.29   |
| 150.0 | 151.0 | 33.83 | 8.08 | 26.34   |
| 159.8 | 160.9 | 33.86 | 7.98 | 26.38   |
| 170.4 | 171.5 | 33.84 | 7.95 | 26.37   |
| 179.7 | 180.9 | 33.86 | 7.79 | 26.41   |
| 189.8 | 191.1 | 33.86 | 7.65 | 26.43   |
| 199.7 | 201.0 | 33.87 | 7.63 | 26.44   |
| 224.6 | 226.1 | 33.89 | 7.43 | 26.49   |
| 250.2 | 252.0 | 33.93 | 7.26 | 26.54   |
| 275.0 | 277.0 | 33.95 | 6.93 | 26.60   |
| 299.9 | 302.1 | 33.96 | 6.71 | 26.64   |
| 324.5 | 326.9 | 33.99 | 6.41 | 26.70   |
| 349.4 | 352.0 | 34.00 | 5.93 | 26.77   |
| 375.1 | 377.9 | 34.02 | 5.63 | 26.83   |
| 399.8 | 402.9 | 34.05 | 5.30 | 26.89   |
| 408.7 | 411.8 | 34.07 | 5.20 | 26.91   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 09 CODE  
 LAT N 48 28.00  
 DATE 8/ 2/80  
 TIME (PST) 0859

TAPE: U00454 -237  
 LONG W 125 51.50  
 PASS NO. 30  
 STN: 8.5. 6

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.8   | 2.9   | 32.35 | 9.13 | 25.02   |        |
| 5.0   | 5.0   | 32.34 | 9.14 | 25.02   |        |
| 9.9   | 10.0  | 32.34 | 9.14 | 25.02   |        |
| 14.9  | 15.0  | 32.34 | 9.15 | 25.02   |        |
| 20.0  | 20.1  | 32.34 | 9.15 | 25.02   |        |
| 25.0  | 25.2  | 32.36 | 9.19 | 25.03   | 6.53   |
| 29.9  | 30.0  | 32.43 | 9.30 | 25.06   |        |
| 34.8  | 35.0  | 32.44 | 9.31 | 25.07   |        |
| 39.8  | 40.1  | 32.46 | 9.34 | 25.08   |        |
| 44.8  | 45.0  | 32.56 | 9.43 | 25.14   |        |
| 49.7  | 50.0  | 32.62 | 9.53 | 25.18   | 6.31   |
| 59.6  | 59.9  | 32.70 | 9.57 | 25.23   |        |
| 70.4  | 70.8  | 32.83 | 9.64 | 25.32   |        |
| 74.5  | 75.0  | 32.88 | 9.63 | 25.36   | 5.66   |
| 80.3  | 80.8  | 32.94 | 9.58 | 25.42   |        |
| 90.4  | 91.0  | 33.09 | 9.37 | 25.56   |        |
| 100.3 | 100.9 | 33.15 | 8.96 | 25.68   | 4.40   |
| 110.0 | 110.6 | 33.15 | 8.95 | 25.68   |        |
| 116.3 | 117.0 | 33.17 | 8.92 | 25.70   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 32.20

DATE 8/ 2/80

TIME (PST) 1000

TAPE: U00454 -238

LONG W 125 45.70

PASS NO. 32

STN: B.S. 5

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.8   | 1.9   | 32.44 | 9.38 | 25.06   |
| 5.0   | 5.0   | 32.44 | 9.37 | 25.06   |
| 10.0  | 10.1  | 32.44 | 9.36 | 25.06   |
| 14.9  | 15.0  | 32.44 | 9.36 | 25.06   |
| 19.8  | 19.9  | 32.45 | 9.36 | 25.06   |
| 24.8  | 25.0  | 32.45 | 9.33 | 25.07   |
| 29.8  | 30.0  | 32.46 | 9.32 | 25.08   |
| 34.8  | 35.0  | 32.47 | 9.29 | 25.10   |
| 39.8  | 40.0  | 32.48 | 9.27 | 25.10   |
| 44.9  | 45.1  | 32.52 | 9.29 | 25.13   |
| 49.7  | 50.0  | 32.53 | 9.32 | 25.14   |
| 59.6  | 60.0  | 32.59 | 9.41 | 25.17   |
| 69.6  | 70.0  | 32.61 | 9.46 | 25.18   |
| 79.6  | 80.0  | 32.62 | 9.39 | 25.19   |
| 81.5  | 82.0  | 32.64 | 9.38 | 25.21   |

CRUISE NO: 09 CODE

LAT N 48 36.40

DATE 8/ 2/80

TIME (PST) 1040

TAPE: U00454 - -239

LONG W 125 40.10

PASS NO. 34

STN: B.S. 4

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.0   | 2.0   | 32.26 | 9.25 | 24.93   |        |
| 5.0   | 5.0   | 32.25 | 9.25 | 24.93   |        |
| 9.9   | 10.0  | 32.26 | 9.25 | 24.93   |        |
| 15.1  | 15.2  | 32.27 | 9.28 | 24.94   |        |
| 19.8  | 20.0  | 32.29 | 9.30 | 24.95   |        |
| 24.6  | 24.7  | 32.35 | 9.36 | 24.99   | 6.34   |
| 29.8  | 30.0  | 32.39 | 9.35 | 25.02   |        |
| 35.1  | 35.3  | 32.38 | 9.34 | 25.01   |        |
| 39.8  | 40.0  | 32.37 | 9.27 | 25.02   |        |
| 44.7  | 45.0  | 32.37 | 9.27 | 25.02   |        |
| 49.8  | 50.1  | 32.36 | 9.23 | 25.02   | 6.26   |
| 59.4  | 59.8  | 32.36 | 9.23 | 25.02   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 09 CODE

LAT N 48 40.40

DATE 8/ 2/80

TIME (PST) 1126

TAPE: U00454 -240

LONG W 125 34.50

PASS NO. 36

STN: B.S. 3

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.5   | 2.5   | 32.28 | 9.16 | 24.96   |
| 4.9   | 4.9   | 32.26 | 9.16 | 24.95   |
| 9.9   | 10.0  | 32.27 | 9.15 | 24.96   |
| 14.8  | 14.9  | 32.28 | 9.17 | 24.97   |
| 19.9  | 20.0  | 32.33 | 9.23 | 24.99   |
| 24.8  | 25.0  | 32.40 | 9.27 | 25.04   |
| 29.8  | 30.0  | 32.39 | 9.25 | 25.04   |
| 34.8  | 35.0  | 32.41 | 9.24 | 25.05   |
| 39.8  | 40.0  | 32.42 | 9.23 | 25.07   |
| 44.7  | 45.0  | 32.43 | 9.22 | 25.07   |
| 49.8  | 50.0  | 32.44 | 9.22 | 25.08   |
| 59.7  | 60.1  | 32.46 | 9.23 | 25.10   |
| 69.6  | 70.0  | 32.48 | 9.27 | 25.10   |
| 79.3  | 79.8  | 32.49 | 9.26 | 25.11   |
| 90.5  | 91.0  | 32.50 | 9.26 | 25.13   |
| 100.4 | 101.0 | 32.53 | 9.25 | 25.14   |
| 110.4 | 111.0 | 32.53 | 9.25 | 25.15   |
| 120.4 | 121.1 | 32.54 | 9.23 | 25.16   |
| 130.2 | 131.0 | 32.55 | 9.25 | 25.16   |
| 140.3 | 141.1 | 32.57 | 9.22 | 25.18   |
| 150.3 | 151.2 | 32.58 | 9.19 | 25.19   |
| 160.1 | 161.0 | 32.59 | 9.19 | 25.20   |
| 170.0 | 171.0 | 32.60 | 9.18 | 25.21   |
| 178.9 | 180.0 | 32.63 | 9.17 | 25.24   |

CRUISE NO: 09 CODE

LAT N 48 44.40

DATE 8/ 2/80

TIME (PST) 1206

TAPE: U00454 -241

LONG W 125 29.10

PASS NO. 38

STN: B.S. 2

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.1   | 2.2   | 32.31 | 9.42 | 24.95   |        |
| 5.0   | 5.0   | 32.31 | 9.41 | 24.95   |        |
| 10.0  | 10.0  | 32.31 | 9.41 | 24.95   |        |
| 15.0  | 15.1  | 32.32 | 9.38 | 24.96   |        |
| 19.9  | 20.0  | 32.35 | 9.43 | 24.98   |        |
| 24.9  | 25.0  | 32.44 | 9.37 | 25.06   | 6.36   |
| 29.9  | 30.1  | 32.47 | 9.37 | 25.08   |        |
| 34.9  | 35.0  | 32.48 | 9.34 | 25.09   |        |
| 39.8  | 40.0  | 32.48 | 9.34 | 25.09   |        |
| 44.8  | 45.1  | 32.49 | 9.32 | 25.10   |        |
| 49.8  | 50.1  | 32.51 | 9.32 | 25.12   | 6.18   |
| 59.5  | 59.8  | 32.53 | 9.33 | 25.14   |        |
| 69.7  | 70.1  | 32.54 | 9.35 | 25.14   |        |
| 74.8  | 75.2  | 32.56 | 9.36 | 25.15   | 6.13   |
| 79.5  | 80.0  | 32.56 | 9.37 | 25.15   |        |
| 90.5  | 91.0  | 32.57 | 9.35 | 25.16   |        |
| 100.4 | 101.0 | 32.59 | 9.28 | 25.19   | 6.02   |
| 110.3 | 110.9 | 32.61 | 9.26 | 25.21   | 5.95   |
| 115.3 | 116.0 | 32.61 | 9.25 | 25.21   |        |

COASTAL ZONE OCEANOGRAPHY  
CRUISE NO: 09 CODE  
LAT N 48 48.20  
DATE 8/ 2/80  
TIME (PST) 1257

TAPE: U00454 -242  
LONG W 125 23.70  
PASS NO. 40  
STN: B.S. 1

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.3   | 2.3   | 30.28 | 8.38 | 23.52   |
| 5.1   | 5.1   | 30.31 | 8.40 | 23.54   |
| 9.9   | 10.0  | 30.56 | 8.52 | 23.71   |
| 15.0  | 15.1  | 30.77 | 8.63 | 23.87   |
| 20.0  | 20.1  | 30.91 | 8.81 | 23.95   |
| 24.9  | 25.0  | 31.49 | 8.76 | 24.41   |
| 29.9  | 30.0  | 31.54 | 8.71 | 24.45   |
| 34.9  | 35.1  | 31.76 | 9.03 | 24.58   |
| 39.9  | 40.0  | 31.86 | 8.99 | 24.66   |
| 44.8  | 45.0  | 32.05 | 9.14 | 24.79   |
| 50.3  | 50.5  | 32.11 | 9.05 | 24.85   |
| 59.7  | 59.9  | 32.28 | 9.26 | 24.95   |
| 69.8  | 70.1  | 32.48 | 9.40 | 25.08   |
| 79.6  | 80.0  | 32.59 | 9.60 | 25.14   |
| 89.5  | 90.0  | 32.58 | 9.52 | 25.15   |
| 93.2  | 93.7  | 32.59 | 9.45 | 25.16   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE

LAT N 48 39.00

DATE 25/ 3/80

TIME (PST) 0831

TAPE: U00454 -269

LONG W 125 2.50

PASS NO. 1

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.0   | 2.0   | 31.03 | 8.73 | 24.05   |        |
| 5.0   | 5.0   | 31.04 | 8.74 | 24.06   |        |
| 9.8   | 9.9   | 31.07 | 8.79 | 24.08   |        |
| 14.9  | 15.0  | 31.11 | 8.79 | 24.11   |        |
| 19.9  | 20.0  | 31.12 | 8.76 | 24.12   |        |
| 24.8  | 25.0  | 31.12 | 8.75 | 24.12   | 6.53   |
| 29.9  | 30.0  | 31.29 | 8.90 | 24.23   |        |
| 34.9  | 35.1  | 31.70 | 9.10 | 24.52   | 6.31   |
| 39.8  | 40.0  | 31.94 | 9.21 | 24.70   |        |
| 44.5  | 44.7  | 32.12 | 9.10 | 24.85   |        |

CRUISE NO: 10 CODE

LAT N 48 35.60

DATE 25/ 3/80

TIME (PST) 0918

TAPE: U00454 -270

LONG W 125 9.00

PASS NO. 3

STN: 102

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.0   | 2.0   | 31.17 | 8.66 | 24.17   |
| 5.0   | 5.0   | 31.17 | 8.64 | 24.18   |
| 10.0  | 10.0  | 31.18 | 8.64 | 24.18   |
| 15.0  | 15.0  | 31.17 | 8.64 | 24.18   |
| 19.9  | 20.0  | 31.20 | 8.64 | 24.20   |
| 24.9  | 25.0  | 31.20 | 8.64 | 24.20   |
| 29.8  | 30.0  | 31.94 | 9.44 | 24.65   |
| 34.9  | 35.1  | 32.36 | 9.68 | 24.94   |
| 39.7  | 39.9  | 32.53 | 9.79 | 25.06   |
| 44.7  | 44.9  | 32.56 | 9.81 | 25.08   |
| 49.7  | 49.9  | 32.63 | 9.83 | 25.13   |
| 59.8  | 60.1  | 32.65 | 9.83 | 25.15   |
| 69.6  | 70.0  | 32.69 | 9.79 | 25.18   |
| 79.5  | 80.0  | 32.75 | 9.72 | 25.24   |
| 90.1  | 90.6  | 33.03 | 9.31 | 25.53   |
| 96.3  | 96.9  | 33.05 | 9.28 | 25.55   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE.

LAT N 48 32.20

DATE 25/ 3/80

TIME (PST) 1001

TAPE: U00454 -271

LONG W 125 15.50

PASS NO. 5

STN: 103

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .9    | .9    | 31.70 | 9.21 | 24.50   |        |
| 1.9   | 1.9   | 31.72 | 9.24 | 24.52   |        |
| 5.2   | 5.2   | 31.75 | 9.23 | 24.54   |        |
| 9.9   | 9.9   | 31.87 | 9.29 | 24.63   |        |
| 15.2  | 15.3  | 32.14 | 9.42 | 24.81   |        |
| 20.0  | 20.1  | 32.19 | 9.50 | 24.84   |        |
| 24.8  | 25.0  | 32.21 | 9.55 | 24.85   | 6.67   |
| 29.9  | 30.0  | 32.34 | 9.71 | 24.92   |        |
| 34.9  | 35.1  | 32.47 | 9.73 | 25.02   |        |
| 39.8  | 40.0  | 32.49 | 9.74 | 25.04   |        |
| 44.7  | 45.0  | 32.58 | 9.74 | 25.11   |        |
| 49.8  | 50.0  | 32.66 | 9.76 | 25.17   | 6.06   |
| 59.6  | 60.0  | 32.76 | 9.77 | 25.25   |        |
| 69.6  | 69.9  | 32.85 | 9.75 | 25.32   |        |
| 74.6  | 75.0  | 32.89 | 9.72 | 25.35   | 5.42   |
| 79.5  | 80.0  | 32.95 | 9.63 | 25.42   |        |
| 90.6  | 91.1  | 33.08 | 9.44 | 25.55   |        |
| 100.4 | 101.0 | 33.12 | 9.38 | 25.59   | 4.35   |
| 103.5 | 104.2 | 33.22 | 9.22 | 25.69   |        |

CRUISE NO: 10 CODE

LAT N 48 28.90

DATE 25/ 3/80

TIME (PST) 1052

TAPE: U00454 -272

LONG W 125 21.80

PASS NO. 7

STN: 104

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.7   | 1.7   | 32.30 | 9.31 | 24.96   |
| 5.0   | 5.0   | 32.30 | 9.31 | 24.96   |
| 9.8   | 9.9   | 32.29 | 9.31 | 24.95   |
| 14.9  | 15.0  | 32.31 | 9.34 | 24.96   |
| 19.8  | 19.9  | 32.41 | 9.52 | 25.01   |
| 24.8  | 25.0  | 32.44 | 9.55 | 25.03   |
| 30.1  | 30.2  | 32.44 | 9.58 | 25.03   |
| 34.7  | 34.9  | 32.45 | 9.58 | 25.04   |
| 39.9  | 40.1  | 32.46 | 9.60 | 25.04   |
| 45.3  | 45.5  | 32.46 | 9.60 | 25.04   |
| 49.7  | 50.0  | 32.47 | 9.61 | 25.04   |
| 59.6  | 59.9  | 32.49 | 9.66 | 25.05   |
| 69.5  | 69.9  | 32.54 | 9.69 | 25.08   |
| 79.6  | 80.0  | 32.68 | 9.74 | 25.19   |
| 89.4  | 90.0  | 32.83 | 9.66 | 25.32   |
| 100.3 | 100.9 | 33.15 | 9.11 | 25.65   |
| 110.3 | 111.0 | 33.59 | 8.26 | 26.13   |
| 120.2 | 120.9 | 33.82 | 7.59 | 26.41   |
| 130.2 | 131.0 | 33.87 | 7.39 | 26.48   |
| 139.0 | 139.9 | 33.90 | 7.31 | 26.51   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE

LAT N 48 25.50

DATE 25/ 3/80

TIME (PST) 1226

TAPE: U00454 -273

LONG W 125 28.30

PASS NO. 9

STN: 105

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.0   | 2.0   | 32.46 | 9.57 | 25.04   |        |
| 5.1   | 5.1   | 32.46 | 9.56 | 25.04   |        |
| 10.0  | 10.0  | 32.46 | 9.56 | 25.05   |        |
| 14.9  | 14.9  | 32.50 | 9.67 | 25.05   |        |
| 20.1  | 20.2  | 32.55 | 9.68 | 25.09   |        |
| 24.9  | 25.0  | 32.57 | 9.68 | 25.11   | 6.66   |
| 29.8  | 30.0  | 32.57 | 9.69 | 25.10   |        |
| 35.0  | 35.2  | 32.57 | 9.70 | 25.11   |        |
| 39.9  | 40.1  | 32.58 | 9.70 | 25.11   |        |
| 44.8  | 45.0  | 32.58 | 9.70 | 25.11   |        |
| 49.8  | 50.1  | 32.58 | 9.70 | 25.11   | 6.64   |
| 59.6  | 59.9  | 32.61 | 9.70 | 25.14   |        |
| 69.6  | 70.0  | 32.69 | 9.67 | 25.21   |        |
| 74.5  | 75.0  | 32.67 | 9.46 | 25.23   | 5.83   |
| 79.6  | 80.0  | 32.71 | 9.43 | 25.26   |        |
| 90.5  | 91.0  | 32.86 | 9.34 | 25.39   |        |
| 100.5 | 101.1 | 33.13 | 9.07 | 25.64   | 3.77   |
| 110.3 | 111.0 | 33.54 | 8.48 | 26.06   |        |
| 114.3 | 114.9 | 33.56 | 8.41 | 26.08   |        |

CRUISE NO: 10 CODE

LAT N 48 22.00

DATE 25/ 3/80

TIME (PST) 1314

TAPE: U00454 -274

LONG W 125 34.70

PASS NO. 11

STN: 106

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.8   | 2.8   | 31.45 | 9.21 | 24.31   |
| 5.6   | 5.6   | 31.44 | 9.19 | 24.31   |
| 10.6  | 10.6  | 31.46 | 9.17 | 24.32   |
| 14.9  | 14.9  | 31.87 | 9.28 | 24.62   |
| 19.8  | 19.9  | 31.96 | 9.28 | 24.70   |
| 25.0  | 25.1  | 31.97 | 9.27 | 24.70   |
| 30.0  | 30.1  | 32.16 | 9.40 | 24.83   |
| 34.6  | 34.8  | 32.33 | 9.44 | 24.96   |
| 39.8  | 40.0  | 32.35 | 9.44 | 24.98   |
| 44.9  | 45.1  | 32.55 | 9.45 | 25.13   |
| 49.6  | 49.9  | 32.55 | 9.44 | 25.13   |
| 59.7  | 60.1  | 32.57 | 9.47 | 25.15   |
| 69.6  | 70.0  | 32.61 | 9.44 | 25.18   |
| 79.7  | 80.1  | 32.72 | 9.27 | 25.30   |
| 89.5  | 90.0  | 32.99 | 9.12 | 25.53   |
| 100.4 | 101.0 | 33.47 | 8.30 | 26.03   |
| 110.4 | 111.1 | 33.89 | 7.10 | 26.53   |
| 120.3 | 121.0 | 33.97 | 6.66 | 26.66   |
| 130.3 | 131.1 | 33.98 | 6.60 | 26.67   |
| 137.2 | 138.1 | 33.97 | 6.59 | 26.67   |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 10 CODE  
 LAT N 48 18.60  
 DATE 25/ 3/80  
 TIME (PST) 1415

TAPE: U00454 -275  
 LONG W 125 41.20  
 PASS NO. 1  
 STN: 107

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.0   | 2.0   | 31.89 | 9.36 | 24.63   |        |
| 5.0   | 5.0   | 31.92 | 9.33 | 24.66   |        |
| 9.9   | 10.0  | 31.95 | 9.30 | 24.69   |        |
| 15.0  | 15.0  | 32.02 | 9.24 | 24.75   |        |
| 19.9  | 20.0  | 32.13 | 9.24 | 24.83   |        |
| 24.9  | 25.0  | 32.21 | 9.26 | 24.90   | 6.90   |
| 29.8  | 30.0  | 32.46 | 9.50 | 25.05   |        |
| 34.9  | 35.1  | 32.60 | 9.64 | 25.14   |        |
| 39.8  | 40.0  | 32.63 | 9.65 | 25.16   |        |
| 44.6  | 44.8  | 32.66 | 9.68 | 25.18   |        |
| 49.8  | 50.1  | 32.68 | 9.69 | 25.20   | 6.37   |
| 59.8  | 60.1  | 32.69 | 9.68 | 25.21   |        |
| 69.6  | 70.0  | 32.77 | 9.65 | 25.27   |        |
| 74.5  | 75.0  | 33.05 | 9.42 | 25.52   | 5.30   |
| 79.5  | 80.0  | 33.13 | 9.34 | 25.60   |        |
| 89.6  | 90.1  | 33.30 | 9.05 | 25.78   |        |
| 100.3 | 100.9 | 33.43 | 8.75 | 25.93   | 3.98   |
| 110.3 | 111.0 | 33.55 | 8.54 | 26.05   |        |
| 120.2 | 120.9 | 33.61 | 8.41 | 26.12   |        |
| 125.3 | 126.0 | 33.63 | 8.35 | 26.15   | 3.34   |
| 130.2 | 131.0 | 33.66 | 8.29 | 26.18   |        |
| 140.1 | 141.0 | 33.75 | 8.07 | 26.28   |        |
| 145.8 | 146.7 | 33.89 | 7.61 | 26.46   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 10 CODE  
 LAT N 48 15.10  
 DATE 25/ 3/80  
 TIME (PST) 1520

TAPE: U00454 -276  
 LONG W 125 47.70  
 PASS NO. 3  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .6    | .6    | 32.26 | 9.37 | 24.91   |
| 1.9   | 1.9   | 32.26 | 9.45 | 24.90   |
| 4.9   | 4.9   | 32.29 | 9.40 | 24.94   |
| 9.9   | 10.0  | 32.38 | 9.31 | 25.02   |
| 14.9  | 15.0  | 32.45 | 9.37 | 25.07   |
| 20.0  | 20.1  | 32.52 | 9.45 | 25.11   |
| 24.9  | 25.1  | 32.58 | 9.51 | 25.15   |
| 29.9  | 30.1  | 32.61 | 9.53 | 25.16   |
| 34.9  | 35.1  | 32.67 | 9.58 | 25.21   |
| 39.8  | 40.0  | 32.69 | 9.59 | 25.22   |
| 45.0  | 45.2  | 32.68 | 9.59 | 25.21   |
| 49.6  | 49.9  | 32.69 | 9.59 | 25.22   |
| 59.6  | 59.9  | 32.69 | 9.60 | 25.21   |
| 70.4  | 70.8  | 32.74 | 9.59 | 25.25   |
| 79.5  | 80.0  | 32.98 | 9.53 | 25.45   |
| 90.5  | 91.0  | 33.28 | 9.29 | 25.73   |
| 99.5  | 100.1 | 33.41 | 9.00 | 25.87   |
| 110.3 | 111.0 | 33.52 | 8.80 | 25.99   |
| 120.2 | 120.9 | 33.56 | 8.72 | 26.03   |
| 130.2 | 131.1 | 33.63 | 8.52 | 26.12   |
| 140.1 | 141.0 | 33.68 | 8.38 | 26.18   |
| 150.1 | 151.1 | 33.75 | 8.20 | 26.27   |
| 153.8 | 154.8 | 33.77 | 8.16 | 26.29   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 10 CODE  
 LAT N 48 12.90  
 DATE 25/ 3/80  
 TIME (PST) 1553

TAPE: U00454 -277  
 LONG W 125 52.00  
 PASS NO. 5  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .8    | .8    | 32.16 | 9.34 | 24.85   |        |
| 2.0   | 2.0   | 32.16 | 9.35 | 24.84   |        |
| 5.1   | 5.1   | 32.16 | 9.35 | 24.84   |        |
| 10.0  | 10.0  | 32.17 | 9.33 | 24.85   |        |
| 15.0  | 15.0  | 32.37 | 9.39 | 25.00   |        |
| 19.9  | 20.0  | 32.51 | 9.49 | 25.10   |        |
| 24.9  | 25.1  | 32.52 | 9.49 | 25.10   | 6.66   |
| 29.8  | 30.0  | 32.52 | 9.51 | 25.10   |        |
| 34.8  | 35.0  | 32.58 | 9.55 | 25.14   |        |
| 39.9  | 40.1  | 32.61 | 9.57 | 25.16   |        |
| 44.7  | 45.0  | 32.62 | 9.56 | 25.17   |        |
| 49.8  | 50.1  | 32.65 | 9.56 | 25.19   | 6.49   |
| 59.7  | 60.0  | 32.68 | 9.56 | 25.22   |        |
| 69.5  | 69.9  | 32.74 | 9.57 | 25.26   |        |
| 75.4  | 75.8  | 33.06 | 9.49 | 25.53   | 6.38   |
| 79.6  | 80.0  | 33.13 | 9.45 | 25.58   |        |
| 90.5  | 91.1  | 33.35 | 9.16 | 25.81   |        |
| 100.3 | 100.9 | 33.46 | 8.98 | 25.92   | 4.40   |
| 110.4 | 111.0 | 33.59 | 8.76 | 26.05   |        |
| 120.3 | 121.1 | 33.66 | 8.56 | 26.14   |        |
| 125.3 | 126.1 | 33.71 | 8.44 | 26.20   | 3.94   |
| 130.3 | 131.1 | 33.73 | 8.38 | 26.22   |        |
| 140.3 | 141.2 | 33.75 | 8.26 | 26.26   |        |
| 149.9 | 150.9 | 33.80 | 8.08 | 26.32   | 3.21   |
| 159.9 | 161.0 | 33.82 | 8.00 | 26.35   |        |
| 169.9 | 171.0 | 33.84 | 7.92 | 26.38   |        |
| 179.8 | 181.0 | 33.85 | 7.87 | 26.39   |        |
| 189.7 | 190.9 | 33.88 | 7.84 | 26.42   |        |
| 199.5 | 200.9 | 33.92 | 7.66 | 26.48   | 2.80   |
| 225.4 | 227.0 | 33.92 | 7.10 | 26.55   |        |
| 250.4 | 252.2 | 33.95 | 6.97 | 26.60   | 2.97   |
| 275.2 | 277.1 | 33.97 | 6.68 | 26.65   |        |
| 299.8 | 302.0 | 33.96 | 6.34 | 26.69   | 2.80   |
| 324.6 | 327.0 | 33.99 | 6.21 | 26.73   |        |
| 350.4 | 353.0 | 34.02 | 5.96 | 26.78   |        |
| 375.1 | 377.9 | 34.03 | 5.55 | 26.85   |        |
| 399.9 | 403.0 | 34.06 | 5.18 | 26.91   |        |
| 424.7 | 428.0 | 34.08 | 5.08 | 26.94   |        |
| 450.5 | 454.0 | 34.08 | 4.84 | 26.96   |        |
| 475.4 | 479.1 | 34.11 | 4.76 | 27.00   |        |
| 493.7 | 497.7 | 34.13 | 4.67 | 27.02   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE

LAT N 48 10.60

DATE 25/ 3/80

TIME (PST) 1748

TAPE: U00454 -278

LONG W 125 56.20

PASS NO. 8

STN: 110

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .0    | .0    | 2.44  | 9.40 | 1.67    |
| 2.0   | 2.0   | 32.39 | 9.50 | 24.99   |
| 4.9   | 4.9   | 32.39 | 9.50 | 25.00   |
| 10.1  | 10.1  | 32.39 | 9.50 | 25.00   |
| 15.1  | 15.1  | 32.39 | 9.49 | 25.00   |
| 20.2  | 20.3  | 32.41 | 9.53 | 25.01   |
| 24.8  | 24.9  | 32.45 | 9.57 | 25.03   |
| 29.8  | 30.0  | 32.46 | 9.55 | 25.04   |
| 35.0  | 35.2  | 32.49 | 9.60 | 25.06   |
| 40.5  | 40.7  | 32.57 | 9.64 | 25.12   |
| 44.7  | 45.0  | 32.57 | 9.64 | 25.11   |
| 49.7  | 50.0  | 32.64 | 9.68 | 25.16   |
| 59.6  | 59.9  | 32.73 | 9.68 | 25.24   |
| 69.6  | 70.0  | 32.87 | 9.72 | 25.34   |
| 79.5  | 80.0  | 33.01 | 9.60 | 25.47   |
| 90.5  | 91.0  | 33.25 | 9.23 | 25.71   |
| 100.2 | 100.8 | 33.31 | 9.13 | 25.78   |
| 110.3 | 111.0 | 33.51 | 8.76 | 25.99   |
| 120.2 | 120.9 | 33.62 | 8.52 | 26.11   |
| 130.3 | 131.1 | 33.67 | 8.43 | 26.16   |
| 140.1 | 140.9 | 33.68 | 8.36 | 26.19   |
| 150.2 | 151.2 | 33.72 | 8.28 | 26.23   |
| 160.0 | 161.0 | 33.76 | 8.17 | 26.28   |
| 169.8 | 170.9 | 33.81 | 8.01 | 26.34   |
| 180.4 | 181.6 | 33.85 | 7.88 | 26.39   |
| 189.9 | 191.2 | 33.87 | 7.76 | 26.42   |
| 199.8 | 201.1 | 33.91 | 7.57 | 26.48   |
| 225.4 | 227.0 | 33.93 | 7.35 | 26.53   |
| 250.1 | 251.8 | 33.95 | 7.00 | 26.59   |
| 274.9 | 276.9 | 33.95 | 6.55 | 26.65   |
| 300.1 | 302.2 | 33.96 | 6.27 | 26.70   |
| 324.9 | 327.2 | 33.98 | 6.14 | 26.73   |
| 350.4 | 353.0 | 34.00 | 5.87 | 26.78   |
| 375.2 | 378.0 | 34.02 | 5.61 | 26.83   |
| 390.8 | 393.7 | 34.02 | 5.46 | 26.85   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE

LAT N 48 8.50

DATE 25/ 3/80

TIME (PST) 1842

TAPE: U00454 -279

LONG W 126 .00

PASS NO. 10

STN: 111

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 3.2   | 3.2   | 32.28 | 9.43 | 24.93   |
| 5.1   | 5.1   | 32.28 | 9.44 | 24.92   |
| 9.9   | 10.0  | 32.28 | 9.44 | 24.92   |
| 15.0  | 15.1  | 32.28 | 9.44 | 24.92   |
| 19.8  | 20.0  | 32.27 | 9.43 | 24.92   |
| 24.9  | 25.0  | 32.29 | 9.42 | 24.93   |
| 29.7  | 29.9  | 32.34 | 9.47 | 24.97   |
| 34.8  | 35.0  | 32.42 | 9.52 | 25.02   |
| 39.9  | 40.1  | 32.44 | 9.57 | 25.03   |
| 44.8  | 45.1  | 32.47 | 9.59 | 25.05   |
| 49.7  | 50.0  | 32.58 | 9.67 | 25.12   |
| 59.7  | 60.0  | 32.63 | 9.68 | 25.16   |
| 69.7  | 70.1  | 32.72 | 9.72 | 25.22   |
| 79.6  | 80.0  | 32.84 | 9.81 | 25.30   |
| 89.5  | 90.0  | 32.95 | 9.67 | 25.41   |
| 100.3 | 100.9 | 33.35 | 9.05 | 25.82   |
| 110.4 | 111.0 | 33.49 | 8.72 | 25.98   |
| 120.2 | 121.0 | 33.59 | 8.48 | 26.10   |
| 130.4 | 131.2 | 33.68 | 8.28 | 26.20   |
| 140.0 | 140.9 | 33.70 | 8.10 | 26.24   |
| 150.0 | 151.0 | 33.78 | 8.12 | 26.30   |
| 160.1 | 161.1 | 33.82 | 8.02 | 26.34   |
| 169.8 | 170.9 | 33.85 | 7.91 | 26.39   |
| 179.7 | 180.9 | 33.88 | 7.81 | 26.42   |
| 189.9 | 191.1 | 33.89 | 7.74 | 26.44   |
| 199.8 | 201.1 | 33.92 | 7.59 | 26.49   |
| 224.6 | 226.1 | 33.94 | 7.28 | 26.55   |
| 250.1 | 251.8 | 33.98 | 6.99 | 26.62   |
| 275.1 | 277.1 | 33.93 | 6.42 | 26.66   |
| 299.9 | 302.0 | 33.93 | 6.02 | 26.71   |
| 324.7 | 327.1 | 33.95 | 5.68 | 26.76   |
| 349.6 | 352.2 | 34.01 | 5.84 | 26.79   |
| 375.2 | 378.0 | 33.97 | 5.17 | 26.84   |
| 400.1 | 403.2 | 34.01 | 5.17 | 26.88   |
| 424.7 | 428.0 | 34.05 | 5.07 | 26.91   |
| 450.5 | 454.0 | 34.08 | 4.90 | 26.96   |
| 475.4 | 479.1 | 34.08 | 4.69 | 26.99   |
| 498.9 | 502.9 | 34.08 | 4.52 | 27.00   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE

LAT N 48 19.20

DATE 25/ 3/80

TIME (PST) 2040

TAPE: U00454 -280

LONG W 126 2.50

PASS NO. 12

SYN: B.S. 8

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.0   | 1.0   | 31.99 | 9.20 | 24.73   |
| 2.1   | 2.1   | 31.98 | 9.20 | 24.72   |
| 5.0   | 5.0   | 31.97 | 9.20 | 24.72   |
| 9.9   | 9.9   | 31.96 | 9.20 | 24.71   |
| 14.9  | 15.0  | 31.97 | 9.20 | 24.71   |
| 19.8  | 19.9  | 31.97 | 9.18 | 24.72   |
| 24.9  | 25.0  | 31.97 | 9.15 | 24.72   |
| 29.8  | 29.9  | 32.00 | 9.11 | 24.76   |
| 35.0  | 35.1  | 32.47 | 9.45 | 25.07   |
| 39.7  | 40.0  | 32.64 | 9.57 | 25.18   |
| 44.9  | 45.1  | 32.69 | 9.59 | 25.22   |
| 50.3  | 50.6  | 32.69 | 9.60 | 25.22   |
| 59.6  | 60.0  | 32.70 | 9.51 | 25.24   |
| 69.6  | 70.0  | 32.78 | 9.41 | 25.32   |
| 79.5  | 80.0  | 32.91 | 9.39 | 25.42   |
| 90.4  | 90.9  | 33.22 | 9.24 | 25.69   |
| 99.5  | 100.1 | 33.35 | 9.00 | 25.83   |
| 109.5 | 110.1 | 33.45 | 8.81 | 25.94   |
| 119.3 | 120.1 | 33.53 | 8.58 | 26.04   |
| 130.8 | 131.6 | 33.64 | 8.34 | 26.15   |
| 140.1 | 141.0 | 33.68 | 8.25 | 26.21   |
| 150.7 | 151.7 | 33.72 | 8.19 | 26.24   |
| 160.1 | 161.1 | 33.77 | 8.09 | 26.30   |
| 170.2 | 171.3 | 33.79 | 8.02 | 26.32   |
| 179.9 | 181.1 | 33.81 | 7.97 | 26.35   |
| 189.6 | 190.8 | 33.84 | 7.84 | 26.39   |
| 199.8 | 201.1 | 33.87 | 7.74 | 26.42   |
| 224.6 | 226.1 | 33.93 | 7.18 | 26.55   |
| 250.4 | 252.1 | 33.98 | 6.57 | 26.67   |
| 275.0 | 276.9 | 34.00 | 6.04 | 26.76   |
| 299.7 | 301.9 | 34.01 | 5.76 | 26.80   |
| 324.6 | 327.0 | 34.02 | 5.55 | 26.84   |
| 350.5 | 353.1 | 34.05 | 5.39 | 26.87   |
| 375.2 | 378.0 | 34.06 | 5.23 | 26.90   |
| 399.9 | 402.9 | 34.08 | 5.05 | 26.94   |
| 424.8 | 428.1 | 34.09 | 4.83 | 26.97   |
| 450.5 | 454.0 | 34.11 | 4.69 | 27.01   |
| 475.3 | 479.0 | 34.13 | 4.57 | 27.04   |
| 497.9 | 501.9 | 34.16 | 4.53 | 27.06   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 10 CODE  
 LAT N 48 23.80  
 DATE 25/ 3/80  
 TIME (PST) 2147

TAPE: U00454 -281  
 LONG W 125 57.40  
 PASS NO. 14  
 STN: B.S. 7

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 9.9   | 10.0  | 31.39 | 9.14 | 24.27   |
| 14.9  | 15.0  | 31.48 | 9.12 | 24.35   |
| 20.1  | 20.2  | 31.74 | 9.21 | 24.53   |
| 25.8  | 25.9  | 31.84 | 9.28 | 24.60   |
| 29.9  | 30.0  | 31.93 | 9.30 | 24.67   |
| 34.6  | 34.8  | 32.37 | 9.41 | 25.00   |
| 40.4  | 40.6  | 32.46 | 9.46 | 25.06   |
| 44.6  | 44.8  | 32.48 | 9.49 | 25.07   |
| 49.8  | 50.1  | 32.50 | 9.51 | 25.08   |
| 59.7  | 60.0  | 32.61 | 9.54 | 25.16   |
| 70.4  | 70.8  | 32.69 | 9.42 | 25.24   |
| 80.1  | 80.5  | 32.76 | 9.38 | 25.31   |
| 90.4  | 90.9  | 33.02 | 9.42 | 25.50   |
| 100.1 | 100.6 | 33.12 | 9.33 | 25.59   |
| 110.3 | 111.0 | 33.24 | 9.03 | 25.74   |
| 119.5 | 120.2 | 33.38 | 8.78 | 25.88   |
| 130.4 | 131.2 | 33.55 | 8.46 | 26.07   |
| 140.4 | 141.3 | 33.74 | 8.10 | 26.27   |
| 150.0 | 150.9 | 33.83 | 7.69 | 26.40   |
| 160.2 | 161.2 | 33.89 | 7.34 | 26.50   |
| 170.0 | 171.1 | 33.95 | 7.10 | 26.58   |
| 179.9 | 181.0 | 33.96 | 7.07 | 26.59   |
| 190.0 | 191.2 | 33.97 | 6.74 | 26.64   |
| 199.5 | 200.9 | 33.99 | 6.52 | 26.69   |
| 225.5 | 227.1 | 34.00 | 6.18 | 26.74   |
| 250.2 | 252.0 | 34.00 | 6.10 | 26.75   |
| 271.1 | 273.0 | 34.01 | 5.96 | 26.78   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 10 CODE  
 LAT N 48 28.00  
 DATE 25/ 3/80  
 TIME (PST) 2235

TAPE: U00454 -282  
 LONG W 125 51.50  
 PASS NO. 16  
 SYN: 8.S. 6

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 3.0   | 3.0   | 30.92 | 9.06 | 23.92   |
| 5.0   | 5.0   | 30.94 | 9.06 | 23.94   |
| 9.8   | 9.8   | 31.32 | 9.19 | 24.21   |
| 14.9  | 14.9  | 31.50 | 9.27 | 24.34   |
| 19.8  | 19.9  | 31.64 | 9.27 | 24.45   |
| 25.4  | 25.5  | 31.73 | 9.26 | 24.52   |
| 30.0  | 30.2  | 31.81 | 9.22 | 24.59   |
| 35.9  | 36.1  | 31.85 | 9.20 | 24.62   |
| 39.7  | 39.9  | 31.90 | 9.23 | 24.66   |
| 44.7  | 44.9  | 31.99 | 9.27 | 24.72   |
| 49.7  | 49.9  | 32.35 | 9.42 | 24.98   |
| 60.3  | 60.6  | 32.49 | 9.32 | 25.11   |
| 70.4  | 70.8  | 32.63 | 9.32 | 25.22   |
| 79.8  | 80.2  | 32.87 | 9.26 | 25.41   |
| 89.5  | 90.0  | 33.13 | 9.05 | 25.65   |
| 100.3 | 100.9 | 33.63 | 8.25 | 26.16   |
| 109.4 | 110.0 | 33.74 | 7.95 | 26.29   |
| 120.5 | 121.2 | 33.93 | 7.13 | 26.56   |
| 128.1 | 128.9 | 33.97 | 6.79 | 26.64   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE

LAT N 48 32.20

DATE 25/ 3/80

TIME (PST) 2316

TAPE: U00454 -283

LONG W 125 45.70

PASS NO. 17

STN: B.S. 5

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 4.9   | 4.9   | 31.04 | 8.90 | 24.04   |
| 9.9   | 9.9   | 31.05 | 8.90 | 24.04   |
| 14.9  | 15.0  | 31.40 | 9.17 | 24.28   |
| 19.9  | 20.0  | 31.69 | 9.27 | 24.49   |
| 24.9  | 25.1  | 31.76 | 9.25 | 24.54   |
| 29.9  | 30.0  | 32.00 | 9.28 | 24.73   |
| 34.8  | 35.0  | 32.17 | 9.35 | 24.85   |
| 39.8  | 40.0  | 32.30 | 9.45 | 24.94   |
| 44.8  | 45.1  | 32.44 | 9.50 | 25.04   |
| 49.8  | 50.0  | 32.54 | 9.51 | 25.12   |
| 59.7  | 60.0  | 32.67 | 9.49 | 25.22   |
| 69.6  | 70.0  | 32.79 | 9.45 | 25.32   |
| 79.6  | 80.1  | 32.96 | 9.52 | 25.44   |
| 83.3  | 83.7  | 32.96 | 9.52 | 25.44   |

CRUISE NO: 10 CODE

LAT N 48 36.40

DATE 25/ 3/80

TIME (PST) 2357

TAPE: U00454 -284

LONG W 125 40.10

PASS NO. 19

STN: B.S. 4

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.9   | 1.9   | 31.23 | 8.96 | 24.18   |
| 4.9   | 4.9   | 31.23 | 8.97 | 24.17   |
| 10.0  | 10.0  | 31.23 | 8.97 | 24.17   |
| 15.0  | 15.1  | 31.27 | 9.00 | 24.20   |
| 19.8  | 19.9  | 31.36 | 9.06 | 24.26   |
| 24.9  | 25.0  | 31.50 | 9.14 | 24.36   |
| 29.9  | 30.0  | 31.99 | 9.37 | 24.71   |
| 34.9  | 35.1  | 32.11 | 9.41 | 24.80   |
| 39.8  | 40.0  | 32.21 | 9.35 | 24.89   |
| 44.8  | 45.0  | 32.38 | 9.45 | 25.00   |
| 49.9  | 50.1  | 32.57 | 9.47 | 25.14   |
| 56.7  | 57.0  | 32.57 | 9.47 | 25.15   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE

LAT N 48 40.40

DATE 26/ 3/80

TIME (PST) 0039

TAPE: U00454 -285

LONG W 125 34.50

PASS NO. 21

STN: B.S. 3

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.7   | 2.8   | 30.72 | 8.74 | 23.81   |
| 5.0   | 5.0   | 30.72 | 8.74 | 23.81   |
| 10.0  | 10.0  | 30.73 | 8.75 | 23.81   |
| 15.0  | 15.1  | 31.06 | 8.95 | 24.05   |
| 19.9  | 20.0  | 31.27 | 8.97 | 24.21   |
| 24.8  | 24.9  | 31.80 | 9.25 | 24.58   |
| 29.9  | 30.1  | 32.19 | 9.39 | 24.86   |
| 35.0  | 35.1  | 32.29 | 9.44 | 24.93   |
| 39.8  | 40.0  | 32.37 | 9.47 | 24.99   |
| 44.7  | 44.9  | 32.42 | 9.49 | 25.03   |
| 49.6  | 49.9  | 32.48 | 9.50 | 25.07   |
| 59.7  | 60.0  | 32.54 | 9.50 | 25.11   |
| 69.7  | 70.1  | 32.56 | 9.50 | 25.13   |
| 80.4  | 80.8  | 32.58 | 9.50 | 25.15   |
| 89.5  | 90.0  | 32.60 | 9.50 | 25.17   |
| 100.4 | 101.0 | 32.61 | 9.50 | 25.17   |
| 108.2 | 108.8 | 32.64 | 9.50 | 25.19   |

CRUISE NO: 10 CODE

LAT N 48 44.40

DATE 26/ 3/80

TIME (PST) 0117

TAPE: U00454 -286

LONG W 125 29.10

PASS NO. 23

STN: B.S. 2

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 2.1   | 2.1   | 30.44 | 8.66 | 23.60   |
| 5.0   | 5.0   | 30.45 | 8.67 | 23.61   |
| 10.1  | 10.1  | 30.44 | 8.66 | 23.61   |
| 15.0  | 15.1  | 30.51 | 8.69 | 23.66   |
| 19.9  | 20.0  | 31.01 | 8.98 | 24.00   |
| 24.9  | 25.0  | 31.12 | 8.79 | 24.12   |
| 29.9  | 30.1  | 31.89 | 9.30 | 24.64   |
| 34.8  | 34.9  | 32.17 | 9.43 | 24.84   |
| 39.9  | 40.0  | 32.25 | 9.47 | 24.89   |
| 44.8  | 45.1  | 32.48 | 9.51 | 25.06   |
| 49.7  | 49.9  | 32.50 | 9.54 | 25.08   |
| 59.6  | 59.9  | 32.55 | 9.59 | 25.11   |
| 69.6  | 69.9  | 32.61 | 9.58 | 25.15   |
| 79.6  | 80.0  | 32.70 | 9.59 | 25.22   |
| 89.5  | 90.0  | 32.76 | 9.56 | 25.28   |
| 100.4 | 100.9 | 32.81 | 9.54 | 25.32   |
| 110.4 | 111.0 | 32.85 | 9.53 | 25.35   |
| 116.4 | 117.0 | 32.86 | 9.54 | 25.36   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 10 CODE

LAT N 48 48.20

DATE 26/ 3/80

TIME (PST) 0158

TAPE: U00454 -287

LONG W 125 23.70

PASS NO. 25

STN: B.S. 1

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.9   | 1.9   | 29.98 | 8.61 | 23.25   |
| 5.1   | 5.1   | 30.38 | 8.67 | 23.55   |
| 10.1  | 10.1  | 30.76 | 8.73 | 23.84   |
| 14.9  | 15.0  | 31.12 | 8.79 | 24.12   |
| 19.8  | 19.9  | 31.33 | 8.75 | 24.28   |
| 25.0  | 25.1  | 31.47 | 8.98 | 24.36   |
| 29.9  | 30.1  | 31.52 | 8.79 | 24.43   |
| 34.8  | 35.0  | 31.80 | 9.22 | 24.58   |
| 39.9  | 40.1  | 31.98 | 9.30 | 24.71   |
| 44.8  | 45.0  | 32.06 | 9.35 | 24.77   |
| 49.8  | 50.0  | 32.16 | 9.38 | 24.84   |
| 59.7  | 60.0  | 32.43 | 9.54 | 25.02   |
| 69.7  | 70.1  | 32.54 | 9.58 | 25.10   |
| 80.6  | 81.0  | 32.71 | 9.65 | 25.22   |
| 89.3  | 89.7  | 32.78 | 9.59 | 25.29   |

CRUISE NO: 11 CODE

LAT N 48 39.00

DATE 22/ 4/80

TIME (PST) 1505

TAPE: U00454 -288

LONG W 125 2.50

PASS NO. 1

STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .6    | .6    | 29.86 | 10.83 | 22.81   |        |
| 2.2   | 2.2   | 29.85 | 10.82 | 22.80   |        |
| 4.9   | 4.9   | 29.86 | 10.69 | 22.83   |        |
| 9.9   | 9.9   | 29.88 | 10.31 | 22.91   |        |
| 15.0  | 15.1  | 29.97 | 10.28 | 22.98   |        |
| 19.9  | 20.0  | 30.96 | 9.90  | 23.82   |        |
| 24.9  | 25.0  | 31.65 | 8.88  | 24.52   | 5.24   |
| 30.0  | 30.1  | 31.78 | 8.58  | 24.67   |        |
| 34.7  | 34.9  | 31.82 | 8.53  | 24.70   |        |
| 39.8  | 40.0  | 31.85 | 8.51  | 24.73   |        |
| 44.8  | 45.0  | 32.04 | 8.37  | 24.90   |        |
| 49.9  | 50.1  | 32.08 | 8.35  | 24.93   | 4.72   |
| 54.8  | 55.1  | 32.09 | 8.35  | 24.94   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 11 CODE

LAT N 48 35.60

DATE 22/ 4/80

TIME (PST) 1555

TAPE: U00454 -289

LONG W 125 9.00

PASS NO. 3

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .8    | .8    | 29.73 | 10.56 | 22.76   |
| 1.9   | 2.0   | 29.73 | 10.58 | 22.74   |
| 5.0   | 5.0   | 29.73 | 10.57 | 22.75   |
| 9.9   | 10.0  | 30.56 | 10.33 | 23.44   |
| 14.9  | 14.9  | 30.71 | 10.23 | 23.57   |
| 19.9  | 20.0  | 31.08 | 10.07 | 23.88   |
| 25.0  | 25.1  | 31.57 | 9.60  | 24.34   |
| 29.9  | 30.1  | 31.66 | 9.40  | 24.44   |
| 35.0  | 35.1  | 31.90 | 9.57  | 24.61   |
| 39.8  | 40.0  | 32.03 | 9.57  | 24.71   |
| 44.6  | 44.8  | 32.04 | 9.55  | 24.71   |
| 49.8  | 50.0  | 32.18 | 9.62  | 24.81   |
| 59.7  | 59.9  | 32.36 | 9.28  | 25.01   |
| 69.5  | 69.9  | 32.62 | 9.16  | 25.23   |
| 79.6  | 80.1  | 32.60 | 8.56  | 25.31   |
| 90.4  | 90.9  | 32.92 | 8.44  | 25.57   |
| 100.4 | 101.0 | 33.04 | 8.37  | 25.68   |
| 102.5 | 103.0 | 33.04 | 8.37  | 25.69   |

CRUISE NO: 11 CODE

LAT N 48 32.20

DATE 22/ 4/80

TIME (PST) 1640

TAPE: U00454 -290

LONG W 125 15.50

PASS NO. 5

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.3   | 2.3   | 30.69 | 10.66 | 23.48   |        |
| 5.1   | 5.1   | 30.82 | 10.48 | 23.62   |        |
| 10.0  | 10.0  | 31.08 | 9.95  | 23.90   |        |
| 14.9  | 14.9  | 31.09 | 9.92  | 23.91   |        |
| 19.9  | 20.0  | 31.24 | 9.75  | 24.06   |        |
| 24.8  | 25.0  | 31.48 | 9.54  | 24.28   | 6.51   |
| 29.8  | 30.0  | 31.66 | 9.30  | 24.46   |        |
| 35.0  | 35.2  | 31.84 | 9.35  | 24.59   |        |
| 39.7  | 39.9  | 31.86 | 9.32  | 24.61   |        |
| 44.8  | 45.0  | 31.95 | 9.24  | 24.69   |        |
| 49.8  | 50.0  | 32.07 | 9.23  | 24.79   | 5.81   |
| 59.7  | 60.0  | 32.46 | 9.22  | 25.10   |        |
| 69.6  | 70.0  | 32.71 | 8.81  | 25.35   |        |
| 74.6  | 75.0  | 32.77 | 8.76  | 25.41   | 4.41   |
| 79.7  | 80.1  | 32.95 | 8.77  | 25.55   |        |
| 89.6  | 90.1  | 33.27 | 8.43  | 25.85   |        |
| 100.2 | 100.8 | 33.48 | 8.02  | 26.08   | 3.04   |
| 110.3 | 111.0 | 33.56 | 7.88  | 26.17   |        |
| 114.3 | 115.0 | 33.57 | 7.87  | 26.17   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 11 CODE

LAT N 48 28.90

DATE 22/ 4/80

TIME (PST) 1736

TAPE: U00454 -291

LONG W 125 21.80

PASS NO. 7

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .1    | .1    | 15.67 | 9.87  | 11.92   |
| 2.0   | 2.0   | 31.03 | 9.95  | 23.86   |
| 5.0   | 5.0   | 30.97 | 10.02 | 23.80   |
| 10.0  | 10.0  | 31.08 | 9.84  | 23.92   |
| 14.8  | 14.9  | 31.37 | 9.42  | 24.21   |
| 19.9  | 20.0  | 31.81 | 9.26  | 24.58   |
| 24.9  | 25.0  | 32.11 | 9.16  | 24.83   |
| 29.9  | 30.0  | 32.17 | 9.01  | 24.90   |
| 34.8  | 34.9  | 32.32 | 9.27  | 24.98   |
| 39.8  | 40.0  | 32.39 | 8.90  | 25.09   |
| 44.8  | 45.0  | 32.45 | 8.92  | 25.13   |
| 49.8  | 50.0  | 32.62 | 8.89  | 25.27   |
| 59.6  | 60.0  | 32.87 | 8.76  | 25.49   |
| 69.6  | 70.0  | 33.07 | 8.66  | 25.66   |
| 79.5  | 80.0  | 33.30 | 8.34  | 25.89   |
| 90.4  | 91.0  | 33.40 | 8.20  | 25.99   |
| 100.4 | 101.0 | 33.56 | 7.95  | 26.16   |
| 110.4 | 111.0 | 33.65 | 7.85  | 26.24   |
| 120.2 | 121.0 | 33.67 | 7.86  | 26.25   |
| 130.2 | 131.0 | 33.68 | 7.81  | 26.27   |
| 140.2 | 141.1 | 33.72 | 7.73  | 26.31   |
| 149.6 | 150.6 | 33.79 | 7.59  | 26.38   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 11 CODE  
 LAT N 48 25.50  
 DATE 22/ 4/80  
 TIME (PST) 1825

TAPE: U00454 -292  
 LONG W 125 28.30  
 PASS NO. 9  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .7    | .7    | 30.92 | 10.23 | 23.73   |        |
| 1.9   | 1.9   | 31.02 | 10.13 | 23.82   |        |
| 5.0   | 5.0   | 31.01 | 10.12 | 23.82   |        |
| 10.0  | 10.0  | 31.09 | 9.75  | 23.94   |        |
| 15.0  | 15.0  | 31.38 | 9.92  | 24.14   |        |
| 20.0  | 20.0  | 31.61 | 9.72  | 24.35   |        |
| 24.9  | 25.0  | 31.92 | 9.66  | 24.61   | 6.64   |
| 29.9  | 30.0  | 32.05 | 9.42  | 24.74   |        |
| 34.8  | 35.0  | 32.17 | 9.15  | 24.88   |        |
| 39.8  | 40.0  | 32.41 | 8.97  | 25.10   |        |
| 44.7  | 44.9  | 32.51 | 8.80  | 25.20   |        |
| 49.8  | 50.1  | 32.62 | 8.68  | 25.31   | 4.83   |
| 59.7  | 60.0  | 32.71 | 8.67  | 25.38   |        |
| 69.6  | 70.0  | 32.90 | 8.57  | 25.54   |        |
| 74.6  | 75.1  | 33.02 | 8.53  | 25.64   | 3.69   |
| 79.6  | 80.0  | 33.10 | 8.46  | 25.72   |        |
| 90.5  | 91.0  | 33.23 | 8.36  | 25.83   |        |
| 100.4 | 101.0 | 33.33 | 8.22  | 25.93   | 3.30   |
| 110.4 | 111.1 | 33.65 | 7.79  | 26.24   |        |
| 120.3 | 121.1 | 33.79 | 7.54  | 26.39   |        |
| 125.3 | 126.0 | 33.79 | 7.54  | 26.39   | 2.60   |
| 130.2 | 131.0 | 33.81 | 7.46  | 26.42   |        |
| 136.2 | 137.0 | 33.87 | 7.23  | 26.50   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 11 CODE  
 LAT N 48 22.00  
 DATE 22/ 4/80  
 TIME (PST) 1919

TAPE: U00454 -293  
 LONG W 125 34.70  
 PASS NO. 11  
 STN: 106

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .7    | .7    | 31.45 | 9.95 | 24.19   |
| 2.0   | 2.0   | 31.55 | 9.85 | 24.29   |
| 5.0   | 5.0   | 31.55 | 9.81 | 24.30   |
| 10.0  | 10.0  | 31.64 | 9.76 | 24.37   |
| 15.0  | 15.1  | 31.73 | 9.79 | 24.44   |
| 20.0  | 20.1  | 31.81 | 9.68 | 24.52   |
| 24.9  | 25.0  | 31.99 | 9.32 | 24.72   |
| 29.9  | 30.0  | 32.04 | 9.12 | 24.78   |
| 34.8  | 34.9  | 32.10 | 8.85 | 24.88   |
| 39.8  | 40.0  | 32.18 | 8.66 | 24.96   |
| 44.7  | 44.9  | 32.28 | 8.71 | 25.03   |
| 49.7  | 50.0  | 32.48 | 8.80 | 25.17   |
| 59.7  | 60.0  | 32.72 | 8.92 | 25.35   |
| 69.6  | 69.9  | 32.84 | 8.79 | 25.46   |
| 79.6  | 80.0  | 32.91 | 8.73 | 25.53   |
| 79.6  | 80.0  | 32.91 | 8.73 | 25.53   |

CRUISE NO: 11 CODE  
 LAT N 48 18.60  
 DATE 22/ 4/80  
 TIME (PST) 2026

TAPE: U00454 -294  
 LONG W 125 41.20  
 PASS NO. 14  
 STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .3    | .3    | 15.59 | 9.85  | 11.87   |        |
| 2.1   | 2.1   | 30.91 | 10.08 | 23.75   |        |
| 5.0   | 5.0   | 30.90 | 9.98  | 23.76   |        |
| 10.0  | 10.0  | 31.11 | 9.66  | 23.98   |        |
| 15.0  | 15.0  | 31.23 | 9.64  | 24.07   |        |
| 19.9  | 20.0  | 31.64 | 9.42  | 24.43   |        |
| 24.8  | 25.0  | 31.89 | 9.16  | 24.66   | 6.33   |
| 29.8  | 30.0  | 32.29 | 8.85  | 25.02   |        |
| 34.8  | 35.0  | 32.47 | 8.90  | 25.15   |        |
| 39.8  | 40.0  | 32.55 | 8.89  | 25.22   |        |
| 44.8  | 45.0  | 32.59 | 8.93  | 25.25   |        |
| 49.8  | 50.0  | 32.76 | 8.85  | 25.39   | 4.74   |
| 59.6  | 59.9  | 32.99 | 8.61  | 25.61   |        |
| 69.6  | 69.9  | 33.17 | 8.60  | 25.75   |        |
| 74.7  | 75.1  | 33.34 | 8.60  | 25.88   | 3.99   |
| 79.5  | 80.0  | 33.43 | 8.51  | 25.97   |        |
| 89.5  | 90.1  | 33.52 | 8.39  | 26.06   |        |
| 100.3 | 100.9 | 33.64 | 8.10  | 26.19   | 3.26   |
| 110.4 | 111.1 | 33.71 | 7.88  | 26.28   |        |
| 120.2 | 120.9 | 33.73 | 7.81  | 26.31   |        |
| 125.2 | 126.0 | 33.77 | 7.72  | 26.35   | 2.65   |
| 130.1 | 130.9 | 33.82 | 7.55  | 26.41   |        |
| 135.1 | 136.0 | 33.83 | 7.47  | 26.43   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 11 CODE  
 LAT N 48 15.10  
 DATE 22/ 4/80  
 TIME (PST) 2130

TAPE: U00454 -295  
 LONG W 125 47.70  
 PASS NO. 15  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .4    | .4    | 31.17 | 10.02 | 23.97   |
| 2.0   | 2.0   | 31.21 | 10.01 | 23.99   |
| 5.1   | 5.1   | 31.20 | 10.01 | 23.99   |
| 10.0  | 10.0  | 31.25 | 9.80  | 24.06   |
| 15.0  | 15.0  | 31.87 | 9.63  | 24.57   |
| 19.9  | 20.0  | 32.01 | 9.46  | 24.71   |
| 24.8  | 25.0  | 32.01 | 9.45  | 24.71   |
| 29.9  | 30.0  | 32.05 | 9.34  | 24.76   |
| 34.9  | 35.0  | 32.11 | 9.16  | 24.83   |
| 39.8  | 40.0  | 32.36 | 8.98  | 25.06   |
| 44.6  | 44.8  | 32.56 | 8.98  | 25.21   |
| 49.7  | 50.0  | 32.66 | 8.92  | 25.30   |
| 59.7  | 60.0  | 32.86 | 8.87  | 25.46   |
| 69.6  | 70.0  | 33.08 | 8.87  | 25.64   |
| 79.6  | 80.1  | 33.24 | 8.74  | 25.78   |
| 90.5  | 91.0  | 33.41 | 8.60  | 25.94   |
| 99.5  | 100.1 | 33.53 | 8.37  | 26.07   |
| 110.4 | 111.0 | 33.66 | 8.12  | 26.20   |
| 120.3 | 121.0 | 33.73 | 7.90  | 26.30   |
| 130.2 | 131.0 | 33.78 | 7.79  | 26.35   |
| 140.1 | 141.0 | 33.84 | 7.49  | 26.44   |
| 150.1 | 151.0 | 33.85 | 7.47  | 26.45   |
| 159.8 | 160.9 | 33.87 | 7.36  | 26.48   |
| 169.8 | 171.0 | 33.89 | 7.27  | 26.51   |
| 179.8 | 181.0 | 33.90 | 7.24  | 26.52   |
| 189.7 | 191.0 | 33.91 | 7.20  | 26.53   |
| 199.7 | 201.0 | 33.91 | 7.18  | 26.53   |
| 205.2 | 206.6 | 33.92 | 7.12  | 26.55   |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 11 CODE  
 LAT N 48 12.90  
 DATE 22/ 4/80  
 TIME (PST) 2200

TAPE: U00454 -296  
 LONG W 125 52.00  
 PASS NO. 17  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .4    | .4    | 31.89 | 9.71 | 24.57   |        |
| 2.0   | 2.0   | 31.95 | 9.65 | 24.63   |        |
| 5.0   | 5.0   | 31.95 | 9.64 | 24.63   |        |
| 9.9   | 10.0  | 31.96 | 9.64 | 24.64   |        |
| 14.9  | 15.0  | 31.98 | 9.62 | 24.66   | 6.94   |
| 19.9  | 20.0  | 32.00 | 9.61 | 24.67   |        |
| 24.9  | 25.1  | 32.01 | 9.49 | 24.71   |        |
| 29.9  | 30.1  | 32.02 | 9.48 | 24.71   |        |
| 34.8  | 35.0  | 32.02 | 9.41 | 24.73   |        |
| 39.8  | 40.0  | 32.06 | 9.32 | 24.77   | 6.76   |
| 44.8  | 45.1  | 32.27 | 8.96 | 24.99   |        |
| 49.8  | 50.0  | 32.41 | 8.99 | 25.10   |        |
| 59.7  | 60.0  | 32.71 | 8.91 | 25.34   |        |
| 69.6  | 70.0  | 32.95 | 9.00 | 25.52   |        |
| 74.6  | 75.0  | 33.02 | 9.01 | 25.57   | 4.74   |
| 80.5  | 81.0  | 33.09 | 8.91 | 25.64   |        |
| 90.5  | 91.0  | 33.23 | 8.84 | 25.76   |        |
| 100.4 | 101.0 | 33.38 | 8.65 | 25.91   | 4.01   |
| 110.4 | 111.1 | 33.43 | 8.56 | 25.96   |        |
| 120.3 | 121.0 | 33.54 | 8.34 | 26.08   |        |
| 125.2 | 126.0 | 33.60 | 8.23 | 26.14   | 3.28   |
| 130.2 | 131.0 | 33.65 | 8.15 | 26.19   |        |
| 140.2 | 141.0 | 33.75 | 7.99 | 26.30   |        |
| 150.2 | 151.1 | 33.77 | 7.91 | 26.33   | 2.94   |
| 160.0 | 161.1 | 33.81 | 7.79 | 26.37   |        |
| 170.0 | 171.1 | 33.84 | 7.67 | 26.41   |        |
| 179.8 | 181.0 | 33.88 | 7.50 | 26.47   |        |
| 189.8 | 191.1 | 33.88 | 7.34 | 26.49   |        |
| 199.7 | 201.0 | 33.90 | 7.22 | 26.52   | 2.54   |
| 225.5 | 227.0 | 33.96 | 6.80 | 26.63   |        |
| 250.4 | 252.1 | 33.97 | 6.59 | 26.66   | 2.40   |
| 275.1 | 277.0 | 33.97 | 6.20 | 26.72   |        |
| 299.8 | 302.0 | 33.99 | 5.99 | 26.75   | 2.13   |
| 324.7 | 327.1 | 34.00 | 5.86 | 26.78   |        |
| 350.3 | 352.9 | 34.00 | 5.63 | 26.81   |        |
| 375.1 | 377.9 | 34.02 | 5.46 | 26.84   |        |
| 400.0 | 403.1 | 34.03 | 5.21 | 26.88   |        |
| 424.7 | 427.9 | 34.06 | 5.03 | 26.93   |        |
| 450.4 | 453.9 | 34.06 | 4.88 | 26.95   |        |
| 475.3 | 479.0 | 34.06 | 4.88 | 26.95   |        |
| 500.0 | 504.0 | 34.10 | 4.79 | 26.98   | .87    |
| 500.7 | 504.7 | 34.10 | 4.78 | 26.98   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 11 CODE

LAT N 48 10.60

DATE 22/ 4/80

TIME (PST) 2325

TAPE: U00454 -297

LONG W 125 56.20

PASS NO. 19

STN: 110

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| .5    | .5    | 32.00 | 9.46 | 24.70   |
| 1.9   | 1.9   | 32.02 | 9.45 | 24.72   |
| 4.9   | 4.9   | 32.02 | 9.45 | 24.72   |
| 9.9   | 9.9   | 32.02 | 9.45 | 24.72   |
| 14.9  | 15.0  | 32.02 | 9.45 | 24.72   |
| 19.9  | 20.0  | 32.02 | 9.43 | 24.72   |
| 24.8  | 24.9  | 32.02 | 9.35 | 24.73   |
| 29.8  | 30.0  | 32.03 | 9.37 | 24.74   |
| 34.8  | 35.0  | 32.05 | 9.35 | 24.75   |
| 39.8  | 40.0  | 32.05 | 9.32 | 24.76   |
| 44.7  | 44.9  | 32.07 | 9.30 | 24.78   |
| 49.6  | 49.9  | 32.12 | 9.22 | 24.83   |
| 59.7  | 60.0  | 32.41 | 9.00 | 25.10   |
| 69.6  | 70.0  | 32.68 | 8.86 | 25.32   |
| 79.6  | 80.1  | 32.89 | 8.97 | 25.47   |
| 89.6  | 90.1  | 33.15 | 8.83 | 25.70   |
| 100.5 | 101.1 | 33.34 | 8.71 | 25.86   |
| 110.4 | 111.0 | 33.50 | 8.47 | 26.03   |
| 120.3 | 121.0 | 33.62 | 8.24 | 26.16   |
| 130.1 | 130.9 | 33.72 | 8.01 | 26.27   |
| 140.1 | 141.0 | 33.76 | 7.83 | 26.33   |
| 150.0 | 150.9 | 33.81 | 7.64 | 26.40   |
| 160.0 | 161.0 | 33.84 | 7.54 | 26.43   |
| 169.9 | 171.0 | 33.87 | 7.39 | 26.48   |
| 179.9 | 181.0 | 33.89 | 7.32 | 26.50   |
| 189.8 | 191.0 | 33.89 | 7.29 | 26.51   |
| 199.7 | 201.0 | 33.91 | 7.21 | 26.53   |
| 224.5 | 226.0 | 33.93 | 6.91 | 26.59   |
| 250.3 | 252.0 | 33.96 | 6.69 | 26.64   |
| 275.0 | 276.9 | 33.97 | 6.52 | 26.67   |
| 299.7 | 301.9 | 33.97 | 6.25 | 26.71   |
| 324.7 | 327.0 | 33.98 | 5.97 | 26.75   |
| 350.4 | 353.0 | 34.00 | 5.62 | 26.81   |
| 375.3 | 378.1 | 34.02 | 5.44 | 26.85   |
| 399.9 | 402.9 | 34.04 | 5.24 | 26.89   |
| 424.7 | 428.0 | 34.04 | 4.91 | 26.93   |
| 450.5 | 454.0 | 34.07 | 4.77 | 26.97   |
| 475.2 | 479.0 | 34.09 | 4.73 | 26.98   |
| 495.8 | 499.7 | 34.10 | 4.67 | 27.00   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 11 CODE

LAT N 48 8.50

DATE 22/ 4/80

TIME (PST) 0015

TAPE: U00454 -298

LONG W 126 .00

PASS NO. 21

STN: 111

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .0    | .0    | 32.07 | 9.61 | 24.73   |        |
| 2.6   | 2.6   | 32.08 | 9.66 | 24.73   |        |
| 5.0   | 5.0   | 32.08 | 9.66 | 24.73   |        |
| 9.9   | 9.9   | 32.09 | 9.63 | 24.74   |        |
| 15.0  | 15.1  | 32.09 | 9.64 | 24.74   |        |
| 19.9  | 20.0  | 32.12 | 9.58 | 24.78   |        |
| 25.0  | 25.1  | 32.13 | 9.59 | 24.78   | 6.81   |
| 29.8  | 29.9  | 32.12 | 9.57 | 24.78   |        |
| 34.9  | 35.1  | 32.13 | 9.57 | 24.79   |        |
| 39.8  | 40.0  | 32.16 | 9.58 | 24.81   |        |
| 44.8  | 45.1  | 32.20 | 9.45 | 24.86   |        |
| 49.7  | 50.0  | 32.24 | 9.26 | 24.92   | 6.46   |
| 59.7  | 60.1  | 32.33 | 9.10 | 25.01   |        |
| 69.6  | 70.0  | 32.66 | 9.03 | 25.28   |        |
| 74.6  | 75.1  | 32.73 | 8.98 | 25.35   | 5.97   |
| 79.5  | 80.0  | 32.83 | 8.99 | 25.43   |        |
| 90.5  | 91.0  | 33.04 | 8.97 | 25.59   |        |
| 100.4 | 101.0 | 33.28 | 8.78 | 25.81   | 4.34   |
| 110.3 | 111.0 | 33.47 | 8.59 | 25.98   |        |
| 120.4 | 121.1 | 33.57 | 8.33 | 26.11   |        |
| 125.2 | 126.0 | 33.62 | 8.23 | 26.15   | 3.55   |
| 130.2 | 131.0 | 33.65 | 8.10 | 26.20   |        |
| 140.2 | 141.0 | 33.72 | 7.89 | 26.29   |        |
| 150.0 | 150.9 | 33.78 | 7.73 | 26.36   | 3.03   |
| 160.0 | 161.0 | 33.83 | 7.59 | 26.42   |        |
| 170.0 | 171.1 | 33.86 | 7.44 | 26.46   |        |
| 179.8 | 181.0 | 33.87 | 7.37 | 26.48   |        |
| 189.7 | 191.0 | 33.88 | 7.34 | 26.49   |        |
| 199.7 | 201.0 | 33.90 | 7.29 | 26.51   | 2.55   |
| 225.5 | 227.0 | 33.96 | 6.79 | 26.63   |        |
| 250.3 | 252.1 | 33.97 | 6.46 | 26.68   | 2.47   |
| 275.2 | 277.1 | 33.97 | 6.18 | 26.72   |        |
| 299.9 | 302.1 | 33.98 | 5.96 | 26.75   | 2.13   |
| 324.6 | 327.0 | 33.99 | 5.80 | 26.78   |        |
| 350.4 | 353.0 | 34.00 | 5.51 | 26.83   |        |
| 375.2 | 378.0 | 34.02 | 5.25 | 26.87   |        |
| 399.9 | 403.0 | 34.03 | 5.05 | 26.90   |        |
| 424.8 | 428.1 | 34.05 | 4.89 | 26.93   |        |
| 449.5 | 453.0 | 34.07 | 4.82 | 26.96   |        |
| 475.2 | 479.0 | 34.10 | 4.72 | 26.99   |        |
| 495.0 | 498.9 | 34.12 | 4.72 | 27.01   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 11 CODE  
 LAT N 48 19.20  
 DATE 23/ 4/80  
 TIME (PST) 0243

TAPE: U00454 -299  
 LONG W 126 2.50  
 PASS NO. 23  
 STN: B.S. 8

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 1.9   | 1.9   | 31.94 | 9.57 | 24.63   |        |
| 5.0   | 5.0   | 31.94 | 9.57 | 24.63   |        |
| 9.9   | 10.0  | 31.95 | 9.54 | 24.65   |        |
| 15.0  | 15.0  | 31.97 | 9.42 | 24.68   |        |
| 19.8  | 19.9  | 32.01 | 9.36 | 24.73   |        |
| 24.8  | 24.9  | 32.03 | 9.36 | 24.74   | 6.76   |
| 29.9  | 30.1  | 32.03 | 9.36 | 24.74   |        |
| 34.8  | 35.0  | 32.04 | 9.35 | 24.75   |        |
| 39.8  | 40.0  | 32.07 | 9.33 | 24.77   |        |
| 44.7  | 45.0  | 32.15 | 9.26 | 24.85   |        |
| 49.7  | 50.0  | 32.32 | 9.18 | 25.00   | 5.95   |
| 59.7  | 60.0  | 32.55 | 9.01 | 25.20   |        |
| 69.6  | 70.0  | 32.78 | 8.95 | 25.39   |        |
| 74.6  | 75.1  | 32.86 | 8.85 | 25.47   | 5.37   |
| 79.5  | 80.0  | 32.94 | 8.85 | 25.53   |        |
| 90.5  | 91.0  | 33.23 | 8.79 | 25.77   |        |
| 100.4 | 101.0 | 33.45 | 8.53 | 25.98   | 3.87   |
| 110.3 | 111.0 | 33.51 | 8.44 | 26.04   |        |
| 120.2 | 120.9 | 33.65 | 8.15 | 26.19   |        |
| 125.2 | 125.9 | 33.70 | 8.03 | 26.25   | 3.34   |
| 130.1 | 130.9 | 33.74 | 7.95 | 26.29   |        |
| 140.1 | 141.0 | 33.79 | 7.82 | 26.36   |        |
| 150.0 | 151.0 | 33.84 | 7.69 | 26.41   | 2.95   |
| 160.1 | 161.1 | 33.87 | 7.56 | 26.45   |        |
| 169.9 | 171.0 | 33.89 | 7.46 | 26.48   |        |
| 179.8 | 180.9 | 33.91 | 7.34 | 26.51   |        |
| 189.7 | 191.0 | 33.92 | 7.23 | 26.54   |        |
| 199.7 | 201.0 | 33.94 | 7.13 | 26.57   | 2.67   |
| 224.5 | 226.0 | 33.95 | 6.83 | 26.62   |        |
| 250.2 | 251.9 | 33.97 | 6.54 | 26.67   | 2.39   |
| 275.1 | 277.1 | 33.98 | 6.31 | 26.71   |        |
| 299.8 | 302.0 | 33.98 | 6.12 | 26.74   | 2.12   |
| 324.6 | 327.0 | 34.00 | 5.89 | 26.78   |        |
| 350.4 | 353.0 | 34.00 | 5.62 | 26.81   |        |
| 375.2 | 378.1 | 34.01 | 5.44 | 26.84   |        |
| 400.0 | 403.0 | 34.02 | 5.29 | 26.87   |        |
| 424.6 | 427.9 | 34.05 | 5.16 | 26.90   |        |
| 449.5 | 453.0 | 34.07 | 5.03 | 26.93   |        |
| 475.1 | 478.9 | 34.08 | 4.77 | 26.98   |        |
| 499.6 | 503.6 | 34.11 | 4.71 | 27.00   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 11 CODE

LAT N 48 23.80

DATE 23/ 4/80

TIME (PST) 0419

TAPE: U00454 -300

LONG W 125 57.40

PASS NO. 25

STN: B.S. 7

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 1.9   | 2.0   | 31.46 | 9.82 | 24.22   |
| 5.0   | 5.1   | 31.44 | 9.82 | 24.20   |
| 10.0  | 10.0  | 31.56 | 9.79 | 24.30   |
| 15.0  | 15.0  | 31.63 | 9.74 | 24.36   |
| 19.8  | 19.9  | 31.63 | 9.73 | 24.37   |
| 24.9  | 25.0  | 31.67 | 9.65 | 24.41   |
| 29.9  | 30.0  | 32.00 | 9.31 | 24.73   |
| 34.9  | 35.1  | 32.11 | 9.23 | 24.82   |
| 39.8  | 40.0  | 32.16 | 9.05 | 24.89   |
| 44.8  | 45.0  | 32.27 | 9.03 | 24.98   |
| 49.8  | 50.0  | 32.36 | 9.03 | 25.05   |
| 59.7  | 60.0  | 32.59 | 8.79 | 25.27   |
| 69.7  | 70.1  | 32.94 | 8.73 | 25.55   |
| 79.6  | 80.1  | 33.11 | 8.71 | 25.69   |
| 89.5  | 90.0  | 33.39 | 8.64 | 25.91   |
| 100.4 | 101.0 | 33.52 | 8.35 | 26.06   |
| 110.4 | 111.0 | 33.61 | 8.17 | 26.16   |
| 120.1 | 120.9 | 33.68 | 8.02 | 26.23   |
| 130.2 | 131.0 | 33.71 | 7.93 | 26.28   |
| 140.1 | 140.9 | 33.77 | 7.77 | 26.34   |
| 150.2 | 151.1 | 33.87 | 7.52 | 26.45   |
| 160.1 | 161.1 | 33.88 | 7.34 | 26.49   |
| 169.9 | 171.0 | 33.90 | 7.24 | 26.52   |
| 179.8 | 181.0 | 33.93 | 6.99 | 26.58   |
| 189.9 | 191.1 | 33.95 | 6.80 | 26.62   |
| 199.6 | 200.9 | 33.97 | 6.43 | 26.68   |
| 225.5 | 227.0 | 33.98 | 6.27 | 26.71   |
| 250.3 | 252.1 | 33.99 | 6.06 | 26.75   |
| 275.1 | 277.0 | 33.98 | 5.93 | 26.76   |
| 299.8 | 302.0 | 34.00 | 5.69 | 26.80   |
| 324.6 | 327.0 | 34.00 | 5.74 | 26.80   |
| 350.4 | 353.0 | 34.02 | 5.61 | 26.82   |
| 375.1 | 378.0 | 34.04 | 5.55 | 26.85   |
| 399.9 | 403.0 | 34.05 | 5.40 | 26.88   |
| 416.9 | 420.2 | 34.06 | 5.39 | 26.88   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 11 CODE

LAT N 48 28.00

DATE 23/ 4/80

TIME (PST) 0513

TAPE: U00454 -301

LONG W 125 51.50

PASS NO. 27

STN: B.S. 6

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| .9    | .9    | 31.06 | 9.99 | 23.88   |        |
| 2.0   | 2.0   | 31.07 | 9.94 | 23.90   |        |
| 5.0   | 5.0   | 31.07 | 9.97 | 23.89   |        |
| 10.0  | 10.0  | 31.15 | 9.87 | 23.97   |        |
| 15.0  | 15.1  | 31.57 | 9.77 | 24.32   |        |
| 20.0  | 20.1  | 31.68 | 9.79 | 24.39   |        |
| 24.8  | 24.9  | 31.81 | 9.57 | 24.53   | 7.11   |
| 29.9  | 30.0  | 31.93 | 9.41 | 24.66   |        |
| 34.8  | 35.0  | 32.02 | 9.27 | 24.75   |        |
| 39.8  | 40.0  | 32.12 | 9.16 | 24.84   |        |
| 44.8  | 45.0  | 32.24 | 8.93 | 24.97   |        |
| 49.8  | 50.0  | 32.34 | 9.08 | 25.02   | 5.13   |
| 59.7  | 60.0  | 32.49 | 9.21 | 25.12   |        |
| 69.6  | 70.0  | 32.57 | 9.24 | 25.18   |        |
| 74.6  | 75.0  | 32.61 | 9.23 | 25.21   | 4.90   |
| 79.5  | 80.0  | 32.77 | 9.10 | 25.36   |        |
| 89.6  | 90.1  | 33.17 | 8.68 | 25.74   |        |
| 100.4 | 101.0 | 33.65 | 7.80 | 26.25   | 2.82   |
| 110.3 | 110.9 | 33.89 | 7.15 | 26.53   |        |
| 114.4 | 115.0 | 33.91 | 7.02 | 26.56   |        |

CRUISE NO: 11 CODE

LAT N 48 32.20

DATE 23/ 4/80

TIME (PST) 0617

TAPE: U00454 -302

LONG W 125 45.70

PASS NO. 29

STN: B.S. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.9   | 1.9   | 29.95 | 10.22 | 22.98   |
| 4.9   | 4.9   | 29.95 | 10.22 | 22.98   |
| 10.0  | 10.0  | 29.95 | 10.22 | 22.98   |
| 15.0  | 15.1  | 31.23 | 9.82  | 24.04   |
| 19.9  | 20.0  | 31.57 | 9.51  | 24.36   |
| 25.0  | 25.1  | 31.96 | 9.58  | 24.65   |
| 29.9  | 30.0  | 32.02 | 9.63  | 24.69   |
| 34.9  | 35.0  | 32.15 | 9.61  | 24.80   |
| 39.9  | 40.1  | 32.20 | 9.56  | 24.84   |
| 44.7  | 44.9  | 32.25 | 9.28  | 24.92   |
| 49.7  | 50.0  | 32.30 | 9.04  | 25.00   |
| 59.7  | 60.0  | 32.42 | 9.18  | 25.07   |
| 69.6  | 70.0  | 32.61 | 8.91  | 25.26   |
| 79.6  | 80.0  | 32.84 | 8.66  | 25.48   |
| 81.3  | 81.8  | 32.87 | 8.63  | 25.51   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 11 CODE

LAT N 48 36.40

DATE 23/ 4/80

TIME (PST) 0659

TAPE: U00454 -303

LONG W 125 40.10

PASS NO. 31

STN: B.S. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .8    | .8    | 30.78 | 10.30 | 23.61   |        |
| 2.0   | 2.0   | 30.79 | 10.29 | 23.62   |        |
| 4.9   | 5.0   | 30.79 | 10.29 | 23.62   |        |
| 9.9   | 10.0  | 30.78 | 10.29 | 23.61   |        |
| 14.9  | 15.0  | 31.01 | 10.15 | 23.82   |        |
| 19.9  | 20.0  | 31.62 | 9.63  | 24.37   |        |
| 24.9  | 25.1  | 31.75 | 9.30  | 24.53   | 6.21   |
| 29.9  | 30.0  | 31.91 | 9.16  | 24.68   |        |
| 34.8  | 35.0  | 32.11 | 9.11  | 24.84   |        |
| 39.8  | 40.0  | 32.16 | 9.10  | 24.88   |        |
| 44.7  | 45.0  | 32.20 | 9.07  | 24.91   |        |
| 49.5  | 49.7  | 32.20 | 9.08  | 24.92   |        |

CRUISE NO: 11 CODE

LAT N 48 40.40

DATE 23/ 4/80

TIME (PST) 0741

TAPE: U00454 -304

LONG W 125 34.50

PASS NO. 33

STN: B.S. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .1    | .1    | .58   | 10.22 | .14     |
| 1.9   | 1.9   | 29.36 | 10.77 | 22.43   |
| 5.1   | 5.1   | 29.37 | 10.77 | 22.43   |
| 10.0  | 10.0  | 29.37 | 10.76 | 22.44   |
| 15.0  | 15.0  | 30.79 | 10.05 | 23.66   |
| 19.9  | 20.0  | 31.81 | 9.47  | 24.55   |
| 25.0  | 25.1  | 31.89 | 9.30  | 24.64   |
| 30.0  | 30.1  | 31.98 | 9.20  | 24.73   |
| 34.8  | 34.9  | 32.00 | 9.18  | 24.75   |
| 39.8  | 40.0  | 32.02 | 9.16  | 24.77   |
| 44.8  | 45.0  | 32.04 | 9.14  | 24.78   |
| 49.7  | 50.0  | 32.13 | 9.18  | 24.84   |
| 59.6  | 59.9  | 32.27 | 9.09  | 24.97   |
| 69.5  | 69.9  | 32.32 | 9.11  | 25.01   |
| 79.6  | 80.0  | 32.40 | 9.14  | 25.06   |
| 89.6  | 90.1  | 32.42 | 9.15  | 25.07   |
| 100.4 | 100.9 | 32.46 | 9.13  | 25.11   |
| 110.4 | 111.0 | 32.51 | 9.08  | 25.16   |
| 120.4 | 121.0 | 32.57 | 8.94  | 25.23   |
| 130.3 | 131.0 | 32.65 | 8.86  | 25.30   |
| 140.3 | 141.0 | 32.69 | 8.80  | 25.35   |
| 150.2 | 151.0 | 32.72 | 8.79  | 25.37   |
| 160.2 | 161.1 | 32.72 | 8.79  | 25.37   |
| 170.1 | 171.0 | 32.73 | 8.78  | 25.38   |
| 175.9 | 176.9 | 32.74 | 8.78  | 25.39   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 11 CODE

LAT N 48 44.40

DATE 23/ 4/80

TIME (PST) 0820

TAPE: U00454 -305

LONG W 125 29.10

PASS NO. 35

STN: B.S. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.1   | 2.1   | 29.56 | 10.32 | 22.66   |        |
| 5.0   | 5.0   | 30.10 | 10.14 | 23.11   |        |
| 9.9   | 9.9   | 31.19 | 9.88  | 24.00   |        |
| 15.0  | 15.1  | 31.45 | 9.59  | 24.25   |        |
| 19.8  | 19.9  | 31.48 | 9.52  | 24.29   |        |
| 24.9  | 25.0  | 31.56 | 9.42  | 24.37   | 6.09   |
| 29.8  | 29.9  | 31.60 | 9.24  | 24.42   |        |
| 34.8  | 35.0  | 31.70 | 8.99  | 24.54   |        |
| 39.9  | 40.1  | 31.75 | 8.99  | 24.58   |        |
| 44.7  | 44.9  | 31.91 | 8.98  | 24.70   |        |
| 49.9  | 50.1  | 32.03 | 9.23  | 24.76   | 6.09   |
| 59.8  | 60.1  | 32.07 | 9.05  | 24.82   |        |
| 69.6  | 70.0  | 32.19 | 8.96  | 24.93   |        |
| 74.7  | 75.1  | 32.25 | 8.91  | 24.98   | 5.26   |
| 79.5  | 79.9  | 32.39 | 9.16  | 25.05   |        |
| 89.6  | 90.0  | 32.48 | 9.08  | 25.13   |        |
| 100.5 | 101.0 | 32.54 | 9.15  | 25.17   | 5.01   |
| 110.4 | 111.0 | 32.60 | 9.20  | 25.21   |        |
| 112.4 | 113.0 | 32.62 | 9.21  | 25.22   |        |

CRUISE NO: 11

CODE

LAT N 48 48.20

DATE 23/ 4/80

TIME (PST) 0911

TAPE: U00454 -306

LONG W 125 23.70

PASS NO. 37

STN: B.S. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.2   | 2.2   | 29.52 | 10.25 | 22.64   |
| 5.0   | 5.0   | 29.94 | 10.27 | 22.96   |
| 9.9   | 10.0  | 30.99 | 9.73  | 23.87   |
| 14.9  | 14.9  | 31.13 | 9.66  | 23.99   |
| 19.9  | 20.0  | 31.28 | 9.48  | 24.13   |
| 24.9  | 25.0  | 31.39 | 9.35  | 24.24   |
| 29.9  | 30.0  | 31.49 | 9.28  | 24.33   |
| 34.8  | 35.0  | 31.55 | 9.21  | 24.39   |
| 39.8  | 40.0  | 31.62 | 9.08  | 24.46   |
| 44.7  | 44.9  | 31.69 | 9.03  | 24.52   |
| 49.7  | 49.9  | 31.82 | 8.92  | 24.64   |
| 59.6  | 59.9  | 32.03 | 8.74  | 24.84   |
| 69.6  | 70.0  | 32.13 | 8.68  | 24.92   |
| 79.6  | 80.0  | 32.30 | 8.76  | 25.04   |
| 89.6  | 90.0  | 32.44 | 8.89  | 25.13   |
| 92.4  | 92.9  | 32.49 | 8.73  | 25.20   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 8.50

DATE 11/ 6/80

TIME (PST) 1842

TAPE: U00454 -318

LONG W 126 .00

PASS NO. 1

STN: 111

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.4   | 4.4   | 32.02 | 12.62 | 24.16   |        |
| 4.9   | 4.9   | 31.94 | 12.68 | 24.09   |        |
| 9.9   | 9.9   | 31.99 | 12.57 | 24.14   |        |
| 14.9  | 15.0  | 32.13 | 11.54 | 24.45   |        |
| 19.9  | 20.0  | 32.27 | 10.28 | 24.78   |        |
| 25.0  | 25.2  | 32.27 | 10.10 | 24.81   | 5.85   |
| 29.9  | 30.0  | 32.30 | 9.82  | 24.88   |        |
| 34.9  | 35.0  | 32.37 | 9.55  | 24.98   |        |
| 39.9  | 40.1  | 32.45 | 9.19  | 25.09   |        |
| 44.8  | 45.0  | 32.52 | 8.84  | 25.20   |        |
| 49.8  | 50.0  | 32.63 | 8.53  | 25.33   | 5.07   |
| 59.7  | 60.0  | 32.88 | 8.17  | 25.59   |        |
| 69.7  | 70.1  | 33.06 | 8.02  | 25.75   |        |
| 74.6  | 75.0  | 33.12 | 7.96  | 25.80   | 4.52   |
| 79.6  | 80.1  | 33.16 | 7.90  | 25.85   |        |
| 90.5  | 91.0  | 33.45 | 7.75  | 26.09   |        |
| 100.4 | 101.0 | 33.60 | 7.79  | 26.21   | 3.86   |
| 110.3 | 111.0 | 33.67 | 7.72  | 26.27   |        |
| 120.3 | 121.0 | 33.74 | 7.60  | 26.34   |        |
| 125.2 | 126.0 | 33.75 | 7.56  | 26.36   | 2.97   |
| 130.2 | 131.0 | 33.77 | 7.53  | 26.38   |        |
| 140.0 | 140.9 | 33.80 | 7.46  | 26.41   |        |
| 149.9 | 150.9 | 33.83 | 7.39  | 26.44   | 2.93   |
| 160.0 | 161.1 | 33.85 | 7.20  | 26.49   |        |
| 169.9 | 171.0 | 33.86 | 7.16  | 26.50   |        |
| 179.9 | 181.1 | 33.88 | 7.04  | 26.53   |        |
| 189.8 | 191.1 | 33.90 | 6.97  | 26.56   |        |
| 199.6 | 200.9 | 33.92 | 6.87  | 26.58   | 2.53   |
| 225.3 | 226.9 | 33.95 | 6.50  | 26.66   |        |
| 250.3 | 252.0 | 33.95 | 6.23  | 26.70   | 2.20   |
| 275.0 | 277.0 | 33.96 | 5.87  | 26.75   |        |
| 299.7 | 301.9 | 33.97 | 5.71  | 26.77   | 1.93   |
| 324.6 | 327.0 | 33.97 | 5.52  | 26.80   |        |
| 350.3 | 352.9 | 33.98 | 5.38  | 26.83   |        |
| 375.2 | 378.0 | 34.00 | 5.31  | 26.85   |        |
| 399.9 | 403.0 | 34.02 | 5.19  | 26.88   |        |
| 424.7 | 428.0 | 34.05 | 5.07  | 26.91   |        |
| 450.3 | 453.9 | 34.08 | 4.96  | 26.95   |        |
| 475.2 | 479.0 | 34.10 | 4.81  | 26.98   |        |
| 499.9 | 504.0 | 34.11 | 4.75  | 27.00   | .93    |
| 502.8 | 506.8 | 34.11 | 4.74  | 27.00   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 10.60

DATE 11/ 6/80

TIME (PST) 1950

TAPE: U00454 -319

LONG W 125 56.20

PASS NO. 3

STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.1   | 2.1   | 32.03 | 12.95 | 24.11   |
| 5.1   | 5.1   | 32.02 | 12.83 | 24.12   |
| 9.9   | 9.9   | 32.06 | 12.31 | 24.25   |
| 14.8  | 14.9  | 32.17 | 11.42 | 24.50   |
| 19.9  | 20.0  | 32.25 | 10.53 | 24.72   |
| 24.9  | 25.0  | 32.30 | 9.90  | 24.86   |
| 29.8  | 30.0  | 32.32 | 9.62  | 24.93   |
| 34.7  | 34.9  | 32.42 | 9.25  | 25.06   |
| 39.8  | 40.0  | 32.49 | 8.97  | 25.16   |
| 44.8  | 45.0  | 32.64 | 8.42  | 25.36   |
| 49.8  | 50.1  | 32.72 | 8.23  | 25.45   |
| 59.6  | 59.9  | 32.86 | 8.06  | 25.59   |
| 69.6  | 70.0  | 32.99 | 7.94  | 25.71   |
| 80.4  | 80.9  | 33.23 | 7.75  | 25.92   |
| 90.4  | 90.9  | 33.50 | 7.86  | 26.12   |
| 100.4 | 101.0 | 33.65 | 7.77  | 26.25   |
| 110.5 | 111.1 | 33.68 | 7.71  | 26.28   |
| 120.3 | 121.1 | 33.75 | 7.61  | 26.35   |
| 130.1 | 131.0 | 33.82 | 7.48  | 26.42   |
| 140.0 | 140.9 | 33.85 | 7.32  | 26.47   |
| 150.0 | 151.0 | 33.88 | 7.19  | 26.51   |
| 160.0 | 161.1 | 33.90 | 7.11  | 26.54   |
| 169.8 | 170.9 | 33.92 | 7.06  | 26.56   |
| 179.8 | 181.0 | 33.94 | 6.97  | 26.59   |
| 189.7 | 191.0 | 33.95 | 6.91  | 26.60   |
| 199.6 | 201.0 | 33.94 | 6.71  | 26.62   |
| 225.4 | 227.0 | 33.96 | 6.26  | 26.70   |
| 250.2 | 252.0 | 33.97 | 6.05  | 26.73   |
| 275.0 | 277.0 | 33.98 | 5.83  | 26.77   |
| 299.8 | 302.0 | 33.99 | 5.65  | 26.80   |
| 324.7 | 327.1 | 34.00 | 5.53  | 26.83   |
| 350.3 | 353.0 | 34.02 | 5.39  | 26.86   |
| 375.2 | 378.0 | 34.03 | 5.29  | 26.87   |
| 399.8 | 402.9 | 34.04 | 5.22  | 26.89   |
| 424.7 | 428.1 | 34.05 | 5.05  | 26.92   |
| 450.4 | 453.9 | 34.07 | 5.02  | 26.94   |
| 475.0 | 478.9 | 34.08 | 4.96  | 26.96   |
| 499.9 | 503.9 | 34.10 | 4.85  | 26.98   |
| 505.7 | 509.8 | 34.11 | 4.80  | 26.99   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 12.90

DATE 11/ 6/80

TIME (PST) 2040

TAPE: U00454 -320

LONG W 125 52.00

PASS NO. 5

STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.1   | 2.1   | 32.08 | 13.10 | 24.12   |        |
| 5.0   | 5.0   | 32.17 | 12.76 | 24.25   |        |
| 9.9   | 10.0  | 32.06 | 12.47 | 24.22   |        |
| 15.0  | 15.1  | 32.33 | 10.67 | 24.76   |        |
| 19.8  | 19.9  | 32.35 | 10.10 | 24.87   |        |
| 24.9  | 25.0  | 32.39 | 9.87  | 24.94   | 5.68   |
| 29.9  | 30.1  | 32.39 | 9.75  | 24.96   |        |
| 34.8  | 35.0  | 32.47 | 9.08  | 25.13   |        |
| 39.7  | 39.9  | 32.50 | 8.64  | 25.22   |        |
| 44.8  | 45.0  | 32.77 | 8.21  | 25.50   |        |
| 49.7  | 49.9  | 32.91 | 7.99  | 25.64   | 4.74   |
| 59.7  | 60.0  | 33.02 | 7.98  | 25.72   |        |
| 69.5  | 69.9  | 33.28 | 7.93  | 25.93   |        |
| 74.5  | 75.0  | 33.34 | 7.93  | 25.99   | 3.53   |
| 79.5  | 79.9  | 33.53 | 7.88  | 26.14   |        |
| 89.6  | 90.1  | 33.62 | 7.80  | 26.22   |        |
| 100.4 | 101.0 | 33.72 | 7.58  | 26.33   | 2.87   |
| 110.3 | 111.0 | 33.80 | 7.46  | 26.41   |        |
| 120.3 | 121.0 | 33.86 | 7.31  | 26.48   |        |
| 125.2 | 126.0 | 33.86 | 7.31  | 26.48   | 2.66   |
| 130.1 | 131.0 | 33.87 | 7.29  | 26.49   |        |
| 140.0 | 140.9 | 33.90 | 7.25  | 26.52   |        |
| 150.1 | 151.0 | 33.93 | 7.12  | 26.56   | 2.45   |
| 160.0 | 161.1 | 33.94 | 6.96  | 26.59   |        |
| 169.9 | 171.0 | 33.94 | 6.94  | 26.59   |        |
| 179.8 | 181.0 | 33.91 | 6.84  | 26.59   |        |
| 189.5 | 190.8 | 33.96 | 6.63  | 26.65   |        |
| 199.6 | 201.0 | 33.96 | 6.48  | 26.67   | 2.21   |
| 225.4 | 226.9 | 33.95 | 6.00  | 26.73   |        |
| 250.3 | 252.1 | 33.99 | 5.79  | 26.78   | 1.59   |
| 275.0 | 277.0 | 34.00 | 5.64  | 26.81   |        |
| 299.9 | 302.1 | 34.00 | 5.56  | 26.82   | 1.47   |
| 324.5 | 327.0 | 34.01 | 5.51  | 26.83   |        |
| 350.3 | 353.0 | 34.02 | 5.43  | 26.85   |        |
| 375.1 | 378.0 | 34.02 | 5.39  | 26.86   |        |
| 400.0 | 403.1 | 34.04 | 5.35  | 26.87   |        |
| 424.7 | 428.0 | 34.04 | 5.24  | 26.89   |        |
| 450.4 | 454.0 | 34.06 | 5.10  | 26.92   |        |
| 475.2 | 479.0 | 34.09 | 4.96  | 26.96   |        |
| 498.7 | 502.8 | 34.10 | 4.87  | 26.98   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 15.10

DATE 11/ 6/80

TIME (PST) 2210

TAPE: U00454 -321

LONG W 125 47.70

PASS NO. 7

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 32.34 | 12.94 | 24.35   |
| 5.0   | 5.0   | 32.21 | 12.70 | 24.29   |
| 10.0  | 10.0  | 32.19 | 12.34 | 24.35   |
| 14.9  | 15.0  | 32.30 | 10.70 | 24.73   |
| 19.8  | 19.9  | 32.33 | 10.13 | 24.85   |
| 24.9  | 25.0  | 32.34 | 9.83  | 24.91   |
| 29.8  | 30.0  | 32.42 | 9.15  | 25.08   |
| 34.7  | 34.9  | 32.51 | 8.85  | 25.19   |
| 39.8  | 40.0  | 32.55 | 8.71  | 25.25   |
| 44.7  | 45.0  | 32.59 | 8.56  | 25.30   |
| 49.7  | 50.0  | 32.76 | 8.16  | 25.49   |
| 59.6  | 59.9  | 33.10 | 7.97  | 25.79   |
| 69.6  | 70.0  | 33.30 | 7.99  | 25.94   |
| 79.6  | 80.1  | 33.55 | 7.88  | 26.16   |
| 90.5  | 91.0  | 33.71 | 7.69  | 26.31   |
| 100.4 | 101.0 | 33.74 | 7.64  | 26.34   |
| 110.3 | 111.0 | 33.82 | 7.47  | 26.42   |
| 120.3 | 121.1 | 33.85 | 7.35  | 26.47   |
| 130.2 | 131.1 | 33.87 | 7.25  | 26.49   |
| 140.1 | 141.0 | 33.90 | 7.18  | 26.53   |
| 150.0 | 151.0 | 33.91 | 7.10  | 26.55   |
| 159.9 | 161.0 | 33.93 | 6.89  | 26.60   |
| 169.8 | 171.0 | 33.93 | 6.84  | 26.60   |
| 179.8 | 181.1 | 33.94 | 6.80  | 26.61   |
| 189.7 | 191.1 | 33.94 | 6.70  | 26.63   |
| 199.7 | 201.1 | 33.94 | 6.59  | 26.64   |
| 209.2 | 210.6 | 33.95 | 6.41  | 26.68   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 18.60

DATE 11/ 6/80

TIME (PST) 2309

TAPE: U00454 -322

LONG W 125 41.20

PASS NO. 9

SYN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.8   | 3.8   | 32.11 | 12.59 | 24.24   |        |
| 5.1   | 5.2   | 32.11 | 12.44 | 24.27   |        |
| 9.9   | 9.9   | 32.13 | 12.14 | 24.33   |        |
| 14.9  | 15.0  | 32.22 | 10.47 | 24.71   |        |
| 19.8  | 19.9  | 32.26 | 10.01 | 24.81   |        |
| 24.9  | 25.0  | 32.34 | 9.51  | 24.96   | 5.39   |
| 29.8  | 29.9  | 32.47 | 8.90  | 25.16   |        |
| 34.8  | 35.0  | 32.59 | 8.55  | 25.30   |        |
| 39.8  | 40.0  | 32.73 | 8.14  | 25.47   |        |
| 44.8  | 45.0  | 32.92 | 8.06  | 25.64   |        |
| 49.8  | 50.1  | 33.10 | 8.08  | 25.77   | 3.92   |
| 59.7  | 60.0  | 33.28 | 8.04  | 25.92   |        |
| 69.6  | 70.0  | 33.51 | 7.95  | 26.11   |        |
| 74.6  | 75.0  | 33.59 | 7.88  | 26.19   | 3.07   |
| 80.5  | 81.0  | 33.64 | 7.81  | 26.24   |        |
| 90.5  | 91.0  | 33.75 | 7.67  | 26.35   |        |
| 100.4 | 101.0 | 33.81 | 7.53  | 26.41   | 2.60   |
| 110.3 | 111.0 | 33.87 | 7.33  | 26.48   |        |
| 120.2 | 121.0 | 33.89 | 7.12  | 26.53   |        |
| 125.2 | 126.0 | 33.90 | 7.02  | 26.55   | 2.12   |
| 130.1 | 131.0 | 33.90 | 6.98  | 26.56   |        |
| 140.1 | 141.1 | 33.91 | 6.85  | 26.59   |        |
| 145.0 | 145.9 | 33.92 | 6.84  | 26.59   | 2.13   |
| 150.0 | 151.0 | 33.92 | 6.84  | 26.59   |        |
| 154.0 | 155.0 | 33.92 | 6.83  | 26.59   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 22.00

DATE 12/ 6/80

TIME (PST) 0021

TAPE: U00454 -323

LONG W 125 34.70

PASS NO. 11

STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.6   | 4.6   | 32.18 | 12.55 | 24.30   |
| 4.8   | 4.8   | 32.18 | 12.57 | 24.29   |
| 10.0  | 10.1  | 32.15 | 12.59 | 24.27   |
| 14.8  | 14.9  | 32.20 | 11.64 | 24.48   |
| 20.1  | 20.2  | 32.18 | 11.28 | 24.53   |
| 25.0  | 25.1  | 32.25 | 10.29 | 24.76   |
| 30.0  | 30.1  | 32.29 | 9.23  | 24.96   |
| 34.8  | 35.0  | 32.68 | 8.56  | 25.37   |
| 39.8  | 40.0  | 32.81 | 8.41  | 25.49   |
| 44.6  | 44.9  | 32.88 | 8.33  | 25.56   |
| 49.7  | 50.0  | 32.97 | 8.22  | 25.65   |
| 59.7  | 60.0  | 33.24 | 7.96  | 25.90   |
| 69.6  | 70.0  | 33.37 | 7.81  | 26.03   |
| 79.5  | 80.0  | 33.49 | 7.64  | 26.14   |
| 90.5  | 91.1  | 33.67 | 7.23  | 26.35   |
| 100.3 | 100.9 | 33.71 | 7.11  | 26.39   |
| 110.2 | 110.9 | 33.74 | 7.06  | 26.42   |
| 120.3 | 121.0 | 33.81 | 6.92  | 26.49   |
| 130.1 | 131.0 | 33.86 | 6.83  | 26.55   |
| 140.0 | 141.0 | 33.92 | 6.57  | 26.63   |
| 145.9 | 146.8 | 33.92 | 6.55  | 26.63   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 25.50

DATE 12/ 6/80

TIME (PST) 0106

TAPE: U00454 -324

LONG W 125 28.30

PASS NO. 13

STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.3   | 4.4   | 31.78 | 12.06 | 24.08   |        |
| 5.1   | 5.1   | 31.80 | 12.03 | 24.10   |        |
| 10.0  | 10.1  | 31.86 | 12.08 | 24.14   |        |
| 15.0  | 15.0  | 31.99 | 10.21 | 24.57   |        |
| 19.8  | 19.9  | 32.08 | 9.89  | 24.69   |        |
| 24.8  | 24.9  | 32.10 | 9.84  | 24.72   | 5.28   |
| 30.0  | 30.1  | 32.30 | 9.24  | 24.97   |        |
| 34.9  | 35.1  | 32.37 | 9.00  | 25.07   |        |
| 39.9  | 40.1  | 32.48 | 8.71  | 25.20   |        |
| 44.7  | 44.9  | 32.72 | 8.46  | 25.42   |        |
| 49.7  | 50.0  | 32.89 | 8.44  | 25.56   | 3.12   |
| 59.6  | 59.9  | 33.20 | 8.06  | 25.86   |        |
| 69.6  | 70.0  | 33.41 | 7.86  | 26.05   |        |
| 75.5  | 75.9  | 33.61 | 7.46  | 26.26   | 2.26   |
| 80.5  | 81.0  | 33.67 | 7.29  | 26.34   |        |
| 90.3  | 90.8  | 33.75 | 7.07  | 26.43   |        |
| 100.3 | 100.9 | 33.78 | 6.98  | 26.46   | 1.87   |
| 110.4 | 111.1 | 33.78 | 6.97  | 26.47   |        |
| 115.4 | 116.1 | 33.78 | 6.96  | 26.47   | 1.86   |
| 120.2 | 121.0 | 33.79 | 6.94  | 26.48   |        |
| 130.2 | 131.0 | 33.83 | 6.85  | 26.52   |        |
| 139.9 | 140.9 | 33.84 | 6.80  | 26.53   |        |
| 150.0 | 151.0 | 33.84 | 6.78  | 26.54   |        |
| 153.6 | 154.6 | 33.85 | 6.77  | 26.55   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 12 CODE  
 LAT N 48 28.90  
 DATE 12/ 6/80  
 TIME (PST) 0211

TAPE: U00454 -325  
 LONG W 125 21.80  
 PASS NO. 15  
 STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 5.5   | 5.5   | 32.27 | 11.33 | 24.59   |
| 10.0  | 10.0  | 32.02 | 11.01 | 24.45   |
| 14.9  | 15.0  | 32.17 | 10.02 | 24.74   |
| 19.8  | 19.9  | 32.31 | 9.48  | 24.94   |
| 24.9  | 25.0  | 32.39 | 9.33  | 25.02   |
| 29.9  | 30.0  | 32.62 | 8.93  | 25.27   |
| 34.8  | 35.0  | 32.83 | 8.52  | 25.50   |
| 39.7  | 39.9  | 33.10 | 8.17  | 25.76   |
| 44.6  | 44.9  | 33.17 | 8.09  | 25.82   |
| 49.6  | 49.9  | 33.24 | 8.00  | 25.89   |
| 59.8  | 60.1  | 33.44 | 7.84  | 26.07   |
| 69.6  | 70.0  | 33.59 | 7.60  | 26.23   |
| 80.4  | 80.9  | 33.64 | 7.43  | 26.29   |
| 90.5  | 91.0  | 33.76 | 7.18  | 26.42   |
| 100.3 | 101.0 | 33.84 | 6.88  | 26.52   |
| 110.2 | 110.9 | 33.87 | 6.72  | 26.57   |
| 120.2 | 121.0 | 33.89 | 6.64  | 26.60   |
| 130.1 | 130.9 | 33.91 | 6.59  | 26.61   |
| 140.1 | 141.0 | 33.91 | 6.57  | 26.62   |
| 150.1 | 151.1 | 33.92 | 6.55  | 26.63   |
| 150.1 | 151.1 | 33.92 | 6.55  | 26.63   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 32.20

DATE 12/ 6/80

TIME (PST) 0258

TAPE: U00454 -326

LONG W 125 15.50

PASS NO. 17

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.1   | 4.2   | 32.11 | 12.17 | 24.31   |        |
| 5.0   | 5.1   | 32.07 | 12.23 | 24.27   |        |
| 10.0  | 10.0  | 32.05 | 12.24 | 24.26   |        |
| 14.9  | 15.0  | 32.11 | 11.30 | 24.48   |        |
| 20.0  | 20.0  | 32.45 | 9.58  | 25.03   |        |
| 24.9  | 25.0  | 32.69 | 8.87  | 25.33   | 2.07   |
| 29.8  | 30.0  | 32.75 | 8.72  | 25.40   |        |
| 34.9  | 35.1  | 33.03 | 8.27  | 25.69   |        |
| 39.7  | 39.9  | 33.15 | 8.11  | 25.81   |        |
| 44.8  | 45.1  | 33.26 | 7.99  | 25.91   |        |
| 49.7  | 50.0  | 33.28 | 7.98  | 25.92   | 2.49   |
| 59.5  | 59.9  | 33.50 | 7.76  | 26.13   |        |
| 69.7  | 70.1  | 33.65 | 7.49  | 26.29   |        |
| 74.7  | 75.1  | 33.67 | 7.43  | 26.31   | 2.91   |
| 80.5  | 81.0  | 33.71 | 7.29  | 26.37   |        |
| 90.5  | 91.0  | 33.78 | 7.03  | 26.45   |        |
| 100.3 | 100.9 | 33.81 | 6.92  | 26.50   | 3.87   |
| 110.3 | 111.0 | 33.86 | 6.76  | 26.56   |        |
| 116.2 | 117.0 | 33.87 | 6.74  | 26.57   |        |

CRUISE NO: 12 CODE

LAT N 48 35.60

DATE 12/ 6/80

TIME (PST) 0401

TAPE: U00454 -327

LONG W 125 9.00

PASS NO. 19

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.1   | 4.1   | 31.91 | 12.00 | 24.20   |
| 5.0   | 5.0   | 31.91 | 12.00 | 24.19   |
| 10.0  | 10.0  | 31.91 | 12.00 | 24.19   |
| 15.0  | 15.1  | 31.86 | 11.88 | 24.17   |
| 19.7  | 19.8  | 31.86 | 11.32 | 24.28   |
| 25.0  | 25.1  | 32.14 | 10.13 | 24.70   |
| 29.9  | 30.0  | 32.49 | 9.32  | 25.11   |
| 34.9  | 35.0  | 32.59 | 8.99  | 25.24   |
| 39.8  | 40.0  | 32.81 | 8.54  | 25.47   |
| 44.8  | 45.0  | 32.89 | 8.39  | 25.56   |
| 49.7  | 50.0  | 33.08 | 8.14  | 25.75   |
| 59.6  | 59.9  | 33.21 | 7.98  | 25.87   |
| 69.7  | 70.1  | 33.26 | 7.92  | 25.92   |
| 79.6  | 80.1  | 33.32 | 7.82  | 25.98   |
| 90.6  | 91.2  | 33.60 | 7.40  | 26.26   |
| 99.6  | 100.2 | 33.73 | 7.13  | 26.40   |
| 103.3 | 103.9 | 33.76 | 7.03  | 26.44   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 39.00

DATE 12/ 6/80

TIME (PST) 0450

TAPE: U00454 -328

LONG W 125 2.50

PASS NO. 21

STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.1   | 3.1   | 31.61 | 10.66 | 24.20   |        |
| 4.9   | 4.9   | 31.53 | 10.60 | 24.15   |        |
| 10.0  | 10.1  | 32.01 | 10.45 | 24.55   |        |
| 14.9  | 15.0  | 32.17 | 8.90  | 24.92   |        |
| 19.9  | 20.0  | 32.22 | 8.72  | 24.99   |        |
| 24.9  | 25.0  | 32.23 | 8.60  | 25.02   | 3.70   |
| 29.8  | 30.0  | 32.32 | 8.55  | 25.09   |        |
| 34.7  | 34.9  | 32.39 | 8.53  | 25.15   |        |
| 39.8  | 40.0  | 32.42 | 8.52  | 25.18   |        |
| 44.9  | 45.2  | 32.47 | 8.52  | 25.21   |        |
| 49.8  | 50.1  | 32.48 | 8.51  | 25.22   | 3.78   |
| 53.6  | 53.9  | 32.54 | 8.48  | 25.28   |        |

CRUISE NO: 12 CODE

LAT N 48 40.50

DATE 12/ 6/80

TIME (PST) 0531

TAPE: U00454 -329

LONG W 125 .00

PASS NO. 23

STN: 100

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.0   | 3.0   | 31.42 | 10.36 | 24.10   |
| 5.2   | 5.2   | 31.37 | 10.37 | 24.06   |
| 10.0  | 10.1  | 31.38 | 10.43 | 24.06   |
| 14.9  | 14.9  | 31.42 | 9.68  | 24.21   |
| 19.7  | 19.8  | 31.73 | 8.95  | 24.57   |
| 24.9  | 25.1  | 31.87 | 8.94  | 24.68   |
| 30.0  | 30.1  | 31.90 | 8.91  | 24.71   |
| 34.7  | 34.9  | 32.39 | 8.53  | 25.15   |
| 36.7  | 36.9  | 32.41 | 8.52  | 25.17   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 48.20

DATE 12/ 6/80

TIME (PST) 0707

TAPE: U00454 -330

LONG W 125 23.70

PASS NO. 25

STN: B.S. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.1   | 3.1   | 31.57 | 10.55 | 24.18   |
| 5.0   | 5.0   | 31.49 | 10.66 | 24.10   |
| 10.1  | 10.1  | 31.45 | 10.70 | 24.07   |
| 14.9  | 15.0  | 31.75 | 10.04 | 24.41   |
| 19.8  | 19.9  | 31.77 | 9.68  | 24.49   |
| 24.9  | 25.0  | 31.86 | 9.37  | 24.60   |
| 29.9  | 30.0  | 31.97 | 9.05  | 24.74   |
| 34.8  | 34.9  | 32.03 | 8.94  | 24.80   |
| 39.9  | 40.1  | 32.11 | 8.81  | 24.89   |
| 44.8  | 45.0  | 32.13 | 8.80  | 24.90   |
| 49.8  | 50.1  | 32.16 | 8.76  | 24.93   |
| 59.7  | 60.0  | 32.25 | 8.68  | 25.02   |
| 69.6  | 70.0  | 32.49 | 8.49  | 25.23   |
| 80.5  | 81.0  | 32.80 | 8.25  | 25.52   |
| 83.5  | 84.0  | 32.86 | 8.20  | 25.57   |

CRUISE NO: 12 CODE

LAT N 48 44.40

DATE 12/ 6/80

TIME (PST) 0746

TAPE: U00454 -331

LONG W 125 29.10

PASS NO. 27

STN: B.S. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.0   | 2.0   | 31.29 | 11.63 | 23.78   |        |
| 5.0   | 5.0   | 31.22 | 11.71 | 23.71   |        |
| 10.0  | 10.0  | 31.47 | 11.32 | 23.97   |        |
| 14.9  | 15.0  | 31.59 | 10.68 | 24.18   |        |
| 19.9  | 20.0  | 31.75 | 9.51  | 24.50   |        |
| 25.0  | 25.1  | 31.94 | 9.22  | 24.69   | 4.38   |
| 29.8  | 30.0  | 31.97 | 9.03  | 24.74   |        |
| 34.8  | 35.0  | 32.04 | 8.92  | 24.82   |        |
| 39.9  | 40.1  | 32.10 | 8.80  | 24.88   |        |
| 44.8  | 45.0  | 32.15 | 8.77  | 24.93   |        |
| 49.7  | 50.0  | 32.17 | 8.76  | 24.94   | 3.78   |
| 59.7  | 60.0  | 32.23 | 8.68  | 25.00   |        |
| 69.7  | 70.0  | 32.30 | 8.59  | 25.07   |        |
| 74.6  | 75.0  | 32.50 | 8.59  | 25.23   | 3.56   |
| 80.5  | 80.9  | 32.68 | 8.44  | 25.39   |        |
| 90.5  | 91.0  | 32.86 | 8.24  | 25.56   |        |
| 100.5 | 101.1 | 33.00 | 8.13  | 25.68   | 3.32   |
| 110.3 | 110.9 | 33.13 | 7.98  | 25.81   |        |
| 118.1 | 118.8 | 33.22 | 7.88  | 25.89   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 40.40

DATE 12/ 6/80

TIME (PST) 0845

TAPE: U00454 -332

LONG W 125 34.50

PASS NO. 29

STN: B.S. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.1   | 2.1   | 31.67 | 10.83 | 24.22   |
| 5.0   | 5.0   | 31.67 | 10.83 | 24.21   |
| 10.0  | 10.1  | 31.54 | 9.71  | 24.30   |
| 14.9  | 14.9  | 31.89 | 8.99  | 24.68   |
| 19.8  | 19.9  | 32.02 | 8.98  | 24.79   |
| 24.9  | 25.0  | 32.24 | 8.76  | 24.99   |
| 29.9  | 30.0  | 32.27 | 8.73  | 25.02   |
| 34.7  | 34.9  | 32.35 | 8.67  | 25.10   |
| 39.9  | 40.1  | 32.43 | 8.63  | 25.17   |
| 44.8  | 45.0  | 32.55 | 8.50  | 25.28   |
| 49.7  | 50.0  | 32.64 | 8.46  | 25.36   |
| 59.6  | 59.9  | 32.72 | 8.40  | 25.42   |
| 69.6  | 70.0  | 32.82 | 8.29  | 25.52   |
| 80.5  | 81.0  | 32.86 | 8.22  | 25.57   |
| 90.3  | 90.8  | 33.02 | 8.09  | 25.70   |
| 100.4 | 101.0 | 33.16 | 7.95  | 25.84   |
| 110.3 | 110.9 | 33.19 | 7.91  | 25.86   |
| 120.3 | 121.0 | 33.21 | 7.89  | 25.88   |
| 130.1 | 130.9 | 33.23 | 7.86  | 25.91   |
| 140.2 | 141.0 | 33.25 | 7.83  | 25.93   |
| 150.0 | 151.0 | 33.26 | 7.81  | 25.94   |
| 160.0 | 161.0 | 33.30 | 7.76  | 25.98   |
| 169.9 | 171.0 | 33.32 | 7.74  | 25.99   |
| 176.9 | 178.1 | 33.35 | 7.70  | 26.02   |

CRUISE NO: 12 CODE

LAT N 48 36.40

DATE 12/ 6/80

TIME (PST) 0935

TAPE: U00454 -333

LONG W 125 40.10

PASS NO. 31

STN: B.S. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 86.0  | 86.3  | 30.23 | 9.66  | 23.28   |        |
| 5.1   | 5.1   | 31.87 | 11.73 | 24.21   |        |
| 10.0  | 10.0  | 31.90 | 11.54 | 24.27   |        |
| 15.0  | 15.0  | 31.93 | 11.16 | 24.36   |        |
| 20.0  | 20.1  | 32.10 | 9.90  | 24.70   |        |
| 24.8  | 24.9  | 32.50 | 8.85  | 25.19   | 3.52   |
| 30.0  | 30.1  | 32.81 | 8.37  | 25.50   |        |
| 34.9  | 35.1  | 32.87 | 8.23  | 25.57   |        |
| 39.8  | 40.0  | 32.89 | 8.18  | 25.59   |        |
| 44.8  | 45.0  | 32.95 | 8.13  | 25.65   |        |
| 49.7  | 49.9  | 33.06 | 8.05  | 25.74   | 2.83   |
| 53.4  | 53.7  | 33.10 | 8.00  | 25.78   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 32.20

DATE 12/ 6/80

TIME (PST) 1025

TAPE: U00454 -334

LONG W 125 45.70

PASS NO. 33

STN: B.S. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.2   | 2.2   | 32.06 | 10.93 | 24.50   |
| 5.4   | 5.4   | 32.06 | 10.93 | 24.50   |
| 10.0  | 10.1  | 32.05 | 10.91 | 24.50   |
| 14.9  | 15.0  | 32.33 | 9.16  | 25.00   |
| 20.1  | 20.2  | 32.37 | 8.99  | 25.07   |
| 24.8  | 24.9  | 32.57 | 8.52  | 25.29   |
| 29.9  | 30.0  | 32.67 | 8.32  | 25.40   |
| 34.8  | 35.0  | 32.72 | 8.30  | 25.44   |
| 39.7  | 39.9  | 32.91 | 8.21  | 25.61   |
| 44.8  | 45.1  | 32.91 | 8.21  | 25.61   |
| 49.7  | 50.0  | 32.92 | 8.21  | 25.61   |
| 59.6  | 59.9  | 33.01 | 8.16  | 25.69   |
| 69.5  | 70.0  | 33.10 | 8.11  | 25.77   |
| 80.5  | 81.0  | 33.34 | 7.78  | 26.01   |
| 84.1  | 84.7  | 33.34 | 7.78  | 26.01   |

CRUISE NO: 12 CODE

LAT N 48 28.00

DATE 12/ 6/80

TIME (PST) 1113

TAPE: U00454 -335

LONG W 125 51.50

PASS NO. 35

STN: B.S. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.1   | 4.1   | 31.99 | 11.41 | 24.36   |        |
| 4.6   | 4.7   | 31.99 | 11.40 | 24.36   |        |
| 10.0  | 10.1  | 31.99 | 11.38 | 24.37   |        |
| 15.0  | 15.1  | 32.16 | 10.23 | 24.70   |        |
| 20.1  | 20.2  | 32.38 | 9.50  | 24.99   |        |
| 24.9  | 25.0  | 32.60 | 8.91  | 25.26   | 4.26   |
| 29.7  | 29.9  | 32.79 | 8.52  | 25.46   |        |
| 34.8  | 35.0  | 32.91 | 8.34  | 25.58   |        |
| 39.8  | 40.0  | 32.95 | 8.29  | 25.63   |        |
| 44.8  | 45.1  | 33.06 | 8.19  | 25.72   |        |
| 49.8  | 50.0  | 33.13 | 8.08  | 25.79   | 2.79   |
| 59.7  | 60.0  | 33.25 | 7.94  | 25.91   |        |
| 69.4  | 69.8  | 33.31 | 7.88  | 25.96   |        |
| 74.6  | 75.1  | 33.34 | 7.83  | 26.00   | 2.79   |
| 80.4  | 80.9  | 33.40 | 7.74  | 26.06   |        |
| 90.6  | 91.1  | 33.55 | 7.43  | 26.22   |        |
| 100.3 | 100.9 | 33.64 | 7.24  | 26.32   | 1.87   |
| 110.3 | 111.0 | 33.70 | 7.15  | 26.38   |        |
| 114.0 | 114.7 | 33.71 | 7.14  | 26.38   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 12 CODE  
 LAT N 48 23.80  
 DATE 12/ 6/80  
 TIME (PST) 1214

TAPE: U00454 -336  
 LONG W 125 57.40  
 PASS NO. 38  
 STN: B.S. 7

| DEPTH | PRESS | SAL.  | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 5.8   | 5.9   | 31.85 | 12.00 | 24.14   |
| 10.1  | 10.2  | 31.86 | 12.01 | 24.15   |
| 15.6  | 15.7  | 31.88 | 11.79 | 24.21   |
| 19.6  | 19.7  | 32.01 | 11.18 | 24.42   |
| 25.0  | 25.1  | 32.10 | 11.02 | 24.52   |
| 28.8  | 28.9  | 32.07 | 10.69 | 24.55   |
| 35.4  | 35.6  | 32.20 | 9.89  | 24.79   |
| 39.9  | 40.1  | 32.40 | 9.24  | 25.05   |
| 44.8  | 45.0  | 32.65 | 8.58  | 25.34   |
| 50.2  | 50.5  | 32.97 | 8.10  | 25.67   |
| 59.6  | 59.9  | 33.30 | 8.05  | 25.93   |
| 70.0  | 70.4  | 33.53 | 7.88  | 26.14   |
| 79.6  | 80.1  | 33.61 | 7.81  | 26.21   |
| 89.4  | 90.0  | 33.70 | 7.67  | 26.31   |
| 101.0 | 101.6 | 33.66 | 7.53  | 26.29   |
| 110.1 | 110.8 | 33.84 | 7.32  | 26.47   |
| 120.4 | 121.1 | 33.86 | 7.19  | 26.50   |
| 129.8 | 130.7 | 33.87 | 7.10  | 26.52   |
| 140.3 | 141.2 | 33.94 | 6.98  | 26.59   |
| 149.9 | 150.9 | 33.96 | 6.88  | 26.62   |
| 160.0 | 161.1 | 33.92 | 6.87  | 26.59   |
| 170.6 | 171.7 | 33.91 | 6.72  | 26.60   |
| 178.8 | 180.0 | 33.93 | 6.67  | 26.62   |
| 188.6 | 189.9 | 34.03 | 6.43  | 26.74   |
| 199.9 | 201.3 | 33.93 | 6.49  | 26.65   |
| 224.1 | 225.7 | 33.97 | 6.33  | 26.70   |
| 249.8 | 251.6 | 33.94 | 6.29  | 26.68   |
| 275.4 | 277.4 | 33.96 | 6.06  | 26.72   |
| 299.8 | 302.1 | 33.97 | 5.85  | 26.76   |
| 324.7 | 327.1 | 33.97 | 5.80  | 26.77   |
| 350.3 | 352.9 | 34.00 | 5.45  | 26.83   |
| 375.1 | 378.0 | 34.01 | 5.39  | 26.84   |
| 399.9 | 403.0 | 34.03 | 5.17  | 26.89   |
| 424.8 | 428.1 | 34.04 | 5.12  | 26.90   |
| 440.2 | 443.7 | 34.04 | 5.08  | 26.91   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 19.20

DATE 12/ 6/80

TIME (PST) 1326

TAPE: U00454 -337

LONG W 126 2.50

PASS NO. 39

STN: B.S. 8

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.8   | 3.8   | 32.08 | 12.38 | 24.25   |        |
| 5.0   | 5.0   | 32.07 | 12.39 | 24.24   |        |
| 10.0  | 10.1  | 32.07 | 12.36 | 24.25   |        |
| 14.8  | 14.9  | 32.08 | 12.13 | 24.30   |        |
| 19.8  | 19.9  | 32.01 | 11.08 | 24.44   |        |
| 24.8  | 24.9  | 32.00 | 10.08 | 24.60   | 5.22   |
| 29.8  | 30.0  | 32.11 | 9.40  | 24.80   |        |
| 34.8  | 35.0  | 32.35 | 9.22  | 25.01   |        |
| 39.8  | 40.0  | 32.45 | 9.09  | 25.11   |        |
| 44.7  | 45.0  | 32.60 | 8.78  | 25.28   |        |
| 49.7  | 50.0  | 32.77 | 8.45  | 25.46   | 4.77   |
| 59.5  | 59.9  | 33.06 | 8.14  | 25.73   |        |
| 70.1  | 70.5  | 33.27 | 7.92  | 25.93   |        |
| 74.5  | 74.9  | 33.37 | 7.90  | 26.01   | 3.82   |
| 80.5  | 81.0  | 33.50 | 7.86  | 26.12   |        |
| 89.5  | 90.0  | 33.58 | 7.78  | 26.19   |        |
| 100.2 | 100.8 | 33.69 | 7.67  | 26.29   | 3.03   |
| 109.9 | 110.6 | 33.75 | 7.62  | 26.35   |        |
| 120.1 | 120.8 | 33.79 | 7.49  | 26.40   |        |
| 124.8 | 125.6 | 33.79 | 7.48  | 26.40   | 2.68   |
| 130.1 | 131.0 | 33.79 | 7.46  | 26.40   |        |
| 140.1 | 141.0 | 33.78 | 7.41  | 26.40   |        |
| 150.0 | 151.0 | 33.87 | 7.25  | 26.49   | 2.58   |
| 160.0 | 161.1 | 33.89 | 6.92  | 26.56   |        |
| 169.9 | 171.1 | 33.90 | 6.88  | 26.57   |        |
| 179.8 | 181.0 | 33.91 | 6.84  | 26.58   |        |
| 189.7 | 190.9 | 33.94 | 6.75  | 26.62   |        |
| 199.8 | 201.1 | 33.94 | 6.74  | 26.62   | 2.34   |
| 224.6 | 226.1 | 33.94 | 6.58  | 26.64   |        |
| 250.2 | 252.0 | 33.96 | 6.34  | 26.69   | 2.07   |
| 275.0 | 277.0 | 33.96 | 6.19  | 26.71   |        |
| 299.8 | 302.0 | 33.97 | 5.79  | 26.77   | 1.82   |
| 324.5 | 326.9 | 33.99 | 5.57  | 26.81   |        |
| 350.4 | 353.1 | 34.01 | 5.40  | 26.84   |        |
| 375.1 | 378.0 | 34.02 | 5.30  | 26.86   |        |
| 399.9 | 403.0 | 34.03 | 5.20  | 26.89   |        |
| 424.7 | 428.0 | 34.05 | 5.11  | 26.91   |        |
| 450.4 | 454.0 | 34.05 | 5.03  | 26.92   |        |
| 475.3 | 479.1 | 34.07 | 4.95  | 26.94   |        |
| 479.3 | 483.1 | 34.07 | 4.94  | 26.95   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 24.40

DATE 12/ 6/80

TIME (PST) 1532

TAPE: U00454 -338

LONG W 126 15.42

PASS NO. 41

STN: A.P. 8

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.8   | 2.8   | 32.15 | 12.27 | 24.33   |        |
| 5.0   | 5.0   | 32.14 | 12.28 | 24.32   |        |
| 10.2  | 10.3  | 32.13 | 12.28 | 24.31   |        |
| 15.0  | 15.1  | 32.13 | 10.85 | 24.57   |        |
| 20.1  | 20.2  | 32.16 | 10.41 | 24.67   |        |
| 24.9  | 25.0  | 32.27 | 9.99  | 24.83   | 5.70   |
| 29.8  | 29.9  | 32.33 | 9.75  | 24.91   |        |
| 34.9  | 35.1  | 32.56 | 9.64  | 25.11   |        |
| 39.7  | 39.9  | 32.60 | 9.51  | 25.16   |        |
| 44.9  | 45.1  | 32.62 | 9.38  | 25.19   |        |
| 49.7  | 50.0  | 32.60 | 9.31  | 25.20   | 5.44   |
| 59.6  | 59.9  | 32.64 | 9.03  | 25.27   |        |
| 69.5  | 69.9  | 32.61 | 8.19  | 25.38   |        |
| 74.6  | 75.0  | 32.69 | 8.23  | 25.43   | 5.60   |
| 80.4  | 80.8  | 32.80 | 8.04  | 25.54   |        |
| 89.4  | 89.9  | 33.15 | 7.88  | 25.84   |        |
| 100.4 | 101.0 | 33.40 | 7.87  | 26.04   | 3.58   |
| 110.3 | 110.9 | 33.50 | 7.87  | 26.11   |        |
| 120.3 | 121.1 | 33.51 | 7.88  | 26.12   |        |
| 125.2 | 125.9 | 33.54 | 7.88  | 26.15   | 3.01   |
| 130.2 | 131.1 | 33.58 | 7.85  | 26.18   |        |
| 140.1 | 141.0 | 33.66 | 7.75  | 26.26   |        |
| 150.0 | 150.9 | 33.72 | 7.58  | 26.33   | 2.66   |
| 159.9 | 160.9 | 33.80 | 7.39  | 26.42   |        |
| 169.9 | 171.0 | 33.85 | 7.17  | 26.49   |        |
| 179.7 | 180.9 | 33.88 | 7.00  | 26.54   |        |
| 189.6 | 190.9 | 33.91 | 6.83  | 26.59   |        |
| 199.6 | 200.9 | 33.92 | 6.64  | 26.62   | 1.95   |
| 224.5 | 226.1 | 33.95 | 6.21  | 26.70   |        |
| 250.1 | 251.9 | 33.97 | 5.95  | 26.75   | 1.87   |
| 275.2 | 277.2 | 33.98 | 5.65  | 26.79   |        |
| 299.7 | 301.9 | 33.99 | 5.53  | 26.81   | 1.40   |
| 324.8 | 327.2 | 34.00 | 5.38  | 26.84   |        |
| 350.3 | 353.0 | 34.02 | 5.22  | 26.87   |        |
| 375.2 | 378.1 | 34.02 | 5.12  | 26.89   |        |
| 399.8 | 402.8 | 34.03 | 4.91  | 26.92   |        |
| 424.7 | 428.0 | 34.06 | 4.90  | 26.94   |        |
| 450.4 | 453.9 | 34.08 | 4.80  | 26.97   |        |
| 475.3 | 479.1 | 34.10 | 4.77  | 26.99   |        |
| 499.9 | 503.9 | 34.11 | 4.75  | 27.00   | .59    |
| 503.0 | 507.1 | 34.10 | 4.74  | 27.00   |        |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 12 CODE  
 LAT N 48 29.06  
 DATE 12/ 6/80  
 TIME (PST) 1648

TAPE: U00454 -339  
 LONG W 126 9.48  
 PASS NO. 43  
 STN: A.P. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.1   | 4.2   | 32.17 | 11.99 | 24.40   |
| 4.9   | 4.9   | 32.16 | 11.98 | 24.39   |
| 10.0  | 10.0  | 32.17 | 11.98 | 24.40   |
| 14.7  | 14.8  | 32.17 | 11.96 | 24.40   |
| 19.9  | 20.0  | 32.19 | 11.58 | 24.48   |
| 24.9  | 25.1  | 32.23 | 10.63 | 24.69   |
| 30.0  | 30.2  | 32.32 | 10.02 | 24.86   |
| 34.9  | 35.0  | 32.40 | 9.48  | 25.01   |
| 39.8  | 40.0  | 32.46 | 9.10  | 25.12   |
| 44.9  | 45.1  | 32.54 | 8.79  | 25.23   |
| 49.8  | 50.0  | 32.64 | 8.44  | 25.36   |
| 59.9  | 60.2  | 33.03 | 8.11  | 25.71   |
| 69.8  | 70.2  | 33.32 | 7.99  | 25.96   |
| 80.4  | 80.8  | 33.43 | 7.90  | 26.06   |
| 90.4  | 91.0  | 33.57 | 7.87  | 26.18   |
| 100.4 | 101.0 | 33.69 | 7.66  | 26.30   |
| 110.2 | 110.9 | 33.80 | 7.45  | 26.41   |
| 120.4 | 121.1 | 33.83 | 7.37  | 26.45   |
| 130.2 | 131.0 | 33.88 | 7.15  | 26.52   |
| 140.0 | 140.9 | 33.91 | 7.00  | 26.56   |
| 150.1 | 151.1 | 33.93 | 6.86  | 26.60   |
| 160.0 | 161.1 | 33.95 | 6.69  | 26.63   |
| 169.9 | 171.0 | 33.95 | 6.49  | 26.67   |
| 179.8 | 181.0 | 33.96 | 6.35  | 26.69   |
| 189.8 | 191.1 | 33.96 | 6.27  | 26.70   |
| 199.7 | 201.1 | 33.96 | 6.23  | 26.70   |
| 225.4 | 227.0 | 33.97 | 5.97  | 26.74   |
| 246.3 | 248.1 | 33.98 | 5.89  | 26.76   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 33.24

DATE 12/ 6/80

TIME (PST) 1741

TAPE: U00454 -340

LONG W 126 4.00

PASS NO. 45

STN: A.P. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.1   | 3.1   | 32.13 | 11.51 | 24.45   |        |
| 5.0   | 5.0   | 32.11 | 11.53 | 24.43   |        |
| 9.7   | 9.8   | 32.11 | 10.76 | 24.57   |        |
| 14.9  | 14.9  | 32.19 | 9.91  | 24.78   |        |
| 19.9  | 20.0  | 32.33 | 9.45  | 24.96   |        |
| 24.8  | 25.0  | 32.42 | 9.07  | 25.09   | 4.46   |
| 29.8  | 30.0  | 32.48 | 8.91  | 25.16   |        |
| 34.7  | 34.9  | 32.53 | 8.71  | 25.23   |        |
| 39.8  | 40.0  | 32.78 | 8.37  | 25.48   |        |
| 44.8  | 45.1  | 32.96 | 8.20  | 25.65   |        |
| 49.7  | 50.0  | 33.10 | 8.04  | 25.78   | 2.70   |
| 59.7  | 60.0  | 33.37 | 7.87  | 26.02   |        |
| 69.7  | 70.1  | 33.60 | 7.64  | 26.23   |        |
| 75.5  | 76.0  | 33.75 | 7.52  | 26.36   | 2.70   |
| 80.5  | 81.0  | 33.80 | 7.48  | 26.41   |        |
| 90.4  | 91.0  | 33.85 | 7.28  | 26.47   |        |
| 100.5 | 101.2 | 33.89 | 7.18  | 26.52   | 2.54   |
| 110.1 | 110.8 | 33.89 | 7.12  | 26.53   |        |
| 120.3 | 121.1 | 33.91 | 7.03  | 26.56   |        |
| 125.1 | 125.9 | 33.91 | 6.98  | 26.56   | 2.25   |
| 130.1 | 131.0 | 33.91 | 6.82  | 26.59   |        |
| 133.0 | 133.9 | 33.93 | 6.72  | 26.61   |        |

CRUISE NO: 12 CODE

LAT N 48 37.36

DATE 12/ 6/80

TIME (PST) 1846

TAPE: U00454 -341

LONG W 125 58.16

PASS NO. 47

STN: A.P. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.9   | 2.9   | 31.91 | 11.22 | 24.33   |
| 4.9   | 4.9   | 31.90 | 11.23 | 24.33   |
| 10.0  | 10.0  | 31.94 | 10.97 | 24.40   |
| 15.1  | 15.1  | 32.26 | 9.33  | 24.92   |
| 19.8  | 19.9  | 32.34 | 9.13  | 25.02   |
| 24.8  | 25.0  | 32.51 | 8.79  | 25.21   |
| 29.8  | 30.0  | 32.74 | 8.49  | 25.43   |
| 35.0  | 35.2  | 32.92 | 8.33  | 25.59   |
| 39.7  | 40.0  | 32.95 | 8.22  | 25.64   |
| 44.7  | 44.9  | 32.96 | 8.20  | 25.64   |
| 49.5  | 49.8  | 32.96 | 8.20  | 25.65   |
| 59.7  | 60.0  | 33.02 | 8.13  | 25.70   |
| 69.5  | 69.9  | 33.09 | 8.06  | 25.77   |
| 80.5  | 80.9  | 33.19 | 7.96  | 25.86   |
| 90.1  | 90.7  | 33.29 | 7.85  | 25.95   |
| 96.5  | 97.1  | 33.45 | 7.60  | 26.12   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 41.41

DATE 12/ 6/80

TIME (PST) 1937

TAPE: U00454 -342

LONG W 125 52.38

PASS NO. 49

STN: A.P. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.7   | 2.7   | 31.81 | 10.90 | 24.31   |        |
| 5.0   | 5.0   | 31.78 | 10.93 | 24.29   |        |
| 10.0  | 10.0  | 31.85 | 10.84 | 24.35   |        |
| 14.8  | 14.9  | 32.05 | 9.05  | 24.80   |        |
| 19.9  | 20.0  | 32.21 | 8.83  | 24.96   |        |
| 24.7  | 24.9  | 32.28 | 8.70  | 25.04   | 3.74   |
| 30.0  | 30.2  | 32.52 | 8.54  | 25.25   |        |
| 34.6  | 34.8  | 32.66 | 8.46  | 25.37   |        |
| 39.8  | 40.1  | 32.81 | 8.33  | 25.51   |        |
| 44.8  | 45.0  | 32.90 | 8.26  | 25.59   |        |
| 49.7  | 50.0  | 32.91 | 8.25  | 25.59   | 3.00   |
| 59.7  | 60.0  | 32.93 | 8.21  | 25.62   |        |
| 63.6  | 64.0  | 32.94 | 8.20  | 25.63   |        |

CRUISE NO: 12 CODE

LAT N 48 45.39

DATE 12/ 6/80

TIME (PST) 2022

TAPE: U00454 -343

LONG W 125 47.05

PASS NO. 51

STN: A.P. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 31.57 | 11.57 | 24.01   |
| 4.9   | 5.0   | 31.56 | 11.59 | 24.00   |
| 9.9   | 10.0  | 31.56 | 11.58 | 24.00   |
| 14.9  | 15.0  | 31.81 | 10.84 | 24.32   |
| 19.9  | 20.0  | 32.04 | 9.96  | 24.65   |
| 24.9  | 25.0  | 32.13 | 9.48  | 24.80   |
| 29.9  | 30.1  | 32.24 | 9.11  | 24.94   |
| 34.7  | 34.9  | 32.27 | 8.68  | 25.03   |
| 39.9  | 40.1  | 32.27 | 8.69  | 25.03   |
| 44.9  | 45.1  | 32.27 | 8.69  | 25.03   |
| 49.9  | 50.1  | 32.29 | 8.62  | 25.06   |
| 59.7  | 60.1  | 32.41 | 8.48  | 25.17   |
| 69.8  | 70.2  | 32.70 | 8.36  | 25.41   |
| 76.7  | 77.1  | 32.78 | 8.30  | 25.49   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 49.32

DATE 12/ 6/80

TIME (PST) 2108

TAPE: U00454 -344

LONG W 125 41.36

PASS NO. 53

STN: A.P. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.1   | 2.1   | 31.70 | 11.61 | 24.10   |        |
| 5.1   | 5.1   | 31.69 | 11.63 | 24.09   |        |
| 9.9   | 9.9   | 31.69 | 11.63 | 24.09   |        |
| 15.0  | 15.1  | 31.69 | 11.63 | 24.09   |        |
| 19.9  | 20.0  | 31.71 | 11.24 | 24.18   |        |
| 24.8  | 24.9  | 31.94 | 9.15  | 24.70   | 4.40   |
| 29.9  | 30.0  | 31.99 | 9.12  | 24.75   |        |
| 34.8  | 35.0  | 32.02 | 9.12  | 24.77   |        |
| 39.9  | 40.1  | 32.13 | 9.00  | 24.88   |        |
| 44.9  | 45.1  | 32.29 | 8.75  | 25.04   |        |
| 49.6  | 49.8  | 32.35 | 8.67  | 25.10   | 3.46   |
| 52.8  | 53.1  | 32.37 | 8.66  | 25.11   |        |

CRUISE NO: 12 CODE

LAT N 48 53.19

DATE 12/ 6/80

TIME (PST) 2155

TAPE: U00454 -345

LONG W 125 36.12

PASS NO. 55

STN: A.P. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.9   | 2.9   | 31.76 | 11.91 | 24.09   |
| 4.9   | 4.9   | 31.75 | 11.91 | 24.09   |
| 10.1  | 10.1  | 31.76 | 11.91 | 24.09   |
| 14.9  | 15.0  | 31.81 | 9.92  | 24.48   |
| 19.8  | 19.9  | 31.81 | 9.43  | 24.56   |
| 24.9  | 25.0  | 32.02 | 9.19  | 24.76   |
| 29.9  | 30.0  | 32.18 | 8.99  | 24.91   |
| 34.8  | 34.9  | 32.24 | 8.96  | 24.97   |
| 39.9  | 40.1  | 32.25 | 8.95  | 24.98   |
| 41.3  | 41.6  | 32.25 | 8.94  | 24.98   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 49 1.12

DATE 12/ 6/80

TIME (PST) 2320

TAPE: U00454 -346

LONG W 125 50.08

PASS NO. 58

STN: W.B. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.7   | 4.7   | 31.54 | 11.70 | 23.96   |        |
| 5.1   | 5.1   | 31.54 | 11.70 | 23.96   |        |
| 9.9   | 10.0  | 31.53 | 11.63 | 23.97   |        |
| 14.8  | 14.9  | 31.74 | 10.70 | 24.29   |        |
| 19.9  | 20.0  | 31.83 | 10.07 | 24.47   | 4.19   |
| 24.9  | 25.0  | 31.91 | 9.71  | 24.59   |        |
| 30.0  | 30.2  | 32.28 | 8.99  | 24.99   |        |
| 34.6  | 34.8  | 32.35 | 8.89  | 25.06   | 3.40   |
| 39.9  | 40.1  | 32.36 | 8.88  | 25.07   |        |
| 39.9  | 40.1  | 32.36 | 8.88  | 25.07   |        |

CRUISE NO: 12 CODE

LAT N 48 57.31

DATE 12/ 6/80

TIME (PST) 0005

TAPE: U00454 -347

LONG W 125 55.32

PASS NO. 60

STN: W.B. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.7   | 2.7   | 31.79 | 11.74 | 24.15   |
| 5.0   | 5.1   | 31.70 | 11.72 | 24.08   |
| 9.9   | 10.0  | 31.80 | 9.90  | 24.48   |
| 15.0  | 15.0  | 31.88 | 9.17  | 24.65   |
| 19.9  | 20.0  | 31.97 | 9.03  | 24.74   |
| 25.0  | 25.1  | 32.01 | 8.97  | 24.78   |
| 29.9  | 30.0  | 32.03 | 8.94  | 24.80   |
| 34.8  | 35.0  | 32.41 | 8.76  | 25.13   |
| 39.9  | 40.1  | 32.48 | 8.67  | 25.20   |
| 44.9  | 45.2  | 32.49 | 8.65  | 25.21   |
| 49.6  | 49.9  | 32.52 | 8.60  | 25.24   |
| 58.7  | 59.0  | 32.53 | 8.58  | 25.25   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 53.43

DATE 12/ 6/80

TIME (PST) 0050

TAPE: U00454 -348

LONG W 126 1.01

PASS NO. 62

STN: W.B. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.4   | 3.4   | 31.54 | 11.35 | 24.02   |        |
| 5.0   | 5.0   | 31.54 | 11.36 | 24.02   |        |
| 10.1  | 10.1  | 31.57 | 11.37 | 24.04   |        |
| 15.0  | 15.1  | 31.89 | 10.02 | 24.52   |        |
| 20.0  | 20.1  | 31.98 | 9.14  | 24.73   |        |
| 25.0  | 25.1  | 32.09 | 9.02  | 24.84   | 3.82   |
| 30.0  | 30.1  | 32.22 | 8.85  | 24.97   |        |
| 34.7  | 34.9  | 32.28 | 8.70  | 25.04   |        |
| 39.7  | 39.9  | 32.43 | 8.59  | 25.17   |        |
| 44.9  | 45.1  | 32.59 | 8.55  | 25.30   |        |
| 49.6  | 49.8  | 32.76 | 8.37  | 25.47   | 2.97   |
| 59.6  | 60.0  | 32.97 | 8.17  | 25.66   |        |
| 64.7  | 65.1  | 33.07 | 8.07  | 25.75   | 2.74   |
| 69.6  | 70.0  | 33.09 | 8.06  | 25.77   |        |
| 73.5  | 73.9  | 33.10 | 8.05  | 25.77   |        |

CRUISE NO: 12 CODE

LAT N 48 49.50

DATE 12/ 6/80

TIME (PST) 0141

TAPE: U00454 -349

LONG W 126 6.35

PASS NO. 64

STN: W.B. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.7   | 2.7   | 31.64 | 11.46 | 24.08   |
| 5.1   | 5.1   | 31.62 | 11.48 | 24.06   |
| 10.0  | 10.0  | 31.62 | 11.48 | 24.07   |
| 14.9  | 15.0  | 31.64 | 11.45 | 24.09   |
| 20.0  | 20.1  | 32.11 | 10.95 | 24.53   |
| 24.9  | 25.0  | 32.34 | 9.59  | 24.95   |
| 29.9  | 30.1  | 32.33 | 9.34  | 24.98   |
| 34.9  | 35.1  | 32.42 | 8.98  | 25.10   |
| 39.7  | 40.0  | 32.59 | 8.71  | 25.27   |
| 44.8  | 45.0  | 32.68 | 8.58  | 25.37   |
| 49.8  | 50.0  | 32.79 | 8.46  | 25.47   |
| 59.7  | 60.0  | 32.95 | 8.30  | 25.62   |
| 69.5  | 69.9  | 33.15 | 8.19  | 25.79   |
| 80.5  | 81.0  | 33.38 | 7.80  | 26.03   |
| 90.4  | 90.9  | 33.66 | 7.52  | 26.29   |
| 100.2 | 100.8 | 33.69 | 7.30  | 26.34   |
| 100.2 | 100.8 | 33.69 | 7.30  | 26.34   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 12 CODE  
 LAT N 48 45.51  
 DATE 12/ 6/80  
 TIME (PST) 0232

TAPE: U00454 -350  
 LONG W 126 12.14  
 PASS NO. 67  
 STN: W.B. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.4   | 3.4   | 32.13 | 11.96 | 24.37   |        |
| 5.0   | 5.0   | 32.11 | 11.99 | 24.35   |        |
| 10.0  | 10.1  | 32.17 | 11.86 | 24.42   |        |
| 14.9  | 15.0  | 32.14 | 11.92 | 24.39   |        |
| 19.9  | 20.0  | 32.40 | 9.69  | 24.98   |        |
| 25.0  | 25.2  | 32.54 | 8.83  | 25.22   | 5.37   |
| 29.8  | 29.9  | 32.65 | 8.51  | 25.35   |        |
| 35.0  | 35.2  | 32.65 | 8.41  | 25.37   |        |
| 39.9  | 40.1  | 32.77 | 8.23  | 25.49   |        |
| 44.8  | 45.0  | 32.84 | 8.15  | 25.56   |        |
| 49.8  | 50.1  | 32.95 | 8.09  | 25.65   | 4.63   |
| 59.6  | 59.9  | 33.18 | 7.98  | 25.85   |        |
| 69.6  | 70.0  | 33.41 | 7.79  | 26.06   |        |
| 74.7  | 75.1  | 33.53 | 7.84  | 26.14   | 3.53   |
| 79.6  | 80.0  | 33.60 | 7.84  | 26.20   |        |
| 89.6  | 90.1  | 33.69 | 7.70  | 26.29   |        |
| 100.4 | 101.1 | 33.80 | 7.39  | 26.42   | 2.47   |
| 110.4 | 111.1 | 33.87 | 7.05  | 26.53   |        |
| 120.2 | 120.9 | 33.90 | 6.88  | 26.57   |        |
| 125.2 | 126.0 | 33.92 | 6.74  | 26.60   | 1.92   |
| 130.2 | 131.1 | 33.91 | 6.72  | 26.60   |        |
| 132.1 | 133.0 | 33.92 | 6.72  | 26.60   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 12 CODE

LAT N 48 41.46

DATE 12/ 6/80

TIME (PST) 0331

TAPE: U00454 -351

LONG W 126 17.57

PASS NO. 69

STN: W.B. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.3   | 4.4   | 32.06 | 11.69 | 24.36   |
| 4.9   | 4.9   | 32.05 | 11.70 | 24.36   |
| 10.2  | 10.3  | 32.06 | 11.70 | 24.36   |
| 15.0  | 15.1  | 32.08 | 11.43 | 24.43   |
| 20.5  | 20.6  | 32.19 | 9.50  | 24.84   |
| 24.7  | 24.9  | 32.38 | 9.15  | 25.05   |
| 29.9  | 30.0  | 32.37 | 8.85  | 25.09   |
| 34.8  | 34.9  | 32.52 | 8.74  | 25.22   |
| 39.8  | 40.0  | 32.59 | 8.67  | 25.28   |
| 44.8  | 45.1  | 32.63 | 8.41  | 25.36   |
| 49.6  | 49.9  | 32.68 | 8.28  | 25.42   |
| 59.8  | 60.2  | 32.92 | 8.13  | 25.63   |
| 69.6  | 70.0  | 33.05 | 8.04  | 25.74   |
| 79.6  | 80.1  | 33.24 | 7.91  | 25.91   |
| 89.6  | 90.1  | 33.39 | 7.80  | 26.04   |
| 100.5 | 101.1 | 33.62 | 7.73  | 26.23   |
| 110.4 | 111.1 | 33.84 | 7.27  | 26.47   |
| 120.3 | 121.1 | 33.87 | 7.15  | 26.51   |
| 130.1 | 131.0 | 33.91 | 6.99  | 26.56   |
| 140.3 | 141.2 | 33.93 | 6.82  | 26.60   |
| 150.0 | 151.0 | 33.94 | 6.69  | 26.63   |
| 159.9 | 160.9 | 33.94 | 6.57  | 26.64   |
| 169.9 | 171.1 | 33.94 | 6.56  | 26.65   |
| 179.9 | 181.1 | 33.94 | 6.52  | 26.65   |
| 189.6 | 190.9 | 33.96 | 6.36  | 26.69   |
| 199.6 | 201.0 | 33.96 | 6.33  | 26.69   |
| 225.0 | 226.5 | 33.96 | 6.22  | 26.70   |
| 250.2 | 252.0 | 33.97 | 6.09  | 26.73   |
| 274.8 | 276.8 | 33.97 | 5.93  | 26.75   |
| 299.8 | 302.0 | 33.99 | 5.67  | 26.80   |
| 324.6 | 327.0 | 34.00 | 5.57  | 26.81   |
| 350.3 | 353.0 | 34.00 | 5.45  | 26.83   |
| 375.2 | 378.1 | 34.01 | 5.36  | 26.85   |
| 400.1 | 403.2 | 34.01 | 5.28  | 26.86   |
| 424.8 | 428.2 | 34.02 | 5.22  | 26.88   |
| 450.5 | 454.0 | 34.04 | 5.12  | 26.90   |
| 475.0 | 478.9 | 34.04 | 5.03  | 26.92   |
| 487.2 | 491.1 | 34.05 | 4.95  | 26.93   |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 12 CODE  
 LAT N 48 37.34  
 DATE 12/ 6/80  
 TIME (PST) 0424

TAPE: U00454 -352  
 LONG W 126 23.47  
 PASS NO. 71  
 STN: W.B. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.4   | 2.4   | 32.14 | 11.63 | 24.44   |        |
| 5.1   | 5.1   | 32.13 | 11.65 | 24.43   |        |
| 10.0  | 10.0  | 32.12 | 11.65 | 24.42   |        |
| 14.9  | 15.0  | 32.12 | 11.66 | 24.41   |        |
| 19.9  | 20.0  | 32.12 | 11.67 | 24.41   |        |
| 24.9  | 25.1  | 32.32 | 10.22 | 24.83   | 6.80   |
| 29.8  | 30.0  | 32.25 | 9.97  | 24.81   |        |
| 34.8  | 35.0  | 32.27 | 9.83  | 24.85   |        |
| 39.8  | 40.0  | 32.31 | 9.54  | 24.93   |        |
| 44.7  | 44.9  | 32.37 | 9.31  | 25.01   |        |
| 49.9  | 50.1  | 32.43 | 8.87  | 25.13   | 5.42   |
| 59.6  | 59.9  | 32.55 | 8.57  | 25.27   |        |
| 69.7  | 70.1  | 32.73 | 8.22  | 25.47   |        |
| 74.4  | 74.9  | 32.83 | 8.15  | 25.55   | 5.02   |
| 79.6  | 80.1  | 32.89 | 8.11  | 25.60   |        |
| 90.4  | 91.0  | 33.01 | 8.02  | 25.71   |        |
| 99.5  | 100.1 | 33.24 | 7.89  | 25.91   | 3.69   |
| 110.3 | 111.0 | 33.41 | 7.79  | 26.06   |        |
| 120.3 | 121.1 | 33.53 | 7.72  | 26.17   |        |
| 125.3 | 126.1 | 33.61 | 7.69  | 26.23   | 3.11   |
| 130.4 | 131.2 | 33.65 | 7.67  | 26.27   |        |
| 140.2 | 141.1 | 33.70 | 7.63  | 26.31   |        |
| 150.1 | 151.1 | 33.78 | 7.45  | 26.40   | 2.60   |
| 159.8 | 160.9 | 33.85 | 7.21  | 26.49   |        |
| 170.0 | 171.1 | 33.92 | 6.81  | 26.59   |        |
| 179.9 | 181.1 | 33.94 | 6.49  | 26.66   |        |
| 189.8 | 191.0 | 33.95 | 6.40  | 26.68   |        |
| 199.7 | 201.0 | 33.98 | 6.15  | 26.73   | 1.81   |
| 224.5 | 226.0 | 33.99 | 5.77  | 26.78   |        |
| 250.1 | 251.9 | 33.99 | 5.66  | 26.80   | 1.67   |
| 275.0 | 277.0 | 34.00 | 5.55  | 26.82   |        |
| 299.8 | 301.9 | 34.01 | 5.42  | 26.84   | 1.44   |
| 324.6 | 327.0 | 34.01 | 5.35  | 26.85   |        |
| 349.5 | 352.1 | 34.02 | 5.21  | 26.88   |        |
| 375.3 | 378.1 | 34.03 | 5.15  | 26.89   |        |
| 399.9 | 403.0 | 34.04 | 5.09  | 26.90   |        |
| 424.6 | 428.0 | 34.05 | 5.03  | 26.92   |        |
| 450.5 | 454.1 | 34.07 | 4.89  | 26.95   |        |
| 475.1 | 478.9 | 34.08 | 4.80  | 26.97   |        |
| 500.0 | 504.0 | 34.09 | 4.78  | 26.98   | .84    |
| 502.5 | 506.6 | 34.09 | 4.77  | 26.98   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 53.19

DATE 13/ 8/80

TIME (PST) 1440

TAPE: U00454 -363

LONG W 125 36.12

PASS NO. 2

STN: A.P. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .8    | .8    | 31.67 | 13.94 | 23.63   |
| 2.0   | 2.0   | 31.67 | 13.91 | 23.64   |
| 5.0   | 5.1   | 31.67 | 13.81 | 23.65   |
| 10.0  | 10.0  | 31.87 | 11.85 | 24.19   |
| 15.0  | 15.1  | 32.07 | 10.13 | 24.65   |
| 19.8  | 19.9  | 32.14 | 9.85  | 24.75   |
| 24.9  | 25.1  | 32.23 | 9.58  | 24.86   |
| 29.9  | 30.0  | 32.32 | 9.39  | 24.96   |
| 34.8  | 35.0  | 32.35 | 9.32  | 25.00   |
| 39.8  | 40.0  | 32.37 | 9.29  | 25.01   |
| 44.8  | 45.0  | 32.37 | 9.29  | 25.01   |
| 49.7  | 50.0  | 32.41 | 9.21  | 25.06   |
| 55.4  | 55.7  | 32.49 | 9.07  | 25.14   |

CRUISE NO: 13 CODE

LAT N 48 49.32

DATE 13/ 8/80

TIME (PST) 1518

TAPE: U00454 -364

LONG W 125 41.36

PASS NO. 3

STN: A.P. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.5   | 3.6   | 31.78 | 13.67 | 23.77   |        |
| 5.0   | 5.0   | 31.77 | 13.69 | 23.76   |        |
| 9.9   | 10.0  | 31.82 | 11.91 | 24.14   |        |
| 15.1  | 15.2  | 31.88 | 11.17 | 24.32   |        |
| 19.7  | 19.8  | 31.95 | 10.36 | 24.51   |        |
| 25.0  | 25.2  | 32.06 | 9.78  | 24.70   | 4.48   |
| 29.9  | 30.1  | 32.19 | 9.46  | 24.85   |        |
| 34.8  | 34.9  | 32.33 | 9.20  | 25.00   |        |
| 39.9  | 40.1  | 32.47 | 8.98  | 25.14   |        |
| 44.8  | 45.0  | 32.67 | 8.71  | 25.34   |        |
| 49.7  | 50.0  | 32.75 | 8.61  | 25.42   | 2.99   |
| 53.2  | 53.5  | 32.77 | 8.59  | 25.44   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 45.39

DATE 13/ 8/80

TIME (PST) 1604

TAPE: U00454 -365

LONG W 125 47.05

PASS NO. 5

STN: A.P. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .8    | .8    | 31.72 | 12.82 | 23.89   |
| 2.0   | 2.0   | 31.75 | 12.84 | 23.91   |
| 5.0   | 5.0   | 31.73 | 12.84 | 23.89   |
| 9.9   | 10.0  | 31.84 | 10.41 | 24.42   |
| 14.8  | 14.9  | 31.96 | 10.03 | 24.58   |
| 19.9  | 20.0  | 32.04 | 9.83  | 24.67   |
| 24.9  | 25.0  | 32.14 | 9.56  | 24.80   |
| 29.8  | 30.0  | 32.25 | 9.39  | 24.90   |
| 34.9  | 35.1  | 32.32 | 9.31  | 24.97   |
| 39.7  | 39.9  | 32.43 | 9.05  | 25.10   |
| 44.7  | 45.0  | 32.47 | 8.96  | 25.14   |
| 49.8  | 50.0  | 32.65 | 8.71  | 25.33   |
| 59.7  | 60.0  | 32.85 | 8.46  | 25.52   |
| 69.7  | 70.1  | 33.16 | 8.05  | 25.83   |
| 69.7  | 70.1  | 33.16 | 8.05  | 25.83   |

CRUISE NO: 13 CODE

LAT N 48 41.41

DATE 13/ 8/80

TIME (PST) 1645

TAPE: U00454 -366

LONG W 125 52.38

PASS NO. 7

STN: A.P. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.0   | 2.0   | 31.69 | 12.28 | 23.97   |        |
| 5.0   | 5.0   | 31.69 | 12.29 | 23.97   |        |
| 10.0  | 10.0  | 31.69 | 12.25 | 23.98   |        |
| 14.9  | 14.9  | 31.72 | 10.57 | 24.30   |        |
| 19.9  | 20.0  | 31.93 | 10.06 | 24.55   |        |
| 24.7  | 24.8  | 32.14 | 9.57  | 24.79   | 3.91   |
| 29.8  | 29.9  | 32.29 | 9.26  | 24.96   |        |
| 34.8  | 34.9  | 32.58 | 8.83  | 25.25   |        |
| 39.8  | 40.0  | 32.88 | 8.40  | 25.55   |        |
| 44.7  | 44.9  | 32.96 | 8.28  | 25.63   |        |
| 50.5  | 50.8  | 32.98 | 8.25  | 25.66   | 2.77   |
| 59.7  | 60.0  | 33.16 | 8.03  | 25.83   | 2.72   |
| 64.5  | 64.9  | 33.22 | 7.93  | 25.89   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 37.36

DATE 13/ 8/80

TIME (PST) 1735

TAPE: U00454 -367

LONG W 125 58.16

PASS NO. 9

STN: A.P. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.6   | 1.6   | 31.66 | 11.94 | 24.01   |
| 4.9   | 4.9   | 31.66 | 11.94 | 24.01   |
| 10.0  | 10.0  | 31.94 | 12.29 | 24.17   |
| 14.8  | 14.9  | 32.40 | 10.38 | 24.86   |
| 19.9  | 20.0  | 32.46 | 9.76  | 25.01   |
| 25.0  | 25.1  | 32.63 | 9.00  | 25.27   |
| 29.8  | 30.0  | 32.68 | 8.65  | 25.36   |
| 34.8  | 35.0  | 32.80 | 8.31  | 25.51   |
| 39.7  | 39.9  | 32.85 | 8.19  | 25.56   |
| 44.8  | 45.1  | 32.92 | 8.13  | 25.63   |
| 49.6  | 49.9  | 33.00 | 8.11  | 25.69   |
| 59.7  | 60.1  | 33.26 | 7.89  | 25.92   |
| 69.5  | 70.0  | 33.43 | 7.72  | 26.08   |
| 79.6  | 80.1  | 33.60 | 7.49  | 26.25   |
| 89.6  | 90.2  | 33.77 | 7.20  | 26.42   |
| 99.9  | 100.6 | 33.85 | 6.80  | 26.54   |
| 102.2 | 102.8 | 33.85 | 6.80  | 26.54   |

CRUISE NO: 13 CODE

LAT N 48 33.24

DATE 13/ 8/80

TIME (PST) 1819

TAPE: U00454 -368

LONG W 126 4.00

PASS NO. 11

STN: A.P. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 1.8   | 1.8   | 32.29 | 12.88 | 24.32   |        |
| 4.8   | 4.9   | 32.30 | 12.88 | 24.33   |        |
| 10.0  | 10.0  | 32.31 | 12.80 | 24.35   |        |
| 14.9  | 15.0  | 32.38 | 11.68 | 24.62   |        |
| 19.8  | 19.9  | 32.48 | 10.52 | 24.90   |        |
| 24.8  | 24.9  | 32.50 | 9.53  | 25.08   | 5.06   |
| 30.0  | 30.2  | 32.62 | 8.87  | 25.27   |        |
| 34.8  | 35.0  | 32.65 | 8.64  | 25.34   |        |
| 39.6  | 39.9  | 32.69 | 8.43  | 25.40   |        |
| 44.7  | 45.0  | 32.82 | 8.28  | 25.52   |        |
| 49.6  | 49.9  | 32.90 | 8.20  | 25.60   | 5.04   |
| 59.7  | 60.0  | 33.25 | 7.85  | 25.93   |        |
| 69.6  | 70.0  | 33.49 | 7.57  | 26.15   |        |
| 74.6  | 75.0  | 33.61 | 7.45  | 26.26   | 4.15   |
| 79.6  | 80.1  | 33.65 | 7.42  | 26.30   |        |
| 90.5  | 91.0  | 33.70 | 7.37  | 26.34   |        |
| 100.4 | 101.0 | 33.79 | 7.32  | 26.43   | 3.51   |
| 110.2 | 110.9 | 33.85 | 7.25  | 26.48   |        |
| 120.2 | 120.9 | 33.91 | 7.16  | 26.54   |        |
| 125.3 | 126.1 | 33.90 | 7.02  | 26.55   | 2.79   |
| 130.1 | 130.9 | 33.90 | 6.84  | 26.58   |        |
| 137.7 | 138.6 | 33.92 | 6.62  | 26.62   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 13 CODE  
 LAT N 48 29.06  
 DATE 13/ 8/80  
 TIME (PST) 1921

TAPE: U00454 -369  
 LONG W 126 9.48  
 PASS NO. 13  
 STN: A.P. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.4   | 2.4   | 32.33 | 12.71 | 24.39   |
| 4.9   | 4.9   | 32.34 | 12.70 | 24.39   |
| 9.9   | 9.9   | 32.34 | 12.70 | 24.39   |
| 14.9  | 14.9  | 32.33 | 12.38 | 24.45   |
| 19.8  | 19.9  | 32.49 | 10.40 | 24.93   |
| 25.0  | 25.1  | 32.54 | 9.37  | 25.13   |
| 29.8  | 30.0  | 32.56 | 8.88  | 25.23   |
| 34.8  | 35.0  | 32.62 | 8.65  | 25.31   |
| 40.0  | 40.2  | 32.65 | 8.53  | 25.35   |
| 44.7  | 45.0  | 32.69 | 8.40  | 25.40   |
| 49.8  | 50.1  | 32.78 | 8.35  | 25.48   |
| 59.7  | 60.0  | 32.99 | 8.08  | 25.68   |
| 69.7  | 70.1  | 33.19 | 7.88  | 25.87   |
| 79.6  | 80.1  | 33.38 | 7.66  | 26.05   |
| 89.6  | 90.1  | 33.71 | 7.50  | 26.33   |
| 100.5 | 101.1 | 33.75 | 7.59  | 26.35   |
| 110.2 | 110.9 | 33.82 | 7.54  | 26.42   |
| 120.3 | 121.0 | 33.86 | 7.47  | 26.46   |
| 130.1 | 130.9 | 33.88 | 7.40  | 26.48   |
| 140.1 | 141.0 | 33.89 | 7.38  | 26.50   |
| 149.9 | 150.9 | 33.93 | 7.25  | 26.54   |
| 159.9 | 161.0 | 33.92 | 7.20  | 26.55   |
| 170.0 | 171.2 | 33.94 | 7.07  | 26.58   |
| 179.9 | 181.2 | 33.95 | 6.95  | 26.60   |
| 189.7 | 191.0 | 33.96 | 6.83  | 26.62   |
| 199.7 | 201.1 | 33.97 | 6.73  | 26.65   |
| 225.5 | 227.1 | 34.00 | 6.28  | 26.73   |
| 226.5 | 228.1 | 34.00 | 6.23  | 26.74   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 24.40

DATE 13/ 8/80

TIME (PST) 2017

TAPE: U00454 -370

LONG W 126 15.42

PASS NO. 15

STN: A.P. 8

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.9   | 1.9   | 32.38 | 12.88 | 24.39   |
| 5.7   | 5.7   | 32.38 | 12.86 | 24.40   |
| 9.9   | 10.0  | 32.39 | 12.86 | 24.41   |
| 14.9  | 15.0  | 32.39 | 12.79 | 24.41   |
| 20.5  | 20.6  | 32.43 | 11.73 | 24.64   |
| 25.0  | 25.1  | 32.45 | 11.30 | 24.74   |
| 29.8  | 30.0  | 32.46 | 10.60 | 24.87   |
| 34.9  | 35.1  | 32.50 | 10.10 | 24.99   |
| 39.9  | 40.1  | 32.55 | 9.28  | 25.16   |
| 44.8  | 45.0  | 32.57 | 8.98  | 25.22   |
| 49.7  | 50.0  | 32.59 | 8.80  | 25.26   |
| 59.6  | 59.9  | 32.70 | 8.30  | 25.43   |
| 69.6  | 70.0  | 32.93 | 8.14  | 25.63   |
| 79.6  | 80.1  | 33.14 | 7.97  | 25.82   |
| 89.7  | 90.2  | 33.38 | 7.65  | 26.05   |
| 100.4 | 101.0 | 33.54 | 7.53  | 26.19   |
| 110.5 | 111.2 | 33.64 | 7.42  | 26.29   |
| 120.2 | 121.0 | 33.72 | 7.24  | 26.38   |
| 130.2 | 131.1 | 33.76 | 7.22  | 26.41   |
| 139.9 | 140.8 | 33.80 | 7.18  | 26.45   |
| 150.1 | 151.1 | 33.85 | 7.16  | 26.49   |
| 159.9 | 161.0 | 33.90 | 7.10  | 26.54   |
| 170.0 | 171.1 | 33.93 | 7.02  | 26.57   |
| 179.8 | 181.0 | 33.94 | 6.91  | 26.60   |
| 189.7 | 191.0 | 33.95 | 6.78  | 26.63   |
| 199.7 | 201.0 | 33.95 | 6.71  | 26.64   |
| 225.5 | 227.1 | 33.96 | 6.40  | 26.68   |
| 250.1 | 251.8 | 33.98 | 6.22  | 26.72   |
| 275.2 | 277.2 | 34.01 | 6.19  | 26.75   |
| 299.8 | 302.0 | 34.01 | 5.91  | 26.78   |
| 325.5 | 327.9 | 34.04 | 5.85  | 26.82   |
| 350.2 | 352.9 | 34.05 | 5.74  | 26.84   |
| 375.4 | 378.2 | 34.06 | 5.64  | 26.86   |
| 399.8 | 402.9 | 34.07 | 5.48  | 26.88   |
| 425.3 | 428.7 | 34.08 | 5.39  | 26.90   |
| 449.5 | 453.1 | 34.09 | 5.26  | 26.92   |
| 475.4 | 479.2 | 34.09 | 5.15  | 26.94   |
| 484.0 | 487.9 | 34.09 | 5.05  | 26.95   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 8.50

DATE 13/ 8/80

TIME (PST) 2237

TAPE: U00454 -371

LONG W 126 .00

PASS NO. 17

STN: 111

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.3   | 3.3   | 32.22 | 13.80 | 24.08   |
| 4.9   | 4.9   | 32.21 | 13.81 | 24.08   |
| 9.9   | 9.9   | 32.22 | 13.81 | 24.08   |
| 14.9  | 14.9  | 32.21 | 13.80 | 24.08   |
| 19.8  | 19.9  | 32.23 | 12.87 | 24.28   |
| 24.8  | 25.0  | 32.38 | 10.89 | 24.76   |
| 29.8  | 29.9  | 32.49 | 9.93  | 25.01   |
| 34.9  | 35.1  | 32.55 | 9.37  | 25.15   |
| 39.9  | 40.1  | 32.57 | 9.27  | 25.17   |
| 44.6  | 44.9  | 32.59 | 9.04  | 25.23   |
| 49.6  | 49.8  | 32.60 | 8.78  | 25.27   |
| 59.5  | 59.9  | 32.66 | 8.48  | 25.37   |
| 69.5  | 69.9  | 32.86 | 8.40  | 25.54   |
| 79.6  | 80.0  | 33.05 | 8.40  | 25.69   |
| 90.5  | 91.0  | 33.29 | 8.36  | 25.88   |
| 100.3 | 100.9 | 33.40 | 8.18  | 26.00   |
| 110.4 | 111.0 | 33.57 | 7.95  | 26.16   |
| 120.3 | 121.0 | 33.62 | 7.85  | 26.22   |
| 130.1 | 130.9 | 33.69 | 7.70  | 26.29   |
| 140.7 | 141.5 | 33.74 | 7.54  | 26.36   |
| 150.2 | 151.1 | 33.81 | 7.44  | 26.42   |
| 159.9 | 160.9 | 33.83 | 7.34  | 26.45   |
| 169.8 | 170.9 | 33.87 | 7.26  | 26.49   |
| 179.9 | 181.0 | 33.91 | 7.20  | 26.53   |
| 189.7 | 191.0 | 33.93 | 7.13  | 26.56   |
| 199.6 | 200.9 | 33.95 | 7.06  | 26.58   |
| 224.5 | 226.0 | 33.97 | 6.93  | 26.62   |
| 250.3 | 252.1 | 33.99 | 6.70  | 26.67   |
| 275.1 | 277.0 | 33.99 | 6.51  | 26.69   |
| 299.8 | 302.0 | 34.00 | 6.27  | 26.73   |
| 324.8 | 327.2 | 33.99 | 6.00  | 26.76   |
| 350.4 | 353.0 | 34.02 | 5.83  | 26.80   |
| 375.2 | 378.0 | 34.05 | 5.68  | 26.84   |
| 400.0 | 403.1 | 34.06 | 5.61  | 26.86   |
| 424.6 | 427.9 | 34.08 | 5.45  | 26.89   |
| 449.6 | 453.1 | 34.09 | 5.32  | 26.92   |
| 475.0 | 478.8 | 34.11 | 5.19  | 26.95   |
| 500.0 | 504.0 | 34.12 | 5.04  | 26.97   |
| 510.6 | 514.7 | 34.13 | 4.97  | 26.99   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 10.60

DATE 13/ 8/80

TIME (PST) 2323

TAPE: U00454 -372

LONG W 125 56.20

PASS NO. 19

STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 32.24 | 13.81 | 24.09   |
| 4.9   | 4.9   | 32.23 | 13.80 | 24.09   |
| 10.1  | 10.1  | 32.21 | 13.66 | 24.11   |
| 15.0  | 15.0  | 32.22 | 13.48 | 24.15   |
| 19.9  | 19.9  | 32.28 | 12.28 | 24.43   |
| 24.8  | 25.0  | 32.41 | 10.99 | 24.76   |
| 30.0  | 30.2  | 32.46 | 10.35 | 24.91   |
| 34.8  | 35.0  | 32.50 | 9.89  | 25.02   |
| 39.8  | 40.0  | 32.56 | 9.45  | 25.14   |
| 44.7  | 44.9  | 32.58 | 9.28  | 25.18   |
| 49.6  | 49.9  | 32.60 | 8.95  | 25.25   |
| 59.6  | 59.9  | 32.67 | 8.33  | 25.39   |
| 69.7  | 70.1  | 32.91 | 8.37  | 25.58   |
| 79.7  | 80.2  | 33.14 | 8.46  | 25.75   |
| 89.6  | 90.1  | 33.37 | 8.29  | 25.96   |
| 99.5  | 100.1 | 33.47 | 8.19  | 26.04   |
| 110.2 | 110.9 | 33.62 | 7.97  | 26.20   |
| 120.2 | 121.0 | 33.66 | 7.84  | 26.25   |
| 130.2 | 131.0 | 33.76 | 7.69  | 26.35   |
| 140.2 | 141.1 | 33.82 | 7.63  | 26.40   |
| 150.1 | 151.0 | 33.87 | 7.58  | 26.45   |
| 159.8 | 160.8 | 33.90 | 7.53  | 26.48   |
| 169.9 | 171.0 | 33.91 | 7.48  | 26.49   |
| 179.8 | 180.9 | 33.92 | 7.38  | 26.52   |
| 189.8 | 191.0 | 33.93 | 7.26  | 26.54   |
| 199.7 | 201.0 | 33.94 | 7.12  | 26.57   |
| 225.5 | 227.0 | 33.97 | 6.89  | 26.63   |
| 250.3 | 252.1 | 33.99 | 6.61  | 26.67   |
| 275.2 | 277.1 | 34.00 | 6.45  | 26.70   |
| 300.0 | 302.1 | 34.01 | 6.30  | 26.74   |
| 324.6 | 327.0 | 34.02 | 6.11  | 26.77   |
| 350.4 | 353.0 | 34.03 | 5.94  | 26.79   |
| 375.1 | 377.9 | 34.05 | 5.81  | 26.82   |
| 400.0 | 403.1 | 34.04 | 5.55  | 26.85   |
| 424.8 | 428.1 | 34.06 | 5.35  | 26.89   |
| 450.5 | 454.0 | 34.08 | 5.33  | 26.91   |
| 475.2 | 479.0 | 34.10 | 5.27  | 26.93   |
| 496.7 | 500.7 | 34.12 | 5.13  | 26.96   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 12.90

DATE 14/ 8/80

TIME (PST) 0008

TAPE: U00454 -373

LONG W 125 52.00

PASS NO. 21

STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.8   | 1.8   | 32.28 | 13.28 | 24.23   |
| 5.0   | 5.0   | 32.28 | 13.27 | 24.23   |
| 10.0  | 10.1  | 32.28 | 13.27 | 24.24   |
| 14.9  | 15.0  | 32.30 | 13.14 | 24.28   |
| 20.0  | 20.1  | 32.37 | 11.36 | 24.67   |
| 24.7  | 24.9  | 32.42 | 10.55 | 24.84   |
| 29.9  | 30.0  | 32.55 | 9.68  | 25.09   |
| 35.4  | 35.6  | 32.57 | 9.12  | 25.20   |
| 39.7  | 39.9  | 32.59 | 8.89  | 25.25   |
| 44.9  | 45.2  | 32.61 | 8.69  | 25.29   |
| 49.9  | 50.2  | 32.60 | 8.58  | 25.31   |
| 59.6  | 59.9  | 32.73 | 8.30  | 25.45   |
| 69.6  | 70.0  | 32.84 | 8.29  | 25.54   |
| 79.6  | 80.0  | 33.10 | 8.32  | 25.74   |
| 89.4  | 90.0  | 33.31 | 8.33  | 25.90   |
| 99.6  | 100.2 | 33.51 | 8.15  | 26.08   |
| 110.3 | 110.9 | 33.64 | 7.98  | 26.21   |
| 120.4 | 121.1 | 33.77 | 7.80  | 26.34   |
| 130.2 | 131.0 | 33.82 | 7.66  | 26.40   |
| 140.2 | 141.0 | 33.86 | 7.54  | 26.45   |
| 150.1 | 151.1 | 33.90 | 7.35  | 26.51   |
| 159.8 | 160.9 | 33.93 | 7.23  | 26.54   |
| 169.8 | 170.9 | 33.94 | 7.18  | 26.56   |
| 179.8 | 181.0 | 33.96 | 7.00  | 26.60   |
| 189.8 | 191.0 | 33.96 | 6.93  | 26.61   |
| 199.6 | 201.0 | 33.97 | 6.82  | 26.63   |
| 224.6 | 226.2 | 33.99 | 6.49  | 26.69   |
| 250.3 | 252.0 | 34.00 | 6.27  | 26.73   |
| 275.1 | 277.1 | 34.00 | 6.17  | 26.75   |
| 300.0 | 302.2 | 34.02 | 6.03  | 26.77   |
| 324.6 | 327.0 | 34.03 | 5.93  | 26.79   |
| 350.3 | 352.9 | 34.03 | 5.91  | 26.80   |
| 375.2 | 378.1 | 34.04 | 5.82  | 26.82   |
| 399.9 | 403.0 | 34.05 | 5.74  | 26.83   |
| 424.7 | 428.0 | 34.06 | 5.59  | 26.86   |
| 449.5 | 453.0 | 34.07 | 5.51  | 26.88   |
| 475.2 | 479.0 | 34.08 | 5.40  | 26.90   |
| 499.0 | 503.0 | 34.08 | 5.37  | 26.91   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 15.10

DATE 14/ 8/80

TIME (PST) 0053

TAPE: U00454 -374

LONG W 125 47.70

PASS NO. 23

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.2   | 2.2   | 32.18 | 12.61 | 24.29   |
| 4.9   | 4.9   | 32.18 | 12.61 | 24.29   |
| 9.9   | 10.0  | 32.25 | 12.43 | 24.38   |
| 14.8  | 14.9  | 32.46 | 10.80 | 24.83   |
| 19.9  | 20.0  | 32.52 | 9.84  | 25.05   |
| 25.1  | 25.2  | 32.56 | 9.11  | 25.19   |
| 29.7  | 29.8  | 32.57 | 8.85  | 25.24   |
| 34.9  | 35.1  | 32.60 | 8.67  | 25.29   |
| 39.6  | 39.9  | 32.61 | 8.58  | 25.31   |
| 44.7  | 44.9  | 32.63 | 8.44  | 25.35   |
| 49.6  | 49.8  | 32.66 | 8.35  | 25.39   |
| 60.2  | 60.5  | 32.77 | 8.22  | 25.49   |
| 69.5  | 69.9  | 32.92 | 8.11  | 25.62   |
| 79.5  | 80.0  | 33.28 | 8.13  | 25.91   |
| 90.5  | 91.0  | 33.49 | 7.96  | 26.10   |
| 100.3 | 100.9 | 33.64 | 8.00  | 26.20   |
| 110.2 | 110.9 | 33.78 | 7.79  | 26.34   |
| 120.3 | 121.1 | 33.82 | 7.69  | 26.39   |
| 130.2 | 131.0 | 33.86 | 7.53  | 26.45   |
| 140.2 | 141.1 | 33.88 | 7.44  | 26.48   |
| 150.1 | 151.1 | 33.91 | 7.31  | 26.52   |
| 159.9 | 161.0 | 33.92 | 7.13  | 26.55   |
| 169.8 | 171.0 | 33.93 | 7.08  | 26.56   |
| 179.7 | 180.9 | 33.93 | 6.98  | 26.58   |
| 189.7 | 191.0 | 33.94 | 6.93  | 26.59   |
| 199.8 | 201.2 | 33.94 | 6.87  | 26.60   |
| 225.3 | 226.9 | 33.97 | 6.66  | 26.65   |
| 229.4 | 231.0 | 33.98 | 6.55  | 26.68   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 13 CODE  
 LAT N 48 18.60  
 DATE 14/ 8/80  
 TIME (PST) 0144

TAPE: U00454 -375  
 LONG W 125 41.20  
 PASS NO. 25  
 STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.2   | 2.2   | 32.00 | 11.25 | 24.40   |        |
| 4.7   | 4.7   | 32.01 | 11.24 | 24.41   |        |
| 10.0  | 10.0  | 32.02 | 11.22 | 24.42   | 6.19   |
| 15.0  | 15.1  | 32.08 | 11.10 | 24.49   |        |
| 20.1  | 20.2  | 32.25 | 9.82  | 24.83   |        |
| 24.9  | 25.0  | 32.44 | 9.90  | 24.97   | 3.82   |
| 30.0  | 30.1  | 32.60 | 9.31  | 25.20   |        |
| 34.8  | 35.0  | 32.63 | 8.99  | 25.27   |        |
| 39.7  | 39.9  | 32.79 | 8.64  | 25.45   |        |
| 44.8  | 45.0  | 32.85 | 8.46  | 25.52   |        |
| 50.4  | 50.7  | 32.96 | 8.17  | 25.65   | 4.28   |
| 59.7  | 60.0  | 33.12 | 8.02  | 25.80   |        |
| 69.6  | 70.1  | 33.34 | 7.82  | 26.00   |        |
| 74.5  | 75.0  | 33.43 | 7.69  | 26.09   | 4.01   |
| 80.4  | 80.9  | 33.50 | 7.57  | 26.16   |        |
| 89.5  | 90.1  | 33.67 | 7.40  | 26.32   |        |
| 100.4 | 101.0 | 33.80 | 7.62  | 26.39   | 3.15   |
| 110.2 | 110.9 | 33.86 | 7.49  | 26.46   |        |
| 120.2 | 121.0 | 33.89 | 7.37  | 26.49   |        |
| 125.2 | 126.0 | 33.92 | 7.20  | 26.54   | 2.75   |
| 130.1 | 131.0 | 33.92 | 7.17  | 26.54   |        |
| 140.1 | 141.0 | 33.94 | 6.93  | 26.60   | 2.47   |
| 150.0 | 151.0 | 33.95 | 6.92  | 26.60   |        |
| 152.8 | 153.8 | 33.94 | 6.93  | 26.60   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 22.00

DATE 14/ 8/80

TIME (PST) 0308

TAPE: U00454 -376

LONG W 125 34.70

PASS NO. 27

STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.5   | 1.5   | 32.35 | 10.76 | 24.76   |
| 4.8   | 4.8   | 32.36 | 10.82 | 24.76   |
| 10.0  | 10.0  | 32.47 | 10.87 | 24.83   |
| 14.8  | 14.9  | 32.71 | 10.20 | 25.13   |
| 19.9  | 20.0  | 33.08 | 8.65  | 25.67   |
| 25.0  | 25.1  | 33.16 | 8.34  | 25.78   |
| 29.8  | 30.0  | 33.26 | 8.10  | 25.90   |
| 34.8  | 35.0  | 33.32 | 7.98  | 25.96   |
| 39.8  | 40.0  | 33.45 | 7.69  | 26.11   |
| 44.7  | 45.0  | 33.50 | 7.59  | 26.15   |
| 49.7  | 50.0  | 33.57 | 7.42  | 26.24   |
| 59.8  | 60.1  | 33.66 | 7.21  | 26.33   |
| 70.6  | 71.0  | 33.70 | 7.11  | 26.38   |
| 79.6  | 80.1  | 33.72 | 7.07  | 26.40   |
| 89.5  | 90.1  | 33.77 | 6.95  | 26.46   |
| 100.3 | 101.0 | 33.80 | 6.87  | 26.49   |
| 110.2 | 111.0 | 33.84 | 6.79  | 26.53   |
| 120.2 | 121.0 | 33.92 | 6.53  | 26.64   |
| 130.2 | 131.1 | 33.95 | 6.43  | 26.67   |
| 139.9 | 140.9 | 33.95 | 6.42  | 26.67   |
| 147.8 | 148.8 | 33.96 | 6.41  | 26.68   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 13 CODE  
 LAT N 48 25.50  
 DATE 14/ 8/80  
 TIME (PST) 0348

TAPE: U00454 -377  
 LONG W 125 28.30  
 PASS NO. 29  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 1.9   | 1.9   | 32.56 | 12.24 | 24.65   |        |
| 4.8   | 4.8   | 32.58 | 12.24 | 24.66   |        |
| 10.0  | 10.0  | 32.58 | 12.24 | 24.66   | 7.20   |
| 14.9  | 15.0  | 32.65 | 11.41 | 24.88   |        |
| 19.8  | 19.9  | 32.77 | 10.35 | 25.16   |        |
| 25.0  | 25.1  | 32.94 | 9.45  | 25.44   | 3.44   |
| 29.9  | 30.1  | 33.12 | 8.66  | 25.70   |        |
| 34.8  | 35.0  | 33.20 | 8.41  | 25.80   |        |
| 39.7  | 39.9  | 33.34 | 8.01  | 25.97   |        |
| 44.6  | 44.9  | 33.47 | 7.67  | 26.12   |        |
| 49.7  | 50.0  | 33.57 | 7.43  | 26.24   | 2.21   |
| 59.5  | 59.9  | 33.75 | 7.00  | 26.44   |        |
| 69.7  | 70.1  | 33.81 | 6.86  | 26.50   |        |
| 75.4  | 75.9  | 33.85 | 6.77  | 26.54   | 1.56   |
| 79.6  | 80.1  | 33.86 | 6.71  | 26.56   |        |
| 90.3  | 90.9  | 33.88 | 6.67  | 26.58   |        |
| 100.3 | 101.0 | 33.88 | 6.66  | 26.59   | 1.38   |
| 110.2 | 110.9 | 33.90 | 6.63  | 26.60   |        |
| 120.1 | 120.9 | 33.90 | 6.63  | 26.60   |        |
| 125.1 | 126.0 | 33.90 | 6.63  | 26.60   | 1.28   |
| 130.2 | 131.1 | 33.90 | 6.63  | 26.60   |        |
| 132.1 | 133.0 | 33.90 | 6.63  | 26.61   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 28.90

DATE 14/ 8/80

TIME (PST) 0454

TAPE: U00454 -378

LONG W 125 21.80

PASS NO. 31

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.7   | 2.7   | 32.55 | 11.65 | 24.75   |
| 5.1   | 5.1   | 32.61 | 11.53 | 24.83   |
| 10.0  | 10.1  | 32.61 | 11.13 | 24.89   |
| 14.9  | 15.0  | 32.80 | 10.14 | 25.22   |
| 19.9  | 20.0  | 32.87 | 9.71  | 25.34   |
| 24.8  | 24.9  | 32.99 | 9.20  | 25.52   |
| 29.8  | 30.0  | 33.12 | 8.65  | 25.70   |
| 34.8  | 35.0  | 33.22 | 8.33  | 25.83   |
| 39.6  | 39.9  | 33.36 | 7.91  | 26.00   |
| 44.7  | 45.0  | 33.48 | 7.63  | 26.14   |
| 49.8  | 50.1  | 33.59 | 7.38  | 26.26   |
| 59.6  | 60.0  | 33.70 | 7.12  | 26.38   |
| 69.6  | 70.0  | 33.76 | 6.98  | 26.45   |
| 80.4  | 80.9  | 33.82 | 6.81  | 26.52   |
| 90.3  | 90.9  | 33.88 | 6.66  | 26.58   |
| 100.2 | 100.9 | 33.92 | 6.56  | 26.63   |
| 110.2 | 110.9 | 33.93 | 6.51  | 26.65   |
| 120.2 | 121.0 | 33.94 | 6.48  | 26.65   |
| 130.2 | 131.1 | 33.94 | 6.48  | 26.65   |
| 140.0 | 141.0 | 33.94 | 6.47  | 26.66   |
| 149.9 | 151.0 | 33.94 | 6.47  | 26.66   |
| 149.9 | 151.0 | 33.94 | 6.47  | 26.66   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 32.20

DATE 14/ 8/80

TIME (PST) 0532

TAPE: U00454 -379

LONG W 125 15.50

PASS NO. 33

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.2   | 2.2   | 32.49 | 11.99 | 24.64   |        |
| 5.0   | 5.0   | 32.50 | 11.97 | 24.65   |        |
| 9.9   | 9.9   | 32.60 | 11.23 | 24.87   |        |
| 14.9  | 15.0  | 32.90 | 9.49  | 25.40   |        |
| 19.7  | 19.8  | 33.08 | 8.79  | 25.65   |        |
| 24.6  | 24.8  | 33.23 | 8.25  | 25.85   | 2.89   |
| 29.8  | 30.0  | 33.30 | 8.06  | 25.93   |        |
| 34.7  | 34.9  | 33.43 | 7.76  | 26.08   |        |
| 39.7  | 39.9  | 33.48 | 7.65  | 26.13   |        |
| 44.7  | 45.0  | 33.54 | 7.52  | 26.20   |        |
| 49.7  | 50.0  | 33.57 | 7.44  | 26.23   | 2.17   |
| 59.5  | 59.9  | 33.68 | 7.18  | 26.35   |        |
| 70.4  | 70.9  | 33.78 | 6.94  | 26.47   |        |
| 74.6  | 75.1  | 33.83 | 6.83  | 26.52   | 1.87   |
| 80.5  | 81.1  | 33.86 | 6.73  | 26.56   |        |
| 90.5  | 91.1  | 33.90 | 6.63  | 26.60   |        |
| 100.3 | 101.0 | 33.92 | 6.56  | 26.63   | 1.65   |
| 103.4 | 104.1 | 33.92 | 6.55  | 26.63   |        |

CRUISE NO: 13 CODE

LAT N 48 35.60

DATE 14/ 8/80

TIME (PST) 0624

TAPE: U00454 -380

LONG W 125 9.00

PASS NO. 35

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.3   | 2.3   | 31.68 | 11.30 | 24.14   |
| 5.0   | 5.0   | 31.70 | 11.25 | 24.16   |
| 10.0  | 10.0  | 31.91 | 10.49 | 24.46   |
| 15.0  | 15.1  | 32.22 | 9.77  | 24.82   |
| 19.9  | 20.1  | 32.32 | 9.35  | 24.96   |
| 24.9  | 25.0  | 32.41 | 9.08  | 25.08   |
| 29.8  | 30.0  | 32.91 | 8.54  | 25.56   |
| 34.9  | 35.1  | 33.13 | 8.15  | 25.79   |
| 39.8  | 40.1  | 33.18 | 8.12  | 25.83   |
| 44.8  | 45.1  | 33.19 | 8.13  | 25.84   |
| 49.7  | 49.9  | 33.25 | 8.10  | 25.89   |
| 59.6  | 60.0  | 33.36 | 7.93  | 25.99   |
| 69.5  | 69.9  | 33.45 | 7.74  | 26.10   |
| 79.6  | 80.1  | 33.54 | 7.54  | 26.19   |
| 90.4  | 90.9  | 33.64 | 7.28  | 26.31   |
| 100.4 | 101.1 | 33.83 | 6.84  | 26.52   |
| 103.2 | 103.8 | 33.87 | 6.73  | 26.57   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 13 CODE

LAT N 48 39.00

DATE 14/ 8/80

TIME (PST) 0710

TAPE: U00454 -381

LONG W 125 2.50

PASS NO. 37

STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.9   | 4.9   | 31.67 | 11.06 | 24.17   |        |
| 9.9   | 10.0  | 31.83 | 10.20 | 24.45   | 4.19   |
| 14.9  | 14.9  | 31.89 | 9.83  | 24.56   |        |
| 19.9  | 20.0  | 32.12 | 9.38  | 24.81   |        |
| 24.9  | 25.0  | 32.62 | 8.71  | 25.30   | 3.32   |
| 29.9  | 30.0  | 32.66 | 8.67  | 25.34   |        |
| 34.8  | 35.0  | 32.73 | 8.57  | 25.41   |        |
| 39.7  | 39.9  | 32.80 | 8.49  | 25.48   | 3.20   |
| 44.7  | 45.0  | 32.90 | 8.38  | 25.57   |        |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 24.40  
 DATE 22/ 9/80  
 TIME (PST) 1500

TAPE: U00454 -382  
 LONG W 126 15.42  
 PASS NO. 1  
 STN: A.P. 8

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.1   | 2.1   | 32.20 | 13.45 | 24.14   |        |
| 5.0   | 5.0   | 32.20 | 13.44 | 24.14   |        |
| 10.1  | 10.2  | 32.20 | 13.29 | 24.17   |        |
| 15.0  | 15.1  | 32.28 | 12.76 | 24.34   |        |
| 20.0  | 20.1  | 32.38 | 11.41 | 24.66   |        |
| 25.0  | 25.1  | 32.56 | 9.70  | 25.10   | 6.05   |
| 29.9  | 30.0  | 32.64 | 9.02  | 25.27   |        |
| 34.8  | 35.0  | 32.69 | 8.78  | 25.35   |        |
| 39.8  | 40.1  | 32.77 | 8.57  | 25.44   |        |
| 44.8  | 45.0  | 32.84 | 8.43  | 25.52   |        |
| 49.6  | 49.9  | 32.92 | 8.33  | 25.60   | 4.68   |
| 59.7  | 60.0  | 33.09 | 8.14  | 25.76   |        |
| 69.4  | 69.8  | 33.24 | 8.15  | 25.87   |        |
| 74.5  | 74.9  | 33.34 | 8.09  | 25.96   | 4.24   |
| 79.6  | 80.1  | 33.42 | 7.98  | 26.04   |        |
| 90.5  | 91.0  | 33.52 | 7.71  | 26.16   |        |
| 100.4 | 101.1 | 33.62 | 7.50  | 26.26   | 4.05   |
| 110.3 | 111.0 | 33.73 | 7.46  | 26.36   |        |
| 119.8 | 120.6 | 33.79 | 7.32  | 26.42   |        |
| 125.2 | 126.0 | 33.82 | 7.36  | 26.44   | 3.60   |
| 130.3 | 131.1 | 33.83 | 7.35  | 26.45   |        |
| 140.1 | 141.1 | 33.89 | 7.40  | 26.49   |        |
| 150.2 | 151.2 | 33.92 | 7.32  | 26.52   | 3.01   |
| 160.0 | 161.1 | 33.93 | 7.21  | 26.55   |        |
| 169.8 | 171.0 | 33.94 | 7.13  | 26.57   |        |
| 179.8 | 181.0 | 33.95 | 7.04  | 26.59   |        |
| 189.7 | 191.0 | 33.96 | 6.95  | 26.60   |        |
| 199.5 | 200.9 | 33.96 | 6.88  | 26.62   | 2.14   |
| 225.4 | 227.0 | 33.97 | 6.65  | 26.66   |        |
| 250.2 | 252.0 | 33.97 | 6.48  | 26.68   | 2.23   |
| 275.0 | 277.0 | 34.00 | 6.35  | 26.72   |        |
| 299.9 | 302.1 | 34.01 | 6.23  | 26.74   | 1.69   |
| 324.5 | 326.9 | 34.02 | 6.11  | 26.76   |        |
| 350.4 | 353.0 | 34.02 | 6.00  | 26.78   |        |
| 375.2 | 378.1 | 34.03 | 5.88  | 26.81   |        |
| 399.8 | 402.9 | 34.03 | 5.72  | 26.83   |        |
| 424.6 | 427.9 | 34.04 | 5.61  | 26.85   |        |
| 450.4 | 454.0 | 34.06 | 5.46  | 26.88   |        |
| 475.2 | 479.0 | 34.04 | 5.31  | 26.88   |        |
| 497.1 | 501.1 | 34.09 | 5.25  | 26.93   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 29.06

DATE 22/ 9/80

TIME (PST) 1631

TAPE: U00454 -383

LONG W 126 9.48

PASS NO. 3

STN: A.P. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.9   | 2.9   | 32.20 | 12.80 | 24.27   |
| 5.0   | 5.0   | 32.22 | 12.78 | 24.28   |
| 10.5  | 10.5  | 32.23 | 12.92 | 24.26   |
| 14.8  | 14.9  | 32.49 | 10.71 | 24.88   |
| 19.9  | 20.0  | 32.65 | 8.97  | 25.29   |
| 24.8  | 25.0  | 32.70 | 8.68  | 25.37   |
| 29.9  | 30.1  | 32.74 | 8.55  | 25.42   |
| 34.8  | 34.9  | 32.85 | 8.45  | 25.52   |
| 40.0  | 40.2  | 32.90 | 8.40  | 25.57   |
| 44.8  | 45.1  | 32.98 | 8.32  | 25.65   |
| 49.6  | 49.9  | 33.04 | 8.27  | 25.70   |
| 59.7  | 60.1  | 33.14 | 8.17  | 25.79   |
| 69.6  | 70.0  | 33.32 | 8.03  | 25.95   |
| 80.4  | 80.9  | 33.54 | 7.92  | 26.14   |
| 90.5  | 91.1  | 33.65 | 7.80  | 26.24   |
| 100.3 | 100.9 | 33.72 | 7.74  | 26.31   |
| 110.2 | 110.9 | 33.81 | 7.65  | 26.39   |
| 120.2 | 121.0 | 33.85 | 7.56  | 26.44   |
| 130.2 | 131.0 | 33.89 | 7.49  | 26.47   |
| 140.0 | 141.0 | 33.92 | 7.33  | 26.53   |
| 150.1 | 151.1 | 33.94 | 7.17  | 26.56   |
| 159.8 | 160.9 | 33.95 | 7.06  | 26.59   |
| 169.8 | 170.9 | 33.97 | 6.85  | 26.63   |
| 179.8 | 181.0 | 33.97 | 6.81  | 26.64   |
| 189.6 | 191.0 | 33.98 | 6.71  | 26.65   |
| 199.6 | 201.0 | 33.98 | 6.71  | 26.66   |
| 225.5 | 227.1 | 33.99 | 6.55  | 26.68   |
| 250.1 | 251.9 | 33.99 | 6.48  | 26.69   |
| 252.8 | 254.7 | 33.99 | 6.48  | 26.70   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 33.24  
 DATE 22/ 9/80  
 TIME (PST) 1725

TAPE: U00454 -384  
 LONG W 126 4.00  
 PASS NO. 5  
 STN: A.P. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.5   | 2.5   | 32.26 | 12.61 | 24.35   |        |
| 5.3   | 5.3   | 32.33 | 12.44 | 24.44   |        |
| 10.0  | 10.0  | 32.30 | 12.26 | 24.45   |        |
| 15.0  | 15.0  | 32.46 | 10.54 | 24.88   |        |
| 19.9  | 20.0  | 32.56 | 9.48  | 25.14   |        |
| 24.9  | 25.1  | 32.60 | 9.06  | 25.24   | 6.02   |
| 29.8  | 30.0  | 32.67 | 8.63  | 25.35   |        |
| 34.9  | 35.1  | 32.77 | 8.43  | 25.47   |        |
| 39.8  | 40.0  | 32.87 | 8.37  | 25.55   |        |
| 44.7  | 45.0  | 32.94 | 8.33  | 25.61   |        |
| 49.8  | 50.1  | 33.02 | 8.24  | 25.68   | 4.50   |
| 59.7  | 60.1  | 33.22 | 8.08  | 25.86   |        |
| 69.5  | 70.0  | 33.46 | 7.91  | 26.08   |        |
| 74.5  | 75.0  | 33.59 | 7.78  | 26.20   | 3.36   |
| 80.5  | 81.0  | 33.68 | 7.38  | 26.33   |        |
| 89.5  | 90.1  | 33.80 | 7.62  | 26.39   |        |
| 100.4 | 101.0 | 33.82 | 7.23  | 26.46   | 1.64   |
| 110.1 | 110.8 | 33.85 | 6.84  | 26.54   |        |
| 120.3 | 121.1 | 33.85 | 6.83  | 26.54   |        |
| 125.2 | 126.1 | 33.86 | 6.82  | 26.54   | 1.32   |
| 130.2 | 131.0 | 33.86 | 6.82  | 26.55   |        |
| 139.9 | 140.9 | 33.86 | 6.82  | 26.55   |        |
| 147.1 | 148.1 | 33.86 | 6.82  | 26.55   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 37.36

DATE 22/ 9/80

TIME (PST) 1825

TAPE: U00454 -385

LONG W 125 58.16

PASS NO. 7

STN: A.P. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.3   | 2.3   | 31.85 | 11.85 | 24.17   |
| 4.9   | 5.0   | 31.89 | 11.87 | 24.20   |
| 10.0  | 10.1  | 32.51 | 10.06 | 25.00   |
| 15.0  | 15.0  | 32.54 | 9.39  | 25.13   |
| 20.0  | 20.1  | 32.62 | 9.16  | 25.23   |
| 24.8  | 25.0  | 32.78 | 8.83  | 25.41   |
| 30.0  | 30.1  | 32.84 | 8.74  | 25.47   |
| 34.8  | 35.0  | 32.97 | 8.53  | 25.61   |
| 39.7  | 40.0  | 33.09 | 8.38  | 25.72   |
| 44.8  | 45.1  | 33.21 | 8.17  | 25.85   |
| 49.6  | 49.8  | 33.22 | 8.14  | 25.86   |
| 59.6  | 60.0  | 33.32 | 8.01  | 25.95   |
| 69.6  | 70.0  | 33.39 | 7.92  | 26.03   |
| 80.4  | 80.9  | 33.45 | 7.74  | 26.10   |
| 90.4  | 91.0  | 33.61 | 7.45  | 26.26   |
| 100.4 | 101.0 | 33.75 | 7.12  | 26.42   |
| 105.3 | 106.0 | 33.75 | 7.09  | 26.43   |

CRUISE NO: 14 CODE

LAT N 48 41.41

DATE 22/ 9/80

TIME (PST) 2014

TAPE: U00454 -386

LONG W 125 52.38

PASS NO. 9

STN: A.P. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.2   | 3.3   | 31.32 | 10.88 | 23.93   |        |
| 5.0   | 5.1   | 31.38 | 10.89 | 23.98   |        |
| 9.9   | 10.0  | 31.36 | 10.93 | 23.96   |        |
| 14.9  | 14.9  | 31.84 | 10.13 | 24.46   |        |
| 19.9  | 20.0  | 32.06 | 10.01 | 24.66   |        |
| 24.9  | 25.0  | 32.29 | 9.48  | 24.93   | 3.70   |
| 29.9  | 30.1  | 32.41 | 9.23  | 25.06   |        |
| 35.0  | 35.1  | 32.80 | 9.07  | 25.38   |        |
| 39.8  | 40.0  | 32.85 | 8.86  | 25.45   |        |
| 44.8  | 45.0  | 32.88 | 8.71  | 25.51   |        |
| 49.8  | 50.1  | 32.99 | 8.52  | 25.62   | 3.03   |
| 59.7  | 60.0  | 33.11 | 8.32  | 25.74   |        |
| 59.7  | 60.0  | 33.11 | 8.32  | 25.74   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 45.39

DATE 22/ 9/80

TIME (PST) 2107

TAPE: U00454 -387

LONG W 125 47.05

PASS NO. 11

STN: A.P. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.2   | 2.2   | 31.68 | 11.69 | 24.07   |
| 4.9   | 5.0   | 31.57 | 12.00 | 23.93   |
| 9.9   | 9.9   | 31.85 | 11.30 | 24.28   |
| 14.7  | 14.8  | 31.99 | 10.47 | 24.53   |
| 19.8  | 19.9  | 32.02 | 10.27 | 24.58   |
| 24.9  | 25.0  | 32.10 | 9.92  | 24.71   |
| 29.7  | 29.9  | 32.24 | 9.53  | 24.87   |
| 34.9  | 35.0  | 32.28 | 9.48  | 24.92   |
| 39.7  | 40.0  | 32.33 | 9.39  | 24.97   |
| 44.7  | 44.9  | 32.39 | 9.30  | 25.03   |
| 49.8  | 50.0  | 32.52 | 9.12  | 25.16   |
| 59.8  | 60.1  | 32.58 | 9.04  | 25.22   |
| 62.5  | 62.8  | 32.61 | 8.99  | 25.25   |

CRUISE NO: 14 CODE

LAT N 48 49.32

DATE 22/ 9/80

TIME (PST) 2147

TAPE: U00454 -388

LONG W 125 41.36

PASS NO. 13

STN: A.P. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.1   | 2.1   | 31.53 | 12.29 | 23.85   |        |
| 5.1   | 5.1   | 31.54 | 12.34 | 23.84   |        |
| 9.9   | 10.0  | 31.54 | 12.34 | 23.84   |        |
| 14.9  | 15.0  | 31.65 | 12.10 | 23.97   |        |
| 19.9  | 20.0  | 31.94 | 10.69 | 24.45   |        |
| 25.0  | 25.1  | 32.08 | 10.01 | 24.67   | 3.85   |
| 29.9  | 30.0  | 32.13 | 9.86  | 24.74   |        |
| 34.8  | 34.9  | 32.20 | 9.69  | 24.82   |        |
| 39.9  | 40.1  | 32.33 | 9.47  | 24.95   |        |
| 44.6  | 44.8  | 32.36 | 9.37  | 25.00   | 3.31   |
| 50.0  | 50.2  | 32.37 | 9.35  | 25.01   |        |
| 50.0  | 50.2  | 32.37 | 9.35  | 25.01   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 53.19

DATE 22/ 9/80

TIME (PST) 2231

TAPE: U00454 -389

LONG W 125 36.12

PASS NO. 15

STN: A.P. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.4   | 2.4   | 31.54 | 11.87 | 23.93   |
| 5.0   | 5.0   | 31.54 | 11.87 | 23.93   |
| 10.0  | 10.0  | 31.53 | 11.92 | 23.91   |
| 15.1  | 15.1  | 31.58 | 11.45 | 24.04   |
| 20.0  | 20.1  | 31.90 | 10.63 | 24.43   |
| 24.8  | 24.9  | 32.04 | 10.21 | 24.61   |
| 29.9  | 30.0  | 32.14 | 9.97  | 24.73   |
| 34.8  | 35.0  | 32.34 | 9.38  | 24.98   |
| 39.8  | 40.0  | 32.43 | 9.22  | 25.07   |
| 44.8  | 45.0  | 32.47 | 9.17  | 25.11   |
| 49.8  | 50.1  | 32.50 | 9.10  | 25.15   |
| 57.4  | 57.7  | 32.58 | 9.00  | 25.22   |

CRUISE NO: 14 CODE

LAT N 48 48.20

DATE 22/ 9/80

TIME (PST) 2337

TAPE: U00454 -390

LONG W 125 23.70

PASS NO. 17

STN: B.S. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.6   | 2.6   | 31.39 | 10.73 | 24.01   |
| 5.0   | 5.0   | 31.39 | 10.73 | 24.01   |
| 10.0  | 10.0  | 31.39 | 10.73 | 24.01   |
| 14.9  | 15.0  | 31.44 | 10.68 | 24.06   |
| 19.9  | 19.9  | 31.56 | 10.69 | 24.16   |
| 25.0  | 25.1  | 31.83 | 10.44 | 24.40   |
| 29.7  | 29.8  | 32.10 | 10.82 | 24.55   |
| 34.8  | 35.0  | 32.48 | 11.29 | 24.77   |
| 39.8  | 40.0  | 32.62 | 10.95 | 24.93   |
| 44.9  | 45.1  | 32.66 | 10.76 | 25.00   |
| 49.7  | 50.0  | 32.66 | 10.29 | 25.08   |
| 59.6  | 59.9  | 32.81 | 9.95  | 25.25   |
| 69.6  | 70.0  | 32.96 | 8.63  | 25.58   |
| 80.5  | 80.9  | 33.10 | 8.43  | 25.72   |
| 81.1  | 81.6  | 33.13 | 8.39  | 25.75   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 44.40  
 DATE 22/ 9/80  
 TIME (PST) 2317

TAPE: U00454 -391  
 LONG W 125 29.10  
 PASS NO. 19  
 STN: B.S. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.4   | 3.4   | 32.37 | 11.79 | 24.59   |        |
| 4.9   | 4.9   | 32.38 | 11.79 | 24.59   |        |
| 9.9   | 10.0  | 32.38 | 11.78 | 24.60   |        |
| 14.9  | 15.0  | 32.38 | 11.75 | 24.60   |        |
| 19.9  | 20.0  | 32.38 | 11.70 | 24.61   |        |
| 24.8  | 24.9  | 32.62 | 10.76 | 24.97   | 5.04   |
| 29.8  | 29.9  | 32.72 | 10.34 | 25.11   |        |
| 34.8  | 35.0  | 32.74 | 10.10 | 25.17   |        |
| 39.7  | 39.9  | 32.84 | 9.61  | 25.33   |        |
| 44.8  | 45.0  | 32.97 | 8.94  | 25.54   |        |
| 49.7  | 50.0  | 33.04 | 8.72  | 25.63   | 3.36   |
| 59.7  | 60.0  | 33.14 | 8.44  | 25.75   |        |
| 69.6  | 70.0  | 33.28 | 8.20  | 25.89   |        |
| 75.5  | 75.9  | 33.33 | 8.08  | 25.95   | 2.78   |
| 80.4  | 80.8  | 33.42 | 7.90  | 26.05   |        |
| 90.5  | 91.0  | 33.46 | 7.77  | 26.10   |        |
| 100.5 | 101.1 | 33.51 | 7.66  | 26.16   | 2.51   |
| 110.2 | 110.9 | 33.53 | 7.63  | 26.18   | 2.71   |
| 120.2 | 121.0 | 33.56 | 7.57  | 26.21   |        |
| 121.2 | 122.0 | 33.56 | 7.57  | 26.21   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 40.40

DATE 23/ 9/80

TIME (PST) 0010

TAPE: U00454 -392

LONG W 125 34.50

PASS NO. 21

STN: 8.S. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.2   | 3.2   | 32.35 | 12.35 | 24.47   |
| 4.9   | 4.9   | 32.35 | 12.34 | 24.47   |
| 9.9   | 10.0  | 32.39 | 12.35 | 24.50   |
| 15.0  | 15.0  | 32.48 | 11.16 | 24.79   |
| 20.0  | 20.1  | 32.65 | 10.30 | 25.07   |
| 25.0  | 25.2  | 32.82 | 9.63  | 25.31   |
| 29.9  | 30.1  | 32.97 | 9.00  | 25.53   |
| 34.8  | 35.0  | 33.04 | 8.78  | 25.62   |
| 39.7  | 39.9  | 33.14 | 8.47  | 25.75   |
| 44.8  | 45.1  | 33.24 | 8.26  | 25.85   |
| 49.7  | 50.0  | 33.28 | 8.17  | 25.90   |
| 59.5  | 59.9  | 33.31 | 8.09  | 25.93   |
| 69.4  | 69.9  | 33.39 | 7.86  | 26.03   |
| 79.5  | 80.0  | 33.41 | 7.81  | 26.06   |
| 90.5  | 91.1  | 33.46 | 7.72  | 26.11   |
| 100.4 | 101.1 | 33.50 | 7.64  | 26.15   |
| 110.4 | 111.1 | 33.58 | 7.50  | 26.23   |
| 120.3 | 121.1 | 33.61 | 7.45  | 26.26   |
| 130.2 | 131.1 | 33.63 | 7.42  | 26.28   |
| 140.1 | 141.0 | 33.63 | 7.40  | 26.29   |
| 150.0 | 151.0 | 33.64 | 7.39  | 26.29   |
| 159.8 | 160.9 | 33.64 | 7.39  | 26.30   |
| 169.9 | 171.1 | 33.64 | 7.39  | 26.30   |
| 179.8 | 181.0 | 33.67 | 7.34  | 26.33   |
| 188.8 | 190.1 | 33.71 | 7.26  | 26.37   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 36.40

DATE 23/ 9/80

TIME (PST) 0050

TAPE: U00454 -393

LONG W 125 40.10

PASS NO. 23

STN: B.S. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.1   | 3.1   | 32.30 | 12.04 | 24.49   |        |
| 5.1   | 5.2   | 32.30 | 12.03 | 24.49   |        |
| 10.3  | 10.4  | 32.30 | 12.05 | 24.48   |        |
| 14.9  | 15.0  | 32.44 | 11.56 | 24.69   |        |
| 20.0  | 20.1  | 32.90 | 9.08  | 25.46   |        |
| 24.9  | 25.0  | 32.97 | 8.79  | 25.56   | 3.48   |
| 29.9  | 30.0  | 33.08 | 8.47  | 25.70   |        |
| 34.9  | 35.1  | 33.14 | 8.36  | 25.76   |        |
| 39.8  | 40.0  | 33.23 | 8.14  | 25.87   |        |
| 44.8  | 45.0  | 33.24 | 8.11  | 25.88   |        |
| 49.7  | 50.0  | 33.32 | 7.93  | 25.96   | 2.36   |
| 54.6  | 54.9  | 33.35 | 7.86  | 26.00   |        |

CRUISE NO: 14 CODE

LAT N 48 32.20

DATE 23/ 9/80

TIME (PST) 0148

TAPE: U00454 -394

LONG W 125 45.70

PASS NO. 25

STN: B.S. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.4   | 4.4   | 32.32 | 11.31 | 24.64   |
| 5.0   | 5.0   | 32.34 | 11.29 | 24.66   |
| 9.9   | 10.0  | 32.88 | 9.44  | 25.39   |
| 15.0  | 15.1  | 32.94 | 9.05  | 25.50   |
| 19.8  | 19.9  | 33.11 | 8.40  | 25.73   |
| 25.0  | 25.2  | 33.15 | 8.29  | 25.78   |
| 29.8  | 30.0  | 33.28 | 8.01  | 25.92   |
| 35.0  | 35.3  | 33.30 | 7.95  | 25.95   |
| 39.8  | 40.1  | 33.31 | 7.93  | 25.96   |
| 44.5  | 44.8  | 33.32 | 7.92  | 25.97   |
| 49.8  | 50.1  | 33.33 | 7.91  | 25.98   |
| 59.7  | 60.0  | 33.43 | 7.76  | 26.08   |
| 70.4  | 70.8  | 33.49 | 7.68  | 26.13   |
| 79.6  | 80.1  | 33.49 | 7.67  | 26.14   |
| 89.5  | 90.1  | 33.61 | 7.49  | 26.26   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 28.00  
 DATE 23/ 9/80  
 TIME (PST) 0234

TAPE: U00454 -395  
 LONG W 125 51.50  
 PASS NO. 27  
 STN: B.S. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.4   | 2.4   | 32.02 | 11.21 | 24.42   |        |
| 4.9   | 5.0   | 32.18 | 10.88 | 24.60   |        |
| 9.9   | 10.0  | 32.16 | 10.90 | 24.58   |        |
| 14.8  | 14.9  | 32.47 | 10.36 | 24.92   |        |
| 20.0  | 20.1  | 32.61 | 9.96  | 25.09   |        |
| 24.8  | 24.9  | 32.76 | 9.39  | 25.31   | 3.56   |
| 29.8  | 30.0  | 32.86 | 9.07  | 25.43   |        |
| 34.8  | 34.9  | 32.97 | 8.70  | 25.58   |        |
| 39.9  | 40.1  | 33.16 | 8.38  | 25.77   |        |
| 44.9  | 45.2  | 33.22 | 8.28  | 25.84   |        |
| 49.8  | 50.1  | 33.35 | 7.95  | 25.99   | 2.68   |
| 59.6  | 60.0  | 33.47 | 7.73  | 26.12   |        |
| 70.4  | 70.9  | 33.61 | 7.42  | 26.27   |        |
| 74.6  | 75.1  | 33.66 | 7.33  | 26.32   | 2.05   |
| 80.4  | 80.9  | 33.69 | 7.25  | 26.35   |        |
| 90.4  | 91.0  | 33.74 | 7.12  | 26.42   |        |
| 100.4 | 101.1 | 33.79 | 6.99  | 26.47   | 1.64   |
| 110.1 | 110.9 | 33.81 | 6.93  | 26.49   |        |
| 115.3 | 116.0 | 33.83 | 6.90  | 26.51   | 1.53   |
| 120.1 | 120.9 | 33.85 | 6.84  | 26.54   |        |
| 122.2 | 123.0 | 33.87 | 6.79  | 26.56   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 23.80

DATE 23/ 9/80

TIME (PST) 0325

TAPE: U00454 -396

LONG W 125 57.40

PASS NO. 29

STN: B.S. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.0   | 3.0   | 32.20 | 12.41 | 24.34   |
| 4.8   | 4.8   | 32.26 | 12.38 | 24.40   |
| 9.7   | 9.7   | 32.28 | 12.12 | 24.46   |
| 15.0  | 15.0  | 32.36 | 11.25 | 24.68   |
| 20.0  | 20.1  | 32.46 | 9.71  | 25.02   |
| 24.9  | 25.1  | 32.61 | 8.96  | 25.26   |
| 29.8  | 29.9  | 32.72 | 8.61  | 25.40   |
| 34.8  | 35.0  | 32.77 | 8.55  | 25.44   |
| 39.7  | 39.9  | 32.86 | 8.44  | 25.53   |
| 44.8  | 45.0  | 33.00 | 8.34  | 25.65   |
| 49.7  | 50.0  | 33.06 | 8.30  | 25.71   |
| 59.7  | 60.0  | 33.27 | 8.11  | 25.90   |
| 69.6  | 70.0  | 33.36 | 8.02  | 25.99   |
| 79.6  | 80.1  | 33.58 | 7.82  | 26.18   |
| 90.5  | 91.0  | 33.63 | 7.78  | 26.23   |
| 100.4 | 101.0 | 33.74 | 7.67  | 26.34   |
| 110.2 | 110.9 | 33.83 | 7.59  | 26.42   |
| 120.1 | 120.9 | 33.86 | 7.54  | 26.45   |
| 130.2 | 131.0 | 33.88 | 7.48  | 26.47   |
| 140.0 | 141.0 | 33.90 | 7.40  | 26.50   |
| 150.1 | 151.1 | 33.91 | 7.30  | 26.52   |
| 159.9 | 161.0 | 33.93 | 7.16  | 26.56   |
| 169.8 | 171.0 | 33.94 | 7.08  | 26.58   |
| 179.7 | 181.0 | 33.95 | 7.01  | 26.60   |
| 189.7 | 191.0 | 33.95 | 6.98  | 26.60   |
| 199.6 | 201.0 | 33.96 | 6.97  | 26.61   |
| 224.5 | 226.1 | 33.96 | 6.94  | 26.61   |
| 250.2 | 252.0 | 33.96 | 6.92  | 26.61   |
| 275.1 | 277.1 | 33.97 | 6.88  | 26.62   |
| 299.8 | 302.0 | 33.97 | 6.83  | 26.64   |
| 324.6 | 327.1 | 33.97 | 6.80  | 26.64   |
| 344.4 | 347.0 | 33.97 | 6.77  | 26.64   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 19.20  
 DATE 23/ 9/80  
 TIME (PST) 0420

TAPE: U00454 -397  
 LONG W 126 2.50  
 PASS NO. 31  
 STN: B.S. 8

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.4   | 2.4   | 32.20 | 13.27 | 24.17   |        |
| 5.3   | 5.3   | 32.21 | 13.24 | 24.19   |        |
| 9.9   | 10.0  | 32.21 | 13.24 | 24.18   |        |
| 14.9  | 15.0  | 32.21 | 13.23 | 24.19   |        |
| 19.8  | 19.9  | 32.21 | 13.23 | 24.19   |        |
| 24.9  | 25.0  | 32.54 | 10.32 | 24.98   | 6.28   |
| 29.7  | 29.8  | 32.60 | 9.53  | 25.16   |        |
| 34.8  | 35.0  | 32.63 | 8.94  | 25.27   |        |
| 39.7  | 39.9  | 32.66 | 8.65  | 25.34   |        |
| 44.7  | 44.9  | 32.70 | 8.55  | 25.39   |        |
| 49.7  | 50.0  | 32.82 | 8.39  | 25.51   | 5.53   |
| 59.7  | 60.0  | 33.10 | 8.10  | 25.77   |        |
| 69.6  | 70.0  | 33.38 | 7.73  | 26.04   |        |
| 74.7  | 75.1  | 33.52 | 7.75  | 26.15   | 4.27   |
| 80.5  | 81.0  | 33.62 | 7.82  | 26.22   |        |
| 90.4  | 91.0  | 33.70 | 7.74  | 26.29   |        |
| 100.5 | 101.1 | 33.77 | 7.63  | 26.36   | 3.11   |
| 110.2 | 110.9 | 33.83 | 7.66  | 26.41   |        |
| 120.1 | 120.9 | 33.87 | 7.56  | 26.45   |        |
| 125.1 | 125.9 | 33.87 | 7.53  | 26.46   | 2.86   |
| 130.1 | 131.0 | 33.89 | 7.48  | 26.48   |        |
| 140.1 | 141.0 | 33.91 | 7.41  | 26.50   |        |
| 150.0 | 151.0 | 33.94 | 7.29  | 26.54   | 2.54   |
| 159.9 | 160.9 | 33.94 | 7.23  | 26.55   |        |
| 169.8 | 171.0 | 33.95 | 7.13  | 26.58   |        |
| 179.8 | 181.0 | 33.95 | 7.09  | 26.58   |        |
| 189.5 | 190.9 | 33.95 | 7.02  | 26.60   |        |
| 199.7 | 201.1 | 33.97 | 6.92  | 26.62   | 2.34   |
| 225.5 | 227.1 | 33.98 | 6.75  | 26.65   |        |
| 250.2 | 252.0 | 33.99 | 6.66  | 26.67   | 2.12   |
| 275.0 | 277.0 | 33.99 | 6.56  | 26.69   |        |
| 299.8 | 302.0 | 34.00 | 6.52  | 26.69   | 1.99   |
| 324.6 | 327.0 | 34.00 | 6.43  | 26.71   |        |
| 350.3 | 352.9 | 34.01 | 6.32  | 26.73   |        |
| 375.2 | 378.1 | 34.01 | 6.22  | 26.74   |        |
| 399.9 | 403.0 | 34.02 | 6.13  | 26.77   |        |
| 424.6 | 427.9 | 34.03 | 6.03  | 26.78   |        |
| 450.4 | 453.9 | 34.03 | 5.94  | 26.80   |        |
| 465.3 | 469.0 | 34.04 | 5.87  | 26.81   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 8.50  
 DATE 23/ 9/80  
 TIME (PST) 0635

TAPE: U00454 -398  
 LONG W 126 .00  
 PASS NO. 33  
 STN: 111

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.0   | 2.0   | 32.33 | 13.90 | 24.15   |        |
| 5.1   | 5.1   | 32.33 | 13.90 | 24.15   |        |
| 10.0  | 10.0  | 32.33 | 13.90 | 24.15   |        |
| 15.0  | 15.0  | 32.33 | 13.89 | 24.15   |        |
| 19.8  | 19.9  | 32.34 | 13.83 | 24.17   |        |
| 24.9  | 25.1  | 32.45 | 13.48 | 24.33   | 6.84   |
| 29.8  | 30.0  | 32.62 | 11.48 | 24.84   |        |
| 34.9  | 35.1  | 32.61 | 9.74  | 25.14   |        |
| 39.7  | 39.9  | 32.63 | 9.47  | 25.19   |        |
| 44.7  | 44.9  | 32.65 | 9.15  | 25.26   |        |
| 49.9  | 50.2  | 32.65 | 8.97  | 25.29   | 6.03   |
| 59.8  | 60.1  | 32.77 | 8.38  | 25.47   |        |
| 69.6  | 70.0  | 32.92 | 8.14  | 25.62   |        |
| 74.6  | 75.0  | 33.02 | 8.06  | 25.71   | 5.42   |
| 80.5  | 81.0  | 33.16 | 7.98  | 25.83   |        |
| 90.4  | 90.9  | 33.41 | 7.68  | 26.08   |        |
| 100.3 | 100.9 | 33.54 | 7.53  | 26.20   | 4.25   |
| 110.4 | 111.1 | 33.59 | 7.48  | 26.25   |        |
| 120.2 | 120.9 | 33.70 | 7.41  | 26.34   |        |
| 125.3 | 126.1 | 33.73 | 7.41  | 26.37   | 3.81   |
| 130.3 | 131.1 | 33.77 | 7.30  | 26.41   |        |
| 140.1 | 141.0 | 33.83 | 7.30  | 26.46   |        |
| 150.0 | 151.0 | 33.85 | 7.26  | 26.48   | 3.44   |
| 160.0 | 161.0 | 33.87 | 7.22  | 26.50   |        |
| 169.8 | 170.9 | 33.88 | 7.20  | 26.51   |        |
| 179.9 | 181.1 | 33.91 | 7.11  | 26.54   |        |
| 189.7 | 191.0 | 33.92 | 7.04  | 26.56   |        |
| 199.6 | 201.0 | 33.94 | 6.95  | 26.59   | 3.16   |
| 224.6 | 226.1 | 33.95 | 6.77  | 26.63   |        |
| 250.3 | 252.1 | 33.98 | 6.68  | 26.66   | 2.21   |
| 275.0 | 277.0 | 33.98 | 6.48  | 26.69   |        |
| 299.8 | 302.0 | 33.97 | 6.11  | 26.73   | 2.47   |
| 324.6 | 327.0 | 33.99 | 6.04  | 26.75   |        |
| 350.5 | 353.1 | 34.01 | 5.99  | 26.77   |        |
| 375.0 | 377.8 | 34.03 | 5.91  | 26.80   |        |
| 400.0 | 403.1 | 34.03 | 5.78  | 26.82   |        |
| 424.7 | 428.0 | 34.05 | 5.71  | 26.84   |        |
| 450.5 | 454.0 | 34.05 | 5.64  | 26.85   |        |
| 475.2 | 479.0 | 34.07 | 5.56  | 26.87   |        |
| 500.1 | 504.1 | 34.08 | 5.42  | 26.90   | .99    |
| 504.8 | 508.9 | 34.08 | 5.39  | 26.90   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 10.60

DATE 23/ 9/80

TIME (PST) 0752

TAPE: U00454 -399

LONG W 125 56.20

PASS NO. 35

STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.9   | 1.9   | 32.28 | 13.94 | 24.10   |
| 4.9   | 4.9   | 32.31 | 13.94 | 24.13   |
| 10.0  | 10.0  | 32.32 | 13.94 | 24.13   |
| 14.9  | 15.0  | 32.32 | 13.94 | 24.13   |
| 19.9  | 20.0  | 32.32 | 13.93 | 24.13   |
| 24.9  | 25.0  | 32.43 | 12.25 | 24.55   |
| 30.4  | 30.6  | 32.64 | 9.66  | 25.16   |
| 34.8  | 35.0  | 32.62 | 9.44  | 25.19   |
| 39.8  | 40.0  | 32.63 | 9.25  | 25.23   |
| 44.7  | 44.9  | 32.63 | 8.86  | 25.29   |
| 49.8  | 50.1  | 32.66 | 8.46  | 25.37   |
| 59.6  | 59.9  | 32.83 | 8.29  | 25.53   |
| 69.5  | 69.9  | 33.07 | 8.10  | 25.74   |
| 80.2  | 80.6  | 33.38 | 7.94  | 26.01   |
| 90.3  | 90.9  | 33.51 | 7.89  | 26.12   |
| 100.3 | 100.9 | 33.64 | 7.63  | 26.26   |
| 110.2 | 110.9 | 33.80 | 7.63  | 26.38   |
| 120.2 | 121.0 | 33.87 | 7.46  | 26.46   |
| 130.0 | 130.8 | 33.91 | 7.21  | 26.53   |
| 140.1 | 141.0 | 33.92 | 7.21  | 26.54   |
| 150.1 | 151.1 | 33.92 | 7.19  | 26.54   |
| 159.8 | 160.8 | 33.95 | 7.04  | 26.59   |
| 169.8 | 170.9 | 33.96 | 6.94  | 26.61   |
| 179.9 | 181.1 | 33.96 | 6.87  | 26.62   |
| 189.6 | 190.9 | 33.96 | 6.87  | 26.62   |
| 200.4 | 201.8 | 33.96 | 6.84  | 26.62   |
| 224.6 | 226.1 | 33.97 | 6.80  | 26.64   |
| 250.3 | 252.1 | 33.99 | 6.70  | 26.66   |
| 275.0 | 277.0 | 33.98 | 6.66  | 26.66   |
| 300.5 | 302.7 | 33.99 | 6.60  | 26.68   |
| 324.6 | 327.0 | 33.99 | 6.58  | 26.68   |
| 350.2 | 352.8 | 34.00 | 6.50  | 26.70   |
| 375.8 | 378.7 | 34.00 | 6.41  | 26.71   |
| 399.8 | 402.9 | 34.02 | 6.19  | 26.76   |
| 424.6 | 427.9 | 34.02 | 6.09  | 26.77   |
| 450.3 | 453.9 | 34.02 | 5.97  | 26.78   |
| 475.3 | 479.1 | 34.05 | 5.77  | 26.83   |
| 499.9 | 503.9 | 34.06 | 5.59  | 26.87   |
| 527.7 | 532.0 | 34.07 | 5.45  | 26.89   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 12.90  
 DATE 23/ 9/80  
 TIME (PST) 0830

TAPE: U00454 -400  
 LONG W 125 52.00  
 PASS NO. 37  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.0   | 2.0   | 32.27 | 13.75 | 24.13   |        |
| 5.0   | 5.0   | 32.27 | 13.75 | 24.13   |        |
| 10.1  | 10.1  | 32.27 | 13.75 | 24.14   |        |
| 14.9  | 15.0  | 32.28 | 13.75 | 24.14   |        |
| 20.0  | 20.1  | 32.31 | 13.62 | 24.19   |        |
| 24.8  | 24.9  | 32.54 | 10.99 | 24.86   | 6.23   |
| 29.8  | 29.9  | 32.61 | 9.76  | 25.13   |        |
| 34.8  | 34.9  | 32.62 | 8.96  | 25.27   |        |
| 39.8  | 40.0  | 32.64 | 8.57  | 25.34   |        |
| 44.6  | 44.8  | 32.69 | 8.43  | 25.40   |        |
| 49.7  | 50.0  | 32.72 | 8.38  | 25.43   | 5.34   |
| 59.8  | 60.1  | 33.04 | 8.22  | 25.71   |        |
| 69.8  | 70.2  | 33.23 | 7.99  | 25.89   |        |
| 74.6  | 75.0  | 33.26 | 7.98  | 25.91   | 4.47   |
| 80.5  | 80.9  | 33.42 | 7.91  | 26.05   |        |
| 90.3  | 90.8  | 33.53 | 7.89  | 26.13   |        |
| 100.2 | 100.8 | 33.56 | 7.57  | 26.20   | 4.12   |
| 110.3 | 111.0 | 33.63 | 7.46  | 26.28   |        |
| 120.2 | 121.0 | 33.68 | 7.44  | 26.32   |        |
| 125.2 | 126.0 | 33.70 | 7.42  | 26.34   | 3.71   |
| 130.1 | 131.0 | 33.73 | 7.42  | 26.36   |        |
| 140.0 | 140.9 | 33.80 | 7.37  | 26.42   |        |
| 150.0 | 150.9 | 33.83 | 7.30  | 26.45   | 2.80   |
| 160.5 | 161.6 | 33.85 | 7.33  | 26.47   |        |
| 169.8 | 170.9 | 33.88 | 7.39  | 26.48   |        |
| 179.8 | 181.0 | 33.90 | 7.30  | 26.51   |        |
| 189.8 | 191.1 | 33.92 | 7.20  | 26.54   |        |
| 199.8 | 201.1 | 33.93 | 7.14  | 26.56   | 2.21   |
| 224.6 | 226.1 | 33.97 | 6.92  | 26.62   |        |
| 250.3 | 252.1 | 33.97 | 6.85  | 26.63   | 2.04   |
| 275.1 | 277.0 | 33.98 | 6.74  | 26.65   |        |
| 299.9 | 302.1 | 33.99 | 6.60  | 26.68   | 1.94   |
| 325.4 | 327.8 | 33.98 | 6.53  | 26.68   |        |
| 350.3 | 353.0 | 33.99 | 6.46  | 26.70   |        |
| 375.1 | 377.9 | 34.01 | 6.35  | 26.73   |        |
| 399.9 | 402.9 | 34.01 | 6.28  | 26.74   |        |
| 424.7 | 428.0 | 34.02 | 6.11  | 26.76   |        |
| 450.4 | 453.9 | 34.03 | 5.95  | 26.80   |        |
| 475.3 | 479.1 | 34.06 | 5.67  | 26.85   |        |
| 500.2 | 504.2 | 34.07 | 5.46  | 26.89   | 1.46   |
| 500.2 | 504.2 | 34.07 | 5.46  | 26.89   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 15.10

DATE 23/ 9/80

TIME (PST) 0921

TAPE: U00454 -401

LONG W 125 47.70

PASS NO. 39

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 1.9   | 1.9   | 32.24 | 13.60 | 24.14   |
| 4.9   | 5.0   | 32.24 | 13.59 | 24.14   |
| 10.0  | 10.0  | 32.25 | 13.58 | 24.15   |
| 14.8  | 14.9  | 32.25 | 13.58 | 24.15   |
| 19.7  | 19.8  | 32.39 | 12.50 | 24.47   |
| 24.9  | 25.0  | 32.61 | 9.54  | 25.16   |
| 29.9  | 30.1  | 32.60 | 9.19  | 25.21   |
| 34.8  | 35.0  | 32.63 | 8.72  | 25.31   |
| 39.7  | 39.9  | 32.66 | 8.54  | 25.36   |
| 44.7  | 45.0  | 32.77 | 8.47  | 25.46   |
| 49.7  | 50.0  | 32.82 | 8.47  | 25.49   |
| 59.7  | 60.0  | 32.90 | 8.42  | 25.57   |
| 69.7  | 70.1  | 33.32 | 7.81  | 25.98   |
| 79.6  | 80.1  | 33.41 | 7.70  | 26.07   |
| 89.5  | 90.1  | 33.57 | 7.83  | 26.18   |
| 100.4 | 101.0 | 33.67 | 7.80  | 26.26   |
| 110.5 | 111.2 | 33.72 | 7.69  | 26.32   |
| 120.2 | 121.0 | 33.75 | 7.59  | 26.35   |
| 129.3 | 130.1 | 33.77 | 7.57  | 26.37   |
| 139.4 | 140.3 | 33.90 | 7.33  | 26.50   |
| 150.1 | 151.0 | 33.92 | 7.29  | 26.53   |
| 159.9 | 160.9 | 33.93 | 7.19  | 26.55   |
| 169.7 | 170.9 | 33.93 | 7.13  | 26.56   |
| 179.8 | 181.0 | 33.95 | 7.07  | 26.58   |
| 189.7 | 191.0 | 33.94 | 7.05  | 26.58   |
| 200.5 | 201.9 | 33.96 | 6.99  | 26.61   |
| 223.3 | 224.9 | 33.96 | 6.95  | 26.61   |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 18.60  
 DATE 23/ 9/80  
 TIME (PST) 1004

TAPE: U00454 -402  
 LONG W 125 41.20  
 PASS NO. 41  
 SYN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.7   | 2.7   | 32.22 | 13.38 | 24.17   |        |
| 5.0   | 5.1   | 32.22 | 13.37 | 24.17   |        |
| 9.9   | 9.9   | 32.23 | 13.35 | 24.18   | 3.27   |
| 15.1  | 15.1  | 32.24 | 13.27 | 24.21   |        |
| 19.9  | 20.0  | 32.42 | 11.36 | 24.71   |        |
| 24.9  | 25.1  | 32.54 | 9.91  | 25.05   | 5.71   |
| 30.0  | 30.1  | 32.60 | 9.20  | 25.21   |        |
| 34.8  | 35.0  | 32.73 | 8.64  | 25.40   |        |
| 39.8  | 40.0  | 32.83 | 8.47  | 25.50   |        |
| 44.6  | 44.9  | 32.96 | 8.36  | 25.62   |        |
| 49.8  | 50.1  | 33.10 | 8.21  | 25.75   | 4.05   |
| 59.6  | 59.9  | 33.35 | 7.94  | 25.99   |        |
| 69.6  | 70.0  | 33.50 | 7.88  | 26.11   |        |
| 75.5  | 76.0  | 33.61 | 7.87  | 26.20   | 3.70   |
| 79.5  | 80.0  | 33.65 | 7.86  | 26.24   |        |
| 90.4  | 90.9  | 33.77 | 7.68  | 26.36   |        |
| 100.2 | 100.8 | 33.83 | 7.63  | 26.41   | 2.92   |
| 110.2 | 110.9 | 33.87 | 7.55  | 26.45   |        |
| 120.2 | 121.0 | 33.90 | 7.40  | 26.50   |        |
| 125.1 | 125.9 | 33.91 | 7.34  | 26.51   | 2.40   |
| 130.3 | 131.1 | 33.92 | 7.24  | 26.54   |        |
| 139.0 | 139.9 | 33.92 | 7.23  | 26.54   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 22.00

DATE 23/ 9/80

TIME (PST) 1058

TAPE: U00454 -403

LONG W 125 34.70

PASS NO. 43

STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.0   | 3.0   | 32.23 | 11.22 | 24.58   |
| 5.0   | 5.0   | 32.26 | 11.24 | 24.60   |
| 10.0  | 10.0  | 32.40 | 10.78 | 24.79   |
| 15.0  | 15.0  | 32.57 | 10.31 | 25.00   |
| 19.9  | 20.0  | 32.68 | 9.71  | 25.19   |
| 24.8  | 24.9  | 32.87 | 9.17  | 25.43   |
| 29.9  | 30.0  | 33.00 | 8.83  | 25.58   |
| 34.9  | 35.1  | 33.23 | 8.46  | 25.82   |
| 39.7  | 40.0  | 33.37 | 8.11  | 25.98   |
| 44.7  | 45.0  | 33.38 | 8.09  | 25.99   |
| 49.9  | 50.2  | 33.49 | 7.79  | 26.12   |
| 59.5  | 59.9  | 33.64 | 7.38  | 26.29   |
| 69.6  | 70.0  | 33.73 | 7.16  | 26.40   |
| 80.5  | 81.0  | 33.76 | 7.06  | 26.44   |
| 90.6  | 91.2  | 33.80 | 6.97  | 26.48   |
| 100.5 | 101.2 | 33.84 | 6.85  | 26.53   |
| 110.3 | 111.0 | 33.87 | 6.79  | 26.56   |
| 120.2 | 121.0 | 33.89 | 6.74  | 26.58   |
| 130.1 | 131.0 | 33.91 | 6.69  | 26.61   |
| 140.0 | 140.9 | 33.92 | 6.69  | 26.61   |
| 146.1 | 147.1 | 33.91 | 6.68  | 26.61   |

CRUISE NO: 14 CODE

LAT N 48 25.50

DATE 23/ 9/80

TIME (PST) 1134

TAPE: U00454 -404

LONG W 125 28.30

PASS NO. 45

STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.3   | 2.3   | 32.19 | 12.19 | 24.38   |        |
| 5.1   | 5.1   | 32.19 | 12.14 | 24.39   |        |
| 10.0  | 10.0  | 32.27 | 12.02 | 24.47   | 6.78   |
| 14.9  | 15.0  | 32.51 | 11.57 | 24.74   |        |
| 19.9  | 20.0  | 32.83 | 10.13 | 25.24   |        |
| 25.0  | 25.1  | 33.09 | 8.89  | 25.64   | 3.32   |
| 29.6  | 29.7  | 33.30 | 8.26  | 25.91   |        |
| 34.8  | 35.0  | 33.43 | 7.91  | 26.05   |        |
| 39.4  | 39.6  | 33.46 | 7.81  | 26.09   |        |
| 44.7  | 45.0  | 33.55 | 7.57  | 26.20   |        |
| 49.7  | 50.0  | 33.58 | 7.47  | 26.24   | 2.11   |
| 59.6  | 60.0  | 33.67 | 7.27  | 26.33   |        |
| 69.6  | 70.0  | 33.73 | 7.10  | 26.40   |        |
| 75.3  | 75.8  | 33.78 | 6.96  | 26.46   | 1.56   |
| 79.6  | 80.1  | 33.80 | 6.92  | 26.49   |        |
| 90.5  | 91.1  | 33.85 | 6.81  | 26.54   |        |
| 100.4 | 101.1 | 33.89 | 6.73  | 26.58   | 1.26   |
| 110.1 | 110.9 | 33.90 | 6.72  | 26.59   |        |
| 120.2 | 121.0 | 33.90 | 6.69  | 26.60   |        |
| 125.0 | 125.9 | 33.91 | 6.68  | 26.60   | 1.11   |
| 130.1 | 131.0 | 33.91 | 6.68  | 26.61   |        |
| 131.4 | 132.3 | 33.91 | 6.68  | 26.61   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 28.90

DATE 23/ 9/80

TIME (PST) 1232

TAPE: U00454 -405

LONG W 125 21.80

PASS NO. 47

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.0   | 3.0   | 32.42 | 12.05 | 24.58   |
| 5.0   | 5.0   | 32.42 | 11.98 | 24.60   |
| 9.9   | 10.0  | 32.52 | 11.55 | 24.75   |
| 14.9  | 15.0  | 32.86 | 10.09 | 25.27   |
| 19.9  | 20.0  | 32.95 | 9.39  | 25.46   |
| 24.9  | 25.0  | 33.01 | 9.20  | 25.53   |
| 29.7  | 29.8  | 33.09 | 8.94  | 25.64   |
| 34.9  | 35.1  | 33.23 | 8.52  | 25.81   |
| 39.8  | 40.0  | 33.31 | 8.25  | 25.91   |
| 44.8  | 45.0  | 33.46 | 7.83  | 26.09   |
| 49.7  | 50.0  | 33.47 | 7.79  | 26.10   |
| 59.8  | 60.2  | 33.65 | 7.31  | 26.32   |
| 69.7  | 70.1  | 33.79 | 6.95  | 26.47   |
| 80.5  | 81.0  | 33.83 | 6.84  | 26.52   |
| 90.2  | 90.8  | 33.86 | 6.78  | 26.55   |
| 100.4 | 101.0 | 33.91 | 6.70  | 26.60   |
| 110.2 | 111.0 | 33.92 | 6.68  | 26.61   |
| 120.2 | 121.1 | 33.92 | 6.67  | 26.61   |
| 130.1 | 131.0 | 33.92 | 6.67  | 26.61   |
| 140.1 | 141.1 | 33.92 | 6.68  | 26.62   |
| 149.9 | 151.0 | 33.92 | 6.68  | 26.61   |
| 154.0 | 155.1 | 33.92 | 6.67  | 26.61   |

CRUISE NO: 14 CODE

LAT N 48 32.20

DATE 23/ 9/80

TIME (PST) 1312

TAPE: U00454 -406

LONG W 125 15.50

PASS NO. 49

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 1.9   | 1.9   | 31.63 | 12.27 | 23.92   |        |
| 5.0   | 5.0   | 32.45 | 12.34 | 24.55   |        |
| 10.0  | 10.1  | 32.46 | 12.16 | 24.59   | 5.64   |
| 14.9  | 15.0  | 32.73 | 10.52 | 25.09   |        |
| 19.8  | 19.9  | 32.79 | 10.12 | 25.21   |        |
| 25.0  | 25.1  | 33.03 | 8.97  | 25.58   | 3.86   |
| 29.8  | 29.9  | 33.14 | 8.51  | 25.74   |        |
| 34.8  | 35.0  | 33.33 | 8.11  | 25.94   |        |
| 39.9  | 40.2  | 33.48 | 7.73  | 26.12   |        |
| 44.6  | 44.9  | 33.57 | 7.50  | 26.22   |        |
| 49.5  | 49.8  | 33.64 | 7.33  | 26.30   | 2.01   |
| 59.6  | 60.0  | 33.75 | 7.08  | 26.43   |        |
| 69.6  | 70.0  | 33.81 | 6.97  | 26.49   |        |
| 74.6  | 75.0  | 33.83 | 6.94  | 26.51   | 1.60   |
| 79.5  | 80.0  | 33.85 | 6.89  | 26.53   |        |
| 90.4  | 91.0  | 33.90 | 6.82  | 26.58   |        |
| 100.3 | 101.0 | 33.90 | 6.81  | 26.58   | 1.54   |
| 110.3 | 111.0 | 33.90 | 6.81  | 26.58   |        |
| 113.2 | 114.0 | 33.90 | 6.81  | 26.58   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 35.60

DATE 23/ 9/80

TIME (PST) 1403

TAPE: U00454 -407

LONG W 125 9.00

PASS NO. 51

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.2   | 2.3   | 32.38 | 11.60 | 24.63   |
| 5.0   | 5.0   | 32.39 | 11.67 | 24.62   |
| 10.0  | 10.0  | 32.41 | 11.41 | 24.69   |
| 14.9  | 15.0  | 32.47 | 11.15 | 24.78   |
| 19.9  | 20.0  | 32.47 | 10.97 | 24.82   |
| 24.8  | 25.0  | 32.67 | 9.64  | 25.20   |
| 29.9  | 30.1  | 32.82 | 8.97  | 25.42   |
| 34.9  | 35.1  | 32.95 | 8.79  | 25.55   |
| 39.7  | 40.0  | 33.17 | 8.38  | 25.78   |
| 44.6  | 44.9  | 33.25 | 8.23  | 25.87   |
| 49.9  | 50.1  | 33.29 | 8.13  | 25.91   |
| 59.6  | 59.9  | 33.37 | 8.01  | 26.00   |
| 69.6  | 70.1  | 33.60 | 7.57  | 26.24   |
| 79.5  | 80.0  | 33.71 | 7.33  | 26.36   |
| 90.3  | 90.9  | 33.77 | 7.22  | 26.42   |
| 100.2 | 100.9 | 33.80 | 7.15  | 26.45   |
| 108.3 | 109.0 | 33.80 | 7.15  | 26.46   |

CRUISE NO: 14 CODE

LAT N 48 39.00

DATE 23/ 9/80

TIME (PST) 1440

TAPE: U00454 -408

LONG W 125 2.50

PASS NO. 53

STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.8   | 2.8   | 30.91 | 10.87 | 23.61   |        |
| 4.7   | 4.8   | 30.94 | 10.84 | 23.64   |        |
| 10.0  | 10.0  | 31.22 | 10.48 | 23.93   | 4.81   |
| 14.9  | 15.0  | 31.70 | 10.55 | 24.29   |        |
| 19.9  | 19.9  | 31.93 | 10.78 | 24.42   |        |
| 24.7  | 24.8  | 32.17 | 10.82 | 24.60   | 3.98   |
| 30.0  | 30.1  | 32.26 | 9.72  | 24.86   |        |
| 34.9  | 35.0  | 32.49 | 9.74  | 25.04   |        |
| 39.8  | 40.0  | 32.71 | 9.51  | 25.24   |        |
| 44.8  | 45.1  | 32.81 | 9.30  | 25.36   |        |
| 49.7  | 50.0  | 32.84 | 9.24  | 25.40   | 3.79   |
| 58.7  | 59.0  | 32.94 | 9.08  | 25.49   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 34.35

DATE 23/ 9/80

TIME (PST) 1520

TAPE: U00454 -409

LONG W 125 .05

PASS NO. 55

STN: N.L. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.6   | 2.6   | 32.41 | 12.09 | 24.56   |
| 5.0   | 5.0   | 32.39 | 11.90 | 24.58   |
| 10.0  | 10.1  | 32.41 | 11.56 | 24.66   |
| 15.0  | 15.1  | 32.53 | 11.22 | 24.82   |
| 19.9  | 20.0  | 32.81 | 10.29 | 25.20   |
| 24.9  | 25.0  | 32.80 | 9.95  | 25.24   |
| 29.8  | 29.9  | 32.92 | 9.64  | 25.39   |
| 35.0  | 35.1  | 32.94 | 9.58  | 25.42   |
| 39.8  | 40.1  | 32.96 | 9.53  | 25.44   |
| 44.8  | 45.1  | 33.18 | 8.68  | 25.75   |
| 49.8  | 50.1  | 33.49 | 7.92  | 26.10   |
| 56.7  | 57.0  | 33.65 | 7.46  | 26.30   |

CRUISE NO: 14 CODE

LAT N 48 28.11

DATE 23/ 9/80

TIME (PST) 1612

TAPE: U00454 -410

LONG W 124 59.57

PASS NO. 57

STN: N.L. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.0   | 2.0   | 31.83 | 11.64 | 24.19   |        |
| 5.0   | 5.0   | 32.48 | 11.30 | 24.77   |        |
| 10.0  | 10.0  | 32.45 | 11.09 | 24.78   |        |
| 14.8  | 14.9  | 32.55 | 10.53 | 24.95   |        |
| 20.0  | 20.1  | 32.69 | 9.73  | 25.19   |        |
| 24.9  | 25.0  | 32.75 | 9.49  | 25.28   | 4.20   |
| 29.7  | 29.9  | 32.85 | 9.33  | 25.39   |        |
| 34.8  | 35.0  | 32.88 | 9.28  | 25.42   |        |
| 39.9  | 40.1  | 33.03 | 8.83  | 25.60   |        |
| 44.7  | 44.9  | 33.44 | 7.77  | 26.08   |        |
| 49.6  | 49.9  | 33.49 | 7.67  | 26.13   | 2.52   |
| 59.7  | 60.0  | 33.78 | 7.22  | 26.43   |        |
| 69.6  | 70.1  | 33.80 | 7.18  | 26.45   |        |
| 75.5  | 76.0  | 33.84 | 7.10  | 26.50   | 1.85   |
| 80.3  | 80.8  | 33.84 | 7.05  | 26.50   |        |
| 89.5  | 90.1  | 33.88 | 6.96  | 26.54   | 1.74   |
| 95.1  | 95.7  | 33.88 | 6.96  | 26.54   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 25.36

DATE 23/ 9/80

TIME (PST) 1635

TAPE: U00454 -411

LONG W 124 59.53

PASS NO. 59

STN: N.L. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.8   | 2.9   | 32.45 | 11.52 | 24.70   |
| 4.8   | 4.9   | 32.48 | 11.48 | 24.73   |
| 10.0  | 10.0  | 32.54 | 11.48 | 24.77   |
| 14.9  | 15.0  | 32.51 | 11.45 | 24.76   |
| 19.8  | 19.9  | 32.53 | 11.14 | 24.83   |
| 24.8  | 24.9  | 32.52 | 11.08 | 24.83   |
| 29.9  | 30.0  | 32.67 | 10.42 | 25.07   |
| 34.9  | 35.1  | 33.26 | 8.41  | 25.85   |
| 39.8  | 40.0  | 33.32 | 8.17  | 25.94   |
| 44.6  | 44.9  | 33.32 | 8.16  | 25.93   |
| 49.7  | 50.0  | 33.32 | 8.18  | 25.93   |
| 59.6  | 60.0  | 33.58 | 7.61  | 26.22   |
| 69.6  | 70.0  | 33.70 | 7.33  | 26.35   |
| 80.4  | 80.9  | 33.78 | 7.15  | 26.44   |
| 90.4  | 91.0  | 33.79 | 7.13  | 26.45   |
| 100.5 | 101.1 | 33.85 | 7.02  | 26.51   |
| 110.1 | 110.9 | 33.85 | 7.01  | 26.52   |
| 120.2 | 121.0 | 33.85 | 7.00  | 26.51   |
| 130.0 | 130.9 | 33.86 | 6.98  | 26.52   |
| 140.1 | 141.1 | 33.86 | 6.98  | 26.53   |
| 150.1 | 151.1 | 33.87 | 7.00  | 26.53   |
| 159.7 | 160.8 | 33.87 | 7.01  | 26.53   |
| 169.7 | 170.9 | 33.87 | 7.02  | 26.53   |
| 179.6 | 180.9 | 33.88 | 7.02  | 26.53   |
| 183.8 | 185.1 | 33.88 | 7.02  | 26.54   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 14 CODE  
 LAT N 48 23.00  
 DATE 23/ 9/80  
 TIME (PST) 1704

TAPE: U00454 -412  
 LONG W 124 59.49  
 PASS NO. 61  
 STN: N.L. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.9   | 3.0   | 32.41 | 11.68 | 24.64   |        |
| 4.9   | 4.9   | 32.44 | 11.67 | 24.67   |        |
| 9.9   | 10.0  | 32.43 | 11.51 | 24.69   |        |
| 14.9  | 15.0  | 32.53 | 10.84 | 24.88   |        |
| 20.0  | 20.1  | 32.57 | 10.50 | 24.97   |        |
| 24.8  | 25.0  | 32.65 | 10.18 | 25.09   | 4.13   |
| 29.8  | 30.0  | 32.83 | 9.59  | 25.33   |        |
| 34.8  | 35.0  | 32.91 | 9.31  | 25.43   |        |
| 39.8  | 40.0  | 33.28 | 8.28  | 25.88   |        |
| 44.8  | 45.1  | 33.38 | 7.99  | 26.00   |        |
| 49.7  | 50.0  | 33.41 | 7.88  | 26.04   | 2.53   |
| 59.7  | 60.0  | 33.67 | 7.37  | 26.32   |        |
| 69.6  | 70.0  | 33.73 | 7.25  | 26.38   |        |
| 74.6  | 75.0  | 33.79 | 7.12  | 26.45   | 1.92   |
| 80.4  | 80.9  | 33.82 | 7.08  | 26.48   |        |
| 90.4  | 91.0  | 33.83 | 7.07  | 26.49   |        |
| 100.4 | 101.1 | 33.84 | 7.06  | 26.50   | 1.79   |
| 110.3 | 111.0 | 33.85 | 7.02  | 26.51   |        |
| 120.2 | 121.0 | 33.86 | 7.00  | 26.52   |        |
| 125.3 | 126.1 | 33.87 | 6.97  | 26.54   | 1.77   |
| 130.2 | 131.0 | 33.87 | 6.97  | 26.54   |        |
| 140.2 | 141.2 | 33.88 | 6.96  | 26.54   |        |
| 150.0 | 151.1 | 33.88 | 6.97  | 26.54   | 1.70   |
| 159.9 | 161.0 | 33.88 | 6.97  | 26.54   |        |
| 169.8 | 171.0 | 33.89 | 6.95  | 26.55   |        |
| 179.6 | 180.9 | 33.88 | 6.94  | 26.55   |        |
| 189.7 | 191.1 | 33.89 | 6.92  | 26.56   |        |
| 199.7 | 201.1 | 33.89 | 6.93  | 26.56   | 1.65   |
| 224.9 | 226.6 | 33.89 | 6.94  | 26.55   |        |
| 250.2 | 252.0 | 33.90 | 6.93  | 26.56   | 1.64   |
| 258.0 | 259.9 | 33.90 | 6.92  | 26.57   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 20.23

DATE 23/ 9/80

TIME (PST) 1746

TAPE: U00454 -413

LONG W 124 59.45

PASS NO. 63

STN: N.L. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .9    | .9    | 32.46 | 10.87 | 24.82   |
| 2.0   | 2.0   | 32.45 | 10.92 | 24.81   |
| 5.1   | 5.1   | 32.49 | 10.72 | 24.88   |
| 9.9   | 10.0  | 32.56 | 10.47 | 24.97   |
| 15.0  | 15.1  | 32.58 | 10.39 | 25.00   |
| 19.9  | 20.0  | 32.73 | 9.61  | 25.25   |
| 24.8  | 24.9  | 32.94 | 8.83  | 25.53   |
| 29.9  | 30.1  | 33.05 | 8.59  | 25.66   |
| 34.9  | 35.1  | 33.18 | 8.40  | 25.79   |
| 39.9  | 40.1  | 33.18 | 8.37  | 25.79   |
| 44.7  | 45.0  | 33.29 | 8.21  | 25.90   |
| 49.8  | 50.1  | 33.48 | 7.84  | 26.10   |
| 59.6  | 60.0  | 33.59 | 7.51  | 26.24   |
| 69.5  | 69.9  | 33.69 | 7.30  | 26.35   |
| 79.5  | 80.0  | 33.72 | 7.23  | 26.38   |
| 90.4  | 91.0  | 33.76 | 7.14  | 26.43   |
| 100.3 | 101.0 | 33.84 | 6.98  | 26.51   |
| 110.1 | 110.9 | 33.86 | 6.97  | 26.52   |
| 120.2 | 121.0 | 33.86 | 6.96  | 26.53   |
| 130.1 | 131.0 | 33.86 | 6.94  | 26.53   |
| 140.1 | 141.0 | 33.89 | 6.97  | 26.55   |
| 149.9 | 150.9 | 33.88 | 6.99  | 26.54   |
| 159.9 | 161.0 | 33.89 | 6.99  | 26.55   |
| 169.9 | 171.1 | 33.90 | 6.98  | 26.56   |
| 179.6 | 180.8 | 33.90 | 6.98  | 26.56   |
| 189.7 | 191.1 | 33.91 | 6.97  | 26.56   |
| 199.7 | 201.1 | 33.91 | 6.97  | 26.57   |
| 219.1 | 220.7 | 33.91 | 6.95  | 26.57   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 17.45

DATE 23/ 9/80

TIME (PST) 1820

TAPE: U00454 -414

LONG W 124 59.40

PASS NO. 65

STN: N.L. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.7   | 2.7   | 32.53 | 11.62 | 24.75   |        |
| 4.6   | 4.6   | 32.79 | 11.21 | 25.02   |        |
| 10.0  | 10.1  | 32.75 | 11.09 | 25.01   |        |
| 14.9  | 15.0  | 32.69 | 10.58 | 25.05   |        |
| 19.9  | 20.0  | 32.70 | 9.92  | 25.17   |        |
| 24.9  | 25.0  | 33.02 | 8.66  | 25.62   | 3.34   |
| 29.8  | 29.9  | 33.11 | 8.32  | 25.75   |        |
| 34.7  | 34.9  | 33.17 | 8.26  | 25.80   |        |
| 39.9  | 40.2  | 33.23 | 8.18  | 25.86   |        |
| 44.6  | 44.9  | 33.31 | 8.11  | 25.93   |        |
| 49.8  | 50.1  | 33.43 | 8.02  | 26.04   | 3.90   |
| 59.8  | 60.2  | 33.56 | 7.71  | 26.19   |        |
| 70.5  | 70.9  | 33.66 | 7.40  | 26.31   |        |
| 74.5  | 75.0  | 33.69 | 7.35  | 26.34   | 2.57   |
| 80.5  | 81.0  | 33.70 | 7.30  | 26.36   |        |
| 90.3  | 90.9  | 33.78 | 7.12  | 26.44   |        |
| 100.2 | 100.9 | 33.86 | 6.96  | 26.53   | 2.06   |
| 110.3 | 111.0 | 33.86 | 6.94  | 26.53   |        |
| 120.2 | 121.0 | 33.86 | 6.94  | 26.53   |        |
| 125.1 | 125.9 | 33.86 | 6.94  | 26.53   | 1.64   |
| 130.2 | 131.0 | 33.87 | 6.94  | 26.54   |        |
| 140.1 | 141.1 | 33.87 | 6.92  | 26.54   |        |
| 149.8 | 150.9 | 33.87 | 6.92  | 26.54   | 1.66   |
| 159.8 | 160.9 | 33.87 | 6.93  | 26.54   |        |
| 169.7 | 170.9 | 33.87 | 6.93  | 26.54   |        |
| 179.7 | 181.0 | 33.88 | 6.93  | 26.55   |        |
| 189.6 | 191.0 | 33.87 | 6.92  | 26.54   |        |
| 200.4 | 201.8 | 33.88 | 6.92  | 26.55   | 1.64   |
| 225.4 | 227.1 | 33.89 | 6.90  | 26.56   |        |
| 250.2 | 252.0 | 33.93 | 6.94  | 26.59   | 1.78   |
| 265.0 | 267.0 | 33.93 | 6.92  | 26.59   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 15.06

DATE 23/ 9/80

TIME (PST) 1900

TAPE: U00454 -415

LONG W 124 59.35

PASS NO. 67

STN: N.L. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.1   | 2.1   | 32.41 | 11.54 | 24.66   |
| 5.1   | 5.1   | 32.39 | 11.53 | 24.65   |
| 10.1  | 10.2  | 32.48 | 11.03 | 24.81   |
| 14.9  | 15.0  | 32.58 | 10.32 | 25.01   |
| 19.9  | 20.0  | 32.67 | 9.42  | 25.23   |
| 25.0  | 25.1  | 32.93 | 8.72  | 25.54   |
| 29.6  | 29.8  | 33.16 | 8.36  | 25.77   |
| 34.8  | 35.0  | 33.18 | 8.24  | 25.81   |
| 39.7  | 40.0  | 33.21 | 8.21  | 25.84   |
| 44.7  | 44.9  | 33.37 | 8.01  | 26.00   |
| 49.7  | 50.0  | 33.42 | 7.94  | 26.04   |
| 59.7  | 60.1  | 33.60 | 7.75  | 26.21   |
| 69.6  | 70.0  | 33.72 | 7.63  | 26.33   |
| 79.7  | 80.3  | 33.78 | 7.55  | 26.38   |
| 90.4  | 91.0  | 33.84 | 7.51  | 26.43   |
| 100.4 | 101.0 | 33.85 | 7.35  | 26.47   |
| 110.3 | 111.1 | 33.86 | 7.30  | 26.48   |
| 120.2 | 121.0 | 33.86 | 7.22  | 26.49   |
| 130.1 | 131.0 | 33.90 | 7.20  | 26.52   |
| 139.9 | 140.9 | 33.92 | 7.11  | 26.56   |
| 139.9 | 140.9 | 33.92 | 7.11  | 26.56   |

CRUISE NO: 14 CODE

LAT N 48 13.21

DATE 23/ 9/80

TIME (PST) 1924

TAPE: U00454 -416

LONG W 124 56.37

PASS NO. 69

STN: C.A.11

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.5   | 2.5   | 32.31 | 11.67 | 24.56   |
| 5.0   | 5.0   | 32.34 | 11.48 | 24.62   |
| 10.0  | 10.1  | 32.32 | 11.58 | 24.59   |
| 15.0  | 15.1  | 32.57 | 9.88  | 25.08   |
| 19.8  | 19.9  | 32.69 | 9.03  | 25.31   |
| 24.8  | 24.9  | 32.89 | 8.44  | 25.56   |
| 29.9  | 30.1  | 32.96 | 8.38  | 25.62   |
| 34.8  | 35.0  | 33.09 | 8.28  | 25.74   |
| 39.9  | 40.1  | 33.18 | 8.18  | 25.82   |
| 45.3  | 45.6  | 33.29 | 7.95  | 25.94   |
| 49.5  | 49.8  | 33.36 | 7.88  | 26.00   |
| 59.7  | 60.1  | 33.70 | 7.67  | 26.30   |
| 70.1  | 70.6  | 33.76 | 7.59  | 26.36   |
| 80.5  | 81.0  | 33.77 | 7.56  | 26.37   |
| 90.5  | 91.1  | 33.77 | 7.55  | 26.38   |
| 100.4 | 101.1 | 33.78 | 7.54  | 26.38   |
| 110.2 | 111.0 | 33.79 | 7.53  | 26.39   |
| 120.1 | 120.9 | 33.80 | 7.49  | 26.41   |
| 130.2 | 131.1 | 33.81 | 7.48  | 26.41   |
| 135.0 | 135.9 | 33.81 | 7.46  | 26.42   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 12.51

DATE 23/ 9/80

TIME (PST) 1955

TAPE: U00454 -417

LONG W 125 2.25

PASS NO. 71

STN: C.A.10

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.3   | 2.3   | 32.50 | 11.70 | 24.71   |        |
| 4.9   | 4.9   | 32.50 | 11.70 | 24.71   |        |
| 9.8   | 9.9   | 32.51 | 11.68 | 24.72   |        |
| 14.9  | 14.9  | 32.71 | 10.26 | 25.12   |        |
| 19.9  | 20.0  | 32.82 | 9.66  | 25.31   |        |
| 24.8  | 24.9  | 33.02 | 8.71  | 25.62   | 3.10   |
| 29.9  | 30.1  | 33.17 | 8.51  | 25.76   |        |
| 35.0  | 35.2  | 33.25 | 8.28  | 25.86   |        |
| 39.6  | 39.9  | 33.37 | 8.04  | 25.99   |        |
| 44.7  | 44.9  | 33.42 | 8.00  | 26.03   |        |
| 49.6  | 49.9  | 33.44 | 8.01  | 26.05   | 3.70   |
| 59.6  | 60.0  | 33.56 | 7.63  | 26.20   |        |
| 69.6  | 70.1  | 33.63 | 7.43  | 26.28   |        |
| 74.6  | 75.1  | 33.65 | 7.40  | 26.30   | 2.30   |
| 79.6  | 80.1  | 33.69 | 7.34  | 26.34   |        |
| 90.5  | 91.1  | 33.77 | 7.22  | 26.42   |        |
| 100.2 | 100.9 | 33.80 | 7.22  | 26.44   | 2.08   |
| 110.1 | 110.8 | 33.81 | 7.20  | 26.46   |        |
| 120.3 | 121.1 | 33.84 | 7.16  | 26.48   |        |
| 125.2 | 126.0 | 33.85 | 7.15  | 26.49   | 1.94   |
| 130.0 | 130.9 | 33.86 | 7.13  | 26.50   |        |
| 140.1 | 141.1 | 33.88 | 7.11  | 26.52   |        |
| 150.0 | 151.0 | 33.89 | 7.10  | 26.53   | 1.92   |
| 159.8 | 160.9 | 33.89 | 7.09  | 26.53   |        |
| 169.8 | 171.0 | 33.89 | 7.08  | 26.54   |        |
| 179.6 | 180.9 | 33.89 | 7.05  | 26.54   |        |
| 189.7 | 191.0 | 33.91 | 7.02  | 26.56   |        |
| 199.7 | 201.2 | 33.92 | 7.01  | 26.57   | 1.85   |
| 216.2 | 217.8 | 33.93 | 6.96  | 26.58   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 12.29

DATE 23/ 9/80

TIME (PST) 2039

TAPE: U00454 -418

LONG W 125 8.11

PASS NO. 73

STN: C.A. 9

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.8   | 2.8   | 32.47 | 11.32 | 24.75   |
| 4.9   | 4.9   | 32.51 | 11.23 | 24.80   |
| 10.0  | 10.1  | 32.64 | 9.90  | 25.13   |
| 15.0  | 15.0  | 32.68 | 8.78  | 25.33   |
| 20.0  | 20.1  | 32.80 | 8.49  | 25.48   |
| 24.9  | 25.1  | 32.99 | 8.35  | 25.64   |
| 29.8  | 30.0  | 33.19 | 8.14  | 25.84   |
| 34.8  | 35.0  | 33.26 | 8.09  | 25.90   |
| 39.9  | 40.1  | 33.32 | 8.10  | 25.95   |
| 44.8  | 45.1  | 33.40 | 8.06  | 26.01   |
| 49.7  | 50.1  | 33.46 | 8.00  | 26.07   |
| 59.6  | 60.0  | 33.54 | 7.81  | 26.16   |
| 69.5  | 70.0  | 33.60 | 7.47  | 26.25   |
| 79.6  | 80.1  | 33.75 | 7.34  | 26.39   |
| 90.4  | 91.0  | 33.82 | 7.14  | 26.48   |
| 100.1 | 100.7 | 33.85 | 7.08  | 26.51   |
| 100.1 | 100.7 | 33.85 | 7.08  | 26.51   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 12.41

DATE 23/ 9/80

TIME (PST) 2105

TAPE: U00454 -419

LONG W 125 13.55

PASS NO. 75

STN: C.A. 8

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.9   | 3.9   | 32.34 | 11.66 | 24.59   |        |
| 4.9   | 4.9   | 32.38 | 11.67 | 24.62   |        |
| 10.0  | 10.0  | 32.47 | 11.76 | 24.67   |        |
| 14.9  | 15.0  | 32.75 | 9.30  | 25.31   |        |
| 19.9  | 20.1  | 32.89 | 8.62  | 25.52   |        |
| 24.9  | 25.1  | 32.94 | 8.46  | 25.59   | 3.98   |
| 29.8  | 30.0  | 33.12 | 8.26  | 25.76   |        |
| 34.8  | 35.0  | 33.20 | 8.21  | 25.83   |        |
| 39.7  | 39.9  | 33.25 | 8.16  | 25.88   |        |
| 44.6  | 44.9  | 33.29 | 8.12  | 25.92   |        |
| 49.8  | 50.1  | 33.33 | 8.08  | 25.95   | 3.50   |
| 60.5  | 60.9  | 33.48 | 7.99  | 26.09   |        |
| 69.5  | 69.9  | 33.58 | 7.84  | 26.19   |        |
| 75.5  | 76.0  | 33.66 | 7.73  | 26.26   | 3.15   |
| 80.5  | 81.0  | 33.69 | 7.70  | 26.29   |        |
| 89.7  | 90.3  | 33.76 | 7.50  | 26.38   |        |
| 100.2 | 100.9 | 33.79 | 7.32  | 26.42   | 2.49   |
| 110.2 | 110.9 | 33.80 | 7.33  | 26.43   |        |
| 120.1 | 120.9 | 33.83 | 7.17  | 26.47   |        |
| 125.1 | 126.0 | 33.84 | 7.15  | 26.49   | 2.07   |
| 130.1 | 131.0 | 33.85 | 7.12  | 26.50   |        |
| 140.0 | 141.0 | 33.87 | 7.04  | 26.52   |        |
| 149.7 | 150.8 | 33.87 | 7.01  | 26.53   | 1.74   |
| 159.8 | 160.9 | 33.88 | 6.96  | 26.54   |        |
| 169.9 | 171.1 | 33.90 | 6.90  | 26.57   |        |
| 179.7 | 181.0 | 33.89 | 6.89  | 26.56   |        |
| 189.6 | 191.0 | 33.90 | 6.87  | 26.57   |        |
| 199.7 | 201.1 | 33.90 | 6.86  | 26.57   | 1.62   |
| 220.4 | 221.9 | 33.91 | 6.85  | 26.59   | 1.64   |
| 223.4 | 225.0 | 33.91 | 6.85  | 26.58   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 11.37

DATE 23/ 9/80

TIME (PST) 2156

TAPE: U00454 -420

LONG W 125 19.38

PASS NO. 77

STN: C.A. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.6   | 2.6   | 32.23 | 12.92 | 24.26   |
| 4.9   | 5.0   | 32.23 | 12.92 | 24.27   |
| 10.0  | 10.0  | 32.23 | 12.92 | 24.27   |
| 14.8  | 14.9  | 32.23 | 12.90 | 24.27   |
| 19.9  | 20.0  | 32.34 | 11.77 | 24.57   |
| 25.0  | 25.1  | 32.51 | 10.12 | 24.99   |
| 29.8  | 30.0  | 32.53 | 9.78  | 25.06   |
| 34.9  | 35.1  | 32.55 | 9.61  | 25.11   |
| 40.3  | 40.5  | 32.62 | 9.08  | 25.25   |
| 44.7  | 45.0  | 32.73 | 8.66  | 25.40   |
| 49.7  | 50.0  | 32.82 | 8.45  | 25.50   |
| 59.9  | 60.2  | 33.06 | 8.28  | 25.71   |
| 69.8  | 70.2  | 33.14 | 8.24  | 25.78   |
| 79.5  | 80.0  | 33.31 | 8.09  | 25.93   |
| 89.5  | 90.1  | 33.60 | 7.87  | 26.20   |
| 98.3  | 98.9  | 33.71 | 7.81  | 26.29   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 11.16

DATE 23/ 9/80

TIME (PST) 2225

TAPE: U00454 -421

LONG W 125 25.19

PASS NO. 79

STN: C.A. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 1.9   | 1.9   | 31.60 | 13.59 | 23.64   |        |
| 5.0   | 5.0   | 32.22 | 13.59 | 24.13   |        |
| 10.0  | 10.0  | 32.23 | 13.59 | 24.13   |        |
| 15.0  | 15.1  | 32.22 | 13.59 | 24.13   |        |
| 19.9  | 20.0  | 32.31 | 12.98 | 24.32   |        |
| 24.9  | 25.0  | 32.50 | 10.98 | 24.84   | 6.16   |
| 29.8  | 30.0  | 32.57 | 9.68  | 25.11   |        |
| 34.9  | 35.1  | 32.61 | 9.14  | 25.23   |        |
| 39.9  | 40.1  | 32.64 | 8.92  | 25.28   |        |
| 44.6  | 44.8  | 32.70 | 8.64  | 25.38   |        |
| 49.8  | 50.0  | 32.74 | 8.56  | 25.42   | 4.91   |
| 59.7  | 60.0  | 32.92 | 8.40  | 25.58   |        |
| 69.6  | 70.0  | 33.16 | 8.07  | 25.82   |        |
| 74.6  | 75.0  | 33.34 | 7.91  | 25.99   | 4.04   |
| 79.5  | 79.9  | 33.50 | 7.86  | 26.12   |        |
| 90.5  | 91.0  | 33.65 | 7.87  | 26.23   |        |
| 100.4 | 101.0 | 33.76 | 7.78  | 26.34   | 2.96   |
| 110.3 | 111.0 | 33.87 | 7.55  | 26.45   |        |
| 112.4 | 113.1 | 33.88 | 7.49  | 26.47   |        |

CRUISE NO: 14 CODE

LAT N 48 10.57

DATE 23/ 9/80

TIME (PST) 2304

TAPE: U00454 -422

LONG W 125 30.58

PASS NO. 81

STN: C.A. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.2   | 3.2   | 32.23 | 13.41 | 24.17   |
| 5.1   | 5.1   | 32.23 | 13.42 | 24.17   |
| 10.0  | 10.1  | 32.23 | 13.40 | 24.17   |
| 15.0  | 15.0  | 32.30 | 12.73 | 24.36   |
| 19.9  | 20.0  | 32.52 | 10.55 | 24.92   |
| 24.8  | 25.0  | 32.54 | 9.45  | 25.12   |
| 30.0  | 30.1  | 32.62 | 8.86  | 25.28   |
| 34.9  | 35.0  | 32.65 | 8.66  | 25.33   |
| 39.9  | 40.1  | 32.70 | 8.48  | 25.40   |
| 44.8  | 45.0  | 32.79 | 8.36  | 25.48   |
| 49.6  | 49.9  | 32.84 | 8.31  | 25.53   |
| 59.7  | 60.0  | 33.04 | 8.10  | 25.73   |
| 70.2  | 70.6  | 33.25 | 7.90  | 25.91   |
| 79.6  | 80.1  | 33.41 | 7.86  | 26.05   |
| 90.4  | 91.0  | 33.61 | 7.88  | 26.20   |
| 100.1 | 100.7 | 33.74 | 7.77  | 26.32   |
| 110.2 | 110.9 | 33.84 | 7.59  | 26.42   |
| 119.3 | 120.1 | 33.88 | 7.47  | 26.47   |
| 129.3 | 130.2 | 33.90 | 7.36  | 26.50   |
| 140.0 | 140.9 | 33.91 | 7.33  | 26.51   |
| 143.1 | 144.0 | 33.91 | 7.33  | 26.51   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 10.40

DATE 23/ 9/80

TIME (PST) 2339

TAPE: U00454 -423

LONG W 125 36.35

PASS NO. 83

STN: C.A. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.4   | 2.4   | 32.22 | 13.41 | 24.17   |        |
| 4.9   | 4.9   | 32.23 | 13.40 | 24.17   |        |
| 10.0  | 10.1  | 32.23 | 13.38 | 24.17   |        |
| 15.0  | 15.1  | 32.23 | 13.29 | 24.19   |        |
| 19.9  | 20.0  | 32.39 | 11.86 | 24.59   |        |
| 24.9  | 25.0  | 32.60 | 9.67  | 25.13   | 6.06   |
| 29.9  | 30.0  | 32.61 | 9.19  | 25.22   |        |
| 34.8  | 35.0  | 32.65 | 8.67  | 25.33   |        |
| 39.7  | 40.0  | 32.68 | 8.54  | 25.37   |        |
| 44.7  | 44.9  | 32.82 | 8.45  | 25.49   |        |
| 49.7  | 50.0  | 32.87 | 8.38  | 25.55   | 5.26   |
| 59.7  | 60.0  | 33.10 | 8.07  | 25.78   |        |
| 69.6  | 70.0  | 33.28 | 7.98  | 25.92   |        |
| 74.6  | 75.0  | 33.34 | 8.00  | 25.98   | 3.63   |
| 79.6  | 80.1  | 33.48 | 7.94  | 26.09   |        |
| 90.5  | 91.0  | 33.65 | 7.87  | 26.23   |        |
| 100.4 | 101.0 | 33.73 | 7.79  | 26.31   | 3.05   |
| 110.2 | 110.9 | 33.78 | 7.70  | 26.36   |        |
| 120.2 | 121.0 | 33.84 | 7.55  | 26.43   |        |
| 125.2 | 126.0 | 33.84 | 7.54  | 26.43   | 2.40   |
| 130.1 | 131.0 | 33.86 | 7.46  | 26.46   |        |
| 140.1 | 141.0 | 33.91 | 7.27  | 26.53   |        |
| 150.1 | 151.1 | 33.92 | 7.25  | 26.53   |        |
| 157.8 | 158.8 | 33.92 | 7.24  | 26.53   |        |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 10.26

DATE 24/ 9/80

TIME (PST) 0022

TAPE: U00454 -424

LONG W 125 42.11

PASS NO: 85

STN: C.A. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.0   | 3.0   | 32.25 | 13.66 | 24.13   |
| 5.0   | 5.0   | 32.25 | 13.66 | 24.14   |
| 10.0  | 10.0  | 32.25 | 13.64 | 24.14   |
| 15.0  | 15.0  | 32.26 | 13.54 | 24.17   |
| 19.9  | 20.0  | 32.33 | 12.78 | 24.37   |
| 24.9  | 25.0  | 32.52 | 10.27 | 24.98   |
| 29.8  | 29.9  | 32.57 | 9.42  | 25.15   |
| 34.8  | 35.0  | 32.60 | 9.18  | 25.21   |
| 39.8  | 40.1  | 32.59 | 8.99  | 25.24   |
| 44.8  | 45.0  | 32.61 | 8.68  | 25.30   |
| 49.8  | 50.0  | 32.68 | 8.49  | 25.38   |
| 59.7  | 60.0  | 32.99 | 8.38  | 25.64   |
| 69.6  | 70.0  | 33.23 | 7.96  | 25.89   |
| 79.6  | 80.0  | 33.38 | 7.75  | 26.04   |
| 90.4  | 91.0  | 33.48 | 7.67  | 26.13   |
| 100.4 | 101.0 | 33.64 | 7.76  | 26.24   |
| 110.3 | 111.0 | 33.72 | 7.71  | 26.32   |
| 120.1 | 120.8 | 33.82 | 7.63  | 26.41   |
| 130.1 | 130.9 | 33.85 | 7.58  | 26.43   |
| 140.1 | 141.0 | 33.89 | 7.42  | 26.49   |
| 150.0 | 150.9 | 33.89 | 7.38  | 26.50   |
| 160.1 | 161.1 | 33.90 | 7.35  | 26.51   |
| 169.9 | 171.0 | 33.91 | 7.28  | 26.53   |
| 179.7 | 180.9 | 33.92 | 7.24  | 26.53   |
| 189.7 | 191.0 | 33.93 | 7.22  | 26.54   |
| 199.6 | 201.0 | 33.93 | 7.14  | 26.56   |
| 225.5 | 227.1 | 33.94 | 7.10  | 26.57   |
| 250.2 | 252.0 | 33.94 | 7.06  | 26.58   |
| 274.9 | 276.9 | 33.95 | 7.03  | 26.59   |
| 299.8 | 302.0 | 33.96 | 6.87  | 26.62   |
| 325.5 | 327.9 | 33.99 | 6.58  | 26.68   |
| 348.2 | 350.8 | 34.00 | 6.45  | 26.70   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 10.13

DATE 24/ 9/80

TIME (PST) 0057

TAPE: U00454 -425

LONG W 125 47.46

PASS NO. 87

SYN: C.A. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.2   | 2.2   | 32.30 | 13.91 | 24.12   |        |
| 4.9   | 4.9   | 32.30 | 13.90 | 24.13   |        |
| 9.9   | 10.0  | 32.30 | 13.90 | 24.13   |        |
| 15.0  | 15.0  | 32.30 | 13.91 | 24.13   |        |
| 19.9  | 20.0  | 32.47 | 12.25 | 24.58   |        |
| 24.8  | 25.0  | 32.57 | 10.29 | 25.01   | 6.36   |
| 29.8  | 30.0  | 32.61 | 9.54  | 25.16   |        |
| 34.7  | 34.9  | 32.63 | 9.12  | 25.24   |        |
| 39.8  | 40.0  | 32.63 | 8.98  | 25.27   |        |
| 44.8  | 45.0  | 32.64 | 8.69  | 25.32   |        |
| 49.6  | 49.9  | 32.64 | 8.62  | 25.33   | 5.95   |
| 59.7  | 60.0  | 32.72 | 8.42  | 25.43   |        |
| 69.5  | 69.9  | 33.04 | 8.24  | 25.70   |        |
| 74.6  | 75.0  | 33.10 | 8.14  | 25.76   | 4.60   |
| 79.5  | 80.0  | 33.24 | 7.95  | 25.90   |        |
| 89.6  | 90.1  | 33.48 | 7.94  | 26.09   |        |
| 99.6  | 100.2 | 33.57 | 7.88  | 26.17   | 3.74   |
| 110.3 | 111.0 | 33.64 | 7.72  | 26.25   |        |
| 120.3 | 121.1 | 33.76 | 7.72  | 26.34   |        |
| 125.3 | 126.0 | 33.79 | 7.72  | 26.37   | 2.92   |
| 130.2 | 131.0 | 33.81 | 7.68  | 26.39   |        |
| 140.0 | 140.9 | 33.83 | 7.66  | 26.41   |        |
| 150.0 | 151.0 | 33.87 | 7.52  | 26.46   | 2.61   |
| 160.0 | 161.0 | 33.89 | 7.44  | 26.48   |        |
| 169.9 | 171.0 | 33.91 | 7.36  | 26.51   |        |
| 179.9 | 181.1 | 33.91 | 7.26  | 26.53   |        |
| 189.8 | 191.1 | 33.91 | 7.18  | 26.54   |        |
| 199.7 | 201.0 | 33.92 | 7.15  | 26.55   | 2.64   |
| 224.6 | 226.1 | 33.96 | 6.97  | 26.61   |        |
| 250.3 | 252.0 | 33.97 | 6.86  | 26.63   | 2.10   |
| 275.0 | 277.0 | 33.98 | 6.66  | 26.67   |        |
| 299.8 | 302.0 | 33.99 | 6.48  | 26.70   | 1.84   |
| 324.6 | 327.0 | 34.00 | 6.40  | 26.71   |        |
| 350.5 | 353.1 | 34.01 | 6.33  | 26.73   |        |
| 375.1 | 378.0 | 34.01 | 6.24  | 26.74   |        |
| 399.9 | 403.0 | 34.02 | 6.09  | 26.77   |        |
| 424.6 | 427.9 | 34.03 | 5.98  | 26.79   |        |
| 449.5 | 453.1 | 34.05 | 5.75  | 26.83   |        |
| 475.0 | 478.8 | 34.07 | 5.52  | 26.88   |        |
| 499.8 | 503.8 | 34.09 | 5.24  | 26.93   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 10.02

DATE 24/ 9/80

TIME (PST) 0216

TAPE: U00454 -426

LONG W 125 53.18

PASS NO. 89

STN: C.A. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .9    | .9    | 32.32 | 13.92 | 24.14   |
| 2.1   | 2.1   | 32.33 | 13.97 | 24.14   |
| 4.9   | 4.9   | 32.32 | 13.97 | 24.13   |
| 10.0  | 10.0  | 32.32 | 13.97 | 24.13   |
| 14.9  | 15.0  | 32.32 | 13.97 | 24.13   |
| 19.9  | 20.0  | 32.36 | 13.61 | 24.23   |
| 24.9  | 25.0  | 32.56 | 11.27 | 24.83   |
| 29.9  | 30.1  | 32.66 | 9.73  | 25.17   |
| 35.0  | 35.2  | 32.62 | 9.20  | 25.23   |
| 39.8  | 40.0  | 32.62 | 9.01  | 25.26   |
| 44.7  | 45.0  | 32.62 | 8.84  | 25.28   |
| 49.7  | 50.0  | 32.62 | 8.66  | 25.31   |
| 59.5  | 59.9  | 32.78 | 8.36  | 25.48   |
| 69.7  | 70.1  | 33.07 | 8.12  | 25.74   |
| 79.5  | 80.0  | 33.37 | 7.96  | 26.00   |
| 89.5  | 90.0  | 33.58 | 7.89  | 26.18   |
| 100.5 | 101.1 | 33.75 | 7.68  | 26.34   |
| 110.1 | 110.8 | 33.80 | 7.64  | 26.39   |
| 120.2 | 120.9 | 33.84 | 7.57  | 26.43   |
| 130.1 | 131.0 | 33.86 | 7.53  | 26.45   |
| 140.0 | 140.9 | 33.88 | 7.44  | 26.48   |
| 149.9 | 150.9 | 33.90 | 7.32  | 26.51   |
| 159.8 | 160.9 | 33.92 | 7.22  | 26.54   |
| 169.9 | 171.1 | 33.92 | 7.18  | 26.54   |
| 179.8 | 181.0 | 33.95 | 7.01  | 26.60   |
| 189.7 | 191.0 | 33.96 | 6.99  | 26.60   |
| 199.7 | 201.1 | 33.96 | 6.99  | 26.60   |
| 225.4 | 227.0 | 33.96 | 6.90  | 26.62   |
| 250.3 | 252.1 | 33.98 | 6.79  | 26.64   |
| 275.1 | 277.1 | 33.98 | 6.72  | 26.66   |
| 299.7 | 301.9 | 33.99 | 6.67  | 26.67   |
| 324.5 | 326.9 | 33.99 | 6.61  | 26.68   |
| 350.3 | 352.9 | 33.99 | 6.46  | 26.70   |
| 375.1 | 378.0 | 34.01 | 6.26  | 26.74   |
| 400.0 | 403.1 | 34.01 | 6.19  | 26.75   |
| 424.7 | 428.0 | 34.02 | 6.10  | 26.77   |
| 449.5 | 453.1 | 34.04 | 5.85  | 26.81   |
| 475.2 | 479.0 | 34.05 | 5.66  | 26.85   |
| 500.0 | 504.0 | 34.07 | 5.48  | 26.88   |
| 504.7 | 508.8 | 34.07 | 5.46  | 26.89   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 15.03

DATE 24/ 9/80

TIME (PST) 0339

TAPE: U00454 -427

LONG W 125 36.21

PASS NO. 1

STN: X. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.5   | 2.5   | 32.23 | 13.47 | 24.16   |        |
| 5.0   | 5.0   | 32.24 | 13.42 | 24.17   |        |
| 9.9   | 10.0  | 32.23 | 13.29 | 24.20   |        |
| 15.0  | 15.1  | 32.44 | 11.02 | 24.78   |        |
| 20.1  | 20.2  | 32.51 | 10.28 | 24.96   |        |
| 24.9  | 25.0  | 32.59 | 9.16  | 25.21   | 6.06   |
| 29.9  | 30.1  | 32.64 | 8.69  | 25.32   |        |
| 34.8  | 35.0  | 32.70 | 8.54  | 25.39   |        |
| 39.9  | 40.1  | 32.80 | 8.46  | 25.48   |        |
| 44.7  | 45.0  | 32.87 | 8.39  | 25.55   |        |
| 49.8  | 50.0  | 32.98 | 8.32  | 25.65   | 4.20   |
| 59.7  | 60.0  | 33.23 | 8.03  | 25.88   |        |
| 69.5  | 70.0  | 33.47 | 7.77  | 26.10   |        |
| 74.7  | 75.1  | 33.57 | 7.76  | 26.18   | 3.62   |
| 79.6  | 80.0  | 33.59 | 7.75  | 26.21   |        |
| 89.5  | 90.0  | 33.65 | 7.77  | 26.25   |        |
| 100.3 | 101.0 | 33.80 | 7.68  | 26.38   | 2.78   |
| 110.3 | 111.1 | 33.87 | 7.48  | 26.47   |        |
| 120.1 | 120.9 | 33.90 | 7.36  | 26.50   |        |
| 125.2 | 126.0 | 33.90 | 7.35  | 26.50   | 2.15   |
| 130.2 | 131.0 | 33.91 | 7.29  | 26.52   |        |
| 139.0 | 139.9 | 33.91 | 7.27  | 26.53   |        |

CRUISE NO: 14 CODE

LAT N 48 16.42

DATE 24/ 9/80

TIME (PST) 0416

TAPE: U00454 -428

LONG W 125 30.43

PASS NO. 3

STN: X. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.4   | 2.4   | 32.22 | 13.01 | 24.24   |
| 4.8   | 4.8   | 32.22 | 12.99 | 24.25   |
| 9.9   | 9.9   | 32.22 | 13.00 | 24.25   |
| 14.9  | 15.0  | 32.57 | 10.94 | 24.89   |
| 19.9  | 20.0  | 32.60 | 9.63  | 25.14   |
| 25.1  | 25.2  | 32.70 | 8.79  | 25.35   |
| 29.7  | 29.9  | 32.91 | 8.49  | 25.56   |
| 34.7  | 34.9  | 32.97 | 8.38  | 25.62   |
| 39.8  | 40.1  | 33.06 | 8.24  | 25.72   |
| 44.8  | 45.1  | 33.18 | 8.21  | 25.81   |
| 49.7  | 50.0  | 33.26 | 8.16  | 25.89   |
| 59.8  | 60.1  | 33.43 | 7.97  | 26.05   |
| 69.6  | 70.0  | 33.64 | 7.84  | 26.23   |
| 80.5  | 81.0  | 33.73 | 7.78  | 26.31   |
| 89.5  | 90.1  | 33.80 | 7.64  | 26.38   |
| 100.4 | 101.1 | 33.87 | 7.56  | 26.46   |
| 110.3 | 111.0 | 33.92 | 7.29  | 26.53   |
| 120.1 | 120.9 | 33.92 | 7.26  | 26.53   |
| 128.9 | 129.8 | 33.92 | 7.26  | 26.53   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 18.20

DATE 24/ 9/80

TIME (PST) 0452

TAPE: U00454 -429

LONG W 125 25.06

PASS NO. 5

STN: X. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.5   | 2.5   | 32.07 | 11.87 | 24.34   |        |
| 4.8   | 4.9   | 32.07 | 11.88 | 24.34   |        |
| 10.0  | 10.0  | 32.07 | 11.58 | 24.39   |        |
| 14.9  | 15.0  | 32.21 | 11.04 | 24.60   |        |
| 19.9  | 20.0  | 32.42 | 10.36 | 24.88   |        |
| 24.8  | 24.9  | 32.81 | 9.32  | 25.35   | 3.89   |
| 29.9  | 30.1  | 33.08 | 8.59  | 25.68   |        |
| 34.9  | 35.1  | 33.17 | 8.39  | 25.78   |        |
| 39.8  | 40.0  | 33.27 | 8.19  | 25.89   |        |
| 44.7  | 45.0  | 33.42 | 7.93  | 26.04   |        |
| 49.6  | 49.9  | 33.49 | 7.73  | 26.13   | 2.57   |
| 59.6  | 60.0  | 33.60 | 7.46  | 26.26   |        |
| 69.6  | 70.1  | 33.73 | 7.13  | 26.40   |        |
| 74.5  | 75.0  | 33.77 | 7.10  | 26.44   | 1.92   |
| 79.6  | 80.1  | 33.85 | 7.22  | 26.48   |        |
| 90.4  | 91.0  | 33.91 | 7.05  | 26.55   |        |
| 100.4 | 101.1 | 33.92 | 7.03  | 26.57   | 1.72   |
| 110.3 | 111.1 | 33.92 | 7.03  | 26.56   |        |
| 120.2 | 121.0 | 33.91 | 7.04  | 26.56   |        |
| 127.0 | 127.9 | 33.91 | 7.04  | 26.56   |        |

CRUISE NO: 14 CODE

LAT N 48 19.58

DATE 24/ 9/80

TIME (PST) 0531

TAPE: U00454 -430

LONG W 125 19.30

PASS NO. 7

STN: X. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.2   | 2.2   | 32.24 | 11.58 | 24.53   |
| 5.1   | 5.2   | 32.24 | 11.55 | 24.53   |
| 9.9   | 10.0  | 32.20 | 11.64 | 24.49   |
| 14.9  | 15.0  | 32.57 | 10.76 | 24.93   |
| 19.9  | 20.1  | 32.61 | 10.45 | 25.01   |
| 24.9  | 25.0  | 32.66 | 10.00 | 25.13   |
| 29.8  | 29.9  | 32.93 | 9.26  | 25.46   |
| 34.7  | 34.9  | 33.09 | 8.80  | 25.65   |
| 39.8  | 40.1  | 33.27 | 8.43  | 25.85   |
| 44.7  | 45.0  | 33.33 | 8.24  | 25.93   |
| 49.7  | 50.0  | 33.42 | 7.96  | 26.04   |
| 59.6  | 60.0  | 33.62 | 7.43  | 26.27   |
| 69.6  | 70.0  | 33.75 | 7.11  | 26.42   |
| 80.5  | 81.0  | 33.79 | 6.99  | 26.47   |
| 90.4  | 91.0  | 33.84 | 6.85  | 26.53   |
| 100.3 | 101.0 | 33.92 | 6.81  | 26.60   |
| 110.2 | 110.9 | 33.92 | 6.80  | 26.60   |
| 112.3 | 113.0 | 33.92 | 6.80  | 26.59   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 14 CODE

LAT N 48 21.35

DATE 24/ 9/80

TIME (PST) 0605

TAPE: U00454 -431

LONG W 125 13.53

PASS NO. 9

STN: X. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.8   | 2.9   | 32.24 | 11.96 | 24.46   |        |
| 4.8   | 4.9   | 32.23 | 11.96 | 24.45   |        |
| 10.0  | 10.1  | 32.32 | 11.87 | 24.54   |        |
| 14.9  | 15.0  | 32.56 | 11.27 | 24.83   |        |
| 19.8  | 19.9  | 32.92 | 9.68  | 25.38   |        |
| 24.9  | 25.0  | 33.15 | 8.72  | 25.71   | 3.08   |
| 29.9  | 30.0  | 33.36 | 8.05  | 25.98   |        |
| 35.4  | 35.6  | 33.42 | 7.87  | 26.06   |        |
| 39.7  | 40.0  | 33.54 | 7.60  | 26.19   |        |
| 44.8  | 45.0  | 33.56 | 7.55  | 26.21   |        |
| 49.5  | 49.8  | 33.63 | 7.41  | 26.28   | 2.08   |
| 59.6  | 60.0  | 33.76 | 7.17  | 26.42   |        |
| 69.6  | 70.0  | 33.77 | 7.17  | 26.43   |        |
| 75.5  | 76.0  | 33.80 | 7.08  | 26.46   | 1.71   |
| 80.4  | 80.9  | 33.81 | 6.99  | 26.49   |        |
| 90.4  | 91.0  | 33.84 | 6.97  | 26.51   |        |
| 100.3 | 100.9 | 33.88 | 6.89  | 26.55   | 1.52   |
| 110.3 | 111.0 | 33.89 | 6.88  | 26.57   |        |
| 120.1 | 120.9 | 33.91 | 6.88  | 26.58   |        |
| 125.1 | 126.0 | 33.91 | 6.89  | 26.58   | 1.50   |
| 130.0 | 130.9 | 33.91 | 6.87  | 26.58   |        |
| 140.2 | 141.1 | 33.90 | 6.77  | 26.59   |        |
| 149.9 | 151.0 | 33.91 | 6.71  | 26.60   | 1.18   |
| 159.7 | 160.8 | 33.92 | 6.69  | 26.61   |        |
| 169.8 | 171.0 | 33.92 | 6.69  | 26.61   |        |

CRUISE NO: 14 CODE

LAT N 48 23.12

DATE 24/ 9/80

TIME (PST) 0754

TAPE: U00454 -432

LONG W 125 8.17

PASS NO. 11

STN: X. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.5   | 2.5   | 32.53 | 11.36 | 24.79   |
| 5.0   | 5.0   | 32.57 | 11.33 | 24.83   |
| 9.9   | 9.9   | 32.69 | 10.70 | 25.03   |
| 14.9  | 15.0  | 32.86 | 9.85  | 25.31   |
| 19.8  | 19.9  | 32.89 | 9.67  | 25.36   |
| 24.6  | 24.8  | 32.93 | 9.51  | 25.42   |
| 29.8  | 30.0  | 33.10 | 8.86  | 25.65   |
| 34.6  | 34.8  | 33.41 | 7.87  | 26.05   |
| 39.7  | 40.0  | 33.56 | 7.54  | 26.21   |
| 44.9  | 45.2  | 33.60 | 7.45  | 26.25   |
| 49.8  | 50.1  | 33.71 | 7.21  | 26.37   |
| 59.7  | 60.0  | 33.82 | 7.08  | 26.48   |
| 69.6  | 70.0  | 33.86 | 6.94  | 26.53   |
| 80.5  | 81.0  | 33.88 | 6.86  | 26.56   |
| 90.4  | 91.0  | 33.90 | 6.82  | 26.58   |
| 99.4  | 100.1 | 33.90 | 6.81  | 26.58   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 15 CODE  
 LAT N 48 39.00  
 DATE 22/10/80  
 TIME (PST) 1857

TAPE: U00454 -433  
 LONG W 125 2.50  
 PASS NO. 3  
 STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.8   | 2.8   | 31.68 | 9.92 | 24.38   |        |
| 4.9   | 4.9   | 31.68 | 9.92 | 24.38   |        |
| 10.0  | 10.1  | 31.68 | 9.92 | 24.37   | 4.68   |
| 15.0  | 15.1  | 31.68 | 9.92 | 24.38   |        |
| 19.9  | 20.0  | 31.68 | 9.88 | 24.38   |        |
| 24.9  | 25.0  | 31.68 | 9.85 | 24.39   | 4.67   |
| 29.8  | 29.9  | 31.68 | 9.82 | 24.39   | 3.65   |
| 34.8  | 34.9  | 31.68 | 9.82 | 24.39   |        |
| 39.8  | 40.0  | 31.76 | 9.62 | 24.49   |        |
| 44.8  | 45.0  | 31.86 | 9.55 | 24.58   |        |
| 49.7  | 50.0  | 32.24 | 9.26 | 24.92   |        |
| 53.4  | 53.7  | 32.26 | 9.24 | 24.94   |        |

CRUISE NO: 15 CODE  
 LAT N 48 35.60  
 DATE 22/10/80  
 TIME (PST) 1947

TAPE: U00454 -434  
 LONG W 125 9.00  
 PASS NO. 5  
 STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.8   | 2.8   | 32.16 | 11.59 | 24.46   |
| 5.0   | 5.0   | 32.17 | 11.59 | 24.47   |
| 10.0  | 10.1  | 32.17 | 11.58 | 24.47   |
| 15.0  | 15.1  | 32.15 | 11.58 | 24.46   |
| 19.9  | 20.0  | 32.24 | 11.40 | 24.56   |
| 24.9  | 25.1  | 32.07 | 10.52 | 24.58   |
| 30.0  | 30.2  | 32.15 | 9.78  | 24.76   |
| 34.8  | 35.0  | 32.40 | 9.18  | 25.06   |
| 39.8  | 40.0  | 32.45 | 9.16  | 25.10   |
| 44.8  | 45.0  | 32.54 | 9.19  | 25.17   |
| 49.7  | 49.9  | 32.83 | 9.09  | 25.41   |
| 59.7  | 60.0  | 33.14 | 8.44  | 25.75   |
| 69.7  | 70.1  | 33.25 | 8.23  | 25.87   |
| 79.5  | 80.0  | 33.41 | 7.95  | 26.03   |
| 90.4  | 90.9  | 33.55 | 7.71  | 26.18   |
| 100.5 | 101.1 | 33.70 | 7.47  | 26.33   |
| 103.3 | 104.0 | 33.70 | 7.46  | 26.33   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 15 CODE

LAT N 48 32.20

DATE 22/10/80

TIME (PST) 2030

TAPE: U00454 -435

LONG W 125 15.50

PASS NO. 7

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.8   | 2.8   | 32.53 | 11.18 | 24.83   |        |
| 4.9   | 4.9   | 32.53 | 11.17 | 24.82   |        |
| 10.1  | 10.1  | 32.54 | 11.15 | 24.84   | 6.08   |
| 15.0  | 15.1  | 32.54 | 11.12 | 24.84   |        |
| 19.9  | 20.0  | 32.56 | 11.12 | 24.85   |        |
| 24.9  | 25.0  | 32.56 | 11.11 | 24.86   | 4.43   |
| 29.8  | 30.0  | 32.63 | 10.75 | 24.98   |        |
| 34.8  | 35.0  | 32.82 | 10.17 | 25.22   |        |
| 39.8  | 40.0  | 32.86 | 9.72  | 25.33   |        |
| 44.6  | 44.8  | 33.22 | 8.46  | 25.81   |        |
| 49.5  | 49.8  | 33.22 | 8.44  | 25.81   | 2.99   |
| 59.7  | 60.0  | 33.40 | 8.00  | 26.02   |        |
| 69.6  | 70.0  | 33.60 | 7.66  | 26.23   |        |
| 74.6  | 75.0  | 33.68 | 7.51  | 26.31   | 2.29   |
| 80.5  | 81.0  | 33.70 | 7.47  | 26.33   |        |
| 90.4  | 91.0  | 33.73 | 7.40  | 26.37   |        |
| 100.4 | 101.1 | 33.80 | 7.26  | 26.44   | 1.86   |
| 103.4 | 104.1 | 33.80 | 7.25  | 26.44   |        |

CRUISE NO: 15 CODE

LAT N 48 28.90

DATE 22/10/80

TIME (PST) 2120

TAPE: U00454 -436

LONG W 125 21.80

PASS NO. 9

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.6   | 2.6   | 32.39 | 11.44 | 24.67   |
| 4.9   | 5.0   | 32.44 | 11.44 | 24.71   |
| 10.0  | 10.1  | 32.44 | 11.43 | 24.71   |
| 14.9  | 15.0  | 32.47 | 11.34 | 24.75   |
| 19.8  | 19.9  | 32.52 | 10.98 | 24.85   |
| 24.8  | 24.9  | 32.69 | 10.16 | 25.13   |
| 30.0  | 30.1  | 32.95 | 9.20  | 25.49   |
| 34.9  | 35.0  | 33.02 | 8.95  | 25.58   |
| 39.8  | 40.0  | 33.21 | 8.52  | 25.79   |
| 44.6  | 44.8  | 33.33 | 8.24  | 25.93   |
| 49.7  | 50.0  | 33.38 | 8.14  | 25.98   |
| 59.6  | 59.9  | 33.60 | 7.68  | 26.22   |
| 69.7  | 70.1  | 33.68 | 7.46  | 26.32   |
| 80.5  | 81.0  | 33.76 | 7.35  | 26.40   |
| 90.5  | 91.1  | 33.82 | 7.22  | 26.46   |
| 100.4 | 101.1 | 33.86 | 7.14  | 26.50   |
| 110.2 | 110.9 | 33.87 | 7.08  | 26.52   |
| 120.1 | 121.0 | 33.87 | 7.08  | 26.52   |
| 125.3 | 126.1 | 33.87 | 7.08  | 26.52   |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 15 CODE  
 LAT N 48 25.50  
 DATE 22/10/80  
 TIME (PST) 2208

TAPE: U00454 -437  
 LONG W 125 28.30  
 PASS NO. 11  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.4   | 2.4   | 32.51 | 11.21 | 24.80   |        |
| 5.1   | 5.1   | 32.50 | 11.21 | 24.80   |        |
| 10.0  | 10.1  | 32.51 | 11.21 | 24.80   | 5.99   |
| 14.9  | 15.0  | 32.51 | 11.21 | 24.80   |        |
| 20.0  | 20.1  | 32.51 | 11.21 | 24.81   |        |
| 24.8  | 24.9  | 32.52 | 11.21 | 24.81   | 5.95   |
| 30.0  | 30.1  | 32.53 | 11.18 | 24.82   |        |
| 34.8  | 35.0  | 32.67 | 10.74 | 25.01   |        |
| 39.7  | 40.0  | 33.04 | 9.49  | 25.51   |        |
| 44.7  | 44.9  | 33.25 | 8.63  | 25.81   |        |
| 49.6  | 49.9  | 33.45 | 7.97  | 26.06   | 2.38   |
| 59.6  | 60.0  | 33.59 | 7.61  | 26.23   |        |
| 69.5  | 69.9  | 33.68 | 7.41  | 26.32   |        |
| 74.6  | 75.0  | 33.74 | 7.32  | 26.38   | 2.00   |
| 79.6  | 80.1  | 33.80 | 7.23  | 26.44   |        |
| 90.5  | 91.1  | 33.84 | 7.14  | 26.49   |        |
| 100.2 | 100.9 | 33.87 | 7.17  | 26.50   | 1.74   |
| 110.3 | 111.0 | 33.87 | 7.14  | 26.51   |        |
| 120.2 | 121.0 | 33.88 | 7.08  | 26.53   |        |
| 125.1 | 125.9 | 33.89 | 7.04  | 26.54   | 1.47   |
| 130.0 | 130.9 | 33.89 | 7.00  | 26.54   |        |
| 140.2 | 141.2 | 33.89 | 6.97  | 26.55   |        |
| 149.9 | 150.9 | 33.89 | 6.94  | 26.55   | 1.09   |
| 153.8 | 154.9 | 33.89 | 6.94  | 26.55   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 15 CODE

LAT N 48 22.00

DATE 22/10/80

TIME (PST) 2313

TAPE: U00454 -438

LONG W 125 34.70

PASS NO. 13

STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.0   | 3.0   | 32.49 | 11.47 | 24.74   |
| 5.1   | 5.1   | 32.49 | 11.47 | 24.74   |
| 9.9   | 10.0  | 32.49 | 11.47 | 24.74   |
| 14.9  | 14.9  | 32.49 | 11.48 | 24.74   |
| 20.0  | 20.1  | 32.50 | 11.45 | 24.75   |
| 24.9  | 25.0  | 32.94 | 9.85  | 25.37   |
| 29.9  | 30.1  | 33.04 | 9.32  | 25.54   |
| 34.9  | 35.1  | 33.21 | 8.69  | 25.77   |
| 39.9  | 40.1  | 33.27 | 8.47  | 25.85   |
| 44.8  | 45.0  | 33.40 | 8.13  | 26.00   |
| 49.7  | 49.9  | 33.48 | 7.92  | 26.09   |
| 59.7  | 60.0  | 33.55 | 7.74  | 26.18   |
| 69.7  | 70.1  | 33.66 | 7.53  | 26.29   |
| 80.4  | 81.0  | 33.71 | 7.40  | 26.35   |
| 89.7  | 90.2  | 33.75 | 7.32  | 26.39   |
| 100.4 | 101.1 | 33.78 | 7.25  | 26.43   |
| 110.3 | 111.0 | 33.82 | 7.11  | 26.48   |
| 120.1 | 121.0 | 33.86 | 7.03  | 26.52   |
| 130.2 | 131.1 | 33.87 | 7.03  | 26.52   |
| 133.0 | 133.9 | 33.86 | 7.03  | 26.52   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 15 CODE

LAT N 48 18.60

DATE 23/10/80

TIME (PST) 0003

TARE: U00454 -439

LONG W 125 41.20

PASS NO. 15

SYN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.3   | 2.3   | 32.15 | 11.22 | 24.52   |        |
| 4.6   | 4.7   | 32.20 | 11.22 | 24.56   |        |
| 10.2  | 10.2  | 32.21 | 11.18 | 24.58   | 4.49   |
| 14.9  | 15.0  | 32.17 | 11.08 | 24.56   |        |
| 19.9  | 20.0  | 32.36 | 9.92  | 24.90   |        |
| 24.7  | 24.8  | 32.41 | 9.40  | 25.03   | 3.75   |
| 29.9  | 30.0  | 32.57 | 9.20  | 25.19   |        |
| 34.9  | 35.1  | 32.70 | 9.40  | 25.25   |        |
| 39.9  | 40.1  | 32.86 | 8.94  | 25.46   |        |
| 44.8  | 45.0  | 32.94 | 8.74  | 25.55   |        |
| 49.7  | 50.0  | 33.04 | 8.58  | 25.65   | 3.02   |
| 60.4  | 60.8  | 33.19 | 8.34  | 25.80   |        |
| 69.7  | 70.1  | 33.36 | 8.06  | 25.98   |        |
| 75.4  | 75.9  | 33.43 | 7.91  | 26.05   | 3.14   |
| 80.5  | 81.0  | 33.49 | 7.81  | 26.12   |        |
| 89.6  | 90.1  | 33.53 | 7.72  | 26.16   |        |
| 100.4 | 101.0 | 33.69 | 7.40  | 26.33   | 2.41   |
| 110.2 | 110.9 | 33.81 | 7.18  | 26.46   |        |
| 120.2 | 121.0 | 33.92 | 7.09  | 26.56   |        |
| 125.3 | 126.1 | 33.93 | 7.10  | 26.57   | 2.03   |
| 130.4 | 131.2 | 33.93 | 7.11  | 26.56   |        |
| 135.1 | 136.0 | 33.93 | 7.11  | 26.56   | 2.04   |
| 140.0 | 140.9 | 33.94 | 7.07  | 26.57   |        |
| 141.9 | 142.8 | 33.94 | 7.04  | 26.58   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 15 CODE

LAT N 48 15.10

DATE 23/10/80

TIME (PST) 0119

TAPE: U00454 -440

LONG W 125 47.70

PASS NO. 17

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.7   | 3.7   | 32.32 | 13.15 | 24.29   |
| 5.0   | 5.0   | 32.32 | 13.15 | 24.29   |
| 10.0  | 10.0  | 32.32 | 13.16 | 24.29   |
| 15.0  | 15.1  | 32.32 | 13.15 | 24.29   |
| 19.9  | 20.0  | 32.32 | 13.11 | 24.30   |
| 24.9  | 25.0  | 32.57 | 11.57 | 24.78   |
| 29.8  | 29.9  | 32.59 | 10.00 | 25.08   |
| 34.8  | 35.0  | 32.66 | 8.96  | 25.30   |
| 39.8  | 40.0  | 32.65 | 8.65  | 25.33   |
| 44.6  | 44.9  | 32.70 | 8.42  | 25.41   |
| 49.8  | 50.1  | 32.84 | 8.61  | 25.49   |
| 59.6  | 59.9  | 32.98 | 8.75  | 25.58   |
| 69.7  | 70.1  | 33.08 | 8.51  | 25.69   |
| 79.5  | 80.0  | 33.25 | 8.22  | 25.87   |
| 90.5  | 91.0  | 33.43 | 7.91  | 26.06   |
| 100.5 | 101.1 | 33.52 | 7.74  | 26.15   |
| 110.2 | 110.9 | 33.66 | 7.59  | 26.28   |
| 120.3 | 121.1 | 33.81 | 7.43  | 26.42   |
| 130.1 | 130.9 | 33.86 | 7.43  | 26.46   |
| 140.1 | 141.0 | 33.86 | 7.40  | 26.47   |
| 150.0 | 151.0 | 33.88 | 7.34  | 26.49   |
| 160.0 | 161.1 | 33.91 | 7.24  | 26.53   |
| 169.9 | 171.1 | 33.93 | 7.20  | 26.55   |
| 180.0 | 181.2 | 33.93 | 7.15  | 26.56   |
| 184.4 | 185.6 | 33.93 | 7.14  | 26.56   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 15 CODE  
 LAT N 48 12.90  
 DATE 23/10/80  
 TIME (PST) 0153

TAPE: U00454 -441  
 LONG W 125 52.00  
 PASS NO. 19  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.6   | 2.6   | 32.30 | 13.46 | 24.21   |
| 4.8   | 4.9   | 32.31 | 13.45 | 24.22   |
| 10.0  | 10.1  | 32.33 | 13.45 | 24.24   |
| 15.1  | 15.1  | 32.33 | 13.45 | 24.24   |
| 19.9  | 20.0  | 32.33 | 13.44 | 24.24   |
| 24.9  | 25.0  | 32.34 | 13.44 | 24.25   |
| 30.0  | 30.1  | 32.63 | 10.64 | 24.99   |
| 34.8  | 35.0  | 32.62 | 9.24  | 25.22   |
| 39.9  | 40.1  | 32.64 | 8.65  | 25.32   |
| 44.8  | 45.0  | 32.68 | 8.53  | 25.38   |
| 49.7  | 50.0  | 32.69 | 8.43  | 25.40   |
| 59.6  | 59.9  | 32.82 | 8.14  | 25.55   |
| 70.4  | 70.8  | 33.05 | 7.92  | 25.75   |
| 79.7  | 80.1  | 33.28 | 7.94  | 25.93   |
| 89.5  | 90.0  | 33.42 | 7.90  | 26.05   |
| 100.4 | 101.0 | 33.56 | 7.79  | 26.18   |
| 110.4 | 111.1 | 33.75 | 7.61  | 26.35   |
| 120.4 | 121.2 | 33.84 | 7.51  | 26.43   |
| 130.3 | 131.1 | 33.87 | 7.43  | 26.47   |
| 140.0 | 140.9 | 33.88 | 7.32  | 26.50   |
| 150.2 | 151.2 | 33.89 | 7.29  | 26.51   |
| 159.9 | 160.9 | 33.91 | 7.24  | 26.53   |
| 169.5 | 170.6 | 33.91 | 7.20  | 26.54   |
| 179.7 | 180.9 | 33.93 | 7.21  | 26.55   |
| 189.9 | 191.2 | 33.94 | 7.16  | 26.56   |
| 199.6 | 200.9 | 33.94 | 7.11  | 26.57   |
| 225.4 | 227.0 | 33.96 | 7.00  | 26.60   |
| 250.3 | 252.1 | 33.98 | 6.90  | 26.63   |
| 275.1 | 277.1 | 33.99 | 6.80  | 26.65   |
| 300.0 | 302.2 | 33.99 | 6.63  | 26.68   |
| 324.7 | 327.1 | 34.02 | 6.22  | 26.75   |
| 350.4 | 353.0 | 34.05 | 5.62  | 26.85   |
| 375.1 | 377.9 | 34.06 | 5.49  | 26.87   |
| 397.0 | 400.1 | 34.06 | 5.40  | 26.89   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 15 CODE  
 LAT N 48 10.60  
 DATE 23/10/80  
 TIME (PST) 0244

TAPE: U00454 -442  
 LONG W 125 56.20  
 PASS NO. 21  
 STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.6   | 3.6   | 32.36 | 13.97 | 24.16   |
| 4.9   | 5.0   | 32.36 | 13.97 | 24.16   |
| 10.0  | 10.0  | 32.37 | 13.97 | 24.16   |
| 15.1  | 15.1  | 32.36 | 13.98 | 24.16   |
| 20.0  | 20.1  | 32.36 | 13.97 | 24.16   |
| 25.1  | 25.2  | 32.58 | 10.88 | 24.92   |
| 30.0  | 30.2  | 32.57 | 10.34 | 25.00   |
| 34.6  | 34.8  | 32.61 | 9.39  | 25.19   |
| 39.8  | 40.0  | 32.63 | 8.83  | 25.29   |
| 44.8  | 45.0  | 32.60 | 8.65  | 25.30   |
| 49.7  | 49.9  | 32.62 | 8.41  | 25.35   |
| 59.7  | 60.0  | 32.73 | 8.31  | 25.45   |
| 69.7  | 70.0  | 32.93 | 8.09  | 25.64   |
| 80.5  | 81.0  | 33.21 | 8.07  | 25.86   |
| 89.5  | 90.1  | 33.40 | 7.87  | 26.04   |
| 100.3 | 100.9 | 33.62 | 7.66  | 26.24   |
| 110.5 | 111.2 | 33.72 | 7.58  | 26.33   |
| 120.2 | 121.0 | 33.81 | 7.54  | 26.41   |
| 130.1 | 130.9 | 33.87 | 7.46  | 26.47   |
| 140.1 | 141.0 | 33.89 | 7.43  | 26.48   |
| 150.6 | 151.6 | 33.90 | 7.34  | 26.51   |
| 159.9 | 161.0 | 33.92 | 7.29  | 26.53   |
| 169.7 | 170.8 | 33.92 | 7.21  | 26.54   |
| 179.8 | 181.0 | 33.93 | 7.14  | 26.56   |
| 189.7 | 191.0 | 33.95 | 7.12  | 26.57   |
| 199.8 | 201.1 | 33.96 | 7.10  | 26.59   |
| 225.4 | 226.9 | 33.97 | 7.02  | 26.61   |
| 250.4 | 252.2 | 33.98 | 6.96  | 26.62   |
| 275.0 | 276.9 | 33.98 | 6.87  | 26.64   |
| 299.9 | 302.0 | 33.99 | 6.77  | 26.66   |
| 324.6 | 327.0 | 34.00 | 6.62  | 26.68   |
| 350.3 | 353.0 | 34.02 | 6.37  | 26.73   |
| 375.2 | 378.0 | 34.02 | 6.03  | 26.78   |
| 399.8 | 402.8 | 34.04 | 5.79  | 26.82   |
| 424.8 | 428.1 | 34.05 | 5.50  | 26.87   |
| 439.4 | 442.9 | 34.07 | 5.40  | 26.90   |



Data Listings 1981



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 16 CODE

LAT N 48 39.00

DATE 27/11/80

TIME (PST) 1249

TAPE: U00454 -443

LONG W 125 2.50

PASS NO. 1

STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.2   | 4.2   | 29.91 | 10.39 | 22.92   |
| 5.1   | 5.1   | 29.92 | 10.39 | 22.92   |
| 10.2  | 10.2  | 30.31 | 10.58 | 23.20   |
| 14.9  | 15.0  | 31.13 | 10.95 | 23.77   |
| 20.1  | 20.2  | 31.18 | 10.89 | 23.83   |
| 24.8  | 24.9  | 31.33 | 11.01 | 23.92   |
| 30.0  | 30.1  | 31.65 | 10.79 | 24.21   |
| 34.9  | 35.0  | 31.65 | 10.60 | 24.24   |
| 40.0  | 40.2  | 31.75 | 10.02 | 24.41   |
| 44.9  | 45.1  | 31.94 | 9.56  | 24.64   |
| 49.8  | 50.0  | 31.98 | 9.57  | 24.66   |
| 59.7  | 60.0  | 32.47 | 9.08  | 25.13   |
| 69.5  | 69.9  | 32.83 | 8.73  | 25.47   |
| 79.6  | 80.0  | 32.84 | 8.73  | 25.47   |

CRUISE NO: 17 CODE

LAT N 48 39.00

DATE 6/ 1/81

TIME (PST) 0807

TAPE: U00454 -444

LONG W 125 2.50

PASS NO. 1

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 2.3   | 2.3   | 27.44 | 9.67 | 21.11   |        |
| 5.0   | 5.1   | 27.50 | 9.73 | 21.15   |        |
| 9.9   | 9.9   | 28.08 | 9.75 | 21.59   | 6.51   |
| 15.1  | 15.1  | 28.73 | 9.73 | 22.10   |        |
| 19.9  | 19.9  | 29.03 | 9.70 | 22.34   |        |
| 24.9  | 25.0  | 29.60 | 9.59 | 22.81   | 6.39   |
| 30.0  | 30.1  | 29.70 | 9.58 | 22.88   |        |
| 34.8  | 34.9  | 29.98 | 9.60 | 23.10   |        |
| 39.9  | 40.0  | 30.20 | 9.49 | 23.29   |        |
| 44.9  | 45.0  | 31.09 | 9.32 | 24.01   |        |
| 49.9  | 50.1  | 31.52 | 9.23 | 24.36   |        |
| 57.3  | 57.6  | 32.08 | 9.23 | 24.80   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 17 CODE

LAT N 48 35.60

DATE 6/ 1/81

TIME (PST) 0912

TAPE: U00454 -445

LONG W 125 9.00

PASS NO. 3

STN: 102

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 3.9   | 3.9   | 27.15 | 9.95 | 20.84   |
| 5.0   | 5.0   | 27.20 | 9.94 | 20.88   |
| 10.1  | 10.1  | 28.58 | 9.77 | 21.98   |
| 14.7  | 14.7  | 28.94 | 9.69 | 22.27   |
| 20.0  | 20.0  | 29.19 | 9.66 | 22.47   |
| 24.9  | 25.0  | 29.75 | 9.65 | 22.91   |
| 29.9  | 30.0  | 29.82 | 9.60 | 22.97   |
| 34.8  | 34.9  | 30.02 | 9.57 | 23.14   |
| 39.9  | 40.0  | 30.25 | 9.49 | 23.33   |
| 45.0  | 45.1  | 30.74 | 9.35 | 23.73   |
| 49.9  | 50.1  | 31.39 | 8.93 | 24.31   |
| 59.8  | 60.0  | 31.43 | 8.68 | 24.37   |
| 69.7  | 70.0  | 31.80 | 8.98 | 24.62   |
| 79.7  | 80.1  | 32.15 | 9.41 | 24.82   |
| 89.7  | 90.0  | 32.46 | 9.49 | 25.05   |
| 99.9  | 100.3 | 32.80 | 9.26 | 25.36   |
| 110.5 | 111.0 | 32.82 | 9.25 | 25.37   |
| 113.3 | 113.8 | 32.82 | 9.25 | 25.37   |

CRUISE NO: 17 CODE

LAT N 48 32.20

DATE 6/ 1/81

TIME (PST) 0957

TAPE: U00454 -446

LONG W 125 15.50

PASS NO. 5

STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.7   | 3.7   | 27.80 | 10.04 | 21.33   |        |
| 4.9   | 5.0   | 27.81 | 10.04 | 21.34   |        |
| 10.0  | 10.0  | 27.80 | 10.05 | 21.33   | 6.47   |
| 15.0  | 15.0  | 29.44 | 10.34 | 22.56   |        |
| 20.0  | 20.1  | 30.76 | 9.94  | 23.66   |        |
| 24.9  | 25.0  | 30.95 | 9.40  | 23.89   | 5.54   |
| 29.9  | 30.0  | 31.09 | 9.14  | 24.04   |        |
| 34.8  | 34.9  | 31.29 | 8.95  | 24.23   |        |
| 39.9  | 40.0  | 31.53 | 9.01  | 24.40   |        |
| 44.9  | 45.1  | 31.61 | 8.83  | 24.49   |        |
| 49.8  | 50.0  | 31.64 | 8.88  | 24.51   | 5.01   |
| 59.9  | 60.1  | 31.97 | 9.25  | 24.71   |        |
| 69.9  | 70.2  | 32.30 | 9.68  | 24.90   |        |
| 80.5  | 80.9  | 32.52 | 9.67  | 25.08   |        |
| 89.6  | 90.0  | 32.95 | 9.17  | 25.49   |        |
| 99.6  | 100.1 | 33.19 | 8.84  | 25.72   | 3.84   |
| 110.4 | 111.0 | 33.39 | 8.46  | 25.95   |        |
| 112.5 | 113.1 | 33.40 | 8.45  | 25.95   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 17 CODE

LAT N 48 28.90

DATE 6/ 1/81

TIME (PST) 1048

TAPE: U00454 -447

LONG W 125 21.80

PASS NO. 7

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.3   | 3.3   | 30.18 | 9.90  | 23.21   |
| 5.1   | 5.1   | 30.20 | 9.90  | 23.22   |
| 10.0  | 10.0  | 30.29 | 9.88  | 23.30   |
| 14.9  | 15.0  | 30.44 | 9.67  | 23.45   |
| 19.9  | 20.0  | 30.60 | 9.65  | 23.57   |
| 24.9  | 25.0  | 30.95 | 9.22  | 23.92   |
| 29.9  | 30.0  | 31.18 | 9.10  | 24.12   |
| 34.8  | 35.0  | 31.34 | 8.98  | 24.26   |
| 39.8  | 39.9  | 31.57 | 8.93  | 24.44   |
| 44.9  | 45.1  | 31.62 | 8.94  | 24.49   |
| 49.6  | 49.8  | 31.63 | 8.97  | 24.49   |
| 59.8  | 60.1  | 31.76 | 8.94  | 24.59   |
| 69.5  | 69.9  | 31.99 | 9.32  | 24.72   |
| 79.8  | 80.2  | 32.60 | 10.15 | 25.06   |
| 89.6  | 90.0  | 32.76 | 9.76  | 25.25   |
| 100.4 | 100.9 | 33.02 | 9.22  | 25.53   |
| 110.3 | 110.9 | 33.15 | 9.08  | 25.66   |
| 120.4 | 121.0 | 33.37 | 8.70  | 25.89   |
| 130.4 | 131.1 | 33.54 | 8.31  | 26.08   |
| 140.4 | 141.2 | 33.65 | 8.04  | 26.21   |
| 150.0 | 150.9 | 33.68 | 8.02  | 26.23   |
| 150.0 | 150.9 | 33.68 | 8.02  | 26.23   |

CRUISE NO: 17 CODE

LAT N 48 25.50

DATE 6/ 1/81

TIME (PST) 1137

TAPE: U00454 -448

LONG W 125 28.30

PASS NO. 9

STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.9   | 4.9   | 30.47 | 9.12  | 23.56   |        |
| 10.1  | 10.1  | 30.59 | 9.16  | 23.65   | 5.84   |
| 14.9  | 14.9  | 30.63 | 9.19  | 23.67   |        |
| 19.9  | 20.0  | 30.96 | 9.91  | 23.82   |        |
| 24.9  | 25.0  | 31.06 | 8.80  | 24.07   | 5.35   |
| 29.7  | 29.9  | 31.37 | 9.97  | 24.13   |        |
| 34.9  | 35.0  | 31.48 | 10.14 | 24.18   |        |
| 39.8  | 39.9  | 31.68 | 10.26 | 24.32   |        |
| 44.8  | 45.0  | 31.72 | 10.30 | 24.35   |        |
| 49.8  | 50.1  | 31.77 | 10.33 | 24.38   | 5.97   |
| 59.8  | 60.1  | 32.15 | 10.70 | 24.61   |        |
| 69.7  | 70.0  | 32.23 | 10.75 | 24.67   |        |
| 74.6  | 75.0  | 32.32 | 10.76 | 24.73   | 6.25   |
| 79.6  | 79.9  | 32.46 | 10.72 | 24.85   |        |
| 89.7  | 90.1  | 32.49 | 10.60 | 24.89   |        |
| 100.5 | 101.0 | 32.56 | 10.49 | 24.97   | 5.71   |
| 109.5 | 110.1 | 32.60 | 10.38 | 25.02   |        |
| 120.3 | 121.0 | 33.00 | 9.40  | 25.49   |        |
| 125.3 | 126.0 | 33.29 | 8.77  | 25.81   | 3.87   |
| 130.2 | 130.9 | 33.31 | 8.72  | 25.84   |        |
| 133.4 | 134.1 | 33.34 | 8.66  | 25.87   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 17 CODE  
 LAT N 48 22.00  
 DATE 6/ 1/81  
 TIME (PST) 1229

TAPE: U00454 -449  
 LONG W 125 34.70  
 PASS NO. 11  
 STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.4   | 2.4   | 31.46 | 9.13  | 24.33   |
| 4.5   | 4.6   | 31.48 | 9.18  | 24.33   |
| 10.0  | 10.1  | 31.51 | 9.15  | 24.37   |
| 15.0  | 15.0  | 31.53 | 9.14  | 24.39   |
| 19.9  | 20.0  | 31.54 | 9.14  | 24.39   |
| 24.8  | 24.9  | 31.68 | 9.53  | 24.44   |
| 29.9  | 30.0  | 31.94 | 10.29 | 24.52   |
| 34.8  | 35.0  | 32.21 | 10.56 | 24.68   |
| 39.9  | 40.1  | 32.26 | 10.66 | 24.71   |
| 44.7  | 44.9  | 32.35 | 10.85 | 24.74   |
| 49.8  | 50.1  | 32.40 | 10.93 | 24.77   |
| 59.7  | 60.0  | 32.42 | 10.93 | 24.79   |
| 69.7  | 70.0  | 32.44 | 10.94 | 24.80   |
| 79.6  | 80.0  | 32.45 | 10.83 | 24.82   |
| 89.6  | 90.1  | 32.61 | 10.54 | 25.00   |
| 100.4 | 100.9 | 32.81 | 10.10 | 25.23   |
| 109.5 | 110.1 | 32.88 | 9.87  | 25.32   |
| 120.4 | 121.0 | 33.00 | 9.27  | 25.51   |
| 130.2 | 131.0 | 33.21 | 8.84  | 25.74   |
| 140.1 | 141.0 | 33.40 | 8.52  | 25.94   |
| 147.0 | 147.8 | 33.53 | 8.26  | 26.08   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 17 CODE  
 LAT N 48 18.60  
 DATE 6/ 1/81  
 TIME (PST) 1313

TAPE: U00454 -450  
 LONG W 125 41.20  
 PASS NO. 13  
 STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.7   | 3.7   | 32.32 | 10.60 | 24.76   |        |
| 4.9   | 4.9   | 32.40 | 10.59 | 24.83   |        |
| 9.9   | 9.9   | 32.40 | 10.59 | 24.83   | 6.53   |
| 14.9  | 15.0  | 32.40 | 10.58 | 24.83   |        |
| 19.9  | 20.0  | 32.41 | 10.58 | 24.83   |        |
| 24.9  | 25.0  | 32.41 | 10.61 | 24.83   | 6.41   |
| 29.8  | 30.0  | 32.43 | 10.65 | 24.84   |        |
| 34.8  | 35.0  | 32.45 | 10.69 | 24.85   |        |
| 39.7  | 39.9  | 32.48 | 10.77 | 24.86   |        |
| 44.6  | 44.9  | 32.59 | 10.80 | 24.94   |        |
| 49.7  | 49.9  | 32.63 | 10.75 | 24.98   | 5.90   |
| 59.7  | 60.0  | 32.73 | 10.40 | 25.11   |        |
| 69.5  | 69.8  | 32.85 | 9.69  | 25.33   |        |
| 74.7  | 75.1  | 33.00 | 9.44  | 25.48   | 4.61   |
| 80.4  | 80.9  | 33.03 | 9.35  | 25.52   |        |
| 89.6  | 90.1  | 33.10 | 9.22  | 25.60   |        |
| 100.5 | 101.0 | 33.18 | 8.92  | 25.71   | 4.09   |
| 110.3 | 111.0 | 33.26 | 8.75  | 25.79   |        |
| 120.3 | 121.1 | 33.40 | 8.51  | 25.94   |        |
| 125.2 | 125.9 | 33.50 | 8.33  | 26.05   | 3.76   |
| 130.2 | 131.0 | 33.51 | 8.29  | 26.07   |        |
| 140.1 | 141.0 | 33.63 | 8.15  | 26.18   |        |
| 145.1 | 146.0 | 33.72 | 7.92  | 26.28   | 2.94   |
| 149.9 | 150.9 | 33.75 | 7.80  | 26.32   |        |
| 153.0 | 153.9 | 33.86 | 7.49  | 26.45   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 17 CODE

LAT N 48 15.10

DATE 6/ 1/81

TIME (PST) 1410

TAPE: U00454 -451

LONG W 125 47.70

PASS NO. 15

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.0   | 3.0   | 32.34 | 10.06 | 24.87   |
| 4.8   | 4.8   | 32.34 | 10.05 | 24.87   |
| 9.9   | 10.0  | 32.34 | 10.04 | 24.87   |
| 14.9  | 15.0  | 32.34 | 10.03 | 24.87   |
| 19.8  | 19.9  | 32.34 | 10.03 | 24.87   |
| 24.9  | 25.1  | 32.34 | 10.02 | 24.88   |
| 30.0  | 30.1  | 32.34 | 10.02 | 24.87   |
| 34.8  | 35.0  | 32.34 | 9.99  | 24.88   |
| 39.8  | 40.1  | 32.34 | 9.94  | 24.89   |
| 44.7  | 44.9  | 32.34 | 9.85  | 24.90   |
| 49.8  | 50.1  | 32.34 | 9.78  | 24.92   |
| 59.6  | 60.0  | 32.51 | 9.50  | 25.09   |
| 69.6  | 70.0  | 32.92 | 9.65  | 25.39   |
| 79.5  | 79.9  | 33.04 | 9.24  | 25.55   |
| 89.5  | 90.1  | 33.05 | 8.97  | 25.60   |
| 99.7  | 100.3 | 33.19 | 8.86  | 25.73   |
| 110.2 | 110.9 | 33.41 | 8.43  | 25.96   |
| 120.3 | 121.0 | 33.46 | 8.35  | 26.02   |
| 130.2 | 131.0 | 33.50 | 8.27  | 26.06   |
| 140.2 | 141.1 | 33.53 | 8.24  | 26.09   |
| 149.9 | 150.9 | 33.58 | 8.20  | 26.13   |
| 160.0 | 161.0 | 33.76 | 7.88  | 26.32   |
| 170.0 | 171.1 | 33.79 | 7.81  | 26.35   |
| 179.7 | 180.8 | 33.86 | 7.52  | 26.45   |
| 189.7 | 190.9 | 33.88 | 7.42  | 26.48   |
| 199.6 | 200.9 | 33.92 | 7.18  | 26.55   |
| 224.6 | 226.1 | 33.95 | 6.96  | 26.60   |
| 231.4 | 233.0 | 33.95 | 6.95  | 26.60   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 17 CODE  
 LAT N 48 12.90  
 DATE 6/ 1/81  
 TIME (PST) 1446

TAPE: U00454 -452  
 LONG W 125 52.00  
 PASS NO. 17  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.3   | 4.3   | 32.36 | 10.31 | 24.84   |        |
| 5.0   | 5.1   | 32.36 | 10.31 | 24.84   |        |
| 9.9   | 10.0  | 32.36 | 10.31 | 24.84   |        |
| 14.8  | 14.9  | 32.37 | 10.30 | 24.85   |        |
| 19.7  | 19.8  | 32.37 | 10.30 | 24.85   |        |
| 25.0  | 25.1  | 32.36 | 10.29 | 24.85   | 6.51   |
| 29.8  | 30.0  | 32.37 | 10.25 | 24.86   |        |
| 34.8  | 35.0  | 32.35 | 10.08 | 24.87   |        |
| 39.9  | 40.1  | 32.35 | 10.04 | 24.88   |        |
| 44.8  | 45.1  | 32.35 | 9.95  | 24.89   |        |
| 49.6  | 49.9  | 32.33 | 9.91  | 24.89   | 6.51   |
| 59.7  | 60.0  | 32.33 | 9.85  | 24.89   |        |
| 69.5  | 69.9  | 32.41 | 9.55  | 25.01   |        |
| 75.5  | 76.0  | 32.68 | 8.82  | 25.33   | 6.05   |
| 79.6  | 80.1  | 32.79 | 8.40  | 25.48   |        |
| 89.7  | 90.2  | 33.02 | 8.56  | 25.64   |        |
| 100.3 | 100.9 | 33.30 | 8.34  | 25.89   | 4.80   |
| 110.2 | 110.9 | 33.41 | 8.34  | 25.98   |        |
| 120.3 | 121.1 | 33.48 | 8.30  | 26.04   |        |
| 125.2 | 126.0 | 33.49 | 8.28  | 26.05   | 3.13   |
| 130.1 | 130.9 | 33.52 | 8.22  | 26.08   |        |
| 140.1 | 141.0 | 33.64 | 8.15  | 26.18   |        |
| 150.0 | 151.0 | 33.74 | 7.93  | 26.30   | 3.50   |
| 160.0 | 161.0 | 33.79 | 7.84  | 26.35   |        |
| 170.1 | 171.2 | 33.82 | 7.81  | 26.38   |        |
| 179.9 | 181.0 | 33.84 | 7.76  | 26.40   |        |
| 189.9 | 191.1 | 33.87 | 7.65  | 26.44   |        |
| 199.6 | 200.9 | 33.89 | 7.46  | 26.48   | 2.85   |
| 225.5 | 227.0 | 33.89 | 7.02  | 26.55   |        |
| 250.4 | 252.1 | 33.94 | 6.86  | 26.60   | 3.40   |
| 275.2 | 277.1 | 33.97 | 6.65  | 26.66   |        |
| 299.8 | 301.9 | 33.99 | 6.40  | 26.70   | 2.28   |
| 324.6 | 326.9 | 34.00 | 6.22  | 26.74   |        |
| 350.3 | 352.9 | 34.00 | 5.91  | 26.77   |        |
| 375.2 | 378.0 | 34.01 | 5.60  | 26.82   |        |
| 400.0 | 403.0 | 34.00 | 5.35  | 26.85   |        |
| 424.6 | 427.8 | 34.04 | 5.34  | 26.88   |        |
| 449.5 | 453.0 | 34.06 | 5.20  | 26.91   |        |
| 475.2 | 479.0 | 34.09 | 5.00  | 26.95   |        |
| 497.9 | 501.8 | 34.10 | 4.94  | 26.97   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 18 CODE

LAT N 48 39.00

DATE 4/ 2/81

TIME (PST) 1838

TAPE: U00454 -453

LONG W 125 2.50

PASS NO. 1

STN: 101.

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 3.2   | 3.2   | 30.68 | 8.47 | 23.82   |        |
| 5.7   | 5.8   | 30.68 | 8.47 | 23.81   |        |
| 10.0  | 10.1  | 30.71 | 8.52 | 23.83   |        |
| 15.0  | 15.0  | 30.80 | 8.56 | 23.90   |        |
| 19.8  | 19.9  | 30.88 | 8.57 | 23.96   |        |
| 24.9  | 25.0  | 30.96 | 8.57 | 24.02   | 5.90   |
| 29.9  | 30.0  | 31.01 | 8.58 | 24.06   |        |
| 34.8  | 35.0  | 31.07 | 8.62 | 24.10   |        |
| 39.9  | 40.1  | 31.19 | 8.64 | 24.19   |        |
| 44.8  | 45.0  | 31.22 | 8.57 | 24.23   |        |
| 49.8  | 50.0  | 31.26 | 8.63 | 24.25   | 5.74   |
| 49.8  | 50.0  | 31.26 | 8.63 | 24.25   |        |

CRUISE NO: 18 CODE

LAT N 48 35.60

DATE 4/ 2/81

TIME (PST) 1946

TAPE: U00454 -454

LONG W 125 9.00

PASS NO. 3

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.3   | 3.3   | 31.45 | 8.61  | 24.40   |
| 5.0   | 5.0   | 31.44 | 8.63  | 24.39   |
| 10.0  | 10.1  | 31.44 | 8.69  | 24.38   |
| 15.0  | 15.0  | 31.60 | 8.97  | 24.47   |
| 19.9  | 20.0  | 31.67 | 9.04  | 24.51   |
| 25.0  | 25.1  | 31.67 | 9.08  | 24.50   |
| 29.8  | 29.9  | 31.71 | 9.16  | 24.52   |
| 34.7  | 34.8  | 31.71 | 9.14  | 24.53   |
| 40.0  | 40.2  | 31.72 | 9.13  | 24.53   |
| 44.6  | 44.8  | 31.72 | 9.13  | 24.53   |
| 49.8  | 50.0  | 31.72 | 9.15  | 24.53   |
| 59.7  | 60.0  | 31.73 | 9.14  | 24.54   |
| 69.7  | 70.1  | 31.76 | 9.35  | 24.53   |
| 79.6  | 80.0  | 32.29 | 10.37 | 24.78   |
| 90.5  | 91.0  | 32.52 | 10.57 | 24.92   |
| 100.3 | 100.9 | 32.60 | 10.56 | 24.99   |
| 104.4 | 104.9 | 32.65 | 10.56 | 25.02   |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 18 CODE  
 LAT N 48 32.20  
 DATE 4/ 2/81  
 TIME (PST) 2033

TAPE: U00454 -455  
 LONG W 125 15.50  
 PASS NO. 5  
 STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.1   | 4.1   | 31.81 | 9.78  | 24.50   |        |
| 5.0   | 5.1   | 31.81 | 9.76  | 24.50   |        |
| 9.9   | 10.0  | 31.85 | 9.72  | 24.54   |        |
| 14.9  | 15.0  | 31.86 | 9.72  | 24.55   |        |
| 20.0  | 20.1  | 31.87 | 9.73  | 24.55   |        |
| 24.9  | 25.0  | 31.87 | 9.74  | 24.56   | 6.07   |
| 29.8  | 30.0  | 31.87 | 9.74  | 24.56   |        |
| 34.7  | 34.9  | 31.89 | 9.91  | 24.54   |        |
| 39.8  | 40.0  | 31.98 | 10.05 | 24.59   |        |
| 44.7  | 45.0  | 32.21 | 10.51 | 24.69   |        |
| 49.7  | 49.9  | 32.31 | 10.55 | 24.76   | 6.14   |
| 59.9  | 60.2  | 32.39 | 10.58 | 24.82   |        |
| 69.7  | 70.0  | 32.49 | 10.69 | 24.88   |        |
| 74.6  | 75.0  | 32.52 | 10.74 | 24.89   | 6.07   |
| 80.5  | 80.9  | 32.53 | 10.68 | 24.91   |        |
| 90.4  | 90.9  | 32.58 | 10.52 | 24.98   |        |
| 100.5 | 101.0 | 32.72 | 10.28 | 25.13   | 5.52   |
| 106.1 | 106.7 | 32.79 | 10.23 | 25.19   |        |

CRUISE NO: 18 CODE  
 LAT N 48 28.90  
 DATE 4/ 2/81  
 TIME (PST) 2127

TAPE: U00454 -456  
 LONG W 125 21.80  
 PASS NO. 7  
 STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.1   | 4.2   | 32.10 | 10.19 | 24.66   |
| 5.6   | 5.7   | 32.11 | 10.20 | 24.67   |
| 10.0  | 10.1  | 32.14 | 10.30 | 24.67   |
| 15.0  | 15.0  | 32.18 | 10.32 | 24.70   |
| 19.9  | 20.0  | 32.21 | 10.37 | 24.71   |
| 24.9  | 25.0  | 32.21 | 10.40 | 24.71   |
| 29.8  | 29.9  | 32.23 | 10.45 | 24.71   |
| 34.9  | 35.1  | 32.40 | 10.86 | 24.78   |
| 39.7  | 40.0  | 32.49 | 10.94 | 24.84   |
| 44.7  | 45.0  | 32.53 | 10.96 | 24.86   |
| 49.8  | 50.0  | 32.53 | 10.90 | 24.87   |
| 59.8  | 60.1  | 32.59 | 10.93 | 24.92   |
| 69.5  | 69.9  | 32.71 | 10.98 | 25.00   |
| 79.5  | 79.9  | 32.83 | 10.78 | 25.13   |
| 89.6  | 90.1  | 32.89 | 10.66 | 25.19   |
| 100.4 | 101.0 | 32.95 | 10.36 | 25.30   |
| 110.4 | 111.0 | 32.95 | 9.89  | 25.37   |
| 120.3 | 121.0 | 32.97 | 9.78  | 25.41   |
| 129.2 | 130.0 | 33.04 | 9.60  | 25.49   |
| 140.7 | 141.5 | 33.17 | 9.24  | 25.65   |
| 142.2 | 143.1 | 33.17 | 9.19  | 25.66   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 18 CODE

LAT N 48 25.50

DATE 4/ 2/81

TIME (PST) 2220

TAPE: U00454 -457

LONG W 125 28.30

PASS NO. 9

STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.9   | 3.9   | 32.16 | 9.92  | 24.75   |        |
| 4.9   | 4.9   | 32.16 | 9.92  | 24.75   |        |
| 9.9   | 10.0  | 32.16 | 9.92  | 24.75   |        |
| 14.9  | 15.0  | 32.16 | 9.93  | 24.75   |        |
| 20.0  | 20.1  | 32.17 | 9.96  | 24.75   |        |
| 24.8  | 25.0  | 32.19 | 9.99  | 24.76   | 6.42   |
| 29.7  | 29.9  | 32.20 | 10.07 | 24.76   |        |
| 34.7  | 34.9  | 32.26 | 10.14 | 24.79   |        |
| 39.8  | 40.0  | 32.37 | 10.39 | 24.84   |        |
| 44.7  | 44.9  | 32.42 | 10.46 | 24.86   |        |
| 49.8  | 50.1  | 32.43 | 10.49 | 24.87   | 6.07   |
| 59.7  | 60.0  | 32.54 | 10.58 | 24.93   |        |
| 69.5  | 69.8  | 32.69 | 10.44 | 25.08   |        |
| 74.6  | 75.0  | 32.76 | 10.30 | 25.16   | 5.34   |
| 79.5  | 79.9  | 32.78 | 10.26 | 25.18   |        |
| 90.5  | 91.0  | 32.88 | 10.02 | 25.29   |        |
| 100.5 | 101.0 | 32.88 | 10.01 | 25.30   | 5.08   |
| 110.3 | 111.0 | 32.95 | 9.81  | 25.38   |        |
| 120.3 | 121.0 | 32.99 | 9.66  | 25.44   |        |
| 125.3 | 126.0 | 33.01 | 9.61  | 25.46   | 4.66   |
| 130.0 | 130.8 | 33.07 | 9.49  | 25.53   |        |
| 140.1 | 140.9 | 33.16 | 9.26  | 25.64   |        |
| 146.0 | 146.9 | 33.16 | 9.24  | 25.64   |        |

CRUISE NO: 18 CODE

LAT N 48 22.00

DATE 4/ 2/81

TIME (PST) 2316

TAPE: U00454 -458

LONG W 125 34.70

PASS NO. 11

STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 10.0  | 10.1  | 32.37 | 10.14 | 24.88   |
| 14.8  | 14.9  | 32.37 | 10.14 | 24.88   |
| 19.9  | 20.0  | 32.37 | 10.14 | 24.88   |
| 24.9  | 25.0  | 32.37 | 10.14 | 24.88   |
| 30.0  | 30.1  | 32.37 | 10.20 | 24.87   |
| 34.9  | 35.0  | 32.51 | 10.49 | 24.93   |
| 39.8  | 40.0  | 32.51 | 10.37 | 24.95   |
| 44.7  | 45.0  | 32.53 | 10.38 | 24.96   |
| 49.7  | 49.9  | 32.54 | 10.39 | 24.97   |
| 59.6  | 60.0  | 32.57 | 10.47 | 24.98   |
| 69.7  | 70.1  | 32.59 | 10.51 | 24.99   |
| 79.6  | 80.0  | 32.74 | 10.40 | 25.12   |
| 90.5  | 91.0  | 32.91 | 10.72 | 25.20   |
| 100.4 | 100.9 | 32.92 | 10.39 | 25.26   |
| 110.3 | 110.9 | 33.04 | 10.26 | 25.38   |
| 120.2 | 120.9 | 33.32 | 9.59  | 25.71   |
| 130.3 | 131.1 | 33.42 | 9.17  | 25.86   |
| 140.4 | 141.3 | 33.42 | 9.10  | 25.87   |
| 142.9 | 143.8 | 33.43 | 9.09  | 25.87   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 18 CODE

LAT N 48 18.60

DATE 5/ 2/81

TIME (PST) 0010

TAPE: U00454 -459

LONG W 125 41.20

PASS NO. 13

SYN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.5   | 3.6   | 32.52 | 10.46 | 24.94   |        |
| 4.8   | 4.8   | 32.53 | 10.46 | 24.95   |        |
| 10.0  | 10.1  | 32.52 | 10.46 | 24.94   |        |
| 15.0  | 15.1  | 32.52 | 10.46 | 24.94   |        |
| 20.0  | 20.1  | 32.52 | 10.46 | 24.94   |        |
| 24.9  | 25.0  | 32.52 | 10.45 | 24.94   | 6.35   |
| 29.8  | 30.0  | 32.53 | 10.41 | 24.96   |        |
| 34.8  | 35.0  | 32.53 | 10.34 | 24.97   |        |
| 39.7  | 39.9  | 32.53 | 10.34 | 24.97   |        |
| 44.9  | 45.1  | 32.53 | 10.35 | 24.97   |        |
| 49.8  | 50.1  | 32.53 | 10.35 | 24.97   | 6.32   |
| 59.7  | 60.1  | 32.56 | 10.49 | 24.97   |        |
| 69.6  | 70.0  | 32.80 | 10.92 | 25.08   |        |
| 74.6  | 75.0  | 32.91 | 10.80 | 25.19   | 5.95   |
| 79.5  | 80.0  | 32.97 | 10.75 | 25.24   |        |
| 89.5  | 90.0  | 33.10 | 10.53 | 25.38   |        |
| 100.3 | 100.9 | 33.16 | 10.41 | 25.45   | 4.90   |
| 110.3 | 111.0 | 33.22 | 10.27 | 25.52   |        |
| 120.3 | 121.0 | 33.25 | 10.21 | 25.55   |        |
| 125.2 | 125.9 | 33.26 | 10.13 | 25.57   | 4.59   |
| 130.2 | 131.0 | 33.28 | 9.93  | 25.62   |        |
| 140.2 | 141.0 | 33.37 | 9.58  | 25.75   |        |
| 142.9 | 143.7 | 33.37 | 9.56  | 25.75   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 18 CODE  
 LAT N 48 15.10  
 DATE 5/ 2/81  
 TIME (PST) 0115

TAPE: U00454 -460  
 LONG W 125 47.70  
 PASS NO. 15  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.7   | 3.7   | 32.54 | 10.37 | 24.97   |
| 4.9   | 5.0   | 32.53 | 10.38 | 24.97   |
| 9.9   | 9.9   | 32.53 | 10.37 | 24.97   |
| 15.0  | 15.1  | 32.53 | 10.37 | 24.96   |
| 19.9  | 20.0  | 32.53 | 10.37 | 24.96   |
| 24.8  | 25.0  | 32.53 | 10.37 | 24.97   |
| 29.8  | 30.0  | 32.53 | 10.36 | 24.97   |
| 34.9  | 35.1  | 32.53 | 10.36 | 24.97   |
| 39.7  | 39.9  | 32.54 | 10.41 | 24.97   |
| 44.7  | 44.9  | 32.55 | 10.46 | 24.97   |
| 49.7  | 50.0  | 32.58 | 10.55 | 24.97   |
| 60.3  | 60.6  | 32.73 | 10.92 | 25.03   |
| 69.5  | 69.9  | 32.79 | 10.93 | 25.07   |
| 79.6  | 80.1  | 32.94 | 10.71 | 25.22   |
| 90.5  | 91.0  | 33.04 | 10.45 | 25.35   |
| 100.4 | 101.0 | 33.13 | 10.29 | 25.45   |
| 110.3 | 111.0 | 33.28 | 10.01 | 25.61   |
| 120.3 | 121.0 | 33.33 | 9.71  | 25.70   |
| 130.3 | 131.1 | 33.42 | 9.56  | 25.79   |
| 140.2 | 141.1 | 33.47 | 9.24  | 25.89   |
| 150.0 | 150.9 | 33.49 | 8.90  | 25.95   |
| 159.9 | 160.9 | 33.56 | 8.69  | 26.04   |
| 169.9 | 171.0 | 33.60 | 8.42  | 26.11   |
| 179.9 | 181.0 | 33.76 | 7.97  | 26.31   |
| 189.7 | 190.9 | 33.87 | 7.55  | 26.45   |
| 199.7 | 201.0 | 33.90 | 7.37  | 26.50   |
| 224.6 | 226.1 | 33.92 | 7.17  | 26.55   |
| 250.2 | 251.9 | 33.94 | 6.87  | 26.61   |
| 275.0 | 276.9 | 33.96 | 6.70  | 26.64   |
| 283.1 | 285.0 | 33.97 | 6.56  | 26.67   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 18 CODE  
 LAT N 48 12.90  
 DATE 5/ 2/81  
 TIME (PST) 0201

TAPE: U00454 -461  
 LONG W 125 52.00  
 PASS NO. 17  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.8   | 3.9   | 32.54 | 10.59 | 24.93   |        |
| 5.1   | 5.2   | 32.57 | 10.57 | 24.96   |        |
| 10.0  | 10.1  | 32.57 | 10.58 | 24.96   |        |
| 15.0  | 15.1  | 32.58 | 10.60 | 24.96   |        |
| 19.9  | 20.0  | 32.59 | 10.65 | 24.96   |        |
| 24.8  | 25.0  | 32.59 | 10.66 | 24.96   | 6.28   |
| 30.0  | 30.1  | 32.60 | 10.69 | 24.96   |        |
| 34.9  | 35.1  | 32.59 | 10.63 | 24.97   |        |
| 39.7  | 40.0  | 32.59 | 10.61 | 24.97   |        |
| 44.9  | 45.1  | 32.62 | 10.72 | 24.97   |        |
| 50.1  | 50.4  | 32.65 | 10.87 | 24.97   | 5.97   |
| 59.7  | 60.0  | 32.69 | 10.96 | 24.99   |        |
| 69.6  | 70.0  | 32.78 | 10.73 | 25.09   |        |
| 74.5  | 74.9  | 32.77 | 10.64 | 25.10   | 5.45   |
| 79.6  | 80.1  | 32.92 | 10.65 | 25.22   |        |
| 90.3  | 90.8  | 33.18 | 10.14 | 25.51   |        |
| 100.5 | 101.1 | 33.25 | 9.94  | 25.59   | 4.51   |
| 110.3 | 111.0 | 33.27 | 9.89  | 25.62   |        |
| 120.3 | 121.0 | 33.41 | 9.70  | 25.76   |        |
| 125.3 | 126.1 | 33.43 | 9.70  | 25.78   | 3.99   |
| 130.2 | 131.0 | 33.44 | 9.66  | 25.79   |        |
| 140.1 | 141.0 | 33.50 | 9.44  | 25.88   |        |
| 150.0 | 150.9 | 33.61 | 8.98  | 26.04   | 3.33   |
| 160.0 | 161.0 | 33.68 | 8.75  | 26.12   |        |
| 170.0 | 171.0 | 33.65 | 8.36  | 26.16   |        |
| 179.7 | 180.9 | 33.71 | 8.50  | 26.19   |        |
| 189.7 | 190.9 | 33.73 | 8.40  | 26.22   |        |
| 199.7 | 201.0 | 33.79 | 8.04  | 26.32   | 2.96   |
| 225.4 | 226.9 | 33.89 | 7.42  | 26.49   |        |
| 250.3 | 252.0 | 33.95 | 7.02  | 26.59   | 2.58   |
| 275.1 | 277.0 | 33.95 | 6.89  | 26.61   |        |
| 300.0 | 302.1 | 33.98 | 6.56  | 26.67   | 2.27   |
| 324.7 | 327.0 | 33.98 | 6.46  | 26.69   |        |
| 350.4 | 352.9 | 33.99 | 6.29  | 26.72   |        |
| 375.1 | 377.9 | 34.00 | 6.06  | 26.76   |        |
| 400.0 | 403.0 | 34.01 | 5.86  | 26.79   | 1.82   |
| 424.7 | 427.9 | 34.01 | 5.76  | 26.81   |        |
| 447.5 | 450.9 | 34.06 | 5.13  | 26.92   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 18 CODE

LAT N 48 10.60

DATE 5/ 2/81

TIME (PST) 0338

TAPE: U00454 -462

LONG W 125 56.20

PASS NO. 19

STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.4   | 3.4   | 32.48 | 10.25 | 24.95   |
| 4.9   | 4.9   | 32.53 | 10.25 | 24.99   |
| 10.1  | 10.1  | 32.53 | 10.25 | 24.99   |
| 14.9  | 15.0  | 32.54 | 10.25 | 24.99   |
| 19.9  | 20.0  | 32.53 | 10.26 | 24.98   |
| 24.9  | 25.1  | 32.54 | 10.26 | 24.99   |
| 29.8  | 30.0  | 32.54 | 10.26 | 24.99   |
| 34.8  | 35.0  | 32.54 | 10.27 | 24.99   |
| 39.6  | 39.8  | 32.57 | 10.42 | 24.99   |
| 44.7  | 44.9  | 32.60 | 10.47 | 25.00   |
| 49.7  | 49.9  | 32.65 | 10.59 | 25.02   |
| 59.7  | 60.1  | 32.74 | 10.63 | 25.08   |
| 69.6  | 70.0  | 32.96 | 10.78 | 25.23   |
| 79.5  | 79.9  | 33.16 | 10.03 | 25.51   |
| 89.5  | 90.0  | 33.31 | 9.68  | 25.69   |
| 100.4 | 101.0 | 33.38 | 9.46  | 25.78   |
| 110.2 | 110.9 | 33.51 | 9.18  | 25.92   |
| 120.1 | 120.8 | 33.65 | 8.70  | 26.11   |
| 130.2 | 131.0 | 33.69 | 8.52  | 26.17   |
| 140.2 | 141.1 | 33.71 | 8.37  | 26.21   |
| 150.0 | 151.0 | 33.74 | 8.26  | 26.24   |
| 160.0 | 161.1 | 33.76 | 8.05  | 26.30   |
| 169.9 | 171.0 | 33.78 | 8.00  | 26.32   |
| 179.9 | 181.1 | 33.80 | 7.93  | 26.34   |
| 189.8 | 191.1 | 33.81 | 7.88  | 26.36   |
| 199.5 | 200.9 | 33.87 | 7.66  | 26.44   |
| 224.6 | 226.2 | 33.93 | 7.36  | 26.53   |
| 250.3 | 252.0 | 33.95 | 7.26  | 26.55   |
| 275.0 | 277.0 | 33.96 | 7.06  | 26.60   |
| 299.8 | 302.0 | 33.96 | 6.99  | 26.61   |
| 324.5 | 326.9 | 33.98 | 6.77  | 26.65   |
| 350.4 | 352.9 | 33.98 | 6.61  | 26.67   |
| 375.1 | 377.9 | 33.99 | 6.24  | 26.73   |
| 400.0 | 403.0 | 33.99 | 6.10  | 26.75   |
| 424.7 | 427.9 | 34.01 | 5.91  | 26.78   |
| 449.5 | 453.0 | 34.02 | 5.70  | 26.82   |
| 475.1 | 478.8 | 34.03 | 5.48  | 26.85   |
| 500.1 | 504.1 | 34.06 | 5.12  | 26.92   |
| 503.0 | 507.0 | 34.07 | 5.06  | 26.93   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 18 CODE

LAT N 48 8.50

DATE 5/ 2/81

TIME (PST) 0424

TAPE: U00454 -463

LONG W 126 .00

PASS NO. 21

STN: 111

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.0   | 3.0   | 32.59 | 10.70 | 24.95   |        |
| 5.3   | 5.3   | 32.59 | 10.71 | 24.95   |        |
| 10.0  | 10.0  | 32.60 | 10.72 | 24.96   |        |
| 14.9  | 15.0  | 32.59 | 10.68 | 24.96   |        |
| 19.9  | 20.0  | 32.59 | 10.65 | 24.97   |        |
| 24.9  | 25.0  | 32.55 | 10.37 | 24.98   | 6.36   |
| 29.9  | 30.1  | 32.58 | 10.44 | 24.99   |        |
| 34.9  | 35.1  | 32.57 | 10.39 | 24.99   |        |
| 39.9  | 40.1  | 32.58 | 10.40 | 25.00   |        |
| 44.8  | 45.0  | 32.67 | 10.78 | 25.00   |        |
| 49.8  | 50.0  | 32.71 | 10.74 | 25.04   | 6.16   |
| 59.6  | 60.0  | 32.78 | 10.51 | 25.13   |        |
| 69.7  | 70.1  | 32.93 | 10.34 | 25.28   |        |
| 74.5  | 74.9  | 33.04 | 10.31 | 25.37   | 5.34   |
| 80.5  | 81.0  | 33.19 | 10.16 | 25.51   |        |
| 89.5  | 90.1  | 33.17 | 9.17  | 25.66   |        |
| 100.4 | 101.0 | 33.53 | 9.41  | 25.90   | 3.72   |
| 110.3 | 111.0 | 33.61 | 9.11  | 26.01   |        |
| 120.2 | 121.0 | 33.69 | 8.81  | 26.12   |        |
| 125.2 | 125.9 | 33.72 | 8.74  | 26.16   | 3.05   |
| 130.2 | 131.0 | 33.72 | 8.63  | 26.18   |        |
| 140.2 | 141.0 | 33.74 | 8.30  | 26.24   |        |
| 150.1 | 151.0 | 33.74 | 8.15  | 26.26   | 3.16   |
| 159.8 | 160.9 | 33.78 | 8.02  | 26.32   |        |
| 169.8 | 170.9 | 33.83 | 7.81  | 26.38   |        |
| 179.6 | 180.8 | 33.86 | 7.69  | 26.42   |        |
| 189.9 | 191.1 | 33.89 | 7.54  | 26.47   |        |
| 199.8 | 201.1 | 33.92 | 7.43  | 26.51   | 2.65   |
| 225.2 | 226.8 | 33.94 | 7.18  | 26.56   |        |
| 250.2 | 251.9 | 33.96 | 7.06  | 26.59   | 2.58   |
| 275.1 | 277.1 | 33.97 | 6.93  | 26.62   |        |
| 299.5 | 301.7 | 33.98 | 6.83  | 26.64   | 2.34   |
| 324.6 | 327.0 | 33.98 | 6.67  | 26.66   |        |
| 350.3 | 352.9 | 33.99 | 6.38  | 26.70   |        |
| 375.2 | 378.0 | 33.99 | 6.24  | 26.73   |        |
| 400.0 | 403.0 | 33.99 | 6.16  | 26.74   |        |
| 424.7 | 428.0 | 34.01 | 6.00  | 26.77   |        |
| 450.4 | 453.9 | 34.02 | 5.65  | 26.82   |        |
| 475.3 | 479.1 | 34.04 | 5.32  | 26.88   |        |
| 496.7 | 500.6 | 34.05 | 5.23  | 26.90   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 18 CODE  
 LAT N 48 24.40  
 DATE 5/ 2/81  
 TIME (PST) 0652

TAPE: U00454 -464  
 LONG W 126 15.42  
 PASS NO. 23  
 STN: A.P. 8

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.8   | 3.8   | 32.41 | 10.19 | 24.90   |        |
| 4.9   | 5.0   | 32.42 | 10.20 | 24.90   |        |
| 9.9   | 10.0  | 32.42 | 10.21 | 24.90   |        |
| 14.9  | 15.0  | 32.45 | 10.28 | 24.92   |        |
| 20.0  | 20.1  | 32.46 | 10.31 | 24.92   |        |
| 24.8  | 25.0  | 32.52 | 10.49 | 24.94   | 6.43   |
| 29.7  | 29.9  | 32.49 | 10.30 | 24.95   |        |
| 34.7  | 34.9  | 32.48 | 10.22 | 24.95   |        |
| 39.8  | 40.0  | 32.49 | 10.19 | 24.96   |        |
| 44.8  | 45.0  | 32.49 | 10.17 | 24.96   |        |
| 49.7  | 50.0  | 32.49 | 10.13 | 24.98   | 6.35   |
| 59.7  | 60.1  | 32.69 | 10.46 | 25.08   |        |
| 69.7  | 70.1  | 32.86 | 10.46 | 25.21   |        |
| 74.5  | 75.0  | 32.93 | 10.32 | 25.29   | 5.26   |
| 80.5  | 81.0  | 33.07 | 10.25 | 25.40   |        |
| 89.6  | 90.1  | 33.21 | 9.70  | 25.61   |        |
| 99.5  | 100.1 | 33.23 | 9.30  | 25.69   | 3.87   |
| 110.4 | 111.1 | 33.31 | 8.97  | 25.80   |        |
| 120.2 | 120.9 | 33.38 | 8.85  | 25.88   |        |
| 125.4 | 126.1 | 33.42 | 8.74  | 25.92   | 3.89   |
| 130.3 | 131.1 | 33.47 | 8.56  | 25.99   |        |
| 140.0 | 140.9 | 33.51 | 8.46  | 26.04   |        |
| 150.0 | 151.0 | 33.53 | 8.40  | 26.06   | 3.54   |
| 159.9 | 160.9 | 33.58 | 8.34  | 26.11   |        |
| 170.2 | 171.2 | 33.64 | 8.22  | 26.17   |        |
| 179.8 | 181.0 | 33.74 | 7.96  | 26.29   |        |
| 189.8 | 191.0 | 33.80 | 7.77  | 26.36   |        |
| 199.8 | 201.1 | 33.82 | 7.69  | 26.39   | 2.88   |
| 224.6 | 226.1 | 33.90 | 7.43  | 26.49   |        |
| 250.2 | 251.9 | 33.95 | 7.02  | 26.59   | 2.52   |
| 275.1 | 277.0 | 33.98 | 6.71  | 26.66   |        |
| 299.9 | 302.0 | 33.99 | 6.48  | 26.69   |        |
| 324.7 | 327.1 | 33.99 | 6.26  | 26.72   |        |
| 350.4 | 353.0 | 34.00 | 6.02  | 26.76   |        |
| 375.2 | 378.0 | 34.00 | 5.77  | 26.80   |        |
| 400.2 | 403.2 | 34.02 | 5.48  | 26.84   |        |
| 424.8 | 428.0 | 34.04 | 5.33  | 26.88   |        |
| 449.5 | 453.0 | 34.08 | 5.21  | 26.92   |        |
| 475.2 | 479.0 | 34.09 | 5.05  | 26.95   |        |
| 499.0 | 503.0 | 34.10 | 4.91  | 26.97   |        |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 18 CODE

LAT N 48 29.06

DATE 5/ 2/81

TIME (PST) 0828

TAPE: U00454 -465

LONG W 126 9.48

PASS NO. 25

STN: A.P. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.6   | 3.7   | 32.32 | 10.04 | 24.86   |
| 5.1   | 5.2   | 32.32 | 10.04 | 24.85   |
| 10.0  | 10.0  | 32.33 | 10.05 | 24.86   |
| 15.0  | 15.1  | 32.40 | 10.10 | 24.91   |
| 19.9  | 20.0  | 32.47 | 10.18 | 24.95   |
| 24.8  | 24.9  | 32.47 | 10.16 | 24.95   |
| 29.8  | 30.0  | 32.47 | 10.15 | 24.96   |
| 34.7  | 34.9  | 32.47 | 10.12 | 24.96   |
| 39.7  | 39.9  | 32.48 | 10.12 | 24.97   |
| 44.8  | 45.0  | 32.48 | 10.11 | 24.97   |
| 49.6  | 49.9  | 32.48 | 10.11 | 24.97   |
| 59.7  | 60.0  | 32.48 | 10.11 | 24.97   |
| 69.7  | 70.1  | 32.58 | 10.19 | 25.04   |
| 79.5  | 80.0  | 32.90 | 10.12 | 25.29   |
| 89.6  | 90.1  | 32.99 | 10.13 | 25.36   |
| 100.3 | 100.9 | 33.17 | 9.63  | 25.58   |
| 110.4 | 111.0 | 33.28 | 9.22  | 25.74   |
| 120.2 | 121.0 | 33.39 | 8.90  | 25.87   |
| 130.2 | 131.0 | 33.49 | 8.77  | 25.97   |
| 140.2 | 141.1 | 33.58 | 8.76  | 26.05   |
| 150.0 | 151.0 | 33.63 | 8.60  | 26.11   |
| 159.9 | 160.9 | 33.67 | 8.25  | 26.20   |
| 169.9 | 171.0 | 33.74 | 7.89  | 26.30   |
| 179.8 | 180.9 | 33.87 | 7.48  | 26.47   |
| 189.8 | 191.0 | 33.92 | 7.24  | 26.53   |
| 199.8 | 201.1 | 33.94 | 7.07  | 26.58   |
| 224.6 | 226.1 | 33.97 | 6.83  | 26.63   |
| 250.2 | 252.0 | 33.98 | 6.55  | 26.67   |
| 251.3 | 253.0 | 33.98 | 6.55  | 26.67   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 18 CODE  
 LAT N 48 33.24  
 DATE 5/ 2/81  
 TIME (PST) 0940

TAPE: U00454 -466  
 LONG W 126 4.00  
 PASS NO. 27  
 STN: A.P. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.8   | 3.8   | 31.83 | 9.74  | 24.53   |        |
| 5.0   | 5.0   | 31.84 | 9.74  | 24.53   |        |
| 9.9   | 10.0  | 31.84 | 9.74  | 24.53   |        |
| 14.9  | 15.0  | 31.98 | 9.93  | 24.61   |        |
| 19.9  | 20.0  | 32.16 | 10.16 | 24.71   |        |
| 24.9  | 25.0  | 32.23 | 10.17 | 24.76   | 6.09   |
| 29.9  | 30.0  | 32.28 | 10.15 | 24.81   |        |
| 34.8  | 35.0  | 32.31 | 10.17 | 24.83   |        |
| 39.7  | 39.9  | 32.34 | 10.20 | 24.84   |        |
| 44.9  | 45.1  | 32.36 | 10.21 | 24.86   |        |
| 49.7  | 50.0  | 32.39 | 10.24 | 24.88   | 6.37   |
| 59.7  | 60.0  | 32.43 | 10.29 | 24.90   |        |
| 69.7  | 70.1  | 32.57 | 10.62 | 24.95   |        |
| 74.6  | 75.0  | 32.62 | 10.63 | 24.99   | 6.21   |
| 80.4  | 80.8  | 32.72 | 10.41 | 25.10   |        |
| 90.5  | 91.0  | 32.85 | 10.41 | 25.21   |        |
| 100.4 | 100.9 | 33.03 | 10.09 | 25.40   | 4.80   |
| 110.4 | 111.0 | 33.12 | 9.61  | 25.55   |        |
| 120.4 | 121.1 | 33.48 | 8.53  | 26.00   |        |
| 125.2 | 126.0 | 33.51 | 8.44  | 26.04   | 3.47   |
| 130.4 | 131.1 | 33.59 | 8.25  | 26.13   |        |
| 140.2 | 141.0 | 33.77 | 7.73  | 26.35   |        |
| 150.0 | 150.9 | 33.80 | 7.66  | 26.38   | 2.93   |
| 153.7 | 154.7 | 33.80 | 7.66  | 26.38   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 18 CODE  
 LAT N 48 37.36  
 DATE 5/ 2/81  
 TIME (PST) 1042

TAPE: U00454 -467  
 LONG W 125 58.16  
 PASS NO. 29  
 STN: A.P. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.1   | 4.1   | 31.53 | 9.47  | 24.33   |
| 4.8   | 4.8   | 31.52 | 9.48  | 24.33   |
| 9.9   | 10.0  | 31.62 | 9.67  | 24.37   |
| 14.9  | 14.9  | 31.74 | 9.77  | 24.45   |
| 19.9  | 20.0  | 31.81 | 9.75  | 24.50   |
| 24.9  | 25.0  | 31.88 | 9.87  | 24.54   |
| 29.7  | 29.9  | 32.02 | 10.07 | 24.61   |
| 34.8  | 35.0  | 32.10 | 10.13 | 24.67   |
| 39.9  | 40.1  | 32.13 | 10.13 | 24.69   |
| 44.7  | 44.9  | 32.20 | 10.25 | 24.72   |
| 49.7  | 50.0  | 32.27 | 10.35 | 24.76   |
| 59.7  | 60.0  | 32.35 | 10.29 | 24.83   |
| 69.6  | 69.9  | 32.47 | 10.41 | 24.91   |
| 79.6  | 80.0  | 32.67 | 10.29 | 25.09   |
| 89.6  | 90.1  | 32.78 | 10.15 | 25.20   |
| 100.4 | 101.0 | 33.05 | 9.48  | 25.52   |
| 110.4 | 111.0 | 33.09 | 9.37  | 25.57   |
| 110.4 | 111.0 | 33.09 | 9.37  | 25.57   |

CRUISE NO: 18 CODE  
 LAT N 48 41.41  
 DATE 5/ 2/81  
 TIME (PST) 1134

TAPE: U00454 -468  
 LONG W 125 52.38  
 PASS NO. 31  
 STN: A.P. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.6   | 3.7   | 31.55 | 9.45  | 24.35   |        |
| 5.1   | 5.1   | 31.55 | 9.46  | 24.35   |        |
| 9.9   | 9.9   | 31.55 | 9.45  | 24.35   |        |
| 14.9  | 15.0  | 31.55 | 9.44  | 24.35   |        |
| 19.9  | 20.0  | 31.56 | 9.47  | 24.36   |        |
| 24.9  | 25.0  | 31.59 | 9.48  | 24.37   | 6.21   |
| 29.7  | 29.8  | 31.67 | 9.49  | 24.44   |        |
| 34.8  | 34.9  | 31.83 | 9.81  | 24.51   |        |
| 39.8  | 40.0  | 32.07 | 10.12 | 24.65   |        |
| 44.7  | 45.0  | 32.11 | 10.13 | 24.68   |        |
| 49.8  | 50.0  | 32.30 | 10.23 | 24.81   | 5.82   |
| 59.6  | 59.9  | 32.38 | 10.23 | 24.87   |        |
| 64.6  | 65.0  | 32.39 | 10.23 | 24.88   | 5.83   |
| 68.3  | 68.7  | 32.39 | 10.23 | 24.88   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 18 CODE

LAT N 48 45.39

DATE 5/ 2/81

TIME (PST) 1229

TAPE: U00454 -469

LONG W 125 47.05

PASS NO. 33

STN: A.P. 3

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 4.0   | 4.0   | 31.19 | 9.09 | 24.13   |
| 4.8   | 4.9   | 31.20 | 9.09 | 24.13   |
| 9.9   | 10.0  | 31.20 | 9.07 | 24.13   |
| 15.0  | 15.0  | 31.25 | 9.09 | 24.17   |
| 19.9  | 20.0  | 31.35 | 9.16 | 24.23   |
| 24.9  | 25.0  | 31.39 | 8.93 | 24.31   |
| 29.9  | 30.1  | 31.47 | 9.11 | 24.34   |
| 34.8  | 34.9  | 31.49 | 9.07 | 24.36   |
| 39.9  | 40.1  | 31.53 | 9.08 | 24.39   |
| 44.9  | 45.1  | 31.54 | 9.09 | 24.40   |
| 49.8  | 50.0  | 31.54 | 9.10 | 24.40   |
| 59.7  | 60.0  | 31.60 | 9.25 | 24.42   |
| 65.5  | 65.8  | 31.71 | 9.52 | 24.46   |

CRUISE NO: 18 CODE

LAT N 48 49.32

DATE 5/ 2/81

TIME (PST) 1305

TAPE: U00454 -470

LONG W 125 41.36

PASS NO. 35

STN: A.P. 2

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 3.7   | 3.7   | 30.62 | 8.46 | 23.77   |        |
| 5.0   | 5.0   | 30.64 | 8.46 | 23.79   |        |
| 10.0  | 10.0  | 30.63 | 8.47 | 23.78   |        |
| 14.9  | 14.9  | 30.67 | 8.47 | 23.81   |        |
| 19.8  | 19.9  | 30.74 | 8.52 | 23.86   |        |
| 24.8  | 25.0  | 30.76 | 8.54 | 23.87   | 5.86   |
| 29.9  | 30.0  | 30.91 | 8.67 | 23.97   |        |
| 34.9  | 35.0  | 31.06 | 8.72 | 24.08   |        |
| 39.9  | 40.1  | 31.10 | 8.72 | 24.11   |        |
| 44.8  | 45.0  | 31.16 | 8.82 | 24.14   |        |
| 49.7  | 49.9  | 31.23 | 8.91 | 24.18   | 5.65   |
| 59.7  | 60.0  | 31.42 | 9.11 | 24.30   |        |

COASTAL ZONE OCEANOGRAPHY  
CRUISE NO: 18 CODE  
LAT N 48 53.19  
DATE 5/ 2/81  
TIME (PST) 1345

TAPE: U00454 ~471  
LONG W 125 36.12  
PASS NO. 37  
SYN: A.P. 1

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 4.0   | 4.0   | 29.27 | 9.00 | 22.64   |
| 5.0   | 5.0   | 29.28 | 9.02 | 22.64   |
| 10.0  | 10.0  | 30.23 | 8.96 | 23.39   |
| 14.8  | 14.8  | 30.96 | 9.72 | 23.89   |
| 20.0  | 20.0  | 31.00 | 9.76 | 23.87   |
| 24.9  | 25.0  | 31.11 | 9.70 | 23.96   |
| 29.8  | 29.9  | 31.25 | 9.78 | 24.06   |
| 34.9  | 35.1  | 31.27 | 9.75 | 24.09   |
| 40.0  | 40.1  | 31.32 | 9.72 | 24.12   |
| 44.8  | 45.0  | 31.35 | 9.68 | 24.16   |
| 49.8  | 50.0  | 31.36 | 9.59 | 24.18   |
| 52.6  | 52.8  | 31.41 | 9.17 | 24.29   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 19 CODE  
 LAT N 48 10.60  
 DATE 10/ 3/81  
 TIME (PST) 0830

TAPE: U00454 -472  
 LONG W 125 56.20  
 PASS NO. 1  
 STN: 110

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 4.5   | 4.5   | 32.46 | 9.92 | 24.99   |
| 5.0   | 5.0   | 32.47 | 9.92 | 24.99   |
| 9.9   | 9.9   | 32.47 | 9.92 | 24.99   |
| 14.9  | 15.0  | 32.47 | 9.92 | 24.99   |
| 19.9  | 20.0  | 32.47 | 9.92 | 25.00   |
| 24.9  | 25.0  | 32.47 | 9.92 | 24.99   |
| 29.6  | 29.8  | 32.48 | 9.92 | 25.00   |
| 34.9  | 35.0  | 32.49 | 9.91 | 25.01   |
| 39.7  | 40.0  | 32.48 | 9.90 | 25.01   |
| 44.9  | 45.1  | 32.48 | 9.87 | 25.01   |
| 49.7  | 50.0  | 32.48 | 9.87 | 25.01   |
| 59.7  | 60.0  | 32.48 | 9.86 | 25.01   |
| 69.6  | 70.0  | 32.48 | 9.86 | 25.01   |
| 79.8  | 80.2  | 32.48 | 9.84 | 25.02   |
| 90.3  | 90.9  | 32.55 | 9.54 | 25.11   |
| 99.4  | 100.0 | 32.81 | 9.06 | 25.40   |
| 110.3 | 110.9 | 33.17 | 8.56 | 25.76   |
| 120.4 | 121.1 | 33.28 | 8.14 | 25.91   |
| 130.2 | 131.0 | 33.36 | 7.96 | 25.99   |
| 140.3 | 141.2 | 33.50 | 7.70 | 26.14   |
| 150.2 | 151.2 | 33.63 | 7.60 | 26.26   |
| 159.9 | 160.9 | 33.77 | 7.65 | 26.36   |
| 170.0 | 171.1 | 33.88 | 7.74 | 26.44   |
| 179.8 | 180.9 | 33.91 | 7.68 | 26.47   |
| 189.9 | 191.1 | 33.94 | 7.55 | 26.51   |
| 199.7 | 201.1 | 33.96 | 7.44 | 26.54   |
| 224.6 | 226.1 | 33.98 | 7.24 | 26.58   |
| 250.0 | 251.8 | 33.99 | 6.98 | 26.63   |
| 275.1 | 277.0 | 34.01 | 6.71 | 26.68   |
| 300.0 | 302.1 | 34.00 | 6.42 | 26.71   |
| 324.9 | 327.2 | 34.01 | 6.11 | 26.76   |
| 350.4 | 353.0 | 34.02 | 5.88 | 26.80   |
| 375.2 | 378.0 | 34.00 | 5.44 | 26.83   |
| 400.1 | 403.1 | 34.05 | 5.46 | 26.87   |
| 424.8 | 428.1 | 34.05 | 5.28 | 26.89   |
| 449.5 | 453.0 | 34.06 | 5.06 | 26.93   |
| 475.2 | 478.9 | 34.08 | 5.04 | 26.94   |
| 500.1 | 504.1 | 34.10 | 5.00 | 26.96   |
| 501.8 | 505.8 | 34.09 | 5.00 | 26.96   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 19 CODE

LAT N 48 12.90

DATE 10/ 3/81

TIME (PST) 0909

TAPE: U00454 -473

LONG W 125 52.00

PASS NO. 3

STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 6.1   | 6.2   | 32.47 | 10.06 | 24.97   |
| 10.0  | 10.0  | 32.47 | 10.05 | 24.97   |
| 14.9  | 15.0  | 32.47 | 10.05 | 24.97   |
| 20.0  | 20.1  | 32.49 | 10.11 | 24.98   |
| 24.9  | 25.0  | 32.51 | 10.16 | 24.98   |
| 29.7  | 29.9  | 32.52 | 10.17 | 24.99   |
| 34.9  | 35.1  | 32.53 | 10.20 | 24.99   |
| 39.7  | 39.9  | 32.50 | 9.96  | 25.01   |
| 44.7  | 44.9  | 32.46 | 9.73  | 25.02   |
| 49.8  | 50.0  | 32.45 | 9.63  | 25.03   |
| 59.6  | 59.9  | 32.48 | 9.71  | 25.03   |
| 70.2  | 70.6  | 32.47 | 9.57  | 25.05   |
| 79.6  | 80.1  | 32.74 | 9.98  | 25.20   |
| 90.5  | 91.0  | 32.96 | 10.07 | 25.35   |
| 100.5 | 101.0 | 33.17 | 9.57  | 25.59   |
| 110.3 | 111.0 | 33.07 | 7.95  | 25.77   |
| 120.4 | 121.2 | 33.26 | 7.84  | 25.93   |
| 130.2 | 131.0 | 33.48 | 8.00  | 26.09   |
| 140.4 | 141.3 | 33.63 | 7.94  | 26.21   |
| 150.2 | 151.1 | 33.67 | 7.86  | 26.25   |
| 160.1 | 161.1 | 33.71 | 7.76  | 26.30   |
| 169.7 | 170.8 | 33.76 | 7.65  | 26.35   |
| 179.8 | 181.0 | 33.81 | 7.54  | 26.41   |
| 190.5 | 191.7 | 33.87 | 7.57  | 26.45   |
| 199.7 | 201.0 | 33.91 | 7.55  | 26.49   |
| 224.6 | 226.1 | 33.97 | 6.96  | 26.62   |
| 250.0 | 251.7 | 34.00 | 6.74  | 26.67   |
| 275.0 | 276.9 | 33.99 | 6.52  | 26.69   |
| 299.9 | 302.1 | 34.00 | 6.26  | 26.73   |
| 324.6 | 326.9 | 34.00 | 6.06  | 26.76   |
| 350.2 | 352.7 | 33.99 | 5.64  | 26.80   |
| 375.7 | 378.5 | 34.01 | 5.58  | 26.83   |
| 400.0 | 403.0 | 34.03 | 5.42  | 26.86   |
| 424.7 | 427.9 | 34.04 | 5.27  | 26.88   |
| 450.3 | 453.8 | 34.06 | 5.17  | 26.91   |
| 474.2 | 478.0 | 34.08 | 5.02  | 26.95   |
| 500.2 | 504.1 | 34.09 | 4.90  | 26.97   |
| 504.1 | 508.1 | 34.09 | 4.89  | 26.97   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 19 CODE  
 LAT N 48 15.10  
 DATE 10/ 3/81  
 TIME (PST) 0950

TAPE: U00454 -474  
 LONG W 125 47.70  
 PASS NO. 5  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.8   | 4.8   | 32.43 | 10.21 | 24.91   |
| 5.0   | 5.0   | 32.43 | 10.21 | 24.91   |
| 9.9   | 10.0  | 32.43 | 10.21 | 24.91   |
| 15.0  | 15.1  | 32.44 | 10.19 | 24.93   |
| 19.9  | 20.0  | 32.49 | 10.05 | 24.99   |
| 24.9  | 25.0  | 32.47 | 9.88  | 25.00   |
| 29.7  | 29.8  | 32.49 | 9.91  | 25.01   |
| 34.7  | 34.9  | 32.49 | 9.90  | 25.01   |
| 40.4  | 40.7  | 32.48 | 9.86  | 25.01   |
| 44.7  | 45.0  | 32.49 | 9.86  | 25.02   |
| 49.8  | 50.0  | 32.46 | 9.60  | 25.04   |
| 59.5  | 59.9  | 32.58 | 9.95  | 25.07   |
| 69.8  | 70.2  | 32.73 | 10.06 | 25.17   |
| 79.6  | 80.1  | 32.90 | 10.06 | 25.31   |
| 90.0  | 90.5  | 33.02 | 9.99  | 25.41   |
| 99.6  | 100.2 | 33.17 | 9.68  | 25.58   |
| 110.3 | 111.0 | 33.34 | 9.26  | 25.78   |
| 120.0 | 120.7 | 33.43 | 8.87  | 25.92   |
| 130.7 | 131.5 | 33.53 | 8.68  | 26.02   |
| 140.1 | 141.0 | 33.69 | 8.44  | 26.18   |
| 150.0 | 150.9 | 33.74 | 8.15  | 26.26   |
| 159.9 | 160.9 | 33.76 | 8.08  | 26.29   |
| 169.8 | 170.9 | 33.81 | 7.96  | 26.35   |
| 179.8 | 181.0 | 33.82 | 7.80  | 26.38   |
| 189.7 | 191.0 | 33.84 | 7.67  | 26.42   |
| 199.7 | 201.0 | 33.85 | 7.61  | 26.43   |
| 207.8 | 209.2 | 33.85 | 7.61  | 26.43   |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 19 CODE  
 LAT N 48 18.60  
 DATE 10/ 3/81  
 TIME (PST) 1049

TAPE: UDD454 -475  
 LONG W 125 41.20  
 PASS NO. 7  
 SYN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 5.0   | 5.1   | 32.24 | 10.17 | 24.77   |        |
| 9.8   | 9.9   | 32.25 | 10.18 | 24.78   | 6.79   |
| 14.9  | 15.0  | 32.30 | 10.19 | 24.81   |        |
| 20.0  | 20.1  | 32.34 | 10.11 | 24.86   |        |
| 24.9  | 25.1  | 32.37 | 10.13 | 24.88   | 6.53   |
| 29.9  | 30.0  | 32.46 | 10.31 | 24.92   |        |
| 34.6  | 34.8  | 32.52 | 10.36 | 24.95   |        |
| 39.7  | 39.9  | 32.54 | 10.39 | 24.97   |        |
| 44.7  | 44.9  | 32.56 | 10.40 | 24.98   |        |
| 49.6  | 49.9  | 32.56 | 10.41 | 24.98   | 6.37   |
| 59.7  | 60.0  | 32.56 | 10.17 | 25.02   |        |
| 69.6  | 70.0  | 32.55 | 10.11 | 25.03   |        |
| 75.2  | 75.6  | 32.59 | 10.15 | 25.05   | 5.79   |
| 79.6  | 80.1  | 32.66 | 10.22 | 25.09   |        |
| 89.6  | 90.1  | 32.80 | 10.20 | 25.20   |        |
| 100.5 | 101.1 | 33.00 | 9.98  | 25.40   | 4.68   |
| 110.0 | 110.7 | 33.25 | 9.41  | 25.68   |        |
| 120.3 | 121.0 | 33.70 | 8.11  | 26.24   |        |
| 124.5 | 125.2 | 33.80 | 7.75  | 26.37   | 3.08   |
| 130.1 | 130.9 | 33.84 | 7.61  | 26.42   |        |
| 140.1 | 141.0 | 33.86 | 7.51  | 26.45   | 2.90   |
| 150.0 | 150.9 | 33.88 | 7.36  | 26.49   |        |
| 150.0 | 150.9 | 33.88 | 7.36  | 26.49   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 19 CODE  
 LAT N 48 22.00  
 DATE 10/ 3/81  
 TIME (PST) 1217

TAPE: UDD454 -476  
 LONG W 125 34.70  
 PASS NO. 9  
 SYN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.1   | 4.1   | 32.26 | 10.20 | 24.78   |
| 4.9   | 4.9   | 32.26 | 10.20 | 24.78   |
| 10.0  | 10.0  | 32.27 | 10.20 | 24.79   |
| 15.1  | 15.1  | 32.30 | 10.19 | 24.81   |
| 19.9  | 20.0  | 32.31 | 10.19 | 24.82   |
| 24.8  | 24.9  | 32.31 | 10.19 | 24.82   |
| 29.7  | 29.9  | 32.32 | 10.19 | 24.83   |
| 34.8  | 35.0  | 32.35 | 10.22 | 24.85   |
| 39.9  | 40.1  | 32.40 | 10.28 | 24.88   |
| 44.8  | 45.0  | 32.45 | 10.38 | 24.90   |
| 49.6  | 49.9  | 32.49 | 10.42 | 24.92   |
| 59.6  | 59.9  | 32.56 | 10.48 | 24.97   |
| 69.7  | 70.1  | 32.60 | 10.41 | 25.02   |
| 79.5  | 80.0  | 32.73 | 10.19 | 25.15   |
| 90.4  | 90.9  | 32.92 | 9.91  | 25.34   |
| 100.3 | 100.9 | 33.18 | 9.74  | 25.58   |
| 109.6 | 110.2 | 33.43 | 8.98  | 25.90   |
| 120.2 | 120.9 | 33.59 | 8.56  | 26.08   |
| 130.3 | 131.1 | 33.72 | 8.10  | 26.25   |
| 140.2 | 141.1 | 33.84 | 7.56  | 26.43   |
| 143.1 | 144.0 | 33.85 | 7.55  | 26.44   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 19 CODE  
 LAT N 48 25.50  
 DATE 10/ 3/81  
 TIME (PST) 1302

TAPE: U00454 -477  
 LONG W 125 28.30  
 PASS NO. 11  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.5   | 4.6   | 32.00 | 10.10 | 24.60   |        |
| 5.1   | 5.2   | 32.00 | 10.10 | 24.60   |        |
| 9.9   | 9.9   | 32.04 | 10.10 | 24.62   | 6.81   |
| 14.9  | 15.0  | 32.07 | 10.08 | 24.65   |        |
| 19.8  | 19.9  | 32.16 | 10.15 | 24.72   |        |
| 24.8  | 25.0  | 32.35 | 10.38 | 24.83   | 6.37   |
| 30.0  | 30.1  | 32.42 | 10.44 | 24.87   |        |
| 34.8  | 35.0  | 32.47 | 10.45 | 24.91   |        |
| 39.8  | 40.0  | 32.53 | 10.42 | 24.96   |        |
| 44.7  | 44.9  | 32.54 | 10.42 | 24.96   |        |
| 49.6  | 49.9  | 32.55 | 10.42 | 24.97   | 6.30   |
| 59.7  | 60.0  | 32.58 | 10.42 | 24.99   |        |
| 69.6  | 70.0  | 32.59 | 10.39 | 25.00   |        |
| 74.5  | 74.9  | 32.63 | 10.28 | 25.05   | 6.09   |
| 79.7  | 80.1  | 32.69 | 10.23 | 25.11   |        |
| 90.2  | 90.7  | 32.78 | 10.10 | 25.21   |        |
| 99.6  | 100.2 | 33.11 | 9.84  | 25.50   | 4.84   |
| 110.5 | 111.1 | 33.35 | 9.08  | 25.81   |        |
| 120.1 | 120.8 | 33.59 | 8.42  | 26.10   |        |
| 125.3 | 126.1 | 33.63 | 8.27  | 26.16   | 3.15   |
| 130.4 | 131.2 | 33.70 | 8.06  | 26.25   |        |
| 133.3 | 134.1 | 33.76 | 7.88  | 26.32   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 19 CODE  
 LAT N 48 28.90  
 DATE 10/ 3/81  
 TIME (PST) 1407

TAPE: U00454 -478  
 LONG W 125 21.80  
 PASS NO. 13  
 STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.2   | 3.2   | 31.55 | 9.33  | 24.37   |
| 5.1   | 5.1   | 31.54 | 9.32  | 24.37   |
| 10.0  | 10.1  | 31.55 | 9.31  | 24.37   |
| 15.2  | 15.2  | 31.60 | 9.10  | 24.44   |
| 20.0  | 20.1  | 31.61 | 9.25  | 24.43   |
| 25.0  | 25.1  | 31.66 | 9.34  | 24.45   |
| 29.9  | 30.0  | 31.79 | 9.46  | 24.54   |
| 34.8  | 34.9  | 31.81 | 9.17  | 24.60   |
| 39.8  | 40.0  | 31.89 | 9.10  | 24.67   |
| 45.1  | 45.4  | 32.06 | 9.71  | 24.71   |
| 49.8  | 50.0  | 32.34 | 10.34 | 24.82   |
| 59.7  | 60.0  | 32.58 | 10.32 | 25.01   |
| 69.7  | 70.1  | 32.64 | 10.30 | 25.06   |
| 80.4  | 80.8  | 32.80 | 10.09 | 25.23   |
| 89.7  | 90.2  | 32.95 | 9.84  | 25.38   |
| 100.3 | 100.9 | 33.17 | 9.44  | 25.62   |
| 110.4 | 111.0 | 33.41 | 8.96  | 25.88   |
| 120.3 | 121.0 | 33.56 | 8.53  | 26.07   |
| 130.3 | 131.1 | 33.75 | 7.91  | 26.31   |
| 140.1 | 140.9 | 33.75 | 7.89  | 26.31   |
| 147.1 | 148.0 | 33.75 | 7.89  | 26.31   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 19 CODE

LAT N 48 32.20

DATE 10/ 3/81

TIME (PST) 1455

TAPE: U00454 -479

LONG W 125 15.50

PASS NO. 15

STN: 103

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 3.5   | 3.6   | 31.47 | 8.99 | 24.36   |        |
| 5.1   | 5.1   | 31.47 | 8.98 | 24.36   |        |
| 10.0  | 10.1  | 31.50 | 8.90 | 24.40   | 6.25   |
| 14.9  | 14.9  | 31.56 | 9.00 | 24.42   |        |
| 19.9  | 20.0  | 31.65 | 9.08 | 24.49   |        |
| 24.8  | 24.9  | 31.69 | 9.16 | 24.50   | 6.30   |
| 30.0  | 30.1  | 31.84 | 9.33 | 24.59   |        |
| 34.8  | 35.0  | 31.84 | 9.30 | 24.60   |        |
| 39.6  | 39.8  | 31.90 | 9.07 | 24.68   |        |
| 44.7  | 45.0  | 32.04 | 9.02 | 24.80   |        |
| 49.5  | 49.8  | 32.18 | 9.12 | 24.89   | 5.15   |
| 59.7  | 60.0  | 32.42 | 9.37 | 25.04   |        |
| 69.7  | 70.1  | 32.79 | 9.90 | 25.24   |        |
| 74.6  | 75.0  | 32.85 | 9.77 | 25.31   | 4.95   |
| 79.6  | 80.0  | 32.99 | 9.60 | 25.45   |        |
| 90.5  | 91.0  | 33.32 | 8.87 | 25.82   |        |
| 99.6  | 100.1 | 33.53 | 8.33 | 26.07   | 3.70   |
| 106.1 | 106.7 | 33.58 | 8.23 | 26.12   |        |

CRUISE NO: 19 CODE

LAT N 48 35.60

DATE 10/ 3/81

TIME (PST) 1552

TAPE: U00454 -480

LONG W 125 9.00

PASS NO. 17

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.8   | 3.9   | 31.19 | 10.02 | 23.97   |
| 5.1   | 5.1   | 31.20 | 9.98  | 23.99   |
| 10.4  | 10.4  | 31.42 | 9.74  | 24.20   |
| 14.9  | 15.0  | 31.47 | 9.63  | 24.26   |
| 20.0  | 20.1  | 31.50 | 9.53  | 24.30   |
| 24.7  | 24.9  | 31.56 | 9.43  | 24.36   |
| 29.9  | 30.0  | 31.72 | 9.31  | 24.50   |
| 35.0  | 35.1  | 31.97 | 9.47  | 24.68   |
| 39.9  | 40.0  | 32.11 | 9.66  | 24.75   |
| 44.7  | 45.0  | 32.29 | 9.87  | 24.86   |
| 49.9  | 50.1  | 32.38 | 10.06 | 24.90   |
| 59.7  | 60.0  | 32.61 | 10.24 | 25.05   |
| 69.5  | 69.9  | 32.61 | 10.07 | 25.08   |
| 79.6  | 80.0  | 32.68 | 9.97  | 25.15   |
| 89.5  | 90.0  | 32.84 | 9.86  | 25.29   |
| 100.4 | 100.9 | 33.05 | 9.27  | 25.55   |
| 109.9 | 110.5 | 33.29 | 8.96  | 25.79   |
| 114.5 | 115.1 | 33.38 | 8.79  | 25.88   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 19 CODE

LAT N 48 39.00

DATE 10/ 3/81

TIME (PST) 1635

TAPE: U00454 -481

LONG W 125 2.50

PASS NO. 19

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 4.1   | 4.1   | 30.72 | 8.86 | 23.79   |        |
| 5.0   | 5.0   | 30.76 | 8.68 | 23.85   |        |
| 10.1  | 10.1  | 30.86 | 8.68 | 23.93   | 6.17   |
| 15.0  | 15.1  | 30.92 | 8.71 | 23.97   |        |
| 20.0  | 20.1  | 31.05 | 8.83 | 24.05   |        |
| 25.0  | 25.1  | 31.06 | 8.79 | 24.07   | 6.03   |
| 29.8  | 30.0  | 31.07 | 8.77 | 24.08   |        |
| 34.7  | 34.9  | 31.06 | 8.75 | 24.07   |        |
| 39.9  | 40.1  | 31.06 | 8.71 | 24.08   |        |
| 44.9  | 45.1  | 31.07 | 8.72 | 24.08   | 5.97   |
| 49.7  | 50.0  | 31.16 | 8.77 | 24.15   |        |
| 53.4  | 53.7  | 31.24 | 8.78 | 24.21   |        |

CRUISE NO: 20 CODE

LAT N 48 13.21

DATE 21/ 4/81

TIME (PST) 1208

TAPE: U00454 -482

LONG W 124 56.37

PASS NO. 1

STN: C.A.11

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.2   | 4.2   | 30.23 | 10.06 | 23.22   |
| 5.0   | 5.0   | 30.23 | 10.06 | 23.22   |
| 9.9   | 9.9   | 30.24 | 10.04 | 23.23   |
| 15.0  | 15.0  | 31.14 | 9.33  | 24.05   |
| 19.9  | 20.0  | 31.65 | 8.88  | 24.52   |
| 24.9  | 25.0  | 31.75 | 8.97  | 24.58   |
| 29.9  | 30.0  | 32.13 | 9.54  | 24.79   |
| 35.0  | 35.2  | 32.45 | 9.54  | 25.04   |
| 39.8  | 40.0  | 32.57 | 8.86  | 25.24   |
| 44.6  | 44.8  | 32.87 | 9.10  | 25.44   |
| 49.8  | 50.1  | 33.04 | 8.81  | 25.61   |
| 59.8  | 60.1  | 33.14 | 8.72  | 25.71   |
| 69.6  | 70.0  | 33.44 | 7.98  | 26.05   |
| 80.3  | 80.8  | 33.65 | 7.58  | 26.27   |
| 90.5  | 91.0  | 33.83 | 7.29  | 26.46   |
| 100.4 | 101.0 | 33.84 | 7.25  | 26.47   |
| 110.2 | 110.9 | 33.86 | 7.14  | 26.50   |
| 120.2 | 121.0 | 33.86 | 7.12  | 26.50   |
| 130.1 | 130.9 | 33.88 | 7.03  | 26.54   |
| 140.3 | 141.2 | 33.89 | 7.03  | 26.54   |
| 150.0 | 151.0 | 33.89 | 7.02  | 26.54   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 20 CODE  
 LAT N 48 12.51  
 DATE 21/ 4/81  
 TIME (PST) 1250

TAPE: U00454 -483  
 LONG W 125 2.25  
 PASS NO. 3  
 STN: C.A.10

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.7   | 4.7   | 30.76 | 10.19 | 23.62   |        |
| 5.0   | 5.1   | 30.79 | 10.15 | 23.65   |        |
| 10.0  | 10.0  | 31.19 | 9.84  | 24.01   | 7.00   |
| 14.9  | 15.0  | 31.44 | 9.73  | 24.22   |        |
| 20.0  | 20.1  | 31.82 | 9.69  | 24.53   |        |
| 25.0  | 25.1  | 32.17 | 9.72  | 24.79   | 6.76   |
| 29.9  | 30.0  | 32.35 | 9.68  | 24.94   |        |
| 35.0  | 35.2  | 32.45 | 9.68  | 25.01   |        |
| 39.8  | 40.0  | 32.51 | 9.61  | 25.07   |        |
| 44.8  | 45.1  | 32.59 | 9.51  | 25.15   |        |
| 49.7  | 49.9  | 32.68 | 9.41  | 25.24   | 5.84   |
| 59.7  | 60.0  | 32.87 | 9.21  | 25.42   |        |
| 69.7  | 70.1  | 33.06 | 8.88  | 25.62   |        |
| 75.4  | 75.9  | 33.30 | 8.46  | 25.87   | 5.67   |
| 79.4  | 79.9  | 33.35 | 8.34  | 25.93   |        |
| 89.7  | 90.2  | 33.44 | 8.16  | 26.03   |        |
| 100.4 | 101.0 | 33.60 | 7.84  | 26.20   | 5.37   |
| 110.5 | 111.2 | 33.68 | 7.54  | 26.31   |        |
| 120.3 | 121.0 | 33.74 | 7.34  | 26.38   |        |
| 125.4 | 126.2 | 33.79 | 7.21  | 26.44   | 4.03   |
| 130.0 | 130.8 | 33.82 | 7.13  | 26.47   |        |
| 140.1 | 141.0 | 33.85 | 6.94  | 26.53   |        |
| 150.0 | 151.0 | 33.87 | 6.86  | 26.55   | 3.13   |
| 160.0 | 161.1 | 33.89 | 6.80  | 26.57   |        |
| 170.0 | 171.1 | 33.90 | 6.75  | 26.59   |        |
| 179.8 | 181.0 | 33.94 | 6.57  | 26.65   |        |
| 189.9 | 191.2 | 33.95 | 6.29  | 26.69   |        |
| 199.6 | 201.0 | 33.96 | 6.18  | 26.71   | 2.71   |
| 201.8 | 203.2 | 33.97 | 6.15  | 26.72   |        |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 20 CODE  
 LAT N 48 12.24  
 DATE 21/ 4/81  
 TIME (PST) 1420

TAPE: U00454 -484  
 LONG W 125 8.11  
 PASS NO. 5  
 STN: C.A. 9

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.2   | 4.2   | 30.56 | 10.34 | 23.44   |
| 5.0   | 5.0   | 30.56 | 10.33 | 23.44   |
| 10.1  | 10.2  | 31.00 | 10.14 | 23.81   |
| 15.0  | 15.1  | 31.37 | 10.03 | 24.12   |
| 19.7  | 19.8  | 31.43 | 9.99  | 24.17   |
| 25.0  | 25.1  | 31.63 | 9.86  | 24.35   |
| 29.7  | 29.9  | 32.20 | 9.65  | 24.82   |
| 34.8  | 35.0  | 32.26 | 9.64  | 24.88   |
| 39.8  | 40.0  | 32.42 | 9.66  | 25.00   |
| 44.8  | 45.0  | 32.54 | 9.55  | 25.11   |
| 49.8  | 50.0  | 32.66 | 9.38  | 25.22   |
| 59.9  | 60.2  | 32.87 | 9.14  | 25.43   |
| 69.7  | 70.0  | 33.11 | 8.78  | 25.68   |
| 79.6  | 80.0  | 33.36 | 8.30  | 25.94   |
| 89.6  | 90.1  | 33.53 | 8.00  | 26.13   |
| 100.4 | 101.0 | 33.57 | 7.93  | 26.17   |
| 110.3 | 110.9 | 33.74 | 7.49  | 26.36   |
| 114.4 | 115.1 | 33.75 | 7.45  | 26.37   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 20 CODE

LAT N 48 12.41

DATE 21/ 4/81

TIME (PST) 1502

TAPE: U00454 -485

LONG W 125 13.55

PASS NO. 7

STN: C.A. 8

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.7   | 3.7   | 31.37 | 10.50 | 24.04   |
| 4.9   | 4.9   | 31.46 | 10.48 | 24.11   |
| 9.9   | 10.0  | 31.47 | 10.30 | 24.15   |
| 15.0  | 15.0  | 31.47 | 10.15 | 24.17   |
| 19.8  | 19.9  | 31.48 | 10.15 | 24.18   |
| 24.9  | 25.0  | 31.57 | 10.02 | 24.28   |
| 29.9  | 30.0  | 31.81 | 9.73  | 24.51   |
| 34.8  | 35.0  | 31.95 | 9.68  | 24.62   |
| 39.8  | 40.0  | 32.14 | 9.64  | 24.78   |
| 44.8  | 45.0  | 32.27 | 9.62  | 24.88   |
| 49.7  | 49.9  | 32.44 | 9.62  | 25.02   |
| 59.6  | 59.9  | 32.76 | 9.28  | 25.32   |
| 69.7  | 70.0  | 33.16 | 8.67  | 25.73   |
| 79.6  | 80.1  | 33.30 | 8.37  | 25.89   |
| 89.5  | 90.1  | 33.42 | 8.15  | 26.01   |
| 100.6 | 101.1 | 33.55 | 7.95  | 26.15   |
| 109.6 | 110.3 | 33.62 | 7.81  | 26.22   |
| 120.1 | 120.9 | 33.71 | 7.54  | 26.33   |
| 130.0 | 130.8 | 33.77 | 7.43  | 26.40   |
| 132.3 | 133.1 | 33.82 | 7.26  | 26.45   |

CRUISE NO: 20 CODE

LAT N 48 11.37

DATE 21/ 4/81

TIME (PST) 1547

TAPE: U00454 -486

LONG W 125 19.38

PASS NO. 9

STN: C.A. 7

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.1   | 4.1   | 31.41 | 10.22 | 24.11   |
| 4.6   | 4.6   | 31.40 | 10.22 | 24.11   |
| 9.9   | 10.0  | 31.43 | 10.08 | 24.16   |
| 14.9  | 14.9  | 31.43 | 10.04 | 24.16   |
| 20.0  | 20.0  | 31.73 | 9.79  | 24.44   |
| 24.8  | 24.9  | 32.06 | 9.55  | 24.73   |
| 29.9  | 30.0  | 32.16 | 9.52  | 24.81   |
| 34.7  | 34.9  | 32.31 | 9.57  | 24.93   |
| 39.9  | 40.1  | 32.49 | 9.52  | 25.07   |
| 44.8  | 45.0  | 32.60 | 9.46  | 25.17   |
| 49.7  | 50.0  | 32.71 | 9.34  | 25.27   |
| 59.7  | 60.1  | 32.87 | 9.16  | 25.43   |
| 69.6  | 70.0  | 33.08 | 8.84  | 25.64   |
| 79.6  | 80.0  | 33.27 | 8.43  | 25.86   |
| 87.6  | 88.1  | 33.34 | 8.28  | 25.93   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 20 CODE

LAT N 48 11.16

DATE 21/ 4/81

TIME (PST) 1625

TAPE: U00454 -487

LONG W 125 25.19

PASS NO. 11

STN: C.A. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.7   | 3.7   | 30.63 | 10.02 | 23.54   |        |
| 4.9   | 4.9   | 31.24 | 10.03 | 24.02   |        |
| 10.0  | 10.1  | 31.28 | 9.96  | 24.05   | 8.06   |
| 14.8  | 14.9  | 31.59 | 9.32  | 24.40   |        |
| 19.9  | 20.0  | 31.90 | 9.19  | 24.67   |        |
| 24.9  | 25.0  | 32.26 | 9.64  | 24.87   | 5.32   |
| 29.7  | 29.9  | 32.37 | 9.62  | 24.97   |        |
| 34.8  | 35.0  | 32.46 | 9.60  | 25.04   |        |
| 39.8  | 40.0  | 32.56 | 9.52  | 25.13   |        |
| 44.6  | 44.8  | 32.67 | 9.40  | 25.23   |        |
| 49.9  | 50.2  | 32.67 | 9.39  | 25.24   | 4.81   |
| 59.8  | 60.1  | 32.82 | 9.20  | 25.38   |        |
| 69.7  | 70.1  | 32.90 | 9.09  | 25.47   |        |
| 74.6  | 75.0  | 33.15 | 8.66  | 25.73   | 3.69   |
| 79.6  | 80.0  | 33.24 | 8.55  | 25.81   |        |
| 90.3  | 90.9  | 33.49 | 8.08  | 26.08   |        |
| 100.5 | 101.1 | 33.71 | 7.56  | 26.33   | 3.06   |
| 110.4 | 111.1 | 33.72 | 7.53  | 26.34   |        |
| 117.1 | 117.8 | 33.72 | 7.53  | 26.34   |        |

CRUISE NO: 20 CODE

LAT N 48 10.57

DATE 21/ 4/81

TIME (PST) 1723

TAPE: U00454 -488

LONG W 125 30.58

PASS NO. 13

STN: C.A. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.9   | 3.0   | 31.10 | 9.98  | 23.91   |
| 5.5   | 5.5   | 31.11 | 10.01 | 23.92   |
| 10.0  | 10.1  | 31.13 | 9.98  | 23.93   |
| 15.1  | 15.1  | 31.19 | 9.69  | 24.03   |
| 20.0  | 20.1  | 31.37 | 9.40  | 24.22   |
| 24.7  | 24.8  | 31.54 | 9.04  | 24.41   |
| 30.0  | 30.1  | 31.75 | 8.81  | 24.60   |
| 35.0  | 35.1  | 32.04 | 9.18  | 24.78   |
| 39.9  | 40.1  | 32.32 | 9.61  | 24.92   |
| 44.9  | 45.1  | 32.38 | 9.63  | 24.97   |
| 49.9  | 50.1  | 32.44 | 9.58  | 25.02   |
| 59.7  | 60.0  | 32.54 | 9.29  | 25.15   |
| 69.6  | 69.9  | 32.67 | 9.06  | 25.29   |
| 80.5  | 80.9  | 32.99 | 8.96  | 25.56   |
| 90.5  | 91.0  | 33.17 | 8.81  | 25.72   |
| 99.6  | 100.1 | 33.30 | 8.60  | 25.85   |
| 110.5 | 111.2 | 33.50 | 8.07  | 26.09   |
| 119.2 | 119.9 | 33.75 | 7.55  | 26.36   |
| 130.1 | 130.9 | 33.87 | 7.29  | 26.49   |
| 140.3 | 141.1 | 33.91 | 7.07  | 26.55   |
| 140.9 | 141.8 | 33.91 | 7.06  | 26.56   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 20 CODE  
 LAT N 48 10.26  
 DATE 21/ 4/81  
 TIME (PST) 1843

TAPE: U00454 -490  
 LONG W 125 42.11  
 PASS NO. 17  
 STN: C.A. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.8   | 3.8   | 31.40 | 10.19 | 24.11   |
| 5.0   | 5.0   | 31.40 | 10.19 | 24.11   |
| 10.0  | 10.0  | 31.40 | 10.19 | 24.11   |
| 15.1  | 15.1  | 31.69 | 9.79  | 24.41   |
| 20.0  | 20.1  | 31.98 | 9.52  | 24.68   |
| 25.1  | 25.2  | 32.13 | 9.53  | 24.79   |
| 29.8  | 29.9  | 32.29 | 9.64  | 24.90   |
| 34.9  | 35.0  | 32.39 | 9.75  | 24.96   |
| 39.9  | 40.1  | 32.43 | 9.54  | 25.02   |
| 44.9  | 45.1  | 32.41 | 9.48  | 25.02   |
| 49.8  | 50.1  | 32.41 | 9.47  | 25.02   |
| 59.6  | 59.9  | 32.42 | 9.47  | 25.03   |
| 69.7  | 70.1  | 32.48 | 9.41  | 25.08   |
| 80.3  | 80.7  | 32.76 | 9.23  | 25.33   |
| 89.5  | 90.0  | 32.99 | 9.08  | 25.54   |
| 100.4 | 100.9 | 33.40 | 8.22  | 25.99   |
| 110.4 | 111.0 | 33.53 | 7.62  | 26.18   |
| 120.3 | 121.0 | 33.59 | 7.46  | 26.25   |
| 130.1 | 130.9 | 33.70 | 7.39  | 26.35   |
| 140.2 | 141.0 | 33.75 | 7.33  | 26.39   |
| 150.1 | 151.0 | 33.84 | 7.27  | 26.47   |
| 159.9 | 160.9 | 33.88 | 7.15  | 26.52   |
| 170.0 | 171.0 | 33.89 | 7.05  | 26.54   |
| 179.9 | 181.0 | 33.93 | 6.90  | 26.59   |
| 189.8 | 191.0 | 33.95 | 6.68  | 26.64   |
| 199.6 | 200.9 | 33.98 | 6.45  | 26.69   |
| 225.5 | 227.1 | 33.99 | 6.08  | 26.75   |
| 250.4 | 252.1 | 34.01 | 5.78  | 26.80   |
| 275.1 | 277.1 | 34.02 | 5.61  | 26.83   |
| 300.0 | 302.2 | 34.03 | 5.48  | 26.85   |
| 324.4 | 326.7 | 34.05 | 5.31  | 26.89   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 20 CODE  
 LAT N 48 10.40  
 DATE 21/ 4/81  
 TIME (PST) 1805

TAPE: U00454 -489  
 LONG W 125 36.35  
 PASS NO. 15  
 STN: C.A. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.5   | 4.5   | 31.73 | 10.37 | 24.34   |
| 6.0   | 5.0   | 31.73 | 10.37 | 24.34   |
| 9.9   | 10.0  | 31.94 | 10.18 | 24.54   |
| 15.0  | 15.1  | 31.98 | 9.96  | 24.60   |
| 19.9  | 20.0  | 32.03 | 9.89  | 24.66   |
| 24.8  | 24.9  | 32.14 | 9.72  | 24.77   |
| 29.8  | 30.0  | 32.27 | 9.71  | 24.87   |
| 34.9  | 35.0  | 32.31 | 9.66  | 24.91   |
| 40.0  | 40.2  | 32.37 | 9.65  | 24.96   |
| 44.6  | 44.9  | 32.39 | 9.63  | 24.98   |
| 49.8  | 50.0  | 32.44 | 9.67  | 25.01   |
| 59.7  | 60.1  | 32.49 | 9.44  | 25.09   |
| 70.1  | 70.5  | 32.58 | 9.38  | 25.16   |
| 80.6  | 81.1  | 32.77 | 9.26  | 25.34   |
| 89.7  | 90.2  | 33.17 | 8.76  | 25.73   |
| 100.4 | 101.0 | 33.33 | 8.52  | 25.89   |
| 110.2 | 110.9 | 33.39 | 8.41  | 25.95   |
| 120.3 | 121.1 | 33.42 | 8.33  | 25.98   |
| 130.2 | 131.0 | 33.48 | 8.05  | 26.08   |
| 140.3 | 141.1 | 33.81 | 7.38  | 26.43   |
| 150.2 | 151.2 | 33.88 | 7.19  | 26.51   |
| 159.7 | 160.7 | 33.91 | 7.02  | 26.56   |
| 164.9 | 165.9 | 33.92 | 7.02  | 26.56   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 20 CODE  
 LAT N 48 10.13  
 DATE 21/ 4/81  
 TIME (PST) 1933

TAPE: U00454 -491  
 LONG W 125 47.46  
 PASS NO. 19  
 STN: C.A. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 3.6   | 3.6   | 31.88 | 10.10 | 24.51   |        |
| 4.9   | 4.9   | 31.88 | 10.10 | 24.51   |        |
| 10.0  | 10.0  | 31.89 | 10.10 | 24.51   |        |
| 15.0  | 15.1  | 31.93 | 10.06 | 24.55   |        |
| 20.0  | 20.1  | 32.04 | 9.96  | 24.65   |        |
| 24.8  | 24.9  | 32.07 | 9.87  | 24.69   | 6.82   |
| 29.9  | 30.1  | 32.19 | 9.76  | 24.80   |        |
| 34.7  | 34.9  | 32.36 | 9.74  | 24.94   |        |
| 39.8  | 40.1  | 32.46 | 9.91  | 24.99   |        |
| 44.7  | 44.9  | 32.47 | 9.89  | 25.00   |        |
| 50.4  | 50.6  | 32.47 | 9.87  | 25.00   | 6.66   |
| 59.6  | 59.9  | 32.46 | 9.69  | 25.02   |        |
| 69.7  | 70.1  | 32.53 | 9.22  | 25.15   |        |
| 74.7  | 75.1  | 32.79 | 9.19  | 25.36   | 4.58   |
| 79.5  | 79.9  | 33.02 | 8.61  | 25.63   |        |
| 89.6  | 90.1  | 33.13 | 8.25  | 25.77   |        |
| 100.5 | 101.0 | 33.38 | 7.69  | 26.05   | 5.15   |
| 110.5 | 111.1 | 33.51 | 7.63  | 26.16   |        |
| 120.3 | 121.0 | 33.60 | 7.49  | 26.25   |        |
| 125.2 | 126.0 | 33.63 | 7.41  | 26.28   | 3.97   |
| 130.2 | 131.0 | 33.66 | 7.37  | 26.31   |        |
| 140.1 | 141.0 | 33.76 | 7.29  | 26.40   |        |
| 150.0 | 151.0 | 33.80 | 7.26  | 26.44   |        |
| 159.9 | 160.9 | 33.86 | 7.16  | 26.50   |        |
| 169.9 | 171.0 | 33.90 | 7.04  | 26.55   |        |
| 179.7 | 180.8 | 33.93 | 6.88  | 26.60   |        |
| 189.6 | 190.9 | 33.95 | 6.80  | 26.62   |        |
| 199.7 | 201.0 | 33.97 | 6.62  | 26.66   | 2.80   |
| 225.5 | 227.0 | 33.99 | 6.23  | 26.73   |        |
| 250.5 | 252.2 | 33.99 | 5.97  | 26.76   | 2.03   |
| 274.8 | 276.8 | 34.00 | 5.74  | 26.80   |        |
| 299.7 | 301.8 | 34.01 | 5.63  | 26.82   | 1.64   |
| 325.5 | 327.9 | 34.03 | 5.47  | 26.85   |        |
| 349.9 | 352.5 | 34.03 | 5.37  | 26.87   |        |
| 375.2 | 378.0 | 34.06 | 5.19  | 26.91   |        |
| 399.9 | 403.0 | 34.07 | 4.97  | 26.94   |        |
| 424.7 | 428.0 | 34.09 | 4.90  | 26.96   |        |
| 450.1 | 453.6 | 34.11 | 4.74  | 27.00   |        |
| 474.4 | 478.2 | 34.13 | 4.68  | 27.02   |        |
| 500.0 | 504.0 | 34.15 | 4.62  | 27.04   |        |
| 509.9 | 514.0 | 34.15 | 4.60  | 27.05   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 20 CODE

LAT N 48 12.90

DATE 21/ 4/81

TIME (PST) 2135

TAPE: U00454 -492

LONG W 125 52.00

PASS NO. 21

STN: 109

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 4.0   | 4.0   | 32.00 | 9.98 | 24.61   |
| 5.1   | 5.1   | 31.99 | 9.99 | 24.61   |
| 9.8   | 9.9   | 32.01 | 9.95 | 24.63   |
| 14.9  | 15.0  | 32.04 | 9.86 | 24.67   |
| 19.8  | 19.9  | 32.04 | 9.85 | 24.67   |
| 24.8  | 25.0  | 32.08 | 9.81 | 24.70   |
| 29.6  | 29.8  | 32.21 | 9.58 | 24.84   |
| 34.8  | 35.0  | 32.33 | 9.51 | 24.95   |
| 39.7  | 39.9  | 32.41 | 9.50 | 25.01   |
| 44.7  | 44.9  | 32.47 | 9.43 | 25.07   |
| 49.7  | 49.9  | 32.48 | 9.34 | 25.10   |
| 60.2  | 60.5  | 32.60 | 9.26 | 25.20   |
| 70.1  | 70.5  | 32.83 | 9.12 | 25.40   |
| 79.6  | 80.1  | 33.10 | 8.85 | 25.66   |
| 90.5  | 91.0  | 33.35 | 8.31 | 25.94   |
| 100.5 | 101.1 | 33.46 | 8.11 | 26.05   |
| 110.4 | 111.1 | 33.55 | 7.71 | 26.18   |
| 120.3 | 121.0 | 33.62 | 7.49 | 26.27   |
| 130.2 | 131.0 | 33.76 | 7.33 | 26.40   |
| 140.3 | 141.2 | 33.85 | 7.19 | 26.49   |
| 150.0 | 151.0 | 33.86 | 7.15 | 26.50   |
| 160.1 | 161.1 | 33.89 | 7.09 | 26.53   |
| 169.8 | 170.9 | 33.91 | 7.00 | 26.57   |
| 179.9 | 181.1 | 33.94 | 6.87 | 26.60   |
| 189.8 | 191.0 | 33.96 | 6.74 | 26.63   |
| 199.7 | 201.0 | 33.95 | 6.62 | 26.64   |
| 225.3 | 226.8 | 33.98 | 6.39 | 26.70   |
| 250.2 | 252.0 | 33.99 | 6.23 | 26.73   |
| 275.1 | 277.1 | 34.00 | 6.11 | 26.75   |
| 300.4 | 302.6 | 34.00 | 5.78 | 26.79   |
| 325.5 | 327.9 | 34.02 | 5.56 | 26.83   |
| 350.5 | 353.1 | 34.03 | 5.44 | 26.86   |
| 375.1 | 378.0 | 34.06 | 5.22 | 26.90   |
| 399.9 | 403.0 | 34.08 | 5.00 | 26.94   |
| 425.3 | 428.6 | 34.10 | 4.81 | 26.99   |
| 450.0 | 453.5 | 34.11 | 4.74 | 27.00   |
| 475.1 | 478.9 | 34.14 | 4.64 | 27.03   |
| 494.0 | 498.0 | 34.14 | 4.63 | 27.04   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 20 CODE  
 LAT N 48 15.10  
 DATE 21/ 4/81  
 TIME (PST) 2218

TAPE: U00454 -493  
 LONG W 125 47.70  
 PASS NO. 23  
 STN: 108

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T |
|-------|-------|-------|------|---------|
| 3.0   | 3.0   | 5.92  | 9.90 | 4.34    |
| 5.1   | 5.0   | 31.92 | 9.90 | 24.56   |
| 9.9   | 9.9   | 31.92 | 9.89 | 24.57   |
| 15.1  | 15.1  | 31.98 | 9.89 | 24.62   |
| 20.6  | 20.6  | 32.05 | 9.85 | 24.68   |
| 25.0  | 25.1  | 32.19 | 9.54 | 24.84   |
| 30.0  | 30.1  | 32.28 | 9.47 | 24.91   |
| 34.9  | 35.0  | 32.37 | 9.52 | 24.98   |
| 39.9  | 40.1  | 32.42 | 9.47 | 25.03   |
| 45.0  | 45.2  | 32.48 | 9.38 | 25.09   |
| 49.9  | 50.1  | 32.47 | 9.18 | 25.11   |
| 60.4  | 60.6  | 32.48 | 8.93 | 25.15   |
| 69.8  | 70.1  | 32.73 | 9.19 | 25.31   |
| 79.7  | 80.0  | 32.77 | 9.18 | 25.34   |
| 90.5  | 91.0  | 33.23 | 8.68 | 25.78   |
| 99.6  | 100.1 | 33.42 | 8.27 | 25.99   |
| 109.6 | 110.2 | 33.66 | 7.84 | 26.25   |
| 120.5 | 121.1 | 33.77 | 7.60 | 26.37   |
| 130.2 | 131.0 | 33.83 | 7.34 | 26.45   |
| 140.2 | 141.0 | 33.86 | 7.24 | 26.49   |
| 150.1 | 151.0 | 33.88 | 7.09 | 26.53   |
| 160.0 | 160.9 | 33.91 | 6.98 | 26.57   |
| 169.9 | 171.0 | 33.92 | 6.92 | 26.58   |
| 180.5 | 181.6 | 33.94 | 6.79 | 26.61   |
| 189.7 | 190.9 | 33.96 | 6.64 | 26.65   |
| 199.8 | 201.1 | 33.97 | 6.51 | 26.67   |
| 206.4 | 207.7 | 33.97 | 6.43 | 26.69   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 20 CODE  
 LAT N 48 18.60  
 DATE 21/ 4/81  
 TIME (PST) 2309

TAPE: U00454 -494  
 LONG W 125 41.20  
 PASS NO. 25  
 SYN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 4.3   | 4.3   | 31.83 | 10.00 | 24.48   |        |
| 4.9   | 4.9   | 31.83 | 10.00 | 24.48   |        |
| 10.0  | 10.0  | 31.83 | 10.01 | 24.48   | 6.92   |
| 14.9  | 15.0  | 31.86 | 9.97  | 24.51   |        |
| 20.1  | 20.2  | 32.09 | 9.71  | 24.73   |        |
| 24.9  | 25.0  | 32.17 | 9.57  | 24.81   | 6.89   |
| 29.7  | 29.8  | 32.24 | 9.53  | 24.88   |        |
| 34.6  | 34.8  | 32.33 | 9.53  | 24.94   |        |
| 39.7  | 39.9  | 32.38 | 9.53  | 24.99   |        |
| 44.8  | 45.1  | 32.44 | 9.53  | 25.03   |        |
| 49.7  | 50.0  | 32.46 | 9.47  | 25.06   | 6.31   |
| 60.4  | 60.7  | 32.52 | 9.38  | 25.12   |        |
| 69.5  | 69.9  | 32.58 | 9.36  | 25.17   |        |
| 74.7  | 75.1  | 32.65 | 9.29  | 25.23   | 5.89   |
| 79.6  | 80.0  | 32.74 | 9.17  | 25.33   |        |
| 90.4  | 90.9  | 33.08 | 8.77  | 25.65   |        |
| 100.2 | 100.7 | 33.31 | 8.52  | 25.87   | 3.67   |
| 110.3 | 110.9 | 33.55 | 7.95  | 26.14   |        |
| 119.3 | 120.0 | 33.70 | 7.60  | 26.31   |        |
| 125.2 | 125.9 | 33.76 | 7.44  | 26.39   | 2.69   |
| 130.3 | 131.1 | 33.85 | 7.22  | 26.48   |        |
| 140.2 | 141.1 | 33.93 | 6.87  | 26.60   |        |
| 149.9 | 150.9 | 33.93 | 6.78  | 26.61   |        |
| 153.9 | 154.9 | 33.93 | 6.78  | 26.61   |        |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 20 CODE  
 LAT N 48 22.00  
 DATE 22/ 4/81  
 TIME (PST) 0021

TAPE: U00454 -495  
 LONG W 125 34.70  
 PASS NO. 27  
 STN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 6.8   | 6.9   | 31.34 | 10.08 | 24.08   |
| 10.1  | 10.1  | 31.34 | 10.08 | 24.08   |
| 14.7  | 14.8  | 31.37 | 10.02 | 24.12   |
| 20.1  | 20.2  | 31.50 | 9.73  | 24.27   |
| 24.8  | 24.9  | 31.72 | 9.46  | 24.48   |
| 29.9  | 30.0  | 32.03 | 9.43  | 24.73   |
| 34.8  | 34.9  | 32.28 | 9.58  | 24.90   |
| 39.8  | 40.0  | 32.37 | 9.57  | 24.97   |
| 44.8  | 45.1  | 32.42 | 9.57  | 25.01   |
| 49.8  | 50.1  | 32.44 | 9.45  | 25.05   |
| 59.6  | 59.9  | 32.54 | 9.09  | 25.18   |
| 69.8  | 70.1  | 32.71 | 9.20  | 25.30   |
| 80.4  | 80.9  | 32.81 | 9.12  | 25.39   |
| 89.5  | 90.0  | 33.21 | 8.65  | 25.77   |
| 100.5 | 101.1 | 33.59 | 7.94  | 26.17   |
| 110.4 | 111.0 | 33.81 | 7.36  | 26.43   |
| 120.4 | 121.1 | 33.93 | 6.73  | 26.62   |
| 122.9 | 123.7 | 33.94 | 6.63  | 26.64   |

CRUISE NO: 20 CODE  
 LAT N 48 25.50  
 DATE 22/ 4/81  
 TIME (PST) 0106

TAPE: U00454 -496  
 LONG W 125 28.30  
 PASS NO. 29  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| 2.2   | 2.2   | 30.65 | 10.13 | 23.54   |        |
| 5.1   | 5.1   | 30.67 | 10.20 | 23.54   |        |
| 9.9   | 9.9   | 30.68 | 10.20 | 23.55   | 7.76   |
| 14.9  | 15.0  | 31.17 | 9.99  | 23.97   |        |
| 19.9  | 20.0  | 31.48 | 9.42  | 24.30   |        |
| 24.8  | 25.0  | 31.61 | 9.15  | 24.44   | 6.02   |
| 29.9  | 30.0  | 31.76 | 8.94  | 24.59   |        |
| 35.0  | 35.1  | 31.83 | 8.81  | 24.67   |        |
| 39.8  | 40.0  | 32.08 | 8.70  | 24.88   |        |
| 44.7  | 45.0  | 32.34 | 8.73  | 25.08   |        |
| 49.8  | 50.0  | 32.40 | 8.74  | 25.13   | 4.49   |
| 59.8  | 60.1  | 32.68 | 8.67  | 25.35   |        |
| 69.8  | 70.2  | 33.04 | 8.89  | 25.60   |        |
| 74.6  | 75.0  | 33.08 | 8.85  | 25.64   | 3.72   |
| 80.5  | 80.9  | 33.20 | 8.74  | 25.75   |        |
| 89.6  | 90.1  | 33.30 | 8.39  | 25.89   |        |
| 100.5 | 101.1 | 33.64 | 7.75  | 26.24   | 3.01   |
| 110.3 | 110.9 | 33.82 | 7.24  | 26.46   |        |
| 120.3 | 121.0 | 33.82 | 7.23  | 26.46   |        |
| 125.3 | 126.1 | 33.83 | 7.21  | 26.47   | 2.43   |
| 128.0 | 128.8 | 33.83 | 7.20  | 26.48   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 20 CODE

LAT N 48 28.90

DATE 22/ 4/81

TIME (PST) 0220

TAPE: U00454 -497

LONG W 125 21.80

PASS NO. 31

STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 3.8   | 3.8   | 31.24 | 10.03 | 24.01   |
| 5.1   | 5.1   | 31.23 | 10.04 | 24.01   |
| 10.0  | 10.1  | 31.25 | 10.04 | 24.02   |
| 15.0  | 15.1  | 31.28 | 10.07 | 24.04   |
| 19.7  | 19.8  | 31.29 | 10.08 | 24.05   |
| 25.0  | 25.1  | 31.29 | 10.07 | 24.05   |
| 29.8  | 30.0  | 31.29 | 10.07 | 24.05   |
| 34.8  | 35.0  | 31.29 | 10.06 | 24.05   |
| 39.8  | 40.0  | 31.30 | 10.00 | 24.06   |
| 44.8  | 45.0  | 31.77 | 9.69  | 24.48   |
| 49.8  | 50.1  | 32.01 | 9.67  | 24.68   |
| 59.7  | 60.0  | 32.43 | 9.57  | 25.02   |
| 69.5  | 69.9  | 32.60 | 9.23  | 25.20   |
| 80.3  | 80.8  | 33.01 | 8.90  | 25.58   |
| 90.4  | 90.9  | 33.38 | 8.27  | 25.96   |
| 100.5 | 101.1 | 33.60 | 7.80  | 26.21   |
| 110.3 | 111.0 | 33.83 | 7.22  | 26.47   |
| 120.3 | 121.0 | 33.84 | 7.20  | 26.48   |
| 130.2 | 131.0 | 33.89 | 7.06  | 26.54   |
| 140.2 | 141.0 | 33.89 | 7.05  | 26.54   |
| 149.1 | 150.0 | 33.89 | 7.05  | 26.54   |

CRUISE NO: 20 CODE

LAT N 48 32.20

DATE 22/ 4/81

TIME (PST) 0300

TAPE: U00454 -498

LONG W 125 15.50

PASS NO. 33

STN: 103

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 4.1   | 4.1   | 30.15 | 9.92 | 23.19   |        |
| 4.5   | 4.5   | 30.16 | 9.92 | 23.19   |        |
| 10.1  | 10.1  | 30.23 | 9.85 | 23.25   | 7.42   |
| 15.0  | 15.0  | 30.48 | 9.60 | 23.49   |        |
| 19.9  | 20.0  | 30.67 | 9.57 | 23.64   |        |
| 24.9  | 25.0  | 30.97 | 9.77 | 23.85   | 6.69   |
| 29.9  | 30.0  | 31.25 | 9.60 | 24.09   |        |
| 34.7  | 34.9  | 31.57 | 9.34 | 24.38   |        |
| 39.9  | 40.1  | 31.98 | 8.57 | 24.82   |        |
| 44.6  | 44.8  | 31.97 | 8.53 | 24.82   |        |
| 50.3  | 50.5  | 32.05 | 8.47 | 24.89   | 4.65   |
| 59.8  | 60.1  | 32.26 | 8.41 | 25.06   |        |
| 70.5  | 70.8  | 32.64 | 8.35 | 25.37   |        |
| 74.5  | 74.9  | 32.86 | 8.37 | 25.54   | 3.66   |
| 79.5  | 79.9  | 33.13 | 8.24 | 25.77   |        |
| 90.5  | 91.0  | 33.27 | 8.22 | 25.88   |        |
| 99.5  | 100.1 | 33.54 | 7.90 | 26.14   | 2.64   |
| 105.2 | 105.8 | 33.63 | 7.63 | 26.25   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 20 CODE

LAT N 48 35.60

DATE 22/ 4/81

TIME (PST) 0351

TAPE: U00454 -499

LONG W 125 9.00

PASS NO. 34

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 4.0   | 4.0   | 29.87 | 10.13 | 22.93   |
| 5.1   | 5.1   | 29.90 | 10.10 | 22.96   |
| 9.9   | 10.0  | 29.95 | 10.04 | 23.00   |
| 15.0  | 15.0  | 30.23 | 9.77  | 23.27   |
| 19.9  | 20.0  | 30.97 | 9.15  | 23.95   |
| 24.9  | 25.0  | 31.33 | 8.97  | 24.25   |
| 29.9  | 30.1  | 31.55 | 8.72  | 24.46   |
| 34.8  | 35.0  | 31.60 | 8.67  | 24.51   |
| 39.9  | 40.1  | 31.70 | 8.70  | 24.58   |
| 44.7  | 44.9  | 31.77 | 8.72  | 24.63   |
| 49.7  | 49.9  | 31.87 | 8.72  | 24.71   |
| 59.7  | 60.0  | 32.18 | 8.55  | 24.98   |
| 70.2  | 70.6  | 32.59 | 8.31  | 25.34   |
| 79.5  | 79.9  | 33.15 | 8.32  | 25.77   |
| 89.5  | 90.0  | 33.53 | 7.86  | 26.14   |
| 100.4 | 101.0 | 33.57 | 7.81  | 26.18   |
| 104.3 | 104.9 | 33.57 | 7.76  | 26.19   |

CRUISE NO: 20 CODE

LAT N 48 39.00

DATE 22/ 4/81

TIME (PST) 0432

TAPE: U00454 -500

LONG W 125 2.50

PASS NO. 36

STN: 101

| DEPTH | PRESS | SAL   | TEMP | SIGMA-T | OXYGEN |
|-------|-------|-------|------|---------|--------|
| 4.0   | 4.0   | 30.08 | 9.86 | 23.14   |        |
| 4.9   | 5.0   | 30.08 | 9.86 | 23.14   |        |
| 10.0  | 10.0  | 30.09 | 9.86 | 23.14   | 7.17   |
| 15.0  | 15.0  | 30.23 | 9.77 | 23.27   |        |
| 20.0  | 20.1  | 31.27 | 9.09 | 24.19   |        |
| 25.0  | 25.1  | 31.39 | 8.88 | 24.31   | 6.88   |
| 29.7  | 29.8  | 31.42 | 8.84 | 24.34   |        |
| 34.9  | 35.0  | 31.59 | 8.68 | 24.50   |        |
| 39.9  | 40.0  | 31.64 | 8.66 | 24.54   |        |
| 44.8  | 45.0  | 31.71 | 8.60 | 24.61   |        |
| 49.9  | 50.1  | 31.75 | 8.58 | 24.64   | 5.37   |
| 55.7  | 56.0  | 31.75 | 8.58 | 24.64   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 50 23.40

DATE 5/ 9/81

TIME (PST) 0700

TAPE: U00454 -612

LONG W 128 7.50

PASS NO. 1

STN: K.I. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .0    | .0    | 31.71 | 13.53 | 23.74   |
| 2.1   | 2.1   | 31.70 | 13.59 | 23.73   |
| 4.9   | 4.9   | 31.72 | 13.38 | 23.78   |
| 9.9   | 10.0  | 31.74 | 13.33 | 23.81   |
| 14.9  | 15.0  | 31.78 | 13.23 | 23.86   |
| 19.8  | 19.9  | 31.79 | 12.86 | 23.94   |
| 25.0  | 25.1  | 31.80 | 12.64 | 23.99   |
| 30.0  | 30.1  | 31.86 | 12.54 | 24.05   |
| 34.9  | 35.0  | 31.90 | 12.57 | 24.08   |
| 39.8  | 40.0  | 31.96 | 12.34 | 24.17   |
| 44.7  | 44.9  | 32.00 | 12.11 | 24.24   |
| 49.8  | 50.0  | 32.14 | 11.60 | 24.44   |
| 59.7  | 60.0  | 32.45 | 10.12 | 24.94   |
| 69.8  | 70.2  | 32.62 | 9.32  | 25.21   |
| 79.7  | 80.1  | 33.29 | 7.72  | 25.97   |
| 87.4  | 87.9  | 33.46 | 7.47  | 26.14   |

CRUISE NO: 22 CODE

LAT N 50 20.00

DATE 5/ 9/81

TIME (PST) 0742

TAPE: U00454 -613

LONG W 128 13.80

PASS NO. 3

STN: K.I. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .5    | .5    | 31.50 | 14.04 | 23.48   |
| 2.0   | 2.0   | 31.51 | 14.01 | 23.49   |
| 5.0   | 5.0   | 31.62 | 13.82 | 23.61   |
| 10.1  | 10.1  | 31.67 | 13.37 | 23.74   |
| 14.9  | 15.0  | 31.65 | 13.16 | 23.77   |
| 20.0  | 20.1  | 31.71 | 13.16 | 23.82   |
| 24.9  | 25.0  | 31.82 | 13.31 | 23.87   |
| 29.9  | 30.0  | 31.86 | 12.94 | 23.98   |
| 34.8  | 35.0  | 32.04 | 12.35 | 24.23   |
| 39.7  | 39.9  | 32.42 | 10.94 | 24.78   |
| 44.8  | 45.0  | 32.65 | 9.81  | 25.15   |
| 49.9  | 50.1  | 32.84 | 8.82  | 25.45   |
| 59.7  | 60.0  | 33.04 | 8.17  | 25.72   |
| 69.7  | 70.0  | 33.22 | 7.83  | 25.90   |
| 79.5  | 80.0  | 33.36 | 7.58  | 26.05   |
| 89.5  | 90.0  | 33.52 | 7.31  | 26.21   |
| 100.4 | 101.0 | 33.62 | 7.18  | 26.31   |
| 110.4 | 111.1 | 33.71 | 7.11  | 26.39   |
| 120.3 | 121.0 | 33.76 | 7.03  | 26.44   |
| 130.3 | 131.1 | 33.84 | 6.92  | 26.52   |
| 140.1 | 141.0 | 33.89 | 6.82  | 26.57   |
| 150.0 | 151.0 | 33.92 | 6.58  | 26.63   |
| 160.0 | 161.0 | 33.92 | 6.57  | 26.63   |
| 165.8 | 166.9 | 33.92 | 6.55  | 26.63   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 22 CODE  
 LAT N 50 16.30  
 DATE 5/ 9/81  
 TIME (PST) 0831

TAPE: U00454 ~614  
 LONG W 128 20.50  
 PASS NO. 5  
 SYN: K-1, 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| 2.0   | 2.0   | 31.69 | 14.76 | 23.48   |
| 5.1   | 5.1   | 31.70 | 14.69 | 23.50   |
| 10.0  | 10.0  | 31.90 | 13.91 | 23.81   |
| 14.9  | 14.9  | 31.95 | 13.50 | 23.93   |
| 20.0  | 20.0  | 32.06 | 12.73 | 24.17   |
| 24.9  | 25.0  | 32.22 | 12.09 | 24.41   |
| 29.8  | 29.9  | 32.51 | 10.69 | 24.89   |
| 34.8  | 35.0  | 32.67 | 10.16 | 25.11   |
| 39.8  | 40.0  | 32.89 | 9.31  | 25.42   |
| 44.8  | 45.0  | 33.07 | 8.51  | 25.68   |
| 49.7  | 50.0  | 33.15 | 8.21  | 25.79   |
| 59.4  | 59.7  | 33.30 | 7.74  | 25.98   |
| 69.6  | 70.0  | 33.37 | 7.53  | 26.06   |
| 79.6  | 80.0  | 33.52 | 7.19  | 26.23   |
| 90.5  | 91.1  | 33.63 | 7.02  | 26.34   |
| 100.5 | 101.1 | 33.69 | 6.95  | 26.39   |
| 110.3 | 111.0 | 33.74 | 6.89  | 26.44   |
| 120.3 | 121.0 | 33.78 | 6.83  | 26.48   |
| 130.1 | 130.9 | 33.81 | 6.80  | 26.51   |
| 140.2 | 141.1 | 33.82 | 6.73  | 26.53   |
| 150.0 | 151.0 | 33.84 | 6.62  | 26.56   |
| 159.9 | 160.9 | 33.87 | 6.51  | 26.59   |
| 169.9 | 171.1 | 33.88 | 6.51  | 26.60   |
| 179.7 | 180.9 | 33.90 | 6.41  | 26.63   |
| 189.6 | 190.9 | 33.91 | 6.33  | 26.65   |
| 199.6 | 200.9 | 33.92 | 6.24  | 26.67   |
| 225.3 | 226.9 | 33.96 | 6.18  | 26.71   |
| 250.2 | 252.0 | 33.95 | 5.90  | 26.74   |
| 274.9 | 276.9 | 33.98 | 5.88  | 26.76   |
| 299.7 | 301.9 | 34.00 | 5.70  | 26.80   |
| 324.5 | 326.9 | 34.02 | 5.48  | 26.84   |
| 350.3 | 353.0 | 34.03 | 5.33  | 26.87   |
| 375.1 | 377.9 | 34.02 | 5.14  | 26.88   |
| 399.9 | 403.0 | 34.01 | 4.90  | 26.90   |
| 424.7 | 428.0 | 34.05 | 5.05  | 26.92   |
| 450.4 | 454.0 | 34.05 | 4.83  | 26.94   |
| 475.0 | 478.9 | 34.05 | 4.69  | 26.96   |
| 496.9 | 500.9 | 34.07 | 4.65  | 26.98   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 50 12.60

DATE 5/ 9/81

TIME (PST) 0939

TAPE: U00454 -615

LONG W 128 27.00

PASS NO. 7

STN: K.I. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .1    | .1    | 31.58 | 15.72 | 23.19   |
| 2.0   | 2.0   | 31.58 | 15.72 | 23.18   |
| 4.9   | 4.9   | 31.58 | 15.72 | 23.19   |
| 10.0  | 10.0  | 31.58 | 15.71 | 23.19   |
| 15.0  | 15.1  | 31.61 | 15.25 | 23.31   |
| 19.9  | 20.0  | 32.26 | 11.20 | 24.61   |
| 24.8  | 24.9  | 32.26 | 10.44 | 24.74   |
| 29.8  | 29.9  | 32.35 | 9.83  | 24.91   |
| 34.9  | 35.1  | 32.45 | 9.11  | 25.10   |
| 39.9  | 40.0  | 32.52 | 8.81  | 25.21   |
| 44.7  | 44.9  | 32.58 | 8.65  | 25.28   |
| 49.8  | 50.0  | 32.65 | 8.49  | 25.36   |
| 59.6  | 59.9  | 32.84 | 8.14  | 25.56   |
| 69.6  | 69.9  | 33.09 | 7.69  | 25.82   |
| 79.6  | 80.1  | 33.15 | 7.62  | 25.88   |
| 90.5  | 91.0  | 33.42 | 7.41  | 26.12   |
| 100.4 | 101.0 | 33.55 | 7.22  | 26.25   |
| 110.3 | 111.0 | 33.66 | 7.17  | 26.34   |
| 120.3 | 121.1 | 33.74 | 7.12  | 26.41   |
| 130.3 | 131.1 | 33.76 | 7.09  | 26.43   |
| 140.0 | 140.9 | 33.81 | 7.02  | 26.48   |
| 150.0 | 151.0 | 33.85 | 6.94  | 26.52   |
| 160.0 | 161.1 | 33.87 | 6.81  | 26.56   |
| 169.9 | 171.0 | 33.89 | 6.72  | 26.59   |
| 179.8 | 181.0 | 33.91 | 6.64  | 26.61   |
| 189.8 | 191.1 | 33.93 | 6.61  | 26.63   |
| 199.6 | 200.9 | 33.93 | 6.56  | 26.64   |
| 225.4 | 227.0 | 33.96 | 6.25  | 26.70   |
| 250.2 | 252.0 | 33.98 | 5.90  | 26.76   |
| 275.0 | 276.9 | 33.94 | 5.42  | 26.79   |
| 299.8 | 302.0 | 33.95 | 5.30  | 26.81   |
| 324.7 | 327.1 | 33.97 | 5.16  | 26.84   |
| 350.3 | 353.0 | 33.98 | 5.08  | 26.86   |
| 375.2 | 378.1 | 34.01 | 5.01  | 26.89   |
| 400.0 | 403.0 | 34.04 | 4.85  | 26.94   |
| 424.7 | 428.0 | 34.07 | 4.88  | 26.95   |
| 449.6 | 453.1 | 34.10 | 4.88  | 26.97   |
| 475.2 | 479.0 | 34.11 | 4.72  | 27.00   |
| 496.8 | 500.8 | 34.13 | 4.68  | 27.02   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 22 CODE  
 LAT N 50 8.90  
 DATE 5/ 9/81  
 TIME (PST) 1041

TAPE: U00454 -616  
 LONG W 128 34.00  
 PASS NO. 9  
 STN: K.I. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .7    | .7    | 31.61 | 15.97 | 23.15   |
| 1.8   | 1.8   | 31.60 | 15.98 | 23.15   |
| 5.0   | 5.0   | 31.61 | 15.98 | 23.15   |
| 10.0  | 10.0  | 31.60 | 15.90 | 23.16   |
| 14.9  | 15.0  | 31.73 | 15.07 | 23.44   |
| 19.9  | 20.0  | 32.05 | 12.57 | 24.20   |
| 24.9  | 25.0  | 32.37 | 10.56 | 24.81   |
| 30.0  | 30.1  | 32.31 | 9.93  | 24.86   |
| 34.6  | 34.8  | 32.36 | 9.65  | 24.95   |
| 39.9  | 40.1  | 32.40 | 9.35  | 25.03   |
| 45.2  | 45.4  | 32.46 | 9.01  | 25.13   |
| 49.8  | 50.1  | 32.57 | 8.70  | 25.27   |
| 59.8  | 60.1  | 32.65 | 8.37  | 25.38   |
| 69.6  | 69.9  | 32.80 | 8.10  | 25.54   |
| 79.7  | 80.1  | 33.05 | 7.73  | 25.79   |
| 90.4  | 90.9  | 33.22 | 7.44  | 25.96   |
| 100.4 | 101.0 | 33.55 | 7.34  | 26.23   |
| 110.2 | 110.9 | 33.62 | 7.27  | 26.30   |
| 120.2 | 120.9 | 33.70 | 7.14  | 26.38   |
| 130.3 | 131.1 | 33.78 | 7.03  | 26.46   |
| 140.1 | 141.0 | 33.83 | 6.93  | 26.51   |
| 150.2 | 151.1 | 33.87 | 6.86  | 26.55   |
| 159.9 | 160.9 | 33.90 | 6.74  | 26.59   |
| 169.9 | 171.0 | 33.92 | 6.65  | 26.62   |
| 179.8 | 181.0 | 33.92 | 6.57  | 26.63   |
| 189.8 | 191.0 | 33.93 | 6.42  | 26.66   |
| 199.6 | 200.9 | 33.94 | 6.30  | 26.68   |
| 225.5 | 227.1 | 33.95 | 6.02  | 26.72   |
| 250.3 | 252.0 | 33.95 | 5.81  | 26.75   |
| 275.2 | 277.1 | 33.95 | 5.61  | 26.78   |
| 299.7 | 301.9 | 33.98 | 5.58  | 26.80   |
| 324.6 | 327.0 | 34.00 | 5.39  | 26.84   |
| 350.4 | 353.0 | 34.03 | 5.26  | 26.88   |
| 375.2 | 378.0 | 34.04 | 5.22  | 26.89   |
| 399.9 | 403.0 | 34.06 | 5.09  | 26.92   |
| 424.7 | 428.0 | 34.07 | 4.99  | 26.94   |
| 450.4 | 453.9 | 34.08 | 4.89  | 26.96   |
| 475.2 | 479.0 | 34.10 | 4.78  | 26.99   |
| 488.9 | 492.8 | 34.10 | 4.71  | 27.00   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 50 5.00

DATE 5/ 9/81

TIME (PST) 1143

TAPE: U00454 -617

LONG W 128 40.80

PASS NO. 11

STN: K.I. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 31.61 | 16.03 | 23.14   |
| 2.1   | 2.1   | 31.61 | 16.02 | 23.14   |
| 4.9   | 5.0   | 31.61 | 16.02 | 23.14   |
| 10.0  | 10.0  | 31.61 | 15.99 | 23.15   |
| 15.0  | 15.1  | 31.62 | 15.91 | 23.17   |
| 20.0  | 20.1  | 31.68 | 15.43 | 23.32   |
| 24.9  | 25.0  | 31.89 | 14.20 | 23.75   |
| 29.8  | 30.0  | 32.16 | 12.25 | 24.34   |
| 34.9  | 35.0  | 32.28 | 10.91 | 24.68   |
| 39.8  | 39.9  | 32.38 | 10.18 | 24.88   |
| 44.9  | 45.1  | 32.43 | 9.42  | 25.04   |
| 49.9  | 50.1  | 32.52 | 8.89  | 25.19   |
| 59.7  | 60.0  | 32.69 | 8.47  | 25.39   |
| 69.7  | 70.0  | 32.87 | 8.12  | 25.58   |
| 79.7  | 80.1  | 33.02 | 7.76  | 25.76   |
| 90.4  | 90.9  | 33.22 | 7.34  | 25.98   |
| 100.4 | 100.9 | 33.45 | 7.41  | 26.14   |
| 110.3 | 110.9 | 33.57 | 7.36  | 26.25   |
| 120.3 | 121.0 | 33.68 | 7.05  | 26.37   |
| 130.2 | 131.0 | 33.75 | 6.99  | 26.44   |
| 140.2 | 141.0 | 33.82 | 6.94  | 26.50   |
| 150.1 | 151.1 | 33.87 | 6.85  | 26.55   |
| 160.0 | 161.0 | 33.89 | 6.77  | 26.58   |
| 169.9 | 170.9 | 33.89 | 6.74  | 26.58   |
| 179.9 | 181.1 | 33.91 | 6.65  | 26.61   |
| 189.7 | 191.0 | 33.92 | 6.61  | 26.62   |
| 199.6 | 200.9 | 33.92 | 6.55  | 26.63   |
| 224.6 | 226.1 | 33.94 | 6.31  | 26.68   |
| 250.3 | 252.1 | 33.95 | 5.95  | 26.73   |
| 275.0 | 277.0 | 33.95 | 5.71  | 26.76   |
| 299.8 | 302.0 | 33.97 | 5.52  | 26.80   |
| 324.6 | 326.9 | 33.98 | 5.42  | 26.82   |
| 350.4 | 353.0 | 33.99 | 5.25  | 26.85   |
| 375.2 | 378.0 | 34.00 | 5.07  | 26.87   |
| 400.0 | 403.0 | 34.04 | 5.10  | 26.90   |
| 424.8 | 428.1 | 34.05 | 4.94  | 26.93   |
| 449.6 | 453.1 | 34.08 | 4.77  | 26.97   |
| 475.3 | 479.0 | 34.10 | 4.67  | 27.00   |
| 495.7 | 499.7 | 34.11 | 4.59  | 27.02   |



## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 49 53.70

DATE 5/ 9/81

TIME (PST) 1641

TAPE: U00454 -618

LONG W 127 30.30

PASS NO. 13

STN: K.S. 1

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .4    | 31.72 | 15.38 | 23.36   |
| 1.9   | 1.9   | 31.72 | 15.37 | 23.37   |
| 5.0   | 5.0   | 31.71 | 15.31 | 23.37   |
| 10.0  | 10.0  | 31.80 | 14.69 | 23.58   |
| 14.9  | 14.9  | 31.90 | 13.85 | 23.82   |
| 19.8  | 19.9  | 31.99 | 13.16 | 24.03   |
| 24.8  | 24.9  | 32.11 | 12.39 | 24.28   |
| 29.8  | 30.0  | 32.52 | 9.98  | 25.02   |
| 34.9  | 35.1  | 32.67 | 9.38  | 25.24   |
| 39.9  | 40.1  | 32.79 | 8.95  | 25.40   |
| 44.8  | 45.0  | 32.93 | 8.46  | 25.59   |
| 49.8  | 50.0  | 33.04 | 8.10  | 25.72   |
| 59.7  | 60.0  | 33.15 | 7.87  | 25.84   |
| 64.6  | 64.9  | 33.22 | 7.72  | 25.92   |

CRUISE NO: 22 CODE

LAT N 49 50.00

DATE 5/ 9/81

TIME (PST) 1717

TAPE: U00454 -619

LONG W 127 36.00

PASS NO. 15

STN: K.S. 2

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .2    | .2    | 31.55 | 16.03 | 23.09   |
| 2.0   | 2.1   | 31.55 | 16.03 | 23.09   |
| 5.1   | 5.1   | 31.56 | 16.02 | 23.10   |
| 9.9   | 9.9   | 31.83 | 14.78 | 23.58   |
| 14.8  | 14.9  | 31.82 | 14.68 | 23.59   |
| 20.0  | 20.1  | 32.04 | 13.29 | 24.05   |
| 24.9  | 25.0  | 32.19 | 11.87 | 24.44   |
| 29.8  | 29.9  | 32.37 | 11.32 | 24.68   |
| 34.9  | 35.1  | 32.70 | 9.71  | 25.21   |
| 39.8  | 40.0  | 32.82 | 8.97  | 25.42   |
| 44.9  | 45.1  | 32.90 | 8.52  | 25.55   |
| 49.9  | 50.1  | 32.94 | 8.38  | 25.60   |
| 59.7  | 60.0  | 33.21 | 7.76  | 25.91   |
| 69.6  | 70.0  | 33.33 | 7.53  | 26.03   |
| 79.6  | 80.0  | 33.52 | 7.26  | 26.22   |
| 90.4  | 90.9  | 33.55 | 7.22  | 26.24   |
| 93.3  | 93.8  | 33.55 | 7.22  | 26.25   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 49 46.40

DATE 5/ 9/81

TIME (PST) 1757

TAPE: U00454 -620

LONG W 127 42.10

PASS NO. 17

STN: K.S. 3

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 31.58 | 16.18 | 23.08   |
| 2.0   | 2.0   | 31.58 | 16.18 | 23.08   |
| 4.9   | 4.9   | 31.58 | 16.17 | 23.09   |
| 10.0  | 10.0  | 31.61 | 15.66 | 23.22   |
| 15.0  | 15.1  | 31.69 | 15.00 | 23.42   |
| 19.9  | 19.9  | 31.79 | 14.10 | 23.69   |
| 24.9  | 25.0  | 32.03 | 12.09 | 24.27   |
| 29.8  | 29.9  | 32.25 | 10.34 | 24.75   |
| 34.7  | 34.9  | 32.44 | 9.33  | 25.07   |
| 39.9  | 40.1  | 32.50 | 9.03  | 25.16   |
| 44.7  | 44.9  | 32.58 | 8.75  | 25.26   |
| 49.7  | 50.0  | 32.61 | 8.58  | 25.32   |
| 59.6  | 59.9  | 32.86 | 8.21  | 25.56   |
| 69.6  | 69.9  | 33.08 | 7.76  | 25.81   |
| 79.5  | 80.0  | 33.21 | 7.40  | 25.96   |
| 90.4  | 90.9  | 33.47 | 6.88  | 26.23   |
| 100.5 | 101.1 | 33.55 | 6.72  | 26.32   |
| 110.5 | 111.1 | 33.60 | 6.76  | 26.35   |
| 120.2 | 121.0 | 33.69 | 6.86  | 26.41   |
| 130.3 | 131.1 | 33.82 | 6.99  | 26.49   |
| 140.1 | 141.0 | 33.87 | 6.94  | 26.54   |
| 150.0 | 151.0 | 33.90 | 6.84  | 26.57   |
| 160.1 | 161.1 | 33.91 | 6.79  | 26.59   |
| 169.9 | 171.0 | 33.93 | 6.69  | 26.62   |
| 179.7 | 180.9 | 33.93 | 6.63  | 26.63   |
| 189.7 | 191.0 | 33.94 | 6.55  | 26.65   |
| 200.5 | 201.8 | 33.95 | 6.47  | 26.67   |
| 225.5 | 227.0 | 33.97 | 6.29  | 26.70   |
| 250.3 | 252.1 | 33.98 | 6.08  | 26.74   |
| 275.1 | 277.0 | 33.99 | 5.94  | 26.76   |
| 299.9 | 302.0 | 34.00 | 5.83  | 26.78   |
| 324.8 | 327.2 | 34.01 | 5.70  | 26.81   |
| 349.6 | 352.2 | 34.02 | 5.59  | 26.83   |
| 375.2 | 378.0 | 34.03 | 5.54  | 26.84   |
| 399.8 | 402.9 | 34.04 | 5.43  | 26.86   |
| 424.6 | 427.9 | 34.05 | 5.33  | 26.88   |
| 449.6 | 453.2 | 34.06 | 5.22  | 26.91   |
| 475.2 | 479.0 | 34.07 | 5.08  | 26.93   |
| 494.1 | 498.1 | 34.08 | 5.04  | 26.95   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 49 42.70

DATE 5/ 9/81

TIME (PST) 1845

TAPE: U00454 -621

LONG W 127 48.30

PASS NO. 19

STN: K.S. 4

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 31.59 | 16.15 | 23.09   |
| 2.1   | 2.1   | 31.59 | 16.16 | 23.09   |
| 4.9   | 4.9   | 31.59 | 16.15 | 23.10   |
| 10.0  | 10.1  | 31.62 | 15.76 | 23.21   |
| 14.9  | 15.0  | 31.65 | 15.41 | 23.30   |
| 19.9  | 20.0  | 31.89 | 14.06 | 23.77   |
| 24.9  | 25.0  | 32.25 | 11.56 | 24.53   |
| 30.0  | 30.1  | 32.24 | 10.56 | 24.70   |
| 34.9  | 35.1  | 32.32 | 9.86  | 24.88   |
| 39.8  | 39.9  | 32.35 | 9.65  | 24.94   |
| 44.8  | 45.0  | 32.39 | 9.37  | 25.02   |
| 49.8  | 50.0  | 32.46 | 9.07  | 25.12   |
| 59.6  | 59.9  | 32.68 | 8.57  | 25.37   |
| 69.7  | 70.0  | 32.87 | 8.20  | 25.58   |
| 80.5  | 80.9  | 33.06 | 7.89  | 25.77   |
| 90.5  | 91.0  | 33.18 | 7.35  | 25.94   |
| 100.5 | 101.0 | 33.35 | 6.83  | 26.15   |
| 110.3 | 110.9 | 33.48 | 6.59  | 26.28   |
| 120.3 | 121.0 | 33.57 | 6.47  | 26.37   |
| 130.1 | 130.9 | 33.67 | 6.42  | 26.45   |
| 140.2 | 141.1 | 33.73 | 6.49  | 26.48   |
| 150.1 | 151.0 | 33.80 | 6.52  | 26.54   |
| 160.1 | 161.1 | 33.84 | 6.61  | 26.56   |
| 170.0 | 171.1 | 33.90 | 6.74  | 26.59   |
| 179.9 | 181.1 | 33.92 | 6.70  | 26.61   |
| 189.7 | 191.0 | 33.93 | 6.62  | 26.63   |
| 199.7 | 201.1 | 33.93 | 6.55  | 26.64   |
| 225.4 | 227.0 | 33.94 | 6.29  | 26.68   |
| 250.4 | 252.1 | 33.96 | 6.08  | 26.72   |
| 275.0 | 277.0 | 33.96 | 5.84  | 26.76   |
| 299.9 | 302.0 | 33.98 | 5.56  | 26.80   |
| 324.7 | 327.0 | 33.98 | 5.43  | 26.82   |
| 350.5 | 353.1 | 33.99 | 5.30  | 26.84   |
| 375.2 | 378.0 | 34.01 | 5.18  | 26.87   |
| 400.0 | 403.1 | 34.04 | 5.09  | 26.90   |
| 424.6 | 427.9 | 34.06 | 5.04  | 26.93   |
| 449.6 | 453.2 | 34.09 | 4.97  | 26.96   |
| 475.3 | 479.0 | 34.09 | 4.91  | 26.97   |
| 495.1 | 499.0 | 34.11 | 4.85  | 26.98   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 22 CODE  
 LAT N 49 38.90  
 DATE 5/ 9/81  
 TIME (PST) 1940

TAPE: U00454 -622  
 LONG W 127 54.80  
 PASS NO. 21  
 STN: K.S. 5

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .7    | .7    | 31.59 | 16.07 | 23.11   |
| 2.0   | 2.0   | 31.59 | 16.07 | 23.11   |
| 5.0   | 5.0   | 31.59 | 16.07 | 23.11   |
| 9.9   | 10.0  | 31.62 | 15.84 | 23.19   |
| 15.0  | 15.0  | 31.68 | 15.45 | 23.32   |
| 19.9  | 20.0  | 31.82 | 15.02 | 23.52   |
| 24.9  | 25.0  | 32.01 | 13.93 | 23.89   |
| 29.8  | 30.0  | 32.14 | 12.65 | 24.25   |
| 34.8  | 34.9  | 32.28 | 11.12 | 24.64   |
| 39.8  | 40.0  | 32.32 | 10.28 | 24.82   |
| 44.8  | 45.0  | 32.34 | 9.94  | 24.89   |
| 49.7  | 49.9  | 32.39 | 9.45  | 25.01   |
| 59.7  | 60.0  | 32.48 | 8.93  | 25.16   |
| 69.7  | 70.0  | 32.57 | 8.59  | 25.28   |
| 79.7  | 80.1  | 32.76 | 8.26  | 25.48   |
| 89.5  | 90.0  | 32.98 | 8.04  | 25.68   |
| 100.4 | 101.0 | 33.21 | 7.73  | 25.91   |
| 110.4 | 111.0 | 33.34 | 6.96  | 26.12   |
| 120.4 | 121.1 | 33.52 | 6.54  | 26.32   |
| 130.2 | 131.0 | 33.60 | 6.45  | 26.39   |
| 140.1 | 140.9 | 33.66 | 6.39  | 26.45   |
| 150.1 | 151.0 | 33.70 | 6.35  | 26.49   |
| 159.9 | 160.9 | 33.75 | 6.29  | 26.53   |
| 170.0 | 171.1 | 33.80 | 6.23  | 26.57   |
| 180.0 | 181.2 | 33.85 | 6.39  | 26.60   |
| 189.7 | 191.0 | 33.89 | 6.39  | 26.63   |
| 199.6 | 200.9 | 33.91 | 6.34  | 26.65   |
| 225.4 | 226.9 | 33.94 | 6.13  | 26.70   |
| 250.2 | 251.9 | 33.95 | 6.01  | 26.73   |
| 275.0 | 277.0 | 33.97 | 5.81  | 26.76   |
| 299.9 | 302.0 | 33.98 | 5.65  | 26.79   |
| 324.7 | 327.1 | 33.98 | 5.48  | 26.81   |
| 350.5 | 353.1 | 34.01 | 5.23  | 26.86   |
| 375.3 | 378.2 | 34.01 | 5.10  | 26.88   |
| 400.0 | 403.0 | 34.03 | 4.98  | 26.91   |
| 424.8 | 428.1 | 34.04 | 4.89  | 26.93   |
| 450.5 | 454.0 | 34.05 | 4.66  | 26.96   |
| 475.2 | 479.0 | 34.06 | 4.47  | 26.99   |
| 493.2 | 497.1 | 34.07 | 4.38  | 27.01   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 49 35.00

DATE 5/ 9/81

TIME (PST) 2035

TAPE: U00454 -623

LONG W 128 1.10

PASS NO. 23

STN: K.S. 6

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 31.68 | 16.43 | 23.10   |
| 2.0   | 2.0   | 31.68 | 16.43 | 23.10   |
| 5.0   | 5.0   | 31.68 | 16.43 | 23.10   |
| 10.0  | 10.0  | 31.69 | 16.39 | 23.12   |
| 15.0  | 15.1  | 31.77 | 16.12 | 23.24   |
| 20.0  | 20.1  | 31.78 | 16.10 | 23.25   |
| 24.9  | 25.0  | 31.99 | 15.78 | 23.49   |
| 29.9  | 30.0  | 32.12 | 15.28 | 23.69   |
| 34.9  | 35.1  | 32.14 | 13.46 | 24.09   |
| 39.8  | 40.0  | 32.32 | 11.51 | 24.60   |
| 44.7  | 44.9  | 32.41 | 10.05 | 24.92   |
| 49.8  | 50.1  | 32.43 | 9.62  | 25.01   |
| 59.9  | 60.2  | 32.49 | 8.90  | 25.17   |
| 69.6  | 70.0  | 32.55 | 8.51  | 25.28   |
| 79.6  | 80.0  | 32.63 | 8.39  | 25.36   |
| 89.6  | 90.0  | 32.78 | 8.13  | 25.52   |
| 100.4 | 100.9 | 32.98 | 7.57  | 25.75   |
| 110.4 | 111.1 | 33.20 | 7.11  | 25.99   |
| 120.3 | 121.0 | 33.33 | 6.87  | 26.12   |
| 130.3 | 131.0 | 33.51 | 6.56  | 26.31   |
| 140.1 | 141.0 | 33.57 | 6.45  | 26.37   |
| 150.3 | 151.2 | 33.66 | 6.31  | 26.46   |
| 160.0 | 160.9 | 33.72 | 6.30  | 26.50   |
| 170.0 | 171.0 | 33.74 | 6.25  | 26.53   |
| 179.9 | 181.0 | 33.78 | 6.26  | 26.56   |
| 189.8 | 191.0 | 33.80 | 6.22  | 26.58   |
| 199.7 | 201.0 | 33.83 | 6.16  | 26.61   |
| 224.6 | 226.1 | 33.86 | 5.90  | 26.67   |
| 250.3 | 252.0 | 33.92 | 5.85  | 26.72   |
| 275.0 | 276.9 | 33.96 | 5.81  | 26.75   |
| 299.9 | 302.0 | 33.98 | 5.64  | 26.79   |
| 324.5 | 326.8 | 33.99 | 5.47  | 26.82   |
| 349.6 | 352.1 | 34.00 | 5.34  | 26.84   |
| 375.1 | 377.9 | 34.01 | 5.15  | 26.88   |
| 400.1 | 403.1 | 34.04 | 5.02  | 26.91   |
| 424.7 | 427.9 | 34.05 | 4.89  | 26.94   |
| 450.5 | 454.0 | 34.07 | 4.77  | 26.97   |
| 475.2 | 478.9 | 34.09 | 4.65  | 26.99   |
| 487.0 | 490.8 | 34.10 | 4.61  | 27.01   |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 48 39.00

DATE 6/ 9/81

TIME (PST) 1516

TAPE: U00454 -624

LONG W 125 2.50

PASS NO. 27

STN: 101

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .6    | .6    | 31.71 | 11.40 | 24.15   |        |
| 1.9   | 2.0   | 31.71 | 11.39 | 24.15   |        |
| 5.1   | 5.2   | 31.71 | 11.35 | 24.16   |        |
| 10.0  | 10.1  | 31.79 | 10.33 | 24.39   | 4.42   |
| 14.9  | 15.0  | 31.91 | 9.86  | 24.57   |        |
| 20.0  | 20.1  | 32.04 | 9.85  | 24.67   |        |
| 24.9  | 25.0  | 32.09 | 9.61  | 24.75   | 3.69   |
| 29.8  | 29.9  | 32.15 | 9.51  | 24.81   |        |
| 34.9  | 35.0  | 32.21 | 9.35  | 24.88   |        |
| 39.8  | 40.0  | 32.30 | 9.13  | 24.99   |        |
| 44.7  | 45.0  | 32.41 | 8.94  | 25.10   | 3.37   |
| 44.7  | 45.0  | 32.41 | 8.94  | 25.10   |        |

CRUISE NO: 22 CODE

LAT N 48 35.60

DATE 6/ 9/81

TIME (PST) 1607

TAPE: U00454 -625

LONG W 125 9.00

PASS NO. 29

STN: 102

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .1    | .1    | 31.81 | 11.09 | 24.28   |
| 2.0   | 2.0   | 31.80 | 11.11 | 24.27   |
| 4.9   | 4.9   | 31.81 | 11.10 | 24.27   |
| 10.0  | 10.1  | 31.86 | 10.84 | 24.36   |
| 14.9  | 15.0  | 31.91 | 10.42 | 24.47   |
| 19.8  | 19.9  | 31.99 | 10.00 | 24.60   |
| 24.9  | 25.0  | 32.00 | 9.87  | 24.63   |
| 29.9  | 30.0  | 32.07 | 9.61  | 24.73   |
| 34.8  | 35.0  | 32.12 | 9.42  | 24.80   |
| 39.9  | 40.1  | 32.42 | 8.93  | 25.11   |
| 44.9  | 45.1  | 32.63 | 8.68  | 25.32   |
| 49.8  | 50.1  | 32.84 | 8.38  | 25.52   |
| 59.6  | 59.9  | 32.95 | 8.20  | 25.63   |
| 69.5  | 69.9  | 33.04 | 8.18  | 25.71   |
| 80.5  | 80.9  | 33.43 | 7.57  | 26.10   |
| 89.5  | 90.0  | 33.68 | 7.10  | 26.36   |
| 100.4 | 101.0 | 33.69 | 7.08  | 26.38   |
| 106.3 | 107.0 | 33.70 | 7.04  | 26.39   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 22 CODE  
 LAT N 48 32.20  
 DATE 6/ 9/81  
 TIME (PST) 1648

TAPE: U00454 -626  
 LONG W 125 15.50  
 PASS NO. 31  
 STN: 103

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .3    | .3    | 32.08 | 13.05 | 24.13   |        |
| 2.1   | 2.1   | 32.09 | 13.06 | 24.13   |        |
| 5.1   | 5.1   | 32.09 | 13.05 | 24.13   |        |
| 9.9   | 10.0  | 32.07 | 11.79 | 24.35   | 5.26   |
| 14.9  | 15.0  | 32.11 | 10.57 | 24.60   |        |
| 19.9  | 20.0  | 32.31 | 9.94  | 24.86   |        |
| 24.9  | 25.0  | 32.44 | 9.46  | 25.04   | 4.02   |
| 29.9  | 30.0  | 32.54 | 9.33  | 25.14   |        |
| 34.9  | 35.0  | 32.75 | 8.95  | 25.37   |        |
| 39.9  | 40.1  | 33.00 | 8.49  | 25.64   |        |
| 44.8  | 45.1  | 33.06 | 8.34  | 25.70   |        |
| 49.7  | 50.0  | 33.20 | 7.94  | 25.87   | 3.14   |
| 59.6  | 60.0  | 33.46 | 7.46  | 26.14   |        |
| 69.5  | 70.0  | 33.63 | 7.22  | 26.31   |        |
| 74.5  | 75.0  | 33.67 | 7.16  | 26.35   | 2.55   |
| 80.5  | 81.0  | 33.75 | 6.92  | 26.45   |        |
| 90.4  | 91.0  | 33.79 | 6.86  | 26.48   |        |
| 100.5 | 101.1 | 33.80 | 6.82  | 26.50   | 2.14   |
| 110.2 | 110.9 | 33.82 | 6.75  | 26.53   |        |
| 112.4 | 113.1 | 33.82 | 6.74  | 26.53   |        |

CRUISE NO: 22 CODE  
 LAT N 48 28.90  
 DATE 6/ 9/81  
 TIME (PST) 1735

TAPE: U00454 -627  
 LONG W 125 21.80  
 PASS NO. 33  
 STN: 104

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .2    | .2    | 32.17 | 13.17 | 24.17   |
| 2.0   | 2.0   | 32.17 | 13.16 | 24.17   |
| 4.9   | 5.0   | 32.17 | 13.13 | 24.18   |
| 10.0  | 10.0  | 32.24 | 11.77 | 24.49   |
| 14.9  | 15.0  | 32.27 | 11.49 | 24.57   |
| 19.9  | 20.0  | 32.47 | 10.52 | 24.89   |
| 24.9  | 25.1  | 32.60 | 9.77  | 25.12   |
| 29.9  | 30.0  | 32.73 | 9.20  | 25.31   |
| 34.7  | 34.9  | 32.84 | 8.76  | 25.47   |
| 39.8  | 40.1  | 33.05 | 8.10  | 25.73   |
| 44.8  | 45.1  | 33.21 | 7.82  | 25.90   |
| 49.8  | 50.1  | 33.28 | 7.70  | 25.97   |
| 59.7  | 60.1  | 33.49 | 7.32  | 26.18   |
| 69.6  | 70.0  | 33.63 | 7.01  | 26.34   |
| 80.4  | 80.9  | 33.77 | 6.81  | 26.47   |
| 90.4  | 91.0  | 33.83 | 6.69  | 26.54   |
| 100.4 | 101.0 | 33.85 | 6.54  | 26.57   |
| 110.3 | 111.0 | 33.86 | 6.50  | 26.59   |
| 120.2 | 121.0 | 33.88 | 6.50  | 26.60   |
| 130.2 | 131.1 | 33.88 | 6.49  | 26.61   |
| 139.9 | 140.8 | 33.88 | 6.48  | 26.61   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 22 CODE  
 LAT N 48 25.50  
 DATE 6/ 9/81  
 TIME (PST) 1828

TAPE: U00454 -628  
 LONG W 125 28.30  
 PASS NO. 35  
 STN: 105

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .4    | .4    | 32.07 | 13.75 | 23.98   |        |
| 2.1   | 2.1   | 32.07 | 13.75 | 23.98   |        |
| 5.0   | 5.0   | 32.07 | 13.74 | 23.98   |        |
| 10.0  | 10.0  | 32.22 | 12.21 | 24.40   | 6.40   |
| 15.0  | 15.1  | 32.29 | 11.76 | 24.53   |        |
| 19.8  | 19.9  | 32.41 | 11.09 | 24.74   |        |
| 24.9  | 25.0  | 32.47 | 10.73 | 24.86   | 4.38   |
| 30.0  | 30.1  | 32.61 | 9.94  | 25.10   |        |
| 34.7  | 34.9  | 32.89 | 9.04  | 25.46   |        |
| 39.7  | 39.9  | 33.09 | 8.39  | 25.72   |        |
| 44.7  | 45.0  | 33.28 | 7.94  | 25.94   |        |
| 49.7  | 50.0  | 33.37 | 7.72  | 26.03   | 2.95   |
| 59.7  | 60.0  | 33.50 | 7.42  | 26.18   |        |
| 69.5  | 70.0  | 33.64 | 7.09  | 26.34   |        |
| 75.5  | 76.0  | 33.67 | 7.00  | 26.37   | 2.34   |
| 79.5  | 80.0  | 33.68 | 6.98  | 26.38   |        |
| 90.3  | 90.9  | 33.73 | 6.80  | 26.45   |        |
| 100.3 | 100.9 | 33.76 | 6.76  | 26.47   | 2.00   |
| 110.3 | 111.0 | 33.77 | 6.74  | 26.48   |        |
| 120.2 | 121.0 | 33.80 | 6.66  | 26.53   |        |
| 125.2 | 126.0 | 33.83 | 6.62  | 26.55   | 1.71   |
| 126.1 | 126.9 | 33.82 | 6.63  | 26.54   |        |



COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 22 CODE  
 LAT N 48 22.00  
 DATE 6/ 9/81  
 TIME (PST) 1919

TAPE: U00454 -629  
 LONG W 125 34.70  
 PASS NO. 37  
 SYN: 106

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .3    | .3    | 32.01 | 13.35 | 24.01   |
| 2.0   | 2.0   | 32.00 | 13.36 | 24.00   |
| 5.0   | 5.0   | 32.16 | 12.96 | 24.21   |
| 9.8   | 9.9   | 32.18 | 11.67 | 24.47   |
| 15.0  | 15.1  | 32.20 | 11.37 | 24.53   |
| 19.9  | 20.0  | 32.31 | 10.94 | 24.69   |
| 24.8  | 25.0  | 32.50 | 10.02 | 25.00   |
| 29.8  | 29.9  | 32.69 | 9.30  | 25.27   |
| 34.9  | 35.1  | 32.83 | 8.88  | 25.44   |
| 39.8  | 40.0  | 33.02 | 8.32  | 25.67   |
| 44.7  | 45.0  | 33.14 | 8.10  | 25.80   |
| 49.7  | 49.9  | 33.25 | 7.92  | 25.91   |
| 59.6  | 60.0  | 33.41 | 7.49  | 26.10   |
| 69.7  | 70.1  | 33.48 | 7.43  | 26.17   |
| 79.6  | 80.1  | 33.55 | 7.24  | 26.25   |
| 90.4  | 91.0  | 33.62 | 7.03  | 26.33   |
| 100.4 | 101.0 | 33.71 | 6.80  | 26.44   |
| 110.2 | 110.9 | 33.77 | 6.72  | 26.49   |
| 120.2 | 121.0 | 33.85 | 6.62  | 26.56   |
| 130.2 | 131.0 | 33.90 | 6.59  | 26.61   |
| 140.1 | 141.0 | 33.92 | 6.60  | 26.63   |
| 141.9 | 142.8 | 33.92 | 6.58  | 26.63   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 22 CODE  
 LAT N 48 18.60  
 DATE 6/ 9/81  
 TIME (PST) 2008

TAPE: U00454 -630  
 LONG W 125 41.20  
 PASS NO. 39  
 STN: 107

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .3    | .3    | 31.95 | 13.74 | 23.89   |        |
| 1.9   | 1.9   | 31.95 | 13.76 | 23.88   |        |
| 5.0   | 5.0   | 32.13 | 12.29 | 24.31   |        |
| 10.0  | 10.0  | 32.14 | 10.81 | 24.59   | 6.26   |
| 15.0  | 15.1  | 32.15 | 10.62 | 24.62   |        |
| 19.9  | 20.0  | 32.27 | 9.96  | 24.83   |        |
| 24.9  | 25.0  | 32.27 | 9.79  | 24.86   | 4.15   |
| 29.9  | 30.0  | 32.48 | 9.13  | 25.12   |        |
| 34.8  | 35.0  | 32.50 | 9.10  | 25.14   |        |
| 39.7  | 39.9  | 32.51 | 9.03  | 25.17   |        |
| 44.7  | 45.0  | 32.68 | 8.71  | 25.35   |        |
| 49.7  | 50.0  | 32.79 | 8.41  | 25.48   | 4.31   |
| 59.7  | 60.0  | 32.97 | 8.09  | 25.67   |        |
| 69.6  | 70.0  | 33.18 | 7.88  | 25.86   |        |
| 74.5  | 74.9  | 33.32 | 7.81  | 25.99   | 4.10   |
| 80.4  | 80.9  | 33.48 | 7.62  | 26.14   |        |
| 90.4  | 90.9  | 33.60 | 7.44  | 26.26   |        |
| 100.4 | 101.0 | 33.70 | 7.34  | 26.35   | 3.58   |
| 110.2 | 110.9 | 33.76 | 7.28  | 26.41   |        |
| 120.2 | 120.9 | 33.84 | 7.17  | 26.48   |        |
| 125.3 | 126.1 | 33.88 | 7.08  | 26.53   | 2.92   |
| 130.1 | 131.0 | 33.89 | 6.92  | 26.56   |        |
| 140.1 | 141.0 | 33.92 | 6.70  | 26.61   | 2.52   |
| 142.1 | 143.0 | 33.92 | 6.66  | 26.62   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 48 15.10

DATE 6/ 9/81

TIME (PST) 2111

TAPE: U00454 -631

LONG W 125 47.70

PASS NO. 41

STN: 108

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .2    | .2    | 32.12 | 15.52 | 23.65   |
| 2.0   | 2.1   | 32.13 | 15.51 | 23.65   |
| 5.0   | 5.0   | 32.13 | 15.51 | 23.65   |
| 10.0  | 10.0  | 32.25 | 13.33 | 24.20   |
| 15.0  | 15.1  | 32.27 | 12.65 | 24.35   |
| 19.9  | 20.0  | 32.39 | 10.89 | 24.77   |
| 25.0  | 25.2  | 32.41 | 10.34 | 24.88   |
| 29.9  | 30.0  | 32.43 | 9.84  | 24.97   |
| 34.8  | 34.9  | 32.42 | 9.73  | 24.98   |
| 39.8  | 40.0  | 32.45 | 9.41  | 25.06   |
| 44.8  | 45.0  | 32.46 | 9.19  | 25.10   |
| 49.7  | 50.0  | 32.50 | 8.92  | 25.18   |
| 59.6  | 60.0  | 32.72 | 8.51  | 25.41   |
| 69.5  | 69.9  | 33.01 | 8.08  | 25.70   |
| 79.5  | 80.0  | 33.38 | 7.51  | 26.08   |
| 90.5  | 91.0  | 33.54 | 7.46  | 26.21   |
| 100.5 | 101.1 | 33.71 | 7.34  | 26.36   |
| 110.3 | 111.0 | 33.81 | 7.24  | 26.45   |
| 120.3 | 121.0 | 33.83 | 7.10  | 26.48   |
| 130.3 | 131.1 | 33.84 | 7.09  | 26.49   |
| 140.2 | 141.1 | 33.87 | 6.99  | 26.53   |
| 150.0 | 150.9 | 33.90 | 6.91  | 26.57   |
| 160.0 | 161.1 | 33.93 | 6.84  | 26.60   |
| 169.9 | 171.0 | 33.95 | 6.73  | 26.63   |
| 179.9 | 181.1 | 33.95 | 6.68  | 26.64   |
| 189.7 | 191.0 | 33.97 | 6.60  | 26.66   |
| 199.7 | 201.0 | 33.99 | 6.41  | 26.70   |
| 201.3 | 202.6 | 33.99 | 6.40  | 26.71   |

COASTAL ZONE OCEANOGRAPHY  
 CRUISE NO: 22 CODE  
 LAT N 48 12.90  
 DATE 6/ 9/81  
 TIME (PST) 2153

TAPE: U00454 -632  
 LONG W 125 52.00  
 PASS NO. 43  
 STN: 109

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T | OXYGEN |
|-------|-------|-------|-------|---------|--------|
| .2    | .2    | 32.04 | 15.73 | 23.54   |        |
| 2.0   | 2.0   | 32.09 | 15.74 | 23.57   |        |
| 4.9   | 5.0   | 32.10 | 15.72 | 23.59   |        |
| 10.0  | 10.1  | 32.25 | 13.65 | 24.14   |        |
| 14.8  | 14.9  | 32.32 | 12.11 | 24.49   |        |
| 19.9  | 20.0  | 32.41 | 10.79 | 24.80   |        |
| 24.9  | 25.0  | 32.42 | 10.21 | 24.91   | 5.88   |
| 29.9  | 30.0  | 32.45 | 9.63  | 25.03   |        |
| 34.9  | 35.0  | 32.44 | 9.38  | 25.06   |        |
| 39.8  | 40.0  | 32.45 | 9.26  | 25.09   |        |
| 44.8  | 45.1  | 32.54 | 8.86  | 25.22   |        |
| 49.8  | 50.0  | 32.62 | 8.60  | 25.32   | 5.94   |
| 59.7  | 60.0  | 32.79 | 8.36  | 25.49   |        |
| 69.6  | 70.0  | 33.06 | 7.85  | 25.77   |        |
| 74.7  | 75.1  | 33.08 | 7.75  | 25.81   | 5.02   |
| 79.6  | 80.0  | 33.17 | 7.64  | 25.89   |        |
| 90.4  | 91.0  | 33.39 | 7.28  | 26.12   |        |
| 100.5 | 101.1 | 33.48 | 7.08  | 26.21   | 4.69   |
| 110.3 | 111.0 | 33.61 | 6.80  | 26.35   |        |
| 120.3 | 121.1 | 33.70 | 6.85  | 26.42   |        |
| 125.2 | 126.0 | 33.75 | 6.98  | 26.44   | 3.64   |
| 130.1 | 130.9 | 33.78 | 7.06  | 26.45   |        |
| 140.2 | 141.1 | 33.83 | 6.99  | 26.50   |        |
| 150.1 | 151.0 | 33.86 | 7.01  | 26.53   | 3.44   |
| 159.9 | 161.0 | 33.90 | 6.93  | 26.57   |        |
| 169.9 | 171.0 | 33.93 | 6.89  | 26.59   |        |
| 179.8 | 181.0 | 33.94 | 6.82  | 26.61   |        |
| 189.7 | 191.0 | 33.95 | 6.71  | 26.63   |        |
| 199.6 | 200.9 | 33.97 | 6.66  | 26.65   | 2.41   |
| 225.3 | 226.9 | 33.98 | 6.47  | 26.69   |        |
| 250.3 | 252.0 | 33.99 | 6.27  | 26.72   | 2.09   |
| 275.0 | 277.0 | 33.97 | 5.92  | 26.75   |        |
| 299.9 | 302.1 | 33.99 | 5.74  | 26.79   | 1.79   |
| 324.6 | 327.0 | 34.01 | 5.75  | 26.80   |        |
| 350.5 | 353.1 | 34.00 | 5.45  | 26.84   |        |
| 375.2 | 378.1 | 34.02 | 5.25  | 26.87   |        |
| 399.9 | 403.0 | 34.04 | 5.15  | 26.90   |        |
| 424.7 | 428.0 | 34.05 | 5.15  | 26.91   |        |
| 450.5 | 454.0 | 34.09 | 5.17  | 26.93   |        |
| 475.2 | 479.0 | 34.09 | 5.07  | 26.95   |        |
| 495.1 | 499.1 | 34.11 | 4.98  | 26.97   |        |

## COASTAL ZONE OCEANOGRAPHY

CRUISE NO: 22 CODE

LAT N 48 10.60

DATE 6/ 9/81

TIME (PST) 2304

TAPE: UDD454 -633

LONG W 125 56.20

PASS NO. 45

STN: 110

| DEPTH | PRESS | SAL   | TEMP  | SIGMA-T |
|-------|-------|-------|-------|---------|
| .6    | .6    | 32.13 | 15.74 | 23.60   |
| 2.1   | 2.1   | 32.12 | 15.73 | 23.60   |
| 5.1   | 5.1   | 32.13 | 15.73 | 23.60   |
| 10.0  | 10.0  | 32.13 | 15.70 | 23.61   |
| 14.9  | 15.0  | 32.16 | 14.96 | 23.79   |
| 20.0  | 20.1  | 32.29 | 12.32 | 24.43   |
| 24.9  | 25.0  | 32.33 | 11.31 | 24.64   |
| 29.8  | 29.9  | 32.45 | 10.26 | 24.92   |
| 34.8  | 35.0  | 32.44 | 9.66  | 25.01   |
| 39.9  | 40.1  | 32.47 | 9.33  | 25.09   |
| 44.8  | 45.1  | 32.48 | 9.06  | 25.14   |
| 49.8  | 50.1  | 32.53 | 8.85  | 25.21   |
| 59.8  | 60.1  | 32.70 | 8.47  | 25.40   |
| 69.5  | 69.9  | 32.92 | 8.11  | 25.63   |
| 79.5  | 80.0  | 33.15 | 7.79  | 25.85   |
| 90.4  | 90.9  | 33.28 | 7.63  | 25.98   |
| 99.6  | 100.2 | 33.44 | 7.25  | 26.16   |
| 110.3 | 111.0 | 33.55 | 7.16  | 26.26   |
| 120.3 | 121.0 | 33.64 | 7.12  | 26.33   |
| 130.2 | 131.0 | 33.69 | 6.96  | 26.39   |
| 140.2 | 141.0 | 33.77 | 6.89  | 26.47   |
| 149.9 | 150.9 | 33.81 | 6.78  | 26.52   |
| 160.0 | 161.1 | 33.86 | 6.86  | 26.54   |
| 169.9 | 171.0 | 33.90 | 6.89  | 26.57   |
| 179.9 | 181.0 | 33.93 | 6.85  | 26.60   |
| 189.7 | 190.9 | 33.93 | 6.75  | 26.61   |
| 199.7 | 201.0 | 33.94 | 6.59  | 26.64   |
| 225.4 | 226.9 | 33.95 | 6.43  | 26.67   |
| 250.1 | 251.9 | 33.97 | 6.29  | 26.70   |
| 275.0 | 277.0 | 33.97 | 6.03  | 26.74   |
| 299.8 | 301.9 | 33.97 | 5.85  | 26.76   |
| 325.5 | 327.9 | 33.98 | 5.61  | 26.80   |
| 350.4 | 353.0 | 34.01 | 5.47  | 26.83   |
| 375.1 | 378.0 | 34.03 | 5.38  | 26.87   |
| 400.1 | 403.1 | 34.04 | 5.22  | 26.89   |
| 424.7 | 428.0 | 34.03 | 4.95  | 26.91   |
| 450.5 | 454.0 | 34.06 | 4.92  | 26.94   |
| 475.2 | 478.9 | 34.08 | 4.83  | 26.97   |
| 499.0 | 503.0 | 34.09 | 4.76  | 26.98   |